

Dell Pro Tower

QCT1250

Owner's Manual

Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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Views of Dell Pro Tower QCT1250

Front

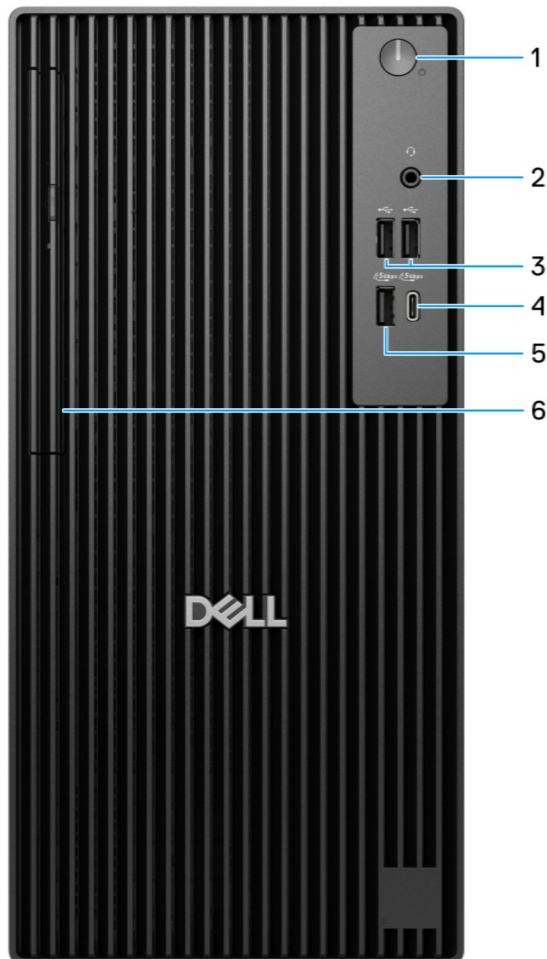


Figure 1. Front view of Dell Pro Tower QCT1250

1. Power button with diagnostic LED

Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for four seconds to force shut-down the computer.

NOTE: You can customize the power-button behavior in Windows.

2. Global headset jack

Connect headphones or a headset (headphone and microphone combo).

3. Two USB 2.0 (480 Mbps) ports

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 480 Mbps.

4. **USB 3.2 Gen 1 (5 Gbps) Type-C port**

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 5 Gbps.

 **NOTE:** This port does not support video/audio streaming.

5. **USB 3.2 Gen 1 (5 Gbps) port**

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 5 Gbps.

6. **Slim optical drive (optional)**

Reads from and writes to CDs and DVDs.

Back

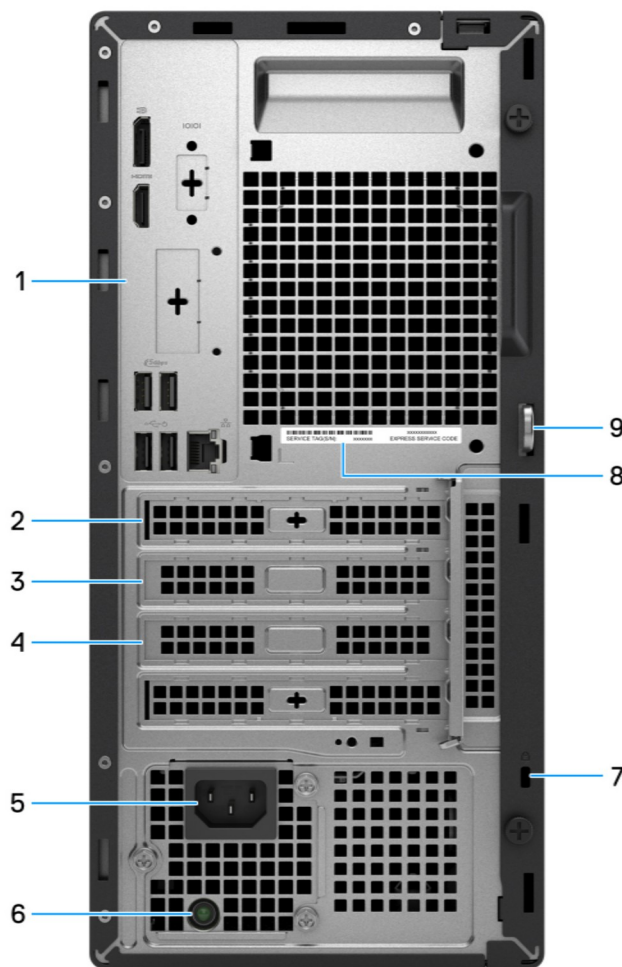


Figure 2. Back view of Dell Pro Tower QCT1250

1. **Back panel**

Connect USB, audio, video, and other devices.

