

# Precision 7560

## Technical Guidebook



## 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.

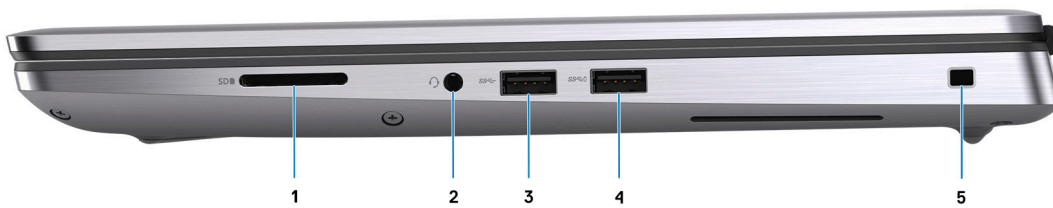
 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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# Views of Precision 7560

## Right



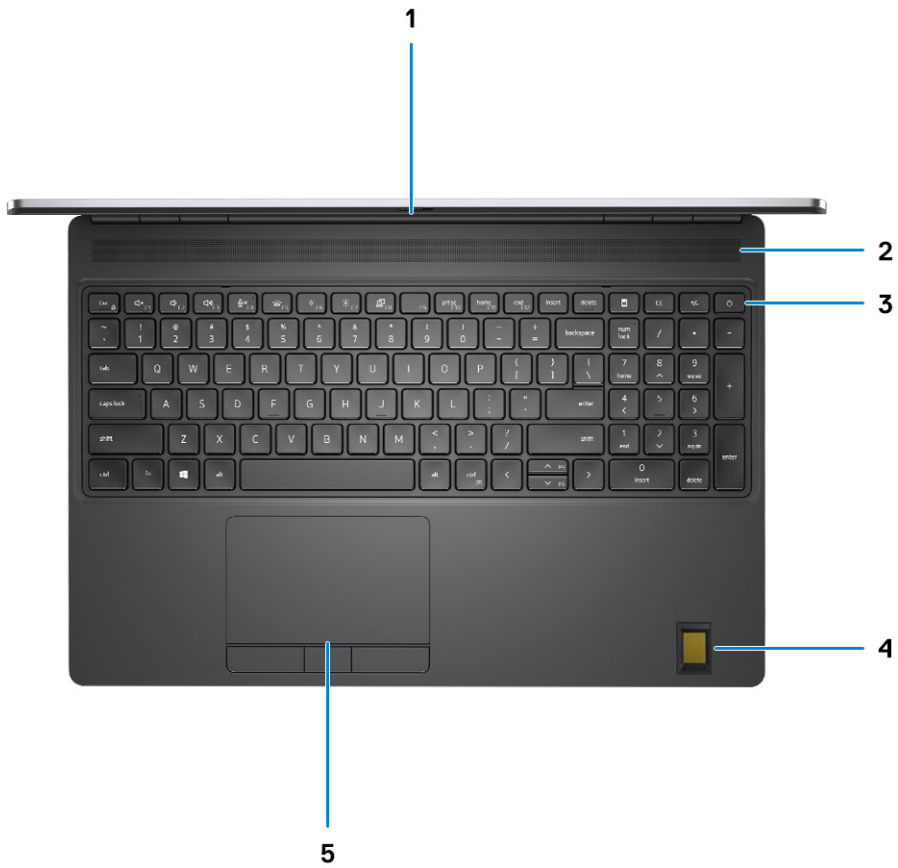
1. SD-card slot
2. Global headset jack
3. USB 3.2 Gen 1 Type-A port
4. USB 3.2 Gen 1 Type-A port with PowerShare
5. Wedge-shaped lock slot

## Left



1. Two USB 3.2 Gen 2 Type-C Thunderbolt 4 ports
2. Smart-card reader (optional)

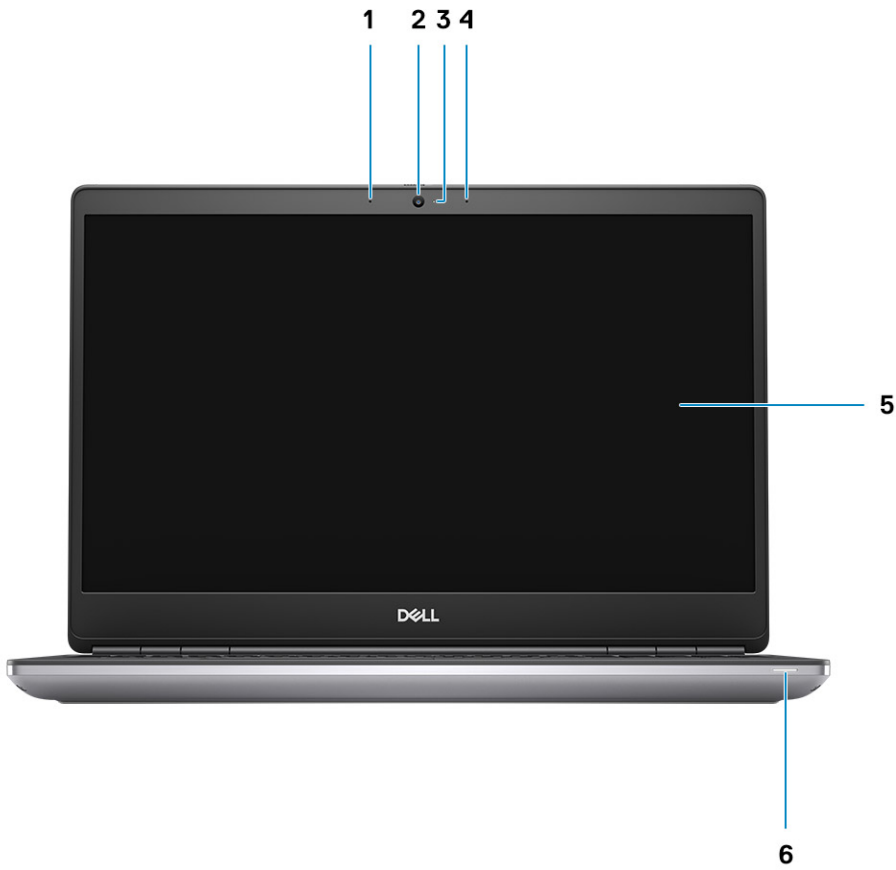
# Top



1. Camera shutter
2. Speaker
3. Power button with optional fingerprint reader
4. Palmrest with optional FIPS fingerprint reader
5. Touchpad

