Vostro 3481

Setup and specifications guide

Notes, cautions, and warnings

(i) **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

Set up your computer

Steps

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 pre-installed on your computer.

4. Create recovery drive for Windows.

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

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

Create a USB recovery drive for Windows

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

Prerequisites

(i) **NOTE:** This process may take up to an hour to complete.

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

Steps

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.

Chassis overview

Topics:

Display view

1. Camera
2. Camera-status light
3. Microphone
4. Display

Left view

1. Power adapter port
2. Battery status light
3. HDMI port
4. Network port
5. USB 3.1 Gen 1 ports (2)
6. Headset port

Right view

1. SD card reader
2. USB 2.0 port
3. VGA port
4. Security-cable slot

Palmrest view

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

Bottom view

1. Speakers
2. Base cover
3. Service Tag label
4. Air vent

Keyboard shortcuts

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

Table 2. List of keyboard shortcuts

Keys	Description
Fn + Esc	Toggle Fn-key lock
Fn + F1	Mute audio
Fn + F2	Decrease volume
Fn + F3	Increase volume
Fn + F4	Play previous
Fn + F5	Play / Pause
Fn + F6	Play next
Fn + F8	Switch to external display
Fn + F9	Search
Fn + F11	Decrease brightness
Fn + F12	Increase brightness
Fn + PrtScr	Turn on/off wireless
Fn + Ctrl	Open application menu

Technical specifications

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

Topics:

System information

Table 3. System information

Feature	Specifications
Chipset	Intel Chipset
DRAM bus width	64-bit
FLASH EPROM	SPI 16 MB
PCIe bus	100 Mhz

Processor

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

Table 4. Processor specifications

Type	UMA Graphics
7th Gen Intel Core i7-7500U processor (4M Cache, up to 3.5 GHz)	Intel HD Graphics 620
7th Gen Intel Core i5-7200U processor (3M Cache, up to 3.1 GHz)	Intel HD Graphics 620
7th Gen Intel Core i3-7020U processor (3M Cache, up to 2.3 GHz)	Intel HD Graphics 620
Intel Celeron 3865U processor (2M Cache, up to 1.8 GHz)	Intel HD Graphics 610
Intel Pentium 4415U processor (2M Cache, up to 2.3 GHz)	Intel HD Graphics 610

Memory

Table 5. Memory specifications

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	16 GB
Number of slots	Two SoDIMM slots
Memory options	4 GB - 1 x 4 GB 8 GB - 2 x 4 GB 8 GB - 1 x 8 GB 12 GB - 1 x 4 GB, 1 x 8 GB 16 GB - 2 x 8 GB 16 GB - 1 x 16 GB
Type	DDR4
Speed	2400 MHz / 2133 MHz ⓘ **NOTE:** 2133 MHz for 7th Gen processor

Storage

Table 6. Storage specifications

Type	Form factor	Interface	Capacity
Solid-State Drive	M.2	M.2 SSD	Up to 256 GB
HDD	2.5 inch	SATA	Up to 2 TB
Intel Optane (PCIe m.2 module with HDD)	M.2	PCIe	16 GB

Storage combinations

Table 7. Storage combinations

Primary/Boot drive	Secondary drive
1 x M.2 SSD	1 x 2.5 inch Drive
1 x 2.5 inch HDD	None

Table 7. Storage combinations (continued)

Primary/Boot drive	Secondary drive
1 x 2.5 inch HDD with M.2 Optane	None

Audio

Table 8. Audio specifications

Feature	Specifications
Controller	Realtek ALC3246 with Waves MaxxAudio Pro
Type	Two-channel high-definition audio
Speakers	Two (Directional speakers)
Interface	Intel HDA bus
Internal speaker amplifier	2 W (RMS) per channel

Media card-reader

Table 9. Media card-reader specifications

Feature	Specifications
Type	One SD card slot
Supported cards	- SD - SDHC - SDXC

Camera

Table 10. Camera specifications

Feature	Specifications
Resolution	- Still image: 0.92 megapixels (HD) - Video: 1280x720 (HD) at 30 fps
Diagonal viewing angle	78.6°
Number of cameras	One front camera
Type	HD fixed focus
Sensor type	CMOS sensor technology
Video Max resolution	1280x720 (HD) at 30 fps
Still image max resolution	0.92 megapixel (HD)

