

Dell Latitude 5310 2-in-1

Setup and specifications guide

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.

© 2020 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

Contents

1 Set up your computer	5
2 Create a USB recovery drive for Windows	7
3 Chassis overview	8
Display view	8
Left view	9
Right view	9
Palmrest view	10
Bottom view	11
4 Keyboard shortcuts	12
5 Specifications of Latitude 5310 2-in-1	13
Dimensions and weight	13
Processors	13
Chipset	13
Operating system	14
Memory	14
Ports and connectors	14
Communications	15
Audio	16
Storage	16
Media-card reader	16
Keyboard	17
Camera	17
Touchpad	18
Touchpad gestures	18
Power adapter	18
Battery	19
Display	19
Fingerprint reader	20
Video	20
Computer environment	20
6 Software	22
Downloading Windows drivers	22
7 System setup	23
Boot menu	23
Navigation keys	23
Boot Sequence	24
System setup options	24
General options	24

System configuration.....	25
Video screen options.....	27
Security.....	27
Secure Boot.....	29
Intel Software Guard Extensions options.....	29
Performance.....	30
Power management.....	30
Post behavior.....	31
Manageability.....	32
Virtualization support.....	33
Wireless options.....	33
Maintenance.....	33
System logs.....	34
Updating the BIOS in Windows	34
Updating BIOS on systems with BitLocker enabled.....	35
Updating your system BIOS using a USB flash drive.....	35
System and setup password.....	35
Assigning a system setup password.....	36
Deleting or changing an existing system setup password.....	36
8 Getting help and contacting Dell.....	37

Set up your computer

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

i **NOTE:** To conserve battery power, the battery might enter power saving mode.






2. Finish Windows system setup.

Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:

- Connect to a network for Windows updates.
 - i** **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

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>i 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 preinstalled on your computer.

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.**

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

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.

 **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.

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**.

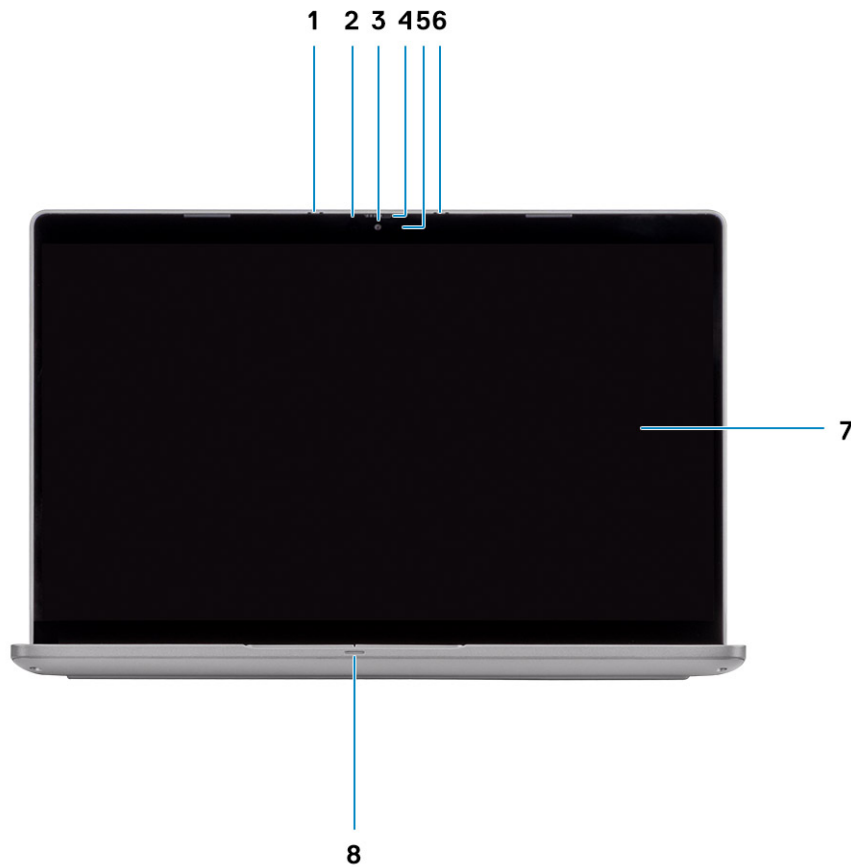
For more information about reinstalling Windows using the USB recovery drive, see the *Troubleshooting* section of your product's *Service Manual* at www.dell.com/support/manuals.

