

# Dell Vostro 3670

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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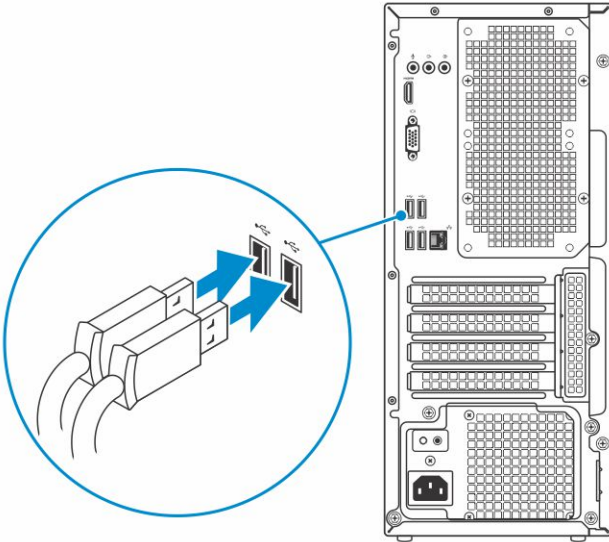
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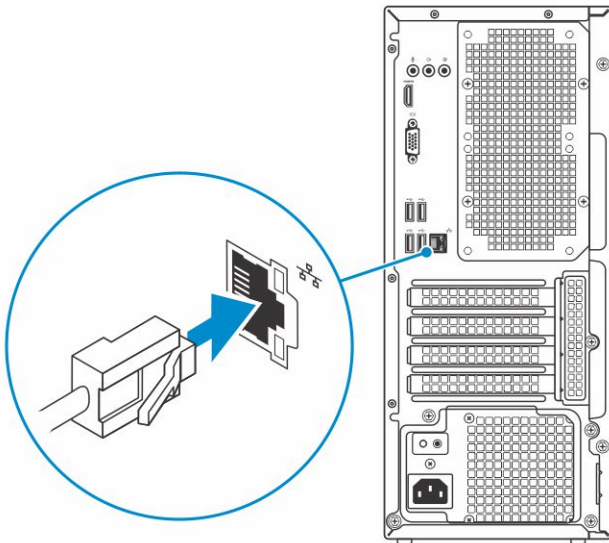
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# Set up your computer

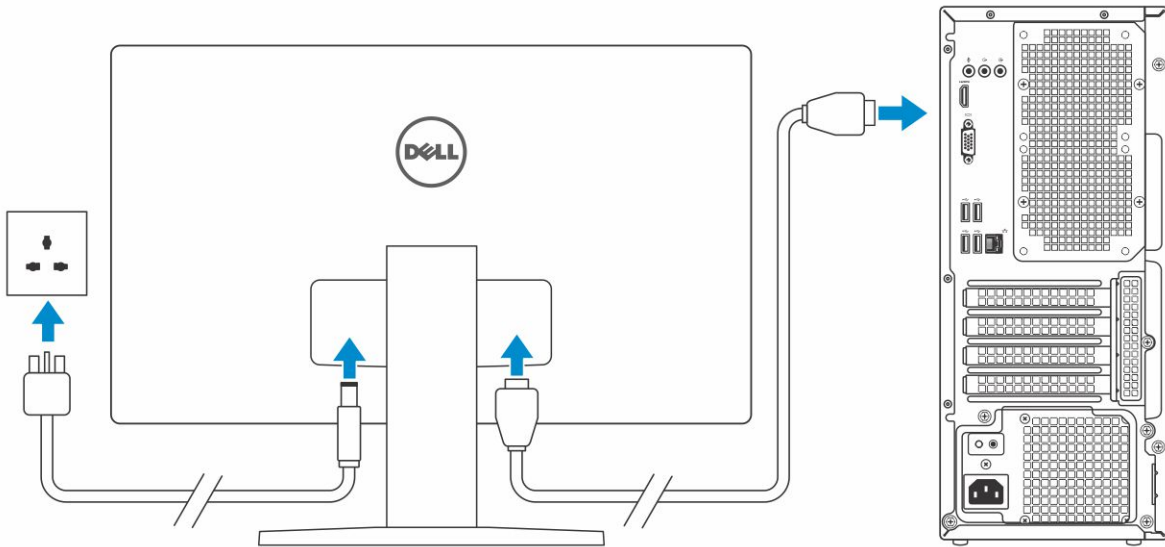
- 1 Connect the keyboard and mouse.



- 2 Connect to your network using a cable, or connect to a wireless network.

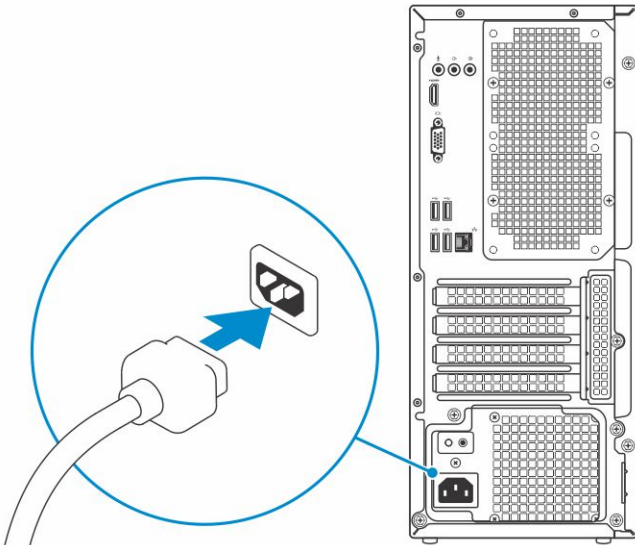


- 3 Connect the display.

