Alienware Aurora Ryzen Edition Setup and Specifications

Regulatory Model: D23M
Regulatory Type: D23M004
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ALIENWARE

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.

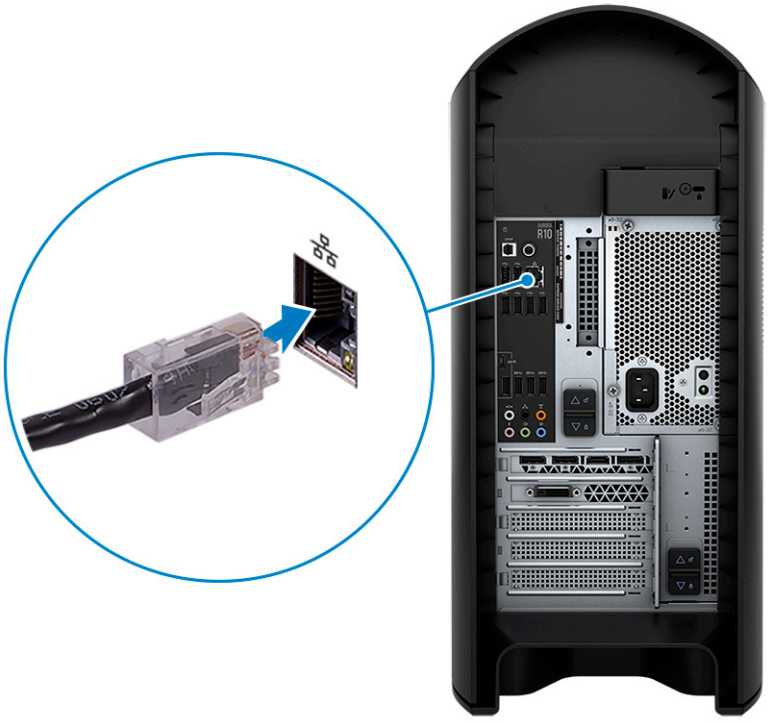
WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Contents

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.

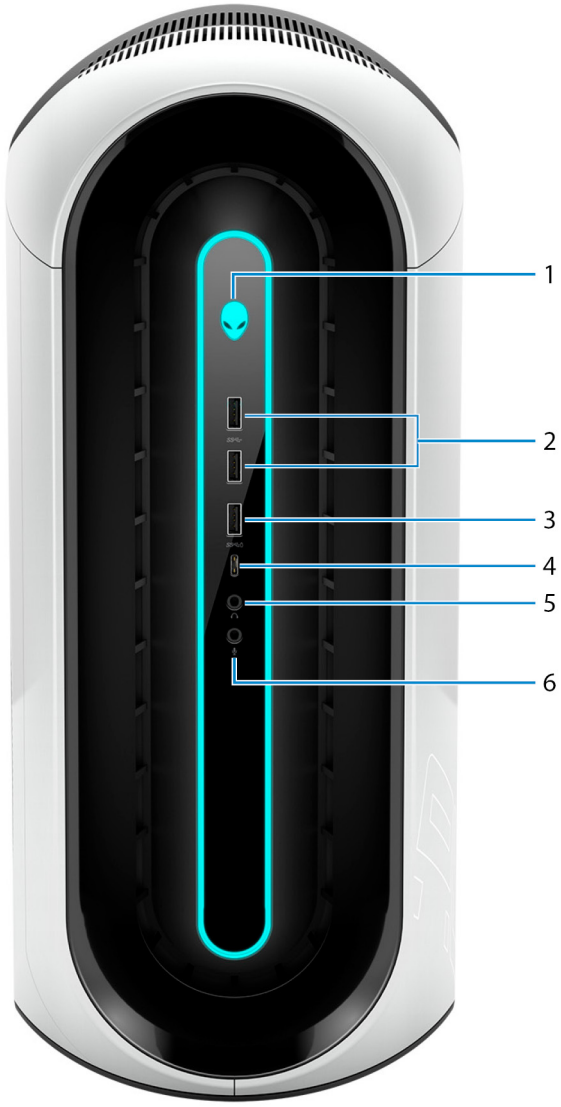
NOTE: If you have two graphics cards, the card installed in PCI-Express X16 (graphics slot 1) is the primary graphics card.

