Alienware m15 R3
Setup and Specifications

ALIENWARE™

Notes, cautions, and warnings

(i) | 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.
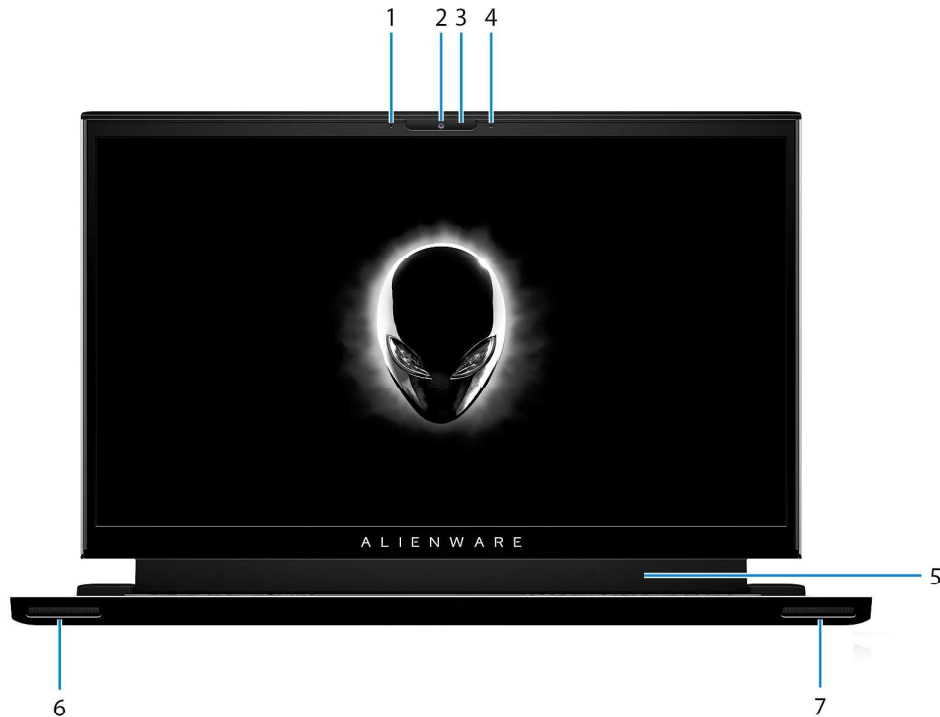
Contents

Set up your Alienware m15 R3

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

Connect the power adapter and press the power button.

Views of Alienware m15 R3

Display

1. **Left microphone**

   Provides digital sound input for audio recording and voice calls.
2. **Camera**

   Enables you to video chat, capture photos, and record videos.
3. **Camera-status light**

   Turns on when the camera is in use.
4. **Right microphone**

   Provides digital sound input for audio recording and voice calls.
5. **Tobii Eye Tracker (optional)**

   Application that enables you to interact with your computer using your eyes.
6. **Left speaker**

   Provides audio output.
7. **Right speaker**

   Provides audio output.

Left

1. **Security-cable slot (wedge-shaped)**

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

2. **Network port**

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

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 your USB devices even when your computer is turned off.

   ⓘ **NOTE: If the charge on your computer's battery is less than 10 percent, you must connect the power adapter to charge your computer, and USB devices connected to the PowerShare port.**

   ⓘ **NOTE: If a USB device is connected to the PowerShare port before the computer is turned off or in hibernate state, you must disconnect and connect it again to enable charging.**

   ⓘ **NOTE: Certain USB devices may not charge when the computer is turned off or in sleep state. In such cases, turn on the computer to charge the device.**

4. **Headset port**

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

Right
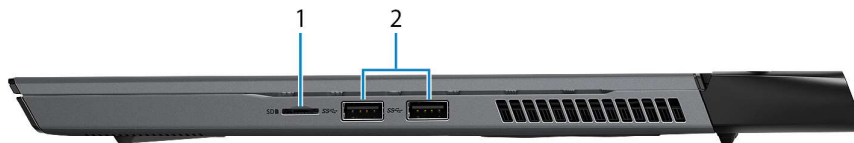
1. **microSD-card slot**

   Reads from and writes to the microSD-card. The computer supports the following card types:

   - Micro Secure Digital (mSD)
   - Micro Secure Digital High Capacity (mSDHC)
   - Micro Secure Digital Extended Capacity (mSDXC)

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.

