Dell Latitude 3310 2-in-1

Setup and Specifications

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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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1

Set up your Latitude 3310 2-in-1

1. Connect the power adapter and press the power button.

NOTE: To conserve battery power, the battery might enter power saving mode. Connect the power adapter and press the power button to turn on the computer.

2. Finish operating system setup.

   For Windows:

   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.

3. Locate and use Dell apps from the Windows Start menu—Recommended.

Table 1. Locate Dell apps

Resources	Description
	Dell Product Registration Register your computer with Dell.
	Dell Help & Support Access help and support for your computer.

Table 1. Locate Dell apps (continued)

Resources	Description
	SupportAssist SupportAssist is the smart technology that keeps your computer running at its best by optimizing settings, detecting issues, removing viruses and notifies when you need to make system updates. SupportAssist proactively checks the health of your system's hardware and software. When an issue is detected, the necessary system state information is sent to Dell to begin troubleshooting. SupportAssist is preinstalled on most of the Dell devices running Windows operating system. For more information, see SupportAssist for Home PCs User's Guide on www.dell.com/serviceabilitytools. **NOTE:** In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.
	Dell Update 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 000149088 at www.dell.com/support.
	Dell Digital Delivery 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 000129837 at www.dell.com/support.

4. Create recovery drive for Windows.

   NOTE: It is recommended to create a recovery drive to troubleshoot and fix problems that may occur with Windows.

2

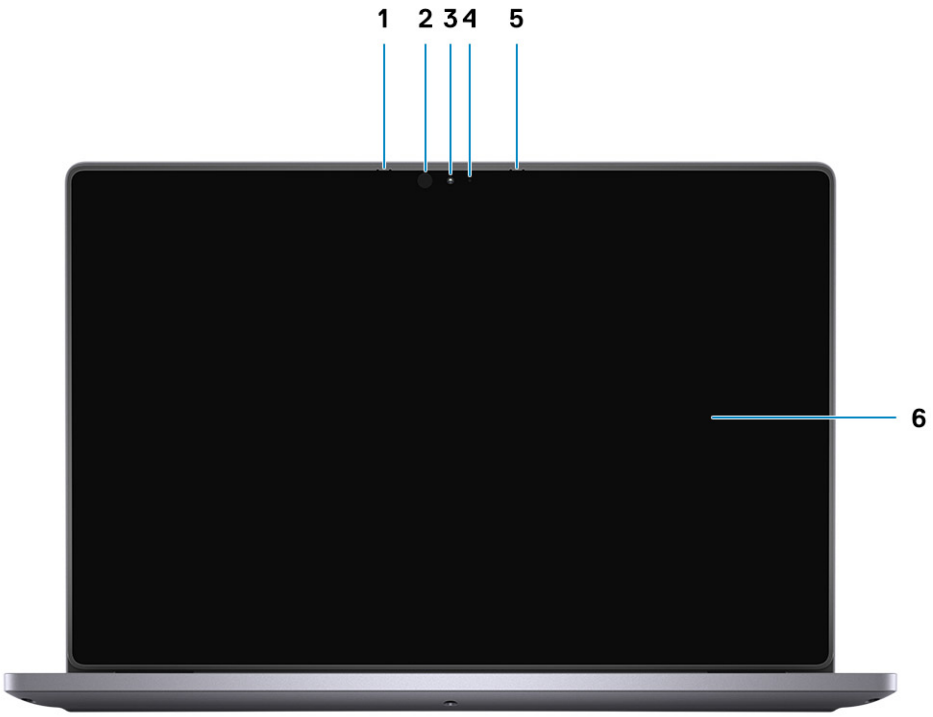
Chassis Overview

This chapter consists of the product view features along with technical specifications. The chassis overview features calls out the different ports, connectors, and components available in the computer.

Topics:

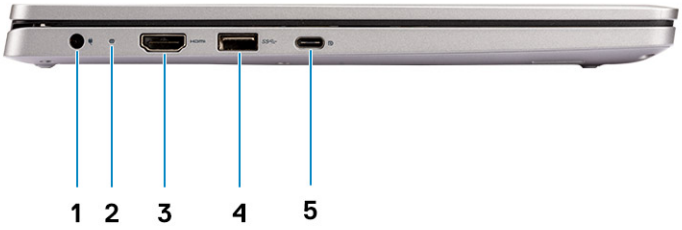
- Front view
- Left view
- Right view
- Base view
- Palmrest view

Front view



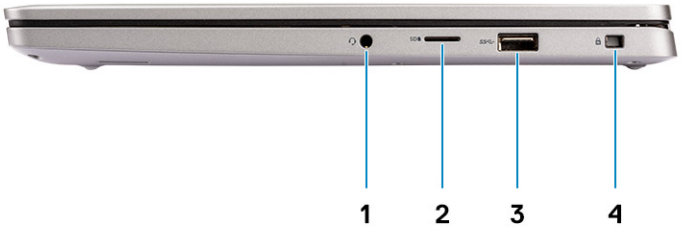
1. Microphone
2. Infrared (IR) emitter (optional)
3. Camera
4. Camera status light
5. Microphone
6. LCD Panel

