Precision 7670

Setup and Specifications

Regulatory Model: P114F
Regulatory Type: P114F001
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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 7670

About this task

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

Steps

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, search in the Knowledge Base Resource at Dell Support Site.

   For Windows:

   Follow the on-screen instructions to complete the setup. When setting up, Dell Technologies 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 Serviceability Tools at the Dell Support Site. **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, search in the Knowledge Base Resource at Dell Support Site.
	**Dell Digital Delivery** Download software applications, which are purchased but not preinstalled on your computer. For more information about using Dell Digital Delivery, search in the Knowledge Base Resource at Dell Support Site.

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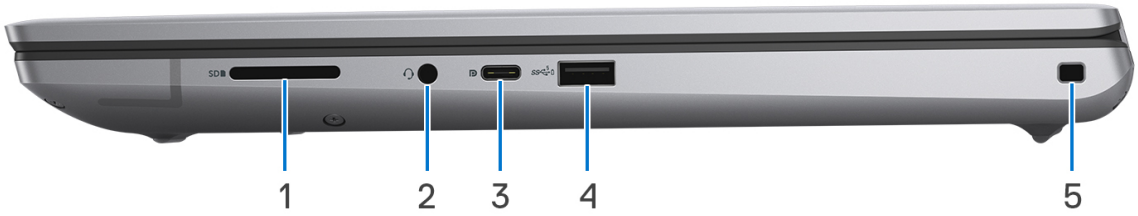
Views of Precision 7670

Right



1. **SD-card slot**

   Insert a SD card to expand your storage and store photos, videos, and data from your computer. The computer supports the following card types:

   - Secure Digital (SD)
   - Secure Digital High Capacity (SDHC)
   - Secure Digital Extended Capacity (SDXC)

2. **Universal audio jack**

   Connect headphones or a headset (headphone and microphone combo).

3. **USB 3.2 Gen 2 Type-C port with DisplayPort alt mode**

   Connect devices such as external storage devices, printers, and external displays. Provides data transfer rate of up to 10 Gbps.

   Supports DisplayPort 1.4 and also enables you to connect an external display using a display adapter.

   NOTE: A USB Type-C to DisplayPort adapter (sold separately) is required to connect a DisplayPort device.

4. **USB 3.2 Gen 1 port with PowerShare**

   Connect devices such as external storage devices and printers.

   Provides data transfer speeds up to 5 Gbps. PowerShare enables you to charge your USB devices even when your computer is turned off.

   NOTE: If your computer is turned off or in hibernate state, you must connect the power adapter to charge your devices using the PowerShare port. You must enable this feature in the BIOS setup program.

   NOTE: Certain USB devices may not charge when the computer is turned off or in sleep state. In such cases, turn on the computer to charge the device.

5. **Security-cable slot (wedge-shaped)**

   Attach a security cable to prevent unauthorized movement of your computer.

Left

1. **Power-adapter port - 7.4 mm**

   Connect a power adapter to provide power to your computer and charge the battery.

2. **Network port**

   Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access, with a transfer rate of 10/100/1000 Mbps.

3. **HDMI 2.0a port (integrated graphics)/HDMI 2.1 port (discrete graphics)**

   Connect to a TV, external display or another HDMI-in enabled device. Provides video and audio output.

4. **USB 3.2 Gen 1 port**

   Connect peripherals such as keyboard, mice, and printers and external storage devices. Supports data transfer speeds up to 5 Gbps.

5. **Thunderbolt 4 ports with USB Type-C**

   Supports USB4, DisplayPort 1.4, Thunderbolt 4 and also enables you to connect to an external display using a display adapter. Provides data transfer rates of up to 40 Gbps for USB4 and Thunderbolt 4.

   NOTE: You can connect a Dell Docking Station to the Thunderbolt 4 ports. For more information, search in the Knowledge Base Resource at Dell Support Site.

   NOTE: A USB Type-C to DisplayPort adapter (sold separately) is required to connect a DisplayPort device.

   NOTE: USB4 is backward compatible with USB 3.2, USB 2.0, and Thunderbolt 3.

   NOTE: Thunderbolt 4 supports two 4K displays or one 8K display.

6. **Smart card reader**

Top

1. **Privacy shutter**

   Slide the privacy shutter to cover the camera lens and protect your privacy when the camera is not in use.

2. **Power button with optional finger print reader**

   Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

   Press to put the computer in sleep state if it is turned on.

   Press and hold for four seconds to force shut-down the computer.

   Press and hold for 25 seconds to force Real Time Clock (RTC) battery reset.

3. **Precision touchpad**

   Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two fingers tap to right-click.

1. **Touchpad**

   Move your finger on the touchpad to move the mouse pointer. Tap to left-click and two fingers tap to right-click.

2. **Left-click area**

   Press to left-click.

3. **Right-click area**

Press to right-click.