Base

1. **Touchpad**

   Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two finger tap to right-click.
2. **Left-click button**

   Press to left-click.
3. **Right-click button**

   Press to right-click.
4. **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 four seconds to force shut-down the computer.

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

(i) **NOTE: This computer supports AlienFX, which lets you choose from an array of color and transition effects across multiple zones on the computer, including the keyboard and power button. For more information, see** Alienware Command Center**.**

Back
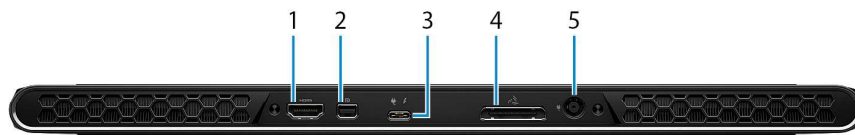
1. **HDMI port**

   Connect to a TV or another HDMI-in enabled device. Provides video and audio output.
2. **Mini DisplayPort**

   Connect to a TV or another DisplayPort-in enabled device. Provides video and audio output.

3. **Thunderbolt 3 (USB Type-C) port with Power Delivery**

Supports USB 3.1 Gen 2 Type-C, DisplayPort 1.4, Thunderbolt 3 and also enables you to connect to an external display using a display adapter. Provides data transfer rates up to 10 Gbps for USB 3.1 Gen 2 and up to 40 Gbps for Thunderbolt 3. Supports Power Delivery that enables two-way power supply between devices. Provides up to 5 V/3 A power output that enables faster charging.

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

4. **External graphics port**

Connect an Alienware Graphics Amplifier to enhance the graphics performance.

5. **Power-adapter port**

Connect a power adapter to provide power to your computer and charge the battery.

Bottom

1. **Left speaker**

Provides audio output.

2. **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.

3. **Right speaker**

Provides audio output.

Specifications of Alienware m15 R3

Dimensions and weight

The following table lists the height, width, depth, and weight of your Alienware m15 R3.

Table 1. Dimensions and weight

Description	Values
Height:	
Front height	▪ 18.30 mm (0.72 in.) ▪ 17.90 mm (0.70 in.) for computers shipped with 300 Hz monitors
Rear height	19.70 mm (0.78 in.)
Width	360.30 mm (14.19 in.)
Depth	▪ 276.20 mm (10.87 in.) ▪ 275.90 mm (10.86 in.) for computers shipped with 300 Hz monitors
Weight (maximum)	2.50 kg (5.51 lb) ⓘ NOTE: The weight of your computer depends on the configuration ordered and manufacturing variability.

Processor

The following table lists the details of the processors supported by your Alienware m15 R3.

Table 2. Processor

Description	Option one	Option two	Option three
Processor type	10th Generation Intel Core i5	10th Generation Intel Core i7	10th Generation Intel Core i9k
Processor wattage	45 W	45 W	45 W
Processor core count	4	6	8
Processor thread count	8	12	16
Processor speed	Up to 4.5 GHz	Up to 5 GHz	Up to 5.3 GHz
Processor cache	8 MB	12 MB	16 MB
Integrated graphics	Intel UHD graphics	Intel UHD graphics	Intel UHD graphics

Chipset

The following table lists the details of the chipset supported by your Alienware m15 R3.

Table 3. Chipset

Description	Values
Chipset	HM470

Table 3. Chipset (continued)

Description	Values
Processor	10th Generation Intel Core i5/i7/i9K
DRAM bus width	128-bit
Flash EPROM	16 MB
PCIe bus	Up to Gen3

Operating system

Your Alienware m15 R3 supports the following operating systems:

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

Memory

The following table lists the memory specifications of your Alienware m15 R3.

