

# Alienware Aurora R9

## 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.

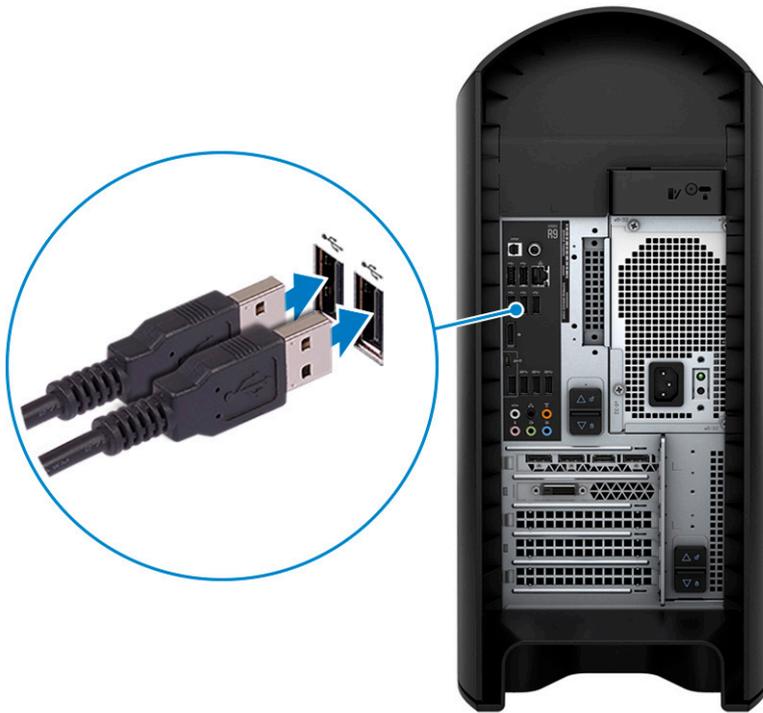
© 2018 - 2019 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

# Contents

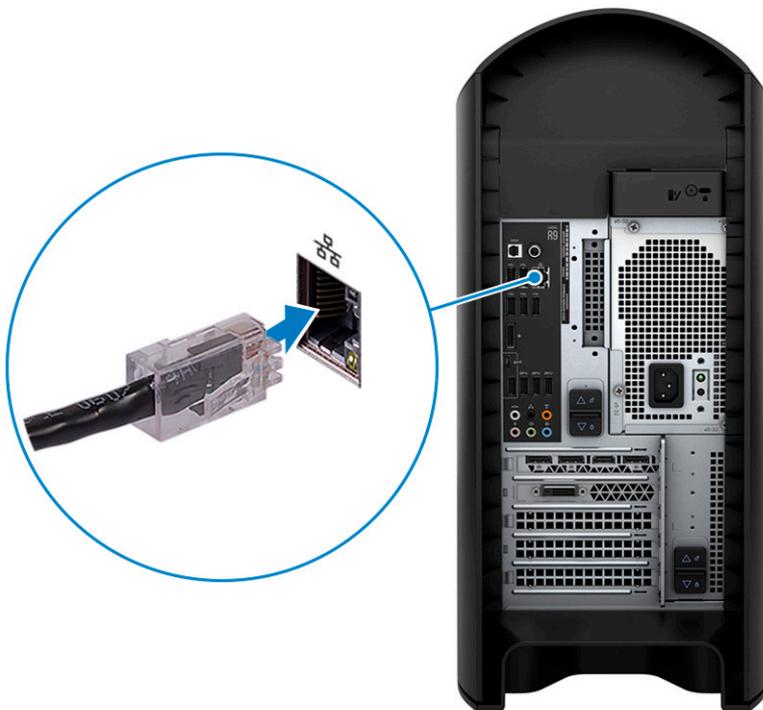
<b>1 Set up your computer.....</b>	<b>4</b>
<b>2 Views of Alienware Aurora R9.....</b>	<b>7</b>
Front.....	7
Back.....	8
Back panel.....	9
<b>3 Specifications of Alienware Aurora R9.....</b>	<b>11</b>
Dimensions and weight.....	11
Processors.....	11
Chipset.....	11
Operating system.....	11
Memory.....	12
Ports and connectors.....	12
Communications.....	13
Video.....	14
Audio.....	14
Storage.....	14
Power ratings.....	14
Computer environment.....	15
<b>4 Alienware Command Center.....</b>	<b>16</b>
<b>5 Getting help and contacting Alienware.....</b>	<b>17</b>