Chassis overview

Topics:

- Display view
- Left view
- Right view
- Palmrest view
- Bottom view

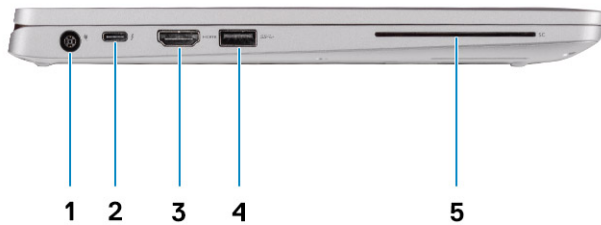
Display view



1. Array microphone
2. Camera IR LED
3. Camera
4. Camera shutter
5. Camera status LED
6. Array microphone
7. LCD panel
8. Battery indicator LED

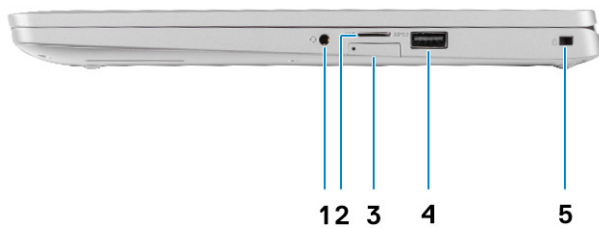
1. Array microphone
2. Camera IR LED
3. Camera
4. Camera shutter
5. Camera status LED
6. Array microphone
7. LCD panel
8. Battery indicator LED

Left view



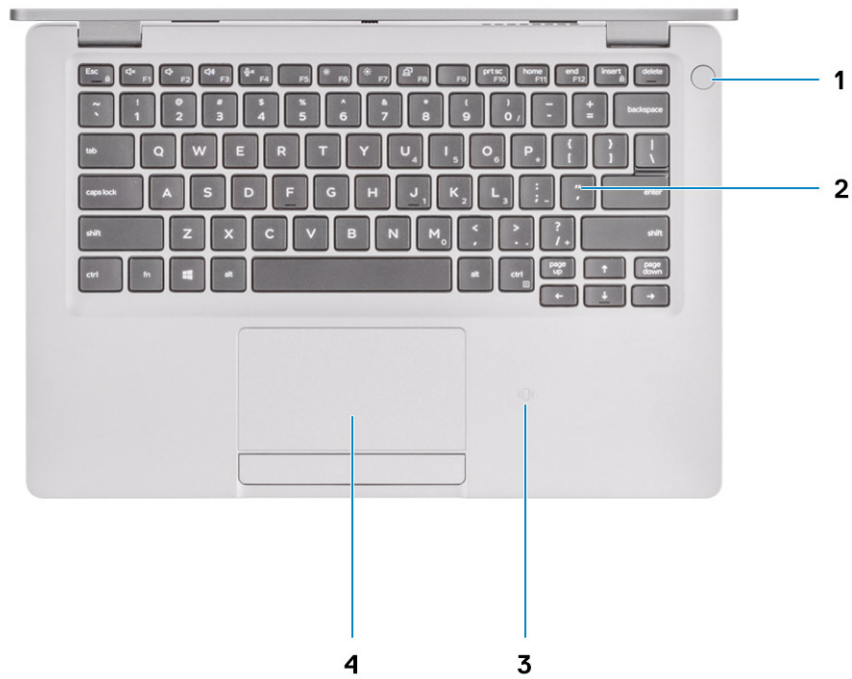
1. Power connector port
2. USB 3.2 Gen 2 (USB Type-C) port with DisplayPort/ Power Delivery/Thunderbolt (optional)
3. HDMI port
4. USB 3.2 Gen 1 port
5. Smart card reader (optional)