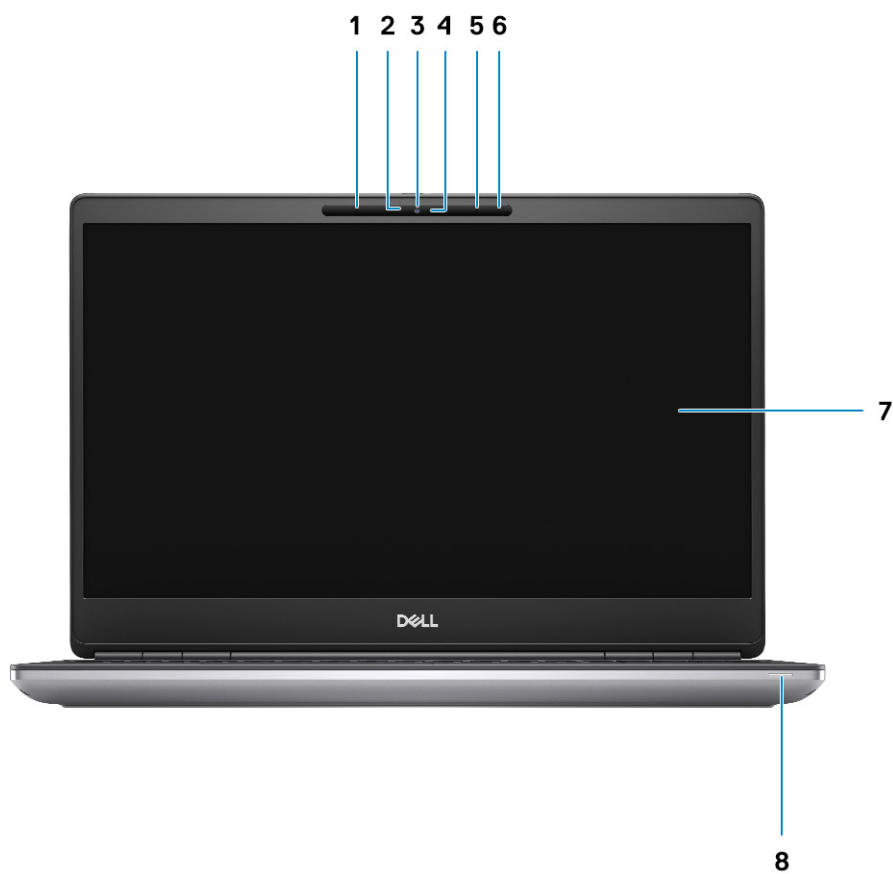
# Front

Front view with RGB camera



1. Microphone
2. Camera
3. Camera-status light
4. Microphone
5. Display
6. Battery-status light/Diagnostic-status light

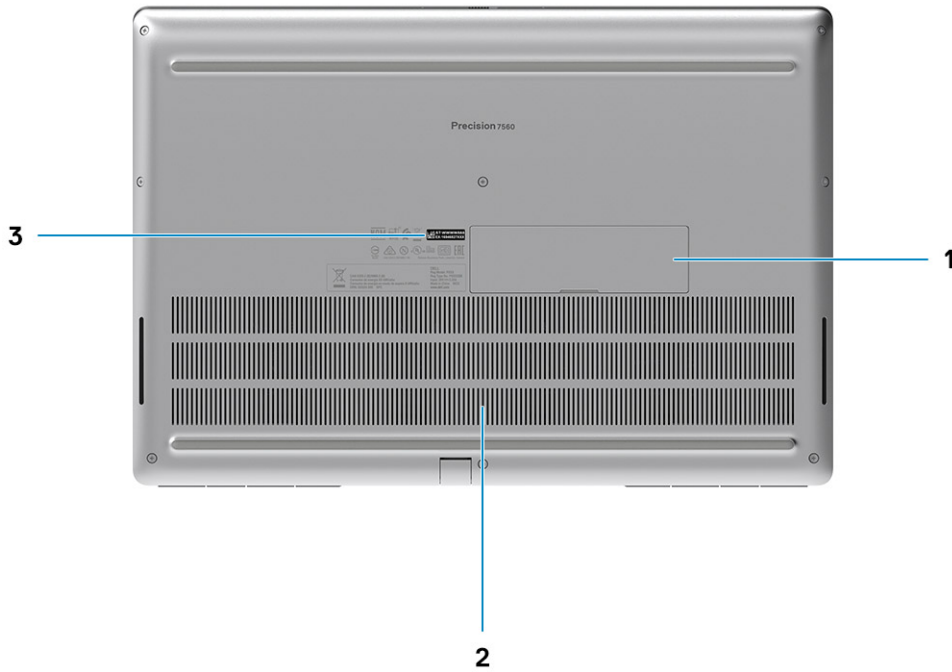
## Front view with IR camera



1. Microphone
2. IR camera sensor
3. Camera
4. Camera-status light
5. Microphone
6. Proximity sensor
7. Display
8. Battery-status light/Diagnostic-status light

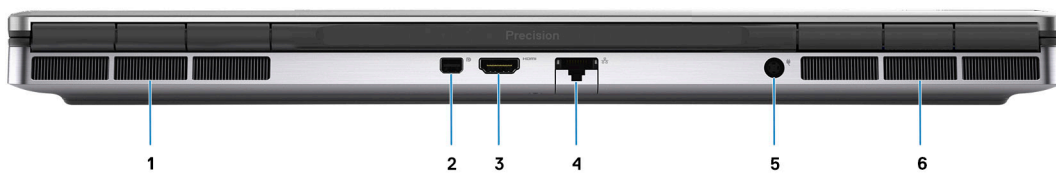


# Bottom



- 1. Solid-state drive door (optional)
- 2. Air vents
- 3. Service tag label

# Back



- 1. Air vent
- 2. Mini DisplayPort 1.4
- 3. HDMI 2.1 port
- 4. RJ45 Ethernet port
- 5. Power adapter port
- 6. Air vent

# Battery charge and status light

The following table lists the battery charge and status light behavior of your Precision 7560.

**Table 1. Battery charge and status light behavior**

Power Source	LED Behavior	System Power State	Battery Charge Level
AC Adapter	Off	S0 - S5	Fully Charged
AC Adapter	Solid White	S0 - S5	< Fully Charged
Battery	Off	S0 - S5	11-100%
Battery	Solid Amber (590+/-3 nm)	S0 - S5	< 10%


- S0 (ON) - System is turned on.
- S4 (Hibernate) - The system consumes the least power compared to all other sleep states. The system is almost at an OFF state, expect for a trickle power. The context data is written to hard drive.
- S5 (OFF) - The system is in a shutdown state.

# Specifications of Precision 7560

## Dimensions and weight

The following table lists the height, width, depth, and weight of your Precision 7560.

**Table 2. Dimensions and weight**

Description	Values
Height:	
Front height	25.00 mm (0.98 in.)
Rear height	27.36 mm (1.08 in.)
Width	360.00 mm (14.17 in.)
Depth	242.00 mm (9.53 in.)
Weight	2.49 kg (5.49 lb)
 <b>NOTE:</b> The weight of your computer depends on the configuration ordered and manufacturing variability.	

## Processor

The following table lists the details of the processors that are supported by your Precision 7560 .

**Table 3. Processor**

Description	Option one	Option two	Option three	Option four	Option five	Option six	Option seven
Processor type	11 <sup>th</sup> Generation Intel Core i5-11500H, vPro	11 <sup>th</sup> Generation Intel Core i7-11600H	11 <sup>th</sup> Generation Intel Core i7-11800H	11 <sup>th</sup> Generation Intel Core i7-11850H, vPro	11 <sup>th</sup> Generation Intel Core i9-11950H, vPro	Intel Xeon W-11855M, vPro	Intel Xeon W-11955M, vPro
Processor wattage	45 W	45 W	45 W	45 W	45 W	45 W	45 W
Processor core count	6	6	8	8	8	6	8
Processor thread count	12	12	16	16	16	12	16
Processor speed	2.90 GHz to 4.60 GHz	2.90 GHz to 4.60 GHz	2.30 GHz to 4.60 GHz	2.50 GHz to 4.80 GHz	2.60 GHz to 5.00 GHz	3.20 GHz to 4.90 GHz	2.60 GHz to 5.00 GHz
Processor cache	12 MB	18 MB	24 MB	24 MB	24 MB	18 MB	24 MB
Integrated graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics

# Chipset

The following table lists the details of the chipset supported by your Precision 7560.

**Table 4. Chipset**

Description	Values
Chipset	WM590
Processor	Intel Xeon Processor/11 <sup>th</sup> Generation Intel Core i5/i7/i9
DRAM bus width	64-bit
Flash EPROM	32 MB
PCIe bus	Up to Gen4

# Operating system

Your Precision 7560 supports the following operating systems:

- Windows 10 Professional, 64-bit
- Windows 10 Home, 64-bit
- Windows 10 Enterprise, 64-bit
- Windows 10 Pro Education, 64-bit
- Windows 10 Pro China, 64-bit
- RHEL 8.4
- Ubuntu 20.04 LTS, 64-bit

# Memory

The following table lists the memory specifications of your Precision 7560.

**Table 5. Memory specifications**

Description	Values
Memory slots	Four-SODIMM slots
Memory type	DDR4
Memory speed	<ul style="list-style-type: none"><li>• 3200 MHz</li><li>• 3466 MHz</li></ul>
Maximum memory configuration	128 GB
Minimum memory configuration	4 GB
Memory size per slot	4 GB, 8GB, 16 GB, 32 GB
Memory configurations supported	<ul style="list-style-type: none"><li>• 8 GB, 1 x 8 GB, DDR4, 3200 MHz, ECC</li><li>• 16 GB, 2 x 8 GB, DDR4, 3200 MHz, ECC</li><li>• 32 GB, 2 x 16 GB, DDR4, 3200 MHz, ECC</li><li>• 32 GB, 4 x 8 GB, DDR4, 3200 MHz, ECC</li><li>• 64 GB, 2 x 32 GB, DDR4, 3200 MHz, ECC</li><li>• 64 GB, 4 x 16 GB, DDR4, 3200 MHz, ECC</li></ul>

**Table 5. Memory specifications (continued)**

Description	Values
	<ul style="list-style-type: none"> <li>● 96 GB, 2 x 16 GB + 2 x 32 GB, DDR4, 3200 MHz, ECC</li> <li>● 128 GB, 4 x 32 GB, DDR4, 3200 MHz, ECC</li> <li>● 8 GB, 1 x 8 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 16 GB, 2 x 8 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 32 GB, 2 x 16 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 32 GB, 4 x 8 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 64 GB, 2 x 32 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 64 GB, 4 x 16 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 96 GB, 2 x 16 GB + 2 x 32 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 128 GB, 4 x 32 GB, DDR4, 3200 MHz, Non ECC</li> <li>● 16 GB, 2 x 8 GB, DDR4, 3466 MHz SuperSpeed, Non ECC</li> <li>● 32 GB, 4 x 8 GB, DDR4, 3466 MHz SuperSpeed, Non ECC</li> <li>● 32 GB, 2 x 16 GB, DDR4, 3466 MHz SuperSpeed, Non ECC</li> <li>● 64 GB, 4 x 16 GB, DDR4, 3466 MHz SuperSpeed, Non ECC</li> </ul>

## External ports

The following table lists the external ports of your Precision 7560.