Left view



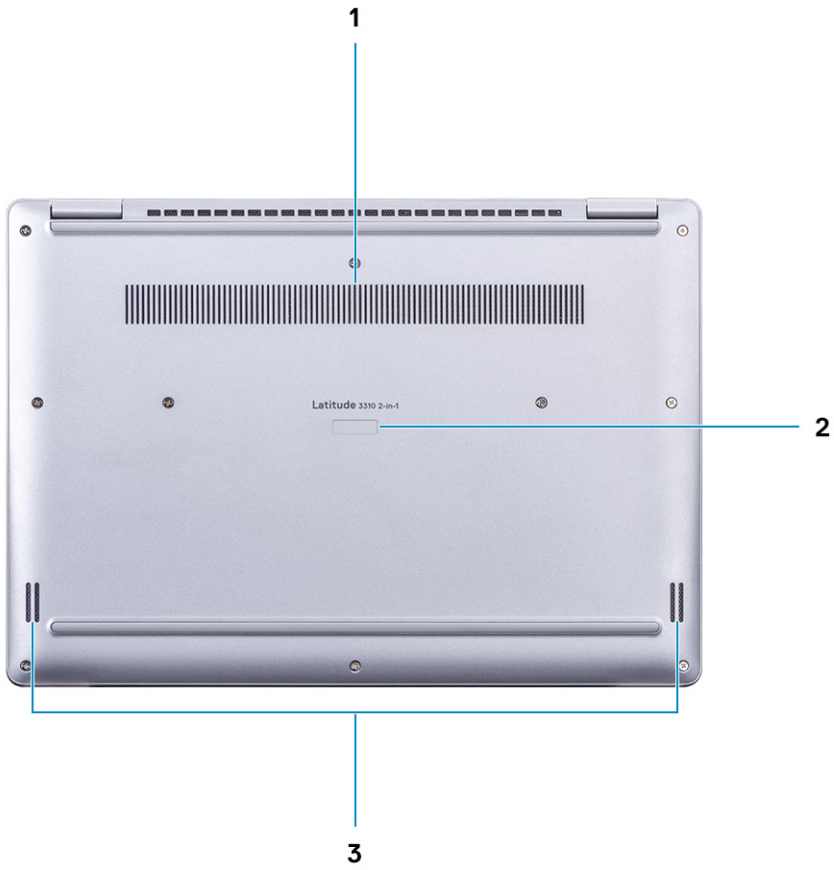
1. Power connector
2. Battery status light
3. HDMI port
4. USB 3.1 port
5. USB Type-C port

Right view



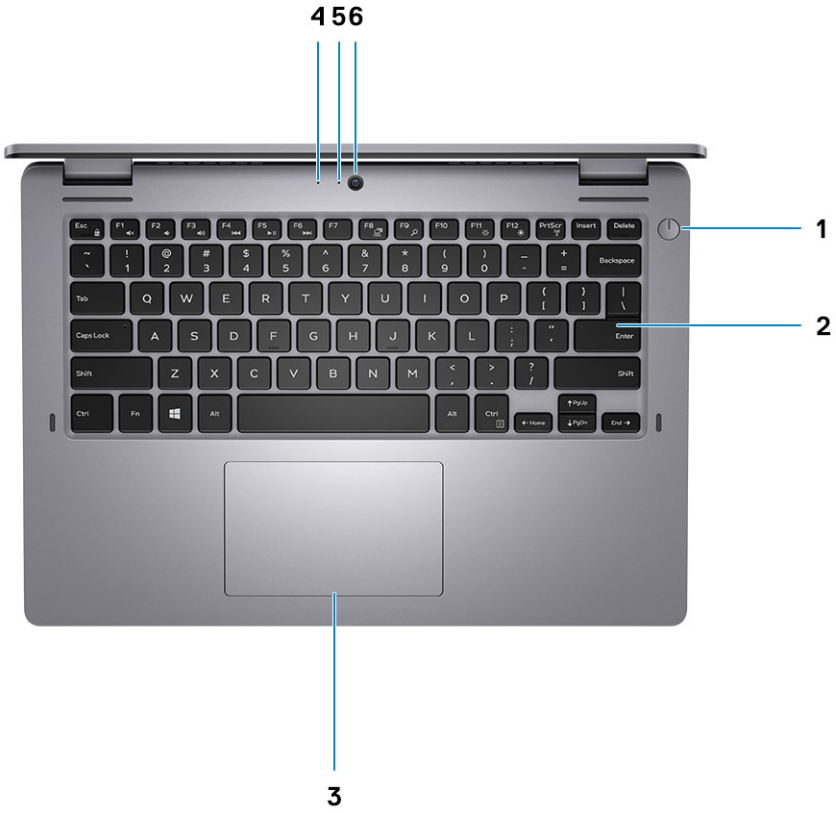
1. Audio port
2. microSD port
3. USB 3.1 port
4. Wedge-shaped lock slot

Base view



1. Heatsink vent
2. Service tag
3. Speakers

Palmrest view



1. Power button
2. Keyboard
3. Touchpad
4. Mic
5. Camera LED
6. Camera

3

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** + **F1**.

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

Table 2. List of keyboard shortcuts

Function key	Redefined key (for multimedia control)	Behavior
F1	Fn + F1	Mute audio
F2	Fn + F2	Decrease volume
F3	Fn + F3	Increase volume
F4	Fn + F4	Play previous track/chapter
F5	Fn + F5	Play/Pause
F6	Fn + F6	Play next track/chapter
F8	Fn + F8	Switch to external display
F9	Fn + F9	Search
F10	Fn + F10	Toggle keyboard backlight (optional) **NOTE:** Non-backlight keyboards have F10 function key without the backlight icon and does not support toggle keyboard backlight function.
F11	Fn + F11	Decrease brightness
F12	Fn + F12	Increase brightness

The **Fn** key is also used with selected keys on the keyboard to invoke other secondary functions.

