

Dell Vostro 3471

Setup and specification guide



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Notes, cautions, and warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your product.

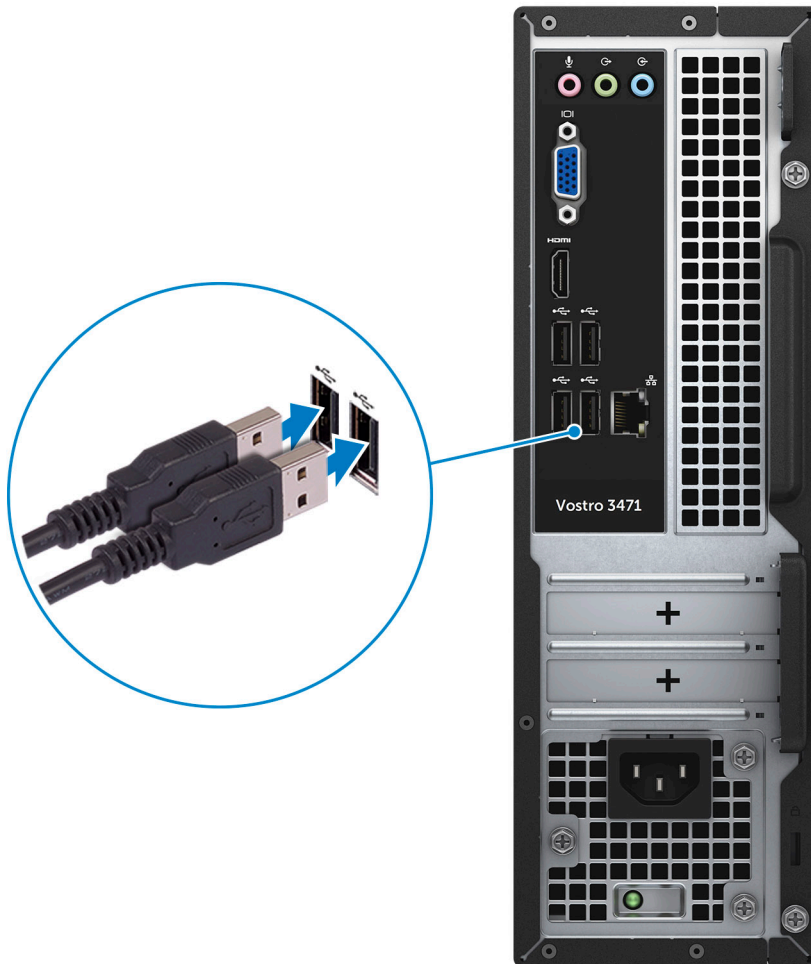
 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

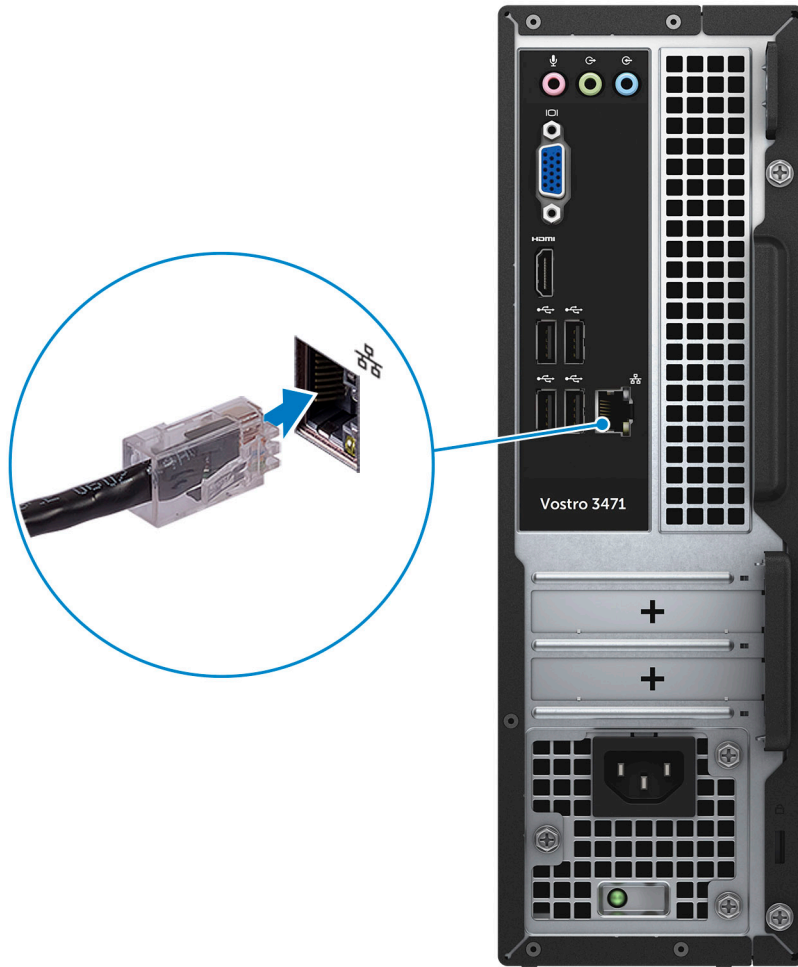
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Set up your computer

