

# 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.

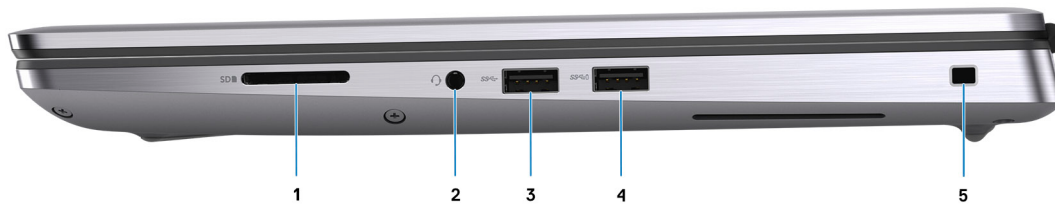
 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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# Views of Precision 7560

## Right



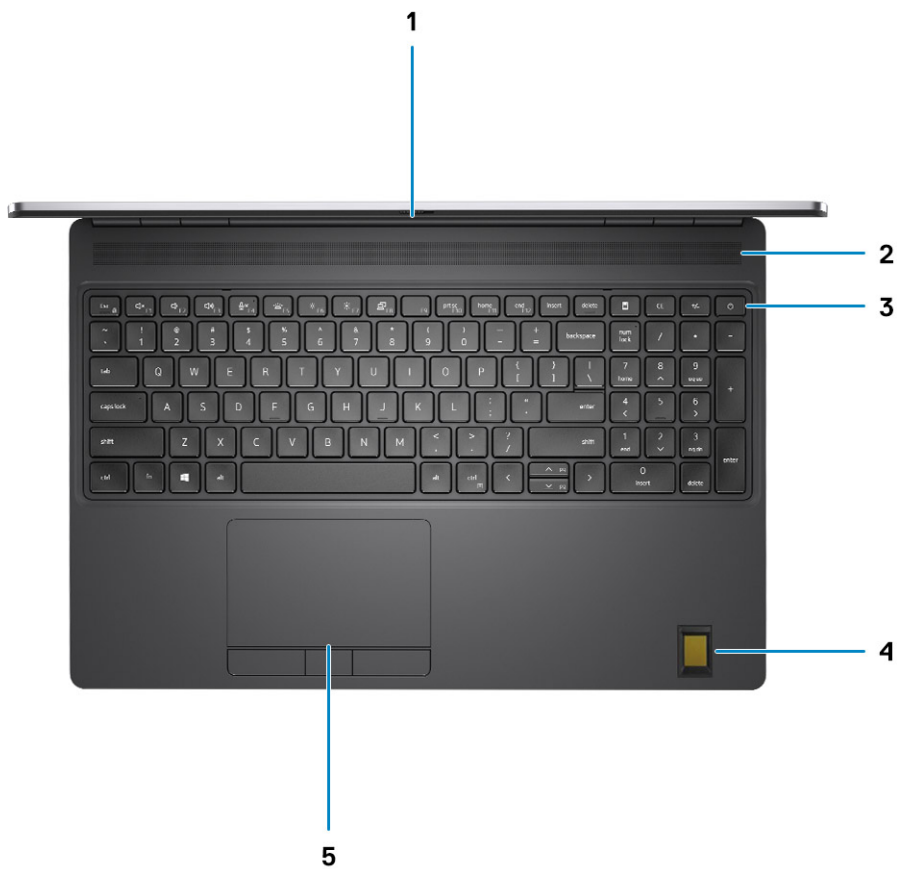
1. SD-card slot
2. Global headset jack
3. USB 3.2 Gen 1 Type-A port
4. USB 3.2 Gen 1 Type-A port with PowerShare
5. Wedge-shaped lock slot

