

## OVERVIEW



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

Notes:

- Items with \* are only available on selected models

## PERFORMANCE

### Processor

#### Processor Family

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

#### Processor\*\*<sup>[1]</sup>

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
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	Intel® Iris® Xe Graphics
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	Intel® Iris® Xe Graphics
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	Intel® Iris® Xe Graphics

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.

### Operating System

#### Operating System\*\*

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- Windows® 11 DG Windows® 10 Pro 64
- Fedora Linux
- Ubuntu Linux LTS
- Ubuntu Linux with Data Science Preload
- Red Hat Enterprise Linux 9.2 (certified only, for detailed and latest information, please visit [Red Hat Certified Hardware](#))<sup>[1]</sup>
- No preload operating system

Notes:

[1] Red Hat Enterprise Linux 9.2 certification will be available after Aug 31, 2023.

### Graphics

#### Graphics

Graphics	Type	Memory	TGP	Key Features
NVIDIA® GeForce RTX™ 4060 Laptop GPU	Discrete	8GB GDDR6	80W	DirectX® 12 Ultimate
NVIDIA® GeForce RTX™ 4080 Laptop GPU	Discrete	12GB GDDR6	80W	DirectX® 12 Ultimate
NVIDIA® GeForce RTX™ 4090 Laptop GPU	Discrete	16GB GDDR6	80W	DirectX® 12 Ultimate
NVIDIA® RTX 2000 Ada Generation Laptop GPU	Discrete	8GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX 3500 Ada Generation Laptop GPU	Discrete	12GB GDDR6 ECC	80W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX 4000 Ada Generation Laptop GPU	Discrete	12GB GDDR6 ECC	80W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX 5000 Ada Generation Laptop GPU	Discrete	16GB GDDR6 ECC	80W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager
NVIDIA® RTX A1000 Laptop GPU	Discrete	6GB GDDR6	35W	DirectX® 12 Ultimate, Vulkan Support, NVIDIA® FXAA / TXAA Anti-Aliasing, NVIDIA® RTX Desktop Manager

## 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

## 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, maximum transfer speeds of up to 5200 MT/s<sup>[1]</sup>

Notes:

[1] System comes with DDR5-5600 DIMMs and will run at 5200 MT/s due to platform limitations.

## Storage

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

- Models with NVIDIA® RTX A1000/2000 Ada:
  - up to two drives, 2x M.2 SSD
  - M.2 2280 SSD up to 8TB, 4TB each
  - RAID 0/1 support
- Models with NVIDIA® RTX 3500/4000/5000 Ada or GeForce RTX4060/4080/4090:
  - one drive, up to 4TB M.2 2280 SSD

### Storage Slot<sup>[2]</sup>

- Models with NVIDIA® RTX A1000/2000 Ada:
  - Two M.2 2280 PCIe® 4.0 x4 slots
- Models with NVIDIA® RTX 3500/4000/5000 Ada or GeForce RTX4060/4080/4090:
  - 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 / 4TB	Opal 2.0
M.2 2280 SSD	PCIe® NVMe®, PCIe® x4	256GB / 512GB / 1TB	Opal 2.0

## RAID

RAID 0/1 support (for models with NVIDIA® RTX A1000/2000 Ada)

Notes:

[1] The storage capacity supported is based on the test results with current Lenovo® storage offerings.

[2] 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).

## Removable Storage

### Card Reader

SD Express 7.0 card reader

## Multi-Media

### Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

**Speakers**

Stereo speakers, 2W x2, Dolby Atmos®

**Microphone**

Dual-microphone array, far-field, Dolby Voice®

**Camera\*\***

- FHD 1080p + IR hybrid with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- 5.0MP + IR with privacy shutter and Ultrasonic Human Presence Detection, fixed focus
- No camera

**Battery**

**Battery**

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

**Power Adapter**

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

- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

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 <sup>[1]</sup>	300nits	Anti-glare	16:10	1200:1	100% sRGB	60Hz	89° / 89° / 89° / 89°	TÜV Low Blue Light, X-Rite® Factory Color Calibration, 86.2% screen to body ratio, DC dimming
16"	WQXGA (2560x1600)	Non-touch	IPS <sup>[2]</sup>	500nits	Anti-glare	16:10	1200:1	100% sRGB	165Hz	89° / 89° / 80° / 80°	TÜV Low Blue Light, X-Rite® Factory Color Calibration, 86.2% screen to body ratio, DC dimming
16"	WQUXGA (3840x2400)	Add-on Film Touch	OLED	SDR 400nits / HDR 500nits	Anti-reflection, anti-smudge	16:10	100,000:1	100% DCI-P3	60Hz	87.5° / 87.5° / 87.5° / 87.5°	DisplayHDR™ 400, Dolby Vision®, TÜV Low Blue Light, X-Rite® Factory Color Calibration, 86.1% screen to body ratio

**Touchscreen**

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

**Color Calibration**

X-Rite® factory color calibration

## Notes:

[1], [2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

## Input Device

### Pen

No support

### Keyboard

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

### Keyboard Backlight

LED backlight

### UltraNav™

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

## Mechanical

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

Models	Dimensions
Touch models	359.5 x 253.8 x 17.3 mm (14.15 x 9.99 x 0.68 inches)
Non-touch models	359.5 x 253.8 x 17.5 mm (14.15 x 9.99 x 0.69 inches)

### Weight<sup>[2]</sup>

Models	Weight
Touch models	Starting at 1.78 kg (3.92 lbs)
Non-touch models	Starting at 1.86 kg (4.11 lbs)

### Case Color\*\*

- Black
- Black, weave

### Case Material\*\*

- CFRP / GFRP (top), aluminium (bottom)
- CFRP / GFRP hybrid (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®

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

#### WWAN

- Fibocom L860-GL-16, 4G LTE CAT16, M.2 card, with embedded eSIM functionality
- Qualcomm® Snapdragon® X55 5G Modem-RF System, 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

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**Notes:**

[1] 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.

Bluetooth® 5.3 operation requires Windows® 11. For more information please visit [General Bluetooth® Support Information on Microsoft®](#).

[2] Ethernet support via optional docking or Lenovo® USB-C® to Ethernet Adapter, up to 2.5GbE.

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

### 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)
- 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
- 1x Power connector

### Optional Ports

1x Nano-SIM card slot (WWAN support models)

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**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™ or USB-C®.

For more compatible docking solutions, please visit

[Docking for ThinkPad® P1 Gen 6](#)

## 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

#### Other Security

- Bottom cover tamper detection
- Camera privacy shutter (camera models)

- (Optional) Ultrasonic Human Presence Detection for IR camera
- (Optional) IR camera for Windows® Hello (facial recognition)

## MANAGEABILITY

### System Management

#### System Management

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

Notes:

[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\*\*\*<sup>[1]</sup>

- 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 6](#)

## OPERATING REQUIREMENTS

### Operating Environment

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

- 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<sup>[1]</sup>

90% PCC recycled plastic used in speaker enclosure  
90% PCC recycled plastic used in the battery  
30% PCC recycled plastic used in 170W power adapter  
90% recycled and/or sustainable packaging

Notes:

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

## CERTIFICATIONS

### Green Certifications<sup>[1]</sup>

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

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered<sup>[3]</sup>
- 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 <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](http://epeat.net) and [energystar.gov](http://energystar.gov) for more information.

[3] EPEAT™ is registered where applicable, please visit [epeat.net](http://epeat.net) for registration status by country.

### Other Certifications

#### Mil-Spec Test

MIL-STD-810H military test passed

#### Other Certifications

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.
- Feature with \*\*\* means that one or more options listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
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