



Product Specifications Reference

PSREF Collections

ThinkPad

ThinkCentre

ThinkStation

Think Tablets

ThinkBook

ThinkVision



Version 621

November 22, 2023

Lenovo



Product Specifications Reference

ThinkPad Laptops and Mobile Workstations



Version 621

November 22, 2023

Lenovo

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

November 22, 2023 - Version 621

Additions in this update

► New product(s)

ThinkPad Z13 Gen 2
ThinkPad Z16 Gen 2

► Spec updated

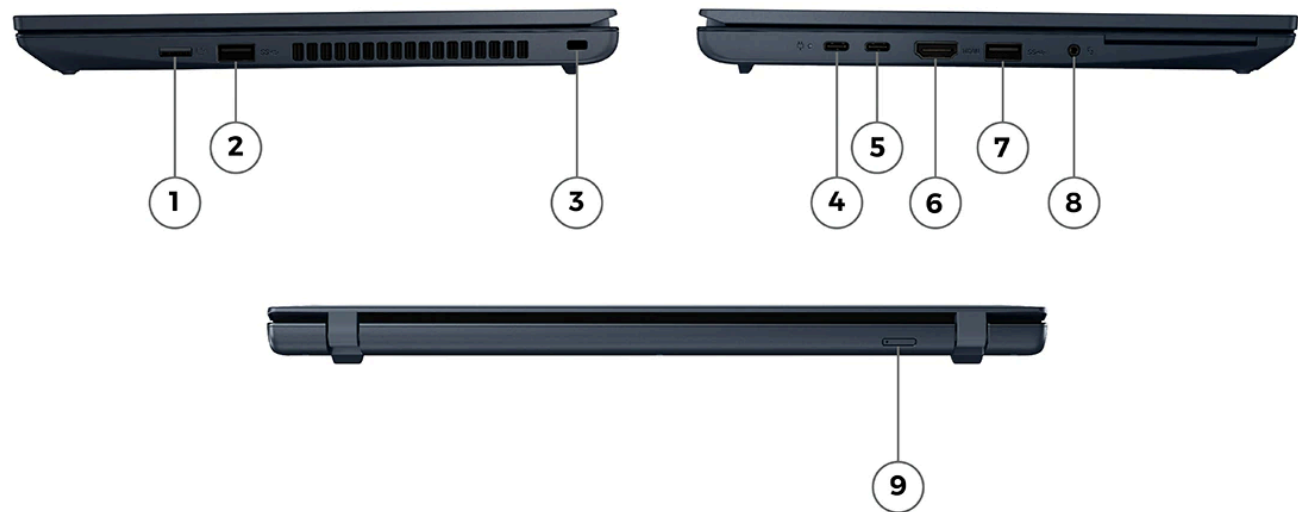
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ThinkPad X13 Gen 4 (AMD)
ThinkPad X13 Gen 4 (Intel)
ThinkPad X13 Yoga Gen 4

Withdrawals in this update

► Withdrawn product(s)

None

OVERVIEW



1. microSD card reader	6. HDMI
2. USB 3.2 Gen 2	7. USB 3.2 Gen 2
3. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)
4. Thunderbolt 4 (vPro) / USB4 (non-vPro)	9. Nano-SIM card slot *
5. Thunderbolt 4 (vPro) / USB4 (non-vPro)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics

Operating System

Operating System**

- ChromeOS
- ChromeOS (with Chrome Education Upgrade)
- ChromeOS (with Chrome Enterprise Upgrade)

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX 12.1

Monitor Support

Monitor Support

- Models with Intel vPro®: supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)
 - HDMI supports up to 3840x2160@60H
 - Thunderbolt supports up to 5120x3200@60Hz
- Models with non-vPro: supports up to 4 independent displays (native display and 3 external monitors via HDMI and USB4®)
 - HDMI supports up to 3840x2160@60Hz
 - USB4 supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 4GB soldered memory, not upgradable
- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable

Memory Slots**

- Memory soldered to systemboard, no slots, single-channel (4GB models)
- Memory soldered to systemboard, no slots, dual-channel (8GB or 16GB models)

Memory Type

LPDDR4x-4266

Storage

Storage Support^[1]

- 64GB eMMC 5.1 on systemboard
- 128GB eMMC 5.1 on systemboard
- One drive, up to 256GB M.2 2242 SSD^[2]

Storage Slot

- eMMC on systemboard, no slots (eMMC models)
- One M.2 2242 PCIe® 4.0 x4 slot (M.2 SSD models)

Storage Type**

Disk Type	Interface	Offering	Security
Flash Memory	eMMC 5.1	64GB / 128GB	-
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB	Opal 2.0

Notes:

- [1] System has one eMMC on systemboard or one M.2 2242 SSD exclusively.
- [2] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

microSD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC5682I codec

Speakers

Stereo speakers, 2W x2, optimized with Waves MaxxAudio®

Microphone

Dual-microphone array

Camera

FHD 1080p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
Google Power Load Test: 11.4 hr @80nits

Alternate configuration 2
Google Power Load Test: 11.0 hr @80nits

Alternate configuration 3
Google Power Load Test: 10.8 hr @80nits

Notes:

- [1] Configuration 1 (max battery life): FHD (non-touch), Intel Pentium® 8505U, 4GB LPDDR4x, Google Chrome OS, 57Wh battery
- Alternate configuration 2: FHD (non-touch), Intel i5-1235U, 8GB LPDDR4x, Google Chrome OS, 57Wh battery
- Alternate configuration 3: FHD (touch), Intel i7-1265U, 16GB LPDDR4x, Google Chrome OS, 57Wh battery

All battery life claims are approximate maximum and based on results using Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Power Adapter

Power Adapter**[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
14"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
14"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°

Touchscreen

- OGS (One Glass Solution) multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

Chrome keyboard, 6-row, spill-resistant

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

325.4 x 217 x 19.83 mm (12.81 x 8.54 x 0.78 inches)

Weight[2]

Starting at 1.56 kg (3.44 lbs)

Case Color

Abyss blue

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet

WLAN + Bluetooth^[1]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

WWAN

- Fibocom L850-GL, 4G LTE CAT9, M.2 card
- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x microSD card reader
- 2x USB 3.2 Gen 2

Optional Ports^{***}

- 1x Nano-SIM card slot (WWAN support models)
- 2x Thunderbolt 4 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4) (vPro models)
- 2x USB4 20Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4) (non-vPro models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® C14 Gen 1 Chromebook](#)

SECURITY & PRIVACY

Security

Security Chip

Google Security Chip H1

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

No support

Other Security

Camera privacy shutter

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant

- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

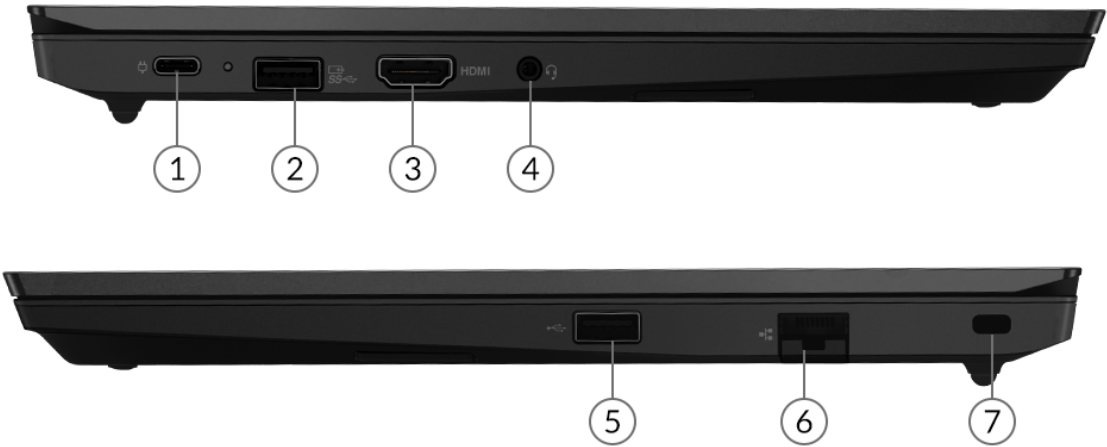
Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. USB-C 3.2 Gen 1	5. USB 2.0
2. USB 3.2 Gen 1 (Always On)	6. Ethernet (RJ-45) *
3. HDMI 1.4b	7. Kensington Security Slot
4. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 5425U	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 5625U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 5 PRO 5675U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 5825U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64^[1]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system^[2]

Notes:

^[1] Windows 11 DG Windows 10 Pro 64 is for special bid only.

^[2] No operating system is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@30Hz
- USB-C supports up to 4096x2160@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to two drives, 2x M.2 SSD

- M.2 2242 SSD up to 512GB

- M.2 2280 SSD up to 1TB

Storage Slot

Two M.2 slots

- One M.2 2242 PCIe® 3.0 x4 slot
- One M.2 2280 PCIe 3.0 x4 slot

Storage Type***

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4 ^[3]	256GB / 512GB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 ^[4]	1TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- [2] The system supports dual SSD via two M.2 slots, but Lenovo only offers one SSD configuration, another SSD slot for user self-extension.
- [3], [4] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to the system slot limitation.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™, audio by HARMAN

Microphone

Dual-microphone array, near-field

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery

Max Battery Life^[1]

- Models with 45Wh battery:
MobileMark® 2018: 9.2 hr
JEITA 2.0: 12.1 hr
- Models with 57Wh battery:
MobileMark 2018: 15.0 hr
JEITA 2.0: 21.0 hr

Notes:

- [1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter**^[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
14"	FHD (1920x1080)	None	TN	250nits	Anti-glare	16:9	500:1	45% NTSC	45°/45°/15°/35°
14"	FHD (1920x1080)	None	IPS[2]	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
14"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/85°/85°

Touchscreen

Non-touch

Notes:

[1] Display with FHD 100% sRGB is NOT available in EMEA.

[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 57 x 100 mm (2.24 x 3.94 inches)

Mechanical

Dimensions (WxDxH)[1]

Models	Dimensions
Aluminium (top), aluminium (bottom) models	324 x 220.7 x 17.9 mm (12.76 x 8.69 x 0.7 inches)
Aluminium (top), PC-ABS (bottom) models	324 x 220.7 x 18.9 mm (12.76 x 8.69 x 0.74 inches)

Weight[2]

Models	Weight
Aluminium (top), PC-ABS (bottom) models	Starting at 1.59 kg (3.51 lbs)
Aluminium (top), aluminium (bottom) models	Starting at 1.64 kg (3.62 lbs)

Case Color**

- Black
- Mineral metallic[3]

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Mineral metallic case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

- Gigabit Ethernet, Realtek RTL8111H-CG, 1x RJ-45, supports Wake-on-LAN
- No onboard Ethernet

WLAN + Bluetooth®**[1]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[2]
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card[3]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[4]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[5]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card[6]
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [3], [4] Wi-Fi 6 full features might be limited by country-level restrictions.

[5], [6], [7] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 1.4b
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 2.0
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.2)

Optional Ports

1x Ethernet (RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E14 Gen 4 \(AMD\)](#)

SECURITY & PRIVACY

Security

Security Chip**

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

^[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

^[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

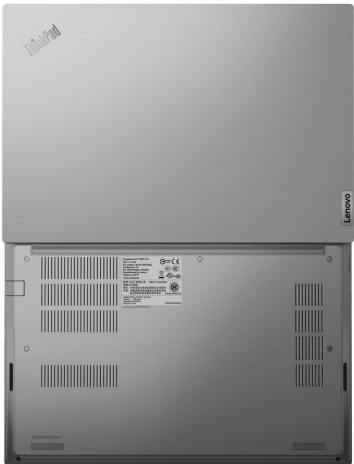
Other Certifications

TÜV Rheinland® Low Blue Light (Software Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

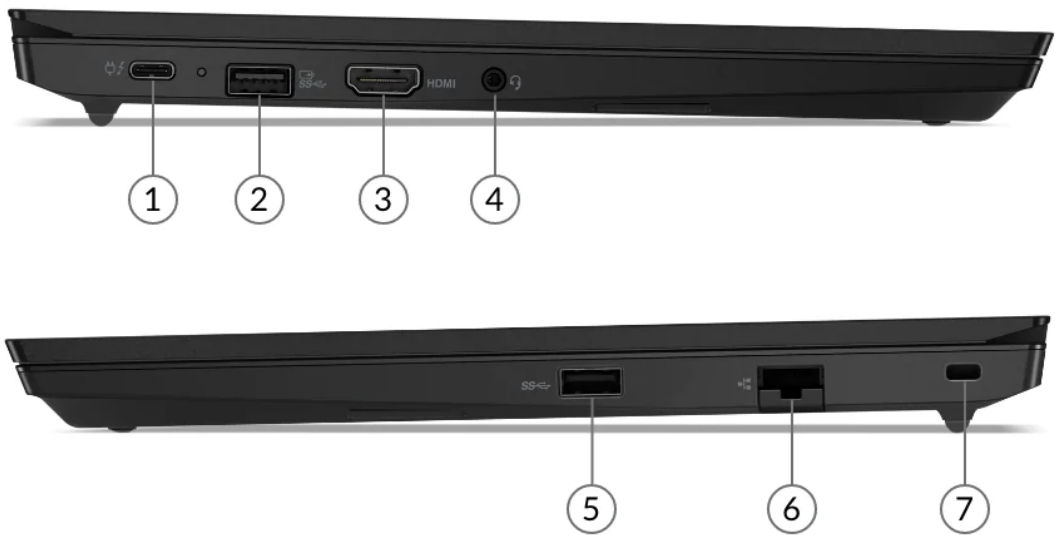


AMD



AMD

OVERVIEW



1. Thunderbolt 4	5. USB 2.0
2. USB 3.2 Gen 1 (Always On)	6. Ethernet (RJ-45)
3. HDMI	7. Kensington Security Slot
4. Headphone / microphone combo jack (3.5mm)	

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics[2]
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics[3]
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics[4]
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics[5]
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics[6]

Notes:

- [1] i5-1240p and i7-1260P are NOT available in EMEA.
- [2], [3], [4], [5], [6] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Ubuntu Linux[1]
- Windows® 11 DG Windows 10 Pro 64[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- [2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	-	DirectX 12

Notes:

- [1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

- Max Memory^[1]
- Up to 32GB DDR4-3200
 - Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200

- Memory Slots**
- One DDR4 SO-DIMM slot
 - One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type
DDR4-3200

Notes:
^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

- Storage Support^{[1][2]}
- Up to two drives, 2x M.2 SSD
- M.2 2242 SSD up to 1TB

- Storage Slot
- Two M.2 slots
- One M.2 2242 PCIe® 3.0 x4 slot
 - One M.2 2242 PCIe 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:
^[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
^[2] The system supports dual SSD via two M.2 slots, but Lenovo only offers one SSD configuration, another SSD slot for user self-extension.

Removable Storage

Optical
None

Card Reader
No card reader

Multi-Media

- Audio Chip
High Definition (HD) Audio, Realtek® ALC3287 codec
- Speakers
Stereo speakers, 2W x2, Dolby® Audio™, audio by HARMAN
- Microphone
Dual-microphone array, near-field
- Camera**
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
 - FHD 1080p, with privacy shutter, fixed focus
 - HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery

Max Battery Life^[1]

- Models with 45Wh battery:
MobileMark® 2018: 9.4 hr
JEITA 2.0: 16.1 hr
Local video (1080p) playback@150nits: 11.8 hr
- Models with 57Wh battery:
MobileMark 2018: 11.5 hr
MobileMark 25: 10.9 hr
JEITA 2.0: 20.6 hr
Local video (1080p) playback@150nits: 15.6 hr

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter**^[1]

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
14"	FHD (1920x1080)	None	TN	250nits	Anti-glare	16:9	500:1	45% NTSC	45°/45°/15°/35°
14"	FHD (1920x1080)	None	IPS ^[2]	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
14"	FHD (1920x1080)	Multi-touch	IPS ^[3]	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
14"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/85°/85°

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] Multi-touch panel is only for special bid in EMEA.
[2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 57 x 100 mm (2.24 x 3.94 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Aluminium (top), aluminium (bottom) models	324 x 220.7 x 17.9 mm (12.76 x 8.69 x 0.7 inches)
Aluminium (top), PC-ABS (bottom) models	324 x 220.7 x 18.9 mm (12.76 x 8.69 x 0.74 inches)

Weight^[2]

Models	Weight
Aluminium (top), PC-ABS (bottom) models	Starting at 1.59 kg (3.51 lbs)
Aluminium (top), aluminium (bottom) models	Starting at 1.64 kg (3.62 lbs)

Case Color**

- Black
- Mineral metallic^[3]

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

- ^[1] The system dimensions may vary depending on configurations.
- ^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- ^[3] Mineral metallic case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[6]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

- ^[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- ^{[2], [4], [5]} Wi-Fi 6 full features might be limited by country-level restrictions.
- ^{[3], [6], [7]} Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10. 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 2.0
- 1x USB 3.2 Gen 1 (Always On)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt.

For more compatible docking solutions, please visit [Docking for ThinkPad® E14 Gen 4 \(Intel\)](#)

SECURITY & PRIVACY

Security

Security Chip**

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service

- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo 15.6" laptop casual toploader, polyester
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light (Software Solution)

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intel



intel



intel



intel



intel



intel

OVERVIEW



1. USB 3.2 Gen 1	5. USB-C 3.2 Gen 2
2. Ethernet (RJ-45)	6. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	7. HDMI
4. USB-C 3.2 Gen 1	8. Headphone / microphone combo jack (3.5mm)

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 7330U	4	8	2.3GHz	4.3GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 5625U ^[1]	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 5 7530U	6	12	2.0GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 7730U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Notes:

^[1] AMD Ryzen 5 5625U is for special bid.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64^[1]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^[1] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 4096x2160@30Hz
- USB-C supports up to 5120x2160@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 2x M.2 SSD
- M.2 2242 SSD up to 512GB
 - M.2 2280 SSD up to 1TB

Storage Slot

- Two M.2 slots
- One M.2 2242 PCIe® 3.0 x4 slot
 - One M.2 2280 PCIe 3.0 x4 slot

Storage Type***[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD[3]	PCIe NVMe®, PCIe 3.0 x4	128GB	-
M.2 2242 SSD	PCIe NVMe, PCIe 4.0 x4	256GB / 512GB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	1TB	Opal 2.0

- Notes:
- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- [2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0 x4 due to AMD platform limitations.
- [3] 128GB SSD is for special bid only.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Synaptic® CX11880 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 47Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 15.03 hr @200nits
JEITA 2.0: up to 20.85 hr @150nits
Local video playback: up to 19.56 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 13.73 hr @200nits
JEITA 2.0: up to 17.34 hr @150nits
Local video playback: up to 15.1 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 12.38 hr @200nits
JEITA 2.0: up to 14.37 hr @150nits
Local video playback: up to 15.2 hr @150nits

- Notes:
- [1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 7730U, 8GB DDR4, Win 11, 57Wh battery, best

power efficiency power mode
Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 7530U, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (non-touch), AMD Ryzen 7 7730U, 8GB DDR4, Win 11, 47Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:
[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)
14"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)
14"	2.2K (2240x1400)	None	IPS	300nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	85°/85°/85°/85°	Eyesafe® Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:
[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

Starting at 313 x 219.3 x 17.99 mm (12.32 x 8.63 x 0.71 inches)

Weight^[2]

Models	Weight
Aluminium (top), PC-ABS (bottom) models	Starting at 1.41 kg (3.11 lbs)
Aluminium (top), aluminium (bottom) models	Starting at 1.43 kg (3.15 lbs)

Case Color**

- Arctic grey
- Graphite black

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek® RTL8111H-CG, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[6]
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

- [1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- [2], [3], [4] Wi-Fi 6 full features might be limited by country-level restrictions.
- [5], [6], [7] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 1.4b
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E14 Gen 5 \(AMD\)](#)

SECURITY & PRIVACY

Security

Security Chip**

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of

warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

25% PCC recycled plastic used in the battery
30% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in standard 65W adapter
Low-temperature solder

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)
- (Optional) TÜV Rheinland Low Blue Light (Software Solution)

• Feature with ** means that only one offering listed under the feature is configured on selected models.

• Feature with *** means that one or more offerings listed under the feature could be configured on selected models.

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AMD



AMD



AMD



AMD



AMD



AMD

OVERVIEW



1. USB 2.0	5. Thunderbolt 4
2. Ethernet (RJ-45)	6. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	7. HDMI
4. USB-C 3.2 Gen 2	8. Headphone / microphone combo jack (3.5mm)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics ^[1]
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics ^[2]
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[3]
Core i5-13500H	12 (4 P-core + 8 E-core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics ^[4]
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics ^[5]
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics ^[6]
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics ^[7]
Core i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel Iris Xe Graphics ^[8]

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	-	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 4096x2160@60Hz
- USB-C supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x2160@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2242 SSD up to 1TB

Storage Slot

Two M.2 slots

- One M.2 2242 PCIe® 3.0 x4 slot
- One M.2 2242 PCIe 4.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] M.2 PCIe 4.0 x4 SSD in the M.2 PCIe 3.0 x4 slot is downgraded to PCIe 3.0 x4 performance.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Synaptic® CX11880 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus

- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 47Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 11.2 hr @200nits
MobileMark 25: up to 8.58 hr with 725 performance score @250nits
JEITA 2.0: up to 15.2 hr @150nits
Local video playback: up to 13.9 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 9.16 hr @200nits
MobileMark 25: up to 7.6 hr with 814 performance score @250nits
JEITA 2.0: up to 15.3 hr @150nits
Local video playback: up to 13.4 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 8.18 hr @200nits
MobileMark 25: up to 6.7 hr with 716 performance score @250nits
JEITA 2.0: up to 14.9 hr @150nits
Local video playback: up to 13.1 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i3-1315U, 8GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), Intel i5-1340P, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: 2.2K (non-touch), Intel i7-1355U, 40GB DDR4, NVIDIA Geforce MX550, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)

14"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)
14"	2.2K (2240x1400)	None	IPS	300nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	85°/85°/85°/85°	Eyesafe® Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Starting at 313 x 219.3 x 17.99 mm (12.32 x 8.63 x 0.71 inches)

Weight^[2]

Models	Weight
Aluminium (top), PC-ABS (bottom) models	Starting at 1.41 kg (3.11 lbs)
Aluminium (top), aluminium (bottom) models	Starting at 1.43 kg (3.15 lbs)

Case Color**

- Arctic grey
- Graphite black

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Realtek® Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[6]
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [4], [5] Wi-Fi 6 full features might be limited by country-level restrictions.

[3], [6], [7] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 2.0
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E14 Gen 5 \(Intel\)](#)

SECURITY & PRIVACY**Security****Security Chip****

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password

- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise
- Non-vPro

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

25% PCC recycled plastic used in the battery
30% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in standard 65W adapter
Low-temperature solder

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo 15.6" laptop casual toploader, polyester, black
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- FSC certified package
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)
- (Optional) TÜV Rheinland Low Blue Light (Software Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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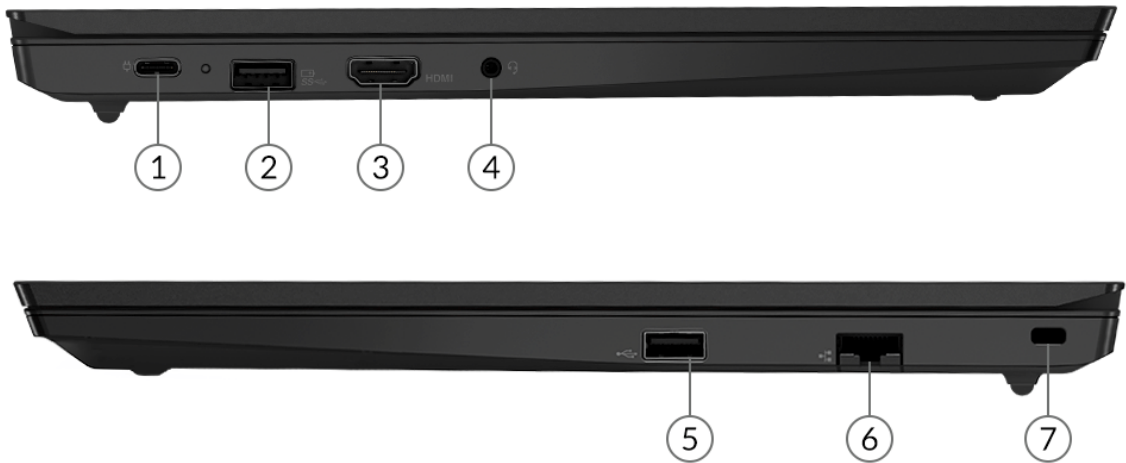


intel



intel

OVERVIEW



1. USB-C 3.2 Gen 1	5. USB 2.0
2. USB 3.2 Gen 1 (Always On)	6. Ethernet (RJ-45)
3. HDMI 1.4b	7. Kensington Security Slot
4. Headphone / microphone combo jack (3.5mm)	

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 5425U	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 5625U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 5825U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64^[1]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system^[2]

Notes:

^[1] Windows 11 DG Windows 10 Pro 64 is for special bid only.

^[2] No operating system is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@30Hz
- USB-C supports up to 4096x2160@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to two drives, 2x M.2 SSD

- M.2 2242 SSD up to 512GB
- M.2 2280 SSD up to 1TB

Storage Slot

- Two M.2 slots
- One M.2 2242 PCIe® 3.0 x4 slot
 - One M.2 2280 PCIe 3.0 x4 slot

Storage Type**^[3]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	1TB	Opal 2.0

- Notes:
- ^[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- ^[2] The system supports dual SSD via two M.2 slots, but Lenovo only offers one SSD configuration, another SSD slot for user self-extension.
- ^[3] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to the system slot limitation.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™, audio by HARMAN

Microphone

Dual-microphone array, near-field

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery

Max Battery Life^[1]

- Models with 45Wh battery:
MobileMark® 2018: 9.6 hr
JEITA 2.0: 14.1 hr
- Models with 57Wh battery:
MobileMark 2018: 12.0 hr
JEITA 2.0: 16.5 hr

- Notes:
- ^[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter**^[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
15.6"	FHD (1920x1080)	None	TN	250nits	Anti-glare	16:9	500:1	45% NTSC	45°/45°/15°/35°
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
15.6"	FHD (1920x1080)	None	IPS[2]	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/85°/85°

Touchscreen

Non-touch

Notes:

[1] Display with FHD 100% sRGB is NOT available in EMEA.

[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 69 x 100 mm (2.72 x 3.94 inches)

Mechanical

Dimensions (WxDxH)[1]

365 x 240 x 18.9 mm (14.37 x 9.45 x 0.74 inches)

Weight[2]

Starting at 1.78 kg (3.92 lbs)

Case Color**

- Black
- Mineral metallic[3]

Case Material

Aluminium (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Mineral metallic case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek RTL8111H-CG, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth^{**}[1]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[6]
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [3], [4] Wi-Fi 6 full features might be limited by country-level restrictions.

[5], [6], [7] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 1.4b
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 2.0
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.2)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E15 Gen 4 \(AMD\)](#)

SECURITY & PRIVACY

Security

Security Chip^{**}

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light (Software Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



AMD



AMD



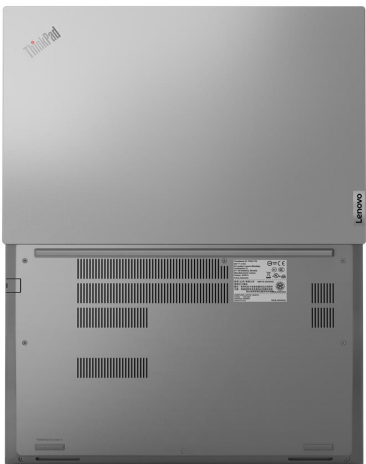
AMD



AMD

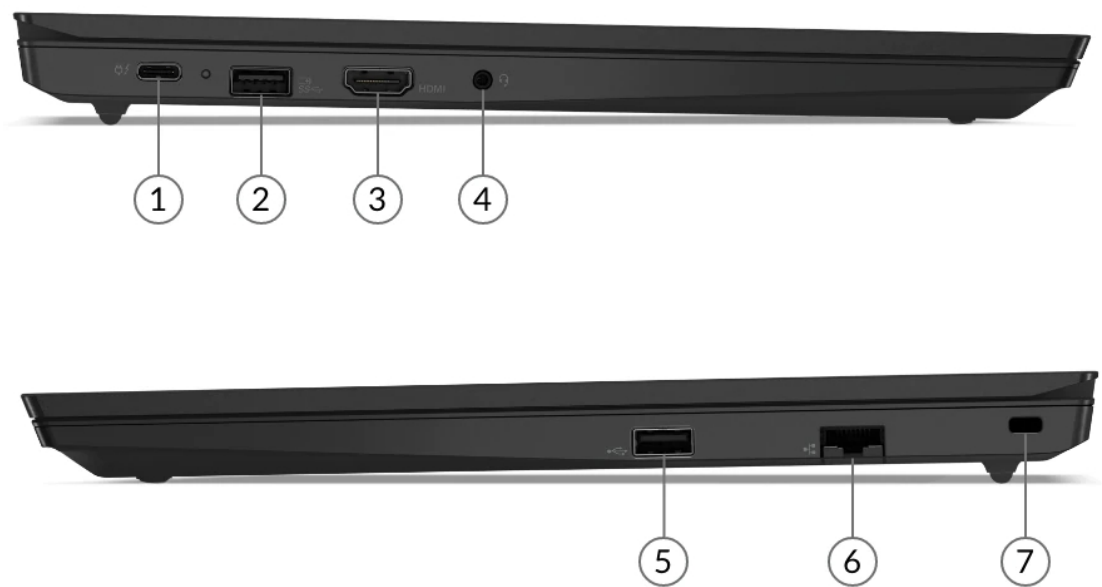


AMD



AMD

OVERVIEW



1. Thunderbolt 4	5. USB 2.0
2. USB 3.2 Gen 1 (Always On)	6. Ethernet (RJ-45)
3. HDMI	7. Kensington Security Slot
4. Headphone / microphone combo jack (3.5mm)	

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics ^[2]
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics ^[3]
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[4]
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics ^[5]

Notes:

- ^[1] i5-1240p and i7-1260P are NOT available in EMEA.
- ^[2], ^[3], ^[4], ^[5] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- ^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- ^[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	-	DirectX 12

Notes:

- ^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

- Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and Thunderbolt™)
- HDMI supports up to 3840x2160@60Hz
 - Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory^[1]
• Up to 32GB DDR4-3200
• Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots**
• One DDR4 SO-DIMM slot
• One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type
DDR4-3200

Notes:
^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}
Up to two drives, 2x M.2 SSD
• M.2 2242 SSD up to 1TB

Storage Slot
Two M.2 slots
• One M.2 2242 PCIe® 3.0 x4 slot
• One M.2 2242 PCIe 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:
^[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
^[2] The system supports dual SSD via two M.2 slots, but Lenovo only offers one SSD configuration, another SSD slot for user self-extension.

Removable Storage

Optical
None
Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC3287 codec
Speakers
Stereo speakers, 2W x2, Dolby® Audio™, audio by HARMAN
Microphone
Dual-microphone array, near-field
Camera**
• FHD 1080p + IR hybrid, with privacy shutter, fixed focus
• FHD 1080p, with privacy shutter, fixed focus
• HD 720p, with privacy shutter, fixed focus

Battery

Battery
ThinkPad E15 Gen 4 (Intel) - July 27 2023

**

- Integrated Li-Polymer 45Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery

Max Battery Life^[1]

- Models with 45Wh battery:
MobileMark® 2018: 8.0 hr
JEITA 2.0: 12.6 hr
Local video (1080p) playback@150nits: 11.1 hr
- Models with 57Wh battery:
MobileMark 2018: 10.8 hr
MobileMark 25: 9.9 hr
JEITA 2.0: 15.6 hr
Local video (1080p) playback@150nits: 14.6 hr

Notes:

^[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter^{**[1]}

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

^[1] AC adapter offerings depend on the country.

DESIGN

Display

Display^{**[1]}

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
15.6"	FHD (1920x1080)	None	TN	250nits	Anti-glare	16:9	500:1	45% NTSC	45°/45°/15°/35°
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
15.6"	FHD (1920x1080)	Multi-touch	IPS ^[2]	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
15.6"	FHD (1920x1080)	None	IPS ^[3]	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/85°/85°

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1] Multi-touch panel is only for special bid in EMEA.
^[2], ^[3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 69 x 100 mm (2.72 x 3.94 inches)

Mechanical**Dimensions (WxDxH)^[1]**

365 x 240 x 18.9 mm (14.37 x 9.45 x 0.74 inches)

Weight^[2]

Starting at 1.7 kg (3.75 lbs)

Case Color**

- Black
- Mineral metallic^[3]

Case Material

Aluminium (top), PC-ABS (bottom)

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

^[3] Mineral metallic case is NOT available in EMEA.

CONNECTIVITY**Network****Ethernet**

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®^[1]**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[6]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

^[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

^[2], ^[4], ^[5] Wi-Fi 6 full features might be limited by country-level restrictions.

^[3], ^[6], ^[7] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

- 1x USB 2.0
- 1x USB 3.2 Gen 1 (Always On)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E15 Gen 4 \(Intel\)](#)

SECURITY & PRIVACY

Security

Security Chip**

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

Lenovo 15.6" laptop casual toplayer, polyester

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

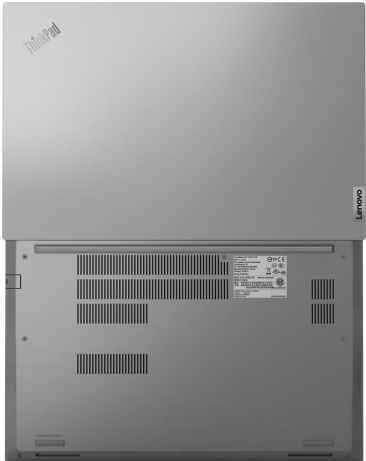
TÜV Rheinland® Low Blue Light (Software Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without





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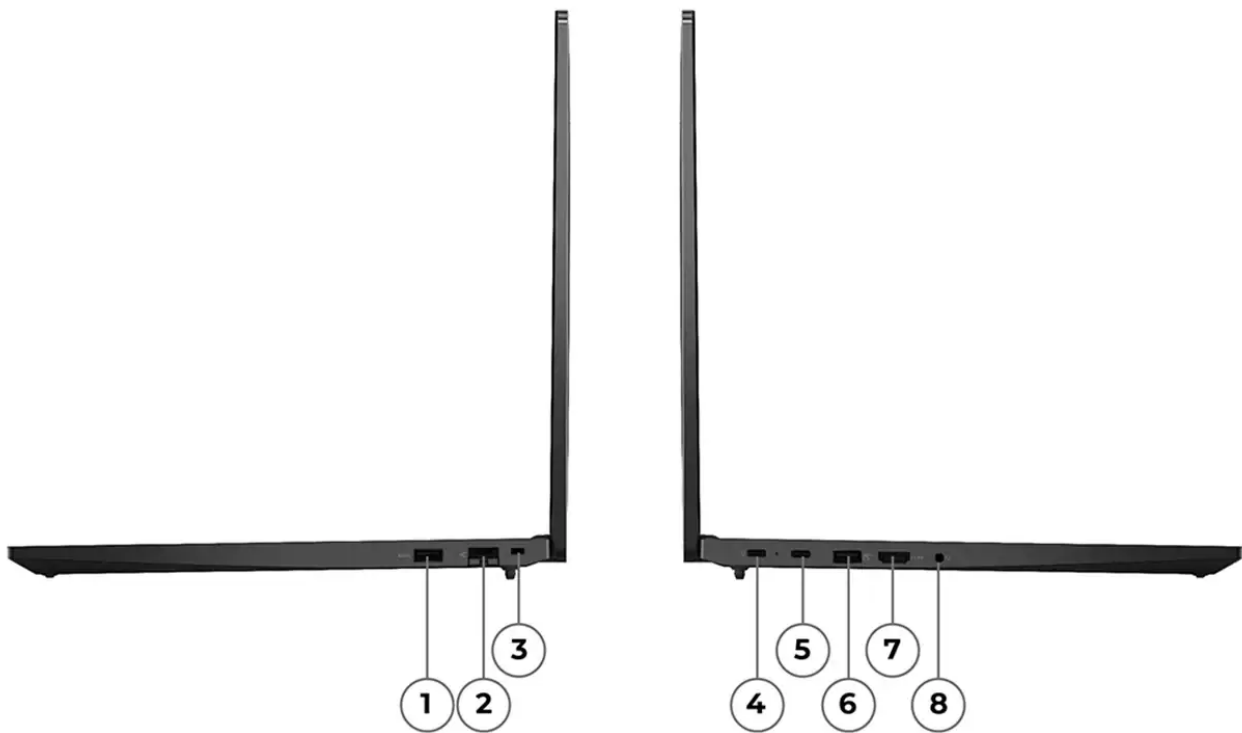


intel



intel

OVERVIEW



1. USB 3.2 Gen 1	5. USB-C 3.2 Gen 2
2. Ethernet (RJ-45)	6. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	7. HDMI
4. USB-C 3.2 Gen 1	8. Headphone / microphone combo jack (3.5mm)

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 7330U	4	8	2.3GHz	4.3GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 7530U	6	12	2.0GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 7730U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64^[1]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 4096x2160@30Hz
- USB-C supports up to 5120x2160@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2242 SSD up to 512GB
- M.2 2280 SSD up to 1TB

Storage Slot

- Two M.2 slots
- One M.2 2242 PCIe® 3.0 x4 slot
 - One M.2 2280 PCIe 3.0 x4 slot

Storage Type^{***[2]}

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0 x4 due to AMD platform limitations.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Synaptic® CX11880 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, Dolby Voice

Camera^{**}

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery^{**}

- Integrated Li-Polymer 47Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 14.45 hr @200nits
JEITA 2.0: up to 20.68 hr @150nits
Local video playback: up to 19.13 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 12.03 hr @200nits
JEITA 2.0: up to 16.71 hr @150nits
Local video playback: up to 15.25 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 12.38 hr @200nits
JEITA 2.0: up to 14.37 hr @150nits
Local video playback: up to 15.2 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 7730U, 8GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 7530U, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA (non-touch), AMD Ryzen 7 7730U, 8GB DDR4, Win 11, 47Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), JEITA 2.0, continuous 1080p

local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	85°/85°/85°/85°	Eyesafe® Certified 2.0
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	85°/85°/85°/85°	Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 68 x 115 mm (2.68 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

Starting at 356.1 x 247.7 x 19.85 mm (14.02 x 9.75 x 0.78 inches)

Weight[2]

Models	Weight
--------	--------

Aluminium (top), PC-ABS (bottom) models	Starting at 1.77 kg (3.90 lbs)
Aluminium (top), aluminium (bottom) models	Starting at 1.81 kg (3.99 lbs)

Case Color

Graphite black

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek® RTL8111H-CG, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**[1]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[2]
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card[3]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[4]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[5]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card[6]
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

- [1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- [2], [3], [4] Wi-Fi 6 full features might be limited by country-level restrictions.
- [5], [6], [7] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 1.4b
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
- USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E16 Gen 1 \(AMD\)](#)

SECURITY & PRIVACY

Security

Security Chip**

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

25% PCC recycled plastic used in the battery
30% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in standard 65W adapter
Low-temperature solder

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)
- (Optional) TÜV Rheinland Low Blue Light (Software Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

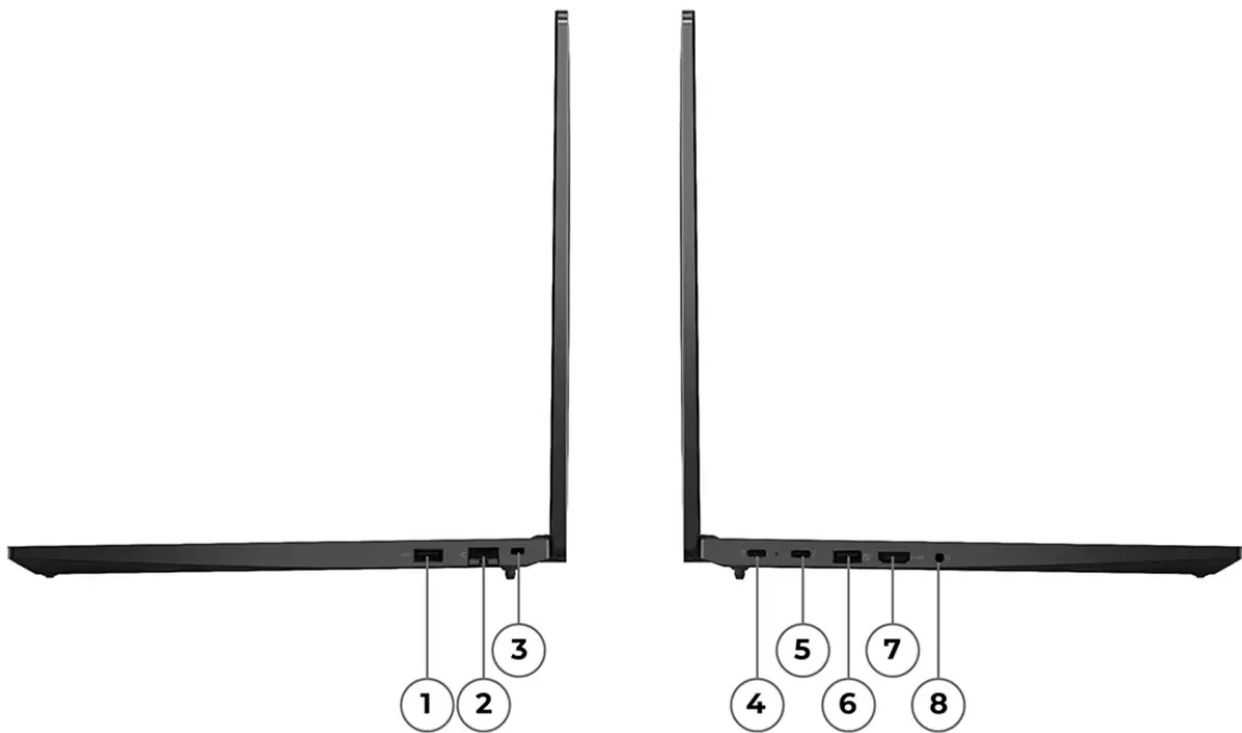


AMD



AMD

OVERVIEW



1. USB 2.0	5. Thunderbolt 4
2. Ethernet (RJ-45)	6. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	7. HDMI
4. USB-C 3.2 Gen 2	8. Headphone / microphone combo jack (3.5mm)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics ^[1]
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics ^[2]
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i5-13500H	12 (4 P-core + 8 E-core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics ^[3]
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics ^[4]
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics ^[5]
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel Iris Xe Graphics ^[6]

Notes:

[1], [2], [3], [4], [5], [6] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	-	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 4096x2160@60Hz
- USB-C supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x2160@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2242 SSD up to 1TB

Storage Slot

Two M.2 slots

- One M.2 2242 PCIe® 3.0 x4 slot
- One M.2 2242 PCIe 4.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] M.2 PCIe 4.0 x4 SSD in the M.2 PCIe 3.0 x4 slot is downgraded to PCIe 3.0 x4 performanc.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Synaptic® CX11880 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus

- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 47Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 10.78 hr @200nits
MobileMark 25: up to 7.36 hr with 731 performance score @250nits
JEITA 2.0: up to 13.9 hr @150nits
Local video playback: up to 12.6 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 7.5 hr @200nits
MobileMark 25: up to 6.1 hr with 720 performance score @250nits
JEITA 2.0: up to 12.9 hr @150nits
Local video playback: up to 11.9 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 7.95 hr @200nits
MobileMark 25: up to 6.16 hr with 781 performance score @250nits
JEITA 2.0: up to 13 hr @150nits
Local video playback: up to 11 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i3-1315U, 8GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), Intel i5-1340P, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: WQXGA (non-touch), Intel i7-1355U, 40GB DDR4, NVIDIA Geforce MX550, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)

16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	TÜV Low Blue Light (Software)
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	85°/85°/85°/85°	Eyesafe® Certified 2.0
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	85°/85°/85°/85°	Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 68 x 115 mm (2.68 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Starting at 356.1 x 247.7 x 19.85 mm (14.02 x 9.75 x 0.78 inches)

Weight^[2]

Models	Weight
Aluminium (top), PC-ABS (bottom) models	Starting at 1.77 kg (3.90 lbs)
Aluminium (top), aluminium (bottom) models	Starting at 1.81 kg (3.99 lbs)

Case Color

Graphite black

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Realtek® Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]

- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[6]
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[7]

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [4], [5] Wi-Fi 6 full features might be limited by country-level restrictions.

[3], [6], [7] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 2.0
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® E16 Gen 1 \(Intel\)](#)

SECURITY & PRIVACY**Security****Security Chip****

- Firmware TPM 2.0 integrated in SoC
- Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year mail-in service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

25% PCC recycled plastic used in the battery
30% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in standard 65W adapter
Low-temperature solder

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo 15.6" laptop casual toploader, polyester, black
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- FSC certified package
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)
- (Optional) TÜV Rheinland Low Blue Light (Software Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Nano-SIM card slot *	6. USB 3.2 Gen 1 (Always On)
2. USB-C 3.2 Gen 2	7. USB-C 3.2 Gen 2
3. USB 3.2 Gen 1	8. Kensington Nano Security Slot
4. Headphone / microphone combo jack (3.5mm)	9. Smart card reader *
5. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 5425U	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 5625U ^[1]	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 5 PRO 5675U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 5825U ^[2]	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 5875U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Notes:

- ^[1] AMD Ryzen 5 5625U is for special bid in EMEA.
^[2] AMD Ryzen 7 5825U is for special bid in EMEA.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- ^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
^[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-3200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to AMD platform limitations.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 9.8 hr with 626 performance score @200nits
JEITA 2.0: up to 11.3 hr @150nits
Local video playback: up to 11.2 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 9.6 hr with 612 performance score @200nits
JEITA 2.0: up to 11.8 hr @150nits
Local video playback: up to 11.6 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 9.3 hr with 589 performance score @200nits
JEITA 2.0: up to 12.0 hr @150nits
Local video playback: up to 12.1 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (touch), AMD Ryzen 7 PRO 5875U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (non-touch), AMD Ryzen 5 5625U, 16GB DDR4, Win 11, 46Wh battery, best power

efficiency power mode
Alternate configuration 3: WUXGA (non-touch), AMD Ryzen 3 5425U, 8GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[2]
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[3]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[4]
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[5]
- No power adapter[6]

Notes:
[1] AC adapter offerings depend on the country.
[2], [3] 45W USB-C AC adapter is NOT available in EMEA.
[4], [5] 65W USB-C slim AC adapter is NOT available in EMEA.
[6] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	500nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	ThinkPad® Privacy Guard

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:
[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical**Dimensions (WxDxH)^[1]**

305 x 218 x 17.3 mm (12.0 x 8.58 x 0.68 inches)

Weight^[2]

Starting at 1.25 kg (2.76 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet^[1]**

No onboard Ethernet

WLAN + Bluetooth®^{[2][3]}**

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[5]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[6]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Qualcomm NFA-725A is for special bid only in EMEA.

[4], [5] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[6] CAT16 is NOT available in EMEA.

Ports^[1]**Standard Ports**

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1

- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad L13 Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE**Warranty^[1]****Base Warranty^{**}**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Sustainability****Material**

50% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment**Temperature^[1]**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES**Bundled Accessories****Bundled Accessories^{***}**

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD



AMD



AMD

OVERVIEW



1. Nano-SIM card slot *	6. USB 3.2 Gen 1 (Always On)
2. Thunderbolt 4	7. USB-C 3.2 Gen 2
3. USB 3.2 Gen 1	8. Kensington Nano Security Slot
4. Headphone / microphone combo jack (3.5mm)	9. Smart card reader *
5. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1215U ^[1]	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U ^[2]	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U ^[3]	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics

Notes:

- [1] i3-1215U is NOT available in EMEA.
- [2] i5-1235U is NOT available in EMEA.
- [3] i7-1255U is NOT available in EMEA.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- [2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX 12.1

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-3200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 8.9 hr with 629 performance score @200nits
JEITA 2.0: up to 14.3 hr @150nits
Local video playback: up to 11.9 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 8.7 hr with 622 performance score @200nits
JEITA 2.0: up to 13.7 hr @150nits
Local video playback: up to 11.2 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 8.2 hr with 704 performance score @200nits
JEITA 2.0: up to 13.0 hr @150nits
Local video playback: up to 11.0 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i3-1215U, 8GB DDR4, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (non-touch), Intel i5-1245U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (non-touch), Intel i7-1265U, 32GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**[1][2]
- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[3]
 - 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[4]
 - 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[5]
 - 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[6]
 - No power adapter[7]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only
45W USB-C AC adapter and 65W USB-C slim AC adapter are NOT available in EMEA.
[3], [4] 45W USB-C AC adapter is NOT available in EMEA.
[5], [6] 65W USB-C slim AC adapter is NOT available in EMEA.
[7] No power adapter is for special bid only.

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	500nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	ThinkPad® Privacy Guard

- Touchscreen
- On-cell multi-touch, supports 10-point touch
 - Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

305 x 218 x 17.3 mm (12.0 x 8.58 x 0.68 inches)

Weight^[2]

Starting at 1.26 kg (2.78 lbs)

Case Color**

- Storm grey^[3]
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Storm grey case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®**^[2]

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[5]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6 full features might be limited by country-level restrictions.

[4] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[5] Fibocom L860-GL CAT16 is special bid only in EMEA.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Optional Ports^{***}

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad L13 Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable^{***}

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password

- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Nano-SIM card slot *	6. USB 3.2 Gen 1 (Always On)
2. USB-C 3.2 Gen 2	7. USB-C 3.2 Gen 2
3. USB 3.2 Gen 1	8. Kensington Nano Security Slot
4. Headphone / microphone combo jack (3.5mm)	9. Smart card reader *
5. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 7330U	4	8	2.3GHz	4.3GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 PRO 7530U	6	12	2.0GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 7730U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-3200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0 x4 due to AMD platform limitations.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 10.65 hr with 574 performance score @250nits
JEITA 2.0: up to 15.16 hr @150nits
Local video playback: up to 13.65 hr @150nits

Alternate configuration 2
MobileMark 25: up to 9.12 hr with 546 performance score @250nits
JEITA 2.0: up to 12.59 hr @150nits
Local video playback: up to 11.79 hr @150nits

Alternate configuration 3
MobileMark 25: up to 9.06 hr with 503 performance score @250nits
JEITA 2.0: up to 13.14 hr @150nits
Local video playback: up to 12.13 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 PRO 7730U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (non-touch), AMD Ryzen 5 7530U PRO, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA (touch), AMD Ryzen 3 7330U, 8GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

305 x 218 x 17.23 mm (12.0 x 8.58 x 0.68 inches)

Weight[2]

Starting at 1.26 kg (2.78 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth^[2]

AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L13 Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD



AMD



AMD

OVERVIEW



1. Nano-SIM card slot *	6. USB 3.2 Gen 1 (Always On)
2. Thunderbolt 4	7. USB-C 3.2 Gen 2
3. USB 3.2 Gen 1	8. Kensington Nano Security Slot
4. Headphone / microphone combo jack (3.5mm)	9. Smart card reader *
5. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U Series Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX 12.1

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type^[1]

LPDDR5-4800

Notes:

[1] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 10.61 hr with 621 performance score @250nits
JEITA 2.0: up to 20.03 hr @150nits
Local video playback: up to 16.71 hr @150nits

Alternate configuration 2
MobileMark 25: up to 10.16 hr with 705 performance score @250nits
JEITA 2.0: up to 16.21 hr @150nits
Local video playback: up to 14.9 hr @150nits

Alternate configuration 3
MobileMark 25: up to 9.6 hr with 709 performance score @250nits
JEITA 2.0: up to 14.21 hr @150nits
Local video playback: up to 12.9 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i3-1315U, 8GB LPDDR5, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), Intel i5-1345U, 16GB LPDDR5, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (touch), Intel i7-1365U, 32GB LPDDR5, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:
[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:
[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight

- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical**Dimensions (WxDxH)^[1]**

305 x 218 x 17.23 mm (12.0 x 8.58 x 0.68 inches)

Weight^[2]

Starting at 1.26 kg (2.78 lbs)

Case Color^{}**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet^[1]**

No onboard Ethernet

WLAN + Bluetooth^{}**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[3]

WWAN^{}**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6 full features might be limited by country-level restrictions.

Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]**Standard Ports**

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L13 Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Nano-SIM card slot *	6. HDMI
2. USB-C 3.2 Gen 2	7. USB 3.2 Gen 1 (Always On)
3. USB 3.2 Gen 1	8. USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	9. Kensington Nano Security Slot
5. Pen slot *	10. Smart card reader *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 5425U	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 5625U ^[1]	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 5 PRO 5675U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 5825U ^[2]	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 5875U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Notes:

- ^[1] AMD Ryzen 5 5625U is for special bid in EMEA.
- ^[2] AMD Ryzen 7 5825U is for special bid in EMEA.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- ^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- ^[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-3200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to AMD platform limitations.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front FHD 1080p, with privacy shutter, fixed focus
- Front FHD 1080p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front HD 720p, with privacy shutter, fixed focus
- Front HD 720p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 9.8 hr with 628 performance score @200nits

JEITA 2.0: up to 11.7 hr @150nits

Local video playback: up to 11.5 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 9.7 hr with 623 performance score @200nits

JEITA 2.0: up to 12.1 hr @150nits

Local video playback: up to 12.1 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 9.4 hr with 590 performance score @200nits

JEITA 2.0: up to 12.5 hr @150nits

Local video playback: up to 12.5 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (touch), AMD Ryzen 7 PRO 5875U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 5625U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (touch), AMD Ryzen 3 5425U, 8GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[2]
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[3]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[4]
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[5]

Notes:

- [1] AC adapter offerings depend on the country.
[2], [3] 45W USB-C AC adapter is NOT available in EMEA.
[4], [5] 65W USB-C slim AC adapter is NOT available in EMEA.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare, anti-smudge	16:10	1000:1	72% NTSC	85°/85°/85°/85°	ThinkPad® Privacy Guard

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

- Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable
- No pen[1]

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Notes:

[1] Customer needs to purchase an external pen separately.

Mechanical

Dimensions (WxDxH)^[1]

305 x 218 x 17.1 mm (12.0 x 8.58 x 0.67 inches)

Weight^[2]

Starting at 1.31 kg (2.89 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®**^{[2][3]}

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[5]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[4] Qualcomm NFA-725A is for special bid only in EMEA.

[5] CAT16 is NOT available in EMEA.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad L13 Yoga® Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter

- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter

- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

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AMD



AMD



AMD



AMD



AMD



AMD

OVERVIEW



1. Nano-SIM card slot *	6. HDMI
2. Thunderbolt 4	7. USB 3.2 Gen 1 (Always On)
3. USB 3.2 Gen 1	8. USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	9. Kensington Nano Security Slot
5. Pen slot *	10. Smart card reader *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1215U ^[1]	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U ^[2]	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U ^[3]	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics

Notes:

- [1] i3-1215U is NOT available in EMEA.
- [2] i5-1235U is NOT available in EMEA.
- [3] i7-1255U is NOT available in EMEA.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- [2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX 12.1

Monitor Support

Monitor Support

- Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)
- HDMI supports up to 3840x2160@60Hz
 - USB-C supports up to 5120x3200@60Hz
 - Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-3200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front FHD 1080p, with privacy shutter, fixed focus
- Front FHD 1080p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front HD 720p, with privacy shutter, fixed focus
- Front HD 720p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 8.6 hr with 733 performance score @200nits
JEITA 2.0: up to 13.5 hr @150nits
Local video playback: up to 11.6 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 8.4 hr with 703 performance score @200nits

ThinkPad L13 Yoga Gen 3 (Intel)

JEITA 2.0: up to 13.2 hr @150nits
Local video playback: up to 10.9 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 8.0 hr with 760 performance score @200nits
JEITA 2.0: up to 12.9 hr @150nits
Local video playback: up to 10.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (touch), Intel i3-1215U, 8GB DDR4, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), Intel i5-1245U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (touch), Intel i7-1265U, 32GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[2]
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[3]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[4]
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[5]

Notes:

[1] AC adapter offerings depend on the country.
[2], [3] 45W USB-C AC adapter is NOT available in EMEA.
[4], [5] 65W USB-C slim AC adapter is NOT available in EMEA.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare, anti-smudge	16:10	1000:1	72% NTSC	85°/85°/85°/85°	ThinkPad® Privacy Guard

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

- Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable
- No pen^[1]

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Notes:

[1] Customer needs to purchase an external pen separately.

Mechanical

Dimensions (WxDxH)^[1]

305 x 218 x 17.1 mm (12.0 x 8.58 x 0.67 inches)

Weight^[2]

Starting at 1.32 kg (2.92 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®**^[2]

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[5]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

- [1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.
- [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- [3] Wi-Fi 6 full features might be limited by country-level restrictions.
- [4] Wi-Fi 6E full features might be limited by country-level restrictions.
Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.
- [5] Fibocom L860-GL CAT16 is special bid only in EMEA.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Optional Ports^{***}

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad L13 Yoga® Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable^{***}

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip

- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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intel



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OVERVIEW



1. Nano-SIM card slot *	6. HDMI
2. USB-C 3.2 Gen 2	7. USB 3.2 Gen 1 (Always On)
3. USB 3.2 Gen 1	8. USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	9. Kensington Nano Security Slot
5. Pen slot *	10. Smart card reader *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 7330U	4	8	2.3GHz	4.3GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 PRO 7530U	6	12	2.0GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 7730U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- ^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- ^[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

- Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)
- HDMI supports up to 3840x2160@60Hz
 - USB-C supports up to 5120x2880@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-3200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0 x4 due to AMD platform limitations.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front FHD 1080p, with privacy shutter, fixed focus
- Front FHD 1080p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front HD 720p, with privacy shutter, fixed focus
- Front HD 720p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 10.91 hr with 572 performance score @250nits
JEITA 2.0: up to 15.07 hr @150nits
Local video playback: up to 13.57 hr @150nits

Alternate configuration 2
MobileMark 25: up to 9.65 hr with 544 performance score @250nits
JEITA 2.0: up to 13.05 hr @150nits
Local video playback: up to 12.28 hr @150nits

Alternate configuration 3
MobileMark 25: up to 9.29 hr with 508 performance score @250nits
JEITA 2.0: up to 13.5 hr @150nits
Local video playback: up to 12.71 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (touch), AMD Ryzen 7 PRO 7730U, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 7530U PRO, 16GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA (touch), AMD Ryzen 3 7330U, 8GB DDR4, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:
^[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	400nits	Anti-glare, anti-smudge	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:
^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

- Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable
- No pen^[1]

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

[1] Customer needs to purchase an external pen separately.

Mechanical

Dimensions (WxDxH)^[1]

305 x 218 x 17.06 mm (12.0 x 8.58 x 0.67 inches)

Weight^[2]

Starting at 1.31 kg (2.89 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®^[2]

AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader

- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L13 Yoga® Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without packaging: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)

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AMD



AMD



AMD



AMD



AMD



AMD

OVERVIEW



1. Nano-SIM card slot *	6. HDMI
2. Thunderbolt 4	7. USB 3.2 Gen 1 (Always On)
3. USB 3.2 Gen 1	8. USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	9. Kensington Nano Security Slot
5. Pen slot *	10. Smart card reader *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U Series Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64^[2]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

[2] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX 12.1

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type^[1]

LPDDR5-4800

Notes:

[1] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- Front FHD 1080p + IR hybrid, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front FHD 1080p, with privacy shutter, fixed focus
- Front FHD 1080p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus
- Front HD 720p, with privacy shutter, fixed focus
- Front HD 720p, with privacy shutter, fixed focus; rear 5.0-megapixel, autofocus

Battery

Battery

Integrated Li-Polymer 46Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 10.76 hr with 628 performance score @250nits

JEITA 2.0: up to 20.83 hr @150nits

Local video playback: up to 16.23 hr @150nits

Alternate configuration 2

MobileMark 25: up to 10.25 hr with 569 performance score @250nits

JEITA 2.0: up to 15.33 hr @150nits

Local video playback: up to 13.3 hr @150nits

Alternate configuration 3

MobileMark 25: up to 9.35 hr with 726 performance score @250nits

JEITA 2.0: up to 13.28 hr @150nits

Local video playback: up to 11.57 hr @150nits

Notes:

- [1] Configuration 1 (max battery life): WUXGA (touch), Intel i3-1315U, 8GB LPDDR5, Win 11, 46Wh battery, best power efficiency power mode
- Alternate configuration 2: WUXGA (touch), Intel i5-1345U, 16GB LPDDR5, Win 11, 46Wh battery, best power efficiency power mode
- Alternate configuration 3: WUXGA (touch), Intel i7-1365U, 32GB LPDDR5, Win 11, 46Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

- [1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	400nits	Anti-glare, anti-smudge	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

- Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and

- rechargeable
- No pen^[1]

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Notes:

[1] Customer needs to purchase an external pen separately.

Mechanical

Dimensions (WxDxH)^[1]

305 x 218 x 17.06 mm (12.0 x 8.58 x 0.67 inches)

Weight^[2]

Starting at 1.32 kg (2.92 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material

Aluminium (top), GFRP (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6 full features might be limited by country-level restrictions.

Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L13 Yoga® Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password

- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to USB-C Cable 2m
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

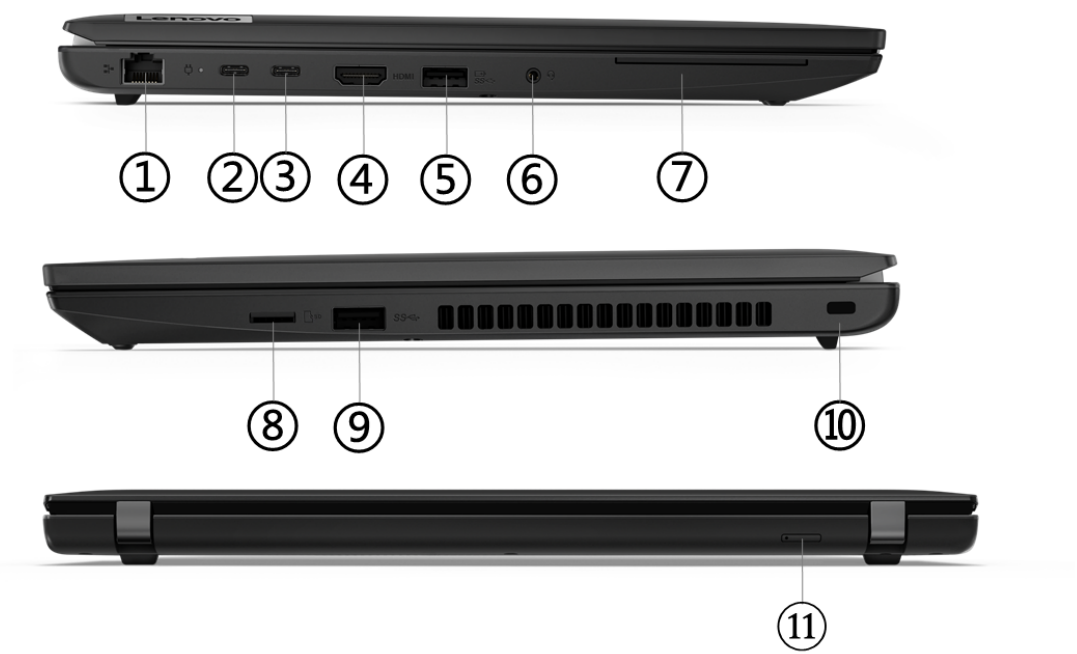
Other Certifications

(Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 1	8. microSD card reader
3. USB-C 3.2 Gen 2	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot (WWAN model) *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 5425U[2]	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 3 PRO 5475U	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon Graphics
AMD Ryzen 5 5625U[3]	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 5 PRO 5675U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 5825U[4]	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 5875U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Notes:

- [1] AMD Ryzen 3 5425U, Ryzen 5 5625U, and Ryzen 7 5825U are for special bid in EMEA.
- [2] AMD Ryzen 3 5425U is for special bid in EMEA.
- [3] AMD Ryzen 5 5625U is for special bid in EMEA.
- [4] AMD Ryzen 7 5825U is for special bid in EMEA.

Operating System

Operating System**

- Linux[1]
- Ubuntu Linux[2]
- Windows® 11 DG Windows 10 Pro 64[3]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- [3] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 3.0 x4	128GB	-
M.2 2242 SSD	PCIe NVMe, PCIe 4.0 x4 ^[2]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to AMD platform limitations.

Removable Storage

Optical

None

Card Reader

microSD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 63Wh battery

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 12.6 hr with 717 performance score @200nits

JEITA 2.0: up to 15.4 hr @150nits

Local video playback: up to 13.7 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 11.1 hr with 633 performance score @200nits

JEITA 2.0: up to 14.3 hr @150nits

Local video playback: up to 12.3 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 10.1 hr with 577 performance score @200nits
JEITA 2.0: up to 13.3 hr @150nits
Local video playback: up to 12.0 hr @150nits

Notes:

[1] Configuration 1 (max battery life): HD (non-touch), AMD Ryzen 7 PRO 5875U, 8GB DDR4, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: FHD (touch), AMD Ryzen 5 PRO 5675U, 32GB DDR4, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: FHD (touch), AMD Ryzen 3 PRO 5475U, 64GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**[1]
- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[2]
 - 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[3]
 - 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[4]
 - 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[5]
 - No power adapter[6]

Notes:

[1] AC adapter offerings depend on the country.
[2], [3] 45W USB-C AC adapter is NOT available in EMEA.
[4], [5] 65W USB-C slim AC adapter is NOT available in EMEA.
[6] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	HD (1366x768)	None	TN	220nits	Anti-glare	16:9	500:1	45% NTSC	45°/45°/15°/35°	-
14"	FHD (1920x1080)	None	IPS[2]	250nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°	-
14"	FHD (1920x1080)	Multi-touch	IPS[3]	300nits	Anti-glare	16:9	1000:1	45% NTSC	85°/85°/85°/85°	-
14"	FHD (1920x1080)	None	IPS[4]	400nits	Anti-glare	16:9	1500:1	100% sRGB	85°/85°/85°/85°	Low power

- Touchscreen
- On-cell multi-touch, supports 10-point touch
 - Non-touch

Notes:

[1] Display with HD TN is for special bid in EMEA.
Display with FHD 100% sRGB is for special bid in EMEA.

[2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Aluminium (top), PC-CF (bottom) models	325.4 x 217 x 18.73 mm (12.81 x 8.54 x 0.74 inches)
Aluminium (top), PC-ABS (bottom) models	325.4 x 217 x 18.93 mm (12.81 x 8.54 x 0.75 inches)
PC-ABS (top), PC-CF (bottom) models	325.4 x 217 x 19.63 mm (12.81 x 8.54 x 0.77 inches)
PC-ABS (top), PC-ABS (bottom) models	325.4 x 217 x 19.83 mm (12.81 x 8.54 x 0.78 inches)

Weight^[2]

Starting at 1.39 kg (3.06 lbs)

Case Color

Thunder black

Case Material**

- Aluminium (top), PC-ABS (bottom)^[3]
- Aluminium (top), PC-CF (bottom)^[4]
- PC-ABS (top), PC-ABS (bottom)
- PC-ABS (top), PC-CF (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3], [4] Aluminium top cover is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Realtek RTL8111EPV (DASH models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN (non-DASH models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Qualcomm® Wi-Fi 6E QCNFA765, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication^[4]
- No support

Notes:

[1] Qualcomm QCNFA765 is NOT available in EMEA.

[2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[4] NFC is for special bid in EMEA.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x microSD card reader

Optional Ports^{***}

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L14 Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable^{***}

- Lenovo HDMI to DP Monitor Adapter
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

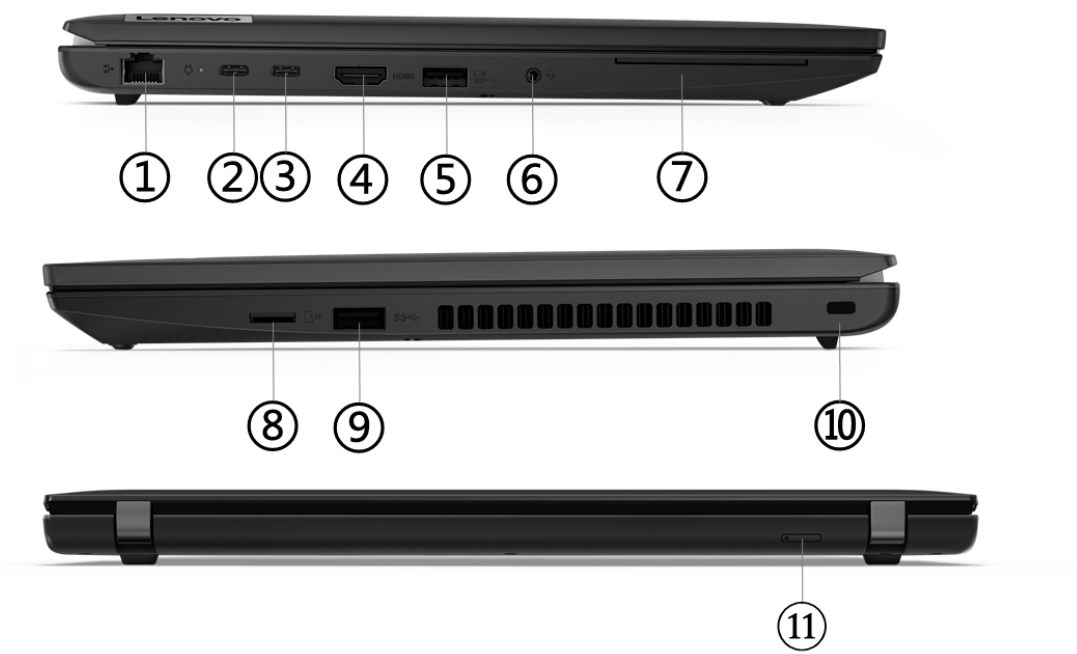


AMD



AMD

OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 1	8. microSD card reader
3. Thunderbolt 4	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold 8505	5 (1 P-core + 4 E-core)	6	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	8MB	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics[2]
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics[3]
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics[4]
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics[5]
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics[6]
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics[7]
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics[8]

Notes:

- [1] Intel P series processors are for special bid only in EMEA.
- [2], [3], [4], [5], [6], [7], [8] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Linux[1]
- Ubuntu Linux[2]
- Windows® 10 IoT Enterprise LTSC 2021[3]
- Windows 11 DG Windows 10 Pro 64[4]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- [3] Windows 10 IoT Enterprise LTSC 2021 is for special bid only.
- [4] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Card Reader

microSD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 63Wh battery

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 12.1 hr with 832 performance score @200nits

JEITA 2.0: up to 18.2 hr @150nits

Local video playback: up to 20.8 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 10.3 hr with 999 performance score @200nits

JEITA 2.0: up to 14.9 hr @150nits

Local video playback: up to 16.1 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 6.7 hr with 994 performance score @200nits

JEITA 2.0: up to 9.7 hr @150nits

Local video playback: up to 10.3 hr @150nits

Notes:

[1] Configuration 1 (max battery life): FHD (non-touch), Intel i3-1215U, 4GB DDR4, Win 10, 57Wh battery, best power efficiency power mode

Alternate configuration 2: FHD (touch), Intel i5-1250P, 16GB DDR4, Win 10, 57Wh battery, best power efficiency power mode

Alternate configuration 3: FHD (non-touch), Intel i7-1260P, 64GB DDR4, Win 10, 42Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^{[1][2]}

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[3]
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[4]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[5]
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[6]
- No power adapter^[7]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

45W USB-C AC adapter and 65W USB-C slim AC adapter are NOT available in EMEA.

[3], [4] 45W USB-C AC adapter is NOT available in EMEA.

[5], [6] 65W USB-C slim AC adapter is NOT available in EMEA.

[7] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	HD (1366x768)	None	TN	220nits	Anti-glare	16:9	500:1	45% NTSC	45°/45°/15°/35°	-
14"	FHD (1920x1080)	None	IPS ^[2]	250nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°	-
14"	FHD (1920x1080)	Multi-touch	IPS ^[3]	300nits	Anti-glare	16:9	1000:1	45% NTSC	85°/85°/85°/85°	-
14"	FHD (1920x1080)	None	IPS ^[4]	400nits	Anti-glare	16:9	1500:1	100% sRGB	85°/85°/85°/85°	Low power

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] Display with HD TN is for special bid in EMEA.
Display with FHD 100% sRGB is for special bid in EMEA.
[2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Aluminium (top), PC-CF (bottom) models	325.4 x 217 x 18.73 mm (12.81 x 8.54 x 0.74 inches)
Aluminium (top), PC-ABS (bottom) models	325.4 x 217 x 18.93 mm (12.81 x 8.54 x 0.75 inches)
PC-ABS (top), PC-CF (bottom) models	325.4 x 217 x 19.63 mm (12.81 x 8.54 x 0.77 inches)
PC-ABS (top), PC-ABS (bottom) models	325.4 x 217 x 19.83 mm (12.81 x 8.54 x 0.78 inches)

Weight^[2]

Starting at 1.39 kg (3.06 lbs)

Case Color

Thunder black

Case Material^{**}

- Aluminium (top), PC-ABS (bottom)^[3]
- Aluminium (top), PC-CF (bottom)^[4]
- PC-ABS (top), PC-ABS (bottom)
- PC-ABS (top), PC-CF (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
[3], [4] Aluminium top cover is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth[®]**^[1]

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Qualcomm[®] Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[5]
- Qualcomm Wi-Fi 6E QCNFA765, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[6]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[7]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication^[8]
- No support

Notes:

^[1] Qualcomm QCNFA725 and Qualcomm QCNFA765 are NOT available in EMEA.

^[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6 full features might be limited by country-level restrictions.

^[3], ^[4], ^[5], ^[6] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

^[7] CAT16 is NOT available in EMEA.

^[8] NFC is for special bid in EMEA.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4[®] 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x microSD card reader

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L14 Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to DP Monitor Adapter
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- Tile ready

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)

- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
25-30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.

- Feature with *** means that one or more offerings listed under the feature could be configured on selected

models.

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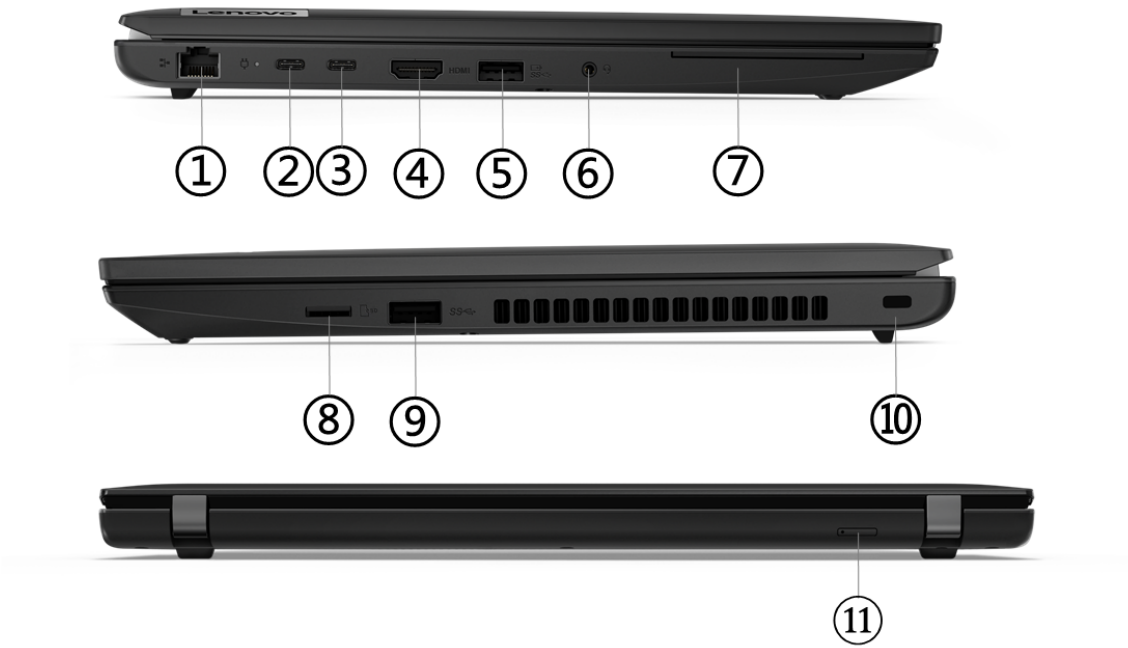


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OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 2	8. microSD card reader
3. USB-C 3.2 Gen 2	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot (WWAN model) *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 PRO 7330U	4	8	2.3GHz	4.3GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 PRO 7530U	6	12	2.0GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 7730U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system^[3]

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

[3] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0 x4 due to AMD platform limitations.

Removable Storage

Card Reader

microSD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 46.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 63Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 100W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 14.12 hr with 605 performance score @250nits
JEITA 2.0: up to 20.8 hr @150nits
Local video playback: up to 17.83 hr @150nits

Alternate configuration 2
MobileMark 25: up to 10.34 hr with 513 performance score @250nits
JEITA 2.0: up to 16.01 hr @150nits
Local video playback: up to 15.78 hr @150nits

Alternate configuration 3
MobileMark 25: up to 8.42 hr with 507 performance score @250nits
JEITA 2.0: up to 13.03 hr @150nits
Local video playback: up to 12.88 hr @150nits

Notes:

[1] Configuration 1 (max battery life): HD (non-touch), AMD Ryzen 7 PRO 7730U, 8GB DDR4, Win 11, 63Wh battery, best power efficiency power mode

Alternate configuration 2: FHD (touch), AMD Ryzen 5 PRO 7530U, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: FHD (touch), AMD Ryzen 5 PRO 7530U, 16GB DDR4, Win 11, 46.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p

local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

^[1] AC adapter offerings depend on the country.

^[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14"	HD (1366x768)	None	TN	220nits	Anti-glare	16:9	500:1	45% NTSC	60Hz	45°/45°/15°/35°	-
14"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	1000:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	FHD (1920x1080)	None	IPS ^[1]	400nits	Anti-glare	16:9	1500:1	72% NTSC	60Hz	85°/85°/85°/85°	Low power

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
--------	------------

Aluminium (top), PC-CF (bottom) models	325.4 x 217 x 18.73 mm (12.81 x 8.54 x 0.74 inches)
Aluminium (top), PC-ABS (bottom) models	325.4 x 217 x 18.93 mm (12.81 x 8.54 x 0.75 inches)
PC-ABS (top), PC-CF (bottom) models	325.4 x 217 x 19.63 mm (12.81 x 8.54 x 0.77 inches)
PC-ABS (top), PC-ABS (bottom) models	325.4 x 217 x 19.83 mm (12.81 x 8.54 x 0.78 inches)

Weight^[2]
Starting at 1.4 kg (3.09 lbs)

Case Color
Thunder black

- Case Material****
- Aluminium (top), PC-ABS (bottom)
 - Aluminium (top), PC-CF (bottom)
 - PC-ABS (top), PC-ABS (bottom)
 - PC-ABS (top), PC-CF (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet
Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN

- WLAN + Bluetooth**®
- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3, M.2 Card^[1]
 - No WLAN and Bluetooth

- WWAN****
- Wireless WAN upgradable to 4G (with antenna ready)
 - Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
 - Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
 - No support

SIM Card
No physical SIM card inbox

- NFC**
- Near Field Communication
 - No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10. 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation. Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

- Standard Ports**
- 1x Ethernet (RJ-45)
 - 1x HDMI 2.1, up to 4K/60Hz
 - 1x Headphone / microphone combo jack (3.5mm)
 - 1x USB 3.2 Gen 1
 - 1x USB 3.2 Gen 1 (Always On)
 - 1x microSD card reader

- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L14 Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
30% PCC recycled plastic used in bottom cover material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
45% PCC recycled plastic used in SIM tray
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

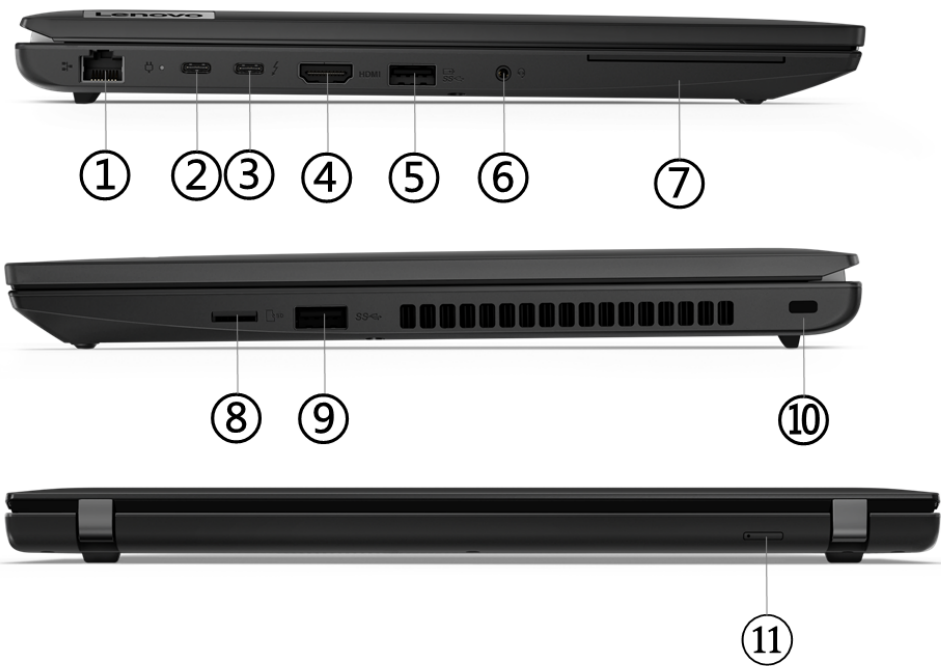


AMD



AMD

OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 2	8. microSD card reader
3. Thunderbolt 4	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® U-series or 13th Generation Intel U or P Series Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
U300	5 (1 P-core + 4 E-core)	6	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	8MB	Intel UHD Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics ^[2]
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics ^[3]
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[4]
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[5]
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics ^[6]
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics ^[7]
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics ^[8]
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics ^[9]

Notes:

- ^[1] Intel P series processors are for special bid only.
- ^{[2], [3], [4], [5], [6], [7], [8], [9]} Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64^[3]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- ^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
- ^[3] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1

NVIDIA® GeForce MX550 ^[2]	Discrete	2GB GDDR6	-	DirectX 12
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Notes:

- [1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.
- [2] NVIDIA GeForce MX550 is NOT available in EMEA.

Monitor Support

Monitor Support

- Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)
- HDMI supports up to 3840x2160@60Hz
 - USB-C supports up to 5120x3200@60Hz
 - Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB / 2TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Card Reader

microSD card reader

Multi-Media

Audio Chip

- Non-vPro® models: High Definition (HD) Audio, Realtek® ALC3287 codec
- vPro models: High Definition (HD) Audio, Senary SN6147 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 46.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 63Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 100W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 14.38 hr @250nits

JEITA 2.0: up to 27.39 hr @150nits

Local video playback: up to 28.77 hr @150nits

Alternate configuration 2

MobileMark 25: up to 9.35 hr @250nits

JEITA 2.0: up to 16.86 hr @150nits

Local video playback: up to 16.67 hr @150nits

Alternate configuration 3

MobileMark 25: up to 7.6 hr @250nits

JEITA 2.0: up to 15.38 hr @150nits

Local video playback: up to 30.01 hr @150nits

Notes:

[1] Configuration 1 (max battery life): FHD (non-touch), Intel i3-1315U, 8GB DDR4, Win 11, 63Wh battery, best power efficiency power mode

Alternate configuration 2: FHD (non-touch), Intel i5-1350P, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: FHD (touch), Intel i7-1360P, 64GB DDR4, NVIDIA Geforce MX550, Win 11, 63Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14"	HD (1366x768)	None	TN	220nits	Anti-glare	16:9	500:1	45% NTSC	60Hz	45°/45°/15°/35°	-
14"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	1000:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	FHD (1920x1080)	None	IPS ^[1]	400nits	Anti-glare	16:9	1500:1	72% NTSC	60Hz	85°/85°/85°/85°	Low power

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Aluminium (top), PC-CF (bottom) models	325.4 x 217 x 18.73 mm (12.81 x 8.54 x 0.74 inches)
Aluminium (top), PC-ABS (bottom) models	325.4 x 217 x 18.93 mm (12.81 x 8.54 x 0.75 inches)
PC-ABS (top), PC-CF (bottom) models	325.4 x 217 x 19.63 mm (12.81 x 8.54 x 0.77 inches)
PC-ABS (top), PC-ABS (bottom) models	325.4 x 217 x 19.83 mm (12.81 x 8.54 x 0.78 inches)

Weight^[2]

Starting at 1.4 kg (3.09 lbs)

Case Color

Thunder black

Case Material**

- Aluminium (top), PC-ABS (bottom)
- Aluminium (top), PC-CF (bottom)
- PC-ABS (top), PC-ABS (bottom)
- PC-ABS (top), PC-CF (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2, M.2 Card^[1]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3, M.2 Card^[2]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

^[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6 full features might be limited by country-level restrictions.

^[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x microSD card reader

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L14 Gen 4 \(Intel\)](#)

Monitor Cable**Monitor Cable*****

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
45% PCC recycled plastic used in SIM tray
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

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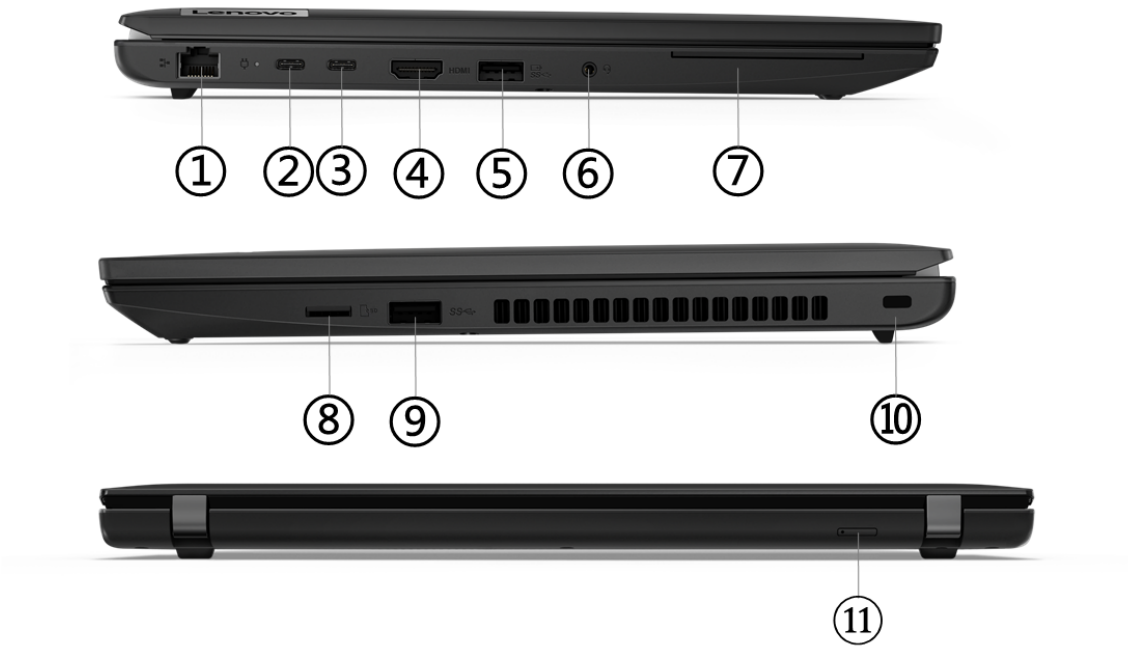


you.

- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 1	8. microSD card reader
3. USB-C 3.2 Gen 2	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot (WWAN model) *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 5425U ^[1]	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 3 PRO 5475U	4	8	2.7GHz	4.1GHz	2MB L2 / 8MB L3	AMD Radeon Graphics
AMD Ryzen 5 5625U ^[2]	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 5 PRO 5675U	6	12	2.3GHz	4.3GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 5825U ^[3]	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 5875U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Notes:

- [1] AMD Ryzen 3 5425U is for special bid in EMEA.
[2] AMD Ryzen 5 5625U is for special bid in EMEA.
[3] AMD Ryzen 7 5825U is for special bid in EMEA.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64^[3]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
[3] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type
DDR4-3200

Notes:
[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]
One drive, up to 1TB M.2 2242 SSD
Storage Slot
One M.2 2242 PCIe® 3.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 3.0 x4	128GB	-
M.2 2242 SSD	PCIe NVMe, PCIe 4.0 x4 ^[2]	256GB / 512GB / 1TB	Opal 2.0

Notes:
[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to AMD platform limitations.

Removable Storage

Optical
None
Card Reader
microSD card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC3287 codec
Speakers
Stereo speakers, 2W x2, Dolby® Audio™
Microphone
Dual-microphone array, far-field, Dolby Voice

Camera**
• FHD 1080p + IR hybrid, with privacy shutter, fixed focus
• FHD 1080p, with privacy shutter, fixed focus
• HD 720p, with privacy shutter, fixed focus

Battery

Battery**
• Integrated Li-Polymer 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
• Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
• Integrated Li-Polymer 63Wh battery

Battery Life^[1]
Configuration 1 (max battery life)
MobileMark® 2018: up to 11.1 hr with 721 performance score @200nits
JEITA 2.0: up to 14.7 hr @150nits
Local video playback: up to 13.3 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 10.2 hr with 661 performance score @200nits
JEITA 2.0: up to 13.4 hr @150nits
Local video playback: up to 13.1 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 9.5 hr with 619 performance score @200nits
JEITA 2.0: up to 12.6 hr @150nits
Local video playback: up to 12.9 hr @150nits

Notes:

- [1] Configuration 1 (max battery life): FHD (touch), AMD Ryzen 7 PRO 5875U, 8GB DDR4, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: FHD (touch), AMD Ryzen 5 PRO 5675U, 32GB DDR4, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: FHD (touch), AMD Ryzen 3 PRO 5475U, 64GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1][2]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[3]
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[4]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[5]
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz[6]
- No power adapter[7]

Notes:

- [1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.
In EMEA only 65W USB-C AC adapter is available.
[3], [4] 45W USB-C AC adapter is NOT available in EMEA.
[5], [6] 65W USB-C slim AC adapter is NOT available in EMEA.
[7] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
15.6"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
15.6"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical**Dimensions (WxDxH)^[1]**

360.2 x 237 x 19.93 mm (14.18 x 9.33 x 0.78 inches)

Weight^[2]

Starting at 1.76 kg (3.87 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet****

- Gigabit Ethernet, Realtek RTL8111EPV (DASH models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN (non-DASH models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®^[1]**

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Qualcomm® Wi-Fi 6E QCNFA765, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication^[4]
- No support

Notes:

[1] Qualcomm QCNFA765 is NOT available in EMEA.

[2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[4] NFC is for special bid in EMEA.

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x microSD card reader

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L15 Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to DP Monitor Adapter
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Mil-Spec Test**

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

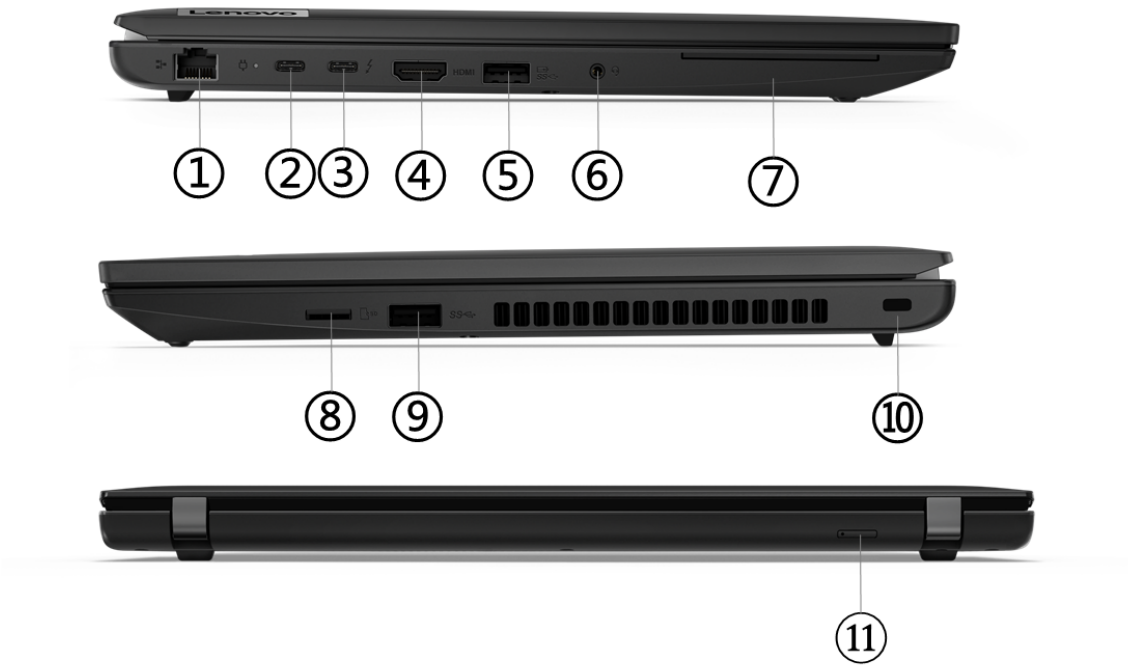


AMD



AMD

OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 1	8. microSD card reader
3. Thunderbolt 4	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold 8505	5 (1 P-core + 4 E-core)	6	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	8MB	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics ^[2]
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics ^[3]
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics ^[4]
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics ^[5]
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[6]
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics ^[7]
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics ^[8]

Notes:

^[1] Intel P series processors are for special bid only in EMEA.
^{[2], [3], [4], [5], [6], [7], [8]} Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021^[3]
- Windows 11 DG Windows 10 Pro 64^[4]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
^[3] Windows 10 IoT Enterprise LTSC 2021 is for special bid only.
^[4] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

None

Card Reader

microSD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus

- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 63Wh battery

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 11.1 hr with 825 performance score @200nits

JEITA 2.0: up to 16.2 hr @150nits

Local video playback: up to 16.3 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 9.6 hr with 1009 performance score @200nits

JEITA 2.0: up to 12.3 hr @150nits

Local video playback: up to 12.7 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 6.2 hr with 998 performance score @200nits

JEITA 2.0: up to 9.4 hr @150nits

Local video playback: up to 9.4 hr @150nits

Notes:

^[1] Configuration 1 (max battery life): FHD (touch), Intel i3-1215U, 4GB DDR4, Win 10, 57Wh battery, best power efficiency power mode

Alternate configuration 2: FHD (non-touch), Intel i5-1250P, 16GB DDR4, Win 10, 57Wh battery, best power efficiency power mode

Alternate configuration 3: FHD (touch), Intel i7-1260P, 64GB DDR4, Win 10, 42Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[2]
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[3]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[4]
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz^[5]
- No power adapter^[6]

Notes:

^[1] AC adapter offerings depend on the country.

^[2], ^[3] 45W USB-C AC adapter is NOT available in EMEA.

^[4], ^[5] 65W USB-C slim AC adapter is NOT available in EMEA.

^[6] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)
15.6"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°
15.6"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/85°/85°

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

360.2 x 237 x 19.93 mm (14.18 x 9.33 x 0.78 inches)

Weight^[2]

Starting at 1.76 kg (3.87 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[5]
- Qualcomm Wi-Fi 6E QCNFA765, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[6]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[7]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication^[8]
- No support

Notes:

[1] Qualcomm QCNFA725 and Qualcomm QCNFA765 are NOT available in EMEA.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6 full features might be limited by country-level restrictions.

[3], [4], [5], [6] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[7] CAT16 is NOT available in EMEA.

[8] NFC is for special bid in EMEA.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x microSD card reader

Optional Ports^{***}

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L15 Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable^{***}

- Lenovo HDMI to DP Monitor Adapter
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- Tile ready

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% PCC recycled plastic used in speaker enclosure
25-30% PCC recycled plastic used in the battery

95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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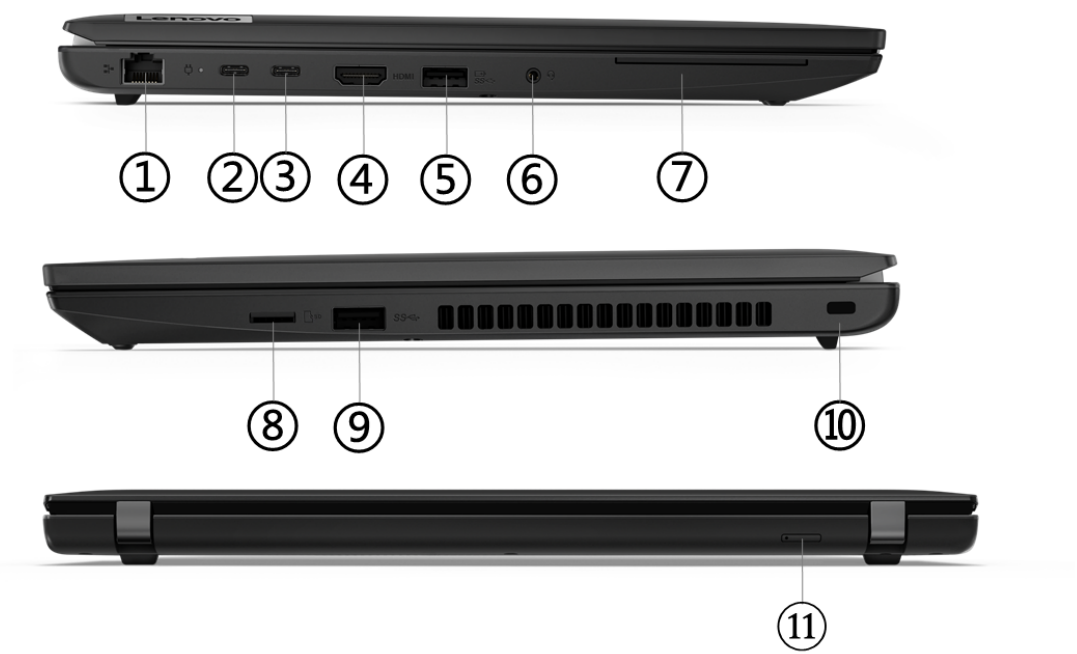


intel



intel

OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 2	8. microSD card reader
3. USB-C 3.2 Gen 2	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot (WWAN model) *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 3 PRO 7330U	4	8	2.3GHz	4.3GHz	2MB L2 / 8MB L3	AMD Radeon™ Graphics
AMD Ryzen 5 PRO 7530U	6	12	2.0GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon Graphics
AMD Ryzen 7 PRO 7730U	8	16	2.0GHz	4.5GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system^[3]

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

[3] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] The SSD with PCIe 4.0x4 is downgraded to closer to PCIe 3.0 x4 due to AMD platform limitations.

Removable Storage

Card Reader

microSD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 46.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 63Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 100W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 12.18 hr with 607 performance score @250nits
JEITA 2.0: up to 18.1 hr @150nits
Local video playback: up to 17.45 hr @150nits

Alternate configuration 2
MobileMark 25: up to 9.31 hr with 512 performance score @250nits
JEITA 2.0: up to 15.12 hr @150nits
Local video playback: up to 15.32 hr @150nits

Alternate configuration 3
MobileMark 25: up to 7.52 hr with 509 performance score @250nits
JEITA 2.0: up to 12.33 hr @150nits
Local video playback: up to 12.46 hr @150nits

Notes:

[1] Configuration 1 (max battery life): FHD (non-touch), AMD Ryzen 7 PRO 7730U, 8GB DDR4, Win 11, 63Wh battery, best power efficiency power mode

Alternate configuration 2: FHD (touch), AMD Ryzen 5 PRO 7530U, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 3: FHD (touch), AMD Ryzen 5 PRO 7530U, 16GB DDR4, Win 11, 46.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using MobileMark 25, JEITA 2.0, continuous 1080p

local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to Microsoft® link for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

^[1] AC adapter offerings depend on the country.

^[2] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)
15.6"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	60Hz	85°/85°/85°/85°
15.6"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	60Hz	85°/85°/85°/85°

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

360.2 x 237 x 19.93 mm (14.18 x 9.33 x 0.78 inches)

Weight^[2]

Starting at 1.77 kg (3.91 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3, M.2 Card^[1]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x microSD card reader
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L15 Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific

model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
30% PCC recycled plastic used in bottom cover material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
45% PCC recycled plastic used in SIM tray
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.

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AMD



AMD



AMD



AMD

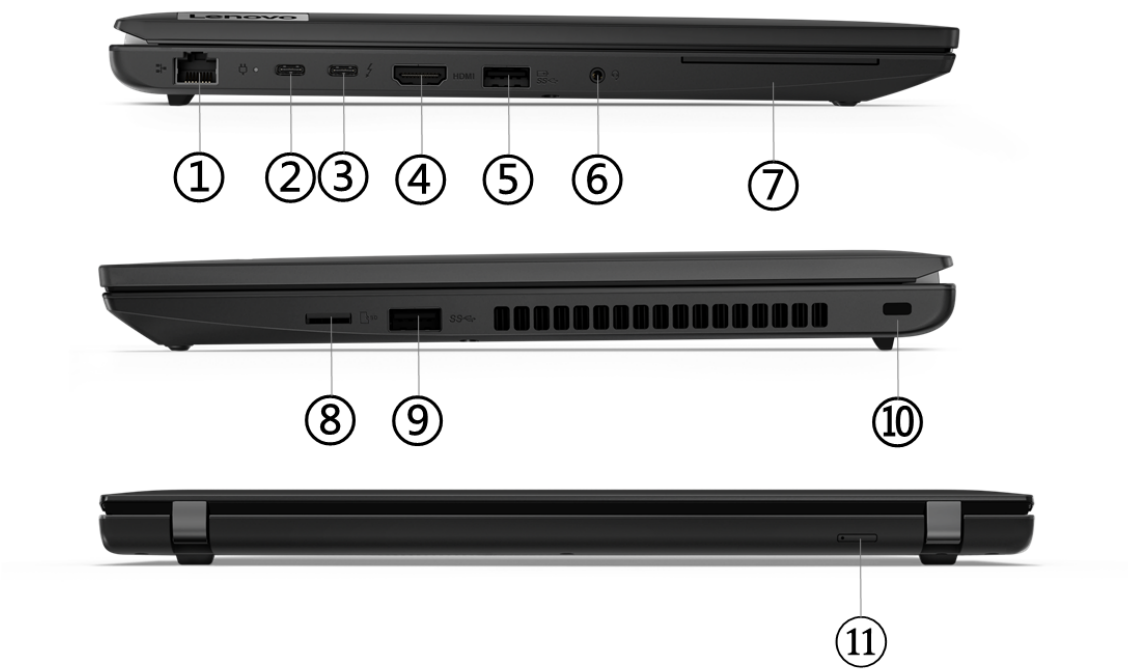


AMD



AMD

OVERVIEW



1. Ethernet (RJ-45)	7. Smart card reader *
2. USB-C 3.2 Gen 2	8. microSD card reader
3. Thunderbolt 4	9. USB 3.2 Gen 1
4. HDMI	10. Kensington Nano Security Slot
5. USB 3.2 Gen 1 (Always On)	11. Nano-SIM card slot *
6. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® U-series or 13th Generation Intel U or P Series Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
U300	5 (1 P-core + 4 E-core)	6	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	8MB	Intel UHD Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics ^[2]
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics ^[3]
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[4]
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics ^[5]
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics ^[6]
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics ^[7]
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics ^[8]

Notes:

^[1] Intel P series processors are for special bid only.
^{[2], [3], [4], [5], [6], [7], [8]} Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64^[3]
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.
^[3] Windows 11 DG Windows 10 Pro 64 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1
NVIDIA® GeForce MX550 ^[2]	Discrete	2GB GDDR6	-	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

[2] NVIDIA GeForce MX550 is NOT available in EMEA.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x3200@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Card Reader

microSD card reader

Multi-Media

Audio Chip

- Non-vPro® models: High Definition (HD) Audio, Realtek® ALC3287 codec
- vPro models: High Definition (HD) Audio, Senary SN6147 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera^{**}

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 46.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 100W AC adapter
- Integrated Li-Polymer 63Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 100W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 11.5 hr @250nits
JEITA 2.0: up to 18.42 hr @150nits
Local video playback: up to 19.5 hr @150nits

Alternate configuration 2
MobileMark 25: up to 8.93 hr @250nits
JEITA 2.0: up to 14.92 hr @150nits
Local video playback: up to 14.54 hr @150nits

Alternate configuration 3
MobileMark 25: up to 7.35 hr @250nits
JEITA 2.0: up to 14.57 hr @150nits
Local video playback: up to 14.25 hr @150nits

Notes:

[1] Configuration 1 (max battery life): FHD (touch), Intel i5-1340P, 8GB DDR4, Win 11, 63Wh battery, best power efficiency power mode
Alternate configuration 2: FHD (non-touch), Intel i5-1350P, 16GB DDR4, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: FHD (touch), Intel i7-1360P, 64GB DDR4, NVIDIA Geforce MX550, Win 11, 63Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)
------	------------	-------	------	------------	---------	--------------	----------------	-------------	--------------	-------------------------

15.6"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	800:1	45% NTSC	60Hz	85°/85°/85°/85°
15.6"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	60Hz	85°/85°/85°/85°

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

360.2 x 237 x 19.93 mm (14.18 x 9.33 x 0.78 inches)

Weight^[2]

Starting at 1.77 kg (3.91 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2, M.2 Card^[1]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3, M.2 Card^[2]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations. Wi-Fi 6 full features might be limited by country-level restrictions.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x microSD card reader

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® L15 Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader

- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in top cover frame material
50% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery pack
90% PCC recycled plastic used in standard adapter
45% PCC recycled plastic used in SIM tray
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 26
- ErP Lot 6
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

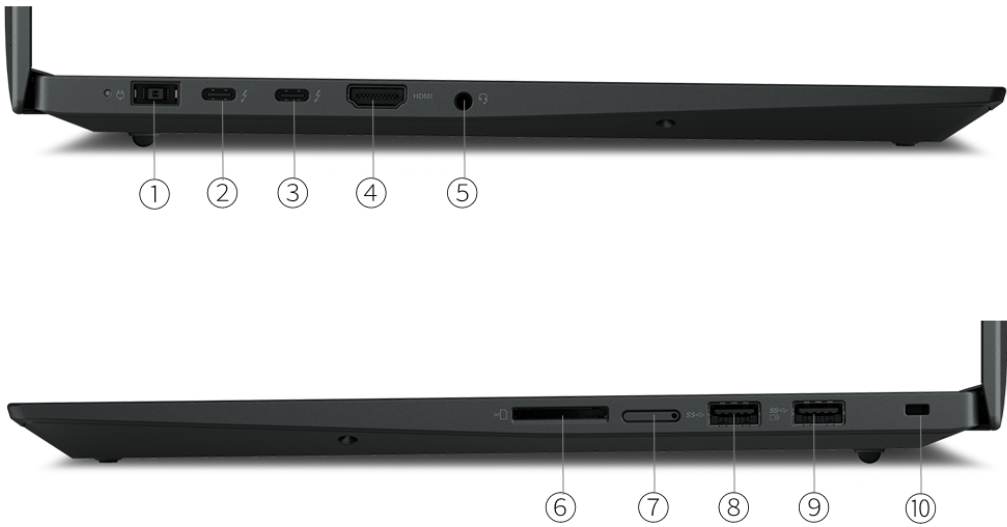
Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Power connector	6. SD card reader
2. Thunderbolt 4	7. Nano-SIM card slot
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. USB 3.2 Gen 1 (Always On)
5. Headphone (3.5mm)	10. Kensington Security Slot

PERFORMANCE

Processor

Processor Family

11th Generation Intel® Core™ i7 / i9 or Intel Xeon® Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i7-11800H	8	16	2.3GHz	4.6GHz	24MB	Intel UHD Graphics
Core i7-11850H	8	16	2.5GHz	4.8GHz	24MB	Intel UHD Graphics
Core i9-11950H	8	16	2.6GHz	5.0GHz	24MB	Intel UHD Graphics
Xeon W-11855M	6	12	3.2GHz	4.9GHz	18MB	Intel UHD Graphics

Operating System

Operating System**[1]

- Fedora Linux
- Red Hat Enterprise Linux 8.4 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Windows 11 DG Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] As preloaded OS, Fedora and Ubuntu Linux will be available in October 2021.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12
NVIDIA® GeForce RTX™ 3080 Laptop GPU[1]	Discrete	16GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A5000 Laptop GPU[2]	Discrete	16GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A2000 Laptop GPU	Discrete	4GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA T1200 Laptop GPU	Discrete	4GB GDDR6	DirectX 12
NVIDIA RTX A3000 Laptop GPU[3]	Discrete	6GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA GeForce RTX 3070 Laptop GPU[4]	Discrete	8GB GDDR6	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A4000 Laptop GPU[5]	Discrete	8GB GDDR6	Dynamic Boost 2.0, DirectX 12

Notes:

[1], [2], [3], [4], [5] Vapor Chamber cooling is available only with NV RTX A3000 /A4000 / A5000 and GeForce RTX 3070 / 3080 GPUs.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 4K@60Hz on NVIDIA T1200 or Intel UHD models, or 8K@60Hz on other discrete graphics models

- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel WM590 chipset

Memory

Max Memory

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type**

- DDR4-3200 ECC
- DDR4-3200 non-ECC

Memory Protection

ECC on models with ECC DIMMs and Xeon processor

Storage

Storage Support^[1]

- One drive, up to 2TB M.2 2280 SSD
- Models with Intel UHD Graphics, NVIDIA T1200, and NVIDIA RTX A2000 Graphics:
up to two drives, 2x M.2 SSD
 - M.2 2280 SSD up to 2TB
 - RAID 0/1 support

Storage Slot^[2]

Two M.2 slots

- One M.2 2280 PCIe® 3.0 x4 slot
- One M.2 2280 PCIe 4.0 x4 slot

Storage Type***^[3]

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal 2.0

RAID^[4]

RAID 0/1 support (All M.2 SSD drives will work at PCIe Gen 3 in RAID mode)

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

^[2] M.2 PCIe Gen 4 SSD in a M.2 PCIe Gen 3 slot runs at PCIe Gen 3 speeds.

^[3] PCIe x4 SSD may be PCIe 3.0 x4 or PCIe 4.0 x4 as substitution.

^[4] Opal capability is not available in RAID mode.

Removable Storage

Optical

None

Card Reader

SD card reader, supports UHS-II SD card

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, Dolby® Atmos®

Microphone

- Dual-microphone array, far-field

- No microphone

Camera**

- FHD 1080p + IR, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Max Battery Life^[1]

MobileMark® 2018: 10.9 hr
JEITA 2.0: 13.7 hr

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter**^[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/-/-	Low blue light, 85.8% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	Multi-touch	IPS	600nits	Anti-reflection, anti-smudge	16:10	1500:1	100% Adobe® RGB	85°/85°/-/-	Low blue light, Dolby Vision™, DisplayHDR™ 400, 85.4% screen to body ratio, DC dimming ^[2]
16"	WQUXGA (3840x2400)	None	IPS	600nits	Anti-glare	16:10	1500:1	100% Adobe RGB	85°/85°/-/-	Low blue light, Dolby Vision, DisplayHDR 400, 85.4% screen to body ratio, DC dimming ^[3]

Color Calibration

- X-Rite® factory color calibration
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch

- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
[2], [3] For non-OLED display, HDR is only supported under hybrid mode.

Input Device

Pen

- Lenovo Pen Pro
- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and glass surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Non-touch models	359.5 x 253.8 x 17.7 mm (14.15 x 9.99 x 0.7 inches)
Touch models	359.5 x 253.8 x 18.2 mm (14.15 x 9.99 x 0.72 inches)

Weight^[2]

Models	Weight
Non-touch models	Starting at 1.81 kg (3.99 lbs)
Touch models	Starting at 1.86 kg (4.1 lbs)

Case Color**

- 37-degree twill CF weave
- Black

Case Material**

- CFRP / GFRP (top), aluminium (bottom)
- CFRP / GFRP hybrid (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)^[2]

WWAN^[3]

- Qualcomm® Snapdragon™ X55 5G Modem-RF System, Sub-6 GHz, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Ethernet support via optional docking or Lenovo USB-C® to Ethernet Adapter.

[2] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

[3] WWAN is only available on models with Intel UHD graphics, NVIDIA T1200, and NVIDIA RTX A2000.

Ports^[1]**Standard Ports**

- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD card reader
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports***

- 1x HDMI 2.1, up to 4K/60Hz (models with integrated graphics)
- 1x Nano-SIM card slot (WWAN support models)
- 1x HDMI 2.1, up to 4K/60Hz (models with NVIDIA T1200 graphics)
- 1x HDMI 2.1, up to 8K/60Hz (models with GeForce RTX graphics)
- 1x HDMI 2.1, up to 8K/60Hz (models with NVIDIA RTX graphics)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® P1 Gen 4](#)

Monitor Cable**Monitor Cable*****

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password

- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

(Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro®
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

ISV Certifications

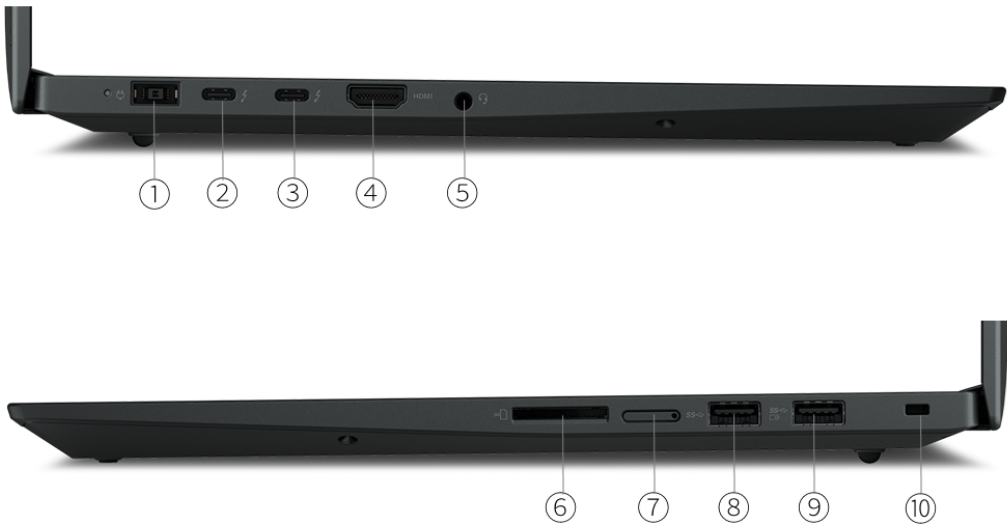
ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

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OVERVIEW



1. Power connector	6. SD Express 7.0 card reader
2. Thunderbolt 4	7. Nano-SIM card slot *
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. USB 3.2 Gen 1 (Always On)
5. Headphone (3.5mm)	10. Kensington Nano Security Slot

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation H series Intel® Core™ i7 / i9 processor, supports up to 14 cores, up to 5.0GHz

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	Intel Iris® Xe Graphics
Core i7-12800H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.7GHz	24MB	Intel Iris Xe Graphics
Core i9-12900H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.8GHz	24MB	Intel Iris Xe Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System

- Fedora Linux
- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A3000 12 GB Laptop GPU [2]	Discrete	12GB GDDR6 ECC	80W	Dynamic Boost 2.0, DirectX 12
NVIDIA GeForce RTX™ 3080 Ti Laptop GPU [3]	Discrete	16GB GDDR6	80W	Dynamic Boost 2.0, VR ready, DirectX 12
NVIDIA RTX A4500 Laptop GPU [4]	Discrete	16GB GDDR6 ECC	80W	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A5500 Laptop GPU [5]	Discrete	16GB GDDR6 ECC	80W	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A1000 Laptop GPU	Discrete	4GB GDDR6	35W	Dynamic Boost 2.0, DirectX 12
NVIDIA GeForce RTX 3070 Ti Laptop GPU [6]	Discrete	8GB GDDR6	80W	Dynamic Boost 2.0, VR ready, DirectX 12
NVIDIA RTX A2000 8GB Laptop GPU	Discrete	8GB GDDR6	35W	Dynamic Boost 2.0, DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD graphics.

[2], [3], [4], [5], [6] Vapor Chamber cooling is available only with NV RTX A3000 / A4500 / A5500 and GeForce RTX 3070 / 3080 GPUs.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz on Intel Iris Xe models; 7680x4320@60Hz on discrete NVIDIA graphics models
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800 non-ECC

Storage

Storage Support^[1]

- Models with integrated graphics or NVIDIA RTX A1000/A2000: up to two drives, 2x M.2 SSD
 - M.2 2280 SSD up to 8TB, 4TB each
 - RAID 0/1 support
- Models with NVIDIA GeForce/RTX A3000/A4500/A5500: one drive, up to 4TB M.2 2280 SSD

Storage Slot

- Models with Intel integrated graphics or NVIDIA RTX A1000/A2000: two M.2 2280 PCIe® 4.0 x4 slots
- Models with NVIDIA GeForce/RTX A3000/A4500/A5500: one M.2 2280 PCIe 4.0 x4 slot

Storage Type^[2]

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB / 4TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal 2.0

RAID

- RAID 0/1 support (for models with integrated graphics or NVIDIA RTX A1000/A2000)
- No support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] PCIe x4 SSD may be PCIe 3.0 x4 or PCIe 4.0 x4 as substitution.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, optimized with Dolby® Atmos®

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter**[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	89°/89°/-/-	Low Blue Light, X-Rite® Factory Color Calibration, 86.42% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	None	IPS	500nits	Anti-glare	16:10	1200:1	100% sRGB	89°/89°/-/-	X-Rite Factory Color Calibration, Low blue light, 86.42% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	IPS	600nits	Anti-glare	16:10	1500:1	100% Adobe® RGB	85°/85°/-/-	X-Rite Factory Color Calibration, Low blue light, Dolby Vision™, DisplayHDR™ 400, 86.08% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	Multi-touch	IPS	600nits	Anti-reflection, anti-smudge	16:10	1500:1	100% Adobe RGB	85°/85°/-/-	X-Rite Factory Color Calibration, Low blue light, Dolby Vision, DisplayHDR 400, 86.08% screen to body ratio, DC dimming

Color Calibration

X-Rite factory color calibration

Touchscreen

- OGM (One Glass Metal mesh) multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen

- Lenovo Precision Pen 2 with built-in rechargeable battery, 4096 levels of pressure sensitivity, tilt detection, supports

WGP, AES 2.0 and MPP 2.0 protocols. For more information, please read [Lenovo Precision Pen 2](#)

- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and glass surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Non-touch models	359.5 x 253.8 x 17.7 mm (14.15 x 9.99 x 0.7 inches)
Touch models	359.5 x 253.8 x 18.2 mm (14.15 x 9.99 x 0.72 inches)

Weight^[2]

Models	Weight
Non-touch models	Starting at 1.81 kg (3.99 lbs)
Touch models	Starting at 1.86 kg (4.1 lbs)

Case Color**

- 37-degree twill CF weave
- Black

Case Material**

- CFRP / GFRP (top), aluminium (bottom)
- CFRP / GFRP hybrid (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet^[1]

No onboard Ethernet

WLAN + Bluetooth®^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)

WWAN

- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional docking or Lenovo USB-C® to Ethernet Adapter.

[2] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector
- 1x SD Express 7.0 card reader
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 2x USB 3.2 Gen 1 (one Always On)
- Models with NVIDIA graphics: 1x HDMI 2.1, up to 8K/60Hz
- Models with integrated graphics: 1x HDMI 2.1, up to 4K/60Hz

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® P1 Gen 5](#)

Monitor Cable

Monitor Cable

- (Optional) Lenovo USB-C to VGA Adapter
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro® Enterprise
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- Lenovo USB-C to Ethernet Adapter (2.5Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant

Notes:

^[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

^[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. SD Express 7.0 card reader	6. Power connector
2. Nano-SIM card slot *	7. Thunderbolt 4
3. USB 3.2 Gen 1	8. Thunderbolt 4
4. USB 3.2 Gen 1 (Always On)	9. HDMI
5. Kensington Nano Security Slot	10. Headphone (3.5mm)

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation H series Intel® Core™ i7 / i9 processor, supports up to 14 cores, up to 5.4GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache
Core i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB
Core i7-13800H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.2GHz / E-core 4.0GHz	24MB
Core i9-13900H	14 (6 P-core + 8 E-core)	20	P-core 2.6GHz / E-core 1.9GHz	P-core 5.4GHz / E-core 4.1GHz	24MB

Operating System

Operating System**

- Fedora Linux
- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Red Hat Enterprise Linux 9.2 certification will be available after Aug 31, 2023.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
NVIDIA® GeForce RTX™ 4080 Laptop GPU	Discrete	12GB GDDR6	80W	Advanced Optimus, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate
NVIDIA RTX 3500 Ada Generation Laptop GPU	Discrete	12GB GDDR6 ECC	80W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 4000 Ada Generation Laptop GPU	Discrete	12GB GDDR6 ECC	80W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA GeForce RTX 4090 Laptop GPU	Discrete	16GB GDDR6	80W	Advanced Optimus, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate
NVIDIA RTX 5000 Ada Generation Laptop GPU	Discrete	16GB GDDR6 ECC	80W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX A1000 Laptop GPU	Discrete	6GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA GeForce RTX 4060 Laptop GPU	Discrete	8GB GDDR6	80W	Advanced Optimus (OTA), Dynamic Boost 2.0, DirectX 12 Ultimate
NVIDIA RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 7680x4320@60Hz

- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

Up to 96GB (2x 48GB DDR5 SO-DIMM)

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-5600 non-ECC

Storage

Storage Support^[1]

- Models with NVIDIA RTX A1000/2000 Ada:
 - up to two drives, 2x M.2 SSD
 - M.2 2280 SSD up to 8TB, 4TB each
 - RAID 0/1 support
- Models with NVIDIA RTX 3500/4000/5000 Ada or GeForce RTX4060/4080/4090:
 - one drive, up to 4TB M.2 2280 SSD

Storage Slot

- Models with NVIDIA RTX A1000/2000 Ada:
 - Two M.2 2280 PCIe® 4.0 x4 slots
- Models with NVIDIA RTX 3500/4000/5000 Ada or GeForce RTX4060/4080/4090:
 - One M.2 2280 PCIe 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB / 4TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal 2.0

RAID

RAID 0/1 support (for models with NVIDIA RTX A1000/2000 Ada)

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, optimized with Dolby® Atmos®

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- 5.0MP + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter**^[1]

- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:
^[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS ^[1]	300nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	89° / 89° / 80° / 80°	TÜV Low Blue Light, X-Rite® Factory Color Calibration, 86.2% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	None	IPS ^[2]	500nits	Anti-glare	16:10	1200:1	100% sRGB	165Hz	89° / 89° / 80° / 80°	TÜV Low Blue Light, X-Rite Factory Color Calibration, 86.2% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	Add-on Film Touch	OLED	SDR 400nits / HDR 500nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	DisplayHDR™ 400, Dolby Vision™, TÜV Low Blue Light, X-Rite Factory Color Calibration, 86.1% screen to body ratio

Color Calibration
X-Rite factory color calibration

- Touchscreen
- Add-on Film Touch, supports 10-point touch (OLED models only)
 - Non-touch

Notes:
^[1], ^[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard
6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight
LED backlight

UltraNav™
3-button TrackPoint® pointing device and glass surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Touch models	359.5 x 253.8 x 17.3 mm (14.15 x 9.99 x 0.68 inches)
Non-touch models	359.5 x 253.8 x 17.5 mm (14.15 x 9.99 x 0.69 inches)

Weight^[2]

Models	Weight
Touch models	Starting at 1.78 kg (3.92 lbs)
Non-touch models	Starting at 1.86 kg (4.11 lbs)

Case Color**

- Black
- Black, weave

Case Material**

- CFRP / GFRP (top), aluminium (bottom)
- CFRP / GFRP hybrid (top), aluminium (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN

- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

- [1] Ethernet support via optional docking or Lenovo USB-C® to Ethernet Adapter, up to 2.5GbE.
- [2] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.
- Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector
- 1x SD Express 7.0 card reader

- 1x Security keyhole
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P1 Gen 6](#)

Monitor Cable**Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY**System Management****System Management**

- Intel vPro® Enterprise^[1]

- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery
30% PCC recycled plastic used in 170W power adapter
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (2.5Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

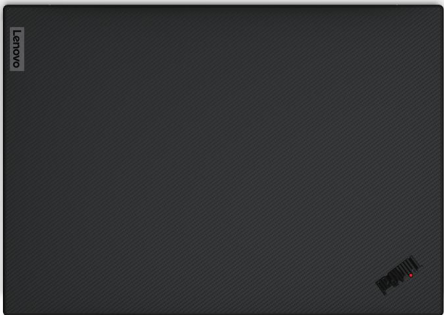
TÜV Rheinland® Low Blue Light

ISV Certifications

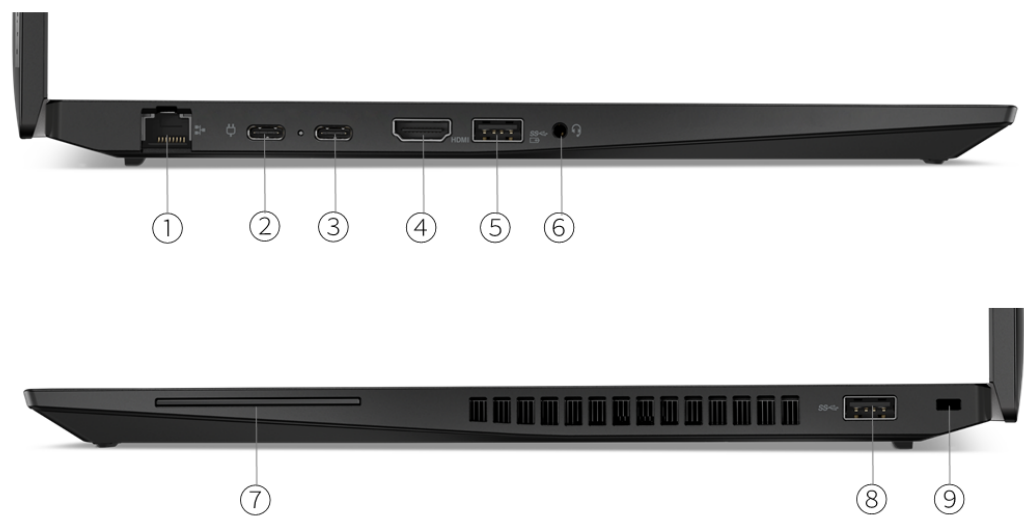
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. USB-C 3.2 Gen 2	7. Smart card reader *
3. USB-C 3.2 Gen 2	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

- Notes:
- Items with * are only available on selected models
 - Two USB-C 3.2 Gen 2 ports support data transfer, Power Delivery and DisplayPort 1.4

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 PRO 6000 U Series Processor, supports up to 8 cores, up to 4.7GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Fedora Linux
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics**[1]

Graphics	Type	Memory	TGP	Key Features
AMD Radeon 660M	Integrated	Shared	Share CPU TDP	DirectX® 12
AMD Radeon 680M	Integrated	Shared	Share CPU TDP	DirectX 12

Notes:

[1] Integrated AMD Radeon 660M / 680 graphics use system memory as dedicated video memory, from 512MB to 8GB (8GB video memory requires system memory >= 32GB).

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz (USB-C to DP)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400 non-ECC

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	89°/89°/-/-	84% screen to body ratio, DC dimming
14"	WUXGA	None	IPS	400nits	Anti-glare	16:10	1000:1	100%	85°/85°/-/-	Low power, TÜV

	(1920x1200)							sRGB		Low Blue Light, TÜV Eye Comfort, 84% screen to body ratio, DC dimming
14"	WQUXGA (3840x2400)	Add-on Film Touch	IPS	500nits	Anti-reflection, anti-smudge	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	Dolby Vision™, HDR 400, X-Rite® Factory Color Calibration (ΔE<2), Low Blue Light, TÜV Eye Comfort, 84% screen to body ratio, DC dimming

Color Calibration

X-Rite factory color calibration (WQUXGA display)

Touchscreen**

- Add-on Film Touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.705 inches)

Weight[2][3]

Models	Weight
Models with black cover	Starting at 1.4 kg (3.09 lbs)

Case Color

Black

Case Material

PC 50% GF + PC 20% CF (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Starting weight is based on minimal configuration (integrated graphics, lowest capacity battery, no WWAN, etc).

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, supports Wake-on-LAN and AMD Pro Manageability

WLAN + Bluetooth®

Qualcomm® Wi-Fi® 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[1]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery and DisplayPort™ 1.4)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® P14s Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter

- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified) and Microsoft Pluton TPM 2.0, one enabled at one time^[1]

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

Notes:

^[1] Microsoft Pluton TPM 2.0 is only applicable on Windows 11.

