Precision 7760

Setup and specifications

Regulatory Model: P44E
Regulatory Type: P44E002
July 2021
Rev. A01

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 Precision 7760

NOTE: The images in this document may differ from your computer depending on the configuration you ordered.

1. Connect the power adapter and press the power button.



NOTE: To conserve battery power, the battery might enter power saving mode. Connect the power adapter and press the power button to turn on the computer.

2. Finish operating system setup.

   For Ubuntu:

   Follow the on-screen instructions to complete the setup. For more information about installing and configuring Ubuntu, see the knowledge base articles SLN151664 and SLN151748 at www.dell.com/support.

   For Windows:

   Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:

   - Connect to a network for Windows updates.

     NOTE: If connecting to a secured wireless network, enter the password for the wireless network access when prompted.

   - If connected to the internet, sign-in with or create a Microsoft account. If not connected to the internet, create an offline account.
   - On the **Support and Protection** screen, enter your contact details.

3. Locate and use Dell apps from the Windows Start menu—Recommended.

Table 1. Locate Dell apps

Resources	Description
	**Dell Product Registration** Register your computer with Dell.
	**Dell Help & Support** Access help and support for your computer.
	**SupportAssist** SupportAssist is the smart technology that keeps your computer running at its best by optimizing settings, detecting issues, removing viruses and notifies when you need to make system updates. SupportAssist proactively checks the health of your system's hardware and software. When an issue is detected, the necessary system state information is sent to Dell to begin troubleshooting. SupportAssist is preinstalled on most of the Dell devices running Windows operating system. For more information, see SupportAssist for Home PCs User's Guide on www.dell.com/serviceabilitytools. **NOTE:** In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.
	**Dell Update** Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the knowledge base article 000149088 at www.dell.com/support.
	**Dell Digital Delivery** Download software applications, which are purchased but not pre-installed on your computer. For more information about using Dell Digital Delivery, see the knowledge base article 000129837 at www.dell.com/support.

2

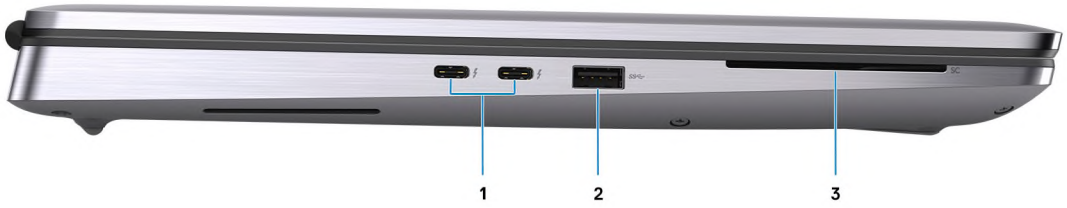
Views of Precision 7760

Right



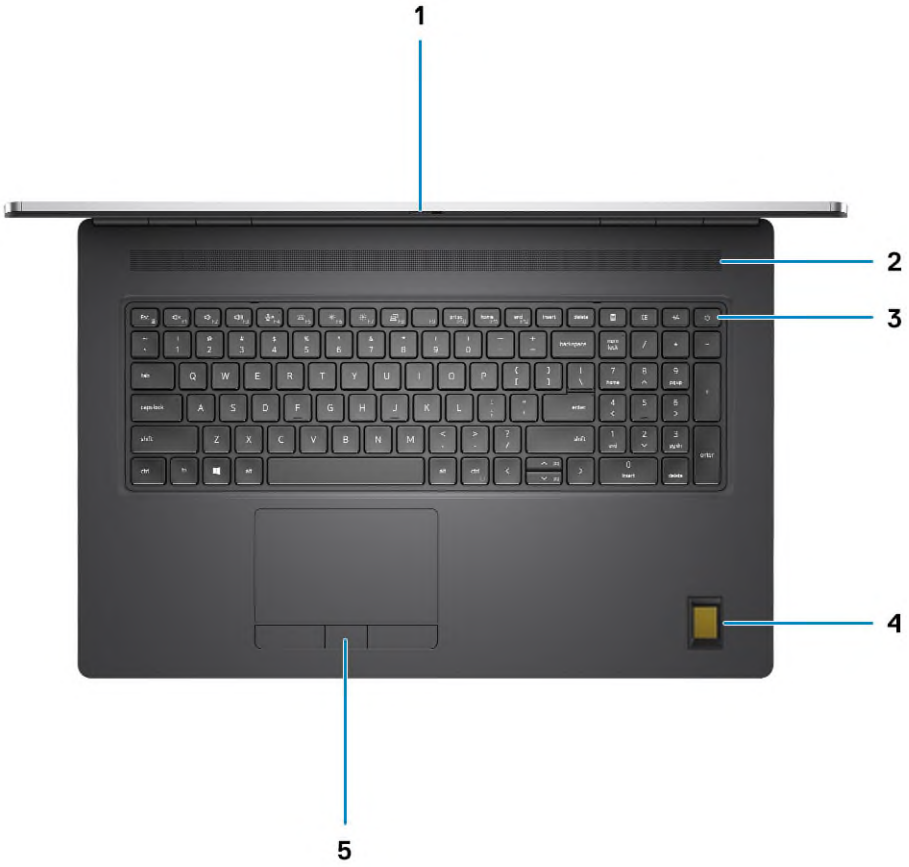
1. SD-card slot
2. Global headset jack
3. USB 3.2 Gen 1 Type-A port
4. USB 3.2 Gen 1 Type-A port with PowerShare
5. Wedge-shaped lock slot

