Dell Vostro 5391

Setup and specifications guide

Regulatory Model: P114G
Regulatory Type: P114G001
September 2020
Rev. A01

Notes, cautions, and warnings

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

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

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

Contents

1

Set up your computer

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

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

2. Finish Windows system setup.

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

   - Connect to a network for Windows updates.

     NOTE: If connecting to a secured wireless network, enter the password for the wireless network access when prompted.
   - If connected to the internet, sign-in with or create a Microsoft account. If not connected to the internet, create an offline account.
   - On the **Support and Protection** screen, enter your contact details.

3. Locate and use Dell apps from the Windows Start menu—Recommended

Table 1. Locate Dell apps

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

Table 1. Locate Dell apps (continued)

Dell apps	Details
	**SupportAssist** Proactively checks the health of your computer's hardware and software. **NOTE:** Renew or upgrade your warranty by clicking the warranty expiry date in SupportAssist.
	**Dell Update** Updates your computer with critical fixes and important device drivers as they become available.
	**Dell Digital Delivery** Download software applications including software that is purchased but not preinstalled on your computer.

4. Create recovery drive for Windows.

   NOTE: It is recommended to create a recovery drive to troubleshoot and fix problems that may occur with Windows.

   For more information, see Create a USB recovery drive for Windows.

2

Create a USB recovery drive for Windows

Create a recovery drive to troubleshoot and fix problems that may occur with Windows. An empty USB flash drive with a minimum capacity of 16 GB is required to create the recovery drive.

NOTE: This process may take up to an hour to complete.

NOTE: The following steps may vary depending on the version of Windows installed. Refer to the Microsoft support site for latest instructions.

1. Connect the USB flash drive to your computer.
2. In Windows search, type `Recovery`.
3. In the search results, click **Create a recovery drive**.
   The **User Account Control** window is displayed.
4. Click **Yes** to continue.
   The **Recovery Drive** window is displayed.
5. Select **Back up system files to the recovery drive** and click **Next**.
6. Select the **USB flash drive** and click **Next**.
   A message appears, indicating that all data in the USB flash drive will be deleted.
7. Click **Create**.
8. Click **Finish**.
   For more information about reinstalling Windows using the USB recovery drive, see the *Troubleshooting* section of your product's *Service Manual* at www.dell.com/support/manuals.

3

Chassis

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

Topics:

Display view

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

Left view

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

Right view

1. Headset port
2. USB 3.1 Gen 1 port

Palmrest view

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

Bottom view

1. Service Tag label
2. Speakers

Keyboard shortcuts

NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys that are used for shortcuts remain the same across all language configurations.

Table 2. List of keyboard shortcuts

Keys	Primary behavior	Secondary behavior (Fn + Key)
Esc	Escape	Toggle Fn-key lock
F1	Mute audio	F1 behavior
F2	Decrease volume	F2 behavior
F3	Increase volume	F3 behavior
F4	Mute microphone	F4 behavior
F5	Turn on/off keyboard backlight	F5 behavior
F6	Decrease brightness	F6 behavior
F7	Increase brightness	F7 behavior
F8	Switch to external display	F8 behavior
F10	Print screen	F10 behavior
F11	Home	F11 behavior
F12	End	F12 behavior

4

System information

The system information chapter provides detailed information of your computer.

Topics:

Product overview

Vostro 5391 is a 13-inch notebook that offers the following:

- 10th Generation Intel Core i3/i5/i7
- Intel Dual Band Wireless AC 9560 (802.11ac) 2x2 + Bluetooth 5.0 (Optional)
- Intel Dual Band Wireless AC 9462 (802.11ac) 2x2 + Bluetooth 5.0 (Optional)
- One M.2 2280 solid-state drive
- Fingerprint reader - Optional
- Backlit keyboard - Optional

Product comparison

This topic details the product comparison with the predecessor.