1. Connect the keyboard and mouse.



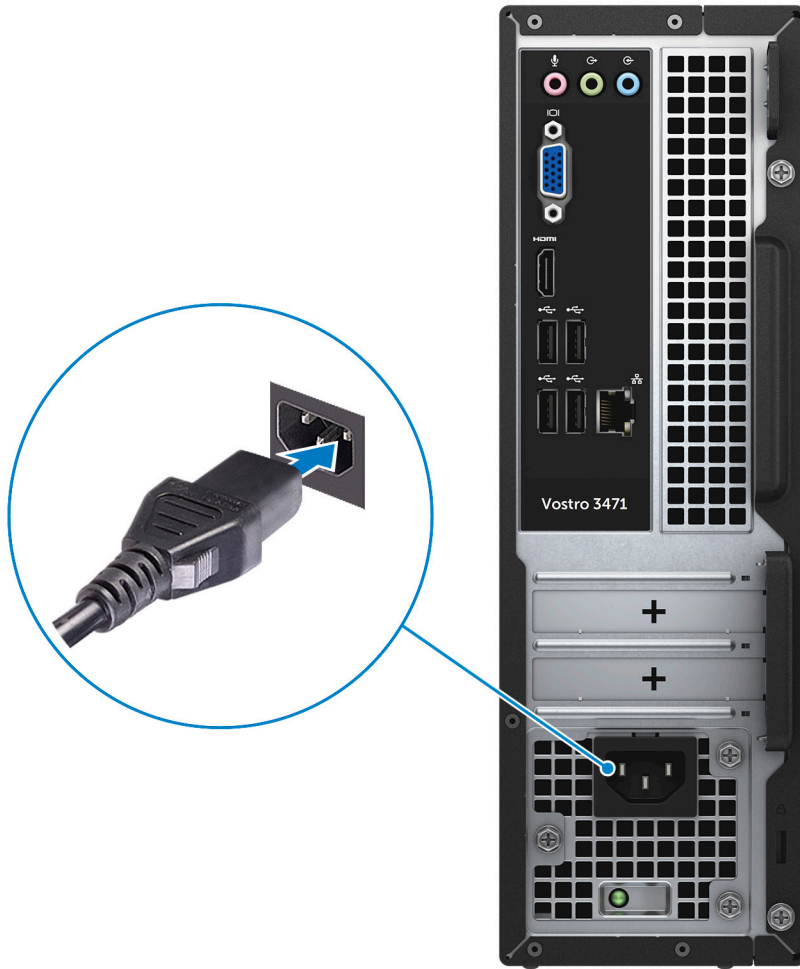
2. Connect to your network using a cable.



3. Connect the display.



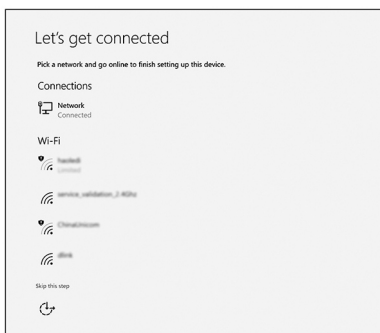
4. Connect the power cable.



