

# Dell Latitude 5300

## 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.

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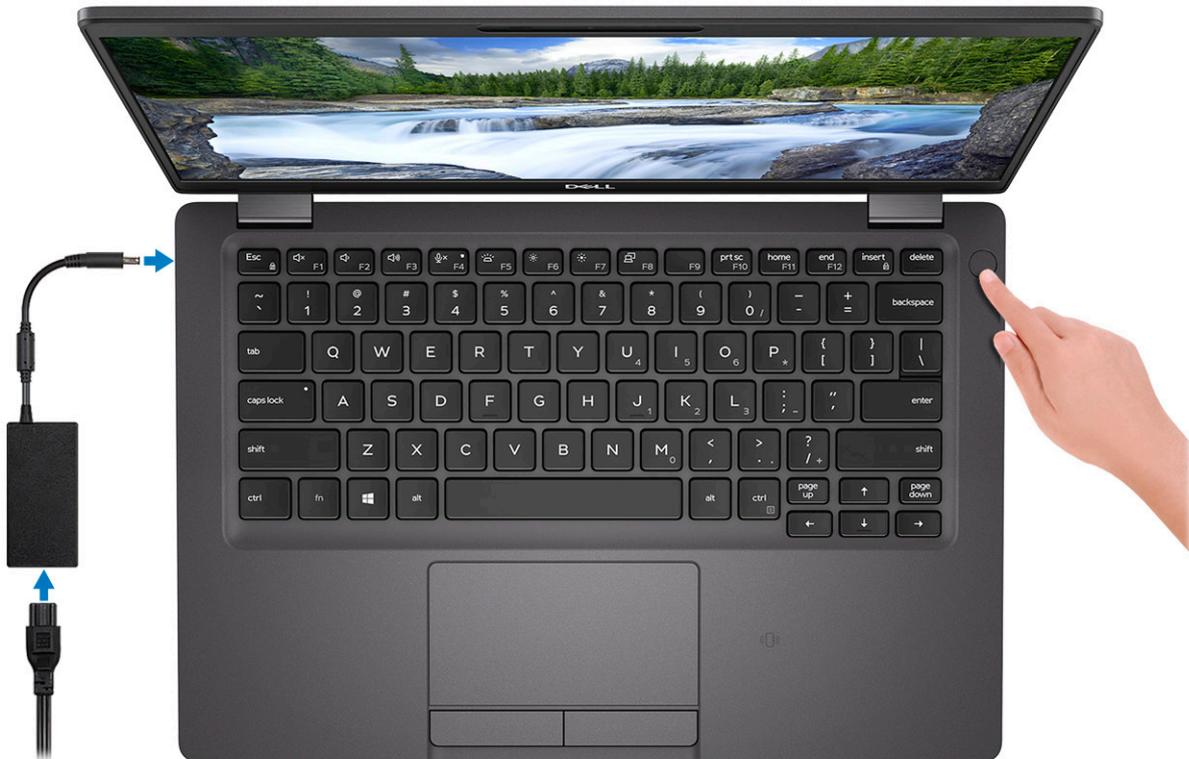
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# Set up your computer

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
	<p><b>Dell Product Registration</b></p> <p>Register your computer with Dell.</p>
	<p><b>Dell Help &amp; Support</b></p> <p>Access help and support for your computer.</p>

## 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](#).

# 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.

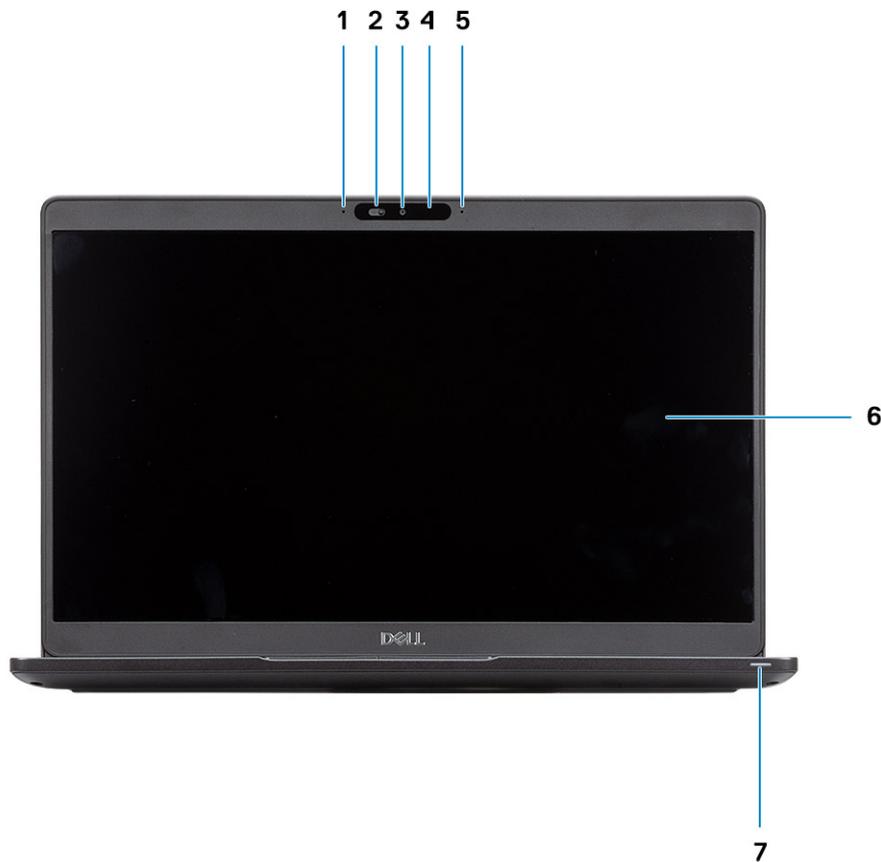
1. Connect the USB flash drive to your computer.
2. In Windows search, type *Recovery*.
3. In the search results, click **Create a recovery drive**.  
The **User Account Control** window is displayed.
4. Click **Yes** to continue.  
The **Recovery Drive** window is displayed.
5. Select **Back up system 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](http://www.dell.com/support/manuals).