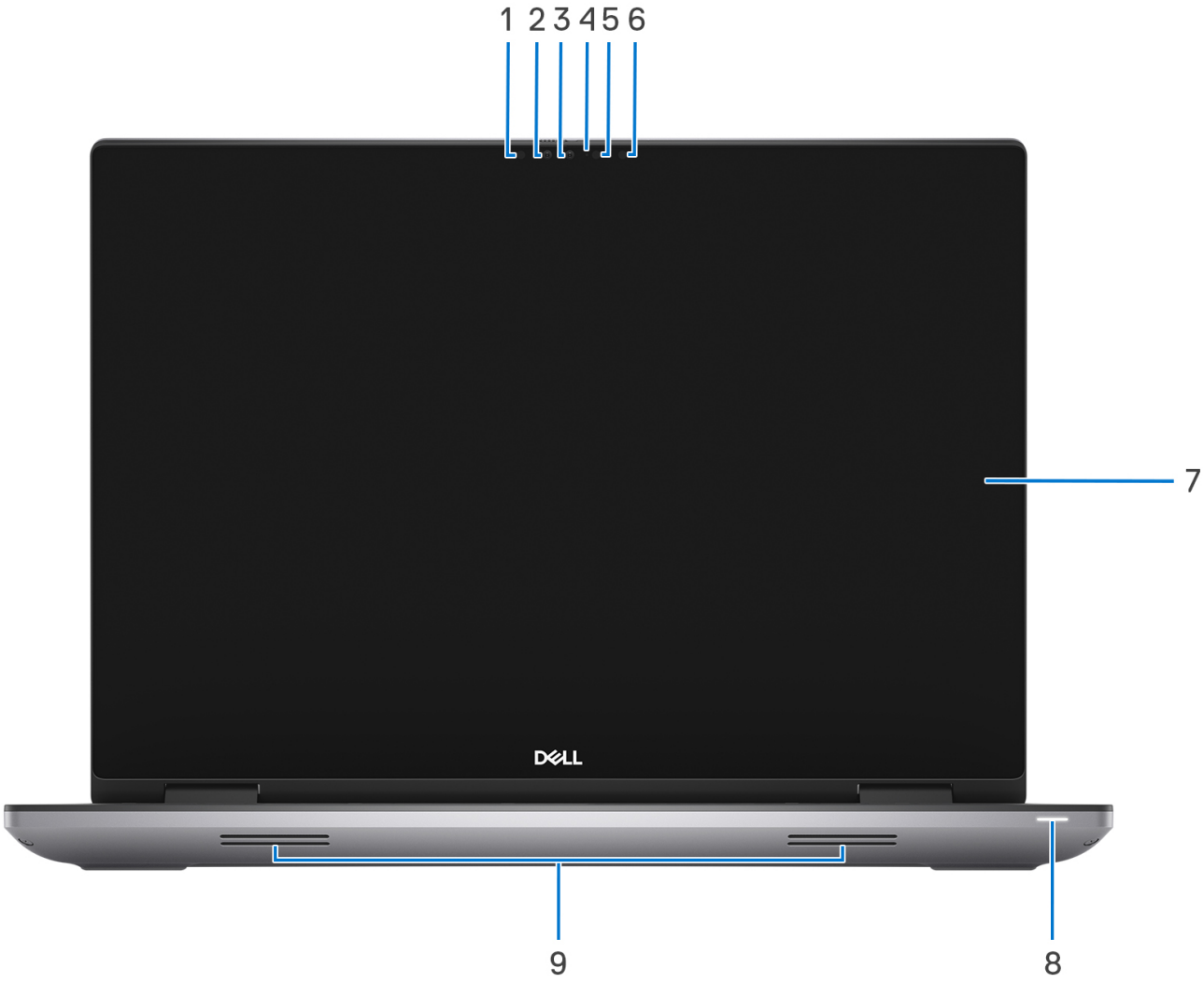
4. **Power button**

   Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

   When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for 10 seconds to force shut-down the computer.

   NOTE: You can customize the power-button behavior in Windows. For more information, see *Me and My Dell* at Dell Support Mannuals.

Display



1. **Left IR LED**

   Emits infrared light, which enables the infrared camera to sense and track motion.

2. **IR camera**

   Enhances security when paired with Windows Hello face authentication.

3. **RGB camera**

   This camera supports standard RGB imaging for photos and videos.

4. **LED light**

5. **Right IR LED**

   Emits infrared light, which enables the infrared camera to sense and track motion.

6. **Ambient-light sensor**

   The sensor detects the ambient light and automatically adjusts the keyboard backlight and display brightness.

7. **LCD panel**

   Provides visual output to the user.

