OVERVIEW



1. SD Express 7.0 card reader	5. HDMI
2. Thunderbolt 4	6. 2x Thunderbolt 5
3. USB-A (USB 10Gbps), Always On	7. Headphone / microphone combo jack (3.5mm)
4. Kensington Nano Security Slot	

PERFORMANCE

Processor

Processor Family

Intel® H Series Core Ultra 5 / 7 / 9 Processor (Series 2); supports up to 16 cores; up to 5.4GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics	NPU	Intel® vPro® Eligibility	Overall TOPS
Core Ultra 5 235H	14 (4 P-core + 8 E-core + 2 LP E-core)	14	P-core 2.4GHz / E-core 1.8GHz / LP E-core 700MHz	P-core 5.0GHz / E-core 4.4GHz / LP E-core 2.5GHz	18MB Intel® Smart Cache	Intel® Arc™ 140T GPU, up to 74 TOPS	Intel® AI Boost, up to 13 TOPS	Intel® vPro® Enterprise	Up to 94 TOPS
Core Ultra 7 255H	16 (6 P-core + 8 E-core + 2 LP E-core)	16	P-core 2.0GHz / E-core 1.5GHz / LP E-core 700MHz	P-core 5.1GHz / E-core 4.4GHz / LP E-core 2.5GHz	24MB Intel® Smart Cache	Intel® Arc™ 140T GPU, up to 74 TOPS	Intel® AI Boost, up to 13 TOPS	-	Up to 96 TOPS
Core Ultra 7 265H	16 (6 P-core + 8 E-core + 2 LP E-core)	16	P-core 2.2GHz / E-core 1.7GHz / LP E-core 700MHz	P-core 5.3GHz / E-core 4.5GHz / LP E-core 2.5GHz	24MB Intel® Smart Cache	Intel® Arc™ 140T GPU, up to 75 TOPS	Intel® AI Boost, up to 13 TOPS	Intel® vPro® Enterprise	Up to 97 TOPS
Core Ultra 9 285H	16 (6 P-core + 8 E-core + 2 LP E-core)	16	P-core 2.9GHz / E-core 2.7GHz / LP E-core 1.0GHz	P-core 5.4GHz / E-core 4.5GHz / LP E-core 2.5GHz	24MB Intel® Smart Cache	Intel® Arc™ 140T GPU, up to 77 TOPS	Intel® AI Boost, up to 13 TOPS	Intel® vPro® Enterprise	Up to 99 TOPS

AI (Artificial Intelligence)

AI PC Category

AI-Ready Workstations

NPU

Integrated Intel® AI Boost, up to 13 TOPS

Operating System

Operating System

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- Fedora Linux
- Ubuntu Linux
- Red Hat Enterprise Linux 10.1 (certified only, for detailed and latest information, please visit Red Hat Certified Hardware)

Graphics

Graphics

Graphics	Type	Memory	AI TOPS (Peak)
Intel® Arc™ 140T GPU	Integrated	Shared	-
NVIDIA® RTX PRO 1000 Blackwell Generation 8GB GDDR7 Laptop GPU	Discrete	8GB GDDR7	440 TOPS
NVIDIA® RTX PRO 2000 Blackwell Generation 8GB GDDR7 Laptop GPU	Discrete	8GB GDDR7	572 TOPS

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via Thunderbolt™ 5, Thunderbolt™ 4, and HDMI®).

Max resolution for multiple external display:
• 3x 3840x2160@60Hz (Thunderbolt™ 5, Thunderbolt™ 4, and HDMI®)
Max resolution for single external display:
• Thunderbolt™ 4 supports up to 7680x4320@60Hz or 3840x2160@240Hz
• Thunderbolt™ 5 supports up to 7680x4320@60Hz or 3840x2160@240Hz
• HDMI® supports up to 7680x4320@60Hz or 3840x2160@240Hz

Chipset

Chipset

Intel® SoC (System on Chip) platform

Memory

Max Memory

Up to 64GB (1x 64GB LPCAMM2), upgradable

Memory Slots

One LPCAMM2 connector, dual-channel

Memory Type

LPDDR5X-7467, maximum transfer speeds of up to 7467 MT/s, 16GB / 32GB / 64GB memory modules are available