2. **Full-height PCIe x1 slot**

Connect a PCI-Express card such as an audio, or network card to enhance the capabilities of your computer.

3. **Full-height PCIe x1 slot**

Connect a PCI-Express card such as an audio, or network card to enhance the capabilities of your computer.

4. **Full-height PCIe x16 expansion card slot**

Connect a PCI-Express card such as graphics, audio, or network card to enhance the capabilities of your computer.

5. Power-cord connector port

Connect a power cable to provide power to your computer.

6. Power-supply diagnostic light

Indicates the power-supply state.

7. Security-cable slot (for Kensington locks)

Connect a security cable to prevent unauthorized movement of your computer.

8. Service Tag label

The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.

9. Padlock ring

Attach a standard padlock to prevent unauthorized access to the interior of your computer.

Back panel

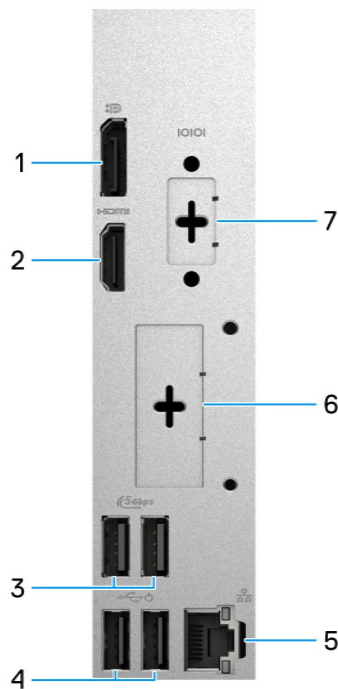


Figure 3. Back panel view of Dell Pro Tower QCT1250

1. DisplayPort 1.4a (HBR2) port or DisplayPort 1.4a (HBR3) port

Connect an external display or a projector.

The maximum resolution that is supported by the DisplayPort 1.4a (HBR2) port is up to 4096 x 2304 at 60 Hz.

The maximum resolution that is supported by the DisplayPort 1.4a (HBR3) port is up to 5120 x 3200 at 60 Hz .

2. HDMI 2.1 (TMDS) port

Connect to a TV, external display, or another HDMI-in enabled device. The maximum resolution that is supported by this port is up to 4096 x 2160 at 60 Hz.

3. Two USB 3.2 Gen 1 (5 Gbps) ports

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 5 Gbps.

4. **Two USB 2.0 (480 Mbps) with SmartPower On ports**

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 480 Mbps.

 **NOTE:** When USB wake is enabled in the BIOS, the computer will turn on or resume from hibernation when a USB device that is connected to this port, such as a mouse or keyboard is used.

5. **RJ45 ethernet port (1 Gbps)**

Connect an RJ45 ethernet cable from a router or a broadband modem for network or Internet access.

6. **Optional port**

The ports available at this location may vary depending on the optional-port module that is installed on your computer.

 **NOTE:** Only one of these options can be installed at the location that is shown on your computer.

- **VGA port**

Connect an external display or a projector. The maximum resolution that is supported by this port is up to 1920 x 1200 at 60 Hz.

- **HDMI 2.1 (TMDS) port**

Connect to a TV, external display, or another HDMI-in enabled device. The maximum resolution that is supported by this port is up to 4096 x 2160 at 60 Hz.

- **HDMI 2.1 (FRL) port**

Connect to a TV, external display, or another HDMI-in enabled device. The maximum resolution that is supported by this port is up to 5120 x 3200 at 60 Hz.

- **DisplayPort 1.4a (HBR3) port**

Connect an external display or a projector. The maximum resolution that is supported by this port is up to 5120 x 3200 at 60 Hz.

- **DisplayPort 2.1 (UHBR20) port**

Connect an external display or a projector. The maximum resolution that is supported by this port is up to 7680 x 4320 at 60 Hz.

- **Two USB 3.2 Gen 2 (10 Gbps) ports**

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 10 Gbps.

- **USB 3.2 Gen 2 (10 Gbps) Type-C with DisplayPort alt mode port**

Connect devices such as external storage devices and printers. Provides data transfer speeds of up to 10 Gbps. The maximum resolution that is supported by this port is up to 5120 x 3200 at 60 Hz with a Type-C to DisplayPort adapter.