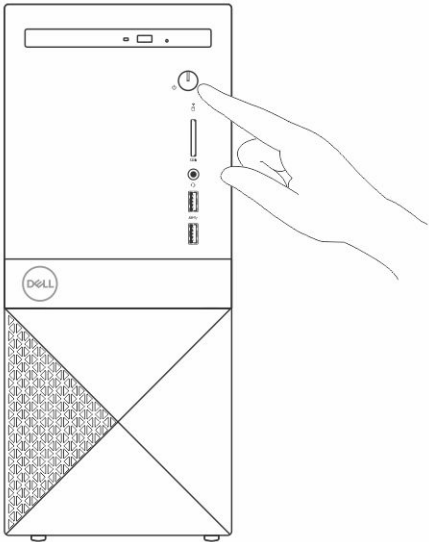


**NOTE:** If you ordered your computer with a discrete graphics card, the HDMI and the display ports on the back panel of your computer are covered. Connect the display to the discrete graphics card.

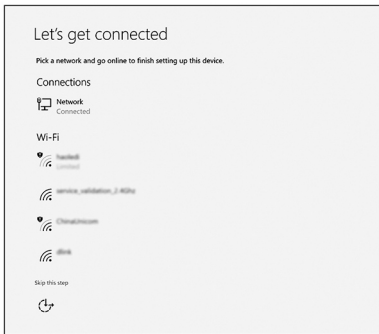
4 Connect the power cable.



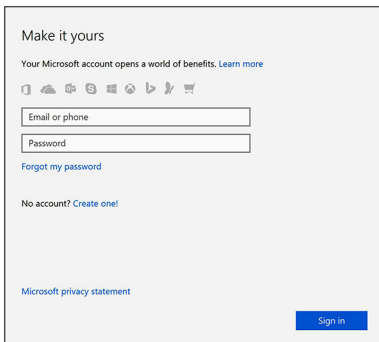
5 Press the power button.



- 6 Follow the instructions on the screen to finish Windows setup:
- a Connect to a network.



- b Sign-in to your Microsoft account or create a new account.



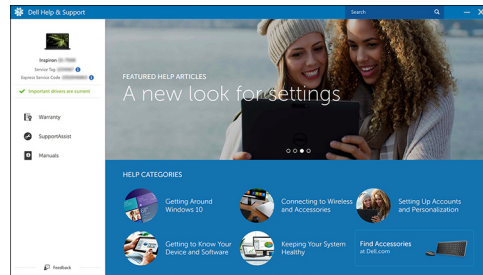
- 7 Locate Dell apps.

Table 1. Locate Dell apps



Register your computer

Dell Help & Support



SupportAssist — Check and update your computer



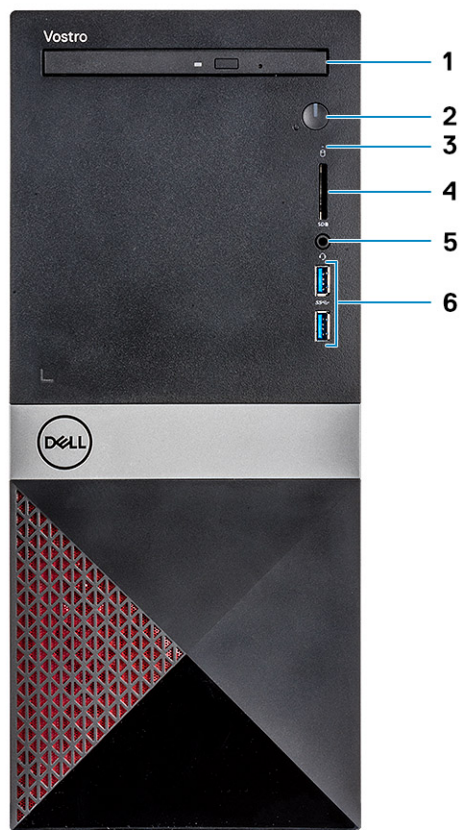
# Chassis

The chapter illustrates the multiple views of the chassis along with the ports and connectors.

## Chassis views

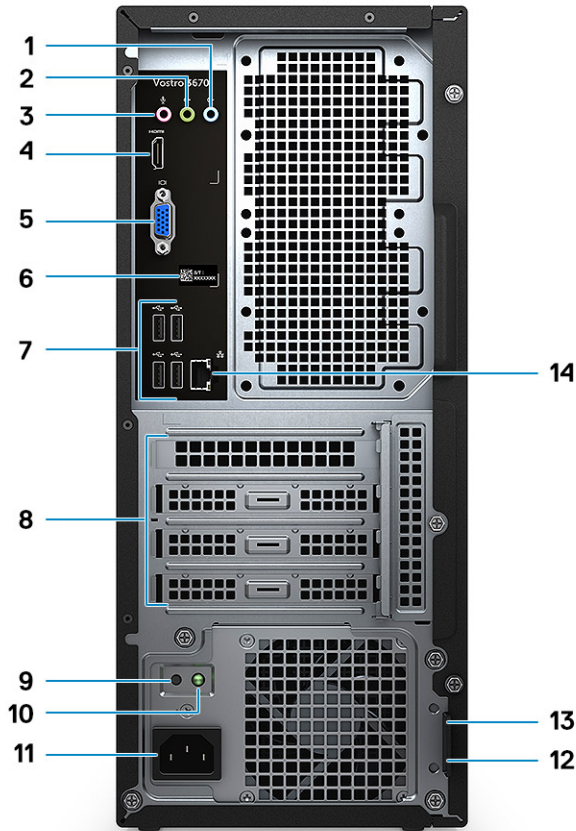
The chassis view displays only the standard components and all the optional components may not be listed.

