Lenovo PSREF
Product Specifications
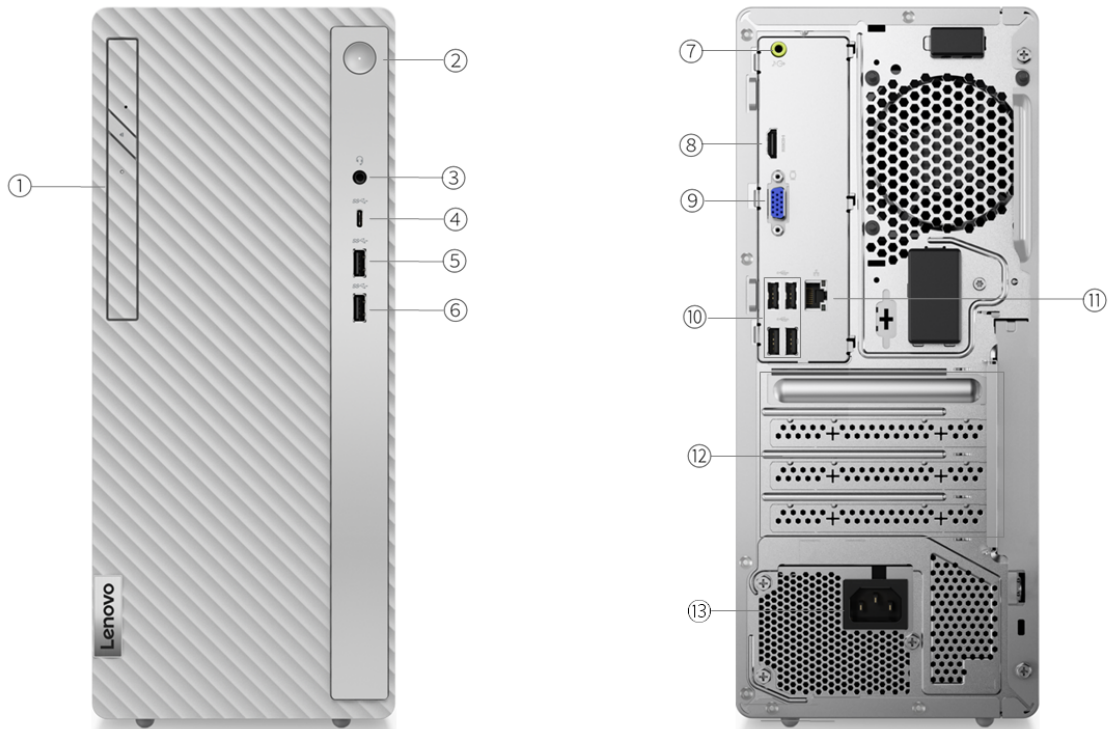Reference

OVERVIEW

1. Optical drive *	8. HDMI 1.4b
2. Power button	9. VGA
3. Headphone / microphone combo jack (3.5mm)	10. 4x USB 2.0
4. USB-C 3.2 Gen 1	11. Ethernet (RJ-45)
5. USB 3.2 Gen 1	12. Optional ports on expansion cards
6. USB 3.2 Gen 1	13. Power connector
7. Audio line-out (3.5mm)	

Notes:
- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th Generation Intel® Core™ i3 / i5 / i7 Processor

Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Core i3-13100	4 (4 P-core + 0 E-core)	8	3.4GHz	4.5GHz	12MB	DDR4-3200	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	20MB	DDR4-3200	Intel UHD Graphics 730
Core i7-13700	16 (8 P-core + 8 E-core)	24	P-core 2.1GHz / E-core 1.5GHz	P-core 5.1GHz / E-core 4.1GHz	30MB	DDR4-3200	Intel UHD Graphics 770

Operating System

Operating System[1]

- Windows® 11 Pro
- Windows 11 Home
- Windows 11 Home Single Language

Notes:

1. Some features may not be supported on the system with Linux preload, including but not limited to Intel RST RAID, Human Presence Detection, etc.

Graphics

Graphics[1]

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	1x VGA, 1x HDMI® 1.4b	2048x1536@50Hz(VGA), 1920x1080@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)

Monitor Support

Monitor Support

Supports up to 2 independent displays via onboard ports (VGA + HDMI)

Chipset

Chipset

Intel B760 chipset

Memory

Max Memory[1]

Up to 32GB DDR4-3200

Memory Slots

Two DDR4 UDIMM slots, dual-channel capable

Memory Type

DDR4-3200

Memory Protection

Non-ECC

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[1]

Up to two drives, 1x 3.5″ HDD + 1x M.2 SSD
• 3.5″ HDD up to 1TB
• M.2 SSD up to 1TB

Storage Type

Disk Type	Interface	RPM
3.5″ SATA HDD	SATA 6Gb/s	7.2K
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	-

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

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

Card Reader

No card reader

Multi-Media

Audio Chip

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

Speakers

No speakers

Power Supply

Power Supply

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

DESIGN

Input Device

Keyboard

• EOS Wireless Keyboard, black
• Lenovo Calliope Keyboard (USB connector), black
• No keyboard

Mouse

• Lenovo Calliope Mouse (USB connector), black
• No mouse
• EOS Wireless Mouse, Black

Mechanical

Form Factor

Tower (13.6L)

Dimensions (WxDxH)[1]

145 x 287.9 x 340 mm (5.71 x 11.33 x 13.39 inches)

Packaging Dimensions (WxDxH)

240 x 395 x 530 mm (9.45 x 15.55 x 20.87 inches)

Weight[2]

5.4 kg (11.9 lbs)

Packaging Weight

All models: 7.4 kg (16.31 lbs)

Case Color

Cloud grey

Bays

1x 3.5″ disk bay

Expansion Slots

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

Cooling System (Fan & Cooler)**

- 1x front system fan
- 1x front system fan, 1x rear system fan
- 1x rear system fan

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

Onboard Ethernet

Gigabit Ethernet, 1x RJ-45

WLAN + Bluetooth®[1]

- Wi-Fi® 6, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, 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 limitations.

Ports[1]

Front Ports

- 2x USB 3.2 Gen 1
- 1x USB-C® 3.2 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

Rear Ports[2]

- 1x HDMI 1.4b
- 1x VGA
- 4x USB 2.0
- 1x Ethernet (RJ-45)
- 1x audio-out (3.5mm)
- 1x power connector

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

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in chipset

BIOS Security

- Administrator password
- Power-on password
- Hard disk password

SERVICE

Warranty[1]

Base Warranty

- 1-year courier or carry-in service
- 1-year mail-in service
- 1-year limited onsite service
- 2-year courier or carry-in service
- 3-year courier or carry-in service

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://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[1]

Green Certifications

- ENERGY STAR® 8.0
- ErP Lot 3
- RoHS compliant

Notes:

1. The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.

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

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