

Dell Latitude 3310 2-in-1

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 power adapter and press the power button.



2. Finish the Windows system setup.
3. 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.**
 - Sign in or create an account if the internet is connected, or create an offline account if its not.
 - On the **Support and Protection** screen, enter your contact details.
4. Locate and use Dell apps from the Windows Start menu—Recommended

Table 1. Locate Dell apps

Dell apps	Details
	<p>Dell Product Registration</p> <p>Register your computer with Dell.</p>
	<p>Dell Help & Support</p> <p>Access help and support for your computer.</p>
	<p>SupportAssist</p> <p>Proactively checks the health of your computer's hardware and software.</p> <p>NOTE: Renew or upgrade your warranty by clicking the warranty expiry date in SupportAssist.</p>

Dell apps



Details

Dell Update

Updates your computer with critical fixes and important device drivers as they become available.

Dell Digital Delivery

Download software applications including software that is purchased but not pre-installed on your computer.

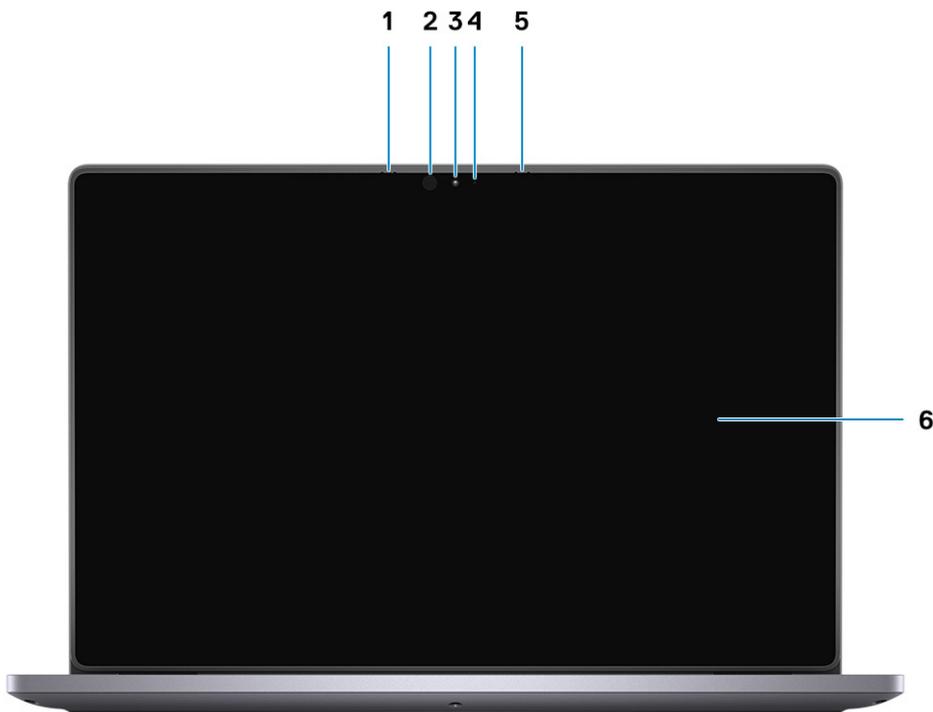
5. Create recovery drive for Windows.

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

6. For more information, see [Create a USB recovery drive for Windows](#).

Chassis Overview

Front view



1. Microphone
3. Camera
5. Microphone

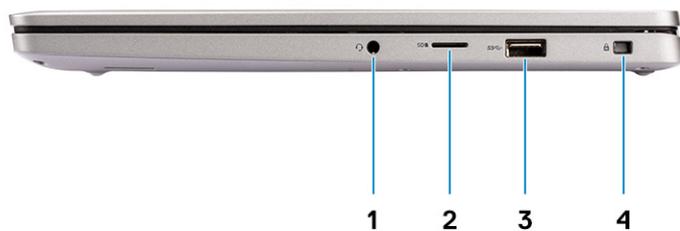
2. Infrared (IR) emitter (optional)
4. Camera status light
6. LCD Panel

