Dell Latitude 5300 2-in-1

Setup and specifications guide

Notes, cautions, and warnings

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

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

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

Contents

Set up your computer

1 Connect the power adapter and press the power button.

> (i) **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.

> (i) **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

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

4   Create recovery drive for Windows.

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

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

Create a USB recovery drive for Windows

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

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

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

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

Chassis overview

Topics:

Display view
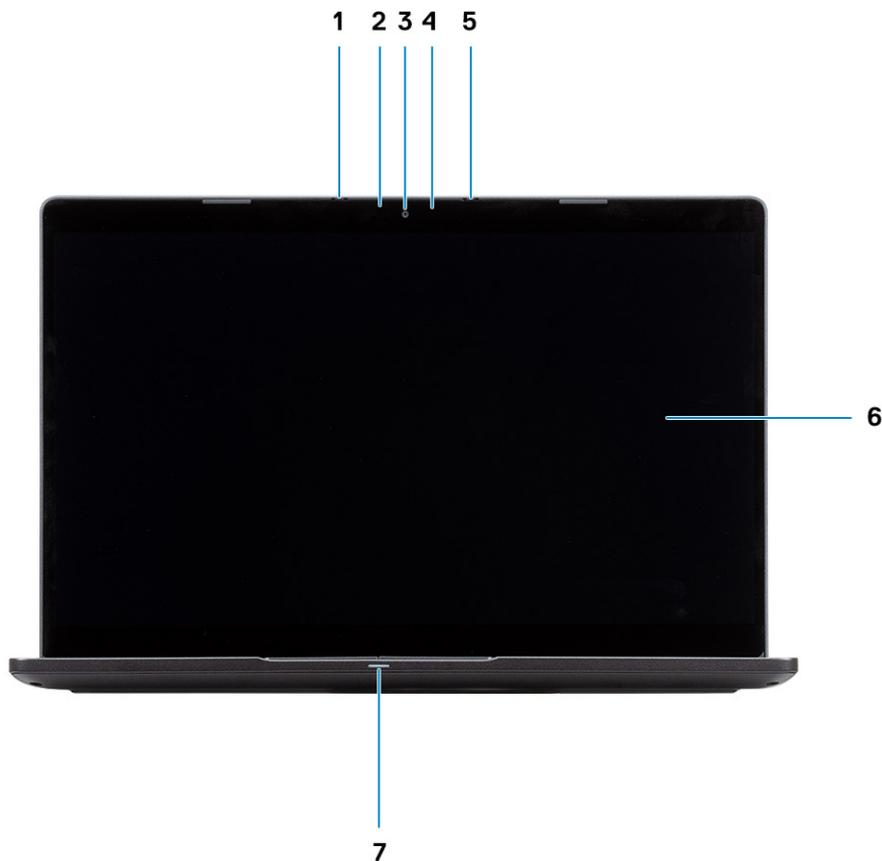
1	Array microphone	2	Infrared (IR) emitter (optional)
3	Camera/ IR camera (optional)	4	Camera status light
5	Array microphone	6	LCD panel
7	LED activity light		

Left view

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

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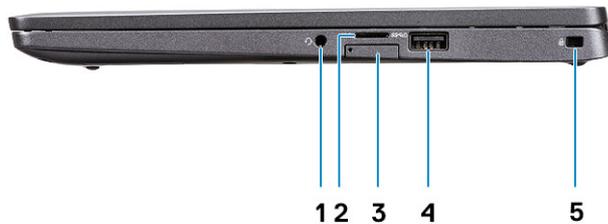
1	Headset/ Microphone port	2	microSD card reader
3	micro-SIM card slot	4	USB 3.1 Gen 1 port with PowerShare
5	Wedge-shaped lock slot		

