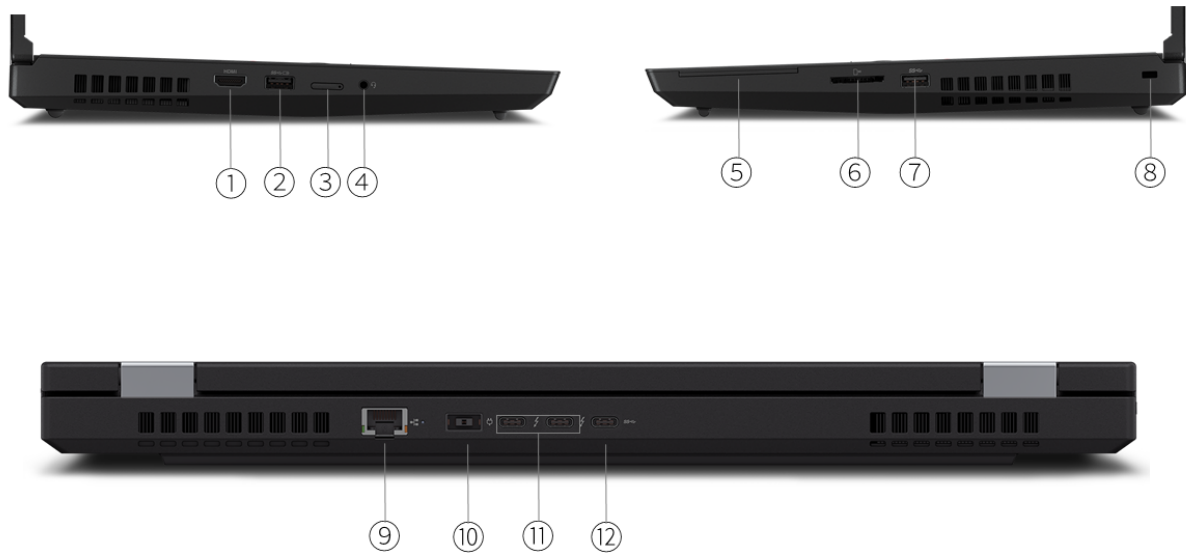


## OVERVIEW



1. HDMI 2.1 / 2.0	7. USB 3.2 Gen 1
2. USB 3.2 Gen 1 (Always On)	8. Kensington Security Slot
3. Nano-SIM card slot *	9. 2.5GbE (RJ-45)
4. Headphone / microphone combo jack (3.5mm)	10. Power connector
5. Smart card reader *	11. 2x Thunderbolt 4
6. SD card reader	12. USB-C 3.2 Gen 2

Notes:

- Ports with \* are only available on selected models

## PERFORMANCE

### Processor

#### Processor Family

11th Generation Intel® Core™ i5 / i7 / i9 or Intel Xeon® Processor

#### Processor\*\*

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-11500H	6	12	2.9GHz	4.6GHz	12MB	DDR4-3200	Intel UHD Graphics
Core i7-11800H	8	16	2.3GHz	4.6GHz	24MB	DDR4-3200	Intel UHD Graphics
Core i7-11850H	8	16	2.5GHz	4.8GHz	24MB	DDR4-3200	Intel UHD Graphics
Core i9-11950H	8	16	2.6GHz	5.0GHz	24MB	DDR4-3200	Intel UHD Graphics
Xeon W-11855M	6	12	3.2GHz	4.9GHz	18MB	DDR4-3200	Intel UHD Graphics
Xeon W-11955M	8	16	2.6GHz	5.0GHz	24MB	DDR4-3200	Intel UHD Graphics

### Operating System

#### Operating System\*\*

- Windows® 10 Pro 64
- Windows 10 Pro 64 for Workstations
- Windows 10 Home 64
- Windows 11 Pro 64
- Windows 11 Pro 64 for Workstations
- Windows 11 Home 64
- Windows 11 DG Windows 10 Pro 64
- Windows 11 DG Windows 10 Pro 64 for Workstations
- Fedora Linux
- Ubuntu Linux LTS
- No operating system

