# **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**

13th Generation Intel® H Series Core™ i5 / i7 Processor

### Processor\*\*

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i5- 13420H	8 (4 P-core + 4 E-core)		P-core 2.1GHz / E- core 1.5GHz	P-core 4.6GHz / E- core 3.4GHz <sup>[1]</sup>	12MB	DDR4-3200	Intel UHD Graphics
Core i7- 13620H	10 (6 P-core + 4 E-core)	16	P-core 2.4GHz / E- core 1.8GHz	P-core 4.9GHz / E- core 3.6GHz <sup>[2]</sup>	24MB	DDR4-3200	Intel UHD Graphics

#### Notes:

[1], [2] 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 Home
- Windows 11 Home Single Language
- Windows 11 Pro
- No operating system

# Graphics

#### Graphics

Graphics	Туре	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 1.4	1920x1080@60Hz	DirectX® 12.1

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

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<sup>[1]</sup>

- Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
  - 2.5" HDD up to 1TB
  - M.2 SSD up to 1TB

• For installing HDD storage, assembly kits are needed. The kits only come with HDD models.

#### Storage Type\*\*\*

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

#### 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 connector, 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

- Dual-microphone array
- No microphone

#### Camera\*\*

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

## **Power Supply**

#### **Power Supply**

Power	Туре	Efficiency	Key Features
90W	Adapter	89%	Autosensing

# DESIGN

## **Display**

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

Size	Resolution	Touch	Туре	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Refresh Rate	Viewing Angle (L/R/U/D)	Key Features
23.8'	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.

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# **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 (23.8 inches)

#### Dimensions (WxDxH)[1]

Models	Dimensions
Models with monitor stand	541 x 207.5 x 433.8 mm (21.3 x 8.17 x 17.1 inches)
Models with liftable monitor stand	541 x 220 x 380.5-480.5 mm (21.3 x 8.66 x 14.98-18.92 inches)

#### Packaging Dimensions (WxDxH)

- Models with liftable monitor stand: 658 x 264 x 570 mm (25.91 x 10.39 x 22.44 inches)
- Models with monitor stand: 659 x 206 x 554 mm (25.94 x 8.11 x 21.81 inches)

#### Weight<sup>[2]</sup>

Models	Weight
Models with liftable monitor stand	Around 6.6 kg (14.6 lbs)
Models with monitor stand	Around 6.7 kg (14.8 lbs)

#### Packaging Weight

Around 10.74 kg (23.08 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)

#### Stand\*\*

- Monitor stand, supports -5° to +25° tilt, left & right 45° swivel
- Liftable monitor stand, supports -5° to +16° tilt, left & right 45° swivel, up to 100mm lift

#### 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 Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card<sup>[1]</sup>
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card<sup>[2]</sup>

#### Notes:

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

#### **Ports**<sup>III</sup>

#### **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

#### 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<sup>®</sup> 20Gbps / USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s; USB4 40Gbps (USB 40Gbps): 40 Gbit/s; Thunderbolt<sup>™</sup> 3/4: 40 Gbit/s.

## **Monitor Cable**

#### **Monitor Cable**

No monitor cable

# **SECURITY & PRIVACY**

## Security

Security Chip

Firmware TPM 2.0 integrated in SoC

#### **BIOS Security**

- Administrator password
- Power-on password
- Intel BIOS guard

# SERVICE

## **Warranty**<sup>III</sup>

#### 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 <u>https://smartfind.lenovo.com/</u>. To learn more details of warranty policy, please access <u>https://pcsupport.lenovo.com/warranty</u>.

# **ENVIRONMENTAL**

# **Operating Environment**

#### Temperature

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

#### 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**<sup>III</sup>

#### **Green Certifications**

- (Optional) ENERGY STAR<sup>®</sup> 8.0
- (Optional) EPEAT<sup>™</sup> Silver Registered<sup>[2]</sup>

#### 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**

#### Other Certifications

- TÜV Rheinland<sup>®</sup> 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.
- Feature with \*\*\* means that one or more offerings listed under the feature could be configured on selected models.
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