7. **Legacy serial port (optional)**

Connect a peripheral or device to the RS-232 serial port.

Top



Figure 4. Top view of Dell Pro Tower QCT1250

1. MyDell QR code

MyDell is your hub for content personalized to your Dell Pro Tower QCT1250, including videos, articles, manuals, and easy access to support.

Set up your computer

Steps

1. Connect the keyboard and mouse.

 **NOTE:** For setup instructions, see the documentation that is shipped with the keyboard and mouse.

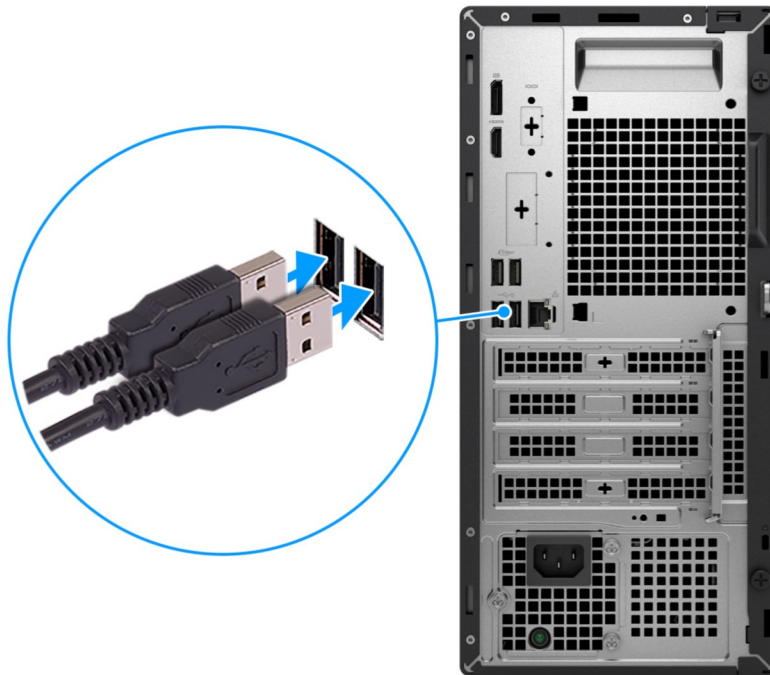


Figure 5. Connecting the keyboard and mouse

2. Connect to your network using a cable, or connect to a wireless network.

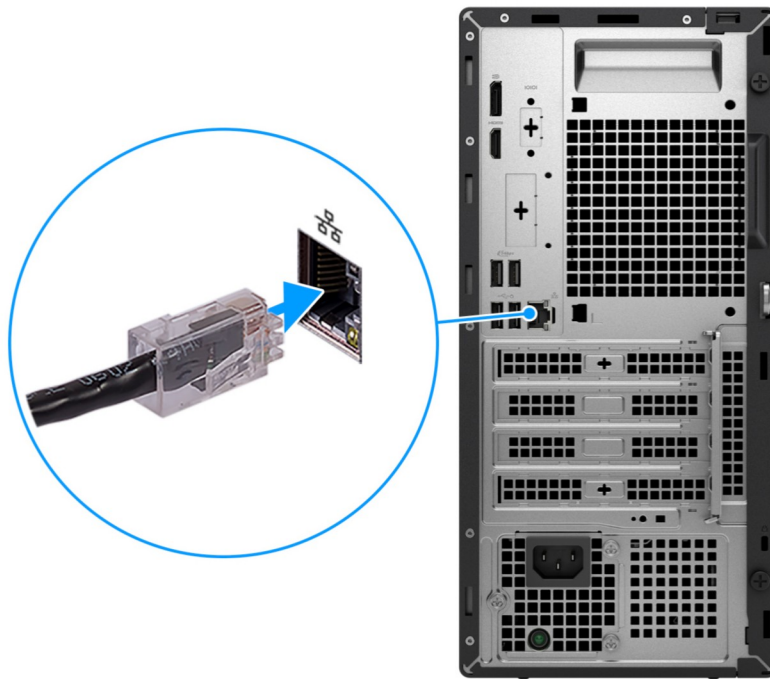


Figure 6. Connecting the network cable

3. Connect the display.

NOTE: For improved graphical performance, connect the display to the display ports on the discrete graphics processing unit.

