# Aurora R6 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 computer

1. Connect the keyboard and mouse.



- i NOTE: For setup instructions, see the documentation shipped with the keyboard and mouse.
- 2. Connect the network cable optional.



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.
- (i) NOTE: If you have two graphics cards, the card installed in PCI-Express X16 (graphics slot 1) is the primary graphics card.
- NOTE: For more information about setting up multiple monitors, see the knowledge base article <u>SLN129825</u> at <a href="https://www.dell.com/support">https://www.dell.com/support</a>.
- 4. Connect the power cable.



**5.** Press the power button.



# Create a USB recovery drive for Windows

Dell recommends that you create a recovery drive to troubleshoot and fix problems that may occur with Windows. An empty USB flash drive with a minimum capacity of 16 GB is required to create the recovery drive.

- (i) NOTE: The following steps may vary depending on the version of Windows installed. Refer to the Microsoft support site for latest instructions.
- 1. Connect the USB flash drive to your computer.
- 2. In Windows search, type Recovery.
- 3. In the search results, click Create a recovery drive. The User Account Control window is displayed.
- Click Yes to continue.
  - The **Recovery Drive** window is displayed.
- 5. Select Back up system files to the recovery drive and click Next.
- 6. Select the USB flash drive and click Next.
  - A message appears, indicating that all data in the USB flash drive will be deleted.
- - i NOTE: This process may take several minutes to complete.

# Reinstall Windows using a USB recovery drive

- CAUTION: This process formats the hard drive and removes all data on your computer. Ensure that you back up data on your computer before beginning this task.
- (i) NOTE: Before reinstalling Windows, ensure your computer has more than 2 GB of memory and more than 32 GB of storage
- 1. Connect the USB recovery drive to your computer.
- 2. Restart your computer.
- 3. Press F12 after the Dell logo is displayed on the screen to access the boot menu.
  - A **Preparing one-time boot menu** message appears.
- 4. After the boot menu loads, select the USB recovery device under UEFI BOOT.
  - The system reboots and a screen to **Choose the keyboard layout** is displayed.
- 5. Choose your keyboard layout.
- 6. In the Choose an option screen, click Troubleshoot.
- 7. Click Recover from a drive.
- 8. Choose one of the following options:
  - Just remove my files to do a quick format.
  - Fully clean the drive to do a complete format.
- 9. Click **Recover** to start the recovery process.

This will take several minutes to complete and your computer will restart during this process.

# Setting up the Virtual Reality (VR) headset — optional

- i NOTE: The VR headset is sold separately.
- 1. Download and run the setup tools for your VR headset at <a href="www.dell.com/VRsupport">www.dell.com/VRsupport</a>.
- 2. Connect the VR headset to the designated USB and HDMI ports on your computer, when prompted.



- NOTE: Connect the headset to the HDMI port on the primary graphics card and connect the display to any available port on the card.
- 3. Follow the instructions on the screen to complete the setup.

# **Views**

### **Front**



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

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

### 2. Headphone port

Connect a headphone or speakers.

### 3. Microphone port

Connect an external microphone to provide sound input.

### 4. USB 3.1 Gen 1 ports with PowerShare (2)

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

PowerShare allows you to charge your USB devices even when your computer is turned off.

### 5. AlienHead/Power button

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

Press to shut down the computer if it is turned on.

Press and hold for 4 seconds to force shut-down the computer.

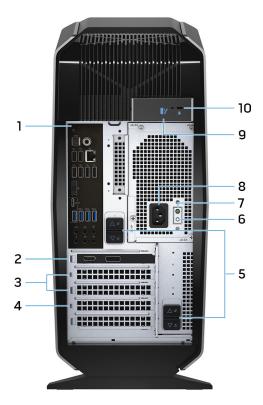
### 6. Optical drive (optional)

Reads from and writes to CDs, DVDs, and Blu-ray discs.

### 7. Optical-drive eject button

Press to open or close the optical drive tray.

### **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.

- i 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.

 $|\hat{i}|$  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.

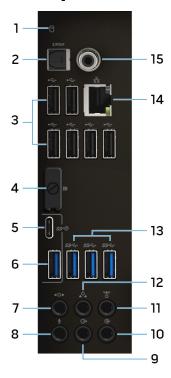
### 10. Side panel release latch

Allows you to remove the side panel from your computer.

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

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

### **Back panel**



### 1. Hard-drive 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 optical cables.

### 3. USB 2.0 ports (6)

Connect peripherals such as 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.

### 6. USB 3.1 Gen 2 Type-A port

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

### 7. Side L/R surround port

Connect the side-left and side-right speakers or surround sound speakers. 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 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 subwoofer.

i 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 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 storage devices and printers. Provides data transfer speeds up to 5 Gbps.