MANAGEABILITY

System Management

System Management

AMD PRO Manageability

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

^[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure

97% PCC recycled plastic used in the 52.5WHr battery
95% PCC recycled plastic used in 65W adapter
90% recycled and/or sustainable packaging
Low-temperature solder

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Low Blue Light

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

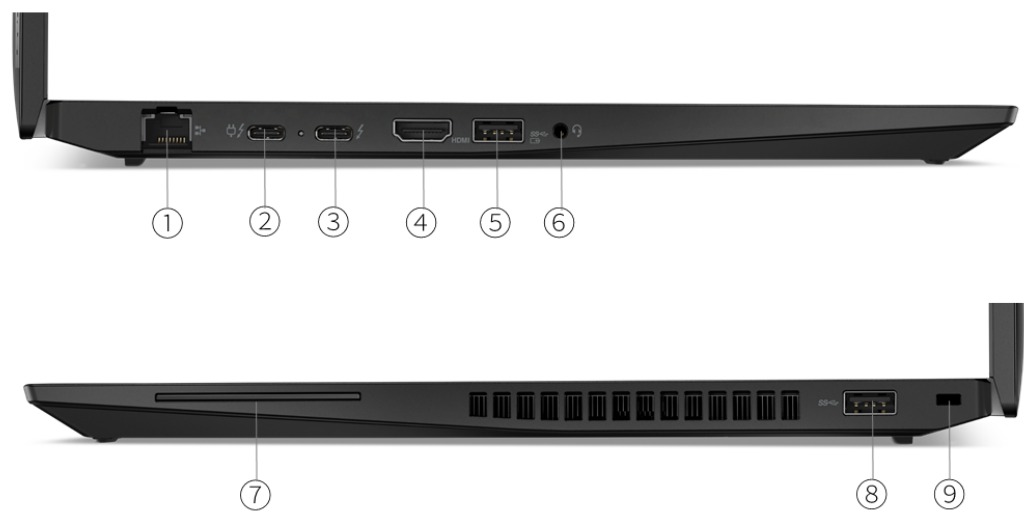
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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	7. Smart card reader *
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (one Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation P series Intel® Core™ i5 / i7 processor, supports up to 14 cores, up to 4.8GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 10 Home 64 Single Language
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® T550 Laptop GPU	Discrete	4GB GDDR6	30W	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 7680x4320@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200 non-ECC

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type^{**[2]}

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.
- [2] PCIe x4 SSD may be PCIe 3.0 x4 or PCIe 4.0 x4 as substitution.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, Dolby® Audio™

Microphone

- Dual-microphone array, Dolby Voice
- No microphone

Camera^{**}

- FHD 1080p + IR, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery^{**}

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter^{**[1]}

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

Notes:

- [1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ICC Template color calibration, Low Blue Light, TÜV Eye Comfort, 84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard, 84% screen to body ratio, DC dimming
14"	2.2K (2240x1400)	None	IPS	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	Low Blue Light, TÜV Eye Comfort, 84% screen to body ratio, DC dimming
14"	WQUXGA (3840x2400)	Add-on Film Touch	IPS	500nits	Anti-reflection, anti-smudge	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	Dolby Vision™, HDR 400, X-Rite® Factory Color Calibration (ΔE<2), Low Blue Light, TÜV Eye Comfort, 84% screen to body ratio, DC dimming

Color Calibration**

- X-Rite factory color calibration
- ICC Template color calibration
- No color calibration

Touchscreen**

- Add-on Film Touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight

- Non-backlight
- UltraNav™**
- 3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.4 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with black cover and integrated graphics	317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.7 inches)
Models with black cover and NVIDIA T550 graphics	317.7 x 226.9 x 17.95 mm (12.51 x 8.93 x 0.707 inches)
Models with gery cover	317.7 x 227.36 x 17.9 mm (12.51 x 8.95 x 0.7 inches)

Weight^{[2][3]}

Models	Weight
Model with black cover	Starting at 1.38 kg (3.05 lbs)
Model with storm grey	Starting at 1.5 kg (3.31 lbs)

Case Color**

- Black
- Storm grey

Case Material**

- Models with black cover and integrated graphics: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with black cover and discrete graphics: PC 50% GF + PC 20% CF (top), aluminium (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

^[3] Starting weight is based on minimal configuration (integrated graphics, lowest capacity battery, no WWAN, etc).

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

^[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad P14s Gen 3](#)

Monitor Cable

Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]

- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Low Blue Light

ISV Certifications

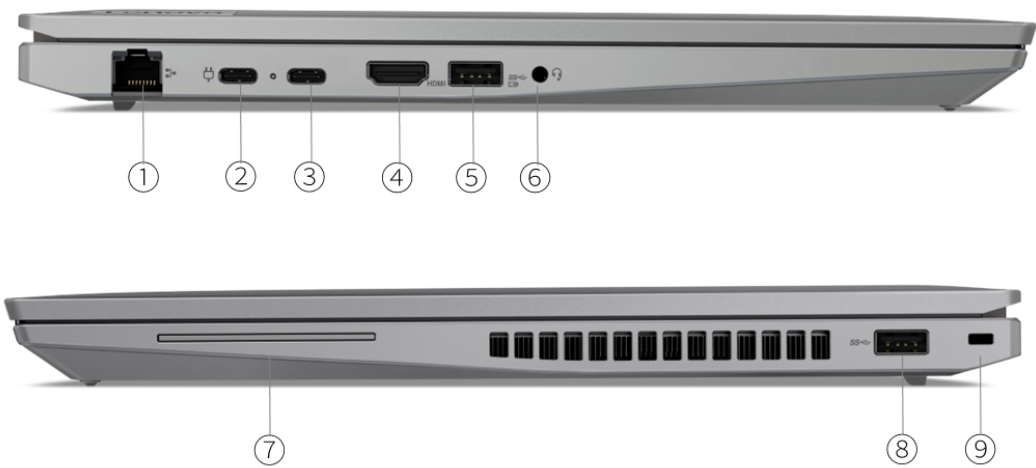
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. USB4	7. Smart card reader *
3. USB-C 3.2 Gen 2	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 PRO 7040U Series Processor, supports up to 8 cores, up to 5.1GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Fedora Linux^[1]
- Red Hat Enterprise Linux 9.1 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[2]
- Ubuntu Linux LTS^[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1] As preloaded OS, Fedora Linux will be available after November 2023.
- [2] Red Hat Enterprise Linux 9.1 certification will be available after Nov 30, 2023.
- [3] As preloaded OS, Ubuntu Linux will be available after October 2023.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
AMD Radeon 740M	Integrated	Shared	Share CPU TDP	DirectX® 12
AMD Radeon 780M	Integrated	Shared	Share CPU TDP	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® 3.2 Gen 2 and USB4®)

- HDMI supports up to 3840x2160@60Hz
- USB-C 3.2 Gen 2 and USB4 support up to 3840x2160@60Hz (USB-C to DP)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with 64GB LPDDR5x: 64GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-7500 non-ECC^[1]

Notes:

- [1] System comes with LPDDR5x-7500 DIMMs and will run at LPDDR5x-6400 due to platform limitations.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- 5.0MP + IR discrete, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Power Adapter

Power Adapter**^[1]

- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA	Multi-	IPS ^[1]	300nits	Anti-glare	16:10	800:1	45%	85°/85°/85°/85°	84% screen to

	(1920x1200)	touch						NTSC		body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS ^[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ICC Template color calibration, Low power, Low Blue Light, Eyesafe® Certified 2.0, TÜV Eye Comfort, 84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard, 84% screen to body ratio, DC dimming
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-fingerprint	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	X-Rite® Factory Color Calibration, Low Blue Light, Eyesafe Certified 2.0, DisplayHDR™ True Black 500, Dolby Vision™, 84% screen to body ratio

Color Calibration**

- X-Rite factory color calibration (OLED display)
- ICC Template color calibration (low power display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:
[\[1\]](#), [\[2\]](#), [\[3\]](#), [\[4\]](#) IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.4 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with black cover	317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.7 inches)
Models with gery cover	317.7 x 227.36 x 17.9 mm (12.51 x 8.95 x 0.7 inches)

Weight^[2]

Models	Weight
--------	--------

Models with black cover	Starting at 1.34 kg (2.97 lbs)
Models with grey cover	Starting at 1.38 kg (3.05 lbs)

Case Color**

- Storm grey
- Villi black

Case Material**

- Models with black cover: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN and AMD Pro Manageability

WLAN + Bluetooth**

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3[1]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

- [1], [2] Wi-Fi 6E full features might be limited by country-level restrictions. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10. 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation. Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports**

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad P14s Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified) and Microsoft Pluton TPM 2.0, one enabled at one time^[1]

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

Notes:

[1] Microsoft Pluton TPM 2.0 is only applicable on Windows 11.

MANAGEABILITY

System Management

System Management

AMD PRO Manageability 2.0

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery
90% PCC recycled plastic used in standard and slim 65W adapter
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Low Blue Light

ISV Certifications

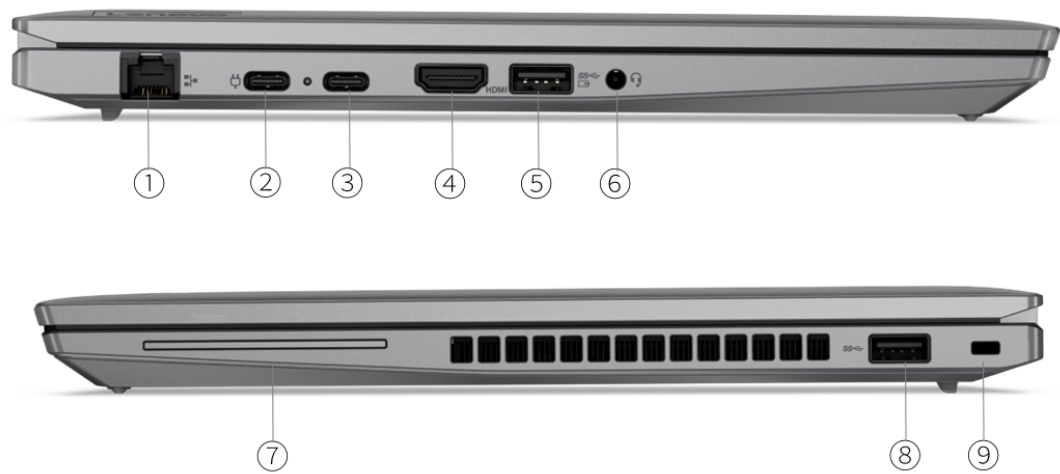
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	7. Smart card reader *
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (one Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation P series Intel® Core™ i5 / i7 processor, supports up to 14 cores, up to 5.2GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Red Hat Enterprise Linux 9.1 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Red Hat Enterprise Linux 9.1 certification will be available after Sep 29, 2023.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	30W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 7680x4320@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with 64GB LPDDR5x: 64GB soldered memory, not upgradable
- Models with DDR5 memory: up to 48GB (16GB soldered + 32GB SO-DIMM)

Memory Slots**

- Models with DDR5 memory: one memory soldered to systemboard, one DDR5 SO-DIMM slot, dual-channel capable
- Models with LPDDR5x memory: memory soldered to systemboard, no slots, dual-channel

Memory Type**

- DDR5-5600 non-ECC (models with integrated graphics)^[1]
- LPDDR5x-7500 non-ECC (models with discrete graphics)^[2]

Notes:

- [1] System comes with DDR5-5600 DIMMs and will run at or DDR5-5200 due to platform limitations.
- [2] System comes with LPDDR5x-7500 DIMMs and will run at LPDDR5x-4800 due to platform limitations.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone (for special bid model)

Camera**

- 5.0MP + IR discrete, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera (for special bid model)

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter**^[1]

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[1]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS ^[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ICC Template color calibration, Low power, Low Blue Light, Eyesafe® Certified 2.0, TÜV Eye Comfort, 84% screen to body ratio, DC dimming
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard, 84% screen to body ratio, DC dimming
14"	2.2K (2240x1400)	None	IPS ^[5]	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/-/-	Low Blue Light, 84% screen to body ratio, DC dimming
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-fingerprint	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	X-Rite® Factory Color Calibration, Low Blue Light, Eyesafe Certified 2.0, DisplayHDR™ True Black 500, Dolby Vision™, 84% screen to body ratio

Color Calibration**

- X-Rite factory color calibration (OLED display)
- ICC Template color calibration (low power display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1], [2], [3], [4], [5] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.4 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with black cover and integrated graphics	317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.7 inches)
Models with black cover and NVIDIA RTX A500 graphics	317.7 x 226.9 x 17.95 mm (12.51 x 8.93 x 0.707 inches)
Models with gery cover	317.7 x 227.36 x 17.9 mm (12.51 x 8.95 x 0.7 inches)

Weight^[2]

Models	Weight
Models with black cover	Starting at 1.34 kg (2.97 lbs)
Model with storm grey	Starting at 1.38 kg (3.05 lbs)

Case Color**

- Storm grey
- Villi black

Case Material**

- Models with black cover and integrated graphics: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with black cover and discrete graphics: PC 50% GF + PC 20% CF (top), aluminium (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[1]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication

ThinkPad P14s Gen 4 (Intel)

- No support

Notes:

[1], [2] Wi-Fi 6E full features might be limited by country-level restrictions. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10. 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation. Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad P14s Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY**System Management****System Management**

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE**Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Sustainability****Material**

98% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the battery
90% PCC recycled plastic used in standard and slim 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment**Temperature^[1]**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Low Blue Light

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	6. Kensington Security Slot
2. SD card reader	7. Power connector
3. HDMI	8. USB4
4. 2x USB 3.2 Gen 1	9. Smart card reader *
5. Ethernet (RJ-45)	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 PRO 6000 H Series Processor, supports up to 8 cores, up to 4.7GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650H	6	12	3.3GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850H	8	16	3.2GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
NVIDIA® RTX A2000 Laptop GPU	Discrete	4GB GDDR6	35W	Dynamic Boost 2.0, DirectX® 12
NVIDIA T1200 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12
NVIDIA T600 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and USB-C®)

- HDMI supports up to 5120x2880@30Hz
- USB-C supports up to 5120x2880@60Hz (USB-C to DP)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800 non-ECC

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 4TB, 2TB each

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

SD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- HD 720p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 68Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- No power adapter

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/-/-	DC dimming
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/-/-	-
15.6"	UHD (3840x2160)	None	IPS	600nits	Anti-glare	16:9	1400:1	100% Adobe® RGB	85°/85°/-/-	Dolby Vision™, DisplayHDR™ 400, optional X-Rite® Factory Color Calibration, DC

										dimming
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Color Calibration

- X-Rite factory color calibration (UHD display)
- No color calibration

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad

Mechanical

Dimensions (WxDxH)^[1]

366.5 x 250 x 22.7 mm (14.43 x 9.84 x 0.89 inches)

Weight^[2]

Starting at 2.26 kg (4.98 lbs)

Case Color

Black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN and AMD Pro Manageability

WLAN + Bluetooth®

Qualcomm® Wi-Fi® 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1

WWAN

No support

SIM Card

No physical SIM card inbox

NFC

No support

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)

- 1x Power connector
- 1x SD card reader
- 1x Security keyhole
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB4® 40Gbps (support data transfer and DisplayPort™ 1.4)

Optional Ports

1x Smart card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® P15v Gen 3 \(AMD\)](#)

Monitor Cable**Monitor Cable**

- (Optional) Lenovo USB-C to DisplayPort Adapter
- (Optional) Lenovo HDMI to VGA Monitor Adapter
- (Optional) Lenovo USB-C to VGA Adapter

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0 (TCG certified) and Microsoft® Pluton TPM 2.0, one enabled at one time^[1]

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader on palm rest, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

Notes:

[1] Microsoft Pluton TPM 2.0 is only applicable on Windows 11.

MANAGEABILITY

System Management

System Management

AMD PRO Manageability

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

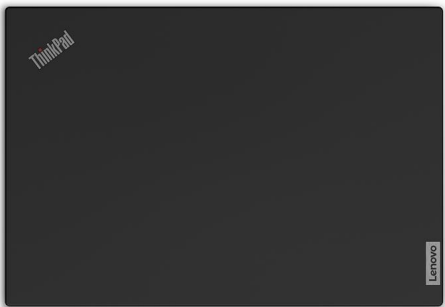
MIL-STD-810H military test passed

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	6. Kensington Security Slot
2. SD card reader	7. Power connector
3. HDMI	8. Thunderbolt 4
4. 2x USB 3.2 Gen 1	9. Smart card reader *
5. Ethernet (RJ-45)	

- Notes:
- Items with * are only available on selected models
 - Nano-SIM card slot on the rear side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

12th Generation H series Intel® Core™ i5 / i7 / i9 processor, supports up to 14 cores, up to 5.0GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-12500H	12 (4 P-core + 8 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.5GHz / E-core 3.3GHz	18MB	Intel Iris® Xe Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	Intel Iris Xe Graphics
Core i7-12800H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.7GHz	24MB	Intel Iris Xe Graphics
Core i9-12900H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.8GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A2000 Laptop GPU	Discrete	4GB GDDR6	35W	Dynamic Boost 2.0, DirectX 12
NVIDIA T1200 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12
NVIDIA T600 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x3200@60Hz (Thunderbolt or USB-C® to DP)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800 non-ECC

Storage

Storage Support^[1]

- Up to two drives, 2x M.2 SSD
- M.2 2280 SSD up to 4TB, 2TB each
 - RAID 0/1 support

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

RAID

RAID 0/1 support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Optical

None

Card Reader

SD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- HD 720p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 68Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter^[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- No power adapter

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/-/-	DC dimming
15.6"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/-/-	DC dimming
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/-/-	DC dimming
15.6"	UHD (3840x2160)	None	IPS	600nits	Anti-glare	16:9	1400:1	100% Adobe® RGB	85°/85°/-/-	Dolby Vision™, DisplayHDR™ 400, optional X-Rite® Factory Color Calibration, DC dimming

Color Calibration

- X-Rite factory color calibration (UHD display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad

Mechanical

Dimensions (WxDxH)^[1]

366.5 x 250 x 22.7 mm (14.43 x 9.84 x 0.89 inches)

Weight^[2]

Models	Weight
Models with integrated graphics	Starting at 2.096 kg (4.62 lbs)
Models with discrete graphics	Starting at 2.226 kg (4.91 lbs)

Case Color

Black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth^[1]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Standard Ports^[2]

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector
- 1x SD card reader
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] Power Delivery only supports power-out for charging peripherals.

Docking

Docking

Various docking solutions supported via Thunderbolt, USB-C, or USB-A.

For more compatible docking solutions, please visit [Docking for ThinkPad® P15v Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable

- (Optional) Lenovo USB-C to DisplayPort Adapter
- (Optional) Lenovo HDMI to VGA Monitor Adapter
- (Optional) Lenovo USB-C to VGA Adapter

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader on palm rest, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management**^[1]

- Intel vPro Enterprise
- Intel vPro Essentials
- Non-vPro

Notes:

^[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

^[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

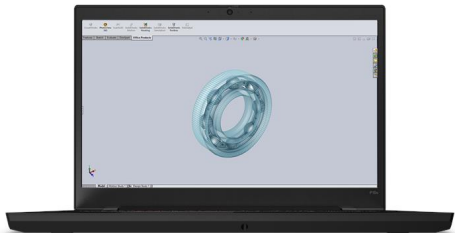
MIL-STD-810H military test passed

ISV Certifications

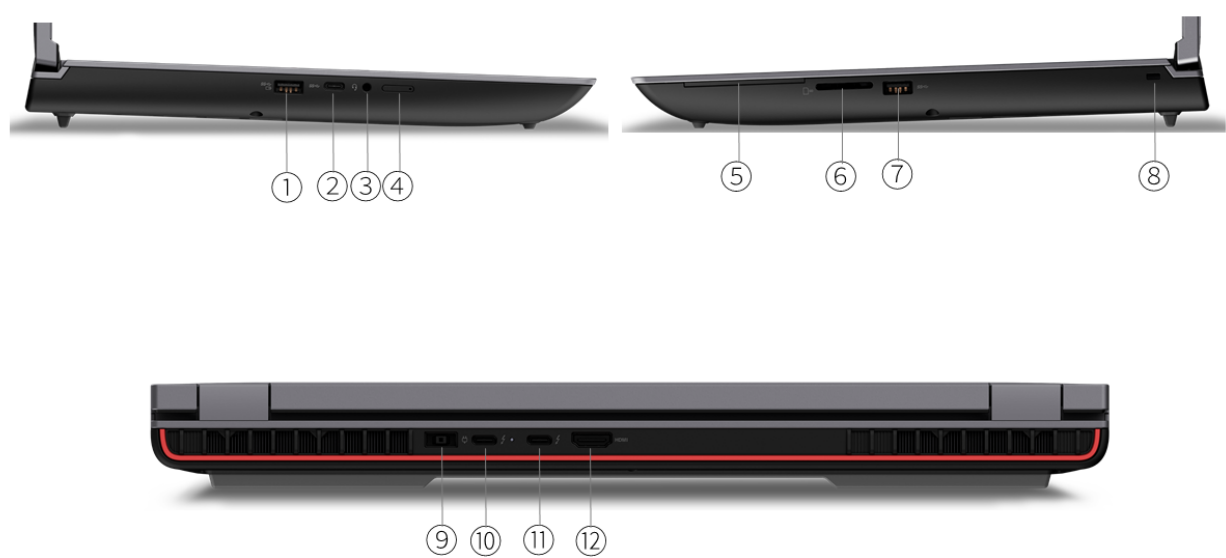
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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OVERVIEW



1. USB 3.2 Gen 1 (one Always On)	7. USB 3.2 Gen 1
2. USB-C 3.2 Gen 2	8. Kensington Nano Security Slot
3. Headphone / microphone combo jack (3.5mm)	9. Power connector
4. Nano-SIM card slot *	10. Thunderbolt 4
5. Smart card reader *	11. Thunderbolt 4
6. SD Express 7.0 card reader	12. HDMI

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation HX series Intel® Core™ i5 / i7 / i9 processor, supports up to 16 cores, up to 5.0GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-12600HX	12 (4 P-core + 8 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	18MB	Intel UHD Graphics
Core i7-12800HX	16 (8 P-core + 8 E-core)	24	P-core 2.0GHz / E-core 1.5GHz	P-core 4.8GHz / E-core 3.4GHz	25MB	Intel UHD Graphics
Core i7-12850HX	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	P-core 4.8GHz / E-core 3.4GHz	25MB	Intel UHD Graphics
Core i9-12900HX	16 (8 P-core + 8 E-core)	24	P-core 2.3GHz / E-core 1.7GHz	P-core 5.0GHz / E-core 3.6GHz	30MB	Intel UHD Graphics
Core i9-12950HX	16 (8 P-core + 8 E-core)	24	P-core 2.3GHz / E-core 1.7GHz	P-core 5.0GHz / E-core 3.6GHz	30MB	Intel UHD Graphics

Operating System

Operating System**

- Fedora Linux
- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A3000 12GB Laptop GPU	Discrete	12GB GDDR6 ECC	115W	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A4500 Laptop GPU	Discrete	16GB GDDR6 ECC	115W	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A5500 Laptop GPU	Discrete	16GB GDDR6 ECC	115W	Dynamic Boost 2.0, DirectX 12
Intel Arc™ Pro A30M Graphics	Discrete	4GB GDDR6	35W	DirectX 12 Ultimate, Deep Link technologies
NVIDIA RTX A1000 Laptop GPU	Discrete	4GB GDDR6	60W	Dynamic Boost 2.0, DirectX 12
NVIDIA RTX A2000 8GB Laptop GPU	Discrete	8GB GDDR6	60W	Dynamic Boost 2.0, DirectX 12

Monitor Support

Monitor Support

- Supports up to 5 independent displays (native display and 4 external monitors via HDMI®, USB-C® and Thunderbolt™)
- HDMI supports up to 3840x2160@60Hz on integrated or Arc graphics models; 7680x4320@60Hz on NVIDIA graphics models
 - USB-C supports up to 5120x3200@60Hz
 - Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset
Intel WM690 chipset

Memory

Max Memory
Up to 128GB (4x 32GB DDR5 SO-DIMM)

Memory Slots
Four DDR5 SO-DIMM slots, dual-channel capable

- Memory Type**^[1]
- DDR5-4800 ECC
 - DDR5-4800 non-ECC

Memory Protection
ECC on models with ECC DIMMs and ECC capable processor (i5-12600HX / i7-12850HX / i9-12950HX)

Notes:

^[1] System comes with DDR5-4800 memory and will run at DDR5-4000 and DDR5-3600 due to platform limitation: 4x 32GB configuration runs at DDR5-3600, other configurations run at DDR5-4000.

Storage

Storage Support^[1]
Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 8TB, 4TB each
- RAID 0/1 support

Storage Slot
Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB / 4TB	Opal 2.0

RAID
RAID 0/1 support

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader
SD Express 7.0 card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers
Stereo speakers, 2W x2, Dolby® Atmos®

- Microphone
- Dual-microphone array, far-field, Dolby Voice
 - No microphone

- Camera**
- FHD 1080p + IR, with privacy shutter, fixed focus
 - FHD 1080p, with privacy shutter, fixed focus
 - No camera

Battery

Battery

Integrated Li-Polymer 94Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 230W AC adapter

Power Adapter

Power Adapter**[1]

- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS[1]	300nits	Anti-glare	16:10	1200:1	100% sRGB	89°/89°/89°/89°	Low Blue Light, X-Rite® Factory Color Calibration, 83.4% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	None	IPS[2]	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Low Blue Light, X-Rite Factory Color Calibration, 83.4% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	IPS[3]	600nits	Anti-glare	16:10	1500:1	100% Adobe® RGB	89°/89°/89°/89°	Low Blue Light, Dolby Vision™, DisplayHDR™ 400, X-Rite Factory Color Calibration, 83.4% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	Multi-touch	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	87.5°/87.5°/87.5°/87.5°	Low Blue Light, Dolby Vision, HDR 500 True Black, X-Rite Factory Color Calibration, 83.4% screen to body ratio

Color Calibration

X-Rite factory color calibration

Touchscreen

- OGM (One Glass Metal mesh) multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device**Pen**

- Lenovo Precision Pen 2 with built-in rechargeable battery, 4096 levels of pressure sensitivity, tilt detection, supports WGP, AES 2.0 and MPP 2.0 protocols. For more information, please read [Lenovo Precision Pen 2](#)
- No pen (purchase separately)
- No support

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical**Dimensions (WxDxH)^[1]**

364 x 266 x 30.23 mm (14.3 x 10.5 x 1.2 inches)

Weight^[2]

Starting at 2.95 kg (6.5 lbs)

Case Color

Storm grey (top), villi black (bottom)

Case Material

AL5052 (97.25% aluminium, 2.5% magnesium, and 0.25% chromium; top), PPS + 50% GF (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

No onboard Ethernet

WLAN + Bluetooth^[1]

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Standard Ports^[2]

- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 2x USB 3.2 Gen 1 (one Always On)
- Models with NVIDIA graphics: 1x HDMI 2.1, up to 8K/60Hz
- Models with integrated or Intel Arc graphics: 1x HDMI 2.1, up to 4K/60Hz

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] Power Delivery only supports power-out for charging peripherals.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® P16 Gen 1](#)

Monitor Cable

Monitor Cable

- (Optional) Lenovo USB-C to DisplayPort Adapter
- (Optional) Lenovo HDMI to VGA Monitor Adapter
- (Optional) Lenovo USB-C to VGA Adapter
- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY**System Management****System Management**

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE**Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Operating Environment****Temperature^[1]**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES**Bundled Accessories****Bundled Accessories**

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- Lenovo USB-C to Ethernet Adapter (2.5Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

^[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

^[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

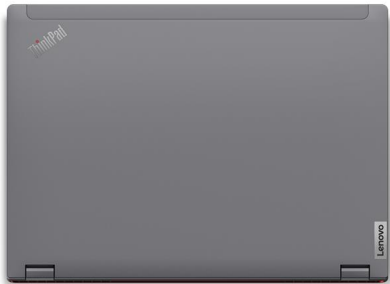
TÜV Rheinland® Low Blue Light

ISV Certifications

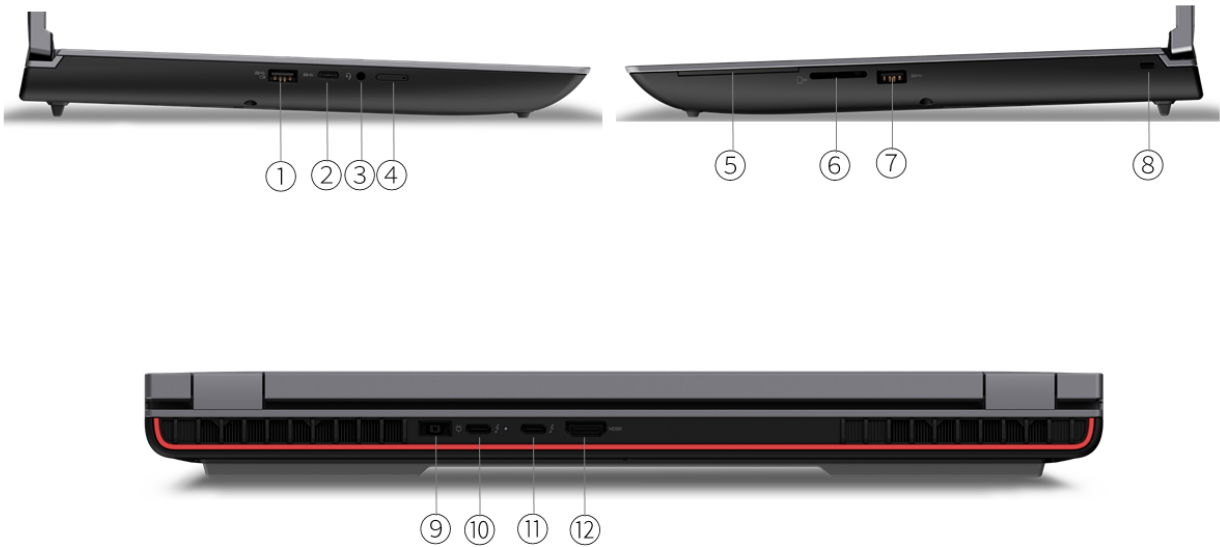
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. USB 3.2 Gen 1 (one Always On)	7. USB 3.2 Gen 1
2. USB-C 3.2 Gen 2	8. Kensington Nano Security Slot
3. Headphone / microphone combo jack (3.5mm)	9. Power connector
4. Nano-SIM card slot *	10. Thunderbolt 4
5. Smart card reader *	11. Thunderbolt 4
6. SD Express 7.0 card reader	12. HDMI

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation HX series Intel® Core™ i5 / i7 / i9 processor, supports up to 24 cores, up to 5.6GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-13600HX	14 (6 P-core + 8 E-core)	20	P-core 2.6GHz / E-core 1.9GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel UHD Graphics
Core i7-13700HX	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	P-core 5.0GHz / E-core 3.7GHz	30MB	Intel UHD Graphics
Core i7-13850HX	20 (8 P-core + 12 E-core)	28	P-core 2.1GHz / E-core 1.5GHz	P-core 5.3GHz / E-core 3.8GHz	30MB	Intel UHD Graphics
Core i9-13950HX	24 (8 P-core + 16 E-core)	32	P-core 2.2GHz / E-core 1.6GHz	P-core 5.5GHz / E-core 4.0GHz	36MB	Intel UHD Graphics
Core i9-13980HX	24 (8 P-core + 16 E-core)	32	P-core 2.2GHz / E-core 1.6GHz	P-core 5.6GHz / E-core 4.0GHz	36MB	Intel UHD Graphics

Operating System

Operating System**

- Fedora Linux
- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#)[])
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[] Red Hat Enterprise Linux 9.2 certification will be available after Aug 18, 2023.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX 3500 Ada Generation Laptop GPU	Discrete	12GB GDDR6 ECC	115W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 4000 Ada Generation Laptop GPU	Discrete	12GB GDDR6 ECC	115W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 5000 Ada Generation Laptop GPU	Discrete	16GB GDDR6 ECC	115W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
Intel Arc™ Pro A30M Graphics	Discrete	4GB GDDR6	35W	DirectX 12 Ultimate, Deep Link technologies
NVIDIA RTX A1000 Laptop GPU	Discrete	6GB GDDR6	60W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	60W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz on integrated or Arc graphics models; 7680x4320@60Hz on NVIDIA graphics models
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel WM790 chipset

Memory

Max Memory

Up to 192GB (4x 48GB DDR5 SO-DIMM)

Memory Slots

Four DDR5 SO-DIMM slots, dual-channel capable

Memory Type**^[1]

- DDR5-5600 ECC
- DDR5-5600 non-ECC

Memory Protection

ECC on models with ECC DIMMs and ECC capable processor (i5-13600HX / i7-13850HX / i9-13950HX)

Notes:

^[1] System comes with DDR5-5600 memory and will run at lower speed due to platform limitations: 4x 32GB / 4x 48GB configurations run at DDR5-3600. Other configurations run at DDR5-4000.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 8TB, 4TB each
- RAID 0/1 support

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB / 4TB	Opal 2.0

RAID

RAID 0/1 support

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 94Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 230W AC adapter

Power Adapter

Power Adapter**[1]

- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS[1]	300nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	85° / 85° / 85° / 85°	Eyesafe® Certified 2.0, Low Blue Light, X-Rite® Factory Color Calibration, 83.4% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	None	IPS[2]	500nits	Anti-glare	16:10	1200:1	100% sRGB	165Hz	89° / 89° / 89° / 89°	Eyesafe Certified 2.0, Low Blue Light, X-Rite Factory Color Calibration, 83.4% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	IPS[3]	800nits	Anti-glare	16:10	1500:1	100% DCI-P3	60Hz	85° / 85° / 85° / 85°	Eyesafe Certified 2.0, TÜV Low Blue Light, DisplayHDR™ 400, Dolby Vision™, X-Rite Factory Color Calibration, 83.4% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	Multi-touch	OLED	SDR 400nits / HDR 500nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	Eyesafe Certified 2.0, TÜV Low Blue Light, Dolby Vision, DisplayHDR

											True Black 500, X-Rite Factory Color Calibration, 83.4% screen to body ratio
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Color Calibration

X-Rite factory color calibration

Touchscreen

- OGM (One Glass Metal mesh) multi-touch, supports 10-point touch (OLED display)
- Non-touch

Notes:

[1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen

- Lenovo Precision Pen 2 with built-in rechargeable battery, 4096 levels of pressure sensitivity, tilt detection, supports WGP, AES 2.0 and MPP 2.0 protocols. For more information, please read [Lenovo Precision Pen 2](#)
- No pen (purchase separately)
- No support

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

364 x 266 x 30.23 mm (14.3 x 10.5 x 1.2 inches)

Weight^[2]

Starting at 2.95 kg (6.5 lbs)

Case Color

Storm grey (top), villi black (bottom)

Case Material

AL5052 (97.25% aluminium, 2.5% magnesium, and 0.25% chromium; top), PPS + 50% GF (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]
- No WLAN and Bluetooth

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)

- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional docking or Lenovo USB-C® to Ethernet Adapter, up to 2.5GbE.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]**Standard Ports^[2]**

- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x USB-C 3.2 Gen 2 (support data transfer and Power Delivery 3.0)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 2x USB 3.2 Gen 1 (one Always On)
- Models with NVIDIA graphics: 1x HDMI 2.1, up to 8K/60Hz
- Models with integrated or Intel Arc graphics: 1x HDMI 2.1, up to 4K/60Hz

Optional Ports^{*}**

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] Power Delivery only supports power-out for charging peripherals.

Docking**Docking**

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® P16 Gen 2](#)

Monitor Cable**Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (2.5Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

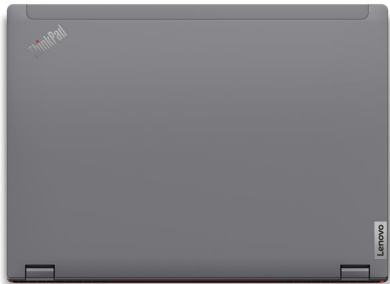
- Eyesafe Certified 2.0
- TÜV Rheinland® Low Blue Light

ISV Certifications

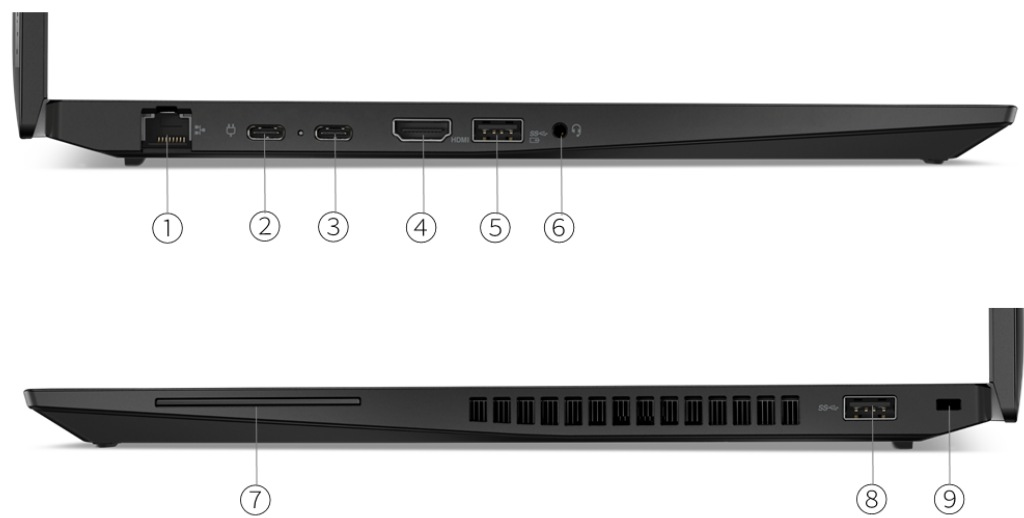
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. USB-C 3.2 Gen 2	7. Smart card reader *
3. USB-C 3.2 Gen 2	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

- Notes:
- Items with * are only available on selected models
 - Two USB-C 3.2 Gen 2 ports support data transfer, Power Delivery and DisplayPort 1.4

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 PRO 6000 Series Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System

- Fedora Linux
- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics**^[1]

Graphics	Type	Memory	TGP	Key Features
AMD Radeon 660M	Integrated	Shared	Share CPU TDP	DirectX® 12
AMD Radeon 680M	Integrated	Shared	Share CPU TDP	DirectX 12

Notes:

^[1] Integrated AMD Radeon 660M / 680 graphics use system memory as dedicated video memory, from 512MB to 8GB (8GB video memory requires system memory >= 32GB).

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 3840x2160@60Hz
- USB-C supports up to 5120x2880@60Hz (USB-C to DP)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400 non-ECC

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p + IR, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery

Power Adapter

Power Adapter**[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming

16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1000:1	100% sRGB	89°/89°/89°/89°	ICC Template color calibration, Low power, Low blue light, TUV Eye Comfort, 85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard, Low Blue Light, TUV Eye Comfort, 85.4% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Dolby Vision™, X-Rite® Factory Color Calibration (ΔE<2), Low blue light, TUV Eye Comfort, 85.4% screen to body ratio, DC dimming

Color Calibration**

- X-Rite factory color calibration (WQXGA display)
- ICC Template color calibration (selected WUXGA display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67 x 115 mm (2.64 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

361.98 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)

Weight^{[2][3]}

Models	Weight
Models with black cover	Starting at 1.81 kg (3.99 lbs)
Models with grey cover	Starting at 1.85 kg (4.08 lbs)

Case Color**

- Black
- Storm grey

Case Material**

- Models with black cover: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Starting weight is based on minimal configuration (integrated graphics, lowest capacity battery, no WWAN, etc).

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, supports Wake-on-LAN
- Gigabit Ethernet, supports Wake-on-LAN and AMD Pro Manageability

WLAN + Bluetooth**

- AMD Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 2x USB 3.2 Gen 1 (one Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad P16s Gen 1 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip^[1]

Discrete TPM 2.0 (TCG certified) and Microsoft® Pluton TPM 2.0, one enabled at one time^[2]

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

Notes:

^[1] Discrete TPM 2.0 is for special bid only.

^[2] Microsoft Pluton TPM 2.0 is only applicable on Windows 11.

MANAGEABILITY

System Management

System Management

- AMD PRO Manageability
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

^[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Low Blue Light

ISV Certifications

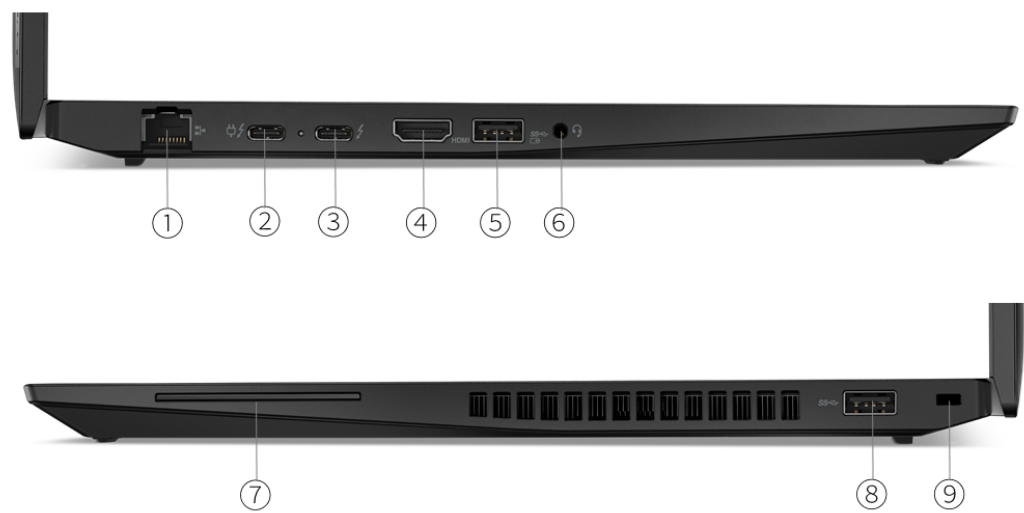
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	7. Smart card reader *
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation P series Intel® Core™ i5 / i7 processor, supports up to 14 cores, up to 4.8GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 10 Home 64 Single Language
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® T550 Laptop GPU	Discrete	4GB GDDR6	30W	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 7680x4320@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200 non-ECC

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type^{**[2]}

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] PCIe x4 SSD may be PCIe 3.0 x4 or PCIe 4.0 x4 as substitution.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, Dolby® Audio™

Microphone

- Dual-microphone array, Dolby Voice
- No microphone

Camera^{**}

- FHD 1080p + IR, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery^{**}

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 135W AC adapter

Power Adapter

Power Adapter^{**[1]}

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 135W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1000:1	100% sRGB	89°/89°/89°/89°	ICC Template color calibration, Low power, Low blue light, TUV Eye Comfort, 85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard, Low Blue Light, TUV Eye Comfort, 85.4% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Dolby Vision™, X-Rite® Factory Color Calibration (ΔE<2), Low blue light, TUV Eye Comfort, 85.4% screen to body ratio, DC dimming

Color Calibration**

- X-Rite factory color calibration (WQXGA display)
- ICC Template color calibration (selected WUXGA display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67 x 115 mm (2.64 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
NVIDIA graphics models	361.9 x 255.5 x 21.1 mm (14.25 x 10.06 x 0.83 inches)

Integrated graphics models	361.98 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)
----------------------------	--

Weight^{[2][3]}

Models	Weight
Models with black cover	Starting at 1.8 kg (3.97 lbs)
Models with grey cover	Starting at 1.83 kg (4.04 lbs)

Case Color^{**}

- Black
- Storm grey

Case Material^{**}

- Models with black cover: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- [3] Starting weight is based on minimal configuration (integrated graphics, lowest capacity battery, no WWAN, etc).

CONNECTIVITY

Network

Ethernet^{**}

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth^{®**[1]}

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1

WWAN^{**}

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

- [1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad P16s Gen 1 \(Intel\)](#)

Monitor Cable

Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Low Blue Light

ISV Certifications

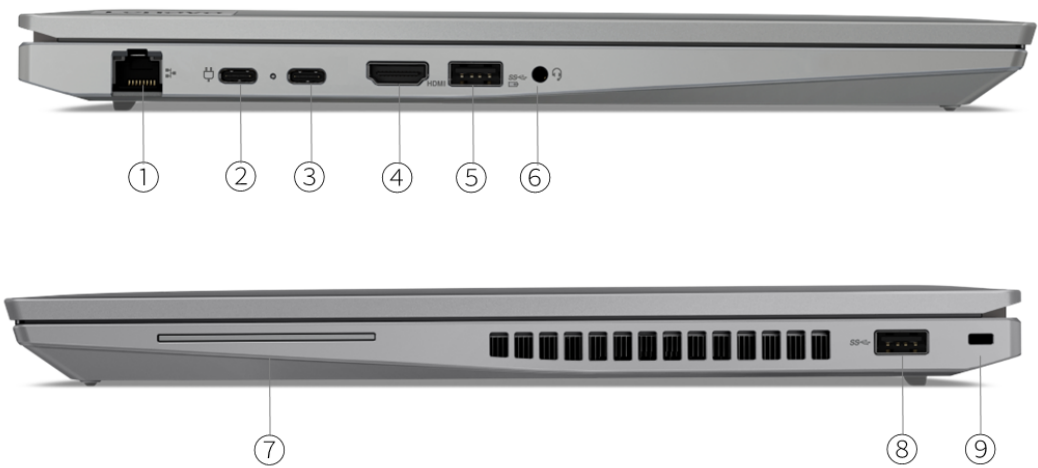
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. USB4	7. Smart card reader *
3. USB-C 3.2 Gen 2	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 PRO 7040U Series Processor, supports up to 8 cores, up to 5.1GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Fedora Linux
- Red Hat Enterprise Linux 9.1 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Red Hat Enterprise Linux 9.1 certification will be available after Nov 30, 2023.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
AMD Radeon 740M	Integrated	Shared	Share CPU TDP	DirectX® 12
AMD Radeon 780M	Integrated	Shared	Share CPU TDP	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® 3.2 Gen 2 and USB4®)

- HDMI supports up to 3840x2160@60Hz
- USB-C 3.2 Gen 2 and USB4 support up to 3840x2160@60Hz (USB-C to DP)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with 64GB LPDDR5x: 64GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-7500 non-ECC^[1]

Notes:

[1] System comes with LPDDR5x-7500 DIMMs and will run at LPDDR5x-6400 due to platform limitations.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- 5.0MP + IR discrete, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery

Power Adapter

Power Adapter**^[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS ^[1]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming

16"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ICC Template color calibration, Low power, Low Blue Light, Eyesafe® Certified 2.0, 85.4% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	X-Rite® Factory Color Calibration, Low Blue Light, Eyesafe Certified 2.0, DisplayHDR™ 400, Dolby Vision™, 85.4% screen to body ratio

Color Calibration**

- X-Rite factory color calibration (OLED display)
- ICC Template color calibration (low power display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67 x 115 mm (2.64 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

361.98 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)

Weight^[2]

Models	Weight
Models with black cover	Starting at 1.70 kg (3.76 lbs)
Models with grey cover	Starting at 1.74 kg (3.85 lbs)

Case Color**

- Storm grey
- Villi black

Case Material**

- Models with black cover: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN and AMD Pro Manageability

WLAN + Bluetooth[®]**

- AMD Wi-Fi[®] 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[1]
- Qualcomm[®] Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1], [2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft[®]](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P16s Gen 2 \(AMD\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified) and Microsoft Pluton TPM 2.0, one enabled at one time^[1]

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

Notes:

^[1] Microsoft Pluton TPM 2.0 is only applicable on Windows 11.

MANAGEABILITY

System Management

System Management

AMD PRO Manageability 2.0

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

- 85% PCC recycled plastic used in key caps (backlight)
- 70% PCC recycled plastic used in key caps (non-backlight)
- 90% PCC recycled plastic used in speaker enclosure
- 90% PCC recycled plastic used in the battery
- 90% PCC recycled plastic used in 65W adapter
- 90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light

ISV Certifications

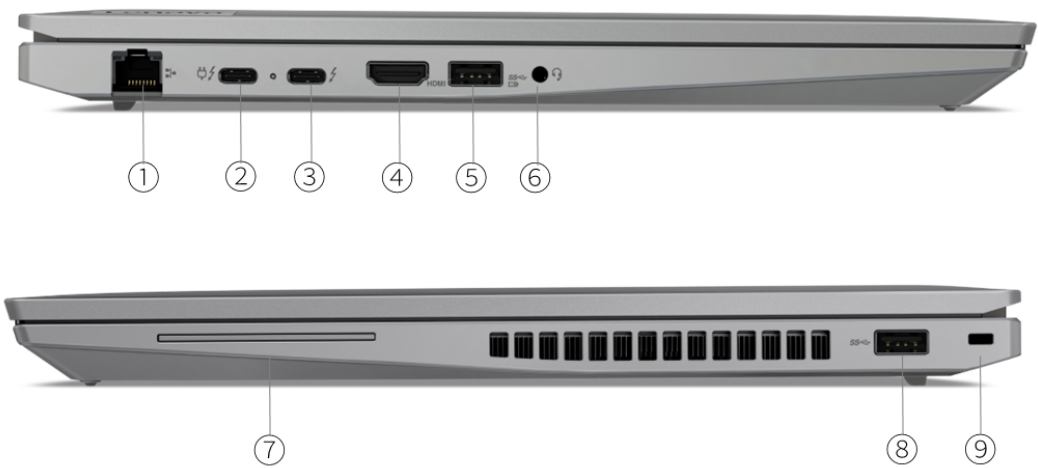
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Ethernet (RJ-45)	6. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	7. Smart card reader *
3. Thunderbolt 4	8. USB 3.2 Gen 1
4. HDMI	9. Security keyhole
5. USB 3.2 Gen 1 (Always On)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation P series Intel® Core™ i5 / i7 processor, supports up to 14 cores, up to 5.2GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Red Hat Enterprise Linux 9.1 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Red Hat Enterprise Linux 9.1 certification will be available after Sep 29, 2023.

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	30W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 7680x4320@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with 64GB LPDDR5x: 64GB soldered memory, not upgradable
- Models with DDR5 memory: up to 48GB (16GB soldered + 32GB SO-DIMM)

Memory Slots**

- Models with DDR5 memory: one memory soldered to systemboard, one DDR5 SO-DIMM slot, dual-channel capable
- Models with LPDDR5x memory: memory soldered to systemboard, no slots, dual-channel

Memory Type**

- DDR5-5600 non-ECC (models with integrated graphics)^[1]
- LPDDR5x-7500 non-ECC (models with discrete graphics)^[2]

Notes:

- [1] System comes with DDR5-5600 memory and will run at DDR5-5200 due to platform limitations.
- [2] System comes with LPDDR5x-7500 memory and will run at LPDDR5x-4800 due to platform limitations.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- 5.0MP + IR discrete, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 135W AC adapter

Power Adapter

Power Adapter**^[1]

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 135W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS ^[1]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ICC Template color calibration, Low power, Low Blue Light, Eyesafe® Certified 2.0, 85.4% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
16"	WQUXGA (3840x2400)	None	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	X-Rite® Factory Color Calibration, Low Blue Light, Eyesafe Certified 2.0, DisplayHDR™ 400, Dolby Vision™, 85.4% screen to body ratio

Color Calibration

- X-Rite factory color calibration (OLED display)
- ICC Template color calibration (low power display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67 x 115 mm (2.64 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
NVIDIA graphics models	361.9 x 255.5 x 21.1 mm (14.25 x 10.06 x 0.83 inches)
Integrated graphics models	361.98 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)

Weight^[2]

Models	Weight
Models with black cover	Starting at 1.70 kg (3.76 lbs)
Models with grey cover	Starting at 1.73 kg (3.83 lbs)

Case Color**

- Storm grey
- Villi black

Case Material**

- Models with black cover: PC 50% GF + PC 20% CF (top), PPS (bottom)
- Models with grey cover: aluminium (top), PPS (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[1]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

- [1], [2] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.
- Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

ThinkPad P16s Gen 2 (Intel)

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Security keyhole
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad P16s Gen 2 \(Intel\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

85% PCC recycled plastic used in key caps (backlight)
70% PCC recycled plastic used in key caps (non-backlight)
98% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the battery
90% PCC recycled plastic used in 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)

- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light

ISV Certifications

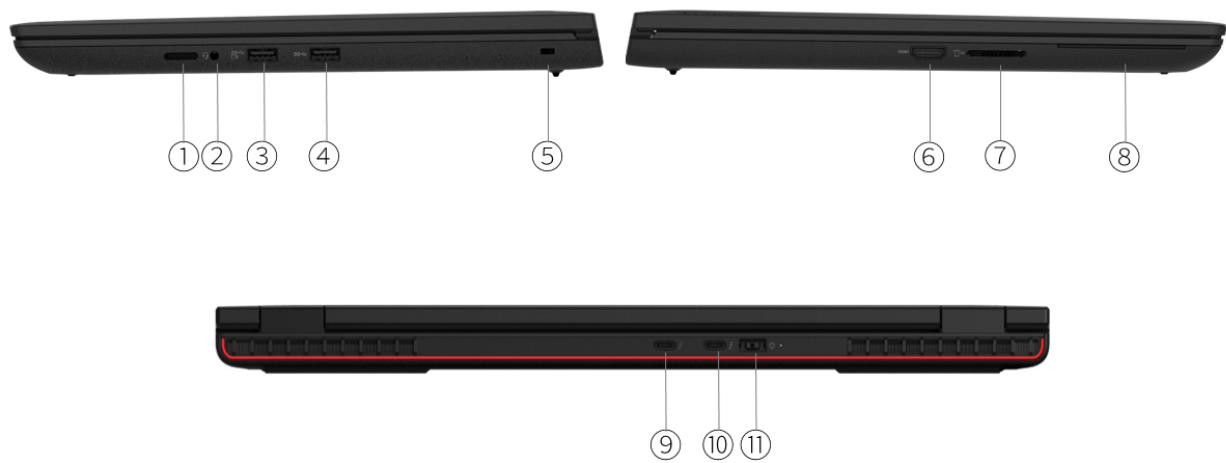
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Nano-SIM card slot *	7. SD Express 7.0 card reader
2. Headphone (3.5mm)	8. Smart card reader *
3. USB 3.2 Gen 1 (Always On)	9. USB4
4. USB 3.2 Gen 1	10. USB4
5. Kensington Nano Security Slot	11. Power-in (Slim Tip)
6. HDMI	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to AMD Ryzen™ PRO 7040HS Series Processor, supports up to 8 cores, up to 5.2GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache
AMD Ryzen 5 PRO 7640HS	6	12	4.3GHz	5.0GHz	6MB L2 / 16MB L3
AMD Ryzen 7 7840HS	8	16	3.8GHz	5.1GHz	8MB L2 / 16MB L3
AMD Ryzen 7 PRO 7840HS	8	16	3.8GHz	5.1GHz	8MB L2 / 16MB L3
AMD Ryzen 9 PRO 7940HS	8	16	4.0GHz	5.2GHz	8MB L2 / 16MB L3

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Red Hat Enterprise Linux 9.2 certification will be available after Nov 30, 2023.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
AMD Radeon™ 760M	Integrated	Shared	Share CPU TDP	DirectX® 12
AMD Radeon 780M	Integrated	Shared	Share CPU TDP	DirectX 12
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX A1000 Laptop GPU	Discrete	6GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB4®)

- HDMI supports up to 7680x4320@60Hz
- USB4 supports up to 5120x3200@60Hz (USB-C® to DP)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

Up to 64GB (2x 32GB DDR5 SO-DIMM)

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-5600 non-ECC

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 4TB, 2TB each

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

RAID

RAID 0/1 support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- 5.0MP + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter**^[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light, 83.9% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	IPS	800nits	Anti-glare	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, Eyesafe® Certified 2.0, TÜV Low Blue Light, X-Rite® Factory Color Calibration, 83.9% screen to body ratio, DC dimming

Color Calibration

- X-Rite factory color calibration (WQUXGA display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

365 x 262 x 24.66 mm (14.37 x 10.31 x 0.97 inches)

Weight^[2]

Starting at 2.2 kg (4.85 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet

WLAN + Bluetooth®

Qualcomm® Wi-Fi® 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[1]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

^[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x Security keyhole
- 2x USB 3.2 Gen 1 (one Always On)
- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)^[2]

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

^[2] Power Delivery only supports power-out for charging peripherals.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P16v Gen 1 \(AMD\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter

- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- AMD PRO Manageability 2.0
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

85% PCC recycled plastic used in key caps

90% PCC recycled plastic used in speaker enclosure

90% PCC recycled plastic used in the battery

30% PCC recycled plastic used in 135W and 170W adapters
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified
- (Optional) TÜV Rheinland® Low Blue Light

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

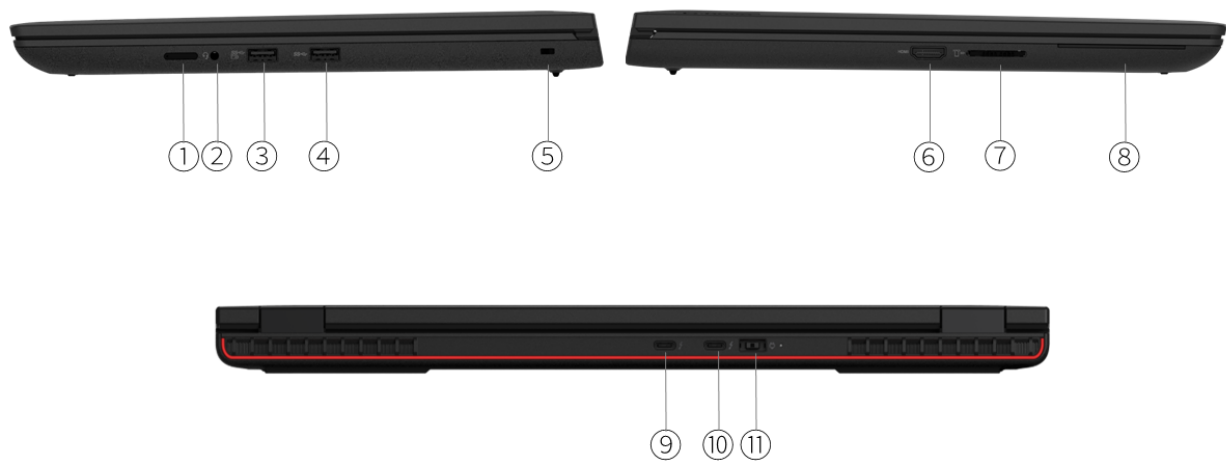
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OVERVIEW



1. Nano-SIM card slot *	7. SD Express 7.0 card reader
2. Headphone (3.5mm)	8. Smart card reader *
3. USB 3.2 Gen 1 (Always On)	9. Thunderbolt 4
4. USB 3.2 Gen 1	10. Thunderbolt 4
5. Kensington Nano Security Slot	11. Power-in (Slim Tip)
6. HDMI	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation H series Intel® Core™ i5 / i7 / i9 processor, supports up to 14 cores, up to 5.4GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache
Core i5-13500H	12 (4 P-core + 8 E-core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz	18MB
Core i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB
Core i7-13800H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.2GHz / E-core 4.0GHz	24MB
Core i9-13900H	14 (6 P-core + 8 E-core)	20	P-core 2.6GHz / E-core 1.9GHz	P-core 5.4GHz / E-core 4.1GHz	24MB

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))^[1]
- Ubuntu Linux LTS^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1] Red Hat Enterprise Linux 9.2 certification will be available after Aug 18, 2023.
- [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris® Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX A1000 Laptop GPU	Discrete	6GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Notes:

- [1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 7680x4320@60Hz
- Thunderbolt supports up to 5120x3200@60Hz (Thunderbolt or USB-C® to DP)

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory
Up to 96GB (2x 48GB DDR5 SO-DIMM)

Memory Slots
Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type
DDR5-5600 non-ECC^[1]

Notes:

[1] System comes with DDR5-5600 memory and will run at DDR5-5200 due to platform limitations.

Storage

Storage Support^[1]
Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 4TB, 2TB each

Storage Slot
Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

RAID
RAID 0/1 support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader
SD Express 7.0 card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers
Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- 5.0MP + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- FHD 1080p, with privacy shutter, fixed focus

Battery

Battery
Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter

**[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light, 83.9% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	None	IPS	800nits	Anti-glare	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, Eyesafe® Certified 2.0, TÜV Low Blue Light, X-Rite® Factory Color Calibration, 83.9% screen to body ratio, DC dimming

Color Calibration

- X-Rite factory color calibration (WQUXGA display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

LED backlight on optional keyboard

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

365 x 262 x 24.66 mm (14.37 x 10.31 x 0.97 inches)

Weight[2]

Starting at 2.2 kg (4.85 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional docking or Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft®](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x Security keyhole
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)^[2]
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

ThinkPad P16v Gen 1 (Intel)

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] Power Delivery only supports power-out for charging peripherals.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P16v Gen 1 \(Intel\)](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service

- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

85% PCC recycled plastic used in key caps
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery
30% PCC recycled plastic used in 135W and 170W adapters
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light

ISV Certifications

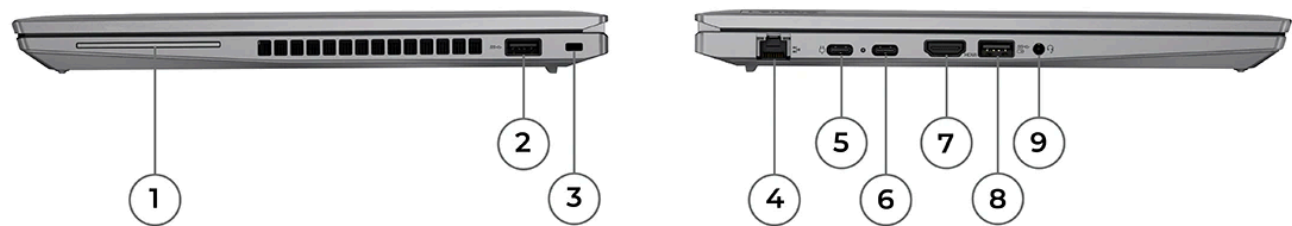
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Smart card reader *	6. USB-C 3.2 Gen 2
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. USB-C 3.2 Gen 2	

- Notes:
- Items with * are only available on selected models
 - Optional nano-SIM card slot on the rear side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 660M	Integrated	Shared	DirectX® 12
AMD Radeon 680M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone^[1]

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Notes:

[1] No microphone is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 14.6 hr with 595 performance score @200nits
MobileMark 25: up to 13.5 hr with 513 performance score @250nits
JEITA 2.0: up to 21.1 hr @150nits
Local video playback: up to 18.1 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 13.3 hr with 694 performance score @200nits
MobileMark 25: up to 12.6 hr with 548 performance score @250nits
JEITA 2.0: up to 16.5 hr @150nits
Local video playback: up to 14.8 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 10.1 hr with 662 performance score @200nits
MobileMark 25: up to 6.0 hr with 541 performance score @250nits
JEITA 2.0: up to 13.2 hr @150nits
Local video playback: up to 10.4 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA Low Power (non-touch), AMD Ryzen 7 PRO 6850U, 16GB LPDDR5, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA 300nits (touch), AMD Ryzen 5 PRO 6650U, 16GB LPDDR5, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: WQUXGA (touch), AMD Ryzen 5 PRO 6650U, 32GB LPDDR5, Win 11, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	On-cell touch	IPS	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified
14"	WUXGA (1920x1200)	On-cell touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light
14"	WQUXGA (3840x2400)	Add-on Film Touch	IPS	500nits	Anti-glare, anti-reflection, anti-smudge	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, Eyesafe Certified

Touchscreen**

- Add-on Film Touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with black cover	317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.70 inches)
Models with storm grey cover	317.7 x 227.36 x 17.9 mm (12.51 x 8.95 x 0.70 inches)

Weight^[2]

Models	Weight
Models with thunder black cover and 39.3Wh battery	Starting at 1.406 kg (3.10 lbs)
Models with thunder black cover and 52.5Wh battery	Starting at 1.498 kg (3.30 lbs)
Models with storm grey cover and 39.3Wh battery	Starting at 1.501 kg (3.31 lbs)
Models with storm grey cover and 52.5Wh battery	Starting at 1.540 kg (3.39 lbs)

Case Color**

- Storm grey
- Thunder black

Surface Treatment

Not anti-microbial surface treatment

Case Material**

- Storm grey models: aluminium (top), PPS (bottom)
- Thunder black models: PC + 20% CF + 50% GF (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Realtek RTL8111EPV (DASH models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN (non-DASH models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[2]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card

- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports^{*}**

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14 Gen 3 \(AMD\)](#)

Monitor Cable**Monitor Cable^{***}**

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh battery
25-30% PCC recycled plastic used in the 39.3Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)

- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified
- (Optional) TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



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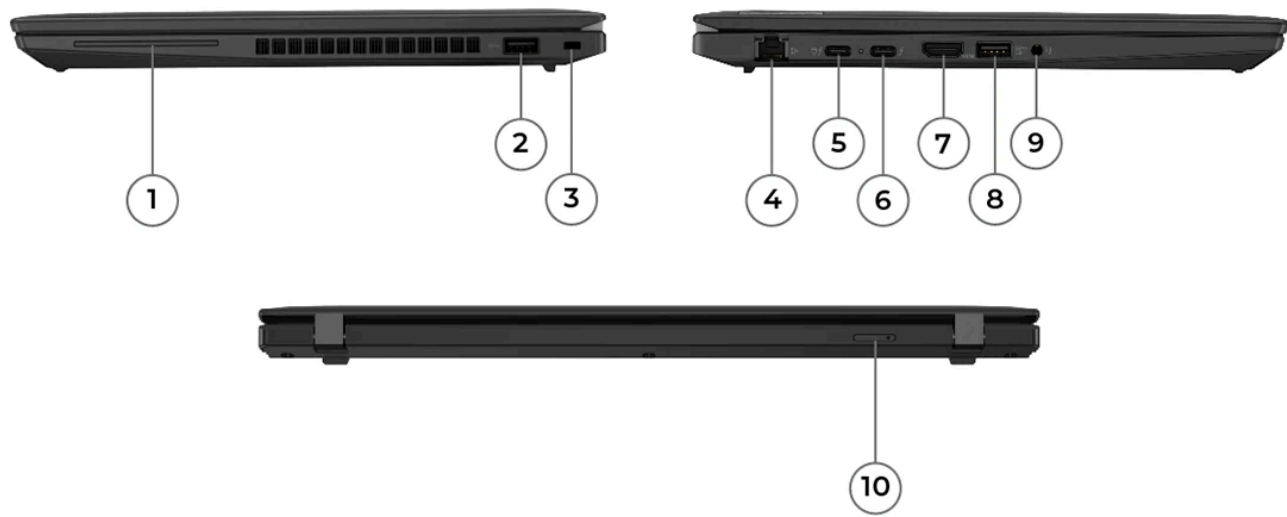


AMD



AMD

OVERVIEW



1. Smart card reader *	6. Thunderbolt 4
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. Thunderbolt 4	10. Nano-SIM card slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	DirectX® 12.1
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	DirectX 12

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-

channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4 ^[2]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone^[1]

Camera**^[2]

ThinkPad T14 Gen 3 (Intel)

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Notes:

[1] No microphone is for special bid only.

[2] Only HD 720p camera and FHD 1080p + IR hybrid camera are available in EMEA.

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 10.0 hr with 791 performance score @200nits

MobileMark 25: up to 8.2 hr with 601 performance score @250nits

JEITA 2.0: up to 19.9 hr @150nits

Local video playback: up to 15.1 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 9.4 hr with 930 performance score @200nits

MobileMark 25: up to 6.5 hr with 653 performance score @250nits

JEITA 2.0: up to 12.0 hr @150nits

Local video playback: up to 10.1 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 7.4 hr with 1055 performance score @200nits

MobileMark 25: up to 4.8 hr with 712 performance score @250nits

JEITA 2.0: up to 11.0 hr @150nits

Local video playback: up to 9.1 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1240P, 8GB soldered, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), Intel i5-1250P, 16GB (8GB soldered + 8GB SO-DIMM), Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: WQUXGA (touch), Intel i7-1280P, 32GB (16GB soldered + 16GB SO-DIMM), NVIDIA GeForce MX550, Win 11, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^{[1][2]}

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[3]

Notes:

[1] AC adapter offerings depend on the country.

[2] 45W USB-C AC adapter is ONLY available for the models with integrated graphics.

45W USB-C AC adapter and 65W USB-C slim AC adapter are NOT available in EMEA.

[3] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	On-cell touch	IPS	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified
14"	WUXGA (1920x1200)	On-cell touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400) [2]	None	IPS	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	Eyesafe Certified
14"	WQUXGA (3840x2400)	Add-on Film Touch	IPS	500nits	Anti-reflection, anti-smudge	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, Eyesafe Certified

Touchscreen**

- Add-on Film Touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
- [2] 2.2K display is NOT available in EMEA.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight[1]

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Notes:

- [1] Non-backlit keyboard is only available for the models with thunder black cover.

Mechanical

Dimensions (WxDxH)[1]

317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.70 inches)

Weight[2]

Models	Weight
Models with thunder black cover, integrated graphics and 39.3Wh battery	Starting at 1.358 kg (2.99 lbs)
Models with thunder black cover, discrete graphics and 39.3Wh battery	Starting at 1.418 kg (3.13 lbs)

Models with storm grey cover and 39.3Wh battery	Starting at 1.477 kg (3.26 lbs)
Models with thunder black cover, integrated graphics and 52.5Wh battery	Starting at 1.478 kg (3.26 lbs)
Models with storm grey cover and 52.5Wh battery	Starting at 1.521 kg (3.35 lbs)
Models with thunder black cover, discrete graphics and 52.5Wh battery	Starting at 1.538 kg (3.39 lbs)

Case Color**

- Storm grey^[3]
- Thunder black

Surface Treatment

Not anti-microbial surface treatment

Case Material**

- Models with thunder black cover and integrated graphics: PC + 20% CF + 50% GF (top), PPS (bottom)
- Models with thunder black cover and discrete graphics: PC + 20% CF + 50% GF (top), aluminium (bottom)
- Models with storm grey cover: aluminium (top), PPS (bottom)

Notes:

- ^[1] The system dimensions may vary depending on configurations.
- ^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- ^[3] Storm grey cover is ONLY available for the models with integrated graphics.
Storm grey cover is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[2]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)^[4]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card^[5]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC^[6]

- Near Field Communication
- No support

Notes:

- ^[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- ^[2], ^[3] Wi-Fi 6E full features might be limited by country-level restrictions.
Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.
- ^[4] Wireless WAN upgradable to 4G is ONLY available in EMEA.
- ^[5] Fibocom L860-GL CAT16 is special bid only in EMEA.
- ^[6] NFC is NOT available for storm grey models.
NFC is special bid only in EMEA.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14 Gen 3 \(Intel\)](#)

Monitor Cable**Monitor Cable*****

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader^[1]

- Smart card reader
- No smart card reader

Fingerprint Reader^[2]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert

- Glance by Mirametrix®
- Human Presence Detection (software)
- (Optional) RFID reader^[3]

Notes:

- [1] Smart card reader is mutually exclusive with RFID reader.
- [2] Fingerprint reader is standard on storm grey models and optional on thunder black models.
- [3] RFID reader is NOT available on storm grey models and is mutually exclusive with smart card reader.

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

- [1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

Notes:

- [1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh battery
25-30% PCC recycled plastic used in the 39.3Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Eyesafe Certified

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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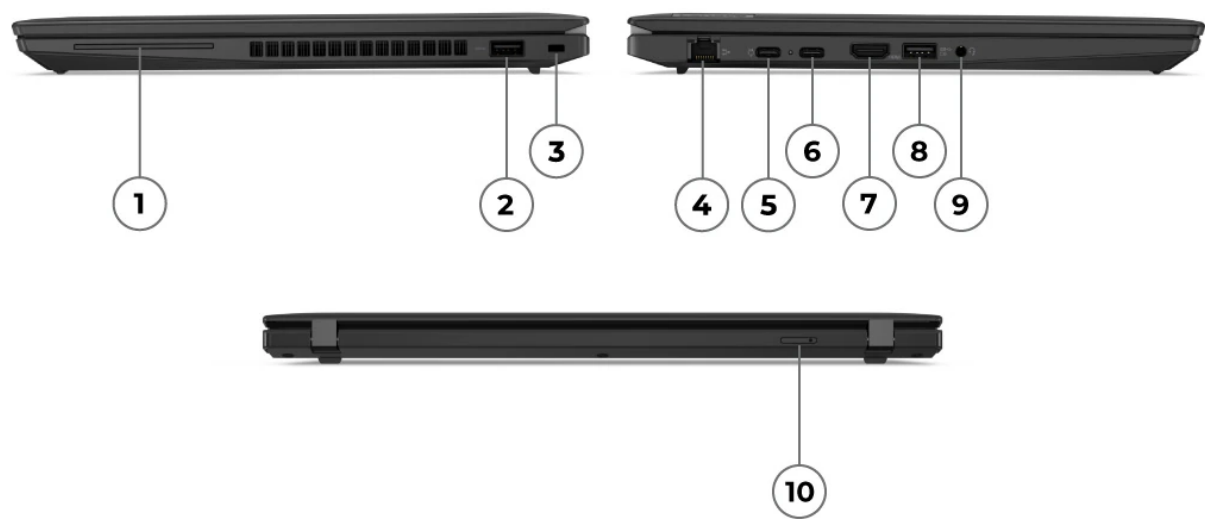


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OVERVIEW



1. Smart card reader *	6. USB-C 3.2 Gen 2
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. USB4 40Gbps	10. Nano-SIM card slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 740M	Integrated	Shared	DirectX® 12
AMD Radeon 780M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® or USB4®)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)
- USB4 supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type**

- LPDDR5-6400 (8GB)
- LPDDR5x-6400 (16GB or 32GB)^[1]

Notes:

[1] Installed memory is actually 7500MHz, but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera^[2]

Notes:

[1] No microphone is for special bid only.

[2] No camera is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 14.3 hr with 692 performance score @250nits
JEITA 2.0: up to 22.0 hr @150nits
Local video playback: up to 17.6 hr @150nits

Alternate configuration 2
MobileMark 25: up to 10.3 hr with 647 performance score @250nits
JEITA 2.0: up to 16.1 hr @150nits
Local video playback: up to 14.1 hr @150nits

Alternate configuration 3
MobileMark 25: up to 5.0 hr with 645 performance score @250nits
JEITA 2.0: up to 7.4 hr @150nits
Local video playback: up to 7.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA Low Power (non-touch), AMD Ryzen 7 PRO 7840U, 16GB LPDDR5x, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA 300nits (touch), AMD Ryzen 5 PRO 7540U, 16GB LPDDR5x, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: 2.8K OLED (non-touch), AMD Ryzen 5 PRO 7540U, 32GB LPDDR5x, Win 11, 39.3Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS[1]	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	Multi-touch	IPS[2]	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS[3]	400nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
14"	WUXGA (1920x1200)	Multi-touch	IPS[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS[5]	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	Eyesafe Certified 2.0
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

[1], [2], [3], [4], [5] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.70 inches)

Weight^[2]

Models	Weight
Models with thunder black cover and 39.3Wh battery	Starting at 1.35 kg (2.96 lbs)
Models with storm grey cover and 39.3Wh battery	Starting at 1.38 kg (3.05 lbs)
Models with thunder black cover and 52.5Wh battery	Starting at 1.39 kg (3.05 lbs)
Models with storm grey cover and 52.5Wh battery	Starting at 1.42 kg (3.13 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material**

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14 Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader^[1]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password

- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

Notes:

[1] Fingerprint reader is standard on storm grey models and optional on thunder black models.

MANAGEABILITY

System Management

System Management

DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

50% recycled aluminium on storm grey top cover
55% recycled aluminium on storm grey bottom cover
90% recycled magnesium on keyboard cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the 39.3Wh and 52.5Wh battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Standard packaging: 90% plastic free packaging
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Eyesafe Certified 2.0

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



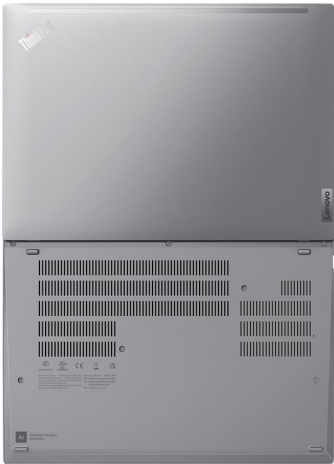
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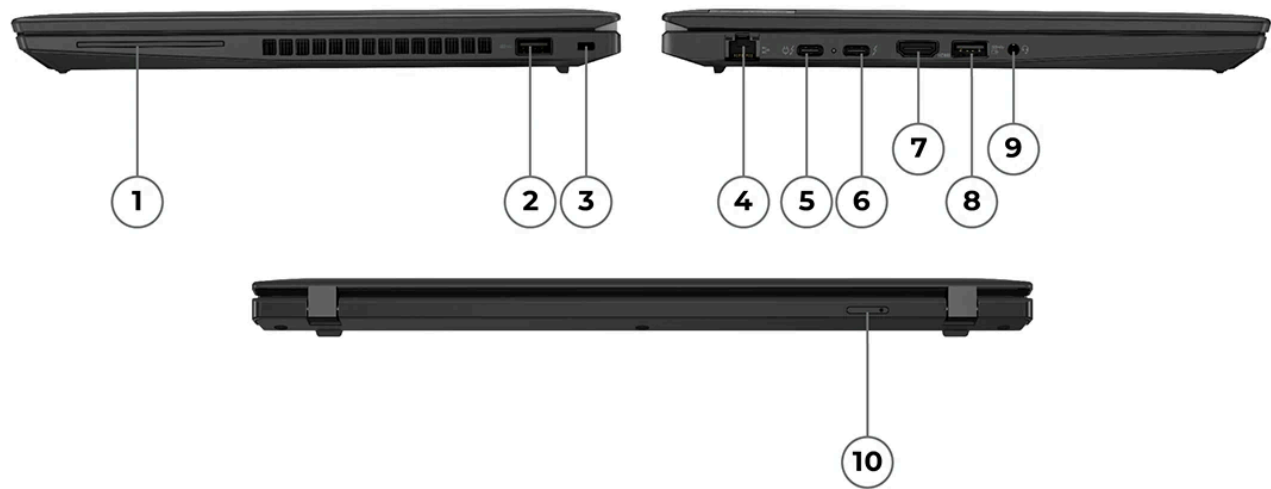


AMD



AMD

OVERVIEW



1. Smart card reader *	6. Thunderbolt 4
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. Thunderbolt 4	10. Nano-SIM card slot *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.
Intel P series processors are for special bid only.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	DirectX® 12.1
NVIDIA® GeForce MX550	Discrete	4GB GDDR6	DirectX 12

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with DDR4 memory: up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Models with DDR5 memory: up to 32GB (16GB soldered + 16GB SO-DIMM) DDR5-5200

Memory Slots**

- Models with DDR4 memory: one memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable
- Models with DDR5 memory: one memory soldered to systemboard, one DDR5 SO-DIMM slot, dual-channel capable
- Models with LPDDR5x memory: memory soldered to systemboard, no slots, dual-channel

Memory Type**

- DDR4-3200 (models with integrated graphics)
- DDR5-5200 (models with integrated graphics)^[2]
- LPDDR5x-4800 (models with discrete graphics)^[3]

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed DDR5 memory is actually 5600MHz but run at 5200MHz due to platform limitation.

[3] Installed LPDDR5x memory is actually 7500MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera^[2]

Notes:

[1] No microphone is for special bid only.

[2] No camera is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 39.3Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 9.5 hr @250nits

JEITA 2.0: up to 21.7 hr @150nits

Local video playback: up to 17.5 hr @150nits

Alternate configuration 2

MobileMark 25: up to 9.2 hr @250nits

JEITA 2.0: up to 20.3 hr @150nits

Local video playback: up to 17.0 hr @150nits

Alternate configuration 3

MobileMark 25: up to 7.2 hr @250nits

JEITA 2.0: up to 12.9 hr @150nits

Local video playback: up to 11.7 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA low power (non-touch), Intel i5-1335U, 16GB soldered DDR5, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA low power (non-touch), Intel i5-1340P, 16GB soldered DDR5, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA (touch), Intel i5-1350P, 16GB soldered DDR5, Win 11, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS ^[1]	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	300nits	Anti-glare	16:10	700:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe [®] Certified 2.0
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad [®] Privacy Guard
14"	2.2K (2240x1400)	None	IPS ^[5]	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	Eyesafe Certified 2.0
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR [™] True Black 500, Dolby Vision [™] , Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4], [5] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav[™]

TrackPoint[®] pointing device and glass-like Mylar[®] surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

317.7 x 226.9 x 17.9 mm (12.51 x 8.93 x 0.70 inches)

Weight^[2]

Models	Weight
Models with thunder black cover, integrated graphics and 39.3Wh battery	Starting at 1.32 kg (2.92 lbs)
Models with storm grey cover and 39.3Wh battery	Starting at 1.36 kg (3.0 lbs)
Models with thunder black cover, integrated graphics and 52.5Wh battery	Starting at 1.37 kg (3.01 lbs)
Models with thunder black cover, discrete graphics and 39.3Wh battery	Starting at 1.38 kg (3.05 lbs)
Models with storm grey cover and 52.5Wh battery	Starting at 1.40 kg (3.09 lbs)
Models with thunder black cover, discrete graphics and 52.5Wh battery	Starting at 1.42 kg (3.14 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material**

- Storm grey models: aluminium (top), PPS (bottom)
- Thunder black models: carbon fiber hybrid (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®[1]**

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be

slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14 Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader^[1]

- Smart card reader
- No smart card reader

Fingerprint Reader^[2]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)
- (Optional) RFID reader^[3]

Notes:

^[1] Smart card reader is mutually exclusive with RFID reader.

^[2] Fingerprint reader is standard on storm grey models and optional on thunder black models.

^[3] RFID reader is mutually exclusive with smart card reader.

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

55% recycled aluminium on storm grey top cover
90% recycled magnesium on keyboard cover
98% PCC recycled plastic used in speaker enclosure
Up to 30% PCC recycled plastic used in the 39.3Wh and 97% in 52.5Wh battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Standard packaging: 90% plastic free packaging
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

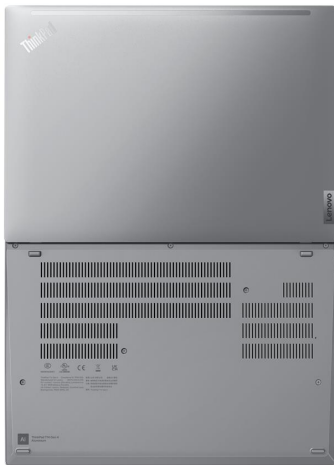
Mil-Spec Test

MIL-STD-810H military test passed

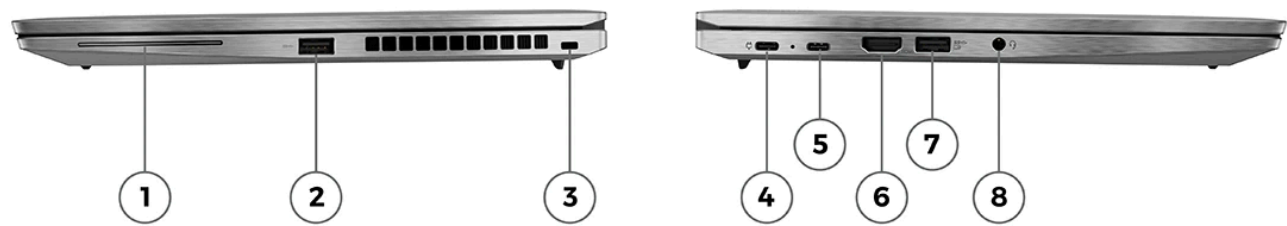
Other Certifications

(Optional) Eyesafe Certified 2.0

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Smart card reader *	5. USB-C 3.2 Gen 2
2. USB 3.2 Gen 1	6. HDMI
3. Kensington Nano Security Slot	7. USB 3.2 Gen 1 (Always On)
4. USB4	8. Headphone / microphone combo jack (3.5mm)

- Notes:
- Items with * are only available on selected models
 - Optional nano-SIM card slot on the rear side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 660M	Integrated	Shared	DirectX® 12
AMD Radeon 680M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 19.52 hr with 707 performance score @200nits

MobileMark 25: up to 18.18 hr with 564 performance score @250nits

JEITA 2.0: up to 22.98 hr @150nits

Local video playback: up to 22.1 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 14.68 hr with 698 performance score @200nits

MobileMark 25: up to 13.47 hr with 553 performance score @250nits

JEITA 2.0: up to 20.22 hr @150nits

Local video playback: up to 18.1 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 10.68 hr with 806 performance score @200nits

MobileMark 25: up to 9.78 hr with 539 performance score @250nits

JEITA 2.0: up to 12.75 hr @150nits

Local video playback: up to 10.5 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA Low Power (non-touch), AMD Ryzen 7 PRO 6850U, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA 300nits (touch), AMD Ryzen 5 PRO 6650U, 16GB LPDDR5, Win 11, 57Wh battery, best

power efficiency power mode
Alternate configuration 3: 2.8K OLED, AMD Ryzen 5 PRO 6650U, 32GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:
[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	Multi-touch	IPS[1]	300nits	Anti-glare	16:10	600:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS[2]	300nits	Anti-glare	16:10	600:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS[3]	400nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified
14"	WUXGA (1920x1200)	Multi-touch	IPS[4]	500nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS[5]	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light Method 2
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:
[1], [2], [3], [4], [5] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical**Dimensions (WxDxH)^[1]**

317.5 x 226.9 x 16.9 mm (12.5 x 8.93 x 0.67 inches)

Weight^[2]

Starting at 1.23 kg (2.71 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material**

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

No onboard Ethernet^[1]

WLAN + Bluetooth®^[2]**

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3], [4] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14s Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

- Glance by Mirametrix®
- (Optional) Human Presence Detection

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% recycled plastic used in the 57Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified
- (Optional) TÜV Rheinland® Low Blue Light Method 2

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

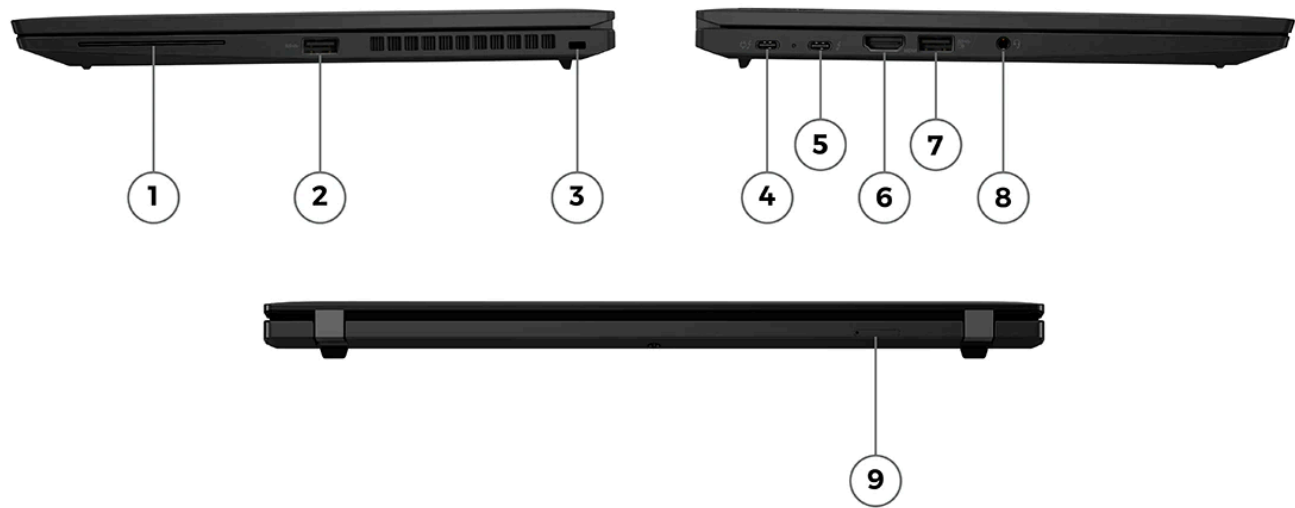


AMD



AMD

OVERVIEW



1. Smart card reader *	6. HDMI
2. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)
4. Thunderbolt 4	9. Nano-SIM card slot *
5. Thunderbolt 4	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P ^[1]	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Notes:

[1] For special bid only in EMEA.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-4800[1]

Notes:

[1] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB[2]	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4[3]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] 2TB SSD is special bid only in EMEA.

[3] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 13.6 hr with 978 performance score @200nits
MobileMark 25: up to 10.8 hr with 669 performance score @250nits
JEITA 2.0: up to 24.0 hr @150nits
Local video playback: up to 18.1 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 10.0 hr with 1066 performance score @200nits
MobileMark 25: up to 7.2 hr with 712 performance score @250nits
JEITA 2.0: up to 15.3 hr @150nits
Local video playback: up to 14.8 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 8.2 hr with 936 performance score @200nits
MobileMark 25: up to 6.3 hr with 750 performance score @250nits
JEITA 2.0: up to 12.3 hr @150nits
Local video playback: up to 11.8 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1235U, 8GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), Intel i5-1250P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: 2.8K OLED, Intel i5-1245U, 8GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter^{**[1]}

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display^{**}

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA	Multi-	IPS ^[1]	300nits	Anti-glare	16:10	600:1	45%	85°/85°/85°/85°	-

	(1920x1200)	touch						NTSC		
14"	WUXGA (1920x1200)	None	IPS ^[2]	300nits	Anti-glare	16:10	600:1	45% NTSC	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	800:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS ^[5]	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light Method 2
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4], [5] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight^[1]

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Notes:

[1] Non-backlit keyboard is only available for the models with thunder black cover.

Mechanical

Dimensions (WxDxH)^[1]

317.5 x 226.9 x 16.9 mm (12.5 x 8.93 x 0.67 inches)

Weight^[2]

Models	Weight
Thunder black models	Starting at 1.21 kg (2.67 lbs)
Storm grey models	Starting at 1.45 kg (3.19 lbs)

Case Color**

- Storm grey^[3]
- Thunder black

Case Material**

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Storm grey case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14s Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter

- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- (Optional) Human Presence Detection
- Tile ready

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of

warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

- 97% PCC recycled plastic used in speaker enclosure
- 97% recycled plastic used in the 57Wh battery
- 95% PCC recycled plastic used in standard 65W adapter
- Low-temperature solder
- 90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified
- (Optional) Intel Evo™ Platform
- (Optional) TÜV Rheinland® Low Blue Light Method 2

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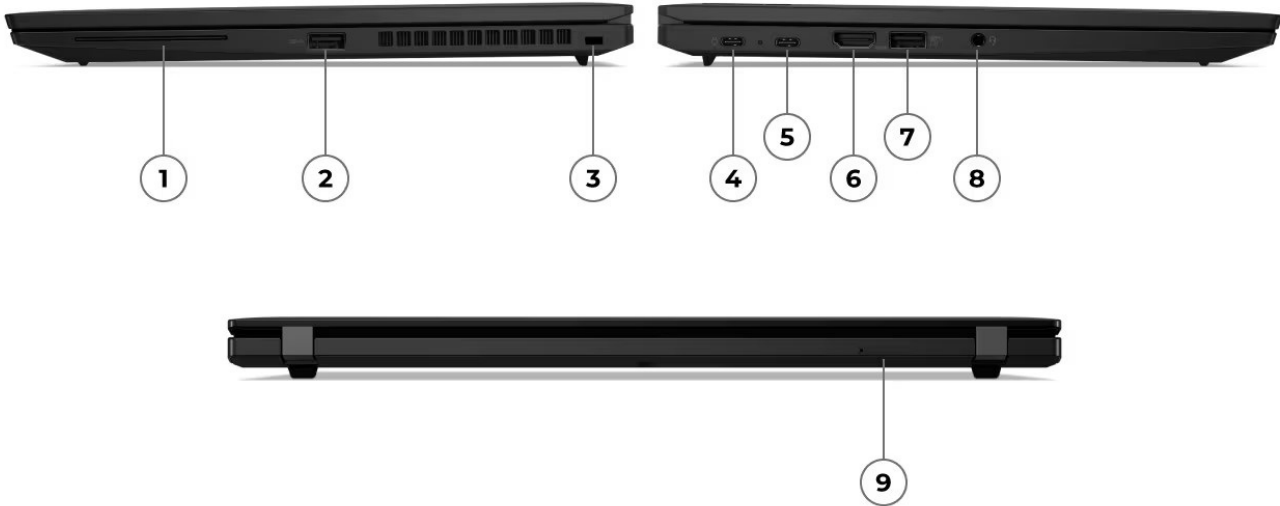


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OVERVIEW



1. Smart card reader *	6. HDMI
2. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)
4. USB4	9. Nano-SIM card slot *
5. USB4	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 740M	Integrated	Shared	DirectX® 12
AMD Radeon 780M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB4®)

- HDMI supports up to 4K@60Hz
- USB4 supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-6400^[1]

Notes:

[1] Installed memory is actually 7500MHz but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera^[2]

Notes:

[1] No microphone is for special bid only.

[2] No camera is for special bid only.

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 15.67 hr with 707 performance score @250nits

JEITA 2.0: up to 23.1 hr @150nits

Local video playback: up to 18.7 hr @150nits

Alternate configuration 2

MobileMark 25: up to 12.3 hr with 667 performance score @250nits

JEITA 2.0: up to 18.8 hr @150nits

Local video playback: up to 16.13 hr @150nits

Alternate configuration 3

MobileMark 25: up to 7.66 hr with 664 performance score @250nits

JEITA 2.0: up to 10.96 hr @150nits

Local video playback: up to 11.27 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA 300nits (non-touch), AMD Ryzen 7 PRO 7840U, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA 300nits (touch), AMD Ryzen 5 PRO 7540U, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: 2.8K OLED (non-touch), AMD Ryzen 5 PRO 7540U, 32GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:
[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS[1]	300nits	Anti-glare	16:10	600:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	Multi-touch	IPS[2]	300nits	Anti-glare	16:10	600:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS[3]	400nits	Anti-glare	16:10	800:1	100% sRGB	60Hz	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
14"	WUXGA (1920x1200)	Multi-touch	IPS[4]	500nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS[5]	300nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	TÜV Low Blue Light Method 2
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	90Hz	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4], [5] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

317.5 x 226.9 x 16.9 mm (12.5 x 8.93 x 0.67 inches)

Weight^[2]

Models	Weight
Deep black models	Starting at 1.26 kg (2.77 lbs)
Storm grey models	Starting at 1.49 kg (3.28 lbs)

Case Color**

- Deep black
- Storm grey

Case Material**

- Deep black models: carbon fiber hybrid (top), aluminium (bottom)
- Storm grey models: aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®**^[2]

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)^[3]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

[3] Wireless WAN upgradable to 4G is ONLY available in EMEA.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14s Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader^[1]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password

- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

Notes:

[1] Fingerprint reader is standard on storm grey models and optional on deep black models.

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% recycled aluminium on storm grey top and keyboard cover
55% recycled aluminium on storm grey bottom cover
22% recycled carbon fiber hybrid on deep black top cover
90% recycled magnesium on deep black keyboard cover
55% recycled aluminium on deep black bottom cover
98% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 57Wh battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Retail or standard packaging: plastic free packaging
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light Method 2

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

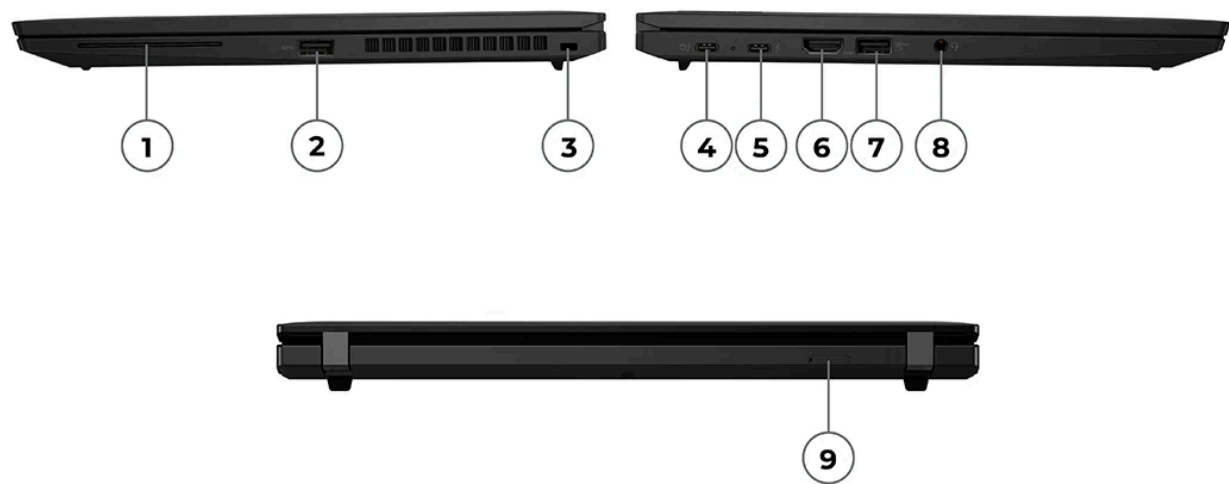


AMD



AMD

OVERVIEW



1. Smart card reader *	6. HDMI
2. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)
4. Thunderbolt 4	9. Nano-SIM card slot *
5. Thunderbolt 4	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel P series processors are for special bid only.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^[1], ^[2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

^[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots
Memory soldered to systemboard, no slots, dual-channel

Memory Type
LPDDR5x-4800^[1]

Notes:
^[1] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]
One drive, up to 2TB M.2 2280 SSD

Storage Slot
One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:
^[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers
Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera^[2]

Notes:
^[1] No microphone is for special bid only.
^[2] No camera is for special bid only.

Battery

Battery
Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 12.4 hr @250nits
JEITA 2.0: up to 24.5 hr @150nits
Local video playback: up to 19.6 hr @150nits

Alternate configuration 2
MobileMark 25: up to 12.0 hr @250nits
JEITA 2.0: up to 18.0 hr @150nits
Local video playback: up to 16.5 hr @150nits

Alternate configuration 3
MobileMark 25: up to 11.2 hr @250nits
JEITA 2.0: up to 24.1 hr @150nits
Local video playback: up to 18.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA low power (non-touch), Intel i5-1335U, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), Intel i5-1345U, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA low power (non-touch), Intel i5-1340P, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS ^[2]	300nits	Anti-glare	16:10	600:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[3]	300nits	Anti-glare	16:10	600:1	45% NTSC	60Hz	85°/85°/85°/85°	-
14"	WUXGA (1920x1200)	None	IPS ^[4]	400nits	Anti-glare	16:10	800:1	100% sRGB	60Hz	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0

14"	WUXGA (1920x1200)	Multi-touch	IPS ^[5]	500nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS ^[6]	300nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	TÜV Low Blue Light Method 2
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	90Hz	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] 2.2K display is NOT available in EMEA.

[2], [3], [4], [5], [6] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

317.5 x 226.9 x 16.9 mm (12.5 x 8.93 x 0.67 inches)

Weight^[2]

Models	Weight
Deep black models	Starting at 1.25 kg (2.76 lbs)
Storm grey models	Starting at 1.48 kg (3.26 lbs)

Case Color**

- Deep black
- Storm grey

Case Material**

- Deep black models: carbon fiber hybrid (top), aluminium (bottom)
- Storm grey models: aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)^[3]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

[3] Wireless WAN upgradable to 4G is ONLY available in EMEA.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T14s Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

22% recycled carbon fiber hybrid or 55% recycled aluminium on top cover
55% recycled aluminum on bottom cover
98% PCC recycled plastic used in speaker enclosure
97% recycled plastic used in the 57Wh battery
90% PCC recycled plastic used in standard 45W and 65W adapter
Low-temperature solder
Standard packaging: 90% plastic free packaging
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) Intel Evo™ Platform
- (Optional) TÜV Rheinland® Low Blue Light Method 2

• Feature with ** means that only one offering listed under the feature is configured on selected models.

• ThinkPad T14s Gen 4 (Intel) - November 10, 2023
• Feature with *** means that one or more offerings listed under the feature could be configured on selected

models.

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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	6. Kensington Security Slot
2. SD card reader	7. Power connector
3. HDMI	8. Thunderbolt 4
4. 2x USB 3.2 Gen 1	9. Smart card reader *
5. Ethernet (RJ-45)	

- Notes:
- Items with * are only available on selected models
 - Nano-SIM card slot on the rear side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

12th Generation H series Intel® Core™ i7 processor, supports up to 14 cores, up to 4.8GHz

Processor^{**[1]}

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB
Core i7-12800H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.7GHz	24MB

Notes:

[1] Intel Iris® Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System

- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
NVIDIA® GeForce RTX™ 3050 Laptop GPU	Discrete	4GB GDDR6	35W	Dynamic Boost 2.0, DirectX® 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI® and Thunderbolt™)

- HDMI supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x3200@60Hz (Thunderbolt or USB-C® to DP)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800 non-ECC

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 4TB, 2TB each
- RAID 0/1 support

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

RAID

RAID 0/1 support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Optical

None

Card Reader

SD card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- HD 720p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery

Integrated Li-Polymer 68Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter^[1]

135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/-/-	DC dimming
15.6"	FHD (1920x1080)	Multi-touch	IPS	300nits	Anti-glare	16:9	800:1	45% NTSC	85°/85°/-/-	DC dimming
15.6"	FHD (1920x1080)	None	IPS	300nits	Anti-glare	16:9	1200:1	100% sRGB	85°/85°/-/-	DC dimming

15.6"	UHD (3840x2160)	None	IPS	600nits	Anti-glare	16:9	1400:1	100% Adobe® RGB	85°/85°/-/-	Dolby Vision™, DisplayHDR™ 400, DC dimming
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Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad

Mechanical

Dimensions (WxDxH)^[1]

366.5 x 250 x 22.7 mm (14.43 x 9.84 x 0.89 inches)

Weight^[2]

Models	Weight
Models with discrete graphics	Starting at 2.226 kg (4.91 lbs)

Case Color

Black

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®^[1]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

No support

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Standard Ports^[2]

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector
- 1x SD card reader
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 2x USB 3.2 Gen 1 (one Always On)

Optional Ports

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] Power Delivery only supports power-out for charging peripherals.

Docking

Docking

Various docking solutions supported via Thunderbolt, USB-C, or USB-A.

For more compatible docking solutions, please visit [Docking for ThinkPad® T15p Gen 3](#)

Monitor Cable

Monitor Cable

- (Optional) Lenovo USB-C to DisplayPort Adapter
- (Optional) Lenovo HDMI to VGA Monitor Adapter
- (Optional) Lenovo USB-C to VGA Adapter

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader on palm rest, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- NVMe password
- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello

MANAGEABILITY**System Management****System Management**

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE**Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Sustainability****Material**

90% recycled / sustainable packaging

Operating Environment**Temperature^[1]**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

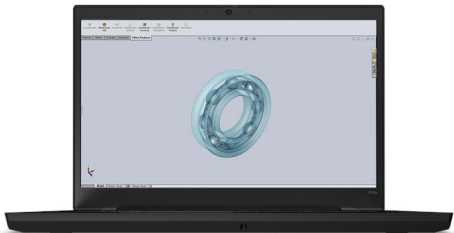
MIL-STD-810H military test passed

ISV Certifications

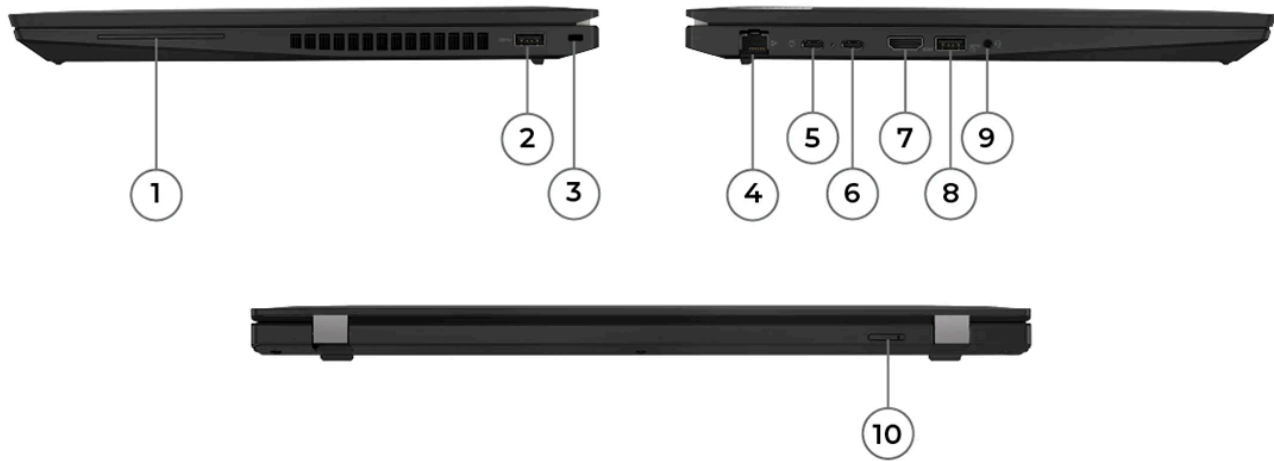
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Smart card reader *	6. USB-C 3.2 Gen 2
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. USB-C 3.2 Gen 2	10. Nano-SIM card slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 660M	Integrated	Shared	DirectX® 12
AMD Radeon 680M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone^[1]

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Notes:

[1] No microphone is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 24.4 hr with 629 performance score @200nits

MobileMark 25: up to 23.2 hr with 532 performance score @250nits

JEITA 2.0: up to 35.0 hr @150nits

Local video playback: up to 29.7 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 11.1 hr with 795 performance score @200nits

MobileMark 25: up to 11.4 hr with 535 performance score @250nits

JEITA 2.0: up to 18.3 hr @150nits

Local video playback: up to 16.2 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 12.1 hr with 687 performance score @200nits

MobileMark 25: up to 11.3 hr with 542 performance score @250nits

JEITA 2.0: up to 15.5 hr @150nits

Local video playback: up to 14.0 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA Low Power (non-touch), AMD Ryzen 7 PRO 6850U, 16GB LPDDR5, Win 10, 86Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 PRO 6650U, 16GB LPDDR5, Win 10, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: WQXGA (non-touch), AMD Ryzen 5 PRO 6650U, 32GB LPDDR5, Win 10, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**[1]
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	-	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1000:1	100% sRGB	-	85°/85°/85°/85°	Low power, Eyesafe® Certified
16"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	-	85°/85°/85°/85°	ThinkPad® Privacy Guard
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	-	85°/85°/85°/85°	Dolby Vision™, TÜV Rheinland® Low Blue Light

- Touchscreen
- On-cell multi-touch, supports 10-point touch
 - Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67.7 x 115 mm (2.67 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

361.9 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)

Weight^[2]

Models	Weight
Models with storm grey cover	Starting at 1.738 kg (3.83 lbs)
Models with thunder black cover	Starting at 1.810 kg (3.99 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material**

- Storm grey models: aluminium (top), PPS (bottom)
- Thunder black models: PC + 20% CF + 50% GF (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Realtek RTL8111EPV (DASH models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN (non-DASH models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[2]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T16 Gen 1 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader^[1]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

- Self-healing BIOS

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®

Notes:

[1] Fingerprint reader is standard on storm grey models and optional on thunder black models.

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh battery
25-30% PCC recycled plastic used in the 86Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

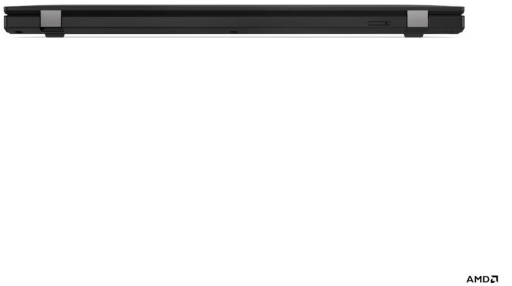
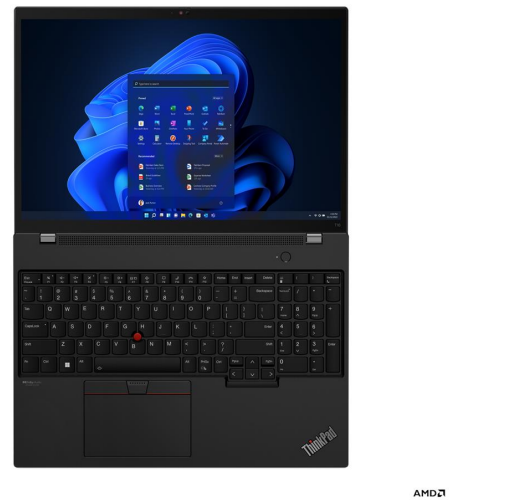
Mil-Spec Test

MIL-STD-810H military test passed

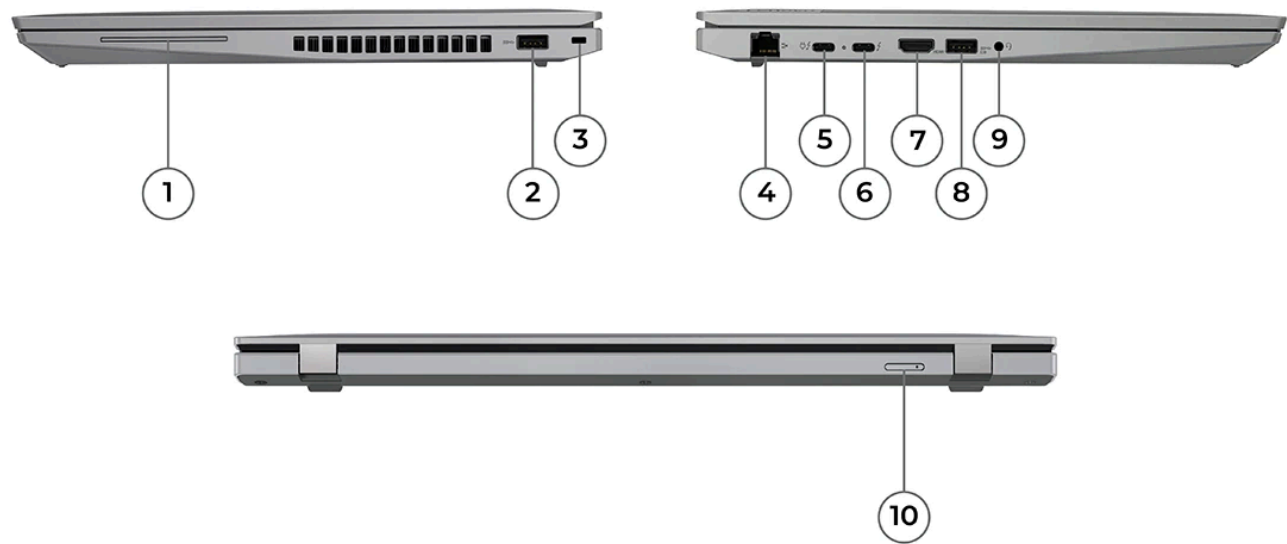
Other Certifications

- (Optional) Eyesafe Certified
- (Optional) TÜV Rheinland Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Smart card reader *	6. Thunderbolt 4
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. Thunderbolt 4	10. Nano-SIM card slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	DirectX® 12.1
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	DirectX 12

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-

channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Up to 48GB (16GB soldered + 32GB SO-DIMM) DDR4-3200

Memory Slots

One memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4 ^[2]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone^[1]

Camera**^[2]

ThinkPad T16 Gen 1 (Intel)

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Notes:

[1] No microphone is for special bid only.

[2] Only HD 720p and FHD 1080p + IR hybrid are available in EMEA.

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 135W AC adapter
- Integrated Li-Polymer 86Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 135W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 10.1 hr with 786 performance score @200nits

MobileMark 25: up to 8.5 hr with 617 performance score @250nits

JEITA 2.0: up to 17.1 hr @150nits

Local video playback: up to 16.5 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 9.4 hr with 911 performance score @200nits

MobileMark 25: up to 6.6 hr with 655 performance score @250nits

JEITA 2.0: up to 12.0 hr @150nits

Local video playback: up to 10.1 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 7.5 hr with 1101 performance score @200nits

MobileMark 25: up to 5.0 hr with 722 performance score @250nits

JEITA 2.0: up to 8.6 hr @150nits

Local video playback: up to 7.4 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1240P, 8GB soldered, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), Intel i5-1250P, 16GB (8GB soldered + 8GB SO-DIMM), Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: WQXGA, Intel i7-1280P, 32GB (16GB soldered + 16GB SO-DIMM), NVIDIA GeForce MX550, Win 11, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^{[1][2]}

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 135W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[3]

Notes:

[1] AC adapter offerings depend on the country.

[2] 45W USB-C AC adapter is ONLY available for the models with integrated graphics.

45W USB-C AC adapter and 65W USB-C slim AC adapter are NOT available in EMEA.
[3] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	60Hz	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	800:1	45% NTSC	-	85°/85°/85°/85°	-
16"	WUXGA (1920x1200) [2]	None	IPS	400nits	Anti-glare	16:10	1000:1	100% sRGB	-	85°/85°/85°/85°	Low power, Eyesafe® Certified
16"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare	16:10	1000:1	100% sRGB	-	85°/85°/85°/85°	ThinkPad® Privacy Guard
16"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	-	85°/85°/85°/85°	Eyesafe Certified

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
[2] Low power display is NOT available in EMEA.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67.7 x 115 mm (2.67 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

Models	Dimensions
Integrated graphics models	361.9 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)
Discrete graphics models	361.9 x 255.5 x 21.1 mm (14.25 x 10.06 x 0.83 inches)

Weight[2]

Models	Weight
Models with thunder black cover and integrated graphics	Starting at 1.769 kg (3.9 lbs)
Models with storm grey cover	Starting at 1.803 kg (3.97 lbs)
Models with thunder black cover and discrete graphics	Starting at 1.842 kg (4.06 lbs)

Case Color**

- Storm grey[3]
- Thunder black

Case Material**

- Storm grey models: aluminium (top), PPS (bottom)
- Thunder black models: PC + 20% CF + 50% GF (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Storm grey cover is ONLY available for the models with integrated graphics.

Storm grey cover is ONLY available with backlit keyboard.

Storm grey cover is NOT available in EMEA.

CONNECTIVITY**Network****Ethernet****

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®[1]**

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1[2]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)[4]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card[5]
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC[6]

- Near Field Communication
- No support

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[2], [3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[4] Wireless WAN upgradable to 4G is ONLY available in EMEA.

[5] Fibocom L860-GL CAT16 is special bid only in EMEA.

[6] NFC is NOT available for storm grey models.

NFC is special bid only in EMEA.

Ports^[1]**Standard Ports**

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T16 Gen 1 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader^[1]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Human Presence Detection (software)

Notes:

[1] Fingerprint reader is standard on storm grey models and optional on thunder black models.

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh battery
25-30% PCC recycled plastic used in the 86Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Eyesafe Certified

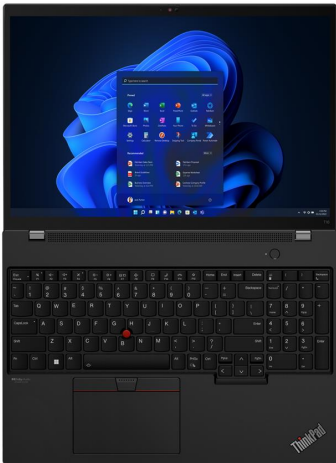
- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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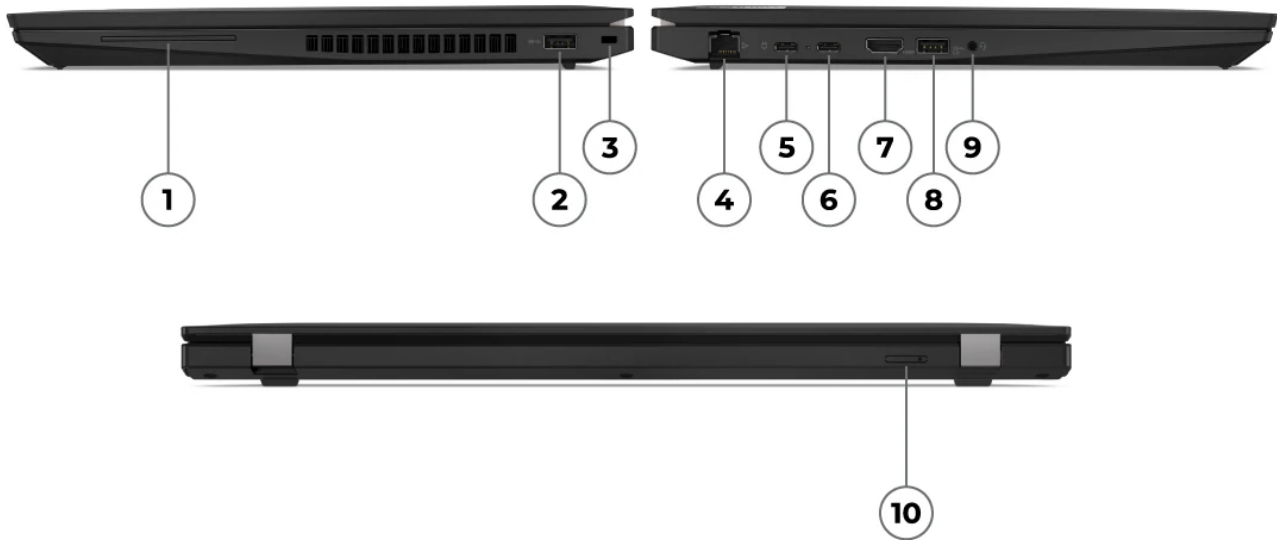


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OVERVIEW



1. Smart card reader *	6. USB-C 3.2 Gen 2
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. USB4 40Gbps	10. Nano-SIM card slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 740M	Integrated	Shared	DirectX® 12
AMD Radeon 780M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C® or USB4®)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)
- USB4 supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type**

- LPDDR5-6400 (8GB)
- LPDDR5x-6400 (16GB or 32GB)^[1]

Notes:

[1] Installed memory is actually 7500MHz, but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera^[2]

Notes:

[1] No microphone is for special bid only.

[2] No camera is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 86Wh battery

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 21.6 hr with 701 performance score @250nits
JEITA 2.0: up to 30.8 hr @150nits
Local video playback: up to 26.1 hr @150nits

Alternate configuration 2
MobileMark 25: up to 15.3 hr with 654 performance score @250nits
JEITA 2.0: up to 23.0 hr @150nits
Local video playback: up to 21.2 hr @150nits

Alternate configuration 3
MobileMark 25: up to 5.7 hr with 640 performance score @250nits
JEITA 2.0: up to 9.2 hr @150nits
Local video playback: up to 8.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA Low Power (non-touch), AMD Ryzen 7 PRO 7840U, 16GB LPDDR5x, Win 11, 86Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 PRO 7540U, 16GB LPDDR5x, Win 11, 86Wh battery, best power efficiency power mode

Alternate configuration 3: WQUXGA OLED (non-touch), AMD Ryzen 5 PRO 7540U, 32GB LPDDR5x, Win 11, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	Multi-touch	IPS[1]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
16"	WUXGA (1920x1200)	Multi-touch	IPS[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
16"	WQUXGA (3840x2400)	None	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	87.5°/87.5°/87.5°/87.5°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67.7 x 115 mm (2.67 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

361.9 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)

Weight^[2]

Models	Weight
Models with thunder black cover and 52.5Wh battery	Starting at 1.71 kg (3.76 lbs)
Models with storm grey cover and 52.5Wh battery	Starting at 1.75 kg (3.84 lbs)
Models with thunder black cover and 86Wh battery	Starting at 1.83 kg (4.02 lbs)
Models with storm grey cover and 86Wh battery	Starting at 1.85 kg (4.08 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material**

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[1]

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T16 Gen 2 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader^[1]

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password

- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

Notes:

[1] Fingerprint reader is standard on storm grey models and optional on thunder black models.

MANAGEABILITY

System Management

System Management

DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

50% recycled aluminium on storm grey top cover
55% recycled aluminium on storm grey bottom cover
90% recycled magnesium on keyboard cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the 52.5Wh and 86Wh battery
90% PCC recycled plastic used in standard 65W and 100W adapters
Low-temperature solder
Standard packaging: 90% plastic free packaging
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Eyesafe Certified 2.0

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

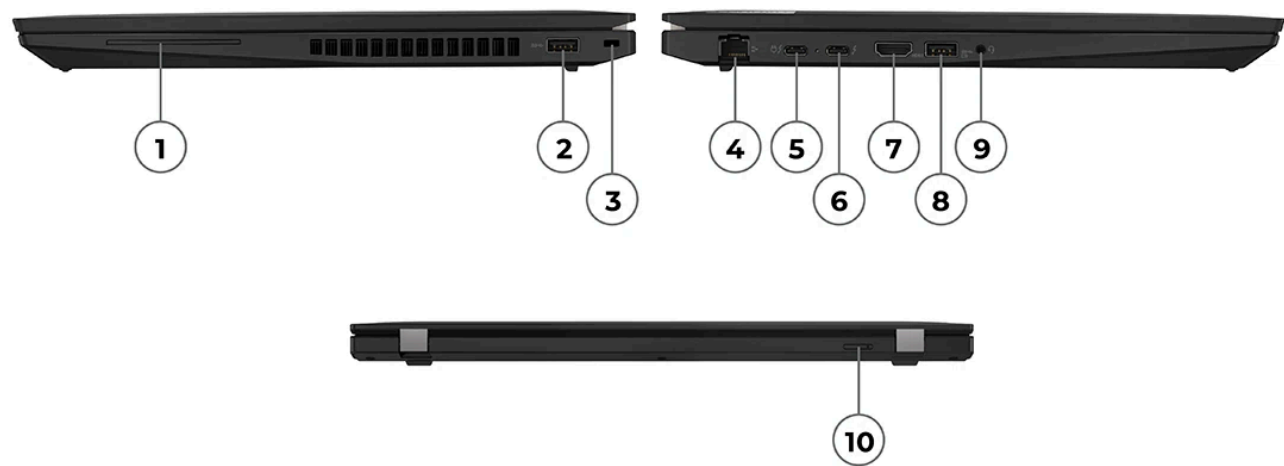


AMD



AMD

OVERVIEW



1. Smart card reader *	6. Thunderbolt 4
2. USB 3.2 Gen 1	7. HDMI
3. Kensington Nano Security Slot	8. USB 3.2 Gen 1 (Always On)
4. Ethernet (RJ-45)	9. Headphone / microphone combo jack (3.5mm)
5. Thunderbolt 4	10. Nano-SIM card slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.
Intel P series processors are for special bid only.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	DirectX® 12.1
NVIDIA® GeForce MX550	Discrete	4GB GDDR6	DirectX 12

Notes:

^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

^[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Models with 16GB LPDDR5x: 16GB soldered memory, not upgradable
- Models with 32GB LPDDR5x: 32GB soldered memory, not upgradable
- Models with DDR4 memory: up to 40GB (8GB soldered + 32GB SO-DIMM) DDR4-3200
- Models with DDR5 memory: up to 32GB (16GB soldered + 16GB SO-DIMM) DDR5-5200

Memory Slots**

- Models with DDR4 memory: one memory soldered to systemboard, one DDR4 SO-DIMM slot, dual-channel capable
- Models with DDR5 memory: one memory soldered to systemboard, one DDR5 SO-DIMM slot, dual-channel capable
- Models with LPDDR5x memory: memory soldered to systemboard, no slots, dual-channel

Memory Type**

- DDR4-3200 (models with integrated graphics)
- DDR5-5200 (models with integrated graphics)^[2]
- LPDDR5x-4800 (models with discrete graphics)^[3]

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

^[2] Installed DDR5 memory is actually 5600MHz but run at 5200MHz due to platform limitation.

^[3] Installed LPDDR5x memory is actually 7500MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera^[2]

Notes:

[1] No microphone is for special bid only.

[2] No camera is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 52.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W or 135W AC adapter
- Integrated Li-Polymer 86Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 135W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 10.0 hr @250nits

JEITA 2.0: up to 18.5 hr @150nits

Local video playback: up to 16.9 hr @150nits

Alternate configuration 2

MobileMark 25: up to 9.2 hr @250nits

JEITA 2.0: up to 19.5 hr @150nits

Local video playback: up to 17.1 hr @150nits

Alternate configuration 3

MobileMark 25: up to 7.0 hr @250nits

JEITA 2.0: up to 13.0 hr @150nits

Local video playback: up to 12.3 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1340P, 16GB soldered DDR5, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA low power (non-touch), Intel i5-1335U, 16GB soldered DDR5, Win 11, 52.5Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA (touch), Intel i5-1350P, 16GB soldered DDR5, Win 11, 52.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 135W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**										
Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	Multi-touch	IPS ^[1]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS ^[2]	300nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	-
16"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
16"	WUXGA (1920x1200)	Multi-touch	IPS ^[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
16"	WQUXGA (3840x2400)	None	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	87.5°/87.5°/87.5°/87.5°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

- Touchscreen
- On-cell multi-touch, supports 10-point touch
 - Non-touch

Notes:

[1], [2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

- Keyboard
- 6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad
- Keyboard Backlight
- LED backlight
 - Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 67.7 x 115 mm (2.67 x 4.53 inches)

Mechanical

Models	Dimensions
Integrated graphics models	361.9 x 255.5 x 20.5 mm (14.25 x 10.06 x 0.81 inches)
Discrete graphics models	361.9 x 255.5 x 21.1 mm (14.25 x 10.06 x 0.83 inches)

Models	Weight
Models with thunder black cover and integrated graphics	Starting at 1.68 kg (3.70 lbs)
Models with storm grey cover and integrated graphics	Starting at 1.71 kg (3.75 lbs)
Models with discrete graphics	Starting at 1.74 kg (3.84 lbs)

Case Color**

- Storm grey
- Thunder black

Case Material**

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid (top), PPS (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM (vPro® models), 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V (non-vPro models), 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®[1]**

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be

slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad T16 Gen 2 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

^[1], ^[2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% recycled aluminium on storm grey top cover
55% recycled aluminium on storm grey bottom cover
90% recycled magnesium on keyboard cover
95% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 52.5Wh and 86Wh battery
90% PCC recycled plastic used in standard 45W, 65W and 135W adapters
Low-temperature solder
Standard packaging: 90% plastic free packaging
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0

- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

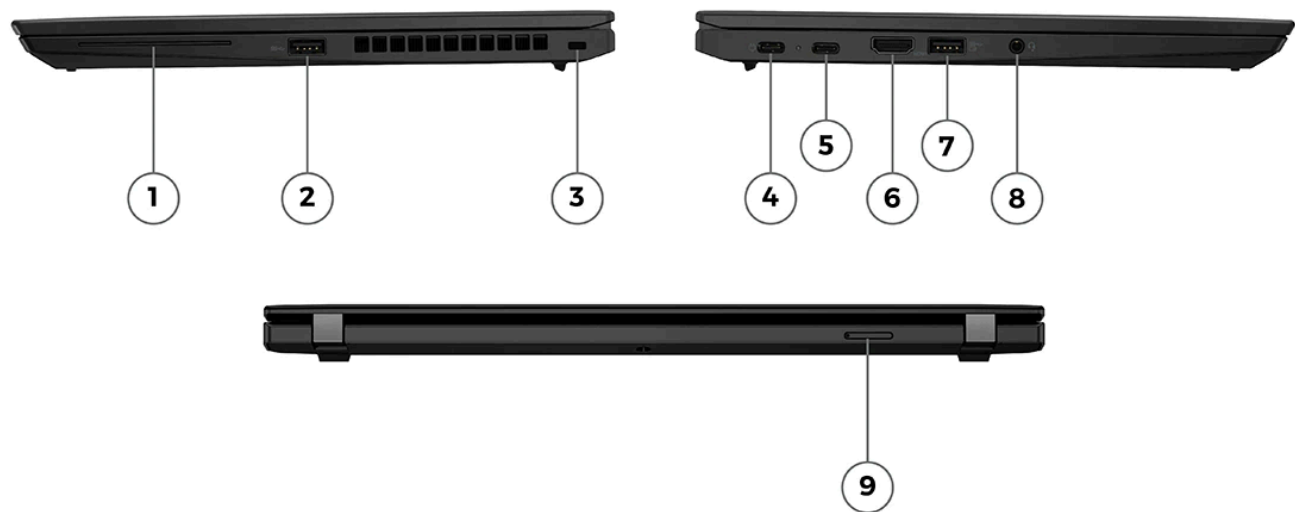
Other Certifications

(Optional) Eyesafe Certified 2.0

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Smart card reader *	6. HDMI
2. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)
4. USB4	9. Nano-SIM card slot *
5. USB-C 3.2 Gen 2	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 660M	Integrated	Shared	DirectX® 12
AMD Radeon 680M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 4K@60Hz
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery**

- Integrated Li-Polymer 41Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 54.7Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 15.68 hr with 868 performance score @200nits
MobileMark 25: up to 13.7 hr with 531 performance score @250nits
JEITA 2.0: up to 20.28 hr @150nits
Local video playback: up to 17.3 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 15.67 hr with 724 performance score @200nits
MobileMark 25: up to 14.47 hr with 669 performance score @250nits
JEITA 2.0: up to 21.58 hr @150nits
Local video playback: up to 18 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 10.8 hr with 702 performance score @200nits
MobileMark 25: up to 9.36 hr with 542 performance score @250nits
JEITA 2.0: up to 13.66 hr @150nits
Local video playback: up to 12.3 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WQXGA (non-touch), AMD Ryzen 7 PRO 6850U, 16GB LPDDR5, Win 10, 54.7Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 PRO 6650U, 16GB LPDDR5, Win 10, 54.7Wh battery, best power efficiency power mode

Alternate configuration 3: WUXGA 300nits (non-touch), AMD Ryzen 5 PRO 6650U, 32GB LPDDR5, Win 10, 41Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	500nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	ThinkPad® Privacy Guard
13.3"	WQXGA (2560x1600)	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Low power, Dolby Vision™, TÜV Low Blue Light

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with PPS top cover	305.8 x 217.56 x 18.10 mm (12.04 x 8.57 x 0.71 inches)
Models with CF /GF hybrid top cover	305.8 x 217.89 x 18.25 mm (12.04 x 8.58 x 0.72 inches)
Models with aluminium top cover	305.8 x 218.39 x 18.10 mm (12.04 x 8.60 x 0.71 inches)

Weight^[2]

Models	Weight
Models with WUXGA display, 41Wh battery, and black carbon fiber top cover	Starting at 1.19 kg (2.62 lbs)
Models with WQXGA display, 41Wh battery, and black PPS top cover	Starting at 1.21 kg (2.67 lbs)
Models with WUXGA display, 41Wh battery, and black PPS top cover	Starting at 1.25 kg (2.77 lbs)
Models with WUXGA display, 54.7Wh battery, and black carbon fiber top cover	Starting at 1.26 kg (2.77 lbs)
Models with WQXGA display, 54.7Wh battery, and black PPS top cover	Starting at 1.26 kg (2.78 lbs)
Models with WQXGA display, 41Wh battery, and storm grey top cover	Starting at 1.28 kg (2.82 lbs)
Models with WUXGA display, 54.7Wh battery, and black PPS top cover	Starting at 1.31 kg (2.88 lbs)
Models with WUXGA display, 41Wh battery, and storm grey top cover	Starting at 1.33 kg (2.93 lbs)
Models with WQXGA display, 54.7Wh battery, and storm grey top cover	Starting at 1.34 kg (2.94 lbs)
Models with WUXGA display, 54.7Wh battery, and storm grey top cover	Starting at 1.38 kg (3.04 lbs)

Case Color^{**}

- Storm grey
- Thunder black

Case Material^{**}

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid or PPS (top), aluminium (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®^{**[2]}

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN^{**}

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3], [4] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X13 Gen 3 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip

- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- (Optional) Human Presence Detection

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
25% PCC recycled plastic used in the 54.7Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

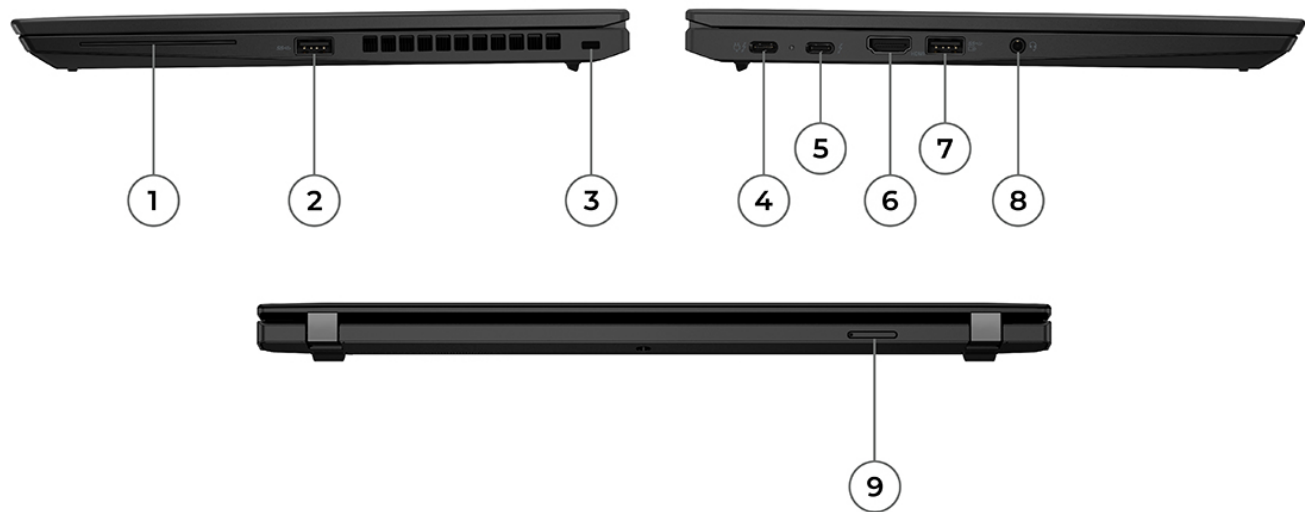


AMD



AMD

OVERVIEW



1. Smart card reader *	6. HDMI
2. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
3. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)
4. Thunderbolt 4	9. Nano-SIM card slot *
5. Thunderbolt 4	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] i3-1215U, i7-1255U, i7-1265U and i7-1280P are NOT available in EMEA.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	DirectX 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable^[1]

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-4800^[2]

Notes:

[1] In EMEA, 32GB memory is only available for i7 models.

