

# Precision 3590

## Owner's Manual

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# Views of Precision 3590

## Right

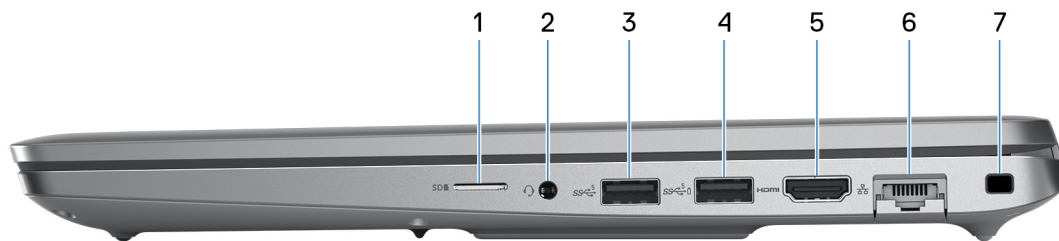


Figure 1. Right view

**1. microSD-card slot**

Reads from and writes to the microSD-card.

**2. Universal audio jack**

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

**3. USB 3.2 Gen 1 port**

Connect devices such as external storage devices and printers. It provides data transfer speeds up to 5 Gbps.

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

Connect devices such as external storage devices and printers.

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

**NOTE:** If the charge on your computer's battery is less than 10 percent, you must connect the power adapter to charge your computer, and USB devices connected to the PowerShare port.

**NOTE:** If a USB device is connected to the PowerShare port before the computer is turned off or in hibernate state, you must disconnect and connect it again to enable charging.

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

**5. HDMI 2.1 TMDs port**

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

**6. Network port**

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

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

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

# Left



Figure 2. Left view

## 1. Thunderbolt 4.0 with DisplayPort Alt Mode/USB Type-C/USB4/Power Delivery

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

**NOTE:** You can connect a Dell Docking Station to one of the Thunderbolt 4 ports. For more information, search in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

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

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

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

## 2. Thunderbolt 4.0 with DisplayPort Alt Mode/USB Type-C/USB4/Power Delivery

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

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

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

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

## 3. Battery-status light

Battery-status light indicates the battery-charge status.

- White-Battery is charging.
- Solid yellow-Battery charge is low.
- Blinking yellow-Battery charge is critical.
- Off—Battery is fully charged.

## 4. Smart-card reader slot (optional)

Using smart card provides authentication in corporate networks.



# Top

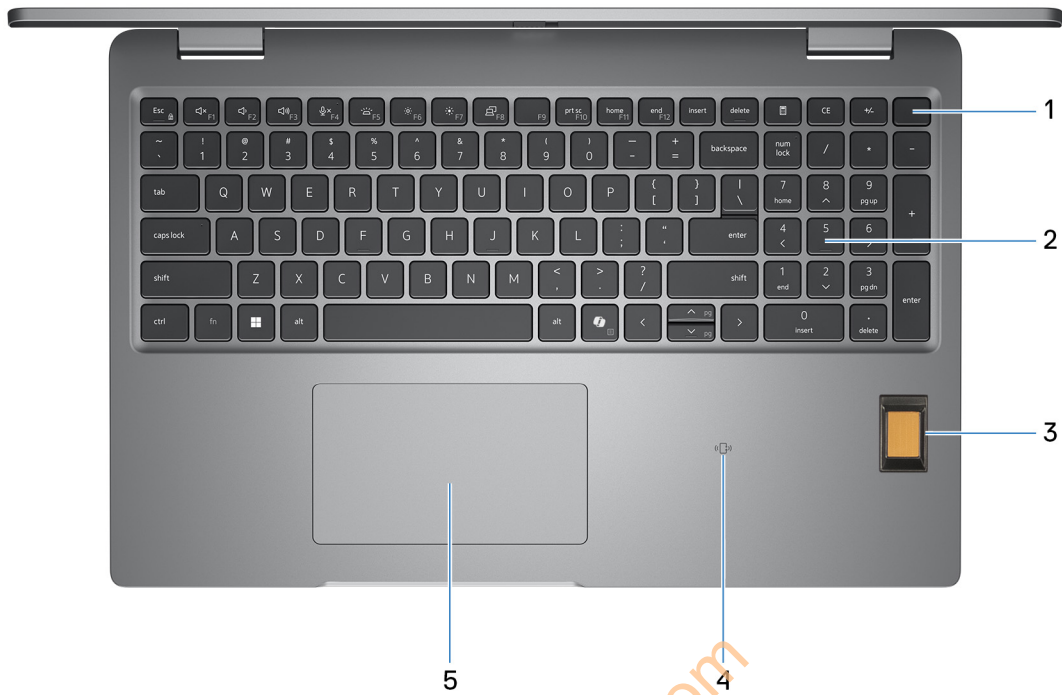


Figure 3. Image: Top view

## 1. Power button with optional fingerprint reader

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

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

If the power button has a fingerprint reader, place your finger on the power button steadily to log in.

