Lenovo PSREF
Product Specifications
Reference

OVERVIEW

1. HDMI	5. Power button
2. USB-C 3.2 Gen 2	6. Headphone / microphone combo jack (3.5mm)
3. USB4 40Gbps	7. USB 3.2 Gen 1 (Always On)
4. E-shutter switch	

PERFORMANCE

Processor

Processor Family

AMD Ryzen™ 7 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
AMD Ryzen 7 7840HS	8	16	3.8GHz	5.1GHz	8MB L2 / 16MB L3	AMD Radeon™ 780M Graphics

Operating System

Operating System[**]

- Windows® 11 Home
- Windows 11 Home Single Language
- Windows 11 Pro

Graphics

Graphics

Graphics	Type	Memory	Boost Clock	TGP	Key Features
NVIDIA® GeForce RTX™ 3050 6GB Laptop GPU	Discrete	6GB GDDR6	990 MHz	73W	Resizable BAR, Dynamic Boost 2.0, DirectX® 12 Ultimate

Monitor Support

Monitor Support

Supports up to 4 independent displays (native display and 3 external monitors via HDMI®, USB-C®)
• HDMI supports up to 4K@60Hz
• USB-C supports up to 8K@60Hz

Chipset

Chipset

Intel® SoC (System on Chip) platform

Memory

Max Memory

16GB soldered memory, not upgradable

Memory Slots

Memory soldered to systemboard, no slots, dual-channel

Memory Type

LPDDR5x-6400

Storage

Storage Support[1]

One drive, up to 512GB M.2 2242 SSD or 1TB M.2 2280 SSD

Storage Slot

One M.2 2280 PCIe® 4.0 x4 slot

Storage Type[**]

Disk Type	Interface	Offering
M.2 2242 SSD	PCIe NVMe®, PCIe 4.0 x4	512GB
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. 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, 2W x4, optimized with Dolby® Atmos®, Amplifier (AMP)

Microphone

Quad-microphone array with noise-cancelling

Camera

FHD 1080p + IR, with E-shutter, fixed focus, with ToF sensor

Sensor

Sensors

- Ambient light sensor (ALS)
- Hall sensor
- ToF sensor

Battery

Battery

Integrated Li-Polymer 73Wh battery, supports Rapid Charge Express (get 3 hours of runtime with a 15-minute charge)[1]

Notes:

[1] Rapid Charge Express is only effective in hibernates or fully shutting down the computer.

Power Adapter

Power Adapter[1]

140W USB-C slim (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.

DESIGN

Display

Display**[1][2]

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
14.5″	2.5K (2560x1600)	Multi-touch	IPS	350 nits	Glossy	16:10	1500:1	100% sRGB	90Hz (Max)	85°/85°/85°/85°	Above 91.4% screen-to-body ratio, Eyesafe® Certified 2.0, Dolby Vision™
14.5″	3K (3072x1920)	Multi-touch	IPS	400 nits	Glossy	16:10	1500:1	100% DCI-P3	120Hz (Max)	85°/85°/85°/85°	Above 91.4% screen-to-body ratio, Eyesafe Certified 2.0, Dolby Vision, AGC

										Dragontrail™ Glass, TCON

Color Calibration

- TCON (Timing Controller) color calibration
- No color calibration

Touchscreen

OGM (One Glass Metal mesh) multi-touch, supports 10-point touch

Notes:

[1] California Electronic Waste Recycling Fee
In California USA, 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, please go to https://www.calrecycle.ca.gov/Electronics/Consumer.
[2] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

Input Device

Keyboard

6-row, multimedia Fn keys

Keyboard Backlight

LED backlight

Touchpad

Buttonless glass surface multi-touch touchpad, supports Precision TouchPad (PTP), 80 x 135 mm (3.15 x 5.31 inches)

Mechanical

Dimensions (WxDxH)[1]

325.5 x 226.49 x 15.6 mm (12.81 x 8.92 x 0.61 inches)

Weight[2]

Starting at 1.59 kg (3.50 lbs)

Case Color

Storm grey

Surface Treatment

Aluminium stamping (anodized with sandblasting)

Case Material

Aluminium (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

Ethernet

No onboard Ethernet

WLAN + Bluetooth®[1][2]

Wi-Fi® 6E, 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 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 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4a)
- 1x USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4a)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)

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

- Administrator password
- User password
- Master hard disk password
- User hard disk password
- Self-healing BIOS

Other Security

- IR camera for Windows Hello
- E-shutter

SERVICE

Warranty[1]

Base Warranty

1-year courier or carry-in service

Notes:

[1] The warranty upgrades may be bundled with some models, please check the "Included upgrade" column in the specific model's configurations. For more service extensions, please go to https://smartfind.lenovo.com/. To learn more details of warranty policy, please access https://pcsupport.lenovo.com/warranty.

ENVIRONMENTAL

Operating Environment

Temperature

- 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 and transportation: 5% to 95% at wet-bulb temperature 27°C (81°F)

Altitude

Maximum altitude (without pressurization): 3048 m (10,000 ft)

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- ENERGY STAR® 8.0
- EPEAT™ Gold Registered[2]
- ErP Lot 6
- ErP Lot 26
- RoHS compliant

Notes:

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

[2] EPEAT is registered where applicable, please see https://www.epeat.net for registration status by country.

Other Certifications

Mil-Spec Test

MIL-STD-810H military test passed (21 test items)

Other Certifications

- Eyesafe Certified 2.0
- 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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