8. **Power-status light**

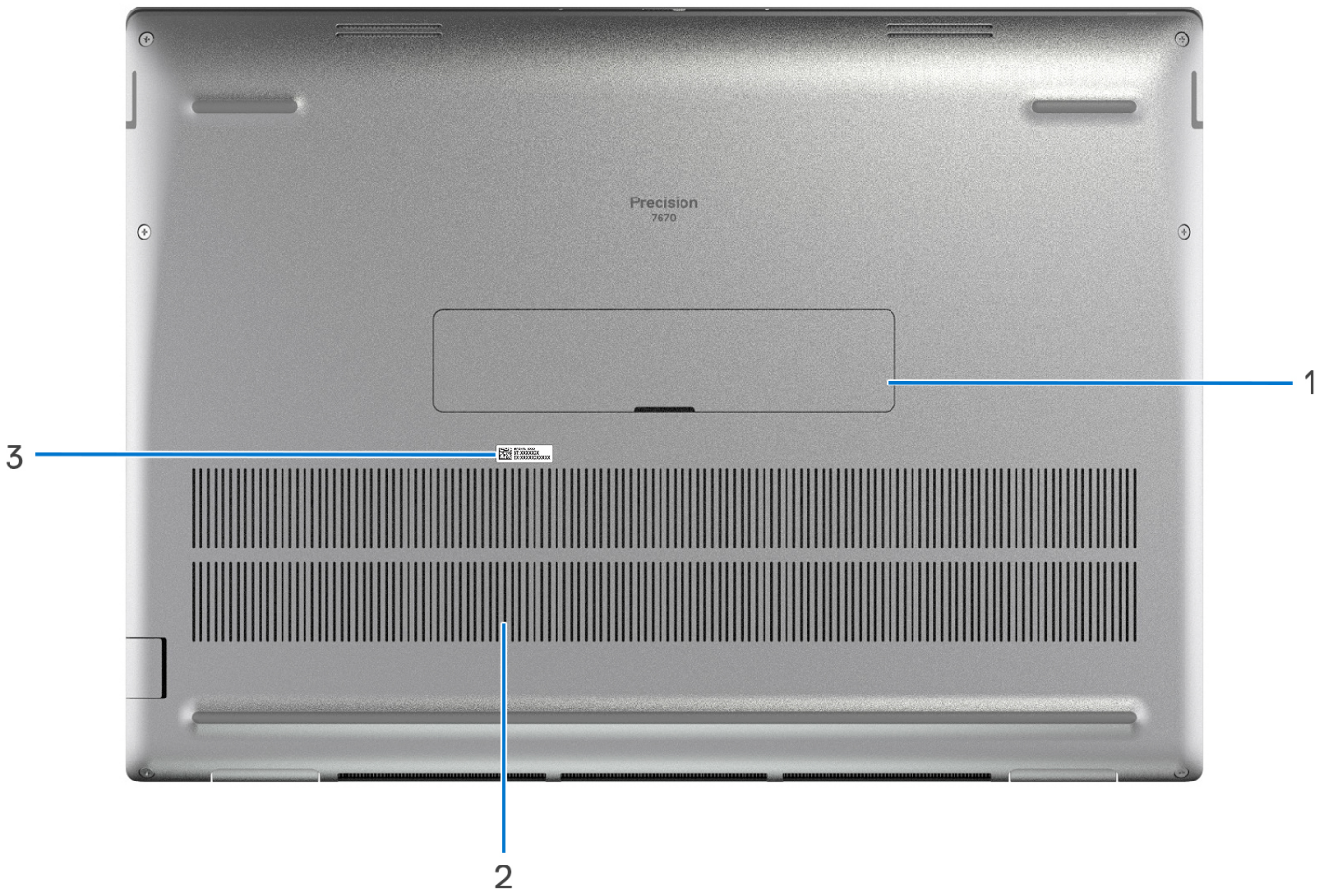
   Indicates the power state of the computer.

   White light—Power adapter is connected and the battery is charging.

9. **Speakers**

   Provide audio output.

Bottom



1. **Solid-state drive door**
2. **Air vents**

   Air is blown out by the internal fans through the air vents.

NOTE: To prevent the computer from overheating, ensure that the air vents are not blocked when the computer is running.

3. **Service Tag and regulatory labels**

   The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information. The regulatory label contains regulatory information of your computer.

Using the privacy shutter

1. Slide the privacy shutter to the left to access the camera lens.
2. Slide the privacy shutter to the right to cover the camera lens.

Service Tag

The service tag is a unique alphanumeric identifier that allows Dell service technicians to identify the hardware components in your computer and access warranty information.

Battery charge and status light

The following table lists the battery charge and status light behavior of your Precision 7670.

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) - Computer is turned on.
- S4 (Hibernate) - The computer consumes the least power compared to all other sleep states. The computer is almost at an OFF state. The context data is written to a storage device so that you can resume everything from where you left, once the computer is turned on.
- S5 (OFF) - The computer is in a shutdown state.

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Specifications of Precision 7670

Dimensions and weight

The following table lists the height, width, depth, and weight of your Precision 7670.

Table 3. Dimensions and weight

Description	Values
Height:	
Front height	0.88 in. (22.30 mm)
Rear height	0.92 in. (23.20 mm)
Width	14.02 in. (356.00 mm)
Depth	10.18 in. (258.34 mm)
Weight (Minimum) **NOTE:** The weight of your computer depends on the configuration that is ordered and manufacturing variability.	5.75 lb (2.60 kg)

Processor

The following table lists the details of the processors that are supported in your Precision 7670.

Table 4. Processor

Description	Option one	Option two	Option three
Processor type	12th Generation Intel Core i5-12600HX, vPro	12th Generation Intel Core i7-12850HX, vPro	12th Generation Intel Core i9-12950HX, vPro
Processor wattage	55 W	55 W	55 W
Processor core count	4 P cores and 8 E cores	8 P cores and 8 E cores	8 P cores and 8 E cores
Processor thread count	16	24	24
Processor speed	P cores 2.50 GHz to 4.60 GHz, E cores 1.80 GHz to 3.30 GHz	P cores 2.10 GHz to 4.80 GHz, E cores 1.50 GHz to 3.40 GHz	P cores 2.30 GHz to 5.00 GHz, E cores 1.70 GHz to 3.60 GHz
Processor cache	18 MB	25 MB	30 MB
Integrated graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics

Chipset

The following table lists the details of the chipset that is supported in your Precision 7670.

