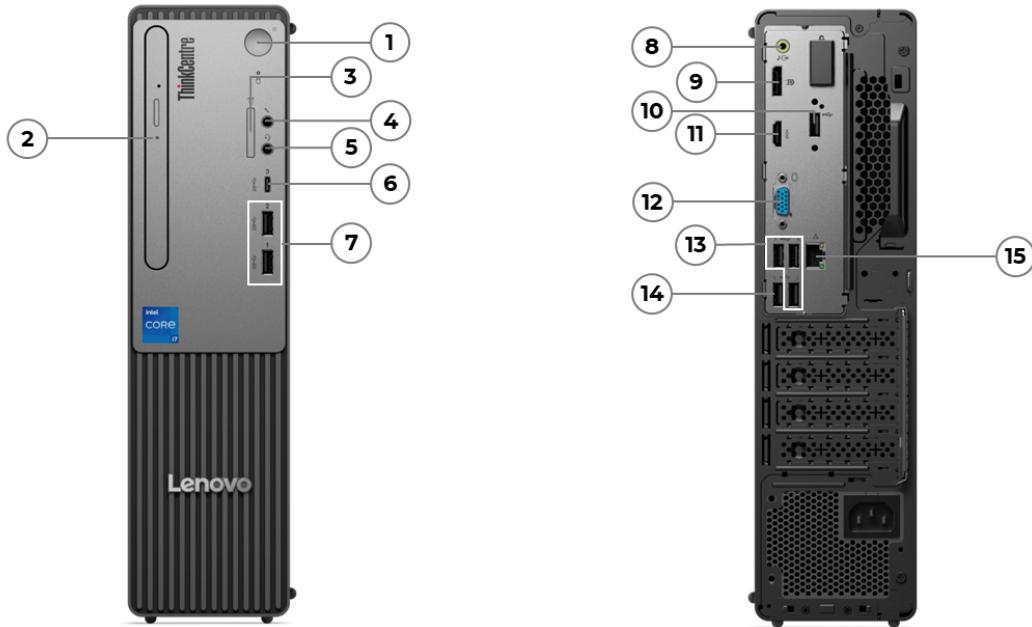


OVERVIEW



| | |
|--|---|
| 1. Power button | 9. DisplayPort 1.4 |
| 2. Optical drive * | 10. USB-A (Hi-Speed USB) * |
| 3. Card reader * | 11. HDMI 2.1 TMDS |
| 4. Microphone jack (3.5mm) | 12. VGA |
| 5. Headphone / microphone combo jack (3.5mm) | 13. 3x USB-A (Hi-Speed USB) |
| 6. USB-C (USB 5Gbps), with 15W charging | 14. USB-A (Hi-Speed USB), with Smart Power On |
| 7. 2x USB-A (USB 5Gbps) | 15. Ethernet (RJ-45) |
| 8. Audio-out (3.5mm) | |

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th / 14th Generation Intel® Core™ i3 / i5 / i7 Processor, or Intel® 300 Processor

Processor**

| Processor Name | Cores | Threads | Base Frequency | Max Frequency | Cache | Processor Graphics |
|----------------|---------------------------|---------|-------------------------------|--|---|-------------------------|
| Core i3-13100 | 4 (4 P-core + 0 E-core) | 8 | P-core 3.4GHz | P-core 4.5GHz | 5MB L2 Cache / 12MB Intel® Smart Cache | Intel® UHD Graphics 730 |
| Core i5-13400 | 10 (6 P-core + 4 E-core) | 16 | P-core 2.5GHz / E-core 1.8GHz | P-core 4.6GHz / E-core 3.3GHz | 9.5MB L2 Cache / 20MB Intel® Smart Cache | Intel® UHD Graphics 730 |
| Core i5-13500 | 14 (6 P-core + 8 E-core) | 20 | P-core 2.5GHz / E-core 1.8GHz | P-core 4.8GHz / E-core 3.5GHz | 11.5MB L2 Cache / 24MB Intel® Smart Cache | Intel® UHD Graphics 770 |
| Core i5-13600 | 14 (6 P-core + 8 E-core) | 20 | P-core 2.7GHz / E-core 2.0GHz | P-core 5.0GHz / E-core 3.7GHz | 11.5MB L2 Cache / 24MB Intel® Smart Cache | Intel® UHD Graphics 770 |
| Core i7-13700 | 16 (8 P-core + 8 E-core) | 24 | P-core 2.1GHz / E-core 1.5GHz | Max Turbo up to 5.2GHz / P-core 5.1GHz / E-core 4.1GHz | 24MB L2 Cache / 30MB Intel® Smart Cache | Intel® UHD Graphics 770 |
| Core i3-14100 | 4 (4 P-core + 0 E-core) | 8 | P-core 3.5GHz | P-core 4.7GHz | 5MB L2 Cache / 12MB Intel® Smart Cache | Intel® UHD Graphics 730 |
| Core i5-14400 | 10 (6 P-core + 4 E-core) | 16 | P-core 2.5GHz / E-core 1.8GHz | P-core 4.7GHz / E-core 3.5GHz | 9.5MB L2 Cache / 20MB Intel® Smart Cache | Intel® UHD Graphics 730 |
| Core i5-14500 | 14 (6 P-core + 8 E-core) | 20 | P-core 2.6GHz / E-core 1.9GHz | P-core 5.0GHz / E-core 3.7GHz | 11.5MB L2 Cache / 24MB Intel® Smart Cache | Intel® UHD Graphics 770 |
| Core i5-14600 | 14 (6 P-core + 8 E-core) | 20 | P-core 2.7GHz / E-core 2.0GHz | P-core 5.2GHz / E-core 3.9GHz | 20MB L2 Cache / 24MB Intel® Smart Cache | Intel® UHD Graphics 770 |
| Core i7-14700 | 20 (8 P-core + 12 E-core) | 28 | P-core 2.1GHz / E-core 1.5GHz | Max Turbo up to 5.4GHz / P-core 5.3GHz / E-core 4.2GHz | 28MB L2 Cache / 33MB Intel® Smart Cache | Intel® UHD Graphics 770 |
| Intel® 300 | 2 (2 P-core + 0 E-core) | 4 | P-core 3.9GHz | - | 2.5MB L2 Cache / 6MB Intel® Smart Cache | Intel® UHD Graphics 710 |

