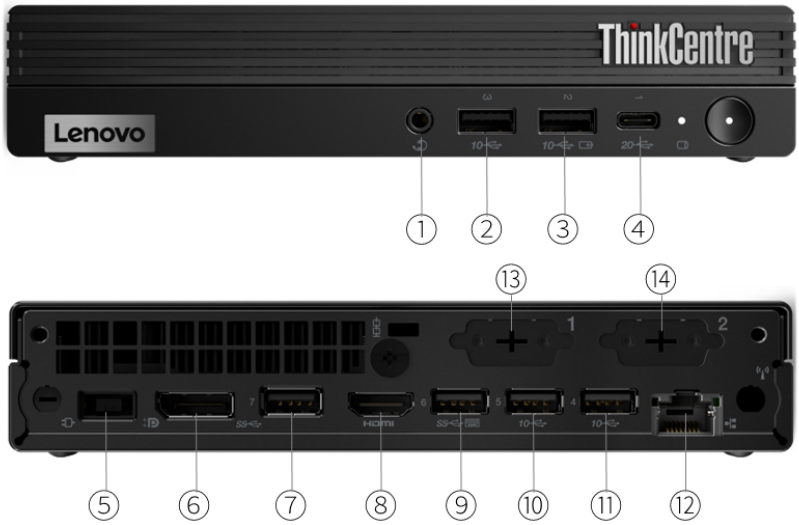
OVERVIEW



1. Headphone / microphone combo jack (3.5mm)	8. HDMI
2. USB-A (USB 10Gbps)	9. USB-A (USB 5Gbps), with Smart Power On
3. USB-A (USB 10Gbps), Always On	10. USB-A (USB 10Gbps)
4. USB-C (USB 20Gbps), data transfer only	11. USB-A (USB 10Gbps)
5. Power connector	12. Ethernet (GbE RJ-45)
6. DisplayPort 1.4a	13. Punch out port 1 *
7. USB-A (USB 5Gbps)	14. Punch out port 2 *

Notes:

- Items with * are only available on selected models

PERFORMANCE

Processor

Processor Family

13th or 14th Generation Intel® Core™ i5 / i7 / i9 Processor, 35W or 65W

Processor[**][1]

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
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	DDR5-4800	Intel® UHD Graphics 770
Core i5-13500T	14 (6 P-core + 8 E-core)	20	P-core 1.6GHz / E-core 1.2GHz	P-core 4.6GHz / E-core 3.2GHz	11.5MB L2 Cache / 24MB Intel® Smart Cache	DDR5-4800	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	DDR5-4800	Intel® UHD Graphics 770
Core i5-13600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 4.8GHz / E-core 3.4GHz	11.5MB L2 Cache / 24MB Intel® Smart Cache	DDR5-4800	Intel® UHD Graphics 770
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	DDR5-4800	Intel® UHD Graphics 770
Core i5-14500T	14 (6 P-core + 8 E-core)	20	P-core 1.7GHz / E-core 1.2GHz	P-core 4.8GHz / E-core 3.4GHz	11.5MB L2 Cache / 24MB Intel® Smart Cache	DDR5-4800	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	DDR5-5600	Intel® UHD Graphics 770
Core i5-14600T	14 (6 P-core + 8 E-core)	20	P-core 1.8GHz / E-core 1.3GHz	P-core 5.1GHz / E-core 3.6GHz	20MB L2 Cache / 24MB Intel® Smart Cache	DDR5-5600	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	DDR5-5600	Intel® UHD Graphics 770
Core i7-13700T	16 (8 P-core + 8 E-core)	24	P-core 1.4GHz / E-core 1.0GHz	Max Turbo up to 4.9GHz / P-core 4.8GHz / E-core 3.6GHz	24MB L2 Cache / 30MB Intel® Smart Cache	DDR5-5600	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	DDR5-5600	Intel® UHD Graphics 770
Core i7-14700T	20 (8 P-core + 12 E-core)	28	P-core 1.3GHz / E-core 0.9GHz	Max Turbo up to 5.2GHz / P-core 5.0GHz / E-core 3.7GHz	28MB L2 Cache / 33MB Intel® Smart Cache	DDR5-5600	Intel® UHD Graphics 770
Core i9-13900	24 (8 P-core + 16 E-core)	32	P-core 2.0GHz / E-core 1.5GHz	Max Turbo up to 5.6GHz / P-core 5.2GHz / E-core 4.2GHz	32MB L2 Cache / 36MB Intel® Smart Cache	DDR5-5600	Intel® UHD Graphics 770
Core i9-13900T	24 (8 P-core + 16 E-core)	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.3GHz / P-core 5.1GHz / E-core 3.9GHz	32MB L2 Cache / 36MB Intel® Smart Cache	DDR5-5600	Intel® UHD Graphics 770
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	DDR5-5600	Intel® UHD Graphics 770
Core i9-14900T	24 (8 P-core + 16	32	P-core 1.1GHz / E-core 0.8GHz	Max Turbo up to 5.5GHz / P-core 5.1GHz / E-	32MB L2 Cache / 36MB Intel®	DDR5-5600	Intel® UHD Graphics 770