4. Connect the power cable.

5. Press the power button.

Views of Alienware Aurora Ryzen Edition

Front



1. **Power button (Alien head)**

   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.

   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. For more information, see *Me and My Dell* at www.dell.com/support/manuals.

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

   Connect devices 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 devices 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 and printers

   Provides data transfer speeds up to 5 Gbps. Supports Power Delivery that enables two-way power supply between devices. Provides up to 7.5 W power output that enables faster charging.

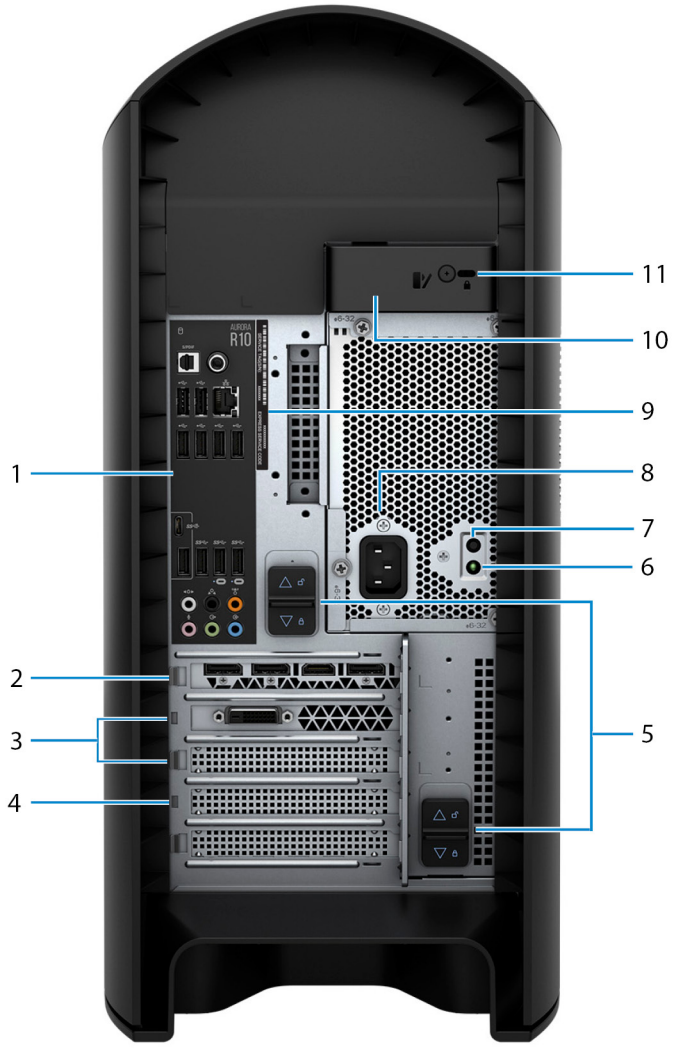
5. **Headphone port**

   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 lanes 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.

   NOTE: The PCI-Express X4 slot 3 works at X2 lanes only.

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 lanes 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.

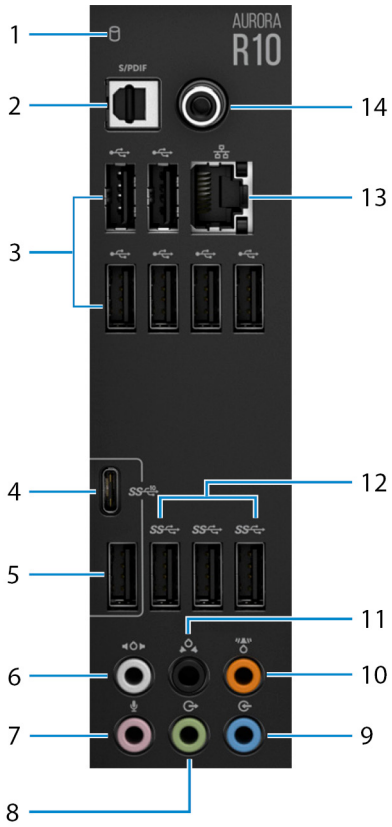
10. **Side panel release latch**

    Allows you to remove the side panel from your computer.

