OVERVIEW

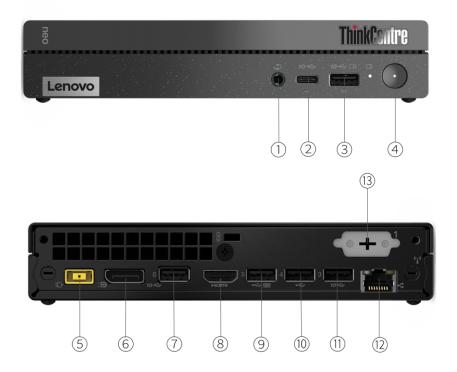|	
1. Headphone / microphone combo jack (3.5mm)	8. HDMI 2.1 TMDS
2. USB-C 3.2 Gen 2 (support data transfer and 5V@0.9A charging)	9. USB 2.0
3. USB 3.2 Gen 2 (Always On and 5V@2.1A charging)	10. USB 2.0
4. Power button	11. USB 3.2 Gen 2
5. Power-in	12. Ethernet (RJ-45)
6. DisplayPort 1.4	13. Punch out port *
7. USB 3.2 Gen 2	

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

PERFORMANCE

Processor

Processor Family

Intel® Celeron® or 12th Generation Intel Core™ i3 Processor

Processor**

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron 7305[1]	5 (1 P-core + 4 E-core)	6	P-core 1.1GHz / E-core 0.9GHz	P-core 1.1GHz / E-core 0.9GHz	8MB	DDR4-3200	Intel UHD Graphics
Core i3-1215U [2]	6 (2 P-core + 4 E-core)	8	P-core 1.2GHz / E-core 0.9GHz	P-core 4.4GHz / E-core 3.3GHz	10MB	DDR4-3200	Intel UHD Graphics

Notes:

[1], [2] 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**

- IGEL Linux[1]
- LeTOS™ V2 (Lenovo® Terminal Operating System, Linux-based)
- Windows® 10 IoT Enterprise (Thin Client)
- No operating system

Notes:

[1] The pre-installed IGEL OS version is 11.08.240
The device is preload with a free evaluation license. The evaluation license will be valid for a period of 90 days.

Graphics

Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD Graphics	Integrated	Shared	1x DP 1.4, 1x HDMI® 2.1 TMDS, 1x punch out port (1x VGA or 1x DP 1.4)	4096x2160@60Hz(DP), 4096x2160@60Hz(HDMI), 1920x1200@60Hz(VGA)	DirectX® 12.1

Monitor Support

Monitor Support

Supports up to 3 independent displays via (onboard DP, onboard HDMI, punch out port 1 [VGA / DP])

Chipset

Chipset

Intel SoC (System on Chip) platform

Memory

Max Memory[1]

- Models with Intel Core processor: Up to 32GB DDR4-3200
- Models with Intel Celeron processor: Up to 16GB DDR4-3200

Memory Slots

- Models with Intel Core processor: Two DDR4 SO-DIMM slots, dual-channel capable
- Models with Intel Celeron processor: One 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. The system may support more memory as the technology develops.

Storage

Storage Support[1]

One drive, 256GB M.2 2280 SSD

Storage Type

Disk Type	Interface	Security
M.2 2280 SSD	PCIe® NVMe®, PCIe 4.0 x4	Opal 2.0

Notes:

[1] The max capacity of each disk type is based on the test results with current Lenovo storage offerings. The system may support larger storage as the technology develops.

Removable Storage

Optical

None

Card Reader

No card reader

Multi-Media

Audio Chip

High Definition (HD) Audio, Realtek® ALC256 codec

Speakers

Single speaker, 2W x1

Microphone

No microphone

Power Supply

Power Supply**[1]

Power	Type	Efficiency	Key Features
65W	Adapter	89%	Autosensing
90W	Adapter	89%	Autosensing
No power supply			

Notes:

[1] When work with TIO monitor, an appropriate power adapter is needed. Customer may need to:
• Order a Tiny for TIO MT (12LK, 12LK, 12M3, 12M4) models
• Or order an additional 90W power adapter. If original power adapter is less than 90W.

DESIGN

Input Device

Keyboard

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

Mouse

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

Mechanical

Form Factor

Tiny (1L)

Dimensions (WxDxH)[1]

179 x 182.9 x 36.5 mm (7.05 x 7.2 x 1.44 inches)

Packaging Dimensions (WxDxH)

140 x 262 x 500 mm (5.51 x 10.31 x 19.69 inches)

Weight[2]

Around 1.11 kg (2.45 lbs)

Packaging Weight

Around 5.18 kg (11.42 lbs)

Case Color

Black

Bays

No bays

Expansion Slots

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

EOU

- No support
- (Optional) Toolless cover (toolless chassis screw required), stand, optional 2.5″ HDD bracket assembly / removal

Stand

- Vertical stand
- No stand

Mounting

- Supports VESA mount 100mm
- None

Others

(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

Onboard Ethernet

Gigabit Ethernet, Realtek RTL8111K-CG, 1x RJ-45

WLAN + Bluetooth®**

- Realtek Wi-Fi® 6 RTL8852BE, 802.11ax Dual Band 2x2 Wi-Fi + Bluetooth 5.1, M.2 card[1]
- Intel Wi-Fi 6 AX201, 802.11ax 2x2 Wi-Fi + Bluetooth 5.1, M.2 Card[2]
- No WLAN and Bluetooth

Notes:

[1], [2] Bluetooth 5.2 is hardware ready but may run at a lower version due to OS limitations.

Ports[1]

Front Ports

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

Optional Front Ports

None

Rear Ports

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

Optional Rear Ports**[2]

- 1x VGA (Punch out port)
- 1x DisplayPort 1.4(Punch out port)
- 1x Serial (Punch out port)

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] Punch out ports only available on i3 models.

Monitor Cable

Monitor Cable

No monitor cable

SECURITY & PRIVACY

Security

Security Chip

Firmware TPM 2.0 integrated in SoC

Physical Locks

Kensington® Security Slot™, 3 x 7 mm

Chassis Intrusion Switch

Chassis intrusion switch

BIOS Security

- Administrator password
- Supervisor password
- Hard disk password
- Boot sequence control
- Cover presence switch
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Intel BIOS guard

MANAGEABILITY

System Management

System Management

None

SERVICE

Warranty[1]

Base Warranty**

- 1-year courier or carry-in service

- 1-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: 10°C (50°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: -15.2 m (-50 ft) to 3048 m (10,000 ft)
- Storage: -15.2 m (-50 ft) to 10668 m (35,000 ft)

CERTIFICATIONS

Green Certifications[1]

Green Certifications

- (Optional) ENERGY STAR® 8.0
- ErP Lot 3 and Lot 7
- TCO Certified 9.0
- RoHS compliant

Notes:

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

Other Certifications

Other Certifications

(Optional) TÜV Rheinland® Ultra Low Noise

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

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