# **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

# ThinkPad X1 Carbon Gen 11

# 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<sup>®</sup> Core<sup>™</sup> i5-1340P, i5-1350P and i7-1360p are for special bid only.

# **Operating System**

**Operating System**\*\*

- Windows<sup>®</sup> 11 Pro
- Windows® 11 Home
- Windows<sup>®</sup> 11 Home Single Language
- Windows® 11 DG Windows® 10 Pro 64
- Fedora Linux<sup>[1]</sup>
- Ubuntu Linux<sup>[2]</sup>
- Linux<sup>[3]</sup>
- No preload 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	Туре	Memory	TGP	Key Features
Intel <sup>®</sup> Iris <sup>®</sup> Xe Graphics	Integrated	Shared	Share CPU TDP	DirectX® 12.1

# **Monitor Support**

## Monitor Support<sup>[1]</sup>

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt<sup>™</sup> and HDMI®)

- HDMI  $^{\!\!\rm s}$  supports up to 4K@60Hz

Thunderbolt<sup>™</sup> 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
- 64GB soldered memory, not upgradable

### Memory Slots

Memory soldered to systemboard, no slots, 8-channel

### Memory Type\*\*

- LPDDR5/x-6000 (32GB)<sup>[1]</sup>
- LPDDR5/x-6400 (16GB)<sup>[2]</sup>
- LPDDR5x-6000 (64GB)<sup>[3]</sup>

### Notes:

[1] Installed memory is actually LPDDR5-6400 or LPDDR5x-7500 but run as LPDDR5-6000 or LPDDR5x-6000 due to platform limitation.

[2] Installed LPDDR5x memory is actually LPDDR5x-7500 but run as LPDDR5x-6400 due to platform limitation.

[3] Installed memory is actually LPDDR5x-7500 but run as LPDDR5x-6000 due to platform limitation.

## Storage

### Storage Support<sup>[1]</sup>

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\*\*

- HD 720p, with privacy shutter, fixed focus
- 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<sup>[1]</sup>

57Wh Rechargeable Li-ion Battery, supports Rapid Charge (charge up to 80% in 1hr) with 65W AC adapter

### Battery Life<sup>[2]</sup>

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] Rapid charge is only guaranteed when the computer is turned off or in standby mode or in hibernation mode. When the computer is powered on, the Charge Time will vary depending on system power consumption and AC adapter power.
[2] Configuration 1 (max battery life): WUXGA (non-touch), Intel<sup>®</sup> 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 <u>MobileMark® 25</u>, 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 <u>Microsoft<sup>®</sup> link</u> for more information about the Windows<sup>®</sup> Performance power slider.

# **Power Adapter**

#### Power Adapter\*\*[1]

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

Notes:

[1] AC adapter offerings depend on the country.[2] No power adapter is for special bid only.

# DESIGN

# Display

## Display\*\*

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
14″	WUXGA (1920x1200)	None	IPS <sup>[1]</sup>	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 <sup>[2]</sup>	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 <sup>[3]</sup>	500nits	Anti-glare	16:10	1000:1	100% sRGB	85° / 85° / 85° / 85°	ThinkPad® Privacy Guard
14″	2.2K (2240x1400)	None	IPS <sup>[4]</sup>	300nits	Anti-glare	16:10	1500:1	100% sRGB	85° / 85° / 85° / 85°	TÜV Low Blue Light (Hardware Solution)
14″	2.8K (2880x1800)	None	OLED	400nits	Anti-glare, anti- reflection, anti-smudge	16:10	100,000:1	100% DCI-P3	85° / 85° / 85° / 85°	DisplayHDR <sup>™</sup> 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**

#### Pen

No support

#### 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 3-button Trackpad, 56 x 110 mm (2.20 x 4.33 inches)

## **Mechanical**

#### Dimensions (WxDxH)<sup>[1]</sup>

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<sup>[2]</sup>

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<sup>®</sup> 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

WLAN + Bluetooth®

Lenovo

Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3<sup>[1]</sup>

### 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

### Ethernet

No onboard Ethernet<sup>[2]</sup>

#### NFC

- Near Field Communication
- No support

### Notes:

[1] Wi-Fi<sup>®</sup> 6E full features might be limited by country-level restrictions.