Right view



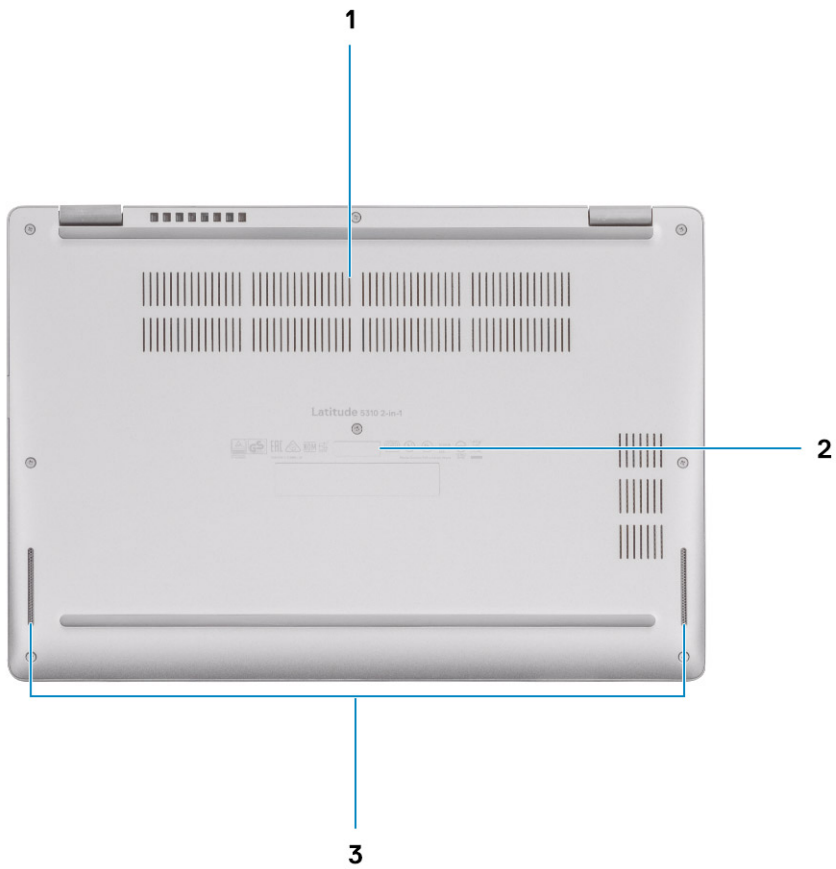
1. Universal Audio Jack
2. microSD card reader
3. micro-SIM card slot (optional)
4. USB 3.2 Gen 1 port with PowerShare
5. Wedge-shaped lock slot

Palmrest view



- | | |
|--|-------------|
| 1. Power button with optional fingerprint reader (FPR) | 2. Keyboard |
| 3. NFC/Contactless smartcard reader (optional) | 4. Touchpad |

Bottom view



1. Thermal vent
2. Service tag label
3. Speakers

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.

Table 2. List of keyboard shortcuts

Keys	Primary Behavior	Secondary Behavior (Fn + Key)
Fn + Esc	Escape	Toggle Fn-key lock
Fn + F1	Mute audio	F1 behavior
Fn + F2	Decrease volume	F2 behavior
Fn + F3	Increase volume	F3 behavior
Fn + F4	Mic Mute	F4 behavior
Fn + F5	Keyboard backlight	F5 behavior
	NOTE: Not applicable for non-backlight keyboard.	
Fn + F6	Decrease screen brightness	F6 behavior
Fn + F7	Increase screen brightness	F7 behavior
Fn + F8	Display Toggle (Win + P)	F8 behavior
Fn + F10	Print Screen	F10 behavior
Fn + F11	Home	F11 behavior
Fn + F12	End	F12 behavior
Fn + Right Ctrl	Emulates Right Click	--

Specifications of Latitude 5310 2-in-1

Dimensions and weight

Table 3. Dimensions and weight

Description	Values
Height:	
Front	17.53 mm (0.69 in.)
Rear	19.71 mm (0.78 in.)
Width	305.70 mm (12.04 in.)
Depth	207.50 mm (8.17 in.)
Weight	2.92 lb (1.32 kg)
	NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.