Wireless

Table 11. Wireless specifications

Feature	Specifications
Type	- Qualcomm QCA9565, DW1707 802.11bgn (1x1) WiFi + Bluetooth 4.0 - Qualcomm QCA9377, DW1810 802.11ac Dual Band (1x1) WiFi + Bluetooth 4.1 - Qualcomm QCA61x4A, DW1820 802.11ac Dual Band (2x2) WiFi + Bluetooth 4.1
Maximum transfer rate	867 Mbps
Frequency bands	2.4 GHz/5 GHz
Encryption	64-bit/128-bit WEP - AES-CCMP - TKIP

Ports and connectors

Table 12. Ports and connectors

Features	Specifications
Memory card reader	SD 3.0 memory card reader
USB	- One USB 2.0 port - Two USB 3.1 Gen 1 port
Security	wedge lock slot
Docking port	Dell USB 3.0 Dock (UNO)
Audio	- Universal audio jack - Noise reduction single microphone
Video	- HDMI 1.4b - VGA port
Network adapter	One RJ-45 connector

Video card

Table 13. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel HD Graphics 620	UMA	7th Gen Intel Core i7-7500U processor 7th Gen Intel Core	Integrated	Shared system memory	HDMI 1.4b VGA	1920 x 1080

Table 13. Video card specifications (continued)

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
		i5-7200U processor ● 7th Gen Intel Core i3-7020U processor ● Intel Celeron 3865U processor ● Intel Pentium 4415U processor				
Intel HD Graphics 610	UMA		Integrated	Shared system memory	HDMI 1.4b	1920 x 1080
AMD Radeon 520	Discrete	NA	GDDR5	2 GB	No	1920 x 1080

Display

Table 14. Display specifications

Feature	Specifications
Type	● 14 inch HD (1366 x 768) TN, Anti-glare, Ultra slim, non-touch display ● 14 inch FHD (1920 x 1080) IPS, Anti-glare (optional), non-touch display
Height (Active area)	320.90 mm (12.63 inches)
Width (Active area)	205.60 mm (8.09 inches)
Diagonal	355.00 mm (14.00 inches)
Luminance/Brightness (typical)	400 nits max
Refresh rate	60 Hz
Horizontal viewing angle (min)	+/- 40 degrees
Vertical viewing angle (min)	+10/- 30 degrees

Keyboard

Table 15. Keyboard specifications

Feature	Specifications
Number of keys	● 80 (U.S)

Table 15. Keyboard specifications (continued)

Feature	Specifications
	● 81 (UK) ● 82 (Brazil) ● 84 (Japan)
Size	Full sized ● X= 19.00 mm key pitch ● Y= 19.00 mm key pitch
Backlit keyboard	Optional
Layout	QWERTY/AZERTY/Kanji

Fingerprint reader—optional

Table 16. Fingerprint reader specifications

Feature	Specifications
Sensor technology	Capacitive
Sensor resolution	500 PPI
Sensor area	5.5 mm x 4.4 mm (0.22 inches x 0.17 inches)
Sensor pixel size	108 x 88

Operating system

Table 17. Operating system

Feature	Specifications
Operating systems supported	● Windows 10 Home (64 bit) ● Windows 10 Pro (64 bit) ● Ubutnu

Touchpad

Table 18. Touchpad specifications

Feature	Specifications
Resolution	1219 x 919
Dimensions	● Width: 4.13 inch (105 mm) ● Height: 2.56 inch (65 mm)
Multi-touch	Supports five fingers

Battery

Table 19. Battery specifications

Feature	Specifications	
Type	Primatic/Polymer 3-cell 42 WHr	
Dimension	Width	175.37 mm (6.9 in)
	Depth	90.73 mm (3.57 in)
	Height	5.9 mm (0.24 in)
Weight (maximum)	0.2 kg (0.44 lb)	
Voltage	11.4 VDC	
Life span	300 discharge / charge cycles	
Charging time when the computer is off (approximate)	Standard charge	0°C to 60°C : 4 hours
	Express Charge	0°C to 35°C : 4 hours 16°C to 45°C : 2 hours 46°C to 60°C : 3 hours
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	-20°C to 65°C (-40°F to 149°F)	
Coin-cell battery	CR 2032	

