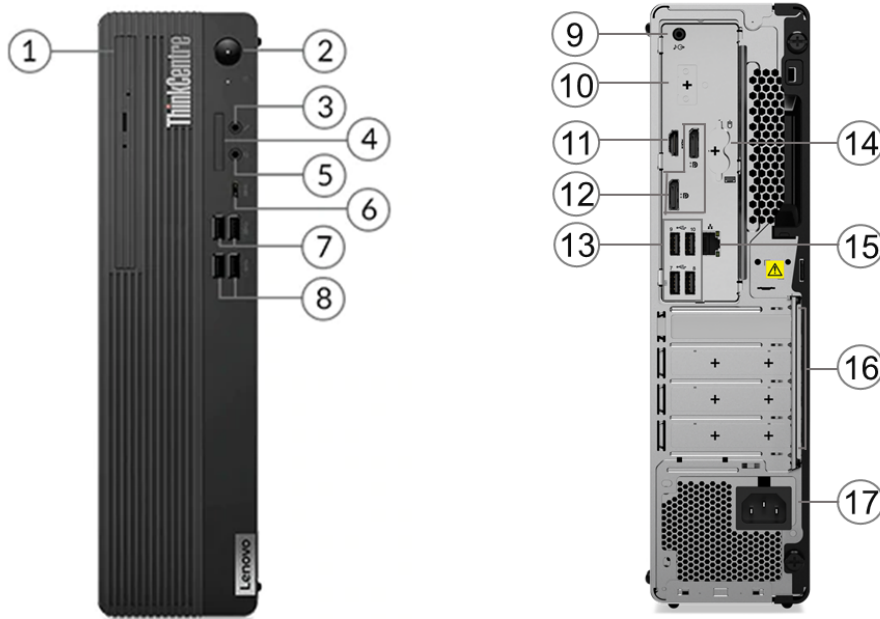


**OVERVIEW**



|  |   |
|--|---|
| 1. Optical drive *                           | 10. Flex IO *                           |
| 2. Power button                              | 11. HDMI 2.1 TMDS                       |
| 3. Microphone (3.5mm)                        | 12. 2x DisplayPort 1.4                  |
| 4. Card reader *                             | 13. 4x USB 3.2 Gen 1                    |
| 5. Headphone / microphone combo jack (3.5mm) | 14. 2x PS/2 ports (keyboard / mouse) *  |
| 6. USB-C 3.2 Gen 2                           | 15. Ethernet (RJ-45)                    |
| 7. 2x USB 3.2 Gen 1                          | 16. Optional ports on expansion cards * |
| 8. 2x USB 3.2 Gen 2                          | 17. Power connector                     |
| 9. Line-out (3.5mm)                          |   |

Notes:

- Ports with \* are only available on selected models
- More ports are available through the optional expansion cards (not shown on the sample product above)

## PERFORMANCE

### Processor

#### Processor Family

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

#### Processor\*\*

| Processor Name     | Cores                    | Threads | Base Frequency                | Max Frequency                 | Cache | Processor Graphics     |
|--------------------|--------------------------|---------|-------------------------------|-------------------------------|-------|------------------------|
| Pentium Gold G7400 | 2                        | 4       | 3.7GHz                        | -                             | 6MB   | Intel UHD Graphics 710 |
| Core i3-12100      | 4 (4 P-core + 0 E-core)  | 8       | P-core 3.3GHz                 | P-core 4.3GHz                 | 12MB  | Intel UHD Graphics 730 |
| Core i3-12300      | 4 (4 P-core + 0 E-core)  | 8       | P-core 3.5GHz                 | P-core 4.4GHz                 | 12MB  | Intel UHD Graphics 730 |
| Core i5-12600      | 6 (6 P-core + 0 E-core)  | 12      | P-core 3.3GHz                 | P-core 4.8GHz                 | 18MB  | Intel UHD Graphics 770 |
| Core i5-12400      | 6 (6 P-core + 0 E-core)  | 12      | P-core 2.5GHz                 | P-core 4.4GHz                 | 18MB  | Intel UHD Graphics 730 |
| Core i5-12500      | 6 (6 P-core + 0 E-core)  | 12      | P-core 3.0GHz                 | P-core 4.6GHz                 | 18MB  | 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  | 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  | Intel UHD Graphics 770 |
| Core i9-12900F     | 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  | -                      |