[2] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB ^[2]	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4 ^[3]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] 2TB SSD is special bid only in EMEA.

[3] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera

Battery

Battery**

- Integrated Li-Polymer 41Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 54.7Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 11.8 hr with 872 performance score @200nits

MobileMark 25: up to 9.7 hr with 618 performance score @250nits

JEITA 2.0: up to 19.8 hr @150nits

Local video playback: up to 15.7 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 11.3 hr with 982 performance score @200nits

MobileMark 25: up to 9.7 hr with 791 performance score @250nits

JEITA 2.0: up to 19.5 hr @150nits

Local video playback: up to 15.2 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 8.4 hr with 1243 performance score @200nits

MobileMark 25: up to 5.9 hr with 711 performance score @250nits

JEITA 2.0: up to 14.1 hr @150nits

Local video playback: up to 14 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1240P, 8GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), Intel i5-1245U, 16GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode

Alternate configuration 3: WQXGA, Intel i7-1280U, 32GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.

[2] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	500nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	ThinkPad® Privacy Guard
13.3"	WQXGA (2560x1600) ^[2]	None	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Low power, Dolby Vision™, TÜV Low Blue Light

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
- [2] WQXGA display is NOT available in EMEA.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight^[1]

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Notes:

- [1] Non-backlit keyboard is only available for the models with thunder black cover.

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with PPS top cover	305.8 x 217.56 x 18.10 mm (12.04 x 8.57 x 0.71 inches)
Models with CF /GF hybrid top cover	305.8 x 217.89 x 18.25 mm (12.04 x 8.58 x 0.72 inches)
Models with aluminium top cover	305.8 x 218.39 x 18.10 mm (12.04 x 8.60 x 0.71 inches)

Weight^[2]

Models	Weight
Models with WUXGA display, 41Wh battery, and black carbon fiber top cover	Starting at 1.20 kg (2.65 lbs)
Models with WQXGA display, 41Wh battery, and black PPS top cover	Starting at 1.23 kg (2.71 lbs)
Models with WUXGA display, 54.7Wh battery, and black carbon fiber top cover	Starting at 1.24 kg (2.74 lbs)
Models with WUXGA display, 41Wh battery, and black PPS top cover	Starting at 1.25 kg (2.77 lbs)
Models with WQXGA display, 54.7Wh battery, and black PPS top cover	Starting at 1.26 kg (2.78 lbs)
Models with WUXGA display, 41Wh battery, and storm grey top cover	Starting at 1.28 kg (2.83 lbs)
Models with WUXGA display, 54.7Wh battery, and black PPS top cover	Starting at 1.29 kg (2.85 lbs)
Models with WUXGA display, 54.7Wh battery, and storm grey top cover	Starting at 1.32 kg (2.91 lbs)

Case Color**

- Storm grey^[3]
- Thunder black

Case Material**

- Storm grey models: aluminium (top), aluminium (bottom)
- Thunder black models: carbon fiber hybrid or PPS (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Storm grey case is NOT available in EMEA.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.
For more compatible docking solutions, please visit [Docking for ThinkPad X13 Gen 3 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- (Optional) Human Presence Detection
- Tile ready

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[\[1\]](#), [\[2\]](#) Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in speaker enclosure
25% PCC recycled plastic used in the 54.7Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Intel Evo™ Platform
- (Optional) TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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intel



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OVERVIEW



1. USB4	6. Nano-SIM card slot *
2. USB4	7. USB 3.2 Gen 1
3. USB 3.2 Gen 1 (Always On)	8. HDMI
4. Headphone / microphone combo jack (3.5mm)	9. Kensington Nano Security Slot
5. Smart card reader *	

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 740M	Integrated	Shared	DirectX® 12
AMD Radeon 780M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB4®)

- HDMI supports up to 4K@60Hz
- USB4 supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-6400^[1]

Notes:

[1] Installed memory is actually 7500MHz but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone^[1]

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera^[2]

Notes:

[1] No microphone is for special bid only.

[2] No camera is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 41Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 54.7Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 15.3 hr with 692 performance score @250nits

JEITA 2.0: up to 22.29 hr @150nits

Local video playback: up to 18.9 hr @150nits

Alternate configuration 2

MobileMark 25: up to 12.31 hr with 682 performance score @250nits

JEITA 2.0: up to 21.66 hr @150nits

Local video playback: up to 16.26 hr @150nits

Alternate configuration 3

MobileMark 25: up to 11.46 hr with 699 performance score @250nits

JEITA 2.0: up to 16.7 hr @150nits

Local video playback: up to 14.16 hr @150nits

Notes:

- [1] Configuration 1 (max battery life): WUXGA low power (non-touch), AMD Ryzen 7 PRO 7840U, 16GB LPDDR5x, Win 11, 54.7Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 PRO 7540U, 16GB LPDDR5x, Win 11, 54.7Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA low power (non-touch), AMD Ryzen 7 PRO 7840U, 16GB LPDDR5x, Win 11, 41Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:

- [1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS[1]	300nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS[2]	300nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS[3]	400nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

- [1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight^[1]

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Notes:

[1] Non-backlit keyboard is only available for the models with deep black cover.

Mechanical

Dimensions (WxDxH)^[1]

301.7 x 214.8 x 15.95 mm (11.88 x 8.46 x 0.63 inches)

Weight^[2]

Models	Weight
Models with deep black CFRP top cover	Starting at 1.14 kg (2.51 lbs)
Models with carbon fiber hybrid top cover	Starting at 1.19 kg (2.63 lbs)
Models with aluminium top cover	Starting at 1.30 kg (2.87 lbs)

Case Color**

- Deep black
- Storm grey

Case Material**

- Deep black models: carbon fiber hybrid or CFRP (top), aluminium (bottom)
- Storm grey models: aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®**^[2]

- MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3
- Qualcomm® Wi-Fi 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)^[3]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC^[4]

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

[3] Wireless WAN upgradable to 4G is ONLY available in EMEA.

[4] NFC is mutually exclusive with smart card reader.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X13 Gen 4 \(AMD\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader^[1]

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password

- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

Notes:

[1] Smart card reader is mutually exclusive with NFC.

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% recycled aluminium on storm grey top cover
50% recycled aluminium or 90% recycled magnesium on keyboard cover
55% recycled aluminium on bottom cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Retail packaging: plastic free packaging with 100% bamboo sugarcane fiber
Standard or bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Eyesafe Certified 2.0

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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AMD



AMD



AMD



AMD

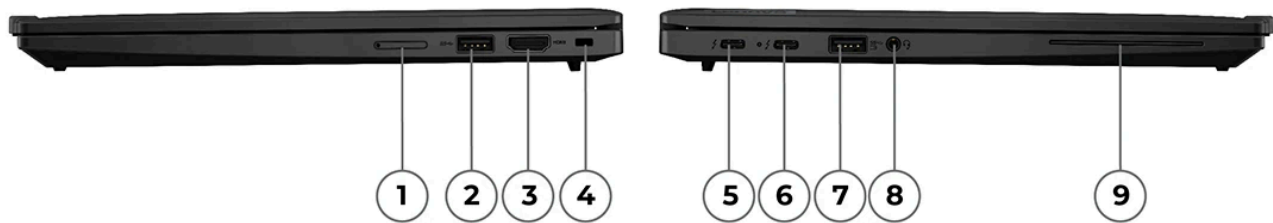


AMD



AMD

OVERVIEW



1. Nano-SIM card slot *	6. Thunderbolt 4
2. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
3. HDMI	8. Headphone / microphone combo jack (3.5mm)
4. Kensington Nano Security Slot	9. Smart card reader *
5. Thunderbolt 4	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1315U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.5GHz / E-core 3.3GHz	10MB	Intel UHD Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel P series processors are for special bid only.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^{[1], [2]} Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
Intel UHD Graphics	Integrated	Shared	DirectX® 12.1
Intel Iris Xe Graphics	Integrated	Shared	DirectX 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-4800[1]

Notes:

[1] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus
- No camera[1]

Notes:

[1] No camera is for special bid only.

Battery

- Battery****
- Integrated Li-Polymer 41Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
 - Integrated Li-Polymer 54.7Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 12.2 hr with 822 performance score @250nits
JEITA 2.0: up to 22.9 hr @150nits
Local video playback: up to 19.0 hr @150nits

Alternate configuration 2
MobileMark 25: up to 11.2 hr with 638 performance score @250nits
JEITA 2.0: up to 21.6 hr @150nits
Local video playback: up to 17.5 hr @150nits

Alternate configuration 3
MobileMark 25: up to 10.6 hr with 639 performance score @250nits
JEITA 2.0: up to 18.5 hr @150nits
Local video playback: up to 15.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA low power (non-touch), Intel i3-1315U, 8GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA low power (non-touch), Intel i5-1340P, 16GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (touch), Intel i5-1350P, 16GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**^[1]**
- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**										
Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features

13.3"	WUXGA (1920x1200)	None	IPS ^[1]	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS ^[3]	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
13.3"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

- LED backlight
- Non-backlight^[1]

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 61 x 115 mm (2.40 x 4.53 inches)

Notes:

[1] Non-backlit keyboard is only available for the models with deep black cover.

Mechanical

Dimensions (WxDxH)^[1]

301.7 x 214.8 x 15.95 mm (11.88 x 8.46 x 0.63 inches)

Weight^[2]

Models	Weight
Models with deep black carbon fiber hybrid top cover	Starting at 1.09 kg (2.41 lbs)
Models with deep black CFRP top cover	Starting at 1.12 kg (2.47 lbs)
Models with storm grey top cover	Starting at 1.25 kg (2.76 lbs)

Case Color**

- Deep black
- Storm grey

Case Material**

- Deep black models: carbon fiber hybrid or CFRP (top), aluminium (bottom)
- Storm grey models: aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)^[3]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC^[4]

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

[3] Wireless WAN upgradable to 4G is ONLY available in EMEA.

[4] NFC is mutually exclusive with smart card reader.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X13 Gen 4 \(Intel\)](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader^[1]

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

Notes:

^[1] Smart card reader is mutually exclusive with NFC.

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

^[1], ^[2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

50% recycled aluminium on storm grey top cover
50% recycled aluminium or 90% recycled magnesium on keyboard cover
55% recycled aluminium on bottom cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Retail packaging: plastic free packaging with 100% bamboo sugarcane fiber
Standard or bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

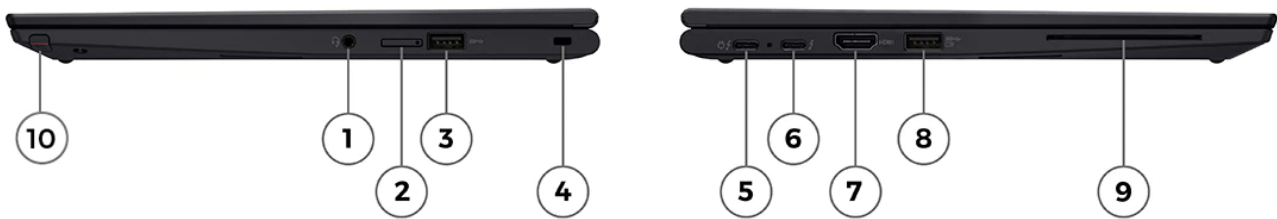
Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) Intel Evo™ Platform

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	6. Thunderbolt 4
2. Nano-SIM card slot *	7. HDMI
3. USB 3.2 Gen 1	8. USB 3.2 Gen 1 (Always On)
4. Kensington Nano Security Slot	9. Smart card reader *
5. Thunderbolt 4	10. Pen slot *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR4x-4266

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4 ^[2]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera**

- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 52.8Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 12.63 hr with 862 performance score @200nits

MobileMark 25: up to 11.48 hr with 667 performance score @250nits

JEITA 2.0: up to 19.11 hr @150nits

Local video playback: up to 17.66 hr @150nits

Alternate configuration 2

MobileMark 2018: up to 12.1 hr with 842 performance score @200nits

MobileMark 25: up to 10.83 hr with 721 performance score @250nits

JEITA 2.0: up to 18.23 hr @150nits

Local video playback: up to 15.7 hr @150nits

Alternate configuration 3

MobileMark 2018: up to 11.63 hr with 836 performance score @200nits

MobileMark 25: up to 10.3 hr with 756 performance score @250nits

JEITA 2.0: up to 17.95 hr @150nits

Local video playback: up to 15.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WQXGA (touch), Intel i5-1235U, 8GB LPDDR4x, Win 11, 52.8Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA AR/AS (touch), Intel i5-1245U, 16GB LPDDR4x, Win 11, 52.8Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA AR/AS (touch), Intel i7-1265U, 32GB LPDDR4x, Win 11, 52.8Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	500nits	Anti-glare, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
13.3"	WQXGA (2560x1600)	Multi-touch	IPS	400nits	Anti-reflection, anti-smudge	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Low power, Dolby Vision™, TÜV Low Blue Light

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

- Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable
- No pen (with a pen garage ready, purchase separately)^[1]

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Notes:

[1] No pen inbox is only for special bid models.

Mechanical**Dimensions (WxDxH)^[1]**

305 x 214.15 x 15.9 mm (12.0 x 8.43 x 0.63 inches)

Weight^[2]

Starting at 1.19 kg (2.62 lbs)

Case Color

Thunder black

Case Material

Carbon fiber hybrid (top), carbon fiber hybrid (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

No onboard Ethernet^[1]

WLAN + Bluetooth^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)

Optional Ports***

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X13 Yoga® Gen 3](#)

Monitor Cable

Monitor Cable***

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- Tile ready

MANAGEABILITY**System Management****System Management**

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE**Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Sustainability****Material**

30% PCC recycled plastic used in speaker enclosure
25% PCC recycled plastic used in the 57Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment**Temperature^[1]**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Intel Evo™ Platform
- (Optional) TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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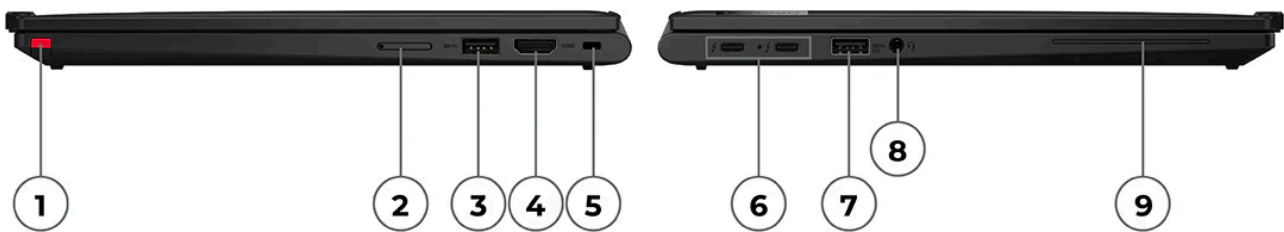


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intel

OVERVIEW



1. Pen slot *	6. 2x Thunderbolt 4
2. Nano-SIM card slot *	7. USB 3.2 Gen 1 (Always On)
3. USB 3.2 Gen 1	8. Headphone / microphone combo jack (3.5mm)
4. HDMI	9. Smart card reader *
5. Kensington Nano Security Slot	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i5 / i7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

[1] Intel P series processors are for special bid only.

Operating System

Operating System**

- Linux[1]
- Ubuntu Linux[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-4800^[1]

Notes:

[1] Installed memory is actually 6400MHz but run at 4800MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

- Dual-microphone array, 360° far-field, Dolby Voice
- No microphone

Camera**

- 5.0MP + IR discrete, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- No camera^[1]

Notes:

[1] No camera is for special bid only.

Battery

Battery**

- Integrated Li-Polymer 41Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter
- Integrated Li-Polymer 54.7Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 25: up to 11.2 hr with 769 performance score @250nits

JEITA 2.0: up to 22.6 hr @150nits
Local video playback: up to 18.0 hr @150nits

Alternate configuration 2
MobileMark 25: up to 10.8 hr with 707 performance score @250nits
JEITA 2.0: up to 21.8 hr @150nits
Local video playback: up to 17.3 hr @150nits

Alternate configuration 3
MobileMark 25: up to 9.8 hr with 739 performance score @250nits
JEITA 2.0: up to 18.1 hr @150nits
Local video playback: up to 15.3 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA low power (touch), Intel i5-1335U, 8GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA low power (touch), Intel i7-1360P, 16GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA anti-glare (touch), Intel i7-1370P, 16GB LPDDR5, Win 11, 54.7Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**[1]
- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	400nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

- Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable
- No pen (with a pen garage ready, purchase separately)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

301.7 x 214.6 x 16.4 mm (11.88 x 8.45 x 0.65 inches)

Weight^[2]

Starting at 1.21 kg (2.66 lbs)

Case Color**

- Deep black
- Storm grey

Case Material

Magnesium (top), magnesium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)^[3]
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

[3] Wireless WAN upgradable to 4G is ONLY available in EMEA.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 2.0)

Optional Ports^{***}

- 1x Smart card reader
- 1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X13 Yoga® Gen 4](#)

Monitor Cable

Monitor Cable^{***}

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- (Optional) Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- Ultrasonic Human Presence Detection (IR camera models)

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% recycled magnesium on top cover
90% recycled magnesium on keyboard cover
90% recycled magnesium on bottom cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Retail packaging: plastic free packaging with 100% bamboo sugarcane fiber
Standard or bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) Intel Evo™ Platform

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	4. USB-C 3.2 Gen 2
2. Nano-SIM card slot *	5. USB-C 3.2 Gen 2
3. Kensington Nano Security Slot	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Qualcomm® Snapdragon™ Processor

Processor

Processor Name	Cores	Threads	Max Frequency	Cache	Processor Graphics
Qualcomm Snapdragon 8cx Gen 3	4x Kryo Prime + 4x Kryo Gold	8	Kryo Prime / Gold @3.0GHz	1MB L2 for Prime core + 512KB L2 for Gold Core™	Qualcomm Adreno™ 690 GPU

Operating System

Operating System**

- Windows® 11 Home (on ARM)
- Windows 11 Home Single Language (on ARM)
- Windows 11 Pro (on ARM)

Graphics

Graphics

Graphics	Type	Memory	Key Features
Qualcomm Adreno 690 GPU	Integrated	Shared	DirectX® 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via USB-C®)

- USB-C supports up to 5K@60Hz

Chipset

Chipset

Qualcomm SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR4x-4266

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 3.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD ^[2]	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] PCIe 4.0x4 is downgraded to closer to PCIe 3.0x4 due to the system slot limitation.

Removable Storage

Card Reader

No card reader

Multi-Media**Audio Chip**

High Definition (HD) Audio, Qualcomm WCD9385 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™

Microphone

Triple-microphone array, far-field

Camera**

- 5.0MP + IR discrete, with E-shutter, MIPI, fixed focus
- 5.0MP + IR discrete, with E-shutter, MIPI, fixed focus, Computer Vision
- 5.0MP, with E-shutter, MIPI, fixed focus

Battery**Battery**

Integrated Li-Polymer 49.5Wh battery

Battery Life^[1]

Configuration 1 (max battery life)

Local video playback: up to 28 hr @150nits

Alternate configuration 2

Local video playback: up to 26.2 hr @150nits

Alternate configuration 3

Local video playback: up to 22.2 hr @150nits

Notes:

^[1] Configuration 1 (max battery life): WUXGA 400nits (non-touch), Qualcomm Snapdragon 8cx Gen 3, 8GB LPDDR4x, Win 11, 49.5Wh battery, balanced power mode

Alternate configuration 2: WUXGA 300nits (non-touch), Qualcomm Snapdragon 8cx Gen 3, 16GB LPDDR4x, Win 11, 49.5Wh battery, balanced power mode

Alternate configuration 3: WQXGA 300nits (touch), Qualcomm Snapdragon 8cx Gen 3, 32GB LPDDR4x, Win 11, 49.5Wh battery, balanced power mode

All battery life claims are approximate maximum and based on results using continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter**Power Adapter**^[1]**

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

^[1] AC adapter offerings depend on the country.

^[2] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	Multi-touch	IPS	300nits	Anti-glare	16:10	1000:1	72% NTSC	85°/85°/85°/85°	-
13.3"	WUXGA (1920x1200)	None	IPS	400nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass-like Mylar® surface multi-touch touchpad, 56 x 115 mm (2.24 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

298.7 x 206.4 x 13.4 mm (11.76 x 8.13 x 0.53 inches)

Weight^[2]

Starting at 1.06 kg (2.35 lbs)

Case Color

Thunder black

Case Material

Magnesium-aluminium (top), GFRP (bottom)

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®^[2]

Qualcomm Wi-Fi® 6E WCN6855, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Qualcomm Snapdragon X55 5G Modem-RF System, Sub-6 GHz, M.2 card, with embedded eSIM functionality
- Qualcomm Snapdragon X55 5G Modem-RF System, Sub-6 GHz & mmWave, M.2 card, with embedded eSIM

functionality

- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 2x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X13s Gen 1](#)

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader integrated in power button, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- Self-healing BIOS

Other Security

- E-shutter
- (Optional) Computer Vision-based User Presence Sensing including lock on leave

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year courier service
- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% certified recycled magnesium
97% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the 49.5Wh battery
30% PCC recycled plastic used in standard 65W adapter
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories^{***}

- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C Port Replicator
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Mil-Spec Test**

MIL-STD-810H military test passed

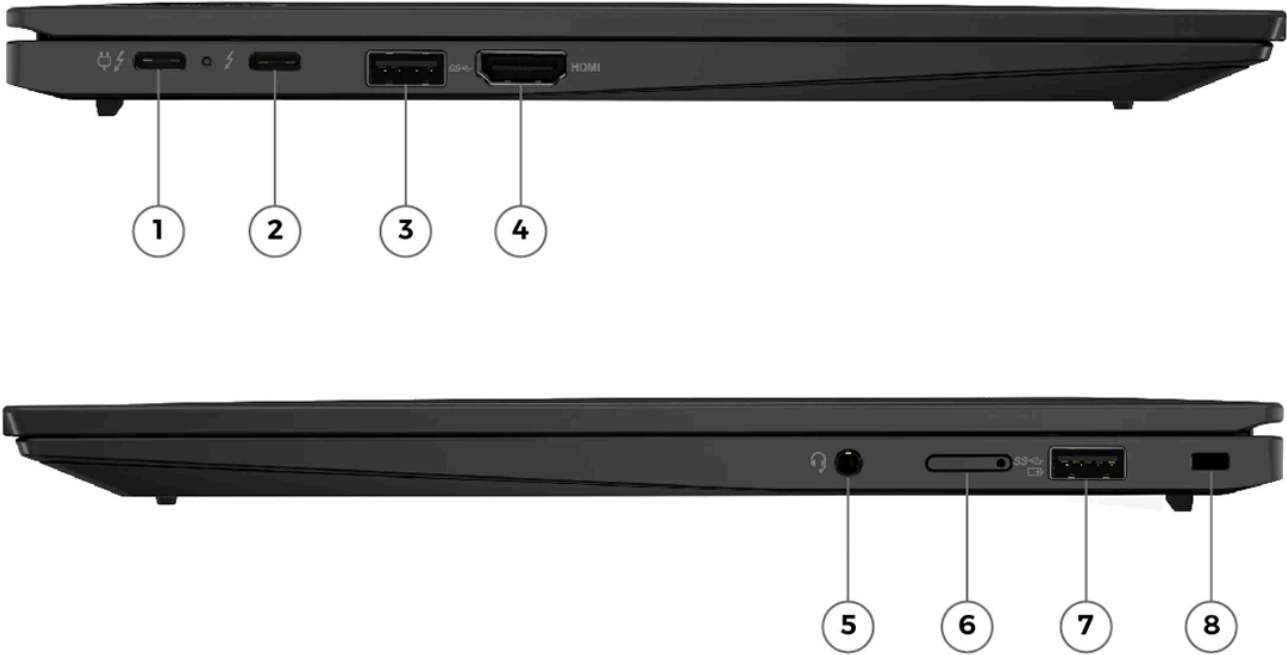
Other Certifications

(Optional) Eyesafe Certified

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Thunderbolt 4	5. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	6. Nano-SIM card slot *
3. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
4. HDMI	8. Kensington Nano Security Slot

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P ^[1]	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Notes:

[1] NOT available in EMEA.

Operating System

Operating System**

- Fedora Linux^[1]
- Linux^[2]
- Ubuntu Linux^[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2], [3] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable[1]
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, 8-channel

Memory Type

LPDDR5-5200[2]

Notes:

[1] 8GB memory is NOT available in EMEA.

[2] Installed memory is actually 6400MHz but run at 5200MHz due to processor limitation.

Storage

Storage Support[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB[2]	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4[3]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] 512GB and 1TB are NOT available in EMEA.

[3] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2 woofers and 0.8W x2 tweeters, Dolby® Atmos®

Microphone

Quad-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with privacy shutter, MIPI, fixed focus, Computer Vision
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus[1]

Notes:

[1] HD 720p camera is NOT available in EMEA.

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 15.0 hr with 838 performance score @200nits
MobileMark 25: up to 13.1 hr with 663 performance score @250nits
JEITA 2.0: up to 24.9 hr @150nits
Local video playback: up to 19.9 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 14.3 hr with 840 performance score @200nits
MobileMark 25: up to 11.3 hr with 623 performance score @250nits
JEITA 2.0: up to 24.9 hr @150nits
Local video playback: up to 19.9 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 14.2 hr with 809 performance score @200nits
MobileMark 25: up to 11.1 hr with 600 performance score @250nits
JEITA 2.0: up to 21.7 hr @150nits
Local video playback: up to 19.7 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1235U, 8GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (non-touch), Intel i5-1240P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (non-touch), Intel i7-1260P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter^{**[1][2]}

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

Notes:

[1] AC adapter offerings depend on the country.
[2] In EMEA only 65W USB-C slim AC adapters are available.

DESIGN

Display

Display^{**[1]}

Size	Resolution	Touch	Type	Brightness	Surface	Aspect	Contrast	Color	Viewing Angle	Key Features
------	------------	-------	------	------------	---------	--------	----------	-------	---------------	--------------

						Ratio	Ratio	Gamut	(L/R/U/D)	
14"	WUXGA (1920x1200)	None	IPS ^[2]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified
14"	WUXGA (1920x1200)	On-cell touch	IPS ^[3]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe Certified
14"	WUXGA (1920x1200)	On-cell touch	IPS ^[4]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS ^[5]	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light Method 2
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified
14"	WQUXGA (3840x2400)	None	IPS ^[6]	500nits	Glossy	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	Low power, DisplayHDR 400, Dolby Vision, Eyesafe Certified
14"	WQUXGA (3840x2400)	Add-on Film Touch	IPS ^[7]	500nits	Anti-glare, anti-reflection, anti-smudge	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	Low power, DisplayHDR 400, Dolby Vision, Eyesafe Certified

Touchscreen**

- Add-on Film Touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1] 2.2K display and Add on Film Touch display are NOT available in EMEA.

[2], [3], [4], [5], [6], [7] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, air intake design, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

Mechanical

Models	Dimensions
Models with 720p camera	315.6 x 222.5 x 14.95 mm (12.43 x 8.76 x 0.59 inches)
Models with other camera	315.6 x 222.5 x 15.36 mm (12.43 x 8.76 x 0.60 inches)

Weight^[2]

Starting at 1.12 kg (2.48 lbs)

Case Color**

- Deep black, paint
- Deep black, weave

Case Material

Carbon fiber (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth^{**[2]}

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN^{**}

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6 full features might be limited by country-level restrictions.

[4] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X1 Carbon Gen 10](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave
- Tile ready

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service

- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

95% PCC recycled plastic used in speaker enclosure
25-30% PCC recycled plastic used in the 57Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified
- (Optional) Intel Evo™ Platform
- (Optional) TÜV Rheinland® Low Blue Light Method 2
- TÜV Rheinland Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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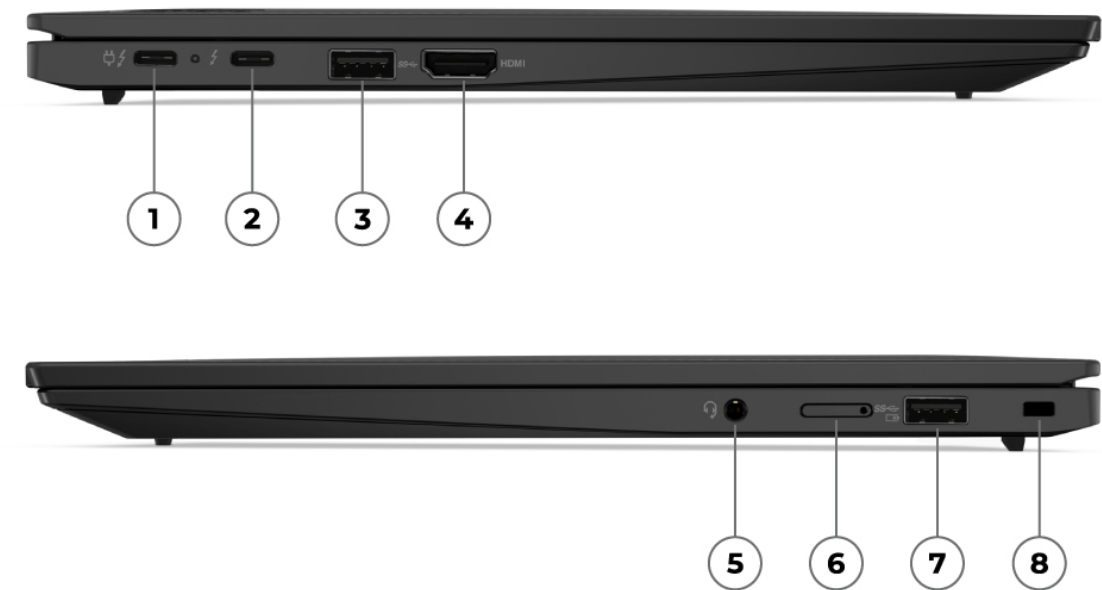


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OVERVIEW



1. Thunderbolt 4	5. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	6. Nano-SIM card slot *
3. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
4. HDMI	8. Kensington Nano Security Slot

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i5 / i7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

[1] Intel Core i5-1340P, i5-1350P and i7-1360p are for special bid only.

Operating System

Operating System**

- Fedora Linux[1]
- Linux[2]
- Ubuntu Linux[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2], [3] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1

Monitor Support

Monitor Support[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable
- 64GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, 8-channel

Memory Type**

- LPDDR5/x-6000 (32GB)^[1]
- LPDDR5/x-6400 (16GB)^[2]
- LPDDR5x-6000 (64GB)^[3]

Notes:

[1] Installed memory is actually LPDDR5-6400 or LPDDR5x-7500 but run at 6000MHz due to platform limitation.

[2] Installed memory is actually LPDDR5-6400 or LPDDR5x-7500 but run at 6400MHz due to platform limitation.

[3] Installed memory is actually LPDDR5x-7500 but run at 6000MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2 woofers and 0.8W x2 tweeters, Dolby® Atmos®

Microphone

Quad-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with privacy shutter, MIPI, fixed focus, Computer Vision
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- HD 720p, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 13.95 hr with 658 performance score @250nits
JEITA 2.0: up to 28.5 hr @150nits
Local video playback: up to 22.9 hr @150nits

Alternate configuration 2
MobileMark 25: up to 13.63 hr with 654 performance score @250nits
JEITA 2.0: up to 26.4 hr @150nits
Local video playback: up to 20.5 hr @150nits

Alternate configuration 3
MobileMark 25: up to 13.48 hr with 642 performance score @250nits
JEITA 2.0: up to 24.8 hr @150nits
Local video playback: up to 19.8 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i5-1345U, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (non-touch), Intel i5-1340P, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (non-touch), Intel i5-1350P, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	None	IPS ^[1]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe Certified 2.0

14"	WUXGA (1920x1200)	Multi-touch	IPS ^[3]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	2.2K (2240x1400)	None	IPS ^[4]	300nits	Anti-glare	16:10	1500:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light Method 2
14"	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ True Black 500, Dolby Vision™, Eyesafe Certified 2.0

Touchscreen

- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2], [3], [4] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, air intake design, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with 720p camera	315.6 x 222.5 x 14.96 mm (12.43 x 8.76 x 0.59 inches)
Models with other camera	315.6 x 222.5 x 15.36 mm (12.43 x 8.76 x 0.60 inches)

Weight^[2]

Starting at 1.12 kg (2.48 lbs)

Case Color**

- Deep black, paint
- Deep black, weave

Case Material

Carbon fiber (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G or 5G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card, with embedded eSIM functionality

- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]**Standard Ports**

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X1 Carbon Gen 11](#)

Monitor Cable**Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% recycled magnesium on keyboard cover

55% recycled aluminium on bottom cover

90% PCC recycled plastic used in speaker enclosure

25-30% PCC recycled plastic used in the 57Wh battery enclosure

90% PCC recycled plastic used in standard 45W and 65W adapters

Low-temperature solder

Retail or standard packaging: plastic free packaging with 100% bamboo sugarcane fiber

Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) Intel Evo™ Platform
- (Optional) TÜV Rheinland® Low Blue Light Method 2
- TÜV Rheinland Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)

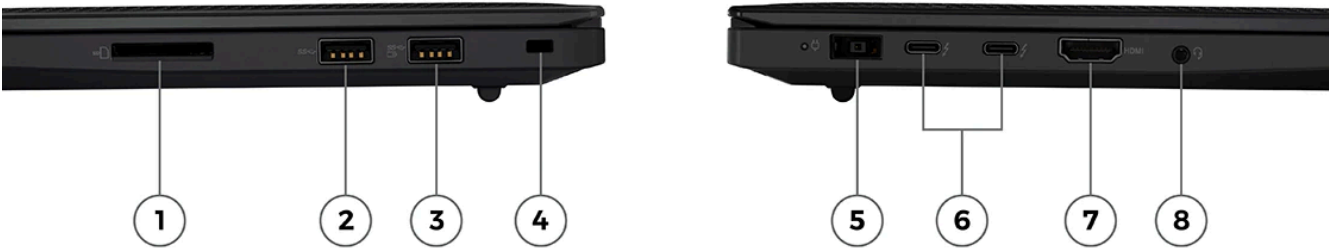
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OVERVIEW



1. SD Express 7.0 card reader	5. Power connector
2. USB 3.2 Gen 1	6. 2x Thunderbolt 4
3. USB 3.2 Gen 1 (Always On)	7. HDMI
4. Kensington Nano Security Slot	8. Headphone / microphone combo jack (3.5mm)

- Notes:
- Optional nano-SIM card slot on the right side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	Intel Iris® Xe Graphics
Core i7-12800H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.7GHz	24MB	Intel Iris Xe Graphics
Core i9-12900H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.8GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
NVIDIA® GeForce RTX™ 3080 Ti Laptop GPU	Discrete	16GB GDDR6	DirectX® 12
NVIDIA GeForce RTX 3050 Ti Laptop GPU	Discrete	4GB GDDR6	DirectX 12
NVIDIA GeForce RTX 3060 Laptop GPU	Discrete	6GB GDDR6	DirectX 12
NVIDIA GeForce RTX 3070 Ti Laptop GPU	Discrete	8GB GDDR6	DirectX 12

Monitor Support

Monitor Support^[1]

Supports up to 5 independent displays in hybrid mode (native display and 4 external monitors via HDMI® and Thunderbolt™);

Supports up to 4 independent displays in discrete mode (native display and 3 external monitors via HDMI and Thunderbolt)

- HDMI supports up to 8K@60Hz
- Thunderbolt supports up to 5K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.
8K resolution support needs 2 display pipes. That is, simultaneous display number will “-1” when 8K resolution displayed.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Models with RTX 3050 Ti graphics:
up to two drives, 2x M.2 SSD
 - M.2 2280 SSD up to 4TB
 - RAID 0/1 support
- Models with RTX 3060/3070 Ti/3080 Ti graphics:
one drive, up to 4TB M.2 2280 SSD

Storage Slot

- One M.2 2280 PCIe® 4.0 x4 slot (models with RTX 3060/3070 Ti/3080 Ti graphics)
- Two M.2 2280 PCIe 4.0 x4 slots (models with RTX 3050 Ti graphics)

Storage Type^{***[2]}

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB / 4TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4 ^[3]	256GB / 512GB / 1TB	Opal 2.0

RAID

RAID 0/1 support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] Opal capability is not available in RAID mode.

[3] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, far-field, Dolby Voice

Camera

FHD 1080p + IR hybrid, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)

MobileMark® 2018: up to 11.0 hr with 907 performance score @200nits

MobileMark 25: up to 9.8 hr with 627 performance score @250nits

JEITA 2.0: up to 22.0 hr @150nits
Local video playback: up to 15.3 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 10.4 hr with 945 performance score @200nits
MobileMark 25: up to 9.7 hr with 632 performance score @250nits
JEITA 2.0: up to 19.3 hr @150nits
Local video playback: up to 14.5 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 6.7 hr with 861 performance score @200nits
MobileMark 25: up to 5.8 hr with 556 performance score @250nits
JEITA 2.0: up to 12.5 hr @150nits
Local video playback: up to 10.3 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), Intel i7-12700H, 16GB DDR5, NVIDIA GeForce RTX 3050 Ti, Win 10, 90Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (non-touch), Intel i7-12800H, 32GB DDR5, NVIDIA GeForce RTX 3050 Ti, Win 10, 90Wh battery, best power efficiency power mode
Alternate configuration 3: WQUXGA (touch), Intel i7-12900H, 64GB DDR5, NVIDIA GeForce RTX 3080 Ti, Win 10, 90Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**[1]
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz[2]
 - 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz[3]
 - No power adapter

Notes:

[1] AC adapter offerings depend on the country.
[2] 170W is for RTX 3050 Ti graphics only.
[3] 230W is for RTX 3060/3070 Ti/3080 Ti graphics only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS	300nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	89°/89°/80°/80°	-
16"	WQXGA (2560x1600)	None	IPS	500nits	Anti-glare	16:10	1200:1	100% sRGB	165Hz	89°/89°/80°/80°	TÜV Low Blue Light Method 2
16"	WQUXGA (3840x2400)	None	IPS	600nits	Anti-glare	16:10	1500:1	100% Adobe® RGB	60Hz	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, TÜV Low Blue Light Method 2[2]

16"	WQUXGA (3840x2400)	Multi-touch	IPS	600nits	Anti-reflection, anti-smudge	16:10	1500:1	100% Adobe RGB	60Hz	85°/85°/85°/85°	DisplayHDR 400, Dolby Vision, TÜV Low Blue Light Method 2 ^[3]
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Color Calibration

X-Rite® factory color calibration

Touchscreen

- OGM (One Glass Metal mesh) multi-touch, supports 10-point touch
- Non-touch

Notes:

- [1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
- [2], [3] Dolby Vision and DisplayHDR 400 are only supported under hybrid graphics mode.

Input Device

Pen

- Lenovo Precision Pen 2 with built-in rechargeable battery, 4096 levels of pressure sensitivity, tilt detection, supports WGP, AES 2.0 and MPP 2.0 protocols. For more information, please read [Lenovo Precision Pen 2](#)
- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad, 67.7 x 115 mm (2.67 x 4.53 inches)

Mechanical

Dimensions (WxDxH)^[1]

359.5 x 253.8 x 17.9 mm (14.15 x 9.99 x 0.7 inches)

Weight^[2]

Starting at 1.88 kg (4.14 lbs)

Case Color^{**}

- Deep black, paint (WUXGA or WQXGA models)
- Deep black, weave (WQUXGA models)

Case Material

Carbon fiber (top), aluminium (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN^[4]

- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C® to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

[4] WWAN is only available on the models with RTX 3050 Ti graphics.

Ports^[1]**Standard Ports**

- 1x HDMI 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector
- 1x SD Express 7.0 card reader
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X1 Extreme Gen 5](#)

Monitor Cable**Monitor Cable*****

- Lenovo HDMI to VGA Monitor Adapter
- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- IR camera for Windows Hello
- Glance by Mirametrix®
- Tile ready

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

30% PCC recycled plastic used in speaker enclosure
30% PCC recycled plastic used in the 90Wh battery
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)

- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories**

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- Lenovo USB-C to Ethernet Adapter (2.5Gbps)
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) TÜV Rheinland® Low Blue Light Method 2

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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ThinkPad X1 Extreme Gen 5 - July 19 2023



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OVERVIEW



1. Thunderbolt 4	4. USB-C 3.2 Gen 2
2. Volume buttons	5. Thunderbolt 4
3. Power button	

Notes:

- Optional nano-SIM card slot on the left of Port 1 (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1230U	10 (2 P-core + 8 E-core)	12	P-core 1.0GHz / E-core 0.7GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240U	10 (2 P-core + 8 E-core)	12	P-core 1.1GHz / E-core 0.8GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1250U	10 (2 P-core + 8 E-core)	12	P-core 1.1GHz / E-core 0.8GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260U	10 (2 P-core + 8 E-core)	12	P-core 1.1GHz / E-core 0.8GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and USB-C®)

- USB-C supports up to 3840x2160@60Hz
- Thunderbolt supports up to 5120x3200@60Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, 8-channel

Memory Type

LPDDR5-5200

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio

Speakers

Stereo speakers, 2W x3, Dolby® Atmos®, 2 of 3 speakers enabled in each posture

Microphone

Quad-microphone array, far-field, Dolby Voice, 2 of 4 microphones enabled in each posture

Camera**

- 5.0MP + IR discrete, MIPI, fixed focus
- 5.0MP + IR discrete, MIPI, fixed focus, Computer Vision

Battery

Battery**

- Integrated Li-Polymer 48Wh battery, supports Rapid Charge (charge up to 80% in 1hr)
- Integrated Li-Polymer 64Wh (48Wh + 16Wh) battery, gets 4 hours of runtime with a 30-minute charge

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 11.28 hr with 834 performance score @200nits
MobileMark 25: up to 10.23 hr with 818 performance score @250nits
JEITA 2.0: up to 14.65 hr @150nits
Local video playback: up to 15.18 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 11.23 hr with 830 performance score @200nits
MobileMark 25: up to 9.73 hr with 843 performance score @250nits
JEITA 2.0: up to 14.5 hr @150nits
Local video playback: up to 14.75 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 8.06 hr with 768 performance score @200nits
MobileMark 25: up to 6.58 hr with 771 performance score @250nits
JEITA 2.0: up to 10.5 hr @150nits
Local video playback: up to 9.96 hr @150nits

Notes:

[1] Configuration 1 (max battery life): 2560x2024 OLED, Intel i5-1240U, 16GB LPDDR5, Win 11, 64Wh battery, best power efficiency power mode
Alternate configuration 2: 2560x2024 OLED, Intel i5-1240U, 16GB LPDDR5, Win 11, 64Wh battery, best power efficiency power mode
Alternate configuration 3: 2560x2024 OLED, Intel i5-1240U, 8GB LPDDR5, Win 11, 48Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

^[1] AC adapter offerings depend on the country.

DESIGN

Display

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16.3"	2560x2024	Multi-touch	Folding OLED	SDR 400nits / HDR 600nits	Anti-smudge	4:3	1000000:1	100% DCI-P3	89°/89°/89°/89°	16.3" when open and 12" when folded, DisplayHDR™ True Black 600, Dolby Vision™

Touchscreen

On-cell multi-touch, supports 10-point touch

Multi-mode

Multi-mode

Laptop with OSK (on screen keyboard) or split screen, laptop with keyboard, landscape with keyboard, portrait with keyboard, tablet and book

Input Device

Pen**

- Lenovo Precision Pen 2 with USB cable, built-in rechargeable battery, 4096 levels of pressure sensitivity, tilt detection, supports WGP, AES 2.0 and MPP 2.0 protocols. For more information, please read [Lenovo Precision Pen 2](#)
- Lenovo Precision Pen, 4096 levels of pressure sensitivity, magnetically attached to the system. For more information, please read [Lenovo Precision Pen Overview](#)
- No pen (purchase separately)

Keyboard

- ThinkPad® Bluetooth® TrackPoint® Keyboard and Stand. Full size keyboard with LED backlight, magnetically attachable to bottom, charging via USB-C cable. Stand supports system in both portrait & landscape modes and magnetically attaches to system in portrait mode. Living hinge for angle adjustment.^[1]
- No keyboard and stand

Keyboard Backlight

LED backlight on optional keyboard

UltraNav™

TrackPoint pointing device and glass surface multi-touch touchpad with 3 haptic buttons, 50 x 110 mm (1.97 x 4.33 inches)

Notes:

^[1] ThinkPad Bluetooth TrackPoint Keyboard and Stand is sold as a single unit and components are not available individually.

Mechanical

Dimensions (WxDxH)^[1]

Folded: 176.2 x 276.2 x 17.4 mm (6.94 x 10.87 x 0.69 inches)
Unfolded: 345.7 x 276.2 x 8.6 mm (13.61 x 10.87 x 0.34 inches)

Weight^[2]

Models	Weight
WLAN models with 48Wh battery	X1 Fold 16: starting at 1.26 kg (2.78 lbs) Keyboard and stand: around 627 g (1.38 lbs) Total: around 1.887 kg (4.16 lbs)
WLAN models with 64Wh battery	X1 Fold 16: starting at 1.311 kg (2.89 lbs) Keyboard and stand: around 627 g (1.38 lbs) Total: around 1.938 kg (4.27 lbs)
WWAN models with 64Wh battery	X1 Fold 16: starting at 1.314 kg (2.9 lbs) Keyboard and stand: around 627 g (1.38 lbs) Total: around 1.941 kg (4.28 lbs)

Case Color

Performance black

Case Material

Aluminium + 100% recycled woven performance fabric

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN

- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

- [1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.
- [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- [3] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the

host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X1 Fold 16 Gen 1](#)

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Smart Card Reader

No smart card reader

Fingerprint Reader

- Touch style fingerprint reader in keyboard key, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Self-healing BIOS

Other Security

- IR camera for Windows Hello
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave
- Tile ready

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

^[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service

- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

Recycled Performance Woven fabric cover

97% PCC recycled plastic used in speaker enclosure

97% PCC recycled plastic used in the 48Wh and 16Wh batteries

At least 90% PCC recycled plastic used in standard 65W adapter

Low-temperature solder

90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo Powered USB-C Travel Hub
- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

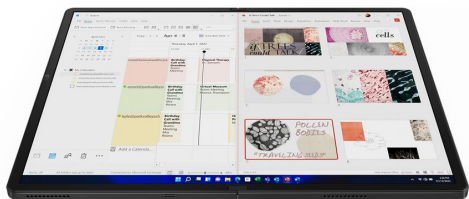
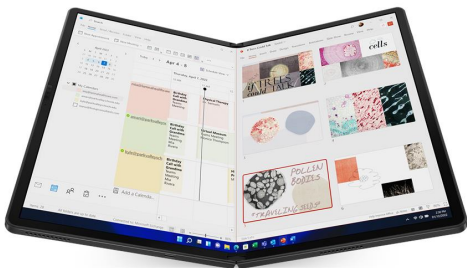
Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Intel Evo™ Platform

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Power button	3. 2x Thunderbolt 4
2. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Optional nano-SIM card slot on the rear side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 3 independent displays (native display and 2 external monitors via Thunderbolt™)

- Thunderbolt supports up to 5K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable^[1]

Memory Slots

Memory soldered to systemboard, no slots, 8-channel

Memory Type

LPDDR5-5200^[2]

Notes:

- [1] 32GB memory is only for i7-1280P models.
- [2] Installed memory is actually 6400MHz but run at 5200MHz due to processor limitation.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2 woofers and 1W x2 tweeters, Dolby® Atmos®

Microphone

Quad-microphone array, 360° far-field, Dolby Voice

Camera^{**[1]}

- FHD 1080p + IR discrete, with privacy shutter, MIPI, fixed focus, Computer Vision
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus

Notes:

- [1] FHD 1080p camera and FHD 1080p + IR discrete camera are only available on non-touch models. FHD 1080p + IR hybrid camera is only available on touch models.

Battery

Battery

Integrated Li-Polymer 49.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 11.0 hr with 871 performance score @200nits
MobileMark 25: up to 10.3 hr with 806 performance score @250nits
JEITA 2.0: up to 18.2 hr @150nits
Local video playback: up to 16.2 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 10.4 hr with 888 performance score @200nits
MobileMark 25: up to 9.8 hr with 796 performance score @250nits
JEITA 2.0: up to 17.9 hr @150nits

Local video playback: up to 15.6 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 10.1 hr with 845 performance score @200nits
MobileMark 25: up to 9.6 hr with 838 performance score @250nits
JEITA 2.0: up to 17.0 hr @150nits
Local video playback: up to 15.4 hr @150nits

Notes:

[1] Configuration 1 (max battery life): 2K (non-touch), Intel i5-1240P, 16GB LPDDR5, Win 11, 49.5Wh battery, best power efficiency power mode
Alternate configuration 2: 2K (non-touch), Intel i5-1250P, 16GB LPDDR5, Win 11, 49.5Wh battery, best power efficiency power mode
Alternate configuration 3: 2K (non-touch), Intel i7-1280P, 32GB LPDDR5, Win 11, 49.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

- Power Adapter**[1]
- 65W USB-C® slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
 - No power adapter[2]

Notes:

[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13"	2K (2160x1350)	None	IPS	450nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power
13"	2K (2160x1350)	Multi-touch	IPS	450nits	Anti-glare, anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power

- Touchscreen
- Add-on Film Touch, supports 10-point touch[2]
 - Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
[2] Multi-touch display is only for black weave models.

Input Device

Keyboard
6-row, spill-resistant, multimedia Fn keys with Unified Communications controls
Keyboard Backlight
LED backlight

UltraNav™
TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Non-touch models	293.2 x 208.0 x 14.4 mm (11.54 x 8.19 x 0.57 inches)
Touch models	293.3 x 208.1 x 14.8 mm (11.55 x 8.19 x 0.58 inches)

Weight^[2]

Models	Weight
Non-touch models	Starting at 966.5 g (2.13 lbs)
Touch models	Starting at 991.5 g (2.19 lbs)

Case Color**

- Deep black, paint
- Deep black, weave

Case Material

Carbon fiber (top), magnesium alloy (bottom)

Notes:

- ^[1] The system dimensions may vary depending on configurations.
- ^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®^[2]

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Wireless WAN upgradable to 4G or 5G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- Qualcomm® Snapdragon™ X55 5G Modem-RF System, Sub-6 GHz, M.2 card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

No support

Notes:

- ^[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.
- ^[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- ^[3] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)

- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X1 Nano Gen 2](#)

Monitor Cable**Monitor Cable*****

- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI® Adapter
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader on palm rest, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave
- Tile ready

MANAGEABILITY**System Management****System Management**

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

97% PCC recycled plastic used in the 49.5Wh battery
30% PCC recycled plastic used in speaker enclosure
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C Port Replicator
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]

- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

(Optional) Intel Evo™ Platform

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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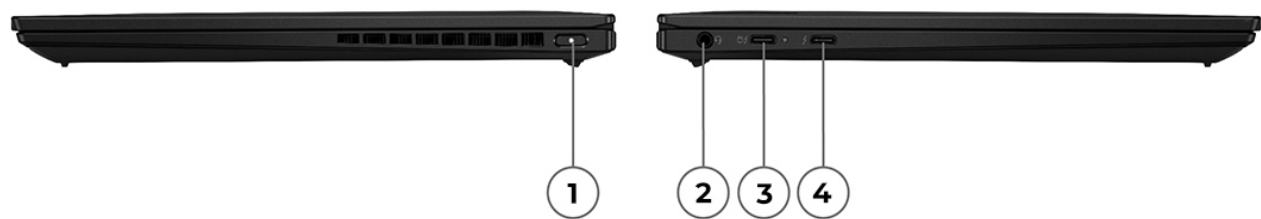


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intel

OVERVIEW



1. Power button	3. Thunderbolt 4
2. Headphone / microphone combo jack (3.5mm)	4. Thunderbolt 4

- Notes:
- Optional nano-SIM card slot on the rear side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® P Series Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1350P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Operating System

Operating System**

- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Key Features
Intel Iris Xe Graphics	Integrated	Shared	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 3 independent displays (native display and 2 external monitors via Thunderbolt™)

- Thunderbolt supports up to 5K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

16GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, 8-channel

Memory Type

LPDDR5x-6400^[1]

Notes:

[1] Installed memory is actually 7500MHz but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2 woofers and 1W x2 tweeters, Dolby® Atmos®

Microphone

Quad-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with privacy shutter, MIPI, fixed focus, Computer Vision
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 49.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 11.13 hr with 632 performance score @250nits
JEITA 2.0: up to 19.67 hr @150nits
Local video playback: up to 17.83 hr @150nits

Alternate configuration 2
MobileMark 25: up to 10.58 hr with 653 performance score @250nits
JEITA 2.0: up to 19.03 hr @150nits
Local video playback: up to 17.44 hr @150nits

Alternate configuration 3
MobileMark 25: up to 10.28 hr with 651 performance score @250nits
JEITA 2.0: up to 18.92 hr @150nits
Local video playback: up to 17.13 hr @150nits

Notes:

[1] Configuration 1 (max battery life): 2K (non-touch), Intel i5-1340P, 16GB LPDDR5x, Win 11, 49.5Wh battery, best power efficiency power mode
Alternate configuration 2: 2K (touch), Intel i5-1350P, 16GB LPDDR5x, Win 11, 49.5Wh battery, best power efficiency power mode
Alternate configuration 3: 2K (touch), Intel i7-1370P, 16GB LPDDR5x, Win 11, 49.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality,

power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

^[1] AC adapter offerings depend on the country.

^[2] No power adapter is for special bid only.

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
13"	2K (2160x1350)	None	IPS	450nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power
13"	2K (2160x1350)	Multi-touch	IPS	450nits	Anti-glare, anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power

Touchscreen

- Add-on Film Touch, supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Non-touch models	293.2 x 208.0 x 14.4 mm (11.54 x 8.19 x 0.57 inches)
Touch models	293.3 x 208.1 x 14.8 mm (11.55 x 8.19 x 0.58 inches)

Weight^[2]

Models	Weight
Non-touch models	Starting at 966.5 g (2.13 lbs)
Touch models	Starting at 991.5 g (2.19 lbs)

Case Color

Deep black, paint

Case Material

Carbon fiber (top), magnesium alloy (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN

- Wireless WAN upgradable to 4G (with antenna ready)
- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® X1 Nano Gen 3](#)

Monitor Cable

Monitor Cable***

- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI® Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader on palm rest, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- IR camera for Windows Hello
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

^[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

^[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

90% recycled magnesium on keyboard cover and bottom cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the 49.5Wh battery enclosure
90% PCC recycled plastic used in standard 45W and 65W adapters
Low-temperature solder
Retail or standard packaging: plastic free packaging with 100% bamboo sugarcane fiber
Bulk packaging: 90% recycled and FSC certified content

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C Port Replicator
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

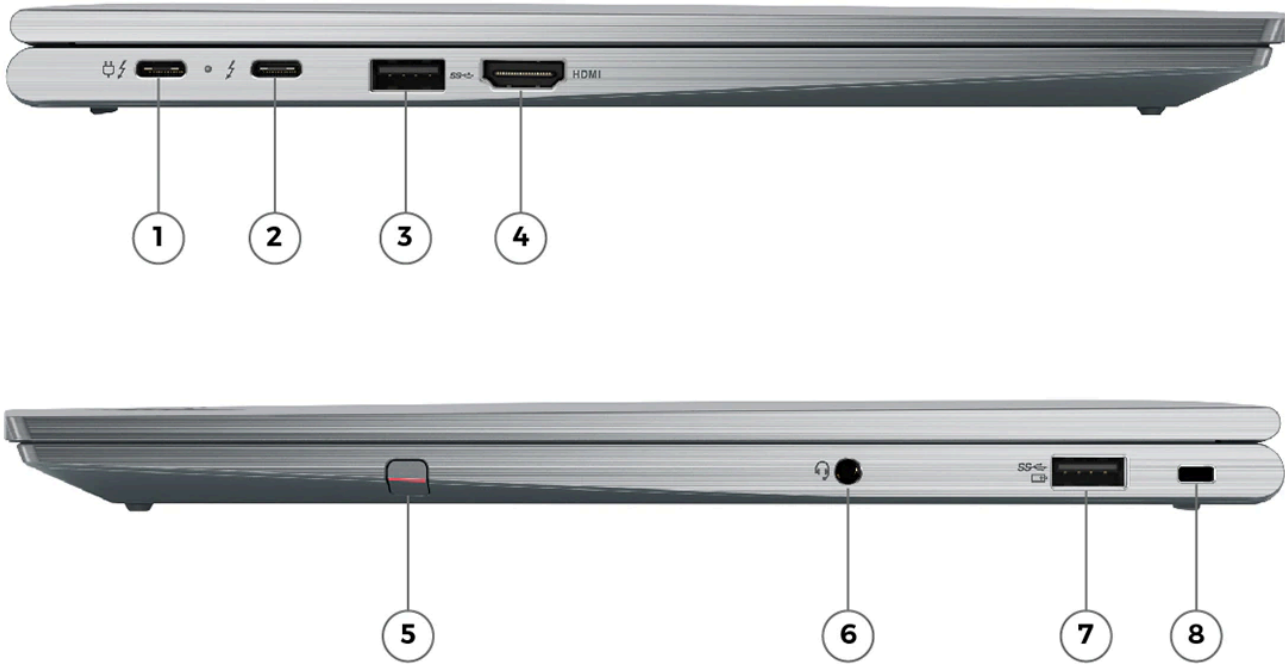
Other Certifications

(Optional) Intel Evo™ Platform

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Thunderbolt 4	5. Pen slot
2. Thunderbolt 4	6. Headphone / microphone combo jack (3.5mm)
3. USB 3.2 Gen 1	7. USB 3.2 Gen 1 (Always On)
4. HDMI	8. Kensington Nano Security Slot

- Notes:
- Optional nano-SIM card slot on the right side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1245U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i5-1250P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	Intel Iris Xe Graphics
Core i7-1255U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz	18MB	Intel Iris Xe Graphics
Core i7-1265U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	12MB	Intel Iris Xe Graphics
Core i7-1270P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 4.8GHz / E-core 3.5GHz	18MB	Intel Iris Xe Graphics
Core i7-1280P ^[1]	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.6GHz	24MB	Intel Iris Xe Graphics

Notes:

[1] NOT available in EMEA.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 8GB soldered memory, not upgradable[1]
- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, 8-channel

Memory Type

LPDDR5-5200[2]

Notes:

[1] 8GB memory is NOT available in EMEA.

[2] Installed memory is actually 6400MHz but run at 5200MHz due to processor limitation.

Storage

Storage Support[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**[2]

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4[3]	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] 512GB and 1TB M.2 2280 PCIe 4x4 SSD are NOT available in EMEA.

[3] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2 woofers and 0.8W x2 tweeters, Dolby® Atmos®

Microphone

Quad-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with privacy shutter, MIPI, fixed focus, Computer Vision
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus

Sensor

Sensors

- Accelerometer (G) sensor
- Proximity (P) sensor

Battery

Battery

Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 14.9 hr with 848 performance score @250nits
JEITA 2.0: up to 24.5 hr @150nits
Local video playback: up to 19.7 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 14.2 hr with 820 performance score @200nits
MobileMark 25: up to 11.3 hr with 608 performance score @250nits
JEITA 2.0: up to 24.1 hr @150nits
Local video playback: up to 19.7 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 14.0 hr with 810 performance score @200nits
MobileMark 25: up to 11.0 hr with 614 performance score @250nits
JEITA 2.0: up to 21.8 hr @150nits
Local video playback: up to 19.3 hr @150nits

Notes:

- [1] Configuration 1 (max battery life): WUXGA (touch), Intel i5-1235U, 8GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), Intel i5-1240P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (touch), Intel i7-1260P, 16GB LPDDR5, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter^{**[1][2]}

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

- [1] AC adapter offerings depend on the country.
[2] In EMEA only 65W USB-C slim AC adapters are available.

DESIGN

Display

Display^{**}

Size	Resolution	Touch	Type	Brightness	Surface	Aspect	Contrast	Color	Viewing Angle	Key Features
------	------------	-------	------	------------	---------	--------	----------	-------	---------------	--------------

						Ratio	Ratio	Gamut	(L/R/U/D)	
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[1]	400nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe Certified
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[3]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard
14"	WQUXGA (3840x2400)	Multi-touch	OLED	500nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	Low power, DisplayHDR™ 400, Dolby Vision™, Eyesafe Certified

Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:
[1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable

Keyboard

6-row, spill-resistant, air intake design, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

Mechanical

Dimensions (WxDxH)^[1]

314.4 x 222.3 x 15.53 mm (12.38 x 8.75 x 0.61 inches)

Weight^[2]

Starting at 1.38 kg (3.04 lbs)

Case Color

Storm grey

Case Material

Aluminium (top), aluminium (bottom)

Notes:
[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®[2]**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[4]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6 full features might be limited by country-level restrictions.

[4] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]**Standard Ports**

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking**Docking**

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X1 Yoga® Gen 7](#)

Monitor Cable**Monitor Cable**

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave
- Tile ready

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

95% PCC recycled plastic used in speaker enclosure

25-30% PCC recycled plastic used in the 57Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified
- (Optional) Intel Evo™ Platform
- TÜV Rheinland® Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)

• Feature with ** means that only one offering listed under the feature is configured on selected models.

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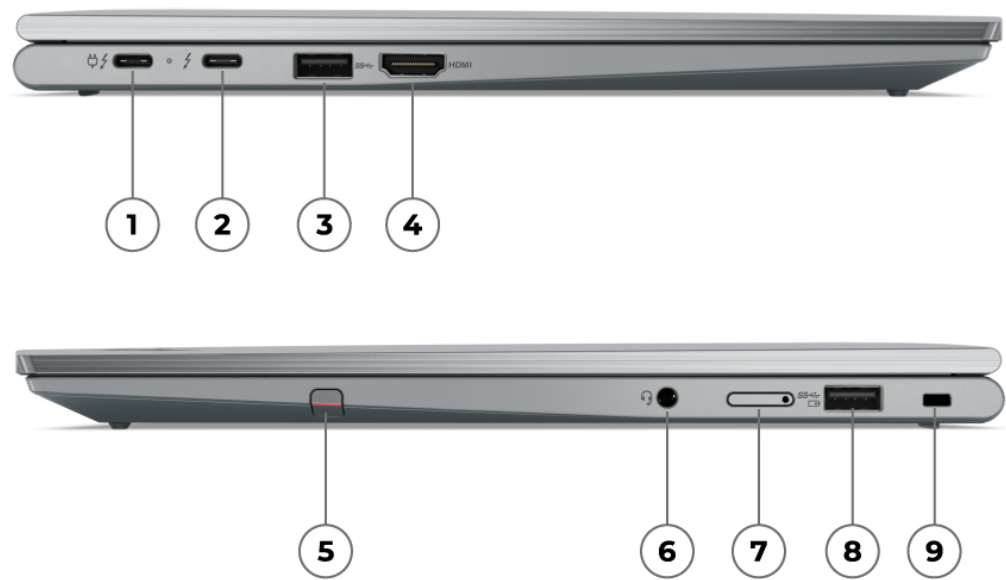


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OVERVIEW



1. Thunderbolt 4	6. Headphone / microphone combo jack (3.5mm)
2. Thunderbolt 4	7. Nano-SIM card slot *
3. USB 3.2 Gen 1	8. USB 3.2 Gen 1 (Always On)
4. HDMI	9. Kensington Nano Security Slot
5. Pen slot	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® U or P Series Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-1335U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris® Xe Graphics
Core i5-1340P	12 (4 P-core + 8 E-core)	16	P-core 1.9GHz / E-core 1.4GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	Intel Iris Xe Graphics
Core i5-1345U	10 (2 P-core + 8 E-core)	12	P-core 1.6GHz / E-core 1.2GHz	P-core 4.7GHz / E-core 3.5GHz	12MB	Intel Iris Xe Graphics
Core i7-1355U	10 (2 P-core + 8 E-core)	12	P-core 1.7GHz / E-core 1.2GHz	P-core 5.0GHz / E-core 3.7GHz	12MB	Intel Iris Xe Graphics
Core i7-1360P	12 (4 P-core + 8 E-core)	16	P-core 2.2GHz / E-core 1.6GHz	P-core 5.0GHz / E-core 3.7GHz	18MB	Intel Iris Xe Graphics
Core i7-1365U	10 (2 P-core + 8 E-core)	12	P-core 1.8GHz / E-core 1.3GHz	P-core 5.2GHz / E-core 3.9GHz	12MB	Intel Iris Xe Graphics
Core i7-1370P	14 (6 P-core + 8 E-core)	20	P-core 1.9GHz / E-core 1.4GHz	P-core 5.2GHz / E-core 3.9GHz	24MB	Intel Iris Xe Graphics

Notes:

^[1] Intel Core i5-1340P, i5-1350P and i7-1360p are for special bid only.

Operating System

Operating System**

- Linux^[1]
- Ubuntu Linux^[2]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^[1], ^[2] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	TGP	Key Features
Intel Iris Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ and HDMI®)

- Thunderbolt supports up to 5K@60Hz
- HDMI supports up to 4K@60Hz

Notes:

^[1] Refresh rates >60hz also supported, however max resolution will be limited.

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable
- 64GB soldered memory, not upgradable

Memory Slots
Memory soldered to systemboard, no slots, 8-channel

Memory Type**

- LPDDR5/x-6000 (32GB)^[1]
- LPDDR5/x-6400 (16GB)^[2]
- LPDDR5x-6000 (64GB)^[3]

Notes:

[1] Installed memory is actually LPDDR5-6400 or LPDDR5x-7500 but run at 6000MHz due to platform limitation.

[2] Installed memory is actually LPDDR5-6400 or LPDDR5x-7500 but run at 6400MHz due to platform limitation.

[3] Installed memory is actually LPDDR5x-7500 but run at 6000MHz due to platform limitation.

Storage

Storage Support^[1]
One drive, up to 2TB M.2 2280 SSD

Storage Slot
One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers
Stereo speakers, 2W x2 woofers and 0.8W x2 tweeters, Dolby® Atmos®

Microphone
Quad-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with privacy shutter, MIPI, fixed focus, Computer Vision
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus

Battery

Battery
Integrated Li-Polymer 57Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 13.7 hr with 667 performance score @250nits
JEITA 2.0: up to 27.7 hr @150nits
Local video playback: up to 22.4 hr @150nits

Alternate configuration 2
MobileMark 25: up to 13.05 hr with 637 performance score @250nits
JEITA 2.0: up to 24.7 hr @150nits
Local video playback: up to 20.1 hr @150nits

Alternate configuration 3
MobileMark 25: up to 13.4 hr with 659 performance score @250nits
JEITA 2.0: up to 24.2 hr @150nits
Local video playback: up to 19.5 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (touch), Intel i5-1345U, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), Intel i5-1340P, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode
Alternate configuration 3: WUXGA (touch), Intel i5-1350P, 16GB LPDDR5x, Win 11, 57Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 45W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[1]	400nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe® Certified 2.0
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[2]	400nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	Low power, Eyesafe Certified 2.0
14"	WUXGA (1920x1200)	Multi-touch	IPS ^[3]	500nits	Anti-glare	16:10	1000:1	100% sRGB	85°/85°/85°/85°	ThinkPad® Privacy Guard

14"	WQUXGA (3840x2400)	Multi-touch	OLED	500nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, Eyesafe Certified 2.0
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Touchscreen

OGS (One Glass Solution) multi-touch, supports 10-point touch

Notes:

[1], [2], [3] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Multi-mode

Multi-mode

Laptop, tent, stand, and tablet modes supported by 360° hinge

Input Device

Pen

Lenovo Integrated Pen, with built-in rechargeable battery, 4096 levels of pressure sensitivity, on-board garaged and rechargeable

Keyboard

6-row, spill-resistant, air intake design, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch touchpad, 56 x 110 mm (2.20 x 4.33 inches)

Mechanical

Dimensions (WxDxH)^[1]

314.4 x 222.3 x 15.53 mm (12.38 x 8.75 x 0.61 inches)

Weight^[2]

Starting at 1.38 kg (3.04 lbs)

Case Color

Storm grey

Case Material

Aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN**

- Wireless WAN upgradable to 4G or 5G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, MIMO 4x4, M.2 card, with embedded eSIM functionality
- Fibocom FM350-GL, 5G Sub-6 GHz, M.2 Card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via Thunderbolt / USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad X1 Yoga® Gen 8](#)

Monitor Cable

Monitor Cable

- Lenovo HDMI to VGA Monitor Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- Camera privacy shutter
- (Optional) IR camera for Windows Hello
- (Optional) Privacy Guard with Privacy Alert
- Glance by Mirametrix®
- (Optional) Computer Vision-based User Presence Sensing including lock on leave

MANAGEABILITY**System Management****System Management****

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE**Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Sustainability****Material**

55% recycled aluminium on bottom cover

90% PCC recycled plastic used in speaker enclosure

25-30% PCC recycled plastic used in the 57Wh battery enclosure

90% PCC recycled plastic used in standard 45W and 65W adapters

Low-temperature solder

Retail or standard packaging: plastic free packaging with 100% bamboo sugarcane fiber

Bulk packaging: 90% recycled and FSC certified content

Operating Environment**Temperature^[1]**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)

- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) Intel Evo™ Platform
- TÜV Rheinland® Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	3. USB4
2. Power button	4. USB4

- Notes:
- Optional nano-SIM card slot on the right side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650U	6	12	2.9GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850U	8	16	2.7GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics
AMD Ryzen 7 PRO 6860Z	8	16	2.7GHz	4.75GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Fedora Linux^[1]
- Linux^[2]
- Ubuntu Linux^[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2], [3] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 660M	Integrated	Shared	DirectX® 12
AMD Radeon 680M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via USB4®)

- USB4 supports up to 8K@30Hz^[1]

Notes:

[1] 8K resolution support needs 2 display pipes. That is, simultaneous display number will “-1” when 8K resolution displayed.

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with E-shutter, fixed focus
- FHD 1080p + IR hybrid, with E-shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 51.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 18.33 hr with 666 performance score @200nits
MobileMark 25: up to 16.66 hr with 759 performance score @250nits
JEITA 2.0: up to 22.8 hr @150nits
Local video playback: up to 22.8 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 17.93 hr with 651 performance score @200nits
MobileMark 25: up to 14.3 hr with 785 performance score @250nits
JEITA 2.0: up to 22.1 hr @150nits
Local video playback: up to 21.35 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 7.81 hr with 635 performance score @200nits
MobileMark 25: up to 7.4 hr with 794 performance score @250nits
JEITA 2.0: up to 11.71 hr @150nits
Local video playback: up to 13.55 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 PRO 6850U, 16GB LPDDR5, Win 11, 51.5Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (non-touch), AMD Ryzen 5 PRO 6650U, 16GB LPDDR5, Win 11, 51.5Wh battery, best

power efficiency power mode
Alternate configuration 3: 2.8K OLED (touch), AMD Ryzen 5 PRO 6650U, 32GB LPDDR5, Win 11, 51.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.
Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.
The maximum capacity of the battery will decrease with time, ambient temperature and use.
Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**[1]

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter[2]

Notes:
[1] AC adapter offerings depend on the country.
[2] No power adapter is for special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS[1]	400nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light, 91.6% screen to body ratio
13.3"	WUXGA (1920x1200)	On-cell touch	IPS[2]	400nits	Anti-reflection, anti-smudge	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light, 91.6% screen to body ratio
13.3"	2.8K (2880x1800)	OGS touch	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	91.6% screen to body ratio, DisplayHDR™ 400, Dolby Vision™, TÜV Low Blue Light

Touchscreen**

- OGS (One Glass Solution) multi-touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:
[1], [2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen

- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, edge-to-edge, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch Haptic ForcePad, 70.9 x 120 mm (2.79 x 4.72 inches)

Mechanical

Dimensions (WxDxH)^[1]

294.4 x 199.6 x 13.99 mm (11.59 x 7.86 x 0.55 inches)

Weight^[2]

Models	Weight
Non-touch models	Starting at 1.19 kg (2.63 lbs)
Touch models	Starting at 1.26 kg (2.78 lbs)

Case Color**

- Arctic grey (top), black (bottom)
- Black (top), black (bottom)^[3]
- Bronze with black vegan leather (top), black (bottom)

Case Material**

- Vegan leather + aluminium (top), aluminium (bottom)
- Aluminium (top), aluminium (bottom)

Notes:

- ^[1] The system dimensions may vary depending on configurations.
- ^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- ^[3] Black top cover is NOT available in NA and EMEA.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®^[2]

Qualcomm® Wi-Fi® 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

No support

Notes:

- ^[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.
- ^[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- ^[3] Wi-Fi 6E full features might be limited by country-level restrictions. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® Z13 Gen 1](#)

Monitor Cable

Monitor Cable

- Lenovo USB-C to HDMI® Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader in keyboard key, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication
- Self-healing BIOS

Other Security

- IR camera for Windows Hello
- E-shutter
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

75% post-consumer recycled aluminium
97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 50Wh battery
95% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories^{***}

- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Mil-Spec Test**

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



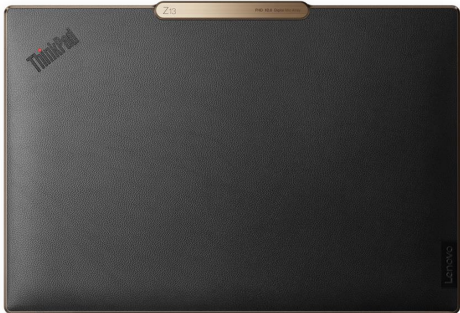
AMD



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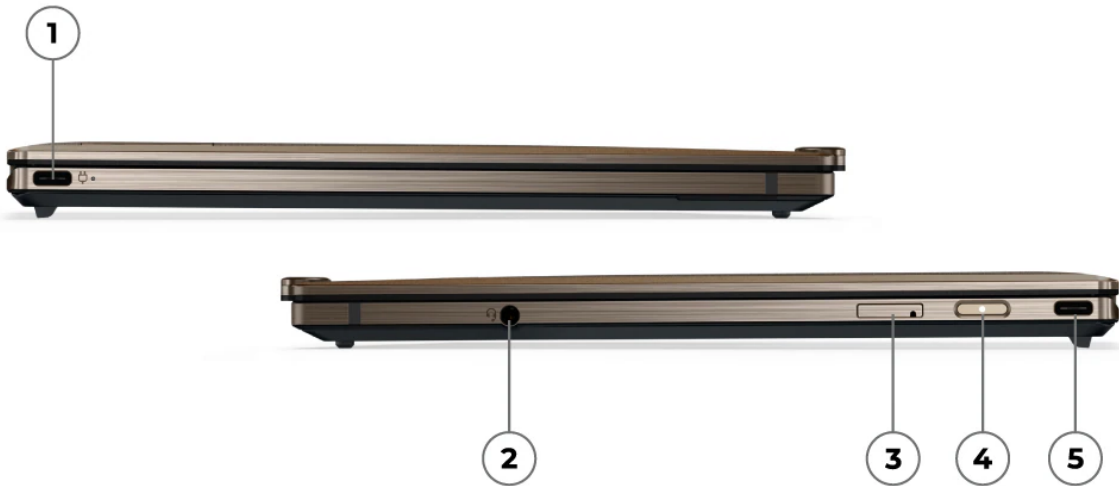


AMD



AMD

OVERVIEW



1. USB4	4. Power button
2. Headphone / microphone combo jack (3.5mm)	5. USB4
3. Nano-SIM card slot *	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7540U	6	12	3.2GHz	4.9GHz	6MB L2 / 16MB L3	AMD Radeon™ 740M
AMD Ryzen 7 PRO 7840U	8	16	3.3GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M

Operating System

Operating System**

- Fedora Linux^[1]
- Linux^[2]
- Ubuntu Linux^[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2], [3] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 740M	Integrated	Shared	DirectX® 12
AMD Radeon 780M	Integrated	Shared	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via USB4®)

- USB4 supports up to 8K@30Hz^[1]

Notes:

[1] 8K resolution support needs 2 display pipes. That is, simultaneous display number will “-1” when 8K resolution displayed.

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable
- 64GB soldered memory, not upgradable^[1]

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-6400^[2]

Notes:

[1] Available for AMD Ryzen 7 PRO models only.
[2] Installed memory is actually 7500MHz but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2242 SSD

Storage Slot

One M.2 2242 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	256GB / 512GB / 1TB / 2TB	Opal 2.0

Notes:
[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with E-shutter, fixed focus
- FHD 1080p + IR hybrid, with E-shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 51.5Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 16.15 hr with 674 performance score @25Onits
JEITA 2.0: up to 24.34 hr @150nits
Local video playback: up to 23.46 hr @150nits

Alternate configuration 2
MobileMark 25: up to 15.91 hr with 648 performance score @250nits
JEITA 2.0: up to 22.32 hr @150nits
Local video playback: up to 19.71 hr @150nits

Alternate configuration 3
MobileMark 25: up to 10.23 hr with 634 performance score @250nits
JEITA 2.0: up to 13.6 hr @150nits
Local video playback: up to 18.4 hr @150nits

Notes:
[1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 PRO 7840U, 16GB LPDDR5, Win 11, 51.5Wh battery, best power efficiency power mode
Alternate configuration 2: WUXGA (touch), AMD Ryzen 5 PRO 7540U, 16GB LPDDR5, Win 11, 51.5Wh battery, best power efficiency power mode
Alternate configuration 3: 2.8K OLED (touch), AMD Ryzen 5 PRO 7540U, 16GB LPDDR5, Win 11, 51.5Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter**^[1]

- 65W USB-C® (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter^[2]

Notes:

^[1] AC adapter offerings depend on the country.

^[2] Special bid only.

DESIGN

Display

Display**

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
13.3"	WUXGA (1920x1200)	None	IPS ^[1]	400nits	Anti-glare	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light, 91.6% screen to body ratio
13.3"	WUXGA (1920x1200)	On-cell touch	IPS ^[2]	400nits	Anti-reflection, anti-smudge	16:10	1500:1	100% sRGB	60Hz	89°/89°/89°/89°	Low power, TÜV Low Blue Light, 91.6% screen to body ratio
13.3"	2.8K (2880x1800)	OGS touch	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	91.6% screen to body ratio, DisplayHDR™ 400, Dolby Vision™, TÜV Low Blue Light

Touchscreen**

- OGS (One Glass Solution) multi-touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

^[1], ^[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen

- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, edge-to-edge, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch Haptic ForcePad, 70.9 x 120 mm (2.79 x 4.72 inches)

Mechanical

Dimensions (WxDxH)^[1]

294.4 x 199.6 x 13.99 mm (11.59 x 7.86 x 0.55 inches)

Weight^[2]

Models	Weight
Models with arctic grey cover and WUXGA non-touch display	Starting at 1.19 kg (2.63 lbs)
Models with arctic grey cover and OLED display	Starting at 1.24 kg (2.74 lbs)
Models with arctic grey cover and WUXGA multi-touch display	Starting at 1.26 kg (2.78 lbs)
Models with flax fiber bronze cover and OLED display	Starting at 1.27 kg (2.80 lbs)
Models with flax fiber bronze cover and WUXGA multi-touch display	Starting at 1.29 kg (2.84 lbs)

Case Color**

- Arctic grey (top), black (bottom)
- Flax fiber bronze (top), black (bottom)^[3]

Case Material**

- Arctic grey models: aluminium (top), aluminium (bottom)
- Flax fiber bronze models: flax fiber + aluminium (top), aluminium (bottom)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- [3] Available for multi-touch models only.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN

- Quectel EM05-G, 4G LTE CAT4, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No physical SIM card inbox

NFC

No support

Notes:

- [1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.
- [2] Wi-Fi 6E full features might be limited by country-level restrictions.
- Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.
- 6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.
- Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® Z13 Gen 2](#)

Monitor Cable

Monitor Cable***

- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI® Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader in keyboard key, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- IR camera for Windows Hello
- E-shutter
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH

- Non-DASH

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] Special bid only.

ENVIRONMENTAL

Sustainability

Material

75% recycled aluminium on top cover
Sustainable flax fiber on bronze top cover
55% recycled aluminium on bottom cover
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the 51.5Wh battery pack
90% PCC recycled plastic used in standard 65W adapter
Low-temperature solder
FSC certified plastic free packaging with bamboo + sugarcane fiber retail box / standard cushion

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories^{***}

- Lenovo Powered USB-C Travel Hub
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



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OVERVIEW



1. Power button	5. USB4
2. Headphone / microphone combo jack (3.5mm)	6. USB4
3. USB-C 3.2 Gen 2	7. SD card reader
4. Kensington Nano Security Slot	

- Notes:
- Optional nano-SIM card slot on the right side (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 / 9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 6650H	6	12	3.3GHz	4.5GHz	3MB L2 / 16MB L3	AMD Radeon™ 660M Graphics
AMD Ryzen 7 PRO 6850H	8	16	3.2GHz	4.7GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics
AMD Ryzen 9 PRO 6950H	8	16	3.3GHz	4.9GHz	4MB L2 / 16MB L3	AMD Radeon 680M Graphics

Operating System

Operating System**

- Fedora Linux^[1]
- Linux^[2]
- Ubuntu Linux^[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2], [3] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 660M	Integrated	Shared	DirectX® 12
AMD Radeon 680M	Integrated	Shared	DirectX 12
AMD Radeon RX 6500M	Discrete	4GB GDDR6	DirectX 12 Ultimate

Monitor Support

Monitor Support

- Supports up to 4 independent displays (native display and 3 external monitors via USB4® or USB-C®)
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)
 - USB4 supports up to 8K@30Hz^[1]

Notes:

[1] 8K resolution support needs 2 display pipes. That is, simultaneous display number will “-1” when 8K resolution displayed.

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable

- 32GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5-6400

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type**

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe x4 ^[2]	256GB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] PCIe x4 may be PCIe 3.0x4 or PCIe 4.0x4 as substitution.

Removable Storage

Card Reader

SD card reader, supports UHS-II SD card

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with E-shutter, fixed focus
- FHD 1080p + IR hybrid, with E-shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 72Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 2018: up to 20.5 hr with 657 performance score @200nits
MobileMark 25: up to 20.0 hr with 624 performance score @250nits
JEITA 2.0: up to 25.9 hr @150nits
Local video playback: up to 28.2 hr @150nits

Alternate configuration 2
MobileMark 2018: up to 19.4 hr with 635 performance score @200nits
MobileMark 25: up to 19.0 hr with 524 performance score @250nits
JEITA 2.0: up to 25.6 hr @150nits
Local video playback: up to 24.6 hr @150nits

Alternate configuration 3
MobileMark 2018: up to 9.4 hr with 619 performance score @200nits
MobileMark 25: up to 6.9 hr with 485 performance score @250nits
JEITA 2.0: up to 9.1 hr @150nits
Local video playback: up to 13.6 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 PRO 6850H, 16GB LPDDR5, Win 11, 72Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 7 PRO 6850H, 16GB LPDDR5, Win 11, 72Wh battery, best power efficiency power mode

Alternate configuration 3: WQUXGA OLED (touch), AMD Ryzen 5 PRO 6650H, 16GB LPDDR5, Win 11, 72Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter^[1]

135W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS ^[1]	400nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	89°/89°/80°/80°	Low power, TÜV Low Blue Light, 92.3% screen to body ratio
16"	WUXGA (1920x1200)	On-cell touch	IPS ^[2]	400nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	60Hz	89°/89°/80°/80°	Low power, TÜV Low Blue Light, 92.3% screen to body ratio
16"	WQUXGA (3840x2400)	OGS touch	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	92.3% screen to body ratio, DisplayHDR™ 400, Dolby Vision™, TÜV Low Blue Light

Touchscreen^{**}

- OGS (One Glass Solution) multi-touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen

- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch Haptic ForcePad, 80 x 120 mm (3.15 x 4.72 inches)

Mechanical

Dimensions (WxDxH)^[1]

354.4 x 237.4 x 15.8 mm (13.95 x 9.35 x 0.62 inches)

Weight^[2]

Models	Weight
OLED models	Starting at 1.81 kg (3.99 lbs)
WUXGA non-touch models	Starting at 1.83 kg (4.04 lbs)
WUXGA multi-touch models	Starting at 1.94 kg (4.28 lbs)

Case Color

Arctic grey (top), black (bottom)

Case Material

Aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®^[2]

Qualcomm® Wi-Fi® 6E NFA725A, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]

WWAN**

- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card
- Quectel EM05-G, 4G LTE CAT4, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

[3] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD card reader
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Optional Ports

1x Nano-SIM card slot (WWAN support models)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® Z16 Gen 1](#)

Monitor Cable

Monitor Cable

- Lenovo USB-C to HDMI® Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader in keyboard key, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication
- Self-healing BIOS

Other Security

- IR camera for Windows Hello
- E-shutter
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Sustainability

Material

75% post-consumer recycled aluminium
97% PCC recycled plastic used in speaker enclosure
97% PCC recycled plastic used in the 70Wh battery
Low-temperature solder
90% recycled and/or sustainable packaging

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



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AMD

OVERVIEW



1. USB4	5. Headphone / microphone combo jack (3.5mm)
2. USB4	6. USB-C 3.2 Gen 2
3. SD card reader	7. Kensington Nano Security Slot
4. Power button	

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 5 / 7 / 9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 5 PRO 7640HS	6	12	4.3GHz	5.0GHz	6MB L2 / 16MB L3	AMD Radeon™ 760M Graphics
AMD Ryzen 7 PRO 7840HS	8	16	3.8GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon 780M Graphics
AMD Ryzen 9 PRO 7940HS	8	16	4.0GHz	5.2GHz	8MB L2 / 16MB L3	AMD Radeon 780M Graphics

Operating System

Operating System**

- Fedora Linux^[1]
- Linux^[2]
- Ubuntu Linux^[3]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2], [3] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Key Features
AMD Radeon 760M	Integrated	Shared	DirectX® 12
AMD Radeon 780M	Integrated	Shared	DirectX 12
AMD Radeon RX 6550M	Discrete	4GB GDDR6	DirectX 12 Ultimate

Monitor Support

Monitor Support

- Supports up to 4 independent displays (native display and 3 external monitors via USB4® or USB-C®)
- USB-C supports up to 4K@60Hz (4 displays output), 5K@60Hz (3 displays output) or 5K@120Hz (up to 2 displays output)
 - USB4 supports up to 8K@30Hz^[1]

Notes:

[1] 8K resolution support needs 2 display pipes. That is, simultaneous display number will “-1” when 8K resolution displayed.

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory

- 16GB soldered memory, not upgradable

- 32GB soldered memory, not upgradable
- 64GB soldered memory, not upgradable^[1]

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-6400^[2]

Notes:

[1] Available for AMD Ryzen 9 PRO models only.

[2] Installed memory is actually 7500MHz but run at 6400MHz due to platform limitation.

Storage

Storage Support^[1]

One drive, up to 2TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

Removable Storage

Card Reader

SD card reader, supports UHS-II SD card

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

Dual-microphone array, 360° far-field, Dolby Voice

Camera**

- FHD 1080p + IR discrete, with E-shutter, fixed focus
- FHD 1080p + IR hybrid, with E-shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 72Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Battery Life^[1]

Configuration 1 (max battery life)
MobileMark® 25: up to 18.46 hr with 726 performance score @250nits
JEITA 2.0: up to 25.28 hr @150nits
Local video playback: up to 25.53 hr @150nits

Alternate configuration 2
MobileMark 25: up to 17.75 hr with 722 performance score @250nits
JEITA 2.0: up to 25.12 hr @150nits
Local video playback: up to 24.61 hr @150nits

Alternate configuration 3
MobileMark 25: up to 8.63 hr with 869 performance score @250nits
JEITA 2.0: up to 12.11 hr @150nits
Local video playback: up to 12.65 hr @150nits

Notes:

[1] Configuration 1 (max battery life): WUXGA (non-touch), AMD Ryzen 7 PRO 7840HS, 16GB LPDDR5x, Win 11, 72Wh battery, best power efficiency power mode

Alternate configuration 2: WUXGA (touch), AMD Ryzen 7 PRO 7840HS, 16GB LPDDR5x, Win 11, 72Wh battery, best power efficiency power mode

Alternate configuration 3: WQUXGA OLED (touch), AMD Ryzen 7 PRO 7840HS, 32GB LPDDR5x, AMD Radeon RX 6550M, Win 11, 72Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using [MobileMark 2018](#), [MobileMark 25](#), JEITA 2.0, continuous 1080p local video playback (using default Media Player in Fullscreen mode with 150nits brightness and default volume level), or Google Power Load Test (PLT) battery-life benchmark tests.

Actual battery life will vary depending on many factors such as product configuration, software, wireless functionality, power management settings, and screen brightness.

The maximum capacity of the battery will decrease with time, ambient temperature and use.

Refer to [Microsoft® link](#) for more information about the Windows Performance power slider.

Power Adapter

Power Adapter^[1]

135W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WUXGA (1920x1200)	None	IPS ^[1]	400nits	Anti-glare	16:10	1000:1	100% sRGB	60Hz	89°/89°/80°/80°	Low power, TÜV Low Blue Light, 92.3% screen to body ratio
16"	WUXGA (1920x1200)	On-cell touch	IPS ^[2]	400nits	Anti-reflection, anti-smudge	16:10	1000:1	100% sRGB	60Hz	89°/89°/80°/80°	Low power, TÜV Low Blue Light, 92.3% screen to body ratio
16"	WQUXGA (3840x2400)	OGS touch	OLED	400nits	Anti-reflection, anti-smudge	16:10	100000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	92.3% screen to body ratio, DisplayHDR™ 400, Dolby Vision™, TÜV Low Blue Light

Touchscreen^{**}

- OGS (One Glass Solution) multi-touch, supports 10-point touch
- On-cell multi-touch, supports 10-point touch
- Non-touch

Notes:

[1], [2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen

- No pen (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls

Keyboard Backlight

LED backlight

UltraNav™

TrackPoint® pointing device and glass surface multi-touch Haptic ForcePad, 80 x 120 mm (3.15 x 4.72 inches)

Mechanical

Dimensions (WxDxH)^[1]

354.4 x 237.4 x 15.8 mm (13.95 x 9.35 x 0.62 inches)

Weight^[2]

Models	Weight
OLED models	Starting at 1.81 kg (3.99 lbs)
WUXGA non-touch models	Starting at 1.83 kg (4.04 lbs)
WUXGA multi-touch models	Starting at 1.94 kg (4.28 lbs)

Case Color

Arctic grey (top), black (bottom)

Case Material

Aluminium (top), aluminium (bottom)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

No onboard Ethernet^[1]

WLAN + Bluetooth®

MediaTek Wi-Fi® 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.3^[2]

WWAN

No support

NFC

No support

Notes:

[1] Ethernet support via optional Lenovo USB-C to Ethernet Adapter.

[2] Wi-Fi 6E full features might be limited by country-level restrictions.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

6GHz Wi-Fi 6E operation is dependent on the support of the operating system, routers/APs/Gateways that support Wi-Fi 6E, and the regional regulatory certifications & spectrum allocation.

Bluetooth 5.3 operation requires Windows 11. For more information please see [General Bluetooth Support Information on Microsoft](#).

Ports^[1]

Standard Ports

- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD card reader
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)

- 2x USB4 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Docking

Docking

Various docking solutions supported via USB-C.

For more compatible docking solutions, please visit [Docking for ThinkPad® Z16 Gen 2](#)

Monitor Cable

Monitor Cable***

- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI® Adapter
- Lenovo USB-C to DisplayPort Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0 (TCG certified, FIPS 140-2 certified) and Microsoft Pluton TPM 2.0, one enabled at one time

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

No smart card reader

Fingerprint Reader

Touch style fingerprint reader in keyboard key, match-on-chip

BIOS Security

- Power-on password
- Supervisor password
- System management password
- NVMe password
- FIDO (Fast Identity Online) authentication
- Certificate based BIOS authentication

Other Security

- IR camera for Windows Hello
- E-shutter
- Glance by Mirametrix®

MANAGEABILITY

System Management

System Management

- DASH
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty^[2]

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

[2] No base warranty is for special bid only.

ENVIRONMENTAL

Sustainability

Material

75% recycled aluminium on top cover

55% recycled aluminium on bottom cover

90% PCC recycled plastic used in speaker enclosure

90% PCC recycled plastic used in the 72Wh battery pack

90% PCC recycled plastic used in standard 135W adapter

Low-temperature solder

FSC certified plastic free packaging with bamboo + sugarcane fiber retail box / standard cushion

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping package: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo Powered USB-C Travel Hub
- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to USB-A Adapter
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]

- ErP Lot 6/26
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

TÜV Rheinland® Low Blue Light

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



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Warranty: For a copy of applicable warranties, write to: Lenovo Warranty Information, 1009 Think Place, Morrisville, NC, 27560. Lenovo makes no representation or warranty regarding third party products or services. The Lenovo Limited Warranty applies only to Lenovo hardware products purchased for your own use, and does not transfer upon resale.

Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.

Lenovo Services:

Carry-in or Mail-in Service: Parts and labor repair coverage where the customer is responsible for shipping (including packaging) or delivery to authorized warranty provider or repair center.

Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit <http://psref.lenovo.com/> for the latest version of Product Specifications Reference.

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Lenovo 1009 Think Place Morrisville, NC 27560 U.S.A.



Product Specifications Reference

ThinkPad Tablets



Version 617

August 30, 2023



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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

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Additions in this update

► **New product(s)**

None

► **Spec updated**

ThinkPad X12 Detachable

Withdrawals in this update

► **Withdrawn product(s)**

None

OVERVIEW



1. Power button	5. Thunderbolt 4
2. Volume button	6. Nano-SIM card slot*
3. Kensington Nano Security Slot	7. USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - Pogo pin connector (8-point) not shown on the sample product above

PERFORMANCE

Processor

Processor Family

11th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-1110G4	2	4	2.5GHz	3.9GHz	6MB	Intel UHD Graphics
Core i5-1130G7	4	8	1.8GHz	4.0GHz	8MB	Intel Iris® Xe Graphics ^[1]
Core i5-1140G7	4	8	1.8GHz	4.2GHz	8MB	Intel Iris Xe Graphics ^[2]
Core i7-1160G7	4	8	2.1GHz	4.4GHz	12MB	Intel Iris Xe Graphics ^[3]
Core i7-1180G7	4	8	2.2GHz	4.6GHz	12MB	Intel Iris Xe Graphics ^[4]

Notes:

[1], [2], [3], [4] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Operating System

Operating System**

- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	TGP	Key Features
Intel UHD Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12
Intel Iris Xe Graphics ^[1]	Integrated	Shared	Share CPU TDP	DirectX 12.1

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays via native display and 2 external monitors; supports external monitors via USB-C® (5120x3200@60Hz) or Thunderbolt™ (5120x3200@60Hz)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

- 4GB soldered LPDDR4x-3733, not upgradable
- 8GB soldered LPDDR4x-4266, not upgradable
- 16GB soldered LPDDR4x-4266, not upgradable

Memory Type**

- LPDDR4x-3733

- LPDDR4x-4266^[1]

Notes:

[1] 8GB or 16GB LPDDR4x-4266 soldered, dual-channel.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2242 SSD

Storage Type

Disk Type	Interface	Offering
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	128GB / 256GB / 512GB / 1TB

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings. The system may support larger storage as the technology develops.

Multi-Media

Speakers

Stereo speakers, Realtek® ALC3306-GRT codec, 1W x2, Dolby® Audio™

Microphone

Dual-microphone array, 360° far-field for Cortana, near-field for Alexa

Camera

Front 5.0MP + IR hybrid user-facing camera, privacy shutter, fixed focus
Rear 8.0MP, autofocus

Sensor

Vibration Motor

No support

Sensors

- Accelerometer (G) sensor
- Gyroscope sensor
- Hall sensor
- Inclinator sensor
- Proximity (P) sensor (WWAN models)

Battery

Battery

Integrated Li-Polymer 42Wh battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

Max Battery Life^[1]

MobileMark® 2018: 10.36 hr
JEITA 2.0: 12.42 hr

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, JEITA 2.0, continuous 1080p video playback (with 150nits brightness and default volume level) or Google Power Load Test (PLT) battery-life benchmark tests. Actual battery life will vary depending on many factors such as product configuration and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter**

- 45W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 45W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

- 65W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- No power adapter

DESIGN

Display

Display^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
12.3"	FHD+ (1920x1280)	Multi-touch	IPS ^[2]	400 nits	Anti-reflection, anti-smudge	3:2	1500:1	100% sRGB	178°	Corning® Gorilla® Glass 5

Touchscreen

GF2 multi-touch, supports 10-point touch

Notes:

- ^[1] California Electronic Waste Recycling Fee
In California USA, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product. For more information, please go to <https://www.calrecycle.ca.gov/Electronics/Consumer>.
- ^[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Pen^{**[1]}

- Lenovo Digital Pen with replaceable AAAA alkaline battery, 4096 levels of pressure sensitivity. For more information, please read [Lenovo Digital Pen Overview](#)
- Lenovo Digital Pen without replaceable AAAA alkaline battery, 4096 levels of pressure sensitivity. For more information, please read [Lenovo Digital Pen Overview](#)
- Lenovo Precision Pen, 4096 levels of pressure sensitivity, magnetically attached to the system. For more information, please read [Lenovo Precision Pen Overview](#)
- No pen (purchase separately)

Notes:

- ^[1] Lenovo Precision Pen: might not be installed with an AAAA alkaline battery.

Mechanical

Dimensions (WxDxH)^[1]

Models	Dimensions
Tablet	Tablet: 283.3 x 203.5 x 8.8 mm (11.15 x 8.01 x 0.34 inches)
Tablet with folio keyboard	Tablet: 283.3 x 203.5 x 8.8 mm (11.15 x 8.01 x 0.35 inches) Folio keyboard: 283.3 x 217.8 x 5.7 mm (11.15 x 8.57 x 0.22 inches) Total: 283.3 x 217.8 x 14.5 mm (11.15 x 8.57 x 0.57 inches)

Weight^[2]

Models	Weight
Tablet	Tablet: around 760 g (1.67 lbs)
Tablet with folio keyboard	Tablet: around 760 g (1.67 lbs) Folio keyboard: 340 g (0.75 lbs) Total: 1,100 g (2.42 lbs)

Case Color

Black

Case Material^[3]

Magnesium-aluminium

Others

- Hinge locking: 170°

- Kensington® Nano Security Slot™

Buttons

- Power button
- Volume button

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- [3] Surface treatment: Peachskin paint.

CONNECTIVITY

Network

WLAN + Bluetooth^[1]

Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, MU-MIMO^[2]

WWAN

- Fibocom L850-GL, 4G LTE CAT9, M.2 card
- No support

SIM Card

- Gemalto eSIM card (physical)
- No physical SIM card inbox

NFC

- Near Field Communication
- No support

Wi-Fi Direct

Support

Wi-Fi Display

Support

Location Services^{**}

Models	Location
WLAN models	No location service
WWAN models	GPS + GLONASS + A-GPS

Notes:

- [1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
- [2] Wi-Fi 6 full features might be limited by country-level restrictions.

Ports^[1]

Standard Ports

- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Pogo pin connector (8-point)

Optional Ports

1x Nano-SIM card slot (WWAN models)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
- USB 2.0: 480 Mbit/s;
- USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt 3/4: 40 Gbit/s.

Docking

Docking

- ThinkPad® X12 Folio Keyboard with touchpad (pogo pin, detachable), 3-level backlight
- No dock

Monitor Cable

Monitor Cable***

- Lenovo USB-C to VGA Adapter
- Lenovo USB-C to HDMI® Adapter
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Fingerprint Reader

- Touch style fingerprint reader on folio keyboard, match-on-chip
- No fingerprint reader

BIOS Security

- Power-on password
- Supervisor password
- System management password
- Hard disk password
- Self-healing BIOS

MANAGEABILITY

System Management

System Management

- Intel vPro®^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty

Base Warranty**^[1]

- 1-year courier or carry-in service
- 1-year courier or carry-in with 2-year system board service (Korea only)
- 1-year limited onsite service
- 3-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature^[1]

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage and transportation in original shipping packaging: -20°C (-4°F) to 60°C (140°F)
- Storage without package: 5°C (41°F) to 43°C (109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

Notes:

[1] When you charge the battery, its temperature must be no lower than 10°C (50°F).

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- Lenovo USB-C to Ethernet Adapter
- Lenovo USB-C to Ethernet Adapter + Lenovo USB-C Port Replicator
- Lenovo USB-C Port Replicator
- None

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- FAA certified
- Low Halogen
- TCO Certified 8.0
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

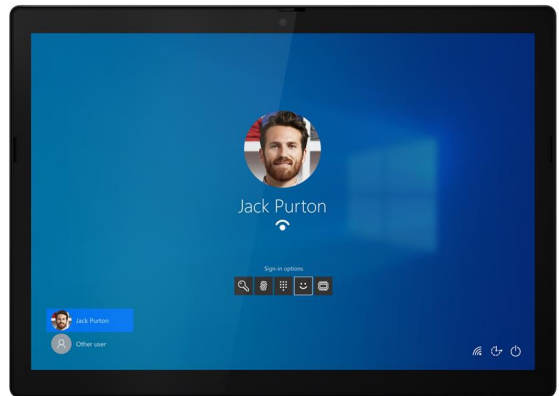
Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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Warranty: For a copy of applicable warranties, write to: Lenovo Warranty Information, 1009 Think Place, Morrisville, NC, 27560. Lenovo makes no representation or warranty regarding third party products or services. The Lenovo Limited Warranty applies only to Lenovo hardware products purchased for your own use, and does not transfer upon resale.

Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.

Lenovo Services:

Carry-in or Mail-in Service: Parts and labor repair coverage where the customer is responsible for shipping (including packaging) or delivery to authorized warranty provider or repair center.

Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit <http://psref.lenovo.com/> for the latest version of Product Specifications Reference.

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Lenovo 1009 Think Place Morrisville, NC 27560 U.S.A.



Product Specifications Reference

ThinkCentre Desktops



Version 617

August 30, 2023



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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

August 2023 - Version 617

Additions in this update

► **New product(s)**

ThinkCentre M90s Gen 4

ThinkCentre M90t Gen 4

► **New model(s)**

None

► **Others**

None

Withdrawals in this update

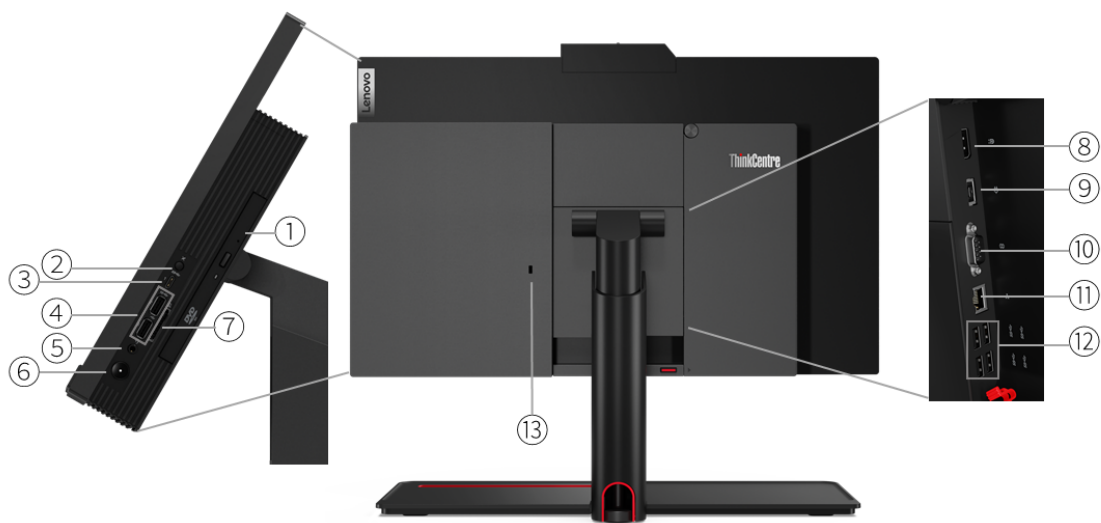
► **Withdrawn product(s)**

None

► **Withdrawn model(s)**

None

OVERVIEW



1. Optical drive *	8. DisplayPort
2. Microphone mute button	9. Power connector
3. USB-C 3.2 Gen 1	10. Serial *
4. 1x USB 3.2 Gen 2 + 1x USB 3.2 Gen 1	11. Ethernet (RJ-45)
5. Headphone / microphone combo jack (3.5mm)	12. 4x USB 3.2 Gen 1
6. Power button	13. Kensington Security Slot
7. Card reader *	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10500	6	12	3.1GHz	4.5GHz ^[5]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[7]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900	10	20	2.8GHz	5.2GHz ^[8]	20MB	DDR4-2933	Intel UHD Graphics 630

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise^[2]
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Special bid only.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 610	Integrated	Shared	1x DP 1.2	4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x DP 1.2	4096x2304@60Hz(DP)	DirectX 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via DisplayPort™

Chipset

Chipset

Intel H470 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-2933

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type^{**}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB
- M.2 SSD up to 1TB
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers

Stereo speakers, 2W x2

Microphone

Dual-microphone array

Camera**

- FHD 1080p + IR, with ThinkShutter (physical switch on/off), Windows Hello support
- FHD 1080p, with ThinkShutter (physical switch on/off)
- No camera

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
135W	Adapter	89%	Autosensing
170W	Adapter	89%	Autosensing

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
21.5"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design (88% screen to body ratio)
21.5"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design (88% screen to body ratio)

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Buttons

- Microphone mute button
- Power button

Form Factor

AIO (21.5 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models (with UltraFlex IV stand, with camera)	Lowest in flat mode: 490.17 x 288.17 x 197.04 mm (19.3 x 11.3 x 7.8 inches) Highest in vertical mode: 490.17 x 232.75 x 439.28 mm (19.3 x 9.2 x 17.3 inches)
Models (with full function monitor stand, with camera)	490.14 x 199.82 x 386.05-466.04 mm (19.3 x 7.9 x 15.2-18.3 inches)
Models (without stand, without ODD, with camera)	490.14 x 46 x 297.75 mm (19.3 x 1.8 x 11.7 inches)
Models (without stand, with ODD, with Camera)	490.14 x 57.8 x 297.75 mm (19.3 x 2.3 x 11.7 inches)

Weight^[2]

Models	Weight
Models (without stand, without ODD)	Non-touch: around 4.86 kg (10.7 lbs) Touch: around 4.62 kg (10.2 lbs)
Models (without stand, with ODD)	Non-touch: around 5.12 kg (11.3 lbs) Touch: around 4.88 kg (10.8 lbs)
Models (with full function monitor stand, without ODD)	Non-touch: around 7.07 kg (15.6 lbs) Touch: around 6.83 kg (15.1 lbs)
Models (with full function monitor stand, with ODD)	Non-touch: around 7.33 kg (16.2 lbs) Touch: around 7.09 kg (15.6 lbs)
Models (with UltraFlex IV stand, without ODD)	Non-touch: around 7.62 kg (16.8 lbs) Touch: around 7.38 kg (16.3 lbs)
Models (with UltraFlex IV stand, with ODD)	Non-touch: around 7.88 kg (17.4 lbs) Touch: around 7.65 kg (16.9 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay
- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover and stand assembly / removal

Stand**

- UltraFlex IV stand, supports -5° to +70° tilt, up to 164mm lift (flat mode) / up to 115mm lift (vertical mode)
- Full function monitor stand, supports -5° to +30° tilt, up to 80mm lift
- No stand

Mounting

Supports VESA mount 100mm

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822BE, 802.11ac Dual Band 1x1 Wi-Fi® + Bluetooth 4.2, M.2 card
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]
- No WLAN and Bluetooth

Notes:

^[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Rear Ports**

- 4x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports

1x serial

Right Ports

- 1x USB-C® 3.2 Gen 1 (5V/3A charging)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable*****

- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI® dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- ErP Lot 3
- RoHS compliant

- TCO Certified 8.0
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

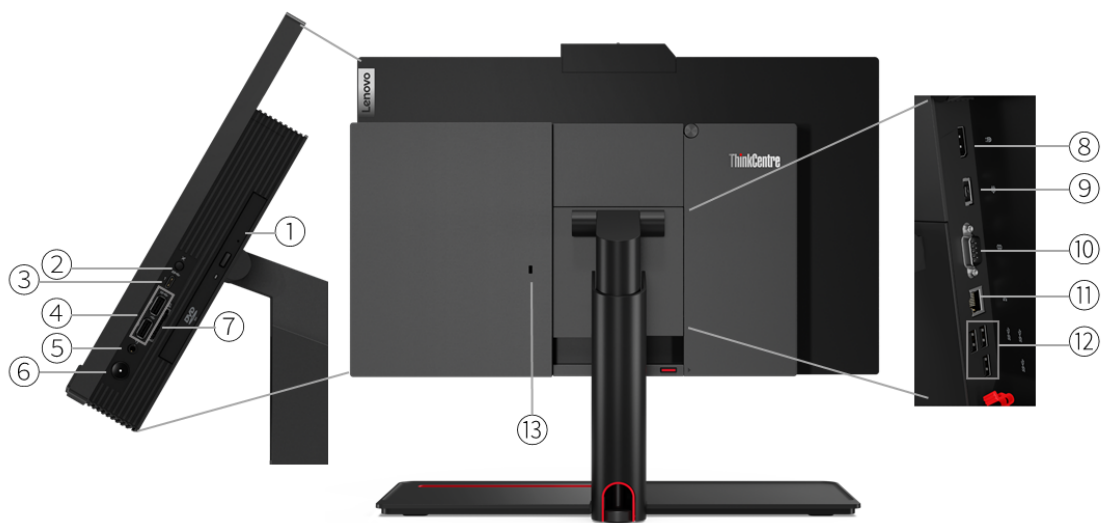
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Optical drive *	8. DisplayPort
2. Microphone mute button	9. Power connector
3. USB-C 3.2 Gen 2	10. Serial or HDMI *
4. 1x USB 3.2 Gen 2 + 1x USB 3.2 Gen 1	11. Ethernet (RJ-45)
5. Headphone / microphone combo jack (3.5mm)	12. 3x USB 3.2 Gen 1
6. Power button	13. Kensington Security Slot
7. Card reader *	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, 10th Generation Intel Core™ i3, or 11th Generation Intel Core i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6405	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6505	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6605	2	4	4.3GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10105	4	8	3.7GHz	4.4GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10305	4	8	3.8GHz	4.5GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10325	4	8	3.9GHz	4.7GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-11400	6	12	2.6GHz	4.4GHz ^[4]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-11500	6	12	2.7GHz	4.6GHz ^[5]	12MB	DDR4-3200	Intel UHD Graphics 750
Core i5-11600	6	12	2.8GHz	4.8GHz ^[6]	12MB	DDR4-3200	Intel UHD Graphics 750
Core i7-11700	8	16	2.5GHz	4.9GHz ^[7]	16MB	DDR4-3200	Intel UHD Graphics 750
Core i9-11900	8	16	2.5GHz	5.2GHz ^[8]	16MB	DDR4-3200	Intel UHD Graphics 750

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 610	Integrated	Shared	1x DP 1.4b, 1x optional HDMI® 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x DP 1.4b, 1x optional HDMI 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX 12
Intel UHD	Integrated	Shared	1x DP 1.4b, 1x optional	4096x2304@60Hz(DP),	DirectX 12

graphics 730			HDMI 2.1	4096x2160@60Hz(HDMI)	
Intel UHD graphics 750	Integrated	Shared	1x DP 1.4b, 1x optional HDMI 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays via native display and 2 external monitor; supports external monitors via DisplayPort™ and optional HDMI

Chipset

Chipset

Intel B560 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type^{**[2]}

- DDR4-2666
- DDR4-3200

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] Installed memory is actually 3200MHz, but may run at 2666MHz, 2933 MHz or 3200MHz depending on the memory support capability of processor.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB
- M.2 SSD up to 1TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal

RAID

No support

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers

Stereo speakers, 2W x2, Dolby® Atmos®

Microphone

- Dual-microphone array
- No microphone

Camera**

- FHD 1080p + IR, with ThinkShutter (physical switch on/off), Windows Hello support
- FHD 1080p, with ThinkShutter (physical switch on/off)
- No camera

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
135W	Adapter	89%	Autosensing
170W	Adapter	89%	Autosensing

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
21.5"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design (88% screen to body ratio), support low blue light mode
21.5"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design (88% screen to body ratio), support low blue light mode

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)

- No mouse

Mechanical

Buttons

- Microphone mute button
- Power button

Form Factor

AIO (21.5 inches)

Dimensions (WxDxH)^[1]

490.1 x 55.6 x 312.3 mm (19.3 x 2.2 x 12.3 inches), no stand, with ODD, with camera

Weight^[2]

8.1 kg (17.9 lbs) at maximum configuration

Case Color

Black

Bays

- 1x 2.5" disk bay
- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover and stand assembly / removal

Stand**

- UltraFlex IV stand, supports -5° to +70° tilt, up to 164mm lift (flat mode) / up to 115mm lift (vertical mode)
- Full function monitor stand, supports -5° to +30° tilt, up to 80mm lift
- No stand

Mounting

Supports VESA mount 100mm

Others

Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth^{**}

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 3x USB 3.2 Gen 1
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports**

- 1x HDMI
- 1x serial

Right Ports

- 1x USB-C® 3.2 Gen 2 (support data transfer and 5V@3A charging)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Ultra Low Noise
- TÜV Rheinland Eye Comfort Certification
- TÜV Rheinland Low Blue Light

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. 3x USB 3.2 Gen 1	7. Microphone mute button
2. USB-C 3.2 Gen 2 (data transfer, 15W charging)	8. PC / monitor mode switch
3. Ethernet (RJ-45)	9. 2x USB 3.2 Gen 2
4. HDMI (HDMI in / HDMI out combo port)	10. Headphone / microphone combo jack (3.5mm)
5. DisplayPort 1.4	11. Card reader *
6. Power connector	12. Power button

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[5]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[6]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[7]	30MB	DDR5-4800	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays via native display and 2 external monitor; supports external monitors via DisplayPort™ and HDMI; work as standalone monitor via HDMI (HDMI in / out combo)

Chipset

Chipset
Intel Q670 chipset

Memory

Max Memory^[1]
Up to 64GB DDR4-3200
Memory Slots
Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type
DDR4-3200

Notes:
^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}
Up to three drives, 2x 2.5" HDD + 1x M.2 SSD
• 2.5" HDD up to 2TB each
• M.2 SSD up to 1TB
Technical support up to 2 HDDs + 1 SSD, but Lenovo only offers the models with up to 2 HDDs or 1 SSD + 1 HDD

Storage Type

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID^[3]
RAID 0/1 support for HDDs

Notes:
^[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
^[2] 2nd 2.5" HDD occupies ODD bay, and needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).
^[3] RAID is not preset by default, user can config RAID 0/1 according to the demand.

Removable Storage

Optical**
• DVD-ROM, SATA connector, slim (9.0mm)
• DVD burner (DVD±RW), SATA connector, slim (9.0mm)
• None

Card Reader
• 3-in-1 card reader (SD, SDHC, SDXC)
• No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC256-NL codec
Speakers
Stereo speakers, 2W x2, Dolby® Atmos®
Microphone

- Dual-microphone array
- No microphone

Camera**

- 5.0-megapixel, IR + RGB hybrid, with ThinkShutter (physical switch on/off), ±20° view angle adjustable, Windows Hello support
- 5.0-megapixel, with ThinkShutter (physical switch on/off), ±20° view angle adjustable
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
180W	Fixed	90%	100V - 240V, 50-60Hz

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
21.5"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free
21.5"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Buttons

- Microphone mute button
- Monitor / PC mode switch button
- Power button

Form Factor

AIO (21.5 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models (with UltraFlex V stand, without camera)	Lowest in vertical mode: 489 x 216.32 x 338.32 mm (19.25 x 8.52 x 13.32 inches) Highest in vertical mode: 489 x 216.32 x 422.81 mm (19.25 x 8.52 x 16.65 inches)
Models (with UltraFlex V stand, with camera)	Lowest in vertical mode: 489 x 216.32 x 358.82 mm (19.25 x 8.52 x 14.13 inches) Highest in vertical mode: 489 x 216.32 x 443.31 mm (19.25 x 8.52 x 17.45 inches)
Models (with full function monitor stand, without camera)	Lowest in vertical mode: 489 x 217.31 x 345.46 mm (19.52 x 8.56 x 13.6 inches) Highest in vertical mode: 489 x 217.31 x 454.47 mm (19.52 x 8.56 x 17.89 inches)
Models (with full function monitor stand, with camera)	Lowest in vertical mode: 489 x 217.31 x 365.96 mm (19.52 x 8.56 x 14.41 inches) Highest in vertical mode: 489 x 217.31 x 474.97 mm (19.52 x 8.56 x 18.7 inches)

Packaging Dimensions (WxDxH)

- With Full Function Monitor Stand: 605 x 235 x 550 mm (23.82 x 9.35 x 21.65 inches)
- With UltraFlex V Stand: 605 x 248 x 545 mm (23.82 x 9.76 x 23.46 inches)

Weight^[2]

Models	Weight
Models (with full function monitor stand, with ODD, with camera)	Around 7.678 kg (16.92 lbs)
Models (with UltraFlex V stand, with ODD, with camera)	Around 7.985 kg (17.6 lbs)

Packaging Weight

- With Full Function Monitor Stand: 1.867 kg (4.12 lbs), packaging only
- With UltraDlex V Stand: 1.983 kg (4.37 lbs), packaging only

Case Color

Black

Bays^[3]

- 2x 2.5" disk bay (2nd 2.5" HDD occupies ODD bay)
- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, stand, motherboard shielding, HDD, and memory assembly / removal

Stand**

- UltraFlex V stand, supports -5° to +70° tilt, up to 70°±2° lift (up to 179.96mm lift in flat mode / up to 84.37mm lift in vertical mode)
- Full function monitor stand, supports -5° to +20° tilt, left & right 45° swivel, 90° pivot, up to 110mm lift
- No stand

Mounting

Supports VESA mount 100mm

Others

- (Optional) Conference Call Base, 3W x4 Harman speakers, 4 digital microphones array with AI noise suppression, Physical button for Teams, USB-C® connector
- Supports Smart Power On

Notes:

^[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2nd 2.5" HDD needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[3]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- No WLAN and Bluetooth

Notes:

[1], [2], [3], [4] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 3x USB 3.2 Gen 1
- 1x HDMI (HDMI in 1.4 / HDMI out 2.1 TMDS combo port)
- 1x DisplayPort 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

1x serial

Right Ports

- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable**

- HDMI to DVI dongle
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle

- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- (Optional) TÜV Rheinland® Ultra Low Noise
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- UL Anti-dust

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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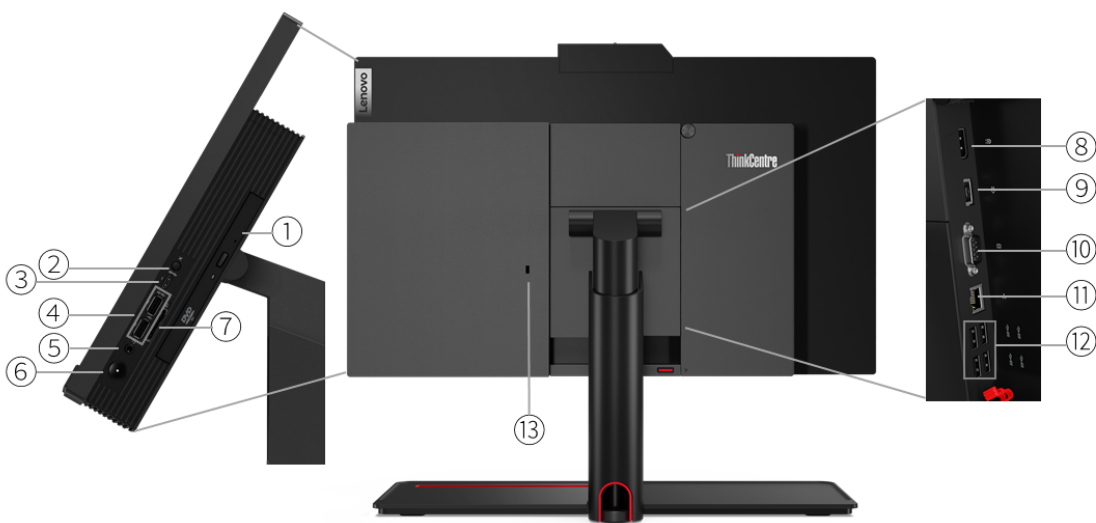
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OVERVIEW



1. Optical drive *	8. DisplayPort
2. Microphone mute button	9. Power connector
3. USB-C 3.2 Gen 1	10. Serial *
4. 2x USB 3.2 Gen 2	11. Ethernet (RJ-45)
5. Headphone / microphone combo jack (3.5mm)	12. 4x USB 3.2 Gen 1
6. Power button	13. Kensington Security Slot
7. Card reader *	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10500	6	12	3.1GHz	4.5GHz ^[5]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[7]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900	10	20	2.8GHz	5.2GHz ^[8]	20MB	DDR4-2933	Intel UHD Graphics 630

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise^[2]
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Special bid only.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 610	Integrated	Shared	1x DP 1.2	4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x DP 1.2	4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ 625	Discrete	2GB GDDR5	1x DP 1.2	4096x2304@60Hz(DP)	DirectX 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via DisplayPort™

Chipset

Chipset

Intel Q470 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-2933

Memory Slots

Two DDR4 DIMM slots, dual-channel capable

Memory Type^{**}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 2x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB each
- M.2 SSD up to 1TB
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

RAID^[2]

RAID 0/1 support for HDDs

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] RAID is not preset by default, user can config RAID 0/1 according to the demand.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers

Stereo speakers, 3W x2

Microphone

Dual-microphone array

Camera**

- FHD 1080p + IR, with ThinkShutter (physical switch on/off), Windows Hello support
- FHD 1080p, with ThinkShutter (physical switch on/off)
- No camera

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
150W	Adapter	89%	Autosensing
170W	Adapter	89%	Autosensing

DESIGN

Display

Display**[1][2]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design, support low blue light mode
23.8"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design, support low blue light mode
23.8"	FHD (1920x1080)	None	IPS	350nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design, support low blue light mode, PrivacyGuard

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.
[2] PrivacyGaurd is only available for MT 11JX.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black

- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Buttons

- Microphone mute button
- Power button
- PrivacyGuard on/off button (PrivacyGuard models only)

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models (with UltraFlex IV stand, with ODD, without PrivacyGuard, with camera)	Lowest in flat mode: 541 x 312.8 x 227.4 mm (21.3 x 12.3 x 9.0 inches) Highest in vertical mode: 541 x 232.7 x 467.7 mm (21.3 x 9.2 x 18.4 inches)
Models (with UltraFlex IV stand, without ODD, without PrivacyGuard, with camera)	Lowest in flat mode: 541 x 312.8 x 227.4 mm (21.3 x 12.3 x 9.0 inches) Highest in vertical mode: 541 x 232.7 x 467.7 mm (21.3 x 9.2 x 18.4 inches)
Models (with full function monitor stand, with ODD, with PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (with full function monitor stand, with ODD, without PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (with full function monitor stand, without ODD, with PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (with full function monitor stand, without ODD, without PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (without stand, without ODD, without PrivacyGuard, with camera)	541 x 46 x 340.5 mm (21.3 x 1.8 x 13.4 inches)
Models (without stand, without ODD, with PrivacyGuard, with camera)	541 x 49.5 x 340.5 mm (21.3 x 1.9 x 13.4 inches)
Models (without stand, with ODD, without PrivacyGuard, with camera)	541 x 57.8 x 340.5 mm (21.3 x 2.3 x 13.4 inches)
Models (without stand, with ODD, with PrivacyGuard, with camera)	541 x 61.3 x 340.5 mm (21.3 x 2.4 x 13.4 inches)

Weight^[2]

Models	Weight
Models (without stand, without ODD, without PrivacyGuard, with camera)	Around 5.25 kg (11.6 lbs)
Models (without stand, with ODD, without PrivacyGuard, with camera)	Around 5.57 kg (12.3 lbs)
Models (without stand, without ODD, with PrivacyGuard, with camera)	Around 6.13 kg (13.5 lbs)
Models (without stand, with ODD, with PrivacyGuard, with camera)	Around 6.45 kg (14.2 lbs)
Models (with full function monitor stand, without ODD, without PrivacyGuard, with camera)	Around 7.51 kg (16.6 lbs)
Models (with full function monitor stand, with ODD, without PrivacyGuard, with camera)	Around 7.84 kg (17.3 lbs)
Models (with UltraFlex IV stand, without ODD, without PrivacyGuard, with camera)	Around 8.26 kg (18.2 lbs)
Models (with full function monitor stand, without ODD, with PrivacyGuard, with camera)	Around 8.39 kg (18.5 lbs)
Models (with UltraFlex IV stand, with ODD, without PrivacyGuard, with camera)	Around 8.58 kg (18.9 lbs)
Models (with full function monitor stand, with ODD, with PrivacyGuard, with camera)	Around 8.71 kg (19.2 lbs)

Case Color

Black

Bays

- 2x 2.5" disk bay (2nd 2.5" HDD occupies ODD bay)

- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover and stand assembly / removal

Stand**

- UltraFlex IV stand, supports -5° to +70° tilt, up to 164mm lift (flat mode) / up to 115mm lift (vertical mode)
- Full function monitor stand, supports -5° to +30° tilt, up to 80mm lift
- No stand

Mounting

Supports VESA mount 100mm

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network^[1]**Onboard Ethernet**

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1] This system does not support Power Over Ethernet (PoE). If the system is used in a PoE environment, then a Network Isolator is required to prevent possible damage to the system, PoE equipment, or both.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Rear Ports**

- 4x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports

1x serial

Right Ports

- 1x USB-C® 3.2 Gen 1 (5V/3A charging)
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI® dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro with Intel AMT 14^[2]
- Non-vPro

Notes:

[1] Require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection.

[2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] Energy Star 8.0 and EPEAT are only available for MT 11CD/11CE, TCO 8.0 and TCO Edge are not for the models with PrivacyGuard.

[3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Ultra Low Noise
- TÜV Rheinland Low Blue Light

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

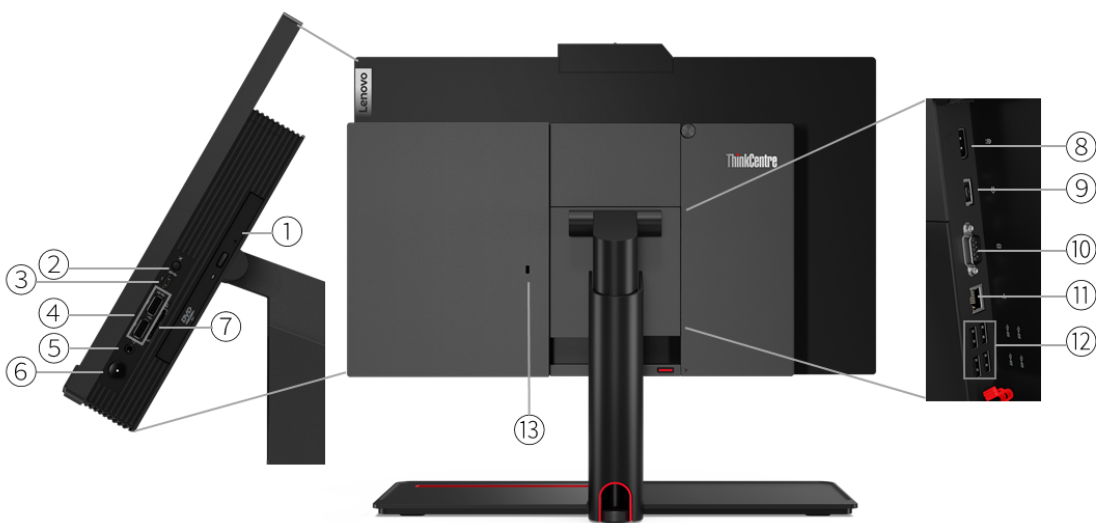
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OVERVIEW



1. Optical drive *	8. DisplayPort (DP in/out combo port)
2. Microphone mute button	9. Power connector
3. USB-C 3.2 Gen 2	10. Serial or HDMI *
4. 2x USB 3.2 Gen 2	11. Ethernet (RJ-45)
5. Headphone / microphone combo jack (3.5mm)	12. 4x USB 3.2 Gen 1
6. Power button	13. Kensington Security Slot
7. Card reader *	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, 10th Generation Intel Core™ i3, or 11th Generation Intel Core i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6405	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6505	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6605	2	4	4.3GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10105	4	8	3.7GHz	4.4GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10305	4	8	3.8GHz	4.5GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10325	4	8	3.9GHz	4.7GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-11400	6	12	2.6GHz	4.4GHz ^[4]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-11500	6	12	2.7GHz	4.6GHz ^[5]	12MB	DDR4-3200	Intel UHD Graphics 750
Core i5-11600	6	12	2.8GHz	4.8GHz ^[6]	12MB	DDR4-3200	Intel UHD Graphics 750
Core i7-11700	8	16	2.5GHz	4.9GHz ^[7]	16MB	DDR4-3200	Intel UHD Graphics 750
Core i9-11900	8	16	2.5GHz	5.2GHz ^[8]	16MB	DDR4-3200	Intel UHD Graphics 750

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 610	Integrated	Shared	1x DP 1.4b, 1x optional HDMI® 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x DP 1.4b, 1x optional HDMI 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX 12
Intel UHD	Integrated	Shared	1x DP 1.4b, 1x optional	4096x2304@60Hz(DP),	DirectX 12

graphics 730			HDMI 2.1	4096x2160@60Hz(HDMI)	
Intel UHD graphics 750	Integrated	Shared	1x DP 1.4b, 1x optional HDMI 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX 12
AMD Radeon™ 630	Discrete	2GB GDDR5	1x DP 1.4b, 1x optional HDMI 2.1	4096x2304@60Hz(DP), 4096x2160@60Hz(HDMI)	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 displays via native display and 2 external monitor; supports external monitors via DisplayPort™ and optional HDMI; work as standalone monitor via DisplayPort (DP in / out combo)

Chipset

Chipset

Intel Q570 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type^{**[2]}

- DDR4-2666
- DDR4-3200

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] Installed memory is actually 3200MHz, but may run at 2666MHz or 3200MHz depending on the memory support capability of processor.