### Front view



- |   |                           |   |                                 |
|---|---------------------------|---|---------------------------------|
| 1 | Optical drive             | 2 | Power button/Power-status light |
| 3 | Hard-drive activity light | 4 | SD card slot                    |
| 5 | Headset port              | 6 | USB 3.1 Gen 1 ports (2)         |

### Back view



- |    |                                 |    |                                |
|----|---------------------------------|----|--------------------------------|
| 1  | Line-in port                    | 2  | Line-out port                  |
| 3  | Microphone port                 | 4  | HDMI port                      |
| 5  | VGA port                        | 6  | Service tag label              |
| 7  | USB 2.0 ports (4)               | 8  | Expansion card slots           |
| 9  | Power supply diagnostics button | 10 | Power supply diagnostics light |
| 11 | Power connector port            | 12 | Padlock ring                   |
| 13 | Kensington security slot        | 14 | Network port                   |

# System 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:

- [Dimensions and weight](#)
- [System information](#)
- [Operating system](#)
- [Memory](#)
- [Ports and connectors](#)
- [Communications](#)
- [Video](#)
- [Audio](#)
- [Storage](#)
- [Processor](#)
- [Storage combinations](#)
- [System board connectors](#)
- [Power supply](#)
- [Security hardware](#)
- [Regulatory and Environmental Compliance](#)

## Dimensions and weight

**Table 2. Dimensions and weight**

Height	14.7 inch (373.7 mm)
Width	6.3 inch (160 mm)
Depth	11.4 inch (289.4 mm)
Weight	13.01 lb (5.9 kg)

## System information

**Table 3. System information**

Chipset	Intel B360
DRAM bus width	64-bit wide channels

FLASH EPROM	256Mbit
PCIe bus	100 Mhz
External bus frequency	DMI 3.0-8GT/s

## Operating system

**Table 4. Operating system**

Operating systems supported	<ul style="list-style-type: none"> <li>• Windows 10 64-bit</li> <li>• Windows 10 64-bit Professional</li> <li>• Windows 10 64-bit National Academic (STF)</li> <li>• Ubuntu 16.04 LTS (64-bit)</li> </ul>
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## Memory

**Table 5. Memory specifications**

Minimum memory configuration	4 GB
Maximum memory configuration	32 GB
Number of slots	2 UDIMM
Maximum memory supported per slot	16 GB
Memory options	<ul style="list-style-type: none"> <li>• 4 GB DDR4 2400 MHz (4Gx1)</li> <li>• 8 GB DDR4 2400 MHz (8Gx1)</li> <li>• 8 GB DDR4 2400 MHz (4Gx2)</li> <li>• 12 GB DDR4 2400 MHz (8Gx1 + 4Gx1)</li> <li>• 16 GB DDR4 2400 MHz (8Gx2)</li> <li>• 16 GB DDR4 2400 MHz (16Gx1)</li> <li>• 24 GB DDR4 2400 MHz (16Gx1 + 8Gx1)</li> <li>• 32 GB DDR4 2400 MHz (16Gx2)</li> <li>• 4 GB DDR4 2666 MHz (4Gx1)</li> <li>• 8 GB DDR4 2666 MHz (8Gx1)</li> <li>• 8 GB DDR4 2666 MHz (4Gx2)</li> <li>• 12 GB DDR4 2666 MHz (8Gx1 + 4Gx1)</li> <li>• 16 GB DDR4 2666 MHz (8Gx2)</li> <li>• 16 GB DDR4 2666 MHz (16Gx1)</li> <li>• 24 GB DDR4 2666 MHz (16Gx1 + 8Gx1)</li> <li>• 32 GB DDR4 2666 MHz (16Gx2)</li> <li>• 16 GB Optane (Optional)</li> <li>• 32 GB Optane (Optional)</li> </ul>

**NOTE:** The memory modules are customer replaceable units (CRU), and it can be upgraded.

**NOTE:**

- Memory configuration of 2400 MHz pair with PDC, CDC, core i3 CPU
- Memory configuration of 2666 MHz pair with core i5, i7 CPU

Type

DDR4 SDRAM Non-ECC memory

Speed

- 2666 MHz on Core i5, i7 processor
- 2400 MHz on Celeron, Pentium, and i3 processor

## Ports and connectors

**Table 6. Ports and connectors**

USB

- Two USB 3.1 Gen 1 ports
- Four USB 2.0 ports

Security

- Kensington lock slot
- Padlock ring

Audio

- Headset port
- Microphone port
- Line-in port
- Line-out port

Video

- HDMI 1.4 (UMA)
- VGA port

Network adapter

One RJ-45 connector

Secure Digital card

SD card slot

## Communications

**Table 7. Communication specifications**

Network adapter

Realtek RTL8111H Gigabit Ethernet controller 10/100/1000 Mb/s Ethernet (RJ-45 )

Wireless

- Intel 9462 1\*1 ac + BT5 (802.11ac + Bluetooth 5.0,1X1)
- Intel 9560 2\*2 ac + BT5 (802.11ac + Bluetooth 5.0,2x2)
- DW 1707 + BT4.0 (802.11bgn + Bluetooth 4.0, 1x1) via M.2