**Table 6. External ports**

Description	Values
Network port	One RJ-45 Ethernet port 10/100/1000 Mbps
USB ports	<ul style="list-style-type: none"> <li>● One USB 3.2 Gen 1 Type-A ports</li> <li>● One USB 3.2 Gen 1 Type-A port with PowerShare</li> <li>● Two USB 3.2 Gen 2 Type-C Thunderbolt 4 ports</li> </ul>
Audio port	One global headset jack
Video port	<ul style="list-style-type: none"> <li>● One HDMI 2.1 port</li> <li>● One mini DisplayPort 1.4</li> </ul>
Media-card reader	One SD-card slot
Smart card reader	One smart-card reader
Micro Subscriber Identity Module (uSIM) Card	One microSIM card
Power-adaptor port	One DC-in port (7.4 mm standard plug)
Security-cable slot	One wedge-shaped security slot

# Internal slots

The following table lists the internal slots of your Precision 7560.

**Table 7. Internal slots**

Description	Values
M.2	A combination of three M.2 solid-state drives (one M.2 2280 and/or two M.2 2230 or M.2 2280)   <b>NOTE:</b> To learn more about the features of different types of M.2 cards, see the knowledge base article 000144170 at <a href="http://www.dell.com/support">www.dell.com/support</a> .

# Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Precision 7560.

**Table 8. Ethernet specifications**

Description	Values
Model number	Intel Ethernet Connection I219-LM
Transfer rate	10/100/1000 Mbps

# Wireless module

The following table lists the Wireless Local Area Network (WLAN) module supported on your Precision 7560.

**Table 9. Wireless module specifications**

Description	Values
Model number	Intel Wi-Fi 6E AX210
Transfer rate	3000 Mbps
Frequency bands supported	2.40 GHz/5 GHz/6 GHz
Wireless standards	<ul style="list-style-type: none"><li>• Wi-Fi 802.11a/b/g</li><li>• Wi-Fi 4 (Wi-Fi 802.11n)</li><li>• Wi-Fi 5 (Wi-Fi 802.11ac)</li><li>• Wi-Fi 6 (Wi-Fi 802.11ax)</li></ul>
Encryption	<ul style="list-style-type: none"><li>• 64-bit/128-bit WEP</li><li>• AES-CCMP</li><li>• TKIP</li></ul>
Bluetooth	Bluetooth 5.2

# WWAN module

The following table lists the Wireless Wide Area Network (WWAN) module supported on your Precision 7560.

**Table 10. WWAN module specifications**

Description	Values
Model number	Qualcomm Snapdragon X55 Global 5G Modem (DW5930E)
Transfer rate	Up to 3 Gbps DL/250 Mbps UL (3GPP Release15 NR/LTE CAT20)
Frequency bands supported	<ul style="list-style-type: none"> <li>• LTE (1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 28, 29, 30, 32, 38, 39, 40, 41, 42, 43, 46, 66)</li> <li>• NR (1, 2, 3, 5, 7, 8, 12, 20, 28, 38, 41, 66, 71, 77, 78, 79)</li> <li>• HSPA+ (1, 2, 4, 5, 6, 8, 9,19)</li> </ul>
Wireless standards	<ul style="list-style-type: none"> <li>• NR FR1(Sub6) FDD/TDD</li> <li>• LTE FDD/TDD</li> <li>• WCDMA/HSPA+</li> <li>• GPS/GLONASS/Beidou/Galileo</li> </ul>
Encryption	Supported
Global Navigation Satellite System (GNSS)	Multi-constellation GNSS receiver

# Audio

The following table lists the audio specifications of your Precision 7560.

**Table 11. Audio specifications**

Description	Values	
Audio controller	ALC3204	
Stereo conversion	Supported	
Internal audio interface	High definition audio	
External audio interface	Global headset jack	
Number of speakers	Two	
Internal-speaker amplifier	Supported (audio codec integrated)	
External volume controls	Keyboard shortcut controls	
Speaker output:		
	Average speaker output	2 W
	Peak speaker output	2.5 W
Subwoofer output	Not supported	
Microphone	Dual-array microphones	

# Storage

This section lists the storage options on your Precision 7560.

Your computer supports one of the following configurations:

- One M.2 2230 or M.2 2280 solid-state drive
- A combination of two M.2 solid-state drives (M.2 2230 or M.2 2280)
- A combination of three M.2 solid-state drives (one M.2 2280 and/or two M.2 2230 or M.2 2280)

The primary drive of your computer varies with the storage configuration. For systems with a M.2 drive, the M.2 drive is the primary drive .


**Table 12. Storage specifications**

Storage type	Interface type	Capacity
M.2 2230 solid-state drive	PCIe NVMe Gen3 x4	256 GB
M.2 2280 solid-state drive	PCIe NVMe Gen3 x4	Up to 1 TB
M.2 2280 solid-state drive, self-encrypting drive	PCIe NVMe Gen3 x4	512 GB
M.2 2280 solid-state drive	PCIe NVMe Gen4 x4	Up to 4 TB

# Media-card reader

The following table lists the media cards supported by your Precision 7560.

**Table 13. Media-card reader specifications**

Description	Values
Media-card type	SD card
Media-cards supported	<ul style="list-style-type: none"><li>• Secure Digital (SD)</li><li>• Secure Digital High Capacity (SDHC)</li><li>• Secure Digital Extended Capacity (SDXC)</li></ul>
 <b>NOTE:</b> The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

# Keyboard

The following table lists the keyboard specifications of your Precision 7560.

**Table 14. Keyboard specifications**

Description	Values
Keyboard type	Backlit keyboard
Keyboard layout	QWERTY
Number of keys	<ul style="list-style-type: none"><li>• United States and Canada: 101 keys</li><li>• United Kingdom: 102 keys</li><li>• Japan: 105 keys</li></ul>
Keyboard size	X=18.70 mm key pitch



**Table 14. Keyboard specifications (continued)**

Description	Values
	Y=18.05 mm key pitch
Keyboard shortcuts	<p>Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key.</p> <p><b>NOTE:</b> You can define the primary behavior of the function keys (F1–F12) changing <b>Function Key Behavior</b> in BIOS setup program.</p>

## Camera

The following table lists the camera specifications of your Precision 7560.

**Table 15. Camera specifications**

Description	Values
Number of cameras	One
Camera type	<p>There are 2 camera options:</p> <ul style="list-style-type: none"> <li>• HD RGB camera</li> <li>• IR camera</li> </ul>
Camera location	Front camera
Camera sensor type	Proximity sensor technology
Camera resolution:	
Still image	0.92 megapixel
Video	1280 x 720 (HD) at 30 fps
Infrared camera resolution:	
Still image	0.30 megapixel
Video	1280 x 720 (HD) at 30 fps
Diagonal viewing angle:	
Camera	74.9 degrees
Infrared camera	70 degrees

## Touchpad

The following table lists the touchpad specifications of your Precision 7560.

**Table 16. Touchpad specifications**

Description	Values
Touchpad resolution:	>300 dpi

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

Description		Values
Touchpad dimensions:		
	Horizontal	105 mm (4.13 in.)
	Vertical	65 mm (2.56 in.)
Touchpad gestures		For more information about touchpad gestures available on Windows 10, see the Microsoft knowledge base article <a href="https://support.microsoft.com/4027871">4027871</a> at <a href="https://support.microsoft.com">support.microsoft.com</a> .

## Power adapter

The following table lists the power adapter specifications of your Precision 7560.

**Table 17. Power adapter specifications**

Description		Values
Type		180 W E5 DC-in
Connector dimensions:		
	External diameter	7.40 mm
	Internal diameter	5.10 mm
Input voltage		100 VAC x 240 VAC
Input frequency		50 Hz x 60 Hz
Input current (maximum)		2.34 A
Output current (continuous)		9.23 A
Rated output voltage		19.50 VDC
Temperature range:		
	Operating	0°C to 40°C (32°F to 104°F)
	Storage	-40°C to 70°C (-40°F to 158°F)

## Battery

The following table lists the battery specifications of your Precision 7560.

