OVERVIEW

1.	USB 3.2 Gen 1	5.	Ethernet (RJ-45)
2.	USB 3.2 Gen 1	6.	Thunderbolt 4
3.	Headphone / microphone combo jack (3.5mm)	7.	Power connector
4.	HDMI 2.0		

Notes:
- Thunderbolt 4 is not available on models with NVIDIA GeForce RTX 3060 graphics cards.

PERFORMANCE

Processor

Processor Family

12th Generation Intel® Core™ i5 / i7 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5-12450H	8 (4 P-core + 4 E-core)	12	P-core 2.0GHz / E-core 1.5GHz	P-core 4.4GHz / E-core 3.3GHz	12MB	DDR5-4800	Intel UHD 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	DDR5-4800	Intel Iris® Xe Graphics
Core i7-12650H	10 (6 P-core + 4 E-core)	16	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel UHD 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	DDR5-4800	Intel Iris Xe Graphics

Operating System

Operating System**

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

Graphics

Graphics**

Graphics	Type	Memory	Boost Clock	TGP	Key Features
NVIDIA® GeForce RTX™ 3050 Laptop GPU	Discrete	4GB GDDR6	1740 MHz	85W	Resizable BAR, Dynamic Boost 2.0, DirectX® 12 Ultimate
NVIDIA GeForce RTX 3050 Ti Laptop GPU	Discrete	4GB GDDR6	1695 MHz	85W	Resizable BAR, Dynamic Boost 2.0, DirectX 12 Ultimate
NVIDIA GeForce RTX 3060 Laptop GPU	Discrete	6GB GDDR6	1642 MHz	105W	Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate

Monitor Support

Monitor Support

Supports up to 3 independent displays (native display and 2 external monitors via HDMI®, USB-C® or Thunderbolt™)
• HDMI supports up to 4K@30Hz
• Thunderbolt supports up to 8k@60Hz
• USB-C supports up to 5120x3200@120Hz

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory[1]

Up to 16GB 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. 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 1TB
• M.2 2242 SSD up to 1TB

Storage Slot

Two M.2 slots
• One M.2 2242 PCIe® 4.0 x4 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	256GB / 512GB / 1TB
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 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

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC3287 codec

Speakers

Stereo speakers, 2W x2, Nahimic Audio

Microphone

Dual-microphone array

Camera

HD 720p, with privacy shutter, fixed focus

Battery

Battery**

• Integrated Li-Polymer 45Wh battery, supports Rapid Charge Boost (get 2 hours of runtime with a 15-minute charge)
• Integrated Li-Polymer 60Wh battery, supports Rapid Charge Boost (get 2 hours of runtime with a 15-minute charge)

Max Battery Life[1]

• Models with 45Wh battery:
  MobileMark® 2018: 4.4 hr
  Local video (1080p) playback@150nits: 5.4 hr
• Models with 60Wh battery:
  MobileMark 2018: 7.1 hr
  Local video (1080p) playback@150nits: 7.7 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**[1]

- 135W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz
- 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	Viewing Angle	Key Features
15.6″	FHD (1920x1080)	None	IPS	250 nits	Anti-glare	16:9	800:1	45% NTSC	170°	Refresh rate 120Hz, DC dimmer
15.6″	FHD (1920x1080)	None	IPS	300 nits	Anti-glare	16:9	1000:1	100% sRGB	160°	Refresh rate 165Hz, DC dimmer
15.6″	WQHD (2560x1440)	None	IPS	350 nits	Anti-glare	16:9	1200:1	100% sRGB	160°	Refresh rate 165Hz, DC dimmer

Color Calibration

No 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, multimedia Fn keys, numeric keypad

Keyboard Backlight**

- 4-Zone RGB backlight
- Blue backlight
- White backlight

Touchpad

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

Mechanical[1]

Dimensions (WxDxH)

359.6 x 266.4 x 21.8 mm (14.16 x 10.49 x 0.86 inches)

Packaging Dimensions (WxDxH)

551 x 349 x 85 mm (21.69 x 13.74 x 3.35 inches)

Weight

Around 2.315 kg (5.1 lbs)

Case Color**

- Glacier white

- Onyx grey

Surface Treatment

Painting

Case Material

PC-ABS (top), PC-ABS (bottom)

Notes:

1. The system dimensions and weight vary depending on configurations.

CONNECTIVITY

Network

Ethernet

Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth®[1][2]

- 802.11ac 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Wi-Fi 6, 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 limitation
2. Wi-Fi 6 full features might be limited by country-level restrictions.

Ports[1]

Standard Ports

- 2x USB 3.2 Gen 1
- 1x HDMI 2.0
- 1x Ethernet (RJ-45)
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector

Optional Ports**

- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4, for RTX 3050/RTX 3050 Ti graphics models)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort 1.4, for RTX 3060 graphics models)

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 SoC

Fingerprint Reader

No fingerprint reader

BIOS Security

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

Other Security

Camera privacy 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
- No base warranty

ENVIRONMENTAL

Operating Environment

Temperature[1]

- Operating: 0°C (32°F) to 40°C (104°F)
- Storage: -20°C (-4°F) to 60°C (140°F)
- Maximum temperature when operating under unpressurized conditions: 31.3°C (88°F)

Humidity

- Operating: 0% to 90% at wet-bulb temperature 23°C (73°F)
- Storage: 20% to 90% 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).

ACCESSORIES

Bundled Accessories

Bundled Accessories

- Lenovo Gaming M100 RGB Mouse (USB connector)
- None

CERTIFICATIONS

Green Certifications

Green Certifications

- ErP Lot 3
- RoHS compliant

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

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