Dell Latitude 3301

Setup and specifications guide

Regulatory Model: P114G
Regulatory Type: P114G001
September 2021
Rev. A0f

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.

Contents

1

Set up your computer

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

   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.

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

Table 1. Locate Dell apps (continued)

Dell apps	Details
	**SupportAssist** Proactively checks the health of your computer's hardware and software. **NOTE:** Renew or upgrade your warranty by clicking the warranty expiry date in SupportAssist.
	**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.

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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.

3

Chassis

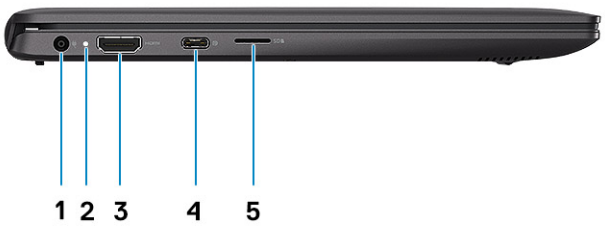
This chapter illustrates the multiple chassis views along with the ports and connectors and also explains the FN hot key combinations.

Topics:

Display view

1. Left microphone
2. Camera
3. Camera-status light
4. Right microphone
5. LCD panel

Left view



1. Power connector port
2. Status light
3. HDMI port
4. USB 3.1 Gen1 Type-C port with Display port 1.2
5. microSD card slot

Right view

1. Headset port
2. USB 3.1 Gen 1 port

1. uSIM card tray (Black PC only)
2. Universal audio jack (headset/microphone combo)
3. USB 3.1 Gen 1

Palmrest view

1. Power button with optional fingerprint reader
2. Keyboard
3. Touchpad

Bottom view

1. Service Tag label
2. 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	Description
Fn + Esc	Toggle Fn-key lock
Fn + F1	Mute audio
Fn + F2	Decrease volume
Fn + F3	Increase volume
Fn + F4	Play / Pause
Fn + F5	Turn on/off keyboard backlight
Fn + F6	Decrease brightness
Fn + F7	Increase brightness
Fn + F8	Switch to external display
Fn + F10	Print screen
Fn + F11	Home
Fn + 12	End
Fn + Ctrl	Open application menu

4

Technical specifications

NOTE: Offerings may vary by region. The following specifications are only those required by law to ship with your computer. For more information about the configuration of your computer, go to Help and Support in your Windows operating system and select the option to view information about your computer.

Topics:

System information

Table 3. System information

Feature	Specifications
Chipset	Integrated in the processor
DRAM bus width	64-bit
FLASH EPROM	32 MB
PCIe bus	Up to Gen3
External bus frequency	Up to 8 GT/s

Processor

NOTE: Processor numbers are not a measure of performance. Processor availability is subject to change and may vary by region/country.

Table 4. Processor specifications

Type	UMA Graphics
8th Gen Intel Core i7-8565U processor (8 MB cache, 4 core count/ 8 threads, Up to 4.6 GHz, 15 W TDP)	Intel UHD Graphics 620
8th Gen Intel Core i5-8365U processor (6 MB cache, 4 core count/ 8 threads, Up to 4.1 GHz, 15 W TDP)	Intel UHD Graphics 620
8th Gen Intel Core i5-8265U processor (6 MB cache, 4 core count/ 8 threads, Up to 3.9 GHz, 15 W TDP)	Intel UHD Graphics 620
8th Gen Intel Core i3-8145U processor (4 MB cache, 2 core count/ 4 threads, Up to 3.5 GHz, 15 W TDP)	Intel UHD Graphics 620

Memory

Table 5. Memory specifications

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	16 GB
Number of slots	Soldered down
Memory options	• 4 GB • 8 GB • 16 GB
Type	LPDDR3
Speed	2133 MHz

Storage

Table 6. Storage specifications

Type	Form factor	Interface	Capacity
Primary Storage	• M.2 2230 SSD • M.2 2280 SSD	• Class 35 • Class 40	• Up to 512 GB • Up to 512 GB
Secondary Storage	M.2 2230	Class 35	Up to 512 GB (Black PC WLAN configuration only, uses the WWAN M.2 slot)