Table 3. Product comparison

Features	Vostro 5390	Vostro 5391
Processor	8th generation Intel core i5 and i7 processors	10th generation Intel core i3, i5 and i7 processors
Memory	Solder down, LPDDR3, 2133MHz, Upto 16 GB	Solder down, LPDDR3, 2133MHz, Upto 16 GB
Video	• Intel Integrated UHD 620 Graphics • NVDIA M250 Graphics with 2GB GDDR5 vRAM	• Intel Integrated UHD Graphics • NVDIA M250 Graphics with 2GB GDDR5 vRAM
Audio	Realtek ALC3204 with Waves MaxxAudio Pro	Realtek ALC3204 with Waves MaxxAudio Pro
Card/Fingerprint reader	• microSD card reader • Optional Fingerprint reader	• microSD slot • Fingerprint reader—optional
Input	• Single-pointing non-backlit keyboard • Multi-touch pad.	• Single-pointing non-backlit keyboard • Multi-touch pad.
Display	• 13 inches non-touch anti-glare • 1366 x 768 (HD) • 1920 x 1080 (FHD)	• 13 inches non-touch glare • 1366 x 768 (HD) • 1920 x 1080 (FHD)
Optical drive	No	No
Wireless	Wireless LAN Options: • Qualcomm QCA9565, DW1707 802.11bgn	Wireless LAN Options: • Qualcomm QCA9565, DW1707 802.11bgn

Table 3. Product comparison (continued)

Features	Vostro 5390	Vostro 5391
	• Qualcomm QCA9377 802.11ac Dual Band (1x1) Wireless Adapter+ Bluetooth 4.1 • Qualcomm QCA61x4A 802.11ac Dual Band (2x2) Wireless Adapter+ Bluetooth 4.1 • Intel Wireless-9462 802.11AC 1x1 Wi-Fi + Bluetooth V5.0 Wireless Card • Intel Wireless-AC 9560, 802.11ac 2x2 Wi-Fi + Bluetooth V5.0	• Qualcomm QCA9377 802.11ac Dual Band (1x1) Wireless Adapter+ Bluetooth 4.1 • Qualcomm QCA61x4A 802.11ac Dual Band (2x2) Wireless Adapter+ Bluetooth 4.1 • Intel Wireless-9462 802.11AC 1x1 Wi-Fi + Bluetooth V5.0 Wireless Card • Intel Wireless-AC 9560, 802.11ac 2x2 Wi-Fi + Bluetooth V5.0
Camera and microphone	• Webcam (optional) - 1280 x 720 (HD) at 30 fps • Non-touch panel: HD 720p camera with single digital microphone • Microphone (optional) – Noise-reducing single microphone	• Webcam (optional) - 1280 x 720 (HD) at 30 fps • Non-touch panel: HD 720p camera with single digital microphone • Microphone (optional) – Noise-reducing single microphone
Multimedia	2 x 2 W MaxxAudio Pro	2 x 2 W MaxxAudio Pro
Ports and connectors	• 2x USB 3.1 Gen 1 • 1x USB 2.0 port • HDMI 1.4b • microSD card • Kensington lock	• 1 x USB 3.1 Gen 1 • 1 x USB 2.0 port • 1 x Type-C USB 3.1 Gen 1 • HDMI 1.4b • microSD card • Kensington lock
Power	• 45 Watt • 65 Watt	• 45 Watt • 65 Watt
Battery	45 Whr 4 Cell 'smart' lithium-ion battery	• 45 Whr 4 Cell 'smart' lithium-ion battery
Operating systems	• Microsoft Windows 10 Pro 64 bit • Microsoft Windows 10 Home 64 bit • Microsoft Windows 10 National Academic 64 bit • Ubuntu	• Microsoft Windows 10 Pro 64-bit • Microsoft Windows 10 Home 64 bit • Ubuntu 16.04 LTS 64-bit
Weight	2.86 lbs/ 1.3 Kg	2.86 lbs/ 1.3 Kg

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.

System information

Table 4. System information

Feature	Specifications
Chipset	Integrated in the processor
DRAM bus width	64-bit
FLASH EPROM	32 MB
PCIe bus	Up to Gen3

Table 4. System information (continued)

Feature	Specifications
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 5. Processor specifications

Type	UMA Graphics
10th Generation Intel Core i7 processor (8 MB cache, 4 core count/ 8 threads, Up to 4.6 GHz, 15 W TDP)	Intel UHD Graphics
10th Generation Intel Core i5 processor (6 MB cache, 4 core count/ 8 threads, Up to 3.9 GHz, 15 W TDP)	Intel UHD Graphics
10th Generation Intel Core i3 processor (4 MB cache, 2 core count/ 4 threads, Up to 3.5 GHz, 15 W TDP)	Intel UHD Graphics

