Dell Latitude 7200 2-in-1

Setup and specifications guide

Regulatory Model: T04J
Regulatory Type: T04J001

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.

2019 - 04

Rev. A00

Contents

1

Set up your computer

1 Connect the power adapter and press the power button.

2 Finish operating system setup.

For Windows:

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.
	**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 apps	Details
	**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.

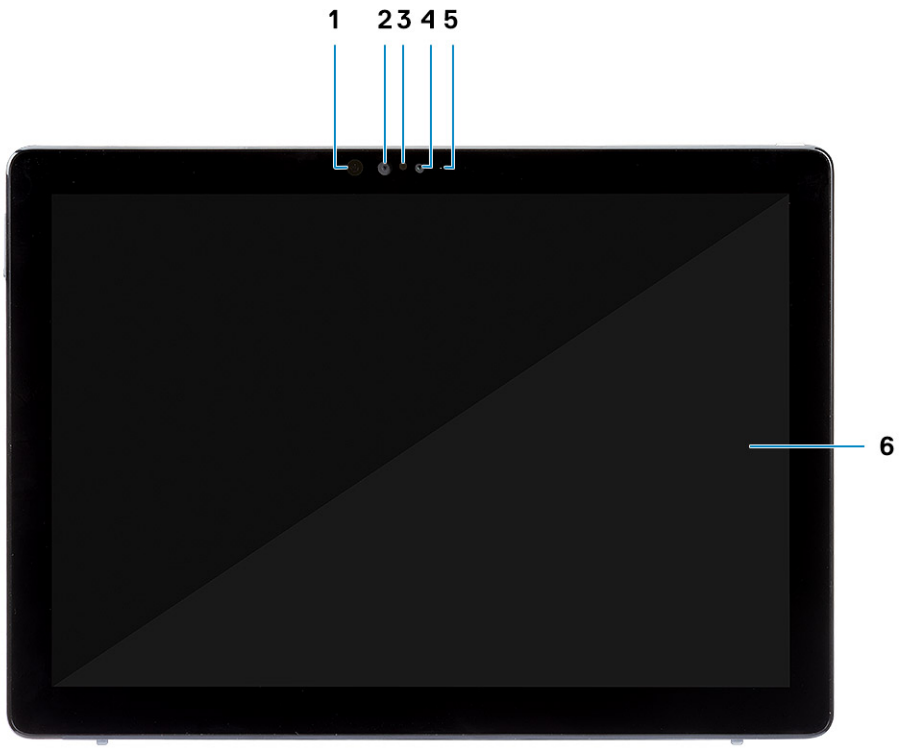
1. Connect the USB flash drive to your computer.
2. In Windows search, type `Recovery`.
3. In the search results, click **Create a recovery drive**.
   The **User Account Control** window is displayed.
4. Click **Yes** to continue.
   The **Recovery Drive** window is displayed.
5. Select **Back up system 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.

3

Chassis view

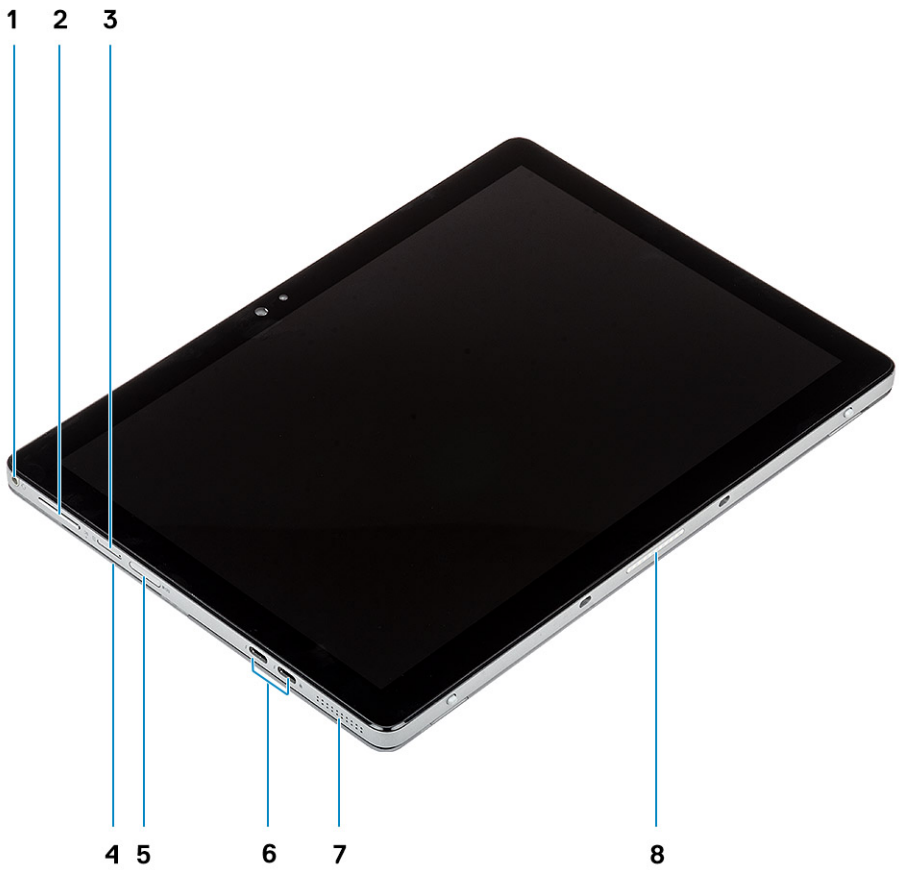
The chassis view displays only the standard components and all the optional components may not be listed.