Processors

Table 4. Processors

Description	Values				
Processors	10th Generation Intel Core i3-10110U	10th Generation Intel Core i5-10210U	10th Generation Intel Core i5-10310U	10th Generation Intel Core i7-10610U	10th Generation Intel Core i7-10810U
Wattage	15 W	15 W	15 W	15 W	15 W
Core count	2	4	4	4	6
Thread count	4	8	8	8	12
Speed	2.1 GHz to 4.1 GHz	1.6 GHz to 4.2 GHz	1.7 GHz to 4.4 GHz	1.8 GHz to 4.9 GHz	1.1 GHz up to 4.9 GHz
Cache	4 MB	6 MB	6 MB	8 MB	12 MB
Integrated graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics

Chipset

Table 5. Chipset

Description	Values
Chipset	Integrated in the processor
Processor	10th Generation Intel Core i3/i5/i7
DRAM bus width	64-bit
Flash ROM	<ul style="list-style-type: none"> 32 MB for vPRO configuration 24 MB for Non-vPRO configuration

Description	Values
PCIe bus	Up to Gen 3

Operating system

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

Memory

Table 6. Memory specifications

Description	Values
Slots	Two SO-DIMM slots
Type	DDR4
Speed	2667 MHz
Maximum memory	32 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 at 2667 MHz (1 x 4 GB) • 8 GB DDR4 at 2667 MHz (2 x 4 GB) • 8 GB DDR4 at 2667 MHz (1 x 8 GB) • 16 GB DDR4 at 2667 MHz (2 x 8 GB) • 16 GB DDR4 at 2667 MHz (1 x 16 GB) • 32 GB DDR4 at 2667 MHz (2 x 16 GB)

Ports and connectors

Table 7. External ports and connectors

Description	Values
External:	
USB	<ul style="list-style-type: none"> • One Type-C USB 3.2 Gen 2 with DisplayPort Alt Mode/Thunderbolt 3 (optional) • One Type-A USB 3.2 Gen 1 with PowerShare • One Type-A USB 3.2 Gen 1
Audio	Universal Audio Jack
Video	<ul style="list-style-type: none"> • One HDMI 1.4 port • One DisplayPort1.2 over USB Type-C
Media card reader	uSD slot (push-push type)
SIM card	uSIM card with tray (optional)
Smart card	Smart card reader slot (optional)
Docking port	Supports Type-C Docks
Power adapter port	<ul style="list-style-type: none"> • One 7.4 mm barrel

Description	Values
Security	<ul style="list-style-type: none"> One Power Delivery 3.0 port over USB Type-C Wedge-shaped security lock

Table 8. Internal ports and connectors

Description	Values
Internal:	
M.2	<ul style="list-style-type: none"> One M.2 2280 slot for SATA/PCIe x 4 One M.2 2230 WLAN/BT PCIe, CNVi, and USB 2.0 One M.2 3042 WWAN PCIe, USB 3.0, and USB 2.0 <p>NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.</p>

Communications

Wireless module

Table 9. Wireless module specifications

Description	Values
Model number	Intel AX201
Transfer rate	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none"> Wi-Fi 802.11a/b/g Wi-Fi 4 (WiFi 802.11n) Wi-Fi 5 (WiFi 802.11ac) Wi-Fi 6 (WiFi 802.11ax)
Encryption	<ul style="list-style-type: none"> 64-bit/128-bit WEP AES-CCMP TKIP
Bluetooth	Bluetooth 5.1

Wireless wide area network module

Table 10. WWAN module specifications

Description	Values
Model number	Intel XMM 7360 Global LTE-Advanced
Form factor	M.2 3042 form factor
Transfer rate	Up to 450 Mbps DL/50 Mbps UL (Cat 9)
Operating Frequency bands supported	(1,2,3,4,5,7,8,11,12,13,17,18,19,20,21,26,28,29,30,38,39,40,41,66), HSPA+ (1, 2, 4,5, 8)
Power supply	DC 3.135 V to 4.4 V, Typical 3.3 V
Temperature	Normal operating temperature: -10°C to + 55°C

Description	Values
	Extended Operating temperature: -20°C to +65°C
Antenna connector	WWAN Main Antenna x 1 WWAN Diversity Antenna x 1
Wake on Wireless	Supported
Network standards	LTE FDD/TDD, WCDMA/HSPA+, GNSS/ Beidou

