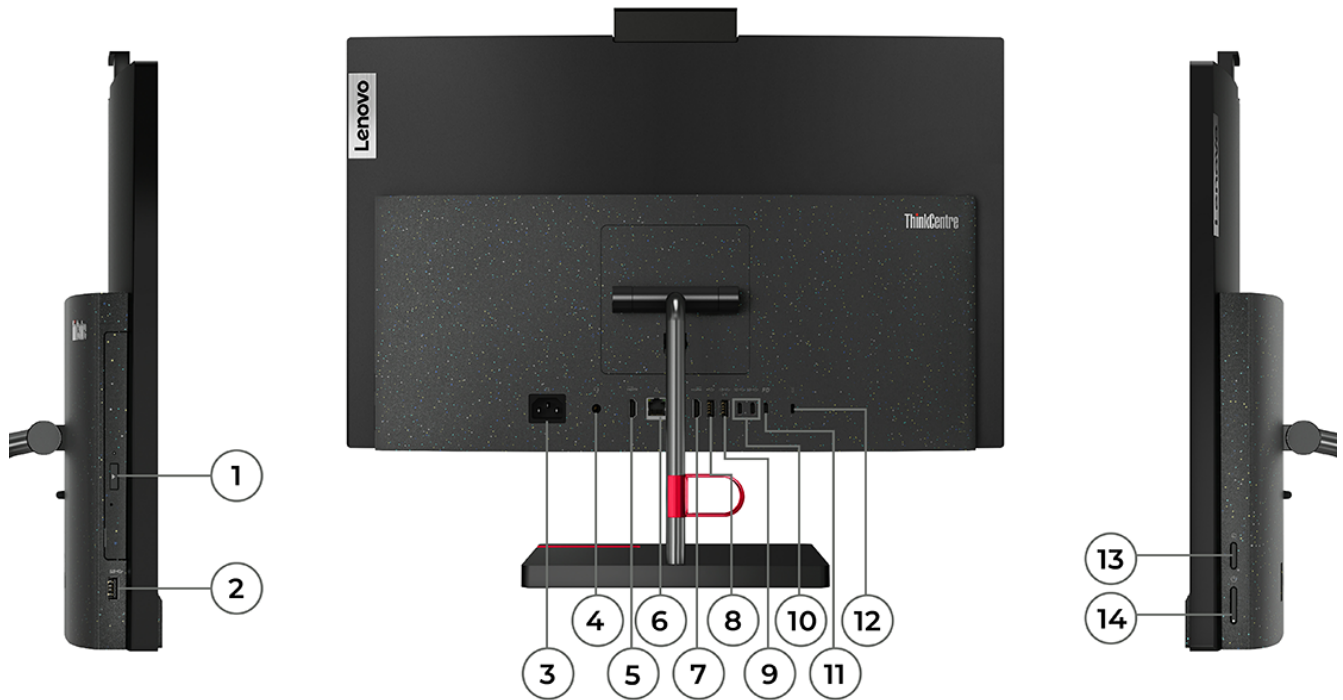


**OVERVIEW**



1. Optical drive eject button *	8. USB 2.0
2. USB 3.2 Gen 1	9. USB 3.2 Gen 2
3. Power connector	10. 2x USB-C 3.2 Gen 2
4. Headphone / microphone combo jack (3.5mm)	11. USB-C 2.0 (support data transfer, PD 3.0)
5. HDMI-in 1.4	12. Kensington Security Slot
6. Ethernet (RJ-45)	13. HDMI Switch Key
7. HDMI-out 2.1 TMDS	14. Power button

Notes:

- Ports with \* are only available on selected models

## PERFORMANCE

### Processor

#### Processor Family

12th Generation Intel® Core™ i3 P-Series and i5 / i7 H-Series Processor

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

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor 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	12MB	DDR5-4800	Intel UHD 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	DDR5-4800	Intel Iris® Xe Graphics
Core i7-12700H	14 (6 P-core + 8 E-core)	20	P-core 2.3GHz / E-core 1.7GHz	P-core 4.7GHz / E-core 3.5GHz	24MB	DDR5-4800	Intel Iris Xe 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.