Power adapter

Table 20. Power adapter specifications

Feature	Specifications
Type	● 45 W (UMA) ● 65 W (Discrete)
Input Voltage	100 VAC - 240 VAC
Input current (maximum)	● 1.3 A for 45 W ● 1.7 A for 65 W
Input frequency	50 Hz to 60 Hz
Output current	● 2.31 A for 45 W ● 3.34 A for 65 W
Rated output voltage	19.5 VDC
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)

Dimensions and weight

Table 21. Dimensions and weight

Feature	Specifications
Height	19.9 mm to 21 mm (0.35 inch to 0.62 inch)
Width	339 mm (13.34 inch)
Depth	241.9 mm (9.52 inch)
Weight	1.79 kg (3.94 lb)

Computer environment

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

Table 22. Computer environment

	Operating	Storage
Temperature range	0°C to 40°C (32°F to 104°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing) (i) **NOTE:** Maximum dew point temperature = 26°C	0% to 95% (non-condensing) (i) **NOTE:** Maximum dew point temperature = 33°C
Vibration (maximum)	0.66 GRMS	1.30 GRMS
Shock (maximum)	140 G †	160 G‡
Altitude (maximum)	0 m to 3048 m (0 ft to 10,000 ft)	0 m to 10,668 m (0 ft to 35,000 ft)

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

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

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

Security

Table 23. Security specifications

Feature	Specifications
Trusted Platform Module (TPM) 2.0	Integrated on the system board
Discrete TPM	Integrated on the system board
Windows Hello Support	Optional
Cable cover	Optional
Chassis intrusion switch	Optional
Chassis lock slot and loop support	Optional

Security Software

Feature	Specifications
Dell Endpoint Security Suite Enterprise	Optional
Dell Data Guardian	Optional
Dell Encryption (Enterprise or Personal)	Optional
Dell Threat Defense	Optional
RSA SecurID Access	Optional
RSA NetWitness Endpoint	Optional
MozyPro or MozyEnterprise	Optional
VMware Airwatch/WorkspaceONE	Optional
Absolute Data & Device Security	Optional

Security Software

System setup

System setup enables you to manage your notebook 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:

- Boot menu
- Navigation keys
- System setup options
- System and setup password

Boot menu

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

The options are:

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

Navigation keys

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

Keys	Navigation
Up arrow	Moves to the previous field.
Down arrow	Moves to the next field.
Enter	Selects a value in the selected field (if applicable) or follow the link in the field.
Spacebar	Expands or collapses a drop-down list, if applicable.
Tab	Moves to the next focus area.
	ⓘ **NOTE:** For the standard graphics browser only.

Keys	Navigation
Esc	Moves to the previous page until you view the main screen. Pressing Esc in the main screen displays a message that prompts you to save any unsaved changes and restarts the system.

System setup options

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

General options

Table 25. General

Option	Description
System Information	Displays the following information: ● 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 Channel Mode, Memory Technology, DIMM A size, and DIMM B size** ● 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 HDD, ODD Device, M.2 SATA SSD, M.2 PCIe SSD-0, LOM MAC Address, Video Controller, Video BIOS Version, Video Memory, Panel type, Native Resolution, Audio Controller, Wi-Fi Device, and Bluetooth Device.**
Battery Information	Displays the battery status health and whether the AC adapter is installed.
Boot Sequence	Allows you to specify the order in which the computer attempts to find an operating system from the devices specified in this list.
Advanced Boot Options	Allows you to select the Legacy Option ROMs option, when in UEFI boot mode. By default, no option is selected. ● Enable Legacy Option ROMs ● Enable Attempt Legacy Boot
UEFI Boot Path Security	This option controls whether or not the system will prompt the user to enter the Admin password when booting a UEFI boot path from the F12 Boot Menu. ● Always, Except Internal HDD—Default ● Always ● Never
Date/Time	Allows you to set the date and time settings. Changes to the system date and time take effect immediately.

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System configurations

Table 26. System Configuration

Option	Description
Integrated NIC	Allows you to configure the on-board LAN controller. ● Disabled = The internal LAN is off and not visible to the operating system.

