

# G5 5090

## Setup and Specifications



## 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.

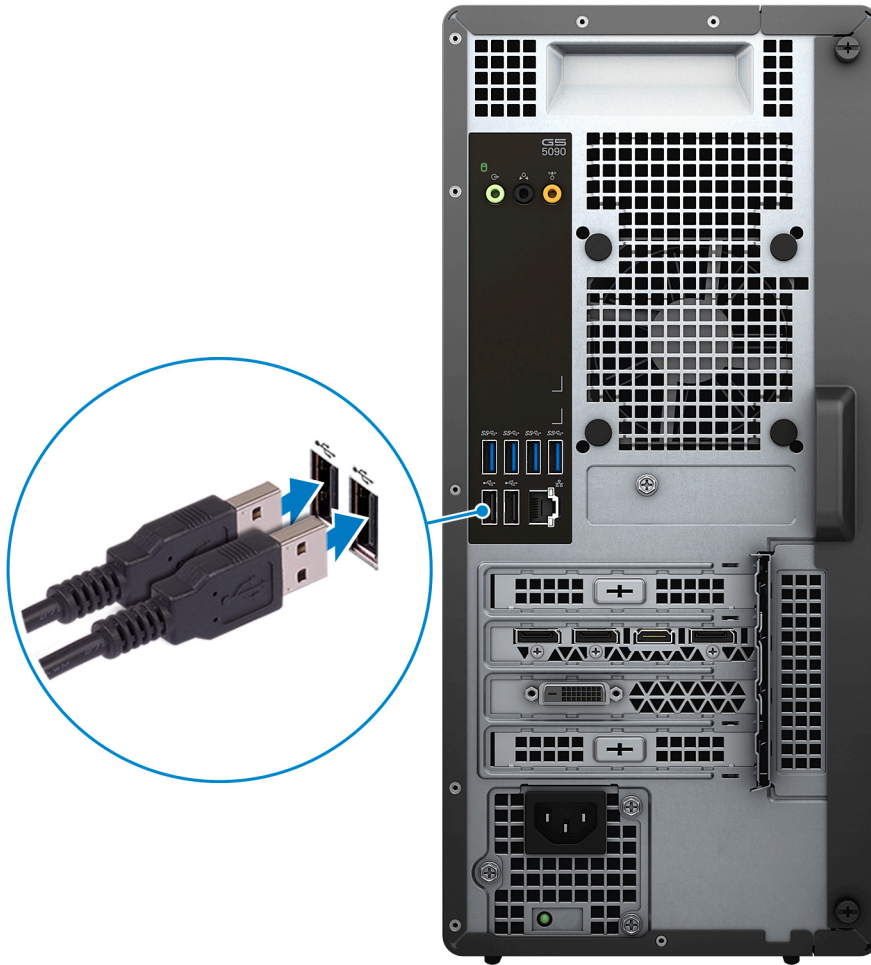
 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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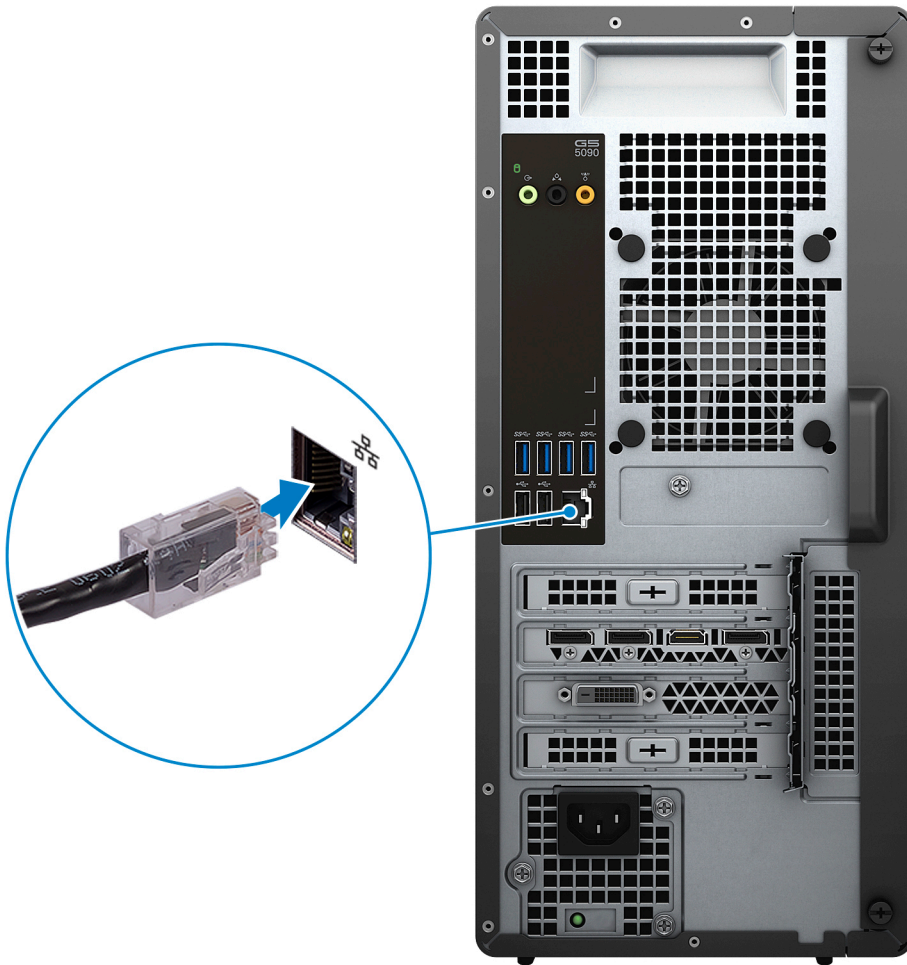
# Set up your G5 5090