Table 3. List of keyboard shortcuts

Function key	Behavior
Fn + PrtScr	Turn off/on wireless
Fn + B	Pause/Break
Fn + Insert	Sleep
Fn + S	Toggle scroll lock
Fn + H	Toggle between power and battery-status light/hard-drive activity light
Fn + R	System request
Fn + Ctrl	Open application menu
Fn + Esc	Toggle Fn-key lock
Fn + PgUp	Page up
Fn + PgDn	Page down
Fn + Home	Home
Fn + End	End

4

Specifications of Latitude 3310 2-in-1

Topics:

- Dimensions and weight
- Processors
- Chipset
- Operating system
- Memory
- Ports and connectors
- Communications
- Audio
- Storage
- Media-card reader
- Keyboard
- Camera
- Touchpad
- Power adapter
- Battery
- Display
- Video
- Computer environment

Dimensions and weight

Table 4. Dimensions and weight

Description	Values
Height:	
Front	19.60 mm (0.78 in.)
Rear	19.60 mm (0.78 in.)
Width	320.60 mm (12.63 in.)
Depth	225.50 mm (8.89 in.)
Weight	3.42 lbs (1.55 kg) **NOTE:** The weight of your computer depends on the configuration ordered and the manufacturing variability.

Processors

Table 5. Processors

Description	Values			
Processors	Intel Core i3-8145U	Intel Pentium-5405U	Intel Core i5-8365U	Intel Pentium-5405U
Wattage	15 W	15 W	15 W	15 W

Table 5. Processors (continued)

Description	Values			
Core count	2	2	4	2
Thread count	4	4	8	4
Speed	Up to 3.9 GHz	Up to 2.3 GHz	Up to 4.1 GHz	Up to 2.3 GHz
Cache	4 MB	2 MB	6 MB	2 MB
Integrated graphics	Intel UHD Graphics 620	Intel UHD Graphics 610	Intel UHD Graphics 620	Intel UHD Graphics 610

Chipset

Table 6. Chipset

Description	Values
Chipset	Premium U/Mainstream U
Processor	Intel Core i3/i5/Intel Pentium DC
DRAM bus width	64-bit
PCIe bus	• Mainstream U-Up to Gen 2 • Premium U-Up to Gen 3

Operating system

Your Latitude 3310 2-in-1 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Home National Academic, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Pro National Academic, 64-bit
- Windows 10 Home, 64-bit
- Windows 10 Pro, 64-bit
- Windows 10 Pro Education, 64-bit
- Windows 10 Enterprise, 64-bit
- Ubuntu 20.04 LTS, 64-bit

Memory

The following table lists the memory specifications of your Latitude 3310 2-in-1:

Table 7. Memory specifications

Description	Values
Slots	1 SO-DIMM slot
Type	Single channel DDR4
Speed	2133 MHz for Intel Pentium DC, 2400 MHz for Intel Core i3/i5

Table 7. Memory specifications (continued)

Description	Values
Maximum memory	16 GB
Minimum memory	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB
Configurations supported	• 4 GB DDR4 (1 x 4 GB) [2133 MHz for Intel Pentium DC, 2400 MHz for Intel Core i3/i5] • 8 GB DDR4 (1 x 8 GB) [2133 MHz for Intel Pentium DC, 2400 MHz for Intel Core i3/i5] • 16 GB DDR4 (1 x 16 GB) [2133 MHz for Intel Pentium DC, 2400 MHz for Intel Core i3/i5]

Ports and connectors

Table 8. External ports and connectors

Description	Values
External:	
USB	• One USB 3.1 Gen 1 port • One USB 3.1 Gen 1 port with PowerShare • One USB 3.1 Gen 1 Type-C port with DisplayPort Alt Mode
Audio	One Universal audio jack
Video	1 x HDMI 1.4a, 1 x DP 1.2 via Type-C
Media card reader	One Micro SD-card 3.0 slot
Power adapter port	One 4.5 mm barrel
Security	One Noble Wedge security

Table 9. Internal ports and connectors

Description	Values
Internal:	
M.2 cards	• One M.2 2230 slot for WiFi and Bluetooth combo card • 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.

Communications

Wireless module

Table 10. Wireless module specifications

Description	Values
Model number	Intel 9560 (160 MHz)
Transfer rate	Up to 1733 Mbps
Frequency bands supported	2.4 GHz/5 GHz
Wireless standards	• WiFi 802.11a/b/g • WiFi 4 (WiFi 802.11n) • WiFi 5 (WiFi 802.11ac)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth	5.0

Audio

Table 11. Audio specifications

Description		Values
Controller		REALTEK ALC3246
Stereo conversion		Supported
Internal interface		High definition audio
External interface		Universal audio jack
Speakers		Two
Internal speaker amplifier		Supported (audio codec integrated)
External volume controls		Keyboard shortcut controls
Speaker output:		
	Average	2 W
	Peak	2.5 W
Subwoofer output		Not supported
Microphone		Supported

Storage

Your computer supports the following configuration:

- One M.2 2230 Solid State Drive

Table 12. Storage specifications

Storage type	Interface type	Capacity
One M.2 2230 Solid State Drive	PCIe	128/256/512 GB

Media-card reader

Table 13. Media-card reader specifications

Description	Values
Type	One Micro SD-card 3.0 slot
Cards supported	• microSD • microSDHC • microSDXC

Keyboard

Table 14. Keyboard specifications

Description	Values
Type	• Single pointing keyboard • Single pointing backlit keyboard
Layout	QWERTY
Number of keys	• United States and Canada: 80 keys • United Kingdom: 81 keys • Japan: 84 keys
Size	X=19.05 mm key pitch Y=18.05 mm key pitch
Shortcut keys	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. **NOTE:** You can define the primary behavior of the function keys (F1–F12) changing **Function Key Behavior** in BIOS setup program. Keyboard shortcuts.