System board connectors

Table 7. System board connectors

Feature	Specifications
M.2 Connectors	• One M.2 2230 hybrid Key-E connector • One M.2 2280 Key-M connector • One M.2 3042 Key-B connector • One M.2 2230 Key-E connector • One M.2 2280 Key-E connector • One M.2 3042 Key-B connector

Media card-reader

Table 8. Media-card reader specifications

Feature	Specifications
Type	MicroSD Card - supports up to 2 TB

Audio

Table 9. Audio specifications

Feature	Specifications
Controller	Realtek ALC3204 with Waves MaxxAudio Pro
Stereo conversion	24-bit DAC (Digital-to-Analog) and ADC (Analog-to-Digital)
Type	HD Audio
Speakers	Two
Interface	Internal: • Intel HDA (high-definition audio) External: • 7.1 channel output via HDMI • Digital microphone input on camera module • Headset combo jack (stereo headphones/microphone-in)
Internal speaker amplifier	Integrated in ALC3204 (Class-D 2 W)
External volume controls	Media-control shortcut keys
Speaker output:	Average: 2 W Peak: 2.5 W
Microphone	Digital-array microphones

Video card

Table 10. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	Maximum resolution
Integrated Intel® UHD Graphics 620	UMA/integrated only	• Intel Core i7-8565U CPU • Intel Core i5-8365U CPU • Intel Core i5-8265U CPU • Intel Core i3-8145U CPU	LPDDR3 (Shared with system memory)	Up to 8 GB (Shared with system memory)	HDMI 1.4 for external output support

Camera

Table 11. Camera specifications

Feature	Specifications
Camera Type	2.7mm, 4-element lens, HD RGB camera
Resolution	Still image: 0.92 megapixel Video: 1280 x 720 (HD) at 30 fps
Diagonal viewing angle	74.9 degrees
Sensor type	CMOS sensor technology

Wireless

Table 12. Wireless specifications

Feature	Specifications
WLAN	• Intel Dual Band Wireless AC 9560 Wi-Fi (802.11ac) 2x2 + Bluetooth 5.0 (Bluetooth Optional) • Intel Dual Band Wireless AC 9462 Wi-Fi (802.11ac) 1x1 + Bluetooth 5.0
WWAN	Intel XMM 7360 LTE-Advanced, Cat 9

Ports and connectors

Table 13. Ports and connectors

Feature	Specifications
Memory card reader	1 x MicroSD 3.0 Card Reader
SIM card reader	1 x uSim Card Tray (Black PC Only)
USB	• 1 x USB Type C 3.1 Gen 1 w/ Power Delivery & DisplayPort 1.2 • 1 x USB 3.1 Gen 1

Table 13. Ports and connectors (continued)

Feature	Specifications
Audio	1 x Universal Audio Jack (Headset/Mic combo)
Video	1 x HDMI 1.4
Others	• 1 x DC-in, 4.5mm barrel • 1 x Optional Touch Fingerprint Reader in Power Button

Display

Table 14. Display specifications

Feature	Specifications	
Type	Full High Definition (FHD)	High Definition (HD)
Height (Active area)	165.24 mm (6.50 in)	165.20 mm (6.50 in)
Width (Active area)	293.76 mm (11.60 in)	293.83 mm (11.60 in)
Diagonal	337.04 mm (13.30 in)	337.09 mm (13.30 in)
Pixels Per Inch (PPI)	166	118
Contrast ratio	400:1	400:1
Luminance/Brightness (typical)	300 nits	220 nits
Refresh rate	60 Hz	60 Hz
Horizontal viewing angle (min)	+/- 80 degrees	+/- 45 degrees
Vertical viewing angle (min)	+/- 80 degrees	Upper 15 degrees, lower 35 degrees
Power consumption (max)	4.6 W	4.5 W

Keyboard

Table 15. Keyboard specifications

Feature	Specifications
Number of keys	• United states and Canada : 81 keys • United Kingdom : 82 Keys • Japan : 85 keys
Size	• X= 18.70 mm key pitch • Y= 18.05 mm key pitch
Backlit keyboard	Optional (backlit and Non-backlit)
Layout	QWERTY

Touchpad

Table 16. Touchpad specifications

Feature	Specifications
Resolution	1920 x 1080
Dimensions	• Width : 105 mm (4.13 in.) • Height : 65 mm (2.56 in.)

