

# Dell Precision 7540

## 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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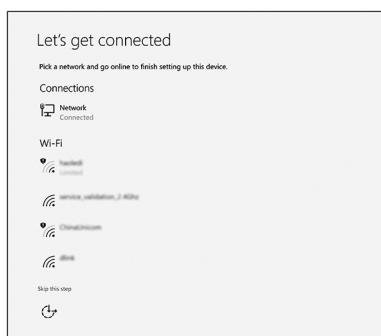
# Set up your computer

## Steps

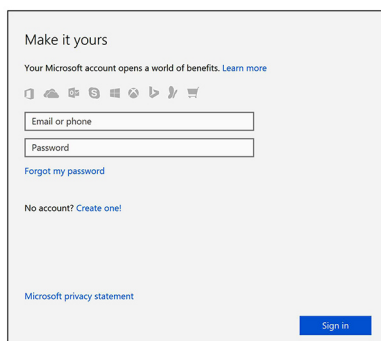
1. Connect the power cable and press the power button



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



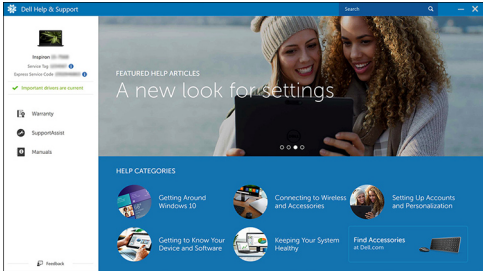



- b. Sign-in to your Microsoft account or create a new account.



3. Locate Dell apps.

Table 1. Locate Dell apps

Features	Specifications
	Register your computer
	Dell Help & Support 
	SupportAssist — Check and update your computer