## Left



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

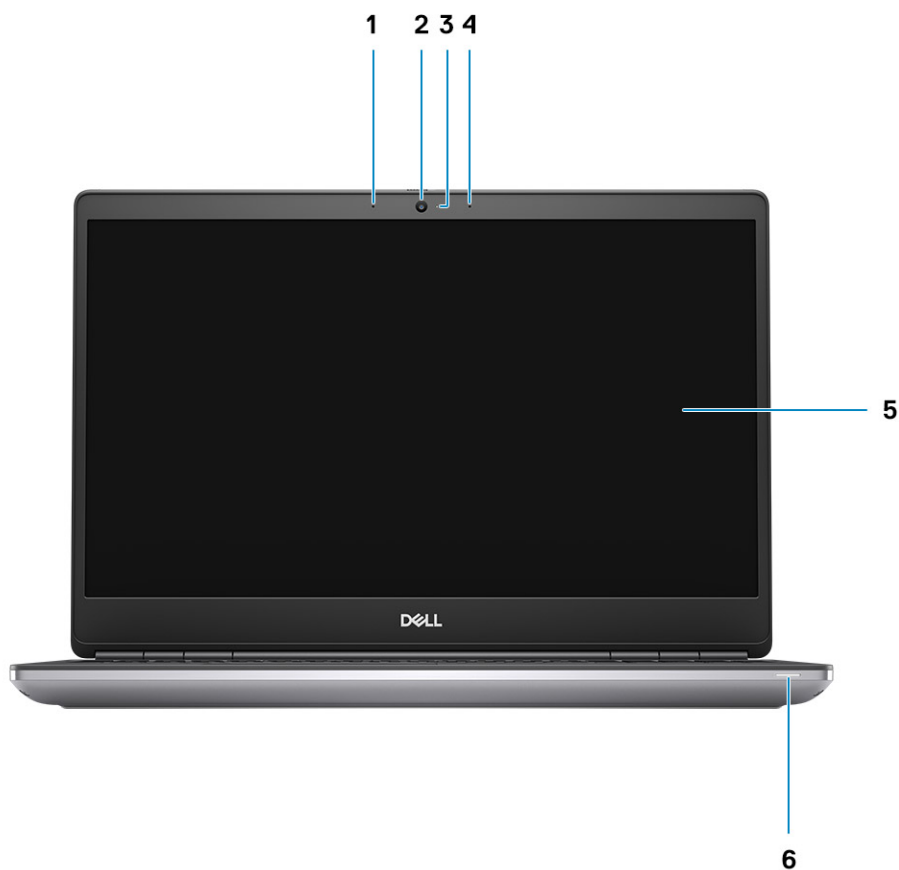
# Top



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

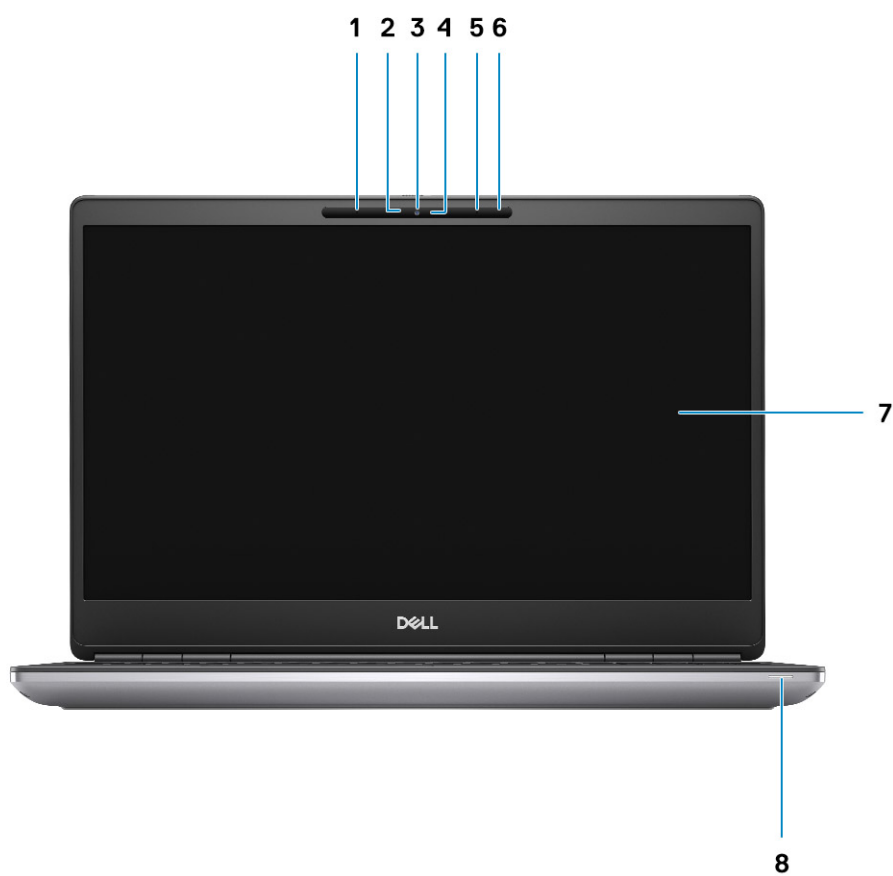
# Front

Front view with RGB camera



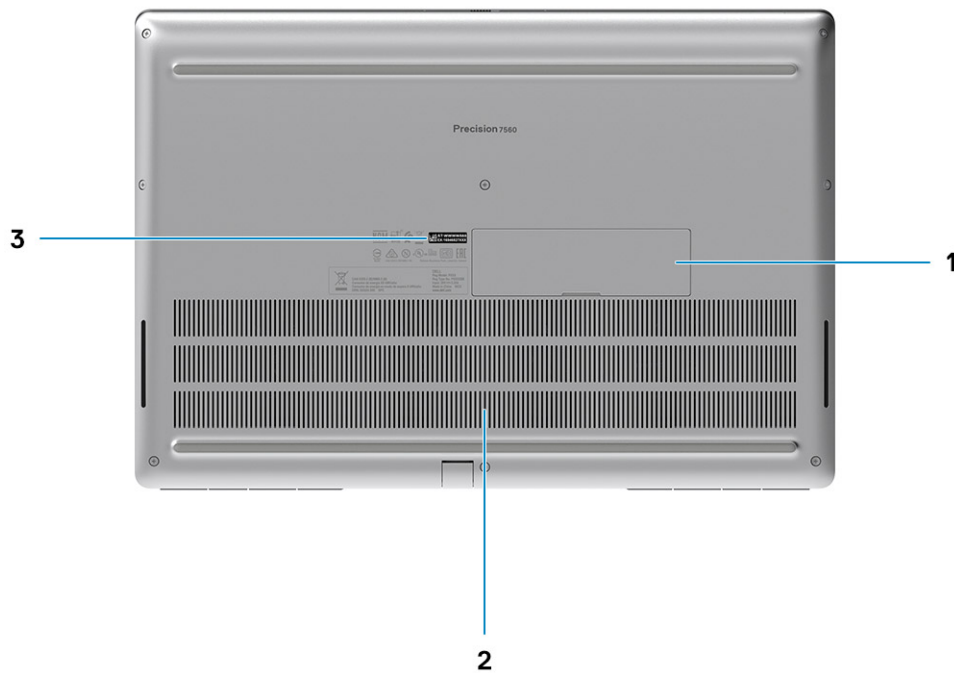
1. Microphone
2. Camera
3. Camera-status light
4. Microphone
5. Display
6. Battery-status light/Diagnostic-status light

## Front view with IR camera



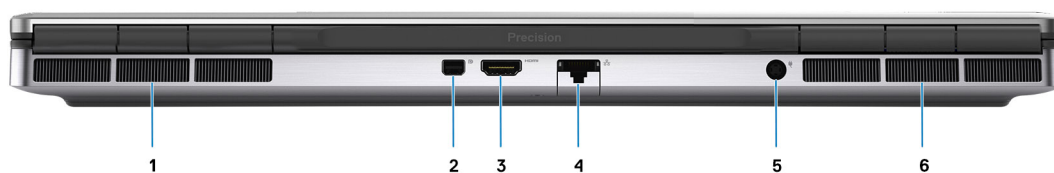
1. Microphone
2. IR camera sensor
3. Camera
4. Camera-status light
5. Microphone
6. Proximity sensor
7. Display
8. Battery-status light/Diagnostic-status light

## 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<br> <b>NOTE:</b> The weight of your computer depends on the configuration ordered and manufacturing variability. | 2.49 kg (5.49 lb)     |

## 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 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 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></ul> |

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

| Description | Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|             | <ul style="list-style-type: none"> <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> <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                                                                                                                                                                               |
| 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)<br><br> <b>NOTE:</b> To learn more about the features of different types of M.2 cards, see the knowledge base article <a href="https://www.dell.com/support/article/000144170">000144170</a> at <a href="https://www.dell.com/support">www.dell.com/support</a> . |
| 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 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 that is 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 wireless card   | Bluetooth 5.2                                                                                                                                                                                                              |
|                           |  <b>NOTE:</b> The version of the Bluetooth wireless card may vary depending on the operating system that is installed on your computer. |