**NOTE:** You can customize the power-button behavior in Windows.

## 2. Keyboard

Use the keyboard to input characters and functions into your computer.

## 3. Fingerprint reader (optional)

Press your finger on the fingerprint reader to log in to your computer. The fingerprint reader enables your computer to recognize your fingerprints as a password.

**NOTE:** Configure the fingerprint reader to register your fingerprint and enable access.

## 4. NFC or Contactless smart card reader (optional)

NFC or Contactless smart card reader provides contactless access of cards in corporate networks.

## 5. Touchpad

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

# Front



Figure 4. Image: Front view

**1. Left microphone**

Provides digital sound input for audio recording and voice calls.

**2. Infrared emitter (optional)**

The infrared emitter emits infrared light, which enables the infrared camera to sense and track motion.

**3. Infrared camera (optional)**

Enhances security when paired with Windows Hello face authentication.

**4. Camera shutter**

Slide the privacy shutter to the left to access the camera lens.

**5. Camera**

A camera enables you to video chat, capture photos, and record videos.

**6. Camera-status light**

Turns on when the camera is in use.

**7. Ambient-light sensor (optional)**

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

**8. Right microphone**

Provides digital sound input for audio recording and voice calls.

## Back



Figure 5. Image: Back view

### 1. Nano-SIM card slot (optional)

Insert a nano-SIM card to connect to a mobile broadband network.

**NOTE:** Availability of the nano-SIM card slot depends on the region and configuration ordered.

## Bottom

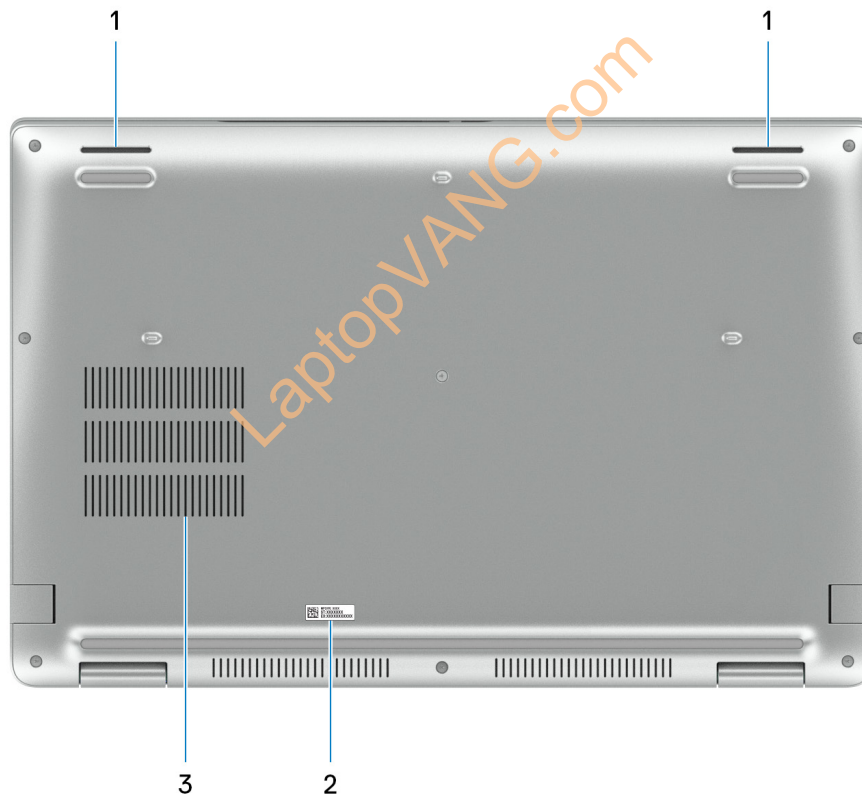


Figure 6. Image: Bottom view

### 1. Speakers

Provide audio output.