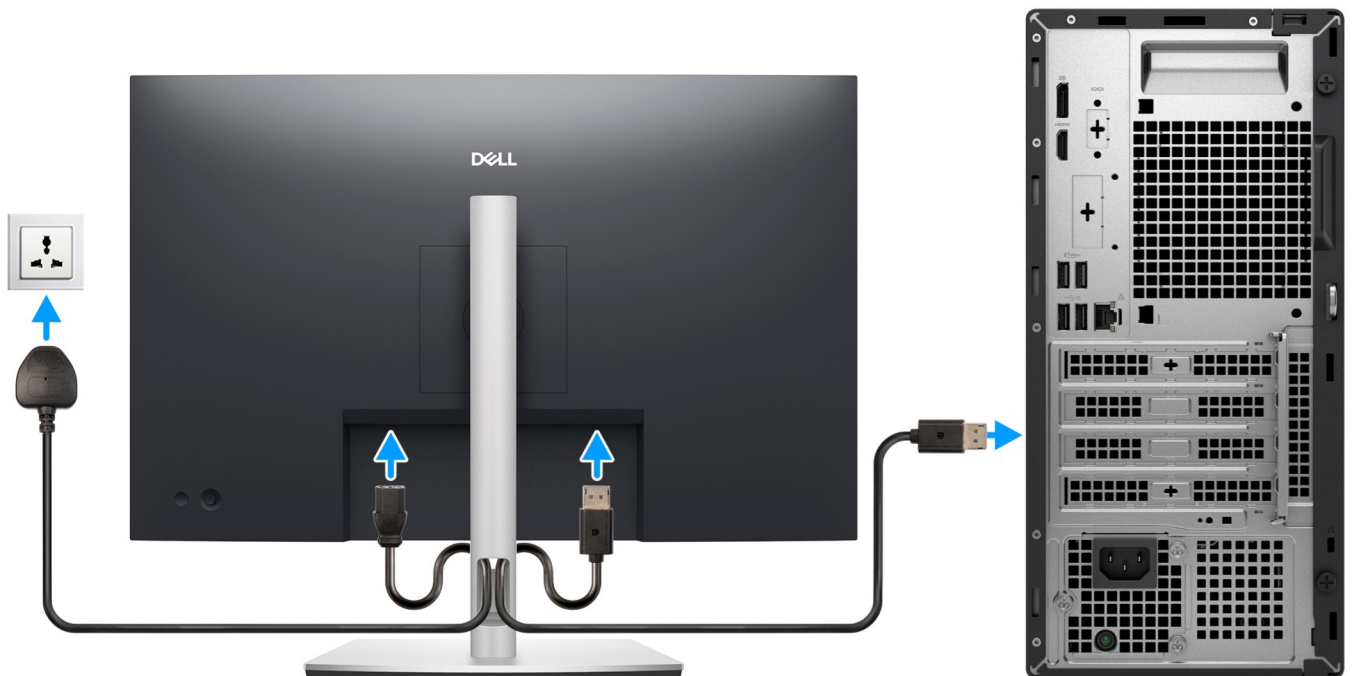


Figure 7. Connecting the display

4. Connect the power cable.

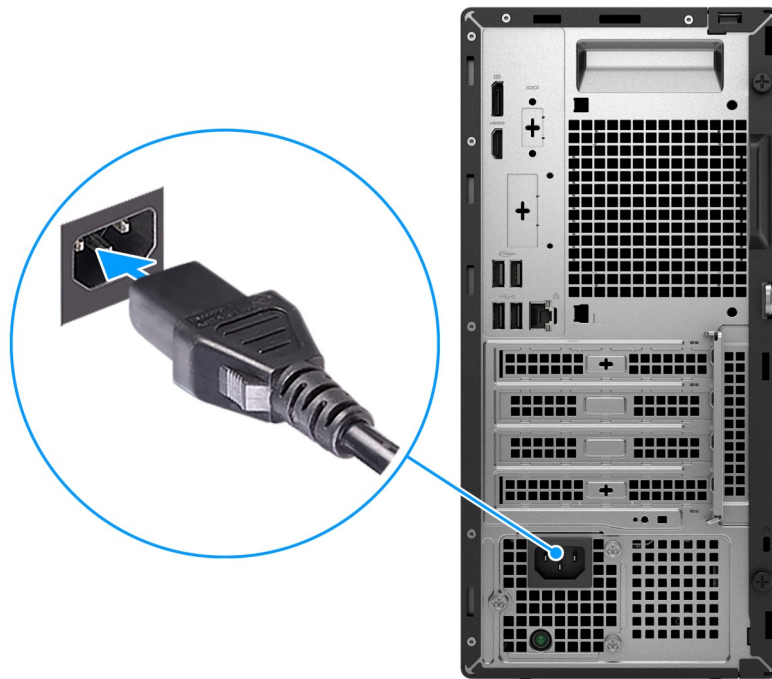


Figure 8. Connecting the power cable

5. Press the power button.



Figure 9. Pressing the power button

6. Finish the operating system setup.

For Ubuntu:

Follow the on-screen instructions to complete the setup. For more information about installing and configuring Ubuntu, search in the Knowledge Base Resource at [Dell Support Site](#).