Table 17. Supported gestures

Supported gestures	Windows 10
Cursor moving	Supported
Clicking/ tapping	Supported
Click and drag	Supported
2-finger scroll	Supported
2-finger Pinch/ Zoom	Supported
2-finger tap (Right Clicking)	Supported
3-finger tap (Invoke Cortana)	Supported
3-finger swipe up (See all open windows)	Supported
3-finger swipe down (Show the desktop)	Supported
3-finger swipe right or left (Switch between open windows)	Supported
4-finger tap (Invoke Action Center)	Supported
4-finger swipe right or left (Switch virtual desktops)	Supported

Fingerprint reader (FPR)—optional

Table 18. Fingerprint reader specifications

Feature	Specifications
Type	FPR in power button
Sensor technology	Capacitive
Sensor resolution	500 ppi
Sensor area	4.06 mm x 3.25 mm

Operating system

Table 19. Operating system

Feature	Specifications
Operating systems supported	• Windows 10 Home (64 bit) • Windows 10 Professional (64bit) • Ubuntu 16.04 LTS 64-bit

Battery

Table 20. Battery

Feature	Specifications	
Type	• 4-cell "smart" lithium-ion (45 WHr) • 4-cell "smart" lithium-ion (52 WHr)	
Dimension	Width Depth Height	4.30 mm (0.17 in.) 257.60 mm (10.17 in.) 97.04 mm (3.82 in.)
Weight (maximum)	0.22 kg (0.49 lb)	
Voltage	7.60 VDC	
Life span	300 discharge/charge cycles	
Charging time when the computer is off (approximate)	4 hours (when the computer is off)	
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	
Temperature range: Operating	0°C to 35°C (32°F to 95°F)	
Temperature range: Storage	-40°C to 65°C (-40°F to 149°F)	
Coin-cell battery	CR-2032 **NOTE: It is recommended that you use a Dell coin-cell battery for your computer. Dell does not provide warranty coverage for problems caused by using accessories, parts, or components not supplied by Dell.**	

Power adapter

Table 21. Power adapter specifications

Feature	Specifications	
Type	65 W E4	65 W Type C
External diameter (mm)	4.50 mm	
Internal diameter (mm)	2.90 mm	
Input Voltage	100 VAC - 240 VAC	100 VAC - 240 VAC
Input current (maximum)	1.6 A /1.7 A	1.7 A
Input frequency	50 Hz to 60 Hz	50 Hz to 60 Hz
Output current	3.34 A (continuous)	• 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	20 VDC/15 VDC/9 VDC/5 VDC
Weight	0.29 kg (0.64 lbs)	0.22 kg (0.48 lbs)

Table 21. Power adapter specifications (continued)

Feature	Specifications	
Adapter size	Dimensions In Inches: 1.10 x 1.90 x 4.30 In mm: 28 x 47 x 108	Dimensions In Inches: 1.1 x 2.0 x 4.4 In mm: 28 x 51 x 112
Temperature range (Operating)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
Storage (Operating)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

Sensor and control specifications

Table 22. Sensor and control specifications

Specifications
1. Free fall sensor on motherboard
2. Hall Effect Sensor (Detects when the lid is closed)

Dimensions and weight

Table 23. Dimensions and weight

Feature	Specifications
Height	16.80 mm / 0.66 in.(PC) 14.90 mm / 0.59 in.(Al)
Width	307.6mm / 12.11 in.(PC) 307.6mm / 12.11 in.(Al)
Depth	204.50 mm / 8.05 in.(PC) 204.50 mm / 8.05 in.(Al)
Weight	• 1.18 kg / 2.61 lb (PC) • 1.17 kg / 2.59 lb (Al)

Computer environment

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

Table 24. Computer environment

	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	10% to 95% (non-condensing)
Vibration (maximum)	0.66 GRMS	1.30 GRMS
Shock (maximum)	110 G†	160 G‡
Altitude (maximum)	–15.2 m to 3048 m (–50 ft to 10,000 ft)	N/A

* 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.