Wi-Fi<sup>®</sup> 6E is only enabled on Windows<sup>®</sup> 11 and operates as Wi-Fi<sup>®</sup> 6 with Windows<sup>®</sup> 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 visit <u>General Bluetooth® Support Information</u> on <u>Microsoft</u>®.

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

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

### **Standard Ports**

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

#### **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<sup>®</sup> 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;

USB4<sup>®</sup> 40Gbps (USB 40Gbps): 40 Gbit/s;

Thunderbolt™ 3/4: 40 Gbit/s.

# Docking

## Docking

Various docking solutions supported via Thunderbolt<sup>™</sup> / USB-C<sup>®</sup>. For more compatible docking solutions, please visit <u>Docking for ThinkPad<sup>®</sup> X1 Carbon Gen 11</u>

# **SECURITY & PRIVACY**

# Security

Security Chip Discrete TPM 2.0, TCG certified, FIPS 140-2 certified Physical Locks

Kensington<sup>®</sup> Nano Security Slot<sup>™</sup>, 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**

- NVMe<sup>®</sup> password
- Power-on password
- Supervisor password
- System management password
- Certificate-based BIOS authentication
- FIDO (Fast Identity Online) authentication
- Self-healing BIOS

## **Other Security**

- Camera privacy shutter
- (Optional) Computer Vision-based User Presence Sensing including lock on leave
- (Optional) IR camera for Windows® Hello (facial recognition)
- Glance by Mirametrix®
- Privacy Guard with Privacy Alert (models with ThinkPad® Privacy Guard display)

# MANAGEABILITY

## System Management

System Management\*\*

- Intel<sup>®</sup> vPro<sup>®</sup> Enterprise<sup>[1]</sup>
- Intel<sup>®</sup> vPro<sup>®</sup> Essentials<sup>[2]</sup>
- Non-vPro®

Notes:

[1], [2] Intel<sup>®</sup> vPro<sup>®</sup> offers a superset of DASH's defined capabilities.

# SERVICE

# Warranty

## 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

# ACCESSORIES

# **Bundled Accessories**

### Bundled Accessories\*\*\*[1]

- Lenovo<sup>®</sup> HDMI<sup>®</sup> to VGA Monitor Adapter
- Lenovo<sup>®</sup> USB-C<sup>®</sup> to Ethernet Adapter (1Gbps)
- None

Notes:

[1] For more compatible accessory solutions, please visit Accessories for ThinkPad® X1 Carbon Gen 11.

# **OPERATING REQUIREMENTS**

# **Operating Environment**

Temperature<sup>[1]</sup>

# ThinkPad X1 Carbon Gen 11

Lenovo

- 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)

#### **Relative 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).

# **ENVIRONMENTAL**

## Sustainability

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

90% recycled magnesium on keyboard frame 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

Notes:

[1] PCC: Post Consumer Content, recycled materials from customers.

# CERTIFICATIONS

## **Green Certifications**<sup>III</sup>

#### Green Certifications<sup>[2]</sup>

- ENERGY STAR<sup>®</sup> 8.0
- EPEAT<sup>™</sup> Gold Registered<sup>[3]</sup>
- 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. For ESG & regulatory compliance documents, please visit <u>https://compliance.lenovo.com</u>.

[2] EPEAT<sup>™</sup> registration and ENERGY STAR<sup>®</sup> certification are optional and only available on the models with preloaded OS. Please visit <u>epeat.net</u> and <u>energystar.gov</u> for more information.

[3] EPEAT<sup>™</sup> is registered where applicable, please visit <u>epeat.net</u> 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<sup>®</sup> Evo<sup>™</sup> Platform
- (Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)
- TÜV Rheinland<sup>®</sup> Dynamic Privacy Filter (DPF) Certification (Privacy Guard models)
- Feature with \*\* means that only one option listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
- Feature with \*\*\* means that one or more options listed under the feature can be configured on selected

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