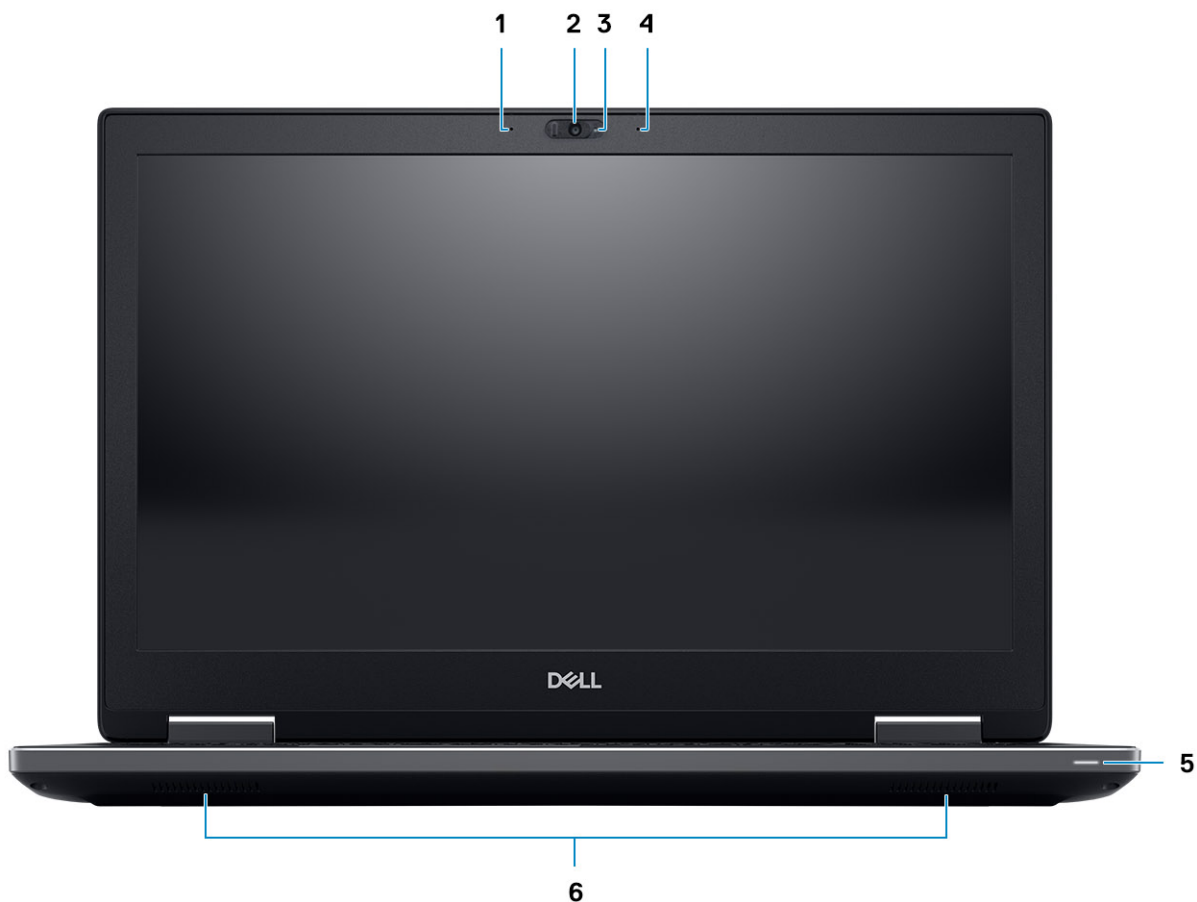
## Chassis

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



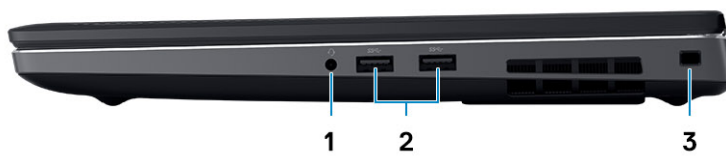
- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| 1. Microphone (Optional)          | 2. Camera-with shutter (Optional) |
| 3. Camera-status light (optional) | 4. Microphone (Optional)          |
| 5.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

## Left view



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

## Right view



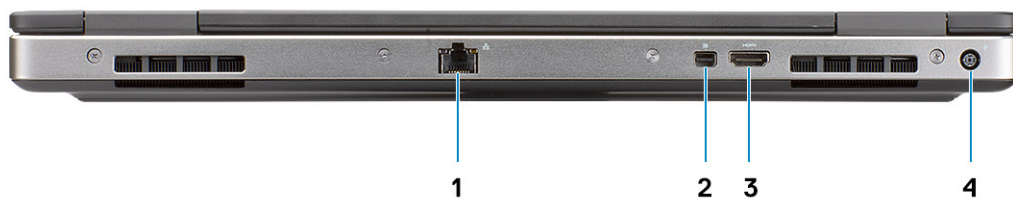
1. Headset port
2. USB 3.1 Gen 1 ports with PowerShare
3. Security cable slot

## Palmrest view



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

## Back view



- 1. RJ45 Network port
- 2. Mini DisplayPort
- 3. HDMI port
- 4. Power connector port

# Bottom view



1. Service tag label

## Hot key definition

Table 2. Keyboard shortcut keys

Hot keys	Function
Fn+ESC - Fn Lock	Allows the user to toggle between <b>locked</b> and <b>unlocked</b> 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"><li>• LED off = microphone capable of recording audio</li><li>• LED on = microphone muted and unable to record audio</li></ul>
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

**Table 2. Keyboard shortcut keys (continued)**

Hot keys	Function
	states when 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:

- [Technical specifications](#)
- [Support policy](#)

## 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**

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

**Table 4. Processor specifications (continued)**

Type	UMA Graphics
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"> <li>• 8 GB - 1 x 8 GB</li> <li>• 16 GB - 1 x 16 GB</li> <li>• 16 GB - 2 x 8 GB</li> <li>• 32 GB - 1 x 32 GB</li> <li>• 32 GB - 2 x 16 GB</li> <li>• 32 GB - 4 x 8 GB</li> <li>• 64 GB - 4 x 16 GB</li> <li>• 64 GB - 2 x 32 GB</li> <li>• 128 GB - 4 x 32 GB</li> </ul>
Type	DDR4 SDRAM ECC and Non-ECC memory
Speed	<ul style="list-style-type: none"> <li>• 2666 MHz</li> <li>• 3200 MHz</li> </ul>

**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
Three solid-state drives (SSDs)	M.2 2280	PCIe 3x4 NVMe, up to 32 Gbps	Not applicable	Up to 2 TB
Three solid-state drives (SSDs)	M.2 2280	PCIe 3x4 NVMe, up to 32 Gbps	SED	Up to 1 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

