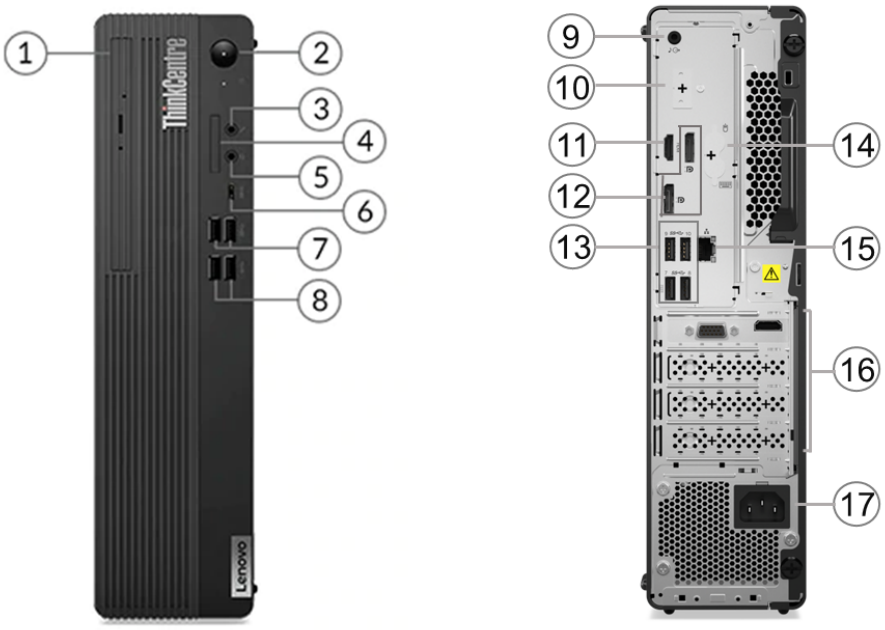
OVERVIEW



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

Notes:

- Items 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

13th Generation Intel® Core™ i5 / i7 or 14th Generation Intel® Core™ i5 / i7 / i9 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	12MB	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	24MB	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	30MB	Intel® UHD Graphics 770
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 i5-14400F	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	-
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
Core i7-14700F	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	-
Core i9-14900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.8GHz / P-core 5.4GHz / E-core 4.3GHz	32MB L2 Cache / 36MB Intel® Smart Cache	Intel® UHD Graphics 770
Core i9-14900F	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.8GHz / P-core 5.4GHz / E-core 4.3GHz	32MB L2 Cache / 36MB Intel® Smart Cache	-

Operating System

Operating System**

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 Home Single Language
- Windows® 11 IoT Enterprise LTSC 2024
- 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	4096x2304@60Hz(DP),	2x DP 1.4a (HBR2, DSC), 1x	DirectX® 12

graphics 730			4096x2160@60Hz[HDMI® / Flex IO(HDMI®) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C®)], 2048x1536@50Hz[Flex IO(VGA)]	HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI® 2.1 TMDS / USB-C®)	
Intel® UHD graphics 770	Integrated	Shared	4096x2304@60Hz(DP), 4096x2160@60Hz[HDMI® / Flex IO(HDMI®) / Flex IO(DP)], 3840x2160@60Hz[Flex IO(USB-C®)], 2048x1536@50Hz[Flex IO(VGA)]	2x DP 1.4a (HBR2, DSC), 1x HDMI® 2.1 TMDS, 1x Flex IO (VGA / DP 1.2 / HDMI® 2.1 TMDS / USB-C®)	DirectX® 12
Intel® Arc™ A310 LP Graphics	Discrete	4GB GDDR6	5120x2880@60Hz(DP)	2x DisplayPort™ 1.4a	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 4 independent displays via onboard ports (2x DP, 1x HDMI®, and 1x optional Flex IO), more displays support via discrete graphics

Chipset

Chipset

Intel® Q670 chipset

Memory

Max Memory[1]

Up to 128GB DDR5

Memory Slots

Four DDR5 UDIMM slots, dual-channel capable

Memory Type**

- DDR5-3600[2]
- DDR5-4000[3]
- DDR5-4400[4]

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 DDR5-3600 depending on the memory support capability of Intel®.

[3] Installed memory is actually DDR5-5600 but may run as DDR5-4000 depending on the memory support capability of Intel®.

[4] Installed memory is actually DDR5-5600 but may run as DDR5-4400 depending on the memory support capability of Intel®.

