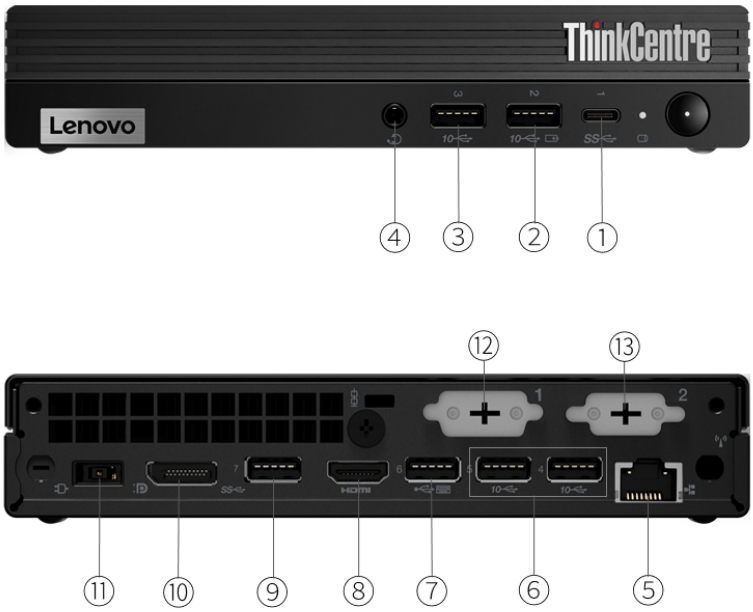
OVERVIEW



1. USB-C 3.2 Gen 1	8. HDMI 2.1 TMDS
2. USB 3.2 Gen 2 (Always On and fast charge)	9. USB 3.2 Gen 1
3. USB 3.2 Gen 2	10. DisplayPort 1.4a
4. Headphone / microphone combo jack (3.5mm)	11. Power connector
5. Ethernet (RJ-45)	12. Punch out port 1 *
6. 2x USB 3.2 Gen 2	13. Punch out port 2 *
7. 1x USB 2.0 (with smart power-on feature)	

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	Processor Graphics
Core i3-13100T	4 (4 P-core + 0 E-core)	8	P-core 2.5GHz	P-core 4.2GHz[1]	12MB	Intel UHD Graphics 730
Core i5-13400T	10 (6 P-core + 4 E-core)	16	P-core 1.3GHz / E-core 1.0GHz	P-core 4.4GHz / E-core 3.0GHz[2]	20MB	Intel UHD Graphics 730
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[3]	24MB	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[4]	24MB	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[5]	30MB	Intel UHD Graphics 770

Notes:

[1], [2], [3], [4], [5] 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**

- Ubuntu Linux[1]
- Windows® 10 IoT Enterprise LTSC 2021
- Windows 11 DG Windows 10 Pro 64
- Windows 11 Home
- Windows 11 Pro
- No operating system

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**

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 730	Integrated	Shared	1x HDMI® 2.1 TMDS, 1x DP 1.4a (HBR2, DSC), 2x punch out ports ([2x HDMI/VGA/DP] or [USB-C® with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX® 12
Intel UHD graphics 770	Integrated	Shared	1x HDMI 2.1 TMDS, 1x DP 1.4a (HBR2, DSC), 2x punch out ports ([2x HDMI/VGA/DP] or [USB-C with DP function, HDMI/VGA/DP])	4096x2304@60Hz(HDMI), 1920x1200@60Hz(VGA), 4096x2304@60Hz(DP), 4096x2304@60Hz(USB-C with DP function)	DirectX 12

Monitor Support

Monitor Support

Supports up to 4 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / HDMI / DP / USB-C], and punch out port 2 [VGA / HDMI / DP])

Chipset

Chipset

Intel Q670 chipset

Memory

Max Memory[1]

Up to 64GB DDR4-3200

Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

Memory Type

DDR4-3200

Notes:

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

Storage

Storage Support[1]

Up to two drives, 1x 2.5" HDD + 1x M.2 SSD
• 2.5" HDD up to 1TB
• M.2 SSD up to 2TB

Storage Type***

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
M.2 2242 SSD	PCIe® NVMe®, PCIe 3.0 x4	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 4.0 x4	-	Opal 2.0

RAID

No support

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® ALC256VB 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

Notes:

[1] When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:
• Order a Tiny for TIO MT (12E5, 12E6 or 12E8) models
• Or for Intel Core i5/i7 models order an additional 135W power adapter, for Intel Core i3 models order an additional 90W power adapter. If original power adapter is less than 135W (i5/i7 models) or 90W (i3 models).