Audio

Table 11. Audio specifications

Description	Values
Controller	REALTEK ALC3254
Stereo conversion	24-bit DAC (Digital-to-Analog) and ADC (Analog-to-Digital)
Internal interface	High Definition audio interface
External interface	Universal Audio Jack
Speakers	Two
Internal speaker amplifier	Supported
External volume controls	Media-control shortcut keys
Speaker output:	
	Average
	2 W
	Peak
	2.5 W
Subwoofer output	Not supported
Microphone	Digital-array microphone

Storage

Your computer supports one of the following configurations:

One M.2 2230 solid-state drive or One M.2 2280 solid-state drive

Table 12. Storage specifications

Storage type	Interface type	Capacity
One M.2 2230 PCIe Solid-State Drive Class 35	PCIe Gen 3 x 4	128 GB, 256 GB, 512 GB
One M.2 2280 PCIe Solid-State Drive Class 40	PCIe Gen 3 x 4	256 GB, 512 GB, 1 TB

Media-card reader

Table 13. Media-card reader specifications

Description	Values
Type	One microSD card slot

Description	Values
Cards supported	<ul style="list-style-type: none"> Secure Digital 4.0 microSD

Keyboard

Table 14. Keyboard specifications

Description	Values
Type	<ul style="list-style-type: none"> Standard keyboard Backlit keyboard
Layout	QWERTY
Number of keys	<ul style="list-style-type: none"> United States and Canada: 81 keys United Kingdom: 82 keys Japan: 85 keys
Size	<p>X=18.05 mm key pitch</p> <p>Y=18.05 mm key pitch</p>
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. You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program. Keyboard shortcuts</p>

Camera

Table 15. Camera specifications

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

Touchpad

Table 16. Touchpad specifications

Description	Values
Resolution:	
Horizontal	1103
Vertical	615
Dimensions:	
Horizontal	91.90 mm (3.62 in.)
Vertical	51.40 mm (2.02 in.)

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 17. Power adapter specifications

Description	Values		
Type	E5 65 W	E5 90 W	65 W USB-C
Diameter (connector)	7.4 mm	7.4 mm	Type-C connector
Input voltage	100 VAC-240 VAC	100 VAC-240 VAC	100 VAC-240 VAC
Input frequency	50 Hz-60 Hz	50 Hz-60 Hz	50 Hz-60 Hz
Input current (maximum)	1.5 A	1.6 A	1.7 A
Output current (continuous)	3.34 A	4.62 A	20 V/3.25 A (Continuous) 15 V/3 A (Continuous) 9.0 V/3 A (Continuous) 5.0 V/3 A (Continuous)
Rated output voltage	19.50 VDC	19.50 VDC	20 VDC/15 VDC/9 VDC/5 VDC
Temperature range:			
Operating	0 °C to 40 °C (32 °F to 104 °F)	0 °C to 40 °C (32 °F to 104 °F)	0 °C to 40 °C (32 °F to 104 °F)
Storage	-40 °C to 70 °C (-40 °F 158 °F)	-40 °C to 70 °C (-40 °F 158 °F)	-40 °C to 70 °C (-40 °F 158 °F)