Front view



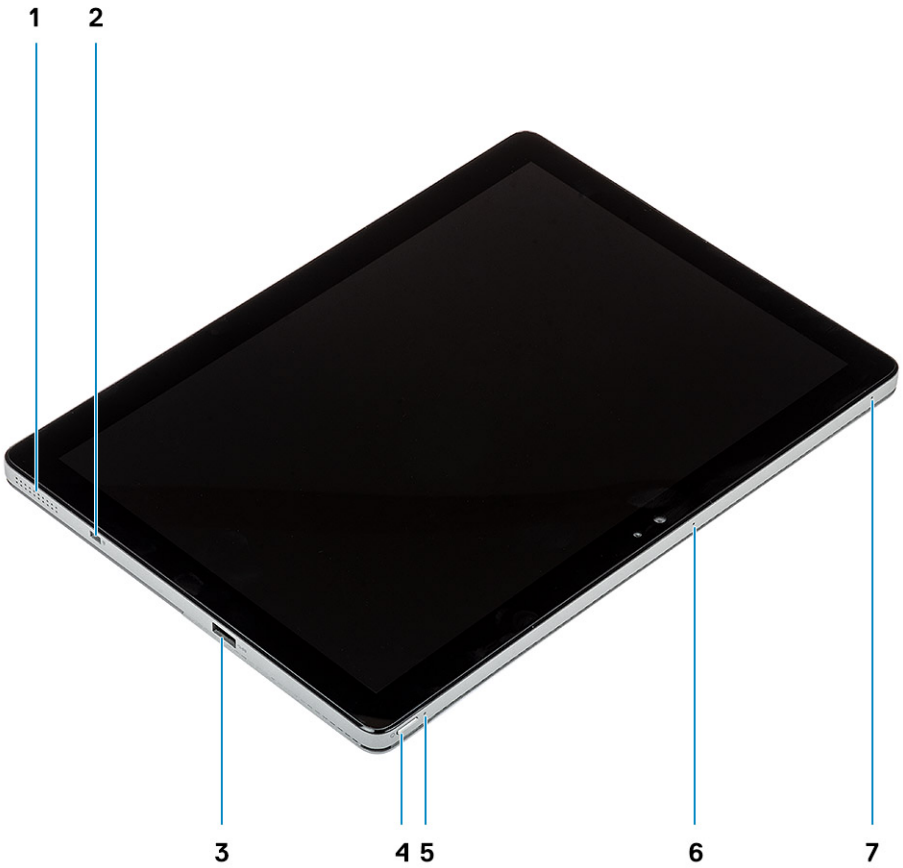
1	IR emitter	2	IR camera
3	Ambient light sensor	4	Front camera
5	Front/rear camera status light	6	LCD display

Side view



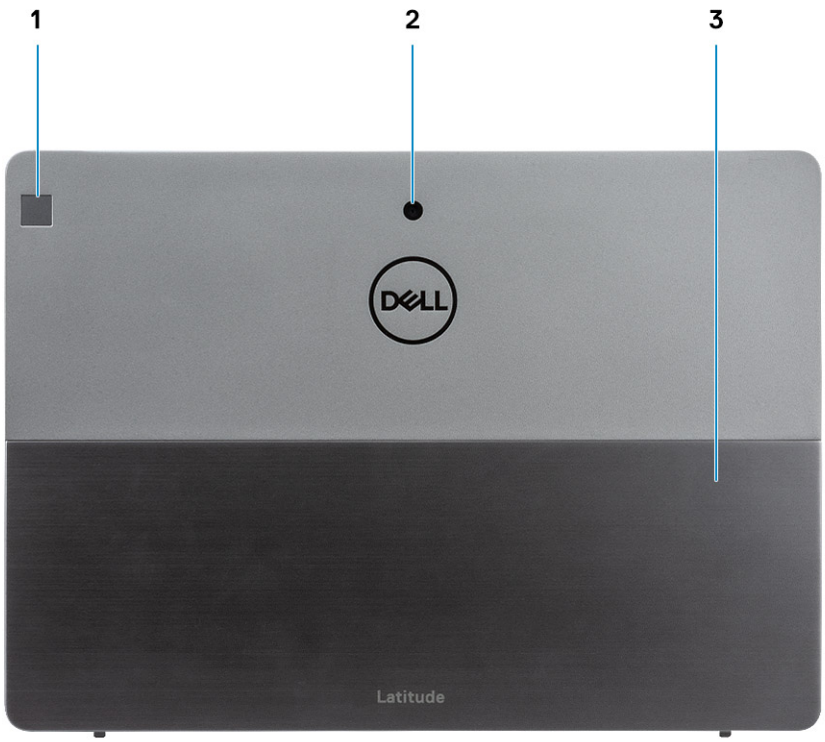
1 Headset/microphone combo jack
2 Volume up/down button
3 Nano SIM card slot (optional)
4 Smart card reader (optional)
5 microSD card slot
6 USB Type-C with Thunderbolt 3/Power Delivery/DisplayPort
7 Speaker
8 Pogo pins