Memory

Table 6. Memory specifications

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

Storage

Table 7. Storage specifications

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

Table 7. Storage specifications (continued)

Type	Form factor	Interface	Capacity
Intel Optane memory	M.2 2230/2280 SSD	PCIe 3x2 NVMe 1.1	Upto 16 GB

System board connectors

Table 8. System board connectors

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

Media card-reader

Table 9. Media-card reader specifications

Feature	Specifications
Type	Micro SD Card Reader Slot Micro SD Card

Audio

Table 10. Audio specifications

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

Table 10. Audio specifications (continued)

Feature	Specifications
Microphone	Digital-array microphones

Video card

Table 11. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
NVDIA M250	Discrete	NA	GDDR5	2 GB	HDMI 1.4b port	1920 x 1200@60 Hz

Camera

Table 12. Camera specifications

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

Wireless

Table 13. Wireless specifications

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

Ports and connectors

Table 14. Ports and connectors

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

Table 14. Ports and connectors (continued)

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

Display

Table 15. Display specifications

Feature	Specifications
Type	Full High Definition (FHD)
Height (Active area)	165.24 mm (6.5 in)
Width (Active area)	293.76 mm (11.6 in)
Diagonal	337.04 mm (13.3 in)
Pixels Per Inch (PPI)	166
Contrast ratio	400:1
Luminance/Brightness (typical)	300 nits
Refresh rate	60 Hz
Horizontal viewing angle (min)	+/- 80 degrees
Vertical viewing angle (min)	+/- 80 degrees
Power consumption (max)	4.6 W

Keyboard

Table 16. Keyboard specifications

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

Touchpad

Table 17. Touchpad specifications

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

Table 18. Supported gestures

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

Fingerprint reader (FPR)—optional

Table 19. Fingerprint reader specifications

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

Operating system

Table 20. Operating system

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

Battery

Table 21. Battery

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

Power adapter

Table 22. Power adapter specifications

Feature	Specifications
Type	E65W
Input Voltage	100 VAC - 240 VAC
Input current (maximum)	1.6 A
Adapter size	Dimensions In Inches: 1.1 x 1.9 x 4.3 In mm: 28 x 47 x 108
Weight	0.29 kg (0.64 lbs)
Input frequency	50 Hz to 60 Hz
Output current	3.34 A (continuous)
Rated output voltage	19.5 VDC

Table 22. Power adapter specifications (continued)

Feature	Specifications
Temperature range (Operating)	0°C to 40°C (32°F to 104°F)
Temperature range (Non-Operating)	-40°C to 70°C (-40°F to 158°F)

Sensor and control specifications

Table 23. 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 24. Dimensions and weight

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

Computer environment

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

Table 25. Computer environment

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

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

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

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

Security

Table 26. Security

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

Security Software

Table 27. Security Software specifications

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

Support policy

For more information on support policy, see the knowledge base articles PNP13290, PNP18925, and PNP18955.

5

Software

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

Topics:

- Downloading Windows drivers

Downloading Windows drivers

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

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

4. Click **Drivers and Downloads**.
5. Select the operating system installed on your tabletdesktopnotebook.
6. Scroll down the page and select the driver to install.
7. Click **Download File** to download the driver for your tabletdesktopnotebook.
8. After the download is complete, navigate to the folder where you saved the driver file.
9. Double-click the driver file icon and follow the instructions on the screen.

6

System setup

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

Press <F12> when the Dell logo appears to initiate a one-time boot menu with a list of the valid boot devices for the system. Diagnostics and BIOS Setup options are also included in this menu. The devices listed on the boot menu depend on the bootable devices in the system. This menu is useful when you are attempting to boot to a particular device or to bring up the diagnostics for the system. Using the boot menu does not make any changes to the boot order stored in the BIOS.

The options are:

- UEFI Boot:
  - Windows Boot Manager
-
- Other Options:
  - BIOS Setup
  - BIOS Flash Update
  - Diagnostics
  - Change Boot Mode Settings

Navigation keys

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

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.

Keys	Navigation
Enter	Selects a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
Tab	Moves to the next focus area.
Esc	Moves to the previous page until you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restarts the system.

Boot Sequence

Boot Sequence allows 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

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

  NOTE: Choosing **Diagnostics**, will display the **ePSA diagnostics** screen.