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.

Make it yours

Your Microsoft account opens a world of benefits. [Learn more](#)

[Forgot my password](#)

No account? [Create one!](#)

[Microsoft privacy statement](#)

[Sign in](#)

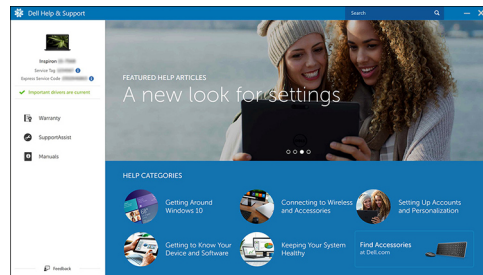
7. Locate Dell apps.

Table 1. Locate Dell apps



Register your computer

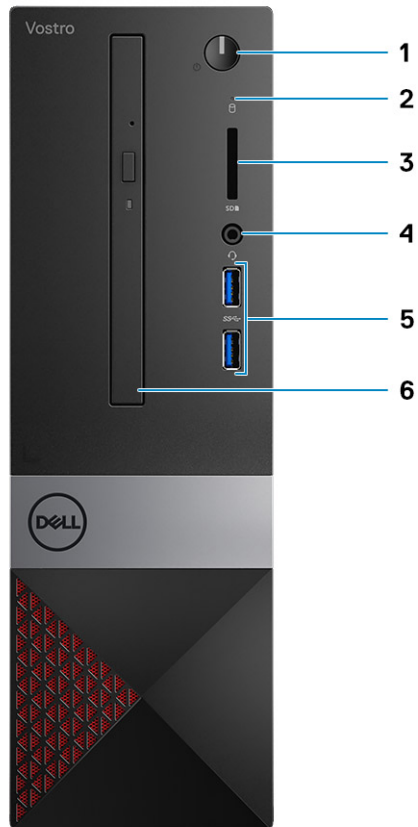
Dell Help & Support



SupportAssist — Check and update your computer

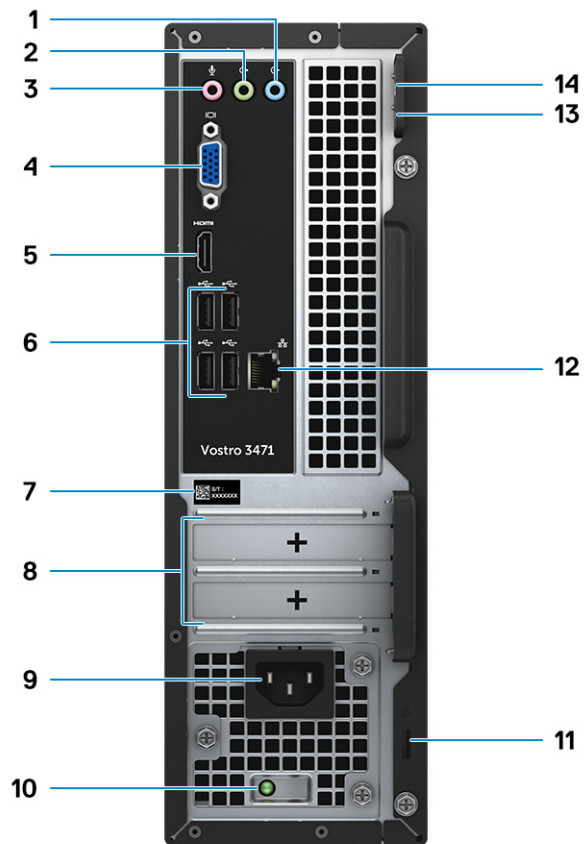
Chassis overview

System front view



1. Power button/power status LED
2. Hard drive activity light
3. Memory card reader
4. Universal audio/microphone connector
5. USB 3.1 Gen 1 ports (2)
6. Optical drive

System back view



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

Technical specifications

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

Topics:

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

Physical specifications

Table 2. Physical specifications

Feature	Specifications
Height	11.4 inch (290 mm)
Width	3.6 inch (92.6 mm)
Depth	11.5 inch (293 mm)
Weight	19.7 lb (4.8 kg)