Side right view



1	Speaker	2	Noble Wedge lock slot
3	USB Type-A 3.1 Gen 1 with PowerShare	4	Power button
5	Battery charge LED	6	Microphone
7	Microphone		

Bottom view



1 Touch fingerprint reader (optional)
2 Rear camera
3 Kickstand

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

Keys	Description
Fn + F5	Play / Pause
Fn + F6	Play next
Fn + F8	Switch to external display
Fn + F9	Search
Fn + F10	Increase brightness
Fn + F11	Print screen
Fn + F12	Insert
Fn + Ctrl	Open application menu

4

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 3. System information

Feature	Specifications
Chipset	Integrated in the processor
Chipset version	• i7 8665U-v0 • i5 8365U-v0 • i5 8265U-w0 • i3 8145U-w0
DRAM bus width	64 bits
DRAM bus speed	LPDDR3 2133
FLASH EPROM	SPI BIOS ROM—32 MB
PCIe bus	GEN 3.0, 8 GHz
CPU frequency	• For Intel Core i7 8665U—1.8 - 4.6 GHz • For Intel Core i5 8365U—1.6 - 4.1 GHz • For Intel Core i5 8265U—1.6 - 3.9 GHz • For Intel Core i3 8145U—2.1 - 3.9 GHZ

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
Intel Core Processor i3-8145U	Intel UHD Graphics 620 Integrated
Intel Core Processor i5-8365U	Intel UHD Graphics 620 Integrated
Intel Core Processor i5-8265U	Intel UHD Graphics 620 Integrated
Intel Core Processor i7-8665U	Intel UHD Graphics 620 Integrated

Memory

Table 5. Memory specifications

Feature	Specifications
Minimum memory configuration	4 GB
Maximum memory configuration	16 GB
Number of slots	Soldered on the system board
Memory options	• 4 GB • 8 GB • 16 GB
Type	LPDDR3
Speed	2133 MHz

Storage

Table 6. Storage specifications

Type	Form factor	Interface	Security option	Capacity
One Solid-State Drive (SSD)	M.2 2230	PCIe 3 x4 NVME, Up to 32 Gbps	SED	Up to 1 TB

System board connectors

Table 7. System board connectors

Feature	Specification
M.2 Connectors	• Slot 2 3042 Socket 2 key B • Slot 3 2230 Socket 3 key M • Slot 1 2230 Socket 1 key E

Media card reader

Table 8. Media card reader specifications

Features	Specifications
Type	microSD card
Supported card	SD 4.0

Audio

Table 9. Audio specifications

Feature	Specifications
Controller	Realtek ALC3254-CG
Type	2 Channel High Definition Audio
Stereo conversion	Supported
Speakers	Supported
Interface	• Internal interface—High definition audio interface • External interface—Universal Audio Jack supports Headset/Headphone/Line-out/Microphone/Line-in function, Digital-array microphones
Internal speaker amplifier	Supported
External volume controls	Supported
Speaker output	• Average—2 W • Peak—2.5 W
Subwoofer output	Not supported
Microphone	Supported

Video card

Table 10. Video card specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 620	UMA LPDDR3	• Intel Core i7-8665U CPU • Intel Core i5-8365U CPU • Intel Core i5-8265U CPU • Intel Core i3-8145U CPU	Integrated	Shared system memory	HDMI/DisplayPort through Type-C	• HDMI 1.4 - 4096 x 2304 @ 24 Hz • DisplayPort - 4096 x 2304 @ 60 Hz

Camera

Table 11. Camera specifications

Feature	Specifications
Resolution	Front facing camera: • Still image: 5 megapixels

Feature	Specifications
	• Video: 1080p at 30 fps World facing camera • Still image: 8 megapixels • Video: 1080p at 30 fps • Flash: No • LED: No Infrared camera • Still image: 5 megapixels • Video: 340 x 340 at 30 fps
Diagonal viewing angle	• Front facing camera—77.3 degree • World facing camera—88.9 degree • Infrared camera—86.7 degree

Ports and connectors

Table 12. Ports and connectors

Feature	Specifications
Memory card reader	microSD 4.0—up to 128 GB
Smart card reader	Optional
USB	• Two USB Type-C with Thunderbolt 3/Power Delivery/DisplayPort • One USB Type-A 3.1 Gen 1 with PowerShare
Security	Noble Wedge Lock slot
Media	• Universal audio jack • Two Internal Digital Microphone—edge firing at top edge (landscape) • Two isolation mounted stereo speakers • Front facing camera—5 MP • World facing camera—8 MP • One camera activity LED • Ambient Light Sensor (ALS)
SIM card reader	One Nano SIM card reader