**NOTE:** The images in this document may differ from your computer depending on the configuration you ordered.

1. Connect the keyboard and mouse.



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

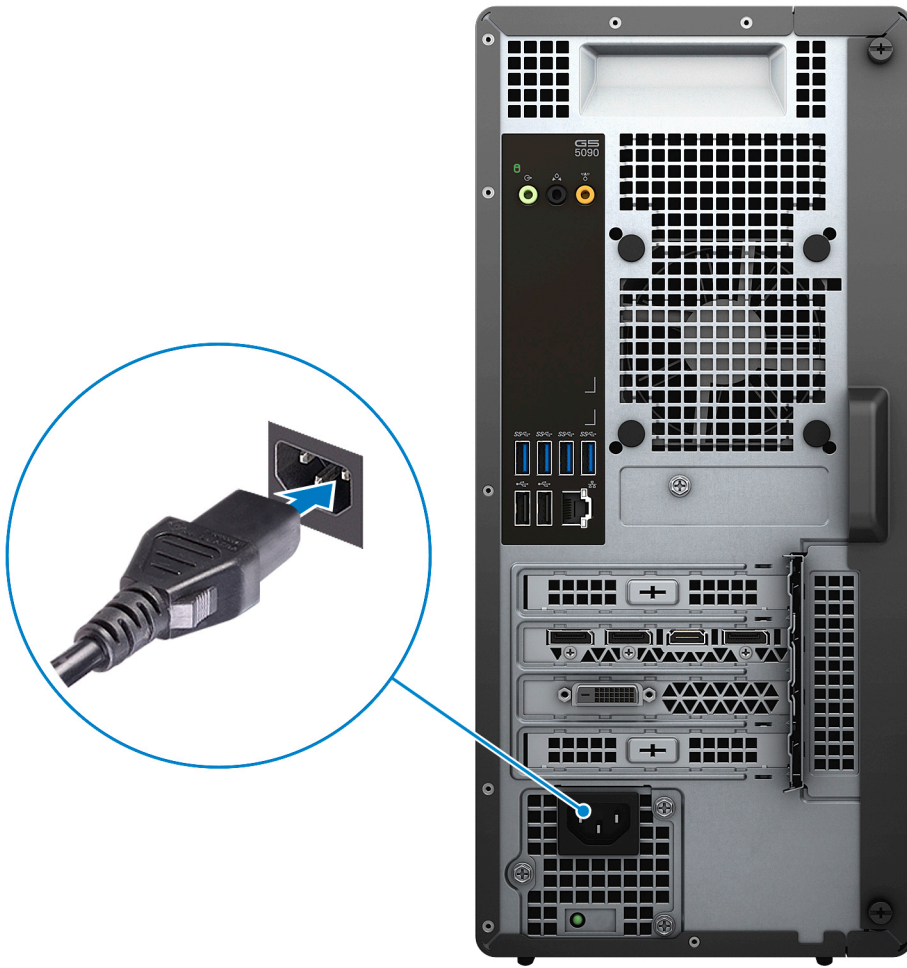


3. Connect the display.



**NOTE:** If you ordered the computer with a discrete graphics card, the HDMI and the display ports on the back panel of the computer are covered. Connect the display to the discrete graphics card.