**Table 18. Battery specifications**

Description	Option one	Option two	Option three
Battery type	6-cell, 68 WHr, Lithium-ion, ExpressChargeBoost	6-cell, 95 WHr, Lithium-ion, ExpressChargeBoost	6-cell, 95 WHr, Lithium-ion LcL
Battery voltage	11.40 VDC	11.40 VDC	11.40 VDC
Battery weight (maximum)	0.39 Kg (0.86 lb)	0.43 kg (0.95 lb)	0.43 kg (0.95 lb)
Battery dimensions:			

**Table 18. Battery specifications (continued)**

Description		Option one	Option two	Option three
	Height	10.3 mm (0.41 in.)	10.3 mm (0.41 in.)	10.3 mm (0.41 in.)
	Width	284.00 mm (11.18 in.)	284.00 mm (11.18 in.)	284.00 mm (11.18 in.)
	Depth	76.75 mm (3.02 in.)	76.75 mm (3.02 in.)	76.75 mm (3.02 in.)
Temperature range:				
	Operating	0°C to 60°C (32°F to 140°F)	0°C to 60°C (32°F to 140°F)	0°C to 60°C (32°F to 140°F)
	Storage	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)
Battery operating time		Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.
Battery charging time (approximate) ⓘ <b>NOTE:</b> Control the charging time, duration, start and end time, and so on, using the Dell Power Manager application. For more information on the Dell Power Manager, see <i>Me and My Dell</i> on <a href="http://www.dell.com">www.dell.com</a> .		<b>Express Charge Method:</b> <ul style="list-style-type: none"> <li>0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16 - 45°C normal express charge</li> <li>46 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours</li> </ul> <b>Standard Charge/ Predominately AC User Charge Method:</b> <ul style="list-style-type: none"> <li>0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours</li> </ul> <b>Express Charge Boost Charge Method (Fast Charge for Initial 35%):</b> <ul style="list-style-type: none"> <li>16 - 45°C target charge time from 0 to 35% RSOC is 20 mins for Accelerated Charge</li> </ul>	<b>Express Charge Method:</b> <ul style="list-style-type: none"> <li>0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16 - 45°C normal express charge</li> <li>46 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours</li> </ul> <b>Standard Charge/ Predominately AC User Charge Method:</b> <ul style="list-style-type: none"> <li>0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours</li> </ul> <b>Express Charge Boost Charge Method (Fast Charge for Initial 35%):</b> <ul style="list-style-type: none"> <li>16 - 45°C target charge time from 0 to 35% RSOC is 20 mins for Accelerated Charge</li> </ul>	<b>Standard Charge/ Predominately AC User Charge Method:</b> <ul style="list-style-type: none"> <li>0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours</li> </ul>
Coin-cell battery		Supported	Supported	Supported
ⓘ <b>NOTE:</b> Dell Technologies recommends that you charge the battery regularly for optimal power consumption. If your battery charge is completely depleted, connect the power adapter, turn on your computer, and then restart your computer to reduce the power consumption. ⚠ <b>CAUTION:</b> Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.				

# Display

The following table lists the display specifications of your Precision 7560.

**Table 19. Display specifications**

Description		Option one	Option two	Option three	Option four
Display type		15.6-inch Full High Definition (FHD)	15.6-inch Full High Definition (FHD)	15.6-inch Full High Definition (FHD)	15.6-inch Ultra High Definition (UHD)
Display-panel technology		Wide-viewing angle (WVA)	Wide-viewing angle (WVA), WLED	Wide-viewing angle (WVA), WLED	HDR600
Display-panel dimensions (active area):					
	Height	193.60 mm (7.62 in.)	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)
	Width	344.20 mm (13.55 in.)	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)
	Diagonal	394.90 mm (15.60 in.)	394.87 mm (15.60 in.)	394.87 mm (15.60 in.)	394.87 mm (15.60 in.)
Display-panel native resolution		1920 x 1080	1920 x 1080	1920 x 1080	3840 x 2160
Luminance (typical)		220 nits	500 nits	500 nits	600 nits
Megapixels		2.07	2.07	2.07	8.29
Color gamut		45% NTSC	100% DCIP3	100% DCIP3	100% Adobe
Pixels Per Inch (PPI)		141 ppi	141 ppi	141 ppi	282
Contrast ratio (typ)		600:1	600:01	600:01	6000:1
Response time (min)		35 ms	35 ms	35 ms	35 ms
Refresh rate		60 Hz	60 Hz	60 Hz	60 Hz
Horizontal view angle		+/- 80 degrees(min)	+/- 80 degrees(min)	+/- 80 degrees(min)	+/- 80 degrees(min)
Vertical view angle		+/- 80 degrees(min)	+/- 80 degrees(min)	+/- 80 degrees(min)	+/- 80 degrees(min)
Pixel pitch		0.18 mm x 0.18 mm	0.18 x 0.18 mm	0.18 x 0.18 mm	0.090 x 0.090 mm
Power consumption (maximum)		4.20 W	7.2 W	7.4 W	18 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	Anti-glare	Anti-glare
Touch options		No	No	Yes	No

## Fingerprint reader (optional)

The following table lists the specifications of the optional fingerprint reader of your Precision 7560.

**Table 20. Fingerprint reader specifications**

Description	Power Button Option	FIPS Option (on palmrest)
Fingerprint-reader sensor technology	Capacitive	Capacitive
Fingerprint-reader sensor resolution	500 dpi	508 dpi
Fingerprint-reader sensor pixel size, X	108	256
Fingerprint-reader sensor pixel size, Y	88	360

## GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Precision 7560.

**Table 21. GPU—Integrated**

Controller	Memory size	Processor
Intel UHD Graphics	Shared system memory	Intel Xeon/11 <sup>th</sup> Generation Intel Core i5/i7/i9

## GPU — Discrete

The following table lists the specifications of the discrete graphics processing unit (GPU) supported by your Precision 7560.

**Table 22. GPU — Discrete**

Controller	External display support	Memory size	Memory type
NVIDIA T1200	mDP/HDMI/Type-C	4 GB	GDDR6
NVIDIA RTX A2000	mDP/HDMI/Type-C	4 GB	GDDR6
NVIDIA RTX A3000	mDP/HDMI/Type-C	6 GB	GDDR6
NVIDIA RTX A4000	mDP/HDMI/Type-C	8 GB	GDDR6
NVIDIA RTX A5000	mDP/HDMI/Type-C	16 GB	GDDR6

## Multiple display support matrix

The following table lists the multiple display support matrix supported by your Precision 7560.

**Table 23. Supported display via host display port under different modes**

Graphics card mode	Connect to External Displays			
	1 External Display	2 External Displays	3 External Displays	4 External Displays
UMA	Type-C: 8K* @60Hz	• Type-C: 8K* @60Hz	• HDMI: 4K@60Hz	(Internal Display Off)

**Table 23. Supported display via host display port under different modes (continued)**

Graphics card mode	Connect to External Displays			
	1 External Display	2 External Displays	3 External Displays	4 External Displays
		<ul style="list-style-type: none"> <li>mDP or HDMI:4K@60</li> </ul>	<ul style="list-style-type: none"> <li>mDP: 4K@60Hz</li> <li>Type-C:4K@60Hz</li> </ul>	<ul style="list-style-type: none"> <li>HDMI: 4K@60Hz</li> <li>mDP: 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> </ul>
Hybrid mode	mDP/HDMI/Type-C:8K@60Hz	<ul style="list-style-type: none"> <li>mDP/HDMI/Type-C:8K@60Hz*1</li> <li>mDP/HDMI/Type-C:8K@60Hz*1</li> </ul>	<ul style="list-style-type: none"> <li>HDMI: 8K@60Hz</li> <li>mDP: 8K@60Hz</li> <li>Type-C:8K@60Hz</li> </ul>	(Internal Display Off) <ul style="list-style-type: none"> <li>HDMI: 8K@60Hz</li> <li>mDP: 8K@60Hz</li> <li>Type-C : 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> </ul>
Hybrid mode with Direct Output	mDP/HDMI/Type-C:8K@60Hz	<ul style="list-style-type: none"> <li>mDP/HDMI/Type-C:8K@60Hz*1</li> <li>mDP/HDMI/Type-C:8K@60Hz*1</li> </ul>	<ul style="list-style-type: none"> <li>HDMI: 8K@60Hz</li> <li>mDP: 4K@60H</li> <li>Type C : 4K@60Hz</li> </ul>	(Internal Display Off) <ul style="list-style-type: none"> <li>HDMI: 4K@60Hz</li> <li>mDP: 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> </ul>
Discrete Mode	mDP/HDMI/Type-C:8K@60Hz	<ul style="list-style-type: none"> <li>mDP/HDMI/Type-C:8K@60Hz*1</li> <li>mDP/HDMI/Type-C:8K@60Hz*1</li> </ul>	(Internal Display Off) <ul style="list-style-type: none"> <li>HDMI: 8K@60Hz</li> <li>mDP: 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> </ul>	(Internal Display Off) <ul style="list-style-type: none"> <li>HDMI: 4K@60Hz</li> <li>mDP: 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> <li>Type-C : 4K@60Hz</li> </ul>

When connecting via docking station, additional external displays can be connected under Hybrid mode (with Internal Display Off).