‡ Measured using a 2 ms half-sine pulse when the hard-drive head is in parked position.

Security

Table 25. Security

Feature	Specifications
Trusted Platform Module (TPM) 2.0	Integrated on the system board
Firmware TPM	Optional
Windows Hello Support	Yes, optional fingerprint on power button
FIPS 140-2 certification for TPM	Yes
Fingerprint Reader Only	Touch Fingerprint reader in power button tied to Control vault 3

Security Software

Table 26. Security Software specifications

Specifications
Dell Client Command Suite
Optional Dell Data Security and Management Software ● Dell Endpoint Security Suite Enterprise ● Dell Data Guardian ● Dell Encryption Enterprise ● Dell Encryption Personal ● Dell Threat Defense ● MozyPro or MozyEnterprise ● RSA NetWitness Endpoint ● RSA SecurID Access ● VMware Workspace ONE ● Absolute Endpoint Visibility and Control

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Software

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

Topics:

Downloading Windows drivers

1. Turn on the notebook.
2. Go to **Dell.com/support**.
3. Click **Product Support**, enter the Service Tag of your notebook, and then click **Submit**.

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

4. Click **Drivers and Downloads**.
5. Select the operating system installed on your notebook.
6. Scroll down the page and select the driver to install.
7. Click **Download File** to download the driver for your notebook.
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.

6

System setup

System setup enables you to manage your tabletdesktopnotebook hardware and specify BIOS level options. From the System setup, you can:

- Change the NVRAM settings after you add or remove hardware
- View the system hardware configuration
- Enable or disable integrated devices
- Set performance and power management thresholds
- Manage your computer security

Topics:

BIOS overview

The BIOS manages data flow between the computer's operating system and attached devices such as hard disk, video adapter, keyboard, mouse, and printer.

Entering BIOS setup program

1. Turn on your computer.
2. Press F2 immediately to enter the BIOS setup program.

   NOTE: If you wait too long and the operating system logo appears, continue to wait until you see the desktop. Then, turn off your computer and try again.

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.
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.

One time boot menu

To enter **one time boot menu**, turn on your computer, and then press F12 immediately.

NOTE: It is recommended to shutdown the computer if it is on.

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 (if available)

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

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

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 27. General

Option	Description
System Information	Displays the following information: • System Information: Displays **BIOS Version, Service Tag, Asset Tag, Ownership Tag, Ownership Date, Manufacture Date, Express Service Code** and the **Signed Firmware Update**. • Battery Information: Displays the battery status health and whether the AC adapter is installed. • Processor Information: Displays **Processor Type, Core Count, Processor ID, Current Clock Speed, Minimum Clock Speed, Maximum Clock Speed, Processor L2 Cache, Processor L3 Cache, Microcode Version, HT Capable,** and **64-Bit Technology.** • Memory Information: Displays **Memory Installed, Memory Available, Memory Speed, Memory Channel Mode, Memory Technology**

Table 27. General (continued)

Option	Description
	• Device Information: Displays **Pass Through MAC Address, Video Controller, Video BIOS Version, Video Memory, Panel type, Native Resolution, Audio Controller, Wi-Fi Device, Cellular Device and Bluetooth Device.**
Boot Sequence	Allows you to specify the order in which the computer attempts to find an operating system from the devices specified in this list.
Advanced Boot Options	Allows you to select the Legacy Option ROMs option, when in UEFI boot mode. By default, no option is selected. • Enable Attempt Legacy Boot
UEFI Boot Path Security	This option controls whether or not the system will prompt the user to enter the Admin password when booting a UEFI boot path from the F12 Boot Menu. • Always, Except Internal HDD—Default • Always • Never

