# OVERVIEW



| 1. | Power button | 5. | 2x USB 3.2 Gen 2 |
|---|---|---|---|
| 2. | Combo audio jack (on bottom) | 6. | Ethernet (RJ-45) |
| 3. | Power connector | 7. | 2x USB 2.0 |
| 4. | HDMI-out | 8. | Optical drive * |

Notes:
- Items with * are only available on selected models

# PERFORMANCE

## Processor

**Processor Family**

Intel® Celeron®, Intel® Pentium®, 12th Gen Intel® U or P Series Core i3 / i5, or 12th Gen Intel® H Series Core i5 Processor

**Processor**\*\*[1]

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Processor Graphics |
|---|---|---|---|---|---|---|
| Celeron® 7305 | 5 (1 P-core + 4 E-core) | 6 | P-core 1.1GHz / E-core 0.9GHz | - | 8MB | Intel® UHD Graphics |
| Pentium® Gold 8505 | 5 (1 P-core + 4 E-core) | 6 | P-core 1.2GHz / E-core 0.9GHz | P-core 4.4GHz / E-core 3.3GHz[2] | 8MB | Intel® UHD 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[3] | 10MB | Intel® UHD Graphics |
| Core i3-1220P | 10 (2 P-core + 8 E-core) | 12 | P-core 1.5GHz / E-core 1.1GHz | P-core 4.4GHz / E-core 3.3GHz[4] | 12MB | 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[5] | 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[6] | 12MB | Intel® Iris® Xe 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[7] | 12MB | Intel® UHD Graphics |

Notes:

[1] Intel® Iris® Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel® Iris® Xe Graphics will function as Intel® UHD Graphics.

[2], [3], [4], [5], [6], [7] Intel® Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see
http://www.intel.com/technology/turboboost/ for more information.

## Operating System

**Operating System**\*\*

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

## Graphics

**Graphics**\*\*

| Graphics | Type | Memory | Max Resolution | Connector | Key Features |
|---|---|---|---|---|---|
| Intel® UHD Graphics | Integrated | Shared | 1920x1080@60Hz | 1x HDMI® 1.4 | DirectX® 12.1 |
| Intel® Iris® Xe Graphics[1] | Integrated | Shared | 1920x1080@60Hz | 1x HDMI® 1.4 | DirectX® 12.1 |

Notes:

[1] Intel® Iris® Xe Graphics capability requires system to be configured with dual-channel memory. On the system with single-channel memory, Intel® Iris® Xe Graphics will function as Intel® UHD Graphics.

## Monitor Support

**Monitor Support**

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via HDMI®

## Chipset

**Chipset**

Intel® SoC (System on Chip) platform

## Memory

**Max Memory**[1]

Up to 16GB DDR4-3200

**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.

## Storage

**Storage Support**[1]

- Up to two drives, 1x 2.5″ HDD + 1x M.2 SSD
  - 2.5″ HDD up to 1TB
  - M.2 SSD up to 512GB
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

**Storage Type**\*\*

| Disk Type | Interface | RPM |
|---|---|---|
| 2.5″ SATA HDD | SATA 6Gb/s | 5.4K |
| M.2 2242 SSD | PCIe® NVMe®, PCIe® 3.0 x4 | - |
| M.2 2280 SSD | PCIe® NVMe®, PCIe® 3.0 x4 | - |
| M.2 2280 SSD | PCIe® NVMe®, PCIe® 4.0 x4 | - |
| M.2 2280 SSD | PCIe® NVMe®, PCIe® 4.0 x4 | - |

**RAID**

No support

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo® storage offerings.