Left



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

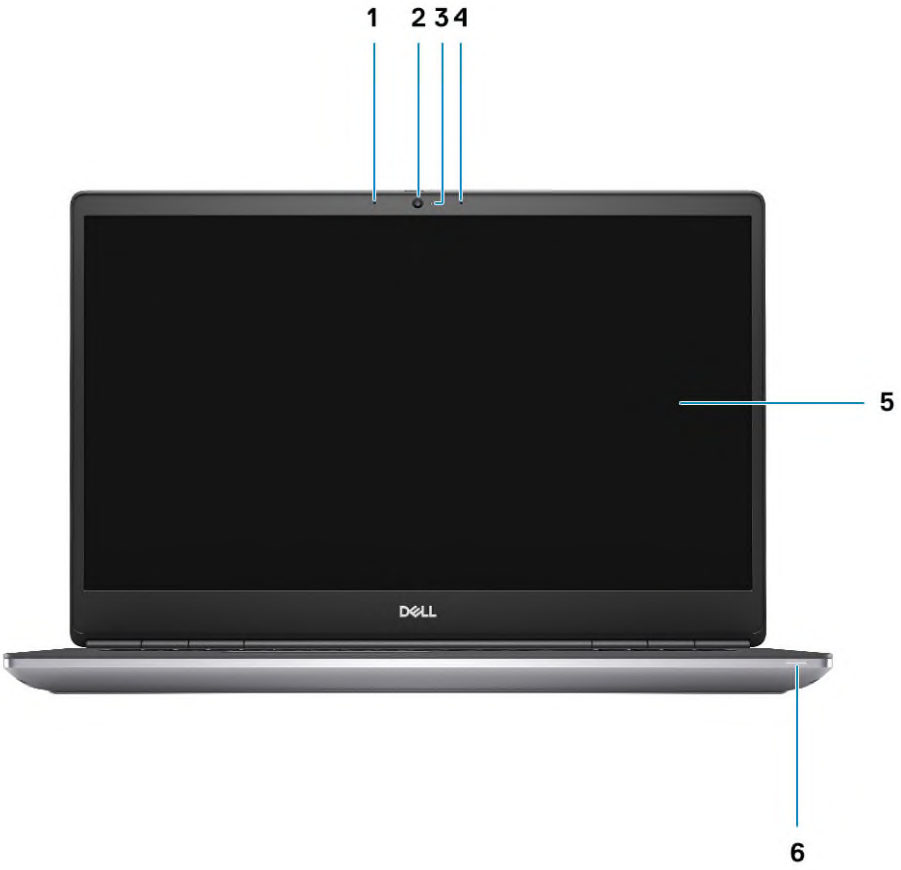
Top



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

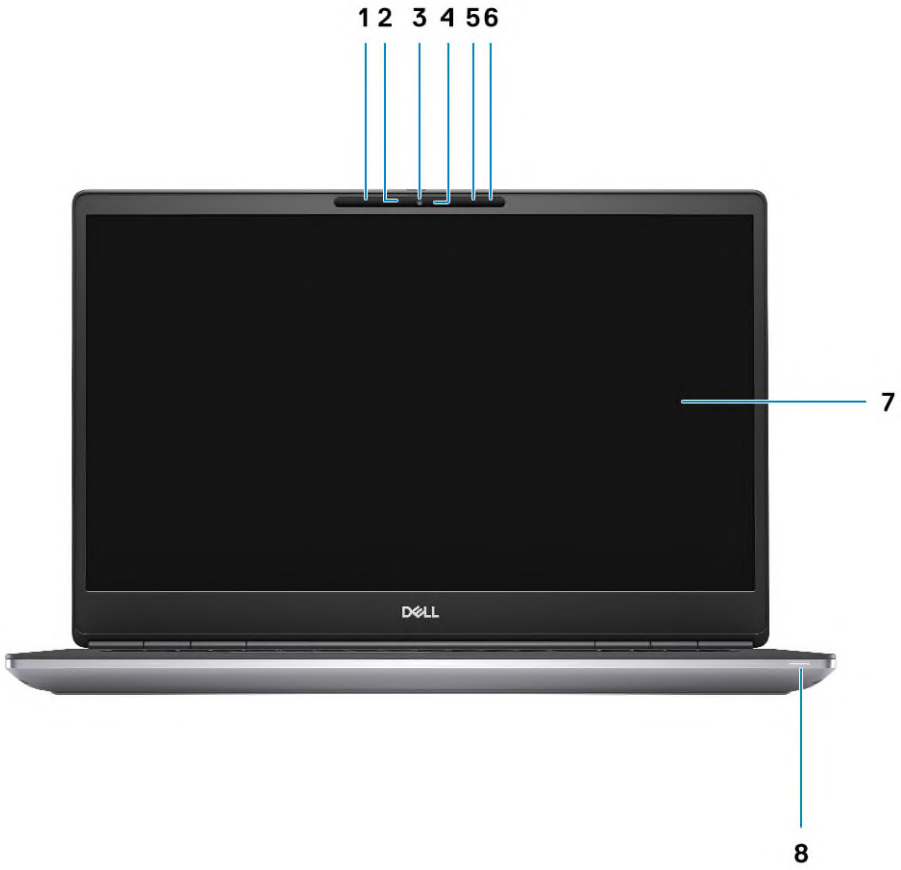
Front

Front view with RGB camera



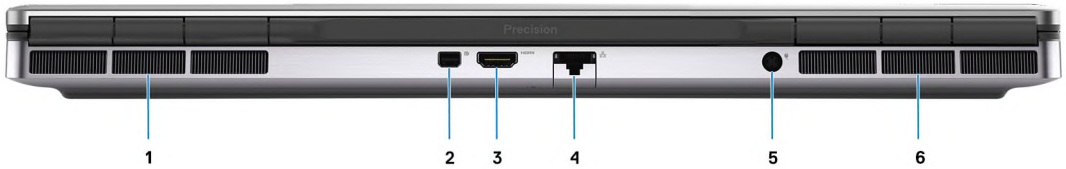
1. Microphone
2. Camera
3. Camera-status light
4. Microphone
5. Display
6. Battery-status light/Diagnostic-status light