4. Connect the power cable.



5. Press the power button.





6. Finish Windows setup.

Follow the on-screen instructions to complete the setup. When setting up, Dell 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
	<p><b>My Dell</b></p> <p>Centralized location for key Dell applications, help articles, and other important information about your computer. It also notifies you about the warranty status, recommended accessories, and software updates if available.</p>
	<p><b>SupportAssist</b></p> <p>Pro-actively checks the health of your computer's hardware and software. The SupportAssist OS Recovery tool troubleshoots issues with the operating system. For more information, see the SupportAssist documentation at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>

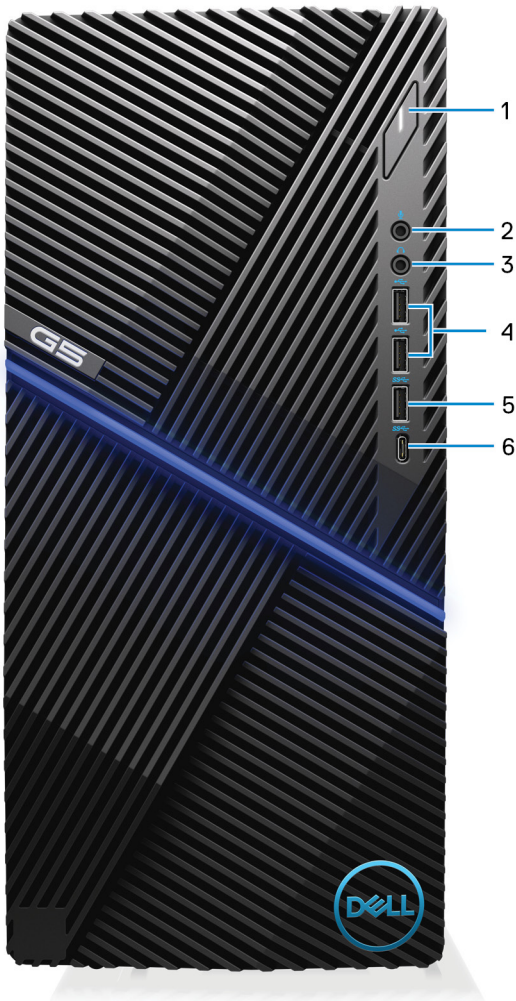
**Table 1. Locate Dell apps (continued)**

Resources	Description
	 <b>NOTE:</b> In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.
	<b>Dell Update</b> Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the knowledge base article <a href="https://www.dell.com/support">SLN305843</a> at <a href="https://www.dell.com/support">www.dell.com/support</a> .
	<b>Dell Digital Delivery</b> Download software applications, which are purchased but not pre-installed on your computer. For more information about using Dell Digital Delivery, see the knowledge base article <a href="https://www.dell.com/support">153764</a> at <a href="https://www.dell.com/support">www.dell.com/support</a> .



## Views of G5 5090

### Front



#### 1. Power button

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

Press to put the computer in sleep state if it is turned on.

Press and hold to force shut-down the computer.

**NOTE:** You can customize the power-button behavior in Power Options. For more information, see *Me and My Dell* at [www.dell.com/support/manuals](http://www.dell.com/support/manuals).

#### 2. Microphone port

Connect an external microphone to provide sound input.