Table 5. Chipset

Description	Values
Chipset	Intel PCH-LP
Processor	Intel 12th Generation Intel Core i5/i7/i9
DRAM bus width	64-bit
Flash EPROM	64 MB
PCIe bus	Up to Gen4

Operating system

Your Precision 7670 supports the following operating systems:

- Windows 11 Pro, 64-bit with DGR
- Windows 11 Pro National Education, 64-bit
- Windows 11 Home, 64-bit with DGR
- Windows 10 Home, 64-bit (factory installed downgrade with a Windows 11 Professional License)
- Windows 10 Pro, 64-bit (factory installed downgrade with a Windows 11 Professional License)
- Windows 10 Enterprise, 64-bit (factory installed downgrade with a Windows 11 Professional License)
- Windows 10 Pro Education, 64-bit (factory installed downgrade with a Windows 11 Professional License)
- Windows 10 Pro China, 64-bit (factory installed downgrade with a Windows 11 Professional License)
- RedHat Enterprise Linux 8.6
- Ubuntu 20.04 LTS, 64-bit

Memory

The following table lists the memory specifications that are supported by your Precision 7670.

Table 6. Memory specifications

Description	Values
Memory slots	• CAMM interface • SODIMM
Memory type	DDR5
Memory speed	• 3600 MHz • 4800 MHz
Maximum memory configuration	• 128 GB - CAMM module • 64 GB - SODIMM
Minimum memory configuration	• 16 GB - CAMM module • 8 GB - SODIMM
Memory size per slot	8 GB, 16 GB, 32 GB, 64 GB, 128 GB

Table 6. Memory specifications (continued)

Description	Values
Memory configurations supported	• 16 GB, 1 x 16 GB, DDR5, 4800 MHz, non-ECC, CAMM module, dual-channel • 32 GB, 1 x 32 GB, DDR5, 4800 MHz, non-ECC, CAMM module, dual-channel • 64 GB, 1 x 64 GB, DDR5, 4800 MHz, non-ECC, CAMM module, dual-channel • 128 GB, 1 x 128 GB, DDR5, 3600 MHz, non-ECC, CAMM module, dual-channel • 8 GB, 1 x 8 GB, DDR5, 4800 MHz, non-ECC, SODIMM • 16 GB, 1 x 16 GB, DDR5, 4800 MHz, ECC, SODIMM • 16 GB, 2 x 8 GB, DDR5, 4800 MHz, non-ECC, SODIMM, dual-channel • 32 GB, 2 x 16 GB, DDR5, 4800 MHz, ECC, SODIMM, dual-channel • 32 GB, 2 x 16 GB, DDR5, 4800 MHz, non-ECC, SODIMM, dual-channel • 64 GB, 2 x 32 GB, DDR5, 4800 MHz, non-ECC, SODIMM, dual-channel **NOTE:** • For system shipped with CAMM, remove memory Interposer board to upgrade to SODIMM type memory. • For system shipped with SODIMM memory, install the memory interposer board to upgrade to CAMM type memory.

External ports and slots

The following table lists the external ports of your Precision 7670.

Table 7. External ports and slots

Description	Values
Network port	One RJ45 Ethernet port
USB ports	• Two Thunderbolt 4 ports (USB Type-C) • One USB 3.2 Gen 2 Type-C port with DisplayPort alt mode • One USB 3.2 Gen 1 port with PowerShare • One USB 3.2 Gen 1 port
Audio port	One universal audio jack
Video port(s)	• Two Thunderbolt 4 ports (USB Type-C) • One HDMI 2.0a port (UMA) • One HDMI 2.1 port (DGPU)
Media-card reader	One SD-card slot
Power-adapter port	• 180 W AC adapter, 7.40 mm - SFF • 240 W AC adapter, 7.40 mm - SFF
Security-cable slot	One wedge-shaped security slot

Input and output power of external ports

The following table lists the input and output power of external ports on the Precision 7670 .

Table 8. Input and output power of external ports

Port type	Connector type	Input power (Independent Mode*)	Input power (Combined Mode**)	Output power (Independent mode)	Output power (Combined mode)
Power-adapter port	7.40 mm barrel, DC-IN connector	240 W	Not applicable	Not applicable	Not applicable
USB Type-C port	Two Thunderbolt 4 ports with USB Type-C	130 W	210 W (105 W support for each port)	15 W (5 V/3 A)	22.5 W (5 V/3A + 5 V/1.5 A)
	One USB 3.2 Gen 2 Type-C port with DisplayPort alt mode	Not applicable	Not applicable	15 W (5 V/3 A)	Not applicable
USB Type-A port	One USB 3.2 Gen 1 port with PowerShare	Not applicable	Not applicable	7.5 W (5 V/1.5 A)	Not applicable
	One USB 3.2 Gen 1 port without PowerShare	Not applicable	Not applicable	4.5 W (5 V/0.9 A)	Not applicable

* Independent mode is a configuration where there is a single power source for either input or output. This power source can be a barrel adapter or a USB Type-C adapter, and it is used with a single Type-C device.