11. **Security-cable slot (for Kensington locks)**

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

Back panel



1. **Hard-drive activity light**

   The activity light turns on when the computer reads from or writes to the hard drive.

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 (6)**

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

4. **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.

5. **USB 3.1 Gen 2 port**

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

6. **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.

7. **Microphone port**

   Connect an external microphone to provide sound input.

8. **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.

9. **Line-in port**

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

10. **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.

11. **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.

12. **USB 3.1 Gen 1 ports (3)**

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

13. **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.

14. **Coaxial S/PDIF port**

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

Specifications of Alienware Aurora Ryzen Edition

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

Processors	Wattage	Core count	Thread count	Speed	Cache
AMD Ryzen 9 3950X	105 W	16	32	4.7/3.5 GHz	64 MB
AMD Ryzen 9 3900XT	105 W	12	24	4.6/3.8 GHz	64 MB
AMD Ryzen 9 3900X	105 W	12	24	4.6/3.8 GHz	64 MB
AMD Ryzen 9 3900	65 W	12	24	4.3/3.1 GHz	64 MB
AMD Ryzen 7 3800XT	105 W	8	16	4.5/3.9 GHz	32 MB
AMD Ryzen 7 3800X	105 W	8	16	4.5/3.9 GHz	32 MB
AMD Ryzen 7 3700X	65 W	8	16	4.4/3.6 GHz	32 MB
AMD Ryzen 5 3600XT	95 W	6	12	4.4/3.8 GHz	32 MB
AMD Ryzen 5 3600X	95 W	6	12	4.4/3.8 GHz	32 MB
AMD Ryzen 5 3600	65 W	6	12	4.2/3.6 GHz	32 MB
AMD Ryzen 5 3500	65 W	6	6	4.1/3.6 GHz	16 MB
AMD Ryzen 5 5600X	65 W	6	12	4.5/3.7 GHz	32 MB

Table 2. Processors (continued)

Processors	Wattage	Core count	Thread count	Speed	Cache
AMD Ryzen 5 5800	65 W	8	16	4.6/3.4 GHz	32 MB
AMD Ryzen 7 5800X	105 W	8	16	4.7/3.8 GHz	32 MB
AMD Ryzen 9 5900	65 W	12	24	4.7/3 GHz	64 MB
AMD Ryzen 9 5900X	105 W	12	24	4.8/3.7 GHz	64 MB
AMD Ryzen 9 5950X	105 W	12	24	4.6/3.5 GHz	32 MB

Chipset

The following table lists the details of the chipset supported by your Alienware Aurora Ryzen Edition

Table 3. Chipset

Description	Values
Chipset	B550A
Processor	AMD Ryzen 9/ AMD Ryzen 7/ AMD Ryzen 5
DRAM bus width	64 bits
Flash EPROM	128 MB
PCIe bus	For PCIe Gen 3, slots 9, 15, 16, and 17 are compatible. PCIe Gen 4 is only compatible with slot 18. **NOTE:** Different PCIe generations are supported depending on the configuration and slots.

Operating system

Your Alienware Aurora Ryzen Edition supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 10 Home, 64-bit
- Windows 10 Pro, 64-bit

Memory

Table 4. Memory specifications

Description	Values
Slots	Four UDIMM
Type	DDR4
Speed	3200 MHz up to 3400 MHz (XMP memory)

Table 4. Memory specifications (continued)