Left view



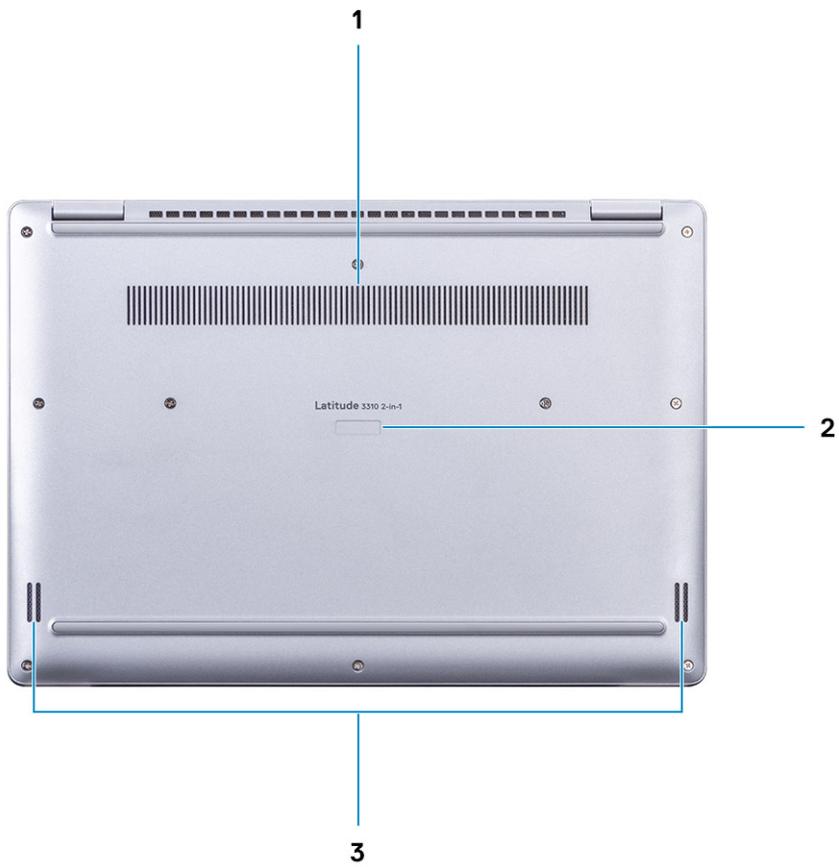
- 1. Power connector
- 2. Battery status light
- 3. HDMI port
- 4. USB 3.1 port
- 5. USB Type-C port

Right view



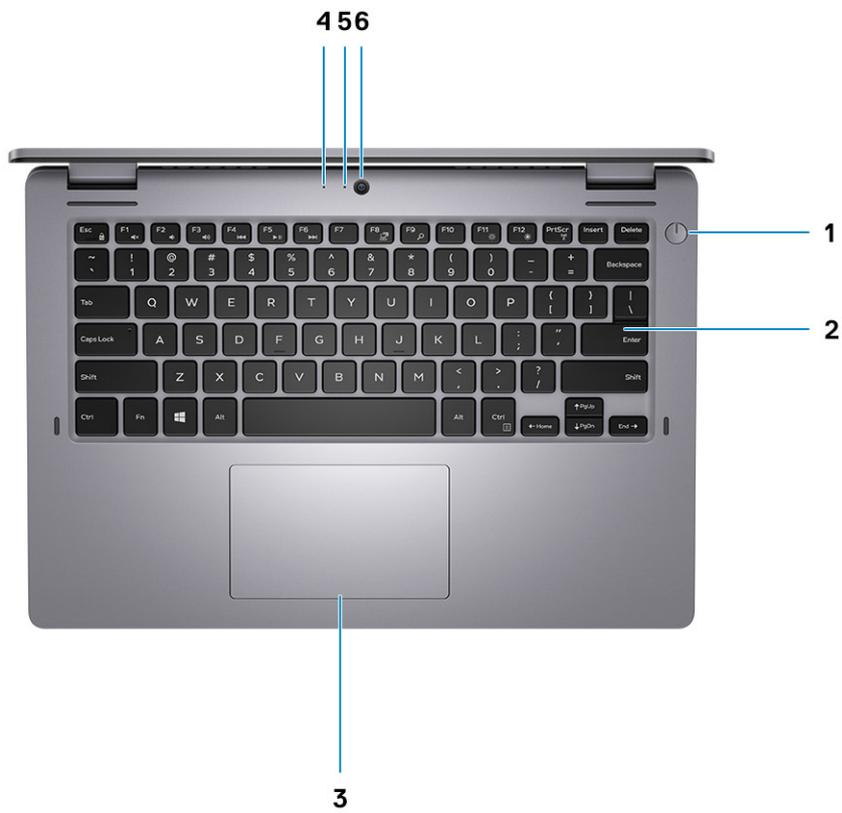
- 1. Audio port
- 2. microSD port
- 3. USB 3.1 port
- 4. Wedge-shaped lock slot