# Set up your computer

1. Connect the keyboard and mouse.



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

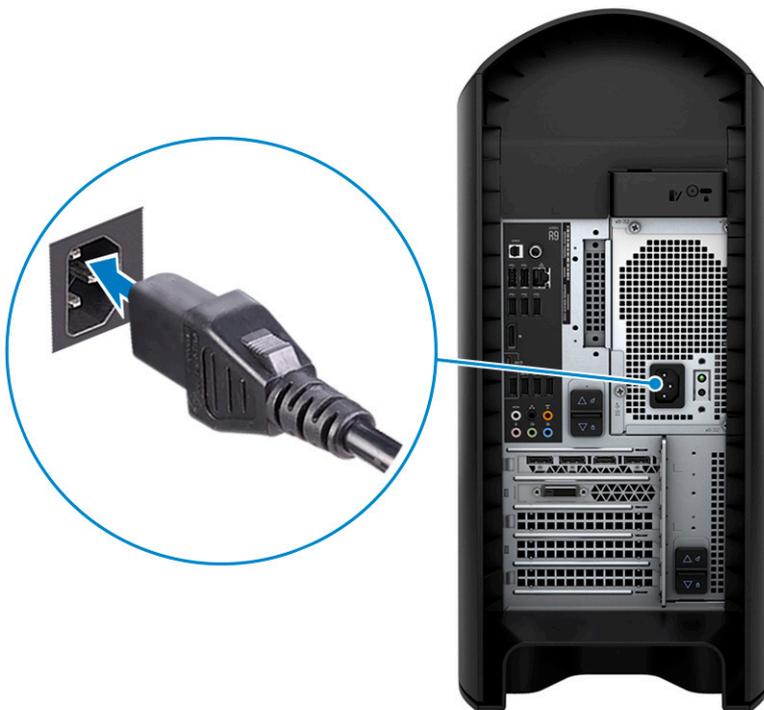


3. Connect the display.



- NOTE: The DisplayPort on the back panel of your computer is covered. Connect the display to the discrete graphics card of your computer.
- NOTE: If you have two graphics cards, the card installed in PCI-Express X16 (graphics slot 1) is the primary graphics card.

4. Connect the power cable.

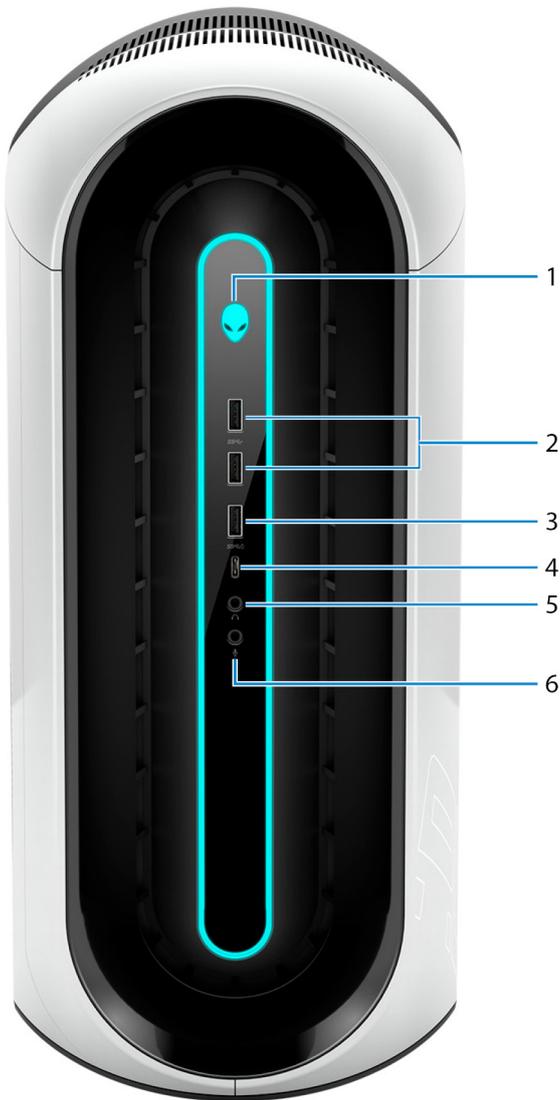


5. Press the power button.



# Views of Alienware Aurora R9

## Front



### 1. Power button (Alienhead)

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 for 4 seconds to force shut-down the computer.

