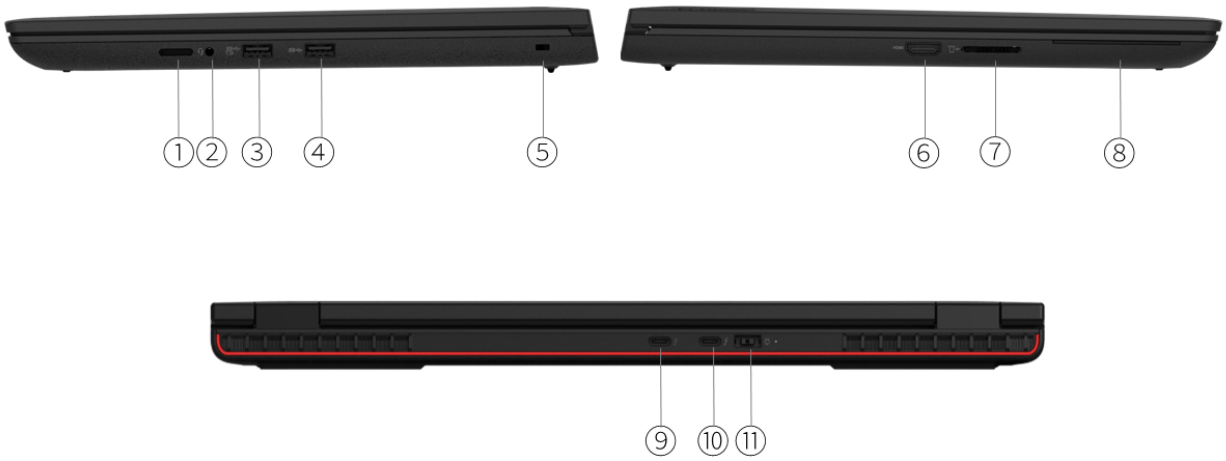
OVERVIEW



1. Nano-SIM card slot *	7. SD Express 7.0 card reader
2. Headphone (3.5mm)	8. Smart card reader *
3. USB 3.2 Gen 1 (Always On)	9. Thunderbolt 4
4. USB 3.2 Gen 1	10. Thunderbolt 4
5. Kensington Nano Security Slot	11. Power-in (Slim Tip)
6. HDMI	

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation H series Intel® Core™ i5 / i7 / i9 processor, supports up to 14 cores, up to 5.4GHz

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache
Core i5-13500H	12 (4 P-core + 8 E-core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz	18MB
Core i7-13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB
Core i7-13800H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.2GHz / E-core 4.0GHz	24MB
Core i9-13900H	14 (6 P-core + 8 E-core)	20	P-core 2.6GHz / E-core 1.9GHz	P-core 5.4GHz / E-core 4.1GHz	24MB

Operating System

Operating System**

- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit Red Hat Certified Hardware)
- Windows® 11 Pro
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 DG Windows 10 Pro 64
- Ubuntu Linux LTS[1]
- No operating system

Notes:

[1] 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	Type	Memory	TGP	Key Features
Intel Iris® Xe Graphics[1]	Integrated	Shared	Share CPU TDP	DirectX® 12.1
NVIDIA® RTX A500 Laptop GPU	Discrete	4GB GDDR6	35W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX A1000 Laptop GPU	Discrete	6GB GDDR6	45W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager
NVIDIA RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	45W	DirectX 12 Ultimate, Vulkan Support, NVIDIA FXAA / TXAA Anti-Aliasing, NVIDIA RTX Desktop Manager

Notes:

[1] Intel Iris Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel Iris Xe Graphics will function as Intel UHD Graphics.

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and Thunderbolt™)
• HDMI supports up to 7680x4320@60Hz
• Thunderbolt supports up to 5120x3200@60Hz (Thunderbolt or USB-C® to DP)

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory

Up to 96GB (2x 48GB DDR5 SO-DIMM)

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type

DDR5-5600 non-ECC[1]

Notes:

[1] System comes with DDR5-5600 memory and will run at DDR5-5200 due to platform limitations.

Storage

Storage Support[1]

Up to two drives, 2x M.2 SSD
• M.2 2280 SSD up to 4TB, 2TB each

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type**

Disk Type	Interface	RPM	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

RAID

RAID 0/1 support

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings. The system may support larger storage as the technology develops.