## Chassis overview

### Topics:

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

## Display view



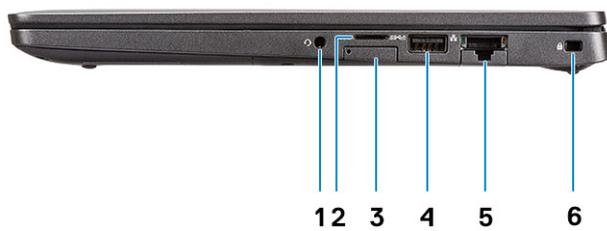
- |                       |                        |
|-----------------------|------------------------|
| 1. Array microphone   | 2. Camera shutter      |
| 3. Camera             | 4. Camera status light |
| 5. Array microphone   | 6. LCD panel           |
| 7. LED activity light |                        |

## Left view



1. Power connector port
2. USB 3.1 Gen 2 (USB Type-C) port with DisplayPort/Thunderbolt (optional)
3. HDMI port
4. USB 3.1 Gen 1
5. Smart card reader (optional)

## Right view



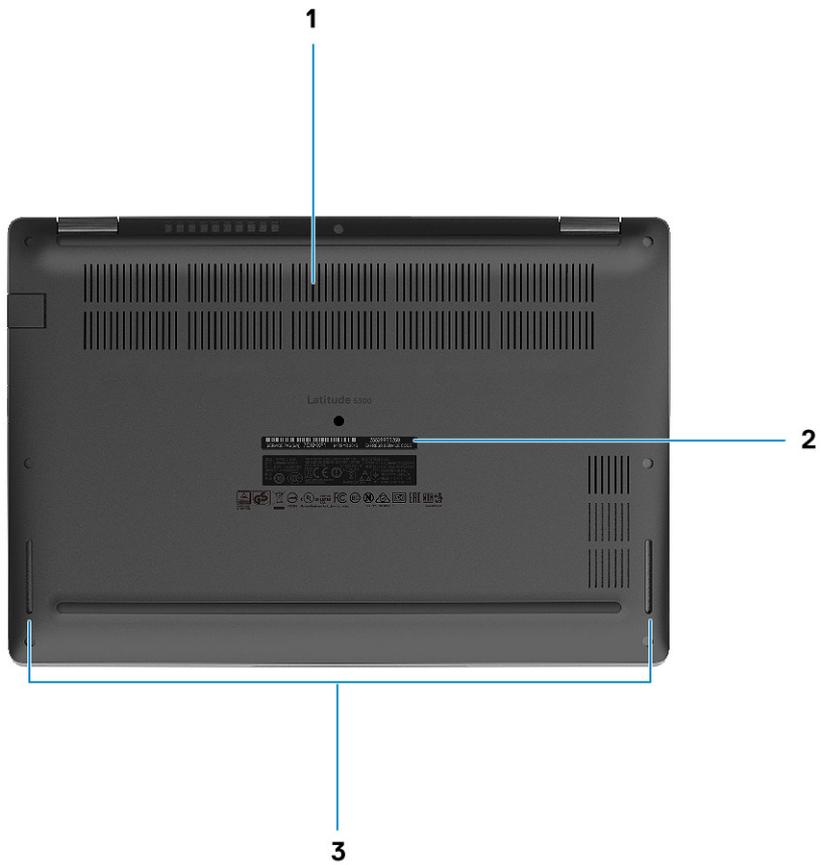
1. Headset/ Microphone port
2. microSD card reader
3. micro-SIM card slot
4. USB 3.1 Gen 1 port with PowerShare
5. Network port
6. Wedge-shaped lock slot

# Palmrest view



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

# Bottom view



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

# Technical specifications

## System information

**Table 2. 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 3. Processor specifications**

Type	UMA Graphics
8th Gen Intel Core i7-8665U processor (8 MB cache, 4 core count/ 8 threads, 1.9 GHz to 4.8 GHz, 15 W TDP) (vPro)	Intel UHD Graphics 620
8th Gen Intel Core i5-8365U Processor (6 MB cache, 4 core count/ 8 threads, 1.6 GHz to 4.1 GHz) (vPro)	Intel UHD Graphics 620
8th Gen Intel Core i5-8265U processor (6 MB cache, 4 core count/ 8 threads, 1.6 GHz 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, 2.1 GHz to 3.9 GHz, 15 W TDP)	Intel UHD Graphics 620

## Memory

**Table 4. Memory specifications**

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	32 GB
Number of slots	2 x SoDIMM slots
Maximum memory supported per slot	16 GB

Feature	Specifications
Memory options	<ul style="list-style-type: none"> <li>4 GB (1 x 4 GB)</li> <li>8 GB (2 x 4 GB)</li> <li>8 GB (1 x 8 GB)</li> <li>16 GB (2 x 8 GB)</li> <li>16 GB (1 x 16 GB)</li> <li>32 GB (2 x 16 GB)</li> </ul>
Type	Dual-channel DDR4
Speed	2666 MHz Non-ECC SDRAM operates at 2400 MHz with Intel 8 <sup>th</sup> Gen processors

## Storage

Table 5. Storage specifications

Type	Form factor	Interface	Capacity
SATA Solid-State Drive Class 20	M.2 2280 SSD	SATA	Upto 512 GB
PCIe Solid-State Drive Class 35	M.2 2230 SSD	PCIe Gen 3x2 NVMe, up to 32 Gbps	Upto 512 GB
PCIe Solid-State Drive Class 40	M.2 2280 SSD	PCIe Gen 3x4 NVMe, up to 32 Gbps	Upto 1 TB
SED Solid-State Drive Class 40 (Opal 2.0)	M.2 2280 SSD	PCIe NVme Opal 2.0 SED PCIe	Upto 512 GB