**NOTE:** You can customize the power-button behavior in Power Options.

### 2. USB 3.1 Gen 1 ports (2)

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

### 3. USB 3.1 Gen 1 port with PowerShare

Connect peripherals such as external storage devices and printers.

Provides data transfer speeds up to 5 Gbps. PowerShare enables you to charge connected USB devices.

**NOTE:** Connected USB devices will not charge when the computer is turned off or in sleep state. To start charging connected devices, turn on the computer.

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

Connect peripherals such as external storage devices, printers, and external displays.

Provides data transfer speeds up to 5 Gbps. Supports Power Delivery that enables two-way power supply between devices. Provides up to 15 W power output that enables faster charging.

**NOTE:** A USB Type-C to DisplayPort adapter (sold separately) is required to connect a DisplayPort device.

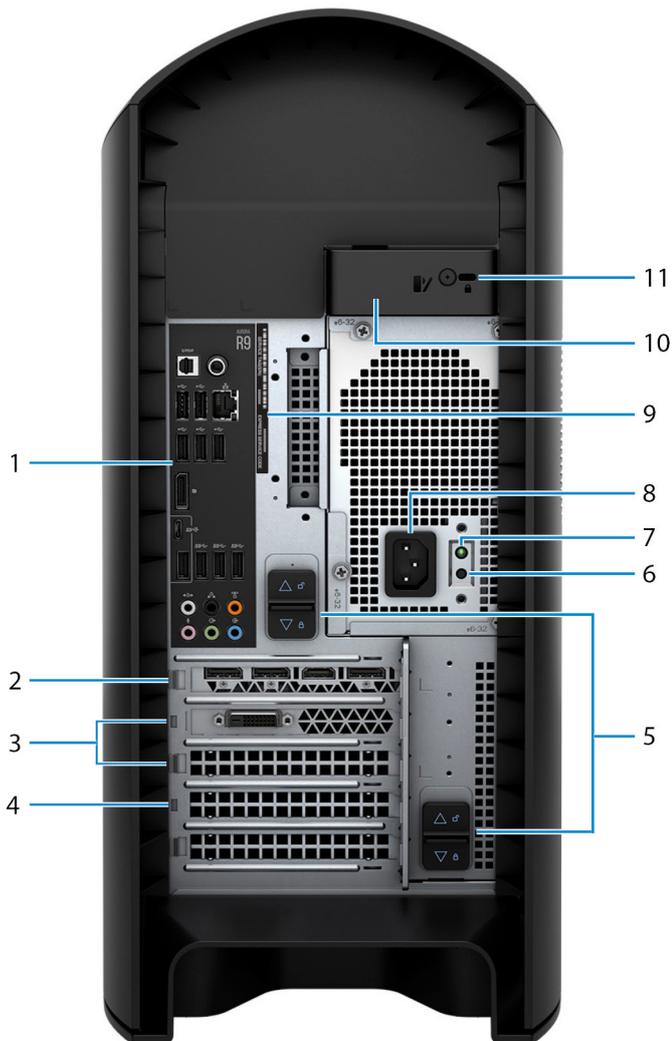
### 5. Headphone port

Connect a headphone or speakers.

### 6. Microphone port

Connect an external microphone to provide sound input.

## Back



### 1. Back panel

Connect USB, audio, video, and other devices.

### 2. PCI-Express X16 (graphics slot 1)

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

For optimal graphics performance, use a PCI-Express X16 slot for connecting the graphics card.

**NOTE:** The PCI-Express X16 slot works at X8 speed only.

**NOTE:** If you have two graphics cards, the card installed in PCI-Express X16 (graphics slot 1) is the primary graphics card.

### 3. PCI-Express X4 slots (2)

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

#### 4. PCI-Express X16 (graphics slot 2)

Connect a PCI-Express card such as graphics, audio, or network card to enhance the capabilities of your computer. For optimal graphics performance, use a PCI-Express X16 slot for connecting the graphics card.

**NOTE: The PCI-Express X16 slot works at X8 speed only.**

#### 5. Power-supply cage release-latches (2)

Allows you to remove the power supply unit from your computer.

#### 6. Power-supply diagnostics button

Press to check the power-supply state.

#### 7. Power-supply diagnostics light

Indicates the power-supply state.

#### 8. Power port

Connect a power cable to provide power to your computer.

