

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**

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

Operating System

Operating System**

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- No preload operating system

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, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate
NVIDIA® GeForce RTX™ 3080 Ti Laptop GPU	Discrete	16GB GDDR6	1590 MHz	175W	Advanced Optimus, 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.

Storage

Storage Support^[1]

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

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.

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, 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

99.99Wh Rechargeable Li-ion 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, MobileMark® 25, MobileMark® 30, JEITA 2.0, JEITA 3.0, 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 depending 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	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
16"	WQXGA (2560x1600)	None	IPS	500nits	Anti-glare	16:10	1200:1	100% sRGB	165Hz	89° / 89° / 89° / 89°	RDolby Vision, DisplayHDR™ 400, NVIDIA® G-SYNC®, DC dimmer, TÜV Low Blue Light, TÜV High Gaming Performance
16"	WQXGA (2560x1600)	None	IPS	500nits	Anti-glare	16:10	1200:1	100% sRGB	240Hz	89° / 89° / 89° / 89°	Dolby Vision®, NVIDIA® G-SYNC®, DC dimmer, Advanced Optimus, TÜV Low Blue Light, TÜV High Gaming Performance

Color Calibration

X-Rite® factory color calibration

Touchscreen

Non-touch

Notes:

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

Input Device

Pen

No support

Keyboard

6-row, 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

- Legion 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^[1]

2.5GbE, Realtek® RTL8125BG Gaming Ethernet, 1x RJ-45, supports Wake-on-LAN

WLAN + Bluetooth®**^[2]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 card^[3]
- Wi-Fi® 6E, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 card^[4]
- Intel® Killer Wi-Fi® 6E AX1675i, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 Card^[5]
- Intel® Killer Wi-Fi® 6E AX1690i, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 Card^[6]

WWAN

No support

Notes:

[1] Wake-on-LAN needs the power adapter plugged in.

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

[3] Wi-Fi® 6 full features might be limited by country-level restrictions.

[4], [5], [6] 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.

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

Ports^[1]

Standard Ports

- 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, Lenovo® Power Delivery 135W and DisplayPort™ 1.4)^[2]
- 2x Thunderbolt™ 4 / USB4® 40Gbps (support data transfer and DisplayPort™ 1.4)
- 1x HDMI® 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Ethernet (RJ-45)
- 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;

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] PD 135W is the input power and requires the use of Lenovo® unique adapter, otherwise it may support lower than 135W.

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
- Hard disk password
- Power-on 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

ACCESSORIES

Bundled Accessories

Bundled Accessories^[1]

None

Notes:

[1] For more compatible accessory solutions, please visit [Accessories for Legion 7 16IAX7](#)

OPERATING REQUIREMENTS

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)

Relative 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. For ESG & regulatory compliance documents, please visit <https://compliance.lenovo.com>.

Other Certifications

Other Certifications

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

- 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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