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System information

Table 28. System Configuration

Option	Description
Date/Time	Allows you to set the date and time settings. Changes to the system date and time take effect immediately.
Smart Reporting	This field controls whether hard drive errors for integrated drives are reported during system startup. The **Enable Smart Reporting option** is disabled by default.
Audio	Allows you to enable or disable the integrated audio controller. The option **Enable Audio** is selected by default. • Enable Microphone • Enable Internal Speaker Both the options are selected by default.
USB Configuration	Allows you to enable or disable the integrated USB controller for: • Enable USB Boot Support • Enable External USB Port All the options are enabled by default.
SATA Operation	Allows you to configure the operating mode of the integrated hard drive controller. • Disabled = The SATA controllers are hidden • AHCI = SATA is configured for AHCI mode • RAID ON = SATA is configured to support RAID mode (selected by default)
Drives	Allows you to enable or disable the various drives on-board: • M.2 PCIe SSD-0/SATA-0 (enabled by default) • M.2 PCIe SSD-1/SATA-1 (enabled by default)
Miscellaneous Devices	Allows you to enable or disable the following devices: • Enable Camera (enabled by default) • Enable Secure Digital (SD) Card (enabled by default) • Secure Digital (SD) Card Boot
Keyboard Illumination	Allows you to change the keyboard illumination settings: • Disabled

Table 28. System Configuration (continued)

Option	Description
	• Dim • Bright (enabled by default)
Keyboard Backlight Timeout on AC	Allows you to set the timeout value for the keyboard backlight when an AC adaptor is plugged into the system: • 5 seconds • 10 seconds (enabled by default) • 15 seconds • 30 seconds • 1 minute • 5 minutes • 15 minutes • Never
Keyboard Backlight Timeout on Battery	Allows you to set the timeout value for the keyboard backlight when the system is running only on battery power: • 5 seconds • 10 seconds (enabled by default) • 15 seconds • 30 seconds • 1 minute • 5 minutes • 15 minutes • Never

Video

Option	Description
LCD Brightness	Allows you to set the display brightness depending up on the power source—On Battery and On AC. The LCD brightness is independent for battery and AC adapter. It can be set using the slider.

EcoPower(enabled by default)

Security

Table 29. Security

Option	Description
Enable Admin Setup Lockout	**OFF**(enabled by default)
Password Bypass	This option lets you bypass the System (Boot) Password and the internal hard drive password prompts during a system restart. • Disabled — Always prompt for the system and internal hard drive password when they are set. This option is enabled by default. • Reboot Bypass — Bypass the password prompts on Restarts (warm boots). **NOTE:** The system will always prompt for the system and internal hard drive passwords when powered on from the off state (a cold boot). Also, the system will always prompt for passwords on any module bay hard drives that may be present.
Non-Admin Password Change	This option lets you determine whether changes to the System and Hard Disk passwords are permitted when an administrator password is set. **Allow Non-Admin Password Changes** - This option is enabled by default.

Table 29. Security (continued)

Option	Description
Non-Admin Setup Changes	Determines whether changes to the setup option are permitted when an administrator password is set.
UEFI Capsule Firmware Updates	This option controls whether this system allows BIOS updates via UEFI capsule update packages. This option is selected by default. Disabling this option will block BIOS updates from services such as Microsoft Windows Update and Linux Vendor Firmware Service (LVFS)
Absolute	This field allows you to Enable, Disable, or Permanently Disable the BIOS module interface of the optional Absolute Persistence Module service from Absolute® Software. The options are: ● **Enabled** - This option is enabled by default. ● **Disabled** ● **Permanently Disable Absolute**
TPM 2.0 Security	Allows you to control whether the Trusted Platform Module (TPM) is visible to the operating system. ● TPM On (default) ● PPI Bypass for Enable Commands (default) ● PPI Bypass for Disable Commands ● PPI Bypass for Clear Commands ● Attestation Enable (default) ● Key Storage Enable (default) ● SHA-256 (default) ● TPM **Enabled**(default)
Intel SGX	Software Guard Extensions (SGX) provide a secured environment for running code/storing sensitive information in the context of the main OS. **Software Control**(enabled by default)
SMM Security Mitigation	Allows you to enable or disable additional UEFI SMM Security Mitigation protections. This option is not set by default.