Palmrest view

1	Power button with optional fingerprint	2	Keyboard
3	Touchpad		

Bottom view
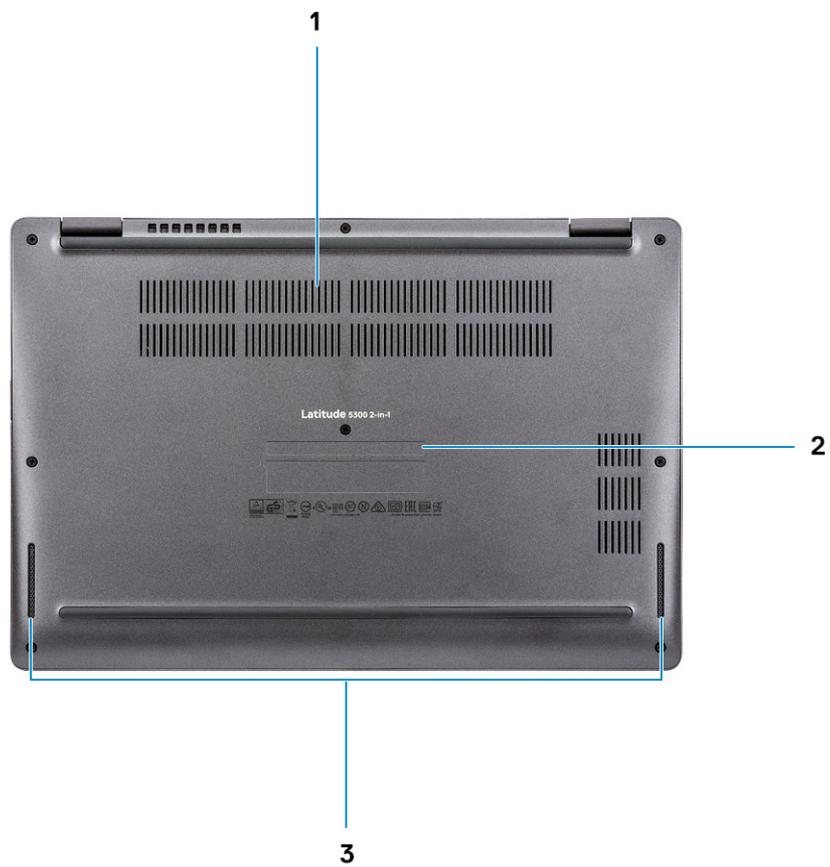
1	Thermal vent	2	Service tag level
3	Speakers		

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.

System information

Table 2. System information

Feature	Specifications
Chipset	Integrated in the processor
DRAM bus width	64-bit
FLASH EPROM	16/32 MB
PCIe bus	Up to Gen3
External bus frequency	Up to 8 GT/s

Processor

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

Table 3. Processor specifications

Type	UMA Graphics
8th Gen Intel Core i7-8665U processor (8 MB cache, 4 core count/ 8 threads, 1.9 GHz to 4.8 GHz, 15 W TDP) (vPro)	Intel UHD Graphics 620
8th Gen Intel Core i5-8365U Processor (6 MB cache, 4 core count/ 8 threads, 1.6 GHz to 4.1 GHz, 15 W TDP) (vPro)	Intel UHD Graphics 620
8th Gen Intel Core i5-8265U processor (6 MB cache, 4 core count/ 8 threads, 1.6 GHz to 3.9 GHz, 15 W TDP)	Intel UHD Graphics 620
8th Gen Intel Core i3-8145U processor (4 MB cache, 2 core count/ 4 threads, 2.1 GHz to 3.9 GHz, 15 W TDP)	Intel UHD Graphics 620

Memory

Table 4. Memory specifications

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	32 GB
Number of slots	2 x SoDIMM slots
Maximum memory supported per slot	16 GB
Memory options	• 4 GB (1 x 4 GB) • 8 GB (2 x 4 GB) • 8 GB (1 x 8 GB) • 16 GB (2 x 8 GB) • 16 GB (1 x 16 GB) • 32 GB (2 x 16 GB)
Type	Dual-channel DDR4
Speed	2400 Mhz
	ⓘ NOTE: The memory is 2666 MHz, but runs at 2400 due to CPU. The 2666 MHz memory functions at 2400 MHz for 8th Generation Intel Core processors.

Storage

Table 5. Storage specifications

Type	Form factor	Interface	Capacity
SATA Solid-State Drive Class 20	M.2 2280 SSD	SATA	Upto 512 GB
PCIe Solid-State Drive Class 35	M.2 2230 SSD	PCIe Gen 3x2 NVMe, up to 16 Gbps	Upto 128 GB
PCIe Solid-State Drive Class 40	M.2 2280 SSD	PCIe Gen 3x4 NVMe, up to 32 Gbps	Upto 1 TB
SED Solid-State Drive Class 40 (Opal 2.0)	M.2 2280 SSD	PCIe NVme Opal 2.0 SED PCIe	Upto 512 GB

System board connectors

Table 6. System board connectors

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

Feature	Specifications
	• One M.2 3042 Key-B connector

Media card-reader

Table 7. Media-card reader specifications

Feature	Specifications
Type	• One MicroSD-card slot • One SD 4.0 card supported via Smart card reader slot (optional)
Supported cards	• Secure Digital (SD 4.0) via Smart card reader • MicroSD

Audio

Table 8. Audio specifications

Feature	Specifications
Controller	Realtek ALC3254 with Waves MaxxAudio Pro
Stereo conversion	24-bit DAC (Digital-to-Analog) and ADC (Analog-to-Digital)
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 ALC3254 (Class-D 2W)
External volume controls	Media-control shortcut keys
Speaker output:	Average: 2 W Peak: 2.5 W
Microphone	Digital-array microphones