# Video

**Table 8. Video**

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 630	UMA	Intel Core i3 -8100	Integrated	Shared system memory	VGA	VGA: 2048x1536@60 Hz
		Intel Core i5 -8400			HDMI 1.4	HDMI : 1920x1080@60Hz
		Intel Core i7 -8700				
Intel UHD Graphics 610	UMA	Intel Pentium Gold G5400	Integrated	Shared system memory	VGA	VGA: 2048x1536@60 Hz
		Celeron processor G4900			HDMI 1.4	HDMI : 1920x1080@60Hz
nVIDIA GeForce GT 710	Discrete	N/A	DDR3	2 GB	DL-DVI HDMI VGA (FH only)	Dual Link DVI = 2560x1600  HDMI = 1920x1200 (PC Mode), 1920x1080 (TV mode, 1080p)  VGA (optional) = 2048x1536
nVIDIA GeForce GT 1030	Discrete	N/A	GDDR5	2 GB	SL-DVI HDMI	SL-DVI = 1920 x 1200x 24bpp @ 60hz (reduced blanking)  HDMI = 4096 x 2160 x 24bpp @ 60hz
nVIDIA GeForce GTX 1050	Discrete	N/A	GDDR5	2 GB	DL-DVI DP HDMI	DL-DVI = 2560 x 1600x 24bpp @ 60hz (reduced blanking)  DisplayPort = <ul style="list-style-type: none"> <li>• 7680 x 4320 @ 60hz YUV420 8bit with single DP1.3</li> <li>• 5120 x 3200 x 24 bpp @ 60hz (reduced blanking)</li> <li>• 5120 x 3200 x 30 bpp @ 60hz (YUV422)</li> </ul> HDMI = 4096 x 2160 x 24bpp @ 60hz

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
nVIDIA GeForce GTX 1050Ti	Discrete	N/A	GDDR5	4 GB	DL-DVI DP HDMI	DL-DVI = 2560 x 1600x 24bpp @ 60hz (reduced blanking) DisplayPort = <ul style="list-style-type: none"> <li>7680 x 4320 @ 60hz YUV420 8bit with single DP1.3</li> <li>5120 x 3200 x 24 bpp @ 60hz (reduced blanking)</li> <li>5120 x 3200 x 30 bpp @ 60hz (YUV422)</li> </ul> HDMI = 4096 x 2160 x 24bpp @ 60hz
nVIDIA GeForce GTX 1060	Discrete	N/A	GDDR5	3 GB	DL-DVI DP HDMI	DL-DVI = 2560 x 1600x 24bpp @ 60hz (reduced blanking) DisplayPort = <ul style="list-style-type: none"> <li>7680 x 4320 @ 60hz YUV420 8bit with single DP1.3</li> <li>5120 x 3200 x 24 bpp @ 60hz (reduced blanking)</li> <li>5120 x 3200 x 30 bpp @ 60hz (YUV422)</li> </ul> HDMI = 4096 x 2160 x 24bpp @ 60hz

## Audio

**Table 9. Audio specifications**

Controller	Waves MaxxAudio Pro
Type	Four-channel high-definition audio
Interface	<ul style="list-style-type: none"> <li>3-stack audio jacks supporting 5.1 surround sound.</li> <li>High-quality speakers</li> <li>Stereo headset/mic combo</li> </ul>

# Storage

**Table 10. Storage specifications**

Type	Form factor	Interface	Capacity
Solid-State Drive (SSD)	M.2 2230 and 2280 PCIe	PCIe 3 x4 NVME, Up to 32 Gbps	Up to 512 GB
Hard drive (HDD)	2.5 and 3.5 inch	SATA AHCI, Up to 6 Gbps	Up to 2 TB at 5400 RPM and 7200 RPM

# Processor

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

**Table 11. Processor specifications**

Type	UMA Graphics
Intel 8th Generation Celeron processor G4900 (2M Cache, up to 3.1 GHz)	Intel UHD Graphics 610 with shared graphics memory
Intel 8th Generation Pentium Gold processor G5400 (4M Cache, up to 3.7 GHz)	Intel UHD Graphics 610 with shared graphics memory
Intel 8th Generation Core i3-8100 (6 MB Cache, up to 3.6 GHz)	Intel UHD Graphics 630 with shared graphics memory
Intel 8th Generation Core i5-8400 8th Generation Intel Core i5-8400 processor (9 MB Cache, up to 4.0 GHz)	Intel UHD Graphics 630 with shared graphics memory
Intel 8th Generation Core i7-8700 8th Generation Intel Core i7-8700 processor (12 MB Cache, up to 4.6 GHz)	Intel UHD Graphics 630 with shared graphics memory

# Storage combinations

**Table 12. Storage combinations**

Type	Form factor
M.2 Drive + SATA	M.2 128GB Solid State Drive+ 1TB 7200 rpm Hard Drive

# System board connectors

**Table 13. System board connectors**

M.2 Connectors	M.2 2230/2280 for M.2 PCIe SSD/Wireless (optional)
Serial ATA (SATA) connector	4 SATA 3.0 ports (Up to 6Gb/s)
PCIe X16 slot	PCIe X16 (1)
PCIe X1 slot	PCIe X1 (2)



PCI

PCI (1)

① | **NOTE: PCI slot support on TPM sku**

## Power supply

**Table 14. Power supply**

Input Voltage	100–240 VAC, 50–60 Hz
Input current (maximum)	<ul style="list-style-type: none"><li>• 290 W PSU (APFC Full range)</li><li>• 290 W PSU (EPA Bronze)</li><li>• 365 W PSU (EPA Gold), pair with nVIDIA GTX 1060 3GB GDDR5, red mesh MT for China only.</li></ul>