Storage

Max Storage Support[1]

Up to two M.2 2280 Gen 5 Performance SSD; up to 8TB, 4TB each[2]

Storage Slot[3]

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® 5.0 x4 Performance[4]	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.
[2] The system provides two M.2 PCIe® 4.0 x4 slots.
[3] The actual data transfer rate of the following PCIe® interface also depends on the capabilities of the connected PCIe® device. The listed values represent theoretical maximums.
PCIe® 3.0 (x2 / x4): 2 GB/s (16 Gbps) / 4 GB/s (32 Gbps);
PCIe® 4.0 (x2 / x4): 4 GB/s (32 Gbps) / 8 GB/s (64 Gbps);
PCIe® 5.0 (x2 / x4): 8 GB/s (64 Gbps) / 16 GB/s (128 Gbps).
[4] Gen 5 SSD on M.2 PCIe® 4.0 slot will run on PCIe® 4.0 protocols.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

SoundWire®, Cirrus Logic® CS42L43 codec

Speakers

Stereo speakers, 2W x2, Dolby Atmos®

Microphone

- Dual-microphone array, far-field, Dolby Voice®
- No microphone (for special bid model)

Camera**

- 5.0MP + IR with privacy shutter, fixed focus, temporal noise reduction

- 5.0MP + IR, with privacy shutter, fixed focus, Computer Vision Human Presence Detection on Image Signal Processor (ISP), temporal noise reduction
- No camera (for special bid model)

Battery

Battery

90Wh Rechargeable Li-ion Battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter[1]

- 140W USB-C® GaN (3-pin) AC adapter, supports PD 3.1, 100-240V, 50-60Hz
- No power adapter

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)	Non-touch	IPS	500nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	89° / 89° / 89° / 89°	91.7% screen to body ratio, X-Rite® Factory Color Calibration, Low power, TÜV Low Blue Light, Eyesafe® 2.0 Certified, DC dimming
16″	WQUXGA (3840x2400)	Non-touch	IPS	800nits	Anti-glare	16:10	1500:1	100% DCI-P3	60Hz	85° / 85° / 85° / 85°	91.7% screen to body ratio, DisplayHDR™ 400, Dolby Vision®, Eyesafe® Certified 2.0, TÜV Low Blue Light, X-Rite® Factory Color Calibration, DC dimming
16″	3.2K (3200x2000)	Add-on Film Touch	Tandem OLED	SDR 600nits / HDR 1500nits (peak)	Anti-glare, anti-reflection, anti-smudge	16:10	100,000:1	100% DCI-P3	40-120Hz VRR	85° / 85° / 85° / 85°	90.9% screen to body ratio, DisplayHDR™ 600, Dolby Vision®, Eyesafe® Certified 2.0, TÜV Rheinland® Low Blue Light, X-Rite® Factory Color

											Calibration, PWM dimming

Touchscreen

- Add-on Film Touch, supports 10-point touch (Tandem OLED models)
- Non-touch

Screen-to-Body Ratio**

- 90.9% (Tandem OLED models)
- 91.7% (IPS models)

Color Calibration

X-Rite® factory color calibration

Input Device

Pen

- Lenovo® Yoga® Pen
- No pen bundled (purchase separately)
- No support (non-touch display doesn't support pen input)

Keyboard

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

Keyboard Backlight

LED backlight

UltraNav™

3-button TrackPoint® pointing device and glass surface multi-touch Haptic Touchpad, 85 x 135 mm (3.35 x 5.31 inches)

Mechanical

Dimensions (WxDxH)[1]

354.3 × 241.0 × 9.9 / 15.8 (front / rear), 20.6 (maximum) mm
13.95 x 9.49 x 0.39 / 0.62 (front / rear), 0.81 (maximum) inches

Weight[2]

Starting at 1.84 kg (4.06 lbs)

Case Color

Black

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

WLAN + Bluetooth®**[1]