## System board connectors

Table 6. System board connectors

Feature	Specifications
M.2 Connectors	<ul style="list-style-type: none"> <li>One M.2 2230 hybrid Key-E connector</li> <li>One M.2 2280 Key-M connector</li> <li>One M.2 3042 Key-B connector</li> </ul>

## Media card-reader

Table 7. Media-card reader specifications

Feature	Specifications
Type	Micro SD Card Reader Slot Micro SD Card

## Audio

Table 8. Audio specifications

Feature	Specifications
Controller	Realtek ALC3254 with Waves MaxxAudio Pro
Stereo conversion	24-bit DAC (Digital-to-Analog) and ADC (Analog-to-Digital)

Feature	Specifications
Type	HD Audio
Speakers	Two
Interface	Internal: <ul style="list-style-type: none"> <li>Intel HDA (high-definition audio)</li> </ul> External: <ul style="list-style-type: none"> <li>7.1 channel output via HDMI</li> <li>Digital microphone input on camera module</li> <li>Headset combo jack (stereo headphones/microphone-in)</li> </ul>
Internal speaker amplifier	Integrated in ALC3254 (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 9. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 620	UMA	<ul style="list-style-type: none"> <li>Intel Core i7-8665U CPU (vPro)</li> <li>Intel Core i5-8265U CPU</li> <li>Intel Core i5-8365U CPU</li> <li>Intel Core i3-8145U CPU</li> </ul>	Integrated	Shared system memory	HDMI 1.4b port	1920 x 1200@60 Hz

## Camera

Table 10. Camera specifications

Feature	Specifications
Camera Type	RGB, HD fixed focus
IR Camera	6 mm IR camera (optional)
Resolution	Still image: HD resolution (1280 x 720) Video: HD resolution (1280 x 720) at 30 fps
Diagonal viewing angle	IR: 87 degree RGB: 78.6 degree

Feature	Specifications
Sensor type	CMOS sensor technology

**NOTE:** The RGB + IR camera is for Windows Hello application only and other applications cannot use it.

## Communication

Table 11. Communication specifications

Feature	Specifications
Network adapter	Integrated Connection I219-V 10/100/1000 Mb/s Ethernet (RJ-45 ) <ul style="list-style-type: none"> <li>8th Generation Intel® Core i5-8365U</li> <li>8th Generation Intel® Core i7-8665U</li> </ul> Integrated Connection I217-LM 10/100/1000 Mb/s Ethernet (RJ-45 ) <ul style="list-style-type: none"> <li>8th Generation Intel® Core i3-8145U</li> <li>8th Generation Intel® Core i5-8265U</li> </ul>

## Mobile Broadband

Table 12. Mobile Broadband

Specifications
Intel XMM 7360 Global LTE-Advanced

## Wireless

Table 13. Wireless specifications

Specifications
Intel Dual Band Wireless AC 9560 (802.11ac) 2x2 + Bluetooth 5.0
Qualcomm QCA61x4A 802.11ac Dual Band (2x2) Wireless Adapter + Bluetooth 4.2
Intel Wi-Fi 6 AX200 2x2 .11ax 160 MHz + Bluetooth 5.0 (Optional)

## Ports and connectors

Table 14. Ports and connectors

Feature	Specifications
Memory card reader	<ul style="list-style-type: none"> <li>One microSD card reader</li> </ul>
SIM card reader	One micro SIM card slot
USB	<ul style="list-style-type: none"> <li>One USB 3.1 Gen 1 (Type-A) ports</li> <li>One USB 3.1 Gen 1 with PowerShare</li> <li>One USB Type-C 3.1 Gen 2 port with DisplayPort/Thunderbolt 3(optional)</li> </ul>

Feature	Specifications
Security	Noble wedge lock slot
Audio	One headset (headphone and microphone combo) port
Video	One HDMI 1.4b port (supports up to 4k @30 Hz)
Network adapter	RJ-45, 10/100/1000, No LED indicator

## Display

**Table 15. Display specifications**

Feature	Specifications
Type	<ul style="list-style-type: none"> <li>13.3 in. antiglare, HD (1366 x 768), WLED, 16:9</li> <li>13.3 in. antiglare, FHD (1920 x 1080), WLED, 16:9 (optional)</li> <li>13.3 in. antiglare, FHD (1920 x 1080), WLED, integrated touch, 16:9 (optional)</li> </ul>
Height (Active area)	165.24 mm (6.51 in.)
Width (Active area)	293.76 mm (11.57 in.)
Diagonal	337.04 mm (13.3 in.)
Pixels Per Inch (PPI)	<ul style="list-style-type: none"> <li>118</li> <li>166 (optional)</li> </ul>
Contrast ratio	<ul style="list-style-type: none"> <li>HD - 800:1</li> <li>FHD - 1000:1</li> <li>FHD IT - 700:1</li> </ul>
Luminance/Brightness (typical)	<ul style="list-style-type: none"> <li>HD - 220 Nits, NTSC 45%</li> <li>FHD - 300 Nits (optional), sRGB 100%</li> <li>FHD IT - 300nits, NTSC 72%</li> </ul>
Refresh rate	60 Hz
Horizontal viewing angle (min)	[HD] +/- 40 degrees +/- 80 degrees (optional)
Vertical viewing angle (min)	[HD] top/bottom 10/30 degrees +/- 80 degrees (optional)
Power consumption (max)	3.5 W <ul style="list-style-type: none"> <li>HD - 2.85 W</li> <li>FHD - 1.99 W</li> <li>FHD IT - 4.8 W</li> </ul>