System information

Table 3. System information

Feature	Specifications
Chipset	Intel B365
DRAM bus width	64-bit
FLASH EPROM	256 Mbit
PCIe clock bus	100 Mhz
External bus frequency	DMI 3.0-8GT/s

Processor specifications

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

Operating system

Operating systems supported:

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Ubuntu
- Windows 10 national academy

Memory specifications

Table 4. Memory specifications

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	32 GB
Number of slots	2
Maximum memory supported per slot	<ul style="list-style-type: none">• Slot configuration1: 4 GB• Slot configuration2: 8 GB• Slot configuration3: 16 GB
Memory options	<ul style="list-style-type: none">• 4 GB (4 GB x 1)• 8 GB (4 GB x 2 or 8 GB x 1)• 12 GB (1 x 4 GB + 1 x 8 GB)• 16 GB (8 GB x 2 or 16 GB x1)• 24 GB (8 GB x 1+16 GB x1)• 32 GB (16 GB x 2)
	NOTE: The memory modules are customer replaceable units (CRU), and it can be upgraded.
Type	Dual-channel DDR4
Speed	<ul style="list-style-type: none">• Speed Configuration1: Intel 9th Generation i5/i7 is 2666 MHz• Speed Configuration2: Intel 9th Generation i3/Intel Pentium Gold/Intel Celeron is 2400MHz

Ports and connectors

Table 5. External ports and connectors

Description	Values
External:	
Network	One RJ-45 port
USB	<ul style="list-style-type: none">• Two USB 3.1 Gen1 ports• Four USB 2.0 ports

Description	Values
Audio	One headset (headphone and microphone combo) port, and one Line-in/Line-out/mic Jack
Video	One HDMI 1.4b port and one VGA port
Media card reader	One SD-card slot
Docking port	Not supported
Power adapter port	NA
Security	NA
Express card	Not supported
Smart card reader	Not supported
Legacy ports	Not supported
Micro subscriber identity module (uSIM) card	Not supported

Table 6. Internal ports and connectors

Description	Values
Internal:	
Expansion	One PCIe16 expansion card slot and one PCIe1 expansion card slot.
mSATA slots	N/A
SATA slots	One SATA slot for 3.5-inch HDD (or two SATA slot for 2.5-inch HDD), and one SATA slot for ODD.
M.2	<ul style="list-style-type: none"> One M.2 2230 slot for WiFi and Bluetooth combo card One M.2 2230/2280 slot for SATA solid-state drive
	<p>NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.</p>

Communications

Ethernet

Table 7. Ethernet specifications

Description	Values
Model number	REALTEK RTL8111H PCI-e Gigabit ethernet controller
Transfer rate	10/100/1000

Wireless module

Table 8. Wireless module specifications

Description	Values
Model number	Qualcomm DW1707
Transfer rate	Up to 150 Mbps
Frequency bands supported	2.4 GHz

Description	Values
Wireless standards	WiFi 802.11b/g/n
Encryption	<ul style="list-style-type: none"> 64-bit/128-bit WEP AES-CCMP TKIP
Bluetooth	Bluetooth 4.0

Video

Table 9. Discrete graphics specification

Discrete graphics			
Controller	External display support	Memory size	Memory Type
NVIDIA GT730LP	1*HDMI/1*DVI-D/1*VGA	2 GB	GDDR5

Table 10. Integrated graphics specifications

Integrated graphics			
Controller	External display support	Memory size	Processor
Intel UHD 630 Graphics	One HDMI 1.4b port	Shared system memory	8 th /9th Generation Intel Core i3/i5/i7
Intel UHD 610 Graphics	One HDMI 1.4b port	Shared system memory	Intel Cel, PDC

Audio specifications

Table 11. Audio specifications

Feature	Specifications
Controller	Waves MaxxAudio Pro
Type	Four-channel high-definition audio
Interface	<ul style="list-style-type: none"> Line-in, line-out, and microphone ports supporting 5.1 surround sound High-quality speakers Stereo headset/mic combo

Storage

Your computer supports one of the following configurations:

- One 3.5-inch hard-drive.
- One M.2 2230/2280 NVMe solid-state drive.
- One 3.5-inch hard-drive and one M.2 2230/2280 NVMe solid-state drive.
- One (or two) 2.5-inch hard-drive and one M.2 2230/2280 solid-state drive.
- The primary drive of your computer varies with the storage configuration. With a M.2 drive, the M.2 drive is the primary drive, and for computers without a M.2 drive, the 3.5-inch (or 2.5-inch) hard drive is the primary drive.