Storage

Max Storage Support[1]

Up to four drives, 1x 3.5" HDD + 1x 2.5" HDD + 2x M.2 SSD
• 3.5" HDD up to 2TB
• 2.5" HDD bay is only for customer self upgrade
• M.2 SSD up to 2TB each[2]

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	-	Opal 2.0

RAID

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

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo® storage offerings.
[2] 2.5" HDD bay is optional part, only for customer self upgrade purpose and the hard drive is sold separately.

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
260W[1]	Fixed	90%	100-240V, 50-60Hz
310W	Fixed	92%	100-240V, 50-60Hz

Notes:

[1] Hybrid PSU sources configured for supply assurance, labeling 260W or 258W with same performance.

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]

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 (7.7 x 15.6 x 20.9 inches)

Weight[2]

Around 5.3 kg (11.7 lbs)

Packaging Weight

7.6 kg (16.76 lbs)

Case Color

Black

Bays

- 1x 2.5″ disk bay (optional)[3]
- 1x 3.5″ disk bay
- 1x slim ODD bay

Expansion Slots

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

EOU

Toolless cover, memory, disk, optical, extension card assembly / removal[4]

Stand

- Vertical stand
- No stand

Others

- (Optional) Dust filter
- 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.

[3] 2.5″ HDD bay is optional part

[4] To comply with UL 4200A, the toolless features are not available for the following countries:
Argentina, Belize, Bolivia, Canada, Caribbean Group, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, TAA, Uruguay, USA, Venezuela.

CONNECTIVITY

Network

WLAN + Bluetooth®**

- 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, Intel® vPro® technology support, M.2 card
- No WLAN and Bluetooth®

Onboard Ethernet

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

Optional Ethernet

- 2.5 Gigabit Ethernet, Realtek® RTL8125BGS, 1x RJ-45, PCIe® x1
- No optional Ethernet

Ports[1]

Front Ports

- 1x USB-C® (USB 10Gbps / USB 3.2 Gen 2), with 15W charging
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 2x USB-A (USB 10Gbps / USB 3.2 Gen 2)
- 1x headphone / microphone combo jack (3.5mm)
- 1x microphone (3.5mm)

Optional Front Ports

1x card reader

Rear Ports[2]

- 4x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 1x HDMI® 2.1 TMDS
- 2x DisplayPort™ 1.4a (HBR2, DSC)
- 1x Ethernet (RJ-45)

- 1x line-out (3.5mm)

Optional Rear Ports***

- 1x USB-C® (USB 5Gbps / USB 3.2 Gen 1), with DisplayPort™ function and 5V@3A charging (Flex IO)
- 1x HDMI® 2.1 TMDS (Flex IO)
- 1x DP 1.2 (Flex IO)
- 1x VGA (Flex IO)
- 2x USB-A (Hi-Speed USB / USB 2.0), via 2-port adapter
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1), via 2-port USB expansion card, PCIe® x1
- 1x 2.5GbE RJ-45, via additional PCIe® adapter
- 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.
[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) 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

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[1]
- Certificate-based BIOS authentication
- Configuration change detection
- Individual USB port disablement
- Intel® BIOS guard
- Secure wipe
- Secure boot
- Self-healing BIOS (Level 2)
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- More BIOS security features, please visit BIOS Simulator[2]

Notes:

[1] Only available for the models with Chassis Intrusion Switch
[2] The BIOS simulator is just for reference. Default settings and some options may vary depending on the hardware, operating system and BIOS version.

MANAGEABILITY

System Management

System Management[1]

- Intel® vPro® Enterprise
- Non-vPro®

Notes:

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

SERVICE

Warranty[1]

Base Warranty**

- 1-year limited onsite service
- 3-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***

- DP to DVI dongle
- DP to HDMI® dongle
- HDMI® to VGA dongle
- 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 bezel
95% PCC ABS wired USB keyboard/mouse top/bottom cover
30% OBP + 60% PCC thermal shell
90% PIC recycled plastic EPE cushion
30% OBP used in bag
FSC certified paper in packaging

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT™ Gold Registered[2]
- ErP Lot 3
- GREENGUARD®
- RoHS compliant
- 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.
[2] EPEAT™ is registered where applicable, please visit epeat.net for registration status by country.

Other Certifications

Other Certifications

(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, Solar Radiation, Contamination by Fluids, Salt Fog)

- 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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