For Windows:

Follow the on-screen instructions to complete the setup. When setting up, Dell Technologies recommends that you:

- Connect to a network for Windows updates.

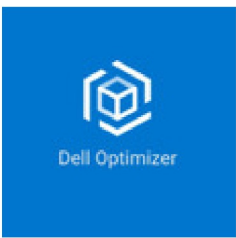


NOTE: If connecting to a secured wireless network, enter the password for the wireless network access when prompted.

- If connected to the Internet, sign-in with or create a Microsoft account. If not connected to the Internet, create an offline account.
- On the **Support and Protection** screen, enter your contact details.

7. Locate and use Dell apps from the Windows Start menu—Recommended.

Table 1. Locate Dell apps

Resources	Description
	Dell Optimizer is an application that is designed to enhance computer performance and productivity by optimizing settings for power, battery, display, collaboration touchpad, and presence detection. It also provides access to applications purchased with your new computer. For more information, see Dell Optimizer User's Guide at Dell Support Site .
	Dell Product Registration Register your computer with Dell.
	Dell Help & Support Access help and support for your computer.
	SupportAssist SupportAssist is a proactive and predictive technology that offers automated technical support for Dell computers. It proactively monitors both hardware and software, addressing performance issues, preventing security threats, and automating engagement with Dell Technical Support. For more information, see SupportAssist documentation at Dell Support Site . NOTE: In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.

Specifications of Dell Pro Tower QCT1250

Dimensions and weight

The following table lists the height, width, depth, and weight of your Dell Pro Tower QCT1250.

Table 2. Dimensions and weight

Description	Values
Height	324.30 mm (12.77 in.)
Width	154 mm (6.06 in.)
Depth	293 mm (11.54 in.)
Weight  NOTE: The weight of your computer depends on the configuration ordered and manufacturing variability.	• Minimum: 4.34 kg (9.57 lb) • Maximum: 6.78 kg (14.95 lb)

Processor

The following table lists the details of the processors that are supported on your Dell Pro Tower QCT1250.

Processors

Table 3. Processors

Description	Option one	Option two	Option three	Option four	Option five
Processor type	Intel Core i3 14100	Intel Core i5 14500 vPro	Intel Core i5 14600 vPro	Intel Core i7 14700 vPro	Intel 300
Processor wattage	60 W	65 W	65 W	65 W	46 W
Processor total core count	4	14	14	20	2
Performance-cores	4	6	6	8	2
Efficient-cores	None	8	8	12	None
Processor total thread counts	8	20	20	28	4
 NOTE: Intel® Hyper-Threading Technology is only available on Performance-cores.					
Processor speed	Up to 4.70 GHz	Up to 5 GHz	Up to 5.20 GHz	Up to 5.40 GHz, Turbo Max Boost	3.90 GHz
Performance-cores frequency					
Processor base frequency	3.50 GHz	2.60 GHz	2.70 GHz	2.10 GHz	3.90 GHz
Maximum turbo frequency	4.70 GHz	5 GHz	5.20 GHz	5.30 GHz	Not applicable
Efficient-cores frequency					
Processor base frequency	Not applicable	1.90 GHz	2 GHz	1.50 GHz	Not applicable
Maximum turbo frequency	Not applicable	3.70 GHz	3.90 GHz	4.20 GHz	Not applicable
Processor cache	12 MB	24 MB	24 MB	33 MB	6 MB
Integrated graphics	Intel UHD Graphics 730	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 710
AI technology	None	None	None	None	None
Neural Processing Unit (NPU) performance	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
 NOTE: Tera Operations Per Second (TOPS) is an AI performance metric that measures how many trillions of operations per second an AI processor can perform.					