## Keyboard

**Table 16. Keyboard specifications**

Feature	Specifications
Number of keys	<ul style="list-style-type: none"> <li>81 (U.S. and Canada)</li> </ul>

Feature	Specifications
	<ul style="list-style-type: none"> <li>82 (UK/Brazil)</li> <li>85 (Japan)</li> </ul>
Size	Full sized <ul style="list-style-type: none"> <li>X= 18.05 mm (0.7 in.) key pitch</li> <li>Y= 18.05 mm (0.71 in.) key pitch</li> </ul>
Backlit keyboard	Optional (backlit and Non-backlit)
Layout	QWERTY

## 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 17. 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	Mute microphone	F4 behavior
Fn + F5	Turn on/off keyboard backlight	F5 behavior
Fn + F6	Decrease brightness	F6 behavior
Fn + F7	Increase brightness	F7 behavior
Fn + F8	Switch to external display	F8 behavior
Fn + F10	Print screen	F10 behavior
Fn + F11	Home	F11 behavior
Fn + F12	End	F12 behavior
Fn + Ctrl	Open application menu	--

## Touchpad

**Table 18. Touchpad specifications**

Feature	Specifications
Resolution	1221 x 661
Dimensions	<ul style="list-style-type: none"> <li>Width: 101.7 mm (4.00 in.)</li> <li>Height: 55.2 mm (2.17 in.)</li> </ul>

Feature	Specifications
Multi-touch	Supports 5-finger multi-touch
	<b>NOTE:</b> For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article 4027871 at <a href="https://support.microsoft.com">support.microsoft.com</a> .

**Table 19. 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—optional

**Table 20. Fingerprint reader specifications**

Feature	Specifications
Type	FPR in power button
Sensor technology	Capacitive
Sensor resolution	363 PPI
Sensor area	Diameter: 10 mm

## Operating system

**Table 21. Operating system**

Feature	Specifications
Operating systems supported	<ul style="list-style-type: none"> <li>Windows 10 Home (64 bit)</li> <li>Windows 10 Professional (64bit)</li> <li>Ubuntu 18.04 LTS (64 bit)</li> </ul>

# Battery

**Table 22. Battery**

Feature	Specifications	
Type	3-cell lithium-ion (42 WHr) ExpressCharge	4-cell lithium-ion (60 WHr) ExpressCharge
Dimension	Width	95.9 mm (3.78 in.)
	Depth	200.5 mm (7.89 in.)
	Height	5.70 mm (0.22 in.)
Weight (maximum)	192.50 g (0.42 lb)	270.00 g (0.60 lb)
Voltage	11.40 VDC	7.60 VDC
Life span	300 discharge/charge cycles	
	1000 discharge/charge cycles (LCL pack)	
Charging time when the computer is off (approximate)	Standard charge	0°C to 50°C: 4 hours
	Express Charge	0°C to 15°C: 4 hours
		16°C to 45°C: 2 hours
		46°C to 50°C: 3 hours
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.	
Temperature range: Operating	Charge: 0°C to 50°C, 32°F to 122°F	Charge: 0°C to 50°C, 32°F to 122°F
	Discharge: 0°C to 70°C, 32°F to 158°F	Discharge: 0°C to 70°C, 32°F to 158°F
Temperature range: Storage	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)
Coin-cell battery	CR-2032	CR-2032

# Power adapter

**Table 23. Power adapter specifications**

Feature	Specifications	
Type	E5 65 W	E5 90 W
Input Voltage	100 VAC - 240 VAC	100 VAC - 240 VAC
Input current (maximum)	1.5 A	1.6 A
Adapter size	Dimensions	Dimensions
	In Inches: 0.87 x 2.60 x 4.17	In Inches: 0.87 x 2.60 x 5.12
	In mm: 22 x 66 x 106	In mm: 22 x 66 x 130
Barrel	7.4 mm	7.4 mm
Weight	0.23 kg (0.51 lb)	0.32 kg (0.70 lb)
Input frequency	50 Hz to 60 Hz	50 Hz to 60 Hz

Feature	Specifications	
Output current	3.34 A (continuous)	4.62 A (continuous)
Rated output voltage	19.5 VDC	19.5 VDC
Temperature range (Operating)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
Temperature range (Non-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 24. 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 25. Dimensions and weight**

Feature	Specifications
Height	Front: 16.9 mm (0.66 in.) Rear: 19.3 mm (0.76 in.)
Width	305.7 mm (12.03 in.)
Depth	207.5 mm (8.17 in.)
Weight	1.24 kg (2.73 lb)

## Computer environment

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

**Table 26. 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 80% (non-condensing) <b>NOTE: Maximum dew point temperature = 26°C</b>	0% to 95% (non-condensing) <b>NOTE: Maximum dew point temperature = 33°C</b>
Vibration (maximum)	0.26 GRMS	1.37 GRMS
Shock (maximum)	105 G †	40 G ‡
Altitude (maximum)	-15.2 m to 3048 m (-50 ft to 10,000 ft)	-15.2 m to 10,668 m (-50 ft to 35,000 ft)

\* Measured using a random vibration spectrum that simulates user environment.

† Measured using a 2 ms half-sine pulse when the hard drive is in use.