Wireless

Table 13. Wireless specifications

Wireless options
Intel Dual Band Wireless-AC 9560 802.11AC 2x2 Wi-Fi and Bluetooth 5
Qualcomm QCA61x4A 802.11ac MU-MIMO Dual Band (2x2) Wi-Fi +Bluetooth 4.1 LTE M.2 Wireless Card
Qualcomm Snapdragon X20 Global Gigabit LTE

Display

Table 14. Display specifications

Feature	Specifications
Type	12.3-inch FHD WUXGA (1920x1280) AR+AS touchscreen
Height (Active area)	172.8 mm (6.80 in)
Width (Active area)	259.2 mm (10.20 in)
Diagonal	312.42 mm (12.3 in)
Luminance/Brightness (typical)	400 Nits
Megapixels	2.46
Pixels Per Inch (PPI)	187.6
Contrast ratio (min)	1000:1
Refresh rate	60 Hz
Horizontal viewing angle (min)	89/89 degree
Vertical viewing angle (min)	89/89 degree
Pixel pitch	0.135 mm
Power consumption (max)	3.24 W

Keyboard

Table 15. Keyboard specifications

Feature	Specifications
Number of keys	• 82 (US) • 83 (UK) • 86 (Japan)
Size	Full sized • X=270.7 mm (10.65 inches)

Feature	Specifications
	• Y=104.95 mm (4.13 inches)
Backlit keyboard	Yes
Layout	Folio

Touchpad

Table 16. Touchpad specifications

Feature	Specifications
Resolution	• Horizontal: 41.7+/-4.2 counts/mm • Vertical: 39.8+/-4.0 counts/mm
Dimensions	• Width: 55 mm (2.16 in) • Height: 100 mm (3.93 in)
Multi-touch	Yes

Operating system

Table 17. Operating system

Supported operating system	
Operating systems supported	Windows 10

Battery

Table 18. Battery specifications

Feature	Specifications
Type	• 38 WHr 2-Cell battery • 38 WHr LCL 2-Cell battery
Dimension	1 38 WHr 2-Cell battery • Length: 185 mm (7.28 in) • Width: 81.2 mm (3.19 in) • Height: 4.8 mm (0.18 in) • Weight: 160 g (0.35 lb) 2 38 WHr LCL 2-Cell battery • Length: 185 mm (7.28 in) • Width: 81.2 mm (3.19 in) • Height: 4.8 mm (0.18 in) • Weight: 160 g (0.35 lb)

Feature	Specifications
Weight (maximum)	160 g (0.35 lb)
Voltage	• 38 WHr 2-Cell battery—8.9 V • 38 WHr LCL 2-Cell battery—8.9 V
Charging time when the computer is off (approximate)	• With 65 W adapter – 0°C to 15°C—4 hr – 16°C to 45°C—2 hr – 46°C to 60°C—3 hr • With 45 W adapter – 0°C to 15°C—4 hr – 16°C to 60°C—2 hr
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions
Temperature range: Operating	• Charging— 0°C to 45°C, 32°F to 113°F • Discharging— 0°C to 70°C, 32°F to 158°F
Temperature range: Storage	-20°C to 65°C (-4°F to 149°F)
Coin-cell battery	No

Power adapter

Table 19. Power adapter specifications

Features	Specifications		
Type	45 W (USB Type-C)	SFF 45 W (USB Type-C)	65 W (USB Type-C)
Input Voltage	100 - 240 VAC	100 - 240 VAC	100 - 240 VAC
Input current (maximum)	1.3 A	1.3 A	1.7 A
Adapter size	0.87 x 2.17 x 3.42 inches (22 x 55 x 87 mm)	0.87 x 2.17 x 2.36 inches (22 x 55 x 60 mm)	0.87 x 2.6 x 3.9 inches (22 x 66 x 99 mm)
Weight	0.35 lbs (0.16 kg)	0.37 lbs (0.17 kg)	0.476 lbs (0.216 kg)
Input frequency	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Output current	• 20 V/2.25 A (continuous) • 15 V/3 A (continuous) • 9.0 V/3 A (continuous) • 5.0 V/3 A (continuous)	• 20 V/2.25 A (continuous) • 15 V/3 A (continuous) • 9.0 V/3 A (continuous) • 5.0 V/3 A (continuous)	• 20 V/3.25 A (continuous) • 15 V/3 A (continuous) • 9.0 V/3 A (continuous) • 5.0 V/3 A (continuous)
Rated output voltage	20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/15 VDC/9 VDC/5 VDC
Temperature range (Operating)	0° to 40°C (32° to 104°F)	0° to 40°C (32° to 104°F)	0° to 40°C (32° to 104°F)
Storage	-40° to 70°C (-40° to 158°F)	-40° to 70°C (-40° to 158°F)	-40° to 70°C (-40° to 158°F)

Dimensions and weight

Table 20. Dimensions and weight

Feature	Specifications
Height	Front height - 9.35 mm (0.3 in) Back height - 9.35 mm (0.3 in)
Width	292 mm (11.4 in)
Depth	208.8 mm (8.2 in)
Weight	Starting 851 g (1.87 lb)

