## OVERVIEW

| | |
|---|---|
| 1. USB-C (USB 10Gbps), with USB PD 65-100W & DP 1.4 | 5. HDMI |
| 2. Combo audio jack | 6. Ethernet (RJ-45) |
| 3. USB-A (USB 5Gbps) | 7. USB-A (USB 5Gbps) |
| 4. USB-A (USB 5Gbps) | 8. Slim tip (rectangle) power connector |

Notes:

- Port 1: PD 140W is the input power and requires the use of Lenovo unique adapter, otherwise it may support lower than 140W.

# PERFORMANCE

## Processor

**Processor Family**

13th or 14th Generation Intel® Core™ i5 / i7 Processor

**Processor****

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Processor Graphics |
|---|---|---|---|---|---|---|
| Core i5-13450HX | 10 (6 P-core + 4 E-core) | 16 | P-core 2.4GHz / E-core 1.8GHz | P-core 4.6GHz / E-core 3.4GHz | 20MB Intel® Smart Cache | Intel® UHD Graphics |
| Core i5-14500HX | 14 (6 P-core + 8 E-core) | 20 | P-core 2.6GHz / E-core 1.9GHz | P-core 4.9GHz / E-core 3.5GHz | 24MB Intel® Smart Cache | Intel® UHD Graphics |
| Core i7-13645HX | 14 (6 P-core + 8 E-core) | 20 | P-core 2.6GHz / E-core 1.9GHz | P-core 4.9GHz / E-core 3.5GHz | 24MB Intel® Smart Cache | Intel® UHD Graphics |
| Core i7-13650HX | 14 (6 P-core + 8 E-core) | 20 | P-core 2.6GHz / E-core 1.9GHz | P-core 4.9GHz / E-core 3.6GHz | 24MB Intel® Smart Cache | Intel® UHD Graphics |
| Core i7-14650HX | 16 (8 P-core + 8 E-core) | 24 | P-core 2.2GHz / E-core 1.6GHz | P-core 5.2GHz / E-core 3.7GHz | 30MB Intel® Smart Cache | Intel® UHD Graphics |
| Core i7-14700HX | 20 (8 P-core + 12 E-core) | 28 | P-core 2.1GHz / E-core 1.5GHz | P-core 5.5GHz / E-core 3.9GHz | 33MB Intel® Smart Cache | 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 | AI TOPS (Peak) | Key Features |
|---|---|---|---|---|---|---|
| NVIDIA® GeForce RTX™ 3050 Laptop GPU | Discrete | 6GB GDDR6 | 1732 MHz | 95W | 142 TOPS | Advanced Optimus, DLSS, DirectX® 12 Ultimate |
| NVIDIA® GeForce RTX™ 3050A Laptop GPU | Discrete | 4GB GDDR6 | 2205 MHz | 65W | - | DLSS, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate |
| NVIDIA® GeForce RTX™ 4050 Laptop GPU | Discrete | 6GB GDDR6 | 2370 MHz | 105W | 194 TOPS | Advanced Optimus, DLSS 3.5, Dynamic Boost 2.0, DirectX® 12 Ultimate |
| NVIDIA® GeForce RTX™ 4060 Laptop GPU | Discrete | 8GB GDDR6 | 2370 MHz | 115W [1] | 233 TOPS | Advanced Optimus, DLSS 3.5, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate |

Notes:

[1] The actual TGP may depend on system configuration. System configured with 170W power adapter, TGP will be 105W. System configured with 230W power adapter, TGP will be 115W.

## Monitor Support

**Monitor Support**

Supports up to 3 independent displays (native display and 2 external monitors via HDMI®, USB-C®)
• HDMI® supports up to 4K@60Hz
• USB-C® supports up to 4K@60Hz

## Chipset

**Chipset**

Intel® HM770 chipset

## Memory

**Max Memory**[1]

- Up to 32GB DDR5-4800
- Up to 32GB DDR5-5600

**Memory Slots**

Two DDR5 SODIMM slots, dual-channel capable

**Memory Type****

- DDR5-4800
- DDR5-5600

Notes:

[1] Maximum memory is only to test technical readiness of notebook. Available memory to sell would vary.

## Storage

**Max Storage Support**[1]

Up to two drives, 2x M.2 SSD
• M.2 2242 SSD up to 1TB each

**Storage Slot**[2]

Two M.2 2280 PCIe® 4.0 x4 slots

**Storage Type**

| Disk Type | Interface | Offering |
|---|---|---|
| M.2 2242 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.
[2] The actual data transfer rate of the following PCIe® interface also depends on the capabilities of the connected PCIe® device. The listed values represent theoretical maximums.
PCIe® 3.0 (x2 / x4): 2 GB/s (16 Gbps) / 4 GB/s (32 Gbps);
PCIe® 4.0 (x2 / x4): 4 GB/s (32 Gbps) / 8 GB/s (64 Gbps);
PCIe® 5.0 (x2 / x4): 8 GB/s (64 Gbps) / 16 GB/s (128 Gbps).

