

Dell Precision 7740

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.

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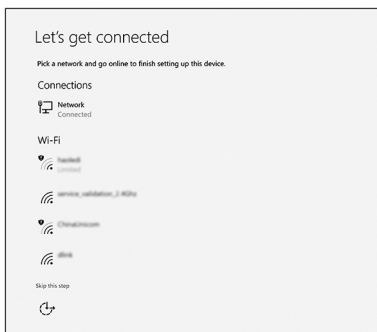
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Set up your computer

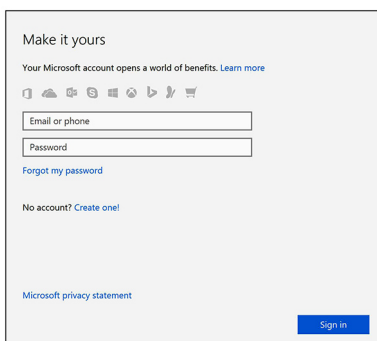
1. Connect the power cable and press the power button



2. Follow the instructions on the screen to finish Windows setup:
 - a) Connect to a network.



- b) Sign-in to your Microsoft account or create a new account.



3. Locate Dell apps.

Table 1. Locate Dell apps

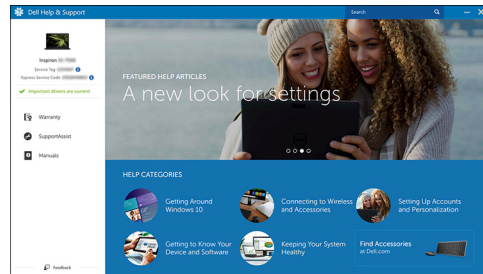
Features

Specifications



Register your computer

Dell Help & Support



SupportAssist — Check and update your computer

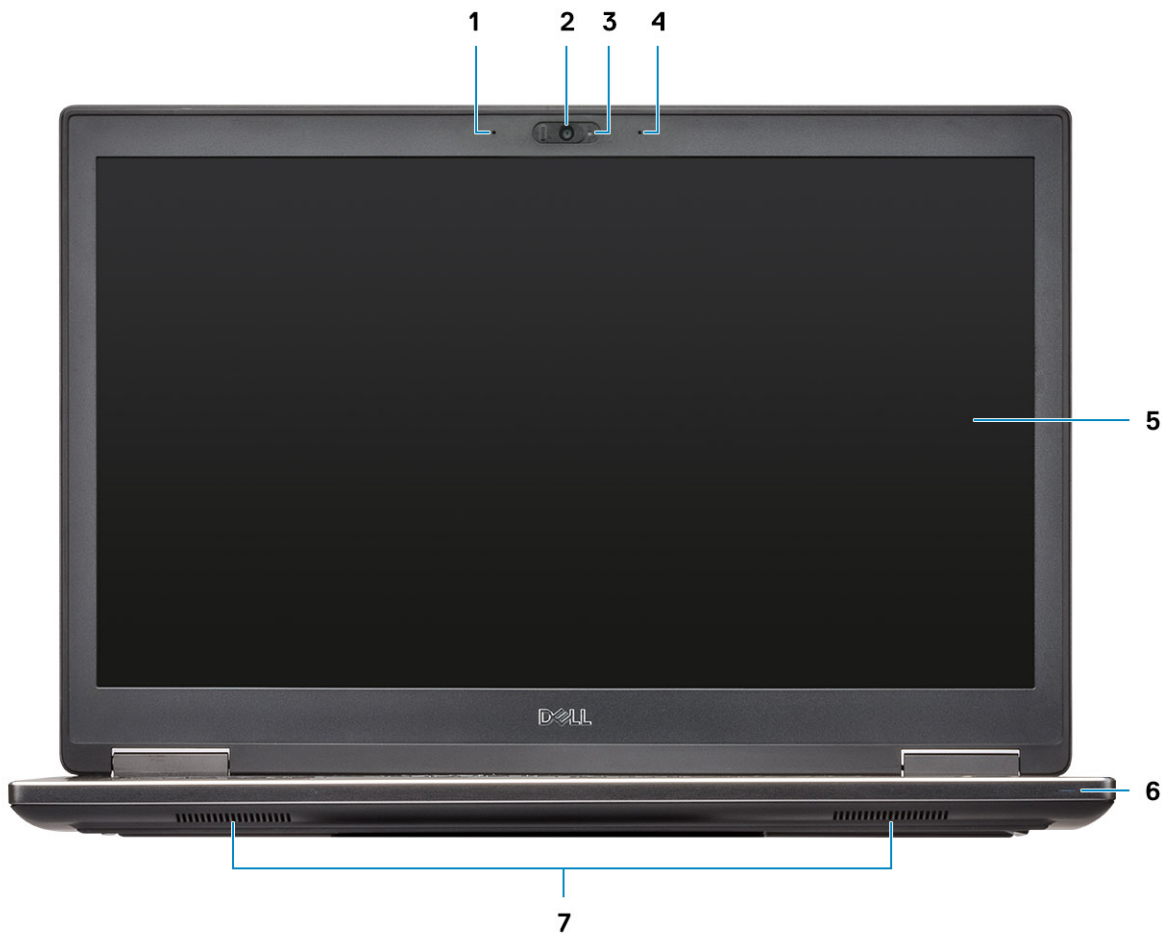
Chassis

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

Topics:

- Front open view
- Left view
- Right view
- Palmrest view
- Back view
- Bottom view
- Hot key definition