#### 3. Headset port

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

#### 4. **USB 2.0 ports (2)**

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

#### 5. **USB 3.1 Gen 1 port**

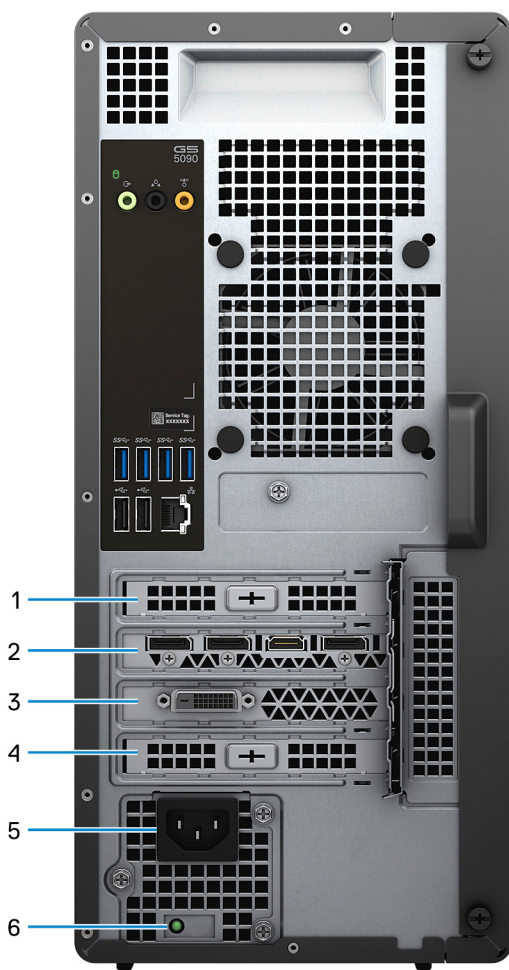
Connect peripherals such as external storage devices and printers. Provides data transfer speeds up to 5 Gbps.

#### 6. **USB 3.1 Gen 1 (Type-C) port**

Connect to external storage devices. Provides data transfer speeds up to 5 Gbps.

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

## Back



#### 1. **PCI-Express x1 slot**

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

#### 2. **PCI-Express x16 (graphics) slot 1**

Connect a PCI-Express graphics card to enhance the capabilities of your computer.

#### 3. **Expansion slot for dual-width graphics card**

This expansion slot seats the bottom half of a dual-width graphics card if it is installed in the PCI-Express x16 slot.

**4. PCI-Express x4 slot**

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

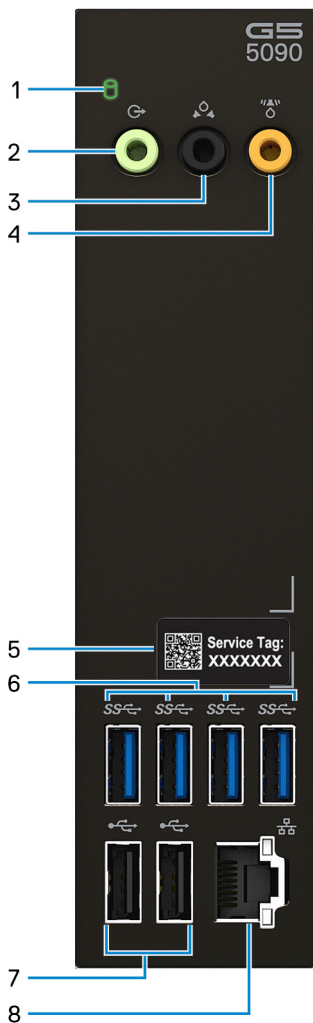
**5. Power port**

Connect a power cable to provide power to your computer.

**6. Power-supply diagnostics light**

Indicates the power-supply state.

## Back panel



**1. Hard-drive activity light**

Turns on when the computer reads from or writes to the hard drive.

**2. Line-out port**


Connect speakers.

**3. Rear L/R surround port**

Connect audio-output devices such as speakers and amplifiers. In a 5.1 speaker channel setup, connect the rear-left and rear-right speakers.

**4. Center/subwoofer LFE surround port**

Connect the subwoofer.

 **NOTE:** For more information about speaker setup, refer to the documentation that shipped with the speakers.

**5. 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.

**6. USB 3.1 Gen 1 ports (4)**

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

**7. USB 2.0 ports (2)**

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


**8. Network port**

Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access, with a transfer rate of 10/100/1000 Mbps.