### Operating System

#### Operating System\*\*

- Windows® 11 Pro 64
- Windows 11 Home 64
- Windows 11 DG Windows 10 Pro 64
- Windows 10 IoT Enterprise LTSC 2021
- Ubuntu Linux
- No operating system

### Graphics

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

| Graphics               | Type       | Memory | Boost Clock | TGP | Connector   | Max Resolution   | Key Features | Remark |
|------------------------|------------|--------|-------------|-----|---|--|--------------|--------|
| Intel UHD graphics 710 | Integrated | Shared | -           | -   | 2x DP 1.4 HBR2, 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C®) | 4096x2304@60hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)] | DirectX® 12  | -      |
| Intel UHD graphics 730 | Integrated | Shared | -           | -   | 2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C)   | 4096x2304@60hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C)], 2048x1536@50Hz[Flex IO(VGA)] | DirectX 12   | -      |
| Intel UHD graphics 770 | Integrated | Shared | -           | -   | 2x DP 1.4 HBR2, 1x HDMI 2.1 TMDS, 1x Flex IO  | 4096x2304@60hz(DP), 4096x2160@60Hz[HDMI / Flex IO(HDMI) / Flex IO(DP)],  | DirectX 12   | -      |

|                     |          |           |   |   |  |   |                           |   |
|---------------------|----------|-----------|---|---|--|---|---------------------------|---|
|                     |          |           |   |   | (VGA / DP 1.2 / HDMI 2.1 TMDS / USB-C) | 3840x2160@60Hz[Flex IO(USB-C)],<br>2048x1536@50Hz[Flex IO(VGA)] |                           |   |
| AMD Radeon™ RX 6400 | Discrete | 4GB GDDR6 | - | - | 1x HDMI 2.1, 1x DP 1.4                 | 7680x4320@60Hz(HDMI),<br>7680x4320@60Hz(DP)                     | DirectX 12,<br>OpenGL 4.6 | - |

**Notes:**

- 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<sup>[1]</sup>

Supports up to 4 independent displays via onboard ports (2x DP, 1x HDMI, and 1x optional Flex IO), more displays support via discrete graphics

**Notes:**

- Onboard video ports are only available for the models with integrated graphics

## Chipset

### Chipset

Intel Q670 chipset

## Memory

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

Up to 128GB DDR5

### Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

### Memory Type

- DDR5-3600
- DDR5-4000
- DDR5-4400

**Notes:**

- 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][2]</sup>

Up to four drives, 1x 2.5"/3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD

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

### Storage Type

| Disk Type     | Interface                          | RPM  | Offering | Security |
|---------------|------------------------------------|------|----------|----------|
| 2.5" SATA HDD | SATA 6Gb/s                         | 7.2K | -        | -        |
| 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 4.0 x4 Value       | -    | -        | Opal2    |
| M.2 2280 SSD  | PCIe NVMe, PCIe 4.0 x4 Performance | -    | -        | Opal2    |

### RAID

RAID 0/1 support (RAID preset only available via special bid model)

# ThinkCentre M80s Gen 3

## 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 max capacity of SSD/HDD is based on the test results with current Lenovo SSD/HDD offerings. The system may support more capacity as the technology develops.

## Removable Storage

### Optical\*\*

- DVD-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, 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® ALC897Q-CG codec

### Speakers

Single speaker, 1W x1

## Power Supply

### Power Supply\*\*

| Power | Type  | Efficiency | Key Features      |
|-------|-------|------------|-------------------|
| 180W  | Fixed | 85%        | 100V - 240V       |
| 260W  | Fixed | 90%        | 100-240V, 50-60Hz |
| 310W  | Fixed | 92%        | 100-240V, 50-60Hz |
| 380W  | Fixed | 92%        | 100-240V, 50-60Hz |

## DESIGN

### Input Device

#### Keyboard\*\*

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Keyboard (PS/2 connector), black
- Lenovo Traditional Keyboard (USB connector), black
- No keyboard

#### Mouse\*\*

- Lenovo Calliope Mouse (USB connector), black
- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Mouse (PS/2 connector), black (only available via special bid)
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
- No mouse

## Mechanical

### Form Factor

SFF (8.2L)

### Dimensions (WxDxH)

92.5 x 297.7 x 339.5 mm (3.6 x 11.7 x 13.4 inches)

### Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.68 x 15.55 x 20.87 inches)

### Weight

Around 5.3 kg (11.7 lbs)