Table 4. Memory specifications

Description	Values
Memory slots	Onboard system memory (i) **NOTE: The memory is integrated to the system board and cannot be upgraded after purchase.**
Memory type	Dual-channel DDR4
Memory speed	2667 MHz
Maximum memory configuration	32 GB
Minimum memory configuration	8 GB
Memory configurations supported	• 8 GB, 2 x 4GB, dual-channel DDR4, 2667 MHz • 16GB, 2 x 8GB, dual-channel DDR4, 2667 MHz • 32GB, 2 x 16GB, dual-channel DDR4, 2667 MHz

External ports

The following table lists the external ports of your Alienware m15 R3.

Table 5. External ports

Description	Values
Network port	One RJ-45 port
USB ports	• Two USB 3.1 Gen 1 ports • One USB 3.1 Gen1 port with PowerShare • One Thunderbolt 3 (USB 3.1 Gen 2) port
Audio port	One headset (headphone and microphone combo) port
Video port	• One HDMI 2.0 port

Table 5. External ports (continued)

Description	Values
	• One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)
Media-card reader	One microSD card slot
Docking port	One external graphics display port ⓘ NOTE: This external graphics display port is compatible with the Alienware Graphics Amplifier.
Power-adapter port	One 7.4 mm x 5.1 mm E4 DC-in
Security	One security-cable slot (wedge-shaped)

Internal slots

The following table lists the internal slots of your Alienware m15 R3.

Table 6. Internal slots

Description	Values
M.2	• Two M.2 2230/2280 slots for solid-state drives • One M.2 2230 slot for solid-state drive ⓘ NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626 at www.dell.com/support.

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Alienware m15 R3.

Table 7. Ethernet specifications

Description	Values
Model number	Killer E3000 PCI-e Gigabit ethernet controller
Transfer rate	10/100/1000/2500 Mbps

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module supported on your Alienware m15 R3.

Table 8. Wireless module specifications

Description	Values
Model number	Killer Wi-Fi 6 AX1650
Transfer rate	Up to 2400 Mbps
Frequency bands supported	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 6 (WiFi 802.11ax)

Table 8. Wireless module specifications (continued)

Description	Values
Encryption	64-bit/128-bit WEP - AES-CCMP - TKIP
Bluetooth	Bluetooth 5

Audio

The following table lists the audio specifications of your Alienware m15 R3.

Table 9. Audio specifications

Description		Values
Audio controller		Realtek ALC3281-CG
Stereo conversion		Supported
Internal audio interface		High definition audio interface
External audio interface		- One headset (headphone and microphone combo) port - HDMI 1.4b port
Number of speakers		4-Way (woofer/tweeter) stereo speaker design
Internal-speaker amplifier		Supported
External volume controls		Keyboard shortcut controls
Speaker output:		
	Average speaker output	4 W
	Peak speaker output	5 W
Subwoofer output		Supported
Microphone		Digital-array microphones in camera assembly

Storage

This section lists the storage options on your Alienware m15 R3.

Your Alienware m15 R3 supports one of the following storage configurations:

- One M.2 2230/2280 solid-state drive
- One M.2 2230 solid-state drive and one 2280 solid-state drive
- Two M.2 2230 solid-state drives
- Two M.2 2280 solid-state drives
- One M.2 2230 solid-state drive and two M.2 2280 solid-state drives

The primary drive of your Alienware m15 R3 varies with the storage configuration. For computers with the M.2 2230/2280 solid-state drive, the primary drive is the designated boot drive.

Table 10. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 solid-state drive	PCIe Gen3 x4 NVMe, up to 32 Gbps	Up to 512 GB

Table 10. Storage specifications (continued)

Storage type	Interface type	Capacity
M.2 2280 solid-state drive	PCIe Gen3 x4 NVMe, up to 32 Gbps	Up to 2 TB

Media-card reader

The following table lists the media cards supported by your Alienware m15 R3.