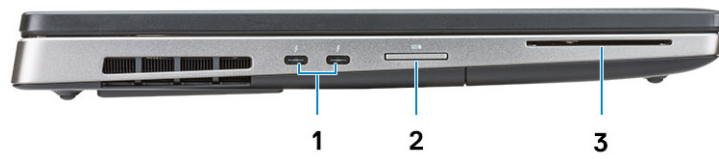
Front open view



1. Microphone (Optional)
2. Camera-with shutter (Optional)
3. Camera-status light (Optional)
4. Microphone (Optional)
5. Display
6. Battery status light

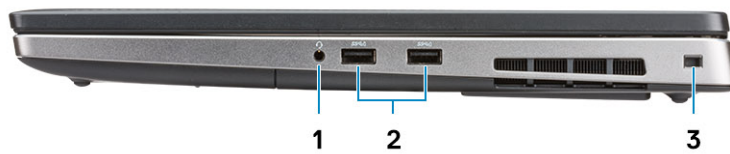
7. Speakers

Left view



1. Thunderbolt 3 Type-C port
2. SD Card reader
3. Smartcard reader

Right view



1. Headset port
2. USB 3.1 Gen 1 ports with PowerShare
3. Security cable slot

Palmrest view



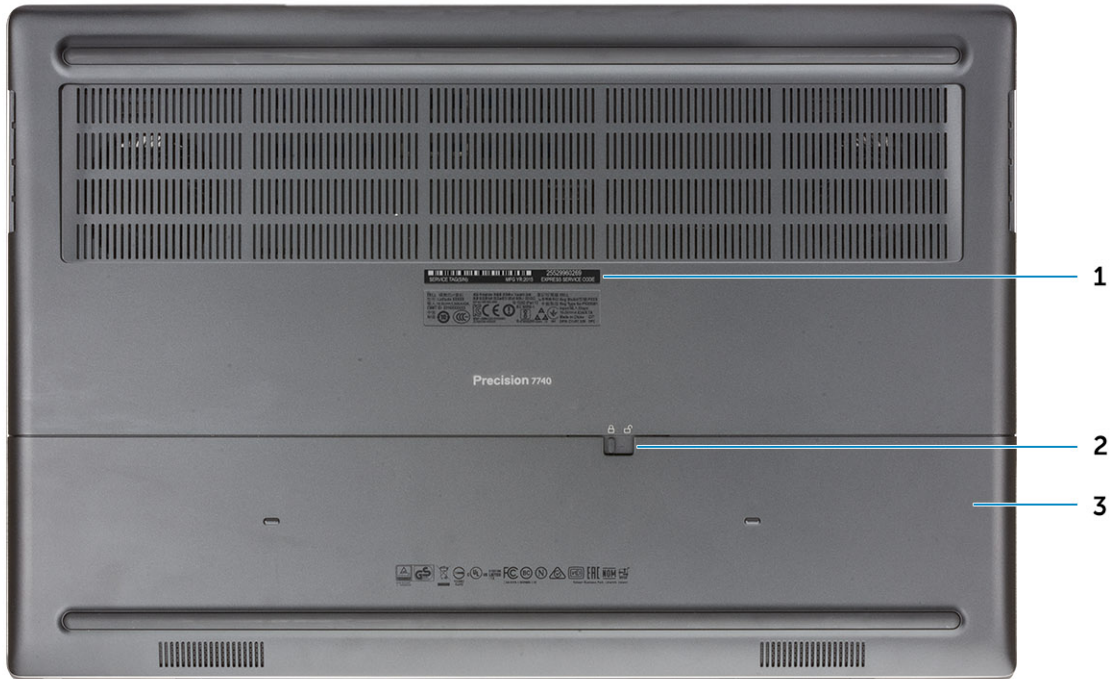
1. Power button
2. Keyboard
3. Fingerprint reader (optional)
4. Contactless Card Reader (optional)
5. Touchpad

Back view



1. HDMI port
2. Mini DisplayPort
3. RJ45 Network port
4. USB 3.1 Gen 1 port with PowerShare
5. Power connector port

Bottom view



1. Service tag label
2. Battery door release latch
3. Battery door

Hot key definition

Table 2. Keyboard shortcut keys

Hot keys	Function
Fn+ESC - Fn Lock	Allows the user to toggle between locked and unlocked Fn keys.
Fn+F1 - Audio Volume Mute	Temporarily mutes/unmutes the audio. The audio level before muting is returned after unmuting.
Fn+F2 – Audio Volume Down/Decrease	Decreases the audio volume until minimum/off is reached.
Fn+F3 – Audio Volume Up/Increase	Increases the audio volume until maximum is reached.
Fn+F4 – Microphone Mute	Silences the on-board microphone so it cannot record audio. There is an LED on the F4 function key that notifies the user of the state of this feature: <ul style="list-style-type: none"> • LED off = microphone capable of recording audio • LED on = microphone muted and unable to record audio
Fn+F6—Scroll lock	Used as Scroll Lock key.
Fn+F8 – LCD and Projector display	Determines video output to LCD and external Video devices when attached and displays present.
Fn+F9 – Search	Mimics the Windows key + F keystroke to open Windows Search dialog box.
Fn+F10 – KB Illumination/Backlight	Determines the Keyboard Illumination/Backlight brightness level. The hot key cycles through the following brightness states when

Hot keys	Function
	pressed: Disabled, Dim, Bright. For more detail, see Keyboard Illumination/Backlight section.
Fn+F11 - Print screen	It is used as Print Screen key
Fn+F12 - Insert	It is used as Insert key
Fn+RightCtrl – Context Menu	It is used as Context Menu key. (a.k.a. Right-Click menu)
Fn+Left Cursor—Home	It is used as Home key.
Fn+Right Cursor – End	It is used as End key.
Fn+B – Pause/Break	It is used as Pause/Break key. Specifically, Fn+B = Pause and Fn+Ctrl+B = Break.
Fn+Arrow Key (Up) – Brightness Decrease	Decreases the stepping of LCD brightness for each press until minimum is reached. For details, see the LCD Brightness section.
Fn+Arrow Key (Down) – Brightness Increase	Increases the stepping of LCD brightness for each press until maximum is reached. For details, see the LCD Brightness section.
Fn+Home - Radio On/Off	Toggles all the radios on and off. For example, WLAN, WWAN, and Bluetooth.
Fn+End - Sleep	Puts the system into the ACPI S3 State and does not wake the system.