Table 26. System Configuration (continued)

Option	Description
	● Enabled = The internal LAN is enabled. ● Enabled w/PXE = The internal LAN is enabled (with PXE boot) (selected by default)
SATA Operation	Allows you to configure the operating mode of the integrated hard drive controller. ● Disabled = The SATA controllers are hidden ● AHCI = SATA is configured for AHCI mode ● RAID ON = SATA is configured to support RAID mode (selected by default)
Drives	Allows you to enable or disable the various drives on-board: ● SATA-0 (enabled by default) ● SATA-1 (enabled by default) ● SATA-2 (enabled by default) ● M.2 PCIe SSD-0 (enabled by default)
Smart Reporting	This field controls whether hard drive errors for integrated drives are reported during system startup. The **Enable Smart Reporting option** is disabled by default.
USB Configuration	Allows you to enable or disable the integrated USB controller for: ● Enable USB Boot Support ● Enable External USB Port All the options are enabled by default.
Audio	Allows you to enable or disable the integrated audio controller. The option **Enable Audio** is selected by default. ● Enable Microphone ● Enable Internal Speaker Both the options are selected by default.
Miscellaneous Devices	Allows you to enable or disable the following devices: ● Enable Camera (enabled by default)

Video

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

ⓘ **NOTE:** The video setting is visible only when a video card is installed into the system.

Security

Table 27. Security

Option	Description
Admin Password	Allows you to set, change, or delete the admin password.
System Password	Allows you to set, change, or delete the system password.
Internal HDD-0 Password	Allows you to set, change or delete the internal HDD password.
Strong Password	This option lets you enable or disable strong passwords for the system.

Table 27. Security (continued)

Option	Description
Password Configuration	Allows you to control the minimum and maximum number of characters allowed for a administrative password and the system password. The range of characters is between 4 and 32.
Password Bypass	This option lets you bypass the System (Boot) Password and the internal HDD password prompts during a system restart. ● Disabled — Always prompt for the system and internal HDD password when they are set. This option is enabled by default. ● Reboot Bypass — Bypass the password prompts on Restarts (warm boots). (i) **NOTE:** The system will always prompt for the system and internal HDD passwords when powered on from the off state (a cold boot). Also, the system will always prompt for passwords on any module bay HDDs that may be present.
Password Change	This option lets you determine whether changes to the System and Hard Disk passwords are permitted when an administrator password is set. **Allow Non-Admin Password Changes** - This option is disabled by default.
Non-Admin Setup Changes	Determines whether changes to the setup option are permitted when an administrator password is set.
UEFI Capsule Firmware Updates	This option controls whether this system allows BIOS updates via UEFI capsule update packages. This option is selected by default. Disabling this option will block BIOS updates from services such as Microsoft Windows Update and Linux Vendor Firmware Service (LVFS)
TPM 2.0 Security	Allows you to control whether the Trusted Platform Module (TPM) is visible to the operating system. ● TPM On (default) ● Clear ● PPI Bypass for Enable Commands ● PPI Bypass for Disable Commands ● PPI Bypass for Clear Commands ● Attestation Enable (default) ● Key Storage Enable (default) ● SHA-256 (default) Choose any one option: ● Disabled ● Enabled (default)
Computrace(R)	This field lets you Activate or Disable the BIOS module interface of the optional Computrace Service from Absolute Software. Enables or disables the optional Computrace service designed for asset management. ● Deactivate ● Disable ● Activate - This option is selected by default.
OROM Keyboard Access	This option determines whether users are able to enter Option ROM configuration screen via hotkeys during boot. ● Enabled (default) ● Disabled ● One Time Enable
Admin Setup Lockout	Allows you to prevent users from entering Setup when Admin password is set. This option is not set by default.
Master Password Lockout	Allows you to disable master password support Hard Disk passwords need to be cleared before the settings can be changed. This option is not set by default.

Table 27. Security (continued)

Option	Description
SMM Security Mitigation	Allows you to enable or disable additional UEFI SMM Security Mitigation protections. This option is not set by default.