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

System setup options

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

System setup options

NOTE: Depending on this computer and its installed devices, the items that are listed in this section may or may not be displayed.

Table 28. System setup options—System information menu

Overview	
BIOS Version	Displays the BIOS version number.
Service Tag	Displays the Service Tag of the computer.
Asset Tag	Displays the Asset Tag of the computer.
Ownership Tag	Displays the ownership tag of the computer.
Manufacture Date	Displays the manufacture date of the computer.
Ownership Date	Displays the ownership date of the computer.
Express Service Code	Displays the express service code of the computer.
Ownership Tag	Displays the ownership tag of the computer.
Signed Firmware Update	Displays whether the signed firmware update is enabled.

Table 28. System setup options—System information menu (continued)

Overview	
Battery	Displays the battery health information.
Primary	Displays the primary battery.
Battery Level	Displays the battery level.
Battery State	Displays the battery state.
Health	Displays the battery health.
AC Adapter	Displays whether an AC adapter is installed.
Processor Information	
Processor Type	Displays the processor type.
Maximum Clock Speed	Displays the maximum processor clock speed.
Core Count	Displays the number of cores on the processor.
Processor L2 Cache	Displays the processor L2 Cache size.
Processor ID	Displays the processor identification code.
Processor L3 Cache	Displays the processor L3 Cache size.
Current Clock Speed	Displays the current processor clock speed.
Minimum Clock Speed	Displays the minimum processor clock speed.
Microcode Version	Displays the microcode version.
Intel Hyper-Threading Capable	Displays whether the processor is Hyper-Threading (HT) capable.
64-Bit Technology	Displays whether 64-bit technology is used.
Memory Information	
Memory Installed	Displays the total computer memory installed.
Memory Available	Displays the total computer memory available.
Memory Speed	Displays the memory speed.
Memory Channel Mode	Displays single or dual channel mode.
Memory Technology	Displays the technology that is used for the memory.
Device Information	
Video Controller	Displays the integrate graphics information of the computer.
dGPU Video Controller	Displays the discrete graphics information of the computer.
Video BIOS Version	Displays the video BIOS version of the computer.
Video Memory	Displays the video memory information of the computer.
Panel Type	Displays the Panel Type of the computer.
Native Resolution	Displays the native resolution of the computer.
Audio Controller	Displays the audio controller information of the computer.
Wi-Fi Device	Displays the wireless device information of the computer.
Bluetooth Device	Displays the Bluetooth device information of the computer.

Table 29. System setup options—Boot options menu

Boot options	
Advanced Boot Options	
Enable UEFI Network Stack	Enables or disables UEFI Network Stack. Default: OFF.

Table 29. System setup options—Boot options menu (continued)

Boot options	
Boot Mode	
Boot Mode: UEFI only	Displays the boot mode of this computer.
Enable Boot Devices	Enables or disables boot devices for this computer.
Boot Sequence	Displays the boot sequence.
BIOS Setup Advanced Mode	Enables or disables advanced BIOS settings. Default: ON.
UEFI Boot Path Security	Enables or disables the system to prompt the user to enter the Admin password when booting a UEFI boot path from the F12 boot menu. Default: Always Except Internal HDD.

Table 30. System setup options—System Configuration menu

System Configuration	
Date/Time	
Date	Sets the computer date in MM/DD/YYYY format. Changes to the date take effect immediately.
Time	Sets the computer time in HH/MM/SS 24-hour format. You can switch between 12-hour and 24-hour clock. Changes to the time take effect immediately.
Enable SMART Reporting	Enables or disables SMART (Self-Monitoring, Analysis, and Reporting Technology) during computer startup to report hard drive errors. Default: OFF.
Enable Audio	Enables or disables all integrated audio controller. Default: ON.
Enable Microphone	Enables or disables microphone. Default: ON.
Enable Internal Speaker	Enables or disables internal speaker. Default: ON.
USB Configuration	
Enable Boot Support	Enables or disables booting from USB mass storage devices such as external hard drive, optical drive, and USB drive.
Enable External USB Ports	Enables or disables USB ports to be functional in an operating system environment.
SATA Operation	Configures operating mode of the integrated SATA hard drive controller. Default: RAID. SATA is configured to support RAID (Intel Rapid Restore Technology).
Drives	Enables or disables various onboard drives.
M.2 PCIe SSD-0/SATA-2	Default: ON.
SATA-0	Default: ON.
Drive Information	Displays the information of various onboard drives.
Miscellaneous Devices	Enables or disables various onboard devices.
Enable Camera	Enables or disables the camera. Default: ON.