Video card

Table 9. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 620	UMA	• Intel Core i7-8665U CPU (vPro) • Intel Core i5-8265U CPU • Intel Core i5-8365U CPU (vPro) • Intel Core i3-8145U CPU	Integrated	Shared system memory	HDMI 1.4 port	1920x1200@60Hz

Camera

Table 10. Camera specifications

Feature	Specifications
Camera Type	RGB, HD fixed focus
IR Camera	6 mm IR camera (optional)
Resolution	Still image: HD resolution (1280x720) Video: HD resolution (1280x720) at 30 fps
Diagonal viewing angle	IR: 87 degree RGB: 78.6 degree
Sensor type	CMOS sensor technology

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

Mobile Broadband

Table 11. Mobile Broadband

Specifications
Intel XMM 7360 Global LTE-Advanced

Wireless

Table 12. Wireless specifications

Specifications
Intel® Dual Band Wireless AC 9560 (802.11ac) 2x2 + Bluetooth 5.0
Qualcomm QCA61x4A (DW1820) 802.11ac Dual Band (2x2) Wireless Adapter + Bluetooth 4.2
Intel Wi-Fi 6 AX200 2x2 .11ax 160MHz + Bluetooth 5.0
Intel XMM 7360 Global LTE-Advanced

Ports and connectors

Table 13. Ports and connectors

Feature	Specifications
Memory card reader	One microSD card reader
	One Smart card reader (optional)
SIM card reader	One micro SIM
USB	• One USB 3.1 Gen 1
	• One USB 3.1 Gen 1 with PowerShare
	• One USB 3.1 Gen 2(USB Type-C) port with DisplayPort/ Thunderbolt/ Power Delivery(optional)
Security	Wedge-shaped lock slot
Audio	Universal Jack (Global Headset Jack + mic phone in + line in support)
Video	One HDMI 1.4b port (supports up to 2k)

Display

Table 14. Display specifications

Feature	Specifications
Type	• FHD: 13.33 inches , 1920 x 1080 (FHD IPS AR Touch with cover glass), 16:9
Height (Active area)	165.24 mm (6.51 inches)
Width (Active area)	293.76 mm (11.57 inches)
Diagonal	337.04 mm (13.26 inches)

Feature	Specifications
Pixels Per Inch (PPI)	166
Contrast ratio	800:1
Luminance/Brightness (typical)	255 nits, NTSC 72%
Refresh rate	60 Hz
Horizontal viewing angle (min)	+/- 80 degrees
Vertical viewing angle (min)	+/- 80 degrees
Power consumption (max)	4.2 W

Dell Active Pen specifications

Table 15. Penspecifications

Specifications
1. Natural writing feel for a pen on paper experience
2. Industry leading accuracy, built with Wacom feel IT technologies
3. Wacom (G12+ or G14) with Shamrock (PN579X)
4. Active stylus with hovering and pressure-sensitive tip (4096 levels for Shamrock (PN579X))
5. Magnetic attach feature with built-in magnet for increased fastening strength
6. Removable Pen clip
7. Customizable* 2 barrel buttons and Top button
8. Quick launch and note taking over lock screen (requires Bluetooth pairing)
9. LED light to show Bluetooth pairing status
10. 12 months battery life**, with AAAA battery

*Need to install "Active Control Panel" from dell.com/support/drivers

**Based on 2 hours daily usage for 5 days a week

Keyboard

Table 16. Keyboard specifications

Feature	Specifications
Number of keys	• 81 (U.S. and Canada) • 82 (UK/Brazil) • 85 (Japan)
Size	Full sized • X= 18.05 mm (0.71 inches) key pitch

Feature	Specifications
	• Y= 18.05 mm (0.71 inches) key pitch
Backlit keyboard	Optional
Layout	QWERTY

Keyboard shortcuts

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

Table 17. List of keyboard shortcuts

Keys	Description
Fn + Esc	Toggle Fn-key lock
Fn + F1	Mute audio
Fn + F2	Decrease volume
Fn + F3	Increase volume
Fn + F4	Mute microphone
Fn + F5	Turn on/off keyboard backlight
Fn + F6	Decrease brightness
Fn + F7	Increase brightness
Fn + F8	Switch to external display
Fn + F10	Print screen
Fn + F11	Home
Fn + 12	End
Fn + Ctrl	Open application menu

Touchpad

Table 18. Touchpad specifications

Feature	Specifications
Resolution	1103 x 615
Dimensions	• Width: 91.9 mm (3.61 inches) • Height: 51.4 mm (2.02 inches)

Feature	Specifications
Multi-touch	Supports 5-finger multi-touch
	ⓘ **NOTE: For more information about touchpad gestures for Windows 10, see the Microsoft knowledge base article 4027871 at support.microsoft.com.**

Table 19. Supported gestures

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

Fingerprint reader—optional

Table 20. Fingerprint reader specifications

Feature	Specifications
Type	FPR in Power button
Sensor technology	Capacitive
Sensor resolution	363 PPI
Sensor area	Diameter: 10 mm (0.393 in.)