### 2. Service Tag label

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

### 3. Air vents

Air vents provide ventilation for your computer. Clogged air vents can cause overheating and can affect your computer's performance and potentially cause hardware issues. Keep the air vents clear of obstructions and clean them regularly to prevent the build-up of dust and dirt. For more information about cleaning air vents, search for articles in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

## Service Tag

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

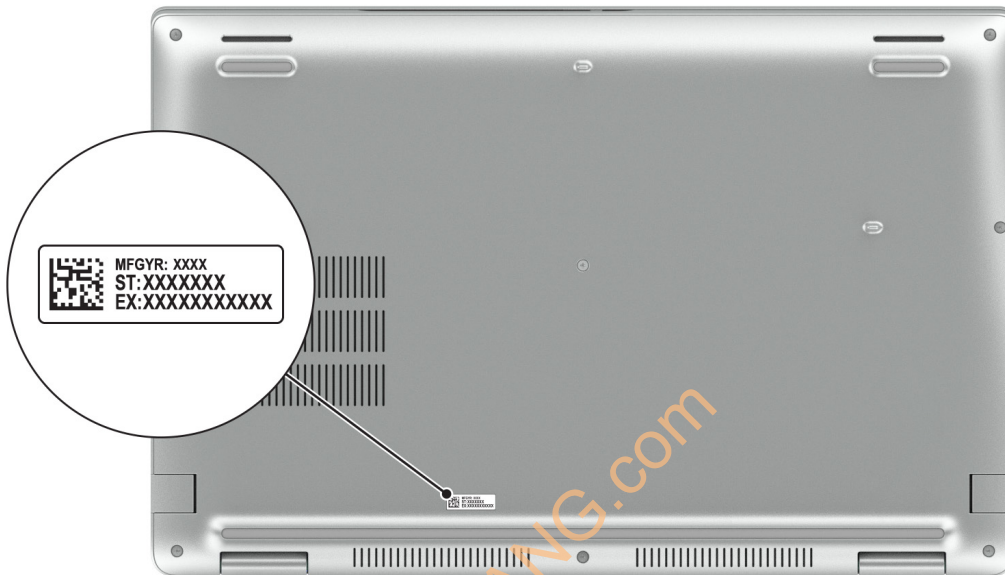


Figure 7. Image: Service Tag location

## Battery charge and status light

The following table lists the battery charge and status light behavior of your Precision 3590.

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, except for a trickle power. The context data is written to a hard drive.
- S5 (OFF) - The system is in a shutdown state.

# Set up your Precision 3590

## About this task

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

## Steps

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



**Figure 8. Connect power adapter and press the power button**

**NOTE:** The battery may go into power-saving mode during shipment to conserve charge on the battery. Ensure that the power adapter is connected to your computer when it is turned on for the first time.

2. Finish the operating system setup.

### For Ubuntu:

Follow the on-screen instructions to complete the setup. For more information about installing and configuring Ubuntu, search in the Knowledge Base Resource at [www.dell.com/support](http://www.dell.com/support).

### For Windows:

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






- Connect to a network for Windows updates.

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

- If connected to the Internet, sign-in with or create a Microsoft account.
- On the **Support and Protection** screen, enter your contact details.

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

**Table 2. Locate Dell apps**


Resources	Description
	<p><b>Dell Product Registration</b> Register your computer with Dell.</p>
	<p><b>Dell Help &amp; Support</b> Access help and support for your computer.</p>
	<p><b>SupportAssist</b> SupportAssist is the smart technology that keeps your computer running at its best by optimizing settings, detecting issues, removing viruses and notifies when you must make computer updates. SupportAssist proactively checks the health of your computer hardware and software. When an issue is detected, the necessary system state information is sent to Dell to begin troubleshooting. SupportAssist is preinstalled on most of the Dell devices running the Windows operating system. For more information, see <i>SupportAssist for Business PCs manuals</i> at <a href="http://www.dell.com/support/home/product-support/product/supportassist-business-pcs/docs">www.dell.com/support/home/product-support/product/supportassist-business-pcs/docs</a>.</p> <p><b>NOTE:</b> In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.</p>
	<p><b>Dell Update</b> Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the product guides and third-party license documents at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>
	<p><b>Dell Digital Delivery</b> Download software applications, which are purchased but not preinstalled on your computer. For more information about using Dell Digital Delivery, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>

# Specifications of Precision 3590

## Dimensions and weight

The following table lists the height, width, depth, and weight of your Precision 3590.

**Table 3. Dimensions and weight**

Description	Values
Height:	
Front height	20.80 mm (0.82 in.)
Rear height	22.80 mm (0.90 in.)
Width	357.80 mm (14.09 in.)
Depth	233.30 mm (9.19 in.)
Weight  <b>NOTE:</b> The weight of your computer depends on the configuration that is ordered and manufacturing variability.	1.62 kg (3.58 lb) - minimum

## Processor

The following table lists the details of the processors that are supported for your Precision 3590.