	E-core)			core 4.0GHz	Smart Cache		

Notes:

[1] Intel® Max Turbo frequency will vary depending on application workload and the hardware and software configurations, see http://www.intel.com/technology/turboboost/ for more information.

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 graphics 770	Integrated	Shared	4096x2160@60Hz(HDMI®), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C® with DP function)	1x HDMI® 2.1 TMDS, 1x DP 1.4, 2x punch out ports([2x HDMI®/VGA/DP] or [USB-C® with DP function, HDMI®/VGA/DP])	DirectX® 12

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 DP, onboard HDMI®, optional punch out port 1 [VGA / HDMI® / DP / USB-C®], and optional punch out port 2 [VGA / HDMI® / DP])

Chipset

Chipset

Intel® Q670 chipset

Memory

Max Memory[1]

Up to 64GB (2x 32GB DDR5 SODIMM)

Memory Slots

Two DDR5 SODIMM 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, DDR5-5200, or DDR5-5600 depending on the memory support capability of processor.

Storage

Max Storage Support[1]

Up to two drives, 2x M.2 2280 SSD

• M.2 2280 SSD up to 2TB

Storage Type***

Disk Type	Interface	Offering	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4	256GB / 512GB / 1TB	Opal 2.0
M.2 2280 SSD	PCIe® NVMe®, PCIe® 4.0 x4 Performance	512GB / 1TB / 2TB	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.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

Speakers**

- Premium single speaker, 2W x1
- Single speaker, 2W x1

Power Supply

Power Supply**[1]

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
135W	Adapter	90%	Autosensing
230W	Adapter	89%	Autosensing
No power adapter	-	-	-

Notes:

[1] 135w power adapter is essential if optional USB-C® port is selected

When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:
• Order a Tiny for TIO MT (12TK or 12TL) models
• Or order an additional 135W power adapter, if original power adapter is 90W or 65W
For detailed information, please refer to ThinkCentre® M90q Gen 5 Adapter Matrix

DESIGN

Input Device

Keyboard**

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

Mouse**

- Lenovo® Calliope Mouse (USB connector), black
- Wireless EOS Mouse, black

- No mouse

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)[1]

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches with rubber feet)

Packaging Dimensions (WxDxH)

250 x 490 x 128mm (9.84 x 19.29 x 5.04 inches)

Weight[2]

Models	Weight
Tiny only	1.25 kg (2.76 lbs)

Packaging Weight

Around 3.4 kg (7.50 lbs)

Case Color

Black

Bays

No bays

Expansion Slots

- One PCIe® 4.0 x8, low-profile
- Two M.2 PCIe® Gen 4x4 slots (for SSD)
- One M.2 slot (for WLAN)

EOU

- No support
- Toolless chassis open (toolless chassis screw required) and toolless M.2 SSD, HDD, memory assembly / removal