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

# Security

**Table 27. 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 Optional IR camera
Cable lock	Wedge-shaped lock
Dell Smartcard Keyboard	Optional
FIPS 140-2 certification for TPM	Yes
ControlVault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification	Yes, for FPR, SC and CSC/NFC
Fingerprint Reader Only	Touch Fingerprint reader in power button tied to ControlVault 3
Contacted Smart Card and ControlVault 3	FIPS 201 Smart card reader certification/SIPR

## Security options—Contacted smartcard reader

**Table 28. Contacted smartcard reader**

Title	Description	Dell ControlVault 3 Smartcard reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5V powered smartcard	Yes
ISO 7816 -3 Class B Card Support	Reader capable of reading 3V powered smartcard	Yes
ISO 7816 -3 Class C Card support	Reader capable of reading 1.8V powered smartcard	Yes
ISO 7816-1 Compliant	Specification for the reader	Yes
ISO 7816 -2 Compliant	Specification for smartcard device physical characteristics (size, location of connection points, etc.)	Yes
T=0 support	Cards support character level transmission	Yes
T=1 support	Cards support block level transmission	Yes
EMVCo Compliant	Compliant with EMVCo (for electronic payment standards) smartcard standards as posted to <a href="http://www.emvco.com">www.emvco.com</a>	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard standards	Yes
PC/SC OS interface	Personal Computer/Smart Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers.	Yes

Title	Description	Dell ControlVault 3 Smartcard reader
Windows Certified	Device certified by WHCK	Yes
FIPS 201 (PIV/HSPD-12) Compliant via GSA	Device compliant with FIPS 201/PIV/HSPD-12 requirements	Yes

## Security options—Contactless smartcard reader

**Table 29. Contactless smartcard reader**

Title	Description	Dell ControlVault 3 Contactless Smartcard reader with NFC
Felica Card Support	Reader and software capable of supporting Felica contactless cards	Yes
ISO 14443 Type A Card Support	Reader and software capable of supporting ISO 14443 Type A contactless cards	Yes
ISO 14443 Type B Card Support	Reader and software capable of supporting ISO 14443 Type B contactless cards	Yes
ISO/IEC 21481	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO/IEC 18092	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO 15693 Card Support	Reader and software capable of supporting ISO15693 contactless cards	Yes
NFC Tag Support	Supports reading and processing of NFC compliant tag information	Yes
NFC Reader Mode	Support for NFC Forum Defined Reader mode	Yes
NFC Writer Mode	Support for NFC Forum Defined Writer mode	Yes
NFC Peer-to-Peer Mode	Support for NFC Forum Defined Peer to Peer mode	Yes
EMVCo Compliant	Compliant with EMVCO smartcard standards as posted to <a href="http://www.emvco.com">www.emvco.com</a>	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard standards	Yes
NFC Proximity OS Interface	Enumerates NFP (Near Field Proximity) device for OS to utilize	Yes
PC/SC OS interface	Personal Computer/Smart Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers	Yes
Windows Certified	Device certified by Microsoft WHCK	Yes
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

 **NOTE: 125 Khz proximity cards are not supported.**

**Table 30. Supported cards**

<b>Manufacturer</b>	<b>Card</b>	<b>Supported</b>
HID	jCOP readertest3 A card (14443a)	Yes
	1430 1L	
	DESFire D8H	
	iClass (Legacy)	
	iClass SEOS	
NXP/Mifare	Mifare DESFire 8K White PVC Cards	Yes
	Mifare Classic 1K White PVC Cards	
	NXP Mifare Classic S50 ISO Card	
G&D	idOnDemand - SCE3.2 144K	Yes
	SCE6.0 FIPS 80K Dual+ 1 K Mifare	
	SCE6.0 nonFIPS 80K Dual+ 1 K Mifare	
	SCE6.0 FIPS 144K Dual + 1K Mifare	
	SCE6.0 nonFIPS 144K Dual + 1 K Mifare	
	SCE7.0 FIPS 144K	
Oberthur	idOnDemand - OCS5.2 80K	Yes
	ID-One Cosmo 64 RSA D V5.4 T=0 card	

## Security Software

**Table 31. Security Software specifications**

<b>Specifications</b>
Dell Client Command Suite
Optional Dell Data Security and Management Software
Dell Client Command Suite
- Dell BIOS Verification
- Optional Dell Endpoint Security and Management Software
- VMware Carbon Black Endpoint Standard
- VMware Carbon Black Endpoint Standard + Secureworks Threat Detection and Response
- Dell Encryption Enterprise
- Dell Encryption Personal
- Carbonite
- VMware Workspace ONE
- Absolute® Endpoint Visibility and Control
- Netskope
- Dell Supply Chain Defense

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 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.

# 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
<b>Up arrow</b>	Moves to the previous field.
<b>Down arrow</b>	Moves to the next field.
<b>Enter</b>	Selects a value in the selected field (if applicable) or follow the link in the field.
<b>Spacebar</b>	Expands or collapses a drop-down list, if applicable.
<b>Tab</b>	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 ePSA diagnostics screen.**

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

# System setup options

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

## General options

Table 32. General

Option	Description
<b>System Information</b>	This section lists the primary hardware features of your computer. The options are: <ul style="list-style-type: none"><li>• <b>System Information</b></li><li>• <b>Memory Configuration</b></li><li>• <b>Processor Information</b></li><li>• <b>Device Information</b></li></ul>
<b>Battery Information</b>	Displays the battery status and the type of AC adapter connected to the computer.
<b>Boot Sequence</b>	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"><li>• <b>Windows Boot Manager</b></li><li>• <b>Boot List Option-UEFI is the enabled by default.</b></li></ul>
<b>UEFI Boot Path Security</b>	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"><li>• <b>Always, Except Internal HDD</b>—Default</li><li>• <b>Always</b></li><li>• <b>Never</b></li></ul>

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 33. 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"> <li>• <b>Disabled</b></li> <li>• <b>AHCI</b>—Default</li> </ul>
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"> <li>• <b>SATA-2</b></li> <li>• <b>M.2 PCIe SSD-0</b></li> </ul>
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"> <li>• <b>Enable USB Boot Support</b></li> <li>• <b>Enable External USB Ports</b></li> </ul> <p>All the options are set by default.</p> <p><b>NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.</b></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"> <li>• <b>Thunderbolt (Enabled by Default)</b></li> <li>• <b>Enable Thunderbolt Boot Support</b></li> <li>• <b>Enable Thunderbolt (and PCIe behind TBT) Pre-boot</b></li> </ul> <p>With following security levels :</p> <ul style="list-style-type: none"> <li>• <b>No Security</b></li> <li>• <b>User Authentication (Enabled by Default)</b></li> <li>• <b>Secure Connect</b></li> <li>• <b>Display Port and USB Only</b></li> </ul>
Thunderbolt™ Auto Switch	<p>This option configures the method used by the Thunderbolt controller to perform PCIe device enumeration.</p>