Operating system

Table 21. Operating system

Feature	Specifications
Operating systems supported	• Microsoft Windows 10 Pro 64-bit • Microsoft Windows 10 Home 64-bit

Battery

Table 22. Battery

Feature	Specifications			
Type	3-cell lithium-ion (42 WHr) ExpressCharge		4-cell lithium-ion (60 WHr) ExpressCharge	
Dimension	Width	95.9 mm (3.78 inches)	Width	95.9 mm (3.78 inches)
	Depth	200.5 mm (7.89 inches)	Depth	238 mm (9.37 inches)
	Height	5.70 mm (0.22 inches)	Height	5.70 mm (0.22 inches)
Weight (maximum)	192.50 g (0.42 lbs)		270.00 g (0.60 lbs)	
Voltage	11.40 VDC		7.60 VDC	
Life span	300 discharge / charge cycles		300 discharge / charge cycles (Standard pack)	
			1000 discharge / charge cycles (LCL pack)	
Charging time when the computer is off (approximate)	Standard charge	0°C to 50°C : 4 hours	Standard charge	0°C to 50°C : 4 hours
	Express Charge	0°C to 15°C : 4 hours	Express Charge	0°C to 15°C : 4 hours
		16°C to 45°C : 2 hours		16°C to 45°C : 2 hours
		46°C to 50°C : 3 hours		46°C to 50°C : 3 hours
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions		Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions	
Temperature range: Operating	Charge: 0 °C to 50 °C, 32 °F to 122 °F		Charge: 0 °C to 50 °C, 32 °F to 122 °F	
	Discharge: 0 °C to 70 °C, 32 °F to 158 °F		Discharge: 0 °C to 70 °C, 32 °F to 158 °F	
Temperature range: Storage	-20°C to 60°C (-4°F to 140°F)		-20°C to 60°C (-4°F to 140°F)	
Coin-cell battery	CR-2032		CR-2032	

(i) **NOTE:**

- For a battery advertised as having the ExpressCharge feature, the battery typically will have greater than 80% charge after about an hour of charging with the system off, and fully charged in about 2 hours with the system off.
- Enabling Expresscharge requires that both the Latitude notebook and the battery that is used on the system be ExpressCharge capable. If any of the above requirements is missing, ExpressCharge will not be enabled.

Power adapter

Feature	Specifications	
Type	E5 65 W	E5 90 W
Input Voltage	100 VAC - 240 VAC	100 VAC - 240 VAC
Input current (maximum)	1.5 A	1.6 A
Adapter size	Dimensions In Inches: 0.87 x 2.60 x 4.17 In mm: 22 x 66 x 106	Dimensions In Inches: 0.87 x 2.60 x 5.12 In mm: 22 x 66 x 130
Barrel	7.4 mm	7.4 mm
Weight	0.23 kg (0.51 lb)	0.32 kg (0.70 lb)
Input frequency	50 Hz to 60 Hz	50 Hz to 60 Hz
Output current	3.34 A (continuous)	4.62 A (continuous)
Rated output voltage	19.5 VDC	19.5 VDC
Temperature range (Operating)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
Temperature range (Non-Operating)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

Sensor and control specifications

Specifications
1. Proximity for SAR compliance (for the WWAN module) Near Field Proximity Sensor
2. Hall Effect Sensor
3. Sensor Hub
4. E-Compass(Magnetometer)
5. Accelerometer
6. Gyro

Dimensions and weight

Feature	Specifications
Height	Front: 16.9 mm (0.66 inches)
	Rear: 19.3 mm (0.76 inches)
Width	305.7 mm (12.03 inches)
Depth	207.5 mm (8.17 inches)
Weight	1.42 kg (3.15 lbs)

Computer environment

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

Table 26. Computer environment

	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 80% (non-condensing)	0% to 95% (non-condensing)
	(i) **NOTE: Maximum dew point temperature = 26°C**	(i) **NOTE: Maximum dew point temperature = 33°C**
Vibration (maximum)	0.66 GRMS	1.3 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 27. Security

Feature	Specifications
Trusted Platform Module (TPM) 2.0	Integrated on the system board
Firmware TPM	Optional
Windows Hello Support	Yes, optional fingerprint on power button