Stand

- Vertical stand
- No stand

IO Box

No IO box

Mounting

- VESA mount bracket kit, supports VESA mount 75mm and 100mm
- None

Others

- (Optional) Dust filter
- (Optional) Power adapter cage

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, Intel® vPro® technology support, M.2 card
- Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3, M.2 card
- Intel® Wi-Fi® 7 BE200, 802.11be 2x2 Wi-Fi® + Bluetooth® 5.3 (Bluetooth® 5.4 hardware ready), 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**

- Gigabit Ethernet, Intel® Ethernet Server Adapter I350-T4, 4x RJ-45, PCIe® x4[2]
- 2.5 Gigabit Ethernet, Realtek® RTL8125BGS, 1x RJ-45, supports Wake-on-LAN
- No optional Ethernet

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.

[2] Intel® Ethernet Server Adapter I350-T4 is not available in EMEA.

Ports[1]

Front Ports

- 1x USB-C® (USB 20Gbps / USB 3.2 Gen 2x2)
- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2), with Always On and 5V@2.1A charging
- 1x USB-A (USB 10Gbps / USB 3.2 Gen 2)
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB-A (USB 5Gbps / USB 3.2 Gen 1)
- 1x USB-A (USB 5Gbps / USB 3.2 Gen 1), with Smart Power On
- 2x USB-A (USB 10Gbps / USB 3.2 Gen 2)
- 1x HDMI® 2.1 TMDS
- 1x DisplayPort™ 1.4a (HBR2, DSC)
- 1x Ethernet (GbE RJ-45)

Optional Rear Ports***

- Punch out port 1 (one of VGA / DisplayPort™ / HDMI® / serial / USB-C® (USB 5Gbps) with DisplayPort™ function and PD-in 100W (20V@5A) and PD-out 60W max (20V@3A / 5V@0.9A))
- Punch out port 2 (one of VGA / DisplayPort™ / HDMI® / serial / 2.5GbE RJ-45)
- 2x USB-A (USB 5Gbps / USB 3.2 Gen 1), share USB 5Gbps bandwidth, occupies port 1 and 2
- 4x USB-A (USB 5Gbps / USB 3.2 Gen 1), share USB 5Gbps bandwidth, occupies port 1 and 2
- 4x GbE RJ-45, via additional PCIe® adapter
- 4x serial (via 4-port serial expansion card, PCIe® x1)

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.

SECURITY & PRIVACY

Security

Security Chip

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

Physical Locks

- (Optional) Kensington® Cable Lock

- Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch[1]

Fingerprint Reader

No fingerprint reader

BIOS Security

- Absolute persistence module
- Administrator password
- Boot sequence control
- Boot without keyboard and mouse
- Configuration change detection
- Certificate based BIOS management
- Cover tamper detected
- Intel® BIOS guard
- Individual USB port disablement
- Hard disk password
- Power-on password
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Self-healing BIOS
- Secure boot
- Secure wipe
- More BIOS security features, please visit BIOS Simulator[2]

Notes:

[1] Chassis intrusion switch is hardware ready function and needs to be special bid or manually enabled in BIOS.
[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 Dual DP dongle
- DP to HDMI® dongle
- DP to VGA dongle
- HDMI® to HDMI® cable (1.5m)
- HDMI® to VGA dongle
- 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[1]

85% PCC recycled plastic used in product chassis
95% PCC recycled plastic used in USB keyboard/mouse
90% PIC recycled plastic EPE cushion or 90% PCC recycled plastic thermal shell with 30% OBP material
30% OBP used in bag
FSC certified paper in packaging

Notes:

[1] PCC: Post Consumer Content, recycled materials from customers.
PIC: Post Industry Content, recycled materials from internal factories.
EPE: Expanded Polyethylene.
OBP: Ocean Bound Plastic, reducing plastic spill into the sea.
FSC: Forest Stewardship Council.

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- (Optional) EPEAT 2.0 Gold Registered
- ErP Lot 3
- RoHS compliant
- TCO Certified, generation 9

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® 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.
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