Camera

Table 15. Camera specifications

Description			Values
Number of cameras			One
Type			High Definition RGB/High Definition RGB Infrared camera
Location			Front camera
Sensor type			CMOS sensor technology
Resolution			
	Camera		
		Still image	0.92 megapixel
		Video	1280 x 720 (HD) at 30 fps
	Infrared camera		
		Still image	0.23 megapixel
		Video	640 x 360 at 15 fps
Diagonal viewing angle			
	Camera		78.6 degrees
	Infrared camera		87 degrees

Table 16. World Facing Camera

Description			Values
Number of cameras			One
Type			5 M RGB camera
Location			Rear camera
Sensor type			CMOS sensor technology
Resolution			
	Camera		
		Still image	5.03 megapixel
		Video	1920 x 1080 at 30 fps
Diagonal viewing angle, RGB			76.6 degrees

Touchpad

Table 17. Touchpad specifications

Description		Values
Resolution:		
	Horizontal	65 mm
	Vertical	105 mm

For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Touchpad gestures

For more information about touchpad gestures for Windows, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Power adapter

Table 18. Power adapter specifications

Description		Values
Type		65 W
Diameter (connector)		4.5 mm
Input voltage		100 VAC x 240 VAC
Input frequency		50 Hz x 60 Hz
Input current (maximum)		1.50 A
Output current (continuous)		3.34 A
Rated output voltage		19.50 VDC
Temperature range:		
	Operating	0°C-40°C (32°F-104°F)
	Storage	-40°C-70°C (-40°F-158°F)

Battery

Table 19. Battery specifications

Description		Values
Type		Polymer 3-cell 42 Whr smart battery with express charge
Voltage		11.40 VDC
Weight (maximum)		0.20 kg (0.44 lb)
Dimensions:		
	Height	103.25 mm (4.06 in.)
	Width	191.85 mm (7.55 in.)
	Depth	5.90 mm (0.23 in.)
Temperature range:		
	Operating	0°C to 35 °C (32°F to 95°F)
	Storage	-20°C to 65°C (-4°F to 149°F)
Operating time		Varies depending on operating conditions and can reduce under certain power-intensive conditions

Table 19. Battery specifications (continued)

Description	Values
Charging time (approximate)	1 year warranty for 300 discharge/charge cycles hours (when the computer is off) **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 www.dell.com/.
Life span (approximate)	300 discharge/charge cycles
Coin-cell battery	CR2032
Operating time	Varies depending on operating conditions and can reduce under certain power-intensive conditions

Display

Table 20. Display specifications

Description		Values
Type		Full High Definition
Panel technology		In-Plane Switching
Luminance (typical)		220 Nits
Dimensions (active area):		
	Height	165.24 mm (6.50 in.)
	Width	293.76 mm (11.57 in.)
	Diagonal	13.3"
Native resolution		1920 x 1080
Megapixels		2073600
Color gamut		45% NTSC
Pixels Per Inch (PPI)		166
Contrast ratio (min)		25.0006944444444
Response time (max)		35 ms
Horizontal view angle		80 min. degrees
Vertical view angle		80 min. degrees
Power consumption (maximum)		4.10 W
Anti-glare vs glossy finish		Anti-Glare
Touch options		Yes

Video

Table 21. Integrated graphics specifications

Integrated graphics			
Controller	**External display support**	**Memory size**	**Processor**
Intel UHD Graphics 610	1 x HDMI 1.4a, 1 x DP 1.2 via Type-C	Shared system memory	Intel Pentium DC
Intel UHD Graphics 620	1 x HDMI 1.4a, 1 x DP 1.2 via Type-C	Shared system memory	Intel Core i3/i5

Computer environment

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

Table 22. Computer environment

Description	Operating	Storage
Temperature range	0°C-35°C (32°F-95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10%-90% (non-condensing)	0%-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 (-49.86 ft to 10000 ft)	-15.2 m to 10,668 m (-49.86 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.

5

System setup

CAUTION: Unless you are an expert computer user, do not change the settings in the BIOS Setup program. Certain changes can make your computer work incorrectly.

NOTE: Before you change BIOS Setup program, it is recommended that you write down the BIOS Setup program screen information for future reference.

Use the BIOS Setup program for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the size of the hard drive.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of hard drive installed, and enabling or disabling base devices.

Topics:

- Boot menu
- Navigation keys
- System setup options
- Boot Sequence
- Updating the BIOS
- System and setup password

Boot menu

Press <F12> when the Dell logo appears to initiate a one-time boot menu with a list of the valid boot devices for the system. Diagnostics and BIOS Setup options are also included in this menu. The devices listed on the boot menu depend on the bootable devices in the system. This menu is useful when you are attempting to boot to a particular device or to bring up the diagnostics for the system. Using the boot menu does not make any changes to the boot order stored in the BIOS.

The options are:

- UEFI Boot:
  - Windows Boot Manager
- Other Options:
  - BIOS Setup
  - BIOS Flash Update
  - Diagnostics
  - Change Boot Mode Settings

Navigation keys

NOTE: For most of the System Setup options, changes that you make are recorded but do not take effect until you restart the system.

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.
Enter	Selects a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.

Keys	Navigation
Tab	Moves to the next focus area.
Esc	Moves to the previous page until you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restarts the system.

System setup options

NOTE: Depending on the laptop and its installed devices, the items listed in this section may or may not appear.

General options

Table 23. General

Option	Description

System Information	This section lists the primary hardware features of your computer.
	The options are:
	• **System Information**
	  ○ BIOS version
	  ○ Service Tag
	  ○ Asset Tag
	  ○ Ownership Tag
	  ○ Manufacture Date
	  ○ Express Service Code
	• **Memory Configuration**
	  ○ Memory Installed
	  ○ Memory Available
	  ○ Memory Speed
	  ○ Memory Channel Mode
	  ○ Memory Technology
	  ○ DIMM A Size
	NOTE: Due to an amount of memory being assigned for system use, "Memory Available" is less than "Memory Installed". Note that certain operating systems may not be able to use all the available memory.
	• **Processor Information**
	  ○ Processor Type
	  ○ Core Count
	  ○ Processor ID
	  ○ Current Clock Speed
	  ○ Maximum Clock Speed
	  ○ Processor L2 Cache
	  ○ Processor L3 Cache
	  ○ HT Capable
	  ○ 64-Bit Technology
	• **Device Information**
	  ○ SATA-0
	  ○ M.2 PCIe SSD-0
	  ○ LOM MAC Address
	  ○ Passthrough MAC Address