Feature	Specifications
Cable lock	Noble lock
Dell Smartcard Keyboard	Optional
Chassis lock slot and loop support	Optional

Security options—Contacted smartcard reader

Table 28. Contacted smartcard reader

Title	Description	Dell ControlVault 3 Smartcard reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5V powered smartcard	Yes
ISO 7816 -3 Class B Card Support	Reader capable of reading 3V powered smartcard	Yes
ISO 7816 -3 Class C Card support	Reader capable of reading 1.8V powered smartcard	Yes
ISO 7816-1 Compliant	Specification for the reader	Yes
ISO 7816 -2 Compliant	Specification for smartcard device physical characteristics (size, location of connection points, etc.)	Yes
T=0 support	Cards support character level transmission	Yes
T=1 support	Cards support block level transmission	Yes
EMVCo Compliant	Compliant with EMVCo (for electronic payment standards) smartcard standards as posted to www.emvco.com	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard standards	Yes
PC/SC OS interface	Personal Computer/Smart Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers.	Yes
Windows Certified	Device certified by Micrsoft WHCK	Yes
FIPS 201 (PIV/HSPD-12) Compliant via GSA	Device compliant with FIPS 201/PIV/HSPD-12 requirements	Yes

Security options—Contactless smartcard reader

Table 29. Contactless smartcard reader

Title	Description	Dell ControlVault 3 Contactless Smartcard reader with NFC
Felica Card Support	Reader and software capable of supporting Felica contactless cards	Yes
Prox (Proximity) (125kHz) Card support	Reader and software capable of supporting Prox/Proximity/125kHz contactless cards	No
ISO 14443 Type A Card Support	Reader and software capable of supporting ISO 14443 Type A contactless cards	Yes
ISO 14443 Type B Card Support	Reader and software capable of supporting ISO 14443 Type B contactless cards	Yes
ISO/IEC 21481	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO/IEC 18092	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO 15693 Card Support	Reader and software capable of supporting ISO15693 contactless cards	Yes
NFC Tag Support	Supports reading and processing of NFC compliant tag information	Yes
NFC Reader Mode	Support for NFC Forum Defined Reader mode	Yes
NFC Writer Mode	Support for NFC Forum Defined Writer mode	Yes
NFC Peer-to-Peer Mode	Support for NFC Forum Defined Peer to Peer mode	Yes
EMVCo Compliant	Compliant with EMVCO smartcard standards as posted to www.emvco.com	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard standards	Yes
NFC Proximity OS Interface	Enumerates NFP (Near Field Proximity) device for OS to utilize	Yes
PC/SC OS interface	Personal Computer/Smart Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers	Yes
Windows Certified	Device certified by Microsoft WHCK	Yes
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

(i) | **NOTE:** 125 Khz proximity cards are not supported.

Table 30. Supported cards

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

Security Software

Table 31. Security Software specifications

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

Software

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

Downloading drivers

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

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

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

System setup

⚠️ **CAUTION: Unless you are an expert computer user, do not change the settings in the BIOS Setup program. Certain changes can make your computer work incorrectly.**

ⓘ **NOTE: Before you change BIOS Setup program, it is recommended that you write down the BIOS Setup program screen information for future reference.**

Use the BIOS Setup program for the following purposes:

- Get information about the hardware installed in your computer, such as the amount of RAM and the size of the hard drive.
- Change the system configuration information.
- Set or change a user-selectable option, such as the user password, type of hard drive installed, and enabling or disabling base devices.

Topics:

Boot menu

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.

Keys	Navigation
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.
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 tabletlaptop and its installed devices, the items listed in this section may or may not appear.

General options

Table 32. General

Option	Description
System Information	This section lists the primary hardware features of your computer.
	The options are:
	- System Information
	- Memory Configuration
	- Processor Information
	- Device Information
Battery Information	Displays the battery status and the type of AC adapter connected to the computer.

Option	Description

Boot Sequence	Allows you to change the order in which the computer attempts to find an operating system.
	
	The options are:
	
	• **Windows Boot Manager**
	• **Boot List Option:**
	Allows you to change the boot list options.
	
	Click one of the following options:
	
	  – **Legacy External Devices**
	  – **UEFI**—Default

Advanced Boot Options	Allows you to Enable Legacy Option ROMs. The options are: • **Enable Legacy Option ROMs**—Default • **Enable Attempt Legacy Boot**
UEFI Boot Path Security	Allows you to control whether the system prompts the user to enter the Admin password when booting to a UEFI boot path. Click one of the following options: • **Always, Except Internal HDD**—Default • **Always** • **Never**
Date/Time	Allows you to set the date and time. The change to the system date and time takes effect immediately.

