# **OVERVIEW**



1. SD card reader	5. Kensington Nano Security Slot
2. HDMI	6. USB-C 3.2 Gen 2
3. Power connector	7. Thunderbolt 4
4. 2x USB 3.2 Gen 2	8. Headphone / microphone combo jack (3.5mm)

# PERFORMANCE

## **Processor**

#### **Processor Family**

13th Generation Intel<sup>®</sup> Core<sup>™</sup> i5 / i7 / i9 Processor

#### Processor\*\*

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Processor Graphics
Core i5- 13500H	12 (4 P-core + 8 E- core)	16	P-core 2.6GHz / E-core 1.9GHz	P-core 4.7GHz / E-core 3.5GHz	18MB	Intel Iris® Xe Graphics
Core i7- 13700H	14 (6 P-core + 8 E-core)	20	P-core 2.4GHz / E-core 1.8GHz	P-core 5.0GHz / E-core 3.7GHz	24MB	Intel Iris Xe Graphics
Core i9- 13900H	14 (6 P-core + 8 E-core)	20	P-core 2.6GHz / E-core 1.9GHz	P-core 5.4GHz / E-core 4.1GHz	24MB	Intel Iris Xe Graphics

# **Operating System**

#### Operating System\*\*[1]

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

#### Notes:

1. Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, MIPI computer vision camera, WWAN, Human Presence Detection, etc.

# Graphics

### Graphics\*\*

Graphics	Туре	Memory	Boost Clock	TGP	Key Features
NVIDIA® GeForce RTX™ 4050 Laptop GPU	Discrete	6GB GDDR6	2370 MHz	115W	DLSS 3, Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX® 12 Ultimate
NVIDIA GeForce RTX 4060 Laptop GPU <sup>[1]</sup>	Discrete	8GB GDDR6	2370 MHz		Advanced Optimus, DLSS 3, Resizable BAR, Dynamic Boost 2.0, VR ready, DirectX 12 Ultimate

Notes:

1. The feature Advance Optimus only applies to the 3.2K display.

# **Monitor Support**

#### **Monitor Support**

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

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

# Chipset

## Chipset

Intel SoC (System on Chip) platform

# Memory

# Max Memory<sup>[1]</sup>

Up to 32GB DDR5-5200 offering

## **Memory Slots**

Two DDR5 SO-DIMM slots, dual-channel capable

## Memory Type

ThinkBook 16p G4 IRH - May 15 2023

DDR5-5200

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<sup>[1][2]</sup>

Up to two drives, 2x M.2 SSD • M.2 2280 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 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.
- 2 . The system supports dual SSD via two M.2 slots, but Lenovo only offers one SSD configuration, another SSD slot for user self-extension.

# **Removable Storage**

#### Card Reader

SD Express 7.0 card reader

# Multi-Media

## Audio Chip

High Definition (HD) Audio, Realtek® ALC3306-CG codec

#### Speakers

Stereo speakers, 2W x2 woofers and 2W x2 tweeters, Dolby® Atmos®, sound by harman/kardon, Smart Amplifier (AMP)

### Microphone

Dual-microphone array with noise-cancelling

### Camera

FHD 1080p + IR hybrid, with privacy shutter, fixed focus

## Sensor

### Sensors

Ambient light sensor (ALS)

# Battery

### Battery

Integrated Li-Polymer 80Wh battery, supports Rapid Charge Pro (charge up to 50% in 30min)

### Max Battery Life<sup>[1]</sup>

MobileMark® 2018: 10.5 hr Local video (1080p) playback@150nits: 18 hr

#### 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 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<sup>[1]</sup>

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

#### Notes:

1. AC adapter offerings depend on the country.

## **Special Features**

### **Special Features**

AI Chip: LA2-Q

# DESIGN

# **Display**

#### Display\*\*[1][2]

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle (L/R/U/D)	Key Features
16″	2.5K WQXGA (2560x1600)	None	IPS	400 nits	Anti- glare	16:10	1200:1	100% sRGB	89°/89°/89°/89°	Refresh rate 60Hz, smart sense panel, X-Rite® factory color calibration (average ΔE<2), Dolby Vision™, Eyesafe®
16″	3.2K (3200x2000)	None	IPS	430 nits	Anti- glare	16:10	1200:1	100% DCI-P3	89°/89°/85°/85°	Refresh rate 165Hz, Advanced Optimus, smart sense panel, X-Rite factory color calibration (average ΔE<2), Dolby Vision, Eyesafe

#### **Color Calibration**

X-Rite factory color calibration

#### Touchscreen

#### Non-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, spill-resistant, multimedia Fn keys, SMB Service Hot key, numeric keypad

### Keyboard Backlight

Smart sense keyboard 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]

354.6 x 255 x 19.9 mm (13.96 x 10.04 x 0.78 inches) Weight<sup>[2]</sup>

Lenovo

Around 2.2 kg (4.85 lbs)

#### Case Color

Storm grey, dual-tone design

Surface Treatment

Anodizing 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<sup>®</sup> 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- 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.
- 2.6GHz 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**<sup>[1]</sup>

#### **Standard Ports**

- 2x USB 3.2 Gen 2
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort<sup>™</sup> 1.4)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x HDMI, up to 8K/60Hz
- 1x SD card reader
- 1x Headphone / microphone combo jack (3.5mm)
- 1x Power connector

#### **Optional Ports**

1x Magic Bay (pogo pin connector)

### Notes:

 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

#### **Physical Locks**

Kensington® Nano Security Slot™, 2.5 x 6 mm

#### **Fingerprint Reader**

Lenovo

Touch style fingerprint reader integrated in power button, match-on-chip

#### **BIOS Security**

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

#### **Other Security**

- Camera privacy shutter
- IR camera for Windows Hello

# SERVICE

## **Warranty**<sup>[1]</sup>

### Base Warranty\*\*

- 1-year courier or carry-in service
- 2-year (1-yr battery) 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 <a href="https://smartfind.lenovo.com/">https://smartfind.lenovo.com/</a>. To learn more details of warranty policy, please access <a href="https://pcsupport.lenovo.com/warranty">https://pcsupport.lenovo.com/warranty</a>.

# **ENVIRONMENTAL**

# **Operating Environment**

#### Temperature<sup>[1]</sup>

- 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).

# ACCESSORIES

# **Bundled Accessories**

### **Bundled Accessories**

- Lenovo Magic Bay Light
- None

# **CERTIFICATIONS**

## **Green Certifications**<sup>III</sup>

### Green Certifications<sup>[2]</sup>

- FSC certified package
- EPEAT<sup>™</sup> Gold Registered
- ENERGY STAR® 8.0
- ErP Lot 6

- ErP Lot 26
- TCO Certified 9.0
- RoHS compliant
- Low-VOC

#### Notes:

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

#### **Other Certifications**

- Eyesafe Certified 2.0
- TÜV Rheinland<sup>®</sup> Low Blue Light (Hardware Solution)
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