System specifications

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

Topics:

- [System information](#)
- [Processor](#)
- [Memory](#)
- [Storage](#)
- [Media card-reader](#)
- [Audio](#)
- [Video](#)
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- [Computer environment](#)
- [Support policy](#)

System information

Table 3. System information

Features	Specifications
Chipset	Intel CM246 chipset
DRAM bus width	64-bit per channel (total 128 bit)
FLASH EPROM	48 kHz
PCIe bus	8 Gbps
External bus frequency	DMI 3.0-8GT/s

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
9th Gen Intel I5-9400H (4 core / 8 TH / 2.5 Ghz up to 4.3 GHz / 8 M cache / 45 W)	Integrated Intel UHD 630
9th Gen Intel I7-9750H (6 core / 12 TH / 2.6 Ghz up to 4.5 GHz / 12 M cache / 45 W)	Integrated Intel UHD 630
9th Gen Intel I7-9850H (6 core / 12 TH / 2.6 Ghz up to 4.6 GHz / 12 M cache / 45 W)	Integrated Intel UHD 630
9th Gen Intel I9-9880H (8 core / 16 TH / 2.3 GHz up to 4.8 GHz / 16 M cache / 45 W)	Integrated Intel UHD 630
9th Gen Intel I9-9980HK (8 core / 16 TH / 2.4 GHz up to 5.0 GHz / 16 M cache / 45 W)	Integrated Intel UHD 630
9th Gen Intel Xeon E-2276M (6 core / 12 TH / 2.8 GHz up to 4.7 GHz / 12 M cache / 45 W)	Integrated Intel UHD P630
9th Gen Intel Xeon E-2286M (8 core / 16 TH / 2.4 Ghz up to 5.0 GHz / 16 M cache / 45 W)	Integrated Intel UHD P630

Memory

Table 5. Memory specifications

Feature	Specifications
Minimum memory configuration	8 GB
Maximum memory configuration	128 GB
Number of slots	4 SODIMM
Maximum memory supported per slot	32 GB
Memory options	<ul style="list-style-type: none"> • 8 GB - 1 x 8 GB • 16 GB - 1 x 16 GB • 16 GB - 2 x 8 GB • 32 GB - 1 x 32 GB • 32 GB - 2 x 16 GB • 32 GB - 4 x 8 GB • 64 GB - 4 x 16 GB • 64 GB - 2 x 32 GB • 128 GB - 4 x 32 GB
Type	DDR4 SDRAM ECC and Non-ECC memory
Speed	<ul style="list-style-type: none"> • 2666 MHz • 3200 MHz

Table 6. Memory population rules

DIMM Sku	Implementation
X1	B
X2	B+D
X3	A+B+C+D

Location of channel A, B, C, D:

1. B and D under Keyboard– Slot B close to touchpad and Slot D close to LCD
2. A and C under Base– Slot C close to rear Input/Output and Slot A close to the battery

Storage

Table 7. Storage specifications

Type	Form factor	Interface	Security option	Capacity
Four Solid-State Drive (SSD)	M.2 2280	· PCIe 3x4 NVMe, Up to 32 Gbps	SED	· Up to 512 GB · Up to 2 TB
One 2.5" Hard-Disk Drive (HDD) with 4 cell battery only	Approximately (2.760 x 3.959 x 0.374 inches)	SATA AHCI, Up to 6 Gbps	SED FIPS	Up to 2 TB

NOTE: Slot 4: SATA; Slot 3, 5, 6: PCIe. Please note that the slots are marked against there respective slots in the system.

Media card-reader

Table 8. Media-card reader specifications

Features	Specifications
Type	One SD-card slot
Supported cards	· SD · SDHC · SDXC

Audio

Table 9. Audio specifications

Features	Specifications
Controller	Realtek ALC3281
Type	Four-channel high-definition audio
Speakers	Two (Directional speakers)
Interface	· Universal audio jack · Stereo headphone · Stereo headset · Stereo line in · Microphone in · Stereo line out
Internal speaker amplifier	2W (RMS) per channel