**Combined mode involves dual-input power sources for the Type-C adapter, and the output power is distributed to two or more Type-C devices.

Internal slots

The following table lists the internal slots of your Precision 7670.

Table 9. Internal slots

Description	Values
M.2	• One WWAN • Up to three M.2 solid-state drives **NOTE:** To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at Dell Support Site.

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Precision 7670.

Table 10. Ethernet specifications

Description	Values
Model number	Intel i219LM
Transfer rate	10/100/1000 Mbps

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module that is supported on your Precision 7670.

Table 11. Wireless module specifications

Description	Values
Model number	Intel AX211
Transfer rate	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz/6 GHz **NOTE:** The 6 GHz frequency is supported on computers installed with Windows 11 operating system only.
Wireless standards	• WiFi 802.11a/b/g • Wi-Fi 4 (Wi-Fi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6E (WiFi 802.11ax) **NOTE:** 160 MHz channel use, MU-MIMO, new 6 GHz band
Encryption	• 64-bit and 128-bit WEP • AES-CCMP • TKIP
Bluetooth wireless card	Bluetooth 5.2

WWAN module

The following table lists the Wireless Wide Area Network (WWAN) modules that are supported on your Precision 7670.

Table 12. WWAN module specifications

Description	Option one
Model number	DW5930e, Qualcomm Snapdragon SDX55 5G
Transfer rate	Up to 3 Gbps DL/250 Mbps UL (3GPP Release 15 NR/LTE CAT20)
Frequency bands supported	• NR: (1, 2, 3, 5, 7, 8, 12, 20, 28, 38, 41, 66, 77, 78, 79) • 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)

Table 12. WWAN module specifications (continued)

Description	Option one
	• HSPA+: (1, 2, 4, 5, 6, 8, 9, 19)
Wireless standards	• NR FR1(Sub 6) FDD/TDD • LTE FDD/TDD • WCDMA/HSPA+ • GPS/GLONASS/Beidou/Galileo
Encryption	Not supported
Global Navigation Satellite System (GNSS)	Supports GPS, and GLONASS
NOTE: For instructions on how to find your computer's IMEI (International Mobile Station Equipment Identity) number, see the knowledge base article 000143678 at Dell Support Site.	

Audio

The following table lists the audio specifications of your Precision 7670.

Table 13. Audio specifications

Description		Values
Audio controller		Realtek ALC711-VD
Stereo conversion		Supported
Internal audio interface		SoundWire
External audio interface		One universal audio jack
Number of speakers		Four (Two tweeter speakers and two woofer speakers)
Internal-speaker amplifier		Realtek ALC1319D
External volume controls		Keyboard shortcut controls
Speaker output:		
	Average speaker output	2 W + 2 W (tweeter), 2 W + 2 W (woofer)
	Peak speaker output	2.5 W + 2.5 W (tweeter), 2.5 W + 2.5 W (woofer)
Subwoofer output		Not supported
Microphone		Dual digital-array microphones

Storage

This section lists the storage options on your Precision 7670.

Table 14. Storage matrix

Storage	M.2 2280 SSD (Slot 4)	M.2 2280/2230 SSD (Slot 3)	M.2 2280 SSD (Slot 5)
M.2 Gen4 SSD Boot	Yes	No	No

Table 14. Storage matrix (continued)

Storage	M.2 2280 SSD (Slot 4)	M.2 2280/2230 SSD (Slot 3)	M.2 2280 SSD (Slot 5)
M.2 Gen4 SSD Boot	Yes	Yes	No
M.2 Gen4 SSD Boot	Yes	Yes	Yes
M.2 2230 Gen4 SSD Boot	No	Yes	No
M.2 Gen3/4 SED SSD	Yes	No	No
M.2 Gen3/4 SED SSD	Yes	Yes	No
M.2 Gen3/4 SED SSD	Yes	Yes	Yes

Table 15. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 Class 35 SSD	PCIe NVMe Gen4 x4	256 GB
M.2 2280 Class 40 SSD	PCIe NVMe Gen4 x4	Up to 4 TB
M.2 2280 Class 40 SED (Self-Encrypting Drive)	PCIe NVMe Gen3 x4	Up to 1 TB
M.2 2280 Class 40 SED (Self-Encrypting Drive)	PCIe NVMe Gen4 x4	Up to 1 TB

Redundant Array of Independent Disks (RAID)

For optimal performance when configuring drives as a RAID volume, Dell Technologies recommends drive models that are identical.

NOTE: RAID is not supported on Intel Optane configurations.

RAID 0 (Striped, Performance) volumes benefit from higher performance when drives are matched because the data is split across multiple drives: any I/O operations with block sizes larger than the stripe size splits the I/O and become constrained by the slowest of the drives. For RAID 0 I/O operations where block sizes are smaller than the stripe size, whichever drive the I/O operation targets, determines the performance, which increases variability and results in inconsistent latencies. This variability is particularly pronounced for write operations, and it can be problematic for applications that are latency sensitive. One such example of this is any application that performs thousands of random writes per second in very small block sizes.