Table 12. Storage specifications

Storage type	Interface type	Capacity
One 3.5-inch hard drive	SATA AHCI, up to 6 Gbps	

Storage type	Interface type	Capacity
Two 2.5-inch hard drives	SATA AHCI, up to 6 Gbps	
One M.2 2230/2280 solid-state drive	SATA AHCI, up to 6 Gbps	
One 9.5 mm slimline DVD-RW drive	SATA AHCI, up to 1.5 Gbps	

Power supply specifications

Table 13. Power supply

Feature	Specifications
Input Voltage	100-240VAC, 200-240VAC, 50–60 Hz
Wattage	<ul style="list-style-type: none"> • 200 W APFC High voltage • 200 W APFC 100V-240V Full range • 200 W EPA Bronze

Security hardware

Table 14. Security hardware

Feature	Specifications
Security HW	<ul style="list-style-type: none"> • Data wipe via BIOS (Secure Erase) • Support of Computrace BIOS agent – supports both Computrace and Proactive Systems Management • Discrete TPM 2.0 (optional) • BIOS disable TPM (China Only)

Regulatory and Environmental Compliance

Table 15. Regulatory and Environmental Compliance

Feature	Specifications
Regulatory and Environmental Compliance	<ul style="list-style-type: none"> • Energy Star 7.1 (available in selected configurations only) • FCC, UL mark • 1 Million Hr MTBF (China only, Post-RTS)
Temperature range	<ul style="list-style-type: none"> • Operating :10°C to 35°C (50°F to 95°F) • Storage: -40°C to 65°C (-40°F to 149°F)
Relative humidity	<ul style="list-style-type: none"> • Operating : 20% to 80% (*Max dew point temperature = 26°C) (non-condensing) • Storage: 5% to 95% (+Max dew point temperature = 33°C) (non-condensing)
Airborne contaminant level	G1 as defined by ISA-S71.04-1985
Vibration	Vibration (maximum)*: operating=0.26 GRMS; Storage=1.37 GRMS
Shock	Shock (maximum): operating=40 G†; Storage=105 G‡

System setup

System setup enables you to manage your 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:

- [Accessing System Setup](#)
- [Navigation Keys](#)
- [System setup options](#)
- [Updating the BIOS in Windows](#)
- [System and setup password](#)

Accessing System Setup

1. Turn on (or restart) your computer.
2. After the white Dell logo appears, press F2 immediately.

The System Setup page is displayed.

i **NOTE: If you wait too long and the operating system logo appears, wait until you see the desktop. Then, shut down or restart your computer and try again.**

i **NOTE: After the Dell logo appears, you can also press F12 and then select BIOS setup.**

Navigation Keys

The following table displays the system setup navigation keys.

i **NOTE: For most of the system setup options, changes that you make are recorded but do not take effect until you restart the system.**

Table 16. Navigation Keys

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.
<Enter>	Allows you to select a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
<Tab>	Moves to the next focus area. i NOTE: For the standard graphics browser only.
<Esc>	Moves to the previous page till 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.
<F1>	Displays the System Setup help file.

System setup options

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


General screen options

This section lists the primary hardware features of your computer.

