

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 7 / 9 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 7 5800H	8	16	3.2GHz	4.4GHz	4MB L2 / 16MB L3	AMD Radeon™ Graphics
AMD Ryzen 9 5900HX	8	16	3.3GHz	4.6GHz	4MB L2 / 16MB L3	AMD Radeon Graphics

Operating System

Operating System**

- Windows® 10 Home 64
- Windows 10 Home 64 Single Language
- Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

Graphics

Graphics**[1]

Graphics	Type	Memory	Boost Clock	TGP	Key Features
NVIDIA® GeForce RTX™ 3060 Laptop GPU	Discrete	6GB GDDR6	1425 MHz / 1702 MHz	130W	Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate
NVIDIA GeForce RTX 3080 Laptop GPU	Discrete	16GB GDDR6	1545 MHz / 1710 MHz	165W	Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate
NVIDIA GeForce RTX 3070 Laptop GPU	Discrete	8GB GDDR6	1560 MHz / 1620 MHz	140W	Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate

Notes:

[1] Free-Sync via integrated graphics; G-Sync via discrete graphics.

Monitor Support

Monitor Support

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

- HDMI supports up to 7680x4320@60Hz
- USB-C supports up to 5120x3200@60Hz

Chipset

Chipset

AMD SoC (System on Chip) platform

Memory

Max Memory[1]

Up to 32GB DDR4-3200 offering

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

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

Storage Slot

Two M.2 2280 PCIe® 3.0 x4 slots

Storage Type

Disk Type	Interface
M.2 2280 SSD	PCIe NVMe®, PCIe 3.0 x4

Notes:

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

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3306 codec

Speakers

Stereo speakers, 2W x2, Nahimic Audio, Harman Speakers, Smart AMP

Microphone

Dual-microphone array

Camera

HD 720p, with E-shutter, fixed focus

Battery

Battery

Integrated Li-Polymer 80Wh battery, supports Rapid Charge Boost (get 2 hours of runtime with a 15-minute charge)

Max Battery Life^[1]

MobileMark® 2018: 5.1 hr (discrete mode) or 8.3 hr (hybrid mode)

Notes:

[1] All battery life claims are approximate maximum and based on results using the MobileMark 2014, MobileMark 2018, MobileMark 25, 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 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

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

X-Rite® factory color calibration

Touchscreen

Non-touch

Input Device

Keyboard

6-row, spill-resistant, multimedia Fn keys, numeric keypad

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]

360 x 260 x 20.1-23.5 mm (14.17 x 10.23 x 0.79-0.93 inches)

Weight^[2]

Around 2.5 kg (5.5 lbs)

Case Color

Storm grey

Surface Treatment

Anodizing sandblasting

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^[1]

Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth®**^{[2][3]}

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel® Killer Wi-Fi 6 AX1650, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card

Notes:

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

[2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

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

Ports^[1]

Standard Ports

- 1x Ethernet (RJ-45)
- 1x HDMI 2.1
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector
- 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 and DisplayPort™ 1.4)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 100W and DisplayPort 1.4)
- 2x USB 3.2 Gen 1

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.

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

Fingerprint Reader

No fingerprint reader

BIOS Security

- Power-on password
- Supervisor 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

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