## Security hardware

**Table 15. Security hardware**

Security HW	<ul style="list-style-type: none"><li>• Data wipe via BIOS (Secure Erase)</li><li>• Support of Computrace BIOS agent – supports both Computrace and Proactive Systems Management</li><li>• Discrete TPM 2.0 (optional)</li><li>• BIOS disable TPM (China Only)</li><li>• Control Vault 2.0 Advanced authentication w FIPS 140-2 Level 3 Certificate</li></ul>
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## Regulatory and Environmental Compliance

**Table 16. Regulatory and Environmental Compliance**

Regulatory and Environmental Compliance	<ul style="list-style-type: none"><li>• Energy Star 6.1 (available in selected configurations only)</li><li>• FCC, UL mark</li><li>• Silver EPEAT Registered (for selected configurations only). For specific country participation and rating, please visit <b><a href="http://www.epeat.net">www.epeat.net</a></b></li><li>• CCC/CECP (China only)</li><li>• ESPL/ 1 Million Hr MTBF (China only, Post-RTS)</li></ul>
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# System setup

System setup enables you to manage your desktop 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](#)
- [General screen options](#)
- [System Configuration screen options](#)
- [Video screen options](#)
- [Security screen options](#)
- [Secure Boot screen options](#)
- [Intel Software Guard Extensions screen options](#)
- [Performance screen options](#)
- [Power Management screen options](#)
- [POST Behavior screen options](#)
- [Virtualization support screen options](#)
- [Wireless screen options](#)
- [Maintenance screen options](#)
- [System Log screen options](#)
- [Advanced configuration options](#)
- [SupportAssist System Resolution screen options](#)

## BIOS overview

**⚠ 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.

**ℹ 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.

# General screen options

This section lists the primary hardware features of your computer.

Option	Description
<b>System Information</b>	<ul style="list-style-type: none"><li>· System Information: Displays BIOS Version, Service Tag, Asset Tag, Ownership Tag, Ownership Date, Manufacture Date, and the Express Service Code.</li><li>· Memory Information: Displays Memory Installed, Memory Available, Memory Speed, Memory Channels Mode, Memory Technology, DIMM 1 Size, DIMM 2Size.</li><li>· Processor Information: Displays Processor Type, Core Count, Processor ID, Current Clock Speed, Minimum Clock Speed, Maximum Clock Speed, Processor L2 Cache, Processor L3 Cache, HT Capable, and 64-Bit technology.</li><li>· Device Information: Displays Primary Hard Drive, SATA-0, SATA-1, SATA-2, SATA-3, LOM MAC Address, Video Controller, Audio Controller, WiFi Device, Bluetooth Device.</li></ul>

## Boot Sequence

<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>· Windows Boot Manager</li><li>· Onboard NIC(IPV4)</li><li>· Oboard NIC(IPV6)</li></ul> By default, all the options are checked. You can also deselect any option or change the boot order.
<b>Boot List Options</b>	Allows you to change the boot list option: <ul style="list-style-type: none"><li>· Legacy External Devices</li><li>· UEFI (default)</li></ul>

## Advanced Boot Options

	This option allows you the legacy option ROMs to load. <ul style="list-style-type: none"><li>· By default, the <b>Enable Legacy Option ROMs</b> is enabled</li><li>· This option allows you the legacy option ROMs to load. By default, the <b>Enable Attemot Legacy Boot</b> is disabled.</li><li>·</li></ul>
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## UEFI Boot Path Security


	This options control whether or not the system will prompt the user to enter the Admin password (if set) when booting a UEFI boot path from the F12 Boot Menu <ul style="list-style-type: none"><li>· <b>Always Except Internal HDD</b> (default)</li><li>· Always</li><li>· Never</li></ul>
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## Date/Time

	Allows you to change the date and time.
--	---

# System Configuration screen options

Option	Description
<b>Integrated NIC</b>	Allows you to configure the integrated network controller. The options are: <ul style="list-style-type: none"><li>· Disabled</li></ul>






Option	Description
	<ul style="list-style-type: none"> <li>· Enabled</li> <li>· Enabled w/PXE: This option is enabled by default.</li> </ul>
<b>SATA Operation</b>	<p>Allows you to configure the internal SATA hard-drive controller. The options are:</p> <ul style="list-style-type: none"> <li>· Disabled</li> <li>· AHCI</li> <li>· <b>RAID On</b>(default)</li> </ul>
<b>Drives</b>	<p>Allows you to configure the SATA drives on board. All drives are enabled by default. The options are:</p> <ul style="list-style-type: none"> <li>· SATA-0</li> <li>· SATA-1</li> <li>· SATA-2</li> <li>· SATA-3</li> <li>· M.2 PCIe SSD-0</li> </ul>
<b>SMART Reporting</b>	<p>This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART (Self-Monitoring Analysis and Reporting Technology) specification. This option is disabled by default.</p> <ul style="list-style-type: none"> <li>· Enable SMART Reporting</li> </ul>
<b>USB Configuration</b>	<p>This field configures the integrated USB controller. If Boot Support is enabled, the system is allowed to boot any type of USB Mass Storage Devices (HDD, memory key, floppy).</p> <p>If USB port is enabled, device attached to this port is enabled and available for OS.</p> <p>If USB port is disabled, the OS cannot see any device attached to this port.</p> <ul style="list-style-type: none"> <li>· <b>Enable USB Boot Support</b> (default)</li> <li>· <b>Enable Front USB Ports</b>(default)</li> <li>· <b>Enable Rear USB Ports</b> (default)</li> </ul> <p> <b>NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.</b></p>
<b>Front USB Configuration</b>	<p>This field enables or disables the front USB configuration</p> <ul style="list-style-type: none"> <li>· <b>Front Port 1 (Bottom Right)* (default)</b></li> <li>· <b>Front Port 2 (Bottom Left)* (default)</b></li> </ul> <p>* denotes a USB 3.0-capable port</p>
<b>Rear USB Configuration</b>	<p>This field enables or disables the front USB configuration</p> <ul style="list-style-type: none"> <li>· Rear Port 1</li> <li>· Rear Port 2</li> <li>· Rear Port 3 (w/RJ-45)</li> <li>· Rear Port 4 (w/RJ-45)</li> </ul> <p>* denotes a USB 3.0-capable port</p>
<b>Audio</b>	<p>This field enables or disables the integrated audio controller. By default, the <b>Enable Audio</b> option is selected.</p>