System configuration

Table 33. System Configuration

Option	Description
SATA Operation	Allows you to configure the operating mode of the integrated SATA hard-drive controller. Click one of the following options: • **Disabled** • **AHCI**—Default
Drives	These fields let you enable or disable various drives on board. The options are: • **SATA-2** • **M.2 PCIe SSD-0**
SMART Reporting	This field controls whether hard drive errors for integrated drives are reported during startup. The option is disabled by default.

Option	Description
USB Configuration	Allows you to enable or disable the internal/integrated USB configuration. The options are: · **Enable USB Boot Support** · **Enable External USB Ports** All the options are set by default. (i) NOTE: **USB keyboard and mouse always work in the BIOS setup irrespective of these settings.**
Dell Type-C Dock Configuration	Allows you to connect to Dell WD and TB family of docks(Type-C Docks) independent of USB and thunderbolt adapter configuration. This option is enabled by default.
Thunderbolt™ Adapter Configuration	Allows you to enable or disable Thunderbolt options: · **Thunderbolt (Enabled by Defualt)** · **Enable Thunderbolt Boot Support** · **Enable Thunderbolt (and PCIe behind TBT) Pre-boot** With following security levels : · **No Security** · **User Authentication (Enabled by Defualt)** · **Secure Connect** · **Display Port and USB Only**
Thunderbolt™ Auto Switch	This option configures the method used by the Thunderbolt controller to perform PCIe device enumeration. · **Auto Switch** : The BIOS will automatically switch between BIOS Assist and Native Thunderbolt PC device enumeration modes to get all benefits of the installed OS · **Native Enumeration**: The BIOS will program the Thunderbolt controller to Native mode (Auto Switching is disabled) · **BIOS Assist Enumeration**: The BIOS will program the Thunderbolt controller to BIOS Assist mode (Auto Switching is disabled) (i) NOTE: **A reboot is required for these changes to take effect.**
USB PowerShare	This option enable/disable the USB PowerShare feature behavior. This option is disabled by default.
Audio	Allows you to enable or disable the integrated audio controller. By default, the **Enable Audio** option is selected. The options are: · **Enable Microphone** · **Enable Internal Speaker** This option is set by default.

Option	Description
Keyboard Illumination	This field lets you choose the operating mode of the keyboard illumination feature. • **Disabled**: The Keyboard illumination will always be off or 0%. • **Dim**: Enable the keyboard illumination feature at 50% brightness. • **Bright**: Enable the keyboard illumination feature at 100% brightness level.
Keyboard Backlight Timeout on AC	This feature defines the timeout value for the keyboard backlight when an AC adapter is plugged into the system. Options are: • **5 seconds** • **10 seconds**(Default) • **15 seconds** • **30 seconds** • **1 minute** • **5 minute** • **15 minute** • **Never**
Keyboard Backlight Timeout on Battery	This feature defines the timeout value for the keyboard backlight when the system is running only on battery power. Options are: • **5 seconds** • **10 seconds**(Default) • **15 seconds** • **30 seconds** • **1 minute** • **5 minute** • **15 minute** • **Never**
Touchscreen	This option controls whether the touchscreen is enabled or disabled This option is enabled by default.
Unobtrusive Mode	When enabled, pressing Fn+F7 will turn off all light and sound emission in the system. Press Fn+F7 to resume normal operation. Default is Disabled.
Fingerprint Reader	Enable or disable the Fingerprint Reader or the Fingerprint Reader Device's Single Sign On capability. • **Enable Fingerprint Reader Device**: Enabled by Default • **ENable Fingerprint Reader Single Sign On**: Enabled by Default
Miscellaneous devices	Allows you to enable or disable various on board devices. • **Enable Camera**—Default • **Enable Secure Digital (SD) Card** • **Secure Digital (SD) Card Boot** - Disabled • **Secure Digital Card (SD) Read-Only Mode** - Disabled

Video screen options

Option	Description
LCD Brightness	Allows you to set the display brightness depending upon the power source. On Battery(50% is default) and On AC (100 % default).
Dynamic Backlight Control	This option Enables or Disables the Dynamic Backlight Control if the Panel supports this feature.

Security

Table 35. Security

Option	Description
Admin Password	Allows you to set, change, or delete the administrator(admin) password. The entries to set password are: · **Enter the old password:** · **Enter the new password:** · **Confirm new password:** Click **OK** once you set the password. ⓘ NOTE: **For the first time login, "Enter the old password:" field is marked to "Not set". Hence, password has to be set for the first time you login and then you can change or delete the password.**
System Password	Allows you to set, change, or delete the System password. The entries to set password are: · **Enter the old password:** · **Enter the new password:** · **Confirm new password:** Click **OK** once you set the password. ⓘ NOTE: **For the first time login, "Enter the old password:" field is marked to "Not set". Hence, password has to be set for the first time you login and then you can change or delete the password.**
Strong Password	Allows you to enforce the option to always set strong password. · **Enable Strong Password** This option is not set by default.
Password Configuration	You can define the length of your password. Min = 4, Max = 32
Password Bypass	Allows you to bypass the System password and the Internal HDD password, when it is set, during a system restart.