Video

Table 10. Video specifications

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Intel UHD Graphics 630	UMA	<ul style="list-style-type: none"> Intel Core Processor i5 Intel Core Processor i7 Intel Core Processor i9 	Integrated	Shared system memory	HDMI/DP/eDP	4096x2304
Intel UHD Graphics P630	UMA	Intel Xeon	Integrated	Shared system memory	HDMI/DP/eDP	4096x2304
NVIDIA Quadro RTX3000	Discrete	NA	GDDR6	6 GB	eDP/mDP/HDMI/Type-C	Max Digital: <ul style="list-style-type: none"> Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz (mDP/type-c to DP) Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz (mDP/type-c to DP)
NVIDIA Quadro RTX4000	Discrete	NA	GDDR6	8 GB	eDP/mDP/HDMI/Type-C	Max Digital: <ul style="list-style-type: none"> Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz (mDP/type-c to DP) Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz (mDP/type-c to DP)
NVIDIA Quadro RTX5000	Discrete	NA	GDDR6	16 GB	eDP/mDP/HDMI/Type-C	Max Digital: <ul style="list-style-type: none"> Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz (mDP/type-c to DP) Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz (mDP/type-c to DP)
Radeon Pro WX 3200	Discrete	NA	GDDR5	4 GB	HDMI/mDP/eDP/USB-C	<ul style="list-style-type: none"> Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
Radeon Pro WX7130	Discrete	NA	GDDR5	8 GB	HDMI/mDP/eDP/USB-C	<ul style="list-style-type: none"> Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz HDMI 2.0 - 4096 x 2160 (4K) @ 60 Hz Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz HDMI 2.0 - 4096 x 2160 (4K) @ 60 Hz

Camera

Table 11. Camera specifications

Features	Specifications
Resolution	Camera: <ul style="list-style-type: none"> Still image: 0.92 megapixels Video: 1280x720 at 30 fps Infrared camera (optional on FHD non-touch): <ul style="list-style-type: none"> Still image: 0.30 megapixels Video: 340x340 at 60 fps
Diagonal viewing angle	<ul style="list-style-type: none"> Camera - 86.7 degrees Infrared camera - 70 degrees

Communications

Table 12. Communications

Features	Specifications
Network adapter	Integrated Intel i219LM10/100/1000 Mb/s Ethernet (RJ-45) with Intel Remote Wake UP and PXE
Wireless	<ul style="list-style-type: none"> Wi-Fi 802.11n/ac via M.2 Bluetooth

Ports and connectors

Table 13. Ports and connectors

Features	Specifications
Memory card reader	SD 4.0 memory card reader

Features	Specifications
Smart card reader	Standard
USB	Three USB 3.1 Gen 1 ports with PowerShare
Security	Noble wedge lock slot
Docking port	Cable dock support
Audio	<ul style="list-style-type: none"> Headset port Noise reduction array microphones Microphone (Optional)
Video	<ul style="list-style-type: none"> Mini DisplayPort 1.4 HDMI 2.0
Network adapter	One RJ-45 connector
Thunderbolt	Two thunderbolt 3 Type-C ports

Contactless smart card

Table 14. Contactless smart card

Features	Specifications
Type	FIPS 201 Smart Card
ISO certification	ISO14443A

Display

Table 15. Display specifications

Features	Specifications
Type	<ul style="list-style-type: none"> 17.3 in. HD+ TN 1600x900 AG non-touch, No Mic, 60% Adobe color gamut 17.3 in. HD+ TN 1600x900 AG non-touch, Mic, 60% Adobe color gamut 17.3 in. HD+ TN 1600x900 AG non-touch, Cam/Mic, 60% Adobe color gamut 17.3 in. UltraSharp FHD WVA 1920x1080 AG, NT, No Mic, w/ Prem Panel Guar 100% sRGB color gamut 17.3 in. UltraSharp FHD WVA 1920x1080 AG, NT, Mic, w/Prem Panel Guar 100% sRGB color gamut 17.3 in. UltraSharp FHD WVA 1920x1080 AG, NT, Cam/Mic, w/ Prem Panel Guar 100% sRGB color gamut 17.3 in. UltraSharp FHD WVA 1920x1080 AG, NT, No WWAN, IR Cam/Mic, w/Prem Panel Guar 100% sRGB color gamut 17.3 in. UltraSharp UHD WVA 3840x2160 AG NT, No WWAN, Cam/Mic, w/Prem Panel Guar 100% Adobe color gamut
Luminance/Brightness (typical)	<ul style="list-style-type: none"> 220 nits (HD+ 60% color gamut) 300 nits (FHD 72% color gamut) 400 nits (UHD Adobe 100% color gamut)
Height (Active area)	<ul style="list-style-type: none"> HD+ - 214.92 mm (8.46 in.)

Features	Specifications
	<ul style="list-style-type: none"> • FHD - 214.81 mm (8.46 in.) • UHD - 214.94 mm or 214.81mm (8.46 in.)
Width (Active area)	<ul style="list-style-type: none"> • HD+ - 382.08 mm (15.04 in.) • FHD - 381.89 mm (15.04 in.) • UHD - 382.12 mm or 381.89 mm (15.04 in.)
Diagonal	<ul style="list-style-type: none"> • HD+ - 438.38 mm (17.30 in.) • FHD - 438.16 mm (17.30 in.) • UHD - 438.42 mm or 438.16mm (17.30 in.)
Megapixels	<ul style="list-style-type: none"> • HD+ - 1.44 • FHD - 2.07 • UHD - 8.29
Pixels Per Inch (PPI)	<ul style="list-style-type: none"> • HD+ - 106 • FHD - 127 • UHD - 255
Contrast ratio	<ul style="list-style-type: none"> • HD+ - 500:1 • FHD - 700:1 • UHD - 1000:1
Refresh rate	60 Hz
Horizontal viewing angle (min)	<ul style="list-style-type: none"> • HD+ - 40/40 degrees • FHD - 80/80 degrees • UHD - 80/80 degrees
Vertical viewing angle (min)	<ul style="list-style-type: none"> • HD+ - 10/30 degrees • FHD - 80/80 degrees • UHD - 80/80 degrees
Pixel pitch	<ul style="list-style-type: none"> • HD+ - 0.2388 mm • FHD - 0.1989 mm • UHD - 0.0995 mm
Power consumption (max)	<ul style="list-style-type: none"> • 4.4 W (HD+ 60% color gamut) • 8 W (FHD 72% color gamut) • 14 W (UHD Adobe 100% color gamut)