**NOTE:** Discrete mode and UMA modes are disabled when additional external displays are connected via docking station.

**Table 24. Supported display via docking station under Hybrid mode**

Hybrid mode		
TBT Dock	Type-C TBT + DP + DP + HDMI/MFDP: *4k@60HZ + 2k@60Hz*3	<ul style="list-style-type: none"> <li>Up to 3 if internal display on</li> <li>Up to 4 if internal display off</li> <li>Connect either HDMI or MFDP only, do not connect both of them</li> </ul>
Single Cable Dock	<ul style="list-style-type: none"> <li>DP + DP + HDMI : FHD@60Hz*3</li> <li>DP + DP + MFDP : FHD@60Hz*3</li> </ul>	
Dual Cable Dock	<ul style="list-style-type: none"> <li>DP + DP + HDMI: 2k@60Hz*3</li> <li>DP + DP + MFDP: 2k@60Hz*3</li> </ul>	

**Table 25. Supported display via docking station under Discrete mode**

Discrete mode		
TBT Dock	<ul style="list-style-type: none"> <li>DP + DP: 8K@60Hz*1</li> <li>DP + HDMI: 4K@60Hz*2</li> <li>MFDP/HDMI+DP1+DP2: 4K@60Hz*3</li> <li>TBT + DP1+DP2+HDMI: 4K@60Hz*4</li> </ul>	<ul style="list-style-type: none"> <li>Up to 3 if internal display on</li> <li>Up to 4 if internal display off</li> <li>Connect either HDMI or MFDP only, do not connect both of them</li> </ul>

**Table 25. Supported display via docking station under Discrete mode (continued)**

Discrete mode		
Single Cable Dock	<ul style="list-style-type: none"> <li>• DP + DP: 4K@60Hz *2</li> <li>• DP + HDMI: 4 K@60Hz*2</li> <li>• DP + MFDP: 4K@60Hz*2</li> </ul>	
Dual Cable Dock	<ul style="list-style-type: none"> <li>• DP + DP: 8K@60Hz*1</li> <li>• DP+DP+HDMI/MFDP: 4K@60Hz*3</li> </ul>	

**NOTE:** For more information on connecting multiple displays, see the computer's *External display connection guide* at [www.dell.com/support](http://www.dell.com/support).

## Hardware security

The following table lists the hardware security of your Precision 7560.

**Table 26. Hardware Security**

Hardware security options
NIST 800-147 protocol
Intel vPro Technology (iAMT 12) (optional, requires Intel WiFi Link WLAN and a vPro compatible processor)
Dell Client Command Suite available ( <a href="http://dell.com/command">dell.com/command</a> )
Factory Installed Dell Client Command   Update, Dell Command   Power Manager
Hardware Trusted Platform Module (TPM) 2.0 discrete (offering available in selected regions only): Discreet TPM 2.0 IC FIPS-140-2 Certified / TCG Certified, TCG Certification for TPM (Trusted Computing Group)
Two Optional fingerprint readers: <ul style="list-style-type: none"> <li>• On Power button</li> <li>• FIPS fingerprint reader in the palmrest</li> </ul>
FIPS 140-2 certification for TPM
TCG Certification for TPM (Trusted Computing Group)
FIPS 201 Full Scan FPR and Control Vault 3
Statement of Non-Volatility
Wedge-shaped lock
Optional Security Hardware Authentication Bundles: <ul style="list-style-type: none"> <li>• Touch Fingerprint Reader (in Power Button) with Control Vault 3.0 Advanced Authentication with FIPS 140-2 Level 3 Certification.</li> <li>• Contacted Smart Card and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification</li> <li>• Touch Fingerprint Reader (in Power Button), Contacted Smart Card, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification.</li> <li>• Touch Fingerprint Reader in Power Button, Contacted Smart Card, Contactless Smart Card, NFC, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification.</li> <li>• Optional Face IR camera (Windows Hello compliant) with Proximity Sensor</li> </ul>

# Smart-card reader

## Contactless smart-card reader

The following table lists the contactless smart-card reader specifications supported by your Precision 7560.


**Table 27. Contactless smart-card reader**

Title	Description	Dell ControlVault 3 contactless smart-card 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 smart card standards as posted to <a href="http://www.emvco.com">www.emvco.com</a>	Yes
EMVCo Certified	Formally certified based on EMVCO smart card 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



**Table 27. Contactless smart-card reader (continued)**

Title	Description	Dell ControlVault 3 contactless smart-card reader with NFC
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

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

**Table 28. 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	
Gemalto	TOP DL GX4 144K card	Yes
Sony	Felica RC-S962	Yes
	Felica RC-S966	Yes
PIVKey	C910 PKI	Yes
IDENTIV	PIV programmed cards	Yes

## Contacted smart-card reader

The following table lists the contacted smart-card reader specifications supported by your Precision 7560.

**Table 29. Contacted smart-card reader**

Title	Description	Dell ControlVault 3 contacted smart-card reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5V powered smart card	Yes
ISO 7816 -3 Class B Card Support	Reader capable of reading 3V powered smart card	Yes

**Table 29. Contacted smart-card reader (continued)**

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

## Operating and storage environment

This table lists the operating and storage specifications of your Precision 7560.

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

**Table 30. Computer environment**

Description	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)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	110 G†	160 G†
Altitude range	-15.2 m to 3048 m (4.64 ft to 5518.4 ft)	-15.2 m to 10668 m (4.64 ft to 19234.4 ft)

**⚠ CAUTION:** Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.

\* 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.

# Engineering specifications

## Ethernet

### Intel Ethernet Connection i219-LM

The following table lists the i219-LM specifications.

**Table 31. Intel Ethernet Connection i219-LM specifications**

Feature	Values
External connector type	RJ45
Data rate	10/100/1000 Mbps
<b>Controller Details</b>	
Controller bus architecture	PCI Express base specification revision 1.1
Integrated memory	Yes
Data transfer mode	Yes (Bus-Master DMA)
Power consumption (Full operation per data rate connection speed)	542 mW (Max)
Power consumption (Standby operation)	76 mW (Max)
IEEE standards compliance	802.3
Hardware certifications	N/A
Boot ROM support	EEPROM (Located in SPI)
<b>Network Transfer Mode</b>	
Network transfer rate	10 Mb (full/half-duplex)
10BASE-T (full-duplex) 20 Mbps	100 Mb (full/half-duplex)
100BASE-TX (half-duplex) 100 Mbps	1000 Mb (full-duplex)
<b>Environmental</b>	
Operating temperature range	0 ° C–85° C (32 ° F–185° F)
Operating humidity	20% to 80% (non condensing)
Operating system driver Support	<ul style="list-style-type: none"> <li>● Windows 10 (x64)</li> <li>● Ubuntu</li> <li>● Neokylin</li> </ul>
Manageability	<ul style="list-style-type: none"> <li>● Wakeup On LAN</li> <li>● PXE 2.1</li> </ul>
Management capabilities alerting	Optional Intel Standard Manageability (must be made at time of purchase).

This term does not connote an actual operating speed of 1 Gb/sec. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

# Wireless module

## Intel AX210, 2x2 MIMO, 2400 Mbps, 2.40 Ghz /5 Ghz/6 GHz, Wi-Fi 6 (WiFi 802.11ax), Bluetooth 5.2

The following table lists the Intel AX210 specifications.