### Operating System

#### Operating System\*\*

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

### Graphics

#### Graphics\*\*<sup>[1][2]</sup>

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x HDMI® 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX® 12
Intel Iris Xe Graphics	Integrated	Shared	1x HDMI 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX 12
Intel Arc™ A370M Graphics	Discrete	4GB GDDR6	1x HDMI 2.1 TMDS	3840x2160@60Hz(HDMI)	DirectX 12

#### Notes:

1. The information of integrated graphics are not applicable for the models without integrated graphics (for the details, please refer to processor section)
2. 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<sup>[1]</sup>

Up to 16GB DDR5-4800

#### Memory Slots

Two DDR5 SO-DIMM slots, dual-channel capable

#### Memory Type

DDR5-4800

# ThinkCentre neo 50a 24

**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]</sup>

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

- 2.5" HDD up to 2TB
- M.2 SSD up to 1TB

### Storage Type\*\*

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
M.2 2280 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4 Value	-	Opal2

### RAID

None

**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.

## 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® ALC274-CG codec

### Speakers

Stereo speakers, 3W x2

### Microphone

Dual array microphone

### Camera\*\*

- 5.0-megapixel, fixed focus
- 5.0-megapixel IR camera, fixed focus
- 5.0-megapixel IR camera, fixed focus, with AI chip
- No camera

## Power Supply

### Power Supply

Power	Type	Efficiency	Key Features
180W	Fixed	90%	100V - 240V, 50-60Hz

## DESIGN

### Display

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

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features

23.8"	FHD (1920x1080)	None	IPS	250 nits	Anti-glare	16:9	1000:1	72% NTSC	horizontal: +/- 89°, vertical: +/- 89°	Borderless design, low blue light, flicker free
23.8"	FHD (1920x1080)	Multi-touch	IPS	250 nits	Anti-glare	16:9	1000:1	72% NTSC	horizontal: +/- 89°, vertical: +/- 89°	Borderless design, low blue light, flicker free

### Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

### Notes:

#### 1. California Electronic Waste Recycling Fee

In California, 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, go to <https://www.calrecycle.ca.gov/Electronics/Consumer>

## Input Device

### Keyboard\*\*

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

### Mouse\*\*

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

## Mechanical

### Form Factor

AIO (23.8 inches)

### Dimensions (WxDxH)

Models	Dimensions
Models with liftable monitor stand	541 x 220 x 482 mm (21.3 x 8.7 x 19 inches)
Models with monitor stand	541 x 209.9 x 433.7 mm (21.3 x 8.3 x 17.1 inches)

### Packaging Dimensions (WxDxH)

- Models with liftable monitor stand: 658 x 264 x 567 mm (25.9 x 10.4 x 22.3 inches )
- Models with monitor stand: 695 x 196 x 569 mm (27.4 x 7.7 x 22.4 inches)

### Weight

Models	Weight
Models with liftable monitor stand	Around 7.65 kg (16.9 lbs)
Models with monitor stand	Around 7.43 kg (16.4 lbs)

### Packaging Weight

- Models with liftable monitor stand: 10.3 kg (22.7 lbs)
- Models with monitor stand: 9.69 kg (21.4 lbs)

### Case Color

Raven black

### Bays

- 1x 2.5" disk bay
- 1x slim ODD bay

### 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 +18° tilt, left & right 45° swivel, up to 100mm lift

**Others**

Supports Smart Power On

**CONNECTIVITY****Network****Onboard Ethernet**

One gigabit Ethernet, Realtek RTL8111K, 1x RJ-45, supports Wake-on-LAN

**WLAN + Bluetooth®\*\*<sup>[1]</sup>**

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi® + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card
- Intel Wireless-AC 9560, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 5.0, M.2 card
- Intel Wi-Fi 6 AX201, 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 limitation

**Ports<sup>[1]</sup>****Rear Ports<sup>[1][2]</sup>**

- 1x USB 2.0
- 1x USB 3.2 Gen 2 (Supports smart power-on)
- 2x USB-C® 3.2 Gen 2
- 1x USB-C 2.0 (Supports data transfer, Power Delivery 3.0)
- 1x HDMI-out 2.1 TMDS
- 1x HDMI-in 1.4
- 1x Ethernet (RJ-45)
- 1x headphone / microphone combo jack (3.5mm)

**Left Ports**

1x USB 3.2 Gen 1

**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;  
USB 3.2 Gen 2x2 (SuperSpeed USB 20Gbps): 20 Gbit/s;  
Thunderbolt™ 3/4: 40 Gbit/s
2. For video ports on discrete graphics, please see graphics section

**Monitor Cable****Monitor Cable**

- Smart Cable (USB Type A-C)
- No monitor cable

**SECURITY & PRIVACY****Security****Security Chip**

Firmware TPM 2.0 integrated in SoC

**Physical Locks**

Kensington® Security Slot™, 3 x 7 mm

**BIOS Security**

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch

- Intel BIOS guard

## SERVICE

### Warranty

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

- 1-year courier or carry-in service
- 1-year limited onsite service

#### Notes:

1. More information of warranty policy, please access <https://pcsupport.lenovo.com/warranty>.

## 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

#### Green Certifications

- EPEAT™ Silver
- (Optional) ENERGY STAR® 8.0

### Other Certifications

#### Other Certifications

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

#### Mil-Spec Test

None

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