Storage

Storage Support^{[1][2]}

Up to three drives, 2x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB each
- M.2 SSD up to 1TB

Technical support up to 2 HDDs + 1 SSD, but Lenovo only offers the models with up to 2 HDDs or 1 SSD + 1 HDD

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal

RAID^[3]

RAID 0/1 support for HDDs

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
- [2] 2nd 2.5" HDD occupies ODD bay, and needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).
- [3] RAID is not preset by default, user can config RAID 0/1 according to the demand.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers

Stereo speakers, 3W x2, Dolby® Atmos®

Microphone

- Dual-microphone array
- No microphone

Camera**

- 5.0-megapixel, IR + RGB hybrid, with ThinkShutter (physical switch on/off), Windows Hello support
- 5.0-megapixel, with ThinkShutter (physical switch on/off)
- No camera

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
150W	Adapter	89%	Autosensing
170W	Adapter	89%	Autosensing

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design, low blue light
23.8"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design, low blue light
23.8"	FHD (1920x1080)	None	IPS	350nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	Borderless design, low blue light, PrivacyGuard

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black

- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Buttons

- Microphone mute button
- Power button
- PrivacyGuard on/off button (PrivacyGuard models only)

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models (with UltraFlex IV stand, with ODD, without PrivacyGuard, with camera)	Lowest in flat mode: 541 x 312.8 x 227.4 mm (21.3 x 12.3 x 9.0 inches) Highest in vertical mode: 541 x 232.7 x 467.7 mm (21.3 x 9.2 x 18.4 inches)
Models (with UltraFlex IV stand, without ODD, without PrivacyGuard, with camera)	Lowest in flat mode: 541 x 312.8 x 227.4 mm (21.3 x 12.3 x 9.0 inches) Highest in vertical mode: 541 x 232.7 x 467.7 mm (21.3 x 9.2 x 18.4 inches)
Models (with full function monitor stand, with ODD, with PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (with full function monitor stand, with ODD, without PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (with full function monitor stand, without ODD, with PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (with full function monitor stand, without ODD, without PrivacyGuard, with camera)	541 x 200 x 414.2-494.2 mm (21.3 x 7.9 x 16.3-19.5 inches)
Models (without stand, without ODD, without PrivacyGuard, with camera)	541 x 46 x 340.5 mm (21.3 x 1.8 x 13.4 inches)
Models (without stand, without ODD, with PrivacyGuard, with camera)	541 x 49.5 x 340.5 mm (21.3 x 1.9 x 13.4 inches)
Models (without stand, with ODD, without PrivacyGuard, with camera)	541 x 57.8 x 340.5 mm (21.3 x 2.3 x 13.4 inches)
Models (without stand, with ODD, with PrivacyGuard, with camera)	541 x 61.3 x 340.5 mm (21.3 x 2.4 x 13.4 inches)

Weight^[2]

Models	Weight
Models (without stand, without ODD, without PrivacyGuard, with camera)	Around 5.25 kg (11.6 lbs)
Models (without stand, with ODD, without PrivacyGuard, with camera)	Around 5.57 kg (12.3 lbs)
Models (without stand, without ODD, with PrivacyGuard, with camera)	Around 6.13 kg (13.5 lbs)
Models (without stand, with ODD, with PrivacyGuard, with camera)	Around 6.45 kg (14.2 lbs)
Models (with full function monitor stand, without ODD, without PrivacyGuard, with camera)	Around 7.51 kg (16.6 lbs)
Models (with full function monitor stand, with ODD, without PrivacyGuard, with camera)	Around 7.84 kg (17.3 lbs)
Models (with UltraFlex IV stand, without ODD, without PrivacyGuard, with camera)	Around 8.26 kg (18.2 lbs)
Models (with full function monitor stand, without ODD, with PrivacyGuard, with camera)	Around 8.39 kg (18.5 lbs)
Models (with UltraFlex IV stand, with ODD, without PrivacyGuard, with camera)	Around 8.58 kg (18.9 lbs)
Models (with full function monitor stand, with ODD, with PrivacyGuard, with camera)	Around 8.71 kg (19.2 lbs)

Case Color

Black

Bays^[3]

- 2x 2.5" disk bay (2nd 2.5" HDD occupies ODD bay)
- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover and stand assembly / removal

Stand**

- UltraFlex IV stand, supports -5° to +70° tilt, up to 164mm lift (flat mode) / up to 115mm lift (vertical mode)
- Full function monitor stand, supports -5° to +30° tilt, up to 80mm lift
- No stand

Mounting

Supports VESA mount 100mm

Others

Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2nd 2.5" HDD needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).

CONNECTIVITY

Network^[1]**Onboard Ethernet**

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro technology support, M.2 Card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1] This system does not support Power Over Ethernet (PoE). If the system is used in a PoE environment, then a Network Isolator is required to prevent possible damage to the system, PoE equipment, or both.

[2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Rear Ports**

- 4x USB 3.2 Gen 1
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports**

- 1x HDMI
- 1x serial

Right Ports

- 1x USB-C® 3.2 Gen 2 (support data transfer and 5V@3A charging)
- 2x USB 3.2 Gen 2

- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable*****

- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY**System Management****System Management**

- Intel vPro^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Eye Comfort Certification
- (Optional) TÜV Rheinland Ultra Low Noise
- TÜV Rheinland Low Blue Light

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.

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inside

OVERVIEW



1. 3x USB 3.2 Gen 1	7. Microphone mute button
2. USB-C 3.2 Gen 2 (support data transfer and 15W charging)	8. PC / monitor mode switch
3. Ethernet (RJ-45)	9. 3x USB 3.2 Gen 2
4. HDMI (HDMI in 1.4 / HDMI out 2.1 TMDS combo port)	10. Headphone / microphone combo jack (3.5mm)
5. DisplayPort 1.4	11. Card reader *
6. Power connector	12. Power button

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[5]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[6]	25MB	DDR4-3200	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[7]	30MB	DDR4-3200	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics***

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays via native display and 2 external monitor; supports external monitors via DisplayPort™ and HDMI; work as standalone monitor via HDMI (HDMI in / out combo)

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to three drives, 2x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB each
- M.2 SSD up to 1TB

Technical support up to 2 HDDs + 1 SSD, but Lenovo only offers the models with up to 2 HDDs or 1 SSD + 1 HDD

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID^[3]

RAID 0/1 support for HDDs

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] 2nd 2.5" HDD occupies ODD bay, and needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).

[3] RAID is not preset by default, user can config RAID 0/1 according to the demand.

Removable Storage

Optical^{**}

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256-NL codec

Speakers

Stereo speakers, 3W x2, Dolby® Atmos®

Microphone

- Dual-microphone array
- No microphone

Camera**

- 5.0-megapixel, IR + RGB hybrid, with ThinkShutter (physical switch on/off), ±20° view angle adjustable, Windows Hello support
- 5.0-megapixel, with ThinkShutter (physical switch on/off), ±20° view angle adjustable
- No camera

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	90%	100V - 240V, 50-60Hz
230W	Fixed	92%	100V - 240V, 50-60Hz

DESIGN

Display

Display**[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free
23.8"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Buttons

- Microphone mute button
- Monitor / PC mode switch button
- Power button

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models (with UltraFlex V stand, without camera)	Lowest in vertical mode: 539.6 x 216.32 x 367.13 mm (21.24 x 8.52 x 14.45 inches) Highest in vertical mode: 539.6 x 216.32 x 451.5 mm (21.24 x 8.52 x 17.78 inches)
Models (with UltraFlex V stand, with camera)	Lowest in vertical mode: 539.6 x 216.32 x 387.63 mm (21.24 x 8.52 x 15.26 inches) Highest in vertical mode: 539.6 x 216.32 x 472 mm (21.24 x 8.52 x 18.58 inches)
Models (with full function monitor stand, without camera)	Lowest in vertical mode: 539.6 x 217.31 x 374.15 mm (21.24 x 8.56 x 14.73 inches) Highest in vertical mode: 539.6 x 217.31 x 483.16 mm (21.24 x 8.56 x 19.02 inches)
Models (with full function monitor stand, with camera)	Lowest in vertical mode: 539.6 x 217.31 x 394.65 mm (21.24 x 8.56 x 15.54 inches) Highest in vertical mode: 539.6 x 217.31 x 503.66 mm (21.24 x 8.56 x 19.83 inches)

Packaging Dimensions (WxDxH)

- With UltraFlex V Stand: 660 x 238 x 545 mm (25.98 x 9.37 x 21.46 inches)
- With Full Function Monitor Stand: 660 x 238 x 575 mm (25.98 x 9.37 x 22.64 inches)

Weight^[2]

Models	Weight
Models (with full function monitor stand, with ODD, with camera)	Around 8.235 kg (18.15 lbs)
Models (with UltraFlex V stand, with ODD, with camera)	Around 8.742 kg (19.27 lbs)

Packaging Weight

- With Full Function Monitor Stand: 2.084 kg (4.59 lbs), packaging only
- With UltraDlex V Stand: 2.0658 kg (4.55 lbs), packaging only

Case Color

Black

Bays^[3]

- 2x 2.5" disk bay (2nd 2.5" HDD occupies ODD bay)
- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, stand, motherboard shielding, HDD, and memory assembly / removal

Stand**

- UltraFlex V stand, supports -5° to +70° tilt, up to 70°±2° lift (up to 174.02mm lift in flat mode / up to 84.37mm lift in vertical mode)
- Full function monitor stand, supports -5° to +20° tilt, left & right 45° swivel, 90° pivot, up to 110mm lift
- No stand

Mounting

Supports VESA mount 100mm

Others

- (Optional) Conference Call Base, 3W x4 Harman speakers, 4 digital microphones array with AI noise suppression, Physical button for Teams, USB-C® connector
- (Optional) Smart Human Presence Detection based on Radar Sensor
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2nd 2.5" HDD needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth**

- MediaTek Wi-Fi® 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[5]
- No WLAN and Bluetooth

Notes:

[1], [2], [3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 3x USB 3.2 Gen 1
- 1x HDMI (HDMI in 1.4 / HDMI out 2.1 TMDS combo port)
- 1x DisplayPort 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

1x serial

Right Ports

- 3x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable**

- HDMI to DVI dongle
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Ultra Low Noise
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- UL Anti-dust

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. 3x USB 3.2 Gen 1	7. Microphone mute button
2. USB-C 3.2 Gen 2 (data transfer, 15W charging)	8. PC / monitor mode switch
3. Ethernet (RJ-45)	9. 3x USB 3.2 Gen 2
4. HDMI in/out combo port	10. Headphone / microphone combo jack (3.5mm)
5. DisplayPort 1.4	11. Card reader *
6. Power connector	12. Power button

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR5-4800	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR5-4800	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[5]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[6]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[7]	30MB	DDR5-4800	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce MX550	Discrete	2GB GDDR6	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 5120x2160@60Hz(DP)	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays via native display and 2 external monitor; supports external monitors via DisplayPort™ and HDMI; work as standalone monitor via HDMI (HDMI in / out combo)

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to three drives, 2x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB each
- M.2 SSD up to 1TB

Technical support up to 2 HDDs + 1 SSD, but Lenovo only offers the models with up to 2 HDDs or 1 SSD + 1 HDD

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID^[3]

RAID 0/1 support for HDDs

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] 2nd 2.5" HDD occupies ODD bay, and needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).

[3] RAID is not preset by default, user can config RAID 0/1 according to the demand.

Removable Storage

Optical^{**}

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256-NL codec

Speakers

Stereo speakers, 3W x2, Dolby® Atmos®

Microphone

- Dual-microphone array
- No microphone

Camera**

- 5.0-megapixel, IR + RGB hybrid, with ThinkShutter (physical switch on/off), ±20° view angle adjustable, Windows Hello support
- 5.0-megapixel, with ThinkShutter (physical switch on/off), ±20° view angle adjustable
- No camera

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	90%	100V - 240V, 50-60Hz
230W	Fixed	92%	100V - 240V, 50-60Hz

DESIGN

Display

Display^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	QHD (2560x1440)	None	IPS	300nits	Anti-glare	16:9	1000:1	99% sRGB	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light (Hardware Solution), flicker free, Eye Safe

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Buttons

- Microphone mute button
- Monitor / PC mode switch button

- Power button

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models (with UltraFlex V stand, without camera)	Lowest in vertical mode: 539.6 x 216.32 x 367.13 mm (21.24 x 8.52 x 14.45 inches) Highest in vertical mode: 539.6 x 216.32 x 451.5 mm (21.24 x 8.52 x 17.78 inches)
Models (with UltraFlex V stand, with camera)	Lowest in vertical mode: 539.6 x 216.32 x 387.63 mm (21.24 x 8.52 x 15.26 inches) Highest in vertical mode: 539.6 x 216.32 x 472 mm (21.24 x 8.52 x 18.58 inches)
Models (with full function monitor stand, without camera)	Lowest in vertical mode: 539.6 x 217.31 x 374.15 mm (21.24 x 8.56 x 14.73 inches) Highest in vertical mode: 539.6 x 217.31 x 483.16 mm (21.24 x 8.56 x 19.02 inches)
Models (with full function monitor stand, with camera)	Lowest in vertical mode: 539.6 x 217.31 x 394.65 mm (21.24 x 8.56 x 15.54 inches) Highest in vertical mode: 539.6 x 217.31 x 503.66 mm (21.24 x 8.56 x 19.83 inches)

Packaging Dimensions (WxDxH)

- With UltraFlex V Stand: 660 x 238 x 545 mm (25.98 x 9.37 x 21.46 inches)
- With Full Function Monitor Stand: 660 x 238 x 575 mm (25.98 x 9.37 x 22.64 inches)

Weight^[2]

Models	Weight
Models (with full function monitor stand, with ODD, with camera)	Around 8.235 kg (18.15 lbs)
Models (with UltraFlex V stand, with ODD, with camera)	Around 8.742 kg (19.27 lbs)

Packaging Weight

- With Full Function Monitor Stand: 2.084 kg (4.59 lbs), packaging only
- With UltraDlex V Stand: 2.0658 kg (4.55 lbs), packaging only

Case Color

Black

Bays^[3]

- 2x 2.5" disk bay (2nd 2.5" HDD occupies ODD bay)
- 1x slim ODD bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, stand, motherboard shielding, HDD, and memory assembly / removal

Stand^{**}

- UltraFlex V stand, supports -5° to +70° tilt, up to 70°±2° lift (up to 174.02mm lift in flat mode / up to 84.37mm lift in vertical mode)
- Full function monitor stand, supports -5° to +20° tilt, left & right 45° swivel, 90° pivot, up to 110mm lift
- No stand

Mounting

Supports VESA mount 100mm

Others

- (Optional) Conference Call Base, 3W x4 Harman speakers, 4 digital microphones array with AI noise suppression, Physical button for Teams, USB-C® connector
- (Optional) Smart Human Presence Detection based on Radar Sensor
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2nd 2.5" HDD needs ODD to HDD bracket kit (optional, come with 2nd 2.5" HDD).

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth^{**}

- MediaTek Wi-Fi® 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[5]
- No WLAN and Bluetooth

Notes:

[1], [2], [3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 3x USB 3.2 Gen 1
- 1x HDMI (HDMI in 1.4 / HDMI out 2.1 TMDS combo port)
- 1x DisplayPort 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

1x serial

Right Ports

- 3x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Right Ports

1x card reader

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable^{**}

- HDMI to DVI dongle
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle

- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

Other Security

(Optional) ThinkShutter camera cover

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

Operating: 20% to 80%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0
- TCO edge
- VOC Report

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Ultra Low Noise
- Eyesafe® Certified
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)
- UL Anti-dust

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	5. 2x USB 3.2 Gen 2
2. Combo audio jack (on bottom)	6. Ethernet (RJ-45)
3. Power connector	7. 2x USB 2.0
4. HDMI-out	8. Optical drive *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, 12th Gen Intel U or P Series Core™ i3 / i5, or 12th Gen Intel H Series Core i5 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 7305	5 (1 P-core + 4 E-core)	6	P-core 1.1GHz / E-core 0.9GHz	-	8MB	DDR4-3200	Intel UHD Graphics
Pentium Gold 8505	5 (1 P-core + 4 E-core)	6	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[2]	8MB	DDR4-3200	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[3]	10MB	DDR4-3200	Intel UHD Graphics
Core i3-1220P	10 (2 P-core + 8 E-core)	12	P-core 1.5GHz / E-core 1.1GHz	P-core 4.4GHz / E-core 3.3GHz[4]	12MB	DDR4-3200	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[5]	12MB	DDR4-3200	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz[6]	12MB	-	Intel Iris Xe Graphics
Core i5-12450H	8 (4 P-core + 4 E-core)	12	P-core 2.0GHz / E-core 1.5GHz	P-core 4.4GHz / E-core 3.3GHz[7]	12MB	-	Intel UHD Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

[2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	1x HDMI 1.4	1920x1080@60Hz	DirectX 12.1

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 16GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 1TB
 - M.2 SSD up to 512GB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type**

Disk Type	Interface	RPM
2.5" SATA HDD	SATA 6Gb/s	5.4K
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256 codec

Speakers

Stereo speakers, 3W x2, Audio by HARMAN

Microphone**

- Single microphone
- Dual-microphone array
- No microphone

Camera

- HD 720p 0° Pre-angle pull up camera, LED indicator
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
90W	Adapter	89%	Autosensing

DESIGN

Display

Display^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
21.5"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, 16.7 million color depth, borderless design

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (21.5 inches)

Dimensions (WxDxH)^[1]

490.3 x 207.5 x 405.39 mm (19.3 x 8.71 x 15.96 inches)

Packaging Dimensions (WxDxH)

591 x 231 x 522 mm (23.27 x 9.09 x 20.55 inches)

Weight^[2]

Around 5.7 kg (12.6 lbs)

Packaging Weight

Around 9.3 kg (20.5 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand

Monitor stand, supports -5° to +25° tilt, left & right 45° swivel

Mounting

None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111H, 1x RJ-45

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro® technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI-out
- 1x Ethernet (RJ-45)
- 1x power connector

Bottom Ports

1x headphone / microphone combo jack (3.5mm)

Left Ports

None

Optional Left Ports

None

Right Ports

None

Optional Right Ports

None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]
- ErP Lot 3 and Lot 7

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free

- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power button	5. 2x USB 3.2 Gen 2
2. Combo audio jack (on bottom)	6. Ethernet (RJ-45)
3. Power connector	7. 2x USB 2.0
4. HDMI-out	8. Optical drive *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® H Series Core™ i5 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-13420H	8 (4 P-core + 4 E-core)	12	P-core 2.1GHz / E-core 1.5GHz	P-core 4.6GHz / E-core 3.4GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 8GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 1TB
 - M.2 SSD up to 512GB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type**

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID
No support

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
• DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
• None

Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC256 codec

Speakers
Stereo speakers, 3W x2, Audio by HARMAN

Microphone
• Dual-microphone array
• No microphone

Camera
• HD 720p 0° Pre-angle pull up camera, LED indicator
• No camera

Power Supply

Power	Type	Efficiency	Key Features
90W	Adapter	89%	Autosensing

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
21.5"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, 16.7 million color depth, borderless design

Touchscreen
Non-touch

Notes:
[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (21.5 inches)

Dimensions (WxDxH)^[1]

490.3 x 207.5 x 405.39 mm (19.3 x 8.17 x 15.96 inches)

Packaging Dimensions (WxDxH)

591 x 231 x 522 mm (23.27 x 9.09 x 20.55 inches)

Weight^[2]

Around 5.7 kg (12.6 lbs)

Packaging Weight

Around 9.3 kg (20.5 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand

Monitor stand, supports -5° to +25° tilt, left & right 45° swivel

Mounting

None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111H, 1x RJ-45

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI-out
- 1x Ethernet (RJ-45)
- 1x power connector

Bottom Ports

1x headphone / microphone combo jack (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

BIOS Security

- Administrator password
- Power-on password
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%

- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power button	5. 2x USB 3.2 Gen 2
2. Combo audio jack (on bottom)	6. Ethernet (RJ-45)
3. Power connector	7. 2x USB 2.0
4. HDMI-out	8. Optical drive *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, 12th Gen Intel U Series Core™ i3 / i5, 12th Gen Intel P Series Core i3 / i5 / i7, or 12th Gen Intel H Series Core i5 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 7305	5 (1 P-core + 4 E-core)	6	P-core 1.1GHz / E-core 0.9GHz	-	8MB	DDR4-3200	Intel UHD Graphics
Pentium Gold 8505	5 (1 P-core + 4 E-core)	6	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[2]	8MB	DDR4-3200	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[3]	10MB	DDR4-3200	Intel UHD Graphics
Core i3-1220P	10 (2 P-core + 8 E-core)	12	P-core 1.5GHz / E-core 1.1GHz	P-core 4.4GHz / E-core 3.3GHz[4]	12MB	DDR4-3200	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[5]	12MB	DDR4-3200	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz[6]	12MB	-	Intel Iris Xe Graphics
Core i5-12450H	8 (4 P-core + 4 E-core)	12	P-core 2.0GHz / E-core 1.5GHz	P-core 4.4GHz / E-core 3.3GHz[7]	12MB	-	Intel UHD Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz[8]	18MB	-	Intel Iris Xe Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

[2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	1x HDMI 1.4	1920x1080@60Hz	DirectX 12.1

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory^[1]
Up to 16GB DDR4-3200
Memory Slots
Two DDR4 SO-DIMM slots, dual-channel capable
Memory Type
DDR4-3200

Notes:
^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]
• Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
• 2.5" HDD up to 1TB
• M.2 SSD up to 1TB
• For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type^{**}

Disk Type	Interface	RPM
2.5" SATA HDD	SATA 6Gb/s	5.4K
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-

RAID
No support

Notes:
^[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
• DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
• None

Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC256 codec
Speakers
Stereo speakers, 3W x2, Audio by HARMAN
Microphone
• Dual-microphone array
• No microphone
Camera^{**}
• 5.0-megapixel IR camera, 0° Pre-angle pull up camera, LED indicator

- HD 720p 0° Pre-angle pull up camera, LED indicator
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
90W	Adapter	89%	Autosensing

DESIGN

Display

Display^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, 16.7 million color depth, borderless design

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with monitor stand	541 x 207.5 x 433.8 mm (21.3 x 8.17 x 17.1 inches)
Models with liftable monitor stand	541 x 220 x 380.5-480.5 mm (21.3 x 8.66 x 14.98-18.92 inches)

Packaging Dimensions (WxDxH)

662 x 231 x 551 mm (26.06 x 9.09 x 21.69 inches)

Weight^[2]

Models	Weight
Models with liftable monitor stand	Around 6.6 kg (14.6 lbs)
Models with monitor stand	Around 6.7 kg (14.8 lbs)

Packaging Weight

Around 10.74 kg (23.08 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand**

- Monitor stand, supports -5° to +25° tilt, left & right 45° swivel
- Liftable monitor stand, supports -5° to +16° tilt, left & right 45° swivel, up to 100mm lift

Mounting

None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111H, 1x RJ-45

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro® technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI-out
- 1x Ethernet (RJ-45)
- 1x power connector

Bottom Ports

1x headphone / microphone combo jack (3.5mm)

Left Ports

None

Optional Left Ports

None

Right Ports

None

Optional Right Ports

None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]
- ErP Lot 3 and Lot 7
- RoHS / WEEE / REACH

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	5. 2x USB 3.2 Gen 2
2. Combo audio jack (on bottom)	6. Ethernet (RJ-45)
3. Power connector	7. 2x USB 2.0
4. HDMI-out	8. Optical drive *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® H Series Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-13420H	8 (4 P-core + 4 E-core)	12	P-core 2.1GHz / E-core 1.5GHz	P-core 4.6GHz / E-core 3.4GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics
Core i7-13620H	10 (6 P-core + 4 E-core)	16	P-core 2.4GHz / E-core 1.8GHz	P-core 4.9GHz / E-core 3.6GHz ^[2]	24MB	DDR4-3200	Intel UHD Graphics

Notes:

[1], [2] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 16GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 1TB
 - M.2 SSD up to 1TB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
 - None

Card Reader

No card reader

Multi-Media

- Audio Chip
- High Definition (HD) Audio, Realtek® ALC256 codec
- Speakers
- Stereo speakers, 3W x2, Audio by HARMAN

- Microphone
- Dual-microphone array
 - No microphone

- Camera**
- 5.0-megapixel IR camera, 0° Pre-angle pull up camera, LED indicator
 - HD 720p 0° Pre-angle pull up camera, LED indicator
 - No camera

Power Supply

Power	Type	Efficiency	Key Features
90W	Adapter	89%	Autosensing

DESIGN

Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, 16.7 million color depth, borderless design

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with monitor stand	541 x 207.5 x 433.8 mm (21.3 x 8.17 x 17.1 inches)
Models with liftable monitor stand	541 x 220 x 380.5-480.5 mm (21.3 x 8.66 x 14.98-18.92 inches)

Packaging Dimensions (WxDxH)

- Models with liftable monitor stand: 658 x 264 x 570 mm (25.91 x 10.39 x 22.44 inches)
- Models with monitor stand: 659 x 206 x 554 mm (25.94 x 8.11 x 21.81 inches)

Weight^[2]

Models	Weight
Models with liftable monitor stand	Around 6.6 kg (14.6 lbs)
Models with monitor stand	Around 6.7 kg (14.8 lbs)

Packaging Weight

Around 10.74 kg (23.08 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

Stand**

- Monitor stand, supports -5° to +25° tilt, left & right 45° swivel
- Liftable monitor stand, supports -5° to +16° tilt, left & right 45° swivel, up to 100mm lift

Mounting

None

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111H, 1x RJ-45

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI-out
- 1x Ethernet (RJ-45)
- 1x power connector

Bottom Ports

1x headphone / microphone combo jack (3.5mm)

Left Ports

None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

BIOS Security

- Administrator password
- Power-on password
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Noise

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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	5. 2x USB 3.2 Gen 2
2. Combo audio jack (on bottom)	6. Ethernet (RJ-45)
3. Power connector	7. 2x USB 2.0
4. HDMI-out	8. Optical drive *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Gen Intel® U Series Core™ i3 / i5, 12th Gen Intel P Series Core i3 / i5 / i7, or 12th Gen Intel H Series Core i5 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[2]	10MB	DDR4-3200	Intel UHD Graphics
Core i3-1220P	10 (2 P-core + 8 E-core)	12	P-core 1.5GHz / E-core 1.1GHz	P-core 4.4GHz / E-core 3.3GHz[3]	12MB	DDR4-3200	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[4]	12MB	DDR4-3200	Intel Iris® Xe Graphics
Core i5-1240P	12 (4 P-core + 8 E-core)	16	P-core 1.7GHz / E-core 1.2GHz	P-core 4.4GHz / E-core 3.3GHz[5]	12MB	-	Intel Iris Xe Graphics
Core i5-12450H	8 (4 P-core + 4 E-core)	12	P-core 2.0GHz / E-core 1.5GHz	P-core 4.4GHz / E-core 3.3GHz[6]	12MB	-	Intel UHD Graphics
Core i7-1260P	12 (4 P-core + 8 E-core)	16	P-core 2.1GHz / E-core 1.5GHz	P-core 4.7GHz / E-core 3.4GHz[7]	18MB	-	Intel Iris Xe Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

[2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	1x HDMI 1.4	1920x1080@60Hz	DirectX 12.1

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 16GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 1TB
 - M.2 SSD up to 1TB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256 codec

Speakers

Stereo speakers, 3W x2

Microphone

- Dual-microphone array
- No microphone

Camera^{**}

- 5.0-megapixel IR camera, fixed focus
- 5.0-megapixel, fixed focus
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
90W	Adapter	89%	Autosensing

DESIGN

Display

Display^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
27"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, 16.7 million color depth, borderless design

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (27 inches)

Dimensions (WxDxH)^[1]

474.12 x 207.52 x 613.1 mm (18.67 x 8.17 x 24.14 inches)

Packaging Dimensions (WxDxH)

570 x 233 x 763 mm (22.44 x 9.17 x 30.03 inches)

Weight^[2]

Around 8.11 kg (17.88 lbs)

Packaging Weight

Around 12.38 kg (27.29 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand

Monitor stand, supports -5° to +25° tilt, left & right 45° swivel

Mounting

None

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111H, 1x RJ-45

WLAN + Bluetooth[®]**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi[®] + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro[®] technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI-out
- 1x Ethernet (RJ-45)
- 1x power connector

Bottom Ports

1x headphone / microphone combo jack (3.5mm)

Left Ports

None

Optional Left Ports

None

Right Ports

None

Optional Right Ports

None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4[®] 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt[™] 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]
- ErP Lot 3 and Lot 7
- RoHS / WEEE / REACH

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Noise

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OVERVIEW



1. Power button	5. 2x USB 3.2 Gen 2
2. Combo audio jack (on bottom)	6. Ethernet (RJ-45)
3. Power connector	7. 2x USB 2.0
4. HDMI-out	8. Optical drive *

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® H Series Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-13420H	8 (4 P-core + 4 E-core)	12 ^[1]	P-core 2.1GHz / E-core 1.5GHz	P-core 4.6GHz / E-core 3.4GHz	12MB	DDR4-3200	Intel UHD Graphics
Core i7-13620H	10 (6 P-core + 4 E-core)	16	P-core 2.4GHz / E-core 1.8GHz	P-core 4.9GHz / E-core 3.6GHz ^[2]	24MB	DDR4-3200	Intel UHD Graphics

Notes:

[1], [2] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 16GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 1TB
 - M.2 SSD up to 1TB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256 codec

Speakers

Stereo speakers, 3W x2

Microphone

- Dual-microphone array
- No microphone

Camera**

- 5.0-megapixel IR camera, 0° Pre-angle pull up camera, LED indicator
- 5.0-megapixel camera, 0° Pre-angle pull up camera, LED indicator
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
90W	Adapter	89%	Autosensing

DESIGN

Display

Display^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
27"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, 16.7 million color depth, borderless design

Touchscreen

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (27 inches)

Dimensions (WxDxH)^[1]

474.1 x 207.5 x 613.1 mm (18.67 x 8.17 x 24.14 inches)

Packaging Dimensions (WxDxH)

570 x 233 x 763 mm (22.44 x 9.17 x 30.03 inches)

Weight^[2]

Around 8.11 kg (17.88 lbs)

Packaging Weight

Around 12.38 kg (27.29 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand

Monitor stand, supports -5° to +25° tilt, left & right 45° swivel

Mounting

None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111H, 1x RJ-45

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI-out
- 1x Ethernet (RJ-45)
- 1x power connector

Bottom Ports

1x headphone / microphone combo jack (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

BIOS Security

- Administrator password
- Power-on password
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

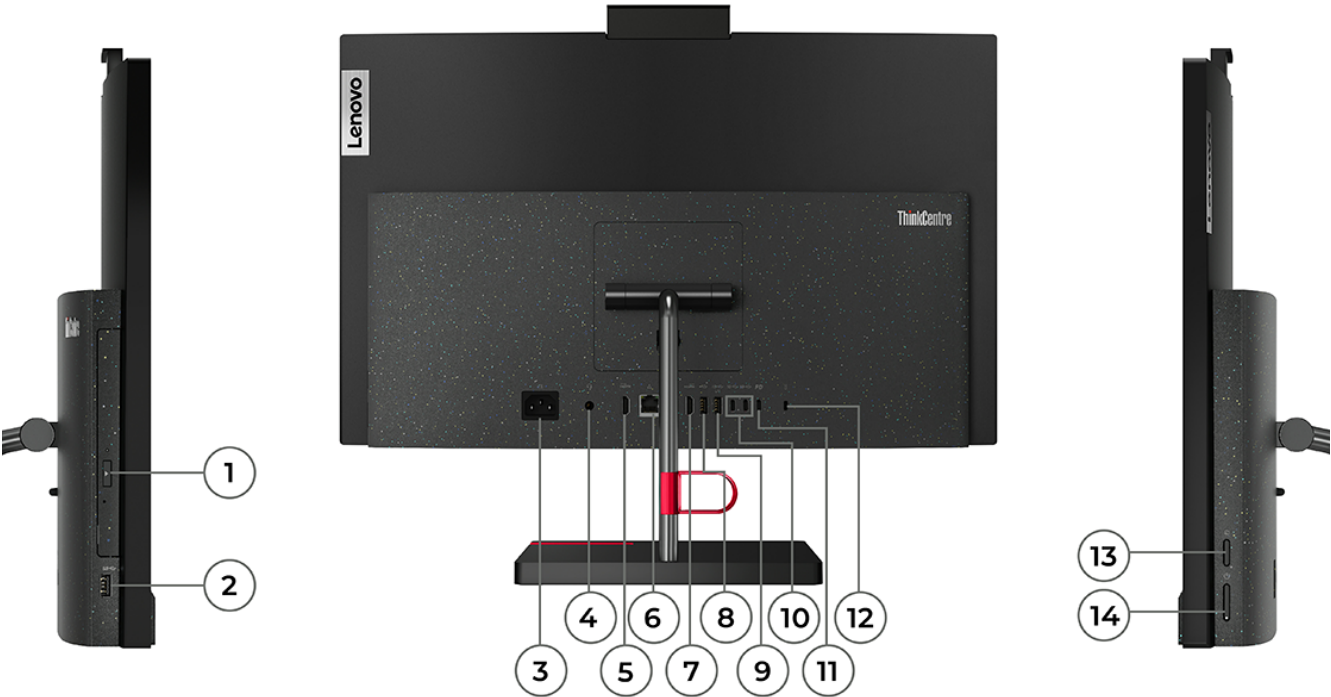
Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Noise

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OVERVIEW



1. Optical drive eject button *	8. USB 2.0
2. USB 3.2 Gen 1	9. USB 3.2 Gen 2
3. Power connector	10. 2x USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	11. USB-C 2.0 (support data transfer, PD 3.0)
5. HDMI-in 1.4	12. Kensington Security Slot
6. Ethernet (RJ-45)	13. HDMI Switch Key
7. HDMI-out 2.1 TMDS	14. Power button

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 P-Series and i5 / i7 H-Series Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-1220P	10 (2 P-core + 8 E-core)	12	P-core 1.5GHz / E-core 1.1GHz	P-core 4.4GHz / E-core 3.3GHz[2]	12MB	DDR5-4800	Intel UHD Graphics
Core i5-12450H	8 (4 P-core + 4 E-core)	12	P-core 2.0GHz / E-core 1.5GHz	P-core 4.4GHz / E-core 3.3GHz[3]	12MB	-	Intel UHD Graphics
Core i5-12500H	12 (4 P-core + 8 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.5GHz / E-core 3.3GHz[4]	18MB	DDR5-4800	Intel Iris® Xe Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz[5]	24MB	DDR5-4800	Intel Iris Xe Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

[2], [3], [4], [5] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux[1]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	1x HDMI 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX 12.1
Intel Arc™ A370M Graphics	Discrete	4GB GDDR6	1x HDMI 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX 12 Ultimate

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 16GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 2TB
 - M.2 SSD up to 1TB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type**

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC274-CG codec

Speakers

Stereo speakers, 3W x2

Microphone

Dual-microphone array

Camera**

- 5.0-megapixel IR camera, fixed focus
- 5.0-megapixel IR camera, fixed focus, with AI chip
- 5.0-megapixel, fixed focus
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
180W	Fixed	90%	100V - 240V, 50-60Hz

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD (1920x1080)	None	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free
23.8"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

^[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Euterpe Wireless Mouse, grey
- No mouse

Mechanical

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with monitor stand	541 x 209.9 x 433.7 mm (21.3 x 8.3 x 17.1 inches)
Models with liftable monitor stand	541 x 220 x 482 mm (21.3 x 8.7 x 19 inches)

Packaging Dimensions (WxDxH)

- Models with liftable monitor stand: 658 x 264 x 567 mm (25.9 x 10.4 x 22.3 inches)
- Models with monitor stand: 695 x 196 x 569 mm (27.4 x 7.7 x 22.4 inches)

Weight^[2]

Models	Weight
Models with monitor stand	Around 7.43 kg (16.4 lbs)

Models with liftable monitor stand	Around 7.65 kg (16.9 lbs)
------------------------------------	---------------------------

Packaging Weight

- Models with liftable monitor stand: 10.3 kg (22.7 lbs)
- Models with monitor stand: 9.69 kg (21.4 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- 1x slim ODD bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

Stand**

- Monitor stand, supports -5° to +25° tilt, left & right 45° swivel
- Liftable monitor stand, supports -5° to +18° tilt, left & right 45° swivel, up to 100mm lift

Mounting

Supports VESA mount 100mm

Others

Supports Smart Power On

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro® technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

- [1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 1x USB-C® 2.0 (Supports data transfer, Power Delivery 3.0)
- 2x USB-C 3.2 Gen 2
- 1x USB 2.0
- 1x USB 3.2 Gen 2 (Supports smart power-on)
- 1x HDMI-in 1.4
- 1x HDMI-out 2.1 TMDS
- 1x Ethernet (RJ-45)
- 1x headphone / microphone combo jack (3.5mm)

Left Ports

1x USB 3.2 Gen 1

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the

host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

- Smart Cable (USB Type A-C)
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]

Notes:

^[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

^[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Ultra Low Noise

Mil-Spec Test

None

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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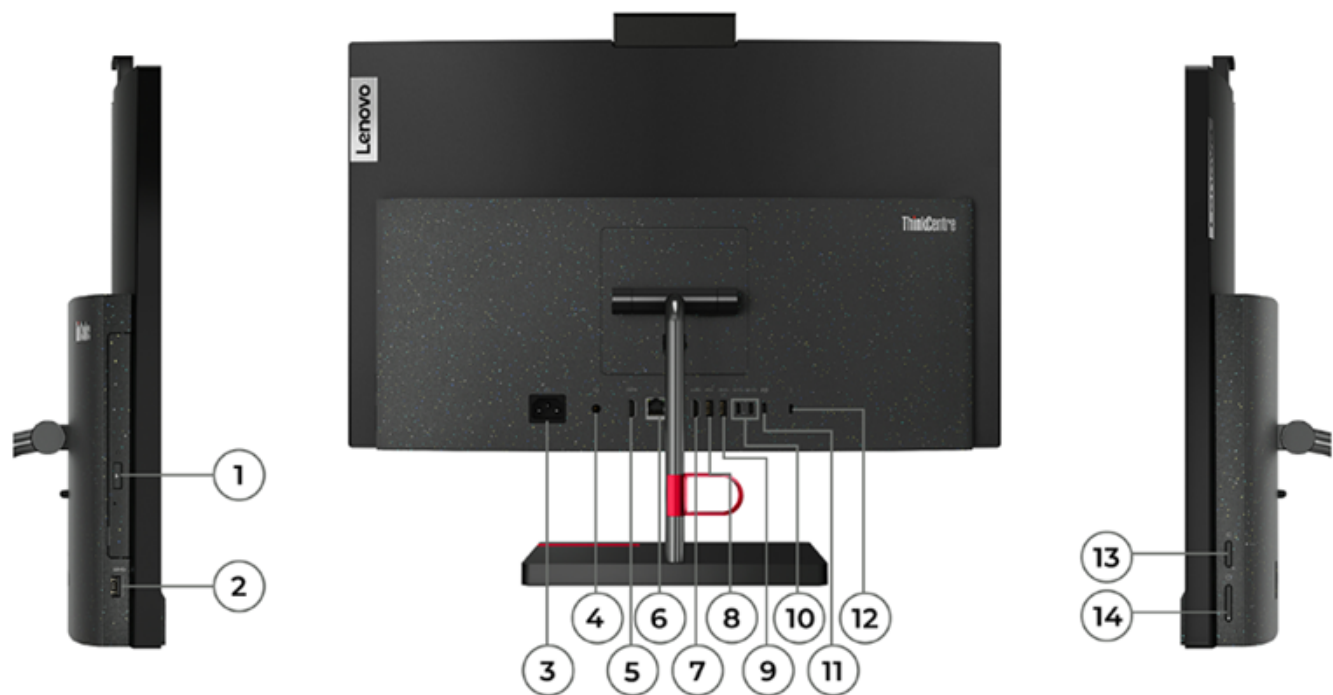


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OVERVIEW



1. Optical drive eject button *	8. USB 2.0
2. USB 3.2 Gen 1	9. USB 3.2 Gen 2
3. Power connector	10. 2x USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	11. USB-C 2.0 (support data transfer, PD 3.0)
5. HDMI-in 1.4	12. Kensington Security Slot
6. Ethernet (RJ-45)	13. HDMI Switch Key
7. HDMI-out 2.1 TMDS	14. Power button

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-13500H	12 (4 P-core + 8 E-core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz ^[2]	18MB	DDR5-5200	Intel Iris® Xe Graphics
Core i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz ^[3]	24MB	DDR5-5200	Intel Iris Xe Graphics

Notes:

- ^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.
- ^[2], ^[3] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System

- Ubuntu Linux^[1]
- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- ^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel Iris Xe Graphics ^[1]	Integrated	Shared	1x HDMI® 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX® 12.1
Intel Arc™ A370M Graphics	Discrete	4GB GDDR6	1x HDMI 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX 12 Ultimate

Notes:

- ^[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 16GB DDR5-5200

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-5200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
 - 2.5" HDD up to 2TB
 - M.2 SSD up to 1TB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Storage Type

Disk Type	Interface	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio

Speakers

Stereo speakers, 3W x2, Audio by HARMAN

Microphone

Dual-microphone array

Camera**

- 5.0-megapixel IR camera, fixed focus
- 5.0-megapixel IR camera, fixed focus, with AI chip
- 5.0-megapixel, fixed focus
- No camera

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
180W	Fixed	90%	100V - 240V, 50-60Hz

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8"	FHD	None	IPS	250nits	Anti-	16:9	1000:1	72%	60Hz	89°/89°/89°/89°	14ms

	(1920x1080)				glare			NTSC			response Time, borderless design, low blue light, flicker free
23.8"	FHD (1920x1080)	Multi-touch	IPS	250nits	Anti-glare	16:9	1000:1	72% NTSC	60Hz	89°/89°/89°/89°	14ms response Time, borderless design, low blue light, flicker free

Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

AIO (23.8 inches)

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with monitor stand	541 x 209.9 x 433.7 mm (21.3 x 8.3 x 17.1 inches)
Models with liftable monitor stand	541 x 220 x 482 mm (21.3 x 8.7 x 19 inches)

Packaging Dimensions (WxDxH)

- Models with liftable monitor stand: 658 x 264 x 570 mm (25.9 x 10.4 x 22.44 inches)
- Models with monitor stand: 695 x 196 x 554 mm (27.4 x 7.7 x 21.81 inches)

Weight^[2]

Models	Weight
Models with monitor stand	Around 7.42 kg (16.36 lbs)
Models with liftable monitor stand	Around 7.64 kg (16.84 lbs)

Packaging Weight

- Models with liftable monitor stand: 11.88 kg (26.19 lbs)
- Models with monitor stand: 11.04 kg (24.34 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay
- 1x slim ODD bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

Expansion Slots

ThinkCentre neo 50a 24 Gen 4

Two M.2 slots (one for WLAN, one for SSD)

Stand**

- Monitor stand, supports -5° to +25° tilt, left & right 45° swivel
- Lifiable monitor stand, supports -5° to +18° tilt, left & right 45° swivel, up to 100mm lift

Mounting

Supports VESA mount 100mm

Others

Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek® RTL8111K-CG, 1x RJ-45

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Rear Ports

- 1x USB-C® 2.0 (Supports data transfer, Power Delivery 3.0)
- 2x USB-C 3.2 Gen 2
- 1x USB 2.0
- 1x USB 3.2 Gen 2 (Supports smart power-on)
- 1x HDMI-in 1.4
- 1x HDMI-out 2.1 TMDS
- 1x Ethernet (RJ-45)
- 1x headphone / microphone combo jack (3.5mm)

Left Ports

1x USB 3.2 Gen 1

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

- Smart Cable (USB Type A-C)
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Intel BIOS guard

SERVICE

Warranty^[1]

Base Warranty

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Ultra Low Noise

Mil-Spec Test

None

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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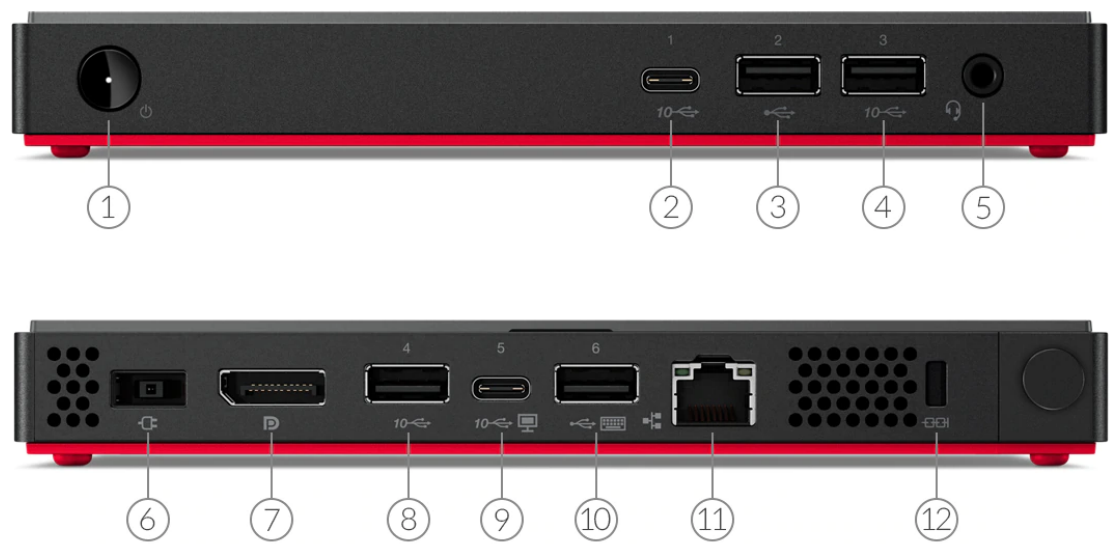


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OVERVIEW



1. Power button	7. DisplayPort
2. USB-C 3.2 Gen 2	8. USB 3.2 Gen 2
3. USB 2.0	9. USB-C 3.2 Gen 2 (display and power-in)
4. USB 3.2 Gen 2	10. USB 2.0
5. Headphone / microphone combo jack (3.5mm)	11. Ethernet (RJ-45)
6. Power connector	

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 / 5 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Ryzen 3 PRO 3300U	4	4	2.1GHz	3.5GHz	2MB L2 / 4MB L3	DDR4-2400	AMD Radeon™ Vega 6 Graphics
AMD Ryzen 5 PRO 3500U	4	8	2.1GHz	3.7GHz	2MB L2 / 4MB L3	DDR4-2400	AMD Radeon Vega 8 Graphics

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon Vega 6 Graphics	Integrated	Shared	1x DisplayPort™, 1x USB-C®	3840x2160@60Hz(DP), 3840x2160@60Hz(USB-C)	DirectX® 12
AMD Radeon Vega 8 Graphics	Integrated	Shared	1x DisplayPort, 1x USB-C	3840x2160@60Hz(DP), 3840x2160@60Hz(USB-C)	DirectX 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (DisplayPort and USB-C)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

8GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-2400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD
• M.2 SSD up to 1TB each

Storage Type***

Disk Type	Interface	Security
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	Opal

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Nano (0.35L)

Dimensions (WxDxH)^[1]

179 x 88 x 22 mm (7.05 x 3.46 x 0.87 inches)

Packaging Dimensions (WxDxH)

490 x 125 x 255 mm (19.29 x 4.92 x 10.04 inches)

Weight^[2]

Around 0.505 kg (1.11 lbs)

Packaging Weight

0.83 kg (1.83 lbs)

Case Color

Iron grey (top cover), black (mid bezel), red (bottom cover)

Bays

No bays

Expansion Slots

- Two M.2 slots (for SSD, one supports up to PCIe 3.0 x4, one supports up to PCIe 3.0 x2)
- One M.2 slot (for WLAN)

Stand

No stand

IO Box

No IO box

Mounting**

- VESA mount bracket kit with adapter holder, supports VESA mount 75mm and 100mm
- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- DIN rail mount bracket kit
- None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111FP-CG, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Qualcomm® QCA6174A, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2
- 1x USB 2.0
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports

- 1x USB-C 3.2 Gen 2 (support display function and power-in [20V and >45W])
- 1x USB 2.0
- 1x USB 3.2 Gen 2
- 1x DisplayPort

- 1x Ethernet (RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- USB-C to DP dongle
- USB-C to HDMI® dongle
- USB-C to VGA dongle
- DP to VGA dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

DASH 1.1 / 1.2

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- ErP Lot 3
- REACH
- RoHS compliant
- TCO Certified 8.0
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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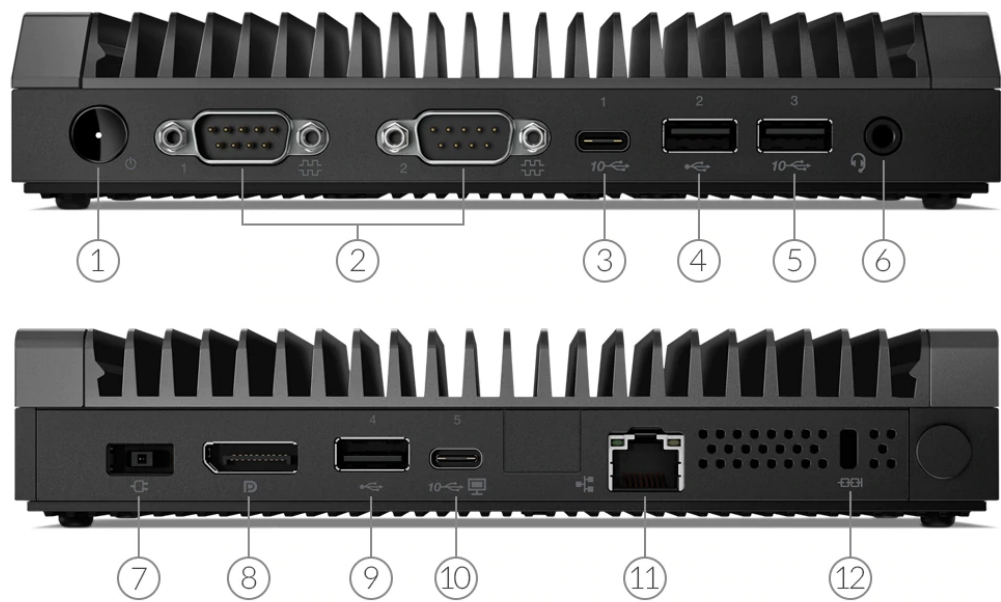


AMD



AMD

OVERVIEW



1. Power button	7. Power connector
2. 2x Serial (RS232)	8. DisplayPort
3. USB-C 3.2 Gen 2	9. USB 3.2 Gen 2
4. USB 2.0	10. USB-C 3.2 Gen 2 (display and power-in)
5. USB 3.2 Gen 2	11. Ethernet (RJ-45)
6. Headphone / microphone combo jack (3.5mm)	12. Kensington Security Slot

PERFORMANCE

Processor

Processor Family

AMD Athlon™ Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Athlon Silver 3050e	2	4	1.4GHz	2.8GHz	1MB L2 / 4MB L3	DDR4-2400	AMD Radeon™ Graphics

Operating System

Operating System^[1]**

- LeTOS™ V2 (Lenovo® Terminal Operating System, Linux-based)
- Ubuntu Linux^[2]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 IoT Enterprise (Thin Client)
- Windows 10 Pro 64
- No operating system

Notes:

^[1] Windows 10 IoT Enterprise (Thin Client) and LeTOS V2 are for Thin Client models.

^[2] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon Graphics	Integrated	Shared	1x DisplayPort™, 1x USB-C®	3840x2160@60Hz(DP), 3840x2160@60Hz(USB-C)	DirectX® 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (DisplayPort and USB-C)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

4GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots

Memory Type

DDR4-2400

Notes:

^[1] The max memory is based on the test results with current Lenovo memory offerings.

Storage

Storage Support^[1]

One drive, up to 1TB M.2 2280 SSD

Storage Type***

Disk Type	Interface	Security
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-
M.2 2280 SSD	SATA 6Gb/s	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	Opal

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features	Dimensions
65W	Adapter	89%	100-240 VAC	108 x 46 x 29 mm, 1800 mm cable
65W	Adapter	88%	100-240 VAC, wide temperature	129 x 53 x 30 mm, 1800 mm cable
No power supply	-	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Nano (0.55L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Nano only	179 x 88 x 34.5 mm (7.05 x 3.46 x 1.36 inches)

Nano with IO box	179 x 88 x 61.3 mm (7.05 x 3.46 x 2.41 inches)
------------------	--

Packaging Dimensions (WxDxH)

490 x 125 x 255 mm (19.29 x 4.92 x 10.04 inches)

Weight^[2]

Models	Weight
Nano only	Around 0.72 kg (1.58 lbs)
Nano with IO box	Around 1.2 kg (2.65 lbs)

Packaging Weight

0.83 kg (1.83 lbs)

Case Color

Iron grey (top cover), black (mid bezel), black (bottom cover)

Bays

No bays

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

Stand

No stand

IO Box

- IO box: 2x serial (RS232 / RS422 / RS485, SDK selectable) and 2x Ethernet (RJ-45, Realtek RTL8153B, gigabit Ethernet) on front, 1x DIO (4DI / 4DO), 1x USB-C (connect to Nano) and 1x DC-in connector (9V - 36V) on rear
- No IO box

Mounting**

- VESA mount bracket kit with adapter holder, supports VESA mount 75mm and 100mm
- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- DIN rail mount bracket kit
- None

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111FP-CG, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Qualcomm® QCA6174A, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- No WLAN and Bluetooth

Notes:

- [1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2

- 1x USB 2.0
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 2x serial (RS-232)

Optional Front Ports

- 2x gigabit Ethernet (RJ-45) on SE30 IO box
- 2x serial (RS232 / RS422 / RS485, SDK selectable) on SE30 IO box

Rear Ports

- 1x USB-C 3.2 Gen 2 (support display function and power-in [20V and >45W])
- 1x USB 3.2 Gen 2
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports

- 1x DC-in 3pin Phoenix connector on SE30 IO box
- 1x DIO (4DI / 4DO) on SE30 IO box

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable*****

- USB-C to DP dongle
- USB-C to HDMI® dongle
- USB-C to VGA dongle
- DP to VGA dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

DASH 1.1 / 1.2

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating:
 - From 10°C (50°F) to 50°C (122°F): for the machine types of 11GW and 11GX
 - From 10°C (50°F) to 35°C (95°F): for the machine types of 11BW and 11BX
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered
- ErP Lot 3
- REACH
- RoHS compliant
- TCO Certified 8.0
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] ENERGY STAR 8.0 and EPEAT are not available for the models with I/O box.

Other Certifications

Other Certifications

TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

- MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock,

Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- None

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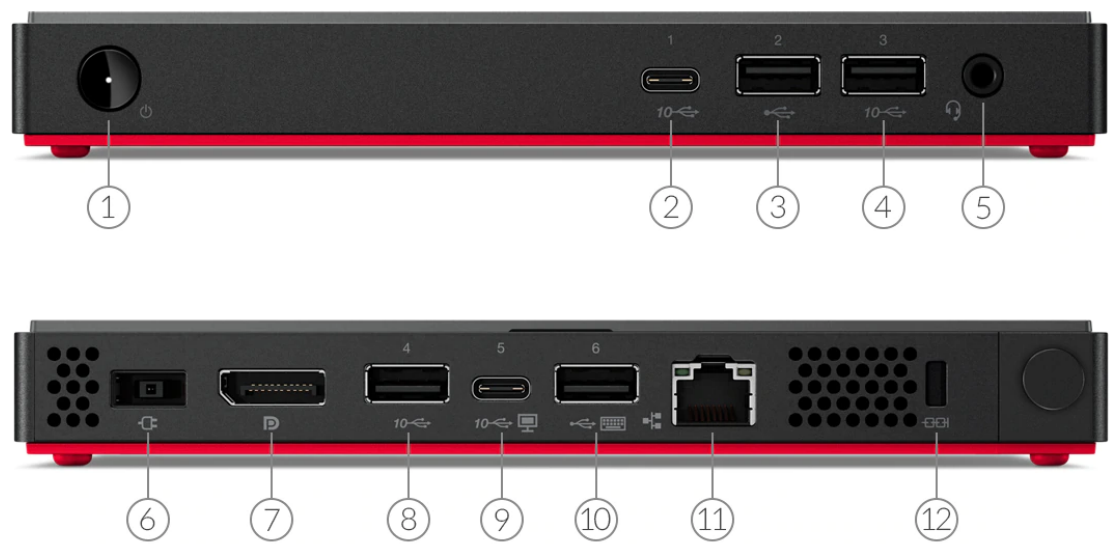


AMD



AMD

OVERVIEW



1. Power button	7. DisplayPort
2. USB-C 3.2 Gen 2	8. USB 3.2 Gen 2
3. USB 2.0	9. USB-C 3.2 Gen 2 (display and power-in)
4. USB 3.2 Gen 2	10. USB 2.0
5. Headphone / microphone combo jack (3.5mm)	11. Ethernet (RJ-45)
6. Power connector	

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 3 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Ryzen 3 PRO 3300U	4	4	2.1GHz	3.5GHz	2MB L2 / 4MB L3	DDR4-2400	AMD Radeon™ Vega 6 Graphics

Operating System

Operating System**

- LeTOS™ V2 (Lenovo® Terminal Operating System, Linux-based)
- Ubuntu Linux
- Windows® 10 IoT Enterprise (Thin Client)
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon Vega 6 Graphics	Integrated	Shared	1x DisplayPort™, 1x USB-C®	3840x2160@60Hz(DP), 3840x2160@60Hz(USB-C)	DirectX® 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (DisplayPort and USB-C)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

8GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

DDR4-2400

Notes:

[1] The max memory is based on the test results with current Lenovo memory offerings.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 SSD up to 256GB each

Storage Type***

Disk Type	Interface	Security
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-
M.2 2280 SSD	SATA 6Gb/s	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	Opal

RAID
No support

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
None
Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC233 codec
Speakers
Single speaker, 1W x1

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - No mouse

Mechanical

Form Factor
Nano (0.35L)
Dimensions (WxDxH)^[1]
179 x 88 x 22 mm (7.05 x 3.46 x 0.87 inches)
Packaging Dimensions (WxDxH)
490 x 125 x 255 mm (19.29 x 4.92 x 10.04 inches)
Weight^[2]
Around 0.505 kg (1.11 lbs)
Packaging Weight
0.83 kg (1.83 lbs)
Case Color
Iron grey (top cover), black (mid bezel), red (bottom cover)

Bays
No bays

Expansion Slots

ThinkCentre M75n Thin Client

- Two M.2 slots (for SSD, one supports up to PCIe 3.0 x4, one supports up to PCIe 3.0 x2 or SATA interface)
- One M.2 slot (for WLAN)

Stand

No stand

IO Box

No IO box

Mounting**

- VESA mount bracket kit with adapter holder, supports VESA mount 75mm and 100mm
- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- DIN rail mount bracket kit
- None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111FP-CG, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel® Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2
- 1x USB 2.0
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports

- 1x USB-C 3.2 Gen 2 (support display function and power-in [20V and >45W])
- 1x USB 2.0
- 1x USB 3.2 Gen 2
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- USB-C to DP dongle
- USB-C to HDMI® dongle
- USB-C to VGA dongle
- DP to VGA dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

DASH 1.1 / 1.2

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered
- ErP Lot 3
- REACH
- RoHS compliant
- TCO Certified 8.0
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

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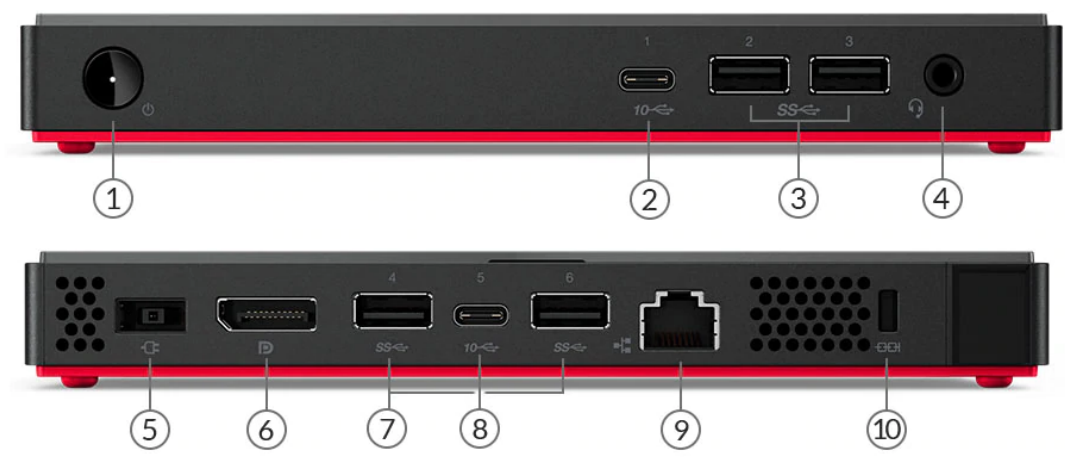


AMD



AMD

OVERVIEW



1. Power button	6. DisplayPort
2. USB-C 3.2 Gen 2	7. 2x USB 3.2 Gen 2
3. 2x USB 3.2 Gen 2	8. USB-C 3.2 Gen 2 (display and power-in)
4. Headphone / microphone combo jack (3.5mm)	9. Ethernet (RJ-45)
5. Power connector	10. Kensington Security Slot

PERFORMANCE

Processor

Processor Family

8th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-8145U	2	4	2.1GHz	3.9GHz	4MB	DDR4-2400	Intel UHD Graphics
Core i5-8265U	4	8	1.6GHz	3.9GHz	6MB	DDR4-2400	Intel UHD Graphics
Core i5-8365U	4	8	1.6GHz	4.1GHz	6MB	DDR4-2400	Intel UHD Graphics
Core i7-8665U	4	8	1.9GHz	4.8GHz	8MB	DDR4-2400	Intel UHD Graphics

Notes:

^[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- No operating system

Notes:

^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics 620	Integrated	Shared	1x DP, 1 USB-C®	4096x2304@60Hz(DP); 4096x2304@60Hz(USB-C)	DirectX® 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (DisplayPort™ and USB-C)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- 4GB soldered memory, not upgradable
- 8GB soldered memory, not upgradable
- 16GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots

Memory Type^[2]

DDR4-2666

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 2666MHz, but runs at 2400MHz due to the memory support capability of processor.

Storage

Storage Support^[1]

- Up to two drives, 2x M.2 SSD
- M.2 SSD up to 1TB each
 - Optional Intel Optane™ Memory Integrated with SSD, M.2

Storage Type^{***}

Disk Type	Interface	Security
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	Opal
Intel Optane Memory with Solid State Storage, M.2 2280	PCIe NVMe, PCIe 3.0 x4	-

RAID

RAID 0/1 support for M.2 SSDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical**
- None
- Card Reader**
- No card reader

Multi-Media

- Audio Chip**
- High Definition (HD) Audio, Realtek® ALC233VB codec
- Speakers**
- Single speaker, 1W x1

Power Supply

Power Supply

Power	Type	Efficiency
65W	Adapter	88%
No power supply	-	-

DESIGN

Input Device

- Keyboard^{**}**
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse^{**}**
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
 - No mouse

Mechanical

Form Factor

Nano (0.35L)

Dimensions (WxDxH)^[1]

179 x 88 x 22 mm (7.05 x 3.46 x 0.87 inches)

Packaging Dimensions (WxDxH)

490 x 125 x 255 mm (19.29 x 4.92 x 10.04 inches)

Weight^[2]

Around 0.505 kg (1.11 lbs)

Packaging Weight

0.83 kg (1.83 lbs)

Case Color

Iron grey (top cover), black (mid bezel), red (bottom cover)

Bays

No bays

Expansion Slots

Three M.2 slots (one for WLAN, two for SSD)

Stand

No stand

IO Box

No IO box

Mounting^{}**

- VESA mount bracket kit with adapter holder, supports VESA mount 75mm and 100mm
- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- DIN rail mount bracket kit
- None

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet^{}**

- Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth^{}**

- 802.11ac 1x1 Wi-Fi® + Bluetooth 5.0, M.2 card
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports

- 1x USB-C 3.2 Gen 2 (support display function and power-in [20V and >45W])
- 2x USB 3.2 Gen 2
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- USB-C to DP dongle
- USB-C to HDMI® dongle
- USB-C to VGA dongle
- DP to VGA dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- ErP Lot 3
- REACH
- RoHS compliant
- TCO Certified 8.0
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

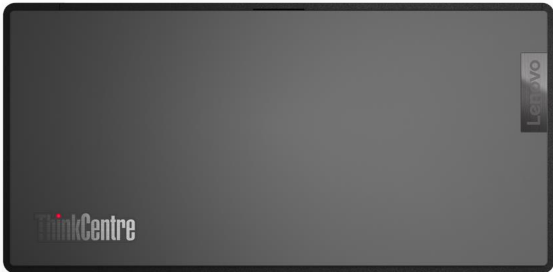
- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

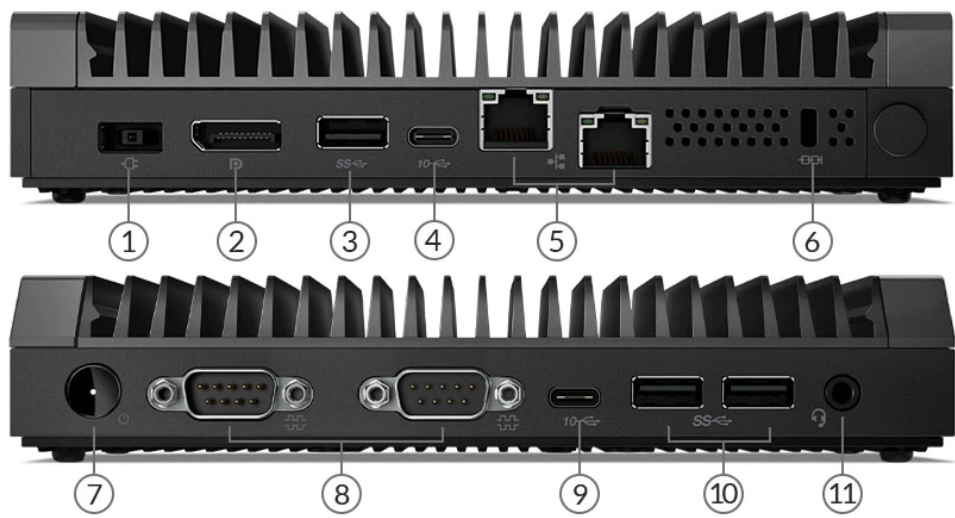
MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.

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OVERVIEW



1. Power connector	7. Power button
2. HDMI (for 8145UE models) / DP (for others)	8. 2x Serial (RS232)
3. USB 3.2 Gen 2 (USB 2.0 for Celeron models)	9. USB-C 3.2 Gen 2
4. USB-C 3.2 Gen 2 (display and power-in)	10. 2x USB 3.2 Gen 2
5. 2x Ethernet (1x Ethernet for Celeron)	11. Headphone / microphone combo jack (3.5mm)
6. Kensington Security Slot	

PERFORMANCE

Processor

Processor Family

Intel® Celeron® or 8th Generation Intel Core™ i3 / i5 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 4205U	2	2	1.8GHz	-	2MB	DDR4-2133	Intel UHD Graphics
Celeron 4305UE	2	2	2.0GHz	-	2MB	DDR4-2133	Intel UHD Graphics 610
Core i3-8145U	2	4	2.1GHz	3.9GHz[2]	4MB	DDR4-2400	Intel UHD Graphics
Core i3-8145UE	2	4	2.2GHz	3.9GHz[3]	4MB	DDR4-2400	Intel UHD Graphics 620
Core i5-8365U	4	8	1.6GHz	4.1GHz[4]	6MB	DDR4-2400	Intel UHD Graphics

Notes:

[1] Celeron 4205U, Core i3-8145U and Core i5-8365U have been already end of life and not available any more.

[2], [3], [4] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- FreeDOS
- Ubuntu Linux[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics 610	Integrated	Shared	1x DP, 1 USB-C®	4096x2304@60Hz(DP); 4096x2304@60Hz(USB-C)	DirectX® 12
Intel UHD Graphics 620	Integrated	Shared	1x HDMI®, 1 USB-C	4096x2304@60Hz(USB-C)	DirectX 12
Intel UHD graphics	Integrated	Shared	1x DP, 1x USB-C	4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C)	DirectX 12

Notes:

[1] The Intel UHD Graphics which is integrated in Celeron 4205U, Core i3-8145U, or Core i5-8365U is not available any more, because those CPUs have been already end of life.

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (DisplayPort™ and USB-C, 8145UE models support HDMI and USB-C)

Chipset

Chipset
Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- 4GB soldered memory, not upgradable
- 8GB soldered memory, not upgradable

Memory Slots
Memory soldered to systemboard, no slots

Memory Type^[2]
DDR4-2666

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 2666MHz, but runs at 2133MHz or 2400MHz depending on the memory support capability of processor.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 SSD up to 1TB each
- Optional Intel Optane™ Memory Integrated with SSD, M.2

Storage Type^{***}

Disk Type	Interface	Security
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	Opal
Intel Optane Memory with Solid State Storage, M.2 2280	PCIe NVMe, PCIe 3.0 x4	-

RAID

RAID 0/1 support for M.2 SSDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
None

Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC233VB codec

Speakers
Single speaker, 1W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features	Dimensions
65W	Adapter	88%	100-240 VAC, wide temperature	129 x 53 x 30 mm, 1800 mm cable
65W	Adapter	88%	-	-
No power supply	-	-	-	-

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Nano (0.55L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Nano only	179 x 88 x 34.5 mm (7.05 x 3.46 x 1.36 inches)
Nano with IO box	179 x 88 x 61.3 mm (7.05 x 3.46 x 2.41 inches)

Packaging Dimensions (WxDxH)

490 x 125 x 255 mm (19.29 x 4.92 x 10.04 inches)

Weight^[2]

Models	Weight
Nano only	Around 0.72 kg (1.58 lbs)
Nano with IO box	Around 1.2 kg (2.65 lbs)

Packaging Weight

0.83 kg (1.83 lbs)

Case Color

Iron grey (top cover), black (mid bezel), black (bottom cover)

Bays

No bays

Expansion Slots

Three M.2 slots (one for WLAN, two for SSD)

Stand

No stand

IO Box

- IO box: 2x serial (RS232 / RS422 / RS485, SDK selectable) and 2x Ethernet (RJ-45, Realtek RTL8153B, gigabit Ethernet) on front, 1x DIO (4DI / 4DO), 1x USB-C (connect to Nano) and 1x DC-in connector (9V - 36V) on rear
- No IO box

Mounting**

- VESA mount bracket kit with adapter holder, supports VESA mount 75mm and 100mm
- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- DIN rail mount bracket kit
- None

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet**

- Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN
- Two Gigabit Ethernet, Intel Ethernet Connection I219-LM and Realtek RTL8111H, 2x RJ-45, supports Wake-on-LAN
- Two Gigabit Ethernet, Realtek RTL8111K and RTL8111H, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth**

- 802.11ac 1x1 Wi-Fi® + Bluetooth 5.0, M.2 card
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

WWAN

- Intel XMM 7360, 4G CAT9, M.2 Card
- No support

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 2x serial (RS-232)

Optional Front Ports

- 2x gigabit Ethernet (RJ-45) on SE30 IO box
- 2x serial (RS232 / RS422 / RS485, SDK selectable) on SE30 IO box

Rear Ports

- 1x USB-C 3.2 Gen 2 (support display function and power-in [20V and >45W])
- 1x USB 2.0 (for Celeron models)
- 1x USB 3.2 Gen 2 (for i3 / i5 models only)
- 1x HDMI (for 8145UE models)
- 1x DisplayPort (for 4205U / 4305UE / 8145U / 8365U models)
- 1x Ethernet (RJ-45, for Celeron models)
- 2x Ethernet (RJ-45, for i3 / i5 models)

Optional Rear Ports

- 1x DC-in 3pin Phoenix connector on SE30 IO box
- 1x DIO (4DI / 4DO) on SE30 IO box

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- USB-C to DP dongle
- USB-C to HDMI dongle
- USB-C to VGA dongle
- DP to VGA dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating:
 - From 0°C (32°F) to 50°C (122°F): for the machine types of 11AK, 11AL, 11AM, 11AS, 11J3, 11J4, 11J7, and 11J8
 - From 0°C (32°F) to 35°C (95°F): for the machine types of 11AH and 11AJ
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[3]
- ErP Lot 3
- REACH
- RoHS compliant
- TCO Certified 8.0
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] Energy Star 8.0 and EPEAT are not available for the models with I/O box, No OS, or Free DOS.

[3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test^[1]

- MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)
- None

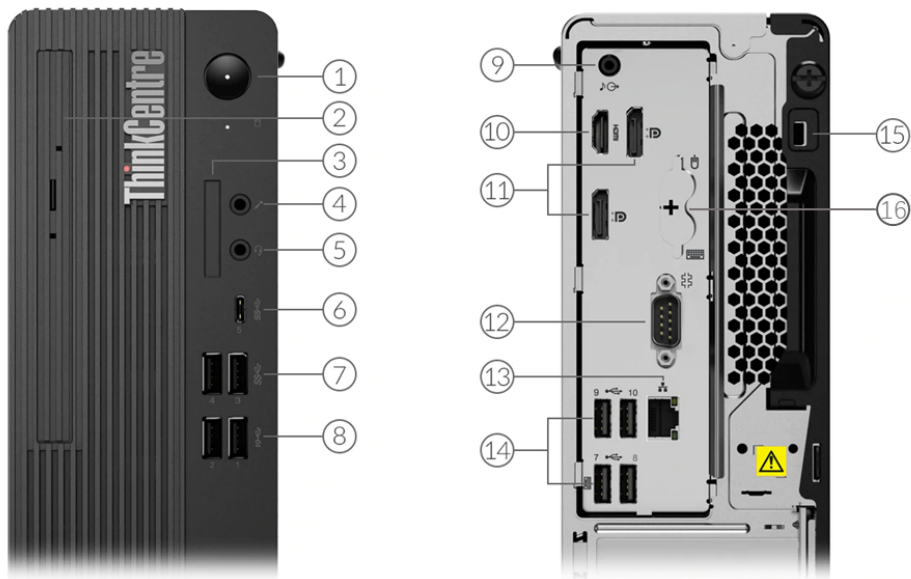
Notes:

[1] Not for the models with I/O box.

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power button	9. Line-out (3.5mm)
2. Optical drive *	10. HDMI
3. Card reader *	11. 2x DisplayPort
4. Microphone (3.5mm)	12. Serial
5. Headphone / microphone combo jack (3.5mm)	13. Ethernet (RJ-45)
6. USB-C 3.2 Gen 1	14. 4x USB 2.0
7. 2x USB 3.2 Gen 1	15. Kensington Security Slot
8. 2x USB 3.2 Gen 2	16. 2x PS/2 ports (keyboard / mouse) *

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400F	6	12	2.9GHz	4.3GHz ^[5]	12MB	DDR4-2666	-
Core i5-10500	6	12	3.1GHz	4.5GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10505	6	12	3.2GHz	4.6GHz ^[7]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[8]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[9]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i7-10700F	8	16	2.9GHz	4.8GHz ^[10]	16MB	DDR4-2933	-
Core i9-10900	10	20	2.8GHz	5.2GHz ^[11]	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900F	10	20	2.8GHz	5.2GHz ^[12]	20MB	DDR4-2933	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 610	Integrated	Shared	1x HDMI®, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x HDMI, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce GT 730	Discrete	2GB GDDR5	1x VGA, 1x HDMI 1.4	2048x1536@75Hz(VGA), 3840x2160@30Hz(HDMI)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x DP 1.4	4096x2160@60Hz(HDMI), 3840x2160@60Hz(DP)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 3 independent displays via onboard ports (HDMI and 2x DisplayPort™), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel H470 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type^{**}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-

M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

RAID
No support

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical****
- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
 - DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
 - None

- Card Reader**
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers
Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	-

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
 - No mouse

Mechanical

Form Factor
SFF (8.2L)

Dimensions (WxDxH)^[1]
92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)
195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

7.5 kg (16.75 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, low-profile (length < 155mm, height < 68mm)
- One PCIe 3.0 x1, low-profile (length < 155mm, height < 68mm)
- Two M.2 slots (one for WLAN, one for SSD)
- Two dummy slots, only brackets for optional port extension

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- No optional Ethernet

WLAN + Bluetooth**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader

- None

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI
- 2x DisplayPort
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports^{***}

- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable**^{***}

- HDMI to HDMI cable
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password

- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[3]
- (Optional) EPEAT Silver Registered^[4]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] ENERGY STAR 8.0 and EPEAT are only available for MT 11DB/11DC.

[3], [4] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

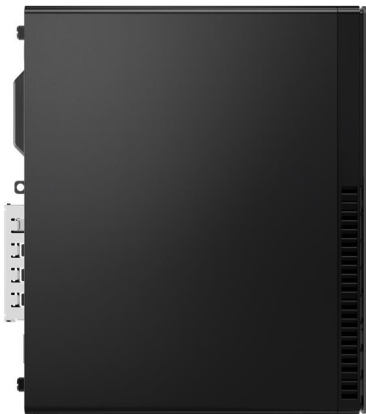
Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

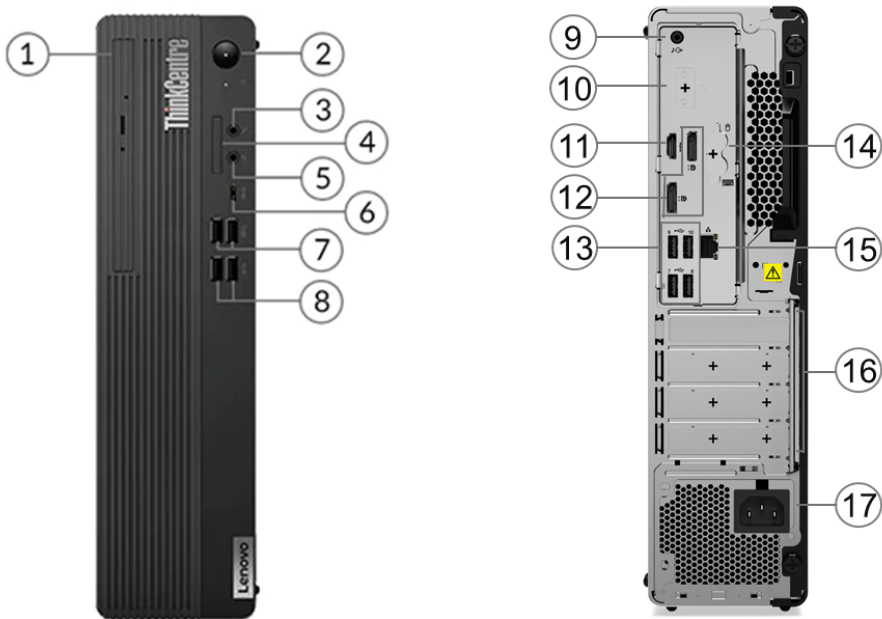
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Optical drive *	10. Flex IO *
2. Power button	11. HDMI 2.1 TMDS
3. Microphone (3.5mm)	12. 2x DisplayPort 1.4
4. Card reader *	13. 4x USB 2.0
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 1	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Optional ports on expansion cards *
8. 2x USB 3.2 Gen 2	17. Power connector
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold G7400	2	4	3.7GHz	-	6MB	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[4]	18MB	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[5]	18MB	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[6]	18MB	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[7]	25MB	Intel UHD Graphics 770
Core i7-12700F	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[8]	25MB	-
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[9]	30MB	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[10]	30MB	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
----------	------	--------	-----------	----------------	--------------

Intel UHD graphics 710	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-3200

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal

M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] The max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings.

Removable Storage

- Optical****
- DVD-ROM, SATA connector, slim (9.0mm)
 - DVD burner (DVD±RW), SATA connector, slim (9.0mm)
 - None

- Card Reader**
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - Lenovo Mouse (PS/2 connector), black (only available via special bid)
 - Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
 - No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Case Color

Black

Bays^[3]

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- Two PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet^{*}**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland RTL8168H, 1x RJ-45, PCIe x1
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth^{}**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1], [2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{***}

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable**^{***}

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY**System Management****System Management****

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE**Warranty^[1]****Base Warranty****

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Operating Environment****Temperature**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3

- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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intel



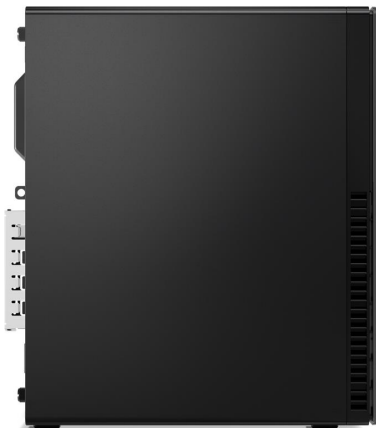
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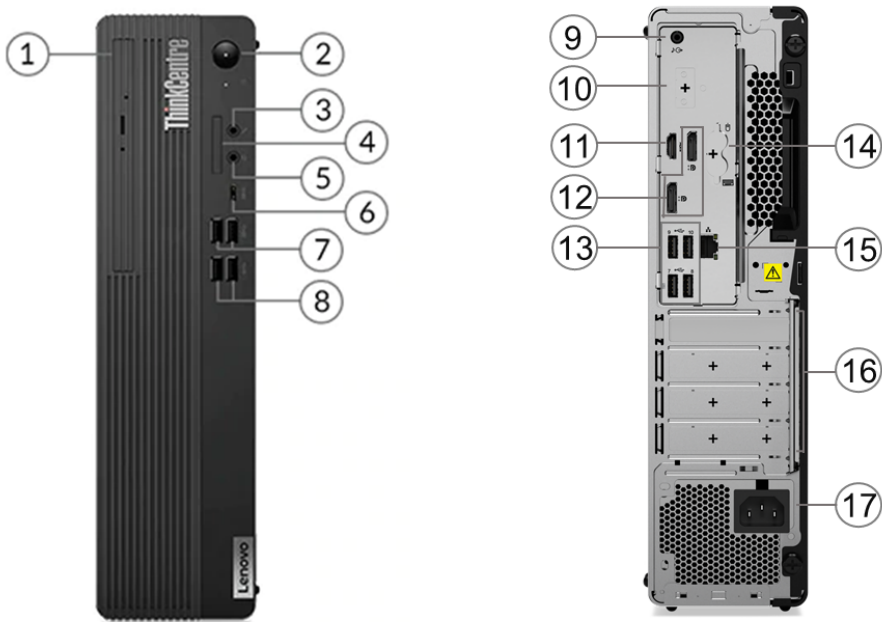


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OVERVIEW



1. Optical drive *	10. Flex IO *
2. Power button	11. HDMI 2.1 TMDS
3. Microphone (3.5mm)	12. 2x DisplayPort 1.4
4. Card reader *	13. 4x USB 2.0
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 1	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Optional ports on expansion cards *
8. 2x USB 3.2 Gen 2	17. Power connector
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	Intel UHD Graphics 730
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	Intel UHD Graphics 770

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux[1]
- Windows® 10 IoT Enterprise LTSC 2021[2]
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

[2] Windows 10 IoT Enterprise LTSC 2021 is special bid only.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO)

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-3200

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Memory Protection

Non-ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] 2TB SSD is special bid only.

Removable Storage

Optical^{**}

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
-------	------	------------	--------------

180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

Around 7.6 kg (16.76 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay^[3]
- 1x 3.5" disk bay^[4]
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- Two PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight

for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD.

[4] 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth[®]**

- Realtek Wi-Fi[®] 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1], [2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI 2.1 TMDS
- 2x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{***}

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4[®] 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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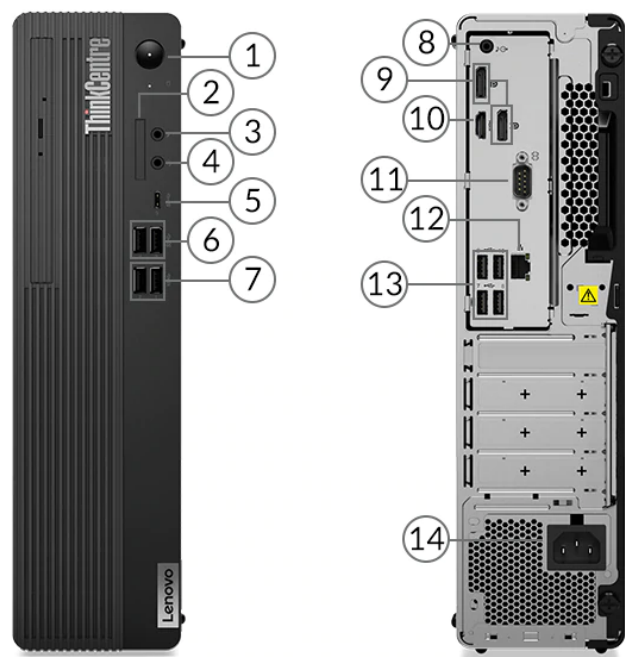


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OVERVIEW



1. Power button	8. Line-out (3.5mm)
2. Card reader	9. 2x DisplayPort 1.4
3. Microphone (3.5mm)	10. HDMI 1.4b
4. Headphone / microphone combo jack (3.5mm)	11. Serial
5. USB-C 3.2 Gen 1	12. Ethernet (RJ-45)
6. 2x USB 3.2 Gen 1	13. 4x USB 2.0 (Note 1)
7. 2x USB 3.2 Gen 2	14. Power connector

- Notes:
- 4 rear USB ports are USB 3.2 Gen 1 for selected Brazil models only
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

AMD Athlon™ or AMD Ryzen™ 3 / 5 / 7 / 9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Athlon Gold PRO 3150G	4	4	3.5GHz	3.9GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon™ Graphics
AMD Athlon Silver 3050GE	2	4	3.4GHz	3.4GHz	1MB L2 / 4MB L3	DDR4-2666	AMD Radeon Graphics
AMD Ryzen 3 3200G	4	4	3.6GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 8 Graphics
AMD Ryzen 3 4300G	4	8	3.8GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 5300G	4	8	4.0GHz	4.2GHz	2MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 PRO 4350G	4	8	3.8GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 PRO 5350G	4	8	4.0GHz	4.2GHz	2MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 4600G	6	12	3.7GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 5600G	6	12	3.9GHz	4.4GHz	3MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 3350G	4	8	3.6GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 11 Graphics
AMD Ryzen 5 PRO 3400G	4	8	3.7GHz	4.2GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 11 Graphics
AMD Ryzen 5 PRO 3600	6	12	3.6GHz	4.2GHz	3MB L2 / 32MB L3	DDR4-3200	-
AMD Ryzen 5 PRO 4650G	6	12	3.7GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 5650G	6	12	3.9GHz	4.4GHz	3MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 4700G	8	16	3.6GHz	4.4GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 5700G	8	16	3.8GHz	4.6GHz	4MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 3700	8	16	3.6GHz	4.4GHz	4MB L2 / 32MB L3	DDR4-3200	-
AMD Ryzen 7 PRO 4750G	8	16	3.6GHz	4.4GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 5750G	8	16	3.8GHz	4.6GHz	4MB L2 / 16MB L3	DDR4 3200	AMD Radeon Graphics
AMD Ryzen 9 PRO 3900	12	24	3.1GHz	4.3GHz	6MB L2 / 64MB L3	DDR4-3200	-

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64

- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, Human Presence Detection, etc.

Graphics

Graphics**[1][2]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon Graphics	Integrated	Shared	2x DisplayPort™ 1.4, 1x HDMI® 1.4	4096x2160@60Hz(DP), 4096x2160@24Hz(HDMI)	DirectX® 12
AMD Radeon Vega 11 Graphics	Integrated	Shared	2x DisplayPort 1.4, 1x HDMI 1.4	4096x2160@60Hz(DP), 4096x2160@24Hz(HDMI)	DirectX 12
AMD Radeon Vega 8 Graphics	Integrated	Shared	2x DisplayPort 1.4, 1x HDMI 1.4	4096x2160@60Hz(DP), 4096x2160@24Hz(HDMI)	DirectX 12
AMD Radeon 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x DP 1.4	4096x2160@60Hz(HDMI), 3840x2160@60Hz(DP)	DirectX 12
AMD Radeon RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

[2] AMD Radeon 520 is not available for MT 11R7 / 11R8 / 11R9 / 11RA.

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (HDMI and 2x DisplayPort), more displays support via discrete graphics

Chipset

Chipset

AMD PRO 565 chipset

Memory[1]

Max Memory[2]

Up to 128GB DDR4-3200

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type**[3]

- DDR4-1866
- DDR4-2133
- DDR4-2400
- DDR4-2666
- DDR4-3200

Notes:

- [1] Recommend to choose the models with more than 4GB for better performance and experience.
- [2] The max memory is based on the test results with current Lenovo® memory offerings.
- [3] Installed memory is actually 3200MHz, but may run at 1866MHz, 2133MHz, 2400MHz or 2666MHz depending on the memory support capability of processor.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value ^[2]	-	Opal 2.0
M.2 2280 SSD ^[3]	PCIe NVMe, PCIe x4	-	Opal 2.0

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
- [2] M.2 PCIe Gen 4 SSD in the M.2 PCIe Gen 3 slot is downgraded to PCIe Gen 3 performance.
- [3] PCIe x4 SSD may be PCIe 3.0 x4 or PCIe 4.0 x4 as substitution. M.2 PCIe Gen 4 SSD in the M.2 PCIe Gen 3 slot is downgraded to PCIe Gen 3 performance.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

- No speakers
- Single speaker, 1W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, low-profile (length < 155mm, height < 68mm)
- One PCIe 3.0 x1, low-profile (length < 155mm, height < 68mm)
- Two M.2 slots (one for WLAN, one for SSD)
- Two dummy slots, only brackets for optional port extension

EOU

EOU design for chassis open, M.2 SSD, HDD, ODD, memory, and PCIe extension card

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network^[1]

Onboard Ethernet**

- Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**^[2]

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland RTL8111FP, 1x RJ-45, PCIe x1

- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Intel Wi-Fi 6 AX200, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]
- No WLAN and Bluetooth

Notes:

^[1] This system does not support Power Over Ethernet (PoE). If the system is used in a PoE environment, then a Network Isolator is required to prevent possible damage to the system, PoE equipment, or both.

^[2] RTL8111FP is not available for AP countries.

^[3], ^[4], ^[5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Front Ports**

- 1x USB-C® 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader
- None

Rear Ports^[2]

- 4x USB 2.0^[3]
- 1x HDMI 1.4b
- 2x DisplayPort 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports***

- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

^[2] For video ports on discrete graphics, please see graphics section.

^[3] 4 rear USB ports are USB 3.2 Gen 1 for selected Brazil models only.

Monitor Cable**Monitor Cable*****

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle

- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- DASH 1.2
- Non-DASH

Notes:

[1] DASH 1.2 is an optional feature for the selected MTs, MT 11W1 / 11W2 / 11W3 / 11W4 do not support DASH.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[3]
- (Optional) EPEAT Silver Registered^[4]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] ENERGY STAR 8.0 and EPEAT are only available for selected MTs.

[3], [4] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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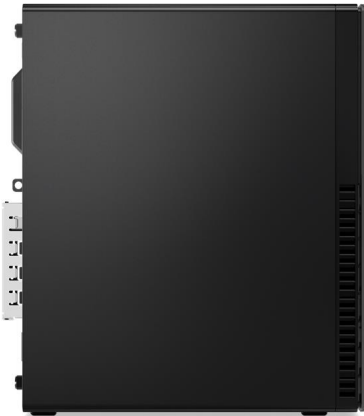
AMD



AMD



AMD



AMD

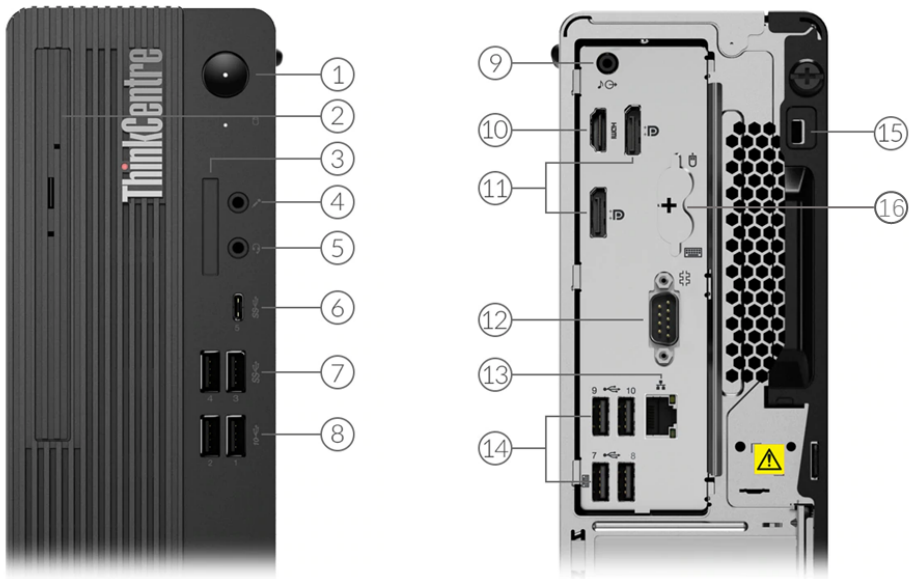


AMD



AMD

OVERVIEW



1. Power button	9. Line-out (3.5mm)
2. Optical drive *	10. HDMI
3. Card reader *	11. 2x DisplayPort
4. Microphone (3.5mm)	12. Serial
5. Headphone / microphone combo jack (3.5mm)	13. Ethernet (RJ-45)
6. USB-C 3.2 Gen 1	14. 4x USB 3.2 Gen 1
7. 2x USB 3.2 Gen 1	15. Kensington Security Slot
8. 2x USB 3.2 Gen 2	16. 2x PS/2 ports (keyboard / mouse) *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400F	6	12	2.9GHz	4.3GHz ^[5]	12MB	DDR4-2666	-
Core i5-10500	6	12	3.1GHz	4.5GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[7]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[8]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i7-10700F	8	16	2.9GHz	4.8GHz ^[9]	16MB	DDR4-2933	-
Core i9-10900	10	20	2.8GHz	5.2GHz ^[10]	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900F	10	20	2.8GHz	5.2GHz ^[11]	20MB	DDR4-2933	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise^[2]
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Special bid only.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
----------	------	--------	-----------	----------------	--------------

Intel UHD graphics 610	Integrated	Shared	1x HDMI®, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x HDMI, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce GT 730	Discrete	2GB GDDR5	1x VGA, 1x HDMI 1.4	2048x1536@75Hz(VGA), 3840x2160@30Hz(HDMI)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x DP 1.4	4096x2160@60Hz(HDMI), 3840x2160@60Hz(DP)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (HDMI and 2x DisplayPort™), more displays support via discrete graphics

Chipset

Chipset

Intel Q470 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type^{**}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical**
- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
 - DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
 - None

- Card Reader
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	-

DESIGN

Input Device

- Keyboard**
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse**
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
 - No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

7.6 kg (16.76 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, low-profile (length < 155mm, height < 68mm)
- One PCIe 3.0 x1, low-profile (length < 155mm, height < 68mm)
- Two M.2 slots (one for WLAN, one for SSD)
- Two dummy slots, only brackets for optional port extension

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader
- None

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI
- 2x DisplayPort
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

- 1x serial (9-pin)

Optional Rear Ports***

- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable*****

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro with Intel AMT 14^[2]
- Non-vPro

Notes:

[1] Require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection.

[2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise

- (Optional) TÜV Rheinland Ultra Low Noise

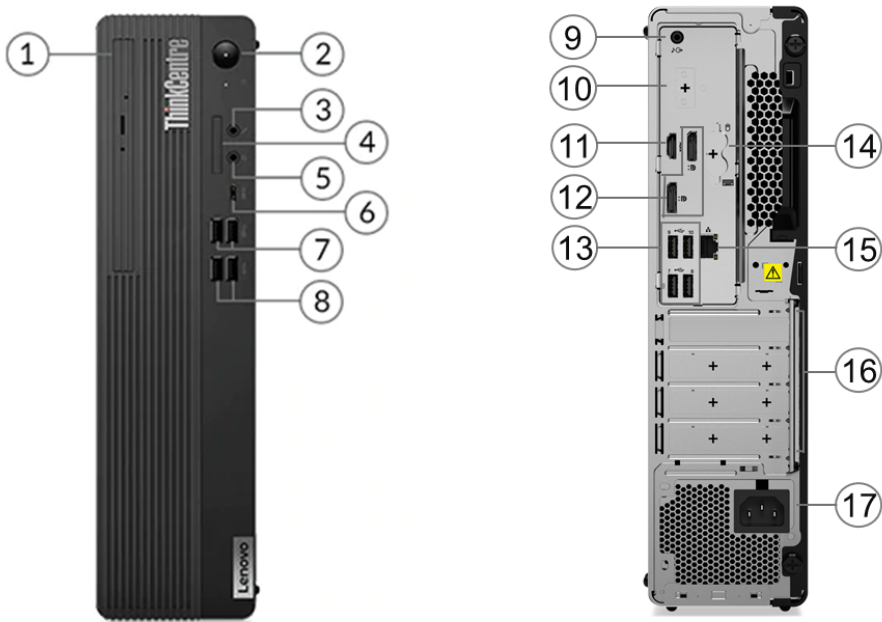
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Optical drive *	10. Flex IO *
2. Power button	11. HDMI 2.1 TMDS
3. Microphone (3.5mm)	12. 2x DisplayPort 1.4
4. Card reader *	13. 4x USB 3.2 Gen 1
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 2	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Optional ports on expansion cards *
8. 2x USB 3.2 Gen 2	17. Power connector
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold G7400	2	4	3.7GHz	-	6MB	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[5]	18MB	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[6]	25MB	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[7]	30MB	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[8]	30MB	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12

Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type^[2]

- DDR5-3600
- DDR5-4000
- DDR5-4400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 4800MHz, but may run at 3600MHz, 4000MHz, or 4400MHz depending on the memory support capability of processor.

Storage

Storage Support^{[1][2]}

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB each

Storage Type

Disk Type	Interface	RPM	Security
-----------	-----------	-----	----------

2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID
RAID 0/1 support (RAID preset only available via special bid models)

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
[2] The max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings.

Removable Storage

- Optical****
- DVD-ROM, SATA connector, slim (9.0mm)
 - DVD burner (DVD±RW), SATA connector, slim (9.0mm)
 - None

- Card Reader**
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

- Audio Chip**
High Definition (HD) Audio, Realtek® ALC897Q-CG codec
- Speakers**
Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Keyboard (PS/2 connector), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - Lenovo Mouse (PS/2 connector), black (only available via special bid)
 - Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
 - No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Starting at 3.824 kg (8.43 lbs)

Packaging Weight

7.6 kg (16.76 lbs)

Case Color

Black

Bays^[3]

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal), low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Three M.2 slots (one for WLAN, two for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]

- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[5]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2], [3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{***}

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable^{***}

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management**

- Intel vPro® Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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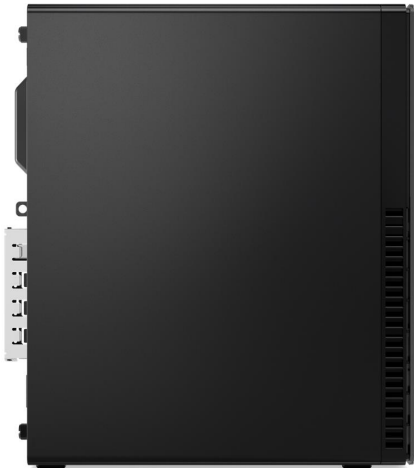
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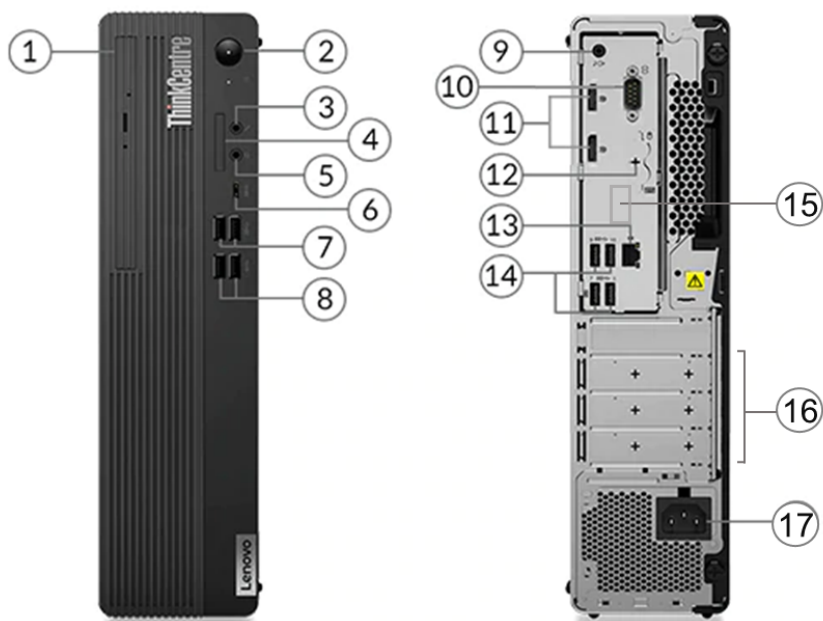


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OVERVIEW



1. Optical drive *	10. Serial
2. Power button	11. 2x DisplayPort
3. Microphone (3.5mm)	12. 2x PS/2 ports (keyboard / mouse) *
4. Card reader *	13. Ethernet (RJ-45)
5. Headphone / microphone combo jack (3.5mm)	14. 4x USB 3.2 Gen 1
6. USB-C 3.2 Gen 1	15. Optional Video Port (HDMI / DP / USB-C) *
7. 2x USB 3.2 Gen 1	16. Optional ports on expansion cards *
8. 2x USB 3.2 Gen 2	17. Power connector
9. Line-out (3.5mm)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400F	6	12	2.9GHz	4.3GHz ^[5]	12MB	DDR4-2666	-
Core i5-10500	6	12	3.1GHz	4.5GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[7]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[8]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i7-10700F	8	16	2.9GHz	4.8GHz ^[9]	16MB	DDR4-2933	-
Core i9-10900	10	20	2.8GHz	5.2GHz ^[10]	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900F	10	20	2.8GHz	5.2GHz ^[11]	20MB	DDR4-2933	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key
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					Features
Intel UHD graphics 610	Integrated	Shared	2x DP, 1x optional video port (HDMI® / 3rd DP / USB-C®)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	2x DP, 1x optional video port (HDMI / 3rd DP / USB-C)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C)	DirectX 12
AMD Radeon™ 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce GT 730	Discrete	2GB GDDR5	1x VGA, 1x HDMI 1.4	2048x1536@75Hz(VGA), 3840x2160@30Hz(HDMI)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x DP 1.4	4096x2160@60Hz(HDMI), 3840x2160@60Hz(DP)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (2x DisplayPort™ and 1x optional port [HDMI / 3rd DP / USB-C]), more displays support via discrete graphics

Chipset

Chipset

Intel Q470 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type^{**}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB each
- M.2 SSD up to 2TB each
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal

Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-
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RAID

RAID 0/1 support (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

7.6 kg (16.76 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, low-profile (length < 155mm, height < 68mm)
- One PCIe 3.0 x4, low-profile (length < 155mm, height < 68mm)
- One PCIe 3.0 x1, low-profile (length < 155mm, height < 68mm)
- One dummy slot, only bracket for optional port extension
- Three M.2 slots (one for WLAN, two for SSD)

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader

- None

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 2x DisplayPort
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports^{***}

- Optional video port (one of HDMI / DisplayPort / USB-C 3.2 Gen 1 with DisplayPort function)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable**^{***}

- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control

- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro with Intel AMT 14^[2]
- Non-vPro

Notes:

[1] Require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection.

[2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[3]
- (Optional) EPEAT Silver Registered^[4]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] ENERGY STAR 8.0 and EPEAT are only available for MT 11D1/11D2.

[3], [4] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

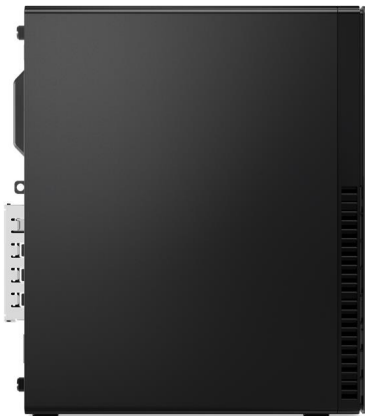
Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

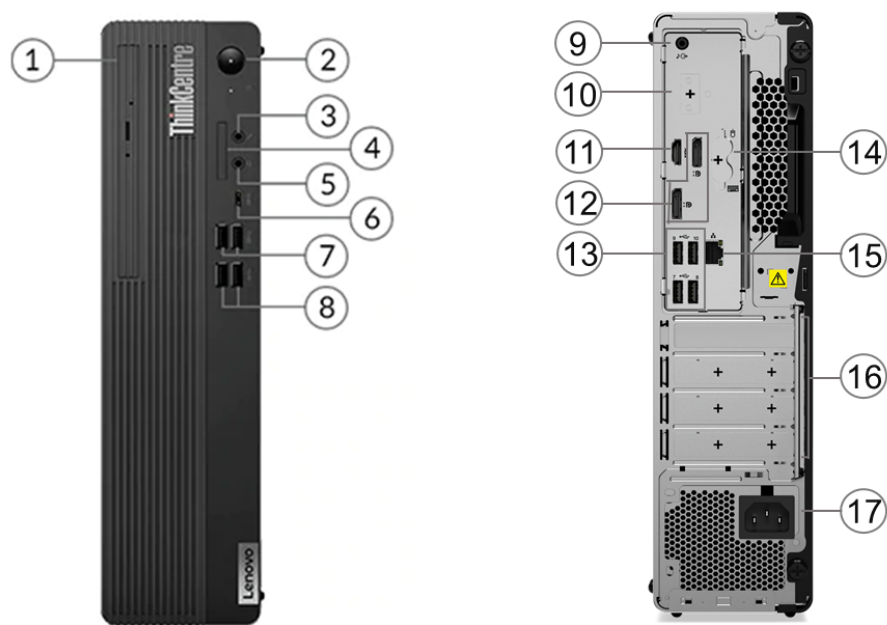
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Optical drive *	10. Flex IO *
2. Power button	11. HDMI 2.1 TMDS
3. Microphone (3.5mm)	12. 2x DisplayPort 1.4
4. Card reader *	13. 4x USB 3.2 Gen 1
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 2	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Optional ports on expansion cards *
8. 2x USB 3.2 Gen 2	17. Power connector
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold G7400	2	4	3.7GHz	-	6MB	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[4]	18MB	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[5]	18MB	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[6]	18MB	Intel UHD Graphics 770
Core i5-12600K	10 (6 P-core + 4 E-core)	16	P-core 3.7GHz / E-core 2.8GHz	P-core 4.9GHz / E-core 3.6GHz ^[7]	20MB	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[8]	25MB	Intel UHD Graphics 770
Core i7-12700F	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[9]	25MB	-
Core i7-12700K	12 (8 P-core + 4 E-core)	20	P-core 3.6GHz / E-core 2.7GHz	Max Turbo up to 5.0GHz / P-core 4.9GHz / E-core 3.8GHz ^[10]	25MB	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[11]	30MB	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[12]	30MB	-
Core i9-12900K	16 (8 P-core + 8 E-core)	24	P-core 3.2GHz / E-core 2.4GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 3.9GHz ^[13]	30MB	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID,

Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type[2]

- DDR5-3600
- DDR5-4000
- DDR5-4400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 4800MHz, but may run at 3600MHz, 4000MHz, or 4400MHz depending on the memory support capability of processor.

Storage

Storage Support^{[1][2]}

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support (RAID preset only available via special bid models)

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
- [2] The max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings.

Removable Storage

Optical^{**}

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard^{**}

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black

- Lenovo Keyboard (PS/2 connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Mouse (PS/2 connector), black (only available via special bid)
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical**Form Factor**

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

7.6 kg (16.76 lbs)

Case Color

Black

Bays^[3]

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal), low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- Two PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Three M.2 slots (one for WLAN, two for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY**Network****Onboard Ethernet**

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet***

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland RTL8168H, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[5]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2], [3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Front Ports**

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports***

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of

warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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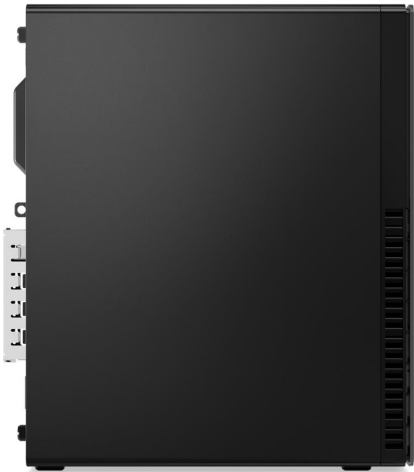
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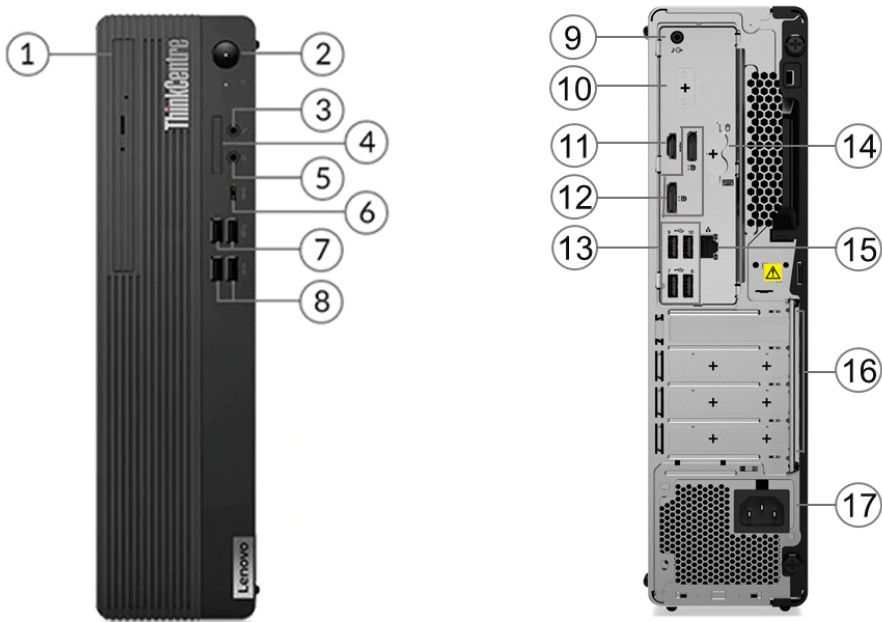


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OVERVIEW



1. Optical drive *	10. Flex IO *
2. Power button	11. HDMI 2.1 TMDS
3. Microphone (3.5mm)	12. 2x DisplayPort 1.4
4. Card reader *	13. 4x USB 3.2 Gen 1
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 2	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Optional ports on expansion cards *
8. 2x USB 3.2 Gen 2	17. Power connector
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	Intel UHD Graphics 730
Core i5-13400F	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	-
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	Intel UHD Graphics 770
Core i7-13700F	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	-
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	Intel UHD Graphics 770
Core i9-13900F	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	-

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD graphics	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex	DirectX 12

770			(VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type^[2]

- DDR5-3600
- DDR5-4000
- DDR5-4400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 5600MHz, but may run at 3600MHz, 4000MHz, or 4400MHz depending on the memory support capability of processor.

Storage

Storage Support^[1]

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

SFF (8.2L)

Dimensions (WxDxH)^[1]

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

7.6 kg (16.76 lbs)

Case Color

Black

Bays^[3]

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal), low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Three M.2 slots (one for WLAN, two for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth[®]**

- Realtek Wi-Fi[®] 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1], [2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 2x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{*}**

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 1x 2nd serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable***

- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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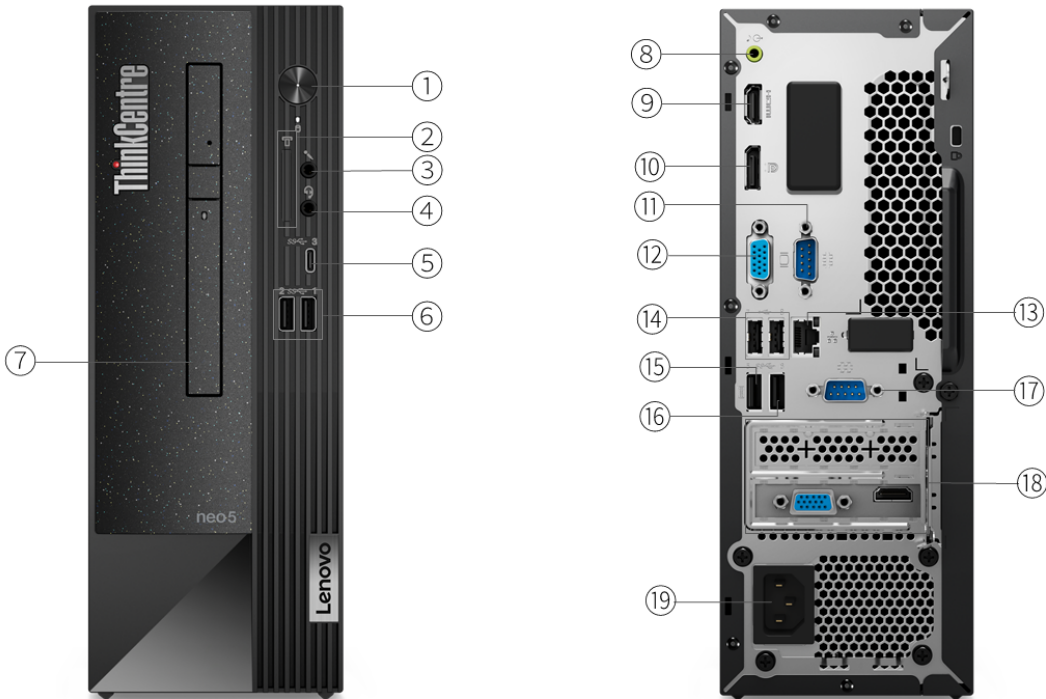


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OVERVIEW



1. Power button	11. Serial *
2. Card reader *	12. VGA
3. Microphone (3.5mm)	13. Ethernet (RJ-45)
4. Headphone / microphone combo jack (3.5mm)	14. 2x USB 2.0
5. USB-C 3.2 Gen 1 (support data transfer and 5V@3A charging)	15. USB 3.2 Gen 1 (with Smart Power On feature)
6. 2x USB 3.2 Gen 1	16. USB 3.2 Gen 1
7. Optical drive *	17. Serial *
8. Line-out (3.5mm)	18. Optional ports on expansion cards *
9. HDMI	19. Power connector
10. DisplayPort 1.4	

- Notes:
- Items with * are only available on selected models
 - Onboard video ports are only available for the models with integrated graphics

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[4]	18MB	DDR4-3200	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[5]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[6]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[7]	25MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700F	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[8]	25MB	DDR4-3200	-
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[9]	30MB	DDR4-3200	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[10]	30MB	DDR4-3200	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x VGA, 1x DP 1.4 HBR2	3840×2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x VGA, 1x DP 1.4 HBR2	3840×2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x VGA, 1x DP 1.4 HBR2	3840×2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX 12
Intel Iris® Xe MAX 100 Graphics[2]	Discrete	2GB LPDDR4X	1x VGA, 1x HDMI 1.4	3840x2160@30Hz(HDMI), 1920x1080@60Hz(VGA)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

[2] Onboard video ports are only available for the models with integrated graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays via (HDMI, DP and VGA), more displays support via discrete graphics

Chipset

Chipset

Intel B660 chipset

Memory

Max Memory[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 UDIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support[1]

Up to two drives, 1x 2.5"/3.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- 3.5" HDD up to 2TB
- M.2 SSD up to 1TB

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 7-in-1 card reader (SD, SDHC, SDXC, MMC, MS, MS-Pro, XD)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

- No speakers
- Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	Autosensing
260W	Fixed	90%	Autosensing

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

SFF (7.4L)

Dimensions (WxDxH)^[1]

100 x 308 x 274.8 mm (3.9 x 12.1 x 10.8 inches)

Packaging Dimensions (WxDxH)

195 x 390 x 500 mm (7.67 x 15.35 x 19.69 inches)

Weight^[2]

Around 4.5 kg (9.9 lbs)

Packaging Weight

Around 6.35 kg (14 lbs)

Case Color

Raven black

Bays

- 1x 2.5"/3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, low-profile (length < 167.65mm, height < 68.90mm)
- One PCIe 3.0 x1, low-profile (length < 167.65mm, height < 68.90mm)
- Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand

- Vertical stand
- No stand

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth[®]**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi[®] + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro[®] technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C[®] 3.2 Gen 1 (support data transfer and 5V@3A charging)
- 2x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^{[2][3]}

- 2x USB 2.0
- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x HDMI 2.1 TMDS
- 1x DisplayPort[™] 1.4
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{}**

- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 1x 2nd serial
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

[3] Onboard video ports are only available for the models with integrated graphics.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable
- HDMI to VGA dongle
- DP 1.2 to VGA dongle
- DP 1.2 to DVI-D dongle
- DP 1.2 to HDMI dongle
- DP 1.2 to dual DP 1.2 dongle
- No monitor cable
- Smart Cable (USB A-C)

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Secure Wipe
- Power-on password
- Supervisor password
- Hard disk password
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Intel BIOS guard

MANAGEABILITY

System Management

System Management

Non-vPro

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Operating Environment****Temperature**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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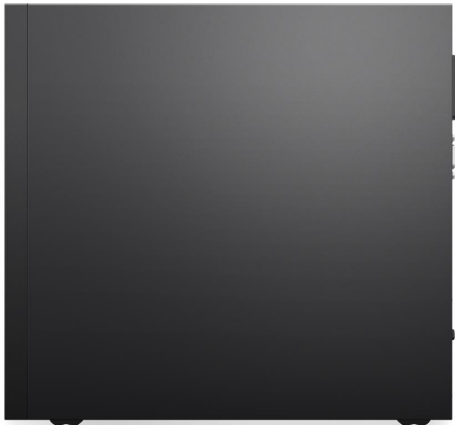
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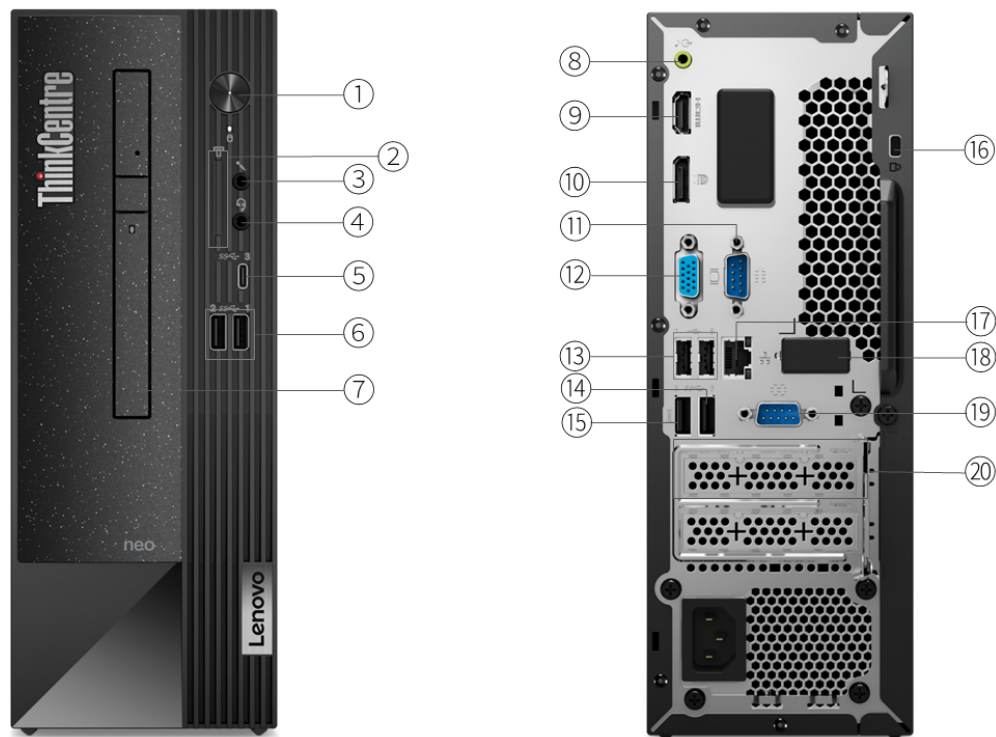


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OVERVIEW



1. Power button	11. Serial *
2. Card reader *	12. VGA
3. Microphone (3.5mm)	13. 2x USB 2.0
4. Headphone / microphone combo jack (3.5mm)	14. 1x USB 3.2 Gen 1
5. USB-C 3.2 Gen 1 (data transfer, 15W charging)	15. 1x USB 3.2 Gen 1 (smart power on)
6. 2x USB 3.2 Gen 1	16. Kensington Security Slot
7. Optical drive *	17. Ethernet (RJ-45)
8. Audio line-out (3.5mm)	18. Smart cable clip slots *
9. HDMI 2.1 TMDs	19. Serial *
10. DP 1.4	20. Optional ports *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th / 13th Generation Intel Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[5]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[6]	25MB	DDR4-3200	Intel UHD Graphics 770
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz ^[7]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz ^[8]	20MB	DDR4-3200	Intel UHD Graphics 730
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz ^[9]	24MB	DDR4-3200	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz ^[10]	24MB	DDR4-3200	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz ^[11]	30MB	DDR4-3200	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x VGA, 1x DP 1.4 HBR2	3840×2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x VGA, 1x DP 1.4 HBR2	3840×2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x VGA, 1x DP 1.4 HBR2	3840×2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support

Supports up to 3 independent displays via (HDMI, DP and VGA)

Chipset

Chipset

Intel B660 chipset

Memory

Max Memory[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 UDIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support[1]

Up to two drives, 1x 3.5" HDD + 1x M.2 SSD

- 3.5" HDD up to 2TB
- M.2 SSD up to 1TB

Storage Type***

Disk Type	Interface	RPM	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

ThinkCentre neo 50s Gen 4

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 7-in-1 card reader (SD, SDHC, SDXC, MMC, MS, MS-Pro, XD)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

- No speakers
- Single speaker, 1W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	Autosensing
260W	Fixed	90%	Autosensing

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse

- Lenovo Calliope Mouse (USB connector), black
- No mouse

Mechanical

Form Factor

SFF (7.4L)

Dimensions (WxDxH)^[1]

100 x 308 x 274.8 mm (3.9 x 12.1 x 10.8 inches)

Packaging Dimensions (WxDxH)

195 x 390 x 500 mm (7.7 x 15.4 x 19.7 inches)

Weight^[2]

Around 4.5 kg (9.9 lbs)

Packaging Weight

Around 6.35 kg (14 lbs)

Case Color

Raven black

Bays

- 1x 2.5"/3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, low-profile (length < 167.65mm, height < 68.90mm)
- One PCIe 3.0 x1, low-profile (length < 167.65mm, height < 68.90mm)
- Two M.2 slots (one for WLAN, one for SSD)

Stand

- Vertical stand

- No stand

Others

(Optional) Smart Cable (USB-A to USB-C®)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@3A charging)
- 2x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports***

- 2x USB 2.0
- 1x parallel
- 1x serial
- 1x 2nd serial
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)

- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Secure Wipe
- Power-on password
- Supervisor password
- Hard disk password
- Certificate based BIOS authentication
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Intel BIOS guard

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

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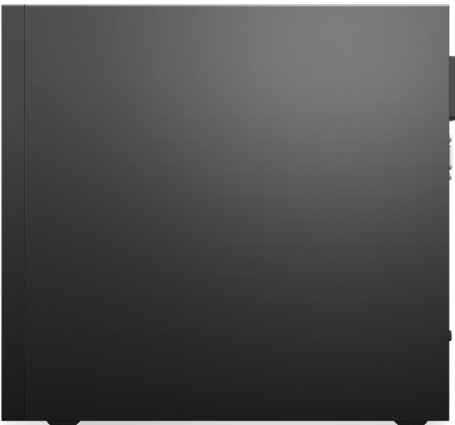
intel



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intel

OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. Power connector
2. USB 3.2 Gen 2	9. DisplayPort
3. USB-C 3.2 Gen 1	10. USB 3.2 Gen 1
4. Power button	11. HDMI
5. Kensington Security Slot	12. USB 2.0
6. Dummy port (no function) *	13. 1x USB 2.0 + 1x USB 3.2 Gen 1
7. Dummy port (no function) *	14. Ethernet (RJ-45)

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

10th Generation Intel® Core™ i3 / i5 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-1005G1	2	4	1.2GHz	3.4GHz ^[1]	4MB	DDR4-3200	Intel UHD Graphics
Core i5-1035G1	4	8	1.0GHz	3.6GHz ^[2]	6MB	DDR4-3200	Intel UHD Graphics

Notes:

[1], [2] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics	Integrated	Shared	1x HDMI®, 1x DP	4096x2304@24Hz(HDMI), 4096x2304@60Hz(DP)	DirectX® 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (DisplayPort™ and HDMI)

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 32GB DDR4-2666

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-2666

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 2TB
- M.2 SSD up to 512GB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2242 SSD	PCIe® NVMe®	-	-
M.2 2280 SSD	PCIe NVMe	-	Opal

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Multi-Media

Audio Chip

High Definition (HD) Audio

Speakers

- No speakers
- Single speaker

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard^{**}

- Lenovo Calliope Keyboard (USB connector), black
- USB Traditional Keyboard, black
- No keyboard

Mouse^{**}

- Lenovo Calliope Mouse (USB connector), black
- USB Calliope Mouse, black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

179 x 182.9 x 36.5 mm (7.05 x 7.20 x 1.4 inches)

Weight^[2]

Around 1.25 kg (2.76 lbs)

Case Color

Black

Expansion Slots

- One M.2 slot (for SSD)

- One M.2 slot (for WLAN)

EOU

- (Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal
- No support

Stand

- Vertical stand
- No stand

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth[®]**

- Realtek[®] RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi[®] + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX200, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB-C[®] 3.2 Gen 1
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 1
- 1x HDMI
- 1x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports

1x parallel (external USB to parallel dongle)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4[®] 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt[™] 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

No chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Mil-Spec Test

MIL-STD-810G military test passed

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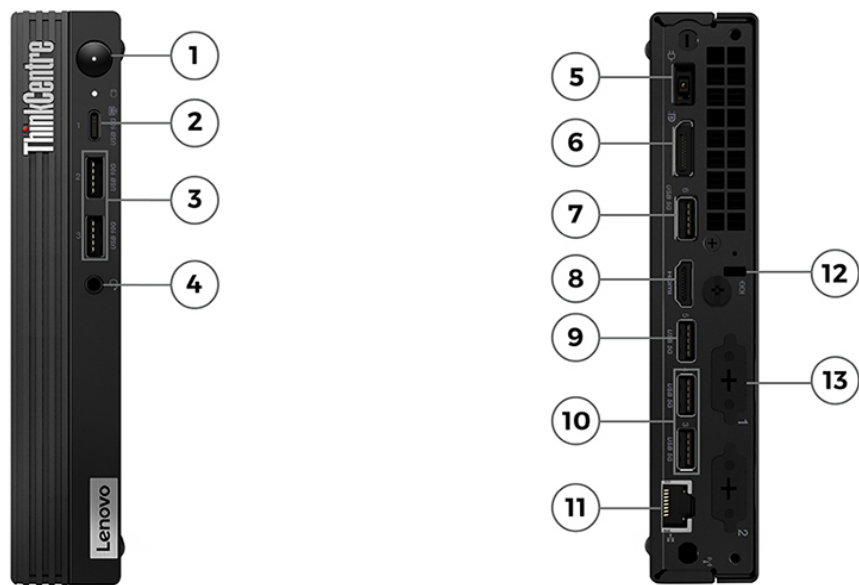


in



intel

OVERVIEW



1. Power button	8. HDMI 2.1 TMDS
2. USB-C 3.2 Gen 2 (with DP 1.4)	9. USB 3.2 Gen 1
3. 2x USB 3.2 Gen 2	10. 2x USB 3.2 Gen 1
4. Headphone / microphone combo jack (3.5mm)	11. Ethernet (RJ-45)
5. Power connector	12. Kensington Security Slot
6. DisplayPort 1.4	13. Flex IO *
7. USB 3.2 Gen 1	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron® or 12th Generation Intel U Series Core™ i3 / i5 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 7305	5 (1 P-core + 4 E-core)	6	P-core 1.1GHz / E-core 0.9GHz	—[2]	8MB	DDR4-3200	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[3]	10MB	DDR4-3200	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[4]	12MB	DDR4-3200	Intel Iris® Xe Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

[2], [3], [4] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System

ChromeOS

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x DP 1.4 HBR2, 1x USB-C® with DP 1.4 function, 1x HDMI® 2.1 TMDS, 1x punch out port (1x HDMI 2.1 TMDS or 1x DP 1.4)	4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function), 4096x2304@60Hz(HDMI)	DirectX® 12.1
Intel Iris Xe Graphics[1]	Integrated	Shared	1x DP 1.4 HBR2, 1x USB-C with DP 1.4 function, 1x HDMI 2.1 TMDS, 1x punch out port (1x HDMI 2.1 TMDS or 1x DP 1.4)	4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function), 4096x2304@60Hz(HDMI)	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onbaord USB-C, onboard DP, onboard HDMI, and one optional port [2nd DP / 2nd HDMI])

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory[1]

Up to 32GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 256GB M.2 2280 SSD or 64GB eMMC 5.1 on systemboard

Storage Type^{***}

Disk Type	Interface
Flash Memory ^[2]	eMMC 5.1
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] EMMC is pre-configured, not upgradable.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC5682I codec

Speakers

No speakers

Microphone

No microphone

Camera

No camera

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing

DESIGN

Input Device

Keyboard

- Chrome USB Keyboard, black
- No keyboard

Mouse

- USB Calliope Mouse, black
- No mouse

Mechanical**Form Factor**

Tiny (1L)

Dimensions (WxDxH)^[1]

178 x 182 x 34 mm (7 x 7.16 x 1.33 inches)

Packaging Dimensions (WxDxH)

140 x 485 x 270 (5.51 x 19.1x 10.6 inches)

Weight^[2]

Around 1.07 kg (2.35 lbs)

Packaging Weight

Around 2.95 kg (6.5 lbs)

Case Color

Raven black

Bays

No bays

Expansion Slots

- One M.2 slot (for WLAN, models with Celeron processor)
- Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) Toolless cover and stand assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- Supports VESA mount 100mm
- None

Others

(Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Onboard Ethernet**

Gigabit Ethernet, Realtek RTL8111K-CG, 1x RJ-45

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Front Ports**

- 1x USB-C 3.2 Gen 2 (with DP 1.4)

- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports

- 4x USB 3.2 Gen 1
- 1x HDMI-out 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (GbE RJ-45)

Optional Rear Ports**

- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.4 (Flex IO)
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable****

- DP to DVI dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Google Security Chip H1

Physical Locks

Kensington® Security Slot™

BIOS Security

No support

MANAGEABILITY**System Management****System Management**

Non-vPro®

SERVICE**Warranty^[1]****Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of

warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 10668 m (35,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

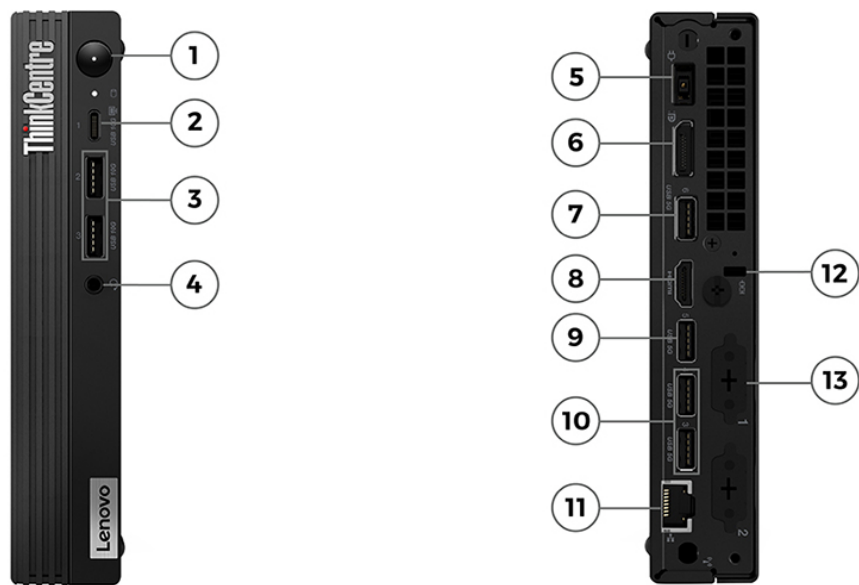
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

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OVERVIEW



1. Power button	8. HDMI 2.1 TMDS
2. USB-C 3.2 Gen 2 (with DP 1.4)	9. USB 3.2 Gen 1
3. 2x USB 3.2 Gen 2	10. 2x USB 3.2 Gen 1
4. Headphone / microphone combo jack (3.5mm)	11. Ethernet (RJ-45)
5. Power connector	12. Kensington Security Slot
6. DisplayPort 1.4	13. Flex IO *
7. USB 3.2 Gen 1	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron® or 12th Generation Intel U Series Core™ i3 / i5 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 7305	5 (1 P-core + 4 E-core)	6	P-core 1.1GHz / E-core 0.9GHz	—[2]	8MB	DDR4-3200	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[3]	10MB	DDR4-3200	Intel UHD Graphics
Core i5-1235U	10 (2 P-core + 8 E-core)	12	P-core 1.3GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz[4]	12MB	DDR4-3200	Intel Iris® Xe Graphics

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.
[2], [3], [4] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System

ChromeOS

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x DP 1.4 HBR2, 1x USB-C® with DP 1.4 function, 1x HDMI® 2.1 TMDS, 1x punch out port (1x HDMI 2.1 TMDS or 1x DP 1.4)	4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function), 4096x2304@60Hz(HDMI)	DirectX® 12
Intel Iris Xe Graphics[1]	Integrated	Shared	1x DP 1.4 HBR2, 1x USB-C with DP 1.4 function, 1x HDMI 2.1 TMDS, 1x punch out port (1x HDMI 2.1 TMDS or 1x DP 1.4)	4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function), 4096x2304@60Hz(HDMI)	DirectX 12

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onbaord USB-C, onboard DP, onboard HDMI, and one optional port [2nd DP / 2nd HDMI])

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory[1]

Up to 32GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

One drive, up to 256GB M.2 2280 SSD or 64GB eMMC 5.1 on systemboard

Storage Type^{***}

Disk Type	Interface
Flash Memory ^[2]	eMMC 5.1
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] EMMC is pre-configured, not upgradable.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC5682I codec

Speakers

No speakers

Microphone

No microphone

Camera

No camera

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing

DESIGN

Input Device

Keyboard

- Chrome USB Keyboard, black
- No keyboard

Mouse

- USB Calliope Mouse, black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

178 x 182 x 34 mm (7 x 7.16 x 1.33 inches)

Packaging Dimensions (WxDxH)

140 x 485 x 270 (5.51 x 19.1x 10.6 inches)

Weight^[2]

Around 1.07 kg (2.35 lbs)

Packaging Weight

Around 2.95 kg (6.5 lbs)

Case Color

Raven black

Bays

No bays

Expansion Slots

- One M.2 slot (for WLAN, models with Celeron processor)
- Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) Toolless cover and stand assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- Supports VESA mount 100mm
- None

Others

(Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K-CG, 1x RJ-45

WLAN + Bluetooth®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2 (with DP 1.4)

- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (GbE RJ-45)

Optional Rear Ports**

- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.4 (Flex IO)
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable****

- DP to DVI dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Google Security Chip H1

Physical Locks

Kensington® Security Slot™

BIOS Security

No support

MANAGEABILITY**System Management****System Management**

Non-vPro®

SERVICE**Warranty^[1]****Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of

warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 10668 m (35,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW

1. Power button	9. Power connector
2. Microphone (3.5mm)	10. DisplayPort
3. Headphone / microphone combo jack (3.5mm)	11. USB 3.1 Gen 1
4. USB 3.1 Gen 1	12. DisplayPort
5. USB 3.1 Gen 1	13. USB 2.0
6. Kensington Security Slot	14. 2x USB 2.0
7. Optional port 1 *	15. Ethernet (RJ-45)
8. Optional port 2 *	16. Wi-Fi antenna slot

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD A9 APU

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD A9-9420e	2	2	1.8GHz	2.7GHz	1MB L2	DDR4-1866	AMD Radeon™ R5 Graphics

Operating System

Operating System

- Windows® 10 Pro 64
- No operating system

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon R5 Graphics	Integrated	Shared	2x DisplayPort™, 1x optional port (VGA / USB-C®)	3840x2160@60Hz(DP), 2048x1280@60Hz(VGA), 3840x2160@60Hz(USB-C)	DirectX® 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (2x DisplayPort + 1x optional port [VGA / USB-C])

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 8GB DDR4-2666

Memory Slots

One DDR4 SO-DIMM slot

Memory Type^[2]

DDR4-2666

Memory Protection

Non-ECC

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] Installed memory is actually 2666MHz, but run at 1866 due to the memory support capability of processor.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD: up to 1TB
- M.2 SSD up to 256GB

Storage Type

Disk Type	Interface	RPM
2.5" SATA HDD	SATA 6Gb/s	5.4K
2.5" SATA HDD	SATA 6Gb/s	7.2K

M.2 2242 SSD	PCIe® NVMe®	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-

RAID
No support

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
None
Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC233-VB2-CG codec
Speakers
Single speaker, 1.5W x1

Power Supply

Power	Type	Efficiency	Key Features
65W	Adapter	88%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard

- Lenovo Traditional Keyboard (USB connector), black
- No keyboard folio

Mouse

- Lenovo Calliope Mouse (USB connector), black
- No mouse

Mechanical

Form Factor
Tiny (1L)
Dimensions (WxDxH)^[1]
179 x 182.9 x 34.5 mm (7.05 x 7.20 x 1.36 inches)
Weight^[2]
1.3 kg (2.87 lbs)
Case Color
Black
Bays
No bays
Expansion Slots
Two M.2 slots (one for WLAN, one for SSD)
EOU
(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®

- Realtek RTL8822BE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 4.2, M.2 card
- Qualcomm® QCA6174A, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
- No WLAN and Bluetooth

WWAN

No support

Ports^[1]

Front Ports

- 2x USB 3.1 Gen 1 (one supports Always On and fast charge)
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB 3.1 Gen 1
- 3x USB 2.0
- 2x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Optional port 1 (one of VGA / serial / USB-C 2.0 with DisplayPort function)
- Optional port 2 (serial)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

- VGA Cable Tiny
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to DVI-D dongle
- DP to HDMI® dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

None

SERVICE

Warranty^[1]

Base Warranty

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year courier or carry-in service
- 3-year limited onsite service
- 3-year split limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ErP Lot 3
- RoHS compliant
- TCO Certified
- WEEE

Notes:

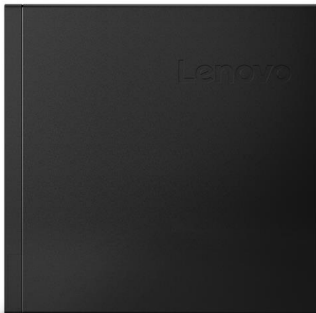
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

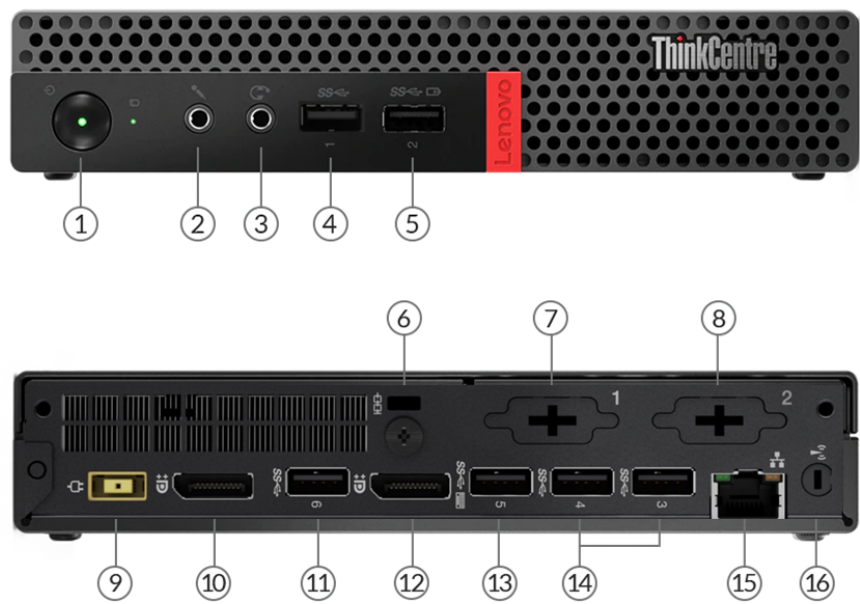
Mil-Spec Test

MIL-STD-810G military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

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OVERVIEW



1. Power button	9. Power connector
2. Microphone (3.5mm)	10. DisplayPort
3. Headphone / microphone combo jack (3.5mm)	11. USB 3.1 Gen 1
4. USB 3.1 Gen 1	12. DisplayPort
5. USB 3.1 Gen 1	13. USB 2.0
6. Kensington Security Slot	14. 2x USB 2.0
7. Optional port 1 *	15. Ethernet (RJ-45)
8. Optional port 2 *	16. Wi-Fi antenna slot

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD E2 / A4 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD A4-9120C	2	2	1.6GHz	2.4GHz	1MB L2	DDR4-1866	AMD Radeon™ R4 Graphics
AMD A4-9120e	2	2	1.5GHz	2.2GHz	1MB L2	DDR4-1866	AMD Radeon R3 Graphics
AMD E2-9000e	2	2	1.5GHz	2.0GHz	1MB L2	DDR4-1866	AMD Radeon R2 Graphics

Operating System

Operating System**

- LeTOS™ V2 (Lenovo® Terminal Operating System, Linux-based)
- Windows® 10 IoT Enterprise
- Windows 10 IoT Enterprise (Thin Client)
- Windows Embedded Standard 7 V2 (WES 7 V2)

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon R2 Graphics	Integrated	Shared	2x DisplayPort™, 1x optional port (VGA)	3840x2160@60Hz(DP), 2048x1280@60Hz(VGA)	DirectX® 12
AMD Radeon R3 Graphics	Integrated	Shared	2x DisplayPort, 1x optional port (VGA)	3840x2160@60Hz(DP), 2048x1280@60Hz(VGA)	DirectX 12
AMD Radeon R4 Graphics	Integrated	Shared	2x DisplayPort, 1x optional port (VGA)	3840x2160@60Hz(DP), 2048x1280@60Hz(VGA)	DirectX 12

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (2x DisplayPort and 1x optional port [VGA])

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 8GB DDR4-2666

Memory Slots

One DDR4 SO-DIMM slot

Memory Type^[2]

DDR4-2666

Notes:

[1] The max memory is based on the test results with current Lenovo memory offerings.