Table 23. General (continued)

Option	Description
	○ Video Controller ○ Video BIOS Version ○ Video Memory ○ Panel Type ○ Native Resolution ○ Audio Controller ○ WiFi Device ○ Bluetooth Device
Battery Information	Displays the battery status, health, and the type of AC adapter connected to the computer.
Boot Sequence	Allows you to change the order in which the computer attempts to find an operating system. The options are: ● **Windows Boot Manager** ● **Onboard NIC (IPV4)** ● **Onboard NIC (IPV6)** Allows you to change the boot list options. Click one of the following options: ○ **Legacy External Devices** ○ **UEFI**—Default
Advanced Boot Options	Allows you to Enable Legacy Option ROMs. The options are: ● **Enable Legacy Option ROMs** ● **Enable Attempt Legacy Boot**
UEFI Boot Path Security	Allows you to control whether the system prompts the user to enter the Admin password when booting to a UEFI boot path. Click one of the following options: ● **Always, Except Internal HDD**—Default ● **Always** ● **Never**
Date/Time	Allows you to set the date and time. The change to the system date and time takes effect immediately.

System configuration

Table 24. System Configuration

Option	Description
SATA Operation	Allows you to configure the operating mode of the integrated SATA hard-drive controller. Click one of the following options: ● **Disabled** ● **AHCI** ● **RAID On**—Default **NOTE:** SATA is configured to support RAID mode.

Table 24. System Configuration (continued)

Option	Description
Drives	These fields let you enable or disable various drives on board. The options are: • **SATA-1** • **M.2 PCIe SSD-0**
SMART Reporting	This field controls whether hard drive errors for integrated drives are reported during startup. The option is disabled by default.
USB Configuration	Allows you to enable or disable the internal/integrated USB configuration. The options are: • **Enable USB Boot Support** • **Enable External USB Ports** All the options are set by default. **NOTE:** USB keyboard and mouse always work in the BIOS setup irrespective of these settings.
Dell Type-C Dock Configuration	Allows you to connect to Dell WD and TB family of docks (Type-C Docks) independent of USB and Thunderbolt adapter configuration. This option is enabled by default.
Audio	Allows you to enable or disable the integrated audio controller. By default, the **Enable Audio** option is selected. The options are: • **Enable Microphone** • **Enable Internal Speaker** This option is set by default.
Touchscreen	This option controls whether the touchscreen is enabled or disabled This option is enabled by default.
Miscellaneous devices	Allows you to enable or disable various on board devices. • **Enable Camera**—Default • **Enable Secure Digital (SD) Card** — Enabled Default • **Secure Digital (SD) Card Boot** - Disabled • **Secure Digital Card (SD) Read-Only Mode** - Disabled

Video screen options

Table 25. Video

Option	Description
LCD Brightness	Allows you to set the display brightness depending upon the power source. On Battery (50% is default) and On AC (100% default).

Table 25. Video (continued)

Option	Description
Switchable Graphics	This option enables or disables switchable graphics technologies such as NVIDIA Optimus and SMD PowerExpress. It should only be enabled for Windows 7 and later versions of Windows or the Ubuntu OS. This feature is not applicable to other operating systems.

Security

Table 26. Security

Option	Description
Admin Password	Allows you to set, change, or delete the administrator (admin) password. The entries to set the password are: • **Enter the old password** • **Enter the new password** • **Confirm new password** Click **OK** once you set the password. **NOTE:** For the first time login, "Enter the old password:" field is marked to "Not set". Set the password for the first time and later you can change or delete the password
System Password	Allows you to set, change, or delete the System password. The entries to set the password are: • **Enter the old password** • **Enter the new password** • **Confirm new password** Click **OK** once you set the password. **NOTE:** For the first time login, "Enter the old password:" field is marked to "Not set". Set the password for the first time and later you can change or delete the password
Strong Password	Allows you to enforce the option to always set the strong password. • **Enable Strong Password** This option is not set by default.
Password Configuration	You can define the length of your password. Min = 4, Max = 32
Password Bypass	Allows you to bypass the System password and the Internal HDD password, when it is set, during a system restart. Click one of the options: • **Disabled**—Default • **Reboot bypass**
Password Change	Allows you to change the System password when the administrator password is set. • **Allow Non-Admin Password Changes** This option is set by default.
Non-Admin Setup Changes	Allows you to determine whether changes to the setup options are allowed when an Administrator Password is set. If disabled, the setup options are locked by the admin password.

Table 26. Security (continued)

Option	Description
	• **Allow Wireless Switch Changes** This option is not set by default.
UEFI Capsule Firmware Updates	Allows you to update the system BIOS via UEFI capsule update packages. • **Enable UEFI Capsule Firmware Updates** This option is set by default.
PTT Security	This option lets you control whether the Platform Trust Technology feature (PTT) is visible to the operating system. The options are : • **PTT On** — Enabled by Default • **Clear** • **PPI ByPass for Clear Command**
Computrace (R)	Allows you to activate or disable the optional Computrace software. The options are: • **Deactivate** • **Disable** • **Activate**—Default
CPU XD Support	Allows you to enable or disable the Execute Disable mode of the Processor, operating system uses this feature to hinder malicious programs that exploits buffer overflow. • **Enable CPU XD Support**—Default
Admin Setup Lockout	Allows you to prevent users from entering Setup when an administrator password is set. • **Enable Admin Setup Lockout** This option is not set by default.
Master Password Lockout	Allows you to disable master password support. • **Enable Master Password Lockout** This option is not set by default. **NOTE:** Hard disk password should be cleared before the settings can be changed.
SMM Security Mitigation	Allows you to enable or disable additional UEFI SMM Security Mitigation protection. • **SMM Security Mitigation** This option is not set by default.