Table 11. Media-card reader specifications

Description	Values
Media-card type	One microSD card slot
Media-cards supported	- Micro Secure Digital (mSD) - Micro Secure Digital High Capacity (mSDHC) - Micro Secure Digital Extended Capacity (mSDXC)
(i) NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

Keyboard

The following table lists the keyboard specifications of your Alienware m15 R3.

Table 12. Keyboard specifications

Description	Values
Keyboard type	- Per-key RGB backlit keyboard 4-zone RGB backlit keyboard
Keyboard layout	QWERTY
Number of keys	- United States and Canada: 82 keys - United Kingdom: 83 keys - Japan: 86 keys
Keyboard size	X=19.05 mm key pitch Y=19.05 mm key pitch
Keyboard shortcuts	Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key. (i) NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program. For more information, see Keyboard shortcuts.

Camera

The following table lists the camera specifications of your Alienware m15 R3.

Table 13. Camera specifications

Description		Values
Number of cameras		One camera
Camera type		HD RGB camera
Camera location		Front camera
Camera sensor type		CMOS sensor technology
Camera resolution:		
	Still image	0.92 megapixel
	Video	1280 x 720 (HD) at 30 fps
Diagonal viewing angle:		74.9 degrees

Touchpad

The following table lists the touchpad specifications of your Alienware m15 R3.

Table 14. Touchpad specifications

Description		Values
Touchpad resolution:		
	Horizontal	1217
	Vertical	681
Touchpad dimensions:		
	Horizontal	105 mm (4.13 in.)
	Vertical	60 mm (2.36 in.)
Touchpad gestures		For more information about touchpad gestures available on Windows 10, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Power adapter

The following table lists the power adapter specifications of your Alienware m15 R3.

Table 15. Power adapter specifications

Description		Option 1	Option 2	Option 3
Type		E4 130W	E4 180W	E4 240W
Connector dimensions:				
	External diameter	7.40 mm	7.40 mm	7.40 mm
	Internal diameter	5.10 mm	5.10 mm	5.10 mm

Table 15. Power adapter specifications (continued)

Description		Option 1	Option 2	Option 3
Input voltage		100 VAC–240 VAC	100 VAC–240 VAC	100 VAC–240 VAC
Input frequency		50 Hz–60 Hz	50 Hz–60 Hz	50 Hz–60 Hz
Input current (maximum)		2.50 A	2.34 A	5 A
Output current (continuous)		6.70 A	9.23 A	12.31 A
Rated output voltage		19.50 VDC	19.50 VDC	19.50 VDC
Temperature range:				
	Operating	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°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)

Battery

The following table lists the battery specifications of your Alienware m15 R3.

Table 16. Battery specifications

Description		Option one	Option two
Battery type		56 WHr, 3-cell "smart" lithium-ion battery	86 WHr, 6-cell "smart" lithium-ion battery
Battery voltage		11.40 VDC	11.40 VDC
Battery weight (maximum)		0.26 kg (0.57 lb)	0.34 kg (0.75 lb)
Battery dimensions:			
	Height	77.70 mm (3.06 in.)	77.70 mm (3.06 in.)
	Width	295.20 mm (11.62 in.)	295.20 mm (11.62 in.)
	Depth	7.56 mm (0.30 in.)	7.56 mm (0.30 in.)
Temperature range:			
	Operating	0°C to 60°C (32°F to 140°F)	0°C to 60°C (32°F to 140°F)
	Storage	–20°C to 60°C (–4°F to 140°F)	–20°C to 60°C (–4°F to 140°F)
Battery operating time		Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Battery charging time (approximate)		3 hours (when the computer is off) (i) **NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see,** *Me and My Dell* **on** www.dell.com/	3 hours (when the computer is off) (i) **NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see,** *Me and My Dell* **on** www.dell.com/
Coin-cell battery		Not supported	Not supported

Display

The following table lists the display specifications of your Alienware m15 R3.