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

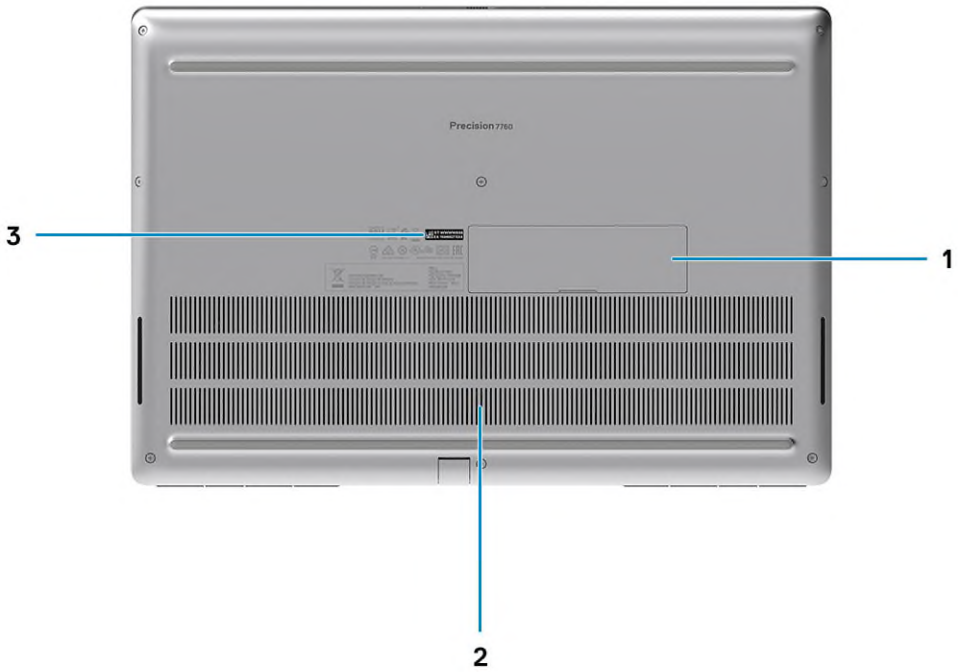
Back



1. Air vent
2. Mini DisplayPort 1.4
3. HDMI 2.1 port

4. RJ45 Ethernet port
5. Power adapter port
6. Air Vent

Bottom



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

Battery charge and status light

The following table lists the battery charge and status light behavior of your Precision 7760.

Table 2. 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.

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Specifications of Precision 7760

Dimensions and weight

The following table lists the height, width, depth, and weight of your Precision 7760.

Table 3. Dimensions and weight

Description	Values
Height:	
Front height	25.98 mm (1.02 in.)
Rear height	28.60 mm (1.13 in.)
Width	400.00 mm (15.75 in.)
Depth	263.60 mm (10.38 in.)
Weight **NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability.	3.01 kg (6.65 lb)

Processor

The following table lists the details of the processors that are supported by your Precision 7760 .

Table 4. Processor

Description	Option one	Option two	Option three	Option four	Option five	Option six	Option seven
Processor type	11th Generation Intel Core i5-11500H, vPro	11th Generation Intel Core i7-11600H	11th Generation Intel Core i7-11800H	11th Generation Intel Core i7-11850H, vPro	11th 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 7760.

Table 5. Chipset

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

Operating system

Your Precision 7760 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Pro National Academic, 64-bit
- Windows 11 Pro for Workstations, 64-bit
- Windows 10 Home, 64-bit
- Windows 10 Pro, 64-bit
- Windows 10 Pro Education, 64-bit
- Windows 10 Pro China, 64-bit
- Windows 10 Enterprise, 64-bit
- RHEL 8.4
- Ubuntu 20.04 LTS, 64-bit

Memory

The following table lists the memory specifications of your Precision 7760.

Table 6. Memory specifications

Description	Values
Memory slots	Four-SODIMM slots
Memory type	DDR4
Memory speed	• 3200 MHz • 3466 MHz
Maximum memory configuration	128 GB
Minimum memory configuration	4 GB
Memory size per slot	4 GB, 8GB, 16 GB, 32 GB
Memory configurations supported	• 8 GB, 1 x 8 GB, DDR4, 3200 MHz, ECC • 16 GB, 2 x 8 GB, DDR4, 3200 MHz, ECC

Table 6. Memory specifications (continued)

Description	Values
	• 32 GB, 2 x 16 GB, DDR4, 3200 MHz, ECC • 32 GB, 4 x 8 GB, DDR4, 3200 MHz, ECC • 64 GB, 2 x 32 GB, DDR4, 3200 MHz, ECC • 64 GB, 4 x 16 GB, DDR4, 3200 MHz, ECC • 96 GB, 2 x 16 GB + 2 x 32 GB, DDR4, 3200 MHz, ECC • 128 GB, 4 x 32 GB, DDR4, 3200 MHz, ECC • 8 GB, 1 x 8 GB, DDR4, 3200 MHz, Non ECC • 16 GB, 2 x 8 GB, DDR4, 3200 MHz, Non ECC • 32 GB, 2 x 16 GB, DDR4, 3200 MHz, Non ECC • 32 GB, 4 x 8 GB, DDR4, 3200 MHz, Non ECC • 64 GB, 2 x 32 GB, DDR4, 3200 MHz, Non ECC • 64 GB, 4 x 16 GB, DDR4, 3200 MHz, Non ECC • 96 GB, 2 x 16 GB + 2 x 32 GB, DDR4, 3200 MHz, Non ECC • 128 GB, 4 x 32 GB, DDR4, 3200 MHz, Non ECC • 16 GB, 2 x 8 GB, DDR4, 3466 MHz SuperSpeed, Non ECC • 32 GB, 4 x 8 GB, DDR4, 3466 MHz SuperSpeed, Non ECC • 32 GB, 2 x 16 GB, DDR4, 3466 MHz SuperSpeed, Non ECC • 64 GB, 4 x 16 GB, DDR4, 3466 MHz SuperSpeed, Non ECC

External ports

The following table lists the external ports of your Precision 7760.