Option	Description
System Information	<ul style="list-style-type: none">System Information: Displays BIOS Version, Service Tag, Asset Tag, Ownership Tag, Ownership Date, Manufacture Date, and the Express Service Code.Memory Information: Displays Memory Installed, Memory Available, Memory Speed, Memory Channels Mode, Memory Technology, DIMM 1 Size, DIMM 2Size.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.Device Information: Displays Primary Hard Drive, SATA-0, SATA-1, SATA-2, SATA-3, LOM MAC Address, Video Controller, Audio Controller, WiFi Device, M.2PCIe SSD-0, Dock eSATA Device, Video BIOS Version, Video Memory, Panel Type, Native Resolution, WiGig Device, Cellular Device, Bluetooth Device.
Boot Sequence	<p>Boot Sequence Allows you to change the order in which the computer attempts to find an operating system. The options are:</p> <ul style="list-style-type: none">Windows Boot ManagerPEBOOT <p>By default, all the options are checked. You can also deselect any option or change the boot order.</p> <p>Boot List Options Allows you to change the boot list option:</p> <ul style="list-style-type: none">LegacyUEFI (default)
Advanced Boot Options	<p>This option allows you the legacy option ROMs to load.</p> <ul style="list-style-type: none">By default, the Enable Legacy Option ROMs is enabledThis option allows you the legacy option ROMs to load. By default, the Enable Attemot Legacy Boot is disabled.
UEFI Boot Path Security	<p>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</p> <ul style="list-style-type: none">Always Except Internal HDD (default)AlwaysNever
Date/Time	Allows you to change the date and time.

System Configuration screen options

Option	Description
Integrated NIC	Allows you to configure the integrated network controller. The options are: <ul style="list-style-type: none">DisabledEnabledEnabled w/PXE: This option is enabled by default.
SATA Operation	Allows you to configure the internal SATA hard-drive controller. The options are:

Option	Description
	<ul style="list-style-type: none"> Disabled AHCI RAID On(default)
Drives	<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"> SATA-0 SATA-1 SATA-2 SATA-3
SMART Reporting	<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"> Enable SMART Reporting
USB Configuration	<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"> Enable USB Boot Support (default) Enable Front USB Ports(default) Enable Rear USB Ports (default) <p> NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.</p>
Front USB Configuration	<p>This field enables or disables the front USB configuration</p> <ul style="list-style-type: none"> Front Port 1 (Bottom Right)* (default) Front Port 2 (Bottom Left)* (default) <p>* denotes a USB 3.0-capable port</p>
Rear USB Configuration	<p>This field enables or disables the front USB configuration</p> <ul style="list-style-type: none"> Rear Port 1 Rear Port 2 Rear Port 3 (w/RJ-45) Rear Port 4 (w/RJ-45) <p>* denotes a USB 3.0-capable port</p>
Audio	<p>This field enables or disables the integrated audio controller. By default, the Enable Audio option is selected.</p>
Miscellaneous Devices	<p>Allows you to enable or disable the Enabled Secure Digital (SD) Card (default).</p>

Video screen options

Option	Description
Primary Display	<p>This option determines which video controller becomes the primary display when multiple controllers are available in the system</p> <ul style="list-style-type: none"> Auto: This option is enabled by default. Intel HD Graphics

Security screen options

Option	Description
Admin Password	<p>Allows you to set, change, or delete the administrator (admin) password.</p> <p>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.</p> <p>NOTE: Successful password changes take effect immediately.</p> <p>Default setting: Not set</p>
System Password	<p>Allows you to set, change, or delete the system password.</p> <p>NOTE: Successful password changes take effect immediately.</p> <p>Default setting: Not set</p>
Internal HDD-0 Password	<p>Allows you to set, change, or delete the password on the system's internal hard-disk drive.</p> <p>NOTE: Successful password changes take effect immediately.</p> <p>Default Setting: Not set</p>
Internal HDD-1 Password	<p>Allows you to set, change, or delete the password on the system's internal hard-disk drive.</p> <p>NOTE: Successful password changes take effect immediately.</p> <p>Default Setting: Not set</p>
Password Change	<p>Allows you to enable the disable permission to the System and Hard Drive passwords when the admin password is set.</p> <p>Default setting: Allow Non-Admin Password Changes is selected.</p>
UEFI Capsule Firmware Update	<p>This option controls whether the system allows the BIOS updates through UEFI capsule update packages. This option is enabled by default.</p>
Non-Admin Setup Changes	<p>Allows you to determine whether changes to the setup options are allowed when an Administrator Password is set. If disabled the setup options are locked by the admin password.</p>
TPM 2.0 Security	<p>Allows you to enable the Trusted Platform Module (TPM) during POST. The options are:</p> <ul style="list-style-type: none">• TPM On (enabled by default)• Clear• PPI Bypass for Enabled Commands• PPI Bypass for Disabled Commands• PPI Bypass for Clear Command• Attestation Enable (enabled by default)• Key Storage Enable (enabled by default)• SHA-256 (enabled by default)• Disabled• Enabled (enabled by default) <p>NOTE: To upgrade or downgrade TPM1.2/2.0, download the TPM wrapper tool (software).</p>
Computrace	<p>Allows you to activate or disable the optional Computrace software. The options are:</p> <ul style="list-style-type: none">• Deactivate• Disable• Activate <p>NOTE: The Activate and Disable options will permanently activate or disable the feature and no further changes are allowed</p> <p>Default setting: Deactivate</p>