#### 9. 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.

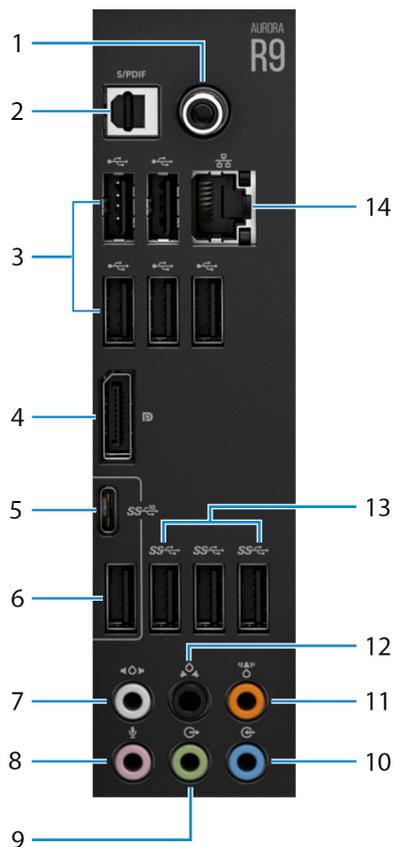
#### 10. Side panel release latch

Allows you to remove the side panel from your computer.

#### 11. Security-cable slot (wedge-shaped)

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

## Back panel



#### 1. Coaxial S/PDIF port

Connect an amplifier, speakers, or a TV for digital audio output through a coaxial cable.

#### 2. Optical S/PDIF port

Connect an amplifier, speakers, or a TV for digital audio output through an optical cable.

### 3. USB 2.0 ports (5)

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

### 4. DisplayPort

Connect an external display or a projector.

 **NOTE: The DisplayPort on the back panel of your computer is covered. Connect the display to the discrete graphics card of your computer.**

### 5. USB 3.1 Gen 2 Type-C port

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

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

### 6. USB 3.1 Gen 2 port

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

### 7. Side L/R surround port

Connect audio-output devices such as speakers and amplifiers. In a 7.1 speaker channel setup, connect the side-left and side-right speakers.

### 8. Microphone port

Connect an external microphone to provide sound input.

### 9. Front L/R surround line-out port

Connect audio-output devices such as speakers and amplifiers. In a 2.1 speaker channel setup, connect the left and right speakers. In a 5.1 or a 7.1 speaker channel setup, connect the front-left and front-right speakers.

### 10. Line-in port

Connect recording or playback devices such as a microphone or CD player.

### 11. Center/subwoofer LFE surround port

Connect the center speaker or the subwoofer.

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

### 12. Rear L/R surround port

Connect audio-output devices such as speakers and amplifiers. In a 5.1 or a 7.1 speaker channel setup, connect the rear-left and rear-right speakers.

### 13. USB 3.1 Gen 1 ports (3)

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

### 14. Network port (with lights)

Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access.

The two lights next to the connector indicate the connectivity status and network activity.

# Specifications of Alienware Aurora R9

## Dimensions and weight

Table 1. Dimensions and weight

Description	Values
Height:	
Front	441.80 mm (17.39 in.)
Rear	481.60 mm (18.96 in.)
Width	222.80 mm (8.77 in.)
Depth	431.90 mm (17 in.)
Weight (maximum)	17.80 kg (39.24 lb)

 **NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.**

## Processors

Table 2. Processors

Description	Values
Processors	9 <sup>th</sup> Generation Intel Core i5k    9 <sup>th</sup> Generation Intel Core i7k    9 <sup>th</sup> Generation Intel Core i9k
Wattage	95 W                                    95 W                                    95 W
Core count	6    8    8
Thread count	6    8    16
Speed	4.4 GHz                                    4.6 GHz                                    4.7 GHz
Cache	9 MB                                        12 MB                                        16 MB

## Chipset

Table 3. Chipset

Description	Values
Chipset	9 <sup>th</sup> Generation Intel Core i5k/i7k/i9k
Processor	Intel Z370
DRAM bus width	Single channel = 64-bit, dual channel = 128-bit
Flash EPROM	16 MB
PCIe bus	PCIe Gen3/Gen2