Passwords

Table 30. Passwords

Option	Description
Enable Strong Passwords	Enforces stricter rules for admin and system passwords.
Password Configuration	Allows you to set the minimum and maximum number of characters allowed for admin and system passwords.
Admin Password	Allows you to set, change or delete the administrator password.
System Password	Allows you to reset the system password.
Enable Master Password Lockout	**Disabled**(default)

Secure boot

Table 31. Secure Boot

Option	Description
Enable Secure Boot	Allows you to enable or disable Secure Boot feature ● Secure Boot Enable

Table 31. Secure Boot (continued)

Option	Description
	This option is selected by default.
Secure Boot Mode	Allows you to modify the behavior of Secure Boot to allow evaluation or enforcement of UEFI driver signatures. • Deployed Mode (default) • Audit Mode
Expert key Management	Allows you to manipulate the security key databases only if the system is in Custom Mode. The **Enable Custom Mode** option is disabled by default. The options are: • PK (default) • KEK • db • dbx If you enable the **Custom Mode**, the relevant options for **PK, KEK, db, and dbx** appear. The options are: • **Save to File**- Saves the key to a user-selected file • **Replace from File**- Replaces the current key with a key from a user-selected file • **Append from File**- Adds a key to the current database from a user-selected file • **Delete**- Deletes the selected key • **Reset All Keys**- Resets to default setting • **Delete All Key**s- Deletes all the keys **NOTE:** If you disable the Custom Mode, all the changes made will be erased and the keys will restore to default settings.

Intel Software Guard Extensions

Table 32. Intel Software Guard Extensions

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

Performance

Table 33. Performance

Option	Description
Hyper-Threading Technology	Allows you to enable or disable the HyperThreading in the processor. • **Disabled**

Table 33. Performance (continued)

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

Power management

Option	Description
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. Default setting: Wake on AC is not selected.
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: • Disabled • Every Day • Weekdays • Select Days Default setting: Disabled
Peak Shift	This option enables you to minimize the AC power consumption during the peak power times of day. After you enable this option, your system runs only in battery even if the AC is attached. • Enable peak shift—is disabled • Set battery threshold (15% to 100%) - 15 % (enabled by default)
Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: • Adaptive—enabled by default • Standard—Fully charges your battery at a standard rate. • ExpressCharge—The battery charges over a shorter time using Dell's fast charging technology. • Primarily AC use • Custom If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop. **NOTE:** All charging mode may not be available for all the batteries. To enable this option, disable the **Advanced Battery Charge Configuration** option.

Option	Description
Advanced Battery Charge Configuration	This option enables you to maximize the battery health. By enabling this option, your system uses the standard charging algorithm and other techniques, during the non work hours to improve the battery health. Enable Advanced Battery Charge Mode- is disabled
Enable Intel Speed Shift Technology	• Enable Intel Speed Shift Technology Default setting: Enabled
USB Wake Support	Allows you to enable USB devices to wake the system from Standby. **NOTE:** This feature is only functional when the AC power adapter is connected. If the AC power adapter is removed during Standby, the system setup removes power from all the USB ports to conserve battery power. • Enable USB Wake Support
Wake on WLAN	Allows you to enable or disable the feature that powers on the computer from the Off state when triggered by a LAN signal. • Disabled • WLAN Default setting: Disabled

Wireless

Option Description	
WWAN/GPS	Allows to enable/disable internal WWAN/GPS device. Enabled by default.
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. • WLAN • Bluetooth All the options are enabled by default.