Operating System

Operating System**

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

Graphics

Graphics**^[1]

| Graphics | Type | Memory | Max Resolution | Connector | Key Features |
|------------|------------|--------|------------------------|--------------------|--------------|
| Intel® UHD | Integrated | Shared | 3840×2160@60Hz(HDMI®), | 1x HDMI® 2.1 TMDS, | DirectX® 12 |

| | | | | | |
|------------------------------|------------|-----------|--|---|----------------------------|
| graphics 710 | | | 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP) | 1x VGA, 1x DP 1.4 | |
| Intel® UHD graphics 730 | Integrated | Shared | 3840x2160@60Hz(HDMI®), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP) | 1x HDMI® 2.1 TMDS, 1x VGA, 1x DP 1.4 | DirectX® 12 |
| Intel® UHD graphics 770 | Integrated | Shared | 3840x2160@60Hz(HDMI®), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP) | 1x HDMI® 2.1 TMDS, 1x VGA, 1x DP 1.4 | DirectX® 12 |
| Intel® Arc™ A310 LP Graphics | Discrete | 4GB GDDR6 | 3840x2160@60Hz(HDMI®), 1600x1200@60Hz(VGA) | 1x HDMI® 2.1 TMDS, 1x VGA | DirectX® 12, OpenGL 4.6 |

Notes:

[1] The information of integrated graphics are not applicable for the models with processor which has no integrated graphics inside (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® B760 chipset

Memory

Max Memory^[1]

Up to 64GB DDR5-5600

Memory Slots

Two DDR5 UDIMM slots, dual-channel capable

Memory Type^[2]

- DDR5-4800
- DDR5-5200
- DDR5-5600

Notes:

[1] The max memory is based on the test results with current Lenovo® memory offerings.

[2] Installed memory is actually DDR5-5600 but may run as DDR5-4800 or DDR5-5200 depending on the memory support capability of processor.

Storage

Max Storage Support**^[1]

- Up to two drives, 1x 3.5" HDD + 1x M.2 SSD
 - 3.5" HDD up to 2TB
 - M.2 SSD up to 1TB
- To install a HDD storage, 3.5" HDD screw and grommet kit is needed.

Storage Type

| Disk Type | Interface | RPM | Security |
|---------------|---------------------------|------|----------|
| 3.5" SATA HDD | SATA 6Gb/s | 7.2K | - |
| 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-ROM, SATA connector, slim (9.0mm)
- DVD burner (DVD±RW), SATA connector, slim (9.0mm)
- For installing ODD, slim ODD bracket kit is needed.
- None

Card Reader

- 3-in-1 card reader
- No card reader

Multi-Media**Audio Chip**

High Definition (HD) Audio, Realtek® ALC623-CG codec

Speakers

- No speakers
- Single speaker, 1W x1

Power Supply**Power Supply****

| Power | Type | Efficiency | Key Features |
|---------------------|-------|------------|-------------------|
| 180W | Fixed | 85% | 100-240V, 50-60Hz |
| 258W | Fixed | 90% | 100-240V, 50-60Hz |
| 260W ^[1] | Fixed | 90% | 100-240V, 50-60Hz |

Notes:

[1] Hybrid PSU sources configured for supply assurance; assembled product has maximum wattage of 258W.