Keyboard

Table 16. Keyboard specifications

Features	Specifications
Number of keys	<ul style="list-style-type: none"> • 103 (U.S. and Canada) • 104 (Europe) • 106 (Brazil) • 107 (Japan)
Size	Full sized <ul style="list-style-type: none"> • X= 19.00 mm key pitch • Y= 19.00 mm key pitch
Backlit keyboard	Optional

Features	Specifications
Layout	QWERTY/AZERTY/Kanji

Touchpad

Table 17. Touchpad specifications

Features	Specifications
Resolution	<ul style="list-style-type: none"> Horizontal: 1048 Vertical: 984
Dimensions	<ul style="list-style-type: none"> Width: 3.92 inches (99.50 mm) Height: 2.09 inches (53 mm)
Multi-touch	Configurable single finger and multi-finger gestures

Battery

Table 18. Battery

Features	Specifications
Type	<ul style="list-style-type: none"> 64 WHr Lithium ion Polymer 4 cell battery with ExpressCharge 97 WHr Lithium ion Polymer 6 cell battery with ExpressCharge 97 WHr Lithium ion Polymer 6 cell battery with three year warranty
Dimension	<ol style="list-style-type: none"> 64 WHr "smart" lithium-ion <ul style="list-style-type: none"> Length - 222.40 mm (8.76 in) Width - 73.80 mm (2.90 in) Height - 11.15 mm (0.44 in) Weight - 298.00 g 97 WHr "smart" lithium-ion <ul style="list-style-type: none"> Length - 332.00 mm (13.07 in) Width - 73.80 mm (2.90 in) Height - 11.15 mm (0.439 in) Weight - 445.00 g
Weight (maximum)	<ul style="list-style-type: none"> 64 WHr - 2.98 kg (0.66 lb) 97 WHr - 4.45 kg (0.98 lb)
Voltage	<ul style="list-style-type: none"> 64 WHr - 7.8 VDC 97 WHr - 11.4 VDC
Life span	300 discharge/recharge cycles
Charging time when the computer is off (approximate)	4 hours
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions
Temperature range: Operating	0°C to 35°C (32°F to 95°F)
Temperature range: Storage	-40°C to 65°C (-40°F to 149°F)
Coin-cell battery	ML1220

Power adapter

Table 19. Power adapter specifications

Features	Specifications
Type	240 W adapter
Input Voltage	100 to 240 VAC
Input current (maximum)	240 W - 3.5 A
Input frequency	50 Hz to 60 Hz
Output current	240 W - 12.31 A (continuous)
Rated output voltage	19.5 VDC
Temperature range (Operating)	0° to 40° C (32° to 104° F)
Temperature range (Non-Operating)	40° to 70° C (-40° to 158° F)

Dimensions and weight

Table 20. Dimensions and weight

Features	Specifications
Height	Front height - 1.03 inches (26.15 mm) Rear height - 1.19 inches (30.3 mm)
Width	16.31 inches (414.20 mm)
Depth	10.78 inches (273.7 mm)
Weight	Starting 6.81 lbs (3.09 kg)

Operating system

Table 21. Operating system

Features	Specifications
Operating systems supported	<ul style="list-style-type: none">Windows 10 Home (64 bit)Windows 10 Professional (64 bit)Windows 10 Pro for Workstations (64 bit)Ubuntu 18.04 LTS (64bit)Red Hat Linux Enterprise 7.5

Computer environment

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

Table 22. 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)

	Operating	Storage
Relative humidity (maximum)	20% to 80% (non-condensing) <i>i</i> NOTE: Maximum dew point temperature = 26°C	20% to 95% (non-condensing) <i>i</i> NOTE: Maximum dew point temperature = 33°C
Vibration (maximum)	0.26 GRMS	1.37 GRMS
Shock (maximum)	105 G †	40 G ‡
Altitude (maximum)	-15.2 m to 3048 m (-50 ft to 10,000 ft)	-15.2 m to 10,668 m (-50 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.

Support policy

For more information on support policy, see the knowledge base articles [PNP13290](#), [PNP18925](#), and [PNP18955](#).

System setup

System setup enables you to manage your hardware and specify BIOS level options. From the System setup, you can:

- Change the NVRAM settings after you add or remove hardware
- View the system hardware configuration
- Enable or disable integrated devices
- Set performance and power management thresholds
- Manage your computer security

Topics:

- [System setup](#)
- [General options](#)
- [System configuration](#)
- [Video screen options](#)
- [Security](#)
- [Secure boot](#)
- [Intel Software Guard Extensions options](#)
- [Performance](#)
- [Power management](#)
- [Post behavior](#)
- [Virtualization support](#)
- [Wireless options](#)
- [Maintenance](#)
- [System logs](#)

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.

