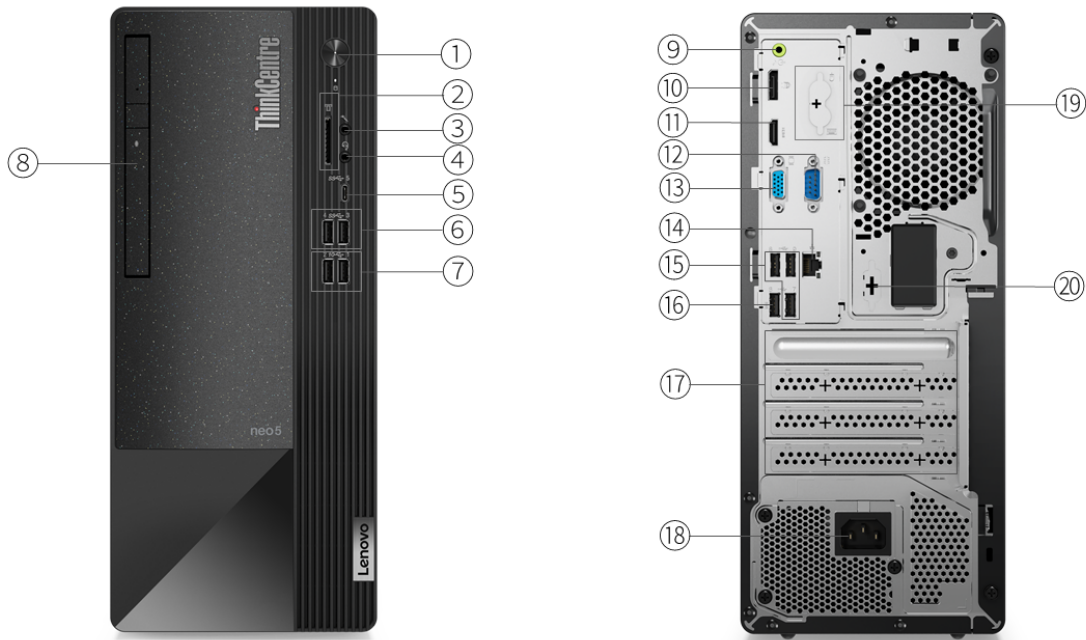


**OVERVIEW**



|  |  |
|--|--|
| 1. Power button                              | 11. HDMI 1.4b                                |
| 2. Card reader *                             | 12. Serial                                   |
| 3. Microphone (3.5mm)                        | 13. VGA                                      |
| 4. Headphone / microphone combo jack (3.5mm) | 14. Ethernet (RJ-45)                         |
| 5. 1x USB-C 3.2 Gen 1                        | 15. 3x USB 2.0                               |
| 6. 2x USB 3.2 Gen 1                          | 16. 1x USB 2.0 (with smart power-on feature) |
| 7. 2x USB 3.2 Gen 2                          | 17. Optional ports on expansion cards *      |
| 8. Optical drive *                           | 18. Power connector                          |
| 9. Headphone (3.5mm)                         | 19. 2x PS/2 ports (keyboard / mouse) *       |
| 10. DisplayPort 1.4                          | 20. serial *                                 |

Notes:

- Ports with \* are only available on selected models

## PERFORMANCE

### Processor

#### Processor Family

Intel® Celeron®, Intel Pentium®, or 12th Generation Intel Core™ i3 / i5 / i7 / i9 Processor