Table 7. External ports

Description	Values
Network port	One RJ-45 Ethernet port 10/100/1000 Mbps
USB ports	• Two USB 3.2 Gen 1 Type-A ports • One USB 3.2 Gen 1 Type-A port with PowerShare • Two USB 3.2 Gen 2 Type-C Thunderbolt 4 ports
Audio port	One global headset jack
Video port	• One HDMI 2.1 port • One mini DisplayPort 1.4
Media-card reader	One SD-card slot
Smart card reader	One smart-card reader
Power-adapter 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 7760.

Table 8. Internal slots

Description	Values
M.2	A combination of four M.2 solid-state drives (one M.2 2280 and/or three M.2 2230 or M.2 2280) **NOTE:** To learn more about the features of different types of M.2 cards, see the knowledge base article 000144170 at www.dell.com/support.
Micro Subscriber Identity Module (uSIM) slot	One slot for microSIM card

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Precision 7760.

Table 9. 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 7760.

Table 10. 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	• WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth	Bluetooth 5.2

WWAN module

The following table lists the Wireless Wide Area Network (WWAN) module supported on your Precision 7760.

Table 11. 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	• 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) • NR (1, 2, 3, 5, 7, 8, 12, 20, 28, 38, 41, 66, 71, 77, 78, 79) • HSPA+ (1, 2, 4, 5, 6, 8, 9,19)
Wireless standards	• NR FR1(Sub6) FDD/TDD • LTE FDD/TDD • WCDMA/HSPA+ • GPS/GLONASS/Beidou/Galileo
Encryption	Supported
Global Navigation Satellite System (GNSS)	Multi-constellation GNSS receiver
NOTE: For instructions on how to find your computer's IMEI (International Mobile Station Equipment Identity) number, see the knowledge base article 000143678 at www.dell.com/support.	

Audio

The following table lists the audio specifications of your Precision 7760.

Table 12. 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

Table 12. Audio specifications (continued)

Description	Values
Subwoofer output	Not supported
Microphone	Dual-array microphones

Storage

This section lists the storage options on your Precision 7760.

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 four M.2 solid-state drives (one M.2 2280 and/or three M.2 2230 or M.2 2280)

Table 13. 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 7760.

Table 14. Media-card reader specifications

Description	Values
Media-card type	SD card
Media-cards supported	• Secure Digital (SD) • Secure Digital High Capacity (SDHC) • Secure Digital Extended Capacity (SDXC)
NOTE: 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 7760.

Table 15. Keyboard specifications

Description	Values
Keyboard type	Backlit keyboard
Keyboard layout	QWERTY

Table 15. Keyboard specifications (continued)

Description	Values
Number of keys	• United States and Canada: 101 keys • United Kingdom: 102 keys • Japan: 105 keys
Keyboard size	X=18.70 mm key pitch Y=18.05 mm key pitch
Keyboard shortcuts	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. **NOTE:** You can define the primary behavior of the function keys (F1–F12) changing **Function Key Behavior** in BIOS setup program.

Camera

The following table lists the camera specifications of your Precision 7760.

Table 16. Camera specifications

Description		Values
Number of cameras		One
Camera type		There are 2 camera options: • HD RGB camera • IR camera
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 7760.

Table 17. Touchpad specifications

Description		Values
Touchpad resolution:		>300 dpi
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, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Power adapter

The following table lists the power adapter specifications of your Precision 7760.

Table 18. Power adapter specifications

Description		Values
Type		240 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)		3.50 A
Output current (continuous)		12.30 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 7760.