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

Keyboard shortcuts

NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys that are 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 that is shown on the lower part of the key sees the character that is typed out when the key is pressed. If you press shift and the key, the symbol that is 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 multimedia control. Press the function key to invoke the task. For example, pressing F1 mutes the audio (see the table below).

However, if the function keys F1-F12 are needed for specific software applications, multimedia functionality can be disabled by pressing **Fn + Esc**. Next, multimedia 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
		Mute audio
		Decrease volume
		Increase volume
		Play previous track/chapter
		Play/Pause
		Play next track/chapter.
		Switch to external display
		Search
		Click keyboard backlight (optional).
		NOTE: Non-backlight keyboards have F10 function key without the backlight icon and do not support toggle keyboard backlight function.
		Decrease brightness
		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
	Turn off/on wireless.
	Pause/Break
	Sleep
	Click scroll lock.
	Toggle between power and battery-status light.../hard-drive activity light
	System request
	Open application menu
	Click Fn-key lock.
	Page up
	Page down
	Home
	End

Specifications of Latitude 3310 2-in-1

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 (1.56 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 Core i5-8265U	Intel Core i5-8365U	Intel Pentium-5405U
Wattage	15 W	15 W	15 W	15 W
Core count	2	4	4	2
Thread count	4	8	8	4
Speed	Up to 3.9 GHz	Up to 3.9 GHz	Up to 4.1 GHz	Up to 2.3 GHz
Cache	4 MB	6 MB	6 MB	2 MB
Integrated graphics	Intel UHD Graphics 620	Intel UHD Graphics 620	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	<ul style="list-style-type: none"> • Mainstream U-Up to Gen 2 • Premium U-Up to Gen 3

Operating system

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

Memory

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
Maximum memory	16 GB
Minimum memory	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB
Configurations supported	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• 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	<ul style="list-style-type: none">• One M.2 2230 slot for WiFi and Bluetooth combo card• One M.2 2230 slot for solid-state drive

Description	Values
	 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	<ul style="list-style-type: none"> • WiFi 802.11a/b/g • WiFi 4 (WiFi 802.11n) • WiFi 5 (WiFi 802.11ac)
Encryption	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none">• microSD• microSDHC• microSDXC

Keyboard

Table 14. Keyboard specifications

Description	Values
Type	<ul style="list-style-type: none">• Single pointing keyboard• Single pointing backlit keyboard
Layout	QWERTY
Number of keys	<ul style="list-style-type: none">• 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	<p>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.</p> <p>NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.</p>

[Keyboard shortcuts.](#)

Camera

Table 15. Camera specifications

Description	Values
Number of cameras	One

Description	Values
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

Touchpad gestures

For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article [4027871](https://support.microsoft.com/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-35 °C (32°F-95°F)
Storage	-20°C-65°C (-40°F-149°F)
Operating time	Varies depending on operating conditions and can reduce under certain power-intensive conditions
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

Description	Values
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)	25.00069444444444
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-65°C (-40°F-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 1000 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.

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 in Windows](#)
- [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.
Tab	Moves to the next focus area.

Keys

Esc

Navigation

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 tabletcomputerlaptop and its installed devices, the items listed in this section may or may not appear.