Option	Description
<b>Miscellaneous Devices</b>	Allows you to enable or disable the following devices: <ul style="list-style-type: none"> <li>· Enable PCI Slot</li> <li>· Enabled Secure Digital (SD) Card (default)</li> </ul>

## Video screen options

Option	Description
<b>Multi-Display</b>	This option enables or disables Multi-Display. It should be enabled for Windows 7 or later. This feature is not applicable to other operating systems. <ul style="list-style-type: none"> <li>· Enable Multi-Display: This option is enabled by default.</li> </ul>
<b>Primary Display</b>	This option determines which video controller becomes the primary display when multiple controllers are available in the system <ul style="list-style-type: none"> <li>· Auto: This option is enabled by default.</li> <li>· Intel HD Graphics</li> <li>· NVIDIA HD Graphics</li> </ul>

## Security screen options

Option	Description
<b>Admin Password</b>	Allows you to set, change, or delete the administrator (admin) password. <p> <b>NOTE: You must set the admin password before you set the system or hard drive password. Deleting the admin password automatically deletes the system password and the hard drive password.</b></p> <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default setting: Not set</p>
<b>System Password</b>	Allows you to set, change, or delete the system password. <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default setting: Not set</p>
<b>Internal HDD-0 Password</b>	Allows you to set, change, or delete the password on the system's internal hard-disk drive. <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default Setting: Not set</p>
<b>Internal HDD-3 Password</b>	Allows you to set, change, or delete the password on the system's internal hard-disk drive. <p> <b>NOTE: Successful password changes take effect immediately.</b></p> <p>Default Setting: Not set</p>
<b>Password Change</b>	Allows you to enable the disable permission to the System and Hard Drive passwords when the admin password is set.

Option	Description
	Default setting: <b>Allow Non-Admin Password Changes</b> is selected.
<b>UEFI Capsule Firmware Update</b>	This option controls whether the system allows the BIOS updates through UEFI capsule update packages. This option is enabled by default.
<b>TPM 2.0 Security</b>	Allows you to enable the Trusted Platform Module (TPM) during POST. The options are: <ul style="list-style-type: none"> <li>• <b>TPM On</b> (enabled by default)</li> <li>• Clear</li> <li>• PPI Bypass for Enabled Commands</li> <li>• PPI Bypass for Disabled Commands</li> <li>• PPI Bypass for Clear Command</li> <li>• <b>Attestation Enable</b> (enabled by default)</li> <li>• <b>Key Storage Enable</b> (enabled by default)</li> <li>• <b>SHA-256</b> (enabled by default)</li> <li>• Disabled</li> <li>• Enabled (enabled by default)</li> </ul> <p> <b>NOTE: To upgrade or downgrade TPM1.2/2.0, download the TPM wrapper tool (software).</b></p>
<b>Computrace</b>	Allows you to activate or disable the optional Computrace software. The options are: <ul style="list-style-type: none"> <li>• Deactivate</li> <li>• Disable</li> <li>• Activate</li> </ul> <p> <b>NOTE: The Activate and Disable options will permanently activate or disable the feature and no further changes are allowed</b></p> <p>Default setting: Deactivate</p>
<b>Master Password Lockout</b>	The option Enable Master Password Lockout is not selected by default.
<b>SIMM Security Mitigation</b>	Allows you to enable or disable the additional UEFI SIMM Security Mitigation protections. Default Setting: SIMM Security Mitigation is not selected.

## Secure Boot screen options

Option	Description
<b>Secure Boot Enable</b>	This option enables or disables the <b>Secure Boot</b> feature. Default setting: Not selected
<b>Secure Boot Mode</b>	<ul style="list-style-type: none"> <li>• <b>Deployed Mode</b> (default)</li> <li>• Audit Mode</li> </ul>
<b>Expert Key Management</b>	Allows you to manipulate the security key databases only if the system is in Custom Mode. The <b>Enable Custom Mode</b> option is disabled by default. The options are: <ul style="list-style-type: none"> <li>• <b>PK</b> (default)</li> <li>• KEK</li> </ul>

Option	Description
	<ul style="list-style-type: none"> <li>· db</li> <li>· dbx</li> </ul> <p>If you enable the <b>Custom Mode</b>, the relevant options for <b>PK, KEK, db, and dbx</b> appear. The options are:</p> <ul style="list-style-type: none"> <li>· <b>Save to File</b>—Saves the key to a user-selected file.</li> <li>· <b>Replace from File</b>—Replaces the current key with a key from a user-selected file.</li> <li>· <b>Append from File</b>—Adds a key to the current database from a user-selected file</li> <li>· <b>Delete</b>—Deletes the selected key</li> <li>· <b>Reset All Keys</b>—Resets to default setting</li> <li>· <b>Delete All Keys</b>—Deletes all the keys</li> </ul> <p><b>NOTE:</b> If you disable the Custom Mode, all the changes made are erased and the keys restore to default settings.</p>