Option	Description
	Click one of the options:
	· **Disabled**—Default
	· **Reboot bypass**
Password Change	Allows you to change the System password when the administrator password is set.
	· **Allow Non-Admin Password Changes**
	This option is set by default.
Non-Admin Setup Changes	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.
	· **Allow Wireless Switch Changes**
	This option is not set by default.
UEFI Capsule Firmware Updates	Allows you to update the system BIOS via UEFI capsule update packages.
	· **Enable UEFI Capsule Firmware Updates**
	This option is set by default.
TPM 2.0 Security	Allows you to enable or disable the Trusted Platform Module (TPM) during POST.
	The options are:
	· **TPM On**—Default
	· **Clear**
	· **PPI Bypass for Enable Command**—Default
	· **PPI Bypass for Disbale Command**
	· **PPI Bypass for Clear Command**
	· **Attestation Enable**—Default
	· **Key Storage Enable**—Default
	· **SHA-256**—Default
Absolute®	This field lets you Enable, Disable, or Permanently Disable the BIOS module interface of the optional Absolute Persistence Module service from Absolute® Software.
OROM Keyboard Access	This option determines whether users are able to enter Option ROM Configuration screens via hotkey during boot. Specifically this settings is capable of preventing access to Intel® RAID(Ctrl+I) or Intel® Management Engine BIOS Extension (Ctrl+P/F12).
	Options are:
	· **Enable**
	· **One Time Enable**
	· **Disable**
Admin Setup Lockout	Allows you to prevent users from entering Setup when an administrator password is set.
	· **Enable Admin Setup Lockout**
	This option is not set by default.
Master Password Lockout	Allows you to disable master password support.
	· **Enable Master Password Lockout**
	This option is not set by default.

Option	Description
	ⓘ | **NOTE:** Hard Disk password should be cleared before the settings can be changed.
SMM Security Mitigation	Allows you to enable or disable additional UEFI SMM Security Mitigation protection. · **SMM Security Mitigation** This option is not set by default.

Secure boot

Option	Description
Secure Boot Enable	Allows you to enable or disable the Secure Boot Feature. · **Secure Boot Enable**—Default
Secure Boot Mode	Changes to the Secure Boot operation mode modifies the behaviour of Secure Boot to allow evaluation of UEFI driver signatures. Choose one of the option: · **Deployed Mode**—Default · **Audit Mode**
Expert Key Management	Allows you to enable or disable Expert Key Management. · **Enable Custom Mode** This option is not set by default. The Custom Mode Key Management options are: · **PK**—Default · **KEK** · **db** · **dbx**

Intel Software Guard Extensions options

Table 37. 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**

Option	Description
	· **Software controlled**—Default
Enclave Memory Size	This option sets **SGX Enclave Reserve Memory Size**
	Click one of the following options:
	· **32 MB**
	· **64 MB**
	· **128 MB**—Default

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.
	· **All**—Default
	· **1**
	· **2**
	· **3**
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.
Intel® TurboBoost™	This option enables or disables the Intel® TurboBoost™ mode of the processor
Hyper-Thread Control	Allows you to enable or disable the HyperThreading in the processor.
	· **Disabled**
	· **Enabled**—Default

Power management

Table 39. Power Management

Option	Description
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. · **Wake on AC** This option is not set by default.
Enable Intel Speed Shift technology	This option is used to enable/disable Intel Speed Shift Technology. This option is not set by default.
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: · **Disabled**—Default · **Every Day** · **Weekdays** · **Select Days** This option is not set by default.
USB Wake Support	Allows you to enable USB devices to wake the system from standby. · **Enable USB Wake Support** · **Wake on Dell USB-C Dock** This option is not set by default.
Wireless Radio Control	This option if enabled, will sense the connection of the system to a wired network and subsequently disable the selected wireless radios (WLAN and/or WWAN). Upon disconnection from the wired network the selected wireless radio will ne enabled. · **Control WLAN radio** This option is not set by default.
Block Sleep	This option lets you to block entering to sleep in OS environment. This option is not set by default.
Peak Shift	Allows you enable of disable the Peak shift feature. This feature when enabled minimizes the AC power usage at times of peak demand. Battery doesnot charge between the Peak Shift start and end time Peak Shift Start and End Time can be configured for all weekdays This option set the battery threshold value (15 % to 100 %)
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. Advanced Battery Charge Mode can be configured for all weekdays