Table 17. Display specifications

Description		Option one	Option two	Option three
Display type		15.6-inch Full High Definition (FHD)	15.6-inch Full High Definition (FHD)	15.6-inch Ultra High Definition (UHD)
Display-panel technology		Wide-Viewing Angle (WVA)	Wide-Viewing Angle (WVA)	Organic Light-Emitting Diode (OLED)
Display-panel dimensions (active area):				
	Height	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)	193.62 mm (7.62 in.)
	Width	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)	344.22 mm (13.55 in.)
	Diagonal	394.87 mm (15.55 in.)	394.87 mm (15.55 in.)	394.94 mm (15.55 in.)
Display-panel native resolution		1920x1080	1920x1080	3840x2160
Luminance (typical)		300 nits	300 nits	400 nits
Megapixels		2.07	2.07	8.29
Color gamut		72% (NTSC)	100% (sRGB)	100% (DCI-P3)
Pixels Per Inch (PPI)		141	141	282
Contrast ratio (typ)		800:1	1000:1	100,000:1
Response time (max)		7 ms	3 ms	1 ms
Refresh rate		144 Hz	300 Hz	60 Hz
Horizontal view angle		85	85	85
Vertical view angle		85	85	85
Pixel pitch		0.18 mm	0.18 mm	0.09 mm
Power consumption (maximum)		7.80 W	6.3 W	14.8 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	TrueLife
Touch options		No	No	No

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Alienware m15 R3.

Table 18. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel UHD graphics	• One HDMI 2.0 port	Shared system memory	10th Generation Intel Core i5/i7/i9K

Table 18. GPU—Integrated

Controller	External display support	Memory size	Processor
	• One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)		

GPU—Discrete

The following table lists the specifications of the discrete graphics processing unit (GPU) supported by your Alienware m15 R3.

Table 19. GPU—Discrete

Controller	External display support	Memory size	Memory type
NVIDIA GeForce GTX 1650 Ti	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	4 GB	GDDR6
NVIDIA GeForce GTX 1660 Ti	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	6 GB	GDDR6
NVIDIA GeForce RTX 2060	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	6 GB	GDDR6
NVIDIA GeForce RTX 2070	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	8 GB	GDDR6
NVIDIA GeForce RTX 2070 SUPER	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	8 GB	GDDR6
NVIDIA GeForce RTX 2080 SUPER Max-Q	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	8 GB	GDDR6
AMD RX5500M	• One HDMI 2.0 port • One mini DisplayPort 1.4 • One Thunderbolt 3 (USB 3.1 Gen 2 Port)	4 GB	GDDR6

Operating and storage environment

This table lists the operating and storage specifications of your Alienware m15 R3.

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

Table 20. 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.

Keyboard shortcuts

ⓘ NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys used for shortcuts remain the same across all language configurations.

Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press **2**, 2 is typed out; if you press **Shift + 2**, @ is typed out.

The keys F1–F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).

However, if the function keys F1–F12 are needed for specific software applications, multi-media functionality can be disabled by pressing **Fn + Esc**. Subsequently, multi-media control can be invoked by pressing **Fn** and the respective function key. For example, mute audio by pressing **Fn + F3**.

ⓘ NOTE: You can also define the primary behavior of the function keys (F1–F12) by changing Function Key Behavior in BIOS setup program.

Table 21. List of keyboard shortcuts

Keys	Description
FN + F1	Disconnect Alienware Graphics Amplifier
FN + F2	Disable/enable wireless
FN + F3 MUTE	Mute audio
FN + F4	Decrease volume
FN + F5	Increase volume
FN + F8	Switch to external display
FN + F9	Decrease brightness
FN + F10	Increase brightness
FN + F11 T-PAD	Disable/enable touchpad
FN + F12 ALIEN FX	Disable/enable AlienFX

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* or the knowledge base article SLN128904 at www.dell.com/support.

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 22. Alienware products and online self-help resources

Self-help resources	Resource location
Information about Alienware products and services	www.alienware.com
Dell Help & Support app	
Tips	
Contact Support	In Windows search, type **Help and Support**, and press **Enter.**
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux
Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on	www.alienware.com/gamingservices
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.

(i) NOTE: Availability varies by country and product, and some services may not be available in your country.

(i) 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.