RAID 1 (Mirrored, Data Protection) volumes benefit from higher performance when drives are matched because the data is mirrored across multiple drives all I/O operations must be performed identically to both drives, thus variations in drive performance when the models are different result in the I/O operations completing only as fast as the slowest drive. While this does not suffer from the variable latency issue in small random I/O operations as with RAID 0 across heterogeneous drives, the impact is nonetheless large because the higher performing drive becomes limited in all I/O types. One of the worst examples of constrained performance here is when using unbuffered I/O. To ensure that that writes are fully committed to nonvolatile regions of the RAID volume, unbuffered I/O bypasses cache (for example by using the Force Unit Access bit in the NVMe protocol) and the I/O operation will not complete until all the drives in the RAID volume have completed the request to commit the data. This kind of I/O operation completely negates any advantage of a higher performing drive in the volume.

Care must be taken to match not only the drive vendor, capacity, and class, but also the specific model. Drives from the same vendor, with the same capacity, and even within the same class, can have different performance characteristics for certain types of I/O operations. Thus, matching by model ensures that the RAID volume consists of a homogeneous array of drives that deliver all the benefits of a RAID volume without incurring the additional penalties when one or more drives in the volume are lower performing.

Precision 7670 supports RAID with more than one hard drive configuration.

Media-card reader

The following table lists the media cards that are supported in your Precision 7670.

Table 16. 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 that is supported by the media-card reader varies depending on the standard of the media card that is installed on your computer.	

Keyboard

The following table lists the keyboard specifications of your Precision 7670.

Table 17. Keyboard specifications

Description	Values
Keyboard type	Backlit keyboard
Keyboard layout	QWERTY
Number of keys	• United States and Canada: 99 keys • United Kingdom: 103 keys • Japan: 106 keys
Keyboard size	X=19.05 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. **NOTE:** If Copilot in Windows is not available on your computer, the Copilot key launches Windows Search. For more information about Copilot in Windows, search in the Knowledge Base Resource at the Dell Support site.

Camera

The following table lists the camera specifications of your Precision 7670.

Table 18. Camera specifications

Description		Values
Number of cameras		One
Camera type		There are two camera options: • FHD RGB • FHD IR
Camera location		Front camera
Camera sensor type		Proximity sensor technology
Camera resolution:		
	Still image	0.92 megapixel
	Video	1920 x 1080 (FHD) at 30 fps
Infrared camera resolution:		
	Still image	0.30 megapixel
	Video	1920 x 1080 (FHD) 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 7670.

Table 19. Touchpad specifications

Description		Values
Touchpad resolution:		
	Horizontal	>300 dpi
	Vertical	761
Touchpad dimensions:		
	Horizontal	115 mm (4.52 in.)
	Vertical	80 mm (3.14 in.)
Touchpad gestures		For more information about touchpad gestures available on Windows, see the Microsoft Knowledge Base article at Microsoft Support Site.

Power adapter

The following table lists the power adapter specifications of your Precision 7670.

Table 20. Power adapter specifications

Description	Option one	Option two
Type	180 W AC adapter, 7.4 mm - SFF	240 W AC adapter, 7.4 mm - SFF
Connector dimensions:		
External diameter	7.40 mm	7.40 mm
Internal diameter	5.10 mm	5.10 mm
Power-adapter dimensions:		
Height	22 mm (0.8 in.)	22 mm (0.8 in.)
Width	66 mm (2.6 in.)	66 mm (2.6 in.)
Depth	130 mm (5.1 in.)	143 mm (5.6 in.)
Input voltage	100 VAC x 240 VAC	100 VAC x 240 VAC
Input frequency	50 Hz–60 Hz	50 Hz–60 Hz
Input current (maximum)	2.34 A	3.50 A
Output current (continuous)	9.23 A	12.30 A
Rated output voltage	19.50 VDC	19.50 VDC
Temperature range:		
Operating	0°C-40°C (32 °F–104°F)	0°C-40°C (32 °F–104°F)
Storage	-40°C-70°C (-40°F-158°F)	-40°C-70°C (-40°F-158°F)
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.		

Battery

The following table lists the battery specifications of your Precision 7670.

Table 21. Battery specifications

Description	Option one	Option two
Battery type	6-cell, 83 Wh, Lithium-ion, ExpressCharge 2.0	6-cell, 93 WHr, Lithium-ion, ExpressCharge and ExpressChargeBoost
Battery voltage	11.55 V (Nominal)	11.55 V (Nominal)
Battery weight (maximum)	0.383 kg (0.844 lb)	0.41 kg (0.90 lb)
Battery dimensions:		
Height	10.75 mm (0.42 in.)	13.25 mm (0.52 in.)

