

## PERFORMANCE

### Processor

#### Processor Family

Intel® Celeron®, Intel Pentium®, 8th Generation Intel Core™ i3 / i5 / i7 Processor, or 9th Generation Intel Core i3 / i5 / i7 / i9 Processor

#### Processor

Processor Name	Cores	Threads	Base Frequency	Max Frequency	Cache	Memory Support	Processor Graphics
Celeron G4900	2	2	3.1GHz	-	2MB	DDR4-2400	Intel UHD Graphics 610
Celeron G4920	2	2	3.2GHz	-	2MB	DDR4-2400	Intel UHD Graphics 610
Celeron G4930	2	2	3.2GHz	-	2MB	DDR4-2400	Intel UHD Graphics 610
Celeron G4950	2	2	3.3GHz	-	2MB	DDR4-2400	Intel UHD Graphics 610
Pentium Gold G5400	2	4	3.7GHz	-	4MB	DDR4-2400	Intel UHD Graphics 610
Pentium Gold G5420	2	4	3.8GHz	-	4MB	DDR4-2400	Intel UHD Graphics 610
Pentium Gold G5500	2	4	3.8GHz	-	4MB	DDR4-2400	Intel UHD Graphics 630
Pentium Gold G5600	2	4	3.9GHz	-	4MB	DDR4-2400	Intel UHD Graphics 630
Pentium Gold G5620	2	4	4.0GHz	-	4MB	DDR4-2400	Intel UHD Graphics 630
Core i3-8100	4	4	3.6GHz	-	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-8300	4	4	3.7GHz	-	8MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9100	4	4	3.6GHz	4.2GHz	6MB	DDR4-2400	Intel UHD Graphics 630
Core i3-9300	4	4	3.7GHz	4.3GHz	8MB	DDR4-2400	Intel UHD Graphics 630
Core i5-8400	6	6	2.8GHz	4.0GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8500	6	6	3.0GHz	4.1GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-8600	6	6	3.1GHz	4.3GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9400	6	6	2.9GHz	4.1GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9500	6	6	3.0GHz	4.4GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i5-9600	6	6	3.1GHz	4.6GHz	9MB	DDR4-2666	Intel UHD Graphics 630
Core i7-8700	6	12	3.2GHz	4.6GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i7-9700	8	8	3.0GHz	4.7GHz	12MB	DDR4-2666	Intel UHD Graphics 630
Core i9-9900	8	16	3.1GHz	5.0GHz	16MB	DDR4-2666	Intel UHD Graphics 630

### Operating System

- Windows® 10 Home 64
- Windows 10 Pro 64
- Ubuntu Linux
- No operating system

### Graphics

Graphics	Type	Memory	Connector	Max Resolution	Key Features
Intel UHD graphics 610	Integrated	Shared	1x DP	4096x2304@60Hz(DP)	DirectX® 12
Intel UHD graphics 630	Integrated	Shared	1x DP	4096x2304@60Hz(DP)	DirectX 12

#### Notes:

- Integrated graphics information and onboard video ports information are not applicable for all models without integrated graphics (for the details, please refer to processor section)

### Monitor Support

Supports up to 2 independent displays via native display and 1 external monitor; supports external monitor via DisplayPort™

## Chipset

Intel B360 chipset

## Memory

### Memory Type

DDR4-2666

### Memory Slots

Two DDR4 SO-DIMM slots, dual-channel capable

### Memory Protection

Non-ECC

### Max Memory

Up to 32GB DDR4-2666

Notes:

- 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

Up to two drives, 1x 2.5" HDD + 1x M.2 2242/2280 SSD

- 2.5" HDD up to 1TB each
- M.2 SSD up to 1TB each
- Optional Intel Optane™ Memory, M.2

### RAID

Not support

### Storage Type

Disk Type	Interface	RPM	Security
2.5" SATA HDD	SATA 6Gb/s	5.4K	-
2.5" SATA HDD	SATA 6Gb/s	7.2K	-
2.5" SATA SSD	SATA 6Gb/s	-	Opal
2.5" SATA SSD	SATA 6Gb/s	-	-
M.2 2242 SSD	PCIe NVMe, PCIe 3.0 x2	-	-
M.2 2280 SSD	PCIe NVMe, PCIe 3.0 x4	-	-
Intel Optane Memory M10	PCIe NVMe, PCIe 3.0 x2	-	-

## Removable Storage

### Optical

- DVD-ROM, SATA 1.5Gb/s, slim (9.0mm)
- DVD burner (DVD±RW), SATA 1.5Gb/s, slim (9.0mm)
- Not configured

### Card Reader

- 3-in-1 card reader
- Not configured

## Multi-Media

### Audio Chip

High Definition (HD) Audio, Realtek® ALC233 codec

### Speakers

Stereo speakers, 2W x2

### Microphone

Dual array microphone

# ThinkCentre M820z AIO

## Camera

- 1080p, LED indicator, with physical switch on/off, supports multi-degree rotation (horizontal 0° to 180°, vertical -25° to 25°)
- Not configured

## Power Supply

Power	Type	Efficiency	Key Features
150W	Adapter	90%	-

## DESIGN

### Display

#### Display

Size	Resolution	Touch	Type	Brightness	Surface	Aspect Ratio	Contrast Ratio	Color Gamut	Viewing Angle	Key Features
21.5"	FHD (1920x1080)	None	IPS	250 nits	Anti-glare	16:9	1000:1	-	horizontal: +/- 89°, vertical: +/- 89°	Borderless design, support Low Blue Light Mode
21.5"	FHD (1920x1080)	Multi-touch	IPS	250 nits	Anti-glare	16:9	1000:1	-	horizontal: +/- 89°, vertical: +/- 89°	Borderless design, support Low Blue Light Mode