Table 4. Processors

Description	Option six	Option seven	Option eight
Processor type	Intel Core Ultra 5 235	Intel Core Ultra 5 245	Intel Core Ultra 7 265
Processor wattage	65 W	65 W	65 W
Processor total core count	14	14	20
Performance-cores	6	6	8
Efficient-cores	8	8	12
Processor total thread counts	14	14	20

Table 4. Processors (continued)

Description	Option six	Option seven	Option eight
 NOTE: Intel® Hyper-Threading Technology is only available on Performance-cores.			
Processor speed	Up to 5 GHz	Up to 5.10 GHz	Up to 5.30 GHz
Performance-cores frequency			
Processor base frequency	3.40 GHz	3.50 GHz	2.40 GHz
Maximum turbo frequency	5 GHz	5.10 GHz	5.20 GHz
Efficient-cores frequency			
Processor base frequency	2.90 GHz	3 GHz	1.80 GHz
Maximum turbo frequency	4.40 GHz	4.50 GHz	4.60 GHz
Processor cache	24 MB	24 MB	30 MB
Integrated graphics	Intel Graphics	Intel Graphics	Intel Graphics
AI technology	Intel AI Boost	Intel AI Boost	Intel AI Boost
Neural Processing Unit (NPU) performance	Up to 13 TOPS	Up to 13 TOPS	Up to 13 TOPS
 NOTE: Tera Operations Per Second (TOPS) is an AI performance metric that measures how many trillions of operations per second an AI processor can perform.			

Chipset

The following table lists the details of the chipset that is supported by your Dell Pro Tower QCT1250.

Table 5. Chipset

Description	Option one	Option two
Processors	- Intel Core i3/i5 vPro/i7 vPro - Intel 300	Intel Core Ultra 5/7
Chipset	Intel Q670	Intel Q870
DRAM bus width	64-bit/128-bit	64-bit/128-bit
Flash EPROM	32 MB PRMC + 16 MB nPRMC	32 MB PRMC + 32 MB nPRMC
PCIe bus	Up to Gen3	Up to Gen4

Operating system

Your Dell Pro Tower QCT1250 supports the following operating systems:

- Windows 11 Home
- Windows 11 Pro
- Windows 11 Pro National Education
- Ubuntu Linux 24.04 LTS

Memory

The following table lists the memory specifications that are supported by your Dell Pro Tower QCT1250.

Table 6. Memory specifications

Description	Values
Memory slots	Two UDIMM slots
Memory type	DDR5
Memory speed	• Up to 4800 MT/s • Up to 5600 MT/s • Up to 6400 MT/s
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, or 32 GB
Memory configurations supported	For computers shipped with an Intel Core 300/i3 14100/i5 14500 vPro processor: • 8 GB: 1 x 8 GB, single-channel DDR5, up to 4800 MT/s • 16 GB: 1 x 16 GB, single-channel DDR5, up to 4800 MT/s • 16 GB: 2 x 8 GB, dual-channel DDR5, up to 4800 MT/s • 32 GB: 1 x 32 GB, single-channel DDR5, up to 4800 MT/s • 32 GB: 2 x 16 GB, dual-Channel DDR5, up to 4800 MT/s • 64 GB: 2 x 32 GB, dual-Channel DDR5, up to 4800 MT/s For computers shipped with an Intel Core i5 14600 vPro/i7 14700 vPro processor: • 8 GB: 1 x 8 GB, single-channel DDR5, up to 5600 MT/s • 16 GB: 1 x 16 GB, single-channel DDR5, up to 5600 MT/s • 16 GB: 2 x 8 GB, dual-channel DDR5, up to 5600 MT/s • 32 GB: 1 x 32 GB, single-channel DDR5, up to 5600 MT/s • 32 GB: 2 x 16 GB, dual-Channel DDR5, up to 5600 MT/s • 64 GB: 2 x 32 GB, dual-Channel DDR5, up to 5600 MT/s For computers shipped with an Intel Core Ultra 5 235/245 or Ultra 7 265 processor: • 8 GB: 1 x 8 GB, single-channel DDR5, up to 6400 MT/s • 16 GB: 1 x 16 GB, single-channel DDR5, up to 6400 MT/s • 16 GB: 2 x 8 GB, dual-channel DDR5, up to 6400 MT/s • 32 GB: 1 x 32 GB, single-channel DDR5, up to 6400 MT/s • 32 GB: 2 x 16 GB, dual-Channel DDR5, up to 6400 MT/s • 64 GB: 2 x 32 GB, dual-Channel DDR5, up to 6400 MT/s

External ports and slots

The following table lists the external ports and slots of your Dell Pro Tower QCT1250.