General options

Table 23. General

Option	Description
System Information	<p>This section lists the primary hardware features of your computer.</p> <p>The options are:</p> <ul style="list-style-type: none">• System Information<ul style="list-style-type: none">• BIOS version• Service Tag• Asset Tag• Ownership Tag• Manufacture Date• Express Service Code• Memory Configuration<ul style="list-style-type: none">• Memory Installed• Memory Available• Memory Speed• Memory Channel Mode• Memory Technology• DIMM A Size<p>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.</p>• Processor Information<ul style="list-style-type: none">• 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<ul style="list-style-type: none">• SATA-0• M.2 PCIe SSD-0• LOM MAC Address• Passthrough MAC Address• Video Controller

Option	Description
	<ul style="list-style-type: none"> • 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	<p>Allows you to change the order in which the computer attempts to find an operating system.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Windows Boot Manager • Onboard NIC (IPV4) • Onboard NIC (IPV6) <p>Allows you to change the boot list options.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Legacy External Devices • UEFI—Default
Advanced Boot Options	<p>Allows you to Enable Legacy Option ROMs.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable Legacy Option ROMs • Enable Attempt Legacy Boot
UEFI Boot Path Security	<p>Allows you to control whether the system prompts the user to enter the Admin password when booting to a UEFI boot path.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • 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	<p>Allows you to configure the operating mode of the integrated SATA hard-drive controller.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Disabled • AHCI • RAID On—Default <p> NOTE: SATA is configured to support RAID mode.</p>
Drives	These fields let you enable or disable various drives on board.

Option	Description
	<p>The options are:</p> <ul style="list-style-type: none"> • SATA-1 • M.2 PCIe SSD-0
SMART Reporting	<p>This field controls whether hard drive errors for integrated drives are reported during startup.</p> <p>The option is disabled by default.</p>
USB Configuration	<p>Allows you to enable or disable the internal/integrated USB configuration.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable USB Boot Support • Enable External USB Ports <p>All the options are set by default.</p> <p>NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.</p>
Dell Type-C Dock Configuration	<p>Allows you to connect to Dell WD and TB family of docks (Type-C Docks) independent of USB and Thunderbolt adapter configuration.</p> <p>This option is enabled by default.</p>
Audio	<p>Allows you to enable or disable the integrated audio controller. By default, the Enable Audio option is selected.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable Microphone • Enable Internal Speaker <p>This option is set by default.</p>
Touchscreen	<p>This option controls whether the touchscreen is enabled or disabled</p> <p>This option is enabled by default.</p>
Miscellaneous devices	<p>Allows you to enable or disable various on board devices.</p> <ul style="list-style-type: none"> • 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	<p>Allows you to set the display brightness depending upon the power source. On Battery (50% is default) and On AC (100% default).</p>
Switchable Graphics	<p>This option enables or disables switchable graphics technologies such as NVIDIA Optimus and SMD PowerExpress.</p> <p>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.</p>

Security

Table 26. Security

Option	Description
Admin Password	<p>Allows you to set, change, or delete the administrator (admin) password.</p> <p>The entries to set the password are:</p> <ul style="list-style-type: none">• Enter the old password• Enter the new password• Confirm new password <p>Click OK once you set the password.</p> <p> 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</p>
System Password	<p>Allows you to set, change, or delete the System password.</p> <p>The entries to set the password are:</p> <ul style="list-style-type: none">• Enter the old password• Enter the new password• Confirm new password <p>Click OK once you set the password.</p> <p> 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</p>
Strong Password	<p>Allows you to enforce the option to always set the strong password.</p> <ul style="list-style-type: none">• Enable Strong Password <p>This option is not set by default.</p>
Password Configuration	<p>You can define the length of your password. Min = 4, Max = 32</p>
Password Bypass	<p>Allows you to bypass the System password and the Internal HDD password, when it is set, during a system restart.</p> <p>Click one of the options:</p> <ul style="list-style-type: none">• Disabled—Default• Reboot bypass
Password Change	<p>Allows you to change the System password when the administrator password is set.</p> <ul style="list-style-type: none">• Allow Non-Admin Password Changes <p>This option is set by default.</p>
Non-Admin Setup Changes	<p>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.</p> <ul style="list-style-type: none">• Allow Wireless Switch Changes <p>This option is not set by default.</p>
UEFI Capsule Firmware Updates	<p>Allows you to update the system BIOS via UEFI capsule update packages.</p> <ul style="list-style-type: none">• Enable UEFI Capsule Firmware Updates <p>This option is set by default.</p>
PTT Security	<p>This option lets you control whether the Platform Trust Technology feature (PTT) is visible to the operating system.</p> <p>The options are :</p>