[2] Installed memory is actually 2666MHz, but run at 1866 due to the memory support capability of processor.

Storage

Storage Support^[1]

One drive, up to 128GB M.2 2242 SSD

Storage Type**

Disk Type	Interface	Security
M.2 2242 SSD	SATA 6Gb/s	-
M.2 2242 SSD	PCIe® NVMe®	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	Opal 2.0

RAID
No support

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
None
Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC233-VB2-CG codec
Speakers
Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
65W	Adapter	88%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard
• Lenovo Traditional Keyboard (USB connector), black
• No keyboard

Mouse
Lenovo Calliope Mouse (USB connector), black

Mechanical

Form Factor
Tiny (1L)
Dimensions (WxDxH)^[1]
179 x 182.9 x 34.5 mm (7.05 x 7.20 x 1.36 inches)
Weight^[2]
Around 1.3 kg (2.87 lbs)

Case Color
Black

Bays
No bays

Expansion Slots
Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

(Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**[1]

- Realtek RTL8821CE, 802.11ac Dual Band 1x1 Wi-Fi® + Bluetooth 4.2, M.2 card
- Realtek RTL8822BE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
- Qualcomm® QCA9377, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 4.2, M.2 card
- Qualcomm QCA6174A, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
- Intel® Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- No WLAN and Bluetooth

Notes:

[1] Win 10 RS3 and Win10 earlier version only support Bluetooth 4.1.

Ports^[1]

Front Ports

- 2x USB 3.1 Gen 1 (one supports Always On and fast charge)
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB 3.1 Gen 1
- 3x USB 2.0
- 2x DisplayPort
- 1x Ethernet (RJ-45)

Optional Rear Ports***

- Optional port 1 (one of VGA / serial)
- Optional port 2 (serial)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;
USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- VGA Cable Tiny
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to DVI-D dongle
- DP to HDMI® dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year courier or carry-in service
- 3-year limited onsite service
- 3-year split limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of

warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- (Optional) ENERGY STAR® 8.0
- ErP Lot 3
- RoHS compliant
- TCO Certified
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

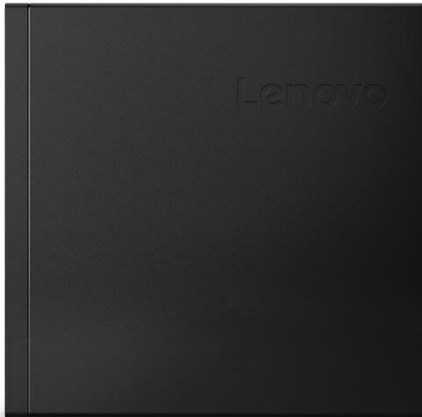
[2] EnergyStar and EPEAT™ are not for non-OS models.

Other Certifications

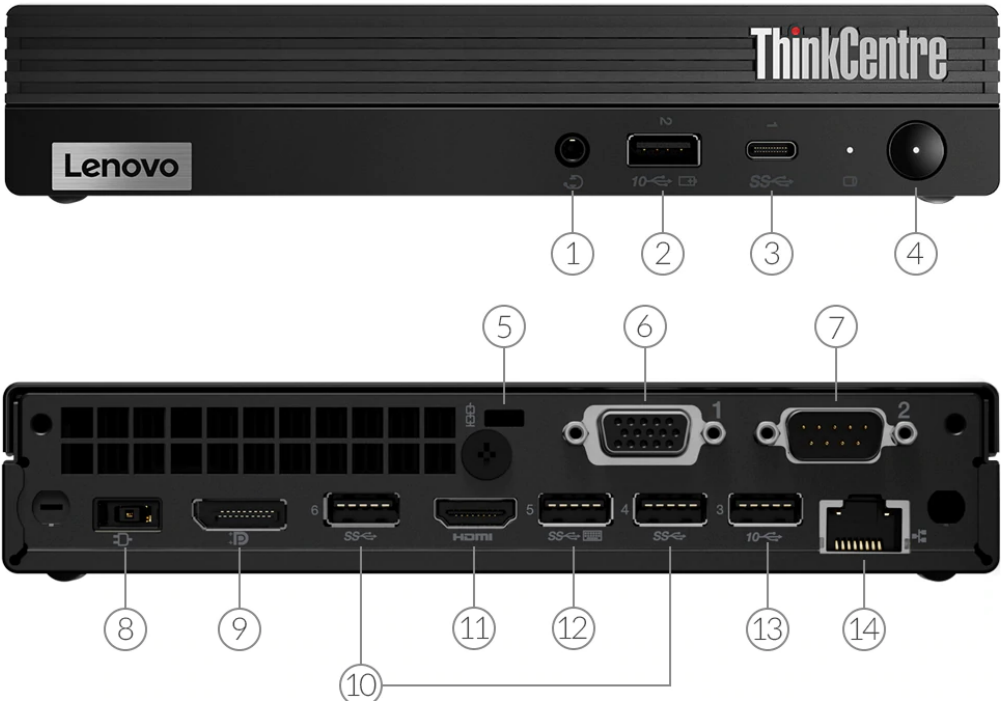
Mil-Spec Test

MIL-STD-810G military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. Power connector
2. USB 3.2 Gen 2	9. DisplayPort
3. USB-C 3.2 Gen 1	10. USB 3.2 Gen 1
4. Power button	11. HDMI
5. Kensington Security Slot	12. USB 3.2 Gen 1
6. Optional port 1 (VGA is shown)	13. USB 3.2 Gen 2
7. Optional port 2 (serial is shown)	14. Ethernet (RJ-45)

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900T	2	2	3.2GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905T	2	2	3.3GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400T	2	4	3.4GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500T	2	4	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100T	4	8	3.0GHz	3.8GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300T	4	8	3.0GHz	3.9GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400T	6	12	2.0GHz	3.6GHz ^[3]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10500T	6	12	2.3GHz	3.8GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600T	6	12	2.4GHz	4.0GHz ^[5]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700T	8	16	2.0GHz	4.5GHz ^[6]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900T	10	20	1.9GHz	4.6GHz ^[7]	20MB	DDR4-2933	Intel UHD Graphics 630

Notes:

[1], [2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
----------	------	--------	-----------	----------------	--------------

Intel UHD graphics 610	Integrated	Shared	1x HDMI®, 1x DP, 1x optional video port (2nd HDMI / VGA / 2nd DP / USB-C® / dual DP)	4096x2304@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 3840x2160@60Hz(Dual DP, MST mode), 2048x1536@50Hz(VGA), 4096x2304@60Hz(USB-C)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x HDMI, 1x DP, 1x optional video port (2nd HDMI / VGA / 2nd DP / USB-C / dual DP)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 3840x2160@60Hz(Dual DP, MST mode), 2048x1536@50Hz(VGA), 4096x2304@60Hz(USB-C)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support

Supports up to 3 independent displays via (onboard DP, onboard HDMI, and one optional port [VGA / 2nd DP / 2nd HDMI / USB-C]) or (one onboard port [DP / HDMI] and optional dual DP [MST mode])

Chipset

Chipset

Intel H470 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-2933

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type^{**[2]}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 3200MHz, but may run at 2666MHz or 2933MHz, depending on the memory support capability of processor.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233VB codec or ALC897Q codec

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 183 x 34.5 / 37 mm with rubber feet (7.05 x 7.2 x 1.36 / 1.5 inches with rubber feet)
With VESA mount & ODD box	187 x 183.8 x 66.5 mm (7.36 x 7.24 x 2.62 inches)

Weight^[2]

Models	Weight
Tiny only	Around 1.25 kg (2.76 lbs)
With VESA mount & ODD box	Around 1.74 kg (3.84 lbs)

Case Color

Black

Bays

1x 2.5" disk bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth[®]**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi[®] + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1
- 1x USB 3.2 Gen 2 (Always On and fast charge)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB 3.2 Gen 2
- 3x USB 3.2 Gen 1
- 1x HDMI
- 1x DisplayPort[™]
- 1x Ethernet (RJ-45)

Optional Rear Ports^{*}**

- Optional port 1 (one of VGA / 2nd DisplayPort / 2nd HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort function)
- 2x DisplayPort ports (occupy Optional port 1 and 2)
- Optional port 2 (serial)
- 2x USB 3.2 Gen 1 ports (share one USB 3.2 Gen 1 bandwidth, occupy optional port 1 and 2)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ENERGY STAR® 8.0
- ErP Lot 3
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

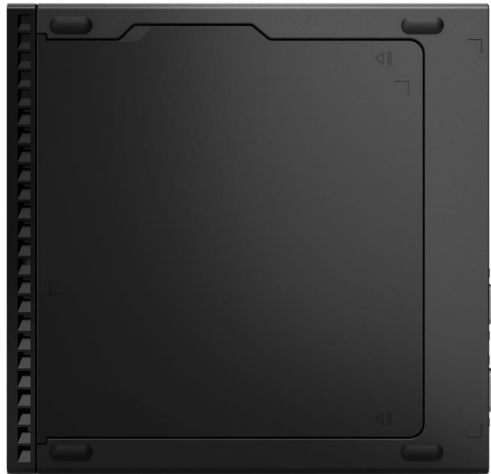
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

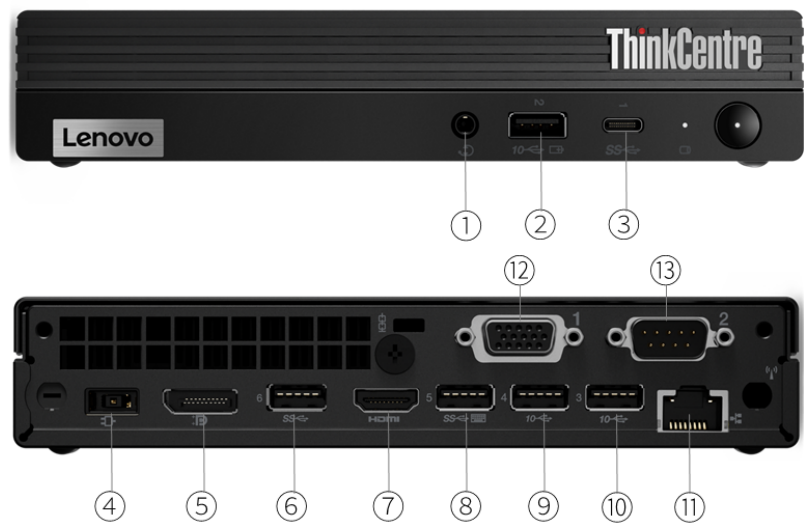
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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. USB 3.2 Gen 1
2. USB 3.2 Gen 2	9. USB 3.2 Gen 2
3. USB-C 3.2 Gen 1	10. USB 3.2 Gen 2
4. Power connector	11. Ethernet (RJ-45)
5. DisplayPort	12. Optional port 1 (VGA is shown) *
6. USB 3.2 Gen 1	13. Optional port 2 (serial is shown) *
7. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, 10th Generation Intel Core™ i3, or 11th Generation Intel Core i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5905T	2	2	3.3GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6405T	2	4	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6505T	2	4	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10105T	4	8	3.0GHz	3.9GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10305T	4	8	3.0GHz	4.0GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400T	6	12	2.0GHz	3.6GHz ^[3]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10500T	6	12	2.3GHz	3.8GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-11400T	6	12	1.3GHz	3.7GHz ^[5]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-11500T	6	12	1.5GHz	3.9GHz ^[6]	12MB	DDR4-3200	Intel UHD Graphics 750
Core i5-11600T	6	12	1.7GHz	4.1GHz ^[7]	12MB	DDR4-3200	Intel UHD Graphics 750
Core i7-11700T	8	16	1.4GHz	4.6GHz ^[8]	16MB	DDR4-3200	Intel UHD Graphics 750
Core i9-11900T	8	16	1.5GHz	4.9GHz ^[9]	16MB	DDR4-3200	Intel UHD Graphics 750

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics 730	Integrated	Shared	1x HDMI®, 1x DP, 1x optional video port (2nd HDMI / VGA / 2nd DP / USB-C® / dual DP)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 3840x2160@60Hz(Dual DP, MST mode), 2048x1536@50Hz(VGA), 4096x2304@60Hz(USB-C)	DirectX® 12
Intel UHD Graphics 750	Integrated	Shared	1x HDMI, 1x DP, 1x optional video port (2nd HDMI / VGA / 2nd DP / USB-C / dual DP)	4096x2304@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 3840x2160@60Hz(Dual DP, MST mode), 2048x1536@50Hz(VGA), 4096x2304@60Hz(USB-C)	DirectX 12
Intel UHD graphics 610	Integrated	Shared	1x HDMI, 1x DP, 1x optional video port (2nd HDMI / VGA / 2nd DP / USB-C / dual DP)	4096x2304@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 3840x2160@60Hz(Dual DP, MST mode), 2048x1536@50Hz(VGA), 4096x2304@60Hz(USB-C)	DirectX 12
Intel UHD graphics 630	Integrated	Shared	1x HDMI, 1x DP, 1x optional video port (2nd HDMI / VGA / 2nd DP / USB-C / dual DP)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 3840x2160@60Hz(Dual DP, MST mode), 2048x1536@50Hz(VGA), 4096x2304@60Hz(USB-C)	DirectX 12

Monitor Support

Monitor Support

Supports up to 3 independent displays via (onboard DP, onboard HDMI, and one optional port [VGA / 2nd DP / 2nd HDMI / USB-C]) or (one onboard port [DP / HDMI] and optional dual DP [MST mode])

Chipset

Chipset

AMD PRO 560 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-2933

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type**

- DDR4-2666
- DDR4-2933
- DDR4-3200

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®	-	-
M.2 2280 SSD	PCIe NVMe	-	Opal

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical**
- DVD-ROM, slim (9.0mm), via USB external ODD box
 - DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
 - None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233VB codec

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
With VESA mount & ODD box	186.6 x 204.2 x 64 mm (7.33 x 8.04 x 2.52 inches)

Weight^[2]

Models	Weight
Tiny only	Around 1.25 kg (2.76 lbs)
With VESA mount & ODD box	Around 1.74 kg (3.84 lbs)

Case Color

Black

Bays

1x 2.5" disk bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro® technology support, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1
- 1x USB 3.2 Gen 2 (Always On and fast charge)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x HDMI
- 1x DisplayPort™
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Optional port 1 (one of VGA / 2nd DisplayPort / 2nd HDMI / serial / USB-C 2.0 with DisplayPort function)
- 2x DisplayPort ports (occupy Optional port 1 and 2)
- Optional port 2 (serial)
- 2x USB 3.2 Gen 1 ports (share one USB 3.2 Gen 1 bandwidth, occupy optional port 1 and 2)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- Dual DP to DVI
- Dual DP to HDMI
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ENERGY STAR® 8.0
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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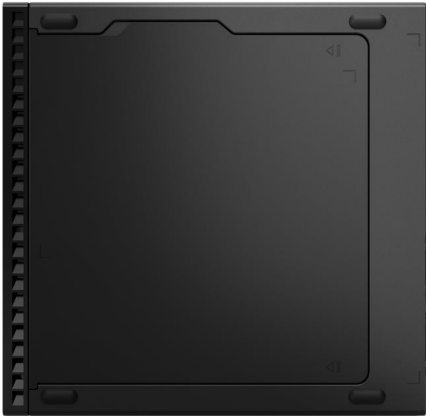
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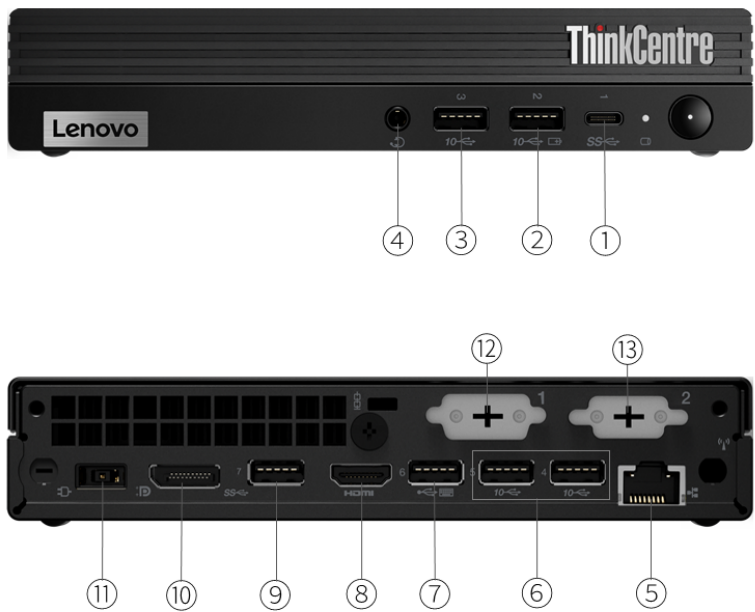


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OVERVIEW



1. USB-C 3.2 Gen 1	8. HDMI 2.1 TMDS
2. USB 3.2 Gen 2 (Always On and fast charge)	9. USB 3.2 Gen 1
3. USB 3.2 Gen 2	10. DisplayPort 1.4
4. Headphone / microphone combo jack (3.5mm)	11. Power connector
5. Ethernet (RJ-45)	12. Punch out port 1 *
6. 2x USB 3.2 Gen 2	13. Punch out port 2 *
7. 1x USB 2.0 (with smart power-on feature)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900T	2	2	2.8GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400T	2	4	3.1GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100T	4 (4 P-core + 0 E-core)	8	P-core 2.2GHz	P-core 4.1GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i3-12300T	4 (4 P-core + 0 E-core)	8	P-core 2.3GHz	P-core 4.2GHz ^[2]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400T	6 (6 P-core + 0 E-core)	12	P-core 1.8GHz	P-core 4.2GHz ^[3]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12500T	6 (6 P-core + 0 E-core)	12	P-core 2.0GHz	P-core 4.4GHz ^[4]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i5-12600T	6 (6 P-core + 0 E-core)	12	P-core 2.1GHz	P-core 4.6GHz ^[5]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700T	12 (8 P-core + 4 E-core)	20	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.7GHz / P-core 4.6GHz / E-core 3.4GHz ^[6]	25MB	DDR4-3200	Intel UHD Graphics 770
Core i9-12900T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[7]	30MB	DDR4-3200	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C® with	4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2160@60Hz(DP),	DirectX® 12

			DP function, HDMI/VGA/DP])	4096x2160@60Hz(USB-C with DP function)	
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Power Supply

Power Supply**[1]

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

Notes:

[1] The optional 90w adapter may increase performance scores when 12500T/12400T CPUs are installed.

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)**[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight[3]

Models	Weight
Tiny only	Around 1.25 kg (2.76 lbs)
With VESA mount & ODD box	Around 1.74 kg (3.84 lbs)

Packaging Weight**[4]

- Tiny only: Around 3.2 kg (7.05 lbs)

- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Raven black

Bays

1x 2.5" disk bay

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) Toolless cover (toolless chassis screw required), stand, optional 2.5" HDD bracket assembly / removal

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The new packages take effect from September 2023. The old packages are:

Tiny only: 500 x 150 x 280 mm (19.69 x 5.91 x 11.02 inches)

Tiny & ODD: 500 x 175 x 280 mm (19.69 x 6.89 x 11.02 inches)

[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[4] The new packages take effect from September 2023. The old package are:

Tiny only: 2.85 kg (6.28 lbs)

Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet^[1]

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, supports Wake-on-LAN
- No optional Ethernet

WLAN + Bluetooth^{}**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[3]
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- No WLAN and Bluetooth

Notes:

[1] Optional Ethernet card occupied puch out port 2.

[2], [3], [4] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@0.9A charging)
- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB 2.0
- 1x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDs
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports**

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 2.0 with DisplayPort function)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable*****

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch

- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) EPEAT™ Gold Registered^[2]
- ENERGY STAR® 8.0
- ErP Lot 3 and Lot 7
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

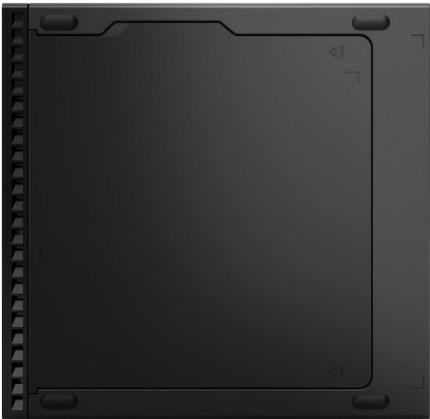
Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

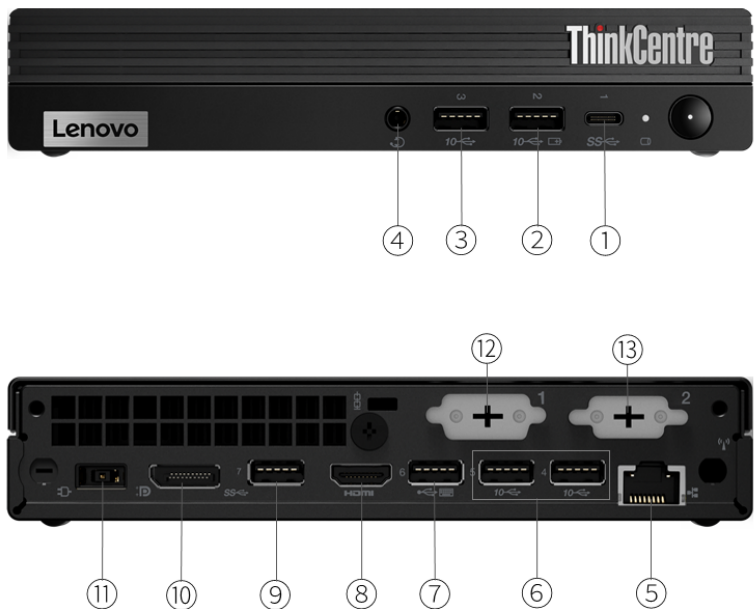
Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. USB-C 3.2 Gen 1	8. HDMI 2.1 TMDs
2. USB 3.2 Gen 2 (Always On and fast charge)	9. USB 3.2 Gen 1
3. USB 3.2 Gen 2	10. DisplayPort 1.4
4. Headphone / microphone combo jack (3.5mm)	11. Power connector
5. Ethernet (RJ-45)	12. Punch out port 1 *
6. 2x USB 3.2 Gen 2	13. Punch out port 2 *
7. 1x USB 2.0 (with smart power-on feature)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-13100T	4 (4 P-core + 0 E-core)	8	P-core 2.5GHz	P-core 4.2GHz ^[1]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz ^[2]	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13500T	14 (6 P-core + 8 E-core)	20	P-core 1.6GHz / E-core 1.2GHz	P-core 4.6GHz / E-core 3.2GHz ^[3]	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.4GHz ^[4]	24MB	DDR5-4800	Intel UHD Graphics 770
Core i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[5]	30MB	DDR5-5600	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C® with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX® 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and

punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset
Intel Q670 chipset

Memory

Max Memory^[1]
Up to 64GB DDR4-3200

Memory Slots
Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type
DDR4-3200

Notes:
^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]
Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID
No support

Notes:
^[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical
None

Card Reader
No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers^{**}

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Power Supply

Power Supply^{**[1]}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	90%	Autosensing

Notes:

[1] When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:

- Order a Tiny for TIO MT (12E5, 12E6 or 12E8) models
- Or for Intel Core i5/i7 models order an additional 135W power adapter, for Intel Core i3 models order an additional 90W power adapter. If original power adapter is less than 135W (i5/i7 models) or 90W (i3 models).

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH) **^[2]

- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)
- Tiny only : 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)

Weight^[3]

Models	Weight
Tiny only	Around 1.25 kg (2.76 lbs)
With VESA mount & ODD box	Around 1.74 kg (3.84 lbs)

Packaging Weight**^[4]

- Tiny only: Around 3.2 kg (7.05 lbs)
- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- No bays

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm

- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The new packages take effect from September 2023. The old packages are:

Tiny only : 490 x 268 x 141 mm (19.29 x 10.55 x 5.55 inches)

Tiny & ODD : 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[4] The new packages take effect from September 2023. The old package are:

Tiny only: 2.85 kg (6.28 lbs)

Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, supports Wake-on-LAN^[1]
- No optional Ethernet

WLAN + Bluetooth^{®}**

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card^[3]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- No WLAN and Bluetooth

Notes:

[1] Optional Ethernet card occupied puch out port 2.

[2], [3], [4] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@0.9A charging)
- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB 2.0
- 1x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports^{*}**

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 2.0 with DisplayPort function)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be

slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty

- 1-year courier or carry-in service

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ENERGY STAR® 8.0
- ErP Lot 3 and Lot 7
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Humidity, Sand and Dust, Vibration, Shock, Solar Radiation, Contamination by Fluids, Salt Fog, Temperature Shock)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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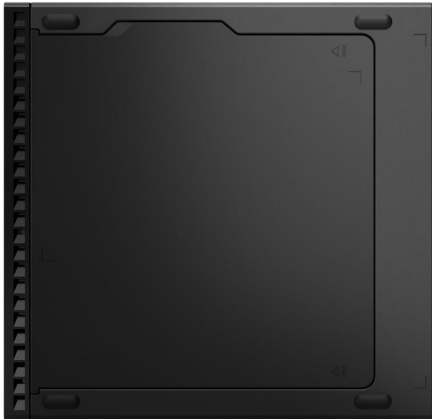
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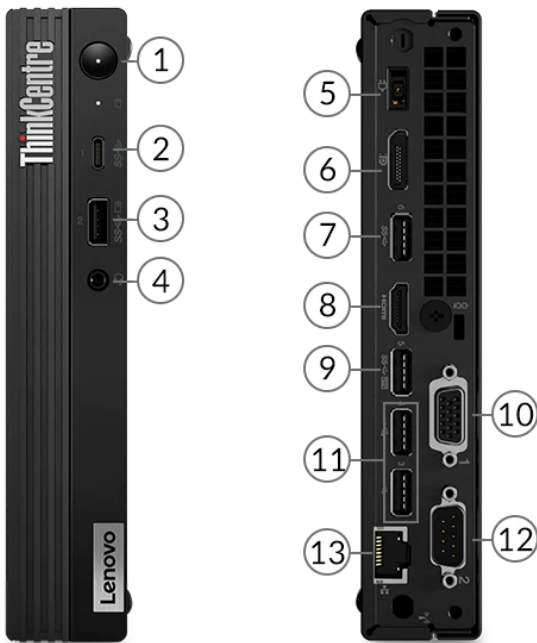


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OVERVIEW



1. Power button	8. HDMI 1.4b
2. USB-C 3.2 Gen 1	9. USB 3.2 Gen 1
3. USB 3.2 Gen 2	10. Optional port 1 (VGA is shown)
4. Headphone / microphone combo jack (3.5mm)	11. 2x USB 2.0
5. Power connector	12. Optional port 2 (serial is shown)
6. DisplayPort 1.4	13. Ethernet (RJ-45)
7. USB 3.2 Gen 1	

PERFORMANCE

Processor

Processor Family

AMD Athlon™ or AMD Ryzen™ 3 / 5 / 7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Athlon Gold PRO 3150GE	4	4	3.3GHz	3.8GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon™ Graphics
AMD Athlon Silver 3050GE	2	4	3.4GHz	3.4GHz	1MB L2 / 4MB L3	DDR4-2666	AMD Radeon Graphics
AMD Athlon Silver PRO 3125GE	2	4	3.4GHz	3.4GHz	1MB L2 / 4MB L3	DDR4-2666	AMD Radeon Graphics
AMD Ryzen 3 3200GE	4	4	3.3GHz	3.8GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 8 Graphics
AMD Ryzen 3 4300GE	4	8	3.5GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 5300GE	4	8	3.6GHz	4.2GHz	2MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 PRO 4350GE	4	8	3.5GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 PRO 5350GE	4	8	3.6GHz	4.2GHz	2MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 4600GE	6	12	3.3GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 5600GE	6	12	3.4GHz	4.4GHz	3MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 3350GE	4	8	3.3GHz	3.9GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 11 Graphics
AMD Ryzen 5 PRO 4650GE	6	12	3.3GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 5650GE	6	12	3.4GHz	4.4GHz	3MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 4700GE	8	16	3.1GHz	4.3GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 5700GE	8	16	3.2GHz	4.6GHz	4MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 4750GE	8	16	3.1GHz	4.3GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 5750GE	8	16	3.2GHz	4.6GHz	4MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics

Operating System

Operating System**

- IGEL Linux^[1]
- Ubuntu Linux
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language

- Windows 11 Pro
- No operating system

Notes:

[1] The pre-installed IGEL OS version is 11.08.240
The device is preload with a free evaluation license. The evaluation license will be valid for a period of 90 days.

Graphics

Graphics**[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon Graphics	Integrated	Shared	1x HDMI®, 1x DisplayPort™, 1x optional port (VGA / 2nd DP / USB-C® / 2nd HDMI / dual DP)	3840x2160@30Hz or 2560x1440@60Hz(HDMI), 1920x1200@60Hz(VGA), 3840x2160(DP)@60Hz	DirectX® 12
AMD Radeon Vega 11 Graphics	Integrated	Shared	1x HDMI, 1x DisplayPort, 1x optional port (VGA / 2nd DP / USB-C / 2nd HDMI / dual DP)	3840x2160@30Hz or 2560x1440@60Hz(HDMI), 1920x1200@60Hz(VGA), 3840x2160(DP)@60Hz	DirectX 12
AMD Radeon Vega 8 Graphics	Integrated	Shared	1x HDMI, 1x DisplayPort, 1x optional port (VGA / 2nd DP / USB-C / 2nd HDMI / dual DP)	3840x2160@30Hz or 2560x1440@60Hz(HDMI), 1920x1200@60Hz(VGA), 3840x2160(DP)@60Hz	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (DisplayPort + HDMI) and optional ports (VGA / 2nd DP / 2nd HDMI / USB-C / 2x DP)

Chipset

Chipset

AMD PRO 500 chipset

Memory

Max Memory[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type[2]

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.
[2] Installed memory is actually 3200MHz, but may run at 2666MHz, 2933MHz or 3200MHz depending on the memory support capability of processor.

Storage

Storage Support[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 1TB

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
- None

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC222 codec

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 183 x 34.5 / 37 mm with rubber feet (7.05 x 7.2 x 1.36 / 1.5 inches with rubber feet)

Packaging Dimensions (WxDxH)^[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight^[3]

Models	Weight
Tiny only	1.25 kg (2.76 lbs)

Packaging Weight^[4]

- Tiny only: Around 3.2 kg (7.05 lbs)
- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Black

Bays

1x 2.5" disk bay

Expansion Slots

- One M.2 slot (for SSD)
- One M.2 slot (for WLAN)

EOU

(Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Notes:

- ^[1] The system dimensions may vary depending on configurations.
- ^[2] The new packages take effect from September 2023. The old packages are:
Tiny only: 500 x 150 x 280 mm (19.69 x 5.91 x 11.02 inches)
Tiny & ODD: 500 x 175 x 280 mm (19.69 x 6.89 x 11.02 inches)
- ^[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- ^[4] The new packages take effect from September 2023. The old package are:
Tiny only: 2.85 kg (6.28 lbs)
Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

- Gigabit Ethernet, Realtek RTL8111FP, 1x RJ-45, supports DASH and Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth^{®**}

- Intel[®] Wi-Fi[®] 6 AX200, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek RTL8822BE, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 4.2, M.2 card
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2 (Always On and fast charge)
- 1x headphone / microphone combo jack (3.5mm)
- 1x USB-C 3.2 Gen 1 (support data transfer)

Rear Ports^[2]

- 2x USB 2.0
- 2x USB 3.2 Gen 1
- 1x HDMI 1.4b

- 1x DisplayPort 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports***

- Optional port 1 (one of VGA / 2nd DisplayPort / 2nd HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort function)
- Optional port 2 (serial)
- 2x USB 3.2 Gen 1 (occupies port 1 and 2)
- 4x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupy port 1 and 2)
- 2x DisplayPort (occupies port 1 and 2)
- 1x parallel

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable*****

- VGA Cable Tiny
- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Individual USB port disablement

MANAGEABILITY**System Management****System Management**

- DASH 1.2
- Non-DASH

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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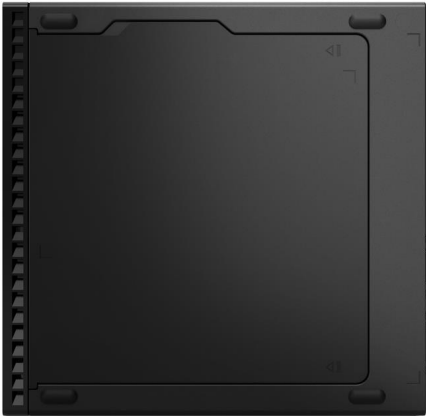
AMD



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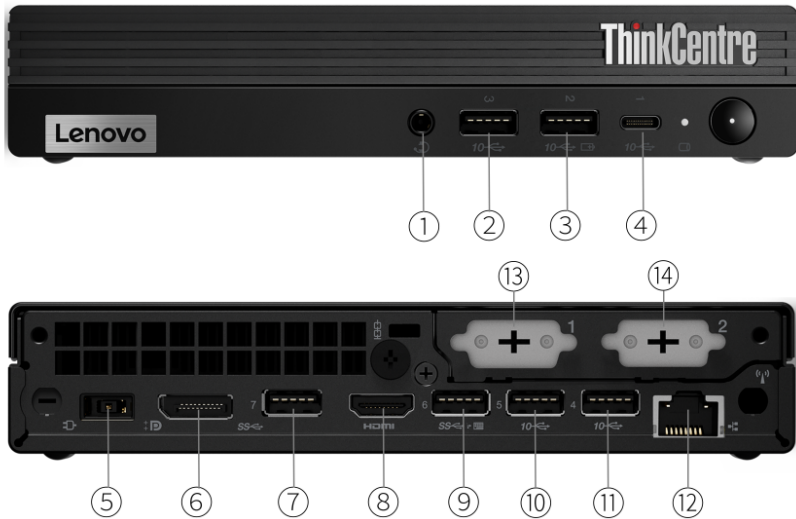


AMD



AMD

OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI
2. USB 3.2 Gen 2	9. USB 3.2 Gen 1 (with Smart Power On feature)
3. USB 3.2 Gen 2 (Always On and fast charge)	10. USB 3.2 Gen 2
4. USB-C 3.2 Gen 2	11. USB 3.2 Gen 2
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort	13. Punch out port 1 *
7. USB 3.2 Gen 1	14. Punch out port 2 *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900T	2	2	2.8GHz	-	4MB	DDR5-4800	Intel UHD Graphics 710
Pentium Gold G7400T	2	4	3.1GHz	-	6MB	DDR5-4800	Intel UHD Graphics 710
Core i3-12100T	4 (4 P-core + 0 E-core)	8	P-core 2.2GHz	P-core 4.1GHz ^[1]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300T	4 (4 P-core + 0 E-core)	8	P-core 2.3GHz	P-core 4.2GHz ^[2]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400T	6 (6 P-core + 0 E-core)	12	P-core 1.8GHz	P-core 4.2GHz ^[3]	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500T	6 (6 P-core + 0 E-core)	12	P-core 2.0GHz	P-core 4.4GHz ^[4]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600T	6 (6 P-core + 0 E-core)	12	P-core 2.1GHz	P-core 4.6GHz ^[5]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700T	12 (8 P-core + 4 E-core)	20	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.7GHz / P-core 4.6GHz / E-core 3.4GHz ^[6]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[7]	30MB	DDR5-4800	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**^[1]

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Windows 10 IoT Enterprise LTSC 2021 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x	4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA),	DirectX® 12

710			HDMI/VGA/DP] or [USB-C® with DP function, HDMI/VGA/DP])	4096x2160@60Hz(DP), 4096x2160@60Hz(USB-C with DP function)	
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB / 1TB	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	128GB	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

RAID

RAID 0/1 support for M.2 SSDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box

- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Microphone

No microphone

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)^[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight^[3]

Models	Weight
Tiny only	1.25 kg (2.76 lbs)
With VESA mount & ODD box	1.74 kg (3.84 lbs)

Packaging Weight^[4]

- Tiny only: Around 3.2 kg (7.05 lbs)

- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Black

Bays

1x 2.5" disk bay

Expansion Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

EOU

- (Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal
- No support

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The new packages take effect from September 2023. The old packages are:

Tiny only: 500 x 150 x 280 mm (19.69 x 5.91 x 11.02 inches)

Tiny & ODD: 500 x 175 x 280 mm (19.69 x 6.89 x 11.02 inches)

[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[4] The new packages take effect from September 2023. The old package are:

Tiny only: 2.85 kg (6.28 lbs)

Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, supports Wake-on-LAN
- No optional Ethernet

WLAN + Bluetooth[®]**

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)

- 1x USB-C 3.2 Gen 2 (support data transfer)

Optional Front Ports

None

Rear Ports

- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort functions)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)
- 2x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupies port 1 and 2)
- 4x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupy port 1 and 2)
- 1x 2.5GbE RJ-45, via RTL8125BGS

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch

- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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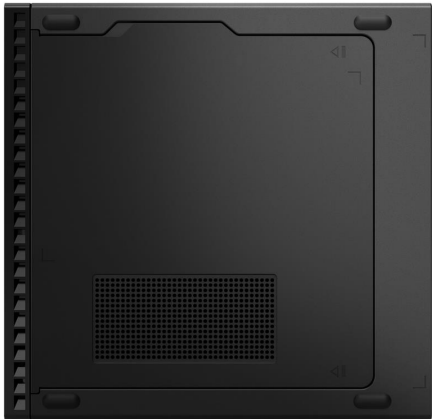
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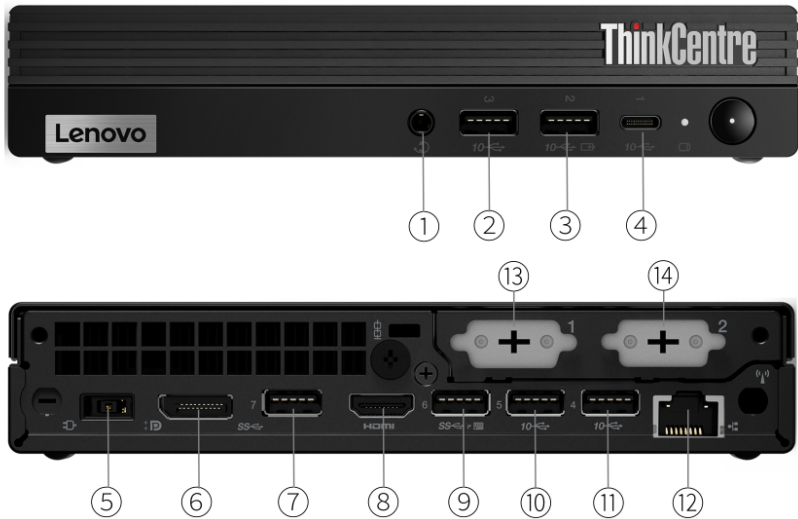


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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI
2. USB 3.2 Gen 2	9. USB 3.2 Gen 1 (with Smart Power On feature)
3. USB 3.2 Gen 2 (Always On and fast charge)	10. USB 3.2 Gen 2
4. USB-C 3.2 Gen 2	11. USB 3.2 Gen 2
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort	13. Punch out port 1 *
7. USB 3.2 Gen 1	14. Punch out port 2 *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor, 35W

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-13100T	4 (4 P-core + 0 E-core)	8	P-core 2.5GHz	P-core 4.2GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13500T	14 (6 P-core + 8 E-core)	20	P-core 1.6GHz / E-core 1.2GHz	P-core 4.6GHz / E-core 3.2GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.4GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900T	24 (8 P-core + 16 E-core)	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz	36MB	DDR5-5600	Intel UHD Graphics 770

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C® with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX® 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB (2x 32GB DDR5 SO-DIMM)

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type^{**}

- DDR5-4800
- DDR5-5600^[2]

Notes:

- ^[1] The max memory is based on the test results with current Lenovo® memory offerings.
- ^[2] System may come with DDR5-5600 memory and will run at lower speed due to platform limitations:
1x 32GB / 2x 32GB configurations run at DDR5-5200

Storage

Storage Support^[1]

Up to three drives, 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

RAID

None

Notes:

- ^[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers^{**}

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Microphone

No microphone

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing

135W	Adapter	90%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)^[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight^[3]

Models	Weight
Tiny only	1.25 kg (2.76 lbs)
With VESA mount & ODD box	1.74 kg (3.84 lbs)

Packaging Weight^[4]

- Tiny only: Around 3.2 kg (7.05 lbs)
- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- No bays

Expansion Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

EOU

- (Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal
- No support

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The new packages take effect from September 2023. The old packages are:

Tiny only: 500 x 150 x 280 mm (19.69 x 5.91 x 11.02 inches)

Tiny & ODD: 500 x 175 x 280 mm (19.69 x 6.89 x 11.02 inches)

[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[4] The new packages take effect from September 2023. The old package are:

Tiny only: 2.85 kg (6.28 lbs)

Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45
- No optional Ethernet

WLAN + Bluetooth[®]**

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x USB-C 3.2 Gen 2 (support data transfer)

Optional Front Ports

None

Rear Ports

- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort functions)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)
- 2x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupies port 1 and 2)
- 4x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupy port 1 and 2)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise with Intel AMT 16^[1]
- Non-vPro

Notes:

^[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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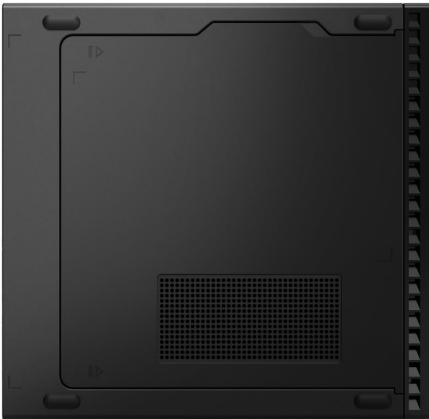
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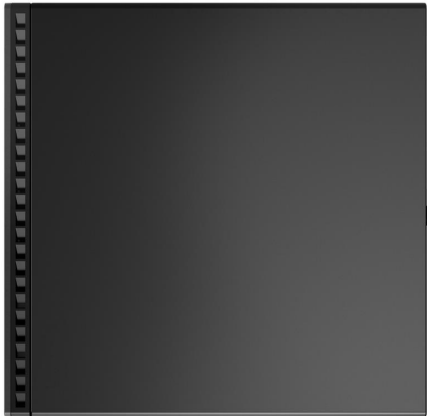
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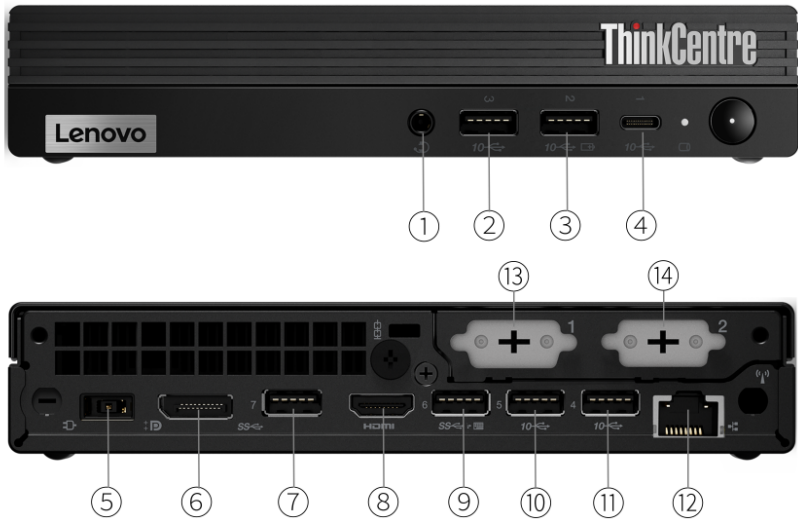


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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI
2. USB 3.2 Gen 2	9. USB 3.2 Gen 1 (with Smart Power On feature)
3. USB 3.2 Gen 2 (Always On and fast charge)	10. USB 3.2 Gen 2
4. USB-C 3.2 Gen 2	11. USB 3.2 Gen 2
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort	13. Punch out port 1 *
7. USB 3.2 Gen 1	14. Punch out port 2 *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR5-4800	Intel UHD Graphics 710
Celeron G6900T	2	2	2.8GHz	-	4MB	DDR5-4800	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR5-4800	Intel UHD Graphics 710
Pentium Gold G7400T	2	4	3.1GHz	-	6MB	DDR5-4800	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12100T	4 (4 P-core + 0 E-core)	8	P-core 2.2GHz	P-core 4.1GHz ^[2]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[3]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300T	4 (4 P-core + 0 E-core)	8	P-core 2.3GHz	P-core 4.2GHz ^[4]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[5]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400T	6 (6 P-core + 0 E-core)	12	P-core 1.8GHz	P-core 4.2GHz ^[6]	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[7]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12500T	6 (6 P-core + 0 E-core)	12	P-core 2.0GHz	P-core 4.4GHz ^[8]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[9]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600T	6 (6 P-core + 0 E-core)	12	P-core 2.1GHz	P-core 4.6GHz ^[10]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[11]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700T	12 (8 P-core + 4 E-core)	20	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.7GHz / P-core 4.6GHz / E-core 3.4GHz ^[12]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[13]	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[14]	30MB	DDR5-4800	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13], [14] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**^[1]

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^[1] Windows 10 IoT Enterprise LTSC 2021 is for special bid only.

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C® with DP function, HDMI/VGA/DP])	4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2160@60Hz(DP), 4096x2160@60Hz(USB-C with DP function)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB DDR5-4800

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-4800

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB / 1TB	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	128GB	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

RAID

RAID 0/1 support for M.2 SSDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, slim (9.0mm), via USB external ODD box
- DVD burner (DVD±RW), slim (9.0mm), via USB external ODD box
- None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers^{**}

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
230W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard^{**}

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse

**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)^[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight^[3]

Models	Weight
Tiny only	1.25 kg (2.76 lbs)
With VESA mount & ODD box	1.74 kg (3.84 lbs)

Packaging Weight^[4]

- Tiny only: Around 3.2 kg (7.05 lbs)
- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Black

Bays

1x 2.5" disk bay

Expansion Slots

- One PCIe 4.0 x8, low-profile
- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

EOU

- (Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal
- No support

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The new packages take effect from September 2023. The old packages are:

Tiny only: 500 x 150 x 280 mm (19.69 x 5.91 x 11.02 inches)

Tiny & ODD: 500 x 175 x 280 mm (19.69 x 6.89 x 11.02 inches)

^[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of

component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[4] The new packages take effect from September 2023. The old package are:

Tiny only: 2.85 kg (6.28 lbs)

Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, supports Wake-on-LAN
- No optional Ethernet

WLAN + Bluetooth^{**}

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro technology support, M.2 Card
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Realtek Wi-Fi 6E RTL8852CE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x USB-C 3.2 Gen 2 (support data transfer)

Optional Front Ports

None

Rear Ports

- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort functions)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)
- 2x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupies port 1 and 2)
- 4x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupy port 1 and 2)
- 1x 2.5GbE RJ-45, via RTL8125BGS
- 4x GbE RJ-45, via additional PCIe adapter

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable

Monitor Cable

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

^[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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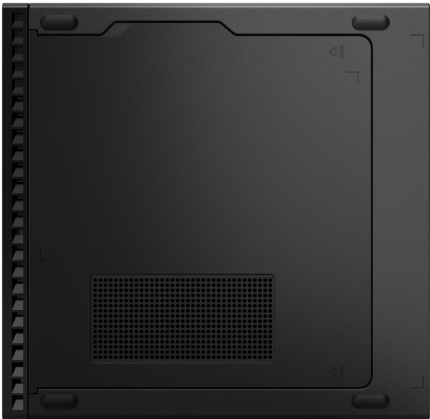
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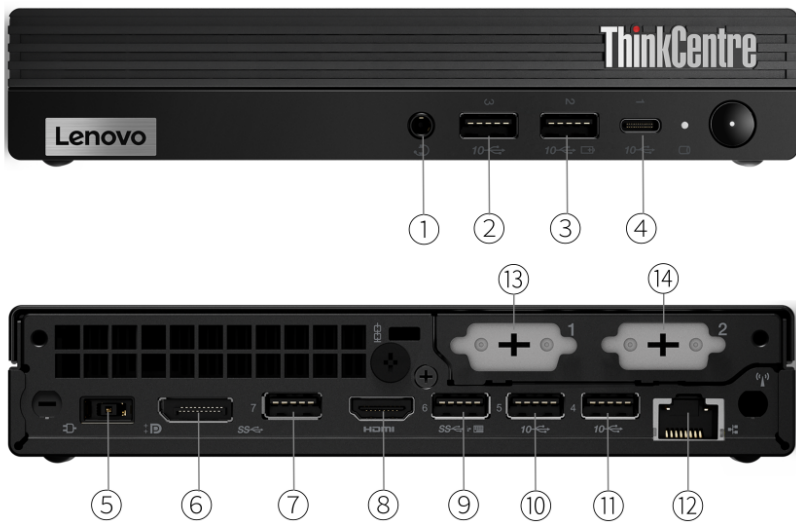


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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI
2. USB 3.2 Gen 2	9. USB 3.2 Gen 1 (with Smart Power On feature)
3. USB 3.2 Gen 2 (Always On and fast charge)	10. USB 3.2 Gen 2
4. USB-C 3.2 Gen 2	11. USB 3.2 Gen 2
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort	13. Punch out port 1 *
7. USB 3.2 Gen 1	14. Punch out port 2 *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor, 35W or 65W

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-13100T	4 (4 P-core + 0 E-core)	8	P-core 2.5GHz	P-core 4.2GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13500T	14 (6 P-core + 8 E-core)	20	P-core 1.6GHz / E-core 1.2GHz	P-core 4.6GHz / E-core 3.2GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.4GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900T	24 (8 P-core + 16 E-core)	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz	36MB	DDR5-5600	Intel UHD Graphics 770

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C® with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP)	DirectX® 12

				function)	
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB (2x 32GB DDR5 SO-DIMM)

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type^{**}

- DDR5-4800
- DDR5-5600^[2]

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] System may come with DDR5-5600 memory and will run at lower speed due to platform limitations: 1x 32GB / 2x 32GB configurations run at DDR5-5200

Storage

Storage Support^[1]

Up to three drives, 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

RAID

None

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	90%	Autosensing
230W	Adapter	89%	Autosensing
No power supply	-	-	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)^[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight^[3]

Models	Weight
Tiny only	1.25 kg (2.76 lbs)
With VESA mount & ODD box	1.74 kg (3.84 lbs)

Packaging Weight^[4]

- Tiny only: Around 3.2 kg (7.05 lbs)
- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- No bays

Expansion Slots

- One PCIe 4.0 x8, low-profile

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

EOU

- (Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal
- No support

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The new packages take effect from September 2023. The old packages are:

Tiny only: 500 x 150 x 280 mm (19.69 x 5.91 x 11.02 inches)

Tiny & ODD: 500 x 175 x 280 mm (19.69 x 6.89 x 11.02 inches)

[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[4] The new packages take effect from September 2023. The old package are:

Tiny only: 2.85 kg (6.28 lbs)

Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4
- No optional Ethernet

WLAN + Bluetooth®**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x USB-C 3.2 Gen 2 (support data transfer)

Optional Front Ports

None

Rear Ports

- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2

- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort functions)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)
- 1x Thunderbolt™ 4 (supports data transfer, Power Delivery 3.0 and DisplayPort 1.4, via Thunderbolt expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupies port 1 and 2)
- 4x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupy port 1 and 2)
- 4x GbE RJ-45, via additional PCIe adapter
- 4x serial (via 4-port serial expansion card, PCIe x1)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable**

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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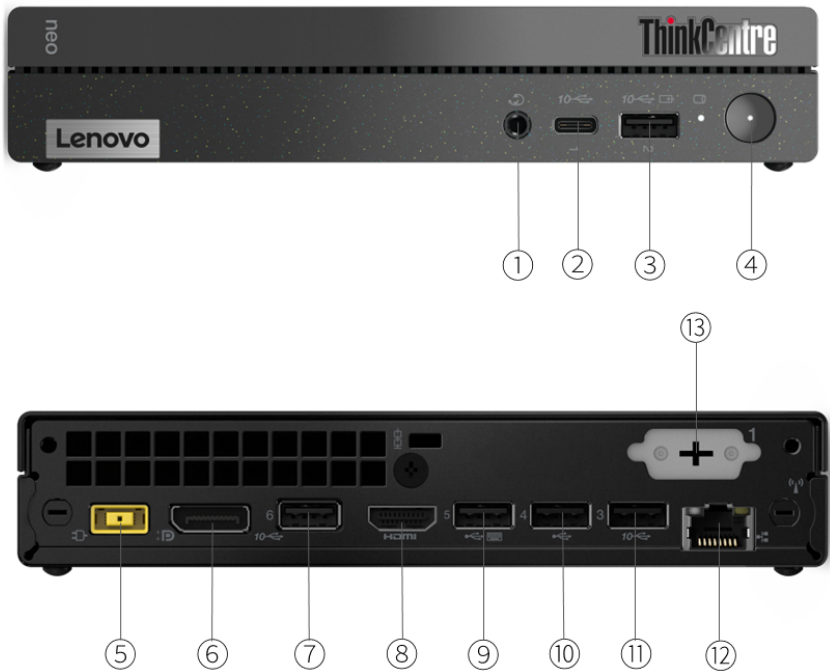


intel



intel

OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI 2.1 TMDS
2. USB-C 3.2 Gen 2 (support data transfer and 5V@0.9A charging)	9. USB 2.0
3. USB 3.2 Gen 2 (Always On and 5V@2.1A charging)	10. USB 2.0
4. Power button	11. USB 3.2 Gen 2
5. Power-in	12. Ethernet (RJ-45)
6. DisplayPort 1.4	13. Punch out port *
7. USB 3.2 Gen 2	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3, or 13th Generation Intel Core i5 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz ^[1]	10MB	DDR4-3200	Intel UHD Graphics
Core i5-13420H	8 (4 P-core + 4 E-core)	12	P-core 2.1GHz / E-core 1.5GHz	P-core 4.6GHz / E-core 3.4GHz ^[2]	12MB	DDR4-3200	Intel UHD Graphics

Notes:

[1], [2] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] The pre-installed IGEL OS version is 11.08.240
The device is preload with a free evaluation license. The evaluation license will be valid for a period of 90 days.

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x DP 1.4, 1x HDMI® 2.1 TMDS, 1x punch out port (1x VGA or 1x DP 1.4)	4096x2160@60Hz(DP), 4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA)	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 3 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / DP])

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 32GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 1TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] 2.5" HDD bracket kit only comes with pre-configured HDD models.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256 codec

Speakers

Single speaker, 2W x1

Microphone

No microphone

Power Supply

Power Supply^{**[1]}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	89%	Autosensing
No power supply	-	-	-

Notes:

[1] The optional 90w adapter may increase performance scores when i5-13420H CPUs are installed.

When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:

- Order a Tiny for TIO MT (12LQ, 12LR) models
- Or for Intel Core i5 models order an additional 135W power adapter, for Intel Core i3 models order an additional 90W power adapter. If original power adapter is less than 135W (i5 models) or 90W (i3 models).

DESIGN

Input Device

Keyboard

- Lenovo Calliope Keyboard (USB connector), black
- No keyboard

Mouse

- Lenovo Calliope Mouse (USB connector), black
- No mouse

Mechanical**Form Factor**

Tiny (1L)

Dimensions (WxDxH)^[1]

179 x 182.9 x 36.5 mm (7.05 x 7.2 x 1.44 inches)

Packaging Dimensions (WxDxH)

140 x 262 x 500 mm (5.51 x 10.31 x 19.69 inches)

Weight^[2]

Around 1.11 kg (2.45 lbs)

Packaging Weight

Around 5.18 kg (11.42 lbs)

Case Color

Black

Bays

1x 2.5" disk bay (optional, or bay comes with disk)

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) Toolless cover (toolless chassis screw required), stand, optional 2.5" HDD bracket assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- Supports VESA mount 100mm
- None

Others

(Optional) Power adapter cage

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Onboard Ethernet**

Gigabit Ethernet, Realtek RTL8111K-CG, 1x RJ-45

WLAN + Bluetooth^{}**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 2 (support data transfer and 5V@0.9A charging)
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

Punch out port (one of VGA / DisplayPort 1.4 / serial)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

Monitor Cable**Monitor Cable****

- DP to VGA dongle
- DP to DVI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Firmware TPM 2.0 integrated in SoC

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Supervisor password
- Hard disk password
- Boot sequence control
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Intel BIOS guard

MANAGEABILITY**System Management****System Management**

None

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 20% to 90%

Altitude

- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 10668 m (35,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3 and Lot 7
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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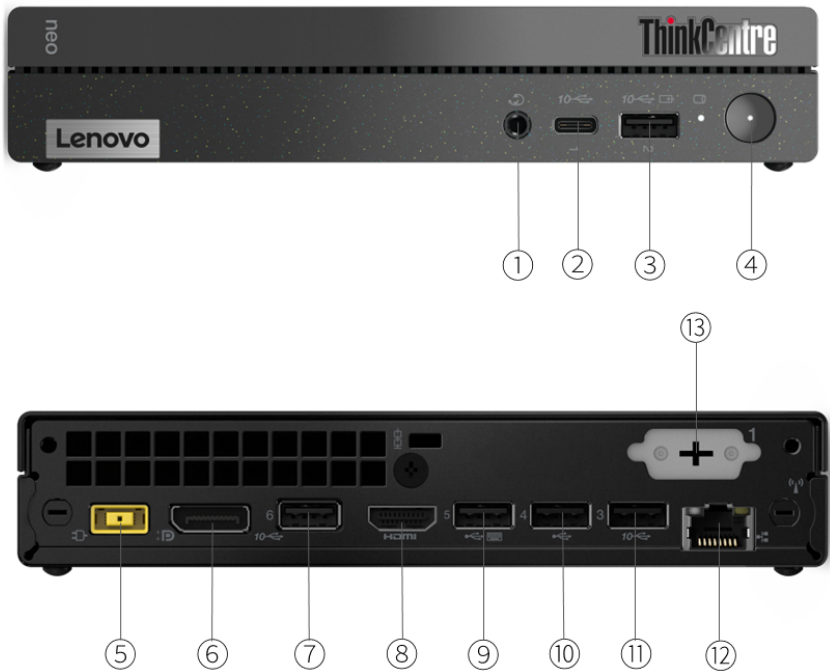


you.

- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI 2.1 TMDs
2. USB-C 3.2 Gen 2 (support data transfer and 5V@0.9A charging)	9. USB 2.0
3. USB 3.2 Gen 2 (Always On and 5V@2.1A charging)	10. USB 2.0
4. Power button	11. USB 3.2 Gen 2
5. Power-in	12. Ethernet (RJ-45)
6. DisplayPort 1.4	13. Punch out port *
7. USB 3.2 Gen 2	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron® or 12th Generation Intel Core™ i3 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 7305	5 (1 P-core + 4 E-core)	6	P-core 1.1GHz / E-core 0.9GHz	P-core 1.1GHz / E-core 0.9GHz ^[1]	8MB	DDR4-3200	Intel UHD Graphics
Core i3-1215U	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz ^[2]	10MB	DDR4-3200	Intel UHD Graphics

Notes:

[1], [2] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- IGEL Linux^[1]
- LeTOS™ V2 (Lenovo® Terminal Operating System, Linux-based)
- Windows® 10 IoT Enterprise (Thin Client)
- No operating system

Notes:

[1] The pre-installed IGEL OS version is 11.08.240
The device is preload with a free evaluation license. The evaluation license will be valid for a period of 90 days.

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x DP 1.4, 1x HDMI® 2.1 TMDS, 1x punch out port (1x VGA or 1x DP 1.4)	4096x2160@60Hz(DP), 4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA)	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 3 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / DP])

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory^[1]

- Models with Intel Celeron processor: Up to 16GB DDR4-3200
- Models with Intel Core processor: Up to 32GB DDR4-3200

Memory Slots

- Models with Intel Core processor: Two DDR4 SO-DIMM slots, dual-channel capable
- Models with Intel Celeron processor: One DDR4 SO-DIMM slot, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo memory offerings.

Storage

Storage Support^[1]

One drive, 256GB M.2 2280 SSD

Storage Type

Disk Type	Interface	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	Opal 2.0

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256 codec

Speakers

Single speaker, 2W x1

Microphone

No microphone

Power Supply

Power Supply^{**[1]}

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
No power supply	-	-	-

Notes:

[1] When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:

- Order a Tiny for TIO MT (12LK, 12LK, 12M3, 12M4) models
- Or order an additional 90W power adapter. If original power adapter is less than 90W.

DESIGN

Input Device

Keyboard

- Lenovo Calliope Keyboard (USB connector), black
- No keyboard

Mouse

- Lenovo Calliope Mouse (USB connector), black
- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

ThinkCentre neo 50q Gen 4 Thin Client

179 x 182.9 x 36.5 mm (7.05 x 7.2 x 1.44 inches)

Packaging Dimensions (WxDxH)^[2]

494 x 250 x 130 mm (19.45 x 9.84 x 5.12 inches)

Weight^[3]

Around 1.11 kg (2.45 lbs)

Packaging Weight^[4]

Around 3.2 kg (7.05 lbs)

Case Color

Black

Bays

No bays

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

- No support
- (Optional) Toolless cover (toolless chassis screw required), stand, optional 2.5" HDD bracket assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- Supports VESA mount 100mm
- None

Others

(Optional) Power adapter cage

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The new package takes effect from November 2023. The old package is:
140 x 262 x 500 mm (5.51 x 10.31 x 19.69 inches)

^[3] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

^[4] The new package takes effect from November 2023. The old package is:
Around 5.18 kg (11.42 lbs)

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K-CG, 1x RJ-45

WLAN + Bluetooth^{**}

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[1]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- No WLAN and Bluetooth

Notes:

^[1], ^[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 2 (support data transfer and 5V@0.9A charging)
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

ThinkCentre neo 50q Gen 4 Thin Client

None

Rear Ports

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports^[2]

Punch out port (one of VGA / DisplayPort 1.4 / serial)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Punch out ports only available on i3 models.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Supervisor password
- Hard disk password
- Boot sequence control
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Intel BIOS guard

MANAGEABILITY

System Management

System Management

None

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 10668 m (35,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- ErP Lot 3 and Lot 7
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power connector	3. USB-B 3.1 Gen 1
2. DisplayPort	4. USB 3.1 Gen 1

- Notes:
- USB 3.1 Gen 1(only available when a Tiny is installed or a PC is connected)

PERFORMANCE

Panel

- Panel
 - In-Plane Switching (IPS)
- Backlight
 - WLED
- Display Size
 - 21.5 inches
- Max View Area
 - WxH: 476.1 x 267.8 mm
- Resolution
 - 1920 x 1080
- Aspect Ratio
 - 16:9
- Pixel Pitch
 - 0.24795 x 0.24795 mm
- Dot / Pixel Per Inch
 - 102 dpi
- Brightness
 - 250 cd/m²
- Contrast Ratio
 - Contrast Ratio: 1000:1
 - Dynamic Contrast Ratio: 3M:1
- View Angle (H / V)
 - Horizontal: 178°, Vertical: 178°
- Response Time
 - Extreme Mode: 4 ms
 - Normal Mode: 6 ms
 - Off Mode: 14 ms
- Refresh Rate
 - 60Hz
- Color Gamut
 - 72% NTSC
- Color Support
 - 16.7 Million
- Color Depth
 - 8-bit
- Screen Surface Treatment
 - Anti-glare

Operating System

- Operating System
 - Windows® 7 Support
 - Windows 10 Support

Multi-Media

- Camera
 - HD 720p, with dual microphone and ThinkShutter
- Microphone
 - Dual-microphone array
- Speakers

Stereo speakers, 2W x2

Power Supply

Power Consumption

Typical / Max: 14W / 25W

Voltage Required

AC 100 to 240 V (40-60Hz)

DESIGN

Display

Touchscreen

- (Optional) Advanced In-cell Touch (AIT), supports 10-point touch (for models 11GTPAT1 and 11GTPAR1 only)
- Non-touch

Mechanical

ThinkCentre® M Series Support

P340 / P330 / P320 / P350 / P360 / M90q / M80q / M70q / M75q / M920(x) / M720 / M910(x) / M710 / M715 / M900(x) / M700 / M630e / M625 / M600 Tiny / M90n / M75n Nano (with TIO kit)

Bezel Width

- Bottom: 22.1mm
- Top / side: 2mm

Buttons

- Brightness button
- Exit button
- Menu button
- Mode-switching button
- Power button

Cable Management

Support

Case Color

Black

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with full function monitor stand	489 x 220.4 x 568.2 mm (19.26 x 8.68 x 22.37 inches)
Models without stand	489 x 65.3 x 339 mm (19.26 x 2.57 x 13.35 inches)

Weight^[2]

Models	Weight
Models without stand	Around 3.41 kg (7.52 lbs)
Models with full function monitor stand	Around 6.58 kg (14.51 lbs)

Mounting

Supports VESA mount 100mm

Stand

Full function monitor stand, supports -5° to +30° tilt, left & right 45° swivel, up to 150mm lift, 90° pivot

In the Box

- 1x Power adapter
- Detachable stand
- Power cable
- Quick Setup Guide
- TIO (monitor)

Notes:

^[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.1 Gen 1, USB upstream
- 1x DisplayPort™
- 1x power connector

Left Ports^[2]

- 1x USB 3.1 Gen 1 (on TIO)
The availability and version depends on the Tiny installed or the PC connected via USB upstream port (USB-B 3.1 Gen 1)
- Side ports offered by installed Tiny (on Tiny)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] The availability and version depends on the Tiny installed or the PC connected via USB upstream port.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- ErP Lot 5
- GREENGUARD®
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Kensington Security Slot	4. DP 1.2
2. Power-in	5. USB-B 3.2 Gen 1
3. HDMI 1.4	6. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.1 x 267.8 mm (18.74 x 10.54 inches)

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.248 x 0.248 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

FHD 1080p

Microphone

Integrated microphone

Speakers

Stereo speakers, 3W x2

Power Supply

Power Consumption

- Typical / Max: 13.4W / 33W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 10W
- Energy Star TEC: 32.3kWh
- External Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- KVM Switch
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Display

Touchscreen

- Capacitive-type multi-touch, supports 10-point touch (for MT 12N9 only)
- Non-touch

Mechanical

ThinkCentre® M Series Support

ThinkCentre Tiny, ThinkStation® Tiny from 4th Generation

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 46mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	489.3 x 207.6 x 357.3 mm (19.26 x 8.17 x 14.07 inches)
Highest Position	489.3 x 207.6 x 512.3 mm (19.26 x 8.17 x 20.17 inches)
Head Only	489.3 x 72.8 x 339.1 mm (19.26 x 2.87 x 13.3 inches)

Packaging Dimensions (WxDxH)

568 x 176 x 422 mm (22.36 x 6.93 x 16.61 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.2 kg (7.1 lbs)
Monitor With Stand	5.5 kg (12.1 lbs)

Packaging Weight

8.1 kg (17.86 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, -5° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- Power Adapter (90W)
- Power cable (1.0 m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB 3.2 Gen 1
- 1x USB-B 3.2 Gen 1, USB upstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm and 2.5 x 6 mm

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (D-class)
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power connector	3. USB-B 3.1 Gen 1
2. DisplayPort	4. USB 3.1 Gen 1

- Notes:
- USB 3.1 Gen 1(only available when a Tiny is installed or a PC is connected)

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2745 x 0.2745 mm

Dot / Pixel Per Inch

92.6 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

- FHD 1080p, with dual microphone and Think Shutter
- IR + RGB camera, with dual microphone and ThinkShutter

Microphone

Dual-microphone array

Speakers

Stereo speakers, 2W x2

Power Supply

Power Consumption

Typical / Max: 15W / 27W

Voltage Required

AC 100 to 240 V (40-60Hz)

DESIGN

Display

Touchscreen

- (Optional) Advanced In-cell Touch (AIT), supports 10-point touch (for models 11GCPAT1 and 11GCPAR1 only)
- Non-touch

Mechanical

ThinkCentre® M Series Support

P340 / P330 / P320 / P350 / P360 / M90q / M80q / M70q / M75q / M920(x) / M720 / M910(x) / M710 / M715 / M900(x) / M700 / M630e / M625 / M600 Tiny / M90n / M75n Nano (with TIO kit)

Bezel Width

- Bottom: 22.1mm
- Top / side: 2mm

Buttons

- Brightness button
- Exit button
- Menu button
- Mode-switching button
- Power button
- Volume button

Cable Management

Support

Case Color

Black

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with full function monitor stand	539.8 x 230.4 x 596.9 mm (21.25 x 9.07 x 23.5 inches)
Models without stand	539.8 x 65.3 x 367.6 mm (21.25 x 2.57 x 14.47 inches)

Packaging Dimensions (WxDxH)

602 x 160 x 422 mm (23.70 x 6.3 x 16.61 inches)

Weight^[2]

Models	Weight
Models without stand	Around 3.61 kg (7.96 lbs)
Models with full function monitor stand	Around 6.66 kg (14.68 lbs)

Packaging Weight

7.6 kg (16.8 lbs)

Mounting

Supports VESA mount 100mm

Stand

Full function monitor stand, supports -5° to +30° tilt, left & right 45° swivel, up to 150mm lift, 90° pivot

In the Box

- 1x Power adapter

- Detachable stand
- Power cable
- Quick Setup Guide
- TIO (monitor)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.1 Gen 1, USB upstream
- 1x DisplayPort™
- 1x power connector

Left Ports^[2]

- 1x USB 3.1 Gen 1 (on TIO)
The availability and version depends on the Tiny installed or the PC connected via USB upstream port (USB-B 3.1 Gen 1)
- Side ports offered by installed Tiny (on Tiny)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] The availability and version depends on the Tiny installed or the PC connected via USB upstream port.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- ErP Lot 5
- GREENGUARD®
- RoHS compliant
- TCO edge 2.0

- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Kensington Security Slot	4. DP 1.2
2. Power-in	5. USB-B 3.2 Gen 1
3. HDMI 1.4	6. USB 3.2 Gen 1

PERFORMANCE

Panel

- Panel**
In-Plane Switching (IPS)
- Backlight**
WLED
- Display Size**
23.8 inches
- Max View Area**
WxH: 527.0 x 296.4 mm (20.75 x 11.67 inches)
- Resolution**
1920 x 1080
- Aspect Ratio**
16:9
- Pixel Pitch**
0.275 x 0.275 mm
- Dot / Pixel Per Inch**
93 dpi
- Brightness**
250 cd/m²
- Contrast Ratio**
 - Contrast Ratio: 1000:1
 - Dynamic Contrast Ratio: 3M:1
- View Angle (H / V)**
Horizontal: 178°, Vertical: 178°
- Response Time**
 - Extreme Mode: 4 ms
 - Normal Mode: 6 ms
- Refresh Rate**
60Hz
- Color Gamut**
99% sRGB
- Color Support**
16.7 Million
- Color Depth**
8-bit (6-bit+FRC)
- Screen Surface Treatment**
Anti-glare
- Curvature**
Flat Panel

Operating System

- Operating System**
 - Windows® 10 Support
 - Windows 11 Support

Multi-Media

- Camera**
FHD 1080p
- Microphone**
Integrated microphone

Speakers

Stereo speakers, 3W x2

Power Supply

Power Consumption

- Typical / Max: 14W / 34W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 11.9W
- Energy Star TEC: 37.9kWh
- External Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- KVM Switch
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Display

Touchscreen

- Capacitive-type multi-touch, supports 10-point touch (for MT 12NB only)
- Non-touch

Mechanical

ThinkCentre® M Series Support

ThinkCentre Tiny, ThinkStation® Tiny from 4th Generation

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 46mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 207.6 x 384.6 mm (21.25 x 8.17 x 15.14 inches)
Highest Position	539.8 x 207.6 x 539.6 mm (21.25 x 8.17 x 21.24 inches)
Head Only	539.8 x 72.8 x 367.6 mm (21.25 x 2.87 x 14.47 inches)

Packaging Dimensions (WxDxH)

620 x 187 x 420 mm (24.41 x 7.36 x 16.54 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.7 kg (8.2 lbs)
Monitor With Stand	6.0 kg (13.2 lbs)

Packaging Weight

9.5 kg (20.9 lbs)

Mounting

Supports VESA mount 100mm

Stand

ThinkCentre Tiny-In-One 24 Gen 5

Supports -5° to +23.5° tilt, left & right 45 swivel, -5° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- Power Adapter (90W)
- Power cable (1.0 m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB 3.2 Gen 1
- 1x USB-B 3.2 Gen 1, USB upstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm and 2.5 x 6 mm

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (D-class)
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. 2x USB 3.1 Gen 1	4. Power connector
2. Headphone / microphone combo jack (3.5mm)	5. DisplayPort
3. HDMI 1.4	6. USB-B 3.1 Gen 1

- Notes:
- USB 3.1 Gen 1(only available when a Tiny is installed or a PC is connected)

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2331 x 0.2331 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

IR + RGB camera, with dual microphone, ThinkShutter, and LED indicator. Supports Window Hello and Facial Recognition

Microphone

Dual-microphone array

Speakers

Stereo speakers, 2W x2

Power Supply

Power Consumption

Typical / Max: 37W / 57W

DESIGN

Display

Touchscreen

Non-touch

Mechanical

ThinkCentre® M Series Support

ThinkCentre Tiny, ThinkCentre Nano, and ThinkStaion Tiny

Bezel Width

- Bottom: 23.3mm
- Top / side: 2mm

Buttons

- Brightness button
- Exit button
- Menu button
- Mode-switching button
- Power button
- Volume button

Cable Management

Support

Case Color

Black

Dimensions (WxDxH)^[1]

Models	Dimensions
Models with full function monitor stand	614 x 329 x 554.25 mm (24.17 x 12.95 x 21.82 inches)
Models without stand	614 x 73.89 x 413.1 mm (24.17 x 2.91 x 16.26 inches)

Packaging Dimensions (WxDxH)

782 x 172 x 469 mm (30.79 x 77.00 x 18.46 inches)

Weight^[2]

Models	Weight
Models without stand	Around 4.90 kg (10.82 lbs)
Models with full function monitor stand	Around 7.95 kg (17.53 lbs)

Packaging Weight

9.75 kg (21.5 lbs)

Mounting

Supports VESA mount 100mm

Stand

Full function monitor stand, supports -5° to +30° tilt, left & right 45° swivel, up to 110mm lift, +90° pivot

In the Box

- 1x Power adapter
- Detachable stand
- Power cable
- TIO (monitor)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.1 Gen 1, USB upstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x power connector

Left Ports^[2]

- 2x USB 3.1 Gen 1 (on TIO)
The availability and version depends on the Tiny installed or the PC connected via USB upstream port (USB-B 3.1 Gen 1)
- 1x headphone / microphone combo jack (on TIO)
- Side ports offered by installed Tiny (on Tiny)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] The USB ports are enabled by installing a Tiny or connecting USB upstream port; the audio port is enabled by installing a Tiny or connecting USB upstream, DisplayPort(in), or HDMI(in) port.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO edge 2.0
- ULE Gold
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- ISO 9241-307
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Power Connector	6. USB 3.0
2. DP 1.2	7. USB 3.0
3. HDMI 1.4	8. Audio line-out (3.5mm)
4. VGA	9. USB 3.0
5. USB-B 3.0	10. USB 3.0

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.1 x 267.8 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2479 x 0.2579 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

Contrast Ratio: 1000:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

Typical / Max: 15W / 48W

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre Tiny, ThinkStation® Tiny

Bezel Width

Side: 2mm

Buttons

- Input Source Switch button
- Menu stick
- Power button

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	489 x 223 x 369 mm (19.25 x 8.78 x 14.53 inches)
Highest Position	489 x 223 x 494 mm (19.25 x 8.78 x 19.45 inches)
Head Only	489.3 x 46.4 x 292.7 mm (19.3 x 1.8 x 11.5 inches)

Packaging Dimensions (WxDxH)

577 x 187 x 442 mm (22.72 x 7.36 x 17.40 inches)

Weight^[2]

Models	Weight
Monitor With Stand	6.05 kg (13.34 lbs)

Packaging Weight

7.58 kg (16.71 lbs)

Mounting

Supports VESA mount 100mm

Stand

- TIO Flex stand, supports -5° to +23° tilt, up to 125mm lift
- Build in DisplayPort™ cable for monitor
- Build in DisplayPort connector for Tiny
- Build in USB-A connector for Tiny
- Build in USB-B cable for monitor

In the Box

- Monitor Head
- Power cable
- TIO Flex stand
- User's guide

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.0, USB upstream
- 4x USB 3.0, USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort 1.2
- 1x VGA
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

SERVICE

Warranty

Base Warranty

- TIO Flex stand: 1-year CRU warranty
- Monitor: 3 years limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. DisplayPort 1.2	6. USB 3.0
2. HDMI 1.4	7. Audio-out (3.5mm)
3. VGA	8. USB 3.0
4. USB-B 3.0	9. USB 3.0
5. USB 3.0	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

Contrast Ratio: 1000:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

Typical / Max: 14W / 56W

Voltage Required

AC 100 to 240 V (47-63Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre Tiny, ThinkStation® Tiny

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 17.3mm

Buttons

- Input Source Switch button
- Menu stick
- Power button

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 223 x 386.78 mm (21.25 x 8.78 x 15.23 inches)
Highest Position	539.8 x 223 x 511.78 mm (21.25 x 8.78 x 20.15 inches)
Head Only	539.80 x 49.00 x 321.40 mm (21.25 x 1.93 x 12.65 inches)

Packaging Dimensions (WxDxH)

619 x 187 x 421 mm (24.37 x 7.36 x 16.57 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.1 kg (6.83 lbs)
Monitor With Stand	6.3 kg (13.89 lbs)

Packaging Weight

8.61 kg (18.98 lbs)

Mounting

Supports VESA mount 100mm

Stand

- TIO Flex stand, supports -5° to +23° tilt, up to 125mm lift
- Build in DisplayPort™ cable for monitor
- Build in DisplayPort connector for Tiny
- Build in USB-A connector for Tiny
- Build in USB-B cable for monitor

In the Box

- Monitor Head
- Power cable
- TIO Flex stand
- User's guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.0, USB upstream
- 4x USB 3.0, USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort 1.2
- 1x VGA
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

SERVICE

Warranty

Base Warranty

- TIO Flex stand: 1-year CRU warranty
- Monitor: 3 years limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

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Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Joystick	7. USB-B 3.2 Gen 1
2. Source Key	8. USB 3.2 Gen 1
3. Power Connector	9. USB 3.2 Gen 1
4. HDMI 1.4	10. Audio-out (3.5mm)
5. DP 1.2	11. USB 3.2 Gen 1
6. VGA	12. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.3 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.3114 x 0.3114 mm

Dot / Pixel Per Inch

82 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

Typical / Max: 24W / 65W

Voltage Required

AC 100 to 240 V (47-63Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre Tiny, ThinkStation® Tiny

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 17.6mm

Buttons

- Input Source Switch button
- Menu stick
- Power button

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	611x 223 x 426 mm (24.09 x 8.78 x 16.78 inches)
Highest Position	611 x 223 x 551 mm (24.09 x 8.78 x 21.7 inches)
Head Only	611.9 x 50.0 x 362.5 mm (24.09 x 1.97 x 14.27 inches)

Packaging Dimensions (WxDxH)

715 x 160 x 527 mm (28.15 x 6.30 x 20.75 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.9 kg (10.8 lbs)
Monitor With Stand	7.90 kg (17.42 lbs)

Packaging Weight

10.24 kg (22.58 lbs)

Mounting

Supports VESA mount 100mm

Stand

- TIO Flex stand, supports -5° to +23° tilt, up to 125mm lift
- Build in DisplayPort™ cable for monitor
- Build in DisplayPort connector for Tiny
- Build in USB-A connector for Tiny
- Build in USB-B cable for monitor

In the Box

- Monitor Head
- Power cable
- TIO Flex stand
- User's guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.1 Gen 1 (1x BC), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort 1.2
- 1x VGA
- 1x audio-out (3.5mm)

- 1x power connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

SERVICE

Warranty

Base Warranty

- TIO Flex stand: 1-year CRU warranty
- Monitor: 3 years limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

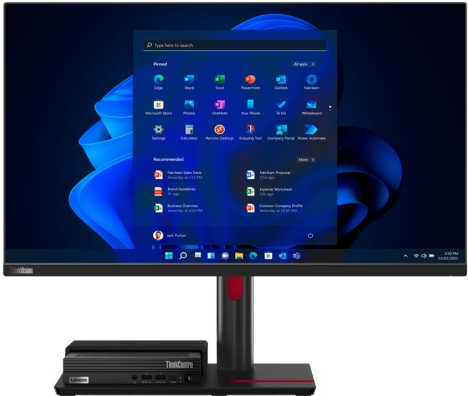
Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

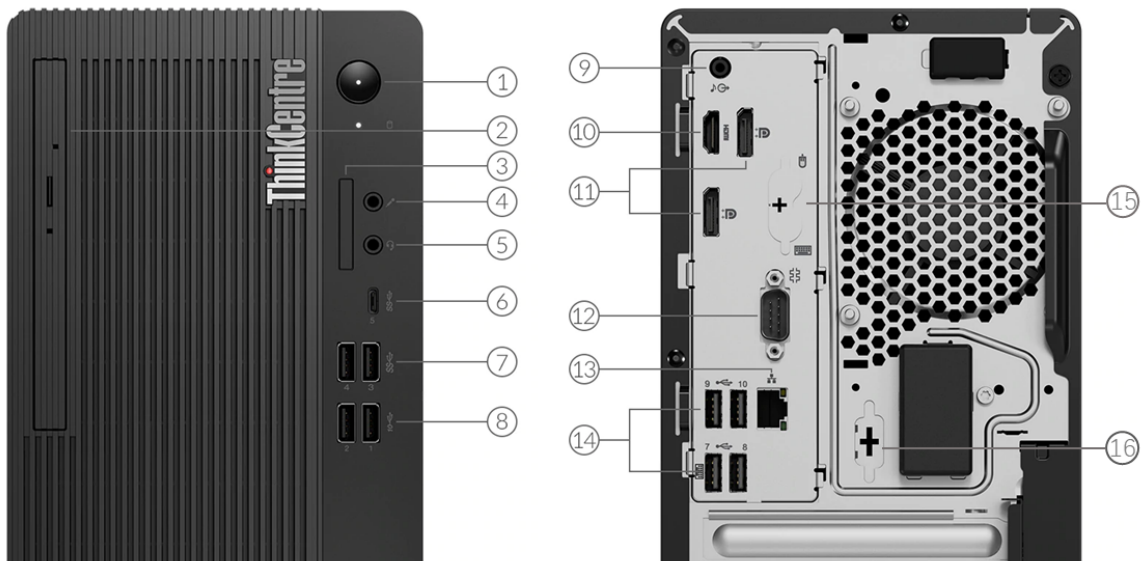
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notice.



OVERVIEW



1. Power button	9. Line-out (3.5mm)
2. Optical drive *	10. HDMI
3. Card reader *	11. 2x DisplayPort
4. Microphone (3.5mm)	12. Serial
5. Headphone / microphone combo jack (3.5mm)	13. Ethernet (RJ-45)
6. USB-C 3.2 Gen 1	14. 4x USB 2.0
7. 2x USB 3.2 Gen 1	15. 2x PS/2 ports (keyboard / mouse) *
8. 2x USB 3.2 Gen 2	16. Serial *

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400F	6	12	2.9GHz	4.3GHz ^[5]	12MB	DDR4-2666	-
Core i5-10500	6	12	3.1GHz	4.5GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[7]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[8]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i7-10700F	8	16	2.9GHz	4.8GHz ^[9]	16MB	DDR4-2933	-
Core i9-10900	10	20	2.8GHz	5.2GHz ^[10]	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900F	10	20	2.8GHz	5.2GHz ^[11]	20MB	DDR4-2933	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key
----------	------	--------	-----------	----------------	-----

					Features
Intel UHD graphics 610	Integrated	Shared	1x HDMI®, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x HDMI, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce GT 730	Discrete	2GB GDDR5	1x VGA, 1x HDMI 1.4	2048x1536@75Hz(VGA), 3840x2160@30Hz(HDMI)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x VGA, 1x DP 1.4	4096x2160@60Hz(HDMI), 2048x1536@85Hz(VGA), 3840x2160@60Hz(DP)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 3 independent displays via onboard ports (HDMI and 2x DisplayPort™), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel H470 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type^{**}

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB
- Optional Intel Optane™ Memory, M.2

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal

Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-
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RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	-

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 296 x 346 mm (5.7 x 11.7 x 13.6 inches)

Packaging Dimensions (WxDxH)

245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight^[2]

Around 4.8 kg (10.6 lbs)

Packaging Weight

All models: 8.3 kg (18.29 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, full-height (length < 215mm)
- One PCIe 3.0 x1, full-height (length < 215mm)
- Two M.2 slots (one for WLAN, one for SSD)

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9462, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader
- None

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI
- 2x DisplayPort

- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports***

- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable*****

- HDMI to HDMI cable
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0 (only available for MT 11D9/11DA)
- EPEAT™ Gold Registered
- EPEAT Silver Registered
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

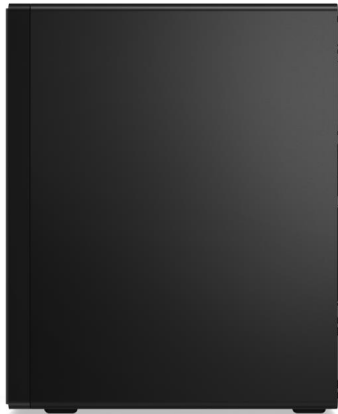
- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

• Feature with ** means that only one offering listed under the feature is configured on selected models.

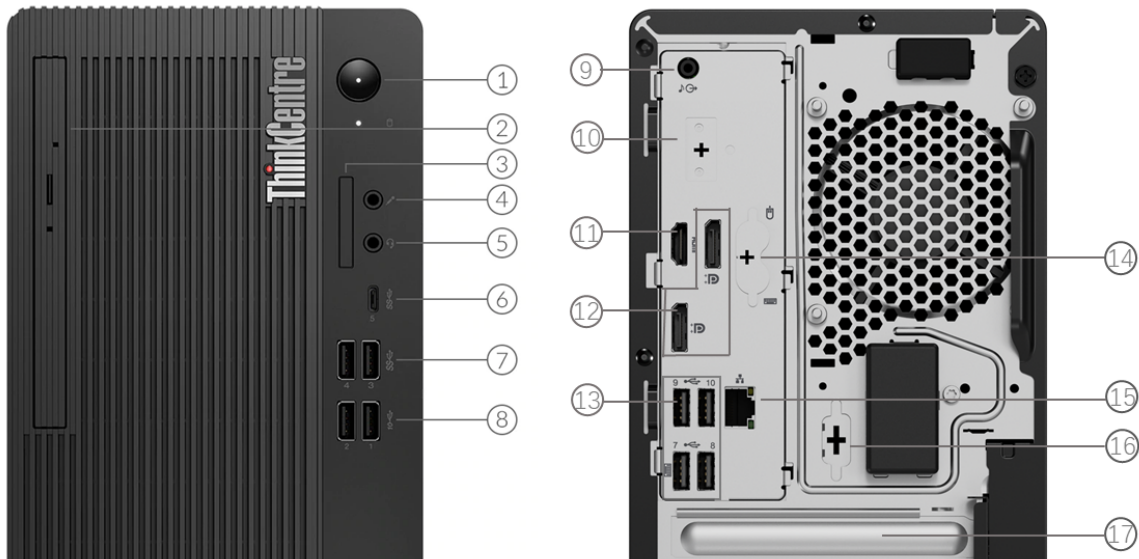
• ThinkCentre M70t** September 25, 2023
• Feature with * means that one or more offerings listed under the feature could be configured on selected

models.

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OVERVIEW



1. Power button	10. Flex IO *
2. Optical drive *	11. HDMI 2.1 TMDS
3. Card reader *	12. 2x DisplayPort 1.4
4. Microphone (3.5mm)	13. 4x USB 2.0
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 1	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Serial *
8. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold G7400	2	4	3.7GHz	-	6MB	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[4]	18MB	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[5]	18MB	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[6]	18MB	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[7]	25MB	Intel UHD Graphics 770
Core i7-12700F	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[8]	25MB	-
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[9]	30MB	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[10]	30MB	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
----------	------	--------	-----------	----------------	--------------

Intel UHD graphics 710	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon RX 6500XT	Discrete	4GB GDDR6	1x HDMI 2.1, 1x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
NVIDIA® GeForce RTX™ 3050	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-3200

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

- Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD
- 2.5" HDD up to 1TB each
 - 3.5" HDD up to 2TB
 - M.2 SSD up to 2TB

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

- Notes:
- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
- [2] The max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings.

Removable Storage

- Optical****
- DVD-ROM, SATA connector, slim (9.0mm)
 - DVD burner (DVD±RW), SATA connector, slim (9.0mm)
 - None

- Card Reader**
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

- Audio Chip**
- High Definition (HD) Audio, Realtek® ALC897Q-CG codec
- Speakers**
- Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black

- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Mouse (PS/2 connector), black (only available via special bid)
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 296 x 346 mm (5.7 x 11.7 x 13.6 inches)

Weight^[2]

Around 5.9 kg (13.0 lbs)

Case Color

Black

Bays^[3]

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, full-height, length ≤ 209mm, height ≤ 117.5mm
- Two PCIe 3.0 x1, full-height, (length ≤ 185mm, height ≤ 100mm) or (length ≤ 118mm, height ≤ 110mm)
- Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet^{***}

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland RTL8168H, 1x RJ-45, PCIe x1
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth^{**}

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1], [2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{***}

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable^{***}

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)

- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

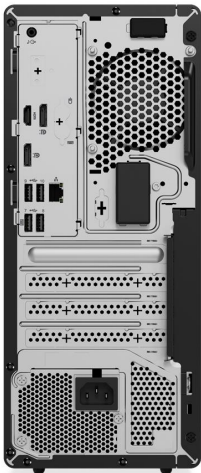
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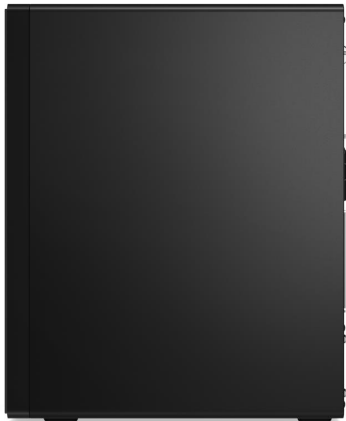
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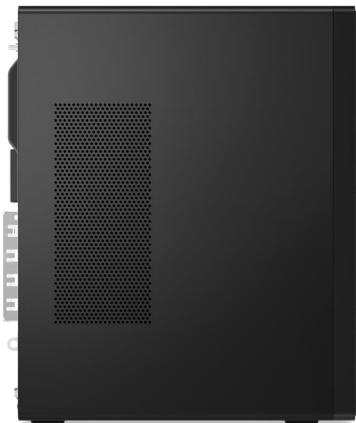
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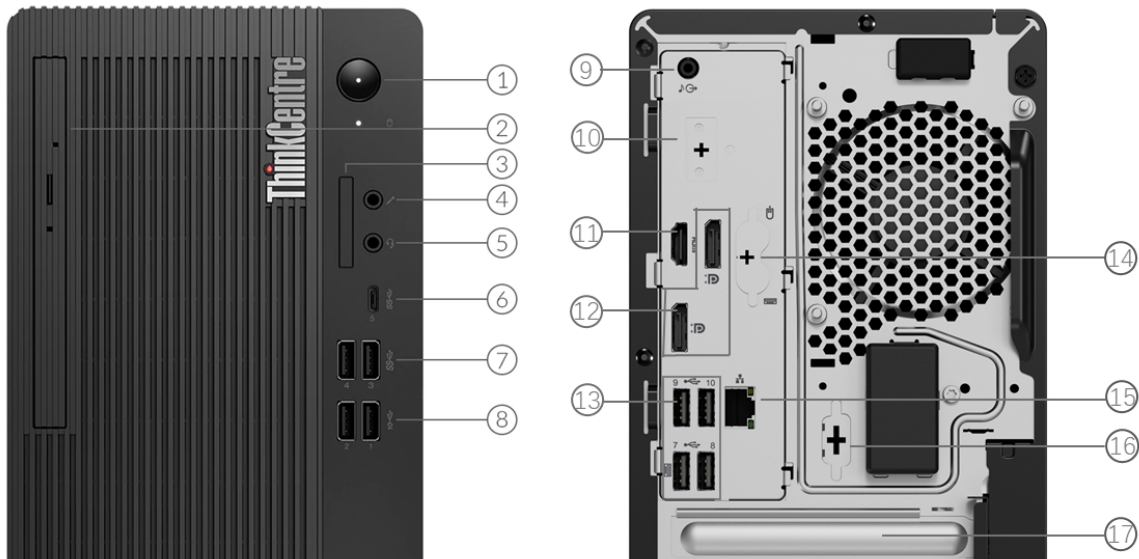


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OVERVIEW



1. Power button	10. Flex IO *
2. Optical drive *	11. HDMI 2.1 TMDS
3. Card reader *	12. 2x DisplayPort 1.4
4. Microphone (3.5mm)	13. 4x USB 2.0
5. Headphone / microphone combo jack (3.5mm)	14. 2x PS/2 ports (keyboard / mouse) *
6. USB-C 3.2 Gen 1	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Serial *
8. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
9. Line-out (3.5mm)	

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	Intel UHD Graphics 730
Core i5-13400F[2]	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	-
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	Intel UHD Graphics 770
Core i7-13700F[3]	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	-

Notes:

- [1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.
- [2], [3] Special bid only.

Operating System

Operating System**

- Ubuntu Linux[1]
- Windows® 10 IoT Enterprise LTSC 2021[2]
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

- [1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.
- [2] Special bid only.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 /	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HD MI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)],	DirectX 12

			HDMI 2.1 TMDs / USB-C)	2048x1536@50Hz[Flex IO(VGA)]	
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
NVIDIA® GeForce RTX™ 3050	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-3200

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] 2TB SSD is special bid only.

Removable Storage

Optical**

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

Mechanical

Form Factor

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 296 x 346 mm (5.7 x 11.7 x 13.6 inches)

Packaging Dimensions (WxDxH)

245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.9 kg (13.0 lbs)

Packaging Weight

8.3 kg (18.29 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay^[3]
- 1x 3.5" disk bay^[4]

- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, full-height, length \leq 209mm, height \leq 117.5mm
- Two PCIe 3.0 x1, full-height, (length \leq 185mm, height \leq 100mm) or (length \leq 118mm, height \leq 110mm)
- Two M.2 slots (one for WLAN, one for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD.

[4] 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1], [2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports***

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)

- 1x VGA (Flex IO)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

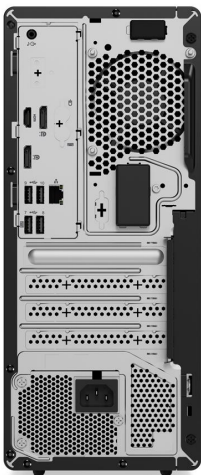
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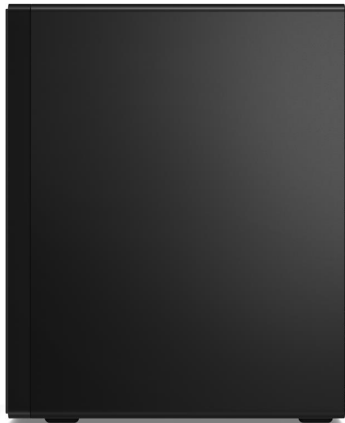
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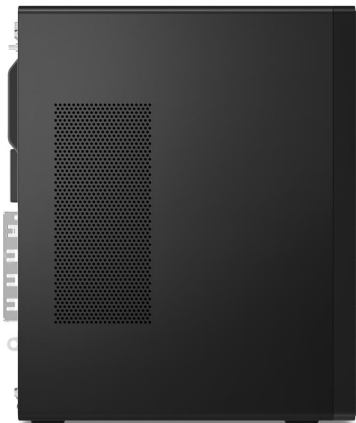
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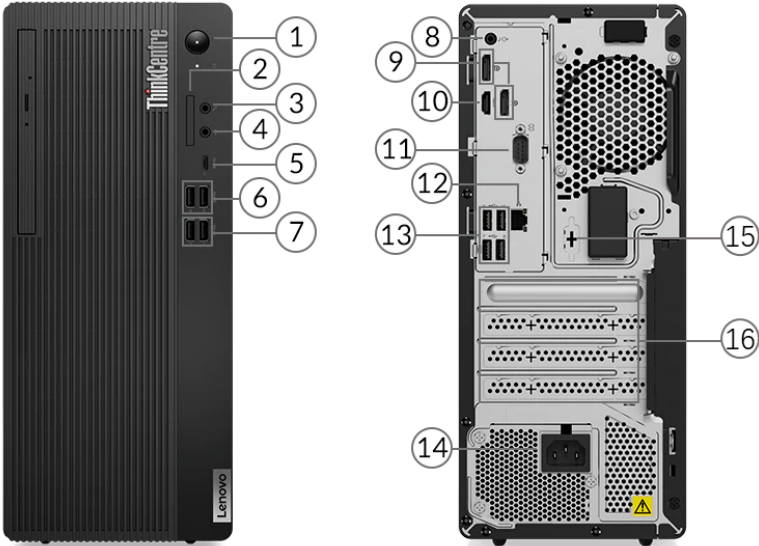


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OVERVIEW



1. Power button	9. 2x DisplayPort 1.4
2. Card reader *	10. HDMI 1.4b
3. Microphone (3.5mm)	11. Serial
4. Headphone / microphone combo jack (3.5mm)	12. Ethernet (RJ-45)
5. USB-C 3.2 Gen 1	13. 4x USB 2.0
6. 2x USB 3.2 Gen 1	14. Power connector
7. 2x USB 3.2 Gen 2	15. Serial *
8. Line-out (3.5mm)	16. Optional ports on expansion cards *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

AMD Athlon™ or AMD Ryzen™ 3 / 5 / 7 / 9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Athlon Gold PRO 3150G	4	4	3.5GHz	3.9GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon™ Graphics
AMD Athlon Silver 3050GE	2	4	3.4GHz	3.4GHz	1MB L2 / 4MB L3	DDR4-2666	AMD Radeon Graphics
AMD Ryzen 3 3200G	4	4	3.6GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 8 Graphics
AMD Ryzen 3 4300G	4	8	3.8GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 5300G	4	8	4.0GHz	4.2GHz	2MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 PRO 4350G	4	8	3.8GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 3 PRO 5350G	4	8	4.0GHz	4.2GHz	2MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 4600G	6	12	3.7GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 5600G	6	12	3.9GHz	4.4GHz	3MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 3350G	4	8	3.6GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 11 Graphics
AMD Ryzen 5 PRO 3400G	4	8	3.7GHz	4.2GHz	2MB L2 / 4MB L3	DDR4-2933	AMD Radeon Vega 11 Graphics
AMD Ryzen 5 PRO 3600	6	12	3.6GHz	4.2GHz	3MB L2 / 32MB L3	DDR4-3200	-
AMD Ryzen 5 PRO 4650G	6	12	3.7GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 5650G	6	12	3.9GHz	4.4GHz	3MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 4700G	8	16	3.6GHz	4.4GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 5700G	8	16	3.8GHz	4.6GHz	4MB L2 / 16MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 3700	8	16	3.6GHz	4.4GHz	4MB L2 / 32MB L3	DDR4-3200	-
AMD Ryzen 7 PRO 4750G	8	16	3.6GHz	4.4GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 5750G	8	16	3.8GHz	4.6GHz	4MB L2 / 16MB L3	DDR4 3200	AMD Radeon Graphics
AMD Ryzen 9 PRO 3900	12	24	3.1GHz	4.3GHz	6MB L2 / 64MB L3	DDR4-3200	-

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64

- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel® RST RAID, Human Presence Detection, etc.

Graphics

Graphics**[1][2]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
AMD Radeon Graphics	Integrated	Shared	2x DisplayPort™ 1.4, 1x HDMI® 1.4	4096x2160@60Hz(DP), 4096x2160@24Hz(HDMI)	DirectX® 12
AMD Radeon Vega 11 Graphics	Integrated	Shared	2x DisplayPort 1.4, 1x HDMI 1.4	4096x2160@60Hz(DP), 4096x2160@24Hz(HDMI)	DirectX 12
AMD Radeon Vega 8 Graphics	Integrated	Shared	2x DisplayPort 1.4, 1x HDMI 1.4	4096x2160@60Hz(DP), 4096x2160@24Hz(HDMI)	DirectX 12
AMD Radeon 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x VGA, 1x DP 1.4	4096x2160@60Hz(HDMI), 2048x1536@85Hz(VGA), 3840x2160@60Hz(DP)	DirectX 12
AMD Radeon RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

[2] AMD Radeon 520 is not available for MT 11RB / 11RC / 11RD / 11RE.

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (HDMI and 2x DisplayPort), more displays support via discrete graphics

Chipset

Chipset

AMD PRO 565 chipset

Memory[1]

Max Memory[2]

Up to 128GB DDR4-3200

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type**[3]

- DDR4-1866
- DDR4-2133
- DDR4-2400
- DDR4-2666
- DDR4-3200

Notes:

- [1] Recommend to choose the models with more than 4GB for better performance and experience.
- [2] The max memory is based on the test results with current Lenovo® memory offerings.
- [3] Installed memory is actually 3200MHz, but may run at 1866MHz, 2133MHz, 2400MHz or 2666MHz depending on the memory support capability of processor.

Storage

Storage Support^[1]

- Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD
- 2.5" HDD up to 1TB each
 - 3.5" HDD up to 2TB
 - M.2 SSD up to 2TB

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal

RAID

RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

- No speakers
- Single speaker, 2W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard^{**}

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical**Form Factor**

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 296 x 346 mm (5.7 x 11.7 x 13.6 inches)

Weight^[2]

Around 5.9 kg (13 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, full-height (length < 215mm)
- One PCIe 3.0 x1, full-height (length < 215mm)
- Two M.2 slots (one for WLAN, one for SSD)
- Two dummy slots, only brackets for optional port extension

EOU

EOU design for chassis open, M.2 SSD, ODD, memory, and PCIe extension card

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network^[1]****Onboard Ethernet****

- Gigabit Ethernet, Realtek RTL8111EPV, 1x RJ-45, supports Wake-on-LAN
- Gigabit Ethernet, Realtek RTL8111HN, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet^[2]**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland RTL8111FP, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Realtek Wi-Fi 6 RTL8852AE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[4]
- Intel Wi-Fi 6 AX200, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[5]

- No WLAN and Bluetooth

Notes:

[1] This system does not support Power Over Ethernet (PoE). If the system is used in a PoE environment, then a Network Isolator is required to prevent possible damage to the system, PoE equipment, or both.

[2] RTL8111FP is not available for AP countries.

[3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader
- None

Rear Ports^[2]

- 4x USB 2.0
- 1x HDMI 1.4b
- 2x DisplayPort 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports^{***}

- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable^{***}

- HDMI to DVI dongle
- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- DASH 1.2
- Non-DASH

Notes:

[1] DASH 1.2 is an optional feature for the selected MTs, MT 11W5/11W6/11W7/11W8 do not support DASH.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS**Green Certifications^[1]****Green Certifications^[2]**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[3]
- (Optional) EPEAT Silver Registered^[4]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] ENERGY STAR 8.0 and EPEAT are only available for MT 11KB/11KC.

[3], [4] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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AMD



AMD



AMD



AMD

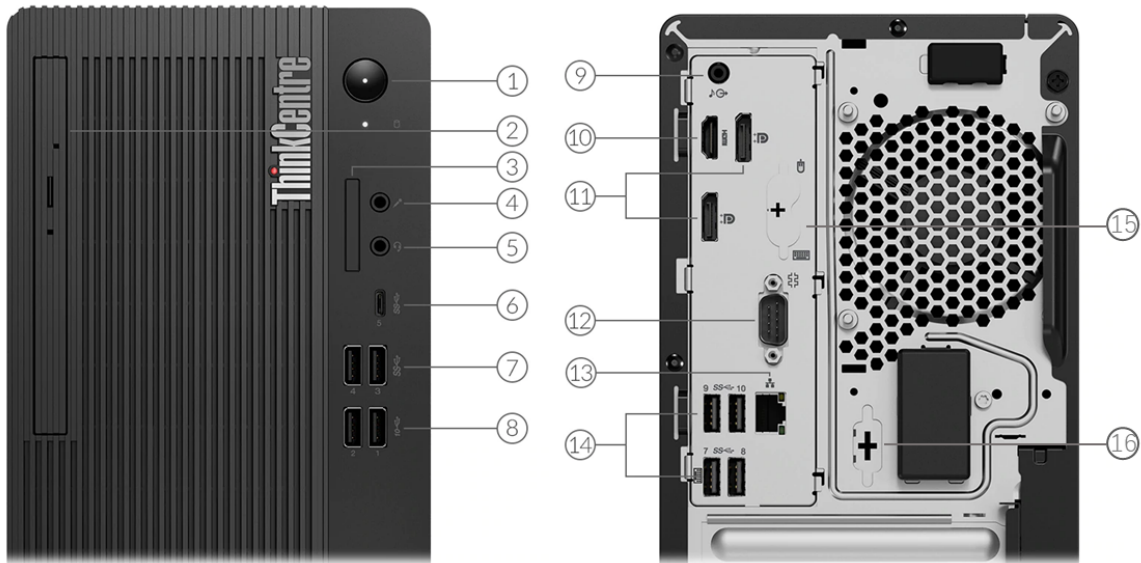


AMD



AMD

OVERVIEW



1. Optical drive *	9. Line-out (3.5mm)
2. Power button	10. HDMI
3. Card reader *	11. 2x DisplayPort
4. Microphone (3.5mm)	12. Serial
5. Headphone / microphone combo jack (3.5mm)	13. Ethernet (RJ-45)
6. USB-C 3.2 Gen 1	14. 4x USB 3.2 Gen 1
7. 2x USB 3.2 Gen 1	15. 2x PS/2 ports (keyboard / mouse) *
8. 2x USB 3.2 Gen 2	16. Serial *

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	Intel UHD Graphics 630
Core i5-10400F	6	12	2.9GHz	4.3GHz ^[5]	12MB	-
Core i5-10500	6	12	3.1GHz	4.5GHz ^[6]	12MB	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[7]	12MB	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[8]	16MB	Intel UHD Graphics 630
Core i7-10700F	8	16	2.9GHz	4.8GHz ^[9]	16MB	-
Core i9-10900	10	20	2.8GHz	5.2GHz ^[10]	20MB	Intel UHD Graphics 630
Core i9-10900F	10	20	2.8GHz	5.2GHz ^[11]	20MB	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise^[2]
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1], [2] Special bid only.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
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Intel UHD graphics 610	Integrated	Shared	1x HDMI®, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x HDMI, 2x DP	1920x1080@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce GT 730	Discrete	2GB GDDR5	1x VGA, 1x HDMI 1.4	2048x1536@75Hz(VGA), 3840x2160@30Hz(HDMI)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x VGA, 1x DP 1.4	4096x2160@60Hz(HDMI), 2048x1536@85Hz(VGA), 3840x2160@60Hz(DP)	DirectX 12

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 3 independent displays via onboard ports (HDMI and 2x DisplayPort™), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q470 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type**

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to three drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 1x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB
- Optional Intel Optane™ Memory, M.2

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal

Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-
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RAID
RAID 0/1 support for HDDs (RAID preset only available via special bid models)

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical****
- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
 - DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
 - None

- Card Reader**
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers
Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
260W	Fixed	85%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	-

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
 - No mouse

Mechanical

Form Factor
Tower (13.6L)

Dimensions (WxDxH)^[1]
145 x 296 x 346 mm (5.7 x 11.7 x 13.6 inches)

Packaging Dimensions (WxDxH)
245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight^[2]
Around 4.8 kg (10.6 lbs)

Packaging Weight

8.3 kg (18.29 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, full-height (length < 215mm)
- One PCIe 3.0 x4, full-height (length < 215mm)
- One PCIe 3.0 x1, full-height (length < 215mm)
- One dummy slot, only bracket for optional port extension
- Two M.2 slots (one for WLAN, one for SSD)

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C® 3.2 Gen 1
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader
- None

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI

- 2x DisplayPort
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports***

- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable*****

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)

- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro with Intel AMT 14^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications^[2]

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[3]
- (Optional) EPEAT Silver Registered^[4]
- ErP Lot 3
- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] ENERGY STAR 8.0 and EPEAT are only available for MT 11CS/11CT.

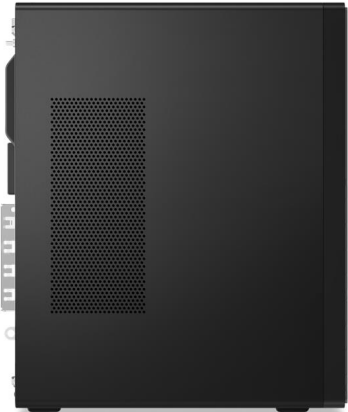
[3], [4] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

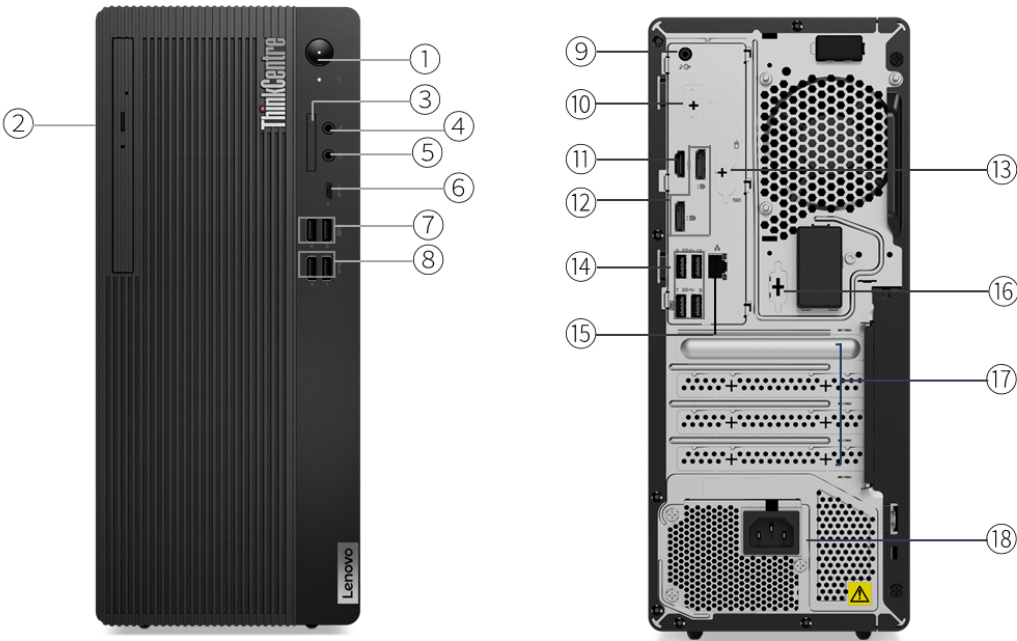
Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	10. Flex IO *
2. Optical drive *	11. HDMI 2.1 TMDS
3. Card reader *	12. 2x DisplayPort 1.4
4. Microphone (3.5mm)	13. 2x PS/2 ports (keyboard / mouse) *
5. Headphone / microphone combo jack (3.5mm)	14. 4x USB 3.2 Gen 1
6. USB-C 3.2 Gen 2	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Serial *
8. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
9. Line-out (3.5mm)	18. Power connector

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR5-4800	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[5]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[6]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[7]	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[8]	30MB	DDR5-4800	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex	DirectX® 12

710			Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C*)	IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon RX 6500XT	Discrete	4GB GDDR6	1x HDMI 2.1, 1x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
NVIDIA® GeForce RTX™ 3050	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type^[2]

- DDR5-3600
- DDR5-4000
- DDR5-4400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 4800MHz, but may run at 3600MHz, 4000MHz, or 4400MHz depending on the memory support capability of processor.

Storage

Storage Support^{[1][2]}

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID

RAID 0/1 support (RAID preset only available via special bid models)

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.
- [2] The max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings.

Removable Storage

Optical^{**}

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard^{**}

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black

- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Mouse (PS/2 connector), black (only available via special bid)
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical**Form Factor**

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 296 x 346 mm (5.7 x 11.7 x 13.6 inches)

Packaging Dimensions (WxDxH)

245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.9 kg (13.0 lbs)

Packaging Weight

8.3 kg (18.29 lbs)

Case Color

Black

Bays^[3]

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal), full-height, (length ≤ 185mm, height ≤ 100mm) or (length ≤ 118mm, height ≤ 110mm)
- One PCIe 4.0 x16, full-height, length ≤ 209mm, height ≤ 117.5mm
- One PCIe 3.0 x1, full-height, (length ≤ 185mm, height ≤ 100mm) or (length ≤ 118mm, height ≤ 110mm)
- Three M.2 slots (one for WLAN, two for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

CONNECTIVITY**Network****Onboard Ethernet**

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet***

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[4]

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth[®]**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi[®] + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card^[5]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2], [3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]**Front Ports**

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 2x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^{*}**

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4[®] 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt[™] 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable^{***}**

- HDMI to HDMI cable (1.5m)

- HDMI to VGA dongle
- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management**

- Intel vPro Enterprise^[1]
- Intel vPro Essentials^[2]
- Non-vPro

Notes:

[1], [2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

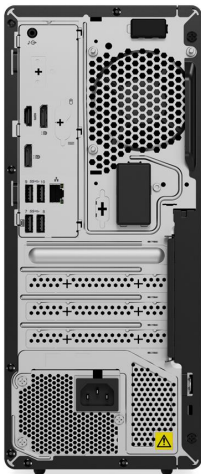
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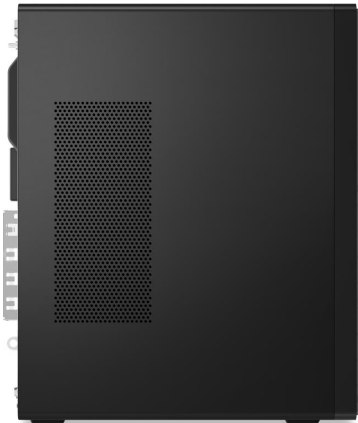
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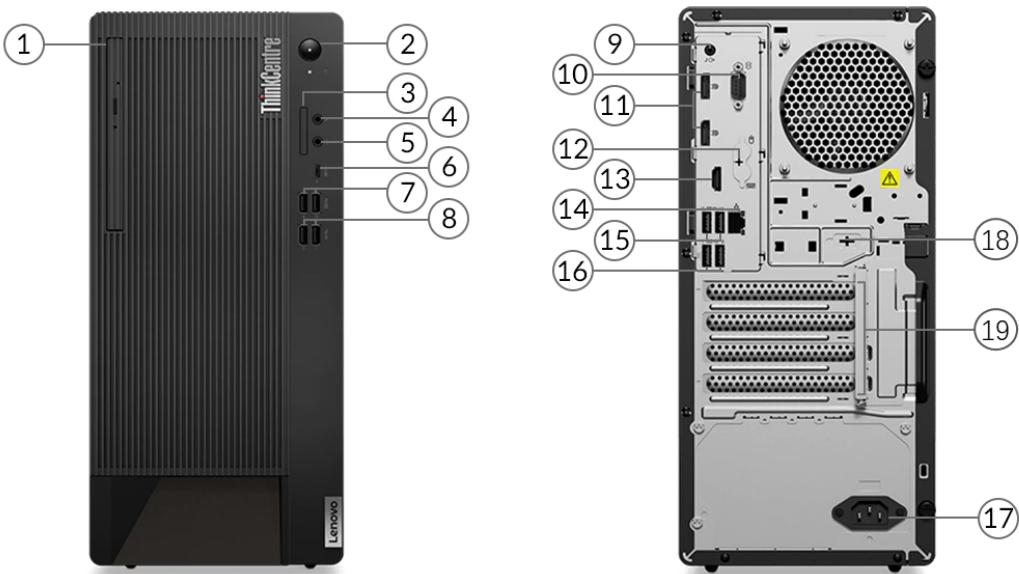


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OVERVIEW



1. Optical drive *	11. 2x DisplayPort
2. Power button	12. 2x PS/2 ports (keyboard / mouse) *
3. Card reader *	13. Optional Video Port (HDMI / DP / USB-C) *
4. Microphone (3.5mm)	14. Ethernet (RJ-45)
5. Headphone / microphone combo jack (3.5mm)	15. 2x USB 3.2 Gen 1
6. USB-C 3.2 Gen 1	16. 2x USB 3.2 Gen 1
7. 2x USB 3.2 Gen 1	17. Power connector
8. 2x USB 3.2 Gen 2	18. Serial *
9. Line-out (3.5mm)	19. Optional ports on expansion cards *
10. Serial	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 10th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G5900	2	2	3.4GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5905	2	2	3.5GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5920	2	2	3.5GHz	-	2MB	DDR4-2666	Intel UHD Graphics 610
Celeron G5925	2	2	3.6GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6400	2	4	4.0GHz	-	4MB	DDR4-2666	Intel UHD Graphics 610
Pentium Gold G6500	2	4	4.1GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Pentium Gold G6600	2	4	4.2GHz	-	4MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10100	4	8	3.6GHz	4.3GHz ^[1]	6MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10300	4	8	3.7GHz	4.4GHz ^[2]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i3-10320	4	8	3.8GHz	4.6GHz ^[3]	8MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400	6	12	2.9GHz	4.3GHz ^[4]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10400F	6	12	2.9GHz	4.3GHz ^[5]	12MB	DDR4-2666	-
Core i5-10500	6	12	3.1GHz	4.5GHz ^[6]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i5-10600	6	12	3.3GHz	4.8GHz ^[7]	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-10700	8	16	2.9GHz	4.8GHz ^[8]	16MB	DDR4-2933	Intel UHD Graphics 630
Core i7-10700F	8	16	2.9GHz	4.8GHz ^[9]	16MB	DDR4-2933	-
Core i9-10900	10	20	2.8GHz	5.2GHz ^[10]	20MB	DDR4-2933	Intel UHD Graphics 630
Core i9-10900F	10	20	2.8GHz	5.2GHz ^[11]	20MB	DDR4-2933	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 IoT Enterprise
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics**^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
----------	------	--------	-----------	----------------	--------------

Intel UHD graphics 610	Integrated	Shared	2x DP, 1x optional video port (HDMI® / 3rd DP / USB-C®)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	2x DP, 1x optional video port (HDMI / 3rd DP / USB-C)	4096x2160@24Hz(onboard HDMI), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C)	DirectX 12
AMD Radeon™ 520	Discrete	2GB GDDR5	2x DP 1.2	4096x2160@60Hz(DP)	DirectX 12
NVIDIA® GeForce GT 730	Discrete	2GB GDDR5	1x VGA, 1x HDMI 1.4	2048x1536@75Hz(VGA), 3840x2160@30Hz(HDMI)	DirectX 12
AMD Radeon RX 550X	Discrete	4GB GDDR5	1x HDMI 2.0, 1x VGA, 1x DP 1.4	4096x2160@60Hz(HDMI), 2048x1536@85Hz(VGA), 3840x2160@60Hz(DP)	DirectX 12
NVIDIA GeForce GTX 1660 SUPER	Discrete	6GB GDDR6	1x HDMI 2.0b, 1x DP 1.4, 1x DVI-D	4096x2160@60Hz(HDMI), 7680x4320@60Hz with DSC(DP), 2560x1600@60Hz(DVI-D)	DirectX 12, PCIe® 3.0 x16, 125 watts, occupies two slots
NVIDIA GeForce RTX™ 2060	Discrete	6GB GDDR6	1x HDMI 3x DP	4096x2160@60Hz(HDMI), 7680x4320@60Hz with DSC(DP)	DirectX 12, PCIe 3.0 x16, 125 watts

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 3 independent displays via onboard ports (2x DisplayPort™ and 1x optional port [HDMI / 3rd DP / USB-C]), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q470 chipset

Memory

Max Memory^[1]

Up to 128GB DDR4-2933

Memory Slots

Four DDR4 DIMM slots, dual-channel capable

Memory Type**

- DDR4-2666
- DDR4-2933

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to five drives, 2x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB each
- M.2 SSD up to 2TB each
- Optional Intel Optane™ Memory, M.2

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe NVMe®, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

RAID

RAID 0/1 support (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	-
300W	Fixed	85%	100-240V, 50-60Hz
300W	Fixed	90%	100-240V, 50-60Hz
500W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)^[1]

170 x 298 x 376 mm (6.7 x 11.7 x 14.8 inches)

Packaging Dimensions (WxDxH)

275 x 395 x 540 mm (10.8 x 15.6 x 21.4 inches)

Weight^[2]

Around 6.5 kg (14.3 lbs)

Packaging Weight

9.8 kg (21.61 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (bay comes with disk)
- 1x 3.5" disk bay
- 1x 3.5" disk bay (optional, or bay comes with disk)
- 1x slim ODD bay

Expansion Slots

- One PCIe 3.0 x16, full-height (length < 245mm)
- One PCIe 3.0 x4, full-height (length < 245mm)
- One PCIe 3.0 x1, full-height (length < 245mm)
- One dummy slot, only bracket for optional port extension
- Three M.2 slots (one for WLAN, two for SSD)

Others

- (Optional) Dust filter
- Supports Smart Power On

Notes:

^[1] The system dimensions may vary depending on configurations.