### Graphics

#### Graphics\*\*

Graphics	Type	Memory	TGP	Key Features
NVIDIA® T1200 Laptop GPU	Discrete	4GB GDDR6	60W	DirectX® 12
NVIDIA RTX A2000 Laptop GPU	Discrete	4GB GDDR6	60W	DirectX 12
NVIDIA RTX A3000 Laptop GPU	Discrete	6GB GDDR6	90W	DirectX 12
NVIDIA RTX A4000 Laptop GPU	Discrete	8GB GDDR6	90W	DirectX 12
NVIDIA RTX A5000 Laptop GPU	Discrete	16GB GDDR6	90W	DirectX 12

### Monitor Support

#### Monitor Support

Supports up to 5 independent displays via native display and 4 external monitors, hybrid mode only; supports external monitors via HDMI® (up to 4K@60Hz on NVIDIA T1200 / 8K@60Hz on other discrete graphics), USB-C (up to 5120x3200@60Hz) or Thunderbolt™ (up to 5120x3200@60Hz)

### Chipset

#### Chipset

Intel WM590 chipset

### Memory

#### Max Memory<sup>[1]</sup>

Up to 128GB DDR4-3200

#### Memory Slots

Four 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

**Notes:**

1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

**Storage****Storage Support**

Up to three drives, 3x M.2 SSD

- M.2 2280 SSD up to 2TB

**Storage Slot<sup>[1]</sup>**

Three M.2 slots

- Two M.2 2280 PCIe® Gen 3x4 slots, support M.2 2280 SSD
- One M.2 2280 PCIe Gen 4x4 slot, supports M.2 2280 SSD

**Storage Type\*\*\***

Disk Type	Interface	RPM	Offering	Security
M.2 2280 SSD	PCIe NVMe®, PCIe x4	-	256GB / 512GB / 1TB	Opal2
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Performance	-	512GB / 1TB / 2TB	Opal2

**RAID<sup>[2]</sup>**

RAID 0/1 support on two M.2 PCIe Gen 3x4 slots

**Notes:**

1. M.2 PCIe Gen 4 SSD in a M.2 PCIe Gen 3 slot runs at PCIe Gen 3 speeds
2. Opal capability is not available in RAID mode

**Removable Storage****Optical**

None

**Card Reader**

SD card reader

**Multi-Media****Audio Chip**

High Definition (HD) Audio, Realtek® ALC3306 codec

**Speakers**

Stereo speakers, Dolby® Atmos®

**Microphone**

- Dual array microphone, near-field
- No microphone

**Camera\*\***

- 720p, with privacy shutter, fixed focus
- IR & 720p hybrid, with privacy shutter, fixed focus
- No camera

**Battery****Battery**

Integrated Li-Polymer 94Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

**Max Battery Life<sup>[1]</sup>**

MobileMark® 2018: 9 hr

JEITA 2.0: 11.5 hr

## Notes:

- 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 and depends 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\*\*

- 170W slim tip (3-pin) AC adapter
- 230W slim tip (3-pin) AC adapter

## DESIGN

### Display

#### Display\*\*[2]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
15.6"	FHD (1920x1080)	None	IPS	300 nits	Anti-glare	16:9	700:1	100% sRGB	170°	-
15.6"	FHD (1920x1080)	None	IPS	500 nits	Anti-glare	16:9	1200:1	100% sRGB	170°	Dolby Vision™
15.6"	UHD (3840x2160)	None	IPS	600 nits	Anti-glare	16:9	1200:1	100% Adobe® RGB	170°	Dolby Vision, HDR 400
15.6"	UHD (3840x2160)	Multi-touch	OLED	SDR 400nit, HDR 500nit (peak)	Anti-reflection Anti-smudge	16:9	100000:1	100% DCI-P3	170°	Dolby Vision, HDR 500 True Black