Option	Description
Master Password Lockout	The option Enable Master Password Lockout is not selected by default.
SIMM Security Mitigation	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
Secure Boot Enable	This option enables or disables the Secure Boot feature. Default setting: Not selected
Secure Boot Mode	<ul style="list-style-type: none"> • Deployed Mode (default) • Audit Mode
Expert Key Management	<p>Allows you to manipulate the security key databases only if the system is in Custom Mode. The Enable Custom Mode option is disabled by default. The options are:</p> <ul style="list-style-type: none"> • PK (default) • KEK • db • dbx <p>If you enable the Custom Mode, the relevant options for PK, KEK, db, and dbx appear. The options are:</p> <ul style="list-style-type: none"> • Save to File—Saves the key to a user-selected file. • Replace from File—Replaces the current key with a key from a user-selected file. • Append from File—Adds a key to the current database from a user-selected file • Delete—Deletes the selected key • Reset All Keys—Resets to default setting • Delete All Keys—Deletes all the keys <p>NOTE: 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
Intel SGX Enable	<p>This field specifies you to provide a secured environment for running code/storing sensitive information in the context of the main OS. The options are:</p> <ul style="list-style-type: none"> • Disabled • Enabled • Software Controlled (default)
Enclave Memory Size	<p>This option sets SGX Enclave Reserve Memory Size. The options are:</p> <ul style="list-style-type: none"> • 32 MB • 64 MB • 128 MB

Performance screen options

Option	Description
Multi Core Support	<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">· All (enabled by default)· 1· 2· 3
Intel SpeedStep	<p>Allows you to enable or disable the Intel SpeedStep feature.</p> <p>Enable Intel SpeedStep</p> <p>Default setting: The option is enabled.</p>
C-States Control	<p>Allows you to enable or disable the additional processor sleep states.</p> <p>C states</p> <p>Default setting: The option is enabled.</p>
Intel TurboBoost	<p>Allows you to enable or disable the Intel TurboBoost mode of the processor.</p> <p>Enable Intel TurboBoost (default)</p>

Power Management screen options

Option	Description
AC Recovery	<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">· Power Off (default)· Power On· Last Power State
Enable Intel Speed Shift Technology	<p>This option is used to enable or disable the Intel speed shift technology support. The option is enabled by default.</p>
Auto On Time	<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">· Disabled· Every Day· Weekdays· Select Days <p>Default setting: Disabled</p>
Deep Sleep Control	<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">· Disabled (default)· Enabled in S5 only· Enabled in S4 and S5
USB Wake Support	<p>Allows you to enable USB devices to wake the system from Standby.</p> <p>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.</p> <ul style="list-style-type: none">· Enable USB Wake Support <p>Default setting: The option is enabled..</p>

Option	Description
Wake on LAN/WLAN	<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"> • Disabled: This option is enabled by default. • LAN Only • WLAN Only • LAN or WLAN • LAN with PXE Boot
Block Sleep	<p>This option lets you block entering to sleep (S3 state) in operating system environment.</p> <p>Block Sleep (S3 state)</p> <p>Default setting: This option is disabled</p>

POST Behavior screen options

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

Virtualization support screen options

Option	Description
Virtualization	<p>Allows you to enable or disable the Intel Virtualization Technology.</p> <p>Enable Intel Virtualization Technology (default).</p>
VT for Direct I/O	<p>Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by Intel® Virtualization technology for direct I/O.</p> <p>Enable VT for Direct I/O - enabled by default.</p>

Wireless screen options

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

Advanced configuration options

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

Maintenance screen options

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

System Log screen options

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

SupportAssist System Resolution

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

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.