^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet^{}**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth^{}**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

^[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

^[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

- 1x card reader
- None

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 2x DisplayPort
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports***

- Optional video port (one of HDMI / DisplayPort / USB-C 3.2 Gen 1 with DisplayPort function)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable*****

- DP to VGA dongle
- DP to VGA cable (1.5M)
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)

- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro with Intel AMT 14^[2]
- Non-vPro

Notes:

[1] Require choosing a vPro-support Wi-Fi adapter to enable vPro function through wireless connection.

[2] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty^{}**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ENERGY STAR® 8.0 (only available for MT 11D0/11CY)
- ErP Lot 3

- RoHS compliant
- TCO Certified 8.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

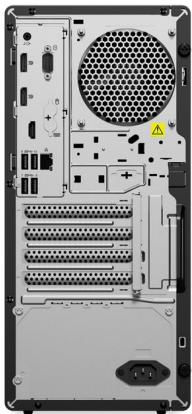
[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

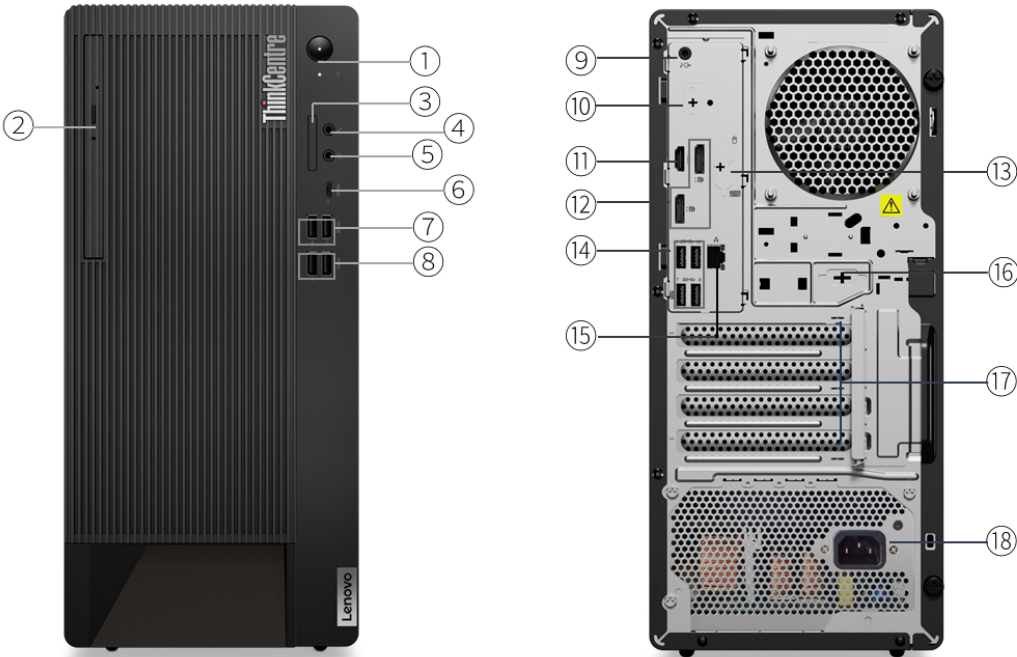
Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	10. Flex IO *
2. Optical drive *	11. HDMI 2.1 TMDS
3. Card reader *	12. 2x DisplayPort 1.4
4. Microphone (3.5mm)	13. 2x PS/2 ports (keyboard / mouse) *
5. Headphone / microphone combo jack (3.5mm)	14. 4x USB 3.2 Gen 1
6. USB-C 3.2 Gen 2	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Serial *
8. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
9. Line-out (3.5mm)	18. Power connector

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

Intel® Pentium® or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Pentium Gold G7400	2	4	3.7GHz	-	6MB	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz ^[2]	12MB	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[4]	18MB	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[5]	18MB	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz ^[6]	18MB	Intel UHD Graphics 770
Core i5-12600K	10 (6 P-core + 4 E-core)	16	P-core 3.7GHz / E-core 2.8GHz	P-core 4.9GHz / E-core 3.6GHz ^[7]	20MB	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[8]	25MB	Intel UHD Graphics 770
Core i7-12700F	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[9]	25MB	-
Core i7-12700K	12 (8 P-core + 4 E-core)	20	P-core 3.6GHz / E-core 2.7GHz	Max Turbo up to 5.0GHz / P-core 4.9GHz / E-core 3.8GHz ^[10]	25MB	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[11]	30MB	Intel UHD Graphics 770
Core i9-12900F	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[12]	30MB	-
Core i9-12900K	16 (8 P-core + 8 E-core)	24	P-core 3.2GHz / E-core 2.4GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 3.9GHz ^[13]	30MB	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12], [13] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID,

Human Presence Detection, etc.

Graphics

Graphics**^{[1][2]}

Graphics	Type	Memory	Connector	Max Resolution	Key Features	Remark
Intel UHD graphics 710	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDs, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDs / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12	-
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDs, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDs / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12	-
Intel UHD graphics 770	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI 2.1 TMDs, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDs / USB-C)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX 12	-
Intel Iris® Xe MAX 100	Discrete	2GB LPDDR4X	2x DP 1.4	3840x2160@60Hz(DP)	DirectX 12, OpenGL 4.6	-
NVIDIA® GeForce RTX™ 3060	Discrete	12G GDDR6	1x HDMI 2.1, 3x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12	-
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6	-
AMD Radeon RX 6500XT	Discrete	4GB GDDR6	1x HDMI 2.1, 1x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6	-
NVIDIA GeForce GTX 1660 SUPER	Discrete	6GB GDDR6	1x HDMI 2.0, 1x DP 1.4, 1x DVI-D	4096x2160@60Hz(HDMI), 5120x3200@60Hz (DP), 2560x1600@60Hz(DVI-D)	DirectX 12	-
NVIDIA GeForce RTX 3070 Ti	Discrete	8G GDDR6X	3x DP 1.4, 1x HDMI 2.1	7680x4320@60Hz(HDMI); 5120x2880@60Hz(DP)	DirectX 12	EOL
NVIDIA GeForce RTX 3050	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6	-

Notes:

- ^[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).
- ^[2] NVIDIA GeForce RTX 3070 Ti is EOL.

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

- ^[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset
Intel Q670 chipset

Memory

Max Memory^[1]
Up to 128GB DDR5

Memory Slots
Four DDR5 UDIMM slots, dual-channel capable

- Memory Type^[2]
- DDR5-3600
 - DDR5-4000
 - DDR5-4400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 4800MHz, but may run at 3600MHz, 4000MHz, or 4400MHz depending on the memory support capability of processor.

Storage

Storage Support^{[1][2]}
Up to five drives, 2x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB each

Storage Type^{***}

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID
RAID 0/1 support (RAID preset only available via special bid models)

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

[2] The max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings.

Removable Storage

- Optical^{**}
- DVD-ROM, SATA connector, slim (9.0mm)
 - DVD burner (DVD±RW), SATA connector, slim (9.0mm)
 - None

- Card Reader
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
300W	Fixed	90%	100-240V, 50-60Hz
500W	Fixed	92%	100-240V, 50-60Hz
750W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Keyboard (PS/2 connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Mouse (PS/2 connector), black (only available via special bid)
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black (EOL on Jan, 2023)
- No mouse

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)^[1]

170 x 298 x 376 mm (6.7 x 11.7 x 14.8 inches)

Packaging Dimensions (WxDxH)

275 x 395 x 540 mm (10.8 x 15.6 x 21.4 inches)

Weight^[2]

Around 6.5 kg (14.3 lbs)

Packaging Weight

9.8 kg (21.61 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (bay comes with disk)
- 1x 3.5" disk bay
- 1x 3.5" disk bay (optional, or bay comes with disk)
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal), full-height, length ≤ 205mm, height ≤ 114.55mm
- One PCIe 4.0 x16, full-height, length ≤ 268.5mm, height ≤ 114.55mm
- Two PCIe 3.0 x1, full-height, length ≤ 205mm, height ≤ 114.55mm
- Three M.2 slots (one for WLAN, two for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet***

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland RTL8168H, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4^[1]
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card^[5]
- No WLAN and Bluetooth

Notes:

[1] Intel Ethernet Server Adapter I350-T4 is not available in EMEA.

[2], [3], [4], [5] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports***

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial

- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable

Monitor Cable***

- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader on mouse (EOL on Jan, 2023)
- No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

* Feature with ** means that only one offering listed under the feature is configured on selected models.

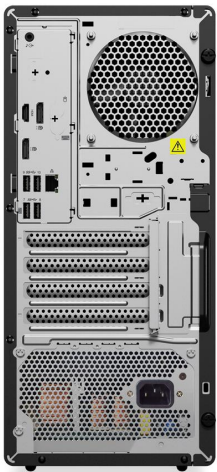
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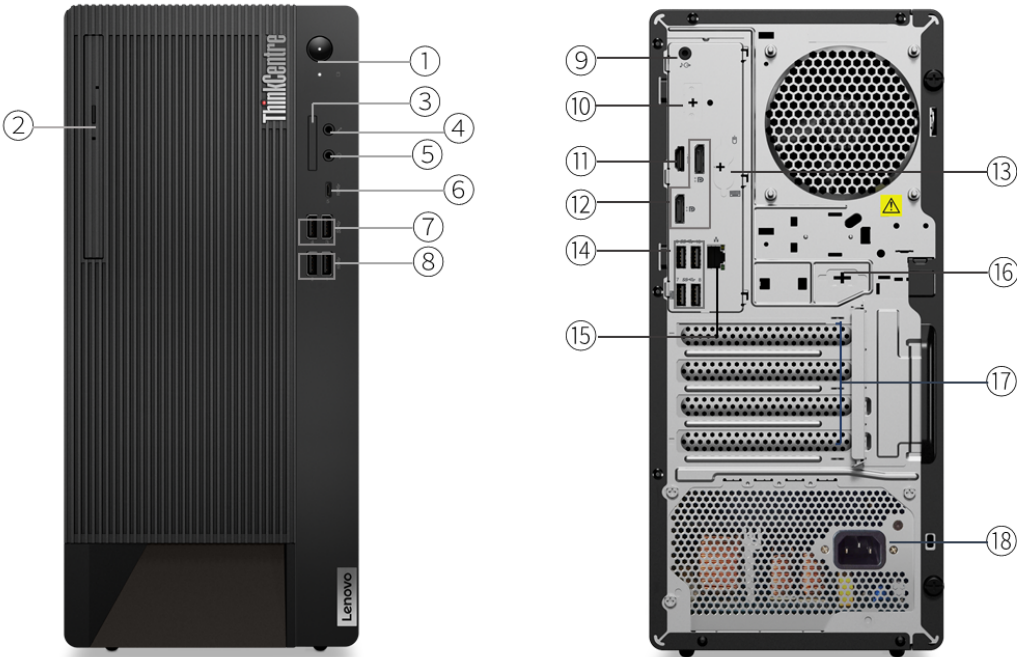


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OVERVIEW



1. Power button	10. Flex IO *
2. Optical drive *	11. HDMI 2.1 TMDs
3. Card reader *	12. 2x DisplayPort 1.4
4. Microphone (3.5mm)	13. 2x PS/2 ports (keyboard / mouse) *
5. Headphone / microphone combo jack (3.5mm)	14. 4x USB 3.2 Gen 1
6. USB-C 3.2 Gen 2	15. Ethernet (RJ-45)
7. 2x USB 3.2 Gen 1	16. Serial *
8. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
9. Line-out (3.5mm)	18. Power connector

- Notes:
- Items with * are only available on selected models
 - More ports are available through the optional expansion cards (not shown on the sample product above)

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	Intel UHD Graphics 730
Core i5-13400F	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	-
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	Intel UHD Graphics 770
Core i7-13700F	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	-
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	Intel UHD Graphics 770
Core i9-13900F	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	-

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®)	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	DirectX® 12
Intel UHD	Integrated	Shared	2x DP 1.4 HBR2, 1x	4096x2304@60Hz(DP),	DirectX 12

graphics 770			HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)	4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)]	
AMD Radeon™ RX 6400	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
NVIDIA® GeForce RTX™ 4060	Discrete	8G GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6
NVIDIA GeForce RTX 3050	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

Notes:

[1] Onboard video ports are only available for the models with integrated graphics.

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type^[2]

- DDR5-3600
- DDR5-4000
- DDR5-4400

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually 5600MHz, but may run at 3600MHz, 4000MHz, or 4400MHz depending on the memory support capability of processor.

Storage

Storage Support^[1]

Up to five drives, 2x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB each
- 3.5" HDD up to 2TB
- M.2 SSD up to 2TB each

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	-

M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal 2.0

RAID
RAID 0/1 support (RAID preset only available via special bid models)

Notes:
[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

- Optical****
- DVD-ROM, SATA connector, slim (9.0mm)
 - DVD burner (DVD±RW), SATA connector, slim (9.0mm)
 - None

- Card Reader**
- 3-in-1 card reader (SD, SDHC, SDXC)
 - No card reader

Multi-Media

Audio Chip
High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers
Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
260W	Fixed	90%	100-240V, 50-60Hz
300W	Fixed	90%	100-240V, 50-60Hz
500W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

- Keyboard****
- Lenovo Calliope Keyboard (USB connector), black
 - Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
 - Lenovo Traditional Keyboard (USB connector), black
 - No keyboard

- Mouse****
- Lenovo Calliope Mouse (USB connector), black
 - Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
 - No mouse

Mechanical

Form Factor
Tower (17L)

Dimensions (WxDxH)^[1]
170 x 298 x 376 mm (6.7 x 11.7 x 14.8 inches)

Packaging Dimensions (WxDxH)
275 x 395 x 540 mm (10.8 x 15.6 x 21.4 inches)

Weight^[2]
Around 6.5 kg (14.3 lbs)

Packaging Weight

9.8 kg (21.61 lbs)

Case Color

Black

Bays

- 1x 2.5" disk bay (bay comes with disk)
- 1x 3.5" disk bay
- 1x 3.5" disk bay (optional, or bay comes with disk)
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal), full-height, length ≤ 205mm, height ≤ 114.55mm
- One PCIe 4.0 x16, full-height, length ≤ 268.5mm, height ≤ 114.55mm
- One PCIe 3.0 x1, full-height, length ≤ 205mm, height ≤ 114.55mm
- Three M.2 slots (one for WLAN, two for SSD)

EOU

Toolless cover, disk, optical, extension card assembly / removal

Stand

No stand

Others

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

WLAN + Bluetooth[®]**

- Realtek Wi-Fi[®] 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro[®] technology support, M.2 Card^[3]
- No WLAN and Bluetooth

Notes:

[1], [2], [3] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^[2]

- 4x USB 3.2 Gen 1

- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports***

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0 (via 2-port adapter)
- 1x parallel
- 1x serial
- 1x 2nd serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

Monitor Cable**Monitor Cable*****

- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to HDMI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)

- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

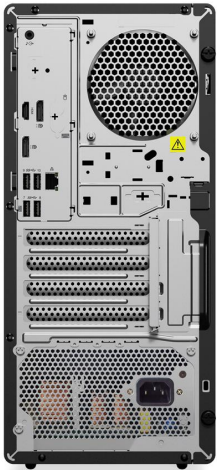
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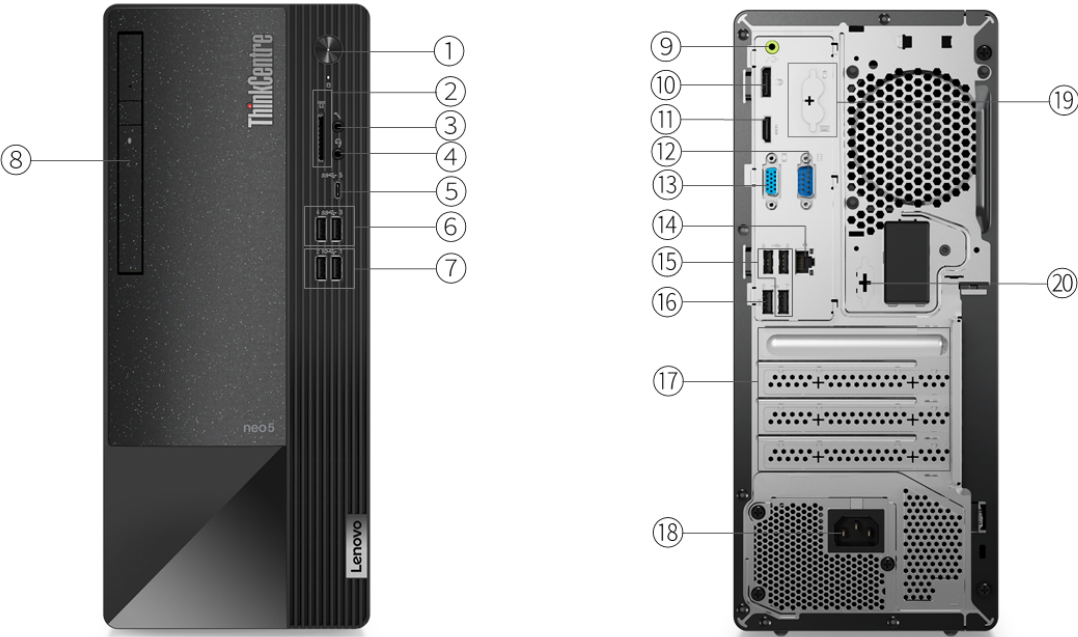


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OVERVIEW



1. Power button	11. HDMI 1.4b
2. Card reader *	12. Serial
3. Microphone (3.5mm)	13. VGA
4. Headphone / microphone combo jack (3.5mm)	14. Ethernet (RJ-45)
5. 1x USB-C 3.2 Gen 1	15. 3x USB 2.0
6. 2x USB 3.2 Gen 1	16. 1x USB 2.0 (with smart power-on feature)
7. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
8. Optical drive *	18. Power connector
9. Headphone (3.5mm)	19. 2x PS/2 ports (keyboard / mouse) *
10. DisplayPort 1.4	20. serial *

- Notes:
- Items with * are only available on selected models
 - Onboard video ports are only available for the models with integrated graphics

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[2]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR4-3200	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[5]	25MB	DDR4-3200	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[6]	30MB	DDR4-3200	Intel UHD Graphics 770

Notes:

^[1], ^[2], ^[3], ^[4], ^[5], ^[6] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

^[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***^[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 1.4b, 1x VGA, 1x DP 1.4	3840x2160@24Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 1.4b, 1x VGA, 1x DP 1.4	3840x2160@24Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	DirectX 12
Intel UHD	Integrated	Shared	1x HDMI 1.4b, 1x	3840x2160@24Hz(HDMI),	DirectX 12

graphics 770			VGA, 1x DP 1.4	1920x1200@60Hz(VGA), 4096x2304@60Hz(DP)	
Intel Iris® Xe MAX 100 Graphics ^[2]	Discrete	2GB LPDDR4X	1x VGA, 1x HDMI 1.4	3840x2160@30Hz(HDMI), 1920x1080@60Hz(VGA)	DirectX 12, OpenGL 4.6
AMD Radeon™ RX 6400 ^[3]	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
AMD Radeon RX 6500XT ^[4]	Discrete	4GB GDDR6	1x HDMI 2.1, 1x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6
NVIDIA® GeForce RTX™ 3050 ^[5]	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

[2], [3], [4], [5] The onboard video ports VGA, HDMI and DisplayPort™ are disabled on the models with discrete graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays via (HDMI, DP and VGA)

Chipset

Chipset

Intel B660 chipset

Memory

Max Memory^[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 UDIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 1x 3.5" HDD + 1x M.2 SSD

- 3.5" HDD up to 2TB
- M.2 SSD up to 1TB

Storage Type***

Disk Type	Interface	RPM	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC222-CG codec

Speakers

- No speakers
- Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency
180W	Fixed	85%
260W	Fixed	90%
310W	Fixed	92%
380W	Fixed	92%

DESIGN

Input Device

Keyboard**

- Euterpe Wireless Keyboard, grey
- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Euterpe Wireless Mouse, grey
- No mouse

Mechanical

Form Factor

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 294 x 340 mm (5.71 x 11.57 x 13.39 inches)

Packaging Dimensions (WxDxH)

245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.5 kg (12.1 lbs)

Packaging Weight

Around 7.5 kg (16.53 lbs)

Case Color

Black (chassis), grey (bezel)

Bays

- 1x 3.5" disk bay

- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, full-height, half-length
- Two PCIe 3.0 x1, full-height, half-length
- (Optional) M.2 Bracket. For installing M.2 devices, M.2 bracket kit is needed. The kit is optional, or comes with pre-configured M.2 SSD or M.2 Wifi models
- Two M.2 slots (one for WLAN, one for SSD)

EOU

- (Optional) toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal
- No support

Cooling System (Fan & Cooler)***

- (Optional) 1x rear fan
- (Optional) 1x front system fan
- (Optional) 1x Photocatalyst System Fan

Others

(Optional) Smart Cable (USB-A to USB-C®)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro® technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@3A charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^{[2][3]}

- 4x USB 2.0
- 1x HDMI 1.4b
- 1x DisplayPort 1.4
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x headphone (3.5mm)

- 1x serial (9-pin)

Optional Rear Ports***

- 1x parallel
- 1x serial
- 2x PS/2
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

[3] The onboard video ports VGA, HDMI and DisplayPort are disabled on the models with discrete graphics.

Monitor Cable**Monitor Cable*****

- HDMI to DVI dongle
- DP to DVI-D dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY**System Management****System Management**

Non-vPro

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- REACH
- RoHS compliant
- TCO Certified
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Ultra Low Noise

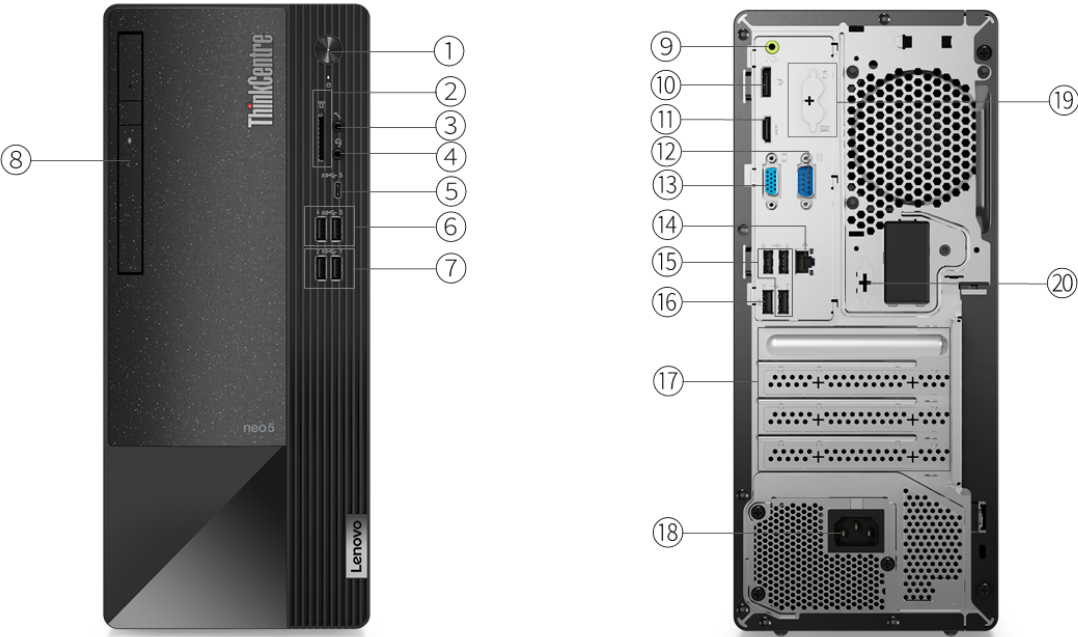
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OVERVIEW



1. Power button	11. HDMI 1.4b
2. Card reader *	12. Serial
3. Microphone (3.5mm)	13. VGA
4. Headphone / microphone combo jack (3.5mm)	14. Ethernet (RJ-45)
5. 1x USB-C 3.2 Gen 1	15. 3x USB 2.0
6. 2x USB 3.2 Gen 1	16. 1x USB 2.0 (with smart power-on feature)
7. 2x USB 3.2 Gen 2	17. Optional ports on expansion cards *
8. Optical drive *	18. Power connector
9. Headphone (3.5mm)	19. 2x PS/2 ports (keyboard / mouse) *
10. DisplayPort 1.4	20. serial *

- Notes:
- Items with * are only available on selected models
 - Onboard video ports are only available for the models with integrated graphics

PERFORMANCE

Processor

Processor Family

Intel® Celeron®, Intel Pentium®, or 12th / 13th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G6900	2	2	3.4GHz	-	4MB	DDR4-3200	Intel UHD Graphics 710
Pentium Gold G7400	2	4	3.7GHz	-	6MB	DDR4-3200	Intel UHD Graphics 710
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[2]	18MB	DDR4-3200	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR4-3200	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR4-3200	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[5]	25MB	DDR4-3200	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[6]	30MB	DDR4-3200	Intel UHD Graphics 770
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz ^[7]	12MB	DDR4-3200	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz ^[8]	20MB	DDR4-3200	Intel UHD Graphics 730
Core i5-13400F	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz ^[9]	20MB	DDR4-3200	-
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz ^[10]	24MB	DDR4-3200	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz ^[11]	30MB	DDR4-3200	Intel UHD Graphics 770
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz ^[12]	36MB	DDR4-3200	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5], [6], [7], [8], [9], [10], [11], [12] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Ubuntu Linux^[1]
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Notes:

[1] Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 710	Integrated	Shared	1x HDMI® 1.4b, 1x VGA, 1x DP 1.4	1920x1080@60Hz(HDMI), 2048x1536@60HZ(VGA), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 730	Integrated	Shared	1x HDMI 1.4b, 1x VGA, 1x DP 1.4	1920x1080@60Hz(HDMI), 2048x1536@60HZ(VGA), 4096x2304@60Hz(DP)	DirectX 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 1.4b, 1x VGA, 1x DP 1.4	1920x1080@60Hz(HDMI), 2048x1536@60HZ(VGA), 4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ RX 6400[2]	Discrete	4GB GDDR6	1x HDMI 2.1 FRL, 1x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).

[2] The onboard video ports VGA, HDMI and DisplayPort™ are disabled on the models with discrete graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays via (HDMI, DP and VGA)

Chipset

Chipset

Intel B760 chipset

Memory

Max Memory[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 UDIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support[1]

Up to two drives, 1x 3.5" HDD + 1x M.2 SSD

- 3.5" HDD up to 2TB
- M.2 SSD up to 1TB

Storage Type***

Disk Type	Interface	RPM	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical**

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC222-CG codec

Speakers

- No speakers
- Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
180W	Fixed	85%	100-240V, 50-60Hz
260W	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz
380W	Fixed	92%	100-240V, 50-60Hz

DESIGN

Input Device

Keyboard**

- Euterpe Wireless Keyboard, grey
- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Euterpe Wireless Mouse, grey
- No mouse

Mechanical

Form Factor

Tower (13.6L)

Dimensions (WxDxH)^[1]

145 x 294 x 340 mm (5.71 x 11.57 x 13.39 inches)

Packaging Dimensions (WxDxH)

245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

Weight^[2]

Around 5.5 kg (12.1 lbs)

Packaging Weight

Around 7.5 kg (16.53 lbs)

Case Color

Black

Bays

- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16, full-height, half-length
- Two PCIe 3.0 x1, full-height, half-length
- (Optional) M.2 Bracket. For installing M.2 devices, M.2 bracket kit is needed. The kit is optional, or comes with pre-configured M.2 SSD or M.2 Wifi models
- Two M.2 slots (one for WLAN, one for SSD)

Cooling System (Fan & Cooler)***

- (Optional) 1x rear system fan
- (Optional) 1x front system fan
- (Optional) 1x Photocatalyst System fan

Others

(Optional) Smart Cable (USB-A to USB-C®)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

No optional Ethernet

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- No WLAN and Bluetooth

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@3A charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^{[2][3]}

- 4x USB 2.0 (one supports Smart Power On)
- 1x HDMI 1.4b
- 1x DisplayPort 1.4
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x headphone (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports***

- 1x parallel
- 1x 2nd serial
- 2x PS/2
- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

[3] The onboard video ports VGA, HDMI and DisplayPort are disabled on the models with discrete graphics.

Monitor Cable**Monitor Cable*****

- HDMI to DVI dongle
- DP to DVI dongle
- No monitor cable

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified

Physical Locks

- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Certificate based BIOS authentication
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)

MANAGEABILITY**System Management****System Management**

Non-vPro®

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- (Optional) EPEAT Silver Registered^[3]
- REACH
- RoHS compliant
- TCO Certified
- WEEE

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

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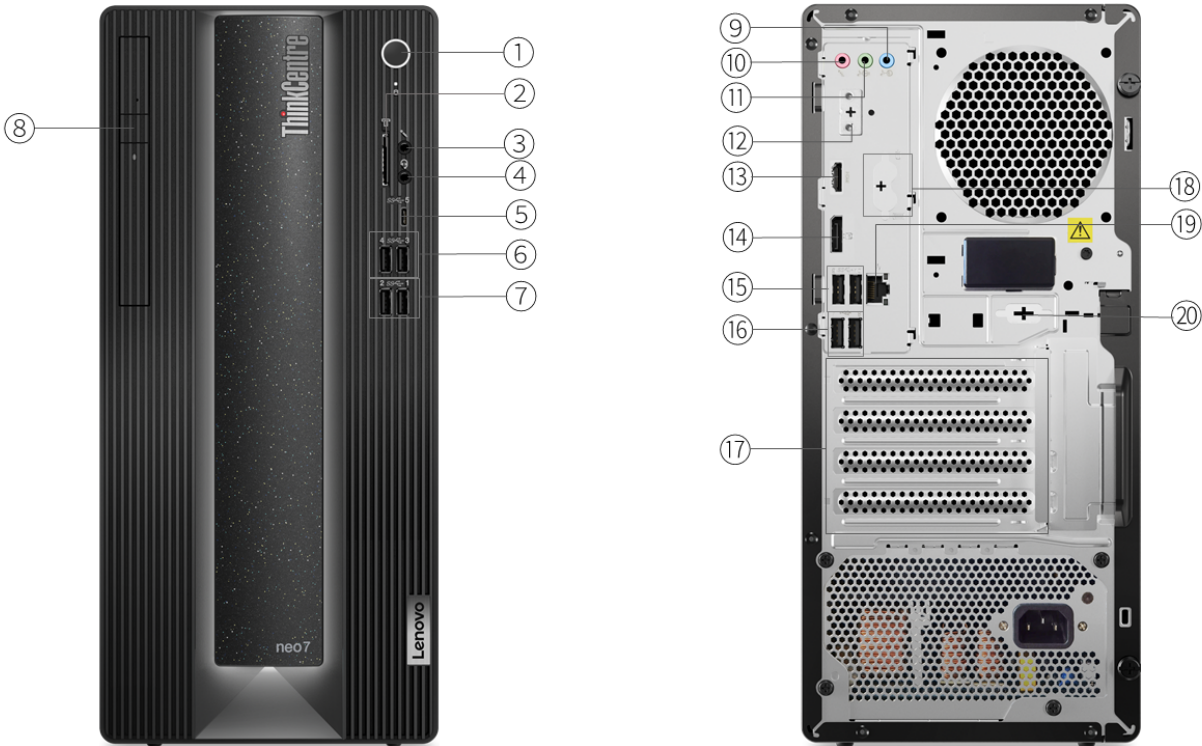
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intel



OVERVIEW



1. Power button	11. Line-out (3.5mm)
2. Card reader *	12. Flex IO *
3. Microphone (3.5mm)	13. HDMI 2.1 TMDs
4. Headphone / microphone combo jack (3.5mm)	14. DisplayPort 1.4
5. 1x USB-C 3.2 Gen 2	15. 2x USB 3.1 Gen 1
6. 2x USB 3.2 Gen 1	16. 2x USB 2.0 (one with smart power-on feature)
7. 2x USB 3.2 Gen 2	17. Expansion card *
8. Optical drive *	18. 2x PS/2 ports (keyboard / mouse) *
9. Line-in (3.5mm)	19. Ethernet (RJ-45)
10. Microphone (3.5mm)	20. Serial *

- Notes:
- Items with * are only available on selected models
 - Onboard video ports are only available for the models with integrated graphics

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz ^[1]	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[2]	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400F	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz ^[3]	18MB	DDR5-4800	-
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz ^[4]	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz ^[5]	25MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700KF	12 (8 P-core + 4 E-core)	20	P-core 3.6GHz / E-core 2.7GHz	Max Turbo up to 5.0GHz / P-core 4.9GHz / E-core 3.8GHz ^[6]	25MB	DDR5-4800	-
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz ^[7]	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900KF	16 (8 P-core + 8 E-core)	24	P-core 3.2GHz / E-core 2.4GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 3.9GHz ^[8]	30MB	DDR5-4800	-

Notes:

[1], [2], [3], [4], [5], [6], [7], [8] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Pro
- No operating system

Graphics

Graphics***[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4	4096x2160@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4	4096x2304@60Hz(HDMI), 4096x2304@60Hz(DP)	DirectX 12
AMD Radeon™ RX 6500XT ^[2]	Discrete	4GB GDDR6	1x HDMI 2.1, 1x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@60Hz(DP)	DirectX 12
NVIDIA® GeForce RTX™ 3060 Ti ^[3]	Discrete	8G GDDR6	1x HDMI 2.1, 3x DP 1.4	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12
NVIDIA GeForce RTX 3050 ^[4]	Discrete	8GB GDDR6	1x HDMI 2.1 FRL, 3x DP 1.4a	7680x4320@60Hz(HDMI), 7680x4320@120Hz(DP)	DirectX 12, OpenGL 4.6

Notes:

- [1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (for the details, please refer to processor section).
- [2], [3], [4] The onboard video ports HDMI and DisplayPort™ are disabled on the models with discrete graphics.

Monitor Support

Monitor Support

Supports up to 3 independent displays via onboard ports (HDMI, DisplayPort, and 1x optional Flex IO), more displays support via discrete graphics

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type^[2]

- DDR5-3600
- DDR5-4000
- DDR5-4400

Memory Protection

Non-ECC

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] System comes with DDR5-4800 memory and will run at lower speed due to platform limitations:
1x 8GB / 2x 8GB / 1x 16GB / 2x 16GB / 1x 32GB / 2x 32GB configurations run at DDR5-4400;
4x 8GB / 4x 16GB configurations run at DDR5-4000;
4x 32GB configuration runs at DDR5-3600.

Storage

Storage Support^[1]

Up to four drives, 2x 3.5" HDD + 2x M.2 SSD

- 3.5" HDD up to 2TB each
- M.2 SSD up to 1TB each

Storage Type^{***}

Disk Type	Interface	RPM	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

RAID 0/1 support

Notes:

- [1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical^{**}

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

Card Reader

ThinkCentre neo 70t

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

- No speakers
- Single speaker, 2W x1

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
750W	Fixed	92%	100-240V, autosensing

DESIGN

Input Device

Keyboard**

- Euterpe Wireless Keyboard, grey
- Lenovo Calliope Keyboard (USB connector), black
- No keyboard

Mouse**

- Lenovo Calliope Mouse (USB connector), black
- Euterpe Wireless Mouse, grey
- No mouse

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)^[1]

376 x 170 x 297.85 mm (14.8x 6.7 x 11.73 inches)

Packaging Dimensions (WxDxH)

395 x 275 x 540 mm (21.4 x 10.8 x 15.6 inches)

Weight^[2]

Around 7.5 kg (16.53 lbs)

Packaging Weight

Around 10.5 kg (23.15 lbs)

Case Color

Raven black

Bays

- 1x 3.5" disk bay (optional)
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe 4.0 x16 (x4 signal)
- One PCIe 4.0 x16, full-height, length<249mm
- One PCIe 3.0 x1
- Three M.2 slots (one for WLAN, two for SSD)

Cooling System (Fan & Cooler)**

- (Optional) 1x front system fan, 1x rear system fan
- (Optional) 1x rear system fan
- (Optional) 1x front system fan

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, supports Wake-on-LAN
- No optional Ethernet

WLAN + Bluetooth[®]*

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi[®] + Bluetooth 5.0, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, Intel vPro[®] technology support, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[2]
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card^[4]
- No WLAN and Bluetooth

Notes:

[1], [2], [3], [4] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

- 1x USB-C[®] 3.2 Gen 2
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports^{[2][3]}

- 2x USB 2.0 (one with smart power-on feature)
- 2x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 1x DisplayPort 1.4
- 1x Ethernet (RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)

Optional Rear Ports^{***}

- 1x USB-C 3.2 Gen 1 (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.4 (Flex IO)
- 1x VGA (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 1x 1GbE RJ-45, via BN8E88
- 1x 1GbE RJ-45, via RGL8168H
- 1x 2.5GbE RJ-45, via RTL8125BGS
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

- None

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

[3] Onboard video ports are only available for the models with integrated graphics.

Monitor Cable

Monitor Cable

- HDMI to HDMI cable
- HDMI to VGA dongle
- DP to VGA dongle
- DP to DVI dongle
- DP to dual DP dongle
- DP to HDMI dongle
- Smart Cable (USB Type A-C)
- No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

(Optional) Smart Cable Clip

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

- Touch style fingerprint reader integrated in power button
- No fingerprint reader

BIOS Security

- Administrator password
- Secure Wipe
- Power-on password
- Hard disk password
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)

MANAGEABILITY

System Management

System Management

- Intel vPro Essentials^[1]
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Humidity

- Operating: 20% to 80%
- Storage: 20% to 90%

Altitude

- Operating: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 10668 m (35,000 ft)

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered^[2]
- ErP Lot 3
- RoHS / WEEE / REACH

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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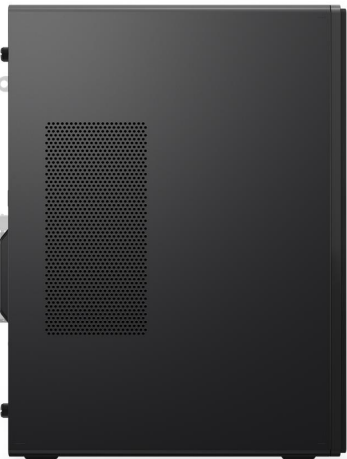
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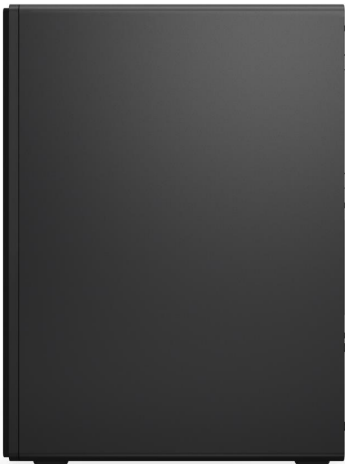
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Lenovo Services:

Carry-in or Mail-in Service: Parts and labor repair coverage where the customer is responsible for shipping (including packaging) or delivery to authorized warranty provider or repair center.

Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit <http://psref.lenovo.com/> for the latest version of Product Specifications Reference.

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Product Specifications Reference

ThinkStation Workstations



Version 616

August 9, 2023

Lenovo

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

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Additions in this update

► **New product(s)**

None

► **Spec updated**

ThinkStation P5

ThinkStation P7

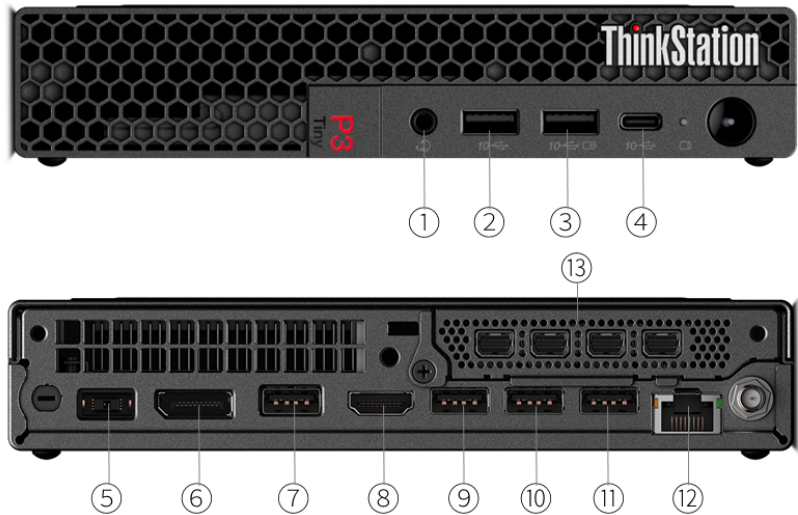
ThinkStation PX

Withdrawals in this update

► **Withdrawn product(s)**

None

OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI 2.1 TMDs
2. USB 3.2 Gen 2	9. USB 3.2 Gen 1 (with Smart Power On feature)
3. USB 3.2 Gen 2 (Always On and fast charge)	10. USB 3.2 Gen 2
4. USB-C 3.2 Gen 2	11. USB 3.2 Gen 2
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort 1.4	13. 2 Punch out ports or expansion card *
7. USB 3.2 Gen 1	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one 13th Gen Intel® Core™ i3 / i5 / i7 / i9 processor, supports up to 24 cores, up to 5.6GHz

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-13100T	4 (4 P-core + 0 E-core)	8	P-core 2.5GHz	P-core 4.2GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13500T	14 (6 P-core + 8 E-core)	20	P-core 1.6GHz / E-core 1.2GHz	P-core 4.6GHz / E-core 3.2GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.4GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900T	24 (8 P-core + 16 E-core)	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz	36MB	DDR5-5600	Intel UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 730

- Intel UHD Graphics 770

Discrete Graphics Support^[1]

Supports up to one NVIDIA® T1000 8GB

Discrete Graphics Offering

Graphics	Memory	Power	Connector	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	None

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Onboard graphics supports up to 4 independent displays via (onboard DP, onboard HDMI®, punch out port 1 [VGA / HDMI / DP / USB-C®], and punch out port 2 [VGA / HDMI / DP]); the number of maximum monitors also depends on the discrete graphic card in use

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB (2x 32GB DDR5 SO-DIMM)

Memory Type

- DDR5-4800 SO-DIMM non-ECC
- DDR5-5600 SO-DIMM non-ECC^[2]

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

^[2] System may come with DDR5-5600 memory and will run at lower speed due to platform limitations: 1x 32GB / 2x 32GB configurations run at DDR5-5200

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD, up to 2TB each

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	512GB / 1TB / 2TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1	None

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical Support

Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Single speaker
- Single speaker, premium

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
170W	Adapter	90%	100V - 240V
230W	Adapter	90%	100V - 240V
300W	Adapter	90%	100V - 240V

DESIGN

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)^[1]

Models	Dimensions
Tiny only	179 x 182.9 x 37mm with rubber feet (7.0 x 7.2 x 1.5 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Weight^[2]

Models	Weight
Tiny only	1.4 kg (3 lbs, maximum configuration)

Bays

No bays

M.2 Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

Expansion Slots

One PCIe 4.0 x8, low-profile^[3]

Notes:

- ^[1] The system dimensions may vary depending on configurations.
- ^[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.
- ^[3] Supports discrete graphic card by x16 riser card (x8 signal), and supports Ethernet card / Thunderbolt 4 / serial card by x4 riser card. Riser card comes with the expansion cards.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional ethernet adapter support, up to one additional 2.5GbE port

- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4

- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, BTB

WLAN + Bluetooth®**

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready)
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support^[1]
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.
Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]**Front Ports**

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x USB-C 3.2 Gen 2 (support data transfer)

Rear Ports^[2]

- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort and PD 3.0 functions)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)
- 1x Thunderbolt™ 4 (via additional PCIe adapter)
- 2x USB 3.2 Gen 1 (occupies port 1 and 2)
- 4x USB 3.2 Gen 1 (share one USB 3.2 Gen 1 bandwidth, occupy port 1 and 2)
- 2x GbE RJ-45, via additional PCIe adapter
- 4x GbE RJ-45, via additional PCIe adapter
- 4x serial, via additional PCIe adapter

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Cable lock
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise with Intel AMT 16
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

ISV Certifications

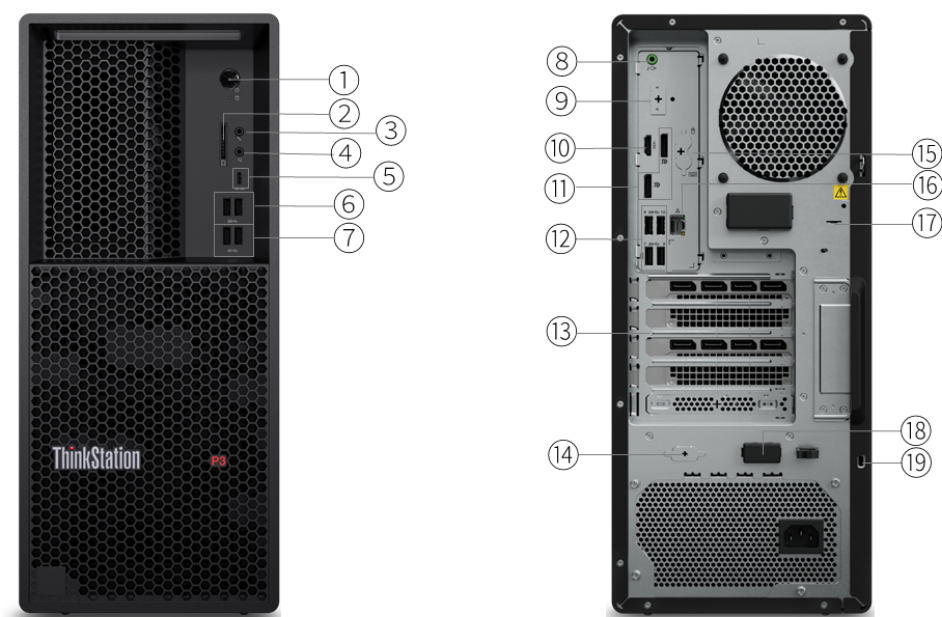
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power button	11. 2x DisplayPort
2. SD card reader *	12. 4x USB 3.2 Gen 1 (one with Smart Power On)
3. Microphone (3.5mm)	13. Optional ports on expansion cards *
4. Headphone / microphone combo jack (3.5mm)	14. Serial (9-pin) *
5. USB-C 3.2 Gen 2	15. 2x PS/2 ports (keyboard / mouse) *
6. 2x USB 3.2 Gen 1	16. Ethernet (GbE RJ-45)
7. 2x USB 3.2 Gen 2	17. E-lock slot
8. Audio line-out (3.5mm)	18. Cable lock slot
9. Flex IO *	19. Kensington Security Slot
10. HDMI	

- Notes:
- Items with * are only available on selected models
 - Flex IO supports one optional port from HDMI, VGA, USB-C (with DP function), and DP.

PERFORMANCE

Processor

Processor Family

Up to one 13th Gen Intel® Core™ i3 / i5 / i7 / i9 processor, supports up to 24 cores, up to 5.8GHz

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400	10 (6 P-core + 4 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.6GHz / E-core 3.3GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13500	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 4.8GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600K	14 (6 P-core + 8 E-core)	20	P-core 3.5GHz / E-core 2.6GHz	P-core 5.1GHz / E-core 3.9GHz	24MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700K	16 (8 P-core + 8 E-core)	24	P-core 3.4GHz / E-core 2.5GHz	Max Turbo up to 5.4GHz / P-core 5.3GHz / E-core 4.2GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900K	24 (8 P-core + 16 E-core)	32	P-core 3.0GHz / E-core 2.2GHz	Max Turbo up to 5.8GHz / P-core 5.4GHz / E-core 4.3GHz	36MB	DDR5-5600	Intel UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

^[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 730
- Intel UHD Graphics 770

Discrete Graphics Support^[1]

Supports up to one NVIDIA® RTX 5000 Ada Generation or two NVIDIA RTX A2000

Discrete Graphics Offering

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	None
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	None
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	None
NVIDIA RTX 5000 Ada Generation	32GB GDDR6 with ECC	250W	4x DP 1.4a	Dual slot	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via onboard video ports and discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel W680 chipset

Memory

Max Memory^[1]

Up to 128GB (4x 32GB DDR5 UDIMM)

Memory Type^{**[2]}

- DDR5-4800 UDIMM ECC
- DDR5-4800 UDIMM non-ECC

Memory Slots

4 DDR5 DIMM slots, 2 channels capable

Memory Protection

ECC on models with ECC DIMMs and ECC capable processor

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] System comes with DDR5-4800 memory and will run at lower speed due to platform limitations:
1x 8GB / 2x 8GB / 1x 16GB / 2x 16GB / 1x 32GB / 2x 32GB configurations run at DDR5-4400;
4x 8GB / 4x 16GB configurations run at DDR5-4000;
4x 32GB configuration runs at DDR5-3600.

Storage

Storage Support^{[1][2]}

Up to five drives (4x HDD + 1x M.2 SSD) or six drives (3x HDD + 3x M.2 SSD)

- 3.5" HDD up to 6TB each
- 2.5" HDD up to 1TB each
- M.2 SSD up to 4TB or 2TB each (see Storage Type)

Storage Type^[3]

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 1TB FIPS	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB / 6TB	-
M.2 2280 SSD for single M.2 to PCIe® adapter	PCIe NVMe®, PCIe 4.0 x4	-	256GB	Opal 2.0

M.2 2280 SSD for Onboard	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0
M.2 2280 SSD for single M.2 to PCIe adapter	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1	None
Integrated SATA controller	Standard	SATA 6.0Gb/s	0/1/10/5	None

- Notes:
- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
 - [2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.
 - [3] M.2 slot on single M.2 to PCIe adapter works at PCIe 3.0.

Removable Storage

Optical Support

Optional one 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
500W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
750W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1100W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (27L)

Dimensions (WxDxH)^[1]

180 x 370 x 415 mm (7.09 x 14.57 x 16.34 inches)

Weight^[2]

13.61 kg (30.0. lbs, maximum configuration)

Bays^[3]

Up to four disk bays:

- Bay 1 supports one 3.5" / 2.5" HDD, standard
- Bay 2 supports one 3.5" / 2.5" HDD, optional
- Bay 3 supports one 3.5" / 2.5" HDD, optional
- Bay 4 supports one 3.5" / 2.5" HDD, optional
- Front Access HDD Bay supports one 3.5" / 2.5" HDD, optional, occupies Bay 3 location

M.2 Slots

- Up to 3x M.2 SSD:

- 2 via onboard slot, can't be available when 4th HDD is selected
- 1 via Single M.2 to PCIe adapter
- One M.2 slot (for WLAN)

Expansion Slots

Supports four PCIe slots with two PCIe 4.0 x16 and two PCIe 3.0 x1.

- Slot 1: PCIe 4.0 x16, full height, full length, 75W, double-width
- Slot 2: PCIe 3.0 x1, full height, half length, 25W
- Slot 3: PCIe 4.0 x16 (x4 lanes), full height, half length, 25W, double-width
- Slot 4: PCIe 3.0 x1, full height, half length, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Front access HDD bay can be selected when disk bays is equal or less than 2.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to two additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)
- 1x USB-C® 3.2 Gen 2 (support data transfer)

Rear Ports^[2]

- 4x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x HDMI® 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^[3]

- 1x USB-C 3.2 Gen 1 with DisplayPort function (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 2x USB 2.0 (via cable and PCIe bracket)
- 1x parallel (via cable and PCIe bracket)

- 1x Thunderbolt™ 4 (via additional PCIe adapter)
- 2x USB 3.2 Gen 1 (via additional PCIe adapter)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 1x serial (via cable)
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2 (via cable)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

[3] 2x USB 2.0 and 1x parallel can not be chosen simultaneously.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Cable lock
- (Optional) E-lock
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise with Intel AMT 16
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

ISV Certifications

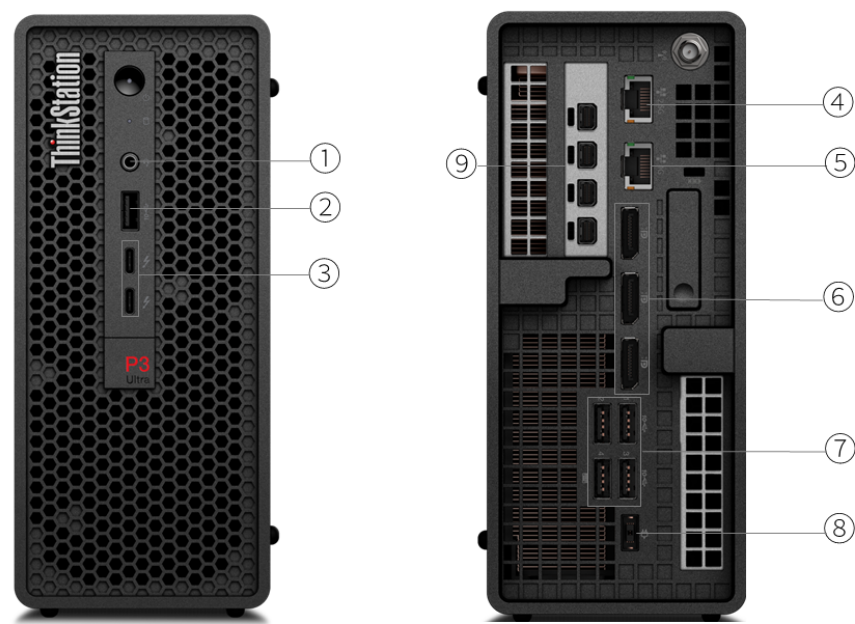
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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OVERVIEW



1. Headphone (3.5mm)	6. 3x DisplayPort
2. USB 3.2 Gen 2	7. 4x USB 3.2 Gen 2
3. 2x Thunderbolt 4	8. Power connector
4. Ethernet (2.5GbE RJ-45)	9. Optional ports on expansion cards *
5. Ethernet (GbE RJ-45)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one 12th Gen Intel® Core™ i5 / i7 / i9 processor or 13th Gen Intel Core i3 / i5 / i7 / i9 processor, supports up to 24 cores, up to 5.8GHz

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz	30MB	DDR5-4800	Intel UHD Graphics 770
Core i3-13100	4 (4 P-core + 0 E-core)	8	P-core 3.4GHz	P-core 4.5GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz	20MB	DDR5-4800	Intel UHD Graphics 730
Core i5-13600	14 (6 P-core + 8 E-core)	20	P-core 2.7GHz / E-core 2.0GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	DDR5-4800	Intel UHD Graphics 770
Core i5-13600K	14 (6 P-core + 8 E-core)	20	P-core 3.5GHz / E-core 2.6GHz	P-core 5.1GHz / E-core 3.9GHz	24MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700K	16 (8 P-core + 8 E-core)	24	P-core 3.4GHz / E-core 2.5GHz	Max Turbo up to 5.4GHz / P-core 5.3GHz / E-core 4.2GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	36MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900K	24 (8 P-core + 16 E-core)	32	P-core 3.0GHz / E-core 2.2GHz	Max Turbo up to 5.8GHz / P-core 5.4GHz / E-core 4.3GHz	36MB	DDR5-5600	Intel UHD Graphics 770
Core i9-13900T	24 (8 P-core + 16 E-core)	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz	36MB	DDR5-5600	Intel UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64

- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 730
- Intel UHD Graphics 770

Discrete Graphics Support^[1]

Supports up to one NVIDIA® RTX A5500 Laptop GPU

Discrete Graphics Offering

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A3000 Laptop GPU	12GB GDDR6	80W	4x miniDP 1.4a	MXM Card	None
NVIDIA RTX A5000 Laptop GPU	16GB GDDR6	115W	4x miniDP 1.4a	MXM Card	None
NVIDIA RTX A5500 Laptop GPU	16GB GDDR6 with ECC	115W	4x miniDP 1.4a	MXM Card	None
NVIDIA RTX 4000 SFF Ada Generation	20GB GDDR6 with ECC	70W	4x miniDP 1.4a	Dual slot	None

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports up to 8 independent displays, 4 via onboard ports (3x DP and 2x Thunderbolt™, simultaneously supports 4 display) and 4 via discrete graphics.

Onboard ports support (with max simultaneous displays):

- DP supports up to 4096x2160@60Hz
- Thunderbolt supports up to 5120x2880@60Hz

Discrete graphics ports support (with max simultaneous displays):

- miniDP supports up to 4096x2160@120Hz (RTX A2000)

Chipset

Chipset

Intel W680 chipset

Memory

Max Memory^[1]

Up to 128GB (4x 32GB DDR5 SO-DIMM)

Memory Type**

- DDR5-4800 SO-DIMM ECC^[2]
- DDR5-4800 SO-DIMM non-ECC^[3]

Memory Slots

Four DDR5 SO-DIMM slots, dual-channel capable

Memory Protection

ECC on models with ECC DIMMs and ECC capable processor

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

^[2], ^[3] System comes with DDR5-4800 memory and will run at lower speed due to platform limitations:
4x 32GB configuration runs at DDR5-3600;
other configurations run at DDR5-4000.

Storage

Storage Support^{[1][2]}

Up to 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 4TB each

Storage Type***

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 1TB FIPS	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	256GB	Opal
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1	None
Integrated SATA controller	Standard	SATA 6.0Gb/s	-	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897-Q codec

Speakers

Single speaker

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
170W	Adapter	90%	100V - 240V
230W	Adapter	90%	100V - 240V
300W	Adapter	90%	100V - 240V

DESIGN

Mechanical

Form Factor

Mini-tower (3.9L)

Dimensions (WxDxH)^[1]

87 x 223 x 202 mm (3.43 x 8.78 x 7.95 inches)

Weight^[2]

3.6 kg (7.94 lbs, maximum configuration)

Bays

1x 2.5" disk bay (optional, comes with disk)

M.2 Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

Expansion Slots

Two PCIe slots with one PCIe 4.0 x16 and one PCIe 3.0 x8.

- Slot 1: PCIe 4.0 x16 (via MXM to PCIe riser card), low profile, 75W, double-width
- Slot 2: PCIe 3.0 x8 (x4 lanes), low profile, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Two Ethernet, 2.5GbE + GbE, Intel Ethernet Connection I225-LM and I210-AT, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional Ethernet adapter support, up to four additional GbE ports

- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support [1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.
Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 2x Thunderbolt 4
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports^[2]

- 4x USB 3.2 Gen 2
- 3x DisplayPort™ 1.2
- 1x Ethernet (2.5GbE RJ-45)
- 1x Ethernet (GbE RJ-45)

Optional Rear Ports

- 2x USB 3.2 Gen 1 (via additional PCIe adapter)
- 1x USB-C® 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x USB-C 3.2 Gen 2 (support data transfer, via USB-C expansion card, PCIe x4)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise with Intel AMT 16
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0

- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

ISV Certifications

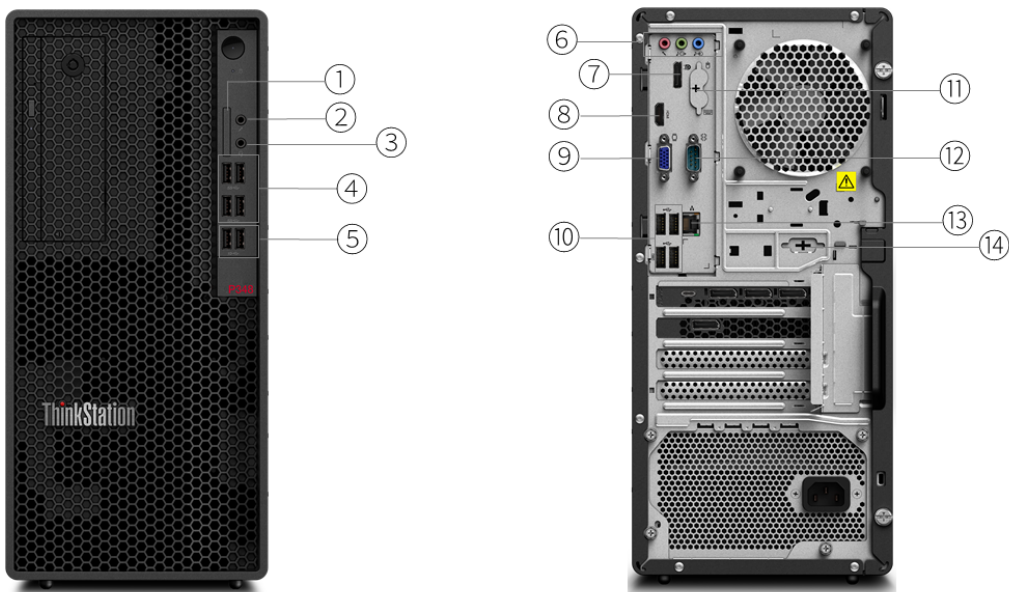
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. SD card reader *	8. HDMI
2. Microphone (3.5mm)	9. VGA
3. Headphone / microphone combo jack (3.5mm)	10. 4x USB 2.0
4. 4x USB 3.2 Gen 1	11. 2x PS/2 ports (keyboard / mouse) *
5. 2x USB 3.2 Gen 2	12. Serial
6. 3x Audio ports (3.5mm)	13. Ethernet (RJ-45)
7. DisplayPort	14. Serial *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

11th Generation Intel® Core™ i5 / i7 / i9 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-11500	6	12	2.7GHz	4.6GHz	12MB	DDR4-3200	Intel UHD Graphics 750
Core i5-11600	6	12	2.8GHz	4.8GHz	12MB	DDR4-3200	Intel UHD Graphics 750
Core i7-11700	8	16	2.5GHz	4.9GHz	16MB	DDR4-3200	Intel UHD Graphics 750
Core i9-11900	8	16	2.5GHz	5.2GHz	16MB	DDR4-3200	Intel UHD Graphics 750

Processor Sockets

1x FCLGA1200

Notes:

^[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 10 Home 64
- Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 630
- Intel UHD Graphics 750

Discrete Graphics Support^[1]

Supports up to one NVIDIA® GeForce RTX™ 3060, NVIDIA RTX A2000, or AMD Radeon™ Pro WX 3200

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA GeForce RTX 3060	12GB GDDR6	170W	3x DP 1.4a, 1x HDMI® 2.1	Dual slot	-
AMD Radeon Pro WX 3200	4GB GDDR5	50W	4x miniDP 1.4	Single slot	-

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via onboard video ports and discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel B560 chipset

Memory

Max Memory^[1]

Up to 128GB (4x 32GB DDR4 UDIMM)

Memory Type

DDR4-3200 UDIMM non-ECC

Memory Slots

Four DDR4 UDIMM slots, dual-channel capable

Memory Protection

Non-ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to three drives, 2x 3.5" SATA HDD + 1x M.2 SSD

- 3.5" HDD up to 4TB each
- M.2 SSD up to 1TB

Storage Type^{***}

Disk Type	Interface	RPM	Offering	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	256GB / 512GB / 1TB	Opal

Storage Controllers

Storage Controller	Type	Interface	Cache
Integrated NVMe controller	Standard	PCIe NVMe	None
Integrated SATA controller	Standard	SATA 6.0Gb/s	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Optical Support

Optional one 9.0mm optical drive, DVD-ROM or DVD±RW

Card Reader

- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
500W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)^[1]

170 x 315.4 x 376 mm (6.7 x 12.4 x 14.8 inches)

Weight^[2]

9.48 kg (20.9 lbs, maximum configuration)

Bays

- 1x 3.5" disk bay (standard)
- 1x 2.5" disk bay (optional by 2.5" HDD cage kit)
- 1x 3.5" disk bay (optional, comes with disk or 3.5" HDD cage kit in flex bay)

Flex Bays

1x Flex bay, supports 2nd 3.5" disk bay and 9.0mm optical

M.2 Slots

Up to 1x M.2 SSD via onboard slot

Expansion Slots

Supports three PCIe slots with one PCIe 4.0 x16 and two PCIe 3.0 x1.

- Slot 1: PCIe 4.0 x16, full height, full length, 75W
- Slot 2: PCIe 3.0 x1, full height, half length, 25W
- Slot 3: PCIe 3.0 x1, full height, half length, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional Ethernet adapter support, up to one additional GbE port

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1

WLAN + Bluetooth^{**}

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready)^[1]
- MediaTek Wi-Fi 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports^[1]

Front Ports

ThinkStation P348 Tower

- 2x USB 3.2 Gen 2
- 4x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

None

Rear Ports^[2]

- 4x USB 2.0 (one supports Smart Power On)
- 1x HDMI
- 1x DisplayPort™
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports^{***}

- 2x USB 3.2 Gen 1 (via 2-port USB expansion card)
- 2x USB 2.0
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

^[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in processor

Physical Locks

- (Optional) Cable lock
- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management^[1]

Non-vPro®

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic

Diagnostic

Lenovo UEFI Bootable Diagnostics

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
 - 2-year limited onsite service
 - 3-year limited onsite service
 - No base warranty
-

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
 - (Optional) EPEAT™ Gold Registered^[2]
 - (Optional) EPEAT Silver Registered^[3]
 - ErP Lot 3
 - RoHS compliant
 - TCO Certified 8.0
-

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2], [3] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

ISV Certifications

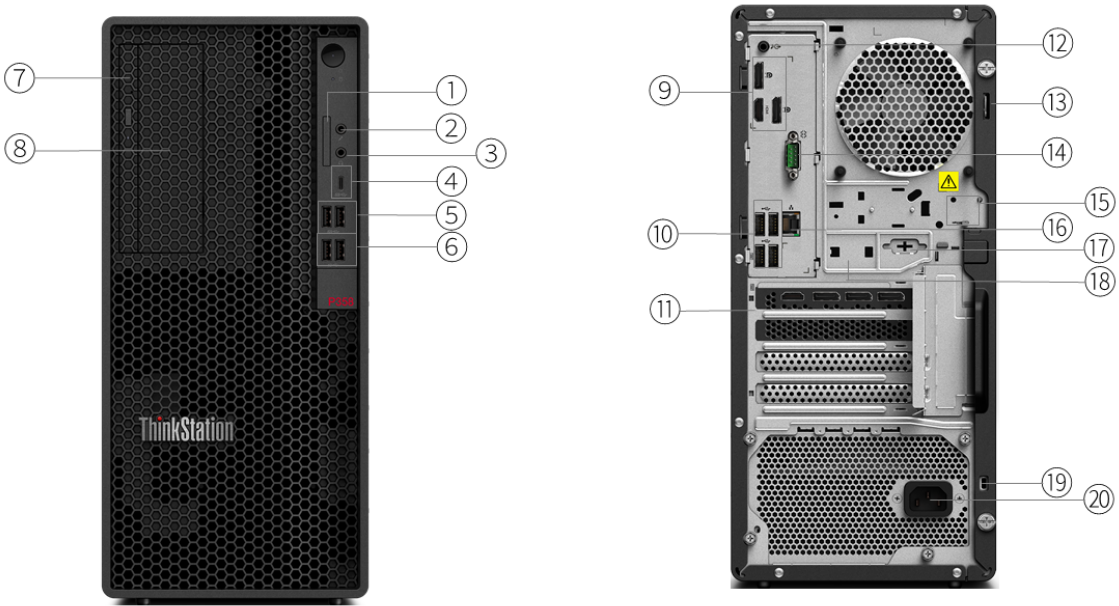
ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

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OVERVIEW



1. Card reader *	11. Optional ports on expansion cards *
2. Microphone (3.5mm)	12. Audio line-out (3.5mm)
3. Headphone / microphone combo jack (3.5mm)	13. Padlock loop
4. USB-C 3.2 Gen 1	14. Serial (9-pin)
5. 2x USB 3.2 Gen 1	15. E-lock slot *
6. 2x USB 3.2 Gen 2	16. Ethernet (RJ-45)
7. Optical drive *	17. Serial (9-pin) *
8. Flex bay *	18. Smart cable clip slots
9. Video ports (2x DP, 1x HDMI) *	19. Kensington Security Slot
10. 4x USB 2.0 (with Smart Power On feature)	20. Power connector

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one AMD Ryzen™ 9 PRO 5000 Series Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
AMD Ryzen 3 PRO 4350G	4	8	3.8GHz	4.0GHz	2MB L2 / 4MB L3	DDR4-3200	AMD Radeon™ Graphics
AMD Ryzen 5 PRO 4650G	6	12	3.7GHz	4.2GHz	3MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 5 PRO 5645	6	12	3.7GHz	4.6GHz	3MB L2 / 32MB L3	DDR4-3200	None
AMD Ryzen 7 PRO 4750G	8	16	3.6GHz	4.4GHz	4MB L2 / 8MB L3	DDR4-3200	AMD Radeon Graphics
AMD Ryzen 7 PRO 5845	8	16	3.4GHz	4.6GHz	4MB L2 / 32MB L3	DDR4-3200	None
AMD Ryzen 9 PRO 5945	12	24	3.0GHz	4.7GHz	6MB L2 / 64MB L3	DDR4-3200	None

Processor Sockets

Socket AM4

Operating System

Operating System**

- Red Hat Enterprise Linux 8.6 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics

- None
- Integrated AMD Radeon Graphics

Discrete Graphics Support^[1]

Supports up to one NVIDIA® GeForce RTX™ 3080 or NVIDIA RTX A2000

Discrete Graphics Offering

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA GeForce RTX 3060	12GB GDDR6	170W	3x DP 1.4a, 1x HDMI® 2.1 FRL	Dual slot	None
NVIDIA GeForce RTX 3070 Ti	8GB GDDR6	290W	3x DP 1.4a, 1x HDMI 2.1 FRL	Triple slot	None
NVIDIA GeForce RTX 3080	10GB GDDR6	320W	3x DP 1.4a, 1x HDMI 2.1 FRL	Triple slot	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

- Models with Ryzen 3 Pro 4350G: no discrete graphic support. Onboard graphics supports up to 3 independent displays via onboard two DP, one HDMI:
 - DP supports up to 4096x2160@60Hz
 - HDMI supports up to 3840x2160@30Hz
- Models with Ryzen Pro 5000 processor: onboard video ports cannot work.Independent displays support depends on the discrete graphic card in use. Discrete graphics ports support:
 - miniDP supports up to 5120x2880@60Hz
 - HDMI supports up to 7680x4320@60Hz

Chipset

Chipset

AMD PRO 565 chipset

Memory

Max Memory^[1]

Up to 128GB (4x 32GB DDR4 UDIMM)

Memory Type**

- DDR4-3200 UDIMM ECC
- DDR4-3200 UDIMM non-ECC

Memory Slots

Four DDR4 UDIMM slots, dual-channel capable

Memory Protection

ECC on models with ECC DIMMs and ECC capable processor

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to 2x 3.5" SATA HDD + 1x 2.5" SATA HDD / SSD + 1x M.2 SSD

- 3.5" HDD up to 4TB each
- M.2 SSD up to 2TB
- No pre-configured 2.5" HDD / SSD options

Storage Type^[3]

Disk Type	Interface	RPM	Offering	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	256GB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

Storage Controllers***^[4]

Storage Controller	Type	Interface	RAID	Cache
Integrated SATA controller	Standard	SATA 6.0Gb/s	0/1	None
Integrated NVMe controller	Standard	PCIe NVMe	-	None

Notes:

^[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

^[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

^[3] System comes with one M.2 PCIe Gen 3 slot for M.2 SSD.

^[4] RAID requires that BIOS version is equal or newer than SOHKT12A.

RAID is only available on models with AMD Ryzen 3 Pro 4350G.

Pre-configuration with RAID cannot be supported.

Removable Storage

Optical Support

Optional one 9.0mm DVD-ROM

Card Reader

- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
300W	Fixed	90%	Autosensing, 80 PLUS Gold qualified
500W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
750W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)^[1]

170 x 315.4 x 376 mm (6.7 x 12.4 x 14.8 inches)

Weight^[2]

9.8 kg (21.6 lbs, maximum configuration)

Bays

- 1x 3.5" disk bay (standard)
- 1x 3.5" disk bay (optional)
- 1x 2.5" disk bay (optional)
- 1x slim ODD bay (optional)

M.2 Slots

- One M.2 slot (for WLAN)
- One M.2 PCIe Gen 3x4 slot (for SSD)

Expansion Slots

Supports two PCIe slots with one PCIe 3.0 x16 and one PCIe 3.0 x1.

- Slot 1: PCIe 3.0 x16, full height, full length, 75W, double-width
- Slot 2: PCIe 3.0 x1, full height, half length, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111EPV, 1x GbE RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional Ethernet adapter support, up to one additional GbE port

- Gigabit Ethernet, Intel® I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1

WLAN + Bluetooth®

- MediaTek Wi-Fi® 6 MT7921, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1
- No WLAN and Bluetooth

Ports^[1]**Front Ports**

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)
- 1x USB-C® 3.2 Gen 1 (support data transfer)

Rear Ports^[2]

- 4x USB 2.0 (one supports Smart Power On)
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)
- 1x serial (9-pin)

Optional Rear Ports

- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB 2.0
- 1x HDMI 2.1 TMDS (onboard, for AMD Ryzen 3 Pro 4350G models)
- 2x DisplayPort™ 1.4 (onboard, for AMD Ryzen 3 Pro 4350G models)
- 1x parallel
- 1x serial
- 4x serial (via 4-port serial expansion card, PCIe x1)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in processor

Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management

AMD PRO Manageability

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

ISV Certifications

ISV Certifications

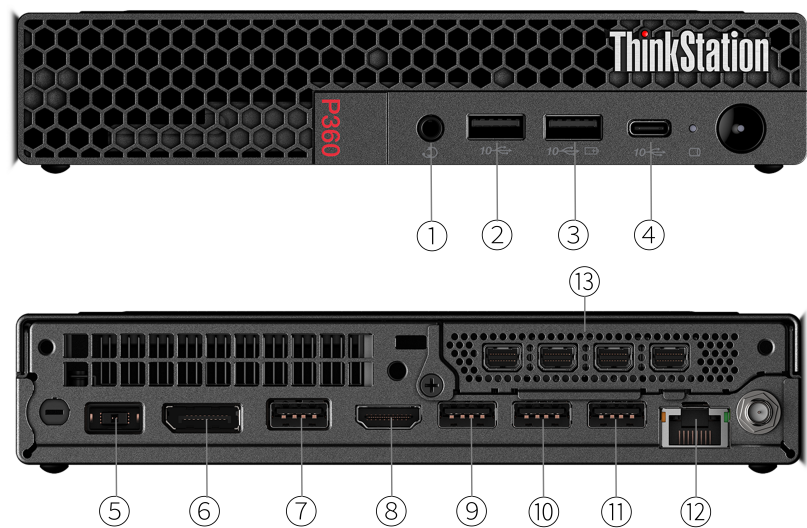
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OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI 2.1 TMDS
2. USB 3.2 Gen 2	9. USB 3.2 Gen 1 (with Smart Power On feature)
3. USB 3.2 Gen 2 (Always On and fast charge)	10. USB 3.2 Gen 2
4. USB-C 3.2 Gen 2	11. USB 3.2 Gen 2
5. Power connector	12. Ethernet (RJ-45)
6. DisplayPort 1.4	13. 2 Punch out ports or expansion card *
7. USB 3.2 Gen 1	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12100T	4 (4 P-core + 0 E-core)	8	P-core 2.2GHz	P-core 4.1GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300T	4 (4 P-core + 0 E-core)	8	P-core 2.3GHz	P-core 4.2GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400T	6 (6 P-core + 0 E-core)	12	P-core 1.8GHz	P-core 4.2GHz	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12500T	6 (6 P-core + 0 E-core)	12	P-core 2.0GHz	P-core 4.4GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600T	6 (6 P-core + 0 E-core)	12	P-core 2.1GHz	P-core 4.6GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700T	12 (8 P-core + 4 E-core)	20	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.7GHz / P-core 4.6GHz / E-core 3.4GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-4800	Intel UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 730
- Intel UHD Graphics 770
- None

Discrete Graphics Support^[1]

Supports up to one NVIDIA® T1000 on models with 35W processor

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	None
Quadro® P400	2GB GDDR5	30W	3x miniDP 1.4	None
Quadro P620	2GB GDDR5	40W	4x miniDP 1.4	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Onboard graphics supports up to 4 independent displays via (onboard DP, onboard HDMI®, punch out port 1 [VGA / HDMI / DP / USB-C®], and punch out port 2 [VGA / HDMI / DP]); the number of maximum monitors also depends on the discrete graphic card in use

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory^[1]

Up to 64GB (2x 32GB DDR5 SO-DIMM)

Memory Type

DDR5-4800 SO-DIMM non-ECC

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD, up to 2TB each

Storage Type

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	256GB / 512GB / 1TB / 2TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

Removable Storage

Optical Support

Optional one 9.0mm optical drive via optical drive kit, DVD-ROM or DVD±RW

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256VB codec

Speakers**

- Single speaker
- Single speaker, premium

Power Supply

Power Supply**[1]

Power	Type	Efficiency	Key Features
170W	Adapter	90%	100V - 240V
230W	Adapter	90%	100V - 240V

Notes:

[1] When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:

- Order a Tiny for TIO MT (30FC or 30FD) models
- Or order an additional 230W power adapter if original power adapter is less than 230W.

DESIGN

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)[1]

Models	Dimensions
Tiny only	179 x 182.9 x 37mm with rubber feet (7.0 x 7.2 x 1.5 inches with rubber feet)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Weight[2]

Models	Weight
Tiny only	1.4 kg (3 lbs, maximum configuration)

Bays

No bays

M.2 Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

Expansion Slots

One PCIe 4.0 x8, low-profile[3]

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Supports discrete graphic card by x16 riser card (x8 signal), and supports Ethernet card / Thunderbolt 4 card by x4 riser card. Riser card comes with the expansion cards.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional ethernet adapter support, up to one additional 2.5GbE port

- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, BTB

WLAN + Bluetooth[®]**

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready)^[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready), Intel vPro[®] technology support
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro technology support^[2]
- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1
- AMD Wi-Fi 6E RZ616, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1^[3]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

[2], [3] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x USB-C 3.2 Gen 2 (support data transfer)

Rear Ports^[2]

- 2x USB 3.2 Gen 1 (one supports Smart Power On)
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)

Optional Rear Ports

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 3.2 Gen 1 with DisplayPort and PD 3.0 functions)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)
- 1x Thunderbolt[™] 4 (via additional PCIe adapter)
- 1x USB-C 3.2 Gen 1 (DP and PD)
- 2x USB 3.2 Gen 1 (occupies port 1 and 2)
- 1x 2.5GbE RJ-45, via RTL8125BGS
- 2x GbE RJ-45, via additional PCIe adapter
- 4x GbE RJ-45, via additional PCIe adapter

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4[®] 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Cable lock
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise with Intel AMT 16
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Mil-Spec Test

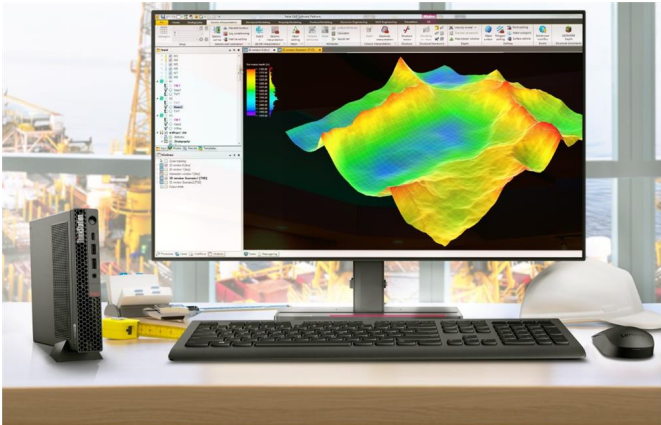
MIL-STD-810H military test passed

ISV Certifications

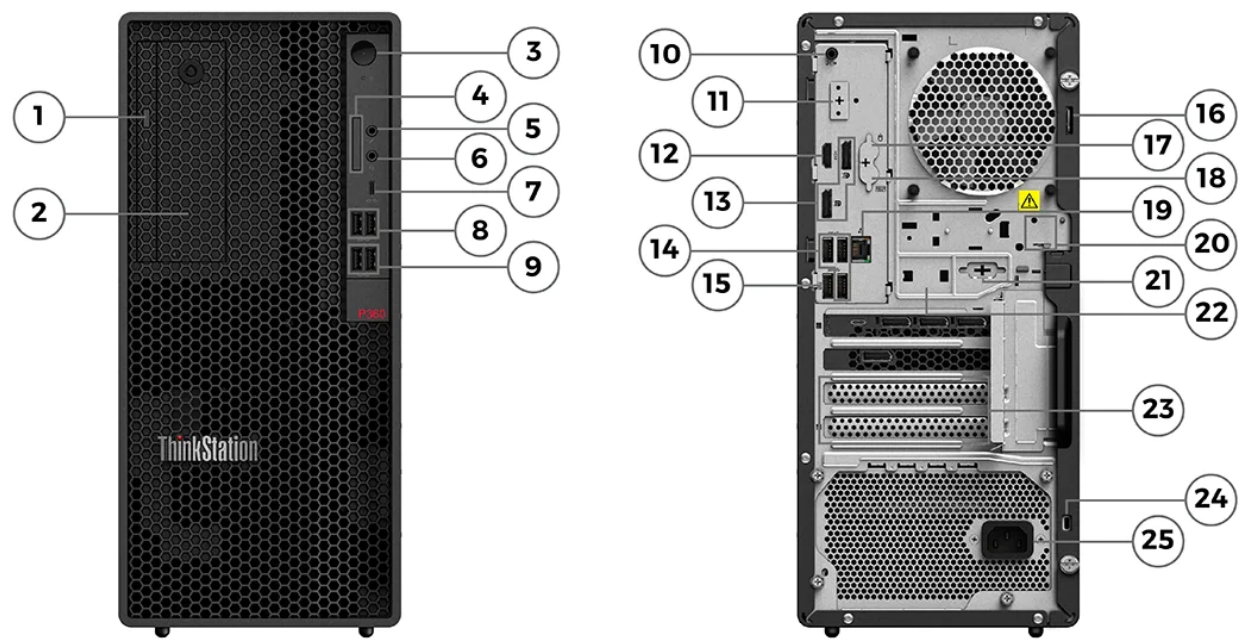
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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OVERVIEW



1. Optical drive *	14. 3x USB 3.2 Gen 1
2. Flex bay *	15. USB 3.2 Gen 1 (with Smart Power On feature)
3. Power button	16. Padlock loop *
4. Card reader *	17. PS/2 port (mouse) *
5. Microphone (3.5mm)	18. PS/2 port (keyboard) *
6. Headphone / microphone combo jack (3.5mm)	19. Ethernet (RJ-45)
7. USB-C 3.2 Gen 2 (data transfer only)	20. E-lock slot *
8. 2x USB 3.2 Gen 1	21. Serial (9-pin) *
9. 2x USB 3.2 Gen 2	22. Smart cable clip slots *
10. Line-out (3.5mm)	23. Optional ports on expansion cards *
11. Flex IO *	24. Kensington Security Slot
12. HDMI	25. Power connector
13. 2x DisplayPort	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600K	10 (6 P-core + 4 E-core)	16	P-core 3.7GHz / E-core 2.8GHz	P-core 4.9GHz / E-core 3.6GHz	20MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700K	12 (8 P-core + 4 E-core)	20	P-core 3.6GHz / E-core 2.7GHz	Max Turbo up to 5.0GHz / P-core 4.9GHz / E-core 3.8GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900K	16 (8 P-core + 8 E-core)	24	P-core 3.2GHz / E-core 2.4GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 3.9GHz	30MB	DDR5-4800	Intel UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

^[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.7 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 730
- Intel UHD Graphics 770

Discrete Graphics Support^[1]

Supports up to one NVIDIA® RTX A5000 or two NVIDIA T1000

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000	6GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	None
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	None
NVIDIA GeForce RTX™ 3060	12GB GDDR6	170W	3x DP 1.4a, 1x HDMI® 2.1 FRL	Dual slot	None
NVIDIA GeForce RTX 3070 Ti	8GB GDDR6	290W	3x DP 1.4a, 1x HDMI 2.1 FRL	Triple slot	None
NVIDIA GeForce RTX 3080	10GB GDDR6	320W	3x DP 1.4a, 1x HDMI 2.1 FRL	Triple slot	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Onboard graphics supports up to 4 independent displays via onboard two DP, one HDMI and one optional USB-C®; the number of maximum monitors also depends on the discrete graphic card in use

Chipset

Chipset

Intel W680 chipset

Memory

Max Memory^[1]

Up to 128GB (4x 32GB DDR5 UDIMM)

Memory Type**^[2]

- DDR5-4800 UDIMM ECC
- DDR5-4800 UDIMM non-ECC

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Protection

ECC on models with ECC DIMMs and ECC capable processor

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] System comes with DDR5-4800 memory and will run at lower speed due to platform limitations:
1x 8GB / 2x 8GB / 1x 16GB / 2x 16GB / 2x 32GB configurations run at DDR5-4400;
4x 8GB / 4x 16GB configurations run at DDR5-4000;
4x 32GB configuration runs at DDR5-3600.

Storage

Storage Support^{[1][2]}

Up to 2x 3.5" SATA HDD or 4x 2.5" SATA HDD; also supports up to 3x M.2 SSD (2 by onboard, 1 by M.2 to PCIe® adapter)

- 3.5" HDD up to 4TB each
- 2.5" HDD up to 1TB each

- Onboard M.2 SSD up to 4TB each
- M.2 SSD by M.2 to PCIe adapter up to 2TB

Storage Type***[3]

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 1TB FIPS	-
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB	-
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	-	256GB	Opal 2.0
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0

Storage Controllers[4]

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1	None
Integrated SATA controller	Standard	SATA 6.0Gb/s	0/1/10/5	None

- Notes:
- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- [2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.
- [3] When using M.2 to PCIe adapter, M.2 SSD works at PCIe Gen 3. 4TB M.2 SSD is pending availability.
- [4] NVMe RAID is supported on onboard M.2 slots. SATA RAID 5 and 10 are supported on 2.5" HDD.

Removable Storage

Optical Support

Optional one 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897Q-CG codec

Speakers

Single speaker, 2W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
500W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
750W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (17L)

Dimensions (WxDxH)[1]

170 x 315.4 x 376 mm (6.7 x 12.4 x 14.8 inches)

Weight[2]

9.67 kg (21.32 lbs, maximum configuration)

Bays

- 1x 3.5" disk bay (standard)

- 1x 3.5" disk bay (optional)
- 2x 2.5" disk bay (optional)

M.2 Slots

- Up to 3x M.2 SSD:
 - 2 via onboard M.2 PCIe Gen 4 slots
 - 1 via Single M.2 to PCIe adapter, PCIe Gen 3
- One M.2 slot for WiFi

Expansion Slots

Supports four PCIe slots with two PCIe 4.0 x16 and two PCIe 3.0 x1.

- Slot 1: PCIe 4.0 x16, full height, full length, 75W, double-width
- Slot 2: PCIe 3.0 x1, full height, half length, 25W
- Slot 3: PCIe 4.0 x16 (x4 lanes), full height, half length, 25W, double-width
- Slot 4: PCIe 3.0 x1, full height, half length, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to two additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth[®]**

- Intel Wi-Fi[®] 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready), Intel vPro[®] technology support
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro technology support^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)
- 1x USB-C 3.2 Gen 2 (support data transfer)

Rear Ports^[2]

- 4x USB 3.2 Gen 1 (one supports Smart Power On)
- 1x HDMI 2.1 TMDS
- 2x DisplayPort[™] 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports^[3]

- 1x USB-C 3.2 Gen 1 with DisplayPort function (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)

- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 2x USB 2.0 (via cable and PCIe bracket)
- 1x parallel (via cable and PCIe bracket)
- 1x Thunderbolt™ 4 (via additional PCIe adapter)
- 2x USB 3.2 Gen 1 (via additional PCIe adapter)
- 1x USB-C 3.2 Gen 2x2 (support data transfer, via USB-C expansion card, PCIe x4)
- 1x serial (via cable)
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 2x PS/2 (via cable)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

[3] 2x USB 2.0 and 1x parallel can not be chosen simultaneously. USB 2.0 and parallel occupy a PCIe slot.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Cable lock
- (Optional) E-lock
- Kensington® Security Slot™, 3 x 7 mm
- Padlock Loop

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management^[1]

- Intel vPro Enterprise with Intel AMT 16
- Non-vPro

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service

- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered^[2]
- ErP Lot 3
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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ThinkStation P360 Tower - October 11 2023

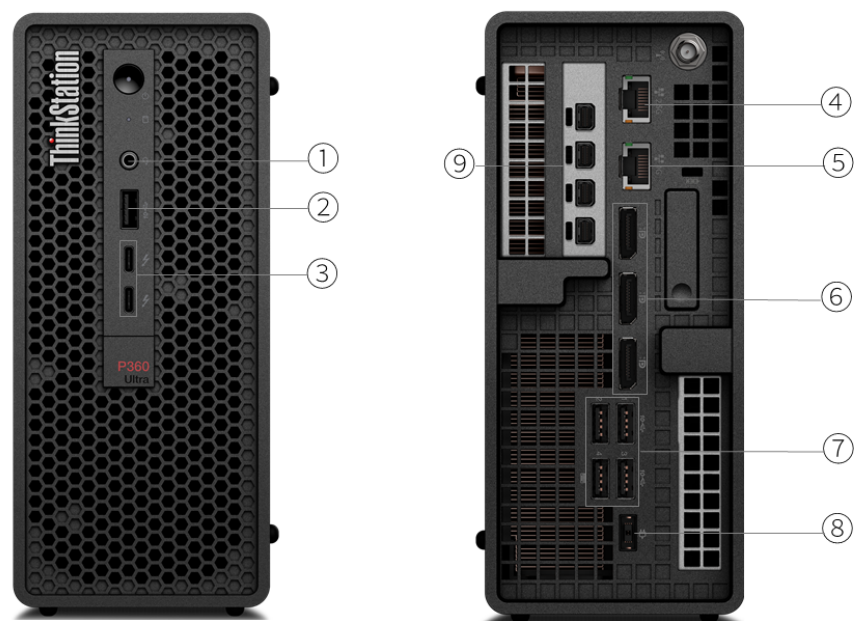


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OVERVIEW



1. Headphone (3.5mm)	6. 3x DisplayPort
2. USB 3.2 Gen 2	7. 4x USB 3.2 Gen 2
3. 2x Thunderbolt 4	8. Power connector
4. Ethernet (2.5GbE RJ-45)	9. Optional ports on expansion cards *
5. Ethernet (GbE RJ-45)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i3 / i5 / i7 / i9 processor, supports processors up to 16 cores; up to 5.2GHz; up to 125W TDP

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-12100	4 (4 P-core + 0 E-core)	8	P-core 3.3GHz	P-core 4.3GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i3-12300	4 (4 P-core + 0 E-core)	8	P-core 3.5GHz	P-core 4.4GHz	12MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400	6 (6 P-core + 0 E-core)	12	P-core 2.5GHz	P-core 4.4GHz	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12400T	6 (6 P-core + 0 E-core)	12	P-core 1.8GHz	P-core 4.2GHz	18MB	DDR5-4800	Intel UHD Graphics 730
Core i5-12500	6 (6 P-core + 0 E-core)	12	P-core 3.0GHz	P-core 4.6GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600	6 (6 P-core + 0 E-core)	12	P-core 3.3GHz	P-core 4.8GHz	18MB	DDR5-4800	Intel UHD Graphics 770
Core i5-12600K	10 (6 P-core + 4 E-core)	16	P-core 3.7GHz / E-core 2.8GHz	P-core 4.9GHz / E-core 3.6GHz	20MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700	12 (8 P-core + 4 E-core)	20	P-core 2.1GHz / E-core 1.6GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700K	12 (8 P-core + 4 E-core)	20	P-core 3.6GHz / E-core 2.7GHz	Max Turbo up to 5.0GHz / P-core 4.9GHz / E-core 3.8GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i7-12700T	12 (8 P-core + 4 E-core)	20	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.7GHz / P-core 4.6GHz / E-core 3.4GHz	25MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900	16 (8 P-core + 8 E-core)	24	P-core 2.4GHz / E-core 1.8GHz	Max Turbo up to 5.1GHz / P-core 5.0GHz / E-core 3.8GHz	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900K	16 (8 P-core + 8 E-core)	24	P-core 3.2GHz / E-core 2.4GHz	Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 3.9GHz	30MB	DDR5-4800	Intel UHD Graphics 770
Core i9-12900T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	30MB	DDR5-4800	Intel UHD Graphics 770

Processor Sockets

1x FCLGA1700

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.7 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language

- Windows 11 Pro
- No operating system

Graphics

Integrated Graphics**

- Intel UHD Graphics 730
- Intel UHD Graphics 770

Discrete Graphics Support^[1]

Supports up to one NVIDIA® RTX A5500 Laptop GPU

Discrete Graphics Offering**

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A3000 Laptop GPU	12GB GDDR6	80W	4x miniDP 1.4a	MXM Card	None
NVIDIA RTX A5000 Laptop GPU	16GB GDDR6	115W	4x miniDP 1.4a	MXM Card	None
NVIDIA RTX A5500 Laptop GPU	16GB GDDR6 with ECC	115W	4x miniDP 1.4a	MXM Card	None
Quadro® P1000	4GB GDDR5	50W	4x miniDP 1.4	Single slot	None

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports up to 8 independent displays, 4 via onboard ports (3x DP and 2x Thunderbolt™, simultaneously supports 4 display) and 4 via discrete graphics.

Onboard ports support (with max simultaneous displays):

- DP supports up to 4096x2160@60Hz
- Thunderbolt supports up to 5120x2880@60Hz

Discrete graphics ports support (with max simultaneous displays):

- miniDP supports up to 5120x2880@60Hz

Chipset

Chipset

Intel W680 chipset

Memory

Max Memory^[1]

Up to 128GB (4x 32GB DDR5 SO-DIMM)

Memory Type**^[2]

- DDR5-4800 SO-DIMM ECC
- DDR5-4800 SO-DIMM non-ECC

Memory Slots

Four DDR5 SO-DIMM slots, dual-channel capable

Memory Protection

ECC on models with ECC DIMMs and ECC capable processor

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

^[2] System comes with DDR5-4800 memory and will run at lower speed due to platform limitations: 4x 32GB or four memory DIMMs with WiFi configurations runs at DDR5-3600;

other configurations run at DDR5-4000.

Storage

Storage Support^{[1][2]}

Up to 1x 2.5" HDD + 2x M.2 SSD

- 2.5" HDD up to 1TB
- M.2 SSD up to 4TB each

Storage Type^{**}

Disk Type	Interface	RPM	Offering	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 1TB FIPS	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	256GB / 512GB / 1TB / 2TB / 4TB	Opal 2.0

Storage Controllers^{***}

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1	None
Integrated SATA controller	Standard	SATA 6.0Gb/s	-	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897-Q codec

Speakers

Single speaker

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
170W	Adapter	90%	100V - 240V
230W	Adapter	90%	100V - 240V
300W	Adapter	90%	100V - 240V

DESIGN

Mechanical

Form Factor

Mini-tower (3.9L)

Dimensions (WxDxH)^[1]

87 x 223 x 202 mm (3.43 x 8.78 x 7.95 inches)

Weight^[2]

3.6 kg (7.94 lbs, maximum configuration)

Bays

1x 2.5" disk bay (optional, comes with disk)

M.2 Slots

- Two M.2 PCIe Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

Expansion Slots

Two PCIe slots with one PCIe 4.0 x16 and one PCIe 3.0 x8.

- Slot 1: PCIe 4.0 x16 (via MXM to PCIe riser card), low profile, 75W, double-width

- Slot 2: PCIe 3.0 x8 (x4 lanes), low profile, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Two Ethernet, 2.5GbE + GbE, Intel Ethernet Connection I225-LM and I210-AT, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

One additional Ethernet adapter support, up to one additional 10 GbE ports

- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth^{**}

- Intel Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.2 hardware ready)^[1]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support^[2]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

[2] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 2
- 2x Thunderbolt 4
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports^[2]

- 4x USB 3.2 Gen 2
- 3x DisplayPort™ 1.2
- 1x Ethernet (2.5GbE RJ-45)
- 1x Ethernet (GbE RJ-45)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management^[1]**

- Intel vPro Enterprise with Intel AMT 16
- Intel vPro Enterprise with Intel AMT 16 on wired LAN
- Non-vPro

Notes:

^[1] Intel vPro offers a superset of DASH's defined capabilities.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

^[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0

- (Optional) EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

ISV Certifications

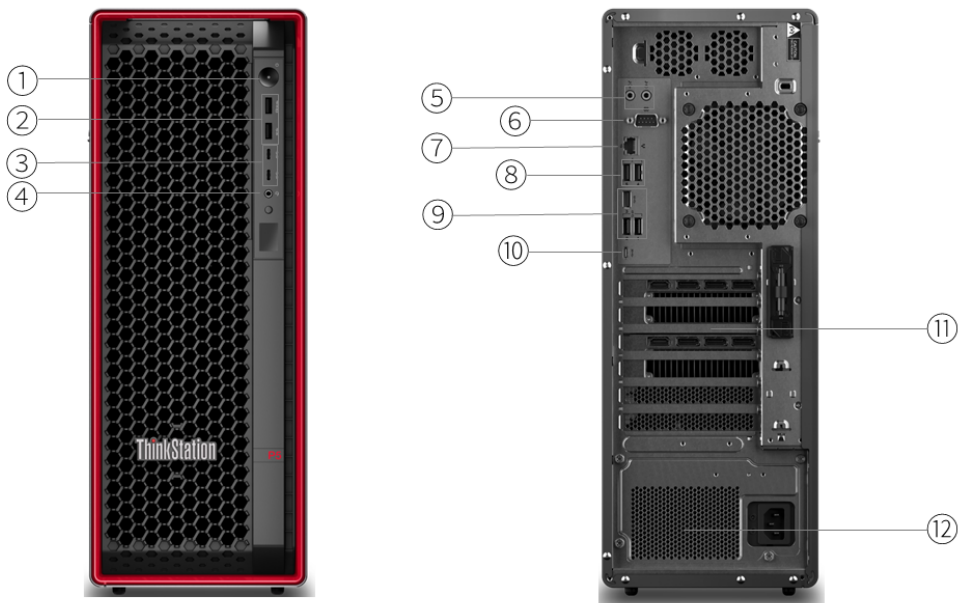
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power button	7. Ethernet (GbE RJ-45)
2. 2x USB 3.2 Gen 2 (one Always On) *	8. 2x USB 2.0
3. 2x USB-C 3.2 Gen 2 *	9. 3x USB 3.2 Gen 2
4. Headphone (3.5mm)	10. 1x USB-C 3.2 Gen 2x2
5. 2x Audio ports (line-out and line-in)	11. PCIe slots
6. Serial (9-pin) *	12. Power supply

- Notes:
- Items with * are only available on selected models
 - Expansion cards are optional. More ports are available through the optional expansion cards

PERFORMANCE

Processor

Processor Family

Up to one Intel® Xeon® W-2400 Series processor, supports up to 24 cores, up to 4.8GHz

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon w3-2423	6	12	2.1GHz	4.2GHz	15MB	DDR5-4400
Xeon w3-2425	6	12	3.0GHz	4.4GHz	15MB	DDR5-4400
Xeon w3-2435	8	16	3.1GHz	4.5GHz	22.5MB	DDR5-4400
Xeon w5-2445	10	20	3.1GHz	4.6GHz	26.25MB	DDR5-4800
Xeon w5-2455X	12	24	3.2GHz	4.6GHz	30MB	DDR5-4800
Xeon w5-2465X	16	32	3.1GHz	4.7GHz	33.75MB	DDR5-4800
Xeon w7-2475X	20	40	2.6GHz	4.8GHz	37.5MB	DDR5-4800
Xeon w7-2495X	24	48	2.5GHz	4.8GHz	45MB	DDR5-4800

Processor Sockets

1x FCLGA4677

Notes:

^[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Windows® 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support^[1]

Supports up to two NVIDIA® RTX A5500 with NVLink

Discrete Graphics Offering

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel W790 chipset

Memory

Max Memory^[1]

Up to 512GB (8x 64GB RDIMM)

Memory Type^[2]

DDR5-4800 RDIMM ECC

Memory Slots

8 DDR5 DIMM slots, 4 channels capable

Memory Protection

ECC

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] System comes with DDR5-4800 memory and some configurations will run at DDR5-4400 due to platform limitations.

Storage

Storage Support^{[1][2]}

Up to ten drives (3x 3.5" SATA HDD + 7x M.2 SSD)

- 3.5" HDD up to 12TB each
- M.2 SSD up to 4TB or 2TB each (see Storage Type)

Storage Type**

Disk Type	Interface	RPM	Offering	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	2TB / 6TB / 12TB	-
M.2 2280 SSD for Onboard / Front access M.2	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0
M.2 2280 SSD for quad M.2 to PCIe adapter ^[3]	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal 2.0

Storage Controllers^[4]

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/5	None
Integrated NVMe controller	Standard	PCIe NVMe	-	None
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- [2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.
- [3] M.2 2280 SSD for quad M.2 to PCIe adapter is PCIe 4.0 x4, and the 4x M.2 slots on quad M.2 to PCIe adapter are PCIe 3.0 x4. See M.2 Slots section for more information.
- [4] As planned, RAID for SATA and NVMe SSD will be available on July 2023.

Removable Storage

Card Reader

- 15-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897-Q codec

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
750W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (33L)

Dimensions (WxDxH)^[1]

165 x 453.9 x 446 mm (6.5 x 17.9 x 17.6 inches, with feet)

Weight^[2]

19 kg (41.9 lbs, maximum configuration)

Bays

Three internal disk bays plus one front access M.2 bay:

- Bay 1 supports one 3.5" HDD, standard
- Bay 2 supports one 3.5" HDD, standard
- Bay 3 supports one 3.5" HDD, optional
- Front access M.2 bay supports one M.2 SSD, optional

M.2 Slots

Up to 7x M.2 SSD:

- 2 via onboard slots, PCIe 4.0 x4
- 4 via Quad M.2 to PCIe adapter, PCIe 3.0 x4
- 1 via front access M.2 bay, PCIe 4.0 x4

Expansion Slots

Supports 6 PCIe slots with 2x PCIe 5.0 slots and 4x PCIe 4.0 slots.

- Slot 1: PCIe 5.0 x16, full height, full length, 75W, double-width, by CPU
- Slot 2: PCIe 4.0 x4, full height, full length, 25W, by PCH
- Slot 3: PCIe 5.0 x16, full height, full length, 75W, double-width, by CPU
- Slot 4: PCIe 4.0 x4, full height, full length, 25W, by PCH
- Slot 5: PCIe 4.0 x8, full height, full length, 25W, by CPU
- Slot 6: PCIe 4.0 x4, full height, full length, 25W, by PCH

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to four additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4

- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Intel X550-T2, 2x RJ-45, PCIe x4
- 10 Gigabit Ethernet, Intel X710-DA2, 2x SFP+, PCIe x8

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]**Front Ports**

1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

- 2x USB-C® 3.2 Gen 2 (support data transfer)
- 2x USB 3.2 Gen 2 (one Always On)

Rear Ports^[2]

- 1x USB-C 3.2 Gen 2x2 (support data transfer)
- 2x USB 2.0
- 3x USB 3.2 Gen 2
- 1x Ethernet (GbE RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)

Optional Rear Ports

- 1x Thunderbolt™ 4 (via additional PCIe adapter)
- 1x serial
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management^[1]

Intel vPro Enterprise with Intel AMT 16

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic

Diagnostic

- ThinkStation® Diagnostics
- Front diagnostic panel with QR code

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

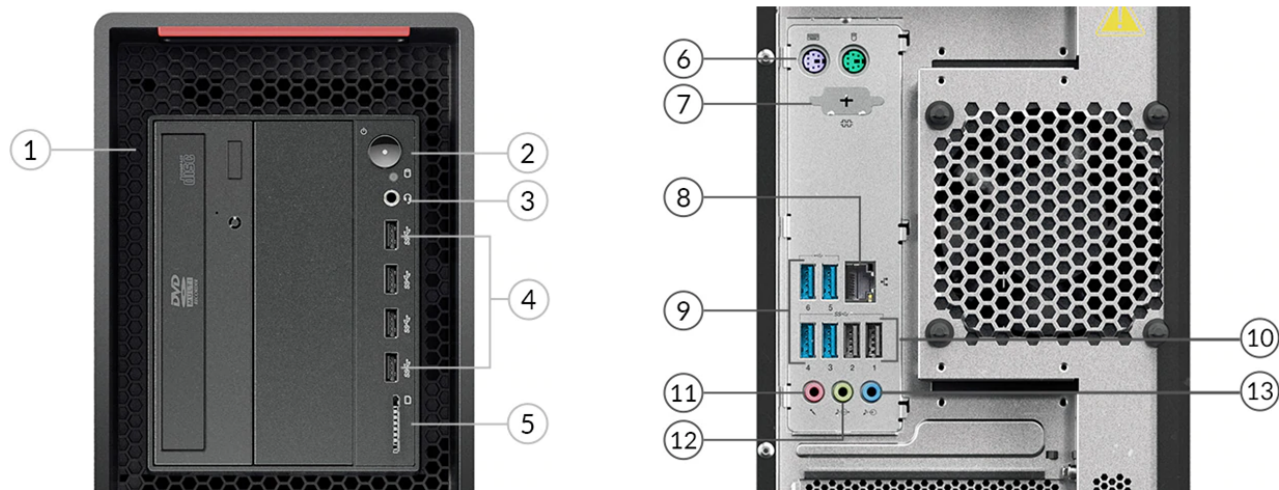
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. 2x Flex bay	8. Ethernet (RJ-45)
2. Power button	9. 4x USB 3.2 Gen 1
3. Headphone / microphone combo jack (3.5mm)	10. 2x USB 2.0
4. 4x USB 3.2 Gen 1	11. Microphone (3.5mm)
5. Card reader	12. Line-out (3.5mm)
6. 2x PS/2 ports (keyboard / mouse)	13. Line-in (3.5mm)
7. Serial *	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one Intel® Xeon® W-2100 / W-2200 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon W-2102	4	4	2.9GHz	-	8.25MB	DDR4-2400
Xeon W-2104	4	4	3.2GHz	-	8.25MB	DDR4-2400
Xeon W-2123	4	8	3.6GHz	3.9GHz	8.25MB	DDR4-2666
Xeon W-2125	4	8	4.0GHz	4.5GHz	8.25MB	DDR4-2666
Xeon W-2133	6	12	3.6GHz	3.9GHz	8.25MB	DDR4-2666
Xeon W-2135	6	12	3.7GHz	4.5GHz	8.25MB	DDR4-2666
Xeon W-2145	8	16	3.7GHz	4.5GHz	11MB	DDR4-2666
Xeon W-2155	10	20	3.3GHz	4.5GHz	13.75MB	DDR4-2666
Xeon W-2175	14	28	2.5GHz	4.3GHz	19MB	DDR4-2666
Xeon W-2195	18	36	2.3GHz	4.3GHz	24.75MB	DDR4-2666
Xeon W-2223	4	8	3.6GHz	3.9GHz	8.25MB	DDR4 2666
Xeon W-2225	4	8	4.1GHz	4.6GHz	8.25MB	DDR4 2933
Xeon W-2235	6	12	3.8GHz	4.6GHz	8.25MB	DDR4 2933
Xeon W-2245	8	16	3.9GHz	4.5GHz	16.5MB	DDR4 2933
Xeon W-2255	10	20	3.7GHz	4.5GHz	19.25MB	DDR4 2933
Xeon W-2265	12	24	3.5GHz	4.6GHz	19.25MB	DDR4 2933
Xeon W-2275	14	28	3.3GHz	4.6GHz	19.25MB	DDR4 2933
Xeon W-2295	18	36	3.0GHz	4.6GHz	24.75MB	DDR4 2933

Processor Sockets

1x FCLGA2066

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.5 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 10 Pro 64 for Workstations
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support[1]

Supports up to one NVIDIA® Quadro® RTX 8000

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None

NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000	6GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	None
Quadro GP100	16GB HBM2	235W	1x DVI-D DL, 4x DP	Dual slot	NVLink
Quadro GV100	32GB HBM2	250W	4x DP 1.4	Dual slot	None
Quadro P4000	8GB GDDR5	120W	4x DP 1.4	Single slot	None
Quadro P5000	16GB GDDR5X	180W	1x DVI-D DL, 4x DP 1.4	Dual slot	SLI
Quadro P600	2GB GDDR5	45W	4x miniDP	Single slot	None
Quadro RTX 5000	16GB GDDR6	265W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 6000	24GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 8000	48GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	None
Quadro P2200	5GB GDDR5	75W	4x DP 1.4	Single slot	None
Quadro P1000	4GB GDDR5	50W	4x miniDP 1.4	Single slot	None
Quadro RTX 4000	8GB GDDR6	160W	3x DP 1.4, 1x VirtualLink	Single slot	None
Quadro P620	2GB GDDR5	40W	4x miniDP 1.4	Single slot	None
Quadro P2000	5GB GDDR5	75W	4x DP	Single slot	None
Quadro P400	2GB GDDR5	30W	3x miniDP 1.4	Single slot	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel C422 chipset

Memory

Max Memory^[1]

Up to 512GB (8x 64GB RDIMM)

Memory Type^{**}

- DDR4-2666 RDIMM ECC
- DDR4-2933 RDIMM ECC

Memory Slots

8 DDR4 DIMM slots, 4 channels capable

Memory Protection

ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to 6x 3.5" SATA HDD / 2.5" SATA HDD / 2.5" SATA SSD + 9x M.2 PCIe® SSD + 1x PCIe AIC SSD

- 3.5" HDD up to 6TB each
- 2.5" SATA HDD up to 500GB each
- 2.5" SATA SSD up to 2TB each
- 2.5" SAS HDD up to 600GB each
- M.2 PCIe SSD up to 2TB each
- PCIe AIC SSD up to 480GB each

Storage Type^{***}

Disk Type	Interface	RPM	Offering
2.5" SAS HDD	SAS 12Gb/s	10K	300GB / 600GB
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB / 500GB FIPS
2.5" SATA SSD	SATA 6Gb/s	-	256GB / 512GB / 1TB / 2TB
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB / 6TB
M.2 PCIe SSD	PCIe NVMe®	-	256GB / 512GB / 1TB / 2TB
PCIe AIC SSD	PCIe NVMe	-	480GB

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
9440-8i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5	None
9460-16i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5/6	4GB DDR4, SuperCap
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None
NVMe for Intel SSD	Optional	PCIe NVMe	0/1/10/5	None

- Notes:
- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- [2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Optical Support

Up to two HH or 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- 15-in-1 card reader
- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC662 codec

Speakers

Single speaker

Power Supply

Power Supply^{**}

Power	Type	Efficiency	Key Features
-------	------	------------	--------------

690W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
900W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (33L)

Dimensions (WxDxH)^[1]

165 x 455x 446 mm (6.5 x 17.9 x 17.6 inches)

Weight^[2]

24 kg (52.91 lbs, maximum configuration)

Bays

- 2x 3.5" disk bay (standard)
- 4x 3.5" disk bay (optional):
2 bays come with 3rd disk or Storage Bay Upgrade Kit
2 bays via flex bay

Flex Bays

2x flex bays, supports the following:

- 2x half-height optical drives
- 2x 5.25" 9.0mm optical drives
- 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD
- 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure
- 1x flex module for the following options:

Tray 1: 9.0mm optical

Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt™, or 4-digit diagnostic display

Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA

M.2 Slots

Up to 9x M.2 SSD:

- 2 via onboard slots
- 4 via Quad M.2 to PCIe adapter
- 3 via Single M.2 to PCIe adapter

Expansion Slots

Supports 5x PCIe 3.0 slots plus 1x PCI slot.

- Slot 1: PCIe 3.0 x8, full height, full length, 25W, double-width, by CPU
- Slot 2: PCIe 3.0 x16, full height, full length, 75W, by CPU
- Slot 3: PCIe 3.0 x4, full height, full length, 25W, double-width, by PCH
- Slot 4: PCIe 3.0 x16, full height, full length, 75W, by CPU
- Slot 5: PCI, full height, full length, 25W
- Slot 6: PCIe 3.0 x4, full height, half length, 25W, by PCH

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to four additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1

- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 5 Gigabit Ethernet, Marvell AQtion AQN-108, 1x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Intel X540-T2, 2x RJ-45, PCIe x8
- 10 Gigabit Ethernet, Intel X550-T2, 2x RJ-45, PCIe x4
- 10 Gigabit Ethernet, Intel X710-DA2, 2x SFP+, PCIe x8
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support
- Intel Dual-Band Wireless-AC 8265, 802.11ac Dual-Band 2x2 Wi-Fi + Bluetooth 4.2
- No WLAN and Bluetooth

Ports^[1]**Front Ports**

- 1x USB 3.2 Gen 1 (Always On and fast charge)
- 3x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports***

- 2x Thunderbolt 3 (with flex module, USB-C® form, one supports video-out)
- 1x USB-C 3.2 Gen 1 (support data transfer, with flex module)
- 1x eSATA (with flex module)

Rear Ports^[2]

- 2x USB 2.0
- 4x USB 3.2 Gen 1
- 1x Ethernet (RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 2x PS/2 ports (keyboard / mouse)

Optional Rear Ports***

- 1x Thunderbolt 3
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card)
- 1x serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY**Security****Security Chip**

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY**System Management****System Management^[1]**

Intel vPro with Intel AMT 11

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic**Diagnostic**

- ThinkStation® Diagnostics
- Photo-audio transfer with Lenovo PC Diagnostics for Android™ and iOS
- Front 4-digit diagnostic
- Lenovo UEFI Bootable Diagnostics
- None

SERVICE**Warranty^[1]****Base Warranty****

- 1-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Operating Environment****Temperature**

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- ENERGY STAR 8.0 (on model 30BE00B7US)
- EPEAT™ Silver Registered
- GREENGUARD®
- RoHS compliant

Notes:

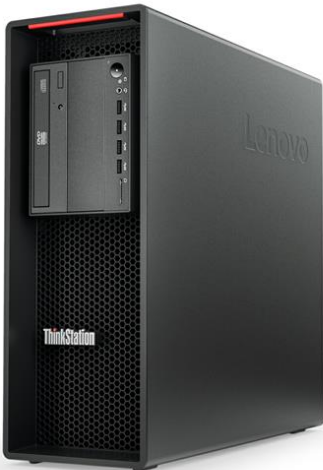
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

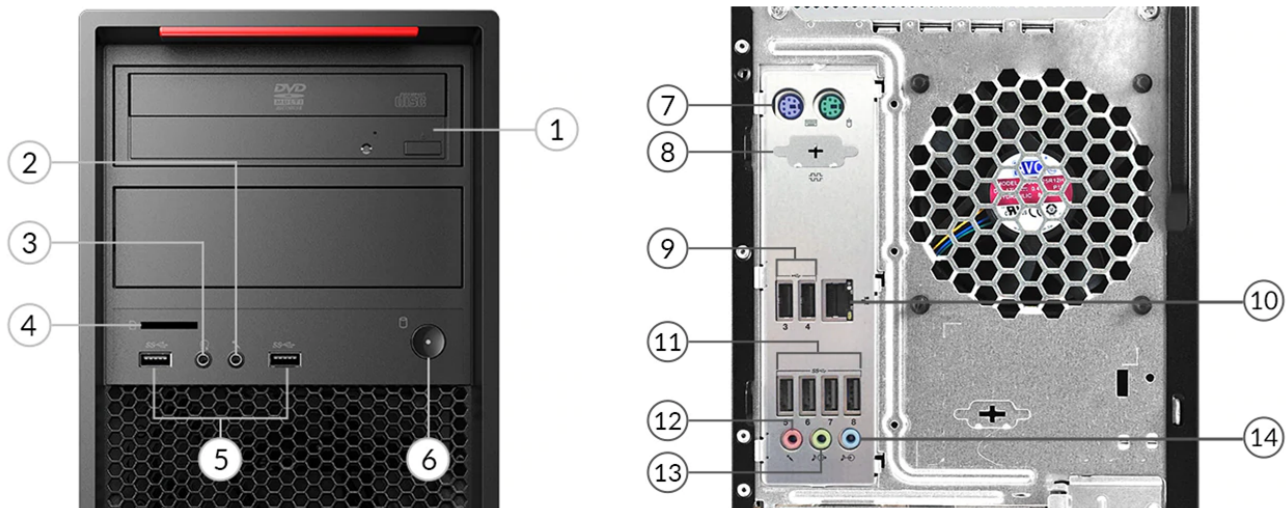
ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

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OVERVIEW



1. Optical drive *	8. Serial *
2. Microphone (3.5mm)	9. 2x USB 2.0
3. Headphone (3.5mm)	10. Ethernet (RJ-45)
4. Card reader	11. 4x USB 3.2 Gen 1
5. 2x USB 3.2 Gen 1	12. Microphone (3.5mm)
6. Power button	13. Line-out (3.5mm)
7. 2x PS/2 ports (keyboard / mouse)	14. Line-in (3.5mm)

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one Intel® Xeon® W-2100 / W-2200 Processor

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon W-2102	4	4	2.9GHz	-	8.25MB	DDR4-2400
Xeon W-2104	4	4	3.2GHz	-	8.25MB	DDR4-2400
Xeon W-2123	4	8	3.6GHz	3.9GHz	8.25MB	DDR4-2666
Xeon W-2125	4	8	4.0GHz	4.5GHz	8.25MB	DDR4-2666
Xeon W-2133	6	12	3.6GHz	3.9GHz	8.25MB	DDR4-2666
Xeon W-2135	6	12	3.7GHz	4.5GHz	8.25MB	DDR4-2666
Xeon W-2145	8	16	3.7GHz	4.5GHz	11MB	DDR4-2666
Xeon W-2155	10	20	3.3GHz	4.5GHz	13.75MB	DDR4-2666
Xeon W-2175	14	28	2.5GHz	4.3GHz	19MB	DDR4-2666
Xeon W-2195	18	36	2.3GHz	4.3GHz	24.75MB	DDR4-2666
Xeon W-2223	4	8	3.6GHz	3.9GHz	8.25MB	DDR4 2666
Xeon W-2225	4	8	4.1GHz	4.6GHz	8.25MB	DDR4 2933
Xeon W-2235	6	12	3.8GHz	4.6GHz	8.25MB	DDR4 2933
Xeon W-2245	8	16	3.9GHz	4.5GHz	16.5MB	DDR4 2933

Processor Sockets

1x FCLGA2066

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.5 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 10 Pro 64 for Workstations
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support[1]

Supports up to one NVIDIA® RTX A5000

Discrete Graphics Offering***[2]

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None

NVIDIA RTX A2000	6GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	None
Quadro® P4000	8GB GDDR5	120W	4x DP 1.4	Single slot	None
Quadro P5000	16GB GDDR5X	180W	1x DVI-D DL, 4x DP 1.4	Dual slot	None
Quadro P600	2GB GDDR5	45W	4x miniDP	Single slot	None
Quadro RTX 5000	16GB GDDR6	265W	4x DP 1.4, 1x VirtualLink	Dual slot	None
Quadro P2200	5GB GDDR5	75W	4x DP 1.4	Single slot	None
Quadro P1000	4GB GDDR5	50W	4x miniDP 1.4	Single slot	None
Quadro RTX 4000	8GB GDDR6	160W	3x DP 1.4, 1x VirtualLink	Single slot	None
Quadro P620	2GB GDDR5	40W	4x miniDP 1.4	Single slot	None
Quadro P400	2GB GDDR5	30W	3x miniDP 1.4	Single slot	None
Quadro P2000	5GB GDDR5	75W	4x DP	Single slot	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

[2] NVIDIA Quadro RTX 5000 supports manufacture configure only, none standalone option is available.

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel C422 chipset

Memory

Max Memory^[1]

- Up to 128GB (4x 32GB RDIMM)
- Up to 256GB (4x 64GB RDIMM)

Memory Type**

- DDR4-2666 RDIMM ECC
- DDR4-2933 RDIMM ECC

Memory Slots

4 DDR4 DIMM slots, 4 channels capable

Memory Protection

ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to 4x 3.5" SATA HDD / 2.5" SATA HDD / 2.5" SATA SSD + 5x M.2 PCIe® SSD

- 3.5" HDD up to 6TB each
- 2.5" SATA HDD up to 500GB each
- 2.5" SATA SSD up to 2TB each
- 2.5" SAS HDD up to 600GB each
- M.2 SSD up to 2TB each

Storage Type***

Disk Type	Interface	RPM	Offering
2.5" SAS HDD	SAS 12Gb/s	10K	300GB / 600GB
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB / 500GB FIPS
2.5" SATA SSD	SATA 6Gb/s	-	256GB / 512GB / 1TB / 2TB
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB / 6TB
M.2 PCIe SSD	PCIe NVMe®	-	256GB / 512GB / 1TB / 2TB

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
9440-8i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5	None
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe for Intel SSD	Optional	PCIe NVMe	0/1/10/5	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Optical Support

Up to two HH or 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- 15-in-1 card reader
- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC662 codec

Speakers

Single speaker

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
500W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
625W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (25L)

Dimensions (WxDxH)^[1]

175 x 426 x 376 mm (6.89 x 16.77 x 14.8 inches, with feet)

Weight^[2]

14.5 kg (31.96 lbs, maximum configuration)

Bays

- 2x 3.5" disk bay (standard)

- 2x 3.5" disk bay (optional, via flex bay)

Flex Bays

2x flex bays, supports the following:

- 2x half-height optical drives
- 2x 5.25" 9.0mm optical drives
- 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD
- 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure
- 1x flex module for the following options:

Tray 1: 9.0mm optical

Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt™, or 4-digit diagnostic display

Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA

M.2 Slots

Up to 5x M.2 SSD:

- 2 via onboard slots
- 3 via Single M.2 to PCIe adapter

Expansion Slots

Supports 4 PCIe slots.

- Slot 1: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU
- Slot 2: PCIe 3.0 x8, full height, full length, 25W, by CPU
- Slot 3: PCIe 3.0 x16, full height, full length, 75W, by CPU
- Slot 4: PCIe 3.0 x4, full height, half length, 25W, by PCH

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-LM, 1x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to four additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 5 Gigabit Ethernet, Marvell AQtion AQN-108, 1x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Intel X540-T2, 2x RJ-45, PCIe x8
- 10 Gigabit Ethernet, Intel X550-T2, 2x RJ-45, PCIe x4
- 10 Gigabit Ethernet, Intel X710-DA2, 2x SFP+, PCIe x8
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support
- Intel Dual-Band Wireless-AC 8265, 802.11ac Dual-Band 2x2 Wi-Fi + Bluetooth 4.2
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 2x USB 3.2 Gen 1
- 1x headphone (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports^{*}**

- 2x Thunderbolt 3 (with flex module, USB-C® form, one supports video-out)
- 1x USB-C 3.2 Gen 1 (support data transfer, with flex module)

- 1x eSATA (with flex module)

Rear Ports^[2]

- 2x USB 2.0
- 4x USB 3.2 Gen 1
- 1x Ethernet (RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 2x PS/2 ports (keyboard / mouse)

Optional Rear Ports^{***}

- 1x Thunderbolt 3
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card)
- 1x serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management^[1]

Intel vPro with Intel AMT 11

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic

Diagnostic

- ThinkStation® Diagnostics
- Photo-audio transfer with Lenovo PC Diagnostics for Android™ and iOS
- Front 4-digit diagnostic
- Lenovo UEFI Bootable Diagnostics
- None

SERVICE

Warranty^[1]

Base Warranty**

- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- ENERGY STAR 8.0 (on model 30BX0095US)
- EPEAT™ Silver Registered
- GREENGUARD®
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

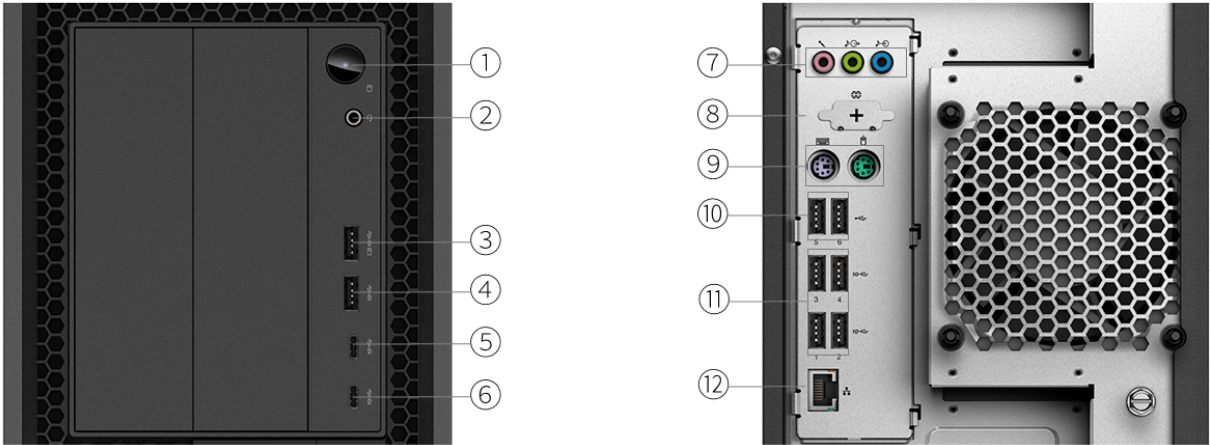
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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	7. 3x Audio ports (3.5mm)
2. Headphone / microphone combo jack (3.5mm)	8. Serial *
3. USB 3.2 Gen 2	9. 2x PS/2 ports (keyboard / mouse)
4. USB 3.2 Gen 2	10. 2x USB 2.0
5. USB-C 3.2 Gen 2	11. 4x USB 3.2 Gen 2
6. USB-C 3.2 Gen 2	12. Ethernet (10GbE RJ-45)

- Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to one AMD Ryzen™ Threadripper PRO 5000 or 3000 Series Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
AMD Ryzen Threadripper PRO 3945WX	12	24	4.0GHz	4.3GHz	6MB L2 / 64MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 3955WX	16	32	3.9GHz	4.3GHz	8MB L2 / 64MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 3975WX	32	64	3.5GHz	4.2GHz	16MB L2 / 128MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 3995WX	64	128	2.7GHz	4.2GHz	32MB L2 / 256MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 5945WX	12	24	4.1GHz	4.5GHz	6MB L2 / 64MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 5955WX	16	32	4.0GHz	4.5GHz	8MB L2 / 64MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 5965WX	24	48	3.8GHz	4.5GHz	12MB L2 / 128MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 5975WX	32	64	3.6GHz	4.5GHz	16MB L2 / 128MB L3	DDR4-3200
AMD Ryzen Threadripper PRO 5995WX	64	128	2.7GHz	4.5GHz	32MB L2 / 256MB L3	DDR4-3200

Processor Sockets

1x sWRX8

Operating System

Operating System**

- Red Hat Enterprise Linux 8.5 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 10 Pro 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Pro
- No operating system

Graphics

Discrete Graphics Support

Supports up to two NVIDIA® RTX A5500 with NVLink

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink

NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
AMD Radeon™ PRO W6400	4GB GDDR6	50W	2x DP 1.4	Single slot	None
AMD Radeon PRO W6600	8GB GDDR6	130W	4x DP 1.4	Single slot	-
AMD Radeon PRO W6800	32GB GDDR6 with ECC	250W	6x miniDP 1.4a	Dual slot	-
AMD Radeon Pro VII	16GB HBM2	250W	6x DP 1.4	Dual slot	-
AMD Radeon Pro W5500	8GB GDDR6	125W	4x DP 1.4	Single slot	-
AMD Radeon Pro W5700	8GB GDDR6	205W	5x miniDP 1.4, 1x USB-C®	Dual slot	-
AMD Radeon Pro WX 3200	4GB GDDR5	50W	4x miniDP 1.4	Single slot	-
Quadro® GV100	32GB HBM2	250W	4x DP 1.4	Dual slot	NVLink
Quadro RTX 5000	16GB GDDR6	265W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 6000	24GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 8000	48GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro P2200	5GB GDDR5	75W	4x DP 1.4	Single slot	None
Quadro P1000	4GB GDDR5	50W	4x miniDP 1.4	Single slot	None
Quadro RTX 4000	8GB GDDR6	160W	3x DP 1.4, 1x VirtualLink	Single slot	None
Quadro P620	2GB GDDR5	40W	4x miniDP 1.4	Single slot	None

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

AMD WRX80 chipset

Memory

Max Memory^[1]

Up to 512GB (8x 64GB or 4x 128GB)

Memory Type

DDR4-3200 RDIMM ECC

Memory Slots

8 DDR4 DIMM slots, 8 channels capable

Memory Protection

ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

Up to 5x 3.5" SATA HDD + 11x M.2 SSD

- 3.5" HDD up to 4TB each
- Onboard M.2 SSD up to 4TB each
- M.2 SSD by M.2 to PCIe® adapter up to 2TB

Storage Type^{***[3]}

Disk Type	Interface	RPM	Offering
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB
M.2 PCIe SSD	PCIe NVMe®, PCIe 3.0	-	256GB / 512GB / 1TB / 2TB

M.2 PCIe SSD	PCIe NVMe, PCIe 4.0	-	256GB / 512GB / 1TB / 2TB / 4TB
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Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Integrated NVMe controller	Standard	PCIe NVMe	0/1/10/5	None
Integrated SATA controller	Standard	SATA 6.0Gb/s	0/1/10/5	None

- Notes:
- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
 - [2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.
 - [3] 4TB M.2 SSD is for onboard M.2 slots only.