### 14. Network port

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.

### 15. Coaxial S/PDIF port

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

# **Specifications**

# Computer model

Table 1. Computer model

Computer model Alienware Aurora R6

# **Dimensions and weight**

### Table 2. Dimensions and weight

 Height
 472.5 mm (18.60 in)

 Width
 212 mm (8.34 in)

 Depth
 360.50 mm (14.19 in)

 Weight
 14.62 kg (32.23 lb)

NOTE: The weight of your computer varies depending on the configuration ordered and the manufacturing variability.

# **System information**

### **Table 3. System information**

Processor • 7<sup>th</sup> Generation Intel Core i5/i5k

7<sup>th</sup> Generation Intel Core i7/i7k

i NOTE: If your computer is shipped with an Intel Core i5k or Intel Core i7k processor, you can overclock the processing speed beyond the standard specifications.

Chipset Intel Z270 chipset

# **Operating system**

**Table 4. Operating system** 

Operating system supported Windows 10 Home 64-bit

Windows 10 Pro 64-bit

# **Memory**

### **Table 5. Memory specifications**

Slots Four DIMM sockets

Type DDR4

Speed • 2400 MHz

Up to HyperX FURY DDR4 XMP at 2667 MHz

Configurations supported

Per slot 4 GB, 8 GB, and 16 GB

Total memory 4 GB, 8 GB, 16 GB, 32 GB, and 64 GB (2400 MHz only)

# **Intel Optane memory**

Intel Optane memory functions as a storage accelerator. It accelerates the system and any type of SATA-based storage media such as hard drives and solid-state drives (SSDs).

- (i) NOTE: Intel Optane memory is supported on computers that meet the following requirements:
  - 7<sup>th</sup> generation Intel Core i3/i5/i7 processor or higher
  - Windows 10 64-bit version or higher (Anniversary Update)
  - Intel Rapid Storage Technology driver version 15.5.xxxx or higher

### Table 6. Intel Optane memory

Interface PCIe NVMe 3.0 x2

Connector M.2

Configurations supported 16 GB and 32 GB

NOTE: For more information about enabling or disabling the Intel Optane memory, see <u>Enabling Intel Optane memory</u> or <u>Disabling Intel Optane memory</u>.

### Ports and connectors

Table 7. Ports and connectors on the back panel

Back	panel	•

Network	One RJ45 port
USB	<ul> <li>Six USB 2.0 ports</li> <li>One USB 3.1 Gen 2 Type-C port</li> <li>One USB 3.1 Gen 2 Type-A port</li> <li>Three USB 3.1 Gen 1 ports</li> </ul>
Audio	<ul> <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 - optional  One DisplayPort - optional  One DisplayPort on the back panel of your computer is covered.  Connect the display to the discrete graphics card of your computer.

### Table 8. Ports and connectors on the front panel

### Front panel:

USB	<ul> <li>Two USB 3.1 Gen 1 ports</li> <li>Two USB 3.1 Gen 1 ports with PowerShare</li> </ul>
Audio	<ul> <li>One audio output/headphone port (supports 2 channel audio)</li> <li>One audio input/microphone port</li> </ul>

### **Communications**

### **Table 9. Supported Communications**

Ethernet 10/100/1000 Mbps Killer E2400 Ethernet controller integrated on system board

Wireless 802.11b/g/n

802.11ac

Bluetooth 4.1/Bluetooth 4.2

### Wireless module

### Table 10. Wireless module specifications

QCA9377 (DW1810) QCA61x4A (DW1820) Rivet 1535 (Killer) Type

Transfer rate 433 Mbps Up to 867 Mbps Up to 867 Mbps (1.867 Gbps

with Doubleshot Pro

AES-CCMP

Dual band 2.4 GHz/5 GHz

technology)

Encryption 64-bit and 128-bit WEP

CKIP **TKIP** 

Dual band 2.4 GHz/5 GHz

**AES-CCMP** 

**AES-CCMP** 

64-bit and 128-bit WEP 64-bit and 128-bit WEP

**CKIP CKIP** TKIP TKIP

Dual band 2.4 GHz/5 GHz

### Video

### Table 11. Video specifications

Frequency bands supported

### Integrated:

Controller Intel HD Graphics 630 Memory Shared system memory

Discrete:

Up to two PCI-Express X16, single-width/double-width, full length (maximum Type

10.5 inches)

(i) NOTE: The graphics configuration of your desktop varies depending on the

graphics card configuration ordered.

