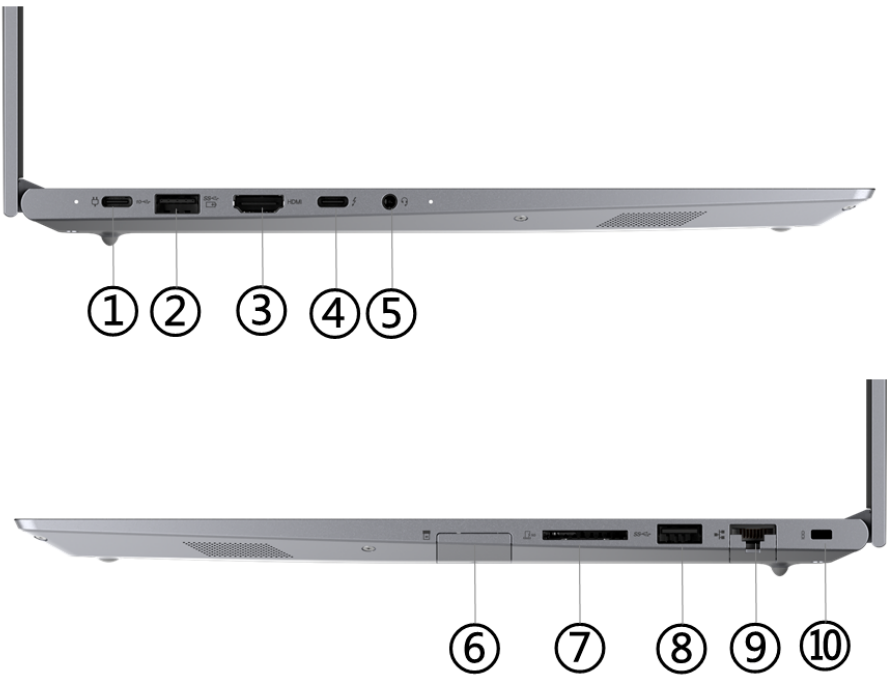# OVERVIEW



| | |
|---|---|
| 1. USB-C 3.2 Gen 2 | 6. USB 2.0 (hidden) |
| 2. USB 3.2 Gen 1 (Always On) | 7. SD card reader |
| 3. HDMI | 8. USB 3.2 Gen 1 |
| 4. Thunderbolt 4 | 9. Ethernet (RJ-45) |
| 5. Headphone / microphone combo jack (3.5mm) | 10. Kensington Nano Security Slot |

# PERFORMANCE

## Processor

**Processor Family**

12th Generation Intel® Core™ i3 / i5 / i7 / i9 Processor

**Processor**[**]

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Processor 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 | Intel Iris® Xe Graphics |
| Core i7-12700H | 14 (6 P-core + 8 E-core) | 20 | P-core 2.5GHz / E-core 1.8GHz | P-core 4.7GHz / E-core 3.5GHz | 24MB | Intel Iris Xe Graphics |
| Core i9-12900H | 14 (6 P-core + 8 E-core) | 20 | P-core 2.5GHz / E-core 1.8GHz | P-core 5.0GHz / E-core 3.8GHz | 24MB | Intel Iris Xe Graphics |
| Core i3-1215U | 6 (2 P-core + 4 E-core) | 8 | P-core 1.2GHz / E-core 0.9GHz | P-core 4.4GHz / E-core 3.3GHz | 10MB | Intel UHD Graphics |
| Core i5-1235U | 10 (2 P-core + 8 E-core) | 12 | P-core 1.3GHz / E-core 0.9GHz | P-core 4.4GHz / E-core 3.3GHz | 12MB | Intel Iris Xe Graphics |
| Core i7-1255U | 10 (2 P-core + 8 E-core) | 12 | P-core 1.7GHz / E-core 1.2GHz | P-core 4.7GHz / E-core 3.5GHz | 12MB | Intel Iris Xe Graphics |
| Core i5-1240P | 12 (4 P-core + 8 E-core) | 16 | P-core 1.7GHz / E-core 1.2GHz | P-core 4.4GHz / E-core 3.3GHz | 12MB | Intel Iris Xe Graphics |
| Core i7-1260P | 12 (4 P-core + 8 E-core) | 16 | P-core 2.1GHz / E-core 1.5GHz | P-core 4.7GHz / E-core 3.4GHz | 18MB | Intel Iris Xe Graphics |

## Operating System

**Operating System**[**]

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

## Graphics

**Graphics**[**]

| Graphics | Type | Memory | Boost Clock | TGP | Key Features |
|---|---|---|---|---|---|
| Intel UHD Graphics | Integrated | Shared | - | Share CPU TDP | DirectX® 12.1 |
| Intel Iris Xe Graphics | Integrated | Shared | - | Share CPU TDP | DirectX 12.1 |
| NVIDIA® GeForce RTX™ 2050 Laptop GPU | Discrete | 4GB GDDR6 | 1700 MHz | 50W | DirectX 12 |