General options


Table 23. General


Option	Description
System Information	<p>This section lists the primary hardware features of your computer.</p> <p>The options are:</p> <ul style="list-style-type: none"> • System Information • Memory Configuration • Processor Information • Device Information

Option	Description
Battery Information	Displays the battery status and the type of AC adapter connected to the computer.
Boot Sequence	<p>Allows you to change the order in which the computer attempts to find an operating system.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Windows Boot Manager • Boot List Option: <p>Allows you to change the boot list options.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Legacy External Devices • UEFI—Default
Advanced Boot Options	<p>Allows you to Enable Legacy Option ROMs.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable Legacy Option ROMs—Default • Enable Attempt Legacy Boot
UEFI Boot Path Security	<p>Allows you to control whether the system prompts the user to enter the Admin password when booting to a UEFI boot path.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • 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 24. System Configuration

Option	Description
Integrated NIC	<p>Allows you to configure the integrated network controller.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Disabled • Enabled • Enabled w/PXE—Default
SATA Operation	<p>Allows you to configure the operating mode of the integrated SATA hard-drive controller.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Disabled • AHCI • RAID On—Default <p> NOTE: SATA is configured to support RAID mode.</p>
Drives	<p>Allows you to enable or disable various drives on board.</p> <p>The options are:</p> <ul style="list-style-type: none"> • SATA-1

Option	Description
SMART Reporting	<ul style="list-style-type: none"> • SATA-4 • M.2 PCIe SSD-0 • M.2 PCIe SSD-1 <p>All the options are set by default.</p> <p>This field controls whether hard drive errors for integrated drives are reported during system startup. This technology is part of the SMART (Self Monitoring Analysis and Reporting Technology) specification. This option is disabled by default.</p> <ul style="list-style-type: none"> • Enable SMART Reporting
USB Configuration	<p>Allows you to enable or disable the internal/integrated USB configuration.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable USB Boot Support • Enable External USB Ports <p>All the options are set by default.</p> <p> NOTE: USB keyboard and mouse always work in the BIOS setup irrespective of these settings.</p>
Dell Type-C Dock Configuration	<p>Always allow Dell docks. This setting affects only the Type-C ports connected to a Dell WD or TB dock.</p>
Thunderbolt Adapter Configuration	<p>Allows you to configure the Thunderbolt adapter security settings within the operating system.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable Thunderbolt Technology Support—Default • Enable Thunderbolt Adapter Boot Support • Enable Thunderbolt Adapter Pre-boot Modules <p>Choose any one option:</p> <ul style="list-style-type: none"> • Security level - No Security • Security level - User Authorization—Default • Security level - Secure Connect • Security level - Display Port Only
Thunderbolt Auto Switch	<p>Allows auto switch the thunderbolt option.</p>
USB PowerShare	<p>This field configures the USB PowerShare feature behavior. This option allows you to charge external devices using the stored system battery power through the USB PowerShare port (disabled by default).</p> <ul style="list-style-type: none"> • Enable USB PowerShare
Audio	<p>Allows you to enable or disable the integrated audio controller. By default, the Enable Audio option is selected.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Enable Microphone • Enable Internal Speaker <p>This option is set by default.</p>
Keyboard Illumination	<p>This field lets you choose the operating mode of the keyboard illumination feature. The keyboard brightness level can be set from 0% to 100%.</p> <p>The options are:</p>

Option	Description
Keyboard Backlight Timeout on AC	<ul style="list-style-type: none"> • Disabled • Dim • Bright—Default <p>Allows to define the timeout value for the keyboard backlight when an AC adapter is plugged in the system. The Keyboard Backlight timeout value is only in effect when the backlight is enabled.</p> <ul style="list-style-type: none"> • 5 seconds • 10 seconds—Default • 15 seconds • 30 seconds • 1 minute • 5 minutes • 15 minutes • Never
Keyboard Backlight Timeout on Battery	<p>Allows to define the timeout value for the keyboard backlight when the system is running only on battery power. The Keyboard Backlight timeout value is only in effect when the backlight is enabled.</p> <ul style="list-style-type: none"> • 5 seconds • 10 seconds—Default • 15 seconds • 30 seconds • 1 minute • 5 minutes • 15 minutes • Never
Touchscreen	<p>This field controls whether the touchscreen is enabled or disabled.</p>
Unobtrusive Mode	<p>Allows you to turn off all light and sound emissions in the system when you press Fn+F7. This option is disabled by default.</p>
Miscellaneous devices	<p>Allows you to enable or disable various on board devices.</p> <ul style="list-style-type: none"> • Enable Camera—Default • Enable Hard Drive Free Fall Protection—Default • Enable Secure Digital (SD) Card—Default • Secure Digital (SD) Card Boot • Secure Digital Card (SD) Read-Only Mode
MAC Address Pass-Through	<p>This feature replaces the external NIC MAC address (in a supported dock or dongle) with the selected MAC address from the system. The default option is to use the Passthrough MAC Address.</p> <p>When the Integrated NIC option is selected, we recommend one of the following:</p> <ul style="list-style-type: none"> • Disable the integrated NIC in the BIOS to prevent any issues from multiple NICs on the network with identical MAC addresses. • If the Integrated NIC cannot be disabled, do not connect it to the same network as your dock or USB Ethernet dongle.

Video screen options


Table 25. Video

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).
Switchable Graphics	<p>This option enables or disables switchable graphics technologies such as NVIDIA Optimus and SMD PowerExpress.</p> <p>It should only be enabled for Windows 7 and later versions of Windows or the Ubuntu OS. This feature is not applicable to other Operating Systems.</p>

Security

Table 26. Security

Option	Description
Admin Password	<p>Allows you to set, change, or delete the administrator(admin) password.</p> <p>The entries to set password are:</p> <ul style="list-style-type: none">• Enter the old password:• Enter the new password:• Confirm new password: <p>Click OK once you set the password.</p> <p>i 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.</p>
System Password	<p>Allows you to set, change, or delete the System password.</p> <p>The entries to set password are:</p> <ul style="list-style-type: none">• Enter the old password:• Enter the new password:• Confirm new password: <p>Click OK once you set the password.</p> <p>i 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.</p>
Strong Password	<p>Allows you to enforce the option to always set strong password.</p> <ul style="list-style-type: none">• Enable Strong Password <p>This option is not set by default.</p>
Password Configuration	You can define the length of your password. Min = 4, Max = 32
Password Bypass	<p>Allows you to bypass the System password and the Internal HDD password, when it is set, during a system restart.</p> <p>Click one of the options:</p> <ul style="list-style-type: none">• Disabled—Default• Reboot bypass
Password Change	Allows you to change the System password when the administrator password is set.