Secure boot

Table 28. Secure Boot

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

Intel Software Guard Extensions

Table 29. Intel Software Guard Extensions

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

Table 29. Intel Software Guard Extensions (continued)

Option	Description
	32 MB **64 MB** **128 MB**—Default

Performance

Table 30. Performance

Option	Description
Multi Core Support	This field specifies whether the process has one or all cores enabled. The performance of some applications improves with the additional cores. - Enable = 2 cores are enabled - Disabled = 1 core is enabled
Intel SpeedStep	Allows you to enable or disable the Intel SpeedStep mode of processor. **Enable Intel SpeedStep** This option is set by default.
C-States Control	Allows you to enable or disable the additional processor sleep states. **C states** This option is set by default.
Hyper-Thread Control	Allows you to enable or disable the HyperThreading in the processor. **Disabled** **Enabled**—Default

POST behavior

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

Option	Description
Extended BIOS POST Time	Allows you to create an extra preboot delay. The options are: ● 0 seconds—enabled by default. ● 5 seconds ● 10 seconds
Full Screen Log	● Enable Full Screen Logo—not enabled
Warnings and errors	● Prompt on warnings and errors—enabled by default ● Continue on warnings ● Continue on warnings and errors
Sign of Life Indication	● Enable Sign of Life Keyboard Backlight Indication—enabled by default

Virtualization support

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

Wireless

Option Description	
Wireless Switch	Allows to set the wireless devices that can be controlled by the wireless switch. The options are: ● WLAN ● Bluetooth All the options are enabled by default. ⓘ **NOTE:** For WLAN enable or disable controls are tied together and they cannot be enabled or disabled independently.
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. ● WLAN ● Bluetooth All the options are enabled by default.

Maintenance screen

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.
BIOS Downgrade	This controls flashing of the system firmware to previous revisions. Option 'Allow BIOS downgrade' is enabled by default.

Option	Description
Data Wipe	This field allows users to erase the data securely from all internal storage devices. Option 'Wipe on Next boot' is not enabled by default. The following is list of devices affected: ● Internal SATA HDD/SSD ● Internal M.2 SATA SDD ● Internal M.2 PCIe SSD ● Internal eMMC
BIOS Recovery	This field allows you to recover from certain corrupted BIOS conditions from a recover file on the user primary hard drive or an external USB key. ● BIOS Recovery from Hard Drive—enabled by default ● Always perform integrity check—disabled by default

Power management

Option	Description
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. Default setting: Wake on AC is not selected.
Enable Intel Speed Shift Technology	● Enable Intel Speed Shift Technology Default setting: Enabled
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: ● Disabled ● Every Day ● Weekdays ● Select Days Default setting: Disabled
USB Wake Support	Allows you to enable USB devices to wake the system from Standby. ⓘ **NOTE:** This feature is only functional when the AC power adapter is connected. If the AC power adapter is removed during Standby, the system setup removes power from all the USB ports to conserve battery power. ● Enable USB Wake Support
Wake on WLAN	Allows you to enable or disable the feature that powers on the computer from the Off state when triggered by a LAN signal. ● Disabled ● WLAN Default setting: Disabled
Peak Shift	This option enables you to minimize the AC power consumption during the peak power times of day. After you enable this option, your system runs only in battery even if the AC is attached. ● Enable peak shift—is disabled ● Set battery threshold (15% to 100%) - 15 % (enabled by default)
Advanced Battery Charge Configuration	This option enables you to maximize the battery health. By enabling this option, your system uses the standard charging algorithm and other techniques, during the non work hours to improve the battery health. Enable Advanced Battery Charge Mode- is disabled

Option	Description
Primary Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: ● Adaptive—enabled by default ● Standard—Fully charges your battery at a standard rate. ● Primarily AC use ● Custom If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop. ⓘ **NOTE:** All charging mode may not be available for all the batteries. To enable this option, disable the **Advanced Battery Charge Configuration** option.

System logs

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

SupportAssist System Resolution

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

System and setup password

Table 31. 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

Prerequisites

You can assign a new **System or Admin Password** only when the status is in **Not Set**.

About this task

To enter the system setup, press F2 immediately after a power-on or re-boot.

Steps

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

Prerequisites

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.

About this task

To enter the System Setup, press F2 immediately after a power-on or reboot.

Steps

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.

    (i) **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.

Software

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

Topics:

• *Downloading drivers*

Downloading drivers

Steps

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

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

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

8

Getting help

Topics:

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Contacting Dell

Prerequisites

(i) **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.

About this task

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:

Steps

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.