## 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                                                                                                                                                                                                                                                |
|  <b>NOTE:</b> For instructions on how to find your computer's IMEI (International Mobile Station Equipment Identity) number, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a> . |                                                                                                                                                                                                                                                                                  |

## 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                              |

**Table 11. Audio specifications (continued)**

| Description      | Values                 |
|------------------|------------------------|
| 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)

**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 | <ul style="list-style-type: none"> <li>• Backlit keyboard</li> <li>• Non-backlit keyboard</li> </ul> |

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

| Description        | Values                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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<br>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                 | There are 2 camera options: <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                                                                                                                                                                                                                                       |
| 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 <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 |

**Table 18. 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)<br><b>i</b> <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°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16°C - 45°C (60.8°F to 113°F) normal express charge</li> <li>46°C - 50°C (114.8°F to 122°F) 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°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16°C - 50°C (60.8°F to 122°F) 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°C - 45°C (60.8°F to 113°F) 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 (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16 - 45°C (60.8°F to 113°F) normal express charge</li> <li>46 - 50°C (114.8°F to 122°F) 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°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16°C - 50°C (60.8°F to 122°F) 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°C - 45°C (60.8°F to 113°F) 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°C - 15°C (32°F to 59°F) maximum allowable charge time from 0 to 100% RSOC is 4 hours</li> <li>16°C - 50°C (60.8°F to 122°F) maximum allowable charge time from 0 to 100% RSOC is 3 hours</li> </ul> |
| Coin-cell battery                                                                                                                                                                                                                                                                                        |           | Supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supported                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Supported                                                                                                                                                                                                                                                                                                 |

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

| Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Option one | Option two | Option three |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|--------------|
| <p><b>NOTE:</b></p> <p>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.</p> <p><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.</p> |            |            |              |

## 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                      |

**Table 19. Display specifications (continued)**

| Description                 | Option one | Option two | Option three | Option four |
|-----------------------------|------------|------------|--------------|-------------|
| 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              | <ul style="list-style-type: none"> <li>Type-C: 8K*60Hz</li> <li>mDP or HDMI:4K@60</li> </ul>                   | <ul style="list-style-type: none"> <li>HDMI: 4K@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> |
| 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**

| <b>Discrete mode</b> |                                                                                                                                                                                         |                                                                                                                                                                                                        |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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> |
| 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**

| <b>Hardware security options</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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**

| <b>Title</b>                           | <b>Description</b>                                                                                                 | <b>Dell ControlVault 3 contactless smart-card reader with NFC</b> |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 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 (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                                                         |
| 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 3 Mbps                                                                               |
| Bluetooth operating frequency bands | 2.4 GHz                                                                                    |
| Bluetooth profiles supported        | Support for Microsoft Inbox Bluetooth profiles in Windows                                  |
| 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 3 Gbps 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<br> <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              | NVIDIA T1200 |
| Cores            | 1024         |
| Memory bandwidth | 192 Gbps     |

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

| Feature                                         | Values                                                                                                                                                                                                                        |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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**

| Feature          | Values                                        |
|------------------|-----------------------------------------------|
| GPU              | NVIDIA RTX A2000                              |
| Cores            | CUDA cores 2560, Tensor cores 80, RT cores 20 |
| Memory bandwidth | 192 Gbps                                      |
| Memory type      | GDDR6                                         |
| Memory size      | 4 GB                                          |
| Memory interface | 128-bit                                       |
| TGP              | 80 W                                          |
| GPU base clock   | 1455 MHz                                      |
| GPU boost clock  | 1824 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                                          | NVIDIA RTX A3000                                                                                                                                  |
| 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                                             | NVIDIA RTX A4000                                                                                                                                                                                                          |
| 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                                      | 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>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                                      | 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>• 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<br>Secure Digital (SD) 4.0 UHS-II<br>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)**

| Accessories                                      |
|--------------------------------------------------|
| 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**

| Software security options                                                  |
|----------------------------------------------------------------------------|
| 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           | Operating system and application specific F9 behavior | 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><br><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> .<br>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.