Removable Storage

Card Reader

SD Express 7.0 card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Dolby® Audio™ Premium

Microphone

- Dual-microphone array, far-field, Dolby Voice
- No microphone

Camera**

- FHD 1080p, with privacy shutter, fixed focus
- 5.0MP + IR hybrid, with privacy shutter and Ultrasonic Human Presence Detection, fixed focus

Battery

Battery

Integrated Li-Polymer 90Wh battery, supports Rapid Charge (charge up to 80% in 1hr)

Power Adapter

Power Adapter**[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1][2]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16″	WUXGA (1920x1200)	None	IPS	300 nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming
16″	WUXGA (1920x1200)	None	IPS	300 nits	Anti-glare	16:10	1200:1	100% sRGB	85°/85°/85°/85°	TÜV Low Blue Light, 83.9% screen to body ratio, DC dimming
16″	WQUXGA (3840x2400)	None	IPS	800 nits	Anti-glare	16:10	1500:1	100% DCI-P3	85°/85°/85°/85°	DisplayHDR™ 400, Dolby Vision™, Eyesafe® Certified 2.0, TÜV Low Blue Light, X-Rite® Factory Color Calibration, 83.9% screen to body ratio, DC dimming
16″	WUXGA (1920x1200)	Multi-touch	IPS	300 nits	Anti-glare	16:10	800:1	45% NTSC	85°/85°/85°/85°	83.9% screen to body ratio, DC dimming

Color Calibration

- X-Rite factory color calibration (WQUXGA display)
- No color calibration

Touchscreen

- On-cell multi-touch, supports 10-point touch (selected FHD display)
- Non-touch

Notes:

[1] California Electronic Waste Recycling Fee
In California USA, 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, please go to https://www.calrecycle.ca.gov/Electronics/Consumer.
[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys with Unified Communications controls, numeric keypad

Keyboard Backlight

LED backlight on optional keyboard

UltraNav™

3-button TrackPoint® pointing device and Mylar® surface multi-touch touchpad, 67.6 x 115 mm (2.66 x 4.53 inches)

Mechanical

Dimensions (WxDxH)[1]

365 x 262 x 24.66 mm (14.37 x 10.31 x 0.97 inches)

Weight[2]

Starting at 2.2 kg (4.85 lbs)

Case Color

Thunder black

Case Material

PC-ABS (top), PC-ABS (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®

Intel Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1 (Bluetooth 5.3 hardware ready)[2]

WWAN**

- Wireless WAN upgradable to 4G (with antenna ready)
- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- No support

SIM Card

No SIM card inbox

NFC

- Near Field Communication
- No support

Notes:

[1] Ethernet support via optional docking or Lenovo USB-C to Ethernet Adapter.
[2] Bluetooth 5.3 is hardware ready but may run at a lower version due to OS limitations.
Wi-Fi 6E is only enabled on Windows 11 and operates as Wi-Fi 6 with Windows 10.

Ports[1]

Standard Ports

- 2x USB 3.2 Gen 1 (one Always On)
- 2x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)[2]
- 1x HDMI 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x SD Express 7.0 card reader
- 1x Security keyhole

Optional Ports

- 1x Smart card reader
- 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.
[2] Power Delivery only supports power-out for charging peripherals.

Docking

Docking

Various docking solutions supported via Thunderbolt or USB-C.
For more compatible docking solutions, please visit
Docking for ThinkPad® P16v Gen 1 (Intel)

Monitor Cable

Monitor Cable

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

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Nano Security Slot™, 2.5 x 6 mm

Smart Card Reader

- Smart card reader
- No smart card reader

Fingerprint Reader

Touch style fingerprint reader integrated in power button, match-on-chip

BIOS Security

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

Other Security

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) Camera privacy shutter
- Bottom cover tamper detection
- (Optional) IR camera for Windows Hello

MANAGEABILITY

System Management

System Management

- Intel vPro® Enterprise
- Non-vPro

SERVICE

Warranty[1]

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

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific

model's configurations. For more service extensions, please go to https://smartfind.lenovo.com/. To learn more details of warranty policy, please access https://pcsupport.lenovo.com/warranty.

ENVIRONMENTAL

Sustainability

Material

85% PCC recycled plastic used in key caps
90% PCC recycled plastic used in speaker enclosure
90% PCC recycled plastic used in the battery
30% PCC recycled plastic used in 135W and 170W adapters
90% recycled and/or sustainable packaging

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)

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).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo USB-C to Ethernet Adapter (1Gbps)
- None

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered[2]
- TCO Certified 9.0
- RoHS compliant

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.
[2] EPEAT is registered where applicable, please see https://www.epeat.net for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed

Other Certifications

- (Optional) Eyesafe Certified 2.0
- (Optional) TÜV Rheinland® Low Blue Light

ISV Certifications

ISV Certifications

Please visit ISV certifications for Lenovo Workstations

- Feature with ** means that only one offering listed under the feature is configured on selected models.
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