

OVERVIEW



1. Thunderbolt 4	6. HDMI
2. Thunderbolt 4	7. USB-C 3.2 Gen 2
3. Power connector	8. Ethernet (RJ-45)
4. USB 3.2 Gen 1 (Always On)	9. Headphone / microphone combo jack (3.5mm)
5. USB 3.2 Gen 1	10. USB-C 3.2 Gen 1

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i7 / i9 Processor

Processor**^[1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i7-12800HX	16 (8 P-core + 8 E-core)	24	P-core 2.0GHz / E-core 1.5GHz	P-core 4.8GHz / E-core 3.4GHz	25MB	Intel UHD Graphics
Core i9-12900HX	16 (8 P-core + 8 E-core)	24	P-core 2.3GHz / E-core 1.7GHz	P-core 5.0GHz / E-core 3.6GHz	30MB	Intel UHD Graphics

Notes:

1. The maximum supported memory speed will vary on the selected memory

Operating System

Operating System**^[1]

- Windows® 11 Pro
- Windows 11 Home
- Windows 11 Home Single Language
- 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	Boost Clock	TGP	Key Features
NVIDIA® GeForce RTX™ 3070 Ti Laptop GPU	Discrete	8GB GDDR6	1485 MHz	150W	Advanced Optimus, Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate
NVIDIA GeForce RTX 3080 Ti Laptop GPU	Discrete	16GB GDDR6	1590 MHz	175W	Advanced Optimus, Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate

Monitor Support

Monitor Support^[1]

Supports up to 4 independent displays (native display and 3 external monitors via HDMI® and USB-C®)

- HDMI supports up to 7680x4320@60Hz
- Thunderbolt™ supports up to 7680x4320@60Hz

Notes:

1. For Max resolution, DSC-enabled display is required. Three external output display devices cannot be supported at the same time when displaying 8K resolution.

Chipset

Chipset

Intel HM670 chipset

Memory

Max Memory^[1]

- Up to 32GB DDR5-4800 offering
- Up to 32GB DDR5-5400 (overclock) offering

Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

Memory Type**

- DDR5-4800
- DDR5-5400 (overclock)

Notes:

1. The max memory is based on the test results with current Lenovo® memory offerings. The system may support more memory as the technology develops.

Storage

Storage Support^[1]

Up to two drives, 2x M.2 SSD

- M.2 2280 SSD up to 2TB

Storage Slot

Two M.2 2280 PCIe® 4.0 x4 slots

Storage Type

Disk Type	Interface	Offering
M.2 2280 SSD	PCIe NVMe®, PCIe 4.0 x4	512GB / 1TB / 2TB

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

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers (super linear speaker), 2W x2, audio by HARMAN certification, optimized with Nahimic Audio, Smart Amplifier (AMP)

Microphone

Dual-microphone array

Camera

FHD 1080p, with E-shutter, fixed focus

Sensor

Sensors

Force sensor

Battery

Battery

Integrated Li-Polymer 99.99Wh battery, supports Rapid Charge Pro (charge up to 50% in 15min, 70% in 30min)

Max Battery Life^[1]

MobileMark® 2018: 7.1 hr

Local video (1080p) playback@150nits: 9.8 hr

Notes:

1. All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, JEITA 2.0, continuous 1080p video playback (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 and usage, software use, wireless functionality, power management settings, and screen brightness. The maximum capacity of the battery will decrease with time and use.

Power Adapter

Power Adapter

300W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

DESIGN

Display

Display**^[1]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16"	WQXGA (2560x1600)	None	IPS	500 nits	Anti-glare	16:10	1200:1	100% sRGB	89°/89°/89°/89°	Refresh rate 165Hz, Dolby® Vision™, DisplayHDR™ 400, NVIDIA G-SYNC®, DC dimmer, TÜV Low Blue Light, TÜV High Gaming Performance
16"	WQXGA (2560x1600)	None	IPS	500 nits	Anti-glare	16:10	1200:1	100% sRGB	89°/89°/89°/89°	Refresh rate 240Hz, Dolby Vision, NVIDIA G-SYNC, DC dimmer, Advanced Optimus, TÜV Low Blue Light, TÜV High Gaming Performance

Color Calibration

X-Rite® Pantone® factory color calibration

Touchscreen

Non-touch

Notes:

1. California Electronic Waste Recycling Fee

In California, 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, go to <https://www.calrecycle.ca.gov/Electronics/Consumer>

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys, numeric keypad, Force sensor, switchable keycaps, easy tool inbox

Keyboard Backlight

Per-key RGB backlight

Touchpad

Buttonless glass surface multi-touch touchpad, supports Precision TouchPad (PTP), 75 x 120 mm (2.95 x 4.72 inches)

Mechanical

Dimensions (WxDxH)^[1]

358.1 x 263.5 x 19.4 mm (14.1 x 10.37 x 0.76 inches)

Weight^[2]

Around 2.53 kg (5.58 lbs)

Case Color

Storm grey (top), black (bottom)

Surface Treatment

Iron sandblasting (anodized)

Case Material

Aluminium (top), aluminium (bottom)

System Lighting

"Y" logo RGB lighting on top cover

RGB lighting on power button

"U" strip RGB lighting

RGB lighting on left, right, and rear thermal vent

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

2.5GbE, Realtek RTL8125BG Gaming Ethernet, 1x RJ-45

WLAN + Bluetooth[®]**^{[1][2]}

- Wi-Fi[®] 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Killer Wi-Fi 6E AX1675i, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card
- Intel Killer Wi-Fi 6E AX1690i, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card

Notes:

1. Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.
2. Wi-Fi 6 and Wi-Fi 6E full features might be limited by country-level restrictions.
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^[1]

Standard Ports

- 2x Thunderbolt 4 / USB4[®] 40Gbps (support data transfer and DisplayPort™ 1.4)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 1 (support data transfer only)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 135W and DisplayPort 1.4)
- 1x HDMI, up to 8K/60Hz
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector

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;
USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;
Thunderbolt 3/4: 40 Gbit/s

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in chipset

Fingerprint Reader

Touch style fingerprint reader integrated in power button

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Self-healing BIOS

Other Security

E-shutter

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)
- 2-year (1-yr battery) courier or carry-in service
- 3-year (1-yr battery) courier or carry-in service

ENVIRONMENTAL

Operating Environment

Temperature^[1]

At altitudes up to 2438 m (8,000 ft)
- Operating: 5°C to 35°C (41°F to 95°F)
- Storage: 5°C to 43°C (41°F to 109°F)

Humidity

- Operating: 8% to 95% at wet-bulb temperature 23°C (73°F)
- Storage: 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).

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- ErP Lot 3
- RoHS compliant

Notes:

1. The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

Other Certifications

Other Certifications

- TÜV Rheinland® High Gaming Performance
- TÜV Rheinland Low Blue Light (Hardware Solution)

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