## Media card-reader

**Table 8. Media-card reader specifications**

Features	Specifications
Type	One SD-card slot
Supported cards	<ul style="list-style-type: none"><li>• SD</li><li>• SDHC</li><li>• SDXC</li></ul>

## Audio

**Table 9. Audio specifications**

Features	Specifications
Controller	Realtek ALC3281
Type	Four-channel high-definition audio
Speakers	Two (Directional speakers)
Interface	<ul style="list-style-type: none"><li>• Universal audio jack</li><li>• Stereo headphone</li><li>• Stereo headset</li><li>• Stereo line in</li><li>• Microphone in</li><li>• Stereo line out</li></ul>
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"> <li>Intel Core Processor i5</li> <li>Intel Core Processor i7</li> <li>Intel Core Processor i9</li> </ul>	Integrated	Shared system memory	mDP/HDMI/Type-C	4096 × 2304
Intel UHD Graphics P630	UMA	Intel Xeon	Integrated	Shared system memory	mDP/HDMI/Type-C	4096 × 2304
Radeon Pro WX 3200	Discrete	NA	GDDR5	4 GB	HDMI/mDP/USB-C	<ul style="list-style-type: none"> <li>Single DisplayPort 1.4 - 7680 × 4320 (8k) @ 30 Hz</li> <li>Dual DisplayPort 1.4 - 7680 × 4320 (8k) @ 60 Hz</li> <li>HDMI 2.0 - 4096 × 2160 (4K) @ 60 Hz</li> </ul>
NVIDIA Quadro T1000	Discrete	NA	GDDR5	4 GB	mDP/HDMI/Type-C	Maximum digital: <ul style="list-style-type: none"> <li>Single DisplayPort 1.4 - 7680 × 4320 (8k) @ 30 Hz (mDP/Type-C to DisplayPort)</li> <li>Dual DisplayPort 1.4 - 7680 × 4320 (8k) @ 60 Hz (mDP/Type-C to DisplayPort)</li> <li>HDMI 2.0, 4096 × 2160 (4K) @ 60 Hz</li> </ul>
NVIDIA Quadro T2000	Discrete	NA	GDDR5	4 GB	mDP/HDMI/Type-C	Maximum digital: <ul style="list-style-type: none"> <li>Single DisplayPort 1.4 - 7680 × 4320 (8k) @ 30 Hz (mDP/Type-C to DisplayPort)</li> <li>Dual DisplayPort 1.4 - 7680 × 4320 (8k) @ 60 Hz</li> </ul>

**Table 10. Video specifications (continued)**

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support	Maximum resolution
						(mDP/Type-C to DisplayPort) <ul style="list-style-type: none"> <li>• HDMI 2.0, 4096 x 2160 (4K) @ 60 Hz</li> </ul>
NVIDIA Quadro RTX3000	Discrete	NA	GDDR6	6 GB	mDP/HDMI/Type-C	Maximum digital: <ul style="list-style-type: none"> <li>• Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz (mDP/Type-C to DisplayPort)</li> <li>• Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz (mDP/Type-C to DisplayPort)</li> <li>• HDMI 2.0, 4096 x 2160 (4K) @ 60 Hz</li> </ul>
NVIDIA Quadro RTX4000	Discrete	NA	GDDR6	8 GB	mDP/HDMI/Type-C	Maximum digital: <ul style="list-style-type: none"> <li>• Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz (mDP/Type-C to DisplayPort)</li> <li>• Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz (mDP/Type-C to DisplayPort)</li> <li>• HDMI 2.0b, 4096 x 2160 (4K) @ 60 Hz</li> </ul>
NVIDIA Quadro RTX5000	Discrete	NA	GDDR6	16 GB	mDP/HDMI/Type-C	Maximum digital: <ul style="list-style-type: none"> <li>• Single DisplayPort 1.4 - 7680 x 4320 (8k) @ 30 Hz (mDP/Type-C to DisplayPort)</li> <li>• Dual DisplayPort 1.4 - 7680 x 4320 (8k) @ 60 Hz (mDP/Type-C to DisplayPort)</li> <li>• HDMI 2.0b, 4096 x 2160 (4K) @ 60 Hz</li> </ul>