Controller AMD or NVIDIA

Also supports NVIDIA SLI and AMD Crossfire technologies

Memory Up to 12 GB

### Audio

### **Table 12. Audio specifications**

Realtek ALC3861 Controller

Integrated 7.1 channel audio with S/PDIF support Type

# Storage

### Table 13. Storage specifications

SATA 6 Gbps Interface

Externally accessible One 5.25-inch drive bay for DVD+/-RW drive, Blu-ray Disc combo (optional),

or Blu-ray Disc writer (optional)

Internally accessible

Solid-state drive (SSD) One M.2 SATA drive (i) NOTE: If you purchased an M.2 drive, it is assigned as primary drive and all other SATA drives in your computer are assigned as secondary drives.

U.2 drive One optional U.2 drive installed in 3.5-inch HDD bay.

One 3.5-inch drive bay For one 3.5-inch SATA drive or two 2.5-inch SATA drives (optional)

NOTE: If your computer is shipped with only one 3.5-inch SATA drive, it is the primary drive. If your computer is shipped with two 2.5-inch SATA drives, one is primary drive and the other is secondary drive.

Two 2.5-inch drive bays For two 2.5-inch SATA drives

NOTE: The SATA drives installed in these drive bays are secondary drives.

Capacity

Up to 1 TB
U.2
Up to 960 GB
Hard drive
Up to 2 TB

# **Power ratings**

### Table 14. Power ratings specifications

Input voltage 100 VAC-240 VAC
Input frequency 50 Hz-60 Hz

Temperature range

Operating 5°C to 50°C (41°F to 122°F)
Storage -40°C to 70°C (-40°F to 158°F)

 Type
 460 W
 850 W

 Input current (maximum):
 8 A
 10 A

Output current: 3.3V/17A, 5V/25A, 12VA/18A, 12VB/

16A, 12VC/8A, 5Vaux/3A

3.3V/20A, 5V/20A, 12VA/32A,

12VB/48A, 12VD/16A, -12V/0.5A, 5Vaux/4A

Rated output voltage: 3.3V, 5V, 12VA, 12VB, 12VC, 5Vaux 3.3V, 5V, 12VA, 12VB, 12VD, -12V,

5Vaux

# Computer environment

Airborne contaminant level: G2 or lower as defined by ISA-S71.04-1985

### Table 15. Computer environment

	Operating	Storage
Temperature range	5°C to 35°C (41°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)	0.26 GRMS	1.37 GRMS
Shock (maximum)*	$40~G$ for 2 ms with a change in velocity of $20$ in/s (51 cm/s) $^{\dagger}$	105 G for 2 ms with a change in velocity of 52.5 in/s $(133 \text{ cm/s})^{\ddagger}$
Altitude (maximum)	-15.20 m to 3048 m (-50 ft to 10,000 ft)	-15.20 m to 10,668 m (-50 ft to 35,000 ft)

 $<sup>^{\</sup>star}$  Measured using a random vibration spectrum that simulates user environment.

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

# **Intel Optane memory**

### **Enabling Intel Optane memory**

- 1. On the taskbar, click the search box, and then type Intel Rapid Storage Technology.
- Click Intel Rapid Storage Technology. The Intel Rapid Storage Technology window is displayed.
- 3. On the Status tab, click Enable to enable the Intel Optane memory.
- 4. On the warning screen, select a compatible fast drive, and then click Yes to continue enabling Intel Optane memory.
- **5.** Click **Intel Optane memory** > **Reboot** to complete enabling your Intel Optane memory.
  - i NOTE: Applications may take up to three subsequent launches after enablement to see the full performance benefits.

# **Disabling Intel Optane memory**

- CAUTION: Do not try to remove the Intel Rapid Storage Technology driver after disabling Intel Optane memory, it will result in a blue screen error. The Intel Rapid Storage Technology user interface can be removed without uninstalling the driver.
- NOTE: Disabling Intel Optane memory is required before removing the SATA storage device accelerated by the Intel Optane memory or the Intel Optane memory module from the system.
- 1. On the taskbar, click the search box, and then type Intel Rapid Storage Technology.
- 2. Click Intel Rapid Storage Technology.
  The Intel Rapid Storage Technology window is displayed.
- 3. On the Intel Optane memory tab, click Disable to disable the Intel Optane memory.
- **4.** Click **Yes** if you accept the warning. The disabling progress is displayed.
- 5. Click Reboot to complete disabling your Intel Optane memory and restart your computer.

# 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 16. Alienware products and online self-help resources

Information about Alienware products and services

Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on

Videos providing step-by-step instructions to service your computer

www.alienware.com

www.alienware.com/gamingservices

www.youtube.com/alienwareservices

# **Contacting Alienware**

To contact Alienware for sales, technical support, or customer service issues, see <a href="https://www.alienware.com">www.alienware.com</a>.

- i NOTE: Availability varies by country and product, and some services may not be available in your country.
- NOTE: If you do not have an active internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.