Table 19. 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

Table 19. Battery specifications (continued)

Description		Option one	Option two	Option three
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:				
	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) **NOTE:** 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 *Me and My Dell* on www.dell.com.		**Express Charge Method:** • 0°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16°C - 45°C (60.8°F to 113°F) normal express charge • 46°C - 50°C (114.8°F to 122°F) maximum allowable charge time from 0 to 100% RSOC is 3 hours **Standard Charge/ Predominately AC User Charge Method:** • 0°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16°C - 50°C (60.8°F to 122°F)maximum allowable charge time from 0 to 100% RSOC is 3 hours **Express Charge Boost Charge Method (Fast Charge for Initial 35%):** • 16°C - 45°C (60.8°F to 113°F) target charge time from 0 to 35% RSOC is 20 mins for Accelerated Charge	**Express Charge Method:** • 0°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16°C - 45°C (60.8°F to 113°F) normal express charge • 46°C - 50°C (114.8°F to 122°F) maximum allowable charge time from 0 to 100% RSOC is 3 hours **Standard Charge/ Predominately AC User Charge Method:** • 0°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16°C - 50°C (60.8°F to 122°F)maximum allowable charge time from 0 to 100% RSOC is 3 hours **Express Charge Boost Charge Method (Fast Charge for Initial 35%):** • 16°C - 45°C (60.8°F to 113°F) target charge time from 0 to 35% RSOC is 20 mins for Accelerated Charge	**Standard Charge/ Predominately AC User Charge Method:** • 0°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16°C - 50°C (60.8°F to 122°F)maximum allowable charge time from 0 to 100% RSOC is 3 hours
Coin-cell battery		Supported	Supported	Supported

Table 19. Battery specifications (continued)

Description	Option one	Option two	Option three
NOTE: 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. **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.**			

Display

The following table lists the display specifications of your Precision 7760.

Table 20. Display specifications

Description		Option one	Option two	Option three
Display type		17.3-inch Full High Definition (FHD)	17.3-inch Full High Definition (FHD)	17.3-inch Ultra High Definition (UHD)
Display-panel technology		Wide-viewing angle (WVA)	Wide-viewing angle (WVA), WLED	Wide-viewing angle (WVA), WLED
Display-panel dimensions (active area):				
	Height	214.81 mm (8.46 in.)	214.81 mm (8.46 in.)	214.81 mm (8.46 in.)
	Width	381.89 mm (15.04 in.)	381.89 mm (15.04 in.)	381.89 mm (15.04 in.)
	Diagonal	438.16 mm (17.30 in.)	438.16 mm (17.30 in.)	438.16 mm (17.30 in.)
Display-panel native resolution		1920 x 1080	1920 x 1080	3840 x 2160
Luminance (typical)		220 nits	500 nits	500 nits
Megapixels		2.07	2.07	8.29
Color gamut		45% NTSC	100% DCIP3	100% Adobe
Pixels Per Inch (PPI)		127 ppi	127 ppi	255 ppi
Contrast ratio (typ)		600:1	600:1	1200:1
Response time (max)		35 ms	35 ms	35 ms
Refresh rate		60 Hz	60 Hz	120 Hz
Horizontal view angle		+/- 80 degrees(min)	+/- 80 degrees(min)	+/- 80 degrees(min)
Vertical view angle		+/- 80 degrees(min)	+/- 80 degrees(min)	+/- 80 degrees(min)
Pixel pitch		0.198 x 0.198 mm	0.198 x 0.198 mm	0.099 x 0.099 mm
Power consumption (maximum)		5.20 W	9 W	12.2 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	Anti-glare

Table 20. Display specifications (continued)

Description	Option one	Option two	Option three
Touch options	No	No	No

Fingerprint reader (optional)

The following table lists the specifications of the optional fingerprint reader of your Precision 7760.

Table 21. 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 7760.

Table 22. GPU—Integrated

Controller	Memory size	Processor
Intel UHD Graphics	Shared system memory	Intel Xeon/11th 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 7760.

Table 23. GPU—Discrete

Controller	Memory size	Memory type
NVIDIA T1200	4 GB	GDDR6
NVIDIA RTX A3000	6 GB	GDDR6
NVIDIA RTX A4000	8 GB	GDDR6
NVIDIA RTX A5000	16 GB	GDDR6

Multiple display support matrix

The following table lists the multiple display support matrix supported by your Precision 7760.