## Camera

Table 11. Camera specifications

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

## 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"><li>• Wi-Fi 802.11n/ac via M.2</li><li>• Bluetooth</li></ul>

## Ports and connectors


Table 13. Ports and connectors

Features	Specifications
Memory card reader	SD 4.0 memory card reader
Smart card reader	Standard
USB	Two USB 3.1 Gen 1 ports
Security	Noble wedge lock slot
Docking port	Cable dock support
Audio	<ul style="list-style-type: none"><li>• Headset port</li><li>• Noise reduction array microphones</li></ul>
Video	<ul style="list-style-type: none"><li>• Mini DisplayPort 1.4</li><li>• HDMI 2.0</li></ul> <p><b>NOTE:</b> For the systems with DisplayPort 1.4 HBR3 is applicable, and HBR2 for every system that has DisplayPort 1.2.</p>
Network adapter	One RJ-45 connector
Thunderbolt	Two thunderbolt 3 Type-C ports

## Contactless smart card

**Table 14. Contactless smartcard**

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 <a href="http://www.emvco.com">www.emvco.com</a>	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

 **NOTE:** 125 KHz proximity cards are not supported.

**Table 15. 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	

## Display

**Table 16. Display specifications**

Features	Specifications
Type	<ul style="list-style-type: none"> <li>15.6 in. FHD WVA, 1920x1080 AG, NT, 45% color NTSC gamut</li> <li>15.6 in. FHD WVA, 1920x1080 AG, NT, 72% color NTSC gamut</li> <li>15.6 in. FHD WVA, 1920x1080 TL, Touch, 72% NTSC color gamut</li> <li>15.6 in. UHD WVA, 3840x2160 AG, NT, 100% Adobe color gamut</li> </ul>
Luminance/Brightness (typical)	<ul style="list-style-type: none"> <li>220 nits (FHD 45% color gamut )</li> <li>300 nits (FHD 72% color gamut )</li> <li>500 nits (UHD Adobe 100% color gamut)</li> </ul>
Height (Active area)	<ul style="list-style-type: none"> <li>FHD - 193.59 mm (7.62 in.)</li> <li>UHD - 194.40 mm (7.65 in.)</li> </ul>
Width (Active area)	<ul style="list-style-type: none"> <li>FHD - 344.16 mm (13.55 in.)</li> <li>UHD - 345.60 mm (13.61 in.)</li> </ul>
Diagonal	<ul style="list-style-type: none"> <li>FHD - 394.87 mm (15.60 in.)</li> <li>UHD - 396.52 mm (15.60 in.)</li> </ul>
Megapixels	<ul style="list-style-type: none"> <li>FHD - 2.07</li> </ul>

**Table 16. Display specifications (continued)**

Features	Specifications
	<ul style="list-style-type: none"> <li>• UHD - 8.29</li> </ul>
Pixels Per Inch (PPI)	<ul style="list-style-type: none"> <li>• FHD - 141</li> <li>• UHD - 282</li> </ul>
Contrast ratio	<ul style="list-style-type: none"> <li>• FHD - 700:1</li> <li>• UHD - 1200:1</li> </ul>
Refresh rate	60 Hz
Horizontal viewing angle (min)	80/80 degrees
Vertical viewing angle (min)	80/80 degrees
Pixel pitch	<ul style="list-style-type: none"> <li>• FHD - 0.179 mm</li> <li>• UHD - 0.090 mm</li> </ul>
Power consumption (max)	<ul style="list-style-type: none"> <li>• 4.2 W (FHD 45% color gamut )</li> <li>• 6.2 W (FHD 72% color gamut )</li> <li>• 10 W (UHD Adobe 100% colour gamut)</li> </ul>