# Specifications of G5 5090

## Dimensions and weight

**Table 2. Dimensions and weight**

Description	Values
Height	367 mm (14.45 in.)
Width	169 mm (6.65 in.)
Depth	308 mm (12.13 in.)
Weight	<ul style="list-style-type: none"> <li>• Minimum: 7.62 kg (16.80 lb)</li> <li>• Maximum: 8.20 kg (18.07 lbs)</li> </ul> <p> <b>NOTE:</b> The weight of your computer depends on the configuration ordered and the manufacturing variability.</p>

## Processors

**Table 3. Processors**

Processors	Wattage	Core count	Thread count	Speed	Cache	Integrated graphics
9 <sup>th</sup> Generation Intel Core i3-9100	65 W	4	4	Up to 4.2 GHz	6 MB	Intel UHD Graphics 630
9 <sup>th</sup> Generation Intel Core i5-9400	65 W	6	6	Up to 4.1 GHz	9 MB	Intel UHD Graphics 630
9 <sup>th</sup> Generation Intel Core i5-9600K	95 W	6	6	Up to 4.6 GHz	9 MB	Intel UHD Graphics 630
9 <sup>th</sup> Generation Intel Core i7-9700	65 W	8	8	Up to 4.7 GHz	12 MB	Intel UHD Graphics 630
9 <sup>th</sup> Generation Intel Core i7-9700K	95 W	8	8	Up to 4.9 GHz	12 MB	Intel UHD Graphics 630
9 <sup>th</sup> Generation Intel Core i9-9900	65 W	8	16	Up to 5 GHz	16 MB	Intel UHD Graphics 630
9 <sup>th</sup> Generation Intel Core i9-9900K	95 W	8	16	Up to 5 GHz	16 MB	Intel UHD Graphics 630

# Chipset

Table 4. Chipset

Description	Values
Chipset	H370
Processor	<ul style="list-style-type: none"><li>9<sup>th</sup> Generation Intel Core i3</li><li>9<sup>th</sup> Generation Intel Core i5/i5k</li><li>9<sup>th</sup> Generation Intel Core i7/i7k</li><li>9<sup>th</sup> Generation Intel Core i9/i9k</li></ul>
Flash EPROM	32 MB
PCIe bus	Up to Gen3.0

# Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)

# Memory

Table 5. Memory specifications



Description	Values
Slots	Four-UDIMM slots
Type	Dual-channel DDR4
Speed	2666 MHz
Maximum memory	64 GB
Minimum memory	8 GB
Memory per slot	8 GB, 16 GB
Configurations supported:	<ul style="list-style-type: none"><li>8 GB DDR4 at 2666 MHz (1 x 8 GB)</li><li>16 GB DDR4 at 2666 MHz (2 x 8 GB)</li><li>32 GB DDR4 at 2666 MHz (2 x 16 GB)</li><li>64 GB DDR4 at 2666 MHz (4 x 16 GB)</li></ul>

# Ports and connectors

Table 6. Ports and connectors

Description	Values
<b>External:</b>	
Network	One RJ-45 port

**Table 6. Ports and connectors (continued)**

Description	Values
USB	<ul style="list-style-type: none"> <li>● Five USB 3.1 Gen 1 ports</li> <li>● Four USB 2.0 ports</li> <li>● One USB 3.1 Gen 1 (Type-C) port</li> </ul>
Audio	<ul style="list-style-type: none"> <li>● One microphone port</li> <li>● One headset port</li> <li>● One audio line-out port</li> <li>● One rear L/R-surround audio-out port</li> <li>● One center/subwoofer LFE surround audio-out port</li> </ul>
Video	<p> <b>NOTE:</b> Depending on the graphics card(s) installed on your computer, the video ports on your computer may vary.</p>
Memory card reader	Not supported
Power port	Power cord connector
Security	Not supported
<b>Internal:</b>	
PCIe expansion card slots	<ul style="list-style-type: none"> <li>● One PCIe x16</li> <li>● One PCIe x1</li> <li>● One PCIe x4</li> </ul>
mSATA	Not supported
SATA	<ul style="list-style-type: none"> <li>● Two SATA slots for 2.5-inch hard drive</li> <li>● One SATA slot for a 3.5-inch hard drive</li> </ul>
M.2	<ul style="list-style-type: none"> <li>● One M.2 2230 slot for WiFi and Bluetooth combo card</li> <li>● One M.2 2230/2280 slot for solid-state drive/Intel Optane storage</li> </ul> <p> <b>NOTE:</b> To learn more about the features of different types of M.2 cards, see the knowledge base article <a href="#">SLN301626</a>.</p>

## Communications

### Ethernet

**Table 7. Ethernet specifications**

Description	Values
Model number	Rivet Networks E2500 PCIe Gigabit Ethernet controller
Transfer rate	10/100/1000 Mbps

