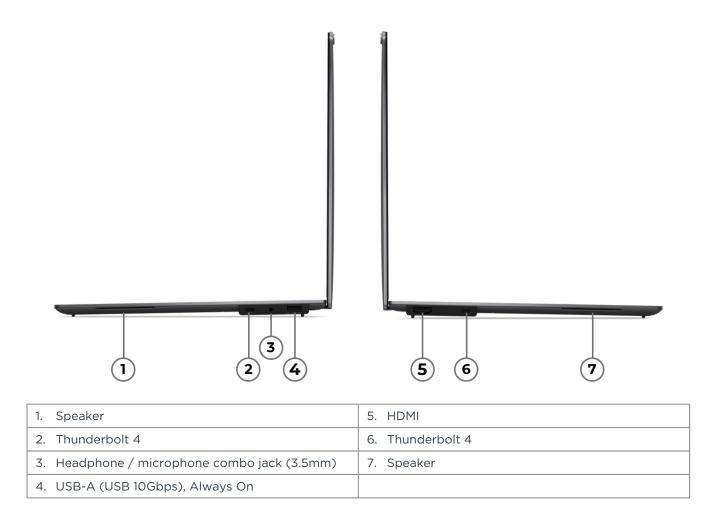
OVERVIEW



ThinkPad X9-15 Gen 1

PERFORMANCE

Processor

Processor Family

Intel $^{\circ}$ V Series Core Ultra 5 / 7 Processor (Series 2)

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics	NPU
Core Ultra 5 226V	8 (4 P-core + 4 LPE-core)	8	P-core 2.1GHz / LPE-core 2.1GHz	P-core 4.5GHz / LPE-core 3.5GHz	8MB	Intel® Arc™ Graphics 130V, up to 53 TOPS	Intel® AI Boost
Core Ultra 5 228V	8 (4 P-core + 4 LPE-core)	8	P-core 2.1GHz / LPE-core 2.1GHz	P-core 4.5GHz / LPE-core 3.5GHz	8MB	Intel® Arc™ Graphics 130V, up to 53 TOPS	Intel® AI Boost
Core Ultra 5 238V	8 (4 P-core + 4 LPE-core)	8	P-core 2.1GHz / LPE-core 2.1GHz	P-core 4.7GHz / LPE-core 3.5GHz	8MB	Intel® Arc™ Graphics 130V, up to 53 TOPS	Intel® AI Boost
Core Ultra 7 258V	8 (4 P-core + 4 LPE-core)	8	P-core 2.2GHz / LPE-core 2.2GHz	P-core 4.8GHz / LPE-core 3.7GHz	12MB	Intel® Arc™ Graphics 140V, up to 64 TOPS	Intel® AI Boost
Core Ultra 7 268V	8 (4 P-core + 4 LPE-core)	8	P-core 2.2GHz / LPE-core 2.2GHz	P-core 5GHz / LPE- core 3.7GHz	12MB	Intel® Arc™ Graphics 140V, up to 66 TOPS	Intel® AI Boost

Al (Artificial Intelligence)

AI PC Category

Copilot+ PC^[1]

Al Performance

Up to 118 overall TOPS

NPU

Integrated Intel[®] AI Boost, up to 48 TOPS

Notes:

[1] The AI features of Copilot+ PC require Windows® 11 to be installed.

Operating System

Operating System**

- Windows[®] 11 Pro
- Windows® 11 Home
- Ubuntu Linux^[1]
- Linux^[2]
- No preload 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	Туре	Memory	TGP	Key Features
Intel® Arc™ Graphics 130V	Integrated	Shared	Share CPU TDP	DirectX® 12.2
Intel® Arc™ Graphics 140V	Integrated	Shared	Share CPU TDP	DirectX® 12.2

Monitor Support

Monitor Support^[1]

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

• HDMI[®] supports up to 4K@60Hz

Thunderbolt[™] supports up to 8K@60Hz^[2]

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Notes:

[1] Refresh rates >60hz also supported, however max resolution will be limited.

[2] 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

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

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-8533, MoP (Memory on Package) memory

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, Cirrus Logic® CS42L43

Speakers

Stereo speakers, 2W x2 woofers and 2W x2 tweeters, Dolby Atmos®

Microphone

Dual-microphone array with smart noise-cancelling

Camera UHD 8.0MP with large sensor + IR discrete, with E-shutter, ToF sensor, MIPI, fixed focus

Sensor

Sensors

- Color sensor
- ToF sensor

Battery

Battery 80Wh Rechargeable Li-ion Battery Battery Life^[1] **Configuration 1**

Lenovo

MobileMark® 30: up to 21.18 hr @250nits JEITA-BAT 3.0 (Video/Idle): up to 26.85 hr / 26.88 hr @200nits Local video playback: up to 29.55 hr @150nits

Configuration 2 MobileMark® 30: up to 21 hr @250nits JEITA-BAT 3.0 (Video/Idle): up to 24.58 hr / 27.42 hr @200nits Local video playback: up to 29.72 hr @150nits

Configuration 3 MobileMark® 30: up to 20.11 hr @250nits JEITA-BAT 3.0 (Video/Idle): up to 22.01 hr / 23.81 hr @200nits Local video playback: up to 28.42 hr @150nits