**Table 4. Processor**

Description	Option one	Option two	Option three
Processor type	Intel Core Ultra 5 125U vPro Essentials	Intel Core Ultra 7 155U vPro Essentials	Intel Core Ultra 5 125H vPro Essentials
Processor wattage	15 W	15 W	28 W
Processor total core count	12	12	14
Performance-cores	2	2	4
Efficient-cores	<ul style="list-style-type: none"> <li>E-cores: 8</li> <li>LPE-cores: 2</li> </ul>	<ul style="list-style-type: none"> <li>E-cores: 8</li> <li>LPE-cores: 2</li> </ul>	<ul style="list-style-type: none"> <li>E-cores: 8</li> <li>LPE-cores: 2</li> </ul>
Processor total thread counts <i>i</i> <b>NOTE:</b> Intel Hyper-Threading Technology is only available on Performance-cores.	14	14	18
Processor speed	Up to 4.30 GHz	Up to 4.80 GHz	Up to 4.50 GHz
Performance-cores frequency			
Processor base frequency	1.30 GHz	1.70 GHz	1.20 GHz
Maximum turbo frequency	4.30 GHz	4.80 GHz	4.50 GHz
Efficient-cores frequency			
Processor base frequency	800 MHz	1.20	700 MHz
Maximum turbo frequency	3.60 GHz	3.80 GHz	3.60 GHz
Processor cache	12 MB	12 MB	18 MB
Integrated graphics	Intel Graphics	Intel Graphics	Intel Graphics or Intel Arc Graphics



**Table 5. Processor**

Description	Option four	Option five	Option six
Processor type	Intel Core Ultra 5 135H vPro Enterprise	Intel Core Ultra 7 155H vPro Essentials	Intel Core Ultra 7 165H vPro Enterprise
Processor wattage	28 W	28 W	28 W
Processor total core count	14	16	16
Performance-cores	4	6	6
Efficient-cores	<ul style="list-style-type: none"> <li>E-cores: 8</li> <li>LPE-cores: 2</li> </ul>	<ul style="list-style-type: none"> <li>E-cores: 8</li> <li>LPE-cores: 2</li> </ul>	<ul style="list-style-type: none"> <li>E-cores: 8</li> <li>LPE-cores: 2</li> </ul>
Processor total thread counts <i>i</i> <b>NOTE:</b> Intel Hyper-Threading Technology is only available on Performance-cores.	18	22	22
Processor speed	Up to 4.60 GHz	Up to 4.80 GHz	Up to 5 GHz
Performance-cores frequency			
Processor base frequency	1.70 GHz	1.40 GHz	1.40 GHz
Maximum turbo frequency	4.60 GHz	4.80 GHz	5 GHz
Efficient-cores frequency			
Processor base frequency	1.20 GHz	900 MHz	900 MHz
Maximum turbo frequency	3.60 GHz	3.80 GHz	3.80 GHz
Processor cache	18 MB	24 MB	24 MB
Integrated graphics	Intel Graphics or Intel Arc Graphics	Intel Graphics or Intel Arc Graphics	Intel Graphics or Intel Arc Graphics

## Chipset

The following table lists the details of the chipset that is supported for your Precision 3590.

**Table 6. Chipset**

Description	Values
Chipset	Integrated in the processor
Processor	Intel Core Ultra 5/7
DRAM bus width	64-bit
Flash EPROM	64 MB
PCIe bus	Up to Gen4

# Operating system

Your Precision 3590 supports the following operating systems:

- Windows 11 Home
- Windows 11 Pro
- Ubuntu Linux 22.04 LTS

# Memory

The following table lists the memory specifications of your Precision 3590.

**Table 7. Memory specifications**

Description	Values
Memory slots	Two-SODIMM slots
Memory type	DDR5
Memory speed	5600 MT/s
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, or 32 GB
Memory configurations supported	<ul style="list-style-type: none"><li>• 1 x 8 GB, DDR5, 5600 MT/s, single-channel</li><li>• 1 x 16 GB, DDR5, 5600 MT/s, single-channel</li><li>• 2 x 8 GB, DDR5, 5600 MT/s, dual-channel</li><li>• 2 x 16 GB, DDR5, 5600 MT/s, dual-channel</li><li>• 1 x 32 GB, DDR5, 5600 MT/s, single-channel</li><li>• 2 x 32 GB, DDR5, 5600 MT/s, dual-channel</li></ul>

# External ports

The following table lists the external ports of your Precision 3590.

