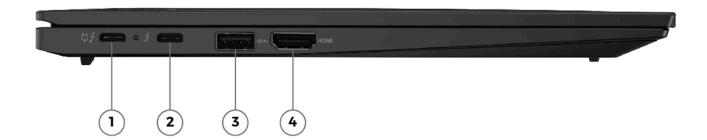
OVERVIEW





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**

- Windows® 11 Pro
- Windows® 11 Home
- Windows[®] 11 Home Single Language
- Windows® 11 DG Windows® 10 Pro 64
- Fedora Linux^[1]
- Ubuntu Linux^[2]
- Linux^[3]
- 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	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 LPDDR5-6400 but run as LPDDR5-5200 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] PCle[®] x4 may be PCle[®] 3.0x4 or PCle[®] 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 <u>MobileMark® 2018</u>, <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[®] link</u> 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 $^{\scriptscriptstyle \otimes}$ (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- * 65W USB-C $^{\scriptscriptstyle \otimes}$ (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]

ThinkPad X1 Carbon Gen 10



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 ^[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 (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™ 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

Dimensions (WxDxH)^[1]

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 (Bluetooth® 5.2 hardware ready)[3]
- Intel[®] Wi-Fi[®] 6E AX211, 802.11ax 2x2 Wi-Fi[®] + Bluetooth[®] 5.1 (Bluetooth[®] 5.2 hardware ready)^[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® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

[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^{III}

Standard Ports

- 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)
- 1x HDMI® 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[®] 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 <u>Docking for ThinkPad® X1 Carbon Gen 10</u>

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

- Supervisor password
- Power-on password
- System management password
- NVMe[®] password
- Certificate based BIOS authentication
- FIDO (Fast Identity Online) authentication
- Self-healing BIOS

Other Security

- Privacy Guard with Privacy Alert (models with ThinkPad[®] Privacy Guard display)
- (Optional) IR camera for Windows® Hello (facial recognition)
- Camera privacy shutter
- 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

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[®] HDMI[®] to VGA Monitor Adapter
- Lenovo[®] USB-C[®] to Ethernet Adapter (1Gbps)
- None

Notes:

[1] For more compatible accessory solutions, please visit <u>Accessories for ThinkPad® X1 Carbon Gen 10</u>.

OPERATING REQUIREMENTS

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)

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 $10^{\circ}C$ ($50^{\circ}F$).

ENVIRONMENTAL

Sustainability

Material

95% PCC recycled plastic used in speaker enclosure 25-30% PCC recycled plastic used in the 57Wh battery frame 95% PCC recycled plastic used in standard 65W adapter Low-temperature solder 90% recycled and/or sustainable packaging

CERTIFICATIONS

Green Certifications¹¹

Green Certifications^[2]

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

[2] EPEAT[™] registration and ENERGY STAR[®] certification are dependent on system OS. Please visit <u>epeat.net</u> and <u>energystar.gov</u> for more information.

[3] EPEAT[™] 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) Intel[®] Evo[™] Platform
- (Optional) Eyesafe[®] Certified
- (Optional) TÜV Rheinland[®] Low Blue Light (Hardware Solution)
- 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.
- Feature with *** means that one or more offerings listed under the feature could be configured on selected models.
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