## Wireless module

**Table 8. Wireless module specifications**

Description	Values	
Model number	Qualcomm QCA9377 (DW1810)	Killer 1650x
Transfer rate	Up to 433 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none"> <li>• WiFi 802.11a/b/g</li> <li>• Wi-Fi 4 (WiFi 802.11n)</li> <li>• Wi-Fi 5 (WiFi 802.11ac)</li> </ul>	<ul style="list-style-type: none"> <li>• WiFi 802.11a/b/g</li> <li>• Wi-Fi 4 (WiFi 802.11n)</li> <li>• Wi-Fi 5 (WiFi 802.11ac)</li> <li>• Wi-Fi 6 (WiFi 802.11ax)</li> </ul>
Encryption	<ul style="list-style-type: none"> <li>• 64-bit/128-bit WEP</li> <li>• AES-CCMP</li> <li>• TKIP</li> </ul>	<ul style="list-style-type: none"> <li>• 64-bit/128-bit WEP</li> <li>• AES-CCMP</li> <li>• TKIP</li> </ul>
Bluetooth	Bluetooth 4.2	Bluetooth 5

## Video

**Table 9. Discrete graphics specifications**

Discrete graphics			
Controller	External display support	Memory size	Memory Type
NVIDIA GeForce GTX 1650	<ul style="list-style-type: none"> <li>• One Dual-link DVI-D port</li> <li>• One HDMI 2.0 port</li> </ul>	4 GB	DDR5
NVIDIA GeForce GTX 1660	<ul style="list-style-type: none"> <li>• One Dual-link DVI-D port</li> <li>• One HDMI 2.0 port</li> <li>• One DisplayPort 1.4</li> </ul>	6 GB	DDR5
NVIDIA GeForce GTX 1660 Ti	<ul style="list-style-type: none"> <li>• One Dual-link DVI-D port</li> <li>• One HDMI 2.0 port</li> <li>• One DisplayPort 1.4</li> </ul>	6 GB	DDR6
NVIDIA GeForce RTX 2060	<ul style="list-style-type: none"> <li>• One Dual-link DVI-D port</li> <li>• One HDMI 2.0 port</li> <li>• One DisplayPort 1.4</li> </ul>	6 GB	DDR6
NVIDIA GeForce RTX 2070	<ul style="list-style-type: none"> <li>• One Dual-link DVI-D port</li> <li>• One HDMI 2.0 port</li> <li>• Two DisplayPort 1.4</li> </ul>	8 GB	DDR6
NVIDIA GeForce RTX 2080	<ul style="list-style-type: none"> <li>• One HDMI 2.0 port</li> <li>• Three DisplayPort 1.4</li> </ul>	8 GB	DDR6
AMD RX 560X	<ul style="list-style-type: none"> <li>• One Dual-link DVI-D port</li> <li>• One HDMI 2.0 port</li> <li>• One DisplayPort 1.4</li> </ul>	4 GB	DDR5



# Audio

**Table 10. Audio specifications**

Description	Values
Type	Integrated 5.1 Channel High Definition audio
Controller	Realtek ALC3861-CG
Stereo conversion	Supported
Internal interface	High-definition audio interface
External interface	<ul style="list-style-type: none"> <li>• One microphone port</li> <li>• One headset port</li> <li>• One audio line-out port</li> <li>• One rear L/R-surround audio-out port</li> <li>• One center/subwoofer LFE surround audio-out port</li> </ul>

# Storage

Your computer supports one of the following configurations:

- One 3.5-inch hard drive
- One 3.5-inch hard drive and one M.2 2230/2280 solid-state drive
- One 3.5-inch hard drive and up to two 2.5-inch hard drive(s)
- One 3.5-inch hard drive, up to two 2.5-inch hard drive(s) and one M.2 2230/2280 solid-state drive

The primary drive of your computer varies with the storage configuration. For computers:

- with a M.2 solid-state drive, the M.2 solid-state drive is the primary drive
- without a M.2 drive, either the 3.5-inch hard drive or one of the 2.5-inch hard drives is the primary drive

**Table 11. Storage specifications**

Form factor	Interface type	Capacity
2.5-inch hard drive <i>i</i> <b>NOTE:</b> This computer is not shipped with a 2.5-inch hard drive installed. It is shipped with two empty 2.5-inch hard drive cages and a SATA extension cable.	SATA AHCI, up to 6 Gbps	The storage capacity of the 2.5-inch hard drive will vary depending on the specifications of the drive(s) purchased and installed separately.
3.5-inch hard drive	SATA AHCI, up to 6 Gbps	Up to 2 TB
M.2 2230/2280 solid-state drive	PCIe Gen3.0x4 NVMe, up to 32 Gbps	Up to 1 TB

# Intel Optane memory (optional)

Intel Optane technology utilizes 3D XPoint memory technology and functions as a non-volatile storage cache/accelerator and/or storage device depending on the Intel Optane memory installed in your computer.