Table 21. Battery specifications (continued)

Description		Option one	Option two
	Width	296.75 mm (11.68 in.)	272.40 mm (10.72 in.)
	Depth	66.68 mm (2.62 in.)	66.68 mm (2.62 in.)
Temperature range:			
	Operating	0°C-50°C (32°F-122°F)	0°C-50°C (32°F-122°F)
	Storage	–20°C-60°C (-4°F-140°F)	–20°C-60°C (4°F-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.
Battery charging time (approximate) **NOTE:** Control the charging time, duration, start and end time, and so on, using the settings on the MyDell application (Power option). For more information about MyDell application, search in the Knowledge Base Resource at Dell Support Site.		• ExpressCharge 2.0: From 0% up to 80% in as little as 35 minutes • Express charge: 2 hrs • Standard charge: 3 hrs	• ExpressCharge Boost: From 0% up to 35% in as little as 20 minutes • Express charge: 2 hrs • Standard charge: 3 hrs
Coin-cell battery		Supported **NOTE:** It is recommended that you use a Dell coin-cell battery for your computer. Dell does not provide warranty coverage for problems caused by using accessories, parts, or components not supplied by Dell.	Supported **NOTE:** It is recommended that you use a Dell coin-cell battery for your computer. Dell does not provide warranty coverage for problems caused by using accessories, parts, or components not supplied by Dell.

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.

CAUTION: Dell Technologies recommends that you charge the battery regularly for optimal power consumption.

Display

The following table lists the display specifications of your Precision 7670.

Table 22. Display specifications

Description	Option one	Option two	Option three
Display type	16-inch Full High Definition+ (FHD+)	16-inch Full High Definition+ (FHD+)	16-inch Ultra High Definition+ (UHD+)
Touch options	No	No	Yes
Display-panel technology	Wide-viewing angle (WVA)	Wide-viewing angle (WVA), WLED	Wide-viewing angle (WVA), OLED
Display-panel dimensions (active area):			

Table 22. Display specifications (continued)

Description		Option one	Option two	Option three
	Height	215.42 mm (8.48 in.)	215.42 mm (8.48 in.)	215.28 mm (8.48 in.)
	Width	344.68 mm (13.56 in.)	344.68 mm (13.56 in.)	344.45 mm (13.56 in.)
	Diagonal	406.40 mm (16.00 in.)	406.40 mm (16.00 in.)	406.40 mm (16.00 in.)
Display-panel native resolution		1920 x 1200	1920 x 1200	3840 x 2400
Luminance (typical)		250 nits	500 nits	400 nits
Megapixels		2.3	2.3	8.35
Color gamut		45% NTSC	99% DCIP3	100% DCIP3
Pixels Per Inch (PPI)		142	142	283
Contrast ratio (typical)		1000:1	1300:1	1000000:1
Response time (maximum)		35 ms	35 ms	35 ms
Refresh rate		60 Hz	60 Hz	60 Hz
Horizontal view angle		+/- 80 degrees	+/- 80 degrees	+/- 80 degrees
Vertical view angle		+/- 80 degrees	+/- 80 degrees	+/- 80 degrees
Pixel pitch		0.18 mm x 0.18 mm	0.18 mm x 0.18 mm	0.18 mm x 0.18 mm
Power consumption (maximum)		4.15 W	6.32 W	14.75 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	Anti-glare

Fingerprint reader

The following table lists the fingerprint-reader specifications of your Precision 7670.

Table 23. Fingerprint reader specifications

Description	Values
Fingerprint-reader sensor technology	Capacitive
Fingerprint-reader sensor resolution	500 DPI
Fingerprint-reader sensor pixel size	• X: 108 • Y: 88

Sensor

The following table lists the sensor of your Precision 7670.

Table 24. Sensor

Sensor support
Ambient Light Sensor
Windows Auto Brightness
Accelerometer
Adaptive Thermal Performance (Lap vs. Desk mode) requires Accelerometer **NOTE:** This is for thermal only.
Hall Effect Sensor
Sensor Hub
Proximity for SAR compliance (for the WWAN module) Near Field Proximity Sensor

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Precision 7670.

Table 25. GPU—Integrated

Controller	Memory size	Processor
Intel UHD Graphics	Shared system memory	Intel 12th Generation Intel Core i5/i7/i9

Multiple display support matrix

The following table lists the multiple display support matrix for your Precision 7670.

Table 26. Multiple display support matrix

Graphics Card	Direct Graphics Controller Direct Output Mode	Supported external displays with computer internal display on	Supported external displays with computer internal display off
Intel UHD Graphics	Integrated	3	4

GPU—Discrete

The following table lists the specifications of the discrete graphics processing unit (GPU) supported by your Precision 7670.

Table 27. GPU—Discrete

Controller	Memory size	Memory type
NVIDIA RTX A1000	4 GB	GDDR6
NVIDIA RTX A2000	8 GB	GDDR6
NVIDIA RTX A3000	12 GB	GDDR6
NVIDIA RTX A4500	16 GB	GDDR6

Table 27. GPU—Discrete (continued)

Controller	Memory size	Memory type
NVIDIA RTX A5500	16 GB	GDDR6
NVIDIA GeForce RTX 3080Ti	16 GB	GDDR6

Multiple display support matrix

The following table lists the multiple display support matrix for your Precision 7670.