## Removable Storage

**Optical**

- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- None

**Card Reader**

No card reader

## Multi-Media

**Audio Chip**

High Definition (HD) Audio, Realtek® ALC256 codec

**Speakers**

Stereo speakers, 3W x2, Audio by HARMAN

**Microphone**\*\*

- Single microphone
- Dual-microphone array
- No microphone

**Camera**

- HD 720p 0° Pre-angle pull up camera, LED indicator
- No camera

## Power Supply

**Power Supply**

| Power | Type | Efficiency | Key Features |
|---|---|---|---|
| 90W | Adapter | 89% | Autosensing |

# 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 21.5″ | FHD (1920x1080) | None | IPS | 250nits | Anti-glare | 16:9 | 1000:1 | 72% NTSC | 60Hz | 89° / 89° / 89° / 89° | 14ms response Time, 16.7 million color depth, borderless design |

**Touchscreen**

Non-touch

Notes:

[1] IPS (in-plane switching) technology may refer to IPS, PLS, ADS, AHVA, AAS.

## Input Device

**Keyboard**\*\*

- Lenovo® Calliope Keyboard (USB connector), black
- Lenovo® Calliope Wireless Keyboard, black
- No keyboard

**Mouse**\*\*

- Lenovo® Calliope Mouse (USB connector), black
- Lenovo® Calliope Wireless Mouse (2.4GHz via USB receiver), black
- No mouse

## Mechanical

**Form Factor**

AIO (21.5 inches)

**Dimensions (WxDxH)**[1]

490.3 x 207.5 x 405.39 mm (19.3 x 8.71 x 15.96 inches)

**Packaging Dimensions (WxDxH)**

591 x 231 x 522 mm (23.27 x 9.09 x 20.55 inches)

**Weight**[2]

Around 5.7 kg (12.6 lbs)

**Packaging Weight**

Around 9.3 kg (20.5 lbs)

**Case Color**

Raven black

**Bays**

- 1x 2.5″ disk bay
- For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

**Expansion Slots**

Two M.2 slots (one for WLAN, one for SSD)

**EOU**

No support

**Stand**

Monitor stand, supports -5° to +25° tilt, left & right 45° swivel

**Mounting**

None

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

**Onboard Ethernet**

Gigabit Ethernet, Realtek® RTL8111H, 1x RJ-45

**WLAN + Bluetooth®**\*\*

- Realtek® RTL8822CE, Wi-Fi® 5, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth® 5.0, M.2 card
- Intel® Wireless-AC 9560, Wi-Fi® 5, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth® 5.0, Intel® vPro® technology support, M.2 card
- Realtek® Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 card[1]
- Intel® Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.1, M.2 Card[2]

Notes:

[1], [2] Bluetooth® 5.2 is hardware ready but may run at a lower version due to OS limitations.

## Ports[1]

**Rear Ports**

- 2x USB 2.0
- 2x USB 3.2 Gen 2
- 1x HDMI®-out
- 1x Ethernet (RJ-45)
- 1x power connector

**Bottom Ports**

1x headphone / microphone combo jack (3.5mm)

**Left Ports**

None

**Optional Left Ports**

None

**Right Ports**

None

**Optional Right Ports**

None

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

**BIOS Security**

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Intel® BIOS guard

# SERVICE

## Warranty[1]

**Base Warranty****

- 1-year courier or carry-in service
- 1-year limited onsite 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://support.lenovo.com/warrantylookup/warrantypolicy.

# OPERATING REQUIREMENTS

## Operating Environment

**Temperature**

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -20°C (-4°F) to 60°C (140°F)

**Relative Humidity**

- Operating: 20% to 80%
- Storage: 10% to 90%

**Altitude**

- Operating: 0 m (0 ft) to 3048 m (10,000 ft)
- Storage: 0 m (0 ft) to 12192 m (40,000 ft)

# CERTIFICATIONS

## Green Certifications[1]

**Green Certifications**

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered[2]
- ErP Lot 3 and Lot 7

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.
[2] EPEAT™ is registered where applicable, please visit epeat.net for registration status by country.

## Other Certifications

**Other Certifications**

- TÜV Rheinland® Flicker Free
- TÜV Rheinland® Low Blue Light
- TÜV Rheinland® Low Noise

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