Removable Storage

Optical Support

Optional one 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- 15-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC4050H codec

Speakers

Single speaker

Power Supply

Power Supply

Power	Type	Efficiency	Key Features
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (33L)

Dimensions (WxDxH)^[1]

165 x 455x 446 mm (6.5 x 17.9 x 17.6 inches)

Weight^[2]

24 kg (52.91 lbs, maximum configuration)

Bays

- 2x 3.5" disk bay (standard)
- 3x 3.5" disk bay (optional):
 - 2 bays come with 3rd disk or Storage Bay Upgrade Kit
 - 1 bay via flex bay

Flex Bays

1x flex bay, supports one of the following:

- Front Access Storage Enclosure
- 5.25" Slim ODD and HDD cage

M.2 Slots

Up to 11x M.2 SSD:

- 2 via onboard slots
- 8 via Quad M.2 to PCIe adapters (only supports PCIe 3.0 SSD)
- 1 via Single M.2 to PCIe adapter (only supports PCIe 3.0 SSD)

Expansion Slots

Supports 6 PCIe slots with 4x PCIe 4.0 x16 slots plus 2x PCIe 4.0 x8 slots.

- Slot 1: PCIe 4.0 x16, full height, full length, 75W, double-width, by CPU
- Slot 2: PCIe 4.0 x8, full height, full length, 25W, by CPU
- Slot 3: PCIe 4.0 x16, full height, full length, 75W, double-width, by CPU
- Slot 4: PCIe 4.0 x16, full height, full length, 75W, by CPU
- Slot 5: PCIe 4.0 x16, full height, full length, 75W, by CPU
- Slot 6: PCIe 4.0 x8, full height, full length, 25W, by IOH

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

10 GbE Ethernet, Marvell AQtion AQN-107, 1x 10GbE RJ-45

Optional Ethernet

One additional Ethernet adapter support, up to two additional 10 GbE ports

- Gigabit Ethernet, Intel® I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Intel X550-T2, 2x RJ-45, PCIe x4
- 10 Gigabit Ethernet, Intel X710-DA2, 2x SFP+, PCIe x8
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth[®]**

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)^[1]
- Intel Wireless-AC 9260, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.1
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.

Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

- 2x USB-C 3.2 Gen 2 (support data transfer)
- 1x USB 3.2 Gen 2
- 1x USB 3.2 Gen 2 (Always On and fast charge)
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports^[2]

- 2x USB 2.0
- 4x USB 3.2 Gen 2
- 1x Ethernet (10GbE RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 2x PS/2 ports (keyboard / mouse)

Optional Rear Ports^{***}

- 1x Thunderbolt™ 3
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card, PCIe x4)
- 1x serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be

slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management

AMD PRO Manageability

Diagnostic

Diagnostic

- ThinkStation® Diagnostics
- Photo-audio transfer with Lenovo PC Diagnostics for Android™ and iOS
- Front 4-digit diagnostic
- Lenovo UEFI Bootable Diagnostics

SERVICE

Warranty^[1]

Base Warranty

3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- ENERGY STAR 8.0 (on model 30E00006US)
- EPEAT™ Silver Registered
- GREENGUARD®
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

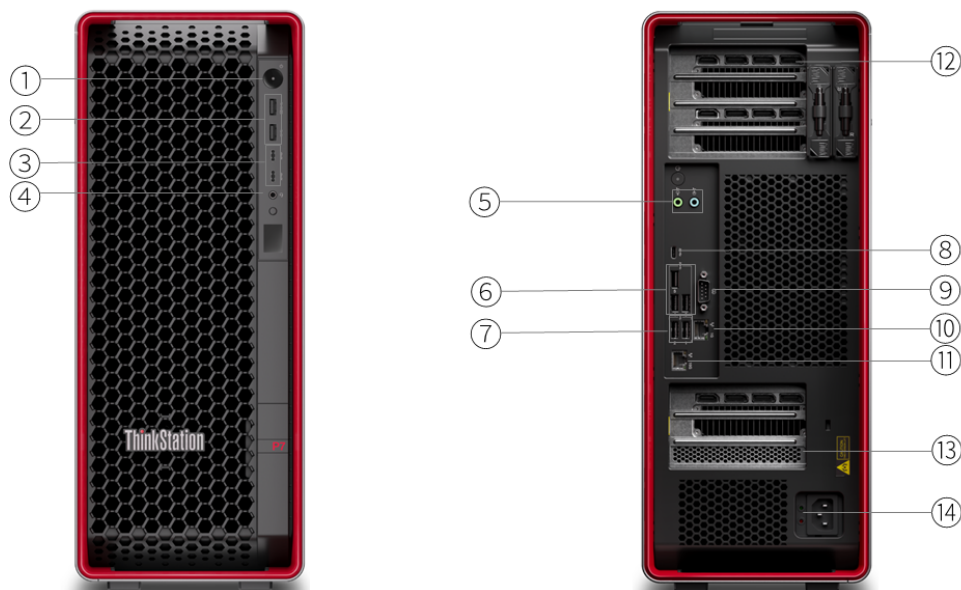
ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

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- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	8. USB-C 3.2 Gen 2x2
2. 2x USB 3.2 Gen 2 (one Always On) *	9. Serial (9-pin) *
3. 2x USB-C 3.2 Gen 2 *	10. Ethernet (GbE RJ-45)
4. Headphone (3.5mm)	11. Ethernet (10GbE RJ-45)
5. 2x Audio ports (line-out and line-in)	12. Upper PCIe slots
6. 3x USB 3.2 Gen 2	13. Lower PCIe slots
7. 2x USB 2.0	14. Power supply

- Notes:
- Items with * are only available on selected models
 - Expansion cards are optional. More ports are available through the optional expansion cards

PERFORMANCE

Processor

Processor Family

Up to one Intel® Xeon® W-3400 Series processor, supports up to 56 cores, up to 4.8GHz

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon w5-3423	12	24	2.1GHz	4.2GHz	30MB	DDR5-4400
Xeon w5-3425	12	24	3.2GHz	4.6GHz	30MB	DDR5-4800
Xeon w5-3433	16	32	2.0GHz	4.2GHz	45MB	DDR5-4400
Xeon w5-3435X	16	32	3.1GHz	4.7GHz	45MB	DDR5-4800
Xeon w7-3445	20	40	2.6GHz	4.8GHz	52.5MB	DDR5-4800
Xeon w7-3455	24	48	2.5GHz	4.8GHz	67.5MB	DDR5-4800
Xeon w7-3465X	28	56	2.5GHz	4.8GHz	75MB	DDR5-4800
Xeon w9-3475X	36	72	2.2GHz	4.8GHz	82.5MB	DDR5-4800
Xeon w9-3495X	56	112	1.9GHz	4.8GHz	105MB	DDR5-4800

Processor Sockets

1x FCLGA4677

Notes:

^[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Windows® 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support^[1]

Supports up to three NVIDIA® RTX A5500

Discrete Graphics Offering

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink

Notes:

^[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel W790 chipset

Memory

Max Memory^[1]

Up to 1TB (8x 128GB 3DS-RDIMM)

Memory Type^{**[2]}

- DDR5-4800 3DS-RDIMM ECC
- DDR5-4800 RDIMM ECC

Memory Slots

8 DDR5 DIMM slots, 8 channels capable

Memory Protection

ECC

Notes:

- [1] The max memory is based on the test results with current Lenovo® memory offerings.
- [2] ThinkStation® P7 comes with DDR5-4800 memory, and some configurations will run at DDR5-4400 due to the memory support capability of processor.

Storage

Storage Support^{[1][2]}

Up to eleven drives (3x 3.5" SATA HDD + 8x M.2 SSD) or 9 drives (9x M.2 SSD)

- 3.5" HDD up to 12TB each
- M.2 SSD up to 4TB or 2TB each (see Storage Type)

Storage Type

Disk Type	Interface	RPM	Offering	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	2TB / 6TB / 12TB	-
M.2 2280 SSD for quad M.2 to PCIe® adapter	PCIe NVMe®, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0
M.2 2280 SSD for Onboard / HDD Bay / Front access M.2	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/5	None
Integrated NVMe controller	Standard	PCIe NVMe	-	None
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None

Notes:

- [1] The storage capacity supported is based on the test results with current Lenovo storage offerings.
- [2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Card Reader

- 15-in-1 card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897-Q codec

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1400W ^[1]	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

Notes:

[1] Countries with input voltage is 100 - 111.9V, output power is limited to 1125W; input voltage is 120V, output power is limited to 1250W.

DESIGN

Mechanical

Form Factor

Tower (39L) or 4U rack, optional rack rail kit needed

Dimensions (WxDxH)^[1]

175 x 508 x 434 mm (6.9 x 20 x 17.1 inches)

Weight^[2]

24.5 kg (50.0 lbs, maximum configuration)

Bays^[3]

Three internal disk bays plus one front access M.2 bay:

- Bay 1 supports one 3.5" HDD, standard, optional support for M.2 SSD
- Bay 2 supports one 3.5" HDD, standard, optional support for M.2 SSD
- Bay 3 supports one 3.5" HDD, optional
- Front access M.2 bay supports one M.2 SSD, optional

M.2 Slots

Up to 9x M.2 SSD:

- 3 via onboard slots, 3rd M.2 slot is vertical and optional holder is needed
- 4 via Quad M.2 to PCIe adapter
- 2 via HDD bay or 1 via front access M.2 bay (choose one)

Expansion Slots

Supports 7 PCIe slots with 4x PCIe 5.0 slots and 3x PCIe 4.0 slots.

- Slot 1: PCIe 5.0 x16, full height, full length, 75W, double-width
- Slot 2: PCIe 4.0 x8, full height, full length, 25W
- Slot 3: PCIe 5.0 x16, full height, full length, 75W, double-width
- Slot 4: PCIe 4.0 x4, full height, full length, 25W
- Slot 5: PCIe 5.0 x16, full height, full length, 75W, double-width
- Slot 6: PCIe 4.0 x16, full height, full length, 75W
- Slot 7: PCIe 5.0 x4, full height, full length, 25W

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] Only one of the following can be selected per system:

- 2x 3.5" disk bay for M.2 SSD
- 1x front access M.2 bay for M.2 SSD.

CONNECTIVITY

Network

Onboard Ethernet

Two Ethernet, GbE + 10GbE, Intel Ethernet Connection I219-LM and Marvell AQtion AQC-113C, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to eight additional GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support^[1]
- No WLAN and Bluetooth

Notes:

[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

- 2x USB-C® 3.2 Gen 2 (support data transfer)
- 2x USB 3.2 Gen 2 (one Always On)

Rear Ports^[2]

- 1x USB-C 3.2 Gen 2x2 (support data transfer)
- 2x USB 2.0
- 3x USB 3.2 Gen 2
- 1x Ethernet (10GbE RJ-45)
- 1x Ethernet (GbE RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)

Optional Rear Ports

- 1x serial
- 2x PS/2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management^[1]

Intel vPro Enterprise with Intel AMT 16

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic

Diagnostic

- ThinkStation Diagnostics
- Front diagnostic panel with QR code

SERVICE

Warranty^[1]

Base Warranty^{}**

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0

- (Optional) EPEAT™ Gold Registered
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

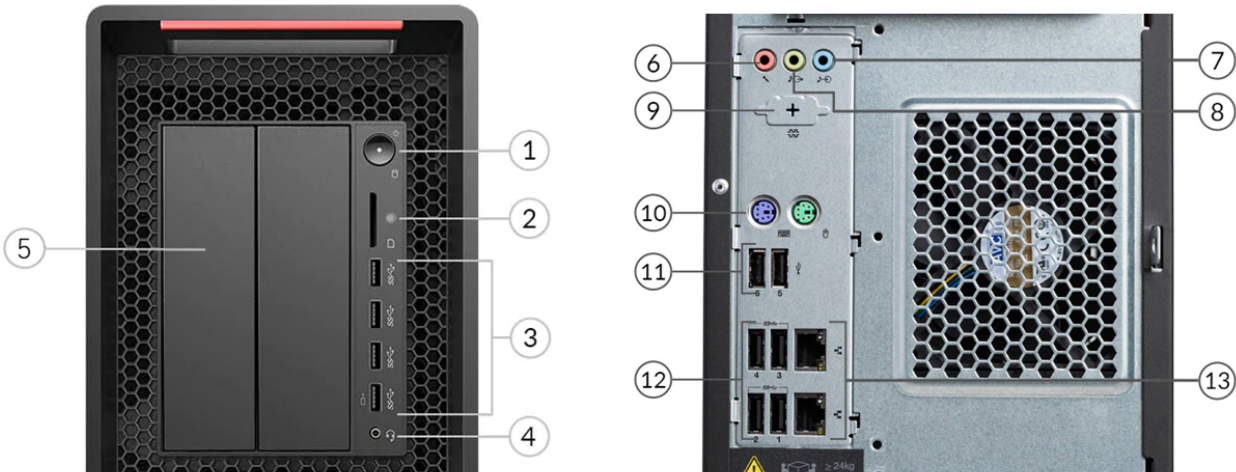
ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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OVERVIEW



1. Power button	8. Line-out (3.5mm)
2. Card reader	9. Serial *
3. 4x USB 3.2 Gen 1	10. 2x PS/2 ports (keyboard / mouse)
4. Headphone / microphone combo jack (3.5mm)	11. 2x USB 2.0
5. 2x Flex bay	12. 4x USB 3.2 Gen 1
6. Microphone (3.5mm)	13. 2x Ethernet (RJ-45)
7. Line-in (3.5mm)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to two 165W Gen 1 or Gen 2 Intel® Xeon® Scalable family processors, Bronze, Silver, Gold, or Platinum

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon W-3223	8	16	3.5GHz	4.0GHz	16.5MB	DDR4-2666
Xeon W-3225	8	16	3.7GHz	4.3GHz	16.5MB	DDR4-2666
Xeon Bronze 3104	6	6	1.7GHz	-	8.25MB	DDR4-2133
Xeon Bronze 3106	8	8	1.7GHz	-	11MB	DDR4-2133
Xeon Bronze 3204	6	6	1.9GHz	1.9GHz	8.25MB	DDR4-2133
Xeon Bronze 3206R	8	8	1.9GHz	1.9GHz	11MB	DDR4-2133
Xeon Silver 4108	8	16	1.8GHz	3.0GHz	11MB	DDR4-2400
Xeon Silver 4109T	8	16	2.0GHz	3.0GHz	11MB	DDR4-2400
Xeon Silver 4110	8	16	2.1GHz	3.0GHz	11MB	DDR4-2400
Xeon Silver 4112	4	8	2.6GHz	3.0GHz	8.25MB	DDR4-2400
Xeon Silver 4114	10	20	2.2GHz	3.0GHz	13.75MB	DDR4-2400
Xeon Silver 4114T	10	20	2.2GHz	3.0GHz	13.75MB	DDR4-2400
Xeon Silver 4116	12	24	2.1GHz	3.0GHz	16.5MB	DDR4-2400
Xeon Silver 4208	8	16	2.1GHz	3.2GHz	11MB	DDR4-2400
Xeon Silver 4209T	8	16	2.2GHz	3.2GHz	11MB	DDR4-2400
Xeon Silver 4210	10	20	2.2GHz	3.2GHz	13.75MB	DDR4-2400
Xeon Silver 4210R	10	20	2.4GHz	3.2GHz	13.75MB	DDR4-2400
Xeon Silver 4214	12	24	2.2GHz	3.2GHz	16.5MB	DDR4-2400
Xeon Silver 4214R	12	24	2.4GHz	3.5GHz	16.5MB	DDR4-2400
Xeon Silver 4215	8	16	2.5GHz	3.5GHz	11MB	DDR4-2400
Xeon Silver 4215R	8	16	3.2GHz	4.0GHz	11MB	DDR4-2400
Xeon Silver 4216	16	32	2.1GHz	3.2GHz	22MB	DDR4-2400
Xeon Gold 5115	10	20	2.4GHz	3.2GHz	13.75MB	DDR4-2400
Xeon Gold 5118	12	24	2.3GHz	3.2GHz	16.5MB	DDR4-2400
Xeon Gold 5120	14	28	2.2GHz	3.2GHz	19.25MB	DDR4-2400
Xeon Gold 5120T	14	28	2.2GHz	3.2GHz	19.25MB	DDR4-2400
Xeon Gold 5122	4	8	3.6GHz	3.7GHz	16.5MB	DDR4-2666
Xeon Gold 5215	10	20	2.5GHz	3.4GHz	13.75MB	DDR4-2666
Xeon Gold 5217	8	16	3.0GHz	3.7GHz	11MB	DDR4-2666
Xeon Gold 5218	16	32	2.3GHz	3.9GHz	22MB	DDR4-2666
Xeon Gold 5220	18	36	2.2GHz	3.9GHz	24.75MB	DDR4-2666
Xeon Gold 5222	4	8	3.8GHz	3.9GHz	16.5MB	DDR4-2933
Xeon Gold 6128	6	12	3.4GHz	3.7GHz	19.25MB	DDR4-2666
Xeon Gold 6130	16	32	2.1GHz	3.7GHz	22MB	DDR4-2666
Xeon Gold 6134	8	16	3.2GHz	3.7GHz	24.75MB	DDR4-2666
Xeon Gold 6136	12	24	3.0GHz	3.7GHz	24.75MB	DDR4-2666
Xeon Gold 6138	20	40	2.0GHz	3.7GHz	27.5MB	DDR4-2666
Xeon Gold 6142	16	32	2.6GHz	3.7GHz	22MB	DDR4-2666

Xeon Gold 6146	12	24	3.2GHz	4.2GHz	24.75MB	DDR4-2666
Xeon Gold 6148	20	40	2.4GHz	3.7GHz	27.5MB	DDR4-2666
Xeon Gold 6226	12	24	2.7GHz	3.7GHz	19.25MB	DDR4-2933
Xeon Gold 6226R	16	32	2.9GHz	3.9GHz	22MB	DDR4-2933
Xeon Gold 6230	20	40	2.1GHz	3.9GHz	27.5MB	DDR4-2933
Xeon Gold 6234	8	16	3.3GHz	4.0GHz	24.75MB	DDR4-2933
Xeon Gold 6238T	22	44	1.9GHz	3.7GHz	30.25MB	DDR4-2933
Xeon Gold 6240R	24	48	2.4GHz	4.0GHz	35.75MB	DDR4-2933
Xeon Gold 6242	16	32	2.8GHz	3.9GHz	22MB	DDR4-2933
Xeon Gold 6244	8	16	3.6GHz	4.4GHz	24.75MB	DDR4-2933
Xeon Gold 6246	12	24	3.3GHz	4.2GHz	24.75MB	DDR4-2933
Xeon Gold 6248	20	40	2.5GHz	3.9GHz	27.5MB	DDR4-2933
Xeon Platinum 8160T	24	48	2.1GHz	3.7GHz	33MB	DDR4-2666

Processor Sockets

2x FCLGA3647

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.5 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Windows® 10 Pro 64 for Workstations
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support^[1]

Supports up to two NVIDIA® Quadro® RTX 8000 with NVLink

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None
NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000	6GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
NVIDIA RTX A6000	48GB GDDR6 with ECC	300W	4x DP 1.4a	Dual slot	NVLink
Quadro GP100	16GB HBM2	235W	1x DVI-D DL, 4x DP	Dual slot	NVLink

Quadro GV100	32GB HBM2	250W	4x DP 1.4	Dual slot	NVLink
Quadro P4000	8GB GDDR5	120W	4x DP 1.4	Single slot	None
Quadro P5000	16GB GDDR5X	180W	1x DVI-D DL, 4x DP 1.4	Dual slot	SLI
Quadro P600	2GB GDDR5	45W	4x miniDP	Single slot	None
Quadro P6000	24GB GDDR5X	250W	1x DVI-D DL, 4x DP 1.4	Dual slot	SLI
Quadro RTX 5000	16GB GDDR6	265W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 6000	24GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 8000	48GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro P2200	5GB GDDR5	75W	4x DP 1.4	Single slot	None
Quadro P1000	4GB GDDR5	50W	4x miniDP 1.4	Single slot	None
Quadro RTX 4000	8GB GDDR6	160W	3x DP 1.4, 1x VirtualLink	Single slot	None
Quadro P620	2GB GDDR5	40W	4x miniDP 1.4	Single slot	None
Quadro P2000	5GB GDDR5	75W	4x DP	Single slot	None
Quadro P400	2GB GDDR5	30W	3x miniDP 1.4	Single slot	None

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel C621 chipset

Memory

Max Memory^[1]

Up to 768GB (12x 64GB RDIMM)

Memory Type**

- DDR4-2666 RDIMM ECC
- DDR4-2933 RDIMM ECC

Memory Slots

12 DDR4 DIMM slots, 12 channels capable (6 DIMM slots with 6 channels per processor)

Memory Protection

ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

- Up to 6x 3.5" SATA HDD / 10x 2.5" SATA HDD / 8x 2.5" SAS HDD / 10x 2.5" SATA SSD / 4x 2.5" PCIe® SSD + 9x M.2 PCIe SSD + 2x PCIe AIC SSD
- 3.5" HDD up to 6TB each
 - 2.5" SATA HDD up to 500GB each
 - 2.5" SAS HDD up to 600GB each
 - 2.5" SATA SSD up to 2TB each
 - M.2 SSD up to 2TB each
 - 2.5" PCIe SSD up to 1.5TB each
 - PCIe AIC SSD up to 480GB each

Storage Type***

Disk Type	Interface	RPM	Offering
2.5" PCIe SSD	PCIe NVMe®	-	1.5TB
2.5" SAS HDD	SAS 12Gb/s	10K	300GB / 600GB
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB / 500GB FIPS
2.5" SATA SSD	SATA 6Gb/s	-	256GB / 512GB / 1TB / 2TB
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB / 6TB
M.2 PCIe SSD	PCIe NVMe	-	256GB / 512GB / 1TB / 2TB
PCIe AIC SSD	PCIe NVMe	-	480GB

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
9440-8i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5	None
9460-16i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5/6	4GB DDR4, SuperCap
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None
NVMe for Intel SSD	Optional	PCIe NVMe	0/1/10/5	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Optical Support

Up to two HH or 9.0mm optical drive, DVD-ROM, DVD±RW, and Blu-ray

Card Reader

- 15-in-1 card reader
- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC662 codec

Speakers

Single speaker

Power Supply

Power Supply**

Power	Type	Efficiency	Key Features
690W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
900W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
1000W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified

DESIGN

Mechanical

Form Factor

Tower (36L)

Dimensions (WxDxH)^[1]

175 x 485 x 446 mm (6.89 x 19.1 x 17.6 inches, with feet)

Weight^[2]

25.7 kg (56.7 lbs, maximum configuration)

Bays^[3]

- 2x 3.5" disk bay (standard)
- 4x 3.5" disk bay (optional):
 - 2 bays come with 3rd disk or Storage Bay Upgrade Kit
 - 2 bays via flex bay

Flex Bays

2x flex bays, supports the following:

- 2x half-height optical drives
- 2x 5.25" 9.0mm optical drives
- 1x 5.25" 9.0mm optical drive + 2x 3.5"/2.5" SATA SSD/HDD
- 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure
- 1x flex module for the following options:

Tray 1: 9.0mm optical

Tray 2: 15-in-1 USB 3.1 Gen 1 reader, 2x Thunderbolt™, or 4-digit diagnostic display

Port 1 and 2: Front USB 3.1 Gen 1 Type-C or eSATA

M.2 Slots

Up to 9x M.2 SSD:

- 2 via onboard slots
- 4 via Quad M.2 to PCIe adapter
- 3 via Single M.2 to PCIe adapter

Expansion Slots

Supports 5 PCIe slots plus one PCI slot.

- Slot 1: PCIe 3.0 x16, full height, full length, 75W, by CPU 2
- Slot 2: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU 1
- Slot 3: PCIe 3.0 x8, full height, full length, 25W, by CPU 1
- Slot 4: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU 1
- Slot 5: PCI, full height, full length, 25W
- Slot 6: PCIe 3.0 x4, full height, half length, 25W, by PCH

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 4x 3.5" bay can also support up to 8x 2.5" SSD / HDD with 2 disks per bay. Additional 9440-8i or 9460-16i PCIe adapter and other parts are needed.

CONNECTIVITY

Network

Onboard Ethernet

Two Gigabit Ethernet, Intel Ethernet Connection I219-LM and I210-AT, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to four additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 5 Gigabit Ethernet, Marvell AQtion AQN-108, 1x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Intel X540-T2, 2x RJ-45, PCIe x8
- 10 Gigabit Ethernet, Intel X550-T2, 2x RJ-45, PCIe x4
- 10 Gigabit Ethernet, Intel X710-DA2, 2x SFP+, PCIe x8
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support
- Intel Dual-Band Wireless-AC 8265, 802.11ac Dual-Band 2x2 Wi-Fi + Bluetooth 4.2
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 1 (Always On and fast charge)
- 3x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports***

- 2x Thunderbolt 3 (with flex module, USB-C® form, one supports video-out)
- 1x USB-C 3.2 Gen 1 (support data transfer, with flex module)
- 1x eSATA (with flex module)

Rear Ports^[2]

- 2x USB 2.0
- 4x USB 3.2 Gen 1
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 2x Ethernet (RJ-45)
- 2x PS/2 ports (keyboard / mouse)

Optional Rear Ports***

- 1x Thunderbolt 3
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card)
- 1x serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management^[1]

Intel vPro with Intel AMT 11

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic**Diagnostic**

- ThinkStation® Diagnostics
- Photo-audio transfer with Lenovo PC Diagnostics for Android™ and iOS
- Front 4-digit diagnostic
- Lenovo UEFI Bootable Diagnostics
- None

SERVICE**Warranty^[1]****Base Warranty****

- 1-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL**Operating Environment****Temperature**

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- (Optional) ENERGY STAR® 8.0
- ENERGY STAR 8.0 (on model 30BA00EQUS)
- EPEAT™ Silver Registered
- GREENGUARD®
- RoHS compliant

Notes:

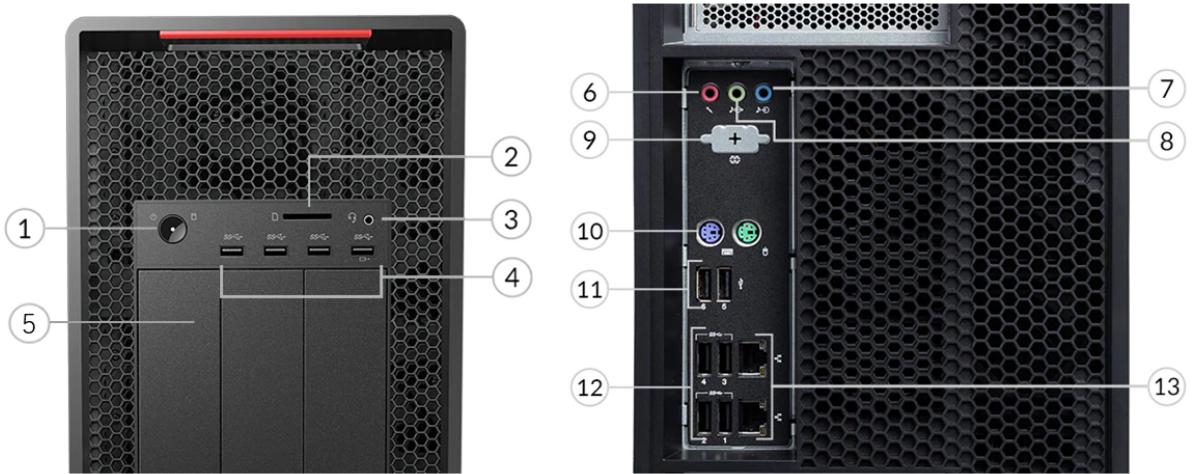
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications**ISV Certifications**Please visit www.thinkworkstations.com/isv-certifications/

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



OVERVIEW



1. Power button	8. Audio line-out (3.5mm)
2. Card reader	9. Serial *
3. Headphone / microphone combo jack (3.5mm)	10. 2x PS/2 ports (keyboard / mouse)
4. 4x USB 3.2 Gen 1	11. 2x USB 2.0
5. 3x Flex bay	12. 4x USB 3.2 Gen 1
6. Microphone (3.5mm)	13. 2x Ethernet (RJ-45)
7. Audio line-in (3.5mm)	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

Up to two 205W Gen 1 or Gen 2 Intel® Xeon® Scalable family processors, Bronze, Silver, Gold, or Platinum

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon W-3223	8	16	3.5GHz	4.0GHz	16.5MB	DDR4-2666
Xeon W-3225	8	16	3.7GHz	4.3GHz	16.5MB	DDR4-2666
Xeon W-3235	12	24	3.3GHz	4.4GHz	19.25MB	DDR4-2933
Xeon W-3245	16	32	3.2GHz	4.4GHz	22MB	DDR4-2933
Xeon W-3265	24	48	2.7GHz	4.4GHz	33MB	DDR4-2933
Xeon W-3275	28	56	2.5GHz	4.4GHz	38.5MB	DDR4-2933
Xeon Bronze 3104	6	6	1.7GHz	-	8.25MB	DDR4-2133
Xeon Bronze 3106	8	8	1.7GHz	-	11MB	DDR4-2133
Xeon Bronze 3204	6	6	1.9GHz	1.9GHz	8.25MB	DDR4-2133
Xeon Bronze 3206R	8	8	1.9GHz	1.9GHz	11MB	DDR4-2133
Xeon Silver 4108	8	16	1.8GHz	3.0GHz	11MB	DDR4-2400
Xeon Silver 4109T	8	16	2.0GHz	3.0GHz	11MB	DDR4-2400
Xeon Silver 4110	8	16	2.1GHz	3.0GHz	11MB	DDR4-2400
Xeon Silver 4112	4	8	2.6GHz	3.0GHz	8.25MB	DDR4-2400
Xeon Silver 4114	10	20	2.2GHz	3.0GHz	13.75MB	DDR4-2400
Xeon Silver 4114T	10	20	2.2GHz	3.0GHz	13.75MB	DDR4-2400
Xeon Silver 4116	12	24	2.1GHz	3.0GHz	16.5MB	DDR4-2400
Xeon Silver 4208	8	16	2.1GHz	3.2GHz	11MB	DDR4-2400
Xeon Silver 4209T	8	16	2.2GHz	3.2GHz	11MB	DDR4-2400
Xeon Silver 4210	10	20	2.2GHz	3.2GHz	13.75MB	DDR4-2400
Xeon Silver 4210R	10	20	2.4GHz	3.2GHz	13.75MB	DDR4-2400
Xeon Silver 4214	12	24	2.2GHz	3.2GHz	16.5MB	DDR4-2400
Xeon Silver 4214R	12	24	2.4GHz	3.5GHz	16.5MB	DDR4-2400
Xeon Silver 4215	8	16	2.5GHz	3.5GHz	11MB	DDR4-2400
Xeon Silver 4215R	8	16	3.2GHz	4.0GHz	11MB	DDR4-2400
Xeon Silver 4216	16	32	2.1GHz	3.2GHz	22MB	DDR4-2400
Xeon Gold 5115	10	20	2.4GHz	3.2GHz	13.75MB	DDR4-2400
Xeon Gold 5118	12	24	2.3GHz	3.2GHz	16.5MB	DDR4-2400
Xeon Gold 5120	14	28	2.2GHz	3.2GHz	19.25MB	DDR4-2400
Xeon Gold 5120T	14	28	2.2GHz	3.2GHz	19.25MB	DDR4-2400
Xeon Gold 5122	4	8	3.6GHz	3.7GHz	16.5MB	DDR4-2666
Xeon Gold 5215	10	20	2.5GHz	3.4GHz	13.75MB	DDR4-2666
Xeon Gold 5217	8	16	3.0GHz	3.7GHz	11MB	DDR4-2666
Xeon Gold 5218	16	32	2.3GHz	3.9GHz	22MB	DDR4-2666
Xeon Gold 5220	18	36	2.2GHz	3.9GHz	24.75MB	DDR4-2666
Xeon Gold 5222	4	8	3.8GHz	3.9GHz	16.5MB	DDR4-2933
Xeon Gold 6128	6	12	3.4GHz	3.7GHz	19.25MB	DDR4-2666
Xeon Gold 6130	16	32	2.1GHz	3.7GHz	22MB	DDR4-2666

Xeon Gold 6134	8	16	3.2GHz	3.7GHz	24.75MB	DDR4-2666
Xeon Gold 6136	12	24	3.0GHz	3.7GHz	24.75MB	DDR4-2666
Xeon Gold 6138	20	40	2.0GHz	3.7GHz	27.5MB	DDR4-2666
Xeon Gold 6142	16	32	2.6GHz	3.7GHz	22MB	DDR4-2666
Xeon Gold 6146	12	24	3.2GHz	4.2GHz	24.75MB	DDR4-2666
Xeon Gold 6148	20	40	2.4GHz	3.7GHz	27.5MB	DDR4-2666
Xeon Gold 6154	18	36	3.0GHz	3.7GHz	24.75MB	DDR4-2666
Xeon Gold 6226	12	24	2.7GHz	3.7GHz	19.25MB	DDR4-2933
Xeon Gold 6226R	16	32	2.9GHz	3.9GHz	22MB	DDR4-2933
Xeon Gold 6230	20	40	2.1GHz	3.9GHz	27.5MB	DDR4-2933
Xeon Gold 6234	8	16	3.3GHz	4.0GHz	24.75MB	DDR4-2933
Xeon Gold 6238T	22	44	1.9GHz	3.7GHz	30.25MB	DDR4-2933
Xeon Gold 6240R	24	48	2.4GHz	4.0GHz	35.75MB	DDR4-2933
Xeon Gold 6242	16	32	2.8GHz	3.9GHz	22MB	DDR4-2933
Xeon Gold 6244	8	16	3.6GHz	4.4GHz	24.75MB	DDR4-2933
Xeon Gold 6246	12	24	3.3GHz	4.2GHz	24.75MB	DDR4-2933
Xeon Gold 6248	20	40	2.5GHz	3.9GHz	27.5MB	DDR4-2933
Xeon Gold 6254	18	36	3.1GHz	4.0GHz	24.75MB	DDR4-2933
Xeon Gold 6258R	28	56	2.7GHz	4.0GHz	38.5MB	DDR4-2933
Xeon Platinum 8160T	24	48	2.1GHz	3.7GHz	33MB	DDR4-2666
Xeon Platinum 8180	28	56	2.5GHz	3.8GHz	38.5MB	DDR4-2666
Xeon Platinum 8280	28	56	2.7GHz	4.0GHz	38.5MB	DDR4-2933

Processor Sockets

2x FCLGA3647

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 8.5 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Windows® 10 Pro 64 for Workstations
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support

Supports up to two NVIDIA® Quadro® RTX 8000 with NVLink

Discrete Graphics Offering***

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400	2GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T600	4GB GDDR6	40W	4x miniDP 1.4	Single slot	None

NVIDIA T1000	4GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None
NVIDIA RTX A2000	6GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5000	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink
NVIDIA RTX A6000	48GB GDDR6 with ECC	300W	4x DP 1.4a	Dual slot	NVLink
Quadro GP100	16GB HBM2	235W	1x DVI-D DL, 4x DP	Dual slot	NVLink
Quadro GV100	32GB HBM2	250W	4x DP 1.4	Dual slot	NVLink
Quadro P4000	8GB GDDR5	120W	4x DP 1.4	Single slot	None
Quadro P5000	16GB GDDR5X	180W	1x DVI-D DL, 4x DP 1.4	Dual slot	SLI
Quadro P600	2GB GDDR5	45W	4x miniDP	Single slot	None
Quadro P6000	24GB GDDR5X	250W	1x DVI-D DL, 4x DP 1.4	Dual slot	SLI
Quadro RTX 5000	16GB GDDR6	265W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 6000	24GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro RTX 8000	48GB GDDR6	295W	4x DP 1.4, 1x VirtualLink	Dual slot	NVLink
Quadro P2200	5GB GDDR5	75W	4x DP 1.4	Single slot	None
Quadro P1000	4GB GDDR5	50W	4x miniDP 1.4	Single slot	None
Quadro RTX 4000	8GB GDDR6	160W	3x DP 1.4, 1x VirtualLink	Single slot	None
Quadro P620	2GB GDDR5	40W	4x miniDP 1.4	Single slot	None
Quadro P2000	5GB GDDR5	75W	4x DP	Single slot	None
Quadro P400	2GB GDDR5	30W	3x miniDP 1.4	Single slot	None

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel C621 chipset

Memory

Max Memory^[1]

Up to 1TB (16x 64GB RDIMM / 16x 64GB LRDIMM and dual processor)

Memory Type**

- DDR4-2666 LRDIMM ECC
- DDR4-2666 RDIMM ECC
- DDR4-2933 RDIMM ECC

Memory Slots

16 DDR4 DIMM slots, 12 channels capable (8 DIMM slots with 6 channels per processor)

Memory Protection

ECC

Notes:

^[1] The max memory is based on the test results with current Lenovo® memory offerings.

Storage

Storage Support^{[1][2]}

- Up to 6x 3.5" SATA HDD / 10x 2.5" SATA HDD / 8x 2.5" SAS HDD / 10x 2.5" SATA SSD / 4x 2.5" PCIe® SSD + 9x M.2 PCIe SSD + 2x PCIe AIC SSD
- 3.5" HDD up to 6TB each
 - 2.5" SATA HDD up to 500GB each
 - 2.5" SAS HDD up to 600GB each
 - 2.5" SATA SSD up to 2TB each
 - M.2 SSD up to 2TB each
 - 2.5" PCIe SSD up to 1.5TB each
 - PCIe AIC SSD up to 480GB each

Storage Type***

Disk Type	Interface	RPM	Offering
2.5" PCIe SSD	PCIe NVMe®	-	1.5TB
2.5" SAS HDD	SAS 12Gb/s	10K	300GB / 600GB
2.5" SATA HDD	SATA 6Gb/s	7.2K	500GB / 500GB FIPS
2.5" SATA SSD	SATA 6Gb/s	-	256GB / 512GB / 1TB / 2TB
3.5" SATA HDD	SATA 6Gb/s	7.2K	1TB / 2TB / 4TB / 6TB
M.2 PCIe SSD	PCIe NVMe	-	256GB / 512GB / 1TB / 2TB
PCIe AIC SSD	PCIe NVMe	-	480GB

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
9440-8i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5	None
9460-16i PCIe	Optional	SAS 12.0Gb/s, SATA 6.0Gb/s	0/1/10/5/6	4GB DDR4, SuperCap
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None
NVMe for Intel SSD	Optional	PCIe NVMe	0/1/10/5	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Optical Support

Up to three HH or two 9.0mm optical drives, DVD-ROM, DVD±RW, or Blu-ray

Card Reader

- 15-in-1 card reader
- SD card reader
- No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC662 codec

Speakers

Single speaker

Power Supply

Power Supply^[1]

Power	Type	Efficiency	Key Features
-------	------	------------	--------------

1400W	Fixed	92%	Autosensing, 80 PLUS Platinum qualified
-------	-------	-----	---

Notes:

[1] Countries with input voltage under 115V, output power limited to 1125 watts.

DESIGN

Mechanical

Form Factor

Tower (55L)

Dimensions (WxDxH)^[1]

200 x 620 x 446 mm (7.87 x 24.4 x 17.56 inches, with feet)

Weight^[2]

37 kg (81.6 lbs, maximum configuration)

Bays^[3]

- 2x 3.5" disk bay (standard)
- 4x 3.5" disk bay (optional):
2 bays come with 3rd disk or Storage Bay Upgrade Kit
2 bays via flex bay

Flex Bays

3x flex bay, supports the following:

- 3x half-height optical drives
- 2x 5.25" 9.0mm optical drives
- 1x 5.25" 9.0mm optical drive + 1x 3.5"/2.5" SATA SSD/HDD
- 1x 3.5"/2.5" SATA SSD/HDD with Front Access Storage Enclosure
- 1x flex module for the following options:

Tray 1: 9.0mm optical

Tray 2: 15-in-1 USB 3.2 Gen 1 reader or 2x Thunderbolt™

Port 1 and 2: Front USB 3.2 Gen 1 Type-C or eSATA

M.2 Slots

Up to 9x M.2 SSD:

- 2 via onboard slots
- 4 via Quad M.2 to PCIe adapter
- 3 via Single M.2 to PCIe adapter

Expansion Slots

Supports up to 8 PCIe slots with 5 PCIe 3.0 x 16 slots and 3 PCIe 3.0 x4 slots, slots 6-8 require 2nd CPU installed.

- Slot 1: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU 1
- Slot 2: PCIe 3.0 x4, full height, full length, 25W, by CPU 1
- Slot 3: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU 1
- Slot 4: PCIe 3.0 x4, full height, full length, 25W, by CPU 1
- Slot 5: PCIe 3.0 x4, full height, half length, 25W, by PCH
- Slot 6: PCIe 3.0 x16, full height, half length, 75W, by CPU 2
- Slot 7: PCIe 3.0 x16, full height, full length, 75W, double-width, by CPU 2
- Slot 8: PCIe 3.0 x16, full height, full length, 75W, by CPU 2

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

[3] 4x 3.5" bay can also support up to 8x 2.5" SSD / HDD with 2 disks per bay. Additional 9440-8i or 9460-16i PCIe adapter and other parts are needed.

CONNECTIVITY

Network

Onboard Ethernet

Two Gigabit Ethernet, Intel Ethernet Connection I219-LM and I210-AT, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to four additional 10 GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- 5 Gigabit Ethernet, Marvell AQtion AQN-108, 1x RJ-45, PCIe x1
- 10 Gigabit Ethernet, Intel X540-T2, 2x RJ-45, PCIe x8
- 10 Gigabit Ethernet, Intel X550-T2, 2x RJ-45, PCIe x4
- 10 Gigabit Ethernet, Intel X710-DA2, 2x SFP+, PCIe x8
- 10 Gigabit Ethernet, Marvell AQtion AQN-107, 1x RJ-45, PCIe x4

WLAN + Bluetooth®

- Intel Dual-Band Wireless-AC 8265, 802.11ac Dual-Band 2x2 Wi-Fi® + Bluetooth 4.2
- No WLAN and Bluetooth

Ports^[1]

Front Ports

- 1x USB 3.2 Gen 1 (Always On and fast charge)
- 3x USB 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports***

- 2x Thunderbolt 3 (with flex module, USB-C® form, one supports video-out)
- 1x USB-C 3.2 Gen 1 (support data transfer, with flex module)
- 1x eSATA (with flex module)

Rear Ports^[2]

- 2x USB 2.0
- 4x USB 3.2 Gen 1
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x microphone (3.5mm)
- 2x Ethernet (RJ-45)
- 2x PS/2 ports (keyboard / mouse)

Optional Rear Ports***

- 1x Thunderbolt 3
- 2x USB-C 3.2 Gen 2 (support data transfer, via 2-port USB-C expansion card)
- 1x serial

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key

- (Optional) Access panel lock kit with unique key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password

MANAGEABILITY

System Management

System Management^[1]

Intel vPro® with Intel AMT 11

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic

Diagnostic

- ThinkStation® Diagnostics
- Photo-audio transfer with Lenovo PC Diagnostics for Android™ and iOS
- Front 4-digit diagnostic
- Lenovo UEFI Bootable Diagnostics

SERVICE

Warranty^[1]

Base Warranty

- 1-year limited onsite service
- 3-year limited onsite service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%
- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- ENERGY STAR 8.0 (on model 30BC003WUS)

- EPEAT™ Silver Registered
- GREENGUARD®
- RoHS compliant

Notes:

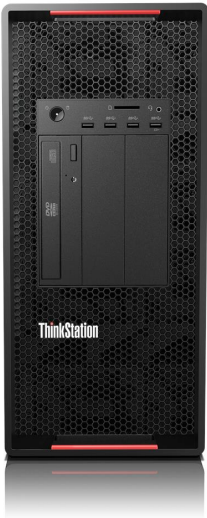
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

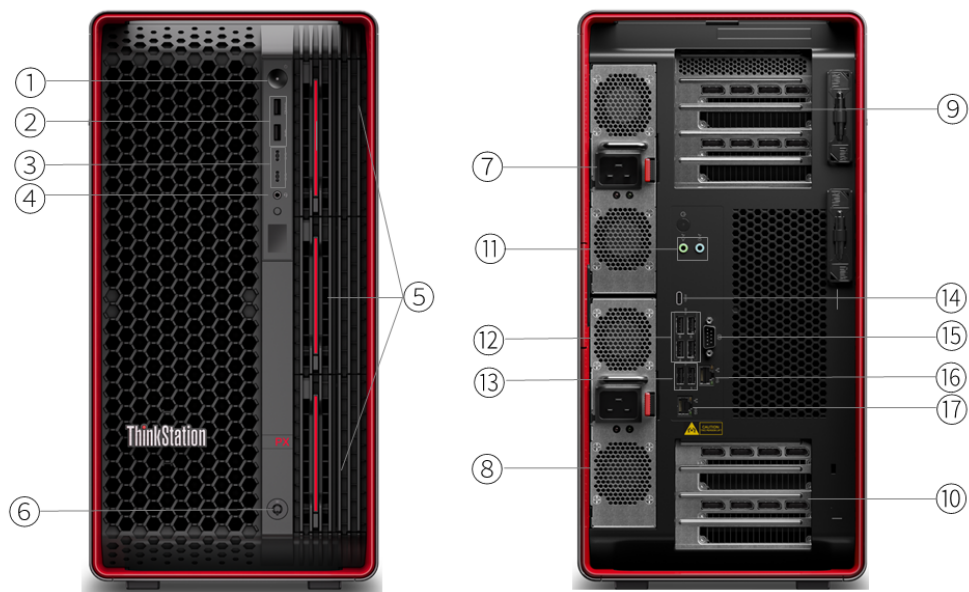
ISV Certifications

Please visit www.thinkworkstations.com/isv-certifications/

- Feature with ** means that only one offering listed under the feature is configured on selected models.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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OVERVIEW



1. Power button	10. PCIe slots 6-9 (top to bottom, by CPU 1)
2. 2x USB 3.2 Gen 2 (one Always On) *	11. 2x Audio ports (line-out and line-in)
3. 2x USB-C 3.2 Gen 2 *	12. 4x USB 3.2 Gen 1
4. Headphone (3.5mm)	13. 2x USB 2.0
5. Front storage bays (HDD or M.2 SSD) *	14. USB-C 3.2 Gen 2x2
6. Lock for front storage bays *	15. Serial (9-pin) *
7. Power supply 2 *	16. Ethernet (GbE RJ-45)
8. Power supply 1 or rear storage bay *	17. Ethernet (10GbE RJ-45)
9. PCIe slots 1-5 (top to bottom, by CPU 2) *	

- Notes:
- Items with * are only available on selected models
 - Expansion cards are optional. More ports are available through the optional expansion cards

PERFORMANCE

Processor

Processor Family

Up to two 4th Gen Intel® Xeon® Scalable family processors, Silver, Gold, or Platinum. Supports up to 120 cores (60 cores per processor), up to 4.1GHz

Processor**[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support
Xeon Silver 4410T	10	20	2.7GHz	4.0GHz	26.25MB	DDR5-4000 1DPC and 2DPC
Xeon Silver 4410Y	12	24	2.0GHz	3.9GHz	30MB	DDR5-4000 1DPC and 2DPC
Xeon Silver 4416+	20	40	2.0GHz	3.9GHz	37.5MB	DDR5-4000 1DPC and 2DPC
Xeon Gold 5416S	16	32	2.0GHz	4.0GHz	30MB	DDR5-4400 1DPC and 2DPC
Xeon Gold 5418Y	24	48	2.0GHz	3.8GHz	45MB	DDR5-4400 1DPC and 2DPC
Xeon Gold 5420+	28	56	2.0GHz	4.1GHz	52.5MB	DDR5-4400 1DPC and 2DPC
Xeon Gold 6430	32	64	2.1GHz	3.4GHz	60MB	DDR5-4400 1DPC and 2DPC
Xeon Gold 6438Y+	32	64	2.0GHz	4.0GHz	60MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Gold 6442Y	24	48	2.6GHz	4.0GHz	60MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Gold 5415+	8	16	2.9GHz	4.1GHz	22.5MB	DDR5-4400 1DPC and 2DPC
Xeon Gold 6416H	18	36	2.2GHz	4.2GHz	45MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Gold 6418H	24	48	2.1GHz	4.0GHz	60MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Platinum 8452Y	36	72	2.0GHz	3.2GHz	67.5MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Platinum 8460Y+	40	80	2.0GHz	3.7GHz	105MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Platinum 8468	48	96	2.1GHz	3.8GHz	105MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Platinum 8470	52	104	2.0GHz	3.8GHz	105MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Platinum 8480+	56	112	2.0GHz	3.8GHz	105MB	DDR5-4800 1DPC, DDR5-4400 2DPC
Xeon Platinum 8490H	60	120	1.9GHz	3.5GHz	112.5MB	DDR5-4800 1DPC, DDR5-4400 2DPC

Processor Sockets

2x FCLGA4677

Notes:

[1] Intel Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see <http://www.intel.com/technology/turboboost/> for more information.

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))
- Windows® 11 DG Windows 10 Pro 64 for Workstations
- Windows 11 Pro for Workstations
- No operating system

Graphics

Discrete Graphics Support[1]

Supports up to four NVIDIA® RTX A5500 with NVLink

Discrete Graphics Offering

Graphics	Memory	Power	Connector	Form Factor	SLI / NVLink
NVIDIA T400 4GB	4GB GDDR6	40W	3x miniDP 1.4	Single slot	None
NVIDIA T1000 8GB	8GB GDDR6	50W	4x miniDP 1.4	Single slot	None

NVIDIA RTX A2000 12GB	12GB GDDR6	70W	4x miniDP 1.4a	Dual slot	None
NVIDIA RTX A4000	16GB GDDR6 with ECC	140W	4x DP 1.4a	Single slot	None
NVIDIA RTX A4500	20GB GDDR6 with ECC	200W	4x DP 1.4	Dual slot	NVLink
NVIDIA RTX A5500	24GB GDDR6 with ECC	230W	4x DP 1.4a	Dual slot	NVLink

Notes:

[1] Discrete graphics support may vary by configurations such as processor selection or power supply wattage.

Monitor Support

Monitor Support

Supports multiple displays via discrete graphics, the number of maximum monitors supported depends on the graphic card in use

Chipset

Chipset

Intel C741 chipset

Memory

Max Memory^[1]

Up to 2TB (16x 128GB 3DS-RDIMMs and dual processor)

Memory Type^{**[2]}

- DDR5-4800 3DS-RDIMM ECC
- DDR5-4800 RDIMM ECC

Memory Slots

16 DDR5 DIMM slots, 16 channels capable (8 DIMM slots with 8 channels per processor)

Memory Protection

ECC

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] System comes with DDR5-4800 memory and some configurations will run at DDR5-4400 or DDR5-4000 due to platform limitations.

Storage

Storage Support^{[1][2]}

Up to seven drives (4x 3.5" SATA HDD + 3x M.2 SSD) or 9 drives (2x 3.5" SATA HDD + 7x M.2 SSD)

- 3.5" HDD supports hot-swap
- 3.5" HDD up to 12TB each
- M.2 SSD up to 4TB each

Storage Type^{***}

Disk Type	Interface	RPM	Offering	Security
3.5" SATA HDD	SATA 6Gb/s	7.2K	2TB / 6TB / 12TB	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB / 4TB	Opal 2.0

Storage Controllers

Storage Controller	Type	Interface	RAID	Cache
Onboard Intel RSTe SATA RAID	Standard	SATA 6.0Gb/s	0/1/10/5	None
Integrated NVMe controller	Standard	PCIe NVMe	-	None
NVMe Basic	Optional	PCIe NVMe	0/1/10	None
NVMe Premium	Optional	PCIe NVMe	0/1/10/5	None

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo storage offerings.

[2] For certain post-manufacturing storage upgrades, additional upgrade kits may be required.

Removable Storage

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC897-Q codec

Speakers

Single speaker, 1.5W x1

Power Supply

Power Supply^[1]

Power	Type	Efficiency	Key Features
1850W	Hot-swap	92%	Up to two power supplies, autosensing, 80 PLUS Platinum qualified, team or redundant mode support with two power supplies, up to 2350W configuration under team mode

Notes:

[1] Countries with input voltage under 111V, output power limited to 1500 watts.

DESIGN

Mechanical

Form Factor

Tower (54L) or 5U rack, optional rack rail kit needed

Dimensions (WxDxH)^[1]

220 x 575 x 440.4mm (8.7 x 22.6 x 17.3 inches, with feet)

Weight^[2]

35.6 kg (78.5 lbs, maximum configuration)

Bays

Three front disk bays and one rear disk bay:

- Front bay 1 supports one 3.5" hot-swap HDD, standard
- Front bay 2 supports one 3.5" hot-swap HDD, standard; or two M.2 SSD via optional front access M.2 bay
- Front bay 3 supports one 3.5" hot-swap HDD, standard; or two M.2 SSD via optional front access M.2 bay
- Rear bay supports one 3.5" hot-swap HDD, optional, occupies 1st PSU cage

M.2 Slots

Up to 7x M.2 SSD:

- 3 via onboard slots
- 4 via front access M.2 bay

Expansion Slots

Supports up to 9 PCIe slots with 4 PCIe 5.0 slots and 5 PCIe 4.0 slots, slots 1-5 require 2nd CPU installed.

- Slot 1: PCIe 4.0 x16, full height, full length, 75W, by CPU 2
- Slot 2: PCIe 4.0 x16, full height, full length, 75W, by CPU 2
- Slot 3: PCIe 5.0 x16, full height, full length, 75W, by CPU 2
- Slot 4: PCIe 5.0 x16, full height, full length, 75W, by CPU 2
- Slot 5: PCIe 4.0 x8, full height, full length, 25W, by CPU 2
- Slot 6: PCIe 5.0 x16, full height, full length, 75W, by CPU 1
- Slot 7: PCIe 4.0 x16, full height, full length, 75W, by CPU 1
- Slot 8: PCIe 5.0 x16, full height, full length, 75W, by CPU 1
- Slot 9: PCIe 4.0 x16, full height, full length, 75W, by CPU 1

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of

component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Onboard Ethernet

Two Ethernet, GbE + 10GbE, Intel Ethernet Connection I219-LM and Marvell AQtion AQC-113C, 2x RJ-45, supports Wake-on-LAN

Optional Ethernet

Two additional Ethernet adapters support, up to eight additional GbE ports

- Gigabit Ethernet, Intel I210-T1, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel I350-T2, 2x RJ-45, PCIe x4
- Gigabit Ethernet, Intel I350-T4, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5719, 4x RJ-45, PCIe x4
- Gigabit Ethernet, Broadcom BCM5720, 2x RJ-45, PCIe x1
- Gigabit Ethernet, Realtek RTL8168H, 1x RJ-45, PCIe x1

WLAN + Bluetooth®

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready), Intel vPro® technology support^[1]
- No WLAN and Bluetooth

Notes:

^[1] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations. Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports^[1]

Front Ports

1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

- 2x USB-C® 3.2 Gen 2 (support data transfer)
- 2x USB 3.2 Gen 2 (one Always On)

Rear Ports^[2]

- 1x USB-C 3.2 Gen 2x2 (support data transfer)
- 2x USB 2.0
- 4x USB 3.2 Gen 1
- 1x Ethernet (10GbE RJ-45)
- 1x Ethernet (GbE RJ-45)
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)

Optional Rear Ports

- 1x serial
- 2x PS/2

Notes:

^[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

^[2] For video ports on discrete graphics, please see graphics section.

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Access panel lock kit with common key
- (Optional) Front storage bay lock with common key
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Power-on password
- UEFI Secure Boot
- Self-healing BIOS

MANAGEABILITY

System Management

System Management^[1]

Intel vPro Enterprise with Intel AMT 16

Notes:

[1] Intel vPro offers a superset of DASH's defined capabilities.

Diagnostic

Diagnostic

- ThinkStation® Diagnostics
- Front Diagnostic Panel with QR code

SERVICE

Warranty^[1]

Base Warranty^{**}

- 1-year limited onsite service
- 2-year limited onsite service
- 3-year limited onsite service
- No base warranty

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to <https://smartfind.lenovo.com/>. To learn more details of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

ENVIRONMENTAL

Operating Environment

Temperature

- Operating: 10°C (50°F) to 35°C (95°F)
- Storage: -40°C (-40°F) to 60°C (140°F)

Altitude

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

Humidity

- Operating: 20% to 80%

- Storage: 10% to 90%

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

ISV Certifications

ISV Certifications

Please visit [ISV certifications for Lenovo Workstations](#)

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Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.

Lenovo Services:

Carry-in or Mail-in Service: Parts and labor repair coverage where the customer is responsible for shipping (including packaging) or delivery to authorized warranty provider or repair center.

Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit <http://psref.lenovo.com/> for the latest version of Product Specifications Reference.

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Lenovo 1009 Think Place Morrisville, NC 27560 U.S.A.



Product Specifications Reference

ThinkVision Monitors



Version 620

November 1, 2023

Lenovo

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Summary of Changes

This section describes the technical changes made in this edition.

This edition might also include minor corrections and editorial changes which are not identified.

November 1, 2023 - Version 620

Additions in this update

- ▶ New product(s)

ThinkVision E22-30

ThinkVision E24-30

ThinkVision E24q-30

- ▶ Spec updated

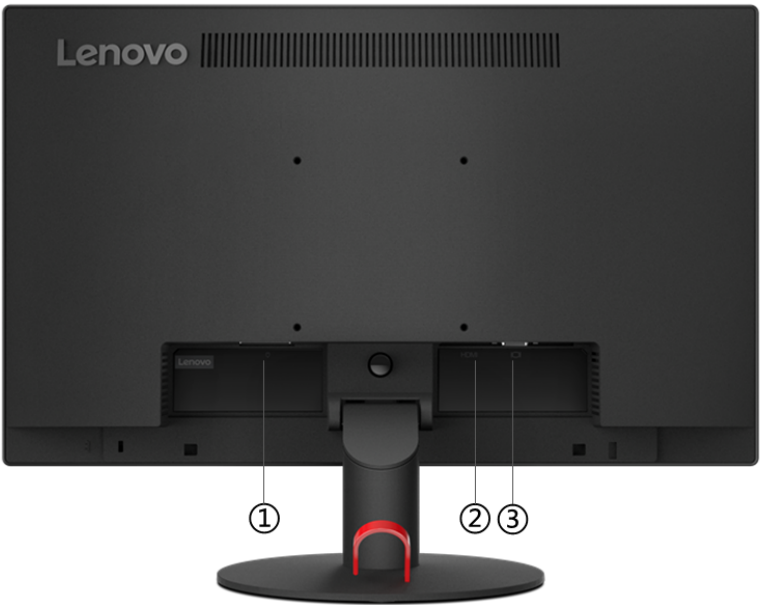
None

Withdrawals in this update

- ▶ Withdrawn product(s)

None

OVERVIEW



1. Power connector	3. VGA
2. HDMI 1.4	

PERFORMANCE

Panel

Panel

Twisted Nematic (TN)

Backlight

WLED

Display Size

19.5 inches

Max View Area

WxH: 432.0 x 239.8 mm

Resolution

1600 x 900

Aspect Ratio

16:9

Pixel Pitch

0.270 x 0.266 mm

Dot / Pixel Per Inch

94 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 2 ms
- Normal Mode: 5 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 12W / 13W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Internal Power Supply

Voltage Required

AC 100 to 240 V (47-63Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

- ThinkCentre M Series Nano
For supporting Nano devices, additional Nano VESA mount (PN: 4XF0V81630) is needed (sold separately).
- ThinkCentre M Series Tiny Support
By Tiny VESA Mount II (PN: 4XFON03161)

Bezel Width

- Side: 15.8 mm
- Top / Bottom: 17.4mm / 25.1mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	464.8 x 204.8 x 352.6 mm (18.30 x 8.06 x 13.88 inches)
Highest Position	464.8 x 204.8 x 352.6 mm (18.30 x 8.06 x 13.88 inches)
Head Only	464.8 x 48.3 x 283.5 mm (18.30 x 1.90 x 11.16 inches)

Packaging Dimensions (WxDxH)

341 x 531 x 139 mm (13.43 x 20.91 x 5.47 inches)

Weight^[2]

Models	Weight
Monitor Head Only	2.2 kg (4.8 lbs)
Monitor With Stand	2.5 kg (5.5 lbs)

Packaging Weight

3.7 kg (8.2 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x VGA

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;
USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

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OVERVIEW



1. Power connector	3. VGA
2. HDMI 1.4	

PERFORMANCE

Panel

Panel

Twisted Nematic (TN)

Backlight

WLED

Display Size

19.5 inches

Max View Area

WxH: 432.96 x 238.05 mm

Resolution

1600 x 900

Aspect Ratio

16:9

Pixel Pitch

0.271 x 0.264 mm

Dot / Pixel Per Inch

94 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 170°, Vertical: 160°

Response Time

- 2 ms (On)
- 5 ms (Off)

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

- Hard Coating (3H)
- Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 12W / 15W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 9.84W
- Energy Star TEC: 31.82kWh
- Internal Power Supply

Voltage Required
AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

- ThinkCentre M Series Nano
For supporting Nano devices, additional Nano VESA mount (PN: 4XF0V81630) is needed (sold separately).
- ThinkCentre M Series Tiny Support
By Tiny VESA Mount II (PN: 4XFON03161)

Bezel Width

- Side: 15.3mm
- Top / Bottom: 18.2mm / 26mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	464.8 x 180.4 x 352.6 mm (18.30 x 7.1 x 13.88 inches)
Highest Position	464.8 x 180.4 x 352.6 mm (18.30 x 7.1 x 13.88 inches)
Head Only	464.8 x 48.3 x 283.5 mm (18.30 x 1.90 x 11.16 inches)

Packaging Dimensions (WxDxH)

560 x 125 x 350 mm (22.05 x 4.92 x 13.78 inches)

Weight^[2]

Models	Weight
Monitor Head Only	2.2 kg (4.8 lbs)
Monitor With Stand	2.5 kg (5.5 lbs)

Packaging Weight

3.7 kg (8.2 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x VGA

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

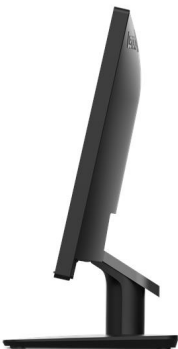
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

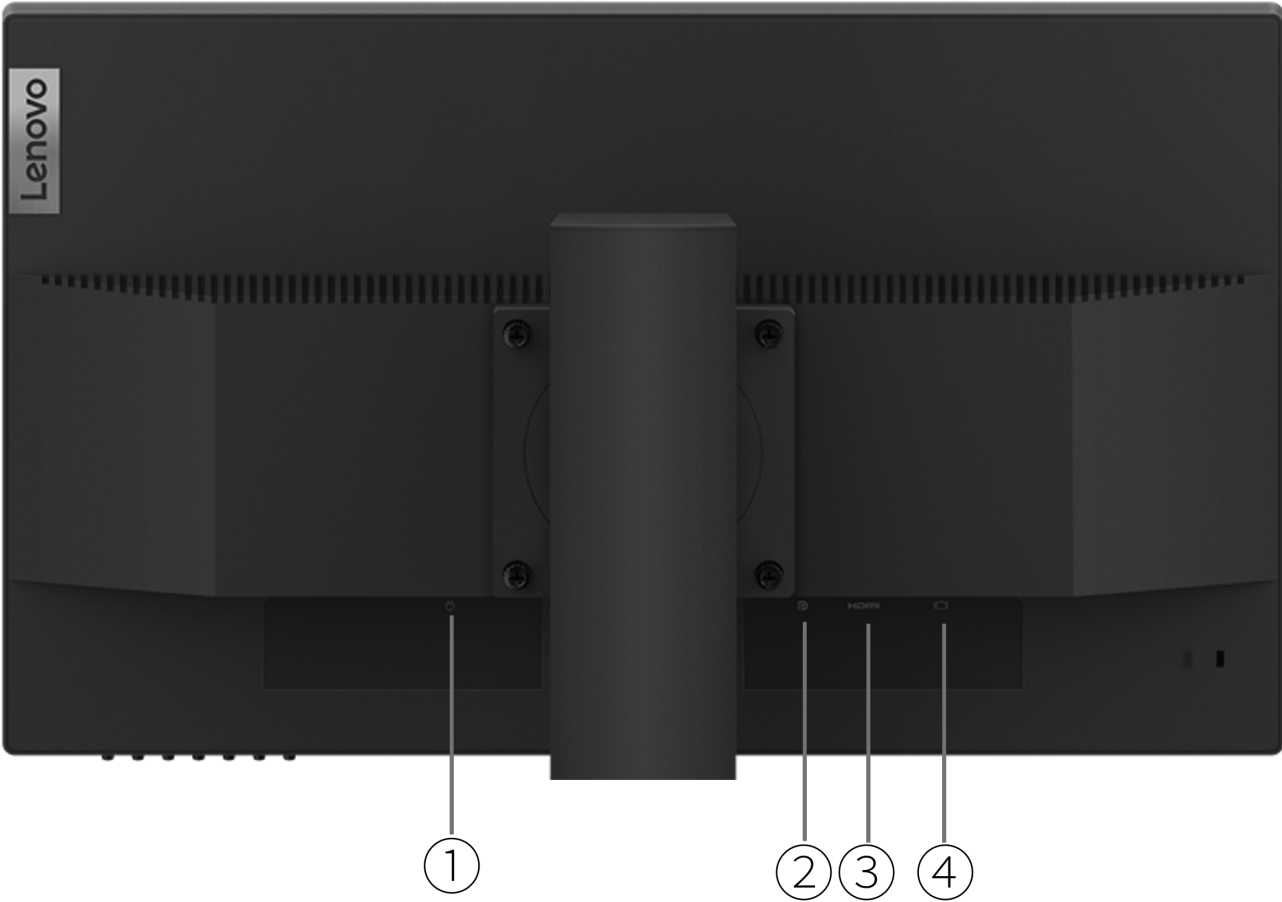
Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Power connector	3. HDMI
2. DisplayPort	4. VGA

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.06 x 267.79 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.248 x 0.248 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Integrated Speakers, 2x 1.5W

Power Supply

Power Consumption

- Typical / Max: 13W / 17W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.5W
- Energy Star Power On: 13W

- Energy Star TEC: 41kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support^[1]

ThinkCentre M Series Tiny

For supporting Tiny devices, additional Sandwich Mounting Kit (PN: 4XHON04098) are needed (sold separately).

Bezel Width

- Side: 15 mm
- Top / Bottom: 17.6mm / 20.8mm

Case Color

Raven black

Dimensions (WxDxH)^[2]

Models	Dimensions
Lowest Position	508.0 x 178.6 x 301.6 mm (20.00 x 7.03 x 11.87 inches)
Highest Position	508.0 x 178.6 x 443.4 mm (20.00 x 7.03 x 17.46 inches)
Unpacked Head Only	508.0 x 43.4 x 307.9 mm (20.00 x 1.71 x 12.12 inches)

Packaging Dimensions (WxDxH)

610 x 131 x 405 mm (24.02 x 5.16 x 15.94 inches)

Weight^[3]

Models	Weight
Monitor Head Only	2.20 kg (4.85 lbs)
Monitor With Stand	3.90 kg (8.60 lbs)

Packaging Weight

5.40 kg (11.9 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] Tiny support model (62BA) only.

[2] The system dimensions may vary depending on configurations.

[3] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2

- 1x VGA

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

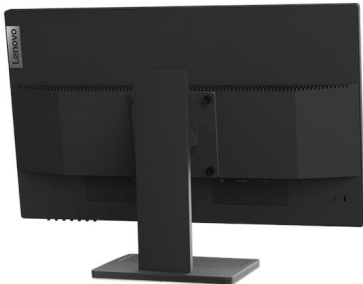
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free

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OVERVIEW



1. HDMI 1.4	3. VGA
2. DisplayPort 1.2	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.1 x 267.8 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.248 x 0.248 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

75Hz

Color Gamut

Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Speakers

Integrated Speakers, 2x 2W

Power Supply

Power Consumption

- Typical / Max: 11W / 27W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 9.2W
- Energy Star TEC: 29.1kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Natural Low Blue Light

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 1.8mm
- Top / Bottom: 1.8mm / 18.3mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	488.9 x 178.6 x 315.3 mm (19.25 x 7.03 x 12.41 inches)
Highest Position	488.9 x 178.6 x 470.3 mm (19.25 x 7.03 x 18.52 inches)
Head Only	488.9 x 46 x 295.1 mm (19.25 x 1.81 x 11.62 inches)

Packaging Dimensions (WxDxH)

570 x 131 x 358 mm (22.44 x 5.16 x 14.09 inches)

Weight^[2]

Models	Weight
Monitor Head Only	2.7 kg (6.0 lbs)
Monitor With Stand	4.3 kg (9.4 lbs)

Packaging Weight

6.1 kg (13.4 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x Quick Setup Guide

- 4x Screws

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™ (3 mm x 7 mm)

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (C-class)
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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DISPLAY

Tamanho do Painel

21,5 polegadas

Dimensão da Tela (L x A)

476,06 x 267,79 mm

Tipo de Painel

3-side NearEdgeless, VA

Luz de Fundo

WLED

Proporção da Tela

16:9

Resolução

1920 x 1080 mm

Distância entre pixels (A x V)

0.2480 x 0.2480 mm

Ponto/Pixel por polegada (DPI/PPI)

102

Ângulo de Visão (H x V)

178° / 178°

Tempo de Resposta (cinza a cinza)

4 ms (modo extremo)

6 ms (modo normal)

Taxa de Contraste (típica)

3000:1

Taxa de Contraste Dinâmico (típica)

3M:1

Cor Gamut NTSC (CIE 1931)

72% NTSC

Suporte de Cores (típico)

16.7M

Taxa de Atualização

60 Hz

Brilho (típico)

250 cd/m²

CONECTIVIDADE

Sinais de Entrada de Vídeo

1 x VGA

1 x HDMI 1.4

Saída de Áudio

Sim (3.5 mm)

MULTI-MEDIA

Suporte Opcional à Barra de Som

Sim

CARACTERÍSTICAS ESPECIAIS

Antirreflexo

Sim

Suporte ao Cliente Tiny

Sim (pelo suporte VESA PN: 4XFON03161)

Tecnologia Sync

FreeSync™

CONSUMO DE ENERGIA

Consumo de energia (Tipo/Máx.)

18W / 22W

MECÂNICO

Ângulo de Inclinação (frente/trás)

-5° / 22°

Montagem VESA

Sim (100 x 100 mm)

Trava Kensington™

Sim

Gerenciamento de Cabos

Sim

Cor da Moldura

Raven Black

Largura da Moldura (lateral)

2.0 mm

Largura do Painel (superior/inferior)

2.0 / 21.2 mm

O QUE VEM NA CAIXA?

Monitor com Suporte

1 x Cabo HDMI

1 x Cabo de Energia

Guia de Configuração Rápida

CERTIFICAÇÕES

Classificação ENERGY STAR®

7.1

CCC

Sim

TCO

TCO 7.0/ TCO Nível 2.0

EPEAT™

Prata

ULE

Ouro

RoHS

Sim

Certificação Windows

Windows 7, Windows 10

Padrão de Eficiência Energética da China

Nível 2

Temperatura Operacional de Acordo com o Ambiente

0°C to 40°C

Baixa Luz Azul

Sim

DIMENSÕES THINKVISION®

S22e-18 (LTPS)

Ângulo de inclinação (frente/trás):

-5° ~ +22°

Tamanho embalado (D x A x L):

655 x 184 x 358 mm

Ajuste de altura:

Sim, até 130 mm

Tamanho desembalado com suporte posição mais baixa (D x A x L):

244,6 x 380,3 x 489,3 mm

Tamanho desembalado com suporte posição mais alta (D x A x L):

244,6 x 510,3 x 489,3 mm

Peso embalado:

6,35 KG

Peso desembalado:

4,68 KG

DIMENSÕES THINKVISION®

S22e-19 (TILT)

Ângulo de Inclinação (frente/trás):

-5° ~ +22°

Tamanho embalado (D x A x L):

555 x 134 x 348 mm

Ajuste de altura:

Não

Tamanho desembalado com suporte (D x A x L):

200 x 373.8 x 489.3 mm

Tamanho desembalado com suporte posição mais alta (D x A x L):

244,6 x 510,3 x 489,3 mm

Peso embalado:

4,07 KG

Peso desembalado:

2,75 KG



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As especificações podem variar dependendo da região.

Lenovo™

OVERVIEW



1. Kensington Security Slot	4. VGA
2. Power Connector	5. Audio line-out (3.5mm)
3. HDMI 1.4	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, VA

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.06 x 267.79 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.248 x 0.248 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 3000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz (HDMI® only)

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

- Hard Coating (3H)
- Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 15W / 19W
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W

- Energy Star Power On: 15W
- Energy Star TEC: 43kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (47-63Hz)

Special Features

Special Features

AMD FreeSync™

AMD FreeSync technology only can work with AMD Radeon™ series graphics card.

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano

For supporting Tiny devices, additional Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).

For supporting Nano devices, additional Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 21.2mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Unpacked Head Only	489.3 x 45.5 x 296.8 mm (19.26 x 1.79 x 11.69 inches)
Unpacked with Stand	489.3 x 173.1 x 405.1 mm (19.26 x 6.81 x 15.95 inches)

Packaging Dimensions (WxDxH)

587 x 140 x 352 mm (23.11 x 5.51 x 13.86 inches)

Weight^[2]

Models	Weight
Monitor Head Only	2.39 kg (5.27 lbs)
Monitor With Stand	3.14 kg (6.92 lbs)

Packaging Weight

4.68 kg (10.32 lbs)

Mounting

Supports VESA mount 100mm

Stand

supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x HDMI cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

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Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Power Connector	6. USB 3.2 Gen 1
2. DP 1.2	7. USB 3.2 Gen 1
3. HDMI 1.4	8. Audio line-out (3.5mm)
4. VGA	9. USB 3.2 Gen 1
5. USB-B 3.2 Gen 1	10. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel
3-side NearEdgeless, In-Plane Switching

Backlight
WLED

Display Size
21.5 inches

Max View Area
WxH: 476.06 x 267.79 mm

Resolution
1920 x 1080

Aspect Ratio
16:9

Pixel Pitch
0.2479 x 0.2479 mm

Dot / Pixel Per Inch
102 dpi

Brightness
250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)
Horizontal: 178°, Vertical: 178°

Response Time
Extreme Mode: 4 ms

Refresh Rate
60Hz

Color Gamut
72% NTSC

Color Support
16.7 Million

Screen Surface Treatment
Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers
Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 12W / 43W
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 10.4W
- Energy Star TEC: 32.97kWh

- Internal Power Supply
- Voltage Required**
AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny
For supporting Tiny devices, additional Tiny monitor kits are needed (sold separately).

Bezel Width

- Side: 1.8mm
- Top / Bottom: 1.8mm / 22mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	489.3 x 205.0 x 396.0 mm (19.26 x 8.07 x 15.59 inches)
Highest Position	489.3 x 205.0 x 546.0 mm (19.26 x 8.07 x 21.50 inches)
Head Only	489.3 x 48.5 x 297.4 mm (19.26 x 1.91 x 11.71 inches)

Packaging Dimensions (WxDxH)

577 x 390 x 187 mm (22.72 x 15.35 x 7.36 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.01 kg (6.64 lbs)
Monitor With Stand	5.47 kg (12.06 lbs)

Packaging Weight

7.20 kg (15.87 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Power Connector	6. USB 3.2 Gen 1
2. DP 1.2	7. USB 3.2 Gen 1
3. HDMI 1.4	8. Audio line-out (3.5mm)
4. VGA	9. USB 3.2 Gen 1
5. USB-B 3.2 Gen 1	10. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.1 x 267.8 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.248 x 0.248 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 108% sRGB
- Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 15W / 48W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 11W

- Energy Star TEC: 34.41kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support

For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 17.3mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	498.3 x 194.7 x 332.4 mm (19.62 x 7.67 x 13.09 inches)
Highest Position	498.3 x 194.7 x 487.4 mm (19.62 x 7.67 x 19.19 inches)
Head Only	489.3 x 46.4 x 294.7 mm (19.26 x 1.83 x 11.60 inches)

Packaging Dimensions (WxDxH)

563 x 144 x 414 mm (22.17 x 5.67 x 16.30 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.0 kg (6.61 lbs)
Monitor With Stand	4.9 kg (10.8 lbs)

Packaging Weight

6.8 kg (14.99 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

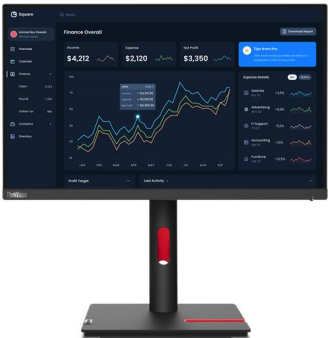
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	5. USB-B 3.2 Gen 1
2. DP 1.2	6. Audio-combo (3.5mm, In/Out)
3. HDMI 1.4	7. USB 3.2 Gen 1
4. VGA	8. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

21.5 inches

Max View Area

WxH: 476.06 x 267.79 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2479 x 0.2479 mm

Dot / Pixel Per Inch

102 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

FHD 1080p + IR camera

Microphone

Integrated microphone

Speakers

Integrated Speakers, 2x 3W

Power Supply

Power Consumption

- Typical / Max: 13W / 43W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 10.75W
- Energy Star TEC: 33.81kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny
For supporting Tiny devices, additional Tiny monitor kits are needed (sold separately).

Bezel Width

- Side: 1.8mm
- Top / Bottom: 1.8mm / 22mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	489.3 x 205.0 x 413 mm (19.26 x 8.07 x 16.26 inches)
Highest Position	489.3 x 205.0 x 563.0 mm (19.26 x 8.07 x 22.17 inches)
Head Only	489.3 x 48.3 x 314.4 mm (19.26 x 1.9 x 12.38 inches)

Packaging Dimensions (WxDxH)

577 x 390 x 187 mm (22.72 x 15.35 x 7.36 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.03 kg (6.68 lbs)
Monitor With Stand	5.49 kg (12.10 lbs)

Packaging Weight

7.22 kg (15.92 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 2x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-combo (3.5mm, In/Out)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Power connector	3. DisplayPort 1.2
2. HDMI 1.4	4. VGA

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

22.5 inches

Max View Area

WxH: 496.2 x 313.9 mm

Resolution

1920 x 1200

Aspect Ratio

16:10

Pixel Pitch

0.25 x 0.25 mm

Dot / Pixel Per Inch

100.6 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Optional Modular Soundbar support

Power Supply

Power Consumption

- Typical / Max: 15W / 18W
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Internal Power Supply

Voltage Required
AC 90 to 264 V (47-63Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support
ThinkCentre M Series Tiny
For supporting Tiny devices, additional Tiny monitor clamp (PN: 4XFON82412) and Tiny VESA mount (PN: 4XFON03161) are needed (sold separately).

Bezel Width
Side: 2.3mm

Cable Management
Support

Case Color
Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	501.2 x 251.9 x 381.9 mm (19.73 x 9.9 x 15.04 inches)
Highest Position	501.2 x 251.9 x 491.9 mm (19.73 x 9.9 x 19.37 inches)
Head Only	501.2 x 43.4 x 326.5 mm (19.73 x 1.71 x 13.54 inches)

Packaging Dimensions (WxDxH)
160 x 655 x 422 mm (6.3 x 25.79 x 16.61 inches)

Weight^[2]

Models	Weight
Monitor With Stand	4.85 kg (10.69 lbs)
Monitor Head Only	2.87 kg (6.33 lbs)

Packaging Weight
6.84 kg (15.08 lbs)

Mounting
Supports VESA mount 100mm

Stand
Supports -5° to +30° tilt, left & right 45 swivel, -90° to +90° pivot, up to 110mm lift

- In the Box**
- Monitor with Stand
 - 1x DP Cable
 - 1x Power cable
 - 1x VGA Cable
 - Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

- Rear Ports**
- 1x HDMI® 1.4

- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- TCO Certified
- TCO edge 2.0
- ULE Gold

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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ThinkVision T23d-10 - March 10 2023



notice.



OVERVIEW



1. DisplayPort 1.2	6. USB 3.2 Gen 1
2. HDMI 1.4	7. Audio-out (3.5mm)
3. VGA	8. USB 3.2 Gen 1
4. USB-B 3.2 Gen 1	9. USB 3.2 Gen 1
5. USB 3.2 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23 inches

Max View Area

WxH: 509.1 x 286.4 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.265 x 0.265 mm

Dot / Pixel Per Inch

96 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 15W / 48W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 11.88W
- Energy Star TEC: 37.05kWh

- Internal Power Supply

Voltage Required

AC 90 to 264 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support

For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 17.3mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	522.0 x 199.7 x 338.8 mm (20.55 x 7.86 x 13.34 inches)
Highest Position	522.0 x 199.7 x 493.8 mm (20.55 x 7.86 x 19.44 inches)
Head Only	522.0 x 46.4 x 313.1 mm (20.55 x 1.83 x 12.33 inches)
Minimal Height	28 mm (1.1 inches)

Packaging Dimensions (WxDxH)

592 x 150 x 421 mm (23.31 x 5.91 x 16.57 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.2 kg (7.05 lbs)
Monitor With Stand	5.2 kg (11.46 lbs)

Packaging Weight

7.3 kg (16.09 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

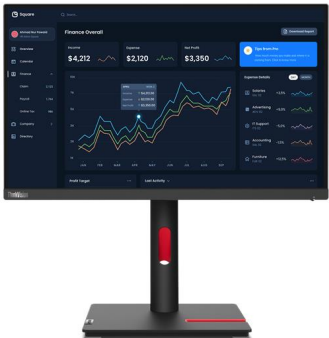
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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ThinkVision E24-27

DISPLAY

Panel Size
23.8-inch

Screen Dimensions
534.44 mm x 303.66 mm

Panel Type
In-Plane Switching

Active Area
527.04 mm x 296.46 mm

Backlight
WLED

Aspect Ratio
16:9

Resolution
1920 x 1080

Pixel Pitch
0.2745 mm x 0.2745 mm

Dot/Pixel Per Inch (DPI/PPI)
93

Viewing angle (H x V @ CR 10:1)
178° / 178°

Response Time
4ms (Extreme mode)
6ms (Normal mode)

Refresh Rate
60 Hz

Brightness (typical)
250 cd/m²

Contrast Ratio (typical)
1000:1

Dynamic Contrast Ratio (typical)
3M:1

Color Gamut
72% NTSC (CIE 1931)

Color Support (typical)
16.7 Million

Anti-glare
Yes

CONNECTIVITY

Video Signal
1 x HDMI 1.4
1 x DP 1.2
1 x VGA

MULTI-MEDIA

Integrated Speakers
Yes (2 x 1.5W)

POWER

Power Consumption (typ./max)
18W / 24W

Power Consumption Sleep/Off Mode
< 0.5W

Power Consumption Switch Off-Mode
< 0.5W

ENERGY STAR Power Consumption (P_{on}/E_{TEC})
13W / 41kWh

Power Supply
Internal

Voltage Required
AC 90 to 264 V (47-63 Hz)

MECHANICAL

Tilt Angle (front/back)
-5° / 22°

Swivel Angle (left/right)
-360° / 360°

Lift (max range)
155 mm

Pivot
-90° / 90°

VESA Mount Capability
Yes (100 x 100 mm)

ThinkCentre Tiny Support*
Yes, by Sandwich Mounting Kit (PN: 4XH0N04098)

Kensington Lock Slot
Yes

Bezel Color
Raven Black

Bezel Width (side)
3.1 mm

Bezel Width (top/bottom)
3.1 / 20.9 mm

DIMENSION

Size Packed (D x H x W, mm/inch)
145.0 x 397.0 x 638.0 mm
5.71 x 15.63 x 25.12 inches

Size Unpacked w/ Stand (D x H x W, mm/inch) (lowest position)
178.6 x 317.1 x 541.8 mm
7.03 x 12.48 x 21.33 inches

Size Unpacked w/ Stand D x H x W, mm/inch) (highest position)
178.6 x 462.5 x 541.8 mm
7.03 x 18.21 x 21.33 inches

Size Unpacked w/o Stand (head only)(D x H x W, mm/inch)
41.7 x 326.4 x 541.8 mm
1.64 x 12.85 x 21.33 inches

Weight Packed (kg/lbs.)
5.70 kg / 12.57 lbs.

Weight Unpacked (kg/lbs.)
4.80 kg / 10.58 lbs.

Weight (Monitor Head Only) (kg/lbs.)
3.10 kg / 6.83 lbs.

WHAT'S IN THE BOX

Monitor with stand
1 x Power cable (1.8 m)
1 x HDMI cable (1.8 m)
Quick setup guide

CERTIFICATION

ENERGY STAR Certification
Yes

CCC
Yes

TCO
8.0

TCO Edge
2.0

EPEAT
Gold

RoHS (2011/65/EU)
Yes

Windows Certification
Windows 7, Windows 10

China Energy Efficiency Standard
Tier 1

TÜV Rheinland Eye Comfort
Yes



* Optional support.

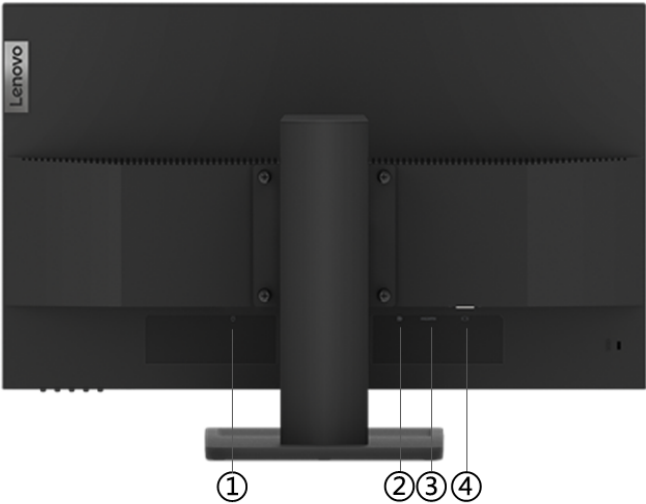
Depending on many factors such as the processing capability of peripheral devices, file attributes, and other factors related to system configuration and operating environments, the actual transfer rate using the various USB connectors on this device will vary and is typically slower than the data rates as defined by the respective USB specifications: 5 Gbit/s for USB 3.2 Gen 1; 10 Gbit/s for USB 3.2 Gen 2 & 20 Gbit/s for USB 3.2 Gen2x2.

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Specifications may vary depending upon region.

Lenovo

OVERVIEW



1. Power connector	3. HDMI 1.4
2. DP 1.2	4. VGA

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Integrated Speakers, 2x 1.5W

Power Supply

Power Consumption

- Typical / Max: 25W / 33W

- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 11.85W
- Energy Star TEC: 37.81kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support^[1]

For supporting Tiny devices, additional Sandwich Mounting Kit (PN: 4XHON04098) are needed (sold separately)

Bezel Width

- Side: 2.3mm
- Top / Bottom: 2.3mm / 20.5mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[2]

Models	Dimensions
Lowest Position	540.4 x 185.7 x 336.3 mm (21.28 x 7.31 x 13.24 inches)
Highest Position	540.4 x 185.7 x 462.1 mm (21.28 x 7.31 x 18.19 inches)
Head Only	540.4 x 43.5 x 325.3 mm (21.28 x 1.71 x 12.81 inches)

Packaging Dimensions (WxDxH)

638 x 145 x 397 mm (25.12 x 5.71 x 15.63 inches)

Weight^[3]

Models	Weight
Monitor Head Only	2.9 kg (6.4 lbs)
Monitor With Stand	4.5 kg (9.92 lbs)

Packaging Weight

6.0 kg (13.2 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

^[1] Tiny support models (62C8 and 62B8) only.

^[2] The system dimensions may vary depending on configurations.

^[3] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light

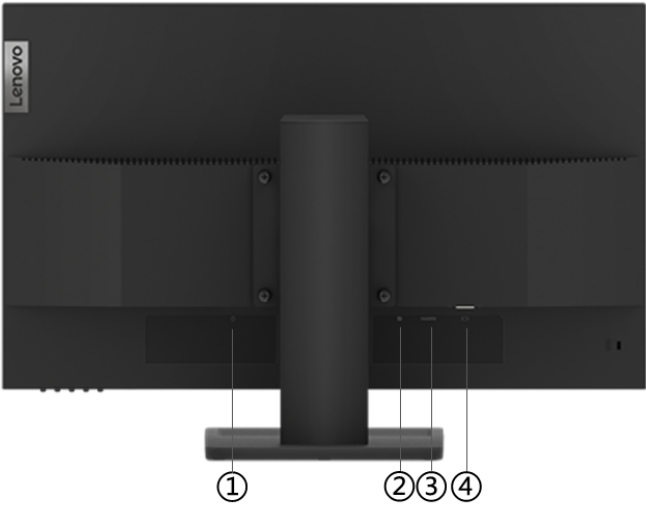
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OVERVIEW



1. Power connector	3. HDMI 1.4
2. DP 1.2	4. VGA

PERFORMANCE

Panel

Panel

3-side NearEdgeless, VA

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 3000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Integrated Speakers, 2x 1.5W

Power Supply

Power Consumption

- Typical / Max: 25W / 33W

- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 12W
- Energy Star TEC: 39kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support^[1]

For supporting Tiny devices, additional Sandwich Mounting Kit (PN: 4XHON04098) are needed (sold separately)

Bezel Width

- Side: 2.3mm
- Top / Bottom: 2.3mm / 20.5mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[2]

Models	Dimensions
Lowest Position	540.4 x 185.7 x 336.3 mm (21.28 x 7.31 x 13.24 inches)
Highest Position	540.4 x 185.7 x 462.1 mm (21.28 x 7.31 x 18.19 inches)
Head Only	540.4 x 43.5 x 325.3 mm (21.28 x 1.71 x 12.81 inches)

Packaging Dimensions (WxDxH)

638 x 145 x 397 mm (25.12 x 5.71 x 15.63 inches)

Weight^[3]

Models	Weight
Monitor Head Only	2.9 kg (6.4 lbs)
Monitor With Stand	4.5 kg (9.92 lbs)

Packaging Weight

6.0 kg (13.2 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

^[1] Tiny support model (63D0) only.

^[2] The system dimensions may vary depending on configurations.

^[3] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

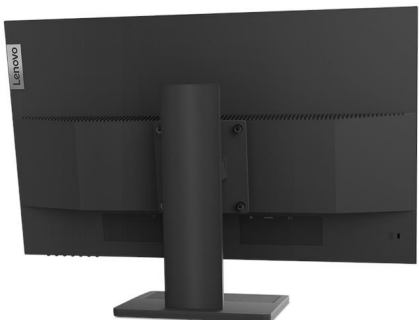
Other Certifications

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. HDMI 1.4	3. VGA
2. DisplayPort 1.2	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1300:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

100Hz

Color Gamut

Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Speakers

Integrated Speakers, 2x 2W

Power Supply

Power Consumption

- Typical / Max: 12W / 29W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 11W
- Energy Star TEC: 35.4kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Natural Low Blue Light

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 1.8mm
- Top / Bottom: 1.8mm / 18.3mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.4 x 178.6 x 342.2 mm (21.24 x 7.03 x 13.47 inches)
Highest Position	539.4 x 178.6 x 497.2 mm (21.24 x 7.03 x 19.57 inches)
Head Only	539.4 x 46 x 322 mm (21.24 x 1.81 x 12.68 inches)

Packaging Dimensions (WxDxH)

621 x 126 x 385 mm (24.45 x 4.96 x 15.16 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.1 kg (6.9 lbs)
Monitor With Stand	4.7 kg (10.4 lbs)

Packaging Weight

6.7 kg (14.8 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x Quick Setup Guide

- 4x Screws

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™ (3 mm x 7 mm)

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (C-class)
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power connector	3. DisplayPort
2. HDMI	4. Audio-out (3.5mm)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 526.9 x 296.4 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2058 x 0.2058 mm

Dot / Pixel Per Inch

123 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Integrated Speakers, 2x 2W

Power Supply

Power Consumption

- Typical / Max: 22W / 32W

- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 16.68W
- Energy Star TEC: 53.41kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny

For supporting Tiny devices, additional Sandwich Mounting Kit (PN: 4XH0N04098) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 21.4mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 180.3 x 320.6 mm (21.25 x 7.10 x 12.62 inches)
Highest Position	539.8 x 180.3 x 475.6 mm (21.25 x 7.10 x 18.72 inches)
Unpacked Head Only	539.8 x 44.0 x 325.7 mm (21.25 x 1.73 x 12.82 inches)

Packaging Dimensions (WxDxH)

690 x 421 x 159 mm (27.17 x 16.57 x 6.26 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.3 kg (7.3 lbs)
Monitor With Stand	5.1 kg (11.2 lbs)

Packaging Weight

7.0 kg (15.43 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. HDMI 2.1 TMDS	2. DisplayPort 1.2
------------------	--------------------

PERFORMANCE

Panel

Panel
3-side NearEdgeless, In-Plane Switching

Backlight
WLED

Display Size
23.8 inches

Max View Area
WxH: 526.8x296.4 mm

Resolution
2560 x 1440

Aspect Ratio
16:9

Pixel Pitch
0.206 x 0.206 mm

Dot / Pixel Per Inch
123 dpi

Brightness
300 cd/m²

Contrast Ratio

- Contrast Ratio: 1300:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)
Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate
100Hz

Color Gamut
Coverage Ratio: 99% sRGB

Color Support
16.7 Million

Color Depth
8-bit (6-bit+FRC)

Screen Surface Treatment
Anti-glare

Curvature
Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Speakers
Integrated Speakers, 2x 2W

Power Supply

Power Consumption

- Typical / Max: 16W / 38.5W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 12.2W
- Energy Star TEC: 38.5kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Natural Low Blue Light

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 1.8mm
- Top / Bottom: 1.8mm / 18.3mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.4 x 178.6 x 342.2 mm (21.24 x 7.03 x 13.47 inches)
Highest Position	539.4 x 178.6 x 497.2 mm (21.24 x 7.03 x 19.57 inches)
Head Only	539.4 x 46 x 322 mm (21.24 x 1.81 x 12.68 inches)

Packaging Dimensions (WxDxH)

621 x 126 x 385 mm (24.45 x 4.96 x 15.16 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.2 kg (7.0 lbs)
Monitor With Stand	4.7 kg (10.4 lbs)

Packaging Weight

6.7 kg (14.8 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x Quick Setup Guide

- 4x Screws

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.2

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™ (3 mm x 7 mm)

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (E-class)
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. USB 3.2 Gen 1
2. HDMI 1.4	8. USB 3.2 Gen 1
3. DP 1.2	9. Audio-out (3.5mm)
4. USB-C 3.2 Gen 1	10. USB 3.2 Gen 1
5. DP out	11. USB 3.2 Gen 1 (BC 1.2)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 526.9 x 296.4 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2058 x 0.2058 mm

Dot / Pixel Per Inch

123 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 83% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 50 Monitor Webcam, sold separately)
- ThinkVision MC 50 monitor webcam (Some models only)

Microphone

- Built-in dual microphone in MC 50 (Models with MC 50 only)
- No microphone

Speakers

- Integrated Speakers, 2x 1W
- Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 23W / 132W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 18.1W
- Energy Star TEC: 57.4kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny monitor clamp II (PN: 4XHOZ42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano monitor clamp II (PN: 4XHOZ42451) and Nano VESA mount (PN: 4XF0V81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 21.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 205 x 420 mm (21.25 x 8.07 x 16.54 inches)
Highest Position	539.8 x 205 x 570 mm (21.25 x 8.07 x 22.44 inches)
Head Only	539.8 x 46.6 x 325.7 mm (21.25 x 1.83 x 12.82 inches)

Packaging Dimensions (WxDxH)

149 x 620 x 423 mm (5.87 x 24.41 x 16.65 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.1 kg (9.0 lbs)
Monitor With Stand	6.4 kg (14.1 lbs)

Packaging Weight

8.5 kg (18.74 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (US, Canada only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (for US, Canada only)
- 1x USB-C to USB-C Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and up to 75W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort 1.2 (Out)
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 75 W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

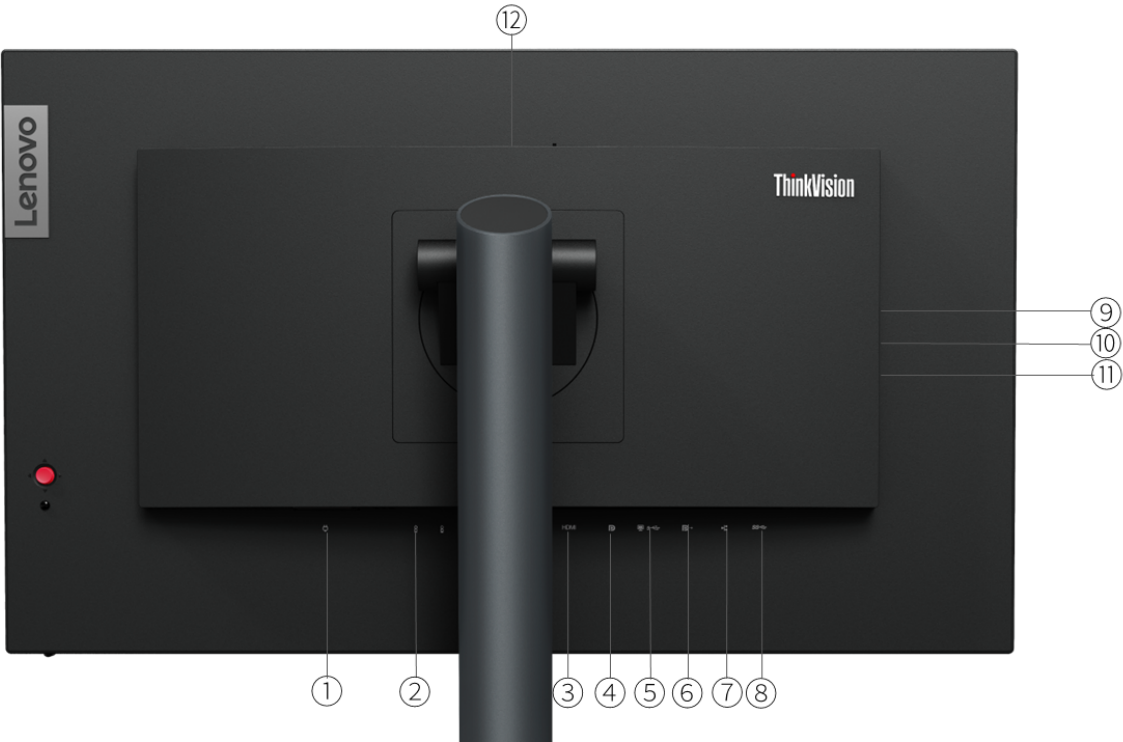
Other Certifications**Other Certifications**

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. Ethernet (RJ-45)
2. Kensington Security Slot	8. USB 3.2 Gen 1
3. HDMI 2.0	9. Audio-out (3.5mm)
4. DisplayPort 1.4	10. USB 3.2 Gen 1
5. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	11. USB 3.2 Gen 1
6. DP out	12. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 526.8 x 296.3 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.205 x 0.205 mm

Dot / Pixel Per Inch

123 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 111% sRGB
- Coverage Ratio: 99% BT.709
- Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 27W / 161W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 18W
- Energy Star TEC: 57kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- HDR10 Compliance
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.5 x 199.7 x 348.8mm (21.24 x 7.86 x 13.73 inches)
Highest Position	539.5 x 199.7 x 503.8mm (21.24 x 7.86 x 19.83 inches)
Head Only	539.5 x 46.5 x 323.7mm (21.24 x 1.83 x 12.74 inches)

Packaging Dimensions (WxDxH)

620 x 160 x 420 mm (24.41 x 6.30 x 16.54 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.8 kg (8.4 lbs)
Monitor With Stand	5.7 kg (12.6 lbs)

Packaging Weight

8.6 kg (19.00 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (For NA, Brazil; No for EMEA, AP, LAS)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (For NA, Brazil; No for EMEA, AP nor LAS)
- 1x USB-C to USB-C Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.4 Alt Mode and up to 100W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 100W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	6. USB 3.1 Gen 1
2. HDMI 1.4	7. USB 3.1 Gen 1
3. DP 1.2	8. Audio-out (3.5mm)
4. DP out	9. USB 3.1 Gen 1
5. USB-B 3.1 Gen 1	10. USB 3.1 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 526.85 x 296.35 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2058 x 0.2058 mm

Dot / Pixel Per Inch

123 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 84% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 20W / 61W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 16.04W
- Energy Star TEC: 51.61kWh
- Internal Power Supply

Voltage Required
AC 100 to 240 V (47-63Hz)

Special Features

- Special Features**
- Factory Calibration: Avg. Delta E<2
 - Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10

DESIGN

Mechanical

- Bezel Width**
- Side: 2mm
 - Top / Bottom: 2mm / 21.4mm

Cable Management
Support

Case Color
Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	205 x 420 x 539.8 mm (8.07 x 16.5 x 21.3 inches)
Highest Position	205 x 570 x 539.8 mm (8.07 x 22.4 x 21.3 inches)
Unpacked Head Only	44.6 x 325.7 x 539.8 mm (1.8 x 12.8 x 21.3 inches)

Packaging Dimensions (WxDxH)
620 x 149 x 423 mm (24.4 x 5.9 x 16.7 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.85 kg (7.89 lbs)
Monitor With Stand	6.18 kg (13.6 lbs)

Packaging Weight
8.1 kg (17.86 lbs)

Mounting
Supports VESA mount 100mm

Stand
Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

- In the Box**
- Monitor with Stand
 - 1x DP Cable (1.8m)
 - 1x Power cable (1.8m)
 - 1x USB-A to USB-B Cable (1.8m)
 - Factory Calibration Report
 - Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.1 Gen 1, USB upstream
- 4x USB 3.1 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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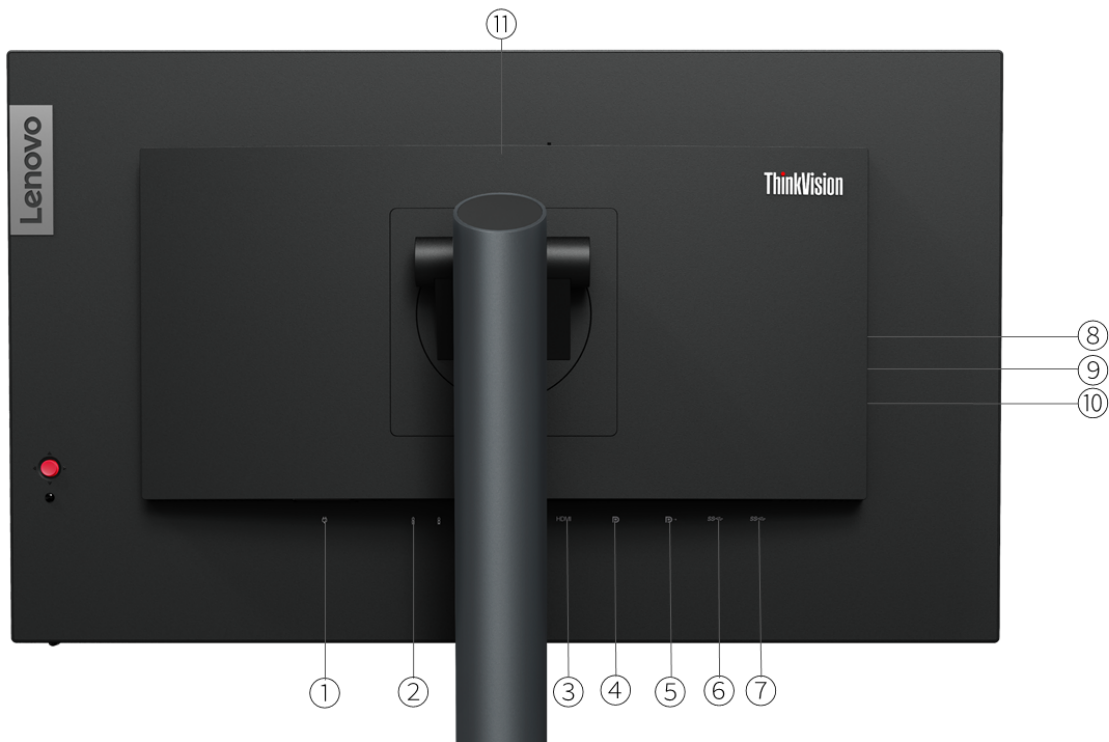
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OVERVIEW



1. Power Connector	7. USB 3.2 Gen 1
2. Kensington Security Slot	8. Audio-out (3.5mm)
3. HDMI 2.0	9. USB 3.2 Gen 1
4. DisplayPort 1.4	10. USB 3.2 Gen 1
5. DP out	11. USB 3.2 Gen 1 (BC 1.2)
6. USB-B 3.2 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 526.8 x 296.3 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.205 x 0.205 mm

Dot / Pixel Per Inch

123 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 110% sRGB
- Coverage Ratio: 99% BT.709
- Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 25W / 65W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 16W
- Energy Star TEC: 49kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- HDR10 Compliance
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.5 x 199.7 x 348.8mm (21.24 x 7.86 x 13.73 inches)
Highest Position	539.5 x 199.7 x 503.8mm (21.24 x 7.86 x 19.83 inches)
Head Only	539.5 x 46.5 x 323.7mm (21.24 x 1.83 x 12.74 inches)

Packaging Dimensions (WxDxH)

620 x 160 x 420 mm (24.41 x 6.30 x 16.54 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.8 kg (8.4 lbs)
Monitor With Stand	5.7 kg (12.6 lbs)

Packaging Weight

8.3 kg (18.3 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0

- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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ThinkVision® S24e-03

EXIBIÇÃO

Tamanho da tela
23,8"

Dimensões da tela (A x V)
527,04 x 296,46 mm

Tipo de tela
3-side NearEdgeless, VA

Luz de fundo
WLED

Proporção da tela
16:9

Resolução
1920 x 1080

Distância entre pixels (A x V)
0.2745 x 0.2745 mm

Ponto/pixel por polegada (DPI/PPI)
92

Ângulo de visão (H x V @ CR 10: 1)
178° / 178°

Tempo de resposta (cinza a cinza)
4 ms (modo extremo)
6 ms (modo normal)

Taxa de atualização
60 Hz

Brilho (típico)
250 cd/m²

Taxa de contraste (típica)
3000:1

Taxa de contraste dinâmico (típica)
3M:1

Color Gamut NTSC (CIE 1931)
72% NTSC

Suporte de cores
16,7 milhões

CONECTIVIDADE

Sinal de vídeo
1 x VGA
1 x HDMI 1.4

Comprimento do cabo de vídeo
1,8 m

Sinal de áudio
1 x saída de áudio (3,5 mm)

MULTIMÍDIA

Suporte opcional para alto-falantes
Sim

RECURSOS ESPECIAIS

Tecnologia de sincronização
FreeSync™

Suporte a Thin Client (Tiny)
Sim (pelo suporte VESA PN: 4XFON03161)

Antirreflexo
Sim

ENERGIA

Consumo de energia (min./max.)
24W / 31W

Modo de suspensão/desligamento da energia
< 0.3W

Modo de desligamento da energia
< 0.3W

Fonte de energia
Interna

Tensão necessária
CA 100 a 240 V (47/63 Hz)

MECÂNICO

Ângulo de inclinação (frontal/traseiro)
-5°/22°

Rotação vertical
Até 90°

Rotação horizontal
-160°/160°

Montagem VESA
Sim (100 mm), ocupado pelo stand com ajuste de altura

Trava Kensington™
Sim

Cor da moldura
Raven Black

Largura da moldura (lateral)
2.0 mm

Largura do painel (superior / inferior)
2.0/22 mm

DIMENSÃO

Tamanho embalado (L x A x P)
683 (L) x 183 (A) x 407 mm (P)

Tamanho desembalado c/ suporte posição mais baixa (L x A x P)
539,5 (L) x 410,8 (A) x 244,6 mm (P)

Tamanho desembalado c/ suporte posição mais alta (L x A x P)
539,5 (L) x 540,8 (A) x 244,6 mm (P)

Tamanho Desembalado sem suporte somente painel (L x A x P)
41,5 x 325,7 x 539,5 mm

Peso embalado
6,68 kg

Peso desembalado
5,2 kg

Peso (somente cabeça do monitor)
3,07 kg

O QUE VEM NA CAIXA

Folheto de informações
Monitor de tela plana
Cabo de alimentação
Cabo HDMI
Base
Suporte

CERTIFICAÇÕES

Classificação ENERGY STAR
7.1

CCC
Sim

EPEAT™
Silver

ULE
Gold

RoHS (EU 2002/95/EC)
Sim (2011/65/UE)

Certificação Windows
Windows 7, Windows 10

Certificação Low Blue Light
Sim



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As especificações podem variar dependendo da região.

Lenovo

OVERVIEW



1. Kensington Security Slot	4. VGA
2. Power Connector	5. Audio line-out (3.5mm)
3. HDMI 1.4	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, VA

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.04 x 296.46 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2745 x 0.2745 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 3000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 17.5W / 23.5W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.5W
- Energy Star Power On: 12W

- Energy Star TEC: 36kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

AMD FreeSync™

AMD FreeSync technology only can work with AMD Radeon™ series graphics card.

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano

For supporting Tiny devices, additional Tiny VESA mount II (PN: 4XF0N03161) are needed (sold separately).

For supporting Nano devices, additional Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 2.5mm
- Top / Bottom: 2.5mm / 22.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Unpacked Head Only	540.4 x 45.5 x 327.2 mm (21.28 x 1.79 x 12.88 inches)
Unpacked with Stand	540.4 x 173.1 x 434.5 mm (21.28 x 6.81 x 17.10 inches)

Packaging Dimensions (WxDxH)

415 x 624 x 124 mm (16.34 x 24.57 x 4.88 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.02 kg (6.66 lbs)
Monitor With Stand	3.82 kg (8.42 lbs)

Packaging Weight

5.42 kg (11.95 lbs)

Mounting

Supports VESA mount 100mm

Stand

supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Kensington Security Slot	4. VGA
2. Power connector	5. Audio line-out (3.5mm)
3. HDMI 1.4	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

Typical: 250 cd/m²

Contrast Ratio

Contrast Ratio: 1300:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

100Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 13.5W / 20.5W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 12.9W

- Energy Star TEC: 40.5kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Natural Low Blue Light

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional mount kits are needed (sold separately).
For supporting Nano devices, additional mount kits are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.4 x 183.0 x 434.0 mm (21.24 x 7.20 x 17.09 inches)
Highest Position	539.4 x 183.0 x 434.0 mm (21.24 x 7.20 x 17.09 inches)
Width of Head (Slimmest Part)	6.9 mm (0.27 inches)
Head Only	539.4 x 43.0 x 326.2 mm (21.24 x 1.69 x 12.84 inches)

Packaging Dimensions (WxDxH)

592 x 110 x 415 mm (23.31 x 4.33 x 16.34 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.0 kg (6.6 lbs)
Monitor With Stand	3.8 kg (8.4 lbs)

Packaging Weight

5.7 kg (12.6 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x VGA
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (E-class)
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

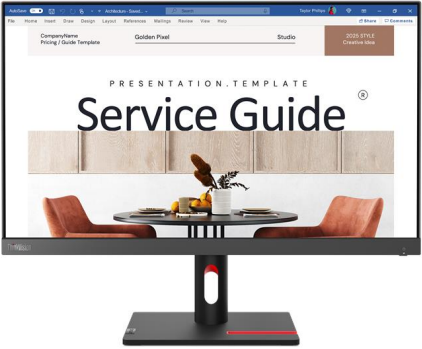
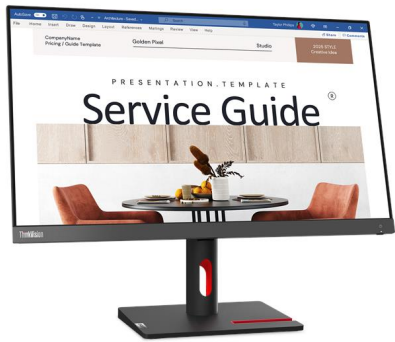
Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

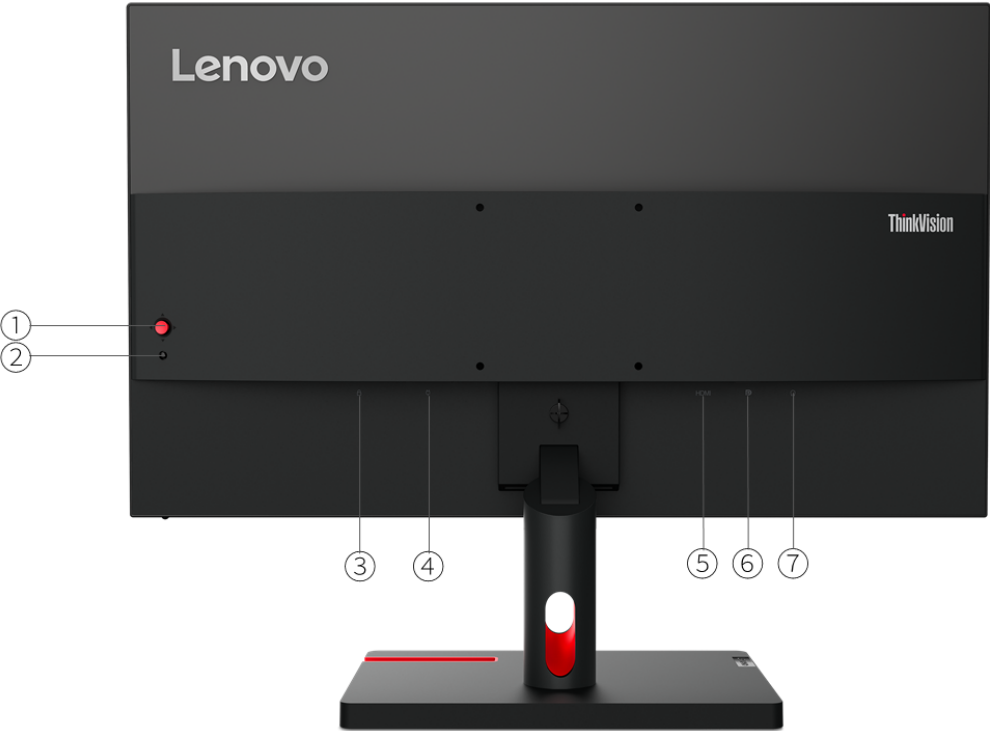
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OVERVIEW



1. Joystick	5. HDMI
2. Source Key	6. VGA
3. Kensington Security Slot	7. Audio line-out (3.5mm)
4. Power connector	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, VA

Backlight

WLED

Display Size

24.5 inches

Max View Area

WxH: 543.7 x 302.6 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.283 x 0.280 mm

Dot / Pixel Per Inch

90 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 3000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 17.5W / 24W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 14.3W
- Energy Star TEC: 45kWh
- Internal Power Supply

Voltage Required
AC 100 to 240 V (50-60Hz)

Special Features

Special Features
Lenovo® ThinkColour 2.0 (Lenovo Display Control Center) Support
ThinkColour 2.0 can only be used with Windows 10 & Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support
ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny / Nano devices, additional Tiny / Nano VESA Mount Kits (PN: 4XFON03161) / (PN: 4XFOV81630) are needed (sold separately).

- Bezel Width**
- Side: 2mm
 - Top / Bottom: 2mm / 22mm

- Buttons**
- Joystick
 - Source Key

Cable Management
Support

Case Color
Storm grey

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	557.2 x 183 x 441.8 mm (21.94 x 7.2 x 17.39 inches)
Highest Position	557.2 x 183 x 441.8 mm (21.94 x 7.2 x 17.39 inches)
Head Only	557.2 x 46.5 x 334.8 mm (21.94 x 1.83 x 13.18 inches)

Packaging Dimensions (WxDxH)
648 x 135 x 414 mm (25.51 x 5.31 x 16.30 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.2 kg (7.1 lbs)
Monitor With Stand	4.1 kg (9.0 lbs)

- Packaging Weight**
- EPS: 5.7 kg (12.6 lbs)
 - Green Package: 6.4 kg (14.1 lbs)

Mounting
Supports VESA mount 100mm

Stand
Supports -5° to +22° tilt

- In the Box**
- Monitor with Stand
 - 1x HDMI® cable (1.8m)
 - 1x Power cable (1.8m)
 - 1x Screw
 - Quick Setup Guide
 - Warranty Booklet (On QSG)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Silver Registered^[2]
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. DisplayPort 1.2	6. USB 3.0
2. HDMI 1.4	7. USB 3.0
3. VGA	8. USB 3.0
4. USB-B 3.0	9. USB 3.0 (1x BC)
5. Audio-out (3.5mm)	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

24 inches

Max View Area

WxH: 518.4 x 324 mm

Resolution

1920 x 1200

Aspect Ratio

16:10

Pixel Pitch

0.27 x 0.27 mm

Dot / Pixel Per Inch

94 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 7 ms
- Off Mode: 15 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 22W / 64W
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22.7mm

Cable Management

Support

Case Color

Black

Dimensions (WxDxH)^[1]

Models	Dimensions
Head Only	533.2 x 42.3 x 355.1 mm (20.99 x 1.67 x 13.98 inches)
Unpacked with Stand	533.2 x 260.4 x 497.4 mm (20.99 x 10.25 x 19.58 inches)

Packaging Dimensions (WxDxH)

160 x 655 x 422 mm (6.3 x 25.79 x 16.61 inces)

Weight^[2]

Models	Weight
Monitor With Stand	5.63 kg (12.41 lbs)
Monitor Head Only	3.98 kg (8.77 lbs)

Packaging Weight

8.7 kg (19.18 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +30° tilt, left & right 45 swivel, 90° pivot, up to 110mm lift

In the Box

- Monitor with Stand
- 1x DP Cable
- 1x HDMI® Cable (for US, Canada only)
- 1x VGA Cable
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.0, USB upstream
- 1x HDMI 1.4
- 4x USB 3.0 (1x BC), USB downstream
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the

host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Power Connector	6. USB 3.2 Gen 1
2. DP 1.2	7. USB 3.2 Gen 1
3. HDMI 1.4	8. Audio line-out (3.5mm)
4. VGA	9. USB 3.2 Gen 1
5. USB-B 3.2 Gen 1	10. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.04 x 296.46 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2745 x 0.2745 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 16W / 55W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 13W

- Energy Star TEC: 46kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny / Nano devices, additional Tiny / Nano monitor clamp II (PN: 4XH0Z42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22.2mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 205 x 409.3 mm (21.25 x 8.09 x 16.11 inches)
Highest Position	539.8 x 205 x 559.3 mm (21.25 x 8.09 x 22.02 inches)
Head Only	539.8 x 44.1 x 326.5 mm (21.25 x 1.74 x 12.85 inches)

Packaging Dimensions (WxDxH)

618 x 422 x 160 mm (24.33 x 16.61 x 6.30 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.65 kg (8.05 lbs)
Monitor With Stand	5.9 kg (13.01 lbs)

Packaging Weight

8.4 kg (18.52 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year courier or carry-in service

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. DisplayPort 1.2	6. USB 3.2 Gen 1
2. HDMI 1.4	7. Audio-out (3.5mm)
3. VGA	8. USB 3.2 Gen 1
4. USB-B 3.2 Gen 1	9. USB 3.2 Gen 1
5. USB 3.2 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 110% sRGB
- Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Color Depth

6-bit (Hi+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 14W / 51W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 12W
- Energy Star TEC: 38kWh

- Internal Power Supply
- Voltage Required**
AC 100 to 240 V (50-60Hz)

Special Features

- Special Features**
- Natural Low Blue Light
 - Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 17.1mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 199.7 x 349.8mm (21.25 x 7.86 x 13.77 inches)
Highest Position	539.8 x 199.7 x 504.8mm (21.25 x 7.86 x 19.87 inches)
Head Only	539.8 x 49.0 x 321.4 mm (21.25 x 1.93 x 12.65 inches)

Packaging Dimensions (WxDxH)

592 x 152 x 422 mm (23.31 x 5.98 x 16.61 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.4 kg (7.5 lbs)
Monitor With Stand	5.4 kg (11.9 lbs)

Packaging Weight

7.8 kg (17.2 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.
[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of

component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0

- TÜV Rheinland® Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. USB 3.2 Gen 1
2. HDMI 1.4	8. USB 3.2 Gen 1
3. DP 1.2	9. Audio line-out (3.5mm)
4. USB-C 3.2 Gen 1	10. USB 3.2 Gen 1
5. DP out	11. USB 3.2 Gen 1 (BC 1.2)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2745 x 0.2745 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

- Optional Modular Camera Support
- ThinkVision® MC 50 monitor webcam (Some models only)

Microphone

Built-in dual microphone in MC 50 (Models with MC 50 only)

Power Supply

Power Consumption

- Typical / Max: 22W / 140W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 15W
- Energy Star TEC: 49kWh
- Internal Power Supply

Voltage Required

AC 90 to 264 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny monitor clamp II (PN: 4XHOZ42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano monitor clamp II (PN: 4XHOZ42451) and Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 204.9 x 417.1mm (21.25 x 8.09 x 16.42 inches)
Highest Position	539.8 x 204.9 x 567.1mm (21.25 x 8.09 x 22.33 inches)
Head Only	539.8 x 44.4 x 325.9 mm (21.25 x 1.75 x 12.83 inches)

Packaging Dimensions (WxDxH)

604 x 161 x 480 mm (23.78 x 6.34 x 18.89 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.6 kg (8.0 lbs)
Monitor With Stand	6.1 kg (13.5 lbs)

Packaging Weight

8.9 kg (19.7 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (for US, Canada only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (for US, Canada only)
- 1x USB-C to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

Support 10M / 100M / 1000M

Ports^[1]**Rear Ports^[2]**

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and to 90W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY**Security****Physical Locks**

Kensington® Security Slot™

SERVICE**Warranty****Base Warranty**

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

^[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

^[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. USB 3.2 Gen 1
2. HDMI 1.4	8. USB 3.2 Gen 1
3. DP 1.2	9. Audio line-out (3.5mm)
4. USB-C 3.2 Gen 1	10. USB 3.2 Gen 1
5. DP out	11. USB 3.2 Gen 1 (BC 1.2)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.275 x 0.275 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- Optional Modular Camera Support
- ThinkVision® MC 50 monitor webcam (Some models only)

Microphone

Built-in dual microphone in MC 50 (Models with MC 50 only)

Speakers

Integrated Speakers, 2x 1W

Power Supply

Power Consumption

- Typical / Max: 22W / 140W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 15W
- Energy Star TEC: 49kWh
- Internal Power Supply

Voltage Required

AC 90 to 264 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny monitor clamp II (PN: 4XHOZ42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano monitor clamp II (PN: 4XHOZ42451) and Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 204.9 x 417.1mm (21.25 x 8.09 x 16.42 inches)
Highest Position	539.8 x 204.9 x 567.1mm (21.25 x 8.09 x 22.33 inches)
Head Only	539.8 x 44.4 x 325.9 mm (21.25 x 1.75 x 12.83 inches)

Packaging Dimensions (WxDxH)

604 x 161 x 480 mm (23.78 x 6.34 x 18.89 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.6 kg (8.0 lbs)
Monitor With Stand	6.1 kg (13.45 lbs)

Packaging Weight

8.9 kg (19.62 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to +90° pivot, up to 150mm lift

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and to 90W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

^[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

^[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Joystick	8. DP out
2. Source Key	9. Ethernet (RJ-45)
3. Kensington Security Slot	10. USB 3.2 Gen 1
4. Power Connector	11. USB 3.2 Gen 1
5. HDMI 2.1	12. Audio-combo (3.5mm, In/Out)
6. DP 1.4	13. USB 3.2 Gen 1
7. USB-C 3.2 Gen 1 (90W)	14. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.274 x 0.274 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

2592 x 1944, 5.0-megapixel, IR + RGB camera

Microphone

Integrated microphone

Speakers

Integrated Speakers, 2x 5W

Power Supply

Power Consumption

- Typical / Max: 24.5W / 160W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 14.3W
- Energy Star TEC: 48.2kWh

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Smart Sensor (Ambient Light Sensor, Human Detection Sensor)
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2.1mm
- Top / Bottom: 2.1mm / 41.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 199.7 x 387.8 mm (21.25 x 7.86 x 15.27 inches)
Highest Position	539.8 x 199.7 x 542.8 mm (21.25 x 7.86 x 21.37 inches)
Head Only	539.8 x 53.9 x 363.3 mm (21.25 x 2.12 x 14.30 inches)

Packaging Dimensions (WxDxH)

590 x 178 x 422 mm (23.23 x 7.01 x 16.61 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.5 kg (9.9 lbs)
Monitor With Stand	6.5 kg (14.3 lbs)

Packaging Weight

8.6 kg (18.96 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.4 alt mode, up to 90W), USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI® 2.1
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-combo (3.5mm, In/Out)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- Microsoft® Teams Certification
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	6. USB 3.2 Gen 1
2. HDMI 1.4	7. Audio line-out (3.5mm)
3. DP 1.2	8. USB 3.2 Gen 1
4. 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode))	9. USB 3.2 Gen 1 (BC 1.2)
5. USB 3.2 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.04 x 296.46 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.2745 x 0.2745 mm

Dot / Pixel Per Inch

93 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 25W / 150W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 17W
- Energy Star TEC: 56kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Display

Touchscreen

Supports 10-point touch

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22.2mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 244.1 x 340.5 mm (21.25 x 9.61 x 13.41 inches)
Highest Position	539.8 x 244.1 x 430.5 mm (21.25 x 9.61 x 16.95 inches)
Head Only	539.8 x 44.1 x 326.5 mm (21.25 x 1.74 x 12.85 inches)

Packaging Dimensions (WxDxH)

421 x 622 x 172 mm (16.57 x 24.49 x 6.77 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.79 kg (8.36 lbs)
Monitor With Stand	5.85 kg (12.90 lbs)

Packaging Weight

8.31 kg (18.32 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +70° tilt, up to 90mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (for US, Canada only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (for US, Canada only)
- 1x USB-C to USB-C Cable
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and to 90W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Joystick	8. USB-B 3.2 Gen 1
2. Source Key	9. USB 3.2 Gen 1
3. Kensington Security Slot	10. USB 3.2 Gen 1
4. Power Connector	11. Audio-combo (3.5mm, In/Out)
5. DP 1.2	12. USB 2.0
6. HDMI 1.4	13. USB 3.2 Gen 1
7. VGA	

PERFORMANCE

Panel

Panel

3-side Borderless In-Plane Switching

Backlight

WLED

Display Size

23.8 inches

Max View Area

WxH: 527.0 x 296.5 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.274 x 0.274 mm

Dot / Pixel Per Inch

93 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz (HDMI® and DP only)

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

1920 x 1080, 2.0-megapixel, IR + RGB camera

Microphone

Integrated microphone

Speakers

Integrated Speakers, 2x 3W

Power Supply

Power Consumption

- Typical / Max: 18W / 60W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 13W
- Energy Star TEC: 41.1kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2.1mm
- Top / Bottom: 2.1mm / 41.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	539.8 x 199.7 x 387.8 mm (21.25 x 7.86 x 15.27 inches)
Highest Position	539.8 x 199.7 x 542.8 mm (21.25 x 7.86 x 21.37 inches)
Head Only	539.8 x 53.9 x 363.3 mm (21.25 x 2.12 x 14.30 inches)

Packaging Dimensions (WxDxH)

590 x 178 x 422 mm (23.23 x 7.01 x 16.61 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.0 kg (8.8 lbs)
Monitor With Stand	6.0 kg (13.2 lbs)

Packaging Weight

8.5 kg (18.74 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)(for EMEA / LA / AP)

- 1x HDMI Cable (1.8m)(for NA)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB 2.0
- 1x USB-B 3.2 Gen 1, USB upstream
- 3x USB 3.2 Gen 1, USB downstream
- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-combo (3.5mm, In/Out)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

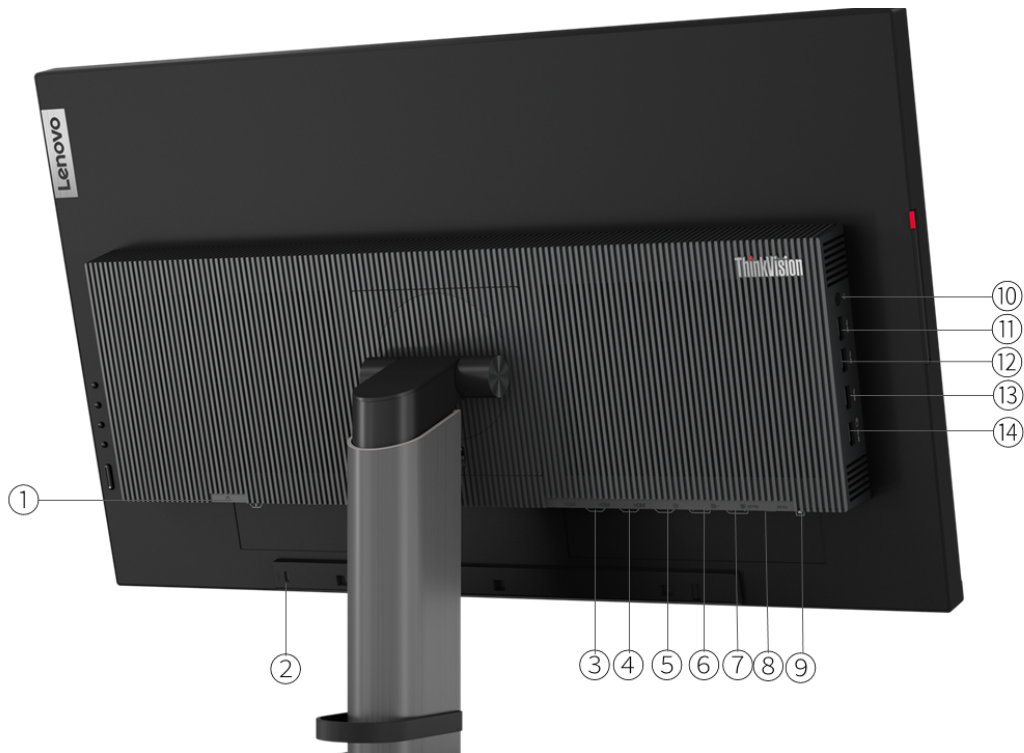
Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	8. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)
2. Kensington Security Slot	9. USB-B 3.2 Gen 1
3. HDMI 2.0	10. Audio-out (3.5mm)
4. HDMI 2.0	11. USB 3.2 Gen 1
5. HDMI 2.0	12. USB 3.2 Gen 1
6. DisplayPort 1.4	13. USB 3.2 Gen 1
7. DP out	14. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel

Mini-LED Backlight with 1152 zones local dimming

Backlight

Mini-LED (with 1152 zones local dimming)

Display Size

27 inches

Max View Area

WxH: 596.74 x 335.66 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.1554 x 0.1554 mm

Dot / Pixel Per Inch

163 dpi

Brightness

- Peak: 1200 cd/m²
- Typical: 620 cd/m²

Contrast Ratio

- Contrast Ratio: 1M:1 (HDR)
- Contrast Ratio: 1100:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 100% BT.709
- 100% sRGB
- 73% BT2020
- 99.5% DCI-P3

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 70W / 270W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W

Voltage Required

AC 100 to 240 V (47-63Hz)

Special Features

Special Features

- Processor LUT: 14 bit
- Factory Calibration: Avg. Delta E<1
- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- HDR10 Compliance
- DisplayHDR™ 1000
- Dolby® Vision™ Approved
- HLG
- Headphone Hood
- KVM Switch
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny / Nano devices, additional Tiny / Nano monitor clamp II (PN: 4XH0Z42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 16mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.1 x 234.1 x 458.8 mm (24.14 x 9.22 x 18.06 inches)
Highest Position	613.1 x 234.1 x 593.8 mm (24.14 x 9.22 x 23.38 inches)
Head Only	613.1 x 53.7 x 359.7 mm (24.14 x 2.11 x 14.16 inches)

Packaging Dimensions (WxDxH)

200 x 758 x 493 mm (7.87 x 29.84 x 19.41 inches)

Weight^[2]

Models	Weight
Monitor Head Only	6.5 kg (14.44 lbs)
Monitor With Stand	10.8 kg (23.81 lbs)

Packaging Weight

13.5 kg (29.76 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x Shading Hood
- 1x USB-A to USB-B Cable (1.8m)
- 1x USB-C® to USB-C Cable (1.5m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 2 (DP 1.4 Alt Mode and up to 100W PD), USB upstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 3x HDMI 2.0
- 1x DisplayPort™ 1.4
- 1x DisplayPort 1.4 (Out)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 100W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

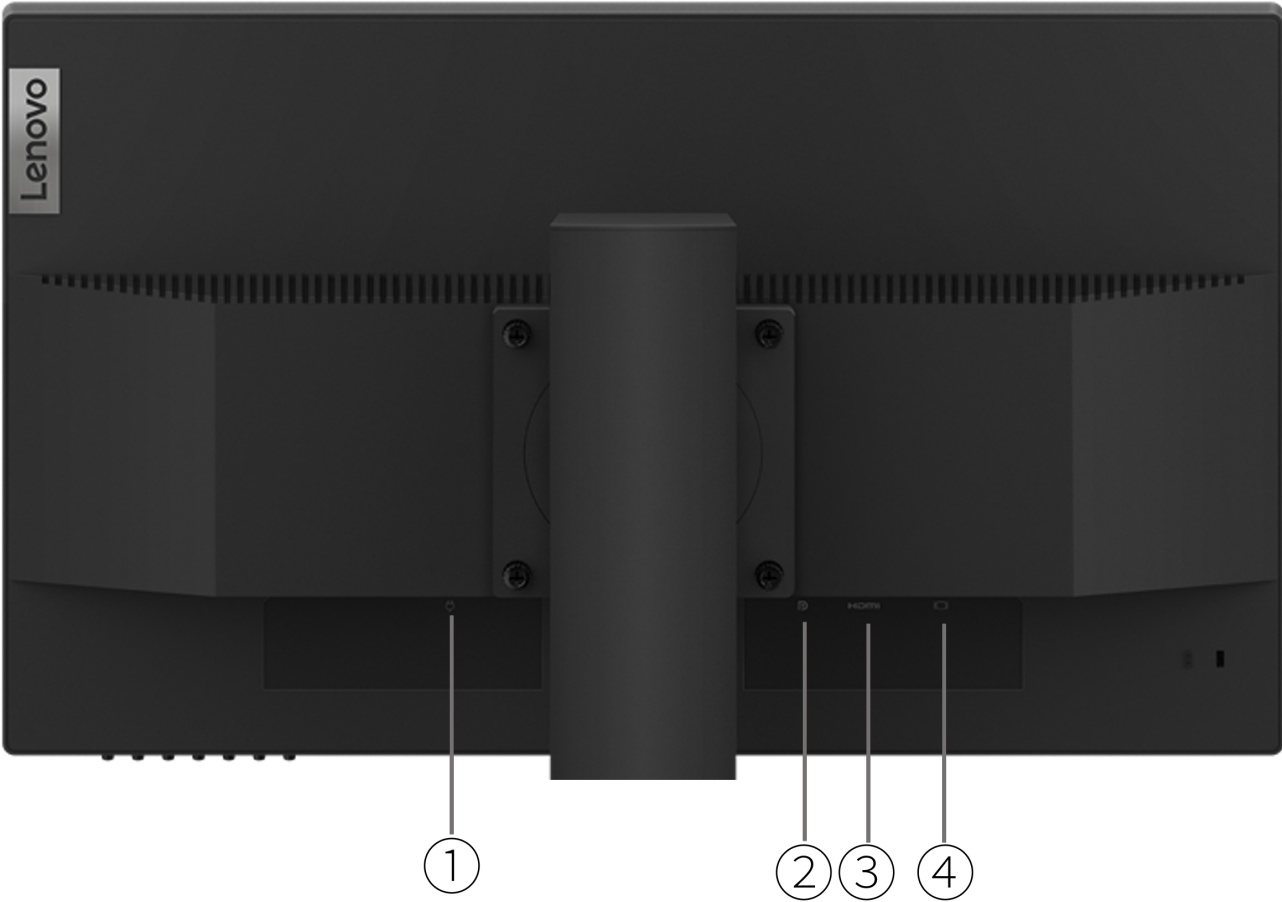
Other Certifications

TÜV Rheinland® Low Blue Light

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OVERVIEW



1. Power connector	3. DisplayPort
2. HDMI	4. Audio-out (3.5mm)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.233 x 0.233 mm

Dot / Pixel Per Inch

108 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Integrated Speakers, 2x 2W

Power Supply

Power Consumption

- Typical / Max: 30W / 40W

- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 20.7W
- Energy Star TEC: 64.95kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

ThinkCentre® M Series Support^[1]

For supporting Tiny devices, additional Sandwich Mounting Kit (PN: 4XHON04098) are needed (sold separately)

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[2]

Models	Dimensions
Lowest Position	613.6 x 220.0 x 419.0 mm (24.16 x 8.66 x 16.50 inches)
Highest Position	613.6 x 220.0 x 574.0 mm (24.16 x 8.66 x 22.60 inches)
Head Only	613.6 x 46.2 x 367.6 mm (24.16 x 1.82 x 14.47 inches)

Packaging Dimensions (WxDxH)

730 x 186 x 460 mm (28.74 x 7.32 x 18.11 inches)

Weight^[3]

Models	Weight
Monitor Head Only	4.5 kg (9.8 lbs)
Monitor With Stand	6.6 kg (14.6 lbs)

Packaging Weight

9.1 kg (20.06 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] Tiny support model (62DF) only.