Option	Description
	<ul style="list-style-type: none"> • PTT On — Enabled by Default • Clear • PPI ByPass for Clear Command
Computrace (R)	<p>Allows you to activate or disable the optional Computrace software.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Deactivate • Disable • Activate—Default
CPU XD Support	<p>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.</p> <ul style="list-style-type: none"> • Enable CPU XD Support—Default
Admin Setup Lockout	<p>Allows you to prevent users from entering Setup when an administrator password is set.</p> <ul style="list-style-type: none"> • Enable Admin Setup Lockout <p>This option is not set by default.</p>
Master Password Lockout	<p>Allows you to disable master password support.</p> <ul style="list-style-type: none"> • Enable Master Password Lockout <p>This option is not set by default.</p> <p> NOTE: Hard disk password should be cleared before the settings can be changed.</p>
SMM Security Mitigation	<p>Allows you to enable or disable additional UEFI SMM Security Mitigation protection.</p> <ul style="list-style-type: none"> • SMM Security Mitigation <p>This option is not set by default.</p>

Secure Boot

Table 27. Secure Boot

Option	Description
Secure Boot Enable	<p>Allows you to enable or disable the Secure Boot Feature.</p> <ul style="list-style-type: none"> • Secure Boot Enable Not enabled by default
Secure Boot Mode	<p>Changes to the Secure Boot operation mode modifies the behavior to allow evaluation of UEFI driver signatures.</p> <p>Choose one of the these options:</p> <ul style="list-style-type: none"> • Deployed Mode—Default • Audit Mode
Expert Key Management	<p>Allows you to enable or disable Expert Key Management.</p> <ul style="list-style-type: none"> • Enable Custom Mode <p>This option is not set by default.</p> <p>The Custom Mode Key Management options are:</p> <ul style="list-style-type: none"> • PK—Default • KEK • db • dbx

Intel Software Guard Extensions options

Table 28. Intel Software Guard Extensions

Option	Description
Intel SGX Enable	<p>This field specifies you to provide a secured environment for running code/storing sensitive information in the context of the main operating systems.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none">• Disabled• Enabled• Software controlled—Default
Enclave Memory Size	<p>This option sets SGX Enclave Reserve Memory Size</p> <p>Click one of the following options:</p> <ul style="list-style-type: none">• 32 MB• 64 MB• 128 MB—Default

Performance

Table 29. Performance

Option	Description
Multi Core Support	<p>This field specifies whether the process has one or all cores enabled. The performance of some applications improves with the additional cores.</p> <ul style="list-style-type: none">• All—Default• 1• 2• 3
Intel SpeedStep	<p>Allows you to enable or disable the Intel SpeedStep mode of processor.</p> <ul style="list-style-type: none">• Enable Intel SpeedStep <p>This option is set by default.</p>
C-States Control	<p>Allows you to enable or disable the additional processor sleep states.</p> <ul style="list-style-type: none">• C states <p>This option is set by default.</p>
Hyper-Thread Control	<p>Allows you to enable or disable the HyperThreading in the processor.</p> <ul style="list-style-type: none">• Disabled• Enabled—Default

Power management

Table 30. Power Management

Option	Description
AC Behavior	<p>Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected.</p> <ul style="list-style-type: none"> • Wake on AC <p>This option is not set by default.</p>
Enable Intel Speed Shift technology	<p>This option is used to enable/disable Intel Speed Shift Technology.</p> <p>This option is not enabled by default.</p>
Auto On Time	<p>Allows you to set the time at which the computer must turn on automatically.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Disabled—Default • Every Day • Weekdays • Select Days <p>This option is not set by default.</p>
USB Wake Support	<p>Allows you to enable USB devices to wake the system from standby.</p> <ul style="list-style-type: none"> • Enable USB Wake Support • Wake on Dell USB-C Dock—Default
Wireless Radio Control	<p>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.</p> <ul style="list-style-type: none"> • Control WLAN radio <p>This option is not set by default.</p>
Wake on LAN /WLAN	<p>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.</p> <ul style="list-style-type: none"> • 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
Block Sleep	<p>This option lets you to block entering to sleep in operating system environment.</p> <p>This option is not set by default.</p>
Peak Shift	<p>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.</p> <p>Peak Shift Start and End Time can be configured for all weekdays.</p> <p>This option sets the battery threshold value (15% to 100%)</p>
Advanced Battery Charge Configuration	<p>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.</p> <p>Advanced Battery Charge Mode can be configured for all weekdays.</p>