Secure Boot

Table 27. Secure Boot

Option	Description
Secure Boot Enable	Allows you to enable or disable the Secure Boot Feature. • **Secure Boot Enable** Not enabled by default
Secure Boot Mode	Changes to the Secure Boot operation mode modifies the behavior to allow evaluation of UEFI driver signatures. Choose one of the these options:

Table 27. Secure Boot (continued)

Option	Description
	• **Deployed Mode**—Default • **Audit Mode**
Expert Key Management	Allows you to enable or disable Expert Key Management. • **Enable Custom Mode** This option is not set by default. The Custom Mode Key Management options are: • **PK**—Default • **KEK** • **db** • **dbx**

Intel Software Guard Extensions options

Table 28. Intel Software Guard Extensions

Option	Description
Intel SGX Enable	This field allows you to provide a secured environment for running code/storing sensitive information in the context of the main operating systems. Click one of the following options: • **Disabled** • **Enabled** • **Software controlled**—Default
Enclave Memory Size	This option sets **SGX Enclave Reserve Memory Size** Click one of the following options: • **32 MB** • **64 MB** • **128 MB**—Default

Performance

Table 29. Performance

Option	Description
Multi Core Support	This field specifies whether the process has one or all cores enabled. The performance of some applications improves with the additional cores. • **All**—Default • **1** • **2** • **3**
Intel SpeedStep	Allows you to enable or disable the Intel SpeedStep mode of processor. • **Enable Intel SpeedStep** This option is set by default.

Table 29. Performance (continued)

Option	Description
C-States Control	Allows you to enable or disable the additional processor sleep states. • **C states** This option is set by default.
Hyper-Thread Control	Allows you to enable or disable the HyperThreading in the processor. • **Disabled** • **Enabled**—Default

Power management

Table 30. Power Management

Option	Description
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. • **Wake on AC** This option is not set by default.
Enable Intel Speed Shift technology	This option is used to enable/disable Intel Speed Shift Technology. This option is not enabled by default.
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: • **Disabled**—Default • **Every Day** • **Weekdays** • **Select Days** This option is not set by default.
USB Wake Support	Allows you to enable USB devices to wake the system from standby. • **Enable USB Wake Support** • **Wake on Dell USB-C Dock**—Default
Wireless Radio Control	This option if enabled, will sense the connection of the system to a wired network and subsequently disable the selected wireless radios (WLAN and WWAN). Upon disconnection from the wired network the selected wireless radio will be enabled. • **Control WLAN radio** This option is not set by default.
Wake on LAN /WLAN	This option allows the computer to power up from the off state when triggered by a special LAN signal. Wake-up from the Standby state is unaffected by this setting and must be enabled in the operating system. This feature only works when the computer is connected to AC power supply. • **Disabled**—Default - Does not allow the system to power on by special LAN signals when it receives a wake-up signal from the LAN or wireless LAN. • **LAN or WLAN** - Allows the system to be powered on by special LAN or WLAN signals. • **LAN Only** - Allows the system to be powered on by special LAN signals. • **WLAN Only** - Allows the system to be powered on by special WLAN signals. • **LAN with PXE Boot A wake up packet is sent to the system in either the S4 or S5**

Table 30. Power Management (continued)

Option	Description
Block Sleep	This option lets you to block entering to sleep in operating system environment. This option is not set by default.
Peak Shift	Allows you enable of disable the Peak shift feature. This feature, when enabled, minimizes the AC power usage at times of peak demand. Battery does not charge between the Peak Shift start and end time. Peak Shift Start and End Time can be configured for all weekdays. This option sets the battery threshold value (15% to 100%)
Advanced Battery Charge Configuration	This option enables you to maximize the battery health. By enabling this option, your system uses the standard charging algorithm and other techniques, during the non-work hours, to improve the battery health. Advanced Battery Charge Mode can be configured for all weekdays.
Primary Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: • **Adaptive**—Default • **Standard** - Fully charges your battery at a standard rate. • **ExpressCharge**- The battery charges over a shorter period of time using Dell's fast charging technology. • **Primarily AC use** • **Custom** If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop. **NOTE:** All charging modes may not be available for all the batteries.

Post behavior

Table 31. POST Behavior

Option	Description
Adapter Warnings	Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters. • **Enable Adapter Warnings**—Default
Numlock Enable	Allows you to enable or disable the Numlock function when the system boots. • **Enable Numlock**—Default
Fn Lock Options	Allows you to let hot key combinations Fn + Esc toggle the primary behavior of F1–F12, between their standard and secondary functions. If you disable this option, you cannot dynamically toggle the primary behavior of these keys. • **Fn Lock**—Default Click one of the following options: • **Lock Mode Disable/Standard**—Default • **Lock Mode Enable/Secondary**
Fastboot	Allows you to speed up the boot process by bypassing some of the compatibility steps. Click one of the following options: • **Minimal**—Default • **Thorough**

Table 31. POST Behavior (continued)

Option	Description
	• **Auto**
Extended BIOS POST Time	Allows you to create an additional preboot delay. Click one of the following options: • **0 seconds**—Default • **5 seconds** • **10 seconds**
Full Screen Logo	Allows you to display full screen logo, if your image matches screen resolution. • **Enable Full Screen Logo** This option is not set by default.
Warnings and Errors	Allows you to select different options to either stop, prompt and wait for user input, continue when warnings are detected but pause on errors, or continue when either warnings or errors are detected during the POST process. Click one of the following options: • **Prompt on Warnings and Errors**—Default • **Continue on Warnings** • **Continue on Warnings and Errors**
MAC Address Pass-Through	This feature replaces the external NIC MAC address (in a supported dock or dongle) with selected MAC address from the system. Click one of the following options: • **Passthrough MAC Address**—Default • **Integrated NIC 1 MAC Address** • **Disabled**

Virtualization support

Table 32. Virtualization Support

Option	Description
Virtualization	This option specifies whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by the Intel Virtualization technology. • **Enable Intel Virtualization Technology** This option is set by default.
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by the Intel Virtualization technology for direct I/O. • **Enable VT for Direct I/O** This option is set by default.