Computer environment

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

Table 21. 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) **NOTE: Maximum dew point temperature = 26°C**	5% to 95% (non-condensing) **NOTE: Maximum dew point temperature = 33°C**
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)

Security

Table 22. Security

Feature	Specifications
Dell USH/CV3.0 (USH/CV2.0 as contingency)	• Contacted Smart Card reader • NFC
Finger Print Reader	Match on chip solution (USH/CV3 solution as contingency)
Discrete TPM 2.0	Supported
Windows Hello 4.0 compliant Face IR Camera	Supported
Noble lock	Supported

Security Software

Table 23. Security Software

Feature	Specifications
Dell ControlVault 3.0/DDP	Supported
Intel security solution • Intel Identity Protection Technology (IPT) • Intel Platform Trust Technology (PTT)—for china • Intel BIOS Guard • Intel Software Guard (SGX) • Intel Trusted Execution Technology (TXT)	Supported
Latitude Security software per software functional plan/cycle list	Contactless smart card will be enabled by Broadcom. BRCM creates a Companion Device application through CDF that allow customers to authenticate the operating system using their contactless smart cards and align with Windows Hello.
D-Pedigree—Secure Supply Chain Functionality	Supported for BIOS

5

Software

This chapter details the supported operating systems along with instructions on how to install the 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
  - Device Configuration
  - BIOS Flash Update
  - Diagnostics
  - SupportAssist OS Recovery
  - Exit Boot Menu and Continue

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. **NOTE: For the standard graphics browser only.**
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.

General options

Table 24. General options

Option	Description
System Information	This section lists the primary hardware features of your computer. The options are: • **System Information** • **Memory Configuration** • **Processor Information**

Option	Description
	• **Device Information**
Battery Information	Displays the battery status and the type of AC adapter connected to the computer.
Boot Sequence	Allows you to change the order in which the computer attempts to find an operating system. The options are: • **Windows Boot Manager**—Enable or disable the Windows Boot Manager option. • **Boot List Option**—You can add, delete, and view the boot options.
Advanced Boot Options	Enable or disable the UEFI Network Stack option.
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 25. System Configuration options

Option	Description
SATA Operation	Allows you to configure the operating mode of the integrated SATA hard-drive controller. The options are: • **Disabled** • **AHCI** • **RAID On**—By default, the RAID On option is enabled. **NOTE: SATA is configured to support RAID mode.**
Drives	Allows you to enable or disable various drives on board. The options are: • **SATA-0** • **SATA–1** • **M.2 PCIe SSD-0** • **M.2 PCIe SSD-1** By default, all the options are enabled.

Option	Description
SMART Reporting	This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART (Self Monitoring Analysis and Reporting Technology) specification. By default, the **Enable SMART Reporting** option is disabled .
USB Configuration	Allows you to enable or disable the internal/integrated USB configuration. The options are: · **Enable USB Boot Support** · **Enable External USB Port** By default, all the options are enabled. **NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.**
Thunderbolt Adapter Configuration	Allows you to configure the Thunderbolt adapter security settings within the operating system. The options are: · **Thunderbolt**—This option is enabled by default. · **Enable Thunderbolt Support** · **Enable Thunderbolt (and PCIe behind TBT) Pre-boot Modules** · **No Security** · **User Authorization**—This option is enabled by default. · **Secure Connect** · **Display Port and USB Only**
Thunderbolt Auto Switch	Allows you to configure the method used by the Thunderbolt controller to perform the PCIe device enumeration. By default, the **Auto switch** option is enabled. The options are: · **Native Enumeration** · **BIOS Assist Enumeration**
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** By default, all the options are enabled.
Fingerprint Reader	Enables or disables the fingerprint reader device. The options are: · Enable Fingerprint Reader Device · Enable Finger Reader Single Sign On By default, both the options are enabled.
Miscellaneous devices	Allows you to enable or disable the following devices: · **Enable Camera** · **Enable Hard Drive Free Fall Protection** · **WiFi Radio**

Option	Description
	• **Enable Secure Digital (SD) Card** By default, all the options are enabled.

Video screen options

Table 26. Video

Option	Description
LCD Brightness	Allows you to set the display brightness depending upon the power source. By default, Brightness On Battery is 50% and Brightness On AC is 100%.