DESIGN**Input Device****Keyboard****

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

Mouse

- Lenovo® Calliope Mouse (USB connector), black
- No mouse

Mechanical**Form Factor**

SFF (8.2L)

Dimensions (WxDxH)^[1]

| Models | Dimensions |
|------------------------|--|
| Models (Max Dimension) | 92.5 x 291.4 x 339.5 mm (3.6 x 11.5 x 13.4 inches) |

Packaging Dimensions (WxDxH)

195 x 395 x 530 mm (7.7 x 15.6 x 20.9 inches)

Weight^[2]

Around 4.2 kg (9.3 lbs)

Packaging Weight

Around 6.29 kg (13.9 lbs)

Case Color

Black (chassis), grey (bezel)

Bays

- For installing HDD or ODD, 3.5" HDD screw and grommet kit or slim ODD bracket kit is needed.
- 1x 3.5" disk bay
- 1x slim ODD bay

Expansion Slots

- One PCIe® 3.0 x16, low-profile, length ≤ 155mm, height ≤ 70mm
- One PCIe® 3.0 x1, low-profile, length ≤ 155mm, height ≤ 70mm
- Two M.2 slots (one for WLAN, one for SSD)

EOU

No support

Stand

- Vertical stand
- No stand

Others

Supports Smart Power On

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

WLAN + Bluetooth®^{**[1]}

- Realtek® Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi® + Bluetooth® 5.3, 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® 5.3, M.2 card
- No WLAN and Bluetooth®

Onboard Ethernet

Gigabit Ethernet, Realtek® RTL8111K, 1x RJ-45, supports Wake-on-LAN

Notes:

[1] Wi-Fi® operation (including Wi-Fi® 6, Wi-Fi® 6E, Wi-Fi® 7, etc.) is subject to the regulatory requirements of each country. Bluetooth® may operate at a lower version than hardware design depending on the factors such as operating system, driver, etc.

Ports^[1]

Front Ports

- 1x USB-C® (USB 5Gbps / USB 3.2 Gen 1), with 15W charging
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Rear Ports^[2]

- 4x USB-A (Hi-Speed USB / USB 2.0), one supports Smart Power On
- 1x HDMI® 2.1 TMDS
- 1x DisplayPort™ 1.4
- 1x VGA
- 1x Ethernet (RJ-45)
- 1x line-out (3.5mm)

Optional Rear Ports

- 1x USB-A (Hi-Speed USB / USB 2.0)
- 1x parallel
- 1x serial
- 1x 2nd serial

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.

Thunderbolt™ 5: 80 Gbit/s (bidirectional), up to 120 Gbit/s in bandwidth boost mode for video-intensive applications.

[2] For video ports on discrete graphics, please see [graphics section](#)

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified, FIPS 140-2 certified

Physical Locks

- (Optional) Coded Lock
- (Optional) Smart Cable Clip
- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

- Chassis intrusion switch
- No chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Hard disk password
- Power-on password
- Absolute persistence module
- Boot sequence control
- Boot without keyboard and mouse
- Cover tamper detected
- Configuration change detection
- Individual USB port disablement
- Intel® BIOS guard
- Never crash Self-healing
- Secure wipe
- Secure boot
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- More BIOS security features, please visit [BIOS Simulator](#)^[1]

Notes:

[1] The BIOS simulator is just for reference. Default settings and some options may vary depending on the hardware, operating system and BIOS version.

SERVICE

Warranty^[1]

Base Warranty**

- 1-year courier or carry-in service
- 1-year limited onsite service
- No base warranty

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>.

ACCESSORIES

Bundled Accessories

Bundled Accessories***

- 3.5" HDD screw and grommet kit (optional, or comes with 3.5" HDD disk)
- DP to DVI dongle
- DP to Dual DP dongle
- DP to HDMI® dongle
- DP to VGA dongle
- HDMI® to HDMI® dongle
- HDMI® to VGA dongle
- Slim ODD bracket kit (optional, or comes with optical drive)
- Smart Cable (USB-A to USB-C®)
- None

OPERATING REQUIREMENTS

Operating Environment

Temperature

- Operating: 5°C (41°F) to 35°C (95°F)
- Storage: -40°C (-40°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)

ENVIRONMENTAL

Sustainability

Material

85% PCC ABS used in the chassis

95% PCC recycled plastic used in USB keyboard/mouse

90% PIC recycled plastic EPE cushion

30% OBP used in the device bag

FSC certified carton

CERTIFICATIONS

Green Certifications^[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Silver Registered
- (Optional) EPEAT™ Gold Registered
- RoHS / WEEE / REACH
- TCO Certified 9.0

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>.

Other Certifications

Other Certifications

- (Optional) TÜV Rheinland® Low Noise
- (Optional) TÜV Rheinland® Ultra Low Noise
- Feature with ** means that only one option listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
- Feature with *** means that one or more options listed under the feature can be configured on selected models. Please refer to the model configuration for specific information.
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