Table 30. System setup options—System Configuration menu (continued)

System Configuration	
Keyboard Illumination	Configures the operating mode of the keyboard illumination feature. Default: Disabled. The keyboard illumination will always be off.
Keyboard Backlight Timeout on AC	Configures the timeout value for the keyboard when an AC adapter is connected to the computer. The keyboard backlight timeout value is only effect when the backlight is enabled. Default: 10 seconds.
Keyboard Backlight Timeout on Battery	Configures the timeout value for the keyboard when the computer is running on battery. The keyboard backlight timeout value is only effect when the backlight is enabled. Default: 10 seconds.
Touchscreen	Enables or disables the touchscreen for the operating system. **NOTE:** Touchscreen will always work in the BIOS setup irrespective of this setting. Default: ON.

Table 31. System setup options—Video menu

Video	
LCD Brightness	
Brightness on battery power	Sets the screen brightness when the computer is running on battery power.
Brightness on AC power	Sets the screen brightness when the computer is running on AC power.
EcoPower	Enables or disables EcoPower which increases the battery life by reducing the screen brightness when appropriate. Default: ON.

Table 32. System setup options—Security menu

Security	
Enable Admin Setup Lockout	Enables or disables the user from entering BIOS Setup when an Admin Password is set. Default: OFF.
Password Bypass	Bypass the System (Boot) Password and the internal hard drive password prompts during a system restart. Default: Disabled.
Enable Non-Admin Password Changes	Enables or disables the user to change the system and hard drive password without the need for admin password. Default: ON.
Non-Admin Setup Changes	
Allow Wireless Switch Changes	Enables or disables changes to the setup option when an Administrator password is set. Default: OFF.
Enable UEFI Capsule Firmware Updates	Enables or disables BIOS updates through UEFI capsule update packages.
Computrace	Enable or disable the BIOS module interface of the optional Computrace(R) Service from Absolute Software.
Intel Platform Trust Technology On	Enables or disables Platform Trust Technology (PTT) visibility to the operating system.

Table 32. System setup options—Security menu (continued)

Security	
	Default: ON.
PPI Bypass for Clear Commands	Enables or disables the operating system to skip BIOS Physical Presence Interface (PPI) user prompts when issuing the Clear command. Default: OFF.
Clear	Enables or disables the computer to clear the PTT owner information, and returns the PTT to the default state. Default: OFF.
Intel SGX	Enables or disables the Intel Software Guard Extensions (SGX) to provide a secured environment for running code/storing sensitive information. Default: Software Control
SMM Security Mitigation	Enables or disables additional UEFI SMM Security Mitigation protections. Default: OFF. **NOTE:** This feature may cause compatibility issues or loss of functionality with some legacy tools and applications.
Enable Strong Passwords	Enables or disables strong passwords. Default: OFF.
Password Configuration	Control the minimum and maximum number of characters that are allowed for Admin and System passwords.
Admin Password	Sets, Changes, or deletes the administrator (admin) password (sometimes called the "setup" password).
System Password	Sets, Changes, or deletes the system password.
Enable Master Password Lockout	Enables or disables the master password support. Default: OFF.

Table 33. System setup options—Secure Boot menu

Secure Boot	
Enable Secure Boot	Enables or disables the computer to boos using only validated boot software. Default: OFF. **NOTE:** For Secure Boot to be enabled, the computer needs to be in UEFI boot mode and the Enable Legacy Option ROMs option needs to be turned off.
Secure Boot Mode	Selects the Secure Boot operation mode. Default: Deployed Mode. **NOTE:** Deployed Mode should be selected for normal operation of Secure Boot.

Table 34. System setup options—Expert Key Management menu

Expert Key Management	
Enable Custom Mode	Enables or disables the keys in the PK, KEK, db, and dbx security key databases to be modified. Default: OFF.
Custom Mode Key Management	Selects the custom values for expert key management.

Table 34. System setup options—Expert Key Management menu (continued)

Expert Key Management	
	Default: PK.