Security

Table 27. 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: By default, the Enter the old password field is marked as 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: By default, the Enter the old password field is marked as 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** By default, this option is disabled.
Password Configuration	You can define the length of your password. Min = 4, Max = 32

Option	Description
Password Bypass	Allows you to bypass the System password and the Internal HDD password, when it is set, during a system restart. The options are: · **Disabled**—This option is enabled by default. · **Reboot bypass**
Password Change	Allows you to change the system password when the administrator password is set. · **Allow Non-Admin Password Changes** By default, this option is enabled.
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** By default, this option is disabled.
UEFI Capsule Firmware Updates	Allows you to update the system BIOS through UEFI capsule update packages. · **Enable UEFI Capsule Firmware Updates** By default, this option is enabled.
TPM 2.0 Security	Allows you to enable or disable the Trusted Platform Module (TPM) during POST. The options are: · **TPM On**—This option is enabled by default. · **Clear** · **PPI Bypass for Enable Commands** · **PPI Bypass for Disbale Commands** · **PPI Bypass for Clear Command** · **Attestation Enable**—This option is enabled by default. · **Key Storage Enable**—This option is enabled by default. · **SHA-256**—This option is enabled by 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.
Admin Setup Lockout	Allows you to prevent users from entering Setup when an administrator password is set. · **Enable Admin Setup Lockout** By default, this option is disabled.
Master Password Lockout	Allows you to disable master password support. · **Enable Master Password Lockout** By default, this option is disabled. **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** By default, this option is enabled.

Secure boot

Table 28. Secure Boot

Option	Description
Secure Boot Enable	Allows you to enable or disable the Secure Boot Feature. • **Secure Boot Enable**—By default, this option is disabled.
Secure Boot Mode	Changes to the Secure Boot operation mode modifies the behavior of Secure Boot to allow evaluation of UEFI driver signatures. This options are: • **Deployed Mode**—By default, this option is enabled. • **Audit Mode**
Expert Key Management	Allows you to enable or disable Expert Key Management. • **Enable Custom Mode**—By default, this option is disabled. The Custom Mode Key Management options are: • **PK**—By default, this option is disabled. • **KEK** • **db** • **dbx**

Intel Software Guard Extensions options

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: • **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. · **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 31. Power Management

Option	Description
Lid Switch	Allows you to disable the lid switch. The options are: · **Enable Lid Switch**—enabled by default · **Power On Lid Open**—enabled by default
AC Behavior	Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected. · **Wake on AC** By default, this option is disabled.

Option	Description
Enable Intel Speed Shift technology	Allows you to enable or disable the Intel Speed Shift Technology option. By default, this option is enabled.
Auto On Time	Allows you to set the time at which the computer must turn on automatically. The options are: • **Disabled**—enabled by default • **Every Day** • **Weekdays** • **Select Days**
USB Wake Support	Allows you to enable USB devices to wake the system from standby. By default, the option **Enable USB Wake Support** is disabled.
Block Sleep	This option enables you to block entering to sleep in operating system environment. By default, the **Block Sleep** option is disabled.
Advanced Battery Charge Configuration	This option enables you to maximize the battery health. When you enable this option, your system uses the standard charging algorithm and other techniques, during the nonwork hours to improve the battery health. By default, the **Enable Advanced Battery Charge Mode** option is disabled.
Primary Battery Charge Configuration	Allows you to select the charging mode for the battery. The options are: • **Adaptive**—enabled by default • **Standard** • **ExpressCharge** • **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.**
Type-C Connector Power	Allows you to set the maximum power that can be drawn from the type-c connector. The options are: • 7.5 Watts—enabled by default • 15 Watts

Post behavior

Table 32. 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**—enabled by default
Keypad (embedded)	Allows you to choose one of two methods to enable the keyboard that is embedded in the internal keyboard. The options are: • **Fn Key Only**—enabled by default • **By Numlock**

Option	Description
Numlock Enable	Allows you to enable or disable the Numlock function when the system boots. • **Enable Numlock**—enabled by 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. By default, the **Fn Lock** option is enabled. Select one of the following options: • **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. Select one of the following options: • **Minimal**—enabled by default • **Thorough** • **Auto**
Extended BIOS POST Time	Allows you to create an additional preboot delay. Select one of the following options: • **0 seconds**—enabled by default • **5 seconds** • **10 seconds**
Full Screen Logo	Allows you to display full screen logo, when your image matches screen resolution. By default, the **Enable Full Screen Logo** option is disabled.
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. Select one of the following options: • **Prompt on Warnings and Errors**—enabled by default • **Continue on Warnings** • **Continue on Warnings and Errors**

Virtualization support

Table 33. Virtualization Support

Option	Description
Virtualization	This option specifies whether a Virtual Machine Monitor (VMM) can use the additional hardware capabilities that are provided by the Intel Virtualization technology. By default, the **Enable Intel Virtualization Technology** option is enabled.
VT for Direct I/O	Enables or disables the Virtual Machine Monitor (VMM) from using the additional hardware capabilities that are provided by the Intel Virtualization technology for direct I/O. By default, the **Enable VT for Direct I/O** option is enabled.

Wireless options

Table 34. 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.
Wireless Device Enable	Allows you to enable or disable the internal wireless devices. The options are: · **WLAN** · **Bluetooth®** All the options are enabled by default.

Maintenance

Table 35. 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.
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**—By default, this option is enabled. 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.

System logs

Table 36. 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

Table 37. SupportAssit System Resolution

Option	Description
Auto OS Recovery Threshold	The **Auto OS Recovery Threshold** setup option controls the automatic boot flow for Support Assist System Resolution Console and Dell OS Recovery tool. Click one of the following options: · **OFF** · **1** · **2**—enabled by default · **3**
SupportAssist OS Recovery	Allows you to recover the SupportAssist OS Recovery (Disabled by default). By default, this option is enabled.