**Table 32. Intel AX210 specifications**

Host interface	<ul style="list-style-type: none"> <li>• Wi-Fi - PCIe</li> <li>• Bluetooth - USB</li> </ul>
Network standard	IEEE 802.11a/b/g/n/ac/ax, 160MHz channel use, MU-MIMO
Wi-Fi Alliance certifications	<ul style="list-style-type: none"> <li>• Wi-Fi CERTIFIED a/b/g/n/ac with wave 2 features</li> <li>• Designed to be Wi-Fi CERTIFIED ax (Wi-Fi 6)</li> <li>• WMM</li> <li>• WMM-PS</li> <li>• WPA</li> <li>• WPA2</li> <li>• WPS2</li> <li>• Protected Management Frames</li> <li>• Wi-Fi Direct (For Windows only)</li> </ul>
Operating frequency bands	<ul style="list-style-type: none"> <li>• 2.4 Ghz</li> <li>• 5 Ghz</li> <li>• 6 Ghz</li> </ul>
Data rate	<ul style="list-style-type: none"> <li>• 2.4 GHz 40M: Up to 574 Mbps</li> <li>• 5/6 GHz 80M: Up to 1.2 Gbps</li> <li>• 5/6 GHz 160M: Up to 2.4 Gbps</li> </ul>
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication	<ul style="list-style-type: none"> <li>• WPA and WPA2 Personal and Enterprise</li> <li>• WPA3 (pending OS support)</li> </ul>
Authentication protocols	<ul style="list-style-type: none"> <li>• 802.1X EAP-TLS</li> <li>• EAP-TTLS/MSCHAPv2</li> <li>• PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA)</li> </ul>
Encryption	<ul style="list-style-type: none"> <li>• 64-bit and 128-bit WEP</li> <li>• TKIP</li> <li>• 128-bit AES-CCMP</li> <li>• 256-bit AES-GCMP</li> </ul>
Product safety	<ul style="list-style-type: none"> <li>• UL</li> <li>• C-UL</li> <li>• CB (IEC60950-1)</li> </ul>
Management capabilities alerting	Support for Intel AMT
Government compliance	<ul style="list-style-type: none"> <li>• FIPS 140-2</li> <li>• FISMA</li> </ul>
Client utility	Intel PRO/Set wireless software v22 and later
Antenna diversity	Supported
Radio On/Off	Supported

**Table 32. Intel AX210 specifications (continued)**


Roaming	Support seamless roaming between access points
Wake on wireless	supported
Wireless display	Native Miracast support by Windows 10
Wireless PAN standard	<ul style="list-style-type: none"> <li>• Dual Mode Bluetooth* 5.2</li> <li>• BLE</li> </ul>
Bluetooth data rates	Up to 3Mbps
Bluetooth operating frequency bands	2.4 GHz
Bluetooth profiles supported	Support for Microsoft Inbox Bluetooth profiles in Windows 10
Bluetooth data encryption	128-bit encryption
Bluetooth output power	Power class 1
Operating temperature	0°C to + 50°C (Full performance at shield temperatures up to 80°C)
Storage temperature	-40°C to +70°C
Humidity	Up to 90% RH non-condensing (at temperatures of 25° C to 35° C)

## WWAN module

### Qualcomm Snapdragon X55 Global 5G Modem

The following table lists the Qualcomm Snapdragon X55 Global 5G Modem specifications.

**Table 33. Qualcomm Snapdragon X55 specifications**

Form factor	M.2 3042 Key.B single side
Host interface	PCIe Gen3
Network standard	<ul style="list-style-type: none"> <li>• NR FR1(Sub6) FDD/TDD</li> <li>• LTE FDD/TDD</li> <li>• WCDMA/HSPA+</li> <li>• GPS/GLONASS/Beidou/Galileo</li> </ul>
Transfer rate	Up to 3Gbps DL/250 Mbps UL (3GPP Release15 NR/LTE CAT20)
Operating frequency bands	<ul style="list-style-type: none"> <li>• NR (1,2,3,5,7,8,12,20,28,38,41,66,71,77,78,79)</li> <li>• LTE(1,2,3,4,5,7,8,12,13,14,17,18,19,20,25,26,28,29,30,32,34, 38,39,40,41,42,46,48, 66)</li> <li>• HSPA+ (1,2,4,5,6,8,9,19)</li> </ul>
Power supply	DC 3.13 V to 3.63 V, Typical 3.3 V
SIM card	Supported through external SIM slot
eSIM with Dual SIM (DSSA)	Supported  <b>NOTE:</b> The availability of eSIM functionality embedded on the module is dependent on the region and carrier requirements.
Antenna diversity	Supported
Radio On/Off	Supported

**Table 33. Qualcomm Snapdragon X55 specifications (continued)**

Wake on wireless	Not supported
Normal operating temperature	-30°C to + 70°C
Extended operating temperature	-40°C to +85°C
Antenna connector	<ul style="list-style-type: none"> <li>● WWAN ANT0 X 1</li> <li>● WWAN ANT1 X 1</li> <li>● WWAN ANT2 X 1</li> <li>● WWAN ANT3 X 1</li> </ul>

## GPU—Integrated

### Intel UHD Graphics

The following table lists the Intel UHD Graphics specifications.

**Table 34. Intel UHD Graphics specifications**

Intel UHD Graphics	
Bus Type	Integrated
Memory Type	UMA
Graphics Level	i5/i7/i9/Xeon: GT2 (UHD)
Estimated Maximum Power Consumption (TDP)	45 W
Overlay Planes	Yes
Operating Systems Graphics/ Video API Support	DirectX 12, OpenGL (4.6 from Intel CML POR)
Maximum Vertical Refresh Rate	<ul style="list-style-type: none"> <li>● HDMI 2.1: 4096 x 2160 @ 60 Hz, 24bpp (HDMI or optional USB Type-C to HDMI dongle)</li> <li>● Max Digital: 4096 x 2304 @ 60 Hz, 24bpp (mDP or DP 1.4 over Type-C Port)</li> </ul>
Number of display supported	Up to 4 displays via DisplayPort Multi-Streaming Technology (MST)
Multiple Display Support	<ul style="list-style-type: none"> <li>● Type-C</li> <li>● mDP/HDMI (If no discrete graphics)</li> </ul>

## GPU—Discrete

### NVIDIA T1200

The following table lists the NVIDIA T1200 specifications.

**Table 35. NVIDIA T1200 specifications**

Feature	Values
GPU	QN20-P1
Cores	1024
Memory bandwidth	192 Gbps

**Table 35. NVIDIA T1200 specifications (continued)**

<b>Feature</b>	<b>Values</b>
Memory type	GDDR6
Memory size	4 GB
Memory interface	128-bit
TGP	80 W
GPU base clock	1665 MHz
GPU boost clock	1785 MHz
Vram clock	6001 MHz
PCIe	Gen 4 x 8
Display	eDP/mDP/HDMI/Type-C
eDP panel	FHD/UHD (HDR 400/600)
Maximum color depth	Up to 10 bit/color
Features	<ul style="list-style-type: none"> <li>• Dynamic boost</li> <li>• Extension Display ID 2.0</li> <li>• Resizable BAR</li> </ul>
Operating Systems Graphics/Video API Support	<ul style="list-style-type: none"> <li>• OpenGL 4.6</li> <li>• OpenCL 1.2</li> <li>• DirectX 12.1</li> </ul>
Supported resolutions and maximum refresh rates	<ul style="list-style-type: none"> <li>• Max Digital : Single DisplayPort 1.4 - 7680x4320 (8K @60 Hz) (mDP/Type-C to DP)</li> <li>• Max Digital : Dual DisplayPort 1.4 - 7680 x 4320 (8k @60Hz) (mDP/Type-C to DP)</li> </ul>
Number of displays supported	Up to 4 displays

## NVIDIA RTX A2000

**Table 36. NVIDIA RTX A2000 specifications**

<b>Feature</b>	<b>Values</b>
GPU	QN20-P3
Cores	CUDA cores 2560, Tensor cores 80, RT cores 20
Memory bandwidth	192 Gbps
Memory type	GDDR6
Memory size	4 GB
Memory interface	192-bit
TGP	80 W
GPU base clock	1455/1824 MHz
GPU boost clock	945 - 1380 MHz
Vram clock	6001 MHz
PCIe	Gen 4 x 8
Display	eDP/mDP/HDMI/Type-C
eDP panel	FHD/UHD (HDR 400/600)



**Table 36. NVIDIA RTX A2000 specifications (continued)**

Feature	Values
Maximum color depth	Up to 10 bit/color
Features	<ul style="list-style-type: none"> <li>• Dynamic boost</li> <li>• Extension Display ID 2.0</li> <li>• eDP DSC</li> <li>• Resizable BAR</li> </ul>
VR	Dell VR Ready
Operating Systems Graphics/Video API Support	<ul style="list-style-type: none"> <li>• OpenGL 4.6</li> <li>• OpenCL 1.2</li> <li>• DirectX 12.1</li> </ul>
Supported resolutions and maximum refresh rates	<ul style="list-style-type: none"> <li>• Max Digital : Single DisplayPort 1.4 - 7680x4320 (8K @60 Hz) (mDP/Type-C to DP)</li> <li>• Max Digital : Dual DisplayPort 1.4 - 7680 x 4320 (8k @60Hz) (mDP/Type-C to DP)</li> </ul>
Number of displays supported	Up to 4 displays

## NVIDIA RTX A3000

The following table lists the NVIDIA RTX A3000 specifications.