#### Processor\*\*

| Processor Name     | Cores                    | Threads | Base Frequency                | Max Frequency                 | Cache | Memory Support | Processor Graphics     |
|--------------------|--------------------------|---------|-------------------------------|-------------------------------|-------|----------------|------------------------|
| Celeron G6900      | 2                        | 2       | 3.4GHz                        | -                             | 4MB   | DDR4-3200      | Intel UHD Graphics 710 |
| Pentium Gold G7400 | 2                        | 4       | 3.7GHz                        | -                             | 6MB   | DDR4-3200      | Intel UHD Graphics 710 |
| Core i3-12100      | 4 (4 P-core + 0 E-core)  | 8       | P-core 3.3GHz                 | P-core 4.3GHz                 | 12MB  | DDR4-3200      | Intel UHD Graphics 730 |
| Core i5-12400      | 6 (6 P-core + 0 E-core)  | 12      | P-core 2.5GHz                 | P-core 4.4GHz                 | 18MB  | DDR4-3200      | Intel UHD Graphics 730 |
| Core i5-12400F     | 6 (6 P-core + 0 E-core)  | 12      | P-core 2.5GHz                 | P-core 4.4GHz                 | 18MB  | DDR4-3200      | -                      |
| Core i5-12500      | 6 (6 P-core + 0 E-core)  | 12      | P-core 3.0GHz                 | P-core 4.6GHz                 | 18MB  | DDR4-3200      | Intel UHD Graphics 770 |
| Core i7-12700      | 12 (8 P-core + 4 E-core) | 20      | P-core 2.1GHz / E-core 1.6GHz | P-core 4.8GHz / E-core 3.6GHz | 25MB  | DDR4-3200      | Intel UHD Graphics 770 |
| Core i9-12900      | 16 (8 P-core + 8 E-core) | 24      | P-core 2.4GHz / E-core 1.8GHz | P-core 5.0GHz / E-core 3.8GHz | 30MB  | DDR4-3200      | Intel UHD Graphics 770 |

### Operating System

#### Operating System\*\*

- Windows® 11 Pro 64
- Windows 11 Home 64
- Windows 11 DG Windows 10 Pro 64
- Ubuntu Linux
- No operating system

### Graphics

#### Graphics\*\*\*[1]

| Graphics               | Type       | Memory | Connector                        | Max Resolution  | Key Features |
|------------------------|------------|--------|----------------------------------|---|--------------|
| Intel UHD graphics 710 | Integrated | Shared | 1x HDMI® 1.4b, 1x VGA, 1x DP 1.4 | 3840x2160@30Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP) | DirectX® 12  |
| Intel UHD graphics 730 | Integrated | Shared | 1x HDMI 1.4b, 1x VGA, 1x DP 1.4  | 3840x2160@30Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP) | DirectX 12   |
| Intel UHD graphics 770 | Integrated | Shared | 1x HDMI 1.4b, 1x VGA, 1x DP 1.4  | 3840x2160@30Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP) | 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)

### Monitor Support

#### Monitor Support

Supports up to 3 independent displays via (HDMI, DP and VGA), more displays support via discrete graphics

### Chipset

#### Chipset

Intel B660 chipset

## Memory

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

Up to 64GB DDR4-3200

### Memory Slots

Two DDR4 UDIMM slots, dual-channel capable

### Memory Type

DDR4-3200

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 3.5" HDD + 1x M.2 SSD

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

### Storage Type<sup>\*\*\*</sup>

| Disk Type     | Interface                | RPM  | Security |
|---------------|--------------------------|------|----------|
| 3.5" SATA HDD | SATA 6Gb/s               | 7.2K | -        |
| M.2 2242 SSD  | PCIe® NVMe®, PCIe 3.0 x4 | -    | -        |
| M.2 2280 SSD  | PCIe NVMe, PCIe 3.0 x4   | -    | Opal2    |
| M.2 2280 SSD  | PCIe NVMe, PCIe 3.0 x4   | -    | -        |
| M.2 2280 SSD  | PCIe NVMe, PCIe 4.0 x4   | -    | Opal2    |