Option	Description
	<ul style="list-style-type: none"> • Allow Non-Admin Password Changes <p>This option is set by default.</p>
Non-Admin Setup Changes	<p>Allows you to determine whether changes to the setup options are allowed when an Administrator Password is set. If disabled the setup options are locked by the admin password.</p> <ul style="list-style-type: none"> • Allow Wireless Switch Changes <p>This option is not set by default.</p>
UEFI Capsule Firmware Updates	<p>Allows you to update the system BIOS via UEFI capsule update packages.</p> <ul style="list-style-type: none"> • Enable UEFI Capsule Firmware Updates <p>This option is set by default.</p>
TPM 2.0 Security	<p>Allows you to enable or disable the Trusted Platform Module (TPM) during POST.</p> <p>The options are:</p> <ul style="list-style-type: none"> • TPM On—Default • Clear • PPI Bypass for Enable Command—Default • PPI Bypass for Disable Command • PPI Bypass for Clear Command • Attestation Enable—Default • Key Storage Enable—Default • SHA-256—Default
Absolute (R)	<p>Allows you to activate or disable the optional Computrace software.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Deactivate • Disable • Activate—Default
OROM keyboard Access	<p>Allows you to enable or disable Option ROM configuration screens via hotkeys during boot.</p> <ul style="list-style-type: none"> • Enable—Default • Disable • One Time Enable
Admin Setup Lockout	<p>Allows you to prevent users from entering Setup when an administrator password is set.</p> <ul style="list-style-type: none"> • Enable Admin Setup Lockout <p>This option is not set by default.</p>
Master Password Lockout	<p>Allows you to disable master password support.</p> <ul style="list-style-type: none"> • Enable Master Password Lockout <p>This option is not set by default.</p> <p> NOTE: Hard Disk password should be cleared before the settings can be changed.</p>
SMM Security Mitigation	<p>Allows you to enable or disable additional UEFI SMM Security Mitigation protection.</p> <ul style="list-style-type: none"> • SMM Security Mitigation <p>This option is not set by default.</p>

Secure boot

Table 27. Secure Boot

Option	Description
Secure Boot Enable	Allows you to enable or disable the Secure Boot Feature. <ul style="list-style-type: none">• 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: <ul style="list-style-type: none">• Deployed Mode—Default• Audit Mode
Expert Key Management	Allows you to enable or disable Expert Key Management. <ul style="list-style-type: none">• Enable Custom Mode This option is not set by default. The Custom Mode Key Management options are: <ul style="list-style-type: none">• PK—Default• KEK• db• dbx

Intel Software Guard Extensions options

Table 28. 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: <ul style="list-style-type: none">• Disabled• Enabled• Software controlled—Default
Enclave Memory Size	This option sets SGX Enclave Reserve Memory Size Click one of the following options: <ul style="list-style-type: none">• 32 MB• 64 MB• 128 MB—Default

Performance

Table 29. 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.

Option	Description
	<ul style="list-style-type: none"> • All—Default • 1 • 2 • 3
Intel SpeedStep	<p>Allows you to enable or disable the Intel SpeedStep mode of processor.</p> <ul style="list-style-type: none"> • Enable Intel SpeedStep <p>This option is set by default.</p>
C-States Control	<p>Allows you to enable or disable the additional processor sleep states.</p> <ul style="list-style-type: none"> • C states <p>This option is set by default.</p>
Intel TurboBoost	<p>Allows you to enable or disable the Intel TurboBoost mode of the processor.</p> <ul style="list-style-type: none"> • Enable Intel TurboBoost <p>This option is set by default.</p>
Hyper-Thread Control	<p>Allows you to enable or disable the HyperThreading in the processor.</p> <ul style="list-style-type: none"> • Disabled • Enabled—Default

Power management

Table 30. Power Management

Option	Description
AC Behavior	<p>Allows you to enable or disable the computer from turning on automatically when an AC adapter is connected.</p> <ul style="list-style-type: none"> • Wake on AC <p>This option is not set by default.</p>
Enable Intel Speed Shift Technology	<p>Allows you to enable or disable the Intel Speed Shift Technology.</p> <ul style="list-style-type: none"> • Enabled—Default
Auto On Time	<p>Allows you to set the time at which the computer must turn on automatically.</p> <p>The options are:</p> <ul style="list-style-type: none"> • Disabled—Default • Every Day • Weekdays • Select Days <p>This option is not set by default.</p>
USB Wake Support	<p>Allows you to enable USB devices to wake the system from standby.</p> <ul style="list-style-type: none"> • Enable USB Wake Support <p>This option is not set by default.</p>