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.

System and setup password

Table 17. 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 re-boot.

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/or Setup password. You cannot delete or change an existing System or Setup password, if the **Password Status** is Locked.

To enter the System Setup, press 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/or Setup password, confirm the deletion when prompted.

5. Press Esc and a message prompts you to save the changes.
6. Press Y to save the changes and exit from System Setup.
The computer reboot.

Operating system

Operating systems supported:

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Ubuntu
- Windows 10 national academy

Downloading drivers

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

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

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

Serial IO driver

Verify if the drivers for Touchpad, IR camera, and keyboard and are installed.

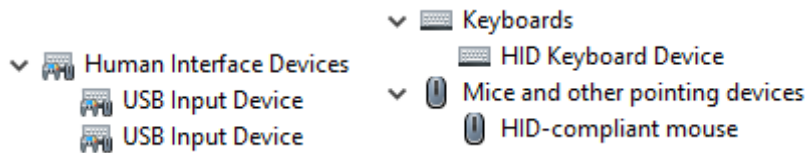
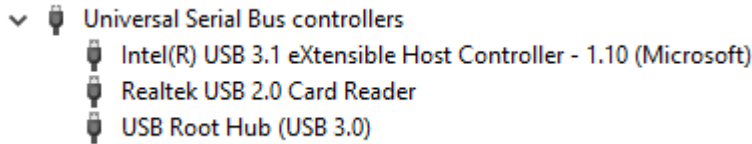


Figure 1. Serial IO driver

USB drivers

Verify if the USB drivers are already installed in the computer.

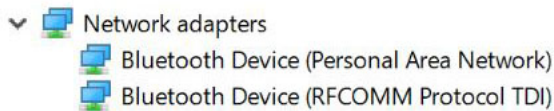


Network drivers

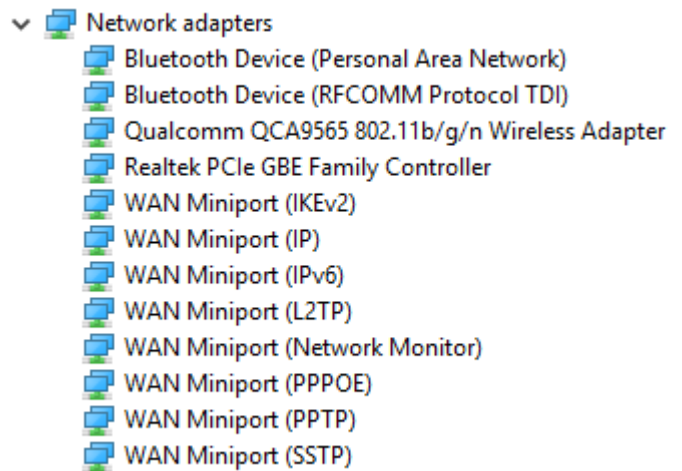
Install the WLAN and Bluetooth drivers from the Dell support site.

Table 18. Network drivers

Before installation



After installation

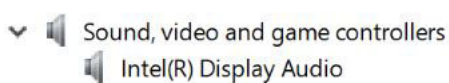


Realtek Audio

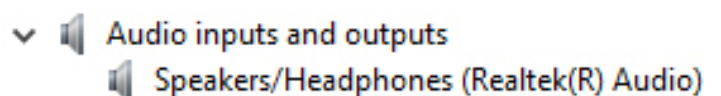
Verify if audio drivers are already installed in the computer.

Table 19. Realtek audio

Before Installation





After Installation



Serial ATA drivers

Install the latest Intel Rapid Storage driver for best performance. Using the default Windows storage drivers is not recommended. Verify if the default serial ATA drivers are installed in the computer.


- ▼  Storage controllers
 -  Microsoft Storage Spaces Controller

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.