Option	Description
Primary Battery Charge Configuration	<p>Allows you to select the charging mode for the battery.</p> <p>The options are:</p> <ul style="list-style-type: none"> • 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 <p>If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop.</p> <p> NOTE: All charging modes may not be available for all the batteries.</p>

Post behavior

Table 31. POST Behavior

Option	Description
Adapter Warnings	<p>Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters.</p> <ul style="list-style-type: none"> • Enable Adapter Warnings—Default
Numlock Enable	<p>Allows you to enable or disable the Numlock function when the system boots.</p> <ul style="list-style-type: none"> • Enable Numlock—Default
Fn Lock Options	<p>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.</p> <ul style="list-style-type: none"> • Fn Lock—Default <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Lock Mode Disable/Standard—Default • Lock Mode Enable/Secondary
Fastboot	<p>Allows you to speed up the boot process by bypassing some of the compatibility steps.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Minimal—Default • Thorough • Auto
Extended BIOS POST Time	<p>Allows you to create an additional preboot delay.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • 0 seconds—Default • 5 seconds • 10 seconds
Full Screen Logo	<p>Allows you to display full screen logo, if your image matches screen resolution.</p> <ul style="list-style-type: none"> • Enable Full Screen Logo <p>This option is not set by default.</p>
Warnings and Errors	<p>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.</p>

Option	Description
	<p>Click one of the following options:</p> <ul style="list-style-type: none"> • Prompt on Warnings and Errors—Default • Continue on Warnings • Continue on Warnings and Errors
MAC Address Pass-Through	<p>This feature replaces the external NIC MAC address (in a supported dock or dongle) with selected MAC address from the system.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Passthrough MAC Address—Default • Integrated NIC 1 MAC Address • Disabled

Virtualization support

Table 32. Virtualization Support

Option	Description
Virtualization	<p>This option specifies whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by the Intel Virtualization technology.</p> <ul style="list-style-type: none"> • Enable Intel Virtualization Technology <p>This option is set by default.</p>
VT for Direct I/O	<p>Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by the Intel Virtualization technology for direct I/O.</p> <ul style="list-style-type: none"> • Enable VT for Direct I/O <p>This option is set by default.</p>

Wireless options

Table 33. Wireless

Option	Description
Wireless Switch	<p>Allows to set the wireless devices that can be controlled by the wireless switch.</p> <p>The options are:</p> <ul style="list-style-type: none"> • WLAN • Bluetooth <p>All the options are enabled by default.</p>
Wireless Device Enable	<p>Allows you to enable or disable the internal wireless devices.</p> <p>The options are:</p> <ul style="list-style-type: none"> • WLAN • Bluetooth <p>All the options are enabled by default.</p>

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. <ul style="list-style-type: none">• Allow BIOS Downgrade This option is set by default.
Data Wipe	Allows you to securely erase data from all internal storage devices. <ul style="list-style-type: none">• 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: <ul style="list-style-type: none">• 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 ePSA diagnostics screen.**

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

Updating the BIOS in Windows

Prerequisites

It is recommended to update your BIOS (System Setup), when you replace the system board or if an update is available. For laptops, ensure that your computer battery is fully charged and connected to a power before initiating a BIOS update.

About this task

- ⓘ **NOTE: If BitLocker is enabled, it must be suspended prior to updating the system BIOS, and then re enabled after the BIOS update is completed.**

Steps

1. Restart the computer.
2. Go to **Dell.com/support**.
 - Enter the **Service Tag** or **Express Service Code** and click **Submit**.
 - Click **Detect Product** and follow the instructions on screen.
3. If you are unable to detect or find the Service Tag, click **Choose from all products**.
4. Choose the **Products** category from the list.
 - ⓘ **NOTE: Choose the appropriate category to reach the product page**
5. Select your computer model and the **Product Support** page of your computer appears.
6. Click **Get drivers** and click **Drivers and Downloads**.
The Drivers and Downloads section opens.
7. Click **Find it myself**.
8. Click **BIOS** to view the BIOS versions.
9. Identify the latest BIOS file and click **Download**.
10. Select your preferred download method in the **Please select your download method below** window, click **Download File**.
The **File Download** window appears.
11. Click **Save** to save the file on your computer.
12. Click **Run** to install the updated BIOS settings on your computer.
Follow the instructions on the screen.