Table 7. External ports and slots

Description	Values
Network port	One RJ45 ethernet port (1 Gbps)

Table 7. External ports and slots (continued)

Description	Values
USB ports	- Two USB 2.0 (480 Mbps) ports - One USB 3.2 Gen 1 (5 Gbps) Type-C port - Three USB 3.2 Gen 1 (5 Gbps) ports - Two USB 2.0 (480 Mbps) with SmartPower on ports
Audio port	One global headset jack
Video port(s)	- One DisplayPort 1.4a (HBR2) port, for computers shipped with Intel 300 and Intel Core processors - One DisplayPort 1.4a (HBR3) port, for computers shipped with Intel Core Ultra processors - One HDMI 2.1 (TMDS) port
Power port	One power-cable connector
Peripheral port	One legacy serial port (optional)
Security-cable slot	- One padlock ring - One security cable slot (for a Kensington lock)

External Port (optional module slot)

The following table lists the external ports that are supported on the optional module slot for Dell Pro Tower QCT1250.

 **NOTE:** The ports that are listed in this table are mutually exclusive. Your Dell Pro Tower QCT1250 can only support one of the listed options.

Table 8. External ports (optional module)

Description	Values
USB ports	- Two USB 3.2 Gen 2 (10 Gbps) ports - One USB 3.2 Gen 2 (10 Gbps) Type-C with DisplayPort Alt Mode port
Video ports	For computers shipped with an Intel Core 300/i3 14100/i5 14500 vPro/i5 14600 vPro/i7 14700 vPro processor: - One HDMI 2.1 (TMDS) port - One VGA port - One DisplayPort 1.4a (HBR3) port For computers shipped with an Intel Core Ultra 5 235/245 or Ultra 7 265 processor: - One HDMI 2.1 (FRL) port - One VGA port - One DisplayPort 2.1 (UHBR20) port

Internal slots

The following table lists the internal slots on your Dell Pro Tower QCT1250.

Table 9. Internal slots

Description	Values
M.2	- One M.2 2230 slot for WiFi and Bluetooth combo card - One M.2 2230/2280 slot for solid-state drive  NOTE: To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at Dell Support Site.
SATA	- One SATA 3.0 slot for 3.5-inch hard drive - One SATA 3.0 slot for 3.5-inch hard drive or slimline optical drive
PCIe	- One full-height PCIe x16 slot - Two full-height PCIe x1 slots

Ethernet

The following table lists the wired ethernet Local Area Network (LAN) specifications of your Dell Pro Tower QCT1250.

Table 10. Ethernet specifications

Description	Values
Model	Intel i219-LM
Transfer rate	10/100/1000 Mbps

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your Dell Pro Tower QCT1250.

Table 11. Wireless module specifications

Description	Option one	Option two	Option three
Model number	Intel Wi-Fi 6E AX211	Intel Wi-Fi 7 BE200, 2x2, 802.11be	MediaTek Wi-Fi 6 MT7920
Transfer rate	Up to 2400 Mbps	Up to 5760 Mbps	Up to 1200 Mbps
Frequency bands supported	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz
Wireless standards	- WiFi 802.11a/b/g - Wi-Fi 4 (WiFi 802.11n) - Wi-Fi 5 (WiFi 802.11ac) - Wi-Fi 6E (WiFi 802.11ax)	- WiFi 802.11a/b/g - Wi-Fi 4 (WiFi 802.11n) - Wi-Fi 5 (WiFi 802.11ac) - Wi-Fi 6 (WiFi 802.11ax) - Wi-Fi 7 (WiFi 802.11be)	- WiFi 802.11a/b/g - Wi-Fi 4 (WiFi 802.11n) - Wi-Fi 5 (WiFi 802.11ac) - Wi-Fi 6 (WiFi 802.11ax)
Encryption	64-bit/128-bit WEP - AES-CCMP - TKIP	64-bit/128-bit WEP - AES-CCMP - TKIP	64-bit/128-bit WEP - AES-CCMP - TKIP

Table 11. Wireless module specifications (continued)

Description	Option one	Option two	Option three
Bluetooth wireless card  NOTE: The functionality of the Bluetooth wireless card may vary based on the operating system.	Bluetooth 5.3	Bluetooth 5.4	Bluetooth 5.4

Audio

The following table lists the audio specifications of your Dell Pro Tower QCT1250.

Table 12. Audio specifications

Description	Values
Audio type	High Definition Audio
Audio controller	Realtek ALC3204
Internal audio interface	High Definition Audio (HDA) interface
External audio interface	One global headset jack

Storage

This section lists the storage options on your Dell Pro Tower QCT1250.