POST behavior

Option	Description
Adapter Warnings	Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters. Default setting: Enable Adapter Warnings
Extended BIOS POST Time	Allows you to create an extra preboot delay. The options are: • 0 seconds—enabled by default. • 5 seconds • 10 seconds
Fastboot	Allows you to speed up the boot process by bypassing some of the compatibility steps. The options are: • Minimal—enabled by default • Thorough • Auto
Fn Lock Options	Allows you to let hot key combinations Fn + Esc toggle the primary behavior of F1–F12, between their standard and secondary functions. If you disable this option, you cannot toggle dynamically the primary behavior of these keys. The available options are:

Option	Description
	• Fn Lock—enabled by default • Lock Mode Disable/Standard—enabled by default • Lock Mode Enable/Secondary
Numlock Enable	Allows you to enable the Numlock option when the computer boots. Enable Network. This option is enabled by default.
Full Screen Logo	• Enable Full Screen Logo—not enabled
Warnings and errors	• Prompt on warnings and errors—enabled by default • Continue on warnings • Continue on warnings and errors
MAC Address Pass-Through	Replaces the external NIC MAC address with the selected MAC address from the system. • System Unique MAC Address (default option) • Disabled

Virtualization support

Option	Description
Virtualization Technology	This field specifies whether a virtual Machine Monitor (VMM) can utilize the conditional hardware capabilities provided by Intel Virtualization Technology. Enable Intel Virtualization Technology—enabled by default.
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by Intel® Virtualization technology for direct I/O. Enable VT for Direct I/O - enabled by default.

Maintenance screen

Option	Description
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.
Service Tag	Displays the Service Tag of your computer.
BIOS Recovery	This field allows you to recover from certain corrupted BIOS conditions from a recover file on the user primary hard drive or an external USB key. • BIOS Recovery from Hard Drive—enabled by default • Always perform integrity check—disabled by default
Data Wipe	This field allows users to erase the data securely from all internal storage devices. Option 'Wipe on Next boot' is not enabled by default. The following device is affected: • Internal M.2 PCIe SSD
BIOS Downgrade	This controls flashing of the system firmware to previous revisions. Option 'Allow BIOS downgrade' is enabled by default.

System logs

Option	Description
Power Events	Allows you to view and clear the System Setup (Power) events. • Keep (default) • Clear

Option	Description
BIOS Events	Allows you to view and clear the System Setup (BIOS) POST events. • Keep (default) • Clear
Thermal Events	Allows you to view and clear the System Setup (Thermal) events. • Keep (default) • Clear

SupportAssist System Resolution

Option	Description
Auto OS Recovery Threshold	Allows you to control the automatic boot flow for SupportAssist System. Options are: • Off • 1 • 2 (Enabled by default) • 3
SupportAssist OS Recovery	Allows you to recover the SupportAssist OS Recovery (Disabled Enabledby default)

Updating the BIOS

Updating the BIOS in Windows

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

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

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

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

   For more information, see knowledge base article 000124211 at www.dell.com/support.

Updating the BIOS in Linux and Ubuntu

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

Updating the BIOS using the USB drive in Windows

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

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

Updating the BIOS from the F12 One-Time boot menu

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

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

BIOS Update

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

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

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

Updating from the One-Time boot menu

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

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

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

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

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

6. Click **Update BIOS**. The computer restarts to flash the BIOS.
7. The computer will restart after the BIOS update is completed.

System and setup password

Table 34. System and setup password

Password type	Description
System password	Password that you must enter to log in 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 that is 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 F12 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.
   - At least one special character: ! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [\ ] ^ _ ` { | }
   - Numbers 0 through 9.
   - Upper case letters from A to Z.
   - Lower case letters from a to z.
3. Type the system password that you entered earlier in the **Confirm new password** field and click **OK**.
4. Press Esc and save the changes as prompted by the pop-up message.
5. Press Y to save the changes.
   The computer restarts.

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/or 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 F12 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**, update, or delete the existing system password, and press Enter or Tab.
4. Select **Setup Password**, update, or delete the existing setup password, and press Enter or Tab.

   NOTE: If you change the System and/or Setup password, reenter the new password when prompted. If you delete the System and/or 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.

Clearing BIOS (System Setup) and System passwords

To clear the system or BIOS passwords, contact Dell technical support as described at www.dell.com/contactdell.

NOTE: For information on how to reset Windows or application passwords, refer to the documentation accompanying Windows or your application.

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Getting help

Topics:

- Contacting Dell

Contacting Dell

NOTE: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Go to **Dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.