**Table 37. NVIDIA RTX A3000 specifications**

Feature	Values
GPU	QN20-E1-KA / QN20-E1-KC
Cores	CUDA cores 4096, Tensor cores 128, RT cores 32
Memory bandwidth	264 Gbps
Memory type	GDDR6
Memory size	6 GB
Memory interface	192-bit
TGP	90 W
GPU base clock	1080 MHz
GPU boost clock	1560 MHz
Vram clock	5501 MHz
PCIe	Gen 4 x 8
Display	eDP/mDP/HDMI/Type-C
eDP panel	FHD/UHD (HDR 400/600)
Maximum color depth	Up to 10 bit/color
Features	<ul style="list-style-type: none"> <li>• Dynamic boost</li> <li>• Extension Display ID 2.0</li> <li>• eDP DSC</li> <li>• Resizable BAR</li> </ul>
VR	Dell VR Ready
Operating Systems Graphics/Video API Support	<ul style="list-style-type: none"> <li>• OpenGL 4.6</li> <li>• OpenCL 1.2</li> <li>• DirectX 12.1</li> </ul>

**Table 37. NVIDIA RTX A3000 specifications (continued)**

Feature	Values
Supported resolutions and maximum refresh rates	<ul style="list-style-type: none"> <li>• Max Digital : Single DisplayPort 1.4 - 7680x4320 (8K @60 Hz) (mDP/Type-C to DP)</li> <li>• Max Digital : Dual DisplayPort 1.4 - 7680 x 4320 (8k @60Hz) (mDP/Type-C to DP)</li> </ul>
Number of displays supported	Up to 4 displays

## NVIDIA RTX A4000

The following table lists the NVIDIA RTX A4000 specifications.

**Table 38. NVIDIA RTX A4000 specifications**

Feature	Values
GPU	QN20-E3 MQ
Cores	CUDA cores 5120, Tensor cores 160, RT cores 40
Memory bandwidth	384 Gbps
Memory type	GDDR6
Memory size	8 GB
Memory interface	256-bit
TGP	90 W
GPU base clock	915 MHz
GPU boost clock	1515 MHz
Vram clock	5501 MHz
PCIe	Gen 4 x 8
Display	eDP/mDP/HDMI/Type-C
eDP panel	FHD/UHD (HDR 400/600)
Maximum color depth	Up to 10 bit/color
Features	<ul style="list-style-type: none"> <li>• Dynamic boost</li> <li>• Extension Display ID 2.0</li> <li>• eDP DSC</li> <li>• Resizable BAR</li> </ul>
VR	Dell VR Ready
Operating Systems Graphics/Video API Support	<ul style="list-style-type: none"> <li>• OpenGL 4.6</li> <li>• OpenCL 1.2</li> <li>• DirectX 12.1</li> </ul>
Supported resolutions and maximum refresh rates	<ul style="list-style-type: none"> <li>• Max Digital : Single DisplayPort 1.4 - 7680x4320 (8K @60 Hz) (mDP/Type-C to DP)</li> <li>• Max Digital : Dual DisplayPort 1.4 - 7680 x 4320 (8k @60Hz) (mDP/Type-C to DP)</li> </ul>
Number of displays supported	Up to 4 displays

# NVIDIA RTX A5000

The following table lists the NVIDIA RTX A5000 specifications.

**Table 39. NVIDIA RTX A5000 specifications**

Feature	Values
GPU	NVIDIA RTX A5000
Cores	CUDA cores 8192, Tensor cores 256, RT cores 64
Memory bandwidth	448 Gbps
Memory type	GDDR6
Memory size	16 GB
Memory interface	256-bit
TGP	90 W
GPU base clock	870 MHz
GPU boost clock	1455 MHz
Vram clock	5501 MHz
PCIe	Gen 4 x 8
Display	eDP/mDP/HDMI/Type-C
eDP panel	FHD/UHD (HDR 400/600)
Maximum color depth	Up to 10 bit/color
Features	<ul style="list-style-type: none"> <li>• Dynamic boost</li> <li>• Extension Display ID 2.0</li> <li>• eDP DSC</li> <li>• Resizable BAR</li> </ul>
VR	Dell VR Ready
Operating Systems Graphics/Video API Support	<ul style="list-style-type: none"> <li>• OpenGL 4.6</li> <li>• OpenCL 1.2</li> <li>• DirectX 12.1</li> </ul>
Supported resolutions and maximum refresh rates	<ul style="list-style-type: none"> <li>• Max Digital : Single DisplayPort 1.4 - 7680x4320 (8K @60 Hz) (mDP/Type-C to DP)</li> <li>• Max Digital : Dual DisplayPort 1.4 - 7680 x 4320 (8k @60Hz) (mDP/Type-C to DP)</li> </ul>
Number of displays supported	Up to 4 displays

## Storage

### M.2 2230, 256 GB, PCIe NVMe Gen3 x4, SSD

The following table lists the M.2 2230, 256 GB SSD specifications.

**Table 40. 256 GB SSD specifications**

Capacity	256 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22.00 mm (0.87 in.)

**Table 40. 256 GB SSD specifications (continued)**

Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe Gen3
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	500,118,192
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW (PS4)</li> <li>• Active: 3.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 256 GB, PCIe NVMe Gen3 x4, SSD

The following table lists the M.2 2280, 256 GB SSD specifications.

**Table 41. 256 GB SSD specifications**

Capacity	256 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen3
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	500,118,192
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW (PS4 - L1.2)</li> <li>• Active: 4.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 512 GB, PCIe NVMe Gen3 x4, SSD

The following table lists the M.2 2280, 512 GB SSD specifications.

**Table 42. 512 GB SSD specifications**

Capacity	512 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen3
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW ( PS4 - L1.2)</li> <li>● Active: 4.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 1 TB, PCIe NVMe Gen3 x4, SSD

The following table lists the M.2 2280, 1 TB SSD specifications.

**Table 43. 1 TB SSD specifications**

Capacity	1 TB
Height (approximate)	3.73 mm (0.15 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen3
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW ( PS4 - L1.2)</li> <li>● Active: 4.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C

**Table 43. 1 TB SSD specifications (continued)**

Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 512 GB, PCIe NVMe Gen3 x4, SSD, self-encrypting drive

The following table lists the M.2 2280, 512 GB SSD, self-encrypting drive specifications.

**Table 44. 512 GB SSD, self-encrypting drive specifications**

Capacity	512 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe Gen3
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW ( PS4 - L1.2)</li> <li>• Active: 4.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 512 GB, PCIe NVMe Gen4 x4, SSD

The following table lists the M.2 2280, 512 GB SSD specifications.

**Table 45. 512 GB SSD specifications**

Capacity	512 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)

**Table 45. 512 GB SSD specifications (continued)**

MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW ( PS4 - L1.2)</li> <li>• Active: 5 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 1 TB, PCIe NVMe Gen4 x4, SSD

The following table lists the M.2 2280, 1 TB SSD specifications.

**Table 46. 1 TB SSD specifications**

Capacity	1 TB
Height (approximate)	3.73 mm (0.15 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW ( PS4 - L1.2)</li> <li>• Active: 5 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 2 TB, PCIe NVMe Gen4 x4, SSD

The following table lists the M.2 2280, 2 TB SSD specifications.

**Table 47. 2 TB SSD specifications**

Capacity	2 TB
Height (approximate)	3.73 mm (0.15 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	4,000,797,360
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW ( PS4 - L1.2)</li> <li>● Active: 5 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 4 TB, PCIe NVMe Gen4 x4, SSD

The following table lists the M.2 2280, 4 TB SSD specifications.

**Table 48. 4TB SSD specifications**

Capacity	4 TB
Height (approximate)	3.73 mm (0.15 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	4,000,797,360
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW ( PS4 - L1.2)</li> <li>● Active: 5 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C



**Table 48. 4TB SSD specifications (continued)**

Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## Media-card reader

The following table lists the Media-card reader specifications on your computer.

**Table 49. Media-card reader (standard offering)**

<b>Media Supported (Maximum capacity supported will vary by Flash Media Types)</b>	
Media Supported	SDXC, SDHC, Micro-SD Secure Digital (SD) 4.0 UHS-II Secure Digital (SD) 3.0 UHS-I
Support Specification Versions	Secure Digital (SD) 4.0
<b>Power Source</b>	
Max Power Requirements	1.2 A
Supply Voltage Range	3.3 V
Power Consumption	MS 0.08 mA
<b>Environmental Operating Conditions (Non-Condensing)</b>	
Operating Temperature Range	0°C to 70°C
Relative Humidity Range	N/A
<b>Environmental Non-Operating Conditions (Non-Condensing)</b>	
Operating Temperature Range	N/A
Relative Humidity Range	N/A

## Accessories

The following table provides the list of supported accessories on your computer.