Option	Description
Wireless Radio Control	<p>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 be enabled.</p> <ul style="list-style-type: none"> • Control WLAN radio • Control WWAN radio <p>This option is not set by default.</p>
Wake on LAN	<p>This option allows the computer to power up from the off state when triggered by a special LAN signal. Wake-up from the Standby state is unaffected by this setting and must be enabled in the operating system. This feature only works when the computer is connected to AC power supply.</p> <ul style="list-style-type: none"> • Disabled—Default - Does not allow the system to power on by special LAN signals when it receives a wake-up signal from the LAN or wireless LAN. • LAN Only - Allows the system to be powered on by special LAN signals. • WLAN Only - Allows the system to be powered on by special WLAN signals. • LAN or WLAN - Allows the system to be powered on by special LAN or WLAN signals.
Block Sleep	Allows you to block entering to sleep in OS environment.
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.
Primary Battery Charge Configuration	<p>Allows you to select the charging mode for the battery.</p> <p>The options are:</p> <ul style="list-style-type: none"> • 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 <p>If Custom Charge is selected, you can also configure Custom Charge Start and Custom Charge Stop.</p> <p> NOTE: All charging mode may not be available for all the batteries. To enable this option, disable the Advanced Battery Charge Configuration option.</p>

Post behavior

Table 31. POST Behavior

Option	Description
Adapter Warnings	<p>Allows you to enable or disable the system setup (BIOS) warning messages when you use certain power adapters.</p> <ul style="list-style-type: none"> • Enable Adapter Warnings—Default
Numlock Enable	<p>Allows you to enable or disable the Numlock function when the system boots.</p> <ul style="list-style-type: none"> • Enable Numlock—Default
Fn Lock Options	<p>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.</p> <ul style="list-style-type: none"> • Fn Lock—Default <p>Click one of the following options:</p>

Option	Description
	<ul style="list-style-type: none"> • Lock Mode Disable/Standard • Lock Mode Enable/Secondary—Default
Fastboot	<p>Allows you to speed up the boot process by bypassing some of the compatibility steps.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Minimal • Thorough—Default • Auto
Extended BIOS POST Time	<p>Allows you to create an additional preboot delay.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • 0 seconds—Default • 5 seconds • 10 seconds
Full Screen Logo	<p>Allows you to display full screen logo, if your image matches screen resolution.</p> <ul style="list-style-type: none"> • Enable Full Screen Logo <p>This option is not set by default.</p>
Sign of Life Indication	<p>Allows the system to indicate during POST that the power button press has been acknowledged by turning on the keyboard backlight.</p>
Warnings and Errors	<p>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.</p> <p>Click one of the following options:</p> <ul style="list-style-type: none"> • Prompt on Warnings and Errors—Default • Continue on Warnings • Continue on Warnings and Errors

Virtualization support

Table 32. Virtualization Support

Option	Description
Virtualization	<p>This option specifies whether a Virtual Machine Monitor (VMM) can utilize the additional hardware capabilities provided by the Intel Virtualization technology.</p> <ul style="list-style-type: none"> • Enable Intel Virtualization Technology <p>This option is set by default.</p>
VT for Direct I/O	<p>Enables or disables the Virtual Machine Monitor (VMM) from utilizing the additional hardware capabilities provided by the Intel Virtualization technology for direct I/O.</p> <ul style="list-style-type: none"> • Enable VT for Direct I/O <p>This option is set by default.</p>


Wireless options

Table 33. Wireless

Option	Description
Wireless Switch	<p>Allows to set the wireless devices that can be controlled by the wireless switch.</p> <p>The options are:</p> <ul style="list-style-type: none">• WWAN• GPS (on WWAN Module)• WLAN• Bluetooth <p>All the options are enabled by default.</p>
Wireless Device Enable	<p>Allows you to enable or disable the internal wireless devices.</p> <p>The options are:</p> <ul style="list-style-type: none">• WWAN/GPS• WLAN• Bluetooth <p>All the options are enabled by default.</p>

Maintenance

Table 34. Maintenance

Option	Description
Service Tag	Displays the service tag of your computer.
Asset Tag	<p>Allows you to create a system asset tag if an asset tag is not already set.</p> <p>This option is not set by default.</p>
BIOS Downgrade	<p>Allows you to flash previous revisions of the system firmware.</p> <ul style="list-style-type: none">• Allow BIOS Downgrade <p>This option is set by default.</p>
Data Wipe	<p>Allows you to securely erase data from all internal storage devices.</p> <ul style="list-style-type: none">• Wipe on Next Boot <p>This option is not set by default.</p>
Bios Recovery	<p>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.</p> <p>BIOS Auto-Recovery— Allows you to recover the BIOS automatically.</p> <p> NOTE: BIOS Recovery from Hard Drive field should be enabled.</p> <p>Always Perform Integrity Check—Performs integrity check on every boot.</p>

System logs

Table 35. 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.

Software

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

Topics:

- [Operating system](#)
- [Downloading drivers](#)
- [Identifying Windows 10 OS version](#)

Operating system

Table 36. Operating system

Features	Specifications
Operating systems supported	<ul style="list-style-type: none"> • Windows 10 Home (64 bit) • Windows 10 Professional (64 bit) • Windows 10 Pro for Workstations (64 bit) • Ubuntu 18.04 LTS (64bit) • Red Hat Linux Enterprise 7.5

Downloading drivers

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

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

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

Identifying Windows 10 OS version

Run dialog box with the Windows Key + R keyboard shortcut. Once that box shows up, enter winver (it stands for Windows version).

Table 37. Identifying Windows 10 OS version

OS Version	Code name	Version	Latest build
Windows 10	Threshold 1	1507	10240
Windows 10	Threshold 2	1511	10586
Windows 10	Redstone 1	1607	14393
Windows 10	Redstone 2	1703	15063
Windows 10	Redstone 3	1709	16299
Windows 10	Redstone 4	1803	17134


OS Version	Code name	Version	Latest build
Windows 10	Redstone 5	1809	17763
Windows 10	19H1	1903	18362

Getting help

Topics:

- [Contacting Dell](#)

Contacting Dell

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

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

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