Notes:

[1] Configuration 1: WQXGA+ (non-touch), Intel® Ultra 5 226V, 16GB LPDDR5x, Win 11, 80Wh battery, best power efficiency power mode

Configuration 2: WQXGA+ (touch), Intel® Ultra 7 258V, 32GB LPDDR5x, Win 11, 80Wh battery, best power efficiency power mode

Configuration 3: WQXGA+ (touch), Intel® Ultra 7 268V, 32GB LPDDR5x, Win 11, 80Wh battery, best power efficiency power mode

All battery life claims are approximate maximum and based on results using <u>MobileMark® 30</u>, JEITA 3.0, 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 and depends 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[®] nano GaN (2-pin, wall-mount) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C[®] nano GaN (3-pin, wall-mount) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C[®] slim GaN (2-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C[®] slim GaN (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	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
15.3″	2.8K WQXGA+ (2880x1800)	Multi- touch	OLED	500nits	Anti- reflection, anti- fingerprint	16:10	100,000:1	100% DCI- P3	30- 120Hz VRR	85° / 85° / 85° / 85°	Eye Comfort Certification (5-star), Dolby Vision®, DisplayHDR™ True Black 600, X-Rite®
15.3″	2.8K WQXGA+ (2880x1800)	None	OLED	500nits	Anti- reflection, anti- fingerprint	16:10	100,000:1	100% DCI- P3	30- 120Hz VRR	85° / 85° / 85° / 85°	Eye Comfort Certification (5-star), Dolby Vision®,

	 	-		 	 	
						DisplayHDR™
						True Black
						600, X-Rite®

Color Calibration

X-Rite® factory color calibration

Touchscreen

- Add-on Film Touch, supports 10-point touch
- Non-touch

Input Device

Pen

No support

Keyboard

6-row, spill-resistant, multimedia Fn keys, Copilot key

Keyboard Backlight

LED backlight

Touchpad**

- Buttonless glass surface multi-touch TrackPad, supports Precision TouchPad (PTP), 80 x 135 mm (3.15 x 5.31 inches)
- Buttonless glass surface multi-touch Haptic Touchpad, supports Precision TouchPad (PTP), 80 x 135 mm (3.15 x 5.31 inches)

Mechanical

Dimensions (WxDxH)^[1]

339.55 x 228.5 x 12.9 mm (13.37 x 9.0 x 0.51 inches)

Weight^[2]

Starting at 1.4 kg (3.08 lbs)

Case Color

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® 7 BE201, 802.11be 2x2 Wi-Fi® + Bluetooth® 5.4^[3] WWAN No support SIM Card No physical SIM card inbox NFC No support

Notes:

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

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[2] Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

[3] 6GHz Wi-Fi $^{\circ}$ 7 operation is subject to the regulation rules in each country.

Ports^[1]

Standard Ports

- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2), Always On
- 2x USB-C[®] (Thunderbolt[™] 4 / USB4[®] 40Gbps), with USB PD 3.0 and DisplayPort[™] 2.1
- 1x HDMI[®] 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)

Notes:

[1] The transfer speed of the 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.

Docking

Docking

Various docking solutions supported via Thunderbolt™. For more compatible docking solutions, please visit <u>Docking for ThinkPad® X9-15 Gen 1</u>

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 integrated in power button, match-on-chip

BIOS Security

- NVMe[®] password
- Power-on password
- Supervisor password
- System management password
- Certificate-based BIOS athentication
- FIDO (Fast Identity Online) authentication
- Self-healing BIOS
- More BIOS security features, please visit <u>BIOS Simulator</u>[1]

Other Security

- ToF Human Presence Detection
- E-shutter
- IR camera for Windows[®] Hello (facial recognition)

Notes:

[1] The BIOS simulator is just for reference. Default settings and some options may vary depending on the hardware, operating system and BIOS version.

MANAGEABILITY

System Management

System Management

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

Notes:

Lenovo

[1] 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[®] USB-C[®] to Ethernet Adapter (1Gbps)
- None

Notes:

[1] For more compatible accessory solutions, please visit Accessories for ThinkPad® X9-15 Gen 1.

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°C (50°F).

ENVIRONMENTAL

Sustainability

Material^[1]

50% recycled aluminium on top cover 50% recycled aluminium on keyboard frame 50% recycled aluminium on bottom cover 90% PCC recycled plastic used in the battery pack enclosure 100% recycled cobalt used in the 80Wh battery 85% PCC recycled plastic used in key caps 90% PCC recycled plastic used in speaker enclosure 30% recycled REE (Rare Earth) in speaker magnet 90% PCC recycled plastic used in standard 65W adapter FSC certified plastic-free packaging Bamboo + sugarcane fiber standard / retail packaging

Notes:

Lenovo

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

CERTIFICATIONS

Green Certifications^{III}

Green Certifications^[2]

- ENERGY STAR[®] 8.0
- EPEAT[™] Gold Registered^[3]
- ErP Lot 6/26
- RoHS compliant
- TCO Certified 10.0

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 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[™] 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

- Eyesafe[®] Certified 2.0
- (Optional) Intel[®] Evo[™] Platform
- TÜV Rheinland® Eye Comfort Certification (5-star)
- 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.
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