Option	Description
<b>USB PowerShare</b>	<ul style="list-style-type: none"> <li>• <b>Auto Switch</b> : The BIOS will automatically switch between BIOS Assist and Native Thunderbolt PC device enumeration modes to get all benefits of the installed OS</li> <li>• <b>Native Enumeration</b>: The BIOS will program the Thunderbolt controller to Native mode ( Auto Switching is disabled)</li> <li>• <b>BIOS Assist Enumeration</b>: The BIOS will program the Thunderbolt controller to BIOS Assist mode ( Auto Switching is disabled)</li> </ul> <p> <b>NOTE: A reboot is required for these changes to take effect.</b></p> <p>This option enable/disable the USB PowerShare feature behavior. This option is disabled by default.</p>
<b>Audio</b>	<p>Allows you to enable or disable the integrated audio controller. By default, the <b>Enable Audio</b> option is selected.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• <b>Enable Microphone</b></li> <li>• <b>Enable Internal Speaker</b></li> </ul> <p>This option is set by default.</p>
<b>Keyboard Illumination</b>	<p>This field lets you choose the operating mode of the keyboard illumination feature.</p> <ul style="list-style-type: none"> <li>• <b>Disabled</b>: The Keyboard illumination will always be off or 0%.</li> <li>• <b>Dim</b>: Enable the keyboard illumination feature at 50% brightness.</li> <li>• <b>Bright</b>: Enable the keyboard illumination feature at 100% brightness level.</li> </ul>
<b>Keyboard Backlight Timeout on AC</b>	<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"> <li>• <b>5 seconds</b></li> <li>• <b>10 seconds</b>(Default)</li> <li>• <b>15 seconds</b></li> <li>• <b>30 seconds</b></li> <li>• <b>1 minute</b></li> <li>• <b>5 minute</b></li> <li>• <b>15 minute</b></li> <li>• <b>Never</b></li> </ul>
<b>Keyboard Backlight Timeout on Battery</b>	<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"> <li>• <b>5 seconds</b></li> <li>• <b>10 seconds</b>(Default)</li> <li>• <b>15 seconds</b></li> <li>• <b>30 seconds</b></li> <li>• <b>1 minute</b></li> <li>• <b>5 minute</b></li> <li>• <b>15 minute</b></li> <li>• <b>Never</b></li> </ul>
<b>Touchscreen</b>	<p>This option controls whether the touchscreen is enabled or disabled</p>

Option	Description
	This option is enabled by default.
<b>Unobtrusive Mode</b>	When enabled, pressing Fn+F7 will turn off all light and sound emission in the system. Press Fn+F7 to resume normal operation. Default is Disabled.
<b>Fingerprint Reader</b>	Enable or disable the Fingerprint Reader or the Fingerprint Reader Device's Single Sign On capability. <ul style="list-style-type: none"> <li>• <b>Enable Fingerprint Reader Device:</b> Enabled by Default</li> <li>• <b>Enable Fingerprint Reader Single Sign On:</b> Enabled by Default</li> </ul>
<b>Miscellaneous devices</b>	Allows you to enable or disable various on board devices. <ul style="list-style-type: none"> <li>• <b>Enable Camera</b>—Default</li> <li>• <b>Enable Secure Digital (SD) Card</b></li> <li>• <b>Secure Digital (SD) Card Boot</b> - Disabled</li> <li>• <b>Secure Digital Card (SD) Read-Only Mode</b> - Disabled</li> </ul>

## Video screen options

Table 34. Video

Option	Description
<b>LCD Brightness</b>	Allows you to set the display brightness depending upon the power source. On Battery (50% is default) and On AC (100% default).
<b>Dynamic Backlight Control</b>	This option enables or disables the Dynamic Backlight Control if the panel supports the feature.

## Security

Table 35. Security

Option	Description
<b>Admin Password</b>	Allows you to set, change, or delete the administrator (admin) password. The entries to set the password are: <ul style="list-style-type: none"> <li>• <b>Enter the old password:</b></li> <li>• <b>Enter the new password:</b></li> <li>• <b>Confirm new password:</b></li> </ul> Click <b>OK</b> once you set the password.  <b>NOTE:</b> 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.
<b>System Password</b>	Allows you to set, change, or delete the System password. The entries to set the password are: <ul style="list-style-type: none"> <li>• <b>Enter the old password:</b></li> <li>• <b>Enter the new password:</b></li> <li>• <b>Confirm new password:</b></li> </ul> Click <b>OK</b> once you set the password.