#### Color Calibration

- X-Rite® Pantone® factory color calibration (UHD display)
- No color calibration

#### Touchscreen

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

## Notes:

- California Electronic Waste Recycling Fee  
In California, 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, go to <https://www.calrecycle.ca.gov/Electronics/Consumer>
- For non-OLED display, HDR is only supported under hybrid mode

## Input Device

### Pen

- Lenovo Pen Pro
- No pen (pen sold separately)
- No support (non-touch display doesn't support pen input)

### 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)

Models	Dimensions
Touch models	375.4 x 252.3 x 25.25-32.2 mm (14.24 x 9.67 x 0.99-1.27 inches)
Non-touch models	375.4 x 252.3 x 24.5-31.45 mm (14.24 x 9.67 x 0.96-1.24 inches)

### Weight<sup>[1]</sup>

Models	Weight
Non-touch models	2.87 kg (6.32 lbs)
Touch models	3.07 kg (6.75 lbs)

### Case Color

Black

### Case Material

PPS / 50% GF (top), PA / 50% GF (bottom)

### Notes:

1. The system weight varies depending on configurations

## CONNECTIVITY

### Network

#### Onboard Ethernet<sup>\*\*</sup>

- 2.5GbE, Intel Ethernet Connection I225-LM (vPro models), supports Wake-on-LAN
- 2.5GbE, Intel Ethernet Connection I225-V (non-vPro models), supports Wake-on-LAN

#### WLAN + Bluetooth<sup>[1]</sup>

- Intel Wi-Fi® 6E AX210, 802.11ax 2x2 Wi-Fi + Bluetooth 5.2
- No WLAN and Bluetooth

#### WWAN<sup>\*\*</sup>

- Wireless WAN upgradable to 4G
- Integrated Mobile Broadband 4G LTE, Quectel EM160R, MIMO 4x4, M.2 card, with embedded eSIM functionality
- No support

#### SIM Card

No SIM card inbox

#### NFC

No support

### Notes:

1. WiFi 6 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  
Bluetooth 5.2 is supported with driver version 22.30 and later

### Ports<sup>[1]</sup>

#### Standard Ports

- 2x USB 3.2 Gen 1 (one Always On)
- 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 1.4a)
- 1x SD card reader
- 1x Ethernet (2.5GbE RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)

#### Optional Ports<sup>\*\*\*</sup>

- 1x Nano-SIM card slot (WWAN model)
- 1x HDMI 2.0 (model with NVIDIA T1200 graphics)

- 1x HDMI 2.1 (model with NVIDIA RTX graphics)
- 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;
  - USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
  - Thunderbolt 3: 40 Gbit/s;
  - FireWire 400: 400 Mbit/s;
  - FireWire 800: 800 Mbit/s

## Monitor Cable

### Monitor Cable\*\*\*

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

## SECURITY & PRIVACY

### Security

#### Security Chip\*\*

- Discrete TPM 2.0, TCG certified
- Firmware TPM 2.0 integrated in chipset
- Disabled (in some regions)

#### 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

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

#### Other Security

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

## MANAGEABILITY

### System Management

#### System Management

- Intel vPro Technology, DASH
- None

## SERVICE

### Warranty

#### Base Warranty\*\*

- 1-year depot service
- 1-year depot with 2-year system board service

- 1-year limited onsite service
- 1-year + 2-year depot service
- 1-year + 2-year limited onsite service
- 3-year (1-yr battery) depot service
- 3-year (1-yr battery) limited onsite service
- No base warranty

## ENVIRONMENTAL

### Operating Environment

#### Temperature<sup>[1]</sup>

- 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

#### Green Certifications

- EPEAT™ Gold
- ENERGY STAR® 8.0
- RoHS compliant

### Other Certifications

#### Mil-Spec Test

MIL-STD-810H military test passed

### ISV Certifications

#### ISV Certifications

Please visit [www.thinkworkstations.com/isv-certifications/](http://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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