Description	Values
Maximum memory	128 GB
Minimum memory	8 GB
Memory per slot	8 GB, 16 GB, and 32 GB
Configurations supported:	• 8 GB, 1 x 8 GB, DDR4, 3200 MHz • 16 GB, 1 x 16 GB, DDR4, 3200 MHz • 16 GB, 2 x 8 GB, DDR4, 3200 MHz • 32 GB, 2 x 16 GB, DDR4, 3200 MHz • 64 GB, 2 x 32 GB, DDR4, 3200 MHz • 64 GB, 4 x 16 GB, DDR4, 3200 MHz • 128 GB, 4 x 32 GB, DDR4, 3200 MHz • 16 GB, 1 x 16 GB, DDR4, 3400 MHz • 32 GB, 2 x 16 GB, DDR4, 3400 MHz • 64 GB, 2 x 32 GB, DDR4, 3400 MHz • 64 GB, 4 x 16 GB, DDR4, 3400 MHz • 128 GB, 4 x 32 GB, DDR4, 3400 MHz

Ports and connectors

Table 5. Ports and connectors

Description	Values
External:	
Network	One RJ-45 port
USB	• Six USB 2.0 ports • Five USB 3.1 Gen 1 ports • One USB 3.1 Gen 1 Type-C port • One USB 3.1 Gen 2 port • One USB 3.1 Gen 2 Type-C port • One USB 3.1 Gen 1 port with PowerShare
Audio	• One audio output/headphone port (supports 2 channel audio) • One audio input/microphone port • One optical S/PDIF port • One coaxial S/PDIF port • One front L/R surround line-out port • One side L/R surround port • One rear L/R surround port • One center/subwoofer LFE surround port • One line-in port
Video	Not supported **NOTE:** Connect the display to the discrete graphics card of your computer.
Memory card reader	Not supported
Power port	Not applicable

Table 5. Ports and connectors (continued)

Description	Values
Security	Kensington lock slot
Internal:	
PCIe expansion card slots	• Two PCIe x16 slots • Two PCIe x4 slots
mSATA	Not supported
SATA	Four
M.2	• One M.2 card slot for WLAN and Bluetooth • One PCIe/SATA M.2 card slot for 2230/2280 solid-state drive **NOTE:** To learn more about the features of different types of M.2 cards, see the knowledge base article 000144170.

Communications

Ethernet

Table 6. Ethernet specifications

Description	Values
Model number	Killer E2600 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 2.4 Gbps
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 6 (WiFi 802.11ax)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • CKIP • TKIP	• 64-bit/128-bit WEP • AES-CCMP • CKIP • TKIP	• 64-bit/128-bit WEP • AES-CCMP • CKIP • TKIP
Bluetooth	Bluetooth 4.2	Bluetooth 4.2	Bluetooth 5.0

Video

Table 8. Discrete graphics specifications

Discrete graphics							
Controller	**Number of cards**	**External display support**	**Memory size**	**Memory type**	**PCIe version**	**Power consumption**	**Recommended PSU**
AMD RX 5300	1	One HDMI port, Two DisplayPort	3 GB	GDDR6	4	85 W	> 550 W
AMD RX 5600	1	One HDMI port, Three DisplayPort	8 GB	GDDR6	4	150 W	> 550 W
AMD RX 5700	1	One HDMI port, Three DisplayPort	8 GB	GDDR6	3	185 W	> 550 W
AMD RX 5700 XT	1	One HDMI port, Three DisplayPort	8 GB	GDDR6	3	225 W	> 550 W
AMD RX 6800 XT	1	One HDMI port, Three DisplayPort	16 GB	GDDR6	4	225 W	1000 W
NVIDIA GeForce GTX 1650 Super	1	One HDMI port and one DVI port	6 GB	GDDR5	3	100 W	> 550 W
NVIDIA GeForce GTX 1660 Super	1	One DVI port, One HDMI port, One DisplayPort	6 GB	GDDR6	3	125 W	> 550 W
NVIDIA GeForce GTX 1660Ti	1	One DVI port, One HDMI port, One DisplayPort	6 GB	GDDR6	3	120 W	> 550 W
NVIDIA GeForce RTX 2060 Super	1	One DVI port, One HDMI port, One DisplayPort	8 GB	GDDR6	3	175 W	> 550 W
NVIDIA GeForce RTX 2070 Super	1	One HDMI port, Three DisplayPort	8 GB	GDDR6	3	215 W	> 550 W
NVIDIA GeForce RTX 2080 Super	1	One HDMI port, Three DisplayPort	8 GB	GDDR6	3	250 W	1000 W
NVIDIA GeForce RTX 2080Ti	1	One HDMI port, Three DisplayPort, One USB Type-C port	11 GB	GDDR6	3	285 W	1000 W
NVIDIA GeForce RTX 2070 Super	2	One HDMI port, Three DisplayPort	8 GB	GDDR6	3	215 W	1000 W
NVIDIA GeForce RTX 2080 Super	2	One HDMI port, Three DisplayPort	8 GB	GDDR6	3	250 W	1000 W
NVIDIA GeForce RTX 2080Ti	2	One HDMI port, Three DisplayPort, One USB Type-C port	11 GB	GDDR6	3	285 W	1000 W
NVIDIA GeForce RTX 3060Ti	1	One HDMI port, Three DisplayPort,	8 GB	GDDR6	4	200 W	> 550 W (Dual width)
NVIDIA GeForce RTX 3070	1	One HDMI port, Three DisplayPort	8 GB	GDDR6	4	220 W	> 550 W (Dual width)
NVIDIA GeForce RTX 3080	1	One HDMI port, Three DisplayPort	10 GB	GDDR6X	4	320 W	1000 W
NVIDIA GeForce RTX 3090	1	One HDMI port, Three DisplayPort	24 GB	GDDR6X	4	350 W	1000 W