Battery

Table 18. Battery specifications

Description	Values		
Type	3-cell lithium-ion 42 WHr ExpressCharge	4-cell lithium-ion 60 WHr ExpressCharge	4-cell lithium-ion 60 WHr with Long life cycle
Voltage	11.40 VDC	7.60 VDC	7.60 VDC
Weight (maximum)	0.19 kg (0.42 lb)	0.27 kg (0.60 lb)	0.27 kg (0.60 lb)
Dimensions:			
Height	95.90 mm (3.78 in.)	95.90 mm (3.78 in.)	95.90 mm (3.78 in.)
Width	200.50 mm (7.89 in.)	238 mm (9.37 in.)	238 mm (9.37 in.)
Depth	5.70 mm (0.22 in.)	5.70 mm (0.22 in.)	5.70 mm (0.22 in.)
Temperature range:			
Operating	Charge: 0 °C/ 32 °F to 45 °C/ 113 °F Discharge: 0 °C/ 32 °F to 70 °C/ 158 °F	Charge: 0 °C/ 32 °F to 45 °C/ 113 °F Discharge: 0 °C/ 32 °F to 70 °C/ 158 °F	Charge: 0 °C/ 32 °F to 45 °C/ 113 °F Discharge: 0 °C/ 32 °F to 70 °C/ 158 °F
Storage	-20 °C to 65 °C (4 °F to 149 °F)	20 °C to 65 °C (4 °F to 149 °F)	20 °C to 65 °C (4 °F to 149 °F)
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Charging time (approximate)	2 hr (Express charge), 3 hr (Standard charge) hours (when the computer is off). i NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see www.dell.com/.	2 hr (Express charge), 3 hr (Standard charge) hours (when the computer is off). i NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see www.dell.com/.	3 hr (Standard charge) hours (when the computer is off). i NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see www.dell.com/.
Life span (approximate)	1 year/300 discharge/charge cycles	1 year/300 discharge/charge cycles	1 year/300 discharge/charge cycles
Coin-cell battery	CR-2032	CR-2032	CR-2032
ExpressCharge	Supported	Supported	Not Supported

Display

Table 19. Display specifications

Description	Values
Type	Full High Definition (FHD)
Panel technology	Wide Viewing Angle (WVA)
Luminance (typical)	300 Nits
Dimensions (active area):	

Description	Values
Height	165.24 mm (6.51 in.)
Width	293.76 mm (11.57 in.)
Diagonal	337.04 mm (13.27 in.)
Native resolution	1920 x 1080
Megapixels	2.07 M
Color gamut	72% (NTSC)
Pixels Per Inch (PPI)	166
Contrast ratio (min)	33.34
Response time (max)	30 ms
Refresh rate	60 Hz
Horizontal view angle	80 +/- degrees
Vertical view angle	80 +/- degrees
Pixel pitch	166
Power consumption (maximum)	4.2 W
Anti-glare vs glossy finish	Anti-glare
Touch options	Yes

Fingerprint reader

Table 20. Fingerprint reader specifications

Description	Values
Sensor technology	Capacitive
Sensor resolution	363 dpi
Sensor area	5.25 mm x 6.9 mm
Sensor pixel size	76 x 100

Video

Table 21. Integrated graphics specifications

Integrated graphics			
Controller	External display support	Memory size	Processor
Intel UHD Graphics	One HDMI 1.4, DP 1.2 over Type-C	Shared system memory	Comet lake U

Computer environment

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

Table 22. Computer environment

Description	Operating	Storage
Temperature range	0 °C to 35 °C (32 °F to 95 °F)	-40 °C to 65 °C (-40 °F to 149 °F)

Description	Operating	Storage
Relative humidity (maximum)	10 % to 80 % (non-condensing)	0 % to 95 % (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	140 G†	160 G†
Altitude (maximum)	-15.2 m to 3048 m (4.64 ft to 5518.4 ft)	-15.2 m to 10668 m (4.64 ft to 19234.4 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.

Software

This chapter details the supported operating systems along with instructions on how to install the drivers.

Topics:

- [Downloading Windows drivers](#)

Downloading Windows drivers

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.

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](#)
- [Boot Sequence](#)
- [System setup options](#)
- [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

Navigation

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.

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

i **NOTE: XXXX denotes the SATA drive number.**

- Optical Drive (if available)
- SATA Hard Drive (if available)
- Diagnostics

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

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

System setup options

i **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: <ul style="list-style-type: none">• System Information• Memory Configuration• Processor Information• Device Information
Battery Information	Displays the battery status 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: <ul style="list-style-type: none">• Windows Boot Manager• Boot List Option-UEFI is the enabled by default.
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: <ul style="list-style-type: none">• Always, Except Internal HDD—Default• Always• Never

Option	Description
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—Default
Drives	<p>These fields let you enable or disable various drives on board.</p> <p>The options are:</p> <ul style="list-style-type: none"> • SATA-2 • 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>
Thunderbolt™ Adapter Configuration	<p>Allows you to enable or disable Thunderbolt options:</p> <ul style="list-style-type: none"> • Thunderbolt (Enabled by Default) • Enable Thunderbolt Boot Support • Enable Thunderbolt (and PCIe behind TBT) Pre-boot <p>With following security levels :</p> <ul style="list-style-type: none"> • No Security • User Authentication (Enabled by Default) • Secure Connect • Display Port and USB Only
Thunderbolt™ Auto Switch	<p>This option configures the method used by the Thunderbolt controller to perform PCIe device enumeration.</p>