## Removable Storage

**Card Reader**

No card reader

## Multi-Media

**Audio Chip**

High Definition (HD) Audio, Realtek® ALC3287 codec

**Speakers**

Stereo speakers, 2W x2, 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**

60Wh Rechargeable Li-ion Battery, supports Rapid Charge Pro (charge up to 50% in 30min)

**Max Battery Life**[1]

MobileMark® 25: 4.1 hr
Local video (1080p) playback@150nits: 5.6 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**[**][1]

- 170W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz[2]
- 230W slim tip (3-pin) AC adapter, 100-240V, 50-60Hz

Notes:

[1] AC adapter offerings depend on the country.
[2] BIOS settings can be optimized to boost system overall performance on 170W AC adapter systems (power from battery + AC adapter will be combined to increase system TGP temporarily).

## Special Features

**Special Features**

AI Chip: LA1

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 15.6″ | FHD (1920x1080) | Non-touch | IPS | 300nits | Anti-glare | 16:9 | 1000:1 | 100% sRGB | 144Hz | 85° / 85° / 85° / 85° | Advanced Optimus, NVIDIA® G-SYNC® |
| 15.6″ | WQHD (2560x1440) | Non-touch | IPS | 350nits | Anti-glare | 16:9 | 1000:1 | 100% sRGB | 165Hz | 85° / 85° / 85° / 85° | Advanced Optimus, NVIDIA® G-SYNC® |

**Touchscreen**

Non-touch

**Screen-to-Body Ratio**

88% AAR (active area ratio)

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

**Keyboard Backlight**[**]

- 4-Zone RGB 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

**Dimensions (WxDxH)**[1]

359.86 x 258.7 x 21.9-23.9 mm (14.17 x 10.19 x 0.86-0.94 inches)

**Weight**[2]

Starting at 2.38 kg (5.25 lbs)

**Case Color**

Luna grey

**Case Material**

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

**Surface Treatment**

Painting

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

**WLAN + Bluetooth®**[1]

Wi-Fi® 6, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.2, M.2 card

**WWAN**

No support

**Ethernet**[2]

Gigabit Ethernet, 1x RJ-45, supports Wake-on-LAN

Notes:

[1] Wi-Fi® operation (including Wi-Fi® 6, Wi-Fi® 6E, Wi-Fi® 7, etc.) is subject to the regulatory requirements of each country. Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

[2] Wake-on-LAN needs the AC adapter plugged in and the system in S3 mode (sleep mode). Since Wake-on-LAN is enabled by default, there are no options displayed in the BIOS.

## Ports[1]

**Standard Ports**

- 3x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 1x USB-C® (USB 10Gbps / USB 3.2 Gen 2), with USB PD 65-100W and DisplayPort™ 1.4[2]
- 1x HDMI® 2.1, up to 8K/60Hz
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Ethernet (RJ-45)
- 1x Slim tip (rectangle) power connector

Notes:

[1] The transfer speed of the 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.

[2] Supports Lenovo® protocol for 140W charging but requires a unique Lenovo® adapter for operation.

## Docking

**Docking**

Various docking solutions supported via USB-C®.
For more compatible docking solutions, please visit Docking for LOQ™ 15IRX9

# SECURITY & PRIVACY

## Security

**Security Chip**

Firmware TPM 2.0 integrated in chipset

**Fingerprint Reader**

No fingerprint reader

**BIOS Security**

- Administrator password
- Master hard disk password
- Power-on password
- User hard disk password
- User password
- Self-healing BIOS
- More BIOS security features, please visit BIOS Simulator[1]

**Other Security**

E-shutter

Notes:

[1] The BIOS simulator is just for reference. Default settings and some options may vary depending on the hardware, operating system and BIOS version.

# 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

# ACCESSORIES

## Bundled Accessories

**Bundled Accessories[1]**

- Lenovo® LOQ™ M100 RGB Mouse (USB connector)
- None

Notes:

[1] For more compatible accessory solutions, please visit Accessories for LOQ™ 15IRX9

# 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:

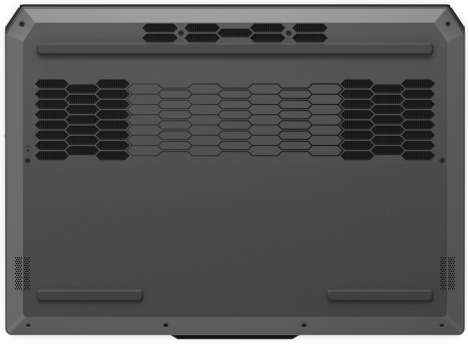
[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration. For ESG & regulatory compliance documents, please visit https://compliance.lenovo.com.

## Other Certifications

**Mil-Spec Test**

MIL-STD-810H military test passed

**Other Certifications**

(Optional) TÜV Rheinland® Low Blue Light (Software 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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