Option	Description
Primary Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: · **Adaptive**—Default · **Standard** - Fully charges your battery at a standard rate. · **ExpressCharge**- The battery charges over a shorter period of time using Dell's fast charging technology. · **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.**

Post behavior

Option	Description
Adapter Warnings	Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters. · **Enable Adapter Warnings**—Default
Numlock Enable	Allows you to enable or disable the Numlock function when the system boots. · **Enable Numlock**—Default
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. · **Fn Lock**—Default Click one of the following options: · **Lock Mode Disable/Standard** · **Lock Mode Enable/Secondary**—Default
Fastboot	Allows you to speed up the boot process by bypassing some of the compatibility steps. Click one of the following options: · **Minimal**—Default · **Thorough** · **Auto**
Extended BIOS POST Time	Allows you to create an additional preboot delay. Click one of the following options: · **0 seconds**—Default · **5 seconds** · **10 seconds**

Option	Description
Full Screen Logo	Allows you to display full screen logo, if your image matches screen resolution. · **Enable Full Screen Logo** This option is not set by default.
Warnings and Errors	Allows you to select different options to either stop, prompt and wait for user input, continue when warnings are detected but pause on errors, or continue when either warnings or errors are detected during the POST process. Click one of the following options: · **Prompt on Warnings and Errors**—Default · **Continue on Warnings** · **Continue on Warnings and Errors**
Sign of Life Indicator	This option allows system to indicate during the POST that the power button has been acknowledged in a manner the user can either hear or feel. · **Enable Sign of Life Audio Indication** · **Enable Sign of Life Display Indication** · **Enable Sign of Life Keyboard Backlight Indication**

Manageability

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

Virtualization support

Option	Description
Virtualization	This option specifies whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by the Intel Virtualization technology. · **Enable Intel Virtualization Technology** This option is set by default.
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by the Intel Virtualization technology for direct I/O. · **Enable VT for Direct I/O** This option is set by default.

Option	Description
Trusted Execution	This option specifies whether a Measured Virtual Machine Monitor (MVMM) can utilize the additional hardware capabilities provided by Intel® Trusted Execution Technology. ⓘ **NOTE: The TPM has to be enabled and activated and Virtualization Technology and VT for Direct I/O must be enabled to use this feature.**

Wireless options

Table 43. Wireless

Option	Description
Wireless Switch	Allows to set the wireless devices that can be controlled by the wireless switch. The options are: · **WWAN** · **GPS (on WWAN Module)** · **WLAN** · **Bluetooth®** All the options are enabled by default.
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. The options are: · **WWAN/GPS** · **WLAN** · **Bluetooth®** · **Contactless Smartcard/ NFC** All the options are enabled by default.

Maintenance

Table 44. Maintenance

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	Allows you to flash previous revisions of the system firmware. · **Allow BIOS Downgrade** This option is set by default.

Option	Description
Data Wipe	Allows you to securely erase data from all internal storage devices.
	· **Wipe on Next Boot**
	This option is not set by default.
Bios Recovery	**BIOS Recovery from Hard Drive**—This option is set by default. Allows you to recover the corrupted BIOS from a recovery file on the HDD or an external USB key.
	BIOS Auto-Recovery— Allows you to recover the BIOS automatically.
	ⓘ NOTE: BIOS Recovery from Hard Drive field should be enabled.
	Always Perform Integrity Check—Performs integrity check on every boot.

System logs

Table 45. 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.

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/us/en/19/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.


```
================ BIOS Update Utility ================

   This utility will update the system BIOS and firmware.  During the
   update procedure, your system will restart.  Do not interrupt this
   procedure once it begins.  Do not disconnect the AC power source (if you
   are updating a mobile computer, connect the AC power adapter).
   Interruption of the BIOS/firmware update procedure will likely render
   your system unusable.

   Do you wish to continue (y/n)? y




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```

Figure 1. DOS BIOS Update Screen

System and setup password

Table 46. System and setup password

Password type	Description
System password	Password that you must enter to log on to your system.
Setup password	Password that you must enter to access and make changes to the BIOS settings of your computer.

You can create a system password and a setup password to secure your computer.

⚠️ **CAUTION: The password features provide a basic level of security for the data on your computer.**

⚠️ **CAUTION: Anyone can access the data stored on your computer if it is not locked and left unattended.**

ⓘ **NOTE: System and setup password feature is disabled.**

Assigning a system setup password

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

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

Getting help

Contacting Dell

ⓘ **NOTE: If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.**

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1   Go to **Dell.com/support.**
2   Select your support category.
3   Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4   Select the appropriate service or support link based on your need.