Table 35. System setup options—Performance menu

Performance	
Intel Hyper-Threading Technology	Enables or disables the Intel Hyper-Threading Technology to use processor resources more efficiently. Default: ON.
Intel SpeedStep	Enables or disables the Intel SpeedStep Technology to dynamically adjust processor voltage and core frequency, decreasing average power consumption and heat production. Default: ON.
Intel TurboBoost Technology	Enabled or disabled the Intel TurboBoost mode of the processor. If enabled, the Intel TurboBoost driver increases the performance of the CPU or graphics processor. Default: ON.
Multi-Core Support	Changes the number of CPU cores available to the operating system. The default value is set to the maximum number of cores. Default: All Cores.
Enable C-State Control	Enables or disables the CPU's ability to enter and exit low-power states. Default: ON.

Table 36. System setup options—Power Management menu

Power Management	
Wake on AC	Enables the computer to turn on and go to boot when AC power is supplied to the computer. Default: OFF.
Auto on Time	Enables the computer to automatically power on for defined days and times. Default: Disabled. The system will not automatically power up.
Battery Charge Configuration	Enables the computer to run on battery during power usage hours. Use the below options to prevent AC power usage between certain times of each day. Default: Adaptive. Battery settings are adaptively optimized based on your typical battery usage pattern.
Enable Advanced Battery Charge Configuration	Enables Advanced Battery Charge Configuration from the beginning of the day to a specified work period. Advanced Battery Charged maximizes battery health while still supporting heavy use during the work day. Default: OFF.
Block Sleep	Blocks the computer from entering Sleep (S3) mode in the operating system. Default: OFF. **NOTE:** If enabled, the computer will not go to sleep, Intel Rapid Start will be disabled automatically, and the operating system power option will be blank if it was set to Sleep.
Enable USB Wake Support	Enables the USB devices to wake the computer from Standby mode. Default: OFF.

Table 36. System setup options—Power Management menu (continued)

Power Management	
Enable Intel Speed Shift Technology	Enables or disables Intel Speed Shift Technology support which enables the operating system to select the appropriate processor performance automatically. Default: ON.
Lid Switch	Enables the computer to power up from the off state whenever the lid is opened. Default: ON.

Table 37. System setup options—Wireless menu

Wireless	
Wireless Switch	Determines which wireless devices can be controlled by the Wireless Switch. For Windows 8 systems, this is controlled by an operating system drive directly. As a result, the setting does not affect the Wireless Switch behavior. **NOTE:** When both WLAN and WiGig are present, enable/disable controls are tied together. Thus, they cannot be enabled or disabled independently.
WLAN	Default: ON.
Bluetooth	Default: ON.
Wireless Device Enable	Enable or disable internal WLAN/Bluetooth devices.
WLAN	Default: ON.
Bluetooth	Default: ON.

Table 38. System setup options—POST Behavior menu

POST Behavior	
Numlock Enable	Enables or disables Numlock when the computer boots. Default: ON.
Enable Adapter Warnings	Enables the computer to display adapter warning messages during boot. Default: ON.
Extend BIOS POST Time	Configures the BIOS POST (Power-On Self-Test) load time. Default: 0 seconds.
Fastboot	Configures the speed of the UEFI boot process. Default: Thorough. Performs complete hardware and configuration initialization during boot.
Fn Lock Options	Enables or disables the Fn lock mode. Default: ON.
Lock Mode	Default: Lock Mode Secondary. Lock Mode Secondary = If this option is selected, the F1-F12 keys scan the code for their secondary functions.
Pull Screen Logo	Enabled or disabled the computer to display full screen logo if the image match screen resolution. Default: OFF.
Warnings and Errors	Selects an action on encountering a warning or error during boot. Default: Prompt on Warnings and Errors. Stop, prompt and wait for user input when warnings or errors are detected.

Table 38. System setup options—POST Behavior menu (continued)

POST Behavior	
	NOTE: Errors deemed critical to the operation of the computer hardware will always halt the computer.

Table 39. System setup options—Virtualization menu

Virtualization	
Intel Virtualization Technology	Enables the computer to run a virtual machine monitor (VMM). Default: ON.
VT for Direct I/O	Enables the computer to perform Virtualization Technology for Direct I/O (VT-d). VT-d is an Intel method that provides virtualization for memory map I/O. Default: ON.

