

OVERVIEW



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

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 / i9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5-12500H	12 (4 P-core + 8 E-core)	16	P-core 2.5GHz / E-core 1.8GHz	P-core 4.5GHz / E-core 3.3GHz	18MB	Intel® Iris® Xe Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	Intel® Iris® Xe Graphics
Core i9-12900H	14 (6 P-core + 8 E-core)	20	P-core 2.5GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.8GHz	24MB	Intel® Iris® Xe 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™ 3050 Ti Laptop GPU	Discrete	4GB GDDR6	1695 MHz	95W	Advanced Optimus, Dynamic Boost 2.0, DirectX® 12 Ultimate
NVIDIA® GeForce RTX™ 3060 Laptop GPU	Discrete	6GB GDDR6	1605 MHz	100W	Advanced Optimus, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate
NVIDIA® GeForce RTX™ 3070 Laptop GPU	Discrete	8GB GDDR6	1410 MHz	100W	Max-Q Technologies: Advanced Optimus, Optimal Playable Settings, Rapid Core Scaling, CPU Optimizer, Dynamicboost, DLSS, 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 8K@60Hz
- USB-C® supports up to 8K@30Hz

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® SoC (System on Chip) platform

Memory

Max Memory^[1]

Up to 24GB (8GB soldered + 16GB SO-DIMM) DDR5-4800 offering

Memory Slots

One memory soldered to systemboard, one DDR5 SO-DIMM slot, dual-channel capable

Memory Type

DDR5-4800

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 1TB 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

Notes:

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

Removable Storage

Card Reader

4-in-1 card reader (SD, SDHC, SDXC, MMC)

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, audio by HARMAN, optimized with Nahimic Audio

Microphone

Dual-microphone array

Camera**

- FHD 1080p, with E-shutter, fixed focus
- HD 720p, with E-shutter, fixed focus

Battery

Battery**

- Integrated Li-Polymer 71Wh battery, supports Rapid Charge Pro (charge up to 50% in 30min)
- Integrated Li-Polymer 99.99Wh battery, supports Super Rapid Charge (10min charge 0-30% capacity, 30min charge 0-70% capacity, 80min charge 0-100% capacity)

Max Battery Life^[1]

- Models with 71Wh battery:
MobileMark® 2018: 6.4 hr
Local video (1080p) playback: 7.8 hr
- Models with 99.99Wh battery:
MobileMark® 2018: 8.6 hr
Local video (1080p) playback: 11.3 hr

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark® 2018, continuous 1080p video playback (with quiet mode, 60Hz, lighting off and hybrid mode) 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^[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**[1]

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)	None	IPS	300nits ^[2]	Anti-glare	16:10	1200:1	100% sRGB	165Hz	89° / 89° / 89° / 89°	Dolby Vision®, NVIDIA® G-SYNC®, DC dimmer, Advanced Optimus, TÜV Low Blue Light
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
- No color calibration

Touchscreen

Non-touch

Notes:

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

[2] Minimum brightness tested in lab.

Input Device

Pen

No support

Keyboard

6-row, multimedia Fn keys, numeric keypad, swtichable keycaps

Keyboard Backlight**

- White backlight
- 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]

357.7 x 260 x 16.9 mm (14.08 x 10.24 x 0.67 inches)

Weight^[2]

Models	Weight
Models with 71Wh battery	Less than 2.175 kg (4.8 lbs)
Models with 99.99Wh battery	Less than 2.23 kg (4.9 lbs)

Case Color**

- Onyx grey
- Storm grey

Surface Treatment

Iron sandblasting (anodized)

Case Material

Aluminium (top), aluminium (bottom)

System Lighting

No system lighting

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

WLAN + Bluetooth®^[1]**

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

WWAN

No support

Notes:

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

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

[3], [4], [5] 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

- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB 3.2 Gen 2
- 1x USB-C® 3.2 Gen 2 (support data transfer, Lenovo® Power Delivery 135W and DisplayPort™ 1.4)^[2]
- 1x Thunderbolt™ 4 / USB4® 40Gbps (support data transfer, Lenovo® Power Delivery 135W and DisplayPort™ 1.4)^[3]
- 1x HDMI® 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Card reader
- 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], [3] 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 SoC

Fingerprint Reader

Touch style fingerprint reader integrated in power button

BIOS Security

- Administrator password
- Power-on password
- Hard disk password

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 S7 16IAH7](#)

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)
- At altitudes above 2438 m (8,000 ft)
 - Maximum temperature when operating under the unpressurized condition: 31.3°C (88°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

- (Optional) 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.
- Lenovo reserves the right to change specifications or other product information without notice. Lenovo is not responsible for photographic or typographical errors. LENOVO PROVIDES THIS PUBLICATION "AS IS," WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore this disclaimer may not apply to you.
- The specifications on this page may not be available in all regions, and may be changed or updated without notice.



intel



intel



intel



intel



intel



intel