**Table 50. Accessories**

<b>Accessories</b>
Dell Performance Dock - WD19DCs
3Dconnexion SpaceMouse Wireless - 3DX-700066
Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
Wacom Cintiq Pro 24 Creative Pen Display Touch - DTH-2420
Dell Premier Rechargeable Wireless Mouse - MS7421W
Dell Mobile Adapter Speakerphone - MH3021P
Dell Pinnacle Backpack - CP9522

**Table 50. Accessories (continued)**

<b>Accessories</b>
Dell Pro Backpack 17 - PO1720P
Dell Pro Hybrid Briefcase Backpack 15 - PO1521HB
Dell UltraSharp 27 4K USB-C Monitor - U2720Q
Dell USB-C Mobile Adapter - DA310
Jabra Evolve2 85

## Security

### Software security

The following table provides the list of security software options for your computer.

**Table 51. Software Security**

<b>Software security options</b>
McAfee Small Business Security 30-day trial
McAfee Small Business Security 12-months subscription, digitally delivered
McAfee Small Business Security 24-months subscription, digitally delivered
McAfee Small Business Security 36-months subscription, digitally delivered

### Fingerprint reader on power button

The following table provides the list of fingerprint reader on power button specification on your computer.

**Table 52. Fingerprint reader on power button specifications**

<b>Category</b>	Fingerprint -reader
<b>Sensor technology</b>	Capacitive sensing
<b>Sensor resolution</b>	500 dpi
<b>Sensor pixel size</b>	108 x 88 pixels
<b>Dell ControlVault 3.0 support</b>	Yes
<b>Anti-spoofing</b>	Yes
<b>Template storage</b>	Dell ControlVault HW protected and encrypted
<b>Match on chip</b>	Yes
<b>FIPS 201 certified</b>	Yes

### FIPS fingerprint reader on palmrest

The following table provides the list of FIPS fingerprint reader on palmrest specification on your computer.

**Table 53. FIPS fingerprint reader on palmrest specifications**

<b>Category</b>	Fingerprint reader
<b>Sensor technology</b>	Capacitive sensing

**Table 53. FIPS fingerprint reader on palmrest specifications (continued)**

<b>Sensor resolution</b>	508 dpi
<b>Sensor pixel size</b>	256 x 360 pixels
<b>Dell ControlVault 3.0 support</b>	Yes
<b>Anti-spoofing</b>	Yes
<b>Template storage</b>	Dell ControlVault HW protected and encrypted
<b>Match on chip</b>	Yes
<b>FIPS 201 certified</b>	Yes

## Dell ControlVault 3.0

Dell ControlVault is a dedicated security processor with secure storage that provides hardware isolation for authentication. It helps reduce the risk of malware attacking critical login information associated with fingerprint readers and contacted or contactless smartcard readers.

**Table 54. Dell ControlVault 3.0 specifications**

<b>Title</b>	<b>Description</b>	<b>Dell ControlVault 3.0</b>
CPU technology	N/A	1 GHz ARM Cortex A7
RAM	N/A	1 MB
ROM	N/A	16 MB
TPM included	TPM enumeration included within ControlVault	No
Host Interface	N/A	USB 2.0
Fingerprint procession on chip	Fingerprint processing occurs within secure boundary of ControlVault	Yes
Windows WBF support	Support for Windows Biometric Framework when fingerprint reader is attached	Yes
FIPS 140-2 level 3 complaint	Device complaint with FIPS 140-2 level 3 requirements	Yes
FIPS 140-2 level 3 certified	Device certified with FIPS 140-2 level 3 requirements	Yes

## Systems management

**Table 55. Systems management**

<b>Systems management</b>
Dell Client Command Suite ( <a href="http://dell.com/command">dell.com/command</a> )
Factory installed Dell Client Command
Dell Command Update
Dell Power Manager
Dell Optimizer

## Color, material, and finish

This section details the color, material, and finish (CMF) specifications of your Precision 7560.




Titan Gray

**Table 56. CMF specifications**

A Cover (Top)	<ul style="list-style-type: none"> <li>• Aluminum/ CNC-S + Beadblast + Hairline Brushing</li> <li>• Anodized Titan Gray, Beadblast</li> <li>• Beadblast (Top)</li> <li>• Hairline (side wall)</li> <li>• PMS Cool Gray 9C</li> </ul>
B Cover (Hinge up)	<ul style="list-style-type: none"> <li>• Touch:               <ul style="list-style-type: none"> <li>○ E2E Glass: Plastic</li> <li>○ Apollo, Resin</li> <li>○ PMS 19-4205 TPG</li> </ul> </li> <li>• Non-touch:               <ul style="list-style-type: none"> <li>○ Plastic</li> <li>○ Apollo, Resin</li> <li>○ PMS 19-4205 TPG</li> </ul> </li> </ul>
C Cover (Palmrest)	<ul style="list-style-type: none"> <li>• Plastic : PC+50%GF + Paint</li> <li>• Apollo, Velvet</li> <li>• PMS 19-4205 TPG</li> </ul>
D Cover (Bottom)	<ul style="list-style-type: none"> <li>• Aluminum/ CNC-S + Beadblast + Hairline Brushing</li> <li>• Anodized Titan Gray, Beadblast</li> <li>• Beadblast (Top)</li> <li>• Hairline (side wall)</li> <li>• PMS Cool Gray 9C</li> </ul>

**NOTE:** Titan Gray, Dull – Cool Gray 9C = RGB 117 120 123 HEX/HTML 75787B CMYK 30 22 17 57

 **NOTE:** Apollo –19-4205 TPG RGB 64 65 69 HEX/HTML 404145 CMYK NA

## Keyboard shortcuts

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

Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press **2**, **2** is typed out; if you press **Shift + 2**, **@** is typed out.

The keys F1-F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).

However, if the function keys F1-F12 are needed for specific software applications, multi-media functionality can be disabled by pressing **Fn + Esc**. Subsequently, multi-media control can be invoked by pressing **Fn** and the respective function key. For example, mute audio by pressing **Fn + F1**.

**NOTE:** You can also define the primary behavior of the function keys (F1–F12) by changing **Function Key Behavior** in BIOS setup program.

**Table 57. List of keyboard shortcuts**

Function key	Primary behavior	Function key	Secondary behavior
F1	Audio Volume Mute	Fn + F1	Operating system and application specific F1 behavior
F2	Audio Volume Down/Decrease	Fn + F2	Operating system and application specific F2 behavior
F3	Audio Volume Up/Increase	Fn + F3	Operating system and application specific F3 behavior
F4	Microphone Mute	Fn + F4	Operating system and application specific F4 behavior
F5	KB Illumination/Backlight	Fn + F5	Operating system and application specific F5 behavior
F6	Brightness Decrease	Fn + F6	Operating system and application specific F6 behavior
F7	Brightness Increase	Fn + F7	Operating system and application specific F7 behavior
F8	Switch to external display	Fn + F8	Operating system and application specific F8 behavior
F9	Scroll Lock	Fn + F9	Operating system and application specific F9 behavior

**Table 57. List of keyboard shortcuts (continued)**

Function key	Primary behavior	Function key	Secondary behavior
F10	Print screen	Fn + F10	Operating system and application specific F10 behavior
F11	Home	Fn + F11	Operating system and application specific F11 behavior
F12	End	Fn + F12	Operating system and application specific F12 behavior

The **Fn** key is also used with selected keys on the keyboard to invoke other secondary functions.

**Table 58. Secondary behavior**



Function key	Behavior
Fn + PrtScr	Turn off/on wireless
Fn + B	Pause/Break
Fn + Insert	Sleep
Fn + S	Toggle scroll lock
Fn + H	Toggle between power and battery-status light/hard-drive activity light
Fn + R	System request
Fn + Ctrl	Open application menu
Fn + Esc	Toggle Fn-key lock
Fn + PgUp	Page up
Fn + PgDn	Page down
Fn + Home	Home
Fn + End	End

# Getting help and contacting Dell

## Self-help resources


You can get information and help on Dell products and services using these self-help resources:


**Table 59. Self-help resources**

Self-help resources	Resource location
Information about Dell products and services	<a href="http://www.dell.com">www.dell.com</a>
My Dell app	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	<a href="http://www.dell.com/support/windows">www.dell.com/support/windows</a> <a href="http://www.dell.com/support/linux">www.dell.com/support/linux</a>
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals and documents.	Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at <a href="http://www.dell.com/support">www.dell.com/support</a> .  For more information on how to find the Service Tag for your computer, see <a href="#">Locate the Service Tag on your computer</a> .
Dell knowledge base articles for a variety of computer concerns	<ol style="list-style-type: none"> <li>1. Go to <a href="http://www.dell.com/support">www.dell.com/support</a>.</li> <li>2. On the menu bar at the top of the Support page, select <b>Support &gt; Knowledge Base</b>.</li> <li>3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.</li> </ol>

## Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see [www.dell.com/contactdell](http://www.dell.com/contactdell).

 **NOTE:** Availability varies by country/region and product, and some services may not be available in your country/region.

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