## Operating system

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

# Memory

**Table 4. Memory specifications**

<b>Description</b>	<b>Values</b>
Slots	Four UDIMM
Type	DDR4
Speed	2666 MHz up to 3200 MHz (XMP memory)
Maximum memory	64 GB
Minimum memory	8 GB
Memory per slot	8 GB and 16 GB
Configurations supported:	<ul style="list-style-type: none"><li>▪ 8 GB DDR4 at 2666 MHz</li><li>▪ 16 GB DDR4 at 2666 MHz</li><li>▪ 32 GB DDR4 at 2666 MHz</li><li>▪ 64 GB DDR4 at 2666 MHz</li><li>▪ 16 GB XMP at 2933 MHz</li><li>▪ 32 GB XMP at 2933 MHz</li><li>▪ 64 GB XMP at 2933 MHz</li><li>▪ 16 GB XMP at 3200 MHz</li><li>▪ 32 GB XMP at 3200 MHz</li><li>▪ 64 GB XMP at 3200 MHz</li></ul>

# Ports and connectors

**Table 5. Ports and connectors**

<b>Description</b>	<b>Values</b>
<b>External:</b>	
Network	One RJ-45 port
USB	<ul style="list-style-type: none"><li>▪ Five USB 2.0 ports</li><li>▪ Five USB 3.1 Gen 1 ports</li><li>▪ One USB 3.1 Gen 1 Type-C port</li><li>▪ One USB 3.1 Gen 2 port</li><li>▪ One USB 3.1 Gen 2 Type-C port</li><li>▪ One USB 3.1 Gen 1 port with PowerShare</li></ul>
Audio	<ul style="list-style-type: none"><li>▪ One audio output/headphone port (supports 2 channel audio)</li><li>▪ One audio input/microphone port</li><li>▪ One optical S/PDIF port</li><li>▪ One coaxial S/PDIF port</li><li>▪ One front L/R surround line-out port</li><li>▪ One side L/R surround port</li><li>▪ One rear L/R surround port</li><li>▪ One center/subwoofer LFE surround port</li><li>▪ One line-in port</li></ul>
Video	One DisplayPort port - optional

Description	Values
	<p> <b>NOTE: The DisplayPort on the back panel of your computer is covered. Connect the display to the discrete graphics card of your computer.</b></p>
Memory card reader	One SD-card slot
Power port	Not applicable
Security	One security-slot (Wedge-shaped lock)
<b>Internal:</b>	
PCIe expansion card slots	<ul style="list-style-type: none"> <li>Two PCIe x16 slots</li> <li>Two PCIe x4 slots</li> </ul>
mSATA	Not supported
SATA	Four
M.2	<ul style="list-style-type: none"> <li>One M.2 card slot for WLAN and Bluetooth</li> <li>One PCIe/SATA M.2 card slot for 2242/2260/2280 solid-state drive</li> </ul> <p> <b>NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article <a href="#">SLN301626</a>.</b></p>

## Communications

### Ethernet

**Table 6. Ethernet specifications**

Description	Values
Model number	Killer E2500 Ethernet controller integrated on system board
Transfer rate	10/100/1000 Mbps

### Wireless module

**Table 7. Wireless module specifications**

Description	Values		
Model number	Qualcomm DW1810	Qualcomm DW1820	Killer AX1650
Transfer rate	Up to 433 Mbps	Up to 867 Mbps	Up to 867 Mbps
Frequency bands supported	Dual band 2.4 GHz/5 GHz	Dual band 2.4 GHz/5 GHz	Dual band 2.4 GHz/5 GHz
Wireless standards	Wi-Fi 5 (WiFi 802.11ac)	Wi-Fi 5 (WiFi 802.11ac)	Wi-Fi 5 (WiFi 802.11ax)
Encryption	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>CKIP</li> <li>TKIP</li> </ul>	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>CKIP</li> <li>TKIP</li> </ul>	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>CKIP</li> <li>TKIP</li> </ul>
Bluetooth	Bluetooth 4.2	Bluetooth 4.2	Bluetooth 5.0

# Video

**Table 8. Discrete graphics specifications**

## Discrete graphics

Controller	External display support	Memory size	Memory Type
NVIDIA GeForce RTX 2080	One HDMI port and one DisplayPort	8 GB	GDDR6
NVIDIA GeForce RTX 2080 Ti	One HDMI port and one DisplayPort	11 GB	GDDR6

# Audio

**Table 9. Audio specifications**

Description	Values
Type	Integrated 7.1 channel audio with S/PDIF port
Controller	Realtek ALC3861
Internal interface	High-definition audio
External interface	7.1 channel output, Microphone-in, stereo headphones, and headset combo connector

# Storage

Your computer supports one of the following configurations:

- One M.2 2242/2260/2280 solid-state drive, one 3.5-inch hard drive, and two 2.5-inch hard drives
- One U.2 drive and two 2.5-inch hard drives
- One 3.5-inch hard drive and two 2.5-inch hard drives

 **NOTE: The primary drive of your computer varies depending on the storage configuration.**

**Table 10. Storage specifications**

Form factor	Interface type	Capacity
Two 2.5-inch hard drives	SATA AHCI 6 Gbps	Up to 2 TB
One 3.5-inch hard drive	SATA AHCI 6 Gbps	Up to 1 TB
One M.2 2242/2260/2280 solid-state drive	<ul style="list-style-type: none"><li>▪ SATA AHCI 6 Gbps</li><li>▪ PCIe NVMe up to 32 Gbps</li></ul>	Up to 1 TB

# Power ratings

**Table 11. Power ratings specifications**

Type	460 W	850 W
Input voltage	90 VAC to 264 VAC	90 VAC to 264 VAC
Input frequency	47 Hz to 63 Hz	47 Hz to 63 Hz
Input current (maximum)	8 A	8 A

Type	460 W	850 W
Output current (continuous)	5 V/25 A, 12 VA/18 A, 12 VB/16 A, 12 VC/8 A, 3.3 V/17 A, 5 Vaux/3 A	5 V/25 A, 12 VA/18 A, 12 VB/16 A, 12 VC/8 A, 3.3 V/17 A, 5 Vaux/3 A
Rated output voltage	5V, 12VA, 12VB, 12VC, 3.3V, 5Vaux	5V, 12VA, 12VB, 12VC, 3.3.V, 5Vaux
Temperature range		
Operating	5°C to 50°C (41°F to 122°F)	5°C to 50°C (41°F to 122°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 12. Computer environment**

Description	Operating	Storage
Temperature range	10°C to 35°C (50°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	20% to 90% (non-condensing)	5% to 95% (non-condensing)
Vibration (maximum)*	0.26 GRMS	1.37 GRMS
Shock (maximum)	40 G for 2 ms with a change in velocity of 20 in/s (51 cm/s)†	105 G for 2 ms with a change in velocity of 52.5 in/s (133 cm/s)‡
Altitude (maximum)	-15.2 m to 3,048 m (-50 ft to 10,000 ft)	-15.2 m to 10,668 m (-50 ft to 35,000 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.

# Alienware Command Center

Alienware Command Center (AWCC) provides a single interface to customize and enhance the gaming experience. The AWCC dashboard displays most recently played or added games, and provides game-specific information, themes, profiles, and access to computer settings. You can quickly access settings such as game-specific profiles and themes, lighting, macros, and audio that are critical to the gaming experience.

AWCC also supports AlienFX 2.0. AlienFX enables you to create, assign, and share game-specific lighting maps to enhance the gaming experience. It also enables you to create your own individual lighting effects and apply them to the computer or attached peripherals. AWCC embeds Peripheral Controls to ensure a unified experience and the ability to link these settings to your computer or game.

AWCC supports the following features:

- **FX:** Create and manage the AlienFX zones.
- **Fusion:** Includes the ability to adjust game-specific Power Management, Sound Management, and Thermal Management features.
- **Peripheral Management:** Enables peripherals to appear in and be managed in Alienware Command Center. Supports key peripheral settings and associates with other functions such as profiles, macros, AlienFX, and game library.

AWCC also supports Sound Management, Thermal Controls, CPU, GPU, Memory (RAM) monitoring. For more information about AWCC, see the *Alienware Command Center Online Help*.

# Getting help and contacting Alienware

## Self-help resources

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

**Table 13. Alienware products and online self-help resources**

Self-help resources	Resource location
Information about Alienware products and services	<a href="http://www.alienware.com">www.alienware.com</a>
My Dell	
Tips	
Contact Support	In Windows search, type <b>Contact Support</b> , and press <b>Enter</b> .
Online help for operating system	<a href="http://www.dell.com/support/windows">www.dell.com/support/windows</a> <a href="http://www.dell.com/support/linux">www.dell.com/support/linux</a>
Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on	<a href="http://www.alienware.com/gamingservices">www.alienware.com/gamingservices</a>
VR Support	<a href="http://www.dell.com/VRsupport">www.dell.com/VRsupport</a>
Videos providing step-by-step instructions to service your computer	<a href="http://www.youtube.com/alienwareservices">www.youtube.com/alienwareservices</a>

## Contacting Alienware

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

 **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.**