Wireless options

Table 33. Wireless

Option	Description
Wireless Switch	Allows to set the wireless devices that can be controlled by the wireless switch.

Table 33. Wireless (continued)

Option	Description
	The options are: • **WLAN** • **Bluetooth** All the options are enabled by default.
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. The options are: • **WLAN** • **Bluetooth** All the options are enabled by default.

Maintenance

Table 34. Maintenance

Option	Description
Service Tag	Displays the service tag of your computer.
Asset Tag	Allows you to create a system asset tag if an asset tag is not already set. This option is not set by default.
BIOS Downgrade	Allows you to flash previous revisions of the system firmware. • **Allow BIOS Downgrade** This option is set by default.
Data Wipe	Allows you to securely erase data from all internal storage devices. • **Wipe on Next Boot** This option is not set by default.
BIOS Recovery	**BIOS Recovery from Hard Drive**—This option is set by default. Allows you to recover the corrupted BIOS from a recovery file on the HDD or an external USB drive. **BIOS Auto-Recovery**— Allows you to recover the BIOS automatically. **NOTE: BIOS Recovery from Hard Drive** field should be enabled. **Always Perform Integrity Check**—Performs integrity check on every boot.

System logs

Table 35. System Logs

Option	Description
BIOS events	Allows you to view and clear the System Setup (BIOS) POST events.
Thermal Events	Allows you to view and clear the System Setup (Thermal) events.
Power Events	Allows you to view and clear the System Setup (Power) events.

SupportAssist System Resolution

Table 36. SupportAssist System Resolution

Option	Description
Auto OS Recovery Threshold	The Auto OS Recovery threshold setup options controls the automatic flow for SupportAssist System Resolution Console and for Dell OS Recovery Tool. The options are: • **0** • **1** • **2**—Default • **3**
SupportAssist OS Recovery	The SupportAssist OS Recovery option will enable or disable the boot flow for SupportAssist OS Recovery tool in the event of certain system errors. This option is not set by default.

Boot Sequence

Boot sequence enables you to bypass the System Setup–defined boot device order and boot directly to a specific device (for example: optical drive or hard drive). During the Power-on Self-Test (POST), when the Dell logo appears, you can:

- Access System Setup by pressing F2 key
- Bring up the one-time boot menu by pressing F12 key.

The one-time boot menu displays the devices that you can boot from including the diagnostic option. The boot menu options are:

- Removable Drive (if available)
- STXXXX Drive

  NOTE: XXXX denotes the SATA drive number.
- Optical Drive (if available)
- SATA Hard Drive (if available)
- Diagnostics

  NOTE: Choosing **Diagnostics**, displays the **SupportAssist** screen.

The boot sequence screen also displays the option to access the System Setup screen.

Updating the BIOS

Updating the BIOS in Windows

About this task

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, see Knowledge Article: https://www.dell.com/support/article/sln153694

Steps

1. Go to www.dell.com/support.
2. Click **Product support**. In the **Search support** box, enter the Service Tag of your computer, and then click **Search**.

NOTE: If you do not have the Service Tag, use the SupportAssist feature to automatically identify your computer. You can also use the product ID or manually browse for your computer model.

3. Click **Drivers & Downloads**. Expand **Find drivers**.
4. Select the operating system installed on your computer.
5. In the **Category** drop-down list, select **BIOS**.
6. Select the latest version of BIOS, and click **Download** to download the BIOS file for your computer.
7. After the download is complete, browse the folder where you saved the BIOS update file.
8. Double-click the BIOS update file icon and follow the on-screen instructions.
   For more information, see knowledge base article 000124211 at www.dell.com/support.

Updating the BIOS in Linux and Ubuntu

To update the system BIOS on a computer that is installed with Linux or Ubuntu, see the knowledge base article 000131486 at www.dell.com/support.

Updating the BIOS using the USB drive in Windows

About this task

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, see Knowledge Article: https://www.dell.com/support/article/sln153694

Steps

1. Follow the procedure from step 1 to step 6 in Updating the BIOS in Windows to download the latest BIOS setup program file.
2. Create a bootable USB drive. For more information, see the knowledge base article 000145519 at www.dell.com/support.
3. Copy the BIOS setup program file to the bootable USB drive.
4. Connect the bootable USB drive to the computer that needs the BIOS update.
5. Restart the computer and press **F12** .
6. Select the USB drive from the **One Time Boot Menu**.
7. Type the BIOS setup program filename and press **Enter**.
   The **BIOS Update Utility** appears.
8. Follow the on-screen instructions to complete the BIOS update.

Updating the BIOS from the F12 One-Time boot menu

Update your computer BIOS using the BIOS update.exe file that is copied to a FAT32 USB drive and booting from the F12 One-Time boot menu.

About this task

CAUTION: If BitLocker is not suspended before updating the BIOS, the next time you reboot the system it will not recognize the BitLocker key. You will then be prompted to enter the recovery key to progress and the system will ask for this on each reboot. If the recovery key is not known this can result in data loss or an unnecessary operating system re-install. For more information on this subject, see Knowledge Article: https://www.dell.com/support/article/sln153694

BIOS Update

You can run the BIOS update file from Windows using a bootable USB drive or you can also update the BIOS from the F12 One-Time boot menu on the computer.

Most of the Dell computers built after 2012 have this capability, and you can confirm by booting your computer to the F12 One-Time Boot Menu to see if BIOS FLASH UPDATE is listed as a boot option for your computer. If the option is listed, then the BIOS supports this BIOS update option.