Option	Description
	 <b>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.</b>
<b>Strong Password</b>	<p>Allows you to enforce the option to always set the strong password.</p> <ul style="list-style-type: none"> <li>• <b>Enable Strong Password</b></li> </ul> <p>This option is not set by default.</p>
<b>Password Configuration</b>	<p>You can define the length of your password. Min = 4, Max = 32</p>
<b>Password Bypass</b>	<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"> <li>• <b>Disabled</b>—Default</li> <li>• <b>Reboot bypass</b></li> </ul>
<b>Password Change</b>	<p>Allows you to change the System password when the administrator password is set.</p> <ul style="list-style-type: none"> <li>• <b>Allow Non-Admin Password Changes</b></li> </ul> <p>This option is set by default.</p>
<b>Non-Admin Setup Changes</b>	<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"> <li>• <b>Allow Wireless Switch Changes</b></li> </ul> <p>This option is not set by default.</p>
<b>UEFI Capsule Firmware Updates</b>	<p>Allows you to update the system BIOS via UEFI capsule update packages.</p> <ul style="list-style-type: none"> <li>• <b>Enable UEFI Capsule Firmware Updates</b></li> </ul> <p>This option is set by default.</p>
<b>TPM 2.0 Security</b>	<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"> <li>• <b>TPM On</b>—Default</li> <li>• <b>Clear</b></li> <li>• <b>PPI Bypass for Enable Command</b>—Default</li> <li>• <b>PPI Bypass for Disable Command</b></li> <li>• <b>PPI Bypass for Clear Command</b></li> <li>• <b>Attestation Enable</b>—Default</li> <li>• <b>Key Storage Enable</b>—Default</li> <li>• <b>SHA-256</b>—Default</li> </ul>
<b>Absolute®</b>	<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>
<b>OROM Keyboard Access</b>	<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"> <li>• <b>Enable</b></li> <li>• <b>One Time Enable</b></li> <li>• <b>Disable</b></li> </ul>
<b>Admin Setup Lockout</b>	<p>Allows you to prevent users from entering Setup when an administrator password is set.</p> <ul style="list-style-type: none"> <li>• <b>Enable Admin Setup Lockout</b></li> </ul> <p>This option is not set by default.</p>

Option	Description
<b>Master Password Lockout</b>	<p>Allows you to disable master password support.</p> <ul style="list-style-type: none"> <li>• <b>Enable Master Password Lockout</b></li> </ul> <p>This option is not set by default.</p> <p> <b>NOTE: Hard Disk password should be cleared before the settings can be changed.</b></p>
<b>SMM Security Mitigation</b>	<p>Allows you to enable or disable additional UEFI SMM Security Mitigation protection.</p> <ul style="list-style-type: none"> <li>• <b>SMM Security Mitigation</b></li> </ul> <p>This option is not set by default.</p>

## Secure boot

Table 36. Secure Boot

Option	Description
<b>Secure Boot Enable</b>	<p>Allows you to enable or disable the Secure Boot Feature.</p> <ul style="list-style-type: none"> <li>• <b>Secure Boot Enable</b>—Default</li> </ul>
<b>Secure Boot Mode</b>	<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"> <li>• <b>Deployed Mode</b>—Default</li> <li>• <b>Audit Mode</b></li> </ul>
<b>Expert Key Management</b>	<p>Allows you to enable or disable Expert Key Management.</p> <ul style="list-style-type: none"> <li>• <b>Enable Custom Mode</b></li> </ul> <p>This option is not set by default.</p> <p>The Custom Mode Key Management options are:</p> <ul style="list-style-type: none"> <li>• <b>PK</b>—Default</li> <li>• <b>KEK</b></li> <li>• <b>db</b></li> <li>• <b>dbx</b></li> </ul>

## Intel Software Guard Extensions options

Table 37. Intel Software Guard Extensions

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

Option	Description
	<ul style="list-style-type: none"> <li>• <b>32 MB</b></li> <li>• <b>64 MB</b></li> <li>• <b>128 MB</b>—Default</li> </ul>

## Performance

Table 38. Performance

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

## Power management

Table 39. Power Management

Option	Description
<b>AC Behavior</b>	<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"> <li>• <b>Wake on AC</b></li> </ul> <p>This option is not set by default.</p>
<b>Enable Intel Speed Shift technology</b>	<p>This option is used to enable/disable Intel Speed Shift Technology.</p> <p>This option is not set by default.</p>
<b>Auto On Time</b>	<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"> <li>• <b>Disabled</b>—Default</li> <li>• <b>Every Day</b></li> <li>• <b>Weekdays</b></li> <li>• <b>Select Days</b></li> </ul> <p>This option is not set by default.</p>
<b>USB Wake Support</b>	<p>Allows you to enable USB devices to wake the system from standby.</p> <ul style="list-style-type: none"> <li>• <b>Enable USB Wake Support</b></li> <li>• <b>Wake on Dell USB-C Dock</b></li> </ul> <p>This option is not set by default.</p>
<b>Wireless Radio Control</b>	<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"> <li>• <b>Control WLAN radio</b></li> </ul> <p>This option is not set by default.</p>
<b>Block Sleep</b>	<p>This option lets you to block entering to sleep in OS environment.</p> <p>This option is not set by default.</p>
<b>Peak Shift</b>	<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>
<b>Advanced Battery Charge Configuration</b>	<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>
<b>Primary Battery Charge Configuration</b>	<p>Allows you to select the charging mode for the battery.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• <b>Adaptive</b>—Default</li> <li>• <b>Standard</b>—Fully charges your battery at a standard rate.</li> <li>• <b>ExpressCharge</b>—The battery charges over a shorter period of time using Dell's fast charging technology.</li> <li>• <b>Primarily AC use</b></li> <li>• <b>Custom</b></li> </ul> <p>If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop.</p> <p> <b>NOTE: All charging mode may not be available for all the batteries.</b></p>

## Post behavior

Table 40. POST Behavior

Option	Description
<b>Adapter Warnings</b>	<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"> <li>• <b>Enable Adapter Warnings</b>—Default</li> </ul>
<b>Numlock Enable</b>	<p>Allows you to enable or disable the Numlock function when the system boots.</p>