## Intel Software Guard Extensions screen options

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 OS. The options are:</p> <ul style="list-style-type: none"> <li>· Disabled</li> <li>· Enabled</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>. The options are:</p> <ul style="list-style-type: none"> <li>· 32 MB</li> <li>· 64 MB</li> <li>· 128 MB</li> </ul>

## Performance screen options

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 improve with the additional cores. This option is enabled by default. Allows you to enable or disable multi-core support for the processor. The installed processor supports two cores. If you enable Multi Core Support, two cores are enabled. If you disable Multi Core Support, one core is enabled.</p> <ul style="list-style-type: none"> <li>· Enabled Multi Core Support (enabled by default)</li> </ul>
<b>Intel SpeedStep</b>	<p>Allows you to enable or disable the Intel SpeedStep feature.</p> <ul style="list-style-type: none"> <li>· Enable Intel SpeedStep</li> </ul> <p>Default setting: The option is enabled.</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>· C states</li> </ul>

Option	Description
	Default setting: The option is enabled.

## Power Management screen options

Option	Description
<b>AC Recovery</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>Power Off (default)</li> <li>Power On</li> <li>Last Power State</li> </ul>
<b>Enable Intel Speed Shift Technology</b>	<p>This option is used to enable or disable the Intel speed shift technology support. The option is enabled by default.</p>
<b>Auto On Time</b>	<p>Allows you to set the time at which the computer must turn on automatically. The options are:</p> <ul style="list-style-type: none"> <li>Disabled</li> <li>Every Day</li> <li>Weekdays</li> <li>Select Days</li> </ul> <p>Default setting: Disabled</p>
<b>Deep Sleep Control</b>	<p>Allows you to aggressive the system is at conserving power while Shut down (S5) or in Hibernate (S4) mode.</p> <ul style="list-style-type: none"> <li>Disabled (default)</li> <li>Enabled in S5 only</li> <li>Enabled in S4 and S5</li> </ul>
<b>USB Wake Support</b>	<p>Allows you to enable USB devices to wake the system from Standby.</p> <p><b>i 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.</b></p> <ul style="list-style-type: none"> <li>Enable USB Wake Support</li> </ul> <p>Default setting: The option is enabled..</p>
<b>Wake on LAN/WLAN</b>	<p>Allows you to enable or disable the feature that powers on the computer from the Off state when triggered by a LAN signal.</p> <ul style="list-style-type: none"> <li><b>Disabled:</b> This option is enabled by default.</li> <li>LAN Only</li> <li>WLAN Only</li> <li>LAN or WLAN</li> <li>LAN with PXE Boot</li> </ul>
<b>Block Sleep</b>	<p>This option lets you block entering to sleep (S3 state) in operating system environment. Block Sleep (S3 state)</p> <p>Default setting: This option is disabled</p>



# POST Behavior screen options

Option	Description
<b>Numlock LED</b>	This option specifies whether the NumLock LED should be on when the system boots. <ul style="list-style-type: none"><li>· Enable Numlock LED: The option is enabled.</li></ul>
<b>Keyboard Errors</b>	This option option specifies whether the keyboard related errors are reported when it boots. <ul style="list-style-type: none"><li>· Enables Keyboard Error Detection: The option is enabled by default.</li></ul>
<b>Fastboot</b>	Allows you to speed up the boot process by bypassing some of the compatibility steps. The options are: <ul style="list-style-type: none"><li>· Minimal</li><li>· <b>Thorough</b> (default)</li><li>· Auto</li></ul>
<b>Extend BIOS POST Time</b>	This option created an additional pre-boot delay. <ul style="list-style-type: none"><li>· <b>0 seconds (default)</b></li><li>· 5 seconds</li><li>· 10 seconds</li></ul>
<b>Full Screen Logo</b>	. This option displays full screen logo if your image match screen resolution. The option Enable Full Screen Logo is not selected by default.
<b>Warnings and Errors</b>	<ul style="list-style-type: none"><li>· <b>Prompt on Warnings and Errors</b> (default)</li><li>· Continue on Warnings</li><li>· Continue on Warnings and Errors</li></ul>

# Virtualization support screen options

Option	Description
<b>Virtualization</b>	Allows you to enable or disable the Intel Virtualization Technology. Enable Intel Virtualization Technology (default).
<b>VT for Direct I/O</b>	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.

# Wireless screen options

Option	Description
<b>Wireless Device Enable</b>	Allows you to enable or disable internal wireless devices. <ul style="list-style-type: none"><li>· <b>WLAN/WiGig</b> (default)</li><li>· <b>Bluetooth</b> (default)</li></ul>

## Maintenance screen options

Option	Description
<b>Service Tag</b>	Displays the Service Tag of your computer.
<b>Asset Tag</b>	Allows you to create a system asset tag if an asset tag is not already set. This option is not set by default.
<b>SERR Messages</b>	This field controls the SERR message mechanism. Some graphic card required the SERR message. <ul style="list-style-type: none"><li>· Enable SERR Messages (default)</li></ul>
<b>BIOS Downgrade</b>	This field controls flashing of the system firmware to pervious revisions. Allows BIOS Downgrade (Enabled by default)
<b>Data Wipe</b>	This field enables user to erase data from all internal storage device.
<b>BIOS Recovery</b>	Allows you to recover from certain corrupted BIOS conditions from a recover file on the user primary hard drive. Enabled by default.
<b>First Power On Date</b>	This option lets you set Ownership date. This option is disabled by default.