### RAID

No support

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<sup>\*\*</sup>

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

### Card Reader

- 3-in-1 card reader (SD, SDHC, SDXC)
- No card reader

## Multi-Media

### Audio Chip

High Definition (HD) Audio, Realtek® ALC222-CG codec

### Speakers

- Single speaker, 2W x1
- No speakers

## Power Supply

### Power Supply<sup>\*\*</sup>

| Power | Type  | Efficiency |
|-------|-------|------------|
| 180W  | Fixed | 85%        |

|      |       |     |
|------|-------|-----|
| 260W | Fixed | 90% |
| 310W | Fixed | 92% |
| 380W | Fixed | 92% |

## DESIGN

### Input Device

#### Keyboard\*\*

- Euterpe Wireless Keyboard, grey
- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

#### Mouse\*\*

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Fingerprint Mouse (USB connector), black
- Euterpe Wireless Mouse, grey
- No mouse

### Mechanical

#### Form Factor

Tower (13.6L)

#### Dimensions (WxDxH)

145 x 294 x 340 mm (5.71 x 11.57 x 13.39 inches)

#### Packaging Dimensions (WxDxH)

All models: 245 x 395 x 530 mm (9.65 x 15.55 x 20.87 inches)

#### Weight

5.5 kg (12.1 lbs)

#### Packaging Weight

All models: 7.5 kg (16.53 lbs)

#### Case Color

Black (chassis), Grey (bezel)

#### Bays

- 1x 3.5" disk bay
- 1x slim ODD bay

#### Expansion Slots

- One PCIe 4.0 x16, full-height, half-length
- Two PCIe 3.0 x1, full-height, half-length
- Two M.2 slots (one for WLAN, one for SSD)

#### EOU

No support

#### Stand

No stand

#### Cooling System (Fan & Cooler)\*\*\*

- (Optional) 1x rear system fan
- (Optional) 1x front system fan, 1x rear system fan
- (Optional) 1x front system fan

## CONNECTIVITY

### Network

#### Onboard Ethernet

Gigabit Ethernet, Intel Ethernet Connection I219-V, 1x RJ-45, supports Wake-on-LAN

**Optional Ethernet**

No optional Ethernet

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

- Realtek RTL8822CE, 802.11ac Dual Band 2x2 Wi-Fi<sup>®</sup> + Bluetooth 5.0, M.2 card
- Realtek Wi-Fi 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.2, 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 5.2, M.2 Card
- No WLAN and Bluetooth

**Notes:**

1. Bluetooth 5.2 is hardware ready but may run at lower version due to OS limitation

**Ports<sup>[1]</sup>****Front Ports**

- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@3A charging)
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

**Optional Front Ports**

- 1x card reader
- None

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

- 4x USB 2.0
- 1x VGA
- 1x HDMI 1.4b
- 1x DisplayPort™ 1.4
- 1x serial (9-pin)
- 1x Ethernet (RJ-45)
- 1x headphone (3.5mm)

**Optional Rear Ports<sup>\*\*\*</sup>**

- 1x serial
- 1x parallel
- 2x PS/2

**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;  
FireWire 400: 400 Mbit/s;  
FireWire 800: 800 Mbit/s
2. For video ports on discrete graphics, please see graphics section

**Monitor Cable****Monitor Cable<sup>\*\*\*</sup>**

- DP to DVI-D dongle
- HDMI to DVI dongle
- USB-A to USB-C cable
- No monitor cable

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

Discrete TPM 2.0, TCG certified

**Physical Locks**

- (Optional) Smart Cable Clip
- Kensington® Security Slot
- Padlock Loop

**Chassis Intrusion Switch**

- Chassis intrusion switch
- No chassis intrusion switch

**Fingerprint Reader**

- Touch style fingerprint reader on mouse
- No fingerprint reader

**BIOS Security**

- Administrator password
- Power-on password
- Hard disk password
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

## MANAGEABILITY

### System Management

**System Management**

Non-vPro

## SERVICE

### Warranty

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

- 1-year depot 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: -40°C (-40°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**

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

- TCO Certified 9.0
- RoHS compliant
- REACH
- WEEE

## Other Certifications

### Other Certifications

TÜV Rheinland® Ultra 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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