Your Dell Pro Tower QCT1250 supports a combination of the following storage configurations:

- One 3.5-inch hard drive
- One M.2 2230/2280 solid-state drive

The primary drive of your Dell Pro Tower QCT1250 is the M.2 solid-state drive.

Table 13. Storage specifications

Storage type	Interface type	Capacity
3.5-inch hard drive	SATA AHCI, up to 6 Gbps	Up to 2 TB
M.2 2230 QLC solid-state drive	• PCIe Gen3x4 NVMe, up to 32 GT/s • PCIe Gen4x4 NVMe, up to 64 GT/s	Up to 1 TB
M.2 2230 TLC solid-state drive	• PCIe Gen3x4 NVMe, up to 32 GT/s • PCIe Gen4x4 NVMe, up to 64 GT/s	Up to 1 TB
9.5 mm 8x slimline DVD-RW drive	SATA AHCI, up to 1.5 Gbps	One slimline DVD-RW

Power ratings

The following table lists the power rating specifications of Dell Pro Tower QCT1250.

Table 14. Power ratings

Description	Option one	Option two
Type	180 W, Bronze	360 W, Platinum

Table 14. Power ratings (continued)

Description	Option one	Option two
Input voltage	90 VAC–264 VAC	90 VAC–264 VAC
Input frequency	47 Hz–63 Hz	47 Hz–63 Hz
Input current (maximum)	3 A	5 A
Output current (continuous)	Operating: 12 VA: 15 A 12 VB: 14 A Storage: 12 VA: 1.50 A 12 VB: 3.30 A	Operating: 12 VA: 18 A 12 VB: 18 A 12 VC: 13 A Storage: 12 VA: 1.50 A 12 VB: 3.30 A 12 VC: 0 A
Rated output voltage	12 VA 12 VB	12 VA 12 VB 12 VC
Temperature range:		
Operating	5°C to 45°C (41°F to 113°F)	5°C to 45°C (41°F to 113°F)
Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

Power supply connector

The following table lists the Power supply connector specifications of your Dell Pro Tower QCT1250.

Table 15. Power supply connector

Power supply	Connectors
180 W internal power supply unit (PSU), 80 Plus Bronze	- One 4-pin connector for processor - One 8-pin connector for processor
360 W internal power supply unit (PSU), 80 Plus Platinum	- Two 4-pin connectors for processor - One 8-pin connector for system board - One 8-pin connector for graphic card

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Dell Pro Tower QCT1250.

Table 16. GPU—Integrated

Controller	Memory size	Processor
Intel Graphics	Shared system memory	Intel Core Ultra 5/7
Intel UHD Graphics 710	Shared system memory	Intel Core 300
Intel UHD Graphics 730	Shared system memory	Intel Core i3
Intel UHD Graphics 770	Shared system memory	Intel Core i5 vPro/i7 vPro

Video port and resolution matrix

The following table lists the Video port and resolution matrix of your Dell Pro Tower QCT1250.

NOTE: DisplayPort Multi-Stream Technology is a feature that allows you to connect up to four displays to a single DisplayPort port on your device using a daisy chain. This enables you to use multiple displays simultaneously, increasing your productivity and workspace efficiency.

Table 17. Video port and resolution matrix

Port type	DisplayPort 1.4a (HBR2)	DisplayPort 1.4a (HBR3)	DisplayPort 2.1 (UHBR20)	VGA	HDMI 2.1 (TDMS)	HDMI 2.1 (FRL)
Maximum resolution—single display	4096 x 2304 at 60 Hz	5130 x 3200 at 60 Hz	7680 x 4320 at 60 Hz	1920 x 1200 at 60 Hz	4096 x 2160 at 60 Hz	5120 x 3200 at 60 Hz
Maximum resolution—dual MST	2560 x 1600 at 60 Hz	3840 x 2160 at 60Hz	5120 x 3200 at 60 Hz	Not applicable	Not applicable	Not applicable
Maximum resolution—triple MST	2560 x 1440 at 60 Hz	2560 x 1600 at 60 Hz	4096 x 2304 at 60 Hz	Not applicable	Not applicable	Not applicable
Maximum resolution—quadruple MST	1920 x 1080 at 60 Hz	2560 x 1440 at 60 Hz	4096 x 2304 at 60 Hz	Not applicable	Not applicable	Not applicable

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Dell Pro Tower QCT1250.

Table 18. GPU—Discrete

Controller	Memory size	Memory type
AMD Radeon RX 6300	2 GB	GDDR6
AMD Radeon RX 7400	8 GB	GDDR6
NVIDIA RTX A400	4 GB	GDDR6