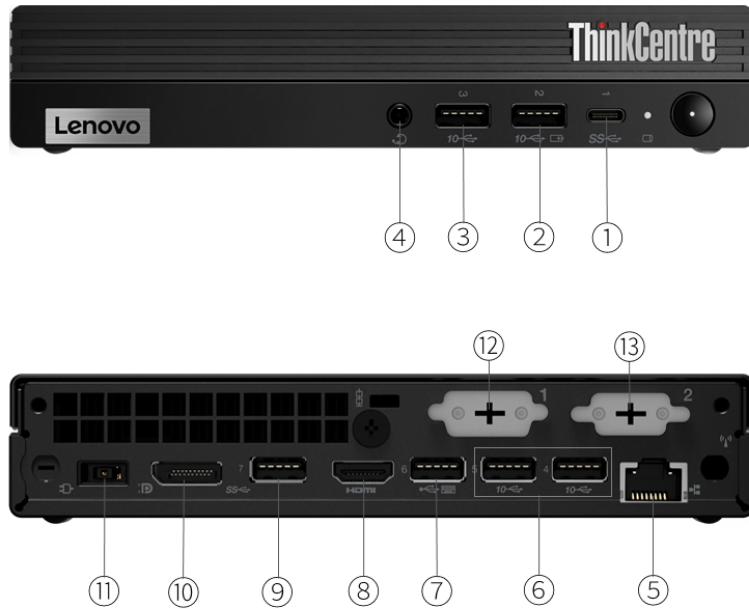


## OVERVIEW



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 <sup>[1]</sup>	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 <sup>[2]</sup>	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 <sup>[3]</sup>	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 <sup>[4]</sup>	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 <sup>[5]</sup>	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\*\*

- Windows® 11 Pro
- Windows® 11 Home
- Windows® 11 DG Windows® 10 Pro 64
- Windows® 10 IoT Enterprise LTSC 2021
- Ubuntu Linux<sup>[1]</sup>
- No preload 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	Max Resolution	Connector	Key Features
Intel® UHD graphics 730	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 1.4a (HBR2, DSC), 2x punch out ports ([2x HDMI®/VGA/DP] or [USB-C® with DP function, HDMI®/VGA/DP])	DirectX® 12
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 1.4a (HBR2, DSC), 2x punch out ports ([2x HDMI®/VGA/DP] or [USB-C® with DP function, HDMI®/VGA/DP])	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<sup>[1]</sup>

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<sup>[1]</sup>

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<sup>\*\*\*</sup>

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<sup>\*\*</sup>

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

## Power Supply

### Power Supply<sup>\*\*[1]</sup>

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)<sup>[1]</sup>**

Models	Dimensions
Tiny only	179 x 182.9 x 36.5 mm with rubber feet (7.05 x 7.2 x 1.44 inches)
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)\*\*<sup>[2]</sup>**

- 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<sup>[3]</sup>**

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\*\*<sup>[4]</sup>**

- 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<sup>[1]</sup>
- No optional Ethernet

**WLAN + Bluetooth®\*\***

- Realtek® Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi® + Bluetooth® 5.3, M.2 card<sup>[2]</sup>
- Intel® Wi-Fi® 6 AX201, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.2, M.2 Card<sup>[3]</sup>
- Intel® Wi-Fi® 6E AX211, 802.11ax 2x2 Wi-Fi® + Bluetooth® 5.3, Intel® vPro® technology support, M.2 Card<sup>[4]</sup>
- No WLAN and Bluetooth®

**Notes:**

[1] Optional Ethernet card occupied punch out port 2.

[2], [4] Bluetooth® 5.3 requires Windows® 11.

[3] Bluetooth® 5.2 requires Windows® 11.

### Ports<sup>[1]</sup>

**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.

## 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
- Certificate based BIOS authentication
- Cover presence switch
- Individual USB port disablement
- Secure Boot
- Self-healing BIOS
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)

## MANAGEABILITY

### System Management

#### System Management

- Intel® vPro® Enterprise<sup>[1]</sup>
- Non-vPro®

Notes:

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

## SERVICE

### Warranty<sup>[1]</sup>

#### 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>.

## 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® dongle
- 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<sup>[1]</sup>

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<sup>[1]</sup>

#### Green Certifications

- (Optional) EPEAT™ Silver Registered<sup>[2]</sup>
- (Optional) EPEAT™ Gold Registered<sup>[3]</sup>
- 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. For ESG & regulatory compliance documents, please visit <https://compliance.lenovo.com>.

[2], [3] EPEAT™ is registered where applicable, please visit [epeat.net](https://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, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Solar Radiation, Contamination by Fluids, Salt Fog)

- 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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