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 2230/2280 solid-state drive, one 3.5-inch hard drive, and two 2.5-inch hard drives
- 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 2 TB
One M.2 2230/2280 solid-state drive	PCIe NVMe up to 32 Gbps	Up to 2 TB

Power ratings

Table 11. Power adapter specifications

Description	Values			
Type	460 W	550 W	850 W	1000 W
Input voltage	90 VAC to 264 VAC	90 VAC to 264 VAC	90 VAC to 264 VAC	90 VAC to 264 VAC
Input frequency	47 Hz to 63 Hz	47 Hz to 63 Hz	47 Hz to 63 Hz	47 Hz to 63 Hz
Input current (maximum)	8 A	8 A	10 A	12 A
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	5.1 V/20 A, 12 VA1/18 A, 12 VA2/18 A, 12 VB/16 A, 12 VC1/16 A, 12 VC2/16 A, 3.3 V/15 A, +5.1 Vaux/4 A	5 V/20 A, 12VA/32 A, 12 VB/48 A, 12 VD/16 A, -12 V/0.5 A, 3.3 V /20 A, 5 Vaux/4 A	5.1 V/20 A, 12 VA/42 A, 12 VB/52 A, 12 VD/16 A, 3.3 V/20 A, -12 V/0.5 A, +5.1 Vaux/4 A

Table 11. Power adapter specifications (continued)

Description		Values			
Rated output voltage		5 V, 12 VA, 12 VB, 12 VC, 3.3 V, 5 Vaux	5 V, 12 VA1, 12 VA2, 12 VB, 12 VC1, 12 VC2, 3.3 V, -12 V, 5 Vaux	5 V, 12 VA, 12 VB, 12 VD, 3.3 V, -12 V, 5 Vaux	5 V, 12 VA, 12 VB, 12 VD, 3.3 V, -12 V, 5 Vaux
Temperature range:					
	Operating	5°C to 50°C (41°F to 122°F)	5°C to 50°C (41°F to 122°F)	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)	-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	www.alienware.com
My Dell app	
Tips	
Contact Support	In Windows search, type **Contact Support**, and press **Enter**.
Online help for operating system	www.dell.com/support/windows
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals and documents.	Your Alienware 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 www.dell.com/support. For more information on how to find the Service Tag for your computer, see Locate the Service Tag on your computer.
VR Support	www.dell.com/VRsupport
Videos providing step-by-step instructions to service your computer	www.youtube.com/alienwareservices

Contacting Alienware

To contact Alienware for sales, technical support, or customer service issues, see 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.