Table 24. 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 • mDP or HDMI:4K@60	• HDMI: 4K@60Hz • mDP: 4K@60Hz • Type-C:4K@60Hz	(Internal Display Off) • HDMI: 4K@60Hz • mDP: 4K@60Hz • Type-C : 4K@60Hz • Type-C : 4K@60Hz
Hybrid mode	mDP/HDMI/Type-C:8K@60Hz	• mDP/HDMI/Type-C:8K@60Hz*1 • mDP/HDMI/Type-C:8K@60Hz*1	• HDMI: 8K@60Hz • mDP: 8K@60Hz • Type-C:8K@60Hz	(Internal Display Off) • HDMI: 8K@60Hz • mDP: 8K@60Hz • Type-C : 4K@60Hz • Type-C : 4K@60Hz
Hybrid mode with Direct Output	mDP/HDMI/Type-C:8K@60Hz	• mDP/HDMI/Type-C:8K@60Hz*1 • mDP/HDMI/Type-C:8K@60Hz*1	• HDMI: 8K@60Hz • mDP: 4K@60H • Type C: 4K@60Hz	(Internal Display Off) • HDMI: 4K@60Hz • mDP: 4K@60Hz • Type-C : 4K@60Hz • Type-C : 4K@60Hz
Discrete Mode	mDP/HDMI/Type-C:8K@60Hz	• mDP/HDMI/Type-C:8K@60Hz*1 • mDP/HDMI/Type-C:8K@60Hz*1	(Internal Display Off) • HDMI: 8K@60Hz • mDP: 4K@60Hz • Type-C : 4K@60Hz	(Internal Display Off) • HDMI: 4K@60Hz • mDP: 4K@60Hz • Type-C : 4K@60Hz • Type-C : 4K@60Hz

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 25. Supported display via docking station under Hybrid mode

Hybrid mode		
TBT Dock	Type-C TBT + DP + DP + HDMI/MFDP: *4k@60HZ + 2k@60Hz*3	• Up to 3 if internal display on • Up to 4 if internal display off • Connect either HDMI or MFDP only, do not connect both of them
Single Cable Dock	• DP + DP + HDMI : FHD@60Hz*3 • DP + DP + MFDP : FHD@60Hz*3	
Dual Cable Dock	• DP + DP + HDMI: 2k@60Hz*3 • DP + DP + MFDP: 2k@60Hz*3	

Table 26. Supported display via docking station under Discrete mode

Discrete mode		
TBT Dock	• DP + DP: 8K@60Hz*1 • DP + HDMI: 4K@60Hz*2 • MFDP/HDMI+DP1+DP2: 4K@60Hz*3 • TBT + DP1+DP2+HDMI: 4K@60Hz*4	• Up to 3 if internal display on • Up to 4 if internal display off • Connect either HDMI or MFDP only, do not connect both of them
Single Cable Dock	• DP + DP: 4K@60Hz *2 • DP + HDMI: 4 K@60Hz*2 • DP + MFDP: 4K@60Hz*2	
Dual Cable Dock	• DP + DP: 8K@60Hz*1 • DP+DP+HDMI/MFDP: 4K@60Hz*3	

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

Hardware security

The following table lists the hardware security of your Precision 7760.

Table 27. 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 (dell.com/command)
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 Certificatication for TPM (Trusted Computing Group)
Two Optional fingerprint readers: • On Power button • FIPS fingerprint reader in the palmrest
FIPS 140-2 certification for TPM
TCG Certificatication 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: • Touch Fingerprint Reader (in Power Button) with Control Vault 3.0 Advanced Authentication with FIPS 140-2 Level 3 Certification. • Contacted Smart Card and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification • Touch Fingerprint Reader (in Power Button), Contacted Smart Card, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification. • 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. • Optional Face IR camera (Windows Hello compliant) with Proximity Sensor

Smart-card reader

Contactless smart-card reader

The following table lists the contactless smart-card reader specifications supported by your Precision 7760.

Table 28. 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 www.emvco.com	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 28. 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 29. 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 7760.

Table 30. 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 30. 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 ectronic payment standards) smart card standards as posted to www.emvco.com	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 7760.

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

Table 31. 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.

4

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 32. 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 32. 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 33. 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

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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 34. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell app	
Tips	
Contact Support	In Windows search, type `Contact Support`, and press Enter.
Online help for operating system	www.dell.com/support/windows
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 www.dell.com/support. For more information on how to find the Service Tag for your computer, see Locate the Service Tag on your computer.
Dell knowledge base articles for a variety of computer concerns	1. Go to www.dell.com/support. 2. On the menu bar at the top of the Support page, select **Support** > **Knowledge Base**. 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.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see 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.