[2] The system dimensions may vary depending on configurations.

[3] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- EU Energy Label (F-class)
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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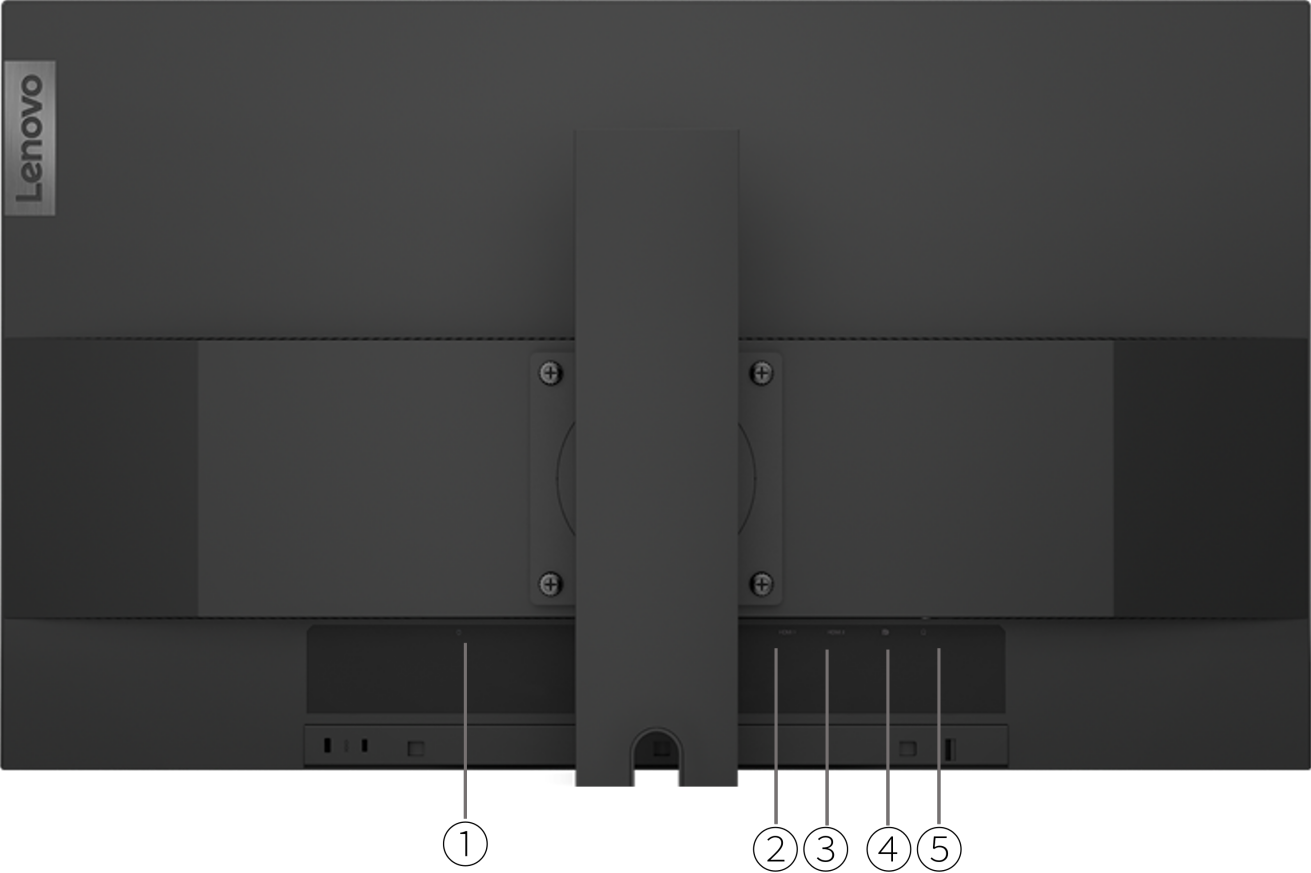
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OVERVIEW



1. Power connector	4. DisplayPort
2. HDMI	5. Audio-out (3.5mm)
3. HDMI	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

28 inches

Max View Area

WxH: 620.9 × 341.3 mm

Resolution

3840 × 2160

Aspect Ratio

16:9

Pixel Pitch

0.16 x 0.16 mm

Dot / Pixel Per Inch

157 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

- 90% DCI-P3
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support
- Windows 11 Support

Multi-Media

Speakers

Integrated Speakers, 2x 2W

Power Supply

Power Consumption

- Typical / Max: 30W / 50W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 25.25W
- Energy Star TEC: 78.48kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- HDR10 Compliance
- Natural Low Blue Light

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny Sandwich Kit II (PN: 4XH0N04098) is needed (sold separately).
For supporting Nano devices, additional Nano VESA Mount (PN: 4XFOV81630) is needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 22.8mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	636.9 x 220.0 x 380.6 mm (25.07 x 8.66 x 14.98 inches)
Highest Position	636.9 x 220.0 x 580.6 mm (25.07 x 8.66 x 22.86 inches)
Head Only	636.9 x 48.9 x 373.7 mm (25.07 x 1.93 x 14.71 inches)

Packaging Dimensions (WxDxH)

744 x 170 x 489 mm (29.29 x 6.69 x 19.25 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.6 kg (10.1 lbs)
Monitor With Stand	6.8 kg (15.0 lbs)

Packaging Weight

9.2 kg (20.28 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, -90° to +90° pivot, up to 200mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 2x HDMI 2.0
- 1x DisplayPort™ 1.4
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

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Other Certifications

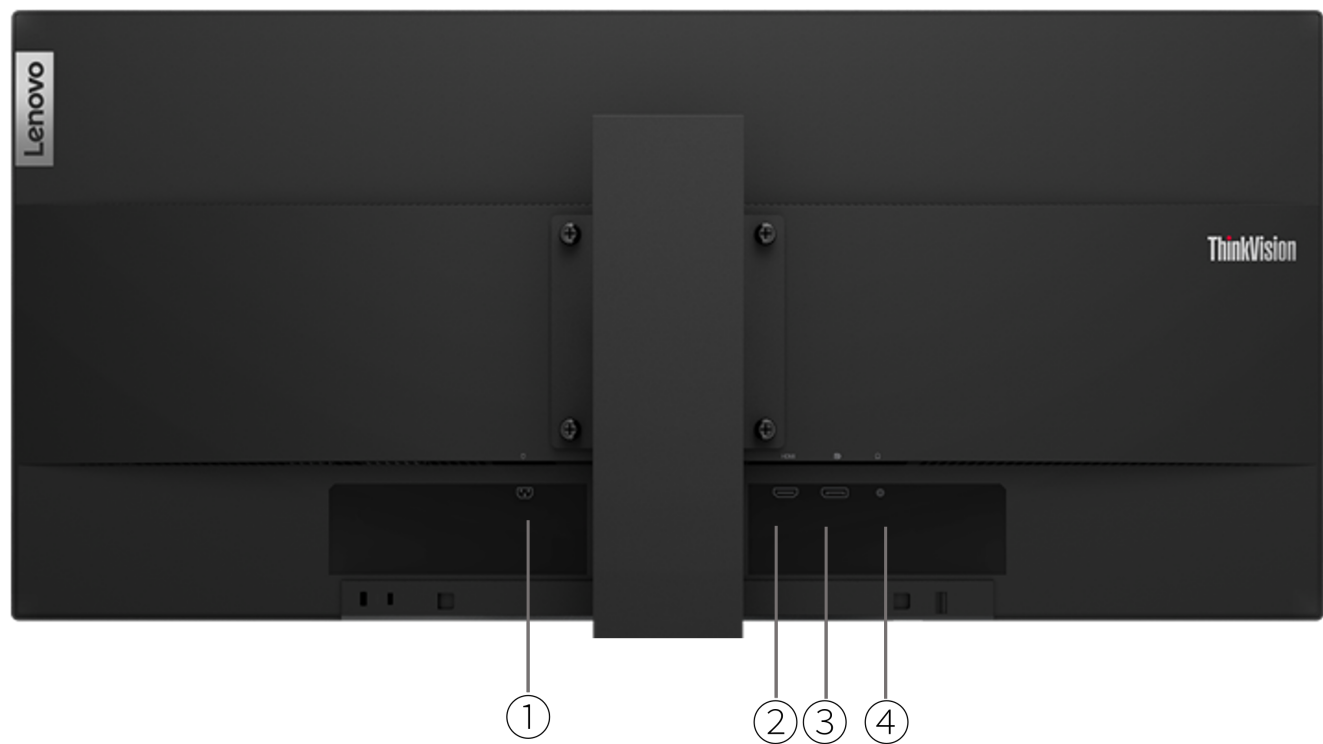
Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification

- TÜV Rheinland Low Blue Light (Hardware Solution)
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OVERVIEW



1. Power connector	3. DisplayPort
2. HDMI	4. Audio-out (3.5mm)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

29 inches

Max View Area

WxH: 672.8 x 283.8 mm

Resolution

2560 x 1080

Aspect Ratio

21:9

Pixel Pitch

0.2628 x 0.2628 mm

Dot / Pixel Per Inch

96 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

90Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (Hi-FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Integrated Speakers, 2x 3W, optional soundbar support

Power Supply

Power Consumption

- Typical / Max: 36W / 45W

- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 13W
- Energy Star TEC: 40kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- AMD FreeSync™
AMD FreeSync technology only can work with AMD Radeon™ series graphics card.

DESIGN

Mechanical

Bezel Width

- Side: 1.8mm
- Top / Bottom: 1.8mm / 26.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	688.4 x 220.0 x 331.1 mm (27.10 x 8.66 x 13.04 inches)
Highest Position	688.4 x 220.0 x 508.1 mm (27.10 x 8.66 x 20.00 inches)
Unpacked Head Only	688.4 x 47.5 x 320.0 mm (27.10 x 1.87 x 12.60 inches)

Packaging Dimensions (WxDxH)

796 x 155 x 395 mm (31.34 x 6.11 x 15.56 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.4 kg (9.7 lbs)
Monitor With Stand	6.6 kg (14.6 lbs)

Packaging Weight

8.5 kg (18.74 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt, left & right 360° swivel, up to 155mm lift

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. USB 3.1 Gen 1
2. HDMI 1.4	8. USB 3.1 Gen 1
3. DP 1.2	9. Audio line-out (3.5mm)
4. USB-C 3.1 Gen 1	10. USB 3.1 Gen 1
5. DP out	11. USB 3.1 Gen 1 (BC)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

4-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.74 x 335.66 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2331 x 0.2331 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 85% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

- Integrated Speakers, 2x 1W
- Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 27W / 150W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 19W
- Energy Star TEC: 61kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Processor LUT: 8 bit
- Factory Calibration: Avg. Delta E<2
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 2mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.8 x 208 x 441.5mm (27.17 x 8.19 x 17.38 inches)
Highest Position	613.8 x 208 x 576.5 mm (27.17 x 8.19 x 22.70 inches)
Head Only	613.8 x 46.9 x 353.8 mm (27.17 x 1.85 x 13.92 inches)

Packaging Dimensions (WxDxH)

722 x 182 x 463 mm (28.43 x 7.17 x 18.23 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.87 kg (10.71 lbs)
Monitor With Stand	7.35 kg (16.17 lbs)

Packaging Weight

9.55 kg (21.01 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (NA only)
- 1x USB-C to USB-C Cable (1.8m)

- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.1 Gen 1 (DP 1.2 Alt Mode, up to 90W), USB upstream
- 4x USB 3.1 Gen 1 (1x BC), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified

- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

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Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Power Connector	7. USB 3.1 Gen 1
2. HDMI 1.4	8. USB 3.1 Gen 1
3. DP 1.2	9. Audio line-out (3.5mm)
4. USB-C 3.1 Gen 1	10. USB 3.1 Gen 1
5. DP out	11. USB 3.1 Gen 1 (BC)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.74 x 335.66 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2331 x 0.2331 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 85% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support
- Windows 11 Support

Multi-Media

Speakers

- Integrated Speakers, 2x 1W
- Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 27W / 150W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 14.9W
- Energy Star TEC: 48.7kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Processor LUT: 8 bit
- Factory Calibration: Avg. Delta E<2

DESIGN

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 23.9mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	614.0 x 208.0 x 425.9 mm (24.17 x 8.19 x 16.77 inches)
Highest Position	614.0 x 208.0 x 563.9 mm (24.17 x 8.19 x 22.20 inches)
Head Only	614.0 x 47.7 x 369.1 mm (24.17 x 1.88 x 14.53 inches)

Packaging Dimensions (WxDxH)

722 x 182 x 463 mm (28.43 x 7.17 x 18.23 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.99 kg (11.00 lbs)
Monitor With Stand	7.43 kg (16.38 lbs)

Packaging Weight

9.51 kg (20.92 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA, Brazil only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (NA, Brazil only)
- 1x USB-C to USB-C Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and to 90W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

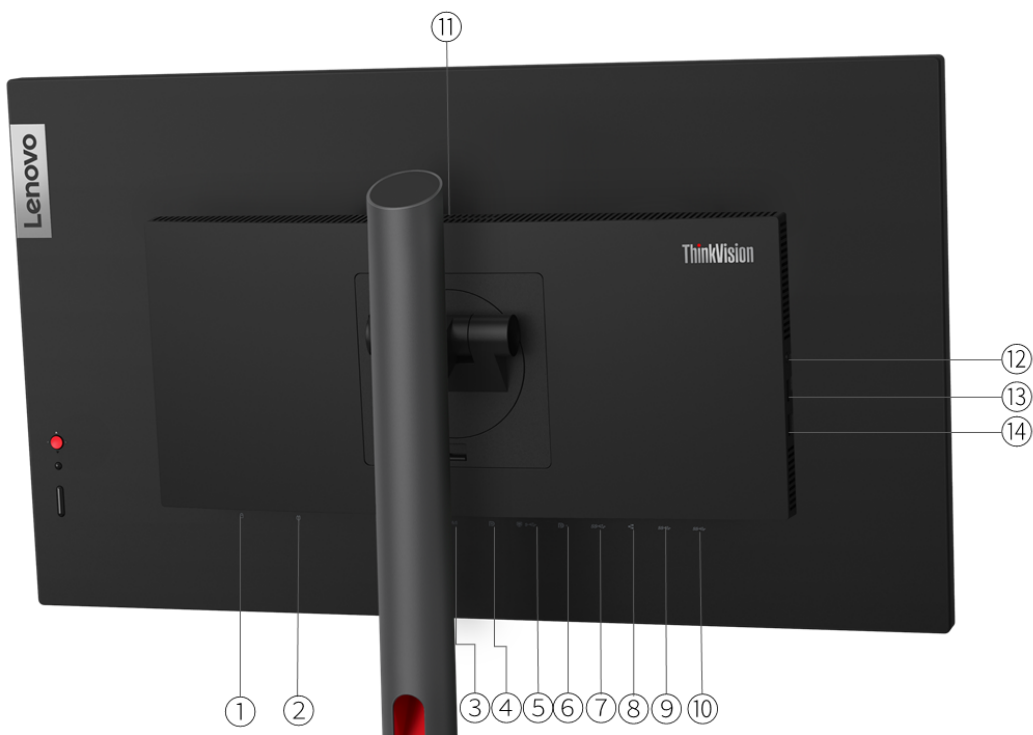
Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Kensington Security Slot	8. Ethernet (RJ-45)
2. Power Connector	9. USB 3.2 Gen 1
3. HDMI 2.0	10. USB 3.2 Gen 1
4. DP 1.4	11. USB 3.2 Gen 1 (BC)
5. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	12. Audio line-out (3.5mm)
6. DP out	13. USB 3.2 Gen 1
7. USB-B 3.2 Gen 1	14. USB-C 3.2 Gen 1 (15W)

PERFORMANCE

Panel

Panel

4-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.233 x 0.233 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 95% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

- Hard Coating (3H)
- Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 22W / 180W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 19W
- Energy Star TEC: 63kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- HDR10 Compliance
- KVM Switch
- Mirrored Power Button
The monitor's power button can be used to control the on/off and sleep modes of a compatible laptop when the two are connected via USB-C® port
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 2mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	611.9 x 204.5 x 380.3 mm (24.09 x 8.05 x 14.97 inches)
Highest Position	611.9 x 204.5 x 535.3 mm (24.09 x 8.05 x 21.07 inches)
Head Only	611.9 x 48.0 x 353.4 mm (24.09 x 1.89 x 13.91 inches)

Packaging Dimensions (WxDxH)

690 x 525 x 148 mm (27.17 x 20.67 x 5.83 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.9 kg (10.8 lbs)
Monitor With Stand	7.0 kg (15.4 lbs)

Packaging Weight

10.3 kg (22.71 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (for US, Canada, and Brazil only)
- 1x Power cable (1.8m)
- 1x USB-B to USB-A Cable (1.8m)
- 1x USB-C to USB-C Cable (1m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (15W), USB downstream
- 1x USB-C 3.2 Gen 1 (DP 1.4 32.4 Gbps for 4 lanes Alt Mode and up to 100W PD), USB upstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 100W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

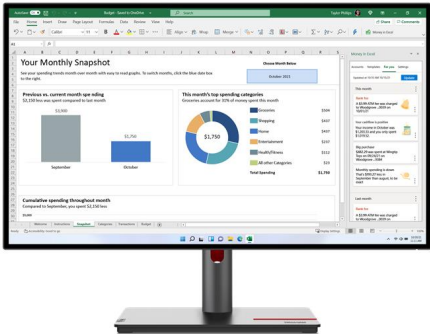
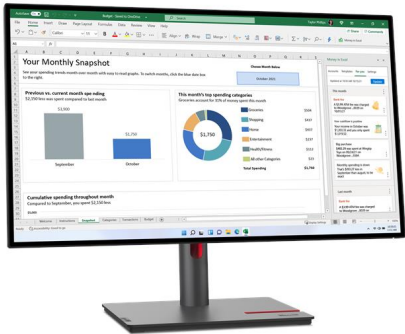
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power connector	8. Ethernet (RJ-45)
2. HDMI 2.1	9. USB 3.2 Gen 2
3. HDMI 2.1	10. USB 3.2 Gen 2
4. DP 1.4	11. Audio-out (3.5mm)
5. DP 1.4 out	12. USB-C 3.2 Gen 2
6. USB4 40Gbps	13. USB 3.2 Gen 2
7. USB-C 3.2 Gen 2	14. USB 3.2 Gen 2

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

Mini-LED (with 1152 zones local dimming)

Display Size

27 inches

Max View Area

WxH: 596.7x335.6 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.155 x 0.155 mm

Dot / Pixel Per Inch

163 dpi

Brightness

- Peak: 1200 cd/m²
- Typical: 650 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 100% BT.709
- 100% sRGB
- 81% BT.2020
- 99% Adobe® RGB
- 99% DCI-P3

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

Optional Modular Camera Support

Microphone

No microphone

Speakers

Optional Modular Soundbar support

Power Supply

Power Consumption

- Typical / Max: 26W / 315W
- Sleep / Off mode: <0.5W / <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 26W
- Energy Star TEC: 82.6kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- HDR10 Compliance
- DisplayHDR™ 1000
- HLG
- KVM Switch
- Smart Sensor (Ambient Light Sensor, Human Detection Sensor)
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device
- Factory Calibration: Avg. Delta E<1.5

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny / Nano devices, additional Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 27.1mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.5 x 220.4 x 397.8 mm (24.15 x 8.68 x 15.66 inches)
Highest Position	613.5 x 220.4 x 549.8 mm (24.15 x 8.68 x 21.65 inches)
Head Only	613.5 x 76.4 x 372.9 mm (24.15 x 3.01 x 14.68 inches)

Packaging Dimensions (WxDxH)

706 x 163 x 504 mm (27.8 x 6.41 x 19.84 inches)

Weight^[2]

Models	Weight
Monitor Head Only	6.2 kg (13.7 lbs)
Monitor With Stand	8.8 kg (19.4 lbs)

Packaging Weight

12 kg (26.5 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Gen 2 Cable (1m)
- 1x USB4® Cable (1m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports

- 1x USB-C 3.2 Gen 2 (support data transfer, up to 15W PD), USB downstream
- 1x USB-C 3.2 Gen 2, USB upstream
- 1x USB4 40Gbps (support data transfer, DP 1.4 Alt Mode and up to 140W PD), USB upstream
- 4x USB 3.2 Gen 2 (1x BC 1.2), USB downstream
- 2x HDMI 2.1
- 1x DisplayPort™ 1.4
- 1x DisplayPort 1.4 (Out)
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
- USB 2.0: 480 Mbit/s;
- USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
- USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
- USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
- USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
- Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™ (2.5 mm x 6 mm and 3 mm x 7 mm)

SERVICE**Warranty****Base Warranty**

3-year limited warranty

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (F-class)
- RoHS compliant
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

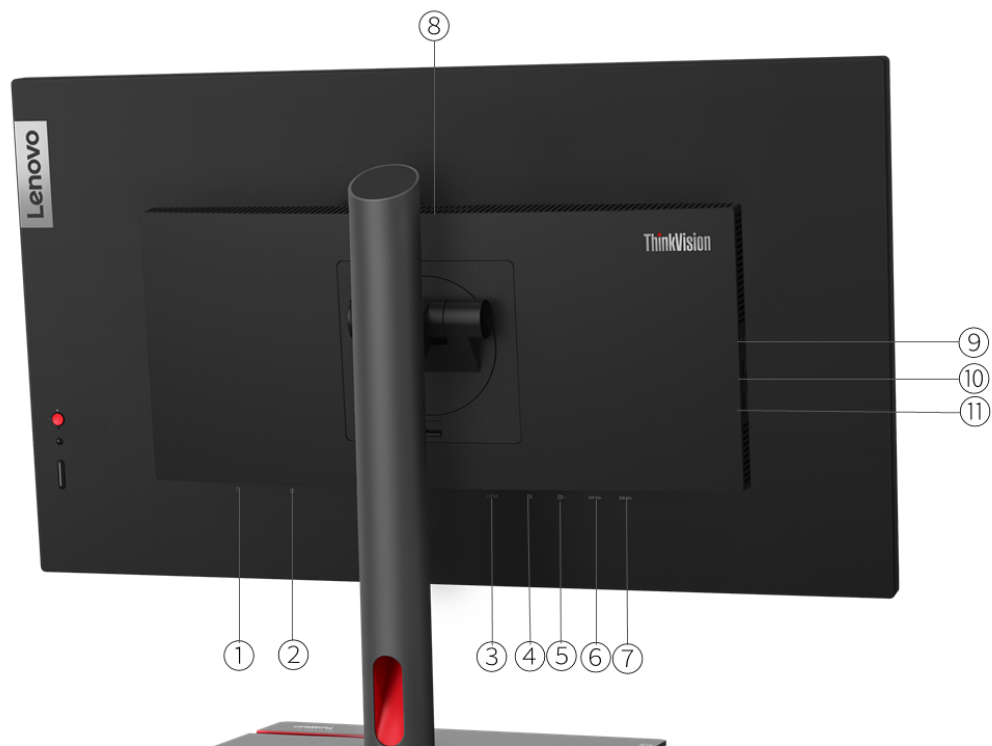
Other Certifications**Other Certifications**

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Kensington Security Slot	7. USB 3.2 Gen 1
2. Power Connector	8. USB 3.2 Gen 1 (BC)
3. HDMI 2.0	9. Audio line-out (3.5mm)
4. DP 1.4	10. USB 3.2 Gen 1
5. DP out	11. USB 3.2 Gen 1
6. USB-B 3.2 Gen 1	

PERFORMANCE

Panel

Panel

4-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.233 x 0.233 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

- 95% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

- Hard Coating (3H)
- Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 23W / 68W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 20W
- Energy Star TEC: 60kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- HDR10 Compliance
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 2mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	611.9 x 204.5 x 380.3 mm (24.09 x 8.05 x 14.97 inches)
Highest Position	611.9 x 204.5 x 535.3 mm (24.09 x 8.05 x 21.07 inches)
Head Only	611.9 x 48.0 x 353.4 mm (24.09 x 1.89 x 13.91 inches)

Packaging Dimensions (WxDxH)

690 x 148 x 525 mm (21.17 x 5.83 x 20.67 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.7 kg (10.4 lbs)
Monitor With Stand	6.8 kg (15.0 lbs)

Packaging Weight

10.0 kg (22.1 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

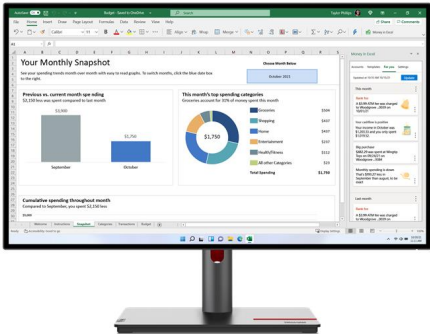
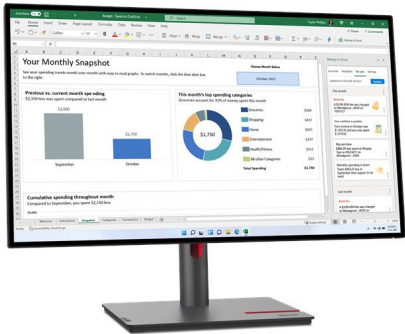
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	8. USB-B 3.2 Gen 1
2. Kensington Security Slot	9. HDMI 2.0
3. USB 3.2 Gen 1	10. HDMI 2.0
4. USB 3.2 Gen 1	11. DP 1.2
5. Ethernet (RJ-45)	12. Audio-out (3.5mm)
6. Thunderbolt 4 Out	13. USB-C 3.2 Gen 1
7. Thunderbolt 4 In	14. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.6 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.1554 x 0.1554 mm

Dot / Pixel Per Inch

163 dpi

Brightness

- Peak: 450 cd/m²
- Typical: 400 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 100% BT.709
- 100% sRGB
- 83.7% BT.2020
- 99.1% DCI-P3
- 99.5% Adobe® RGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 50 Monitor Webcam, sold separately)

- ThinkVision MC 50 monitor webcam (Some models only)

Speakers

- Integrated Speakers, 2x 3W
- Optional Soundbar support (PN: 0A36190)

Power Supply

Power Consumption

- Typical / Max: 35W / 240W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 26W
- Energy Star TEC: 97kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<1
- Shading Hood Support (To be ordered optionally with the monitor)
- Smart Light
- DisplayHDR™ 400
- Headset Rack
- KVM Switch
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny monitor clamp II (PN: 4XHOZ42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano monitor clamp II (PN: 4XHOZ42451) and Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 23.6mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.8 x 219.9 x 421.4 mm (24.16 x 8.66 x 16.59 inches)
Highest Position	613.8 x 219.9 x 556.4mm (24.16 x 8.66 x 21.90 inches)
Head Only	613.8 x 52.9 x 368.8 mm (24.16 x 2.08 x 14.52 inches)

Packaging Dimensions (WxDxH)

732 x 187 x 510 mm (28.82 x 7.36 x 20.08 inches)

Weight^[2]

Models	Weight
--------	--------

Monitor Head Only	5.5 kg (12.13 lbs)
Monitor With Stand	8.0 kg (17.6 lbs)

Packaging Weight

12.8 kg (28.22 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (for US, Canada only)
- 1x Power cable (1.8m)
- 1x Thunderbolt™ 4 cable (40Gbps)
- 1x USB-C® to USB-A Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports^[2]

- 1x Thunderbolt 4 In
- 1x Thunderbolt 4 Out
- 1x USB-C 3.2 Gen 1 (data transfer, up to 27W), USB downstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 3x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 2x HDMI® 2.0
- 1x DisplayPort™ 1.2
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
- USB 2.0: 480 Mbit/s;
- USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
- USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
- USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
- USB4 40Gbps (USB 40Gbps): 40 Gbit/s;
- Thunderbolt 3/4: 40 Gbit/s.
- [2] Up to 27W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Kensington Security Slot	4. VGA
2. Power Connector	5. Audio line-out (3.5mm)
3. HDMI 1.4	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

LED

Display Size

27 inches

Max View Area

WxH: 597.89 x 336.31 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.3114 x 0.3114 mm

Dot / Pixel Per Inch

82 dpi

Brightness

250 nits

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Speakers

Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 18W / 24W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star TEC: 48Wh

- Energy Star TEC: 115kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

AMD FreeSync™

AMD FreeSync technology only can work with AMD Radeon™ series graphics card.

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano

For supporting Tiny / Nano devices, additional Tiny / Nano VESA Mount Kits (PN: 4XFON03161) / (PN: 4XF0V81630) are needed (sold separately).

Bezel Width

- Side: 2.5mm
- Top / Bottom: 2.5mm / 22.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Head Only	612.5 x 43.2 x 367.7 mm (24.11 x 1.70 x 14.48 inches)
Unpacked with Stand	612.5 x 182.5 x 475.8 mm (24.11 x 7.18 x 18.73 inches)

Packaging Dimensions (WxDxH)

710 x 126 x 455 mm (27.95 x 4.96 x 17.91 inches)

Weight^[2]

Models	Weight
Monitor With Stand	4.6 kg (10.14 lbs)
Monitor Head Only	3.6 kg (7.94 lbs)

Packaging Weight

6.42 kg (14.15 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x HDMI® cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports

Rear Ports

- 1x HDMI 1.4
- 1x VGA
- 1x audio-out (3.5mm)
- 1x Power Connector

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- TCO Certified 8.0
- TCO edge 2.0
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

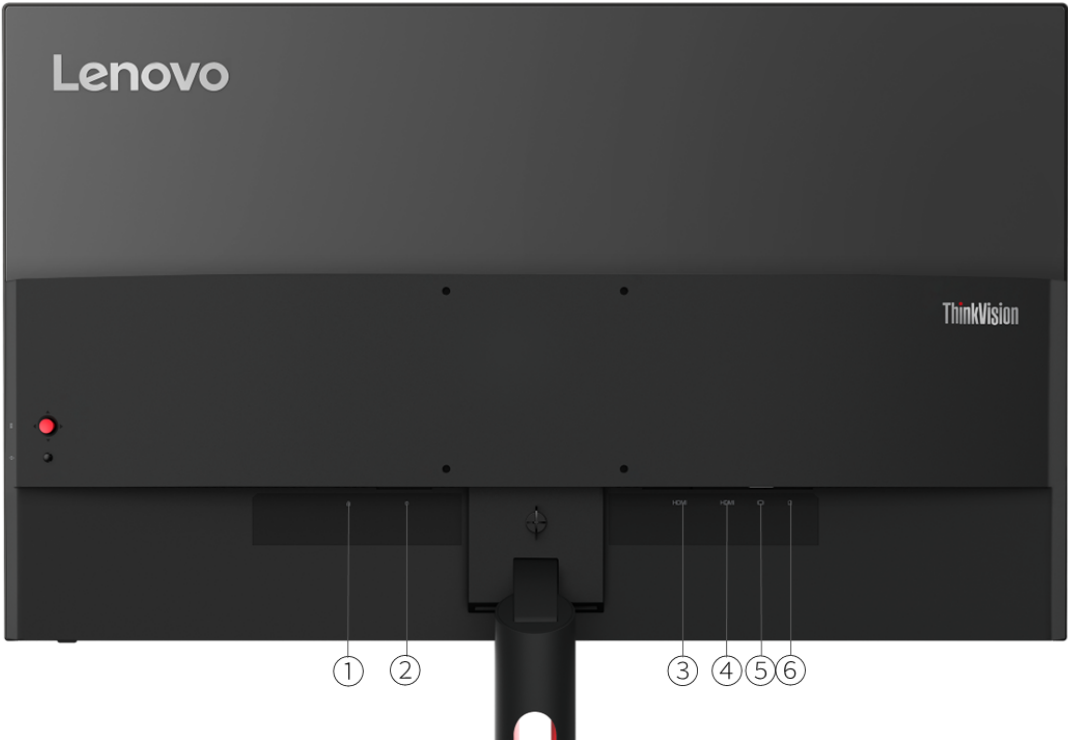
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Kensington Security Slot	4. HDMI 1.4
2. Power connector	5. VGA
3. HDMI 1.4	6. Audio-out (3.5mm)

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 597.9 x 336.3 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.311 x 0.311 mm

Dot / Pixel Per Inch

82 dpi

Brightness

Typical: 300 cd/m²

Contrast Ratio

Contrast Ratio: 1300:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

100Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 19.5W / 36W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 15.7W

- Energy Star TEC: 49.1kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Microsoft® Teams Certified

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional mount kits are needed (sold separately).
For supporting Nano devices, additional mount kits are needed (sold separately).

Bezel Width

- Side: 2.3mm
- Top / Bottom: 2.3mm / 21.0mm

Cable Management

Support

Case Color

Storm grey

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	612.3 x 184.9 x 475.0 mm (24.11 x 7.28 x 18.70 inches)
Highest Position	612.3 x 184.9 x 475.0 mm (24.11 x 7.28 x 18.70 inches)
Width of Head (Slimmest Part)	6.9 mm (0.27 inches)
Head Only	612.3 x 43.5 x 368.0 mm (24.11 x 1.71 x 14.49 inches)

Packaging Dimensions (WxDxH)

720 x 125 x 452 mm (28.35 x 4.92 x 17.8 inches)

Weight^[2]

Models	Weight
Monitor Head Only	3.6 kg (7.9 lbs)
Monitor With Stand	4.5 kg (9.9 lbs)

Packaging Weight

6.9 kg (15.2 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

supports -5° to +22° tilt

In the Box

- Monitor with Stand
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight

for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 2x HDMI 1.4
- 1x VGA
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (E-class)
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

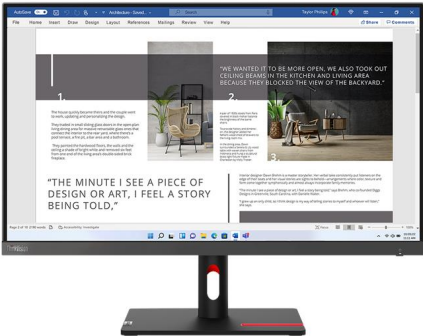
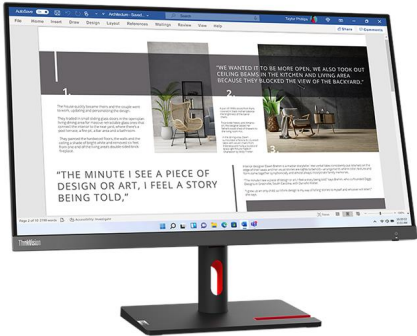
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	6. USB 3.1 Gen 1
2. HDMI 1.4	7. Audio-out (3.5mm)
3. DP 1.2	8. USB 3.1 Gen 1
4. USB-C 3.1 Gen 1 (DP 1.2 Alt Mode)	9. USB 3.1 Gen 1 (BC 1.2)
5. USB 3.1 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.74 x 335.66 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2331 x 0.2331 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 23W / 122W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 18.1W
- Energy Star TEC: 57.6kWh

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 23.87mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	208 x 614 x 564.4 mm (8.19 x 24.17 x 22.22 inches)
Highest Position	208 x 614 x 564.4 mm (8.19 x 24.17 x 22.22 inches)
Head Only	46.7 x 614.0 x 369.1 mm (1.84 x 24.17 x 14.53 inches)

Packaging Dimensions (WxDxH)

480 x 694 x 163 mm (18.90 x 27.32 x 6.42 inches)

Weight^[2]

Models	Weight
Monitor Head Only	5.09 kg (11.22 lbs)
Monitor With Stand	7.6 kg (16.76 lbs)

Packaging Weight

9.75 kg (21.5 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (NA only)
- 1x USB-C to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.1 Gen 1 (DP 1.2 Alt Mode and up to 75W PD), USB upstream
- 4x USB 3.1 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 75W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS (2002/95/EC)
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

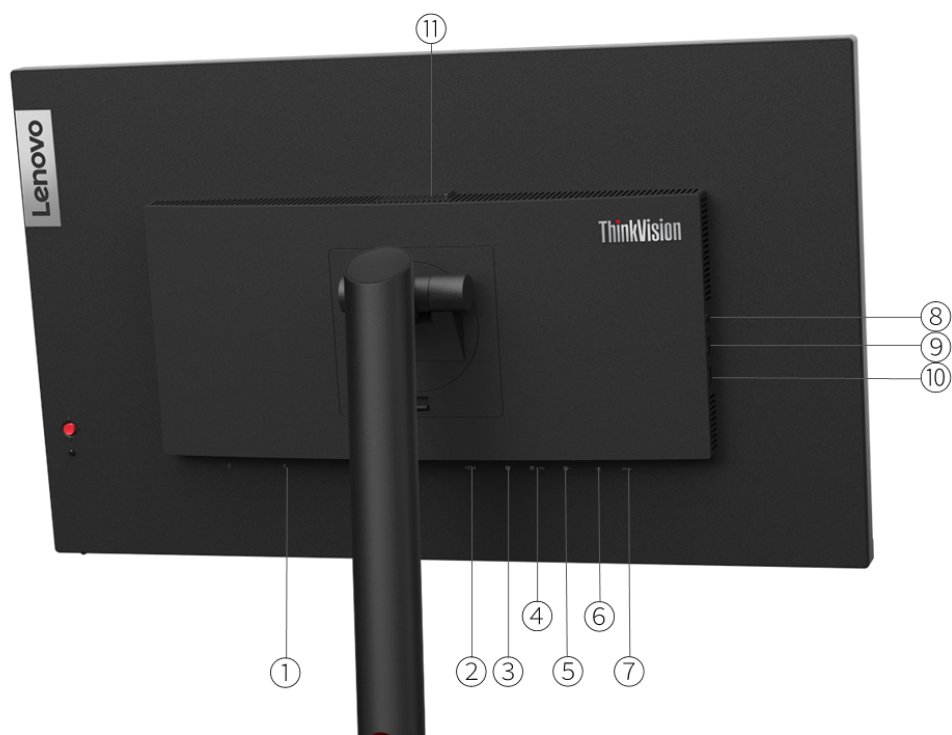
Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. USB 3.2 Gen 1
2. HDMI 2.0	8. Audio-out (3.5mm)
3. DisplayPort 1.4	9. USB 3.2 Gen 1
4. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	10. USB 3.2 Gen 1
5. DP out	11. USB 3.2 Gen 1 (BC 1.2)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.233 x 0.233 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 26W / 148W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 23W
- Energy Star TEC: 71kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.6 x 204.5 x 390.4 mm (24.16 x 8.05 x 15.37 inches)
Highest Position	613.6 x 204.5 x 545.4 mm (24.16 x 8.05 x 21.47 inches)
Head Only	613.6 x 50.0 x 363.5 mm (24.16 x 1.97 x 14.31 inches)

Packaging Dimensions (WxDxH)

690 x 148 x 525 mm (21.17 x 5.83 x 20.67 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.8 kg (10.6 lbs)
Monitor With Stand	6.9 kg (15.2 lbs)

Packaging Weight

10.1 kg (22.27 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (for US, Canada, and Brazil only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (for US, Canada, and Brazil only)
- 1x USB-C to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.4 Alt Mode and up to 90W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. USB 3.2 Gen 1
2. HDMI 1.4	8. USB 3.2 Gen 1
3. DP 1.2	9. USB 3.2 Gen 1
4. USB-C 3.2 Gen 1	10. USB 3.2 Gen 1 (BC 1.2)
5. DP out	11. Audio Combo (3.5mm)
6. Ethernet (RJ-45)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.74 x 335.66 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2331 x 0.2331 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

FHD 1080p + IR camera

Microphone

Integrated microphone

Speakers

Integrated Speakers, 2x 3W

Power Supply

Power Consumption

- Typical / Max: 25W / 148W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 20.59W
- Energy Star TEC: 66.74kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny monitor clamp II (PN: 4XHOZ42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano monitor clamp II (PN: 4XHOZ42451) and Nano VESA mount (PN: 4XFOV81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 50.07mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.6 x 208 x 473.6 mm (24.16 x 8.19 x 18.65 inches)
Highest Position	613.6 x 208 x 608.6 mm (24.16 x 8.19 x 23.96 inches)
Head Only	613.6 x 45.5 x 412.6 mm (24.16 x 1.79 x 16.24 inches)

Packaging Dimensions (WxDxH)

860 x 159 x 515 mm (33.86 x 6.26 x 20.28 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.85 kg (10.69 lbs)
Monitor With Stand	7.35 kg (16.20 lbs)

Packaging Weight

10.55 kg (23.26 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (NA only)
- 1x USB-C to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and to 90W PD), USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-combo (3.5mm, In/Out)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- EU Energy Label (F-class)
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Joystick	8. DP out
2. Source Key	9. Ethernet (RJ-45)
3. Kensington Security Slot	10. USB 3.2 Gen 1
4. Power Connector	11. USB 3.2 Gen 1
5. HDMI 2.1	12. Audio-combo (3.5mm, In/Out)
6. DP 1.4	13. USB 3.2 Gen 1
7. USB-C 3.2 Gen 1 (90W)	14. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side Borderless In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.233 x 0.233 mm

Dot / Pixel Per Inch

109 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

2592 x 1944, 5.0-megapixel, IR + RGB camera

Microphone

Integrated microphone

Speakers

Integrated Speakers, 2x 5W

Power Supply

Power Consumption

- Typical / Max: 30W / 168.5W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 21.1W
- Energy Star TEC: 69.5kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Smart Sensor (Ambient Light Sensor, Human Detection Sensor)
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2.1mm
- Top / Bottom: 2.1mm / 41.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.8 x 204.7 x 429.5mm (24.17 x 8.06 x 16.91 inches)
Highest Position	613.8 x 204.7 x 584.6 mm (24.17 x 8.06 x 23.02 inches)
Head Only	613.8 x 53.9 x 404.8mm (24.17 x 2.12 x 15.94 inches)

Packaging Dimensions (WxDxH)

720 x 160 x 510 mm (28.35 x 6.30 x 20.08 inches)

Weight^[2]

Models	Weight
Monitor Head Only	5.7 kg (12.6 lbs)
Monitor With Stand	7.9 kg (17.4 lbs)

Packaging Weight

10.9 kg (24.0 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, -90° to 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

Support 10M / 100M / 1000M

Ports^[1]**Rear Ports^[2]**

- 1x USB-C 3.2 Gen 1 (DP 1.4 alt mode, up to 90W), USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI® 2.1
- 1x DisplayPort™ 1.4
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-combo (3.5mm, In/Out)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY**Security****Physical Locks**

Kensington® Security Slot™

SERVICE**Warranty****Base Warranty**

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Joystick	7. USB-B 3.2 Gen 1
2. Source Key	8. USB 3.2 Gen 1
3. Power Connector	9. Audio-out (3.5mm)
4. HDMI 1.4	10. USB 3.2 Gen 1
5. DP 1.2	11. USB 3.2 Gen 1
6. VGA	12. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 597.9 x 336.3 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.3114 x 0.3114 mm

Dot / Pixel Per Inch

82 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms
- Off Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 24W / 65W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 15W
- Energy Star TEC: 50kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 17.6mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	611.9 x 204.5 x 389.3 mm (24.09 x 8.05 x 15.33 inches)
Highest Position	611.9 x 204.5 x 544.3 mm (24.09 x 8.05 x 21.43 inches)
Head Only	611.9 x 50.0 x 362.5 mm (24.08 x 1.97 x 14.27 inches)

Packaging Dimensions (WxDxH)

690 x 148 x 525 mm (21.17 x 5.83 x 20.67 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.9 kg (10.8 lbs)
Monitor With Stand	6.9 kg (15.2 lbs)

Packaging Weight

10.1 kg (22.27 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)

- 1x HDMI® Cable (1.8m) (Brazil only)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI 1.4
- 1x DisplayPort™ 1.2
- 1x VGA
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified
- TCO edge

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Joystick	8. Ethernet (RJ-45)
2. Source Key	9. USB 3.2 Gen 1
3. Kensington Security Slot	10. USB 3.2 Gen 1 (BC 1.2)
4. Power Connector	11. Audio-out (3.5mm)
5. HDMI 2.0	12. USB 3.2 Gen 1
6. DP 1.4	13. USB 3.2 Gen 1
7. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.7 x 335.7 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.155 x 0.155 mm

Dot / Pixel Per Inch

163 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1300:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 112% sRGB
- Coverage Ratio: 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+A-FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 35W / 165W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 29W
- Energy Star TEC: 91kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

Smart Power

The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support

For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	613.6 x 204.5 x 390.4 mm (24.16 x 8.05 x 15.37 inches)
Highest Position	613.6 x 204.5 x 545.4 mm (24.16 x 8.05 x 21.47 inches)
Head Only	613.6 x 50.0 x 363.5 mm (24.16 x 1.97 x 14.31 inches)

Packaging Dimensions (WxDxH)

690 x 148 x 525 mm (21.17 x 5.83 x 20.67 inches)

Weight^[2]

Models	Weight
Monitor Head Only	5.3 kg (11.7 lbs)
Monitor With Stand	7.3 kg (16.2 lbs)

Packaging Weight

10.4 kg (22.9 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA, Brazil only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (NA, Brazil only)
- 1x USB-C to USB-C Cable (1m)

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.4 32.4 Gbps for 4 lanes Alt Mode, up to 90W), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	6. USB 3.1 Gen 1
2. HDMI 1.4	7. Audio-out (3.5mm)
3. DP 1.2	8. USB 3.1 Gen 1
4. USB-B 3.1 Gen 1	9. USB 3.1 Gen 1 (BC)
5. USB 3.1 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

27 inches

Max View Area

WxH: 596.74 x 335.66 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.2331 x 0.2331 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

Coverage Ratio: 99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 23W / 65W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 17.4W
- Energy Star TEC: 54.4kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

DESIGN

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 23.87mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	208 x 614 x 429.4 mm (8.19 x 24.17 x 16.9 inches)
Highest Position	208 x 614 x 564.4mm (8.19 x 24.17 x 22.22 inches)
Head Only	46.7 x 614 x 369.1 mm (1.84 x 24.17 x 14.53 inches)

Packaging Dimensions (WxDxH)

480 x 694 x 163 mm (18.9 x 27.32 x 6.42 inches)

Weight^[2]

Models	Weight
Monitor Head Only	4.93 kg (10.87 lbs)
Monitor With Stand	7.44 kg (16.4 lbs)

Packaging Weight

9.59 kg (21.14 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

- 1x USB-B 3.1 Gen 1, USB upstream
- 4x USB 3.1 Gen 1 (1x BC), USB downstream
- 1x HDMI® 1.4
- 1x DisplayPort™ 1.2
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Power Connector	6. USB 3.2 Gen 1
2. HDMI 2.0	7. Ethernet (RJ-45)
3. DP 1.2	8. Audio-out (3.5mm)
4. USB-C 3.2 Gen 1 (DP 1.2 Alt Mode))	9. USB 3.2 Gen 1
5. USB-B 3.2 Gen 1	10. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

31.5 inches

Max View Area

WxH: 697.31 x 392.23 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.1816 x 0.1816 mm

Dot / Pixel Per Inch

140 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 90% DCI-P3
- 99% BT.709
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Multi-Media

Camera

- Optional Modular Camera Support
- ThinkVision® MC 50 monitor webcam (Some models only)

Speakers

Optional Soundbar support (PN: OA36190)

Power Supply

Power Consumption

- Typical / Max: 36W / 186W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 27W
- Energy Star TEC: 84kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Processor LUT: 14 bit
- Factory Calibration: Avg. Delta E<2
- KVM Switch
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny monitor clamp II (PN: 4XHOZ42451) and Tiny VESA mount II (PN: 4XFON03161) are needed (sold separately).
For supporting Nano devices, additional Nano monitor clamp II (PN: 4XHOZ42451) and Nano VESA mount (PN: 4XF0V81630) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 24.1mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	714.6 x 235.0 x 469.4 mm (28.13 x 9.25 x 18.48 inches)
Highest Position	714.6 x 235.0 x 604.4 mm (28.13 x 9.25 x 23.79 inches)
Head Only	51.0 x 714.6 x 426.0 mm (2.01 x 28.13 x 16.77 inches)

Packaging Dimensions (WxDxH)

845 x 528 x 190 mm (32.27 x 20.79 x 7.48 inches)

Weight^[2]

Models	Weight
Monitor Head Only	6.96 kg (15.34 lbs)
Monitor With Stand	10.21 kg (22.51 lbs)

Packaging Weight

13.3 kg (29.32 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, -90° to 90° pivot, up to 135mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (for US, Canada only)
- 1x Power cable (1.8m)
- 1x USB-A to USB-B Cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and to 90W PD), USB upstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 3x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.2
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Kensington Security Slot	8. USB-B 3.2 Gen 1
2. Power Connector	9. HDMI 2.0
3. USB 3.2 Gen 1	10. DP 1.4
4. USB 3.2 Gen 1	11. USB 3.2 Gen 1 (BC 1.2)
5. Ethernet (RJ-45)	12. Audio-out (3.5mm)
6. Thunderbolt 4 Out	13. USB 3.2 Gen 1
7. Thunderbolt 4 In	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

31.5 inches

Max View Area

WxH: 697.3 x 392.2 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.182 x 0.182 mm

Dot / Pixel Per Inch

140 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 100% sRGB
- 95% DCI-P3

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- Optional Modular Camera Support
- ThinkVision® MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 29.5W / 193.7W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 32.9W
- Energy Star TEC: 114.9kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- KVM Switch
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18.6mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	714.2 x 234.6 x 444.5 mm (28.12 x 9.24 x 17.50 inches)
Highest Position	714.2 x 234.6 x 599.5 mm (28.12 x 9.24 x 23.60 inches)
Unpacked Head Only	714.2 x 59.5 x 420.9 mm (28.12 x 2.34 x 16.57 inches)

Packaging Dimensions (WxDxH)

950 x 148 x 525 mm (37.40 x 5.83 x 20.67 inches)

Weight^[2]

Models	Weight
Monitor Head Only	7.2 kg (15.8 lbs)
Monitor With Stand	10.1 kg (22.2 lbs)

Packaging Weight

14.4 kg (31.7 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, -90° to +90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA only)
- 1x Power cable (1.8m)
- 1x Thunderbolt™ 4 cable (40Gbps)
- 1x USB-A to USB-B Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x Thunderbolt 4 In (Up to 100W), USB upstream
- 1x Thunderbolt 4 Out (Up to 27W), USB downstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

[2] Listed are maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

Mini-LED (with 1152 zones local dimming)

Display Size

31.5 inches

Max View Area

WxH: 697.3 x 392.2 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.182 x 0.182 mm

Dot / Pixel Per Inch

140 dpi

Brightness

- Peak: 1200 cd/m²
- Typical: 650 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 100% BT.709
- 100% sRGB
- 81% BT.2020
- 98% DCI-P3
- 99% Adobe® RGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

Flat Panel

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

Optional Modular Camera Support

Speakers

Optional Modular Soundbar support

Power Supply

Power Consumption

- Typical / Max: 32W / 305W
- Sleep / Off mode: <0.5W / <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 32.3W
- Energy Star TEC: 101.9kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- HDR10 Compliance
- DisplayHDR™ 1000
- HLG
- KVM Switch
- Smart Sensor (Ambient Light Sensor, Human Detection Sensor)
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device
- Factory Calibration: Avg. Delta E<1.5

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny / Nano devices, additional Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 29mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	714.2 x 234.9 x 456.6 mm (28.12 x 9.25 x 17.98 inches)
Highest Position	714.2 x 234.9 x 609 mm (28.12 x 9.25 x 23.98 inches)
Head Only	714.2 x 78.9 x 430.9 mm (28.12 x 3.11 x 16.96 inches)

Packaging Dimensions (WxDxH)

908 x 163 x 518 mm (35.75 x 6.42 x 20.39 inches)

Weight^[2]

Models	Weight
Monitor Head Only	7.6 kg (16.8 lbs)
Monitor With Stand	10.5 kg (23.1 lbs)

Packaging Weight

14.6 kg (32.2 lbs)

Mounting

Supports VESA mount 100 x 100 mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m)
- 1x HDMI® cable (1.8m)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Gen 2 Cable (1m)
- 1x USB4® Cable (1m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports

- 1x USB-C 3.2 Gen 2 (support data transfer, up to 15W PD), USB downstream
- 1x USB-C 3.2 Gen 2, USB upstream
- 1x USB4 40Gbps (support data transfer, DP 1.4 Alt Mode and up to 140W PD), USB upstream
- 4x USB 3.2 Gen 2 (1x BC 1.2), USB downstream
- 2x HDMI 2.1
- 1x DisplayPort™ 1.4
- 1x DisplayPort 1.4 (Out)
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™ (2.5 mm x 6 mm and 3 mm x 7 mm)

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- EU Energy Label (G-class)
- RoHS compliant
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Kensington Security Slot	8. DP out
2. Power Connector	9. Ethernet (RJ-45)
3. HDMI 2.0	10. USB 3.2 Gen 1
4. HDMI 2.0	11. USB 3.2 Gen 1
5. DP 1.2	12. Audio-out (3.5mm)
6. 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode))	13. USB-C 3.2 Gen 1
7. USB-B 3.2 Gen 1	14. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

34.14 inches

Max View Area

WxH: 799.8 x 334.8 mm

Resolution

3440 x 1440

Aspect Ratio

21:9

Pixel Pitch

0.2325 x 0.2325 mm

Dot / Pixel Per Inch

109 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

3800R

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 50 Monitor Webcam, sold separately)
- ThinkVision MC 50 monitor webcam (Some models only)

Microphone

- Built-in dual microphone in MC 50 (Models with MC 50 only)
- No microphone

Speakers

Integrated Speakers, 2x 3W

Power Supply

Power Consumption

- Typical / Max: 36W / 230W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 30W
- Energy Star TEC: 93kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- HDR Compliance
- DaisyChain Support (DP out)
- KVM Switch
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny, ThinkCentre M Series Nano
For supporting Tiny devices, additional Tiny Monitor Clamp II (PN: 4XH0Z42451) are needed (sold separately).
For supporting Nano devices, additional Nano Monitor Clamp II (PN: 4XH0Z42451) are needed (sold separately).

Bezel Width

- Side: 9.5mm
- Top / Bottom: 9.5mm / 28.4mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	817.3 x 245.0 x 469.3 mm (32.18 x 9.65 x 18.48 inches)
Highest Position	817.3 x 245.0 x 621.4 mm (32.18 x 9.65 x 24.46 inches)
Head Only	817.3 x 76.8 x 372.7 mm (32.18 x 3.02 x 14.67 inches)

Packaging Dimensions (WxDxH)

937 x 220 x 475 mm (36.89 x 8.66 x 18.70 inches)

Weight^[2]

Models	Weight
Monitor Head Only	7.4 kg (16.31 lbs)
Monitor With Stand	10.8 kg (23.81 lbs)

Packaging Weight

15.5 kg (34.17 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +35° tilt, left & right 45 swivel, up to 150mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-A Cable (1.8m) (NA only)
- 1x USB-C to USB-C Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]**Rear Ports^[2]**

- 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode and up to 100W PD), USB upstream
- 1x USB-C 3.2 Gen 1, USB downstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 3x USB 3.2 Gen 1, USB downstream
- 2x HDMI® 2.0
- 1x DisplayPort™ 1.2
- 1x DisplayPort out
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 100W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- EU Energy Label (F-class)
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	7. Thunderbolt 4
2. USB-C 3.2 Gen 1	8. Thunderbolt 4
3. USB 3.2 Gen 1	9. USB-B 3.2 Gen 1
4. Audio-out (3.5mm)	10. 3x USB 3.2 Gen 1
5. HDMI 2.0	11. Ethernet (RJ-45)
6. DP 1.4	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

39.7 inches

Max View Area

WxH: 929.3 x 392 mm

Resolution

5120 x 2160

Aspect Ratio

21:9

Pixel Pitch

0.1815 x 0.1815 mm

Dot / Pixel Per Inch

140 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

75Hz (Thunderbolt™ and DisplayPort™ only)

Color Gamut

- 98% DCI-P3
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit

Screen Surface Treatment

Anti-glare

Curvature

2500R

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 50 Monitor Webcam, sold separately)
- ThinkVision MC 50 monitor webcam (Some models only)

Microphone

- Built-in dual microphone in MC 50 (Models with MC 50 only)
- No microphone

Power Supply

Power Consumption

- Typical / Max: 66W / 250W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 53W
- Energy Star TEC: 168kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- HDR10 Compliance
- KVM Switch
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 23mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	947.6 x 279.4 x 511.2mm (37.30 x 11.00 x 20.12 inches)
Highest Position	947.6 x 279.4 x 641.2 mm (37.30 x 11.00 x 25.24 inches)
Head Only	947.6 x 100.8 x 428.7mm (37.30 x 3.96 x 16.88 inches)

Packaging Dimensions (WxDxH)

1085 x 275 x 526 mm (42.71 x 10.82 x 20.70 inches)

Weight^[2]

Models	Weight
Monitor Head Only	9.9 kg (21.83 lbs)
Monitor With Stand	14.6 kg (32.19 lbs)

Packaging Weight

20 kg (44.09 lbs)

Mounting

Supports VESA mount 100 x 100 mm & 200 x 100 mm

Stand

Supports -5° to +22° tilt, left & right 45 swivel, up to 130mm lift

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x Thunderbolt 4 cable (40Gbps)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports

- 2x Thunderbolt 4
- 1x USB-C® 3.2 Gen 1 (27W), USB downstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort 1.4
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. USB-C 3.2 Gen 1	7. Thunderbolt 4 Out
2. USB 3.2 Gen 1	8. Thunderbolt 4 In
3. Audio line-out (3.5mm)	9. USB-B 3.2 Gen 1
4. USB 3.2 Gen 1	10. HDMI 2.1
5. USB 3.2 Gen 1	11. HDMI 2.1
6. Ethernet (RJ-45)	12. DP 1.4

PERFORMANCE

Panel

Panel

3-side Borderless In-Plane Switching

Backlight

WLED

Display Size

49 inches

Max View Area

WxH: 1198.1 x 337.0 mm

Resolution

5120 x 1440

Aspect Ratio

32:9

Pixel Pitch

0.234 x 0.234 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 2000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

98% DCI-P3

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Curvature

3800R

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- Optional Modular Camera Support
- ThinkVision® MC 60 monitor webcam (Some models only)

Speakers

- Integrated Speakers, 2x 5W
- Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 58W / 265W
- Sleep / Off mode: 0.5W
- Switch-off Mode: 0.3W
- Energy Star Power On: 54W
- Energy Star TEC: 167kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Factory Calibration: Avg. Delta E<2
- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- True Split
- KVM Switch
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2.1mm
- Top / Bottom: 2.1mm / 19.7mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	1215.1 x 253.9 x 421.3 mm (47.84 x 9.99 x 16.59 inches)
Highest Position	1215.1 x 253.9 x 576.3 mm (47.84 x 9.99 x 22.69 inches)
Unpacked Head Only	1215.1 x 110.4 x 370.1 mm (47.84 x 4.35 x 14.57 inches)

Packaging Dimensions (WxDxH)

1310 x 282 x 525 mm (51.57 x 11.10 x 20.67 inches)

Weight^[2]

Models	Weight
Monitor Head Only	11.1 kg (24.5 lbs)
Monitor With Stand	15.8 kg (34.8 lbs)

Packaging Weight

23.3 kg (51.4 lbs)

Mounting

Supports VESA mount 100 x 100 mm & 200 x 100 mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (NA, LA only)
- 1x Power cable (1.8m)
- 1x Thunderbolt™ 4 cable (40Gbps)
- 1x USB-A to USB-B Cable (1.8m)
- Factory Calibration Report
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network**Ethernet**

Support 10M / 100M / 1000M

Ports^[1]**Rear Ports**

- 1x Thunderbolt 4 In (Up to 100W), USB upstream
- 1x Thunderbolt 4 Out (Up to 27W), USB downstream
- 1x USB-C® 3.2 Gen 1 (15W), USB downstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1, USB downstream
- 2x HDMI® 2.1
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security**Physical Locks**

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- ENERGY STAR® Certified
- EPEAT™ Gold Registered
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

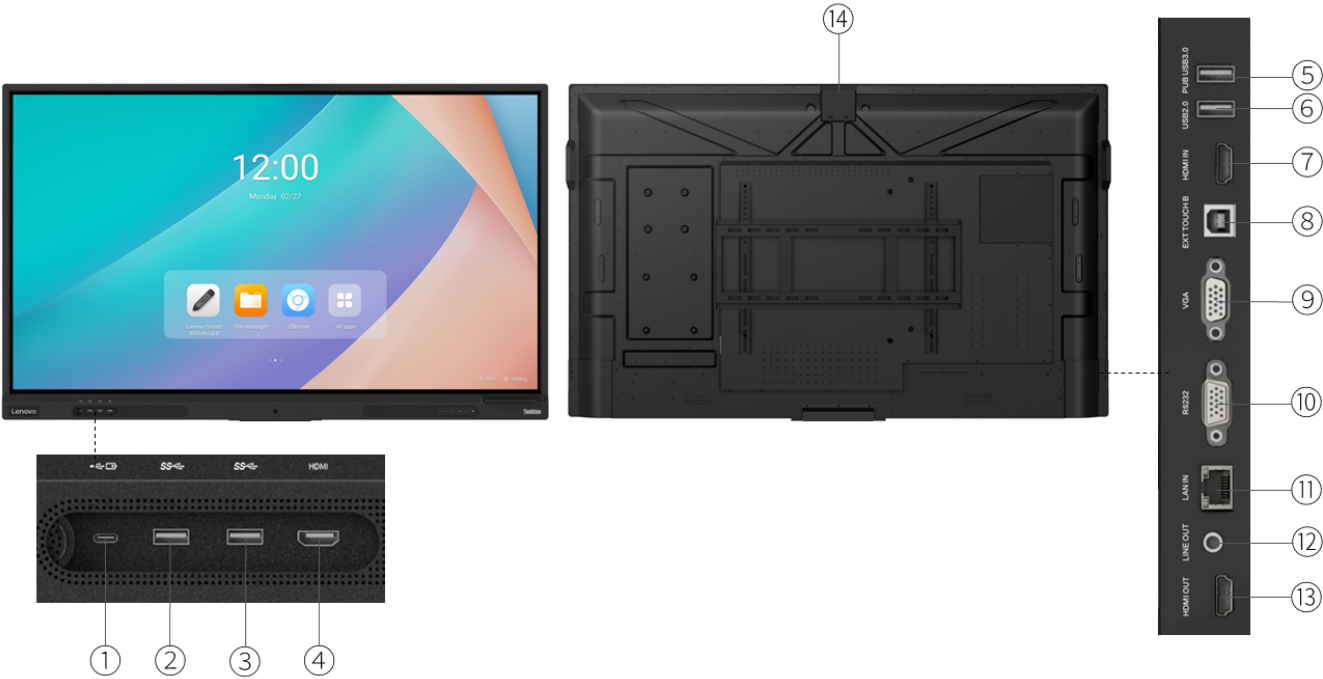
Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. USB-C (DP 1.2 Alt mode)	8. USB-B Touch
2. USB 3.2 Gen 1	9. VGA
3. USB 3.2 Gen 1	10. Serial (RS232)
4. HDMI 2.1 TMDS	11. Ethernet (RJ-45)
5. USB 3.2 Gen 1	12. Line-out (3.5mm)
6. USB 2.0	13. HDMI out
7. HDMI 2.1 TMDS	14. USB 2.0

PERFORMANCE

Panel

Panel

Vertical Alignment (VA)

Backlight

DLED

Display Size

65 inches

Max View Area

WxH: 1428.5 x 803.5 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.372 x 0.372 mm

Dot / Pixel Per Inch

67 dpi

Brightness

- Peak: 450 cd/m²
- Typical: 400 cd/m²

Contrast Ratio

Contrast Ratio: 4000:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

8.5 ms

Refresh Rate

60Hz

Color Gamut

85% NTSC

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Smart System

Smart System

- Operating System: Android™ 11.0
- Quad Core™: ARM Cortex A55
- Storage: 32 GB
- GPU: ARM Mali-G52 MC2
- Memory: 4 GB

Operating System

Operating System

Android 11

Multi-Media

Speakers

Integrated Speakers, 2x 15W

Power Supply

Power Consumption

Max: 174W

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

1x Ambient Light Sensor

DESIGN

Display

Touchscreen

Infrared touch technology, supports 20-point touch, 1.0 mm touch accuracy, 3.2 mm touch glass, 8 Mohs glass hardness

Mechanical

Bezel Width

- Side: 19.28mm
- Top / Bottom: 19.28mm / 69.33mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

1487.2 x 90 x 916.6 mm (58.6 x 3.5 x 36.1 inches)

Packaging Dimensions (WxDxH)

1690 x 210 x 1060 mm (66.5 x 8.3 x 41.7 inches)

Weight^[2]

37.5 kg (82.7 lbs)

Packaging Weight

49.5 kg (109.1 lbs)

Mounting

Supports VESA mount 500 x 400 mm

In the Box

- 1x Guarantee Guide
- 1x HDMI® cable
- 1x IR remote control
- 1x Quick Setup Guide
- 1x Remote control battery
- 1x USB-A to USB-B Cable
- 1x power cord
- 2x Stylus

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth®

- 802.11ac 2x2 Wi-Fi® + Bluetooth 5.1 (both 2.4GHz and 5GHz bands)
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2 (both 2.4GHz and 5GHz bands)

Ports^[1]**Front Ports**

- 1x USB-C® (DP 1.2 Alt Mode)
- 2x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS

Rear Ports

- 1x USB 2.0
- 1x USB 3.2 Gen 1
- 1x USB-B, Touch
- 1x HDMI 2.1 TMDS
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)
- 1x serial (9-pin, RS232)
- 1x HDMI out

Top Ports

1x USB 2.0

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE**Warranty****Base Warranty**

3-year limited warranty

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- ENERGY STAR® Certified
- EU Energy Label (G-class)
- RoHS compliant

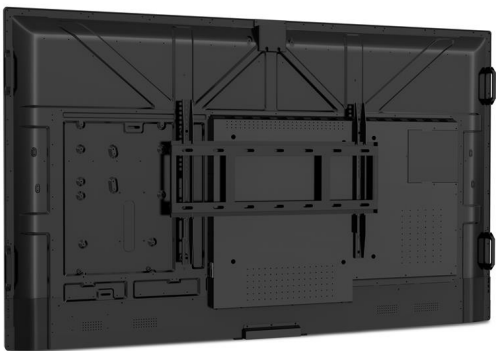
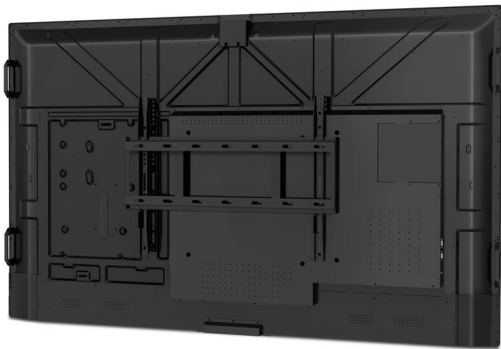
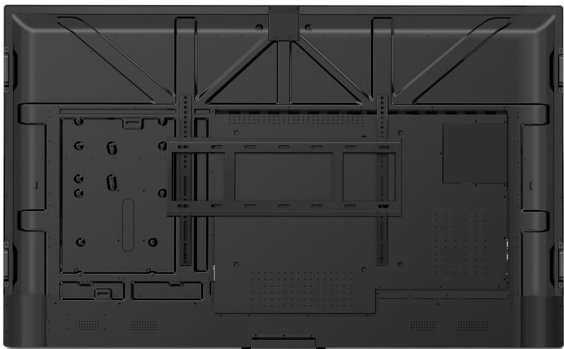
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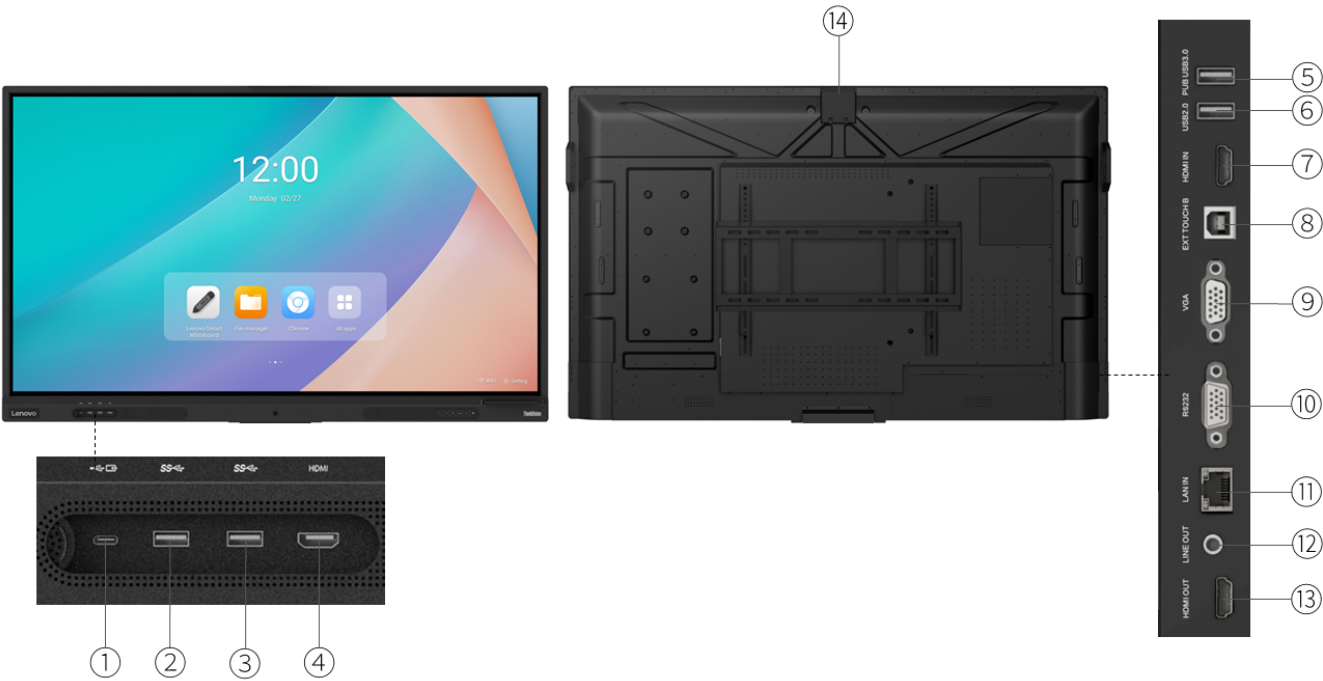
Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. USB-C (DP 1.2 Alt mode)	8. USB-B Touch
2. USB 3.2 Gen 1	9. VGA
3. USB 3.2 Gen 1	10. Serial (RS232)
4. HDMI 2.1 TMDS	11. Ethernet (RJ-45)
5. USB 3.2 Gen 1	12. Line-out (3.5mm)
6. USB 2.0	13. HDMI out
7. HDMI 2.1 TMDS	14. USB 2.0

PERFORMANCE

Panel

Panel

Vertical Alignment (VA)

Backlight

DLED

Display Size

75 inches

Max View Area

WxH: 1650.2 x 928.3 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.429 x 0.429 mm

Dot / Pixel Per Inch

58.7 dpi

Brightness

- Peak: 450 cd/m²
- Typical: 400 cd/m²

Contrast Ratio

Contrast Ratio: 4000:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

8.5 ms

Refresh Rate

60Hz

Color Gamut

85% NTSC

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Smart System

Smart System

- Operating System: Android™ 11.0
- Quad Core™: ARM Cortex A55
- Storage: 32 GB
- GPU: ARM Mali-G52 MC2
- Memory: 4 GB

Operating System

Operating System

Android 11

Multi-Media

Speakers

Integrated Speakers, 2x 15W

Power Supply

Power Consumption

Max: 223W

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

1x Ambient Light Sensor

DESIGN

Display

Touchscreen

Infrared touch technology, supports 20-point touch, 1.0 mm touch accuracy, 3.2 mm touch glass, 8 Mohs glass hardness

Mechanical

Bezel Width

- Side: 19.28mm
- Top / Bottom: 19.28mm / 69.33mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

1709 x 91 x 1041 mm (67.3 x 3.6 x 41 inches)

Packaging Dimensions (WxDxH)

1920 x 210 x 1150 mm (75.6 x 8.3 x 45.3 inches)

Weight^[2]

50.6 kg (111.6 lbs.)

Packaging Weight

64.1 kg (141.3 lbs)

Mounting

Supports VESA mount 600 x 400 mm

In the Box

- 1x Guarantee Guide
- 1x HDMI® cable
- 1x IR remote control
- 1x Quick Setup Guide
- 1x Remote control battery
- 1x USB-A to USB-B Cable
- 1x power cord
- 2x Stylus

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth®

- 802.11ac 2x2 Wi-Fi® + Bluetooth 5.1 (both 2.4GHz and 5GHz bands)
- Wi-Fi 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2 (both 2.4GHz and 5GHz bands)

Ports^[1]**Front Ports**

- 1x USB-C® (DP 1.2 Alt Mode)
- 2x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS

Rear Ports

- 1x USB 2.0
- 1x USB 3.2 Gen 1
- 1x USB-B, Touch
- 1x HDMI 2.1 TMDS
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)
- 1x serial (9-pin, RS232)
- 1x HDMI out

Top Ports

1x USB 2.0

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

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USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE**Warranty****Base Warranty**

3-year limited warranty

CERTIFICATIONS**Green Certifications^[1]****Green Certifications**

- ENERGY STAR® Certified
- EU Energy Label (G-class)
- RoHS compliant

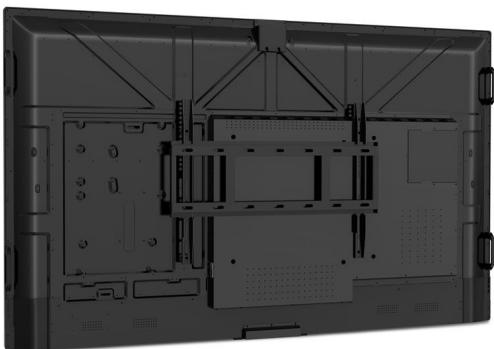
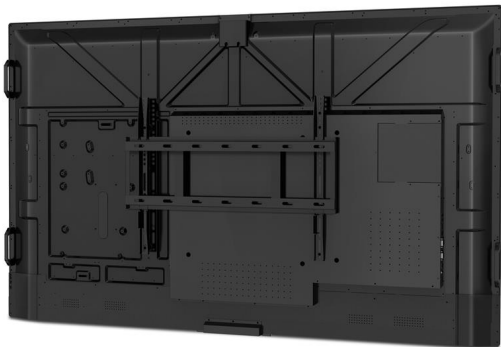
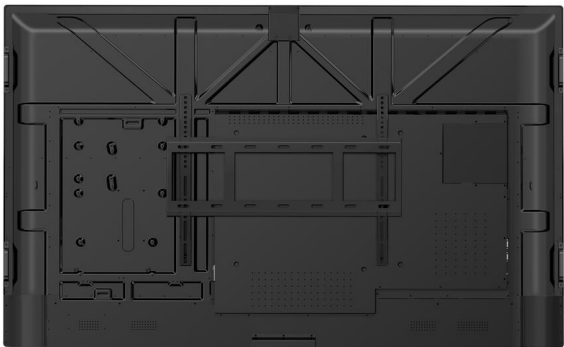
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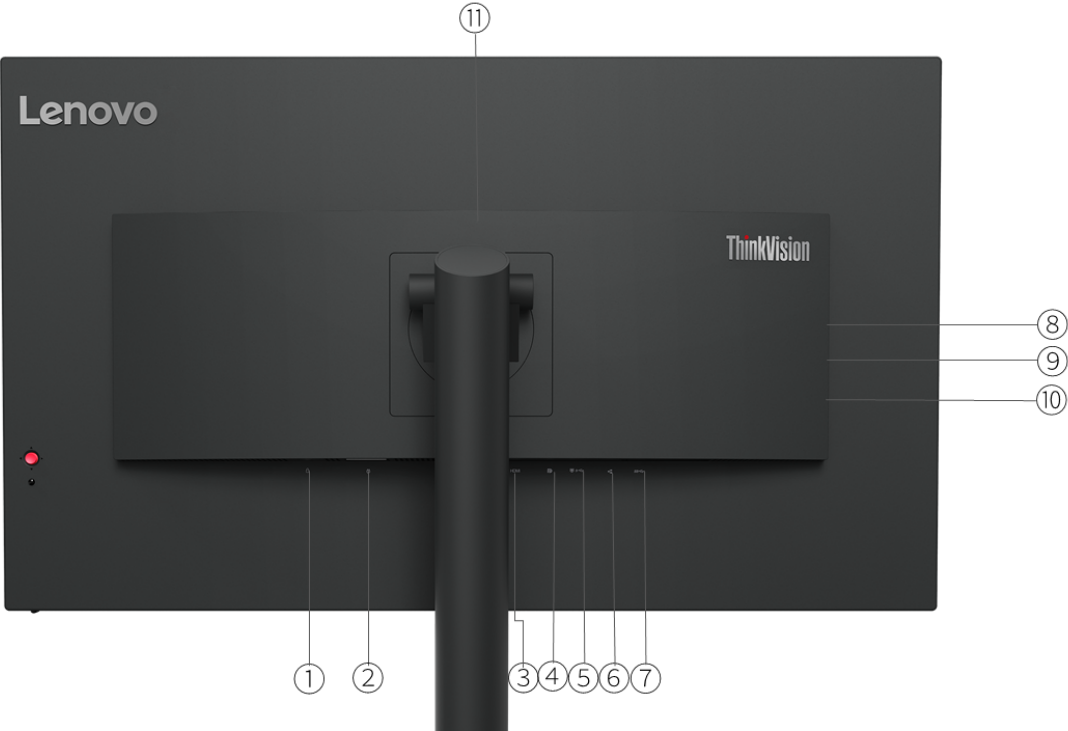
Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Kensington Security Slot	6. Ethernet (RJ-45)
2. Power Connector	7. USB 3.2 Gen 1
3. HDMI 2.0	8. Audio-out (3.5mm)
4. DisplayPort 1.4	9. USB 3.2 Gen 1
5. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	10. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

31.5 inches

Max View Area

WxH: 698.1 x 392.7 mm

Resolution

2560 x 1440

Aspect Ratio

16:9

Pixel Pitch

0.273 x 0.273 mm

Dot / Pixel Per Inch

93 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 130% sRGB
- Coverage Ratio: 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 32W / 153W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 26W
- Energy Star TEC: 82.6kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18.6mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	714.2 x 234.9 x 444.5 mm (28.12 x 9.25 x 17.50 inches)
Highest Position	714.2 x 234.9 x 599.5 mm (28.12 x 9.25 x 23.60 inches)
Head Only	714.2 x 59.5 x 420.9 mm (28.12 x 2.34 x 16.57 inches)

Packaging Dimensions (WxDxH)

950 x 525 x 148 mm (37.40 x 20.67 x 5.83 inches)

Weight^[2]

Models	Weight
Monitor Head Only	7.2 kg (15.9 lbs)
Monitor With Stand	9.9 kg (21.83 lbs)

Packaging Weight

14.0 kg (30.9 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.4 Alt Mode and up to 90W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS (2011/65/EU)
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

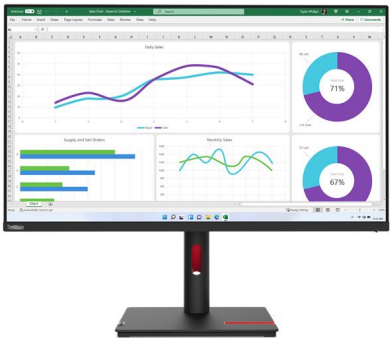
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications**Other Certifications**

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Kensington Security Slot	7. Ethernet (RJ-45)
2. Power Connector	8. USB 3.2 Gen 1
3. HDMI 2.0	9. Audio-out (3.5mm)
4. DisplayPort 1.4	10. USB 3.2 Gen 1
5. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	11. USB 3.2 Gen 1
6. USB-B 3.2 Gen 1	12. USB 3.2 Gen 1 (BC 1.2)

PERFORMANCE

Panel

Panel

3-side NearEdgeless, In-Plane Switching

Backlight

WLED

Display Size

31.5 inches

Max View Area

WxH: 697.3 x 392.2 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.182 x 0.182 mm

Dot / Pixel Per Inch

140 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

- 100% sRGB
- 95% DCI-P3

Color Support

1.07 Billion

Color Depth

10-bit (8-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 32W / 161W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 32W
- Energy Star TEC: 99kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Picture In Picture (PIP) / Picture By Picture (PBP) Support
- KVM Switch
- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2mm
- Top / Bottom: 2mm / 18.6mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	714.2 x 234.9 x 444.5 mm (28.12 x 9.25 x 17.50 inches)
Highest Position	714.2 x 234.9 x 599.5 mm (28.12 x 9.25 x 23.60 inches)
Head Only	714.2 x 59.5 x 420.9 mm (28.12 x 2.34 x 16.57 inches)

Packaging Dimensions (WxDxH)

950 x 525 x 148 mm (37.40 x 20.67 x 5.83 inches)

Weight^[2]

Models	Weight
Monitor Head Only	7.2 kg (15.9 lbs)
Monitor With Stand	10.0 kg (22.0 lbs)

Packaging Weight

14.0 kg (30.86 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, 90° pivot, up to 155mm lift

In the Box

- Monitor with Stand
- 1x Power cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.2 Gen 1 (DP 1.4 Alt Mode and up to 90W PD), USB upstream
- 1x USB-B 3.2 Gen 1, USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 90W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Power Connector	6. USB 3.1 Gen 1
2. HDMI 2.0	7. Audio-out (3.5mm)
3. DP 1.2	8. USB 3.1 Gen 1
4. USB-C 3.1 Gen 1 (DP 1.2 Alt Mode)	9. USB 3.1 Gen 1 (BC)
5. USB 3.1 Gen 1	

PERFORMANCE

Panel

Panel

3-side NearEdgeless, VA

Backlight

WLED

Display Size

34 inches

Max View Area

WxH: 797.2 x 333.7 mm

Resolution

3440 x 1440

Aspect Ratio

21:9

Pixel Pitch

0.2317 x 0.2317 mm

Dot / Pixel Per Inch

109 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 3000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Curvature

1500R

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 46W / 140W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.5W
- Energy Star Power On: 34W
- Energy Star TEC: 107kWh
- Internal Power Supply

Voltage Required
AC 100 to 240 V (50-60Hz)

Special Features

Special Features
Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

Bezel Width
• Side: 2.2mm
• Top / Bottom: 2.2mm / 27.8mm

Cable Management
Support

Case Color
Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	808.6 x 245.0 x 462.4 mm (31.84 x 9.65 x 18.21 inches)
Highest Position	808.6 x 245.0 x 597.4 mm (31.84 x 9.65 x 23.52 inches)
Head Only	808.6 x 106.1 x 372.6 mm (31.84 x 4.18 x 14.67 inches)

Packaging Dimensions (WxDxH)
980 x 523 x 250 mm (38.58 x 20.59 x 9.84 inches)

Weight^[2]

Models	Weight
Monitor Head Only	6.91 kg (15.23 lbs)
Monitor With Stand	9.91 kg (21.85 lbs)

Packaging Weight
13.85 kg (30.53 lbs)

Mounting
Supports VESA mount 100mm

Stand
Supports -5° to +35° tilt, left & right 45 swivel, up to 135mm lift

- In the Box**
- Monitor with Stand
 - 1x DP Cable (1.8m) (NA only)
 - 1x Power cable (1.8m)
 - 1x USB-C® to USB-A Cable (1.8m) (NA only)
 - 1x USB-C to USB-C Cable (1.8m)
 - Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports^[2]

- 1x USB-C 3.1 Gen 1 (DP 1.2 Alt Mode and up to 75W PD), USB upstream
- 4x USB 3.1 Gen 1 (1x BC), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.2
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 75W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- TCO Certified 8.0
- TCO edge 2.0

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

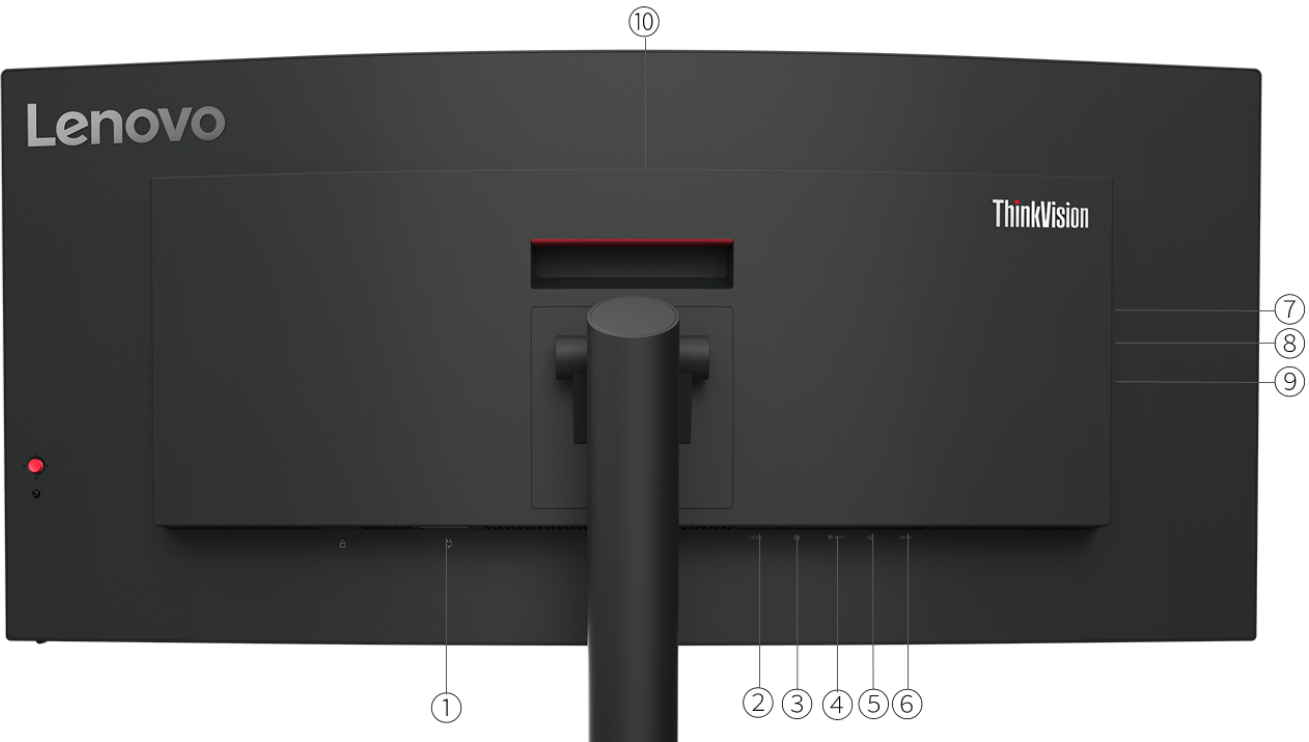
TÜV Rheinland® Eye Comfort Certification

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OVERVIEW



1. Power Connector	6. USB 3.2 Gen 1
2. HDMI 2.0	7. Audio-out (3.5mm)
3. DP 1.4	8. USB 3.2 Gen 1
4. USB-C 3.2 Gen 1 (DP 1.4 Alt Mode)	9. USB 3.2 Gen 1
5. Ethernet (RJ-45)	10. USB 3.2 Gen 1

PERFORMANCE

Panel

Panel

3-side NearEdgeless, VA

Backlight

WLED

Display Size

34 inches

Max View Area

WxH: 792.2 x 333.7 mm

Resolution

3440 x 1440

Aspect Ratio

21:9

Pixel Pitch

0.232 x 0.232 mm

Dot / Pixel Per Inch

110 dpi

Brightness

350 cd/m²

Contrast Ratio

- Contrast Ratio: 3000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 4 ms
- Normal Mode: 6 ms

Refresh Rate

60Hz

Color Gamut

99% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Curvature

1500R

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Multi-Media

Camera

- No bundled webcam (Support ThinkVision® MC 60 Monitor Webcam, sold separately)
- ThinkVision MC 60 monitor webcam (Some models only)

Speakers

Optional Modular Soundbar support (MS30 Monitor Soundbar)

Power Supply

Power Consumption

- Typical / Max: 31W / 130W
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 30W
- Energy Star TEC: 93kWh
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10 and Windows 11
- Smart Power
The Smart Power function intelligently detects overall power consumption and dynamically manages the power delivery to each device

DESIGN

Mechanical

ThinkCentre® M Series Support

ThinkCentre M Series Tiny Support
For supporting Tiny devices, additional Tiny Clamp Bracket Mounting Kit III (PN: 4XF1K72399) are needed (sold separately).

Bezel Width

- Side: 2.1mm
- Top / Bottom: 2.1mm / 22.8mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	808.4 x 231.6 x 414.3 mm (31.83 x 9.12 x 16.31 inches)
Highest Position	808.4 x 231.6 x 569.3 mm (31.83 x 9.12 x 22.41 inches)
Head Only	808.4 x 110.1 x 367.5 mm (31.83 x 4.33 x 14.47 inches)

Packaging Dimensions (WxDxH)

1070 x 525 x 187 mm (42.13 x 20.67 x 7.36 inches)

Weight^[2]

Models	Weight
Monitor Head Only	7.0 kg (15.43 lbs)
Monitor With Stand	9.5 kg (20.94 lbs)

Packaging Weight

14.8 kg (32.63 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +23.5° tilt, left & right 45 swivel, up to 155mm lift

In the Box

- Monitor with Stand
- 1x DP Cable (1.8m) (PRC Workstations only)
- 1x Power cable (1.8m)
- 1x USB-C® to USB-C Cable (1.8m)
- Quick Setup Guide
- Warranty Booklet

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY**Network****Ethernet**

Support 10M / 100M / 1000M

Ports^[1]**Rear Ports^[2]**

- 1x USB-C 3.2 Gen 1 (DP 1.4 Alt Mode and up to 75W PD), USB upstream
- 4x USB 3.2 Gen 1 (1x BC 1.2), USB downstream
- 1x HDMI® 2.0
- 1x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x Power Connector
- 1x audio-out (3.5mm)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

[2] Up to 75W power delivery to compatible devices by USB-C. Listed as maximum capacity of power delivery. Actual capacity of power delivery may vary depending upon devices connected or monitor configuration, and may decline with downstream USB ports connected or higher brightness setting.

SECURITY & PRIVACY**Security****Physical Locks**

Kensington® Security Slot™

SERVICE**Warranty****Base Warranty**

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Gold Registered^[2]
- RoHS compliant
- TCO Certified 9.0
- TCO edge 2.0
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified 2.0
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. USB-B Touch	12. LAN Out (RJ45 Out)
2. HDMI 2.0	13. USB 2.0
3. USB 3.0	14. AV In
4. USB-C 3.0	15. PC Audio
5. TF Card Slot	16. USB-C 3.0
6. Line-in (3.5mm)	17. 2x USB 3.0
7. SPDIF Out	18. DP
8. Line-out (3.5mm)	19. 3x HDMI 2.0
9. HDMI 2.0 Out	20.USB-B Touch
10. Serial (RS232)	21. VGA
11. LAN In (RJ45 In)	22. USB 2.0

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

DLED

Display Size

65 inches

Max View Area

WxH: 1428.5 x 803.5 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.3720 x 0.3720 mm

Dot / Pixel Per Inch

67 dpi

Brightness

400 cd/m²

Contrast Ratio

- Contrast Ratio: 1200:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

8 ms

Refresh Rate

60Hz

Color Gamut

- 85% NTSC
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit

Screen Surface Treatment

Anti-glare

Smart System

Smart System

- Operating System: Android™ 9.0
- Quad Core™: ARM Cortex A73
- GPU: ARM Mali-G52 MC2
- Storage: 64 GB
- Memory: 4 GB

Operating System

Operating System

Android 9.0

Multi-Media

Camera

- Detachable 4K 8MP Camera, Support Voice Tracking AI Feature (Model 62F2KATCWW only)
- No camera

Microphone

8x microphone array

Speakers

Integrated Speakers, 2x 15W

Power Supply

Power Consumption

- Typical / Max: 199W / 251W
- Sleep / Off mode: 35W
- Switch-off Mode: ≤0.5W
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- HDR10 Compliance
- 1x Human Detection Sensor
- 1x Ambient Light Sensor

DESIGN

Display

Touchscreen

Infrared touch technology, supports 20-point touch, 1.0 mm touch accuracy, 3.2 mm touch glass, 8 Mohs glass hardness

Mechanical

Bezel Width

Side: 28.84mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Monitor Only	1527.5 x 87.8 x 952.0 mm (60.14 x 3.42 x 37.48 inches)

Packaging Dimensions (WxDxH)

1660 x 220 x 1045 mm (64.74 x 8.58 x 40.76 inches)

Weight^[2]

Models	Weight
Monitor Only	40.5 kg (89.29 lbs)

Packaging Weight

52.5 kg (115.74 lbs)

Mounting

Supports VESA mount 600 x 400 mm

In the Box

- 1x HDMI® cable
- 1x Power cable
- 1x USB-A to USB-B Cable
- 2x Stylus
- Detachable Camera (Model 62F2KATCWW only)
- Display with Wall Mount Bracket

- Quick Setup Guide
- Remote Control with Battery
- Warranty Booklet
- Wireless Projection Dongle

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

WLAN + Bluetooth®

802.11ac 2x2 Wi-Fi® + Bluetooth 5.0, MIMO (both 2.4GHz and 5GHz bands)

Ports^[1]

Front Ports

- 1x USB-C® 3.0
- 1x USB 3.0
- 1x USB-B Touch
- 1x HDMI 2.0

Top Ports

1x USB 2.0

Bottom Ports

- 1x AV In
- 1x HDMI 2.0 out
- 1x LAN in (RJ45 in)
- 1x LAN out (RJ45 out)
- 1x PC Audio
- 1x SPDIF out
- 1x TF Card slot
- 1x USB 2.0
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x serial (RS232)

Left Ports

- 1x USB-C 3.0
- 1x USB-B Touch
- 2x USB 3.0
- 3x HDMI 2.0
- 1x DP
- 1x VGA

Right Ports

1x Power Connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

RoHS compliant

Notes:

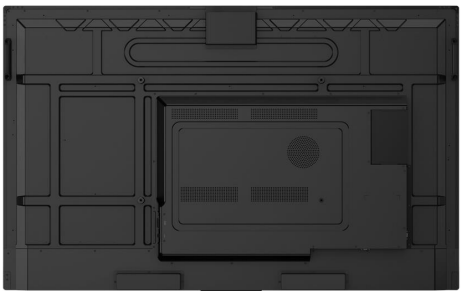
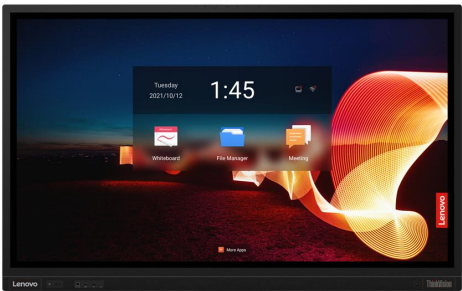
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. USB-B Touch	12. LAN Out (RJ45 Out)
2. HDMI 2.0	13. USB 2.0
3. USB 3.0	14. AV In
4. USB-C 3.0	15. PC Audio
5. TF Card Slot	16. USB-C 3.0
6. Line-in (3.5mm)	17. 2x USB 3.0
7. SPDIF Out	18. DP
8. Line-out (3.5mm)	19. 3x HDMI 2.0
9. HDMI 2.0 Out	20.USB-B Touch
10. Serial (RS232)	21. VGA
11. LAN In (RJ45 In)	22. USB 2.0

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

DLED

Display Size

75 inches

Max View Area

WxH: 1649.7 x 927.9 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.4296 x 0.4296 mm

Dot / Pixel Per Inch

58 dpi

Brightness

400 cd/m²

Contrast Ratio

- Contrast Ratio: 1200:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

8 ms

Refresh Rate

60Hz

Color Gamut

- 85% NTSC
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit

Screen Surface Treatment

Anti-glare

Smart System

Smart System

- Operating System: Android™ 9.0
- Quad Core™: ARM Cortex A73
- GPU: ARM Mali-G52 MC2
- Storage: 64 GB
- Memory: 4 GB

Operating System

Operating System

Android 9.0

Multi-Media

Camera

Detachable 4K 8MP Camera, Support Voice Tracking AI Feature

Microphone

8x microphone array

Speakers

Integrated Speakers, 2x 15W

Power Supply

Power Consumption

- Typical / Max: 247W / 309W
- Sleep / Off mode: 36W
- Switch-off Mode: ≤0.5W
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- HDR10 Compliance
- 1x Human Detection Sensor
- 1x Ambient Light Sensor

DESIGN

Display

Touchscreen

Infrared touch technology, supports 20-point touch, 1.0 mm touch accuracy, 3.2 mm touch glass, 8 Mohs glass hardness

Mechanical

Bezel Width

Side: 28.84mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Monitor Only	1736.7 x 87.1 x 1066.2 mm (68.37 x 3.40 x 41.98 inches)

Packaging Dimensions (WxDxH)

1900 x 225 x 1160 mm (74.1 x 8.78 x 45.67 inches)

Weight^[2]

Models	Weight
Monitor Only	53.0 kg (116.84 lbs)

Packaging Weight

67 kg (147.71 lbs)

Mounting

Supports VESA mount 600 x 400 mm

In the Box

- 1x HDMI® cable
- 1x Power cable
- 1x USB-A to USB-B Cable
- 2x Stylus
- Detachable Camera
- Display with Wall Mount Bracket
- Quick Setup Guide

- Remote Control with Battery
- Warranty Booklet
- Wireless Projection Dongle

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

WLAN + Bluetooth®

802.11ac 2x2 Wi-Fi® + Bluetooth 5.0, MIMO (both 2.4GHz and 5GHz bands)

Ports^[1]

Front Ports

- 1x USB-C® 3.0
- 1x USB 3.0
- 1x USB-B Touch
- 1x HDMI 2.0

Top Ports

1x USB 2.0

Bottom Ports

- 1x AV In
- 1x HDMI 2.0 out
- 1x LAN in (RJ45 in)
- 1x LAN out (RJ45 out)
- 1x PC Audio
- 1x SPDIF out
- 1x TF Card slot
- 1x USB 2.0
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x serial (RS232)

Left Ports

- 1x USB-C 3.0
- 1x USB-B Touch
- 2x USB 3.0
- 3x HDMI 2.0
- 1x DP
- 1x VGA

Right Ports

1x Power Connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

RoHS compliant

Notes:

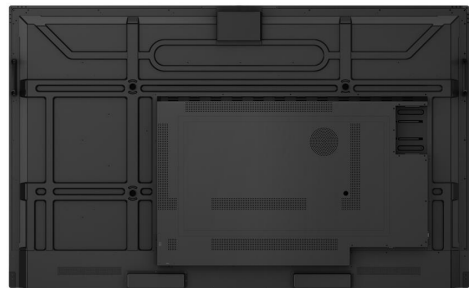
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

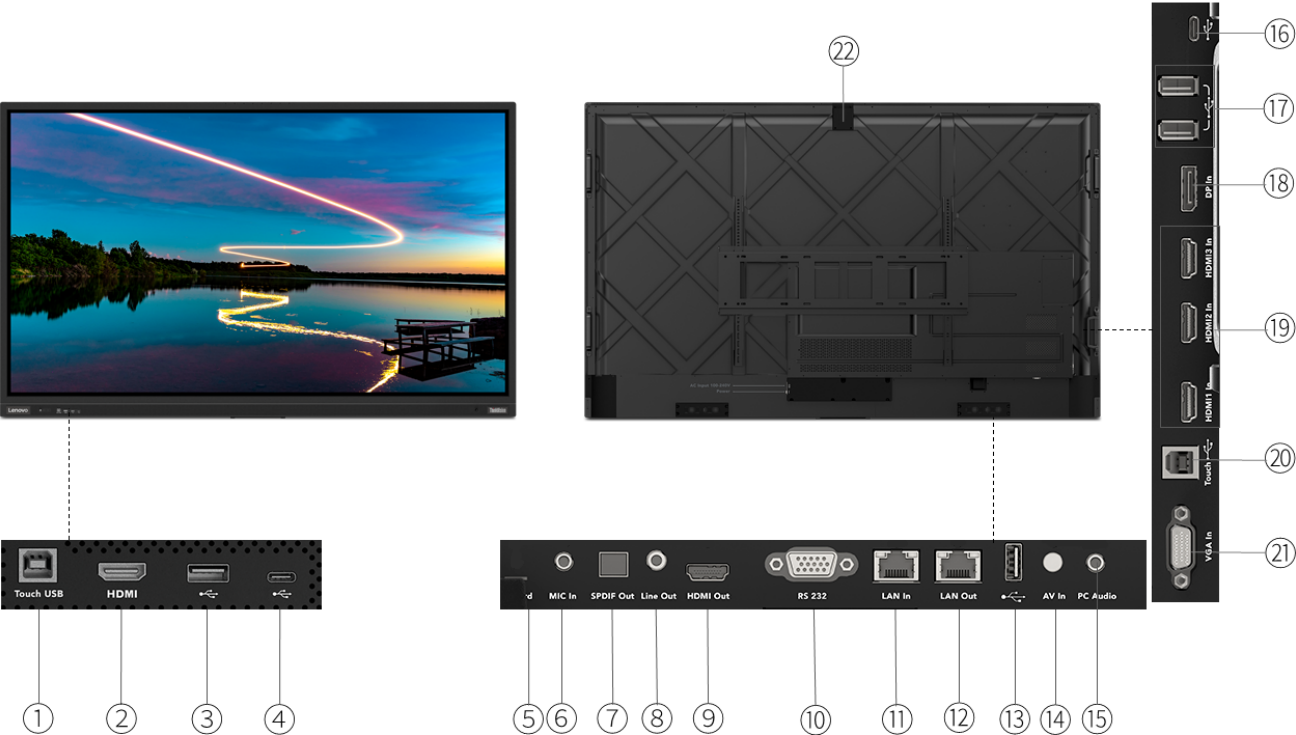
Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. USB-B Touch	12. LAN Out (RJ45 Out)
2. HDMI 2.0	13. USB 2.0
3. USB 3.0	14. AV In
4. USB-C 3.0	15. PC Audio
5. TF Card Slot	16. USB-C 3.0
6. Line-in (3.5mm)	17. 2x USB 3.0
7. SPDIF Out	18. DP
8. Line-out (3.5mm)	19. 3x HDMI 2.0
9. HDMI 2.0 Out	20.USB-B Touch
10. Serial (RS232)	21. VGA
11. LAN In (RJ45 In)	22. USB 2.0

PERFORMANCE

Panel

Panel

Vertical Alignment (VA)

Backlight

DLED

Display Size

86 inches

Max View Area

WxH: 1895.0 x 1066.0 mm

Resolution

3840 x 2160

Aspect Ratio

16:9

Pixel Pitch

0.4935 x 0.4935 mm

Dot / Pixel Per Inch

51 dpi

Brightness

400 cd/m²

Contrast Ratio

- Contrast Ratio: 4000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

6.5 ms

Refresh Rate

60Hz

Color Gamut

- 85% NTSC
- 99% sRGB

Color Support

1.07 Billion

Color Depth

10-bit

Screen Surface Treatment

Anti-glare

Smart System

Smart System

- Operating System: Android™ 9.0
- Quad Core™: ARM Cortex A73
- GPU: ARM Mali-G52 MC2
- Storage: 64 GB
- Memory: 4 GB

Operating System

Operating System

Android 9.0

Multi-Media

Camera

Detachable 4K 8MP Camera, Support Voice Tracking AI Feature

Microphone

8x microphone array

Speakers

Integrated Speakers, 2x 15W

Power Supply

Power Consumption

- Typical / Max: 350W / 410 W
- Sleep / Off mode: 43W
- Switch-off Mode: ≤0.5W
- Internal Power Supply

Voltage Required

AC 100 to 240 V (50-60Hz)

Special Features

Special Features

- HDR10 Compliance
- 1x Human Detection Sensor
- 1x Ambient Light Sensor

DESIGN

Display

Touchscreen

Infrared touch technology, supports 20-point touch, 1.0 mm touch accuracy, 3.2 mm touch glass, 7 Mohs glass hardness

Mechanical

Bezel Width

Side: 28.3mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Monitor Only	1982.0 x 92.0 x 1209.2 mm (78.0 x 3.6 x 47.61 inches)

Packaging Dimensions (WxDxH)

2119 x 275 x 1353 mm (83.4 x 10.8 x 53.3 inches)

Weight^[2]

Models	Weight
Monitor Only	68 kg (150 lbs)

Packaging Weight

Monitor with W20 Dongle and iLFD Detachable Camera: 88 kg (194 lbs)

Mounting

Supports VESA mount 800 x 400 mm

In the Box

- 1x HDMI® cable
- 1x Power cable
- 1x USB-A to USB-B Cable
- 2x Stylus
- Detachable Camera
- Display with Wall Mount Bracket
- Quick Setup Guide

- Remote Control with Battery
- Warranty Booklet
- Wireless Projection Dongle

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Network

Ethernet

Support 10M / 100M / 1000M

WLAN + Bluetooth®

802.11ac 2x2 Wi-Fi® + Bluetooth 5.0, MIMO (both 2.4GHz and 5GHz bands)

Ports^[1]

Front Ports

- 1x USB-C® 3.0
- 1x USB 3.0
- 1x USB-B Touch
- 1x HDMI 2.0

Top Ports

1x USB 2.0

Bottom Ports

- 1x AV In
- 1x HDMI 2.0 out
- 1x LAN in (RJ45 in)
- 1x LAN out (RJ45 out)
- 1x PC Audio
- 1x SPDIF out
- 1x TF Card slot
- 1x USB 2.0
- 1x line-in (3.5mm)
- 1x line-out (3.5mm)
- 1x serial (RS232)

Left Ports

- 1x USB-C 3.0
- 1x USB-B Touch
- 2x USB 3.0
- 3x HDMI 2.0
- 1x DP
- 1x VGA

Right Ports

1x Power Connector

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

RoHS compliant

Notes:

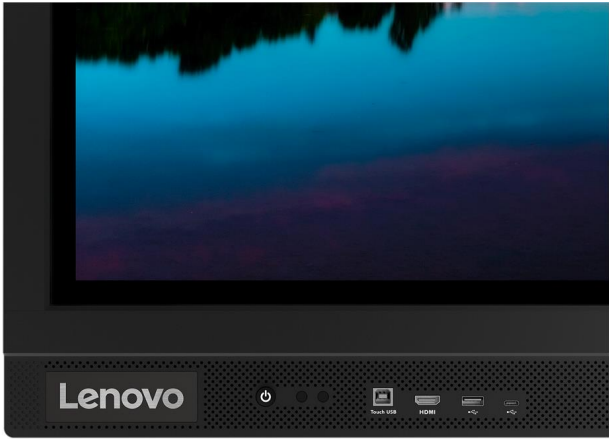
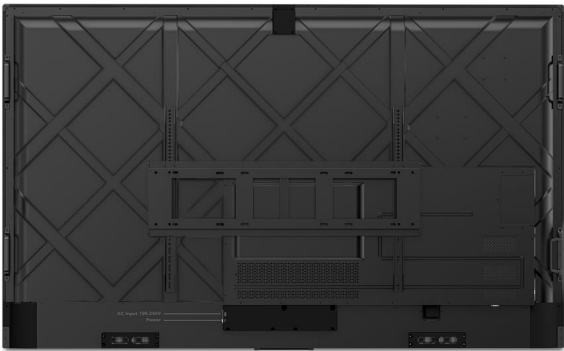
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Cable lock slot	3. 1x USB-C 3.1 Gen 1
2. 1x USB-C 3.1 Gen 1	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

14 inches

Max View Area

WxH: 309.31 x 173.99 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.1611 x 0.1611 mm

Dot / Pixel Per Inch

157 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 700:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

6ms with OD

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 6W / 7.5W (Without USB-C® output)
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 4.88W
- Energy Star TEC: 15.53kWh
- External Power Supply (no adapter bundle)

Voltage Required

DC 5 to 20 V

DESIGN

Mechanical

Bezel Width

- Side: 5.48mm
- Top / Bottom: 5.47mm / 23.87mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	323.37 x 96.54 x 209.03 mm (12.73 x 3.8 x 8.23 inches)
Highest Position	323.37 x 96.54 x 220.03 mm (12.73 x 3.8 x 8.66 inches)

Packaging Dimensions (WxDxH)

402 x 276 x 61mm (15.83 x 10.87 x 2.40 inches)

Weight^[2]

0.598 kg (1.31 lbs)

Packaging Weight

1.67 kg (3.68 lbs)

Mounting

Supports VESA mount 100mm, 2 screw holes

Stand

Supports -5° to +90° tilt

In the Box

- Monitor with Stand
- 1 x Pair of clips
- 1x QSG
- 1x ThinkVision® M14 sleeve
- 1x USB-C to USB-C Cable (1m)

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

2x USB-C 3.1 Gen 1 (DP 1.2 Alt Mode, one USB upstream, one USB downstream and USB 2.0 data transfer)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.
- USB 2.0: 480 Mbit/s;
- USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;
- USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;
- USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
- USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

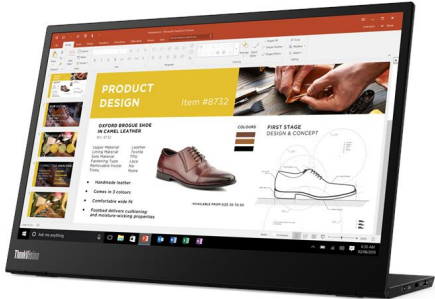
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Image Quality Capability ISO 9241-307
- TÜV Rheinland® Eye Comfort Certification
- TÜV Rheinland Low Blue Light

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OVERVIEW



1. Cable lock slot	3. 1x USB-C 3.1 Gen 1
2. 1x USB-C 3.1 Gen 1	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

14 inches

Max View Area

WxH: 301.5 x 188.5 mm

Resolution

2240 x 1400

Aspect Ratio

16:10

Pixel Pitch

0.135 x 0.135 mm

Dot / Pixel Per Inch

189 dpi

Brightness

- Peak: 375 cd/m²
- Typical: 300 cd/m²

Contrast Ratio

- Contrast Ratio: 1500:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 6 ms
- Normal Mode: 8 ms

Refresh Rate

60Hz

Color Gamut

- Color Area Ratio: 105% sRGB
- Coverage Ratio: 100% sRGB

Color Support

16.7 Million

Color Depth

8-bit

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 10 Support
- Windows 11 Support

Power Supply

Power Consumption

- Typical / Max: 6W / 7.5W (Without USB-C® output)
- Sleep / Off mode: <0.5W
- Switch-off Mode: <0.3W
- Energy Star Power On: 6.85W

- Energy Star TEC: 22.71kWh
- External Power Supply (no adapter bundle)

Voltage Required

5V / 9V / 15V DC 3A or 20V DC 5A Max

Special Features

Special Features

- Natural Low Blue Light
- Lenovo® Artery (Lenovo Display Control Center) Support
Lenovo Artery can only be used with Windows 10 & Windows 11

DESIGN

Mechanical

Bezel Width

- Side: 4.9mm
- Top / Bottom: 4.9mm / 18.9mm

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	314.4 x 106.4 x 216.5mm (12.38 x 4.19 x 8.52 inches)
Highest Position	314.4 x 106.4 x 227.5 mm (12.38 x 4.19 x 8.96 inches)

Packaging Dimensions (WxDxH)

384 x 277 x 76 mm (15.12 x 10.91 x 2.99 inches)

Weight^[2]

Models	Weight
Monitor With Stand	0.6 kg (1.3 lbs)

Packaging Weight

1.8 kg (4.0 lbs)

Mounting

Supports VESA mount 100mm

Stand

Supports -5° to +95° tilt, up to 11mm lift

In the Box

- Monitor with Stand
- 1x USB-C to USB-C Cable (1m)
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

2x USB-C 3.1 Gen 1 (DP 1.2 Alt Mode, USB 2.0 data transfer)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant
- Volatile Organic Compound Certification

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

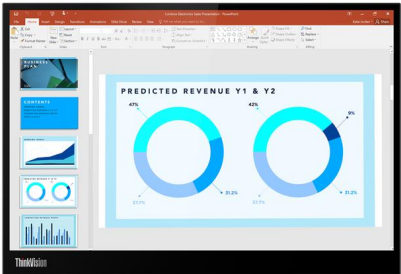
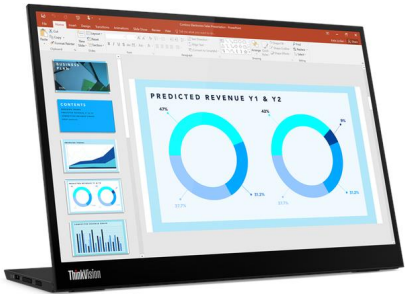
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- Eyesafe® Certified
- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light
- TÜV Rheinland Low Blue Light (Hardware Solution)

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OVERVIEW



1. Cable lock slot	3. 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode))
2. 1x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode))	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

14 inches

Max View Area

WxH: 309.31 x 173.09 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.1611 x 0.1611 mm

Dot / Pixel Per Inch

157 dpi

Brightness

300 cd/m²

Contrast Ratio

- Contrast Ratio: 700:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 6 ms
- Normal Mode: 8 ms

Refresh Rate

60Hz

Color Gamut

72% NTSC

Color Support

16.7 Million

Color Depth

8-bit (6-bit+FRC)

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 8W / 9.5W
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 7.22W
- Energy Star TEC: 25.5kWh
- External Power Supply (no adapter bundle)

Voltage Required

DC 5 / 9 / 15 / 20 V

Special Features

Special Features

Support active pen

DESIGN

Display

Touchscreen

Supports 10-point touch

Mechanical

Bezel Width

- Side: 5.43mm
- Top / Bottom: 5.42mm / 30.38mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	323.4 x 14.0 x 214.3 mm (12.73 x 0.55 x 8.44 inches)
Highest Position	323.4 x 14.0 x 226.5 mm (12.73 x 0.55 x 8.92 inches)

Packaging Dimensions (WxDxH)

267 x 377 x 68 mm (105.12 x 148.43 x 26.77 inches)

Weight^[2]

Models	Weight
Monitor With Stand	0.698 kg (1.54 lbs)

Packaging Weight

1.87 kg (4.12 lbs)

Mounting

Supports VESA mount 100mm, 2 screw holes

Stand

Supports -5° to +90° tilt, 90° pivot, up to 11mm lift

In the Box

- (Optional)Active Pen with battery for selected regions and countries only
- 1x L-shaped dongle
- 1x Pair of clips
- 1x USB-C® to USB-C Cable (1m)
- 1x sleeve
- M14t Monitor
- Quick Setup Guide

Notes:

[1] The system dimensions may vary depending on configurations.

[2] The system weight is approximate and based on results in Lenovo® lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

2x USB-C 3.2 Gen 1 (support data transfer, DP 1.2 Alt Mode, up to 65W power delivery)

Notes:

[1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

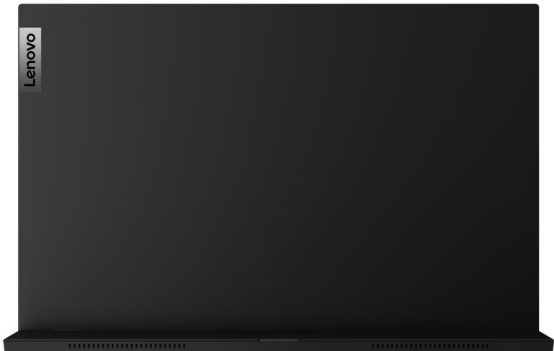
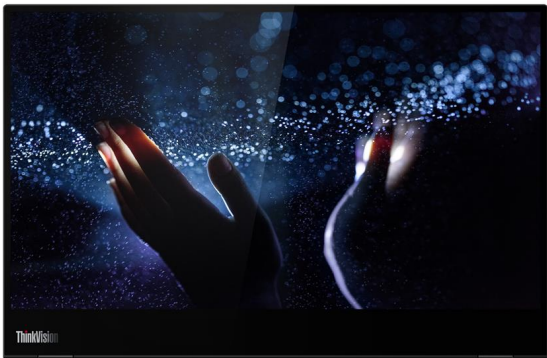
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

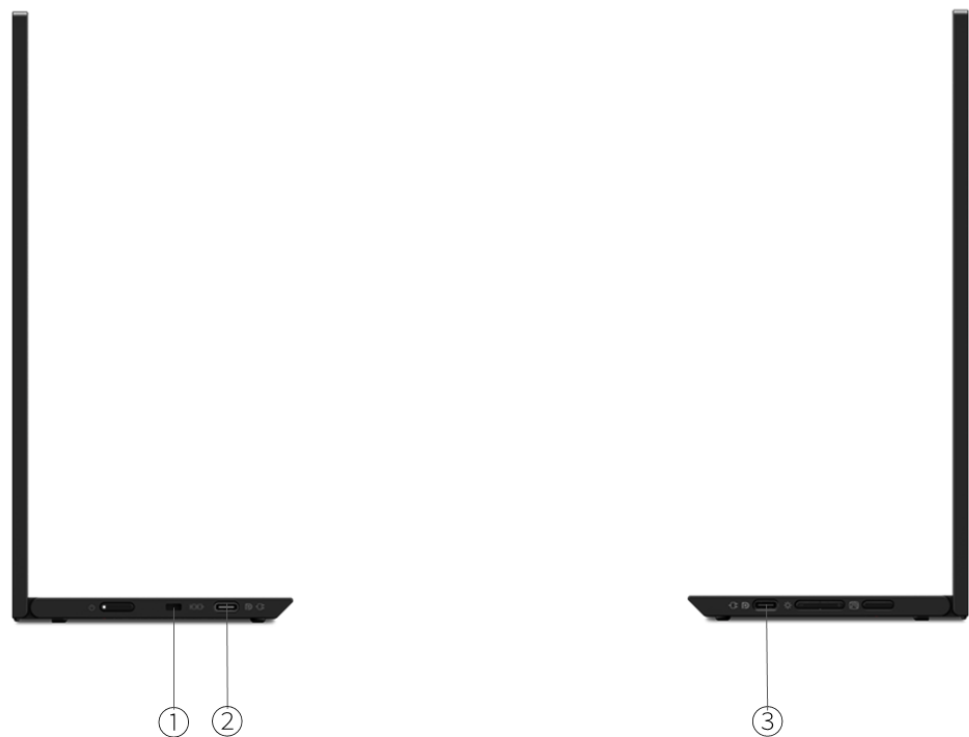
Other Certifications

TÜV Rheinland® Low Blue Light

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OVERVIEW



1. Cable lock slot	3. 1x USB-C 3.1 Gen 1
2. 1x USB-C 3.1 Gen 1	

PERFORMANCE

Panel

Panel

In-Plane Switching (IPS)

Backlight

WLED

Display Size

15.6 inches

Max View Area

WxH: 344.2 x 193.6 mm

Resolution

1920 x 1080

Aspect Ratio

16:9

Pixel Pitch

0.179 x 0.179 mm

Dot / Pixel Per Inch

141 dpi

Brightness

250 cd/m²

Contrast Ratio

- Contrast Ratio: 1000:1
- Dynamic Contrast Ratio: 3M:1

View Angle (H / V)

Horizontal: 178°, Vertical: 178°

Response Time

- Extreme Mode: 6 ms
- Normal Mode: 14 ms

Refresh Rate

60Hz

Color Gamut

45% NTSC

Color Support

16.7 Million

Screen Surface Treatment

Anti-glare

Operating System

Operating System

- Windows® 7 Support
- Windows 10 Support

Power Supply

Power Consumption

- Typical / Max: 8W / 9.5W
- Sleep / Off mode: <0.3W
- Switch-off Mode: <0.3W
- Energy Star Power On: 5W
- Energy Star TEC: 19kWh
- External Power Supply (no adapter bundle)

Voltage Required

DC 5 / 9 / 15 / 20 V

Special Features

Special Features

Lenovo® ThinkColour (Lenovo Display Control Center) Support
ThinkColour can only be used with Windows 10

DESIGN

Mechanical

Bezel Width

- Side: 7.3mm
- Top / Bottom: 7.3mm / 31.9mm

Cable Management

Support

Case Color

Raven black

Dimensions (WxDxH)^[1]

Models	Dimensions
Lowest Position	108.4 x 235.5 x 360.0mm (4.27 x 9.27 x 14.17 inches)
Highest Position	108.4 x 245.5 x 360.0 mm (4.27 x 9.67 x 14.17 inches)

Packaging Dimensions (WxDxH)

279.9 x 407.9 x 75.9 mm (11.02 x 16.06 x 2.99 inches)

Weight^[2]

Models	Weight
Monitor With Stand	0.9 kg (1.9 lbs)

Packaging Weight

1.7 kg (3.75 lbs)

Mounting

Supports VESA mount 100mm, 2 screw holes

Stand

Supports 0° to +90° tilt, up to 10mm lift

In the Box

- 1 x Pair of clips
- 1x USB-C® to USB-C Cable (1m)
- 1x sleeve
- M15 Monitor
- Quick Setup Guide

Notes:

- [1] The system dimensions may vary depending on configurations.
- [2] The system weight is approximate and based on results in Lenovo lab, which varies depending on the source of component, variance of the distribution of each component, and manufacturing process. It may not be the exact weight for each specific model.

CONNECTIVITY

Ports^[1]

Rear Ports

2x USB-C 3.2 Gen 1 (DP 1.2 Alt Mode, one USB upstream, one USB downstream and USB 2.0 data transfer)

Notes:

- [1] The transfer speed of following ports will vary and, depending on many factors, such as the processing speed of the

host device, file attributes and other factors related to system configuration and your operating environment, will be slower than theoretical speed.

USB 2.0: 480 Mbit/s;

USB 3.2 Gen 1 (SuperSpeed USB 5Gbps, formerly USB 3.0 / USB 3.1 Gen 1): 5 Gbit/s;

USB 3.2 Gen 2 (SuperSpeed USB 10Gbps, formerly USB 3.1 Gen 2): 10 Gbit/s;

USB4® 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

SECURITY & PRIVACY

Security

Physical Locks

Kensington® Security Slot™

SERVICE

Warranty

Base Warranty

3-year limited warranty

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ENERGY STAR® Certified
- EPEAT™ Silver Registered^[2]
- RoHS compliant

Notes:

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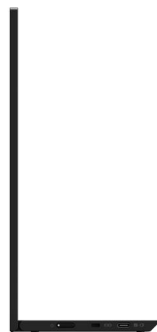
[2] EPEAT is registered where applicable, please see <https://www.epeat.net> for registration status by country.

Other Certifications

Other Certifications

- TÜV Rheinland® Flicker Free
- TÜV Rheinland Low Blue Light

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Limited warranty: Support unrelated to a warranty issue may be subject to additional charges.

Lenovo Services:

Carry-in or Mail-in Service: Parts and labor repair coverage where the customer is responsible for shipping (including packaging) or delivery to authorized warranty provider or repair center.

Depot or Courier Service: Parts and labor repair coverage where shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Expedited Depot: Parts and labor coverage with expedited turnaround. Shipping (including packaging) or delivery to the repair center is paid for by Lenovo.

Onsite / In-home Service: Parts and labor repair coverage where labor is provided onsite at your place of business.

If Lenovo determines your product problem is covered by the product warranty and cannot be resolved over the telephone, a technician will be dispatched to arrive onsite, typically the next day.

International Warranty Service (IWS): PC repair coverage for customers who require a critical warranty repair while travelling internationally. Visit www.lenovo.com/internationalwarranty for details. Visit www.lenovo.com/warranty for Lenovo Warranty Services terms and conditions for complete details and restrictions.

Included software: may differ from its retail version (if available), and may not include user manuals or all program functionality. Software license agreements may apply.

Battery life: Battery life (and recharge times) will vary based on many factors including screen brightness, applications, features, power management, battery conditioning, and other customer preferences.

Visit <http://psref.lenovo.com/> for the latest version of Product Specifications Reference.

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