**Packaging Weight**

7.6 kg (16.76 lbs)

**Case Color**

Black

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

- 1x 2.5" disk bay
- 1x 3.5" disk bay
- 1x slim ODD bay

**Expansion Slots**

- One PCIe 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 4.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe 4.0 x16 (x4 signal), low-profile, length ≤ 155mm, height ≤ 70mm
- Three M.2 slots (one for WLAN, two for SSD)

**EOU**

Toolless cover, disk, optical, extension card assembly / removal

**Stand**

- Vertical stand
- No stand

**Others**

- (Optional) Dust filter
- (Optional) Smart Cable (USB-A to USB-C)
- Supports Smart Power On

**Notes:**

1. 2.5" HDD tray is optional, or comes with 2.5 HDD. 3.5" bay supports 2.5" / 3.5" HDD, 3.5" to 2.5 converter comes with 2nd 2.5" HDD.

## CONNECTIVITY

### Network

**Onboard Ethernet**

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

**Optional Ethernet<sup>\*\*</sup>**

- Gigabit Ethernet, Bitland BN8E88, 1x RJ-45, PCIe x1
- Gigabit Ethernet, Intel Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe x4
- 2.5 Gigabit Ethernet, Realtek RTL8125BGS, 1x RJ-45, PCIe x1
- No optional Ethernet

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

- AMD RZ616, Wi-Fi<sup>®</sup> 6E, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.2, M.2 Card
- 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 5.2, 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
- Intel Wi-Fi 6E AX211, 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 a lower version due to OS limitation

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

**Front Ports**

- 1x USB-C 3.2 Gen 2 (support data transfer and 15W charging)
- 2x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

**Optional Front Ports**

1x card reader

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

- 4x USB 3.2 Gen 1
- 1x HDMI 2.1 TMDS
- 2x DisplayPort™ 1.4
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

#### Optional Rear Ports\*\*\*

- 1x USB-C 3.2 Gen 1 with DisplayPort function and 5V@3A charging (Flex IO)
- 1x HDMI 2.1 TMDS (Flex IO)
- 1x VGA (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x USB-C 3.2 Gen 2x2 (via USB-C expansion card, PCIe x4)
- 2x USB 2.0 (via 2-port adapter)
- 2x USB 3.2 Gen 1 (via 2-port USB expansion card, PCIe x1)
- 2x USB-C 3.2 Gen 2 (via 2-port USB-C expansion card, PCIe x4)
- 1x serial
- 1x 2nd serial
- 4x serial (via 4-port serial expansion card, PCIe x1)
- 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
2. For video ports on discrete graphics, please see graphics section

## Monitor Cable

#### Monitor Cable\*\*\*

- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI dongle
- DP to VGA dongle
- HDMI to HDMI cable (1.5m)
- HDMI to VGA dongle
- No monitor cable

## SECURITY & PRIVACY

### Security

#### Security Chip

Discrete TPM 2.0, TCG certified

#### Physical Locks

- (Optional) E-lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot, 3 x 7 mm
- 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
- Boot sequence control
- Boot without keyboard and mouse
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

## MANAGEABILITY

### System Management

#### System Management\*\*<sup>[1]</sup>

- Intel vPro Enterprise
- Intel vPro Essentials
- Non-vPro

#### Notes:

1. Intel vPro offers a superset of DASH's defined capabilities.

## SERVICE

### Warranty

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

- 1-year depot service
- 1-year limited onsite service
- 3-year limited onsite service
- No base warranty

#### 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
- ErP Lot 3
- TCO Certified 9.0
- RoHS compliant

## Other Certifications

### Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland Ultra Low Noise

### Mil-Spec Test

MIL-STD-810H military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus, Solar Radiation, Contamination by Fluids, Salt Fog)

- 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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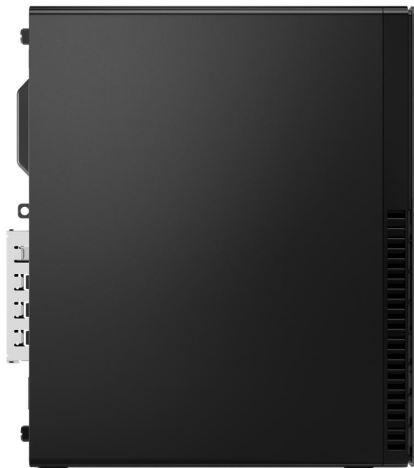
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