## 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 3840x2160@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**

- 8GB soldered memory, not upgradable

- 16GB soldered memory, not upgradable
- 32GB soldered memory, not upgradable

**Memory Slots**

Memory soldered to systemboard, no slots, dual-channel

**Memory Type**

LPDDR5-4800

## Storage

**Storage Support**[1][2]

Up to two drives, 2x M.2 SSD
• M.2 2242 SSD up to 1TB
• M.2 2280 SSD up to 1TB

**Storage Slot**

Two M.2 slots
• One M.2 2280 PCIe® 3.0 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 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

**Optical**

None

**Card Reader**

4-in-1 card reader (SD, SDHC, SDXC, MMC)

## Multi-Media

**Audio Chip**

High Definition (HD) Audio, Realtek® ALC3287 codec

**Speakers**

Stereo speakers, 2W x2, Dolby® Atmos®

**Microphone**

Dual-microphone array with AI-based noise-cancelling, near-field

**Camera**\*\*

- HD 720p, with privacy shutter, fixed focus
- FHD 1080p, with privacy shutter, fixed focus
- FHD 1080p + IR hybrid, with privacy shutter, fixed focus

## Battery

**Battery**\*\*

- Integrated Li-Polymer 57Wh battery, supports Rapid Charge Pro (charge up to 50% in 30min) with 100W AC adapter
- Integrated Li-Polymer 71Wh battery, supports Rapid Charge Pro (charge up to 50% in 30min) with 100W AC adapter

## Power Adapter

**Power Adapter**\*\*[1]

- 65W USB-C (3-pin) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 65W USB-C slim (2-pin, wall-mount) AC adapter, supports PD 3.0, 100-240V, 50-60Hz
- 100W 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 |
|------|-----------|-------|------|-----------|---------|--------------|----------------|-------------|--------------|------------------------|--------------|
| 16″ | WQXGA (2560x1600) | None | IPS | 350 nits | Anti-glare | 16:10 | 1200:1 | 100% sRGB | 60Hz | 85°/85°/85°/85° | DC dimming |
| 16″ | WQXGA (2560x1600) | None | IPS | 350 nits | Anti-glare | 16:10 | 1200:1 | 100% sRGB | 120Hz | 85°/85°/85°/85° | Factory Color Calibration (ΔE<1.5), DC dimming |
| 16″ | WUXGA (1920x1200) | None | IPS | 300 nits | Anti-glare | 16:10 | 800:1 | 45% NTSC | 60Hz | 85°/85°/85°/85° | DC dimming |

**Color Calibration**

• TCON (Timing Controller) color calibration
• No 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**

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]

| Models | Dimensions |
|--------|-----------|
| Models with WQXGA display | 356 x 251 x 16.5 mm (14.02 x 9.88 x 0.65 inches) |
| Models with WUXGA display | 356 x 251 x 16.9 mm (14.02 x 9.88 x 0.67 inches) |

**Weight**[2]

Starting at 1.8 kg (3.97 lbs)

**Case Color**

Arctic 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**

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

**WLAN + Bluetooth®**\*\*[1]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[2]
- Wi-Fi 6E, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[3]

Notes:

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

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

[3] 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 2.0 (hidden)
- 1x USB 3.2 Gen 1
- 1x USB 3.2 Gen 1 (Always On)
- 1x USB-C 3.2 Gen 2 (support data transfer, Power Delivery 3.0 and DisplayPort™ 1.4)
- 1x Thunderbolt 4 / USB4® 40Gbps (support data transfer, Power Delivery 3.0 and DisplayPort 1.4)
- 1x HDMI 2.1, up to 4K/60Hz
- 1x Card reader
- 1x Ethernet (RJ-45)
- 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.

## Docking

**Docking**

Various docking solutions supported via Thunderbolt or USB-C.
For more compatible docking solutions, please visit [Docking for ThinkBook 16 G4+ IAP](#)

# 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**

- Touch style fingerprint reader integrated in smart power button
- No fingerprint reader

**BIOS Security**

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

**Other Security**

- Camera privacy shutter
- (Optional) IR camera for Windows Hello

# SERVICE

## Warranty[1]

**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 https://smartfind.lenovo.com/. To learn more details of warranty policy, please access https://pcsupport.lenovo.com/warranty.

# 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**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered[2]
- 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.

[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**[1]

- (Optional) Eyesafe® Certified
- (Optional) TÜV Rheinland® Low Blue Light (Hardware Solution)
- (Optional) TÜV Rheinland Low Blue Light (Software Solution)

Notes:

[1] Only models with WQXGA displays are certified for TÜV Rheinland Eyesafe Display.

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

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