Updating BIOS on systems with BitLocker enabled

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 reinstall. For more information about this subject, see Knowledge Article: [Updating the BIOS on Dell Systems With BitLocker Enabled](#)

Updating your system BIOS using a USB flash drive

About this task

If the system cannot load into Windows, but there is still a need to update the BIOS, download the BIOS file using another system and save it to a bootable USB Flash Drive.

NOTE: You will need to use a bootable USB flash drive. Please refer to the following article for further details [How to Create a Bootable USB Flash Drive using Dell Diagnostic Deployment Package \(DDDP\)](#)

Steps

1. Download the BIOS update .EXE file to another system.
2. Copy the file e.g. O9010A12.EXE onto the bootable USB flash drive.
3. Insert the USB flash drive into the system that requires the BIOS update.
4. Restart the system and press F12 when the Dell splash logo appears to display the One Time Boot Menu.
5. Using arrow keys, select **USB Storage Device** and click **Enter**.
6. The system will boot to a Diag C:\> prompt.
7. Run the file by typing the full filename, for example, O9010A12.exe and press **Enter**.
8. The BIOS Update Utility will load. Follow the instructions on screen.

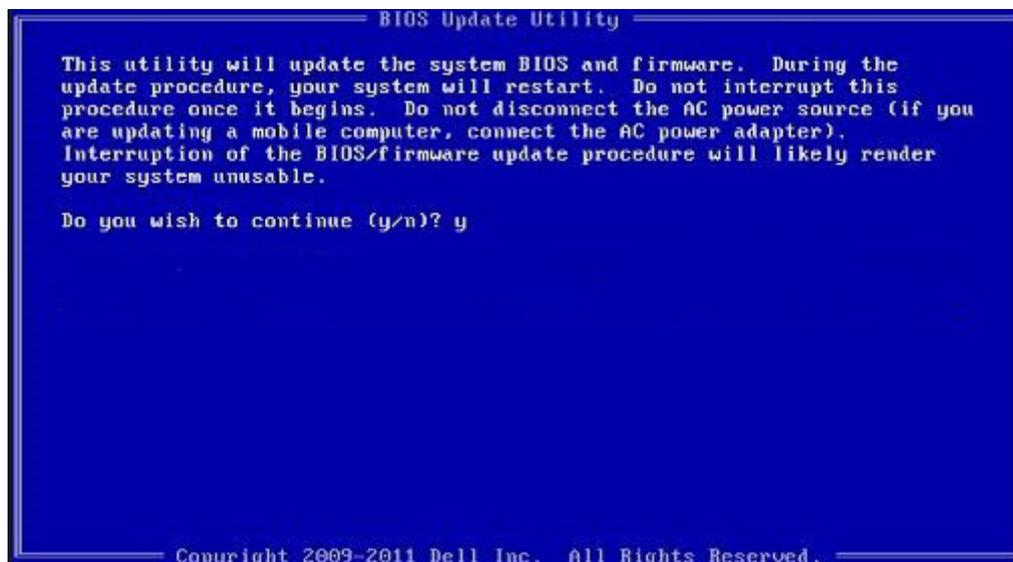


Figure 1. DOS BIOS Update Screen

Updating the Dell BIOS in Linux and Ubuntu environments

If you want to update the system BIOS in a Linux environment, such as Ubuntu, see <https://www.dell.com/support/article/sln171755/>.

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.

Software and Troubleshooting

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.com/support**.
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.

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 <code>Help and Support</code> , and press <code>Enter</code> .
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	<ol style="list-style-type: none"> 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:	See <i>Me and My Dell</i> at www.dell.com/support/manuals .
<ul style="list-style-type: none"> • Product specifications • Operating system • Setting up and using your product • Data backup • Troubleshooting and diagnostics • Factory and system restore • BIOS information 	To locate the <i>Me and My Dell</i> relevant to your product, identify your product through one of the following: <ul style="list-style-type: none"> • 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.**