Option	Description
	<ul style="list-style-type: none"> • Auto Switch : The BIOS will automatically switch between BIOS Assist and Native Thunderbolt PC device enumeration modes to get all benefits of the installed OS • Native Enumeration: The BIOS will program the Thunderbolt controller to Native mode (Auto Switching is disabled) • BIOS Assist Enumeration: The BIOS will program the Thunderbolt controller to BIOS Assist mode (Auto Switching is disabled) <p> NOTE: A reboot is required for these changes to take effect.</p>
USB PowerShare	<p>This option enables/disables the USB PowerShare feature behavior.</p> <p>This option is disabled 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>
Keyboard Illumination	<p>This field lets you choose the operating mode of the keyboard illumination feature.</p> <ul style="list-style-type: none"> • Disabled: The Keyboard illumination will always be off or 0%. • Dim: Enable the keyboard illumination feature at 50% brightness. • Bright: Enable the keyboard illumination feature at 100% brightness level.
Keyboard Backlight Timeout on AC	<p>This feature defines the timeout value for the keyboard backlight when an AC adapter is plugged into the system.</p> <p>Options are:</p> <ul style="list-style-type: none"> • 5 seconds • 10 seconds (Default) • 15 seconds • 30 seconds • 1 minute • 5 minutes • 15 minutes • Never
Keyboard Backlight Timeout on Battery	<p>This feature defines the timeout value for the keyboard backlight when the system is running only on battery power.</p> <p>Options are:</p> <ul style="list-style-type: none"> • 5 seconds • 10 seconds(Default) • 15 seconds • 30 seconds • 1 minute • 5 minutes • 15 minutes • Never

Option	Description
Touchscreen	<p>This option controls whether the touchscreen is enabled or disabled.</p> <p>This option is enabled by default.</p>
Unobtrusive Mode	<p>When enabled, pressing Fn+F7 will turn off all light and sound emissions in the system. Press Fn+F7 to resume normal operation.</p> <p>Default is Disabled.</p>
Fingerprint Reader	<p>Enable or disable the Fingerprint Reader or the Fingerprint Reader Device's Single Sign On capability.</p> <ul style="list-style-type: none"> • Enable Fingerprint Reader Device: Enabled by Default • Enable Fingerprint Reader Single Sign On: Enabled by Default
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 • 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>
Dynamic Backlight Control	<p>This option enables or disables the Dynamic Backlight Control if the panel supports the feature.</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>

Option	Description
	 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	<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>
TPM 2.0 Security	<p>Allows you to enable or disable the Trusted Platform Module (TPM) during POST.</p> <p>The options are:</p> <ul style="list-style-type: none"> • TPM On—Default • Clear • PPI Bypass for Enable Command—Default • PPI Bypass for Disable Command • PPI Bypass for Clear Command • Attestation Enable—Default • Key Storage Enable—Default • SHA-256—Default
Absolute®	<p>This field lets you Enable, Disable, or Permanently Disable the BIOS module interface of the optional Absolute Persistence Module service from Absolute® Software.</p>
OROM Keyboard Access	<p>This option determines whether users are able to enter Option ROM Configuration screens via hotkey during boot. Specifically this settings is capable of preventing access to Intel® RAID (Ctrl+I) or Intel® Management Engine BIOS Extension (Ctrl+P/F12).</p> <p>Options are:</p> <ul style="list-style-type: none"> • Enable • One Time Enable • Disable
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>

Option	Description
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—Default
Secure Boot Mode	<p>Changes to the Secure Boot operation mode modifies the behaviour of Secure Boot to allow evaluation of UEFI driver signatures.</p> <p>Choose one of the option:</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 allows 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>

Option	Description
	<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 processor 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>
Intel® TurboBoost™	<p>This option enables or disables the Intel® TurboBoost™ mode of the processor</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 set 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>