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.

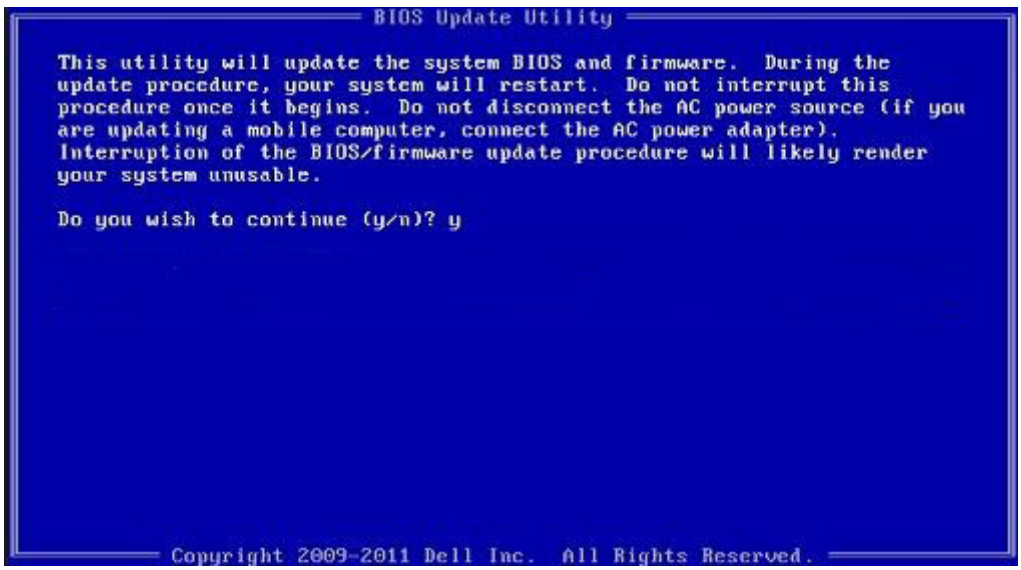


Figure 1. DOS BIOS Update Screen

Updating the Dell BIOS in Linux and Ubuntu environments

If you want to update the system BIOS in a Linux environment such as Ubuntu, see https://www.dell.com/support/article/us/en/19/sln171755/.

Flashing the BIOS from the F12 One-Time boot menu

Updating your system BIOS using a BIOS update .exe file copied to a FAT32 USB key and booting from the F12 one time boot menu.
BIOS Update
You can run the BIOS update file from Windows using a bootable USB key or you can also update the BIOS from the F12 One-Time boot menu on the system.

Most Dell systems built after 2012 have this capability and you can confirm by booting your system to the F12 One-Time Boot Menu to see if BIOS FLASH UPDATE is listed as a boot option for your system. If the option is listed, then the BIOS supports this BIOS update option.

NOTE: Only systems with BIOS Flash Update option in the F12 One-Time Boot Menu can use this function.

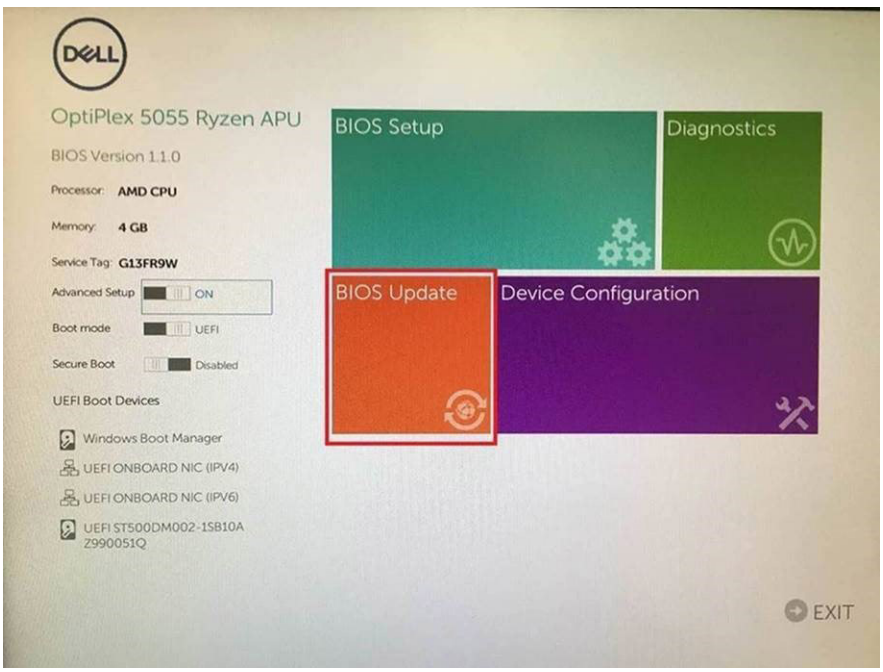
Updating from the One-Time Boot Menu
To update your BIOS from the F12 One-Time boot menu, you will need:

- USB key formatted to the FAT32 file system (key does not have to be bootable)
- BIOS executable file that you downloaded from the Dell Support website and copied to the root of the USB key
- AC power adapter connected to the system
- Functional system battery to flash the BIOS

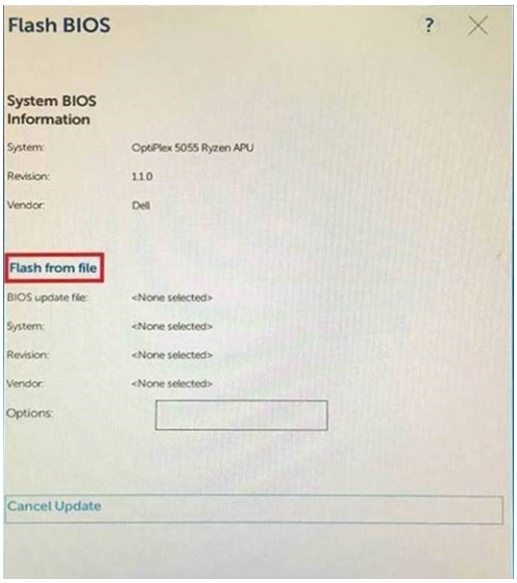
Perform the following steps to execute the BIOS update flash process from the F12 menu:

CAUTION: Do not power off the system during the BIOS update process. Powering off the system could make the system fail to boot.

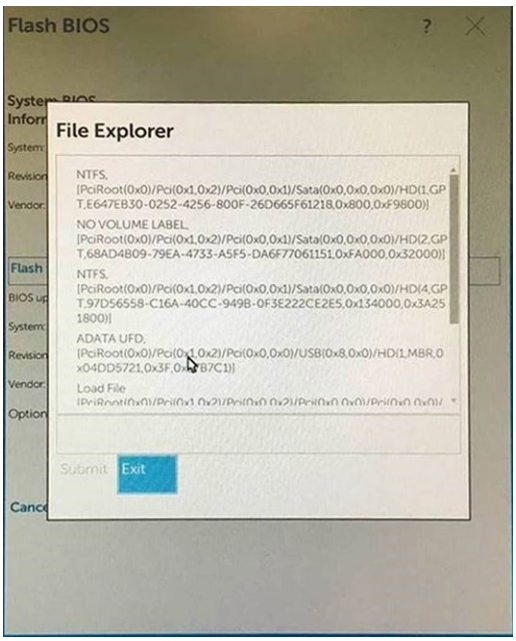
1 From a power off state, insert the USB key where you copied the flash into a USB port of the system .
2 Power on the system and press the F12 key to access the One-Time Boot Menu, Highlight BIOS Update using the mouse or arrow keys then press **Enter**.



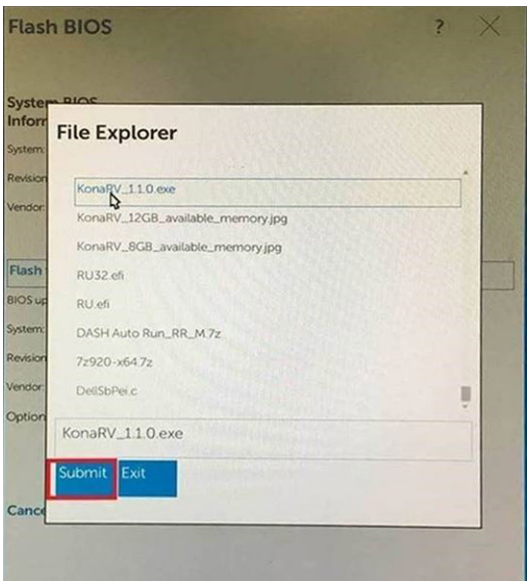
3 The Bios flash menu will open then click the **Flash from file**.



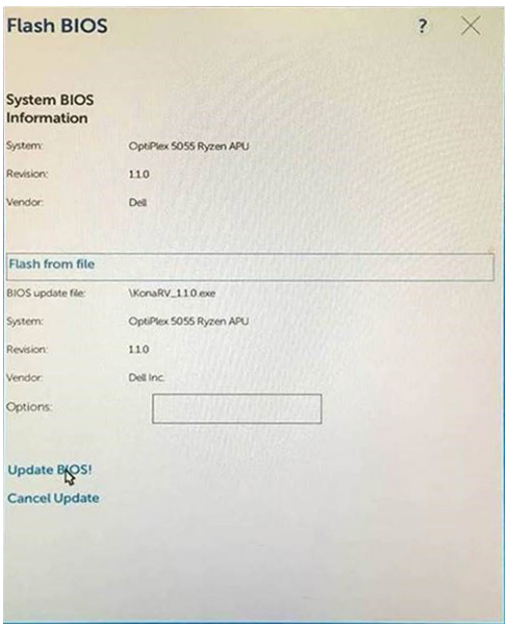
4 Select external USB device



5 Once the file is selected, Double click the flash target file, then press submit .



6 Click the **Update BIOS** then system will reboot to flash the BIOS.



7 Once complete, the system will reboot and the BIOS update process is completed.

System and setup password

Table 38. 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

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.