## Keyboard

**Table 17. Keyboard specifications**

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

## Touchpad

**Table 18. Touchpad specifications**

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

 **NOTE:** For more information about touchpad gestures for Windows 10, see the knowledge base article [4027871](#)

## Battery

**Table 19. Battery**

Features	Specifications
Type	<ul style="list-style-type: none"><li>64 WHr Lithium ion Polymer 4 cell battery with ExpressCharge</li><li>97 WHr Lithium ion Polymer 6 cell battery with ExpressCharge</li><li>97 WHr Lithium ion Polymer 6 cell battery with three year warranty</li></ul>
Dimension	<ol style="list-style-type: none"><li>64 WHr "smart" lithium-ion<ul style="list-style-type: none"><li>Length - 222.40 mm (8.76 in)</li><li>Width - 73.80 mm (2.90 in)</li><li>Height - 11.15 mm (0.44 in)</li><li>Weight - 298.00 g</li></ul></li><li>97 WHr "smart" lithium-ion<ul style="list-style-type: none"><li>Length - 332.00 mm (13.07 in)</li><li>Width - 73.80 mm (2.90 in)</li><li>Height - 11.15 mm (0.439 in)</li><li>Weight - 445.00 g</li></ul></li></ol>
Weight (maximum)	<ul style="list-style-type: none"><li>64 WHr - 2.98 kg (0.66 lb)</li><li>97 WHr - 4.45 kg (0.98 lb)</li></ul>
Voltage	<ul style="list-style-type: none"><li>64 WHr - 7.8 VDC</li><li>97 WHr - 11.4 VDC</li></ul>
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 20. Power adapter specifications**

Features	Specifications
Type	180 W adapter
Input Voltage	100 to 240 VAC
Input current (maximum)	180 W - 2.34 A
Input frequency	50 Hz to 60 Hz

**Table 20. Power adapter specifications (continued)**

Features	Specifications
Output current	180 W - 9.23 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 21. Dimensions and weight**

Features	Specifications
Height	Front height (Touch) - 1.02 inches (25.9 mm) Rear height (Touch) - 1.21 inches (30.85 mm) Front height (Non-touch) - 0.98 inches (25.0 mm) Rear height (Non-touch) - 1.18 inches (29.97 mm) Front height (AI Cover) - 0.94 inches (24.0 mm) Rear height (AI Cover) - 1.19 inches (30.4 mm)
Width	14.87 inches (377.60 mm)
Depth	9.89 inches (251.30 mm)
Weight	Starting 5.57 lbs (2.52 kg)

## Operating system

**Table 22. Operating system**

Features	Specifications
Operating systems supported	<ul style="list-style-type: none"> <li>Windows 10 Home (64 bit)</li> <li>Windows 10 Professional (64 bit)</li> <li>Windows 10 Pro for Workstations (64 bit)</li> <li>Ubuntu 18.04 LTS (64bit)</li> <li>Red Hat Linux Enterprise 8.0</li> </ul>

## Computer environment

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

**Table 23. 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)	20% to 80% (non-condensing) <i>NOTE:</i> Maximum dew point temperature = 26°C	20% to 95% (non-condensing) <i>NOTE:</i> Maximum dew point temperature = 33°C

**Table 23. Computer environment (continued)**

	Operating	Storage
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 [PNP181418](#), [PNP43920](#) and [PNP179097](#).

## Software

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

### Topics:

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


## Operating system

**Table 24. Operating system**

Features	Specifications
Operating systems supported	<ul style="list-style-type: none"> <li>• Windows 10 Home (64 bit)</li> <li>• Windows 10 Professional (64 bit)</li> <li>• Windows 10 Pro for Workstations (64 bit)</li> <li>• Ubuntu 18.04 LTS (64bit)</li> <li>• Red Hat Linux Enterprise 8.0</li> </ul>

## Downloading Windows drivers

### Steps

1. Turn on the notebook.
2. Go to **Dell.com/support**.
3. Click **Product Support**, enter the Service Tag of your notebook, and then click **Submit**.  
 **NOTE:** If you do not have the Service Tag, use the auto detect feature or manually browse for your notebook model.
4. Click **Drivers and Downloads**.
5. Select the operating system installed on your notebook.
6. Scroll down the page and select the driver to install.
7. Click **Download File** to download the driver for your notebook.
8. After the download is complete, navigate to the folder where you saved the driver file.
9. Double-click the driver file icon and follow the instructions on the screen.

## 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 25. 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

**Table 25. Identifying Windows 10 OS version (continued)**

<b>OS Version</b>	<b>Code name</b>	<b>Version</b>	<b>Latest build</b>
Windows 10	Redstone 2	1703	15063
Windows 10	Redstone 3	1709	16299
Windows 10	Redstone 4	1803	17134
Windows 10	Redstone 5	1809	17763
Windows 10	19H1	1903	18362


# Getting help

## Topics:

- [Contacting Dell](#)

## Contacting Dell

### Prerequisites

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

### About this task

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

### Steps

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