Table 40. System setup options—Maintenance menu

Maintenance	
Asset Tag	Creates a system Asset Tag that can be used by an IT administrator to uniquely identify a particular system. Once set in BIOS, the Asset Tag cannot be changed.
Service Tag	Displays the Service Tag of the computer.
BIOS Recovery from Hard Drive	Enables the computer to recover from a bad BIOS image, as long as the Boot Block portion is intact and functioning. Default: ON. **NOTE:** BIOS recovery is designed to fix the main BIOS block and cannot work if the Boot Block is damaged. In addition, this feature cannot work in the event of EC corruption, ME corruption, or a hardware issue. The recovery image must exist on an unencrypted partition on the drive.
BIOS Auto-Recovery	Enables the computer to automatically recover the BIOS without user actions. This feature requires BIOS Recovery from Hard Drive to be set to Enabled. Default: OFF.
Start Data Wipe	**CAUTION: This Secure Wipe Operation will delete information in a way that it cannot be reconstructed.** If enabled, the BIOS will queue up a data wipe cycle for storage devices that are connected to the motherboard on the next reboot. Default: OFF.
Allow BIOS Downgrade	Controls flashing of the system firmware to previous revisions. Default: ON.

Table 41. System setup options—System Logs menu

System Logs	
Power Event Log	Displays Power events. Default: Keep.
BIOS Event Log	Displays BIOS events. Default: Keep.
Thermal Event Log	Displays Thermal events. Default: Keep.

Table 42. System setup options—SupportAssist menu

SupportAssist	
Dell Auto operating system Recovery Threshold	Controls the automatic boot flow for SupportAssist System Resolution Console and for Dell operating system Recovery tool. Default: 2.
SupportAssist operating system Recovery	Enables or disables the boot flow for SupportAssist operating system Recovery tool in the even of certain system errors. Default: ON.

Clearing BIOS (System Setup) and System passwords

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

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

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 outlet.

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 re-install. For more information on this subject, see Knowledge Article: https://www.dell.com/support/article/sln153694

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: https://www.dell.com/support/article/sln143196/

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 Return.
6. The system will boot to a Diag C:\> prompt.
7. Run the file by typing the full filename e.g. O9010A12.exe and press Return.
8. The BIOS Update Utility will load, follow the instructions on screen.

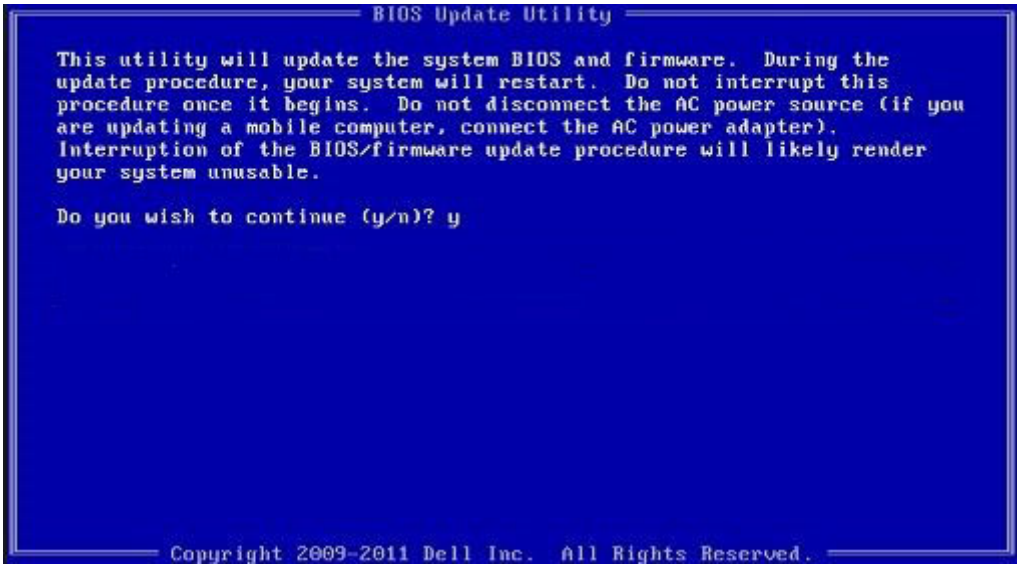

Figure 1. DOS BIOS Update Screen

System and setup password

Table 43. 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.

7

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.