NOTE: Only computers with BIOS Flash Update option in the F12 One-Time boot menu can use this function.

Updating from the One-Time boot menu

To update your BIOS from the F12 One-Time boot menu, you need the following:

- USB drive formatted to the FAT32 file system (key does not have to be bootable)
- BIOS executable file that you downloaded from the Dell Support website and copied to the root of the USB drive
- AC power adapter that is connected to the computer
- Functional computer battery to flash the BIOS

Perform the following steps to perform the BIOS update flash process from the F12 menu:

CAUTION: Do not turn off the computer during the BIOS update process. The computer may not boot if you turn off your computer.

Steps

1. From a turn off state, insert the USB drive where you copied the flash into a USB port of the computer.
2. Turn on the computer and press F12 to access the One-Time Boot Menu, select BIOS Update using the mouse or arrow keys then press Enter.
   The flash BIOS menu is displayed.
3. Click **Flash from file**.
4. Select external USB device.
5. Select the file and double-click the flash target file, and then click **Submit**.
6. Click **Update BIOS**. The computer restarts to flash the BIOS.
7. The computer will restart after the BIOS update is completed.

System and setup password

Table 37. System and setup password

Password type	Description
System password	Password that you must enter to log on to your system.
Setup password	Password that you must enter to access and make changes to the BIOS settings of your computer.

You can create a system password and a setup password to secure your computer.

CAUTION: The password features provide a basic level of security for the data on your computer.

CAUTION: Anyone can access the data stored on your computer if it is not locked and left unattended.

NOTE: System and setup password feature is disabled.

Assigning a system setup password

Prerequisites

You can assign a new **System or Admin Password** only when the status is in **Not Set**.

About this task

To enter the system setup, press F2 immediately after a power-on or reboot.

Steps

1. In the **System BIOS** or **System Setup** screen, select **Security** and press **Enter**.
   The **Security** screen is displayed.
2. Select **System/Admin Password** and create a password in the **Enter the new password** field.
   Use the following guidelines to assign the system password:
   - A password can have up to 32 characters.
   - The password can contain the numbers 0 through 9.
   - Only lower case letters are valid, upper case letters are not allowed.
   - Only the following special characters are allowed: space, (”), (+), (,), (-), (.), (/), (;), ([), (\), (]), (`).
3. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
4. Press **Esc** and a message prompts you to save the changes.
5. Press **Y** to save the changes.
   The computer reboots.

Deleting or changing an existing system setup password

Prerequisites

Ensure that the **Password Status** is Unlocked (in the System Setup) before attempting to delete or change the existing System and Setup password. You cannot delete or change an existing System or Setup password, if the **Password Status** is Locked.

About this task

To enter the System Setup, press **F2** immediately after a power-on or reboot.

Steps

1. In the **System BIOS** or **System Setup** screen, select **System Security** and press **Enter**.
   The **System Security** screen is displayed.
2. In the **System Security** screen, verify that **Password Status** is **Unlocked**.
3. Select **System Password**, alter or delete the existing system password and press **Enter** or **Tab**.
4. Select **Setup Password**, alter or delete the existing setup password and press **Enter** or **Tab**.

   NOTE: If you change the System and/or Setup password, re enter the new password when prompted. If you delete the System and Setup password, confirm the deletion when prompted.

5. Press **Esc** and a message prompts you to save the changes.
6. Press **Y** to save the changes and exit from System Setup.
   The computer restarts.

6

Software and Troubleshooting

Topics:

- Operating system
- Create a USB recovery drive for Windows
- Downloading Windows drivers

Operating system

Table 38. Operating system

Operating system	
Operating systems supported	Windows 10 Professional (64 bit)

Create a USB recovery drive for Windows

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.

Prerequisites

NOTE: This process may take up to an hour to complete.

NOTE: The following steps may vary depending on the version of Windows installed. Refer to the Microsoft support site for latest instructions.

Steps

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.
4. 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.
7. Click **Create**.
8. Click **Finish**.
   For more information about reinstalling Windows using the USB recovery drive, see the *Troubleshooting* section of your product's *Service Manual* at www.dell.com/support/manuals.

Downloading Windows drivers

Steps

1. Turn on the laptop.
2. Go to Dell.support.com.

3. Click **Product Support**, enter the Service Tag, and then click **Submit**.

   NOTE: If you do not have the Service Tag, use the auto detect feature or manually browse for your laptop model.

4. Click **Drivers and Downloads**.
5. Select the operating system installed on your laptop.
6. Scroll down the page and select the driver to install.
7. Click **Download File** to download the driver.
8. After the download is complete, navigate to the folder where you saved the driver file.
9. Double-click the driver file icon and follow the instructions on the screen.

7

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 39. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
Dell Help and Support app	
Accessing help	In Windows search, type `Help and Support`, and press Enter.
Online help for operating system	www.dell.com/support/windows
Troubleshooting information, user manuals, set up instructions, product specifications, technical help blogs, drivers, software updates, and so on.	www.dell.com/support
Dell knowledge base articles for various computer concerns	1. Go to www.dell.com/support. 2. Type the subject or keyword in the **Search** box. 3. Click **Search** to retrieve the related articles.
Learn and know the following information about your product: ● Product specifications ● Operating system ● Setting up and using your product ● Data backup ● Troubleshooting and diagnostics ● Factory and system restore ● BIOS information	See *Me and My Dell* at www.dell.com/support/manuals. To locate the *Me and My Dell* relevant to your product, identify your product through one of the following: ● Select **Detect Product**. ● Locate your product through the drop-down menu under **View Products**. ● Enter the **Service Tag number** or **Product ID** in the search bar.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.

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 about your purchase invoice, packing slip, bill, or Dell product catalog.