Option	Description
	<ul style="list-style-type: none"> <li>• <b>Enable Numlock</b>—Default</li> </ul>
<b>Fn Lock Options</b>	<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 toggle dynamically the primary behavior of these keys.</p> <ul style="list-style-type: none"> <li>• <b>Fn Lock</b>—Default</li> </ul> <p>Click one of the following options:</p> <ul style="list-style-type: none"> <li>• <b>Lock Mode Disable/Standard</b></li> <li>• <b>Lock Mode Enable/Secondary</b>—Default</li> </ul>
<b>Fastboot</b>	<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"> <li>• <b>Minimal</b>—Default</li> <li>• <b>Thorough</b></li> <li>• <b>Auto</b></li> </ul>
<b>Extended BIOS POST Time</b>	<p>Allows you to create an additional preboot delay.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> <li>• <b>0 seconds</b>—Default</li> <li>• <b>5 seconds</b></li> <li>• <b>10 seconds</b></li> </ul>
<b>Full Screen Logo</b>	<p>Allows you to display full screen logo, if your image matches screen resolution.</p> <ul style="list-style-type: none"> <li>• <b>Enable Full Screen Logo</b></li> </ul> <p>This option is not set by default.</p>
<b>Warnings and Errors</b>	<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"> <li>• <b>Prompt on Warnings and Errors</b>—Default</li> <li>• <b>Continue on Warnings</b></li> <li>• <b>Continue on Warnings and Errors</b></li> </ul>
<b>Sign of Life Indicator</b>	<p>This option allows 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"> <li>• <b>Enable Sign of Life Audio Indication</b></li> <li>• <b>Enable Sign of Life Display Indication</b></li> <li>• <b>Enable Sign of Life Keyboard Backlight Indication</b></li> </ul>

## Manageability

Table 41. Manageability

Option	Description
<b>USB Provision</b>	When enabled Intel AMT can be provisioned using the local provisioning file via a USB storage device
<b>MEBx Hotkey</b>	This option specifies whether the MEBx Hotkey function should be enabled when the system boots.

# Virtualization support

Table 42. Virtualization Support

Option	Description
<b>Virtualization</b>	<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"><li>• <b>Enable Intel Virtualization Technology</b></li></ul> <p>This option is set by default.</p>
<b>VT for Direct I/O</b>	<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"><li>• <b>Enable VT for Direct I/O</b></li></ul> <p>This option is set by default.</p>
<b>Trusted Execution</b>	<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><b>NOTE:</b> 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 43. Wireless

Option	Description
<b>Wireless Switch</b>	<p>Allows to set the wireless devices that can be controlled by the wireless switch.</p> <p>The options are:</p> <ul style="list-style-type: none"><li>• <b>WWAN</b></li><li>• <b>GPS (on WWAN Module)</b></li><li>• <b>WLAN</b></li><li>• <b>Bluetooth®</b></li></ul> <p>All the options are enabled by default.</p>
<b>Wireless Device Enable</b>	<p>Allows you to enable or disable the internal wireless devices.</p> <p>The options are:</p> <ul style="list-style-type: none"><li>• <b>WWAN/GPS</b></li><li>• <b>WLAN</b></li><li>• <b>Bluetooth®</b></li><li>• <b>Contactless Smartcard/ NFC</b></li></ul> <p>All the options are enabled by default.</p>

# Maintenance

Table 44. Maintenance

Option	Description
<b>Service Tag</b>	<p>Displays the service tag of your computer.</p>
<b>Asset Tag</b>	<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
<b>BIOS Downgrade</b>	Allows you to flash previous revisions of the system firmware. <ul style="list-style-type: none"> <li>• <b>Allow BIOS Downgrade</b></li> </ul> This option is set by default.
<b>Data Wipe</b>	Allows you to securely erase data from all internal storage devices. <ul style="list-style-type: none"> <li>• <b>Wipe on Next Boot</b></li> </ul> This option is not set by default.
<b>Bios Recovery</b>	<p><b>BIOS Recovery from Hard Drive</b>—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><b>BIOS Auto-Recovery</b>— Allows you to recover the BIOS automatically.</p> <p> <b>NOTE: BIOS Recovery from Hard Drive field should be enabled.</b></p> <p><b>Always Perform Integrity Check</b>—Performs integrity check on every boot.</p>

## System logs

Table 45. System Logs

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

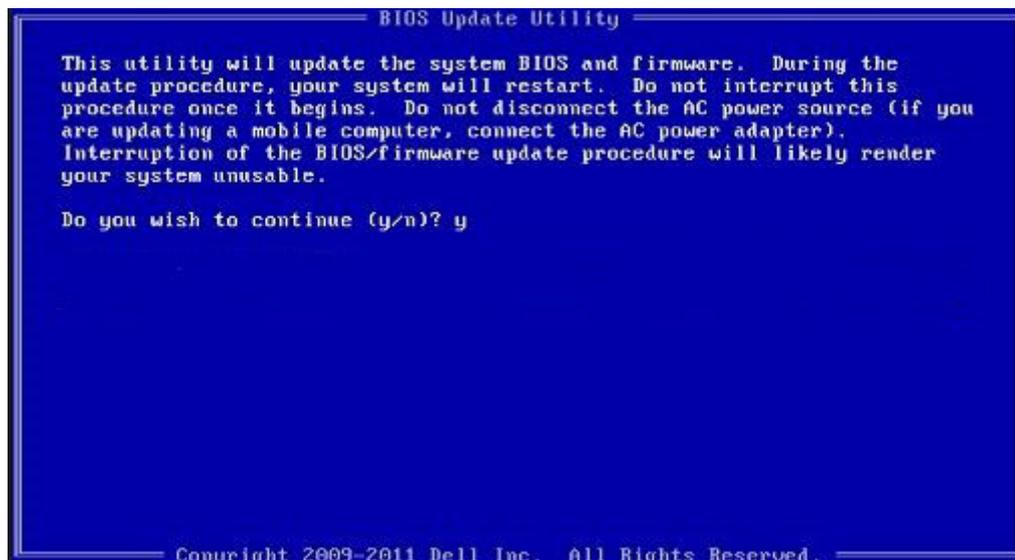


Figure 1. DOS BIOS Update Screen

## System and setup password

Table 46. 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

## 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.