Option	Description
	<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 <p>This option is not set by default.</p>
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/or 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>
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 or 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 set 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>
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>

Option	Description
	<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 • Lock Mode Enable/Secondary—Default
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> <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
Sign of Life Indicator	<p>This option allows the system to indicate during the POST that the power button has been acknowledged in a manner the user can either hear or feel.</p> <ul style="list-style-type: none"> • Enable Sign of Life Audio Indication • Enable Sign of Life Display Indication • Enable Sign of Life Keyboard Backlight Indication


Manageability

Table 32. Manageability

Option	Description
USB Provision	When enabled, Intel AMT can be provisioned using the local provisioning file through an USB storage device.
MEBx Hotkey	This option specifies whether the MEBx Hotkey function should be enabled when the system boots.

Virtualization support

Table 33. 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>
Trusted Execution	<p>This option specifies whether a Measured Virtual Machine Monitor (MVMM) can utilize the additional hardware capabilities provided by Intel® Trusted Execution Technology.</p> <p> NOTE: The TPM has to be enabled and activated and Virtualization Technology and VT for Direct I/O must be enabled to use this feature.</p>

Wireless options


Table 34. Wireless

Option	Description
Wireless Switch	<p>Allows you 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">• WWAN• GPS (on WWAN Module)• 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">• WWAN/GPS• WLAN• Bluetooth®• Contactless Smartcard/ NFC <p>All the options are enabled by default.</p>

Maintenance

Table 35. Maintenance

Option	Description
Service Tag	<p>Displays the service tag of your computer.</p>
Asset Tag	<p>Allows you to create a system asset tag if an asset tag is not already set.</p> <p>This option is not set by default.</p>

Option	Description
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	<p>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.</p> <p>BIOS Auto-Recovery— Allows you to recover the BIOS automatically.</p> <p> NOTE: BIOS Recovery from Hard Drive field should be enabled.</p> <p>Always Perform Integrity Check—Performs integrity check on every boot.</p>


System logs

Table 36. 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.

Updating the BIOS in Windows

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.

 **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.**

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

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 \(DDDP\)](#)

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.

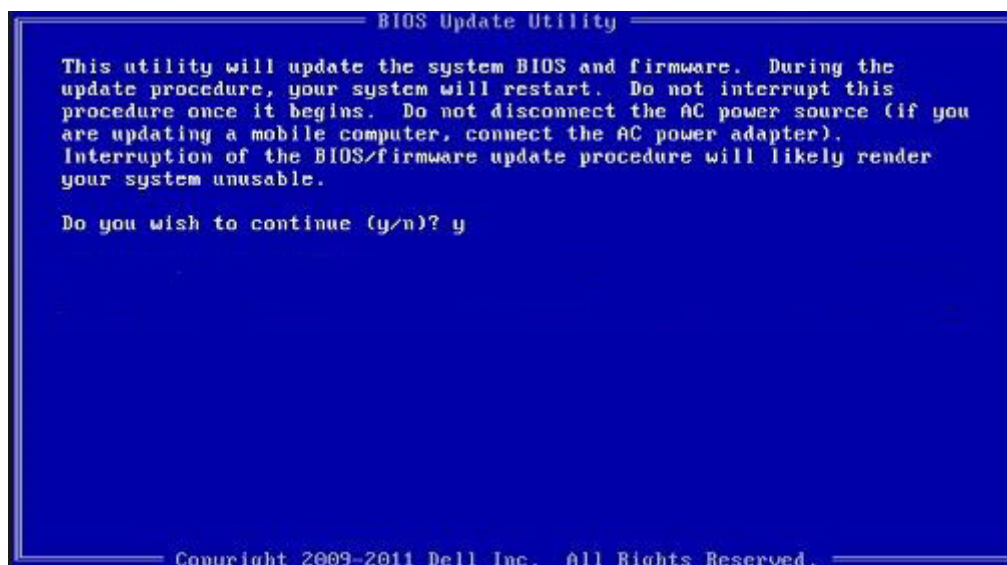


Figure 1. DOS BIOS Update Screen

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

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


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

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

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.

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


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.

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 38. 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</code> and <code>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.