Your computer supports the following Intel Optane Memory devices:

- Intel Optane Memory M10
- Intel Optane Memory M15

## Intel Optane Memory M10

Intel Optane Memory M10 functions only as a non-volatile storage cache/accelerator, enabling enhanced read/write speeds for hard-drive storage. It neither replaces nor adds to the memory (RAM) installed on your computer.

**Table 12. Intel Optane Memory M10 specifications**

Description	Values
Interface	PCIe Gen3.0x2 NVMe
Connector	M.2
Form factor	2280
Capacity	32 GB

**NOTE:** Intel Optane Memory M10 is supported on computers that meet the following requirements:

- 7<sup>th</sup> Generation or higher Intel Core i3/i5/i7 processors
- Windows 10 64-bit version or higher (Anniversary Update)
- Intel Rapid Storage Technology driver version 15.7 or higher

## Intel Optane Memory M15

Intel Optane Memory M15 functions only as a non-volatile storage cache/accelerator, enabling enhanced read/write speeds for hard-drive storage. It neither replaces nor adds to the memory (RAM) installed on your computer.

**Table 13. Intel Optane Memory M15 specifications**

Description	Values
Interface	PCIe Gen3.0x4 NVMe
Connector	M.2
Form factor	2280
Capacity	32 GB

**NOTE:** Intel Optane Memory M15 is supported on computers that meet the following requirements:

- 7<sup>th</sup> Generation or higher Intel Core i3/i5/i7 processors
- Windows 10 64-bit version or higher (Anniversary Update)
- Intel Rapid Storage Technology driver version 17 or higher

## Power rating

**Table 14. Power rating specifications**

Description	Values	
Type	360 W	460 W
Input voltage	90 VAC–264 VAC	100 VAC–240 VAC
Input frequency	47 Hz–63 Hz	50 Hz–60 Hz
Input current (maximum)	5 A	7 A

**Table 14. Power rating specifications (continued)**

Description		Values	
Output current (continuous)		18 A	18 A
Rated output voltage		12 VDC	12 VDC
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)

## Computer environment

**Airborne contaminant level:** G1 as defined by ISA-S71.04-1985

**Table 15. Computer environment**

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	110 G†	160 G†
Altitude (maximum)	-15.2 m to 3048 m (-49.87 ft to 10000 ft)	-15.2 m to 10668 m (-49.87 ft to 35000 ft)

\* Measured using a random vibration spectrum that simulates user environment.

† Measured using a 2 ms half-sine pulse when the hard drive is in use.



‡ Measured using a 2 ms half-sine pulse when the hard-drive head is in parked position.

# Getting help and contacting Dell

## Self-help resources


You can get information and help on Dell products and services using these self-help resources:


**Table 16. Self-help resources**

Self-help resources	Resource location
Information about Dell products and services	<a href="http://www.dell.com">www.dell.com</a>
My Dell app	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	<a href="http://www.dell.com/support/windows">www.dell.com/support/windows</a>
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals and documents.	Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at <a href="http://www.dell.com/support">www.dell.com/support</a> .  For more information on how to find the Service Tag for your computer, see <a href="#">Locate the Service Tag for your Dell Laptop</a> .
Dell knowledge base articles for a variety of computer concerns	<ol style="list-style-type: none"> <li>1. Go to <a href="http://www.dell.com/support">www.dell.com/support</a>.</li> <li>2. On the menu bar at the top of the Support page, select <b>Support &gt; Knowledge Base</b>.</li> <li>3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.</li> </ol>

## Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see [www.dell.com/contactdell](http://www.dell.com/contactdell).

 **NOTE:** Availability varies by country/region and product, and some services may not be available in your country/region.

 **NOTE:** If you do not have an active Internet connection, you can find contact information about your purchase invoice, packing slip, bill, or Dell product catalog.