- Intel® Wi-Fi® 7 BE201, 802.11be 2x2 Wi-Fi® + Bluetooth® 5.4
- Intel® Wi-Fi® 7 BE201, 802.11be 2x2 Wi-Fi® + Bluetooth® 5.4, Intel® vPro® technology support[2]

WWAN

No support

SIM Card

No physical SIM card included

Ethernet

No onboard Ethernet, supports optional Lenovo® USB-C® to Ethernet Adapter (2.5Gbps)

NFC

- Near Field Communication
- No support

Notes:

[1] Wi-Fi® operation (including Wi-Fi® 6, Wi-Fi® 6E, Wi-Fi® 7, etc.) is subject to the regulatory requirements of each country. Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.
[2] Intel® vPro® platform requires the hardware and software necessary to deliver the manageability use cases, security features, system performance, and stability that define the platform. For detailed vPro® support information, please refer to the System Management section.

Ports[1]

Standard Ports

- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2), Always On
- 2x Thunderbolt™ 5, with USB PD 3.1 and DisplayPort™ 2.1, 140W input / 15W output
- 1x Thunderbolt™ 4, with DisplayPort™ 2.1 and USB PD 3.1, 140W input / 15W output
- 1x HDMI® 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x Kensington® Nano Security Slot™

Optional Ports

1x 2.5GbE RJ-45, via Lenovo® USB-C® to Ethernet Adapter (2.5Gbps)

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.
Thunderbolt™ 5: 80 Gbit/s (bidirectional), up to 120 Gbit/s in bandwidth boost mode for video-intensive applications.

Docking

Docking

Various docking solutions supported via Thunderbolt™ / USB-C®.
For more compatible docking solutions, please visit Docking for ThinkPad® P1 Gen 8

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

- NVMe® password
- Power-on password
- Supervisor password
- Self-healing BIOS
- More BIOS security features, please visit BIOS Simulator

Other Security

- Bottom cover tamper detection
- Camera privacy shutter
- Computer Vision-based User Presence Sensing on Image Signal Processor (ISP)
- IR camera for Windows® Hello (facial recognition)

MANAGEABILITY

System Management

System Management[1]

- Intel® vPro® Enterprise
- Non-vPro®

Notes:

[1] Intel® vPro® platform require an eligible Intel® processor, a supported operating system, Intel® LAN and/or WLAN silicon, firmware enhancements, and other hardware and software necessary to deliver the manageability use cases, security features, system performance, and stability that define the platform. See Intel® vPro® Platform for details.

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

ACCESSORIES

Bundled Accessories

Bundled Accessories[1]

- Lenovo® HDMI® to VGA Monitor Adapter
- Lenovo® USB-C® to DisplayPort™ Adapter
- Lenovo® USB-C® to Ethernet Adapter (2.5Gbps)
- Lenovo® USB-C® to VGA Adapter

Notes:

[1] For more compatible accessory solutions, please visit Accessories for ThinkPad® P1 Gen 8.

OPERATING REQUIREMENTS

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)

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]

90% Recycled Magnesium Aluminum C Cover
75% Recycled Aluminum A Cover
55% Recycled Aluminum D Cover
50% PCC Plastic D Cover (Attached Internal Components)
90% PCC Plastic 140W AC Adapter
46% Total PCC Plastic
Plastic Free Packaging with 90% Recycled and / or FSC Certified Content

Notes:

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

CERTIFICATIONS

Green Certifications[1]

Green Certifications[2]

- ENERGY STAR® 9.0
- EPEAT 2.0 Gold Registered
- RoHS compliant
- TCO Certified, generation 10

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 https://compliance.lenovo.com.
[2] EPEAT registration and ENERGY STAR® certification are optional and only available on the models with preloaded OS. Please visit epeat.net and energystar.gov for more information.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Intel® Evo™ Platform
- Eyesafe® Certified 2.0
- TÜV Rheinland® Low Blue Light

ISV Certifications

ISV Certifications

Please visit ISV certifications for Lenovo® Workstations

- 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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