## System Log screen options

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

## Advanced configuration options

Option	Description
<b>ASPM</b>	Allows you to set the ASPM level. <ul style="list-style-type: none"><li>· <b>Auto</b> (default)</li><li>· Disabled</li><li>· L1 Only</li></ul>

## SupportAssist System Resolution screen options

Option	Description
<b>Auto OS Recovery Threshold</b>	Allows you to control the automatic boot flow for SupportAssist System. Options are: <ul style="list-style-type: none"><li>· Off</li><li>· 1</li><li>· 2 (Enabled by default)</li><li>· 3</li></ul>
<b>SupportAssist OS Recovery</b>	Allows you to recover the SupportAssist OS Recovery ( Enabledby default)

# Software

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

Topics:

- [Supported operating systems](#)
- [Downloading drivers](#)
- [Intel chipset drivers](#)
- [Intel HID Event Filter](#)
- [Disk drivers](#)
- [Display adapter driver](#)
- [Bluetooth drivers](#)
- [Network drivers](#)
- [Audio drivers](#)
- [Storage drivers](#)
- [Security drivers](#)

## Supported operating systems

**Table 17. Supported operating systems**

Supported operating systems	Description
Windows 10	<ul style="list-style-type: none"> <li>• Microsoft Windows 10 Pro 64-bit</li> <li>• Microsoft Windows 10 Home 64-bit</li> </ul>

## Downloading drivers

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

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

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

## Intel chipset drivers

Verify if the Intel chipset drivers are already installed in the system.

- System devices
  - ACPI Fan
  - ACPI Fan
  - ACPI Fan
  - ACPI Fan
  - ACPI Fan
  - ACPI Fixed Feature Button
  - ACPI Power Button
  - ACPI Processor Aggregator
  - ACPI Thermal Zone
  - ACPI Thermal Zone
  - Composite Bus Enumerator
  - Dell Diag Control Device
  - Dell System Analyzer Control Device
  - High Definition Audio Controller
  - High Definition Audio Controller
  - High precision event timer
  - Intel(R) Management Engine Interface
  - Intel(R) Power Engine Plug-in
  - Intel(R) Xeon(R) E3 - 1200/1500 v5/6th Gen Intel(R) Core(TM) Gaussian Mixture Model - 1911
  - Intel(R) Xeon(R) E3 - 1200/1500 v5/6th Gen Intel(R) Core(TM) PCIe Controller (x16) - 1901
  - Legacy device
  - Microsoft ACPI-Compliant System
  - Microsoft System Management BIOS Driver
  - Microsoft UEFI-Compliant System
  - Microsoft Virtual Drive Enumerator
  - Microsoft Windows Management Interface for ACPI
  - Microsoft Windows Management Interface for ACPI
  - Microsoft Windows Management Interface for ACPI
  - NDIS Virtual Network Adapter Enumerator
  - Numeric data processor
  - PCI Express Root Complex
  - PCI standard host CPU bridge
  - PCI standard RAM Controller
  - PCI-to-PCI Bridge
  - Plug and Play Software Device Enumerator
  - Programmable interrupt controller
  - Remote Desktop Device Redirector Bus
  - System CMOS/real time clock
  - System timer
  - UMBus Root Bus Enumerator

## Intel HID Event Filter

Verify if the Intel HID event filter is already installed in the computer.

- Human Interface Devices
  - USB Input Device
  - USB Input Device

## Disk drivers

Disk drivers installed in the system

- Disk drives
  - HGST HTS721010A9E630
  - ST2000DM001-1ER164

## Display adapter driver

Verify if the display adapter driver is already installed in the computer.

- Display adapters
  - AMD Radeon (TM) RX 560
  - Intel Coffee Lake UHD Graphics

## Bluetooth drivers

This platform supports a variety of Bluetooth drivers. The following is an example

- Bluetooth
  - Microsoft Bluetooth Enumerator
  - Microsoft Bluetooth LE Enumerator
  - Microsoft Bluetooth Protocol Support Driver
  - Qualcomm QCA9565 Bluetooth 4.0

## Network drivers

Install the WLAN and Bluetooth drivers from the Dell support site.

- Network adapters
  - Bluetooth Device (Personal Area Network)
  - Bluetooth Device (RFCOMM Protocol TDI)
  - Qualcomm QCA9565 802.11b/g/n Wireless Adapter
  - Realtek PCIe GBE Family Controller
  - WAN Miniport (IKEv2)
  - WAN Miniport (IP)
  - WAN Miniport (IPv6)
  - WAN Miniport (L2TP)
  - WAN Miniport (Network Monitor)
  - WAN Miniport (PPPOE)
  - WAN Miniport (PPTP)
  - WAN Miniport (SSTP)

## Audio drivers

Verify if audio drivers are already installed in the computer.

- Sound, video and game controllers
  - AMD High Definition Audio Device
  - Intel(R) Display Audio
  - Realtek Audio

## Storage drivers

Verify if the storage controller drivers are installed in the system.

- Storage controllers
  - Intel(R) Chipset SATA/PCIe RST Premium Controller
  - Microsoft Storage Spaces Controller

## Security drivers

Verify if the security device drivers are installed in the computer.

- Security devices
  - Trusted Platform Module 2.0

# Getting help

## 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.