DESIGN

Input Device

Keyboard**

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard, 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
- 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)
Tiny & ODD	204.2 x 186.6 x 64 mm with rubber feet (8.04 x 7.35 x 2.52 inches with rubber feet)

Packaging Dimensions (WxDxH)**[2]

- Tiny only: 490 x 250 x 130 mm (19.29 x 9.84 x 5.12 inches)
- Tiny & ODD: 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)

Weight[3]

Models	Weight
Tiny only	Around 1.25 kg (2.76 lbs)
With VESA mount & ODD box	Around 1.74 kg (3.84 lbs)

Packaging Weight**[4]

- Tiny only: Around 3.2 kg (7.05 lbs)
- Tiny & ODD: Around 3.9 kg (8.6 lbs)

Case Color

Raven black

Bays

- 1x 2.5" disk bay (optional, or bay comes with disk)
- No bays

Expansion Slots

Two M.2 slots (one for WLAN, one for SSD)

EOU

(Optional) 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 new packages take effect from September 2023. The old packages are:
Tiny only : 490 x 268 x 141 mm (19.29 x 10.55 x 5.55 inches)
Tiny & ODD : 490 x 268 x 166 mm (19.29 x 10.55 x 6.54 inches)
[3] 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.
[4] The new packages take effect from September 2023. The old package are:
Tiny only: 2.85 kg (6.28 lbs)
Tiny & ODD: 3.58 kg (7.89 lbs)

CONNECTIVITY

Network

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, supports Wake-on-LAN[1]
- No optional Ethernet

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[2]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card[3]
- Intel Wi-Fi 6E AX211, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, Intel vPro® technology support, M.2 Card[4]
- No WLAN and Bluetooth

Notes:

[1] Optional Ethernet card occupied puch out port 2.
[2], [3], [4] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports[1]

Front Ports

- 1x USB-C 3.2 Gen 1 (support data transfer and 5V@0.9A charging)
- 1x USB 3.2 Gen 2 (Always On and 5V@2.1A charging)
- 1x USB 3.2 Gen 2
- 1x headphone / microphone combo jack (3.5mm)

Optional Front Ports

None

Rear Ports

- 1x USB 2.0
- 1x USB 3.2 Gen 1
- 2x USB 3.2 Gen 2
- 1x HDMI 2.1 TMDS
- 1x DisplayPort™ 1.4a (HBR2, DSC)
- 1x Ethernet (RJ-45)

Optional Rear Ports***

- Punch out port 1 (one of VGA / DisplayPort / HDMI / serial / USB-C 2.0 with DisplayPort function)
- Punch out port 2 (one of VGA / DisplayPort / HDMI / serial / RJ-45)

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.

Monitor Cable

Monitor Cable[***]

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

SECURITY & PRIVACY

Security

Security Chip

Discrete TPM 2.0, TCG certified

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

Fingerprint Reader

No fingerprint reader

BIOS Security

- Administrator password
- Power-on password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Certificate based BIOS management
- Cover presence switch
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

MANAGEABILITY

System Management

System Management

- Intel vPro Enterprise[1]
- Non-vPro

Notes:

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

SERVICE

Warranty[1]

Base Warranty

- 1-year courier or carry-in service

- 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://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

- (Optional) EPEAT™ Gold Registered[2]
- (Optional) EPEAT Silver Registered[3]
- ENERGY STAR® 8.0
- ErP Lot 3 and Lot 7
- RoHS compliant
- TCO Certified

Notes:

[1] The items listed under the "Green Certifications" section may not only refer to certification but also registration or self-declaration.
[2], [3] EPEAT is registered where applicable, please see https://www.epeat.net for registration status by country.

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, Humidity, Sand and Dust, Vibration, Shock, Solar Radiation, Contamination by Fluids, Salt Fog, Temperature Shock)

- 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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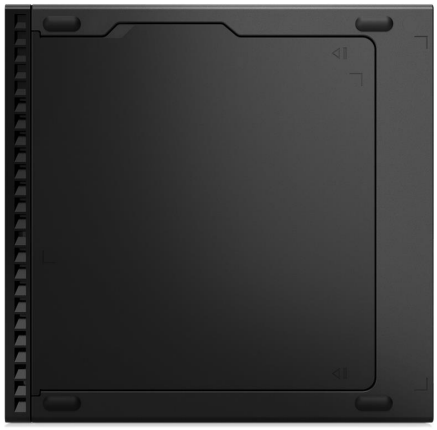
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