Table 28. Multiple display support matrix

Graphics Card	Direct Graphics Controller Direct Output Mode	Supported external displays with computer internal display on	Supported external displays with computer internal display off
NVIDIA RTX A1000	• MS Hybrid • Direct Output Mode • Discrete Mode	• 4 • 4 • 3	4
NVIDIA RTX A2000	• MS Hybrid • Direct Output Mode • Discrete Mode	• 4 • 4 • 3	4
NVIDIA RTX A3000	• MS Hybrid • Direct Output Mode • Discrete Mode	• 4 • 4 • 3	4
NVIDIA RTX A4500	• MS Hybrid • Direct Output Mode • Discrete Mode	• 4 • 4 • 3	4
NVIDIA RTX A5500	• MS Hybrid • Direct Output Mode • Discrete Mode	• 4 • 4 • 3	4
NVIDIA GeForce RTX 3080Ti	• MS Hybrid • Direct Output Mode • Discrete Mode	• 4 • 4 • 3	4

Hardware security

The following table lists the hardware security of your Precision 7670.

Table 29. Hardware security

Hardware security
Trusted Platform Module (TPM) 2.0 discrete
FIPS 140-2 certification for TPM
TCG Certificatication for TPM (Trusted Computing Group)
Contacted Smart Card and Control Vault 3
Contactless Smart Card, NFC, and ControlVault 3
SED SSD NVMe, SSD and HDD (Opal and non-Opal) per SDL

Table 29. Hardware security (continued)

Hardware security
Finger Print Reader in Power Button tied to Control vault 3
SED (Opal 2.0 only - PCIe Interface)
Chassis Intrusion Detection
Battery Removal Detection
RPMC SPI flash
SPI Flash Tamper Detection / Prevention Shunt Circuit

Smart-card reader

Contactless smart-card reader

This section lists the contactless smart-card reader specifications of your Precision 7670. This module is only available in computers shipped with Smart-card readers.

Table 30. Contactless smart-card reader specifications

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) (125 kHz) Card support	Reader and software capable of supporting Prox/Proximity/125 kHz 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
NFC Proximity OS Interface	Enumerates NFP (Near Field Proximity) device for OS to utilize	Yes

Table 30. Contactless smart-card reader specifications (continued)

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

NOTE: 125 Khz proximity cards are not supported.

Table 31. 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	
	ID-One Cosmo 128K V5.5 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 of your Precision 7670.

Table 32. Contacted smart-card reader specifications

Title	Description	Dell ControlVault 3 Smart-card reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5 V powered smart-card	Yes
ISO 7816 -3 Class B Card Support	Reader capable of reading 3 V powered smart-card	Yes
ISO 7816 -3 Class C Card support	Reader capable of reading 1.8 V 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 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
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 7670.

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

Table 33. 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 (-49.8 ft to 10000 ft)	-15.2 m to 10668 m (-49.8 ft to 35000 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 the user environment.

† Measured using a 2 ms half-sine pulse.

4

Keyboard shortcuts of Precision 7670

NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys that are 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 that is 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 that is 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 34. List of keyboard shortcuts

Function key	Primary behavior
F1	Mute audio
F2	Decrease volume
F3	Increase volume
F4	Microphone mute
F5	Click keyboard backlight. **NOTE:** Toggle to cycle the keyboard backlight status through off, low-backlight, and high-backlight
F6	Decrease brightness
F7	Increase brightness
F8	Switch to external display Search
F10	Print screen
F11	Home
F12	End

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

Table 35. Secondary behavior

Function key	Secondary behavior
Fn + F1	Operating system and application specific F1 behavior
Fn + F2	Operating system and application specific F2 behavior
Fn + F3	Operating system and application specific F3 behavior
Fn + F4	Operating system and application specific F4 behavior
Fn + F5	Operating system and application specific F5 behavior
Fn + F6	Operating system and application specific F6 behavior

Table 35. Secondary behavior (continued)

Function key	Secondary behavior
Fn + F7	Operating system and application specific F7 behavior
Fn + F8	Operating system and application specific F8 behavior
Fn + F9	Operating system and application specific F9 behavior
Fn + F10	Operating system and application specific F10 behavior
Fn + F11	Operating system and application specific F11 behavior
Fn + F12	Operating system and application specific F12 behavior
Fn + Right Ctrl	Open application menu
Fn + Esc	Toggle Fn-key lock
Fn + PgUp (Cursor up)	Page up
Fn + PgDn (Cursor down)	Page down

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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 36. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	Dell Site
My Dell app	
Tips	
Contact Support	In Windows search, type `Contact Support`, and press Enter.
Online help for operating system	Windows Support Site Linux Support Site
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals, and documents.	Your Dell computer is uniquely identified using 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 Dell Support Site. For more information about how to find the Service Tag for your computer, see Locate the Service Tag on your computer.
Dell knowledge base articles	1. Go to Dell Support Site. 2. On the menu bar at the top of the Support page, select **Support** > **Support Library**. 3. In the Search field on the Support Library 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 Contact Support at Dell Support Site.

NOTE: Availability of the services may vary depending on the country or region, and product.

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.

6

Revision history

Tracks all updates that are made to the document. It typically includes the date of change, version number, and a brief description of the modification. This log helps maintain transparency, accountability, and a clear timeline of progress.

Table 37. Revision history

Revision	Date	Description
A00	07-07-2022	Original publish date.
A08	08-25-2025	• Added note under memory specifications.