#### Notes:

- California Electronic Waste Recycling Fee  
In California, per state law, Lenovo charges an electronic waste recycling fee on this covered device at the time of sale of the product. For more information, go to <https://www.calrecycle.ca.gov/Electronics/Consumer>

#### Touchscreen

- Advanced In-cell Touch (AIT), supports 10-point touch
- Non-touch

### Input Device

#### Keyboard

- Lenovo Calliope Keyboard (USB connector), black
- Lenovo Calliope Wireless Keyboard (2.4GHz via USB receiver), black
- Lenovo Traditional Keyboard (USB connector), black
- Not configured

#### Mouse

- Lenovo Calliope Wireless Mouse (2.4GHz via USB receiver), black
- Lenovo Calliope Mouse (USB connector), black
- Lenovo Fingerprint Mouse (USB connector), Windows Hello support, black
- Not configured

### Mechanical

#### Buttons

- Power button
- Microphone mute button

#### Form Factor

AIO (21.5 inches)

#### Dimensions (WxDxH)

Models	Dimensions
Models with UltraFlex III stand and no camera	491 x 252 x 335 to 417 mm (19.3 x 9.9 x 13.2 to 16.4 inches)
Models with full function monitor stand and no camera	491 x 252 x 377 to 486 mm (19.3 x 9.9 x 14.8 to 19.1 inches)
Models without stand and camera	491 x 49 x 321 mm (19.3 x 1.9 x 12.6 inches)

## Notes:

- Camera adds 22mm in height (Vertical)

**Weight**

Models	Weight
Models without stand and camera	Non-touch: 5.05 kg (11.1 lbs) Touch: 5.25 kg (11.6 lbs)
Models with UltraFlex III stand and no camera	Non-touch: 7.65 kg (16.9 lbs) Touch: 7.85 kg (17.3 lbs)
Models with full function monitor stand and no camera	Non-touch: 7.18 kg (15.8 lbs) Touch: 7.38 kg (16.3 lbs)

**Case Color**

Black

**Bays**

- 1x slim ODD bay
- 1x 2.5" disk bay

**Expansion Slots**

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

**EOU**

Toolless chassis open and toolless disk, memory, stand assembly / removal

**Stand**

- Full function monitor stand, supports -5° to +45° tilt, left & right 45° swivel, up to 110mm lift
- UltraFlex III stand, supports -5° to +70° tilt, left & right 45° swivel, up to 136mm lift (flat mode) / up to 82mm lift (vertical mode)
- Not configured

**Mounting**

Supports VESA mount (100mm)

**CONNECTIVITY****Network****Onboard Ethernet**

Gigabit Ethernet, Realtek RTL8111G, 1x RJ45, supports Wake-on-LAN

**Optional Ethernet**

Not Support

**WLAN + Bluetooth™**

- Realtek RTL8821CE, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 4.2, M.2 card
- Realtek RTL8822BE, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 card
- Intel Dual Band Wireless-AC 3165, 802.11ac Dual Band 1x1 Wi-Fi + Bluetooth 4.2, M.2 Card
- Intel Dual Band Wireless-AC 8265, 802.11ac Dual Band 2x2 Wi-Fi + Bluetooth 4.2, M.2 Card
- Not configured

**Ports****Rear Ports**

- 4x USB 3.1 Gen 1 (one supports Smart Power On)
- 1x Ethernet (RJ-45)
- 1x DisplayPort

## Notes:

- For video ports on discrete graphics, please see graphics section

**Optional Rear Ports**

1x serial

**Right Ports**

- 1x USB 3.1 Gen 2 (Always On and fast charge)
- 1x USB-C 3.1 Gen 1
- 1x headphone / microphone combo jack (3.5mm)

**Optional Right Ports**

1x card reader

## Monitor Cable

- DP to VGA dongle
- DP to dual DP dongle
- DP to DVI-D dongle
- DP to HDMI® 1.4 dongle
- Not configured

## SECURITY & PRIVACY

### Security

#### Security Chip

Discrete TPM 2.0, TCG certified

#### Physical Locks

Kensington® Security Slot

#### Chassis Intrusion Switch

- Chassis intrusion switch
- Not configured

#### Fingerprint Reader

- Touch style fingerprint reader on mouse
- Not configured

#### BIOS Security

- Power-on password
- Administrator password
- Hard disk password
- Boot sequence control
- Boot without keyboard and mouse
- Smart USB protection (allows keyboard / mouse only, blocks all storage devices)
- Individual USB port disablement

## MANAGEABILITY

### System Management

None

## SERVICE

### Warranty

#### Base Warranty

- 1-year depot service
- 1-year limited onsite service
- 3-year depot service
- 3-year limited onsite service
- 3-year split limited onsite service
- No base warranty

## CERTIFICATIONS

### Green Certifications

- EPEAT™ Silver (not for Celeron / Pentium/ non-OS models)
- ENERGY STAR® 8.0 (not for Celeron / Pentium/ non-OS models)
- ErP Lot 3
- GREENGUARD®
- TCO
- RoHS

## Other Certifications

### Other Certifications

- TÜV Low Blue Light certified
- TÜV Eye comfort certified
- (Optional) TÜV Ultra Low Noise certified

### Mil-Spec Test

MIL-STD-810G military test passed (Low Pressure [Altitude], High Temperature, Low Temperature, Temperature Shock, Humidity, Sand and Dust, Vibration, Shock, Fungus)