**Table 8. External ports**

Description	Values
Network port	One RJ45 port
USB ports	<ul style="list-style-type: none"><li>• One USB 3.2 Gen 1 port</li><li>• One USB 3.2 Gen 1 port with PowerShare</li><li>• Two Thunderbolt 4 ports with Power Delivery and DisplayPort</li></ul> <p><b>NOTE:</b> You can connect a Dell Docking Station to this port. For more information, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>
Audio port	One Universal audio port
Video port	One HDMI 2.1 TMDS port
Media-card reader	One microSD-card slot

**Table 8. External ports (continued)**

Description	Values
Power-adaptor port	USB Type-C power input
Security-cable slot	One wedge-shaped lock slot
SIM-card slot	nano-SIM card slot (optional)

## Internal slots

The following table lists the internal slots of your Precision 3590.

**Table 9. Internal slots**

Description	Values
M.2	<ul style="list-style-type: none"> <li>One M.2 2230 slot for WiFi and Bluetooth combo card</li> <li>One M.2 2230 or 2280 slot for solid state drive</li> <li>One M.2 2230 slot for solid-state drive</li> <li>One M.2 3042 slot for WWAN card</li> </ul> <p><b>NOTE:</b> To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>

## Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your Precision 3590.

**Table 10. Ethernet specifications**

Description	Values
Model number	Intel I219-LM 10/100/Gb (1000BASE-T) for vPRO configurations
Transfer rate	10/100/1000 Mbps

## Wireless module

The following table lists the Wireless Local Area Network (WLAN) modules that are supported on your Precision 3590.

**Table 11. Wireless module specifications**

Description	Option one	Option two
Model number	Realtek RTL8852BE	Intel AX211
Transfer rate	Up to 1201 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz
Wireless standards	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> <li>Wi-Fi 6 (WiFi 802.11ax)</li> </ul>	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> </ul>

**Table 11. Wireless module specifications (continued)**

Description	Option one	Option two
		<ul style="list-style-type: none"> <li>Wi-Fi 6E (WiFi 802.11ax)</li> </ul> <p><b>NOTE:</b> Wi-Fi 6 is supported in regions where Wi-Fi 6E is unavailable.</p>
Encryption	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>TKIP</li> </ul>	<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 5.3	Bluetooth 5.3
	<p><b>NOTE:</b> The version of the Bluetooth wireless card may vary depending on the operating system that is installed on your computer.</p>	

## WWAN module

The following table lists the Wireless Wide Area Network (WWAN) module supported on your Precision 3590.

**Table 12. WWAN module specifications**

Description	Option one	Option two
Model number	Qualcomm Snapdragon SDX12 Advanced (DW5825e), CAT 12	Qualcomm Snapdragon X62 Global 5G Modem (DW5932e)
Form factor	M.2 3042 Key-B	M.2 3042 Key-B
Host interface	USB 3.0/2.0	PCIe Gen3
Network standard	LTE FDD/TDD, WCDMA/HSPA+, GNSS/Beidou, GPS/GLONASS/Beidou/Galileo	NR FR1 (Sub6) FDD/TDD, LTE FDD/TDD, WCDMA/HSPA+, GPS/GLONASS/Galileo/Beidou
Transfer data rate	<ul style="list-style-type: none"> <li>Up to 600 Mbps DL (CAT 12)</li> <li>Up to 150 Mbps UL</li> </ul>	<ul style="list-style-type: none"> <li>5G NR: DL 3.5 Gbps/ UL 900 Mbps</li> <li>LTE: DL 1.6 Gbps (CAT19)/ UL 211 Mbps (CAT18)</li> <li>UMTS: DL DC-HSPA+ Rel8:42 Mbps / UL 5.76 Mbps</li> </ul>
Operating frequency bands	<ul style="list-style-type: none"> <li>LTE (B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B38, B39, B40, B41, B42, B43, B48, B66, B71)</li> <li>HSPA+ (1,2,4,5,6,8,19)</li> </ul>	<ul style="list-style-type: none"> <li>NR (n1, n2, n3, n5, n7, n8, n20, n25, n28, n30, n38, n40, n41, n48, n66, n71, n77, n78, n79)</li> <li>LTE (B1, B2, B3, B4, B5, B7, B8, B12, B13, B14, B17, B18, B19, B20, B25, B26, B28, B29, B30, B32, B34, B38, B39, B40, B41, B42, B43, B46, B48, B66, B71*)</li> <li>WCDMA/HSPA+ (1, 2, 4, 5, 8)</li> </ul> <p>*Modem hardware supports but currently disabled</p>
Power supply	DC 3.135 V to 4.40 V, Typical 3.30 V	DC 3.135 V to 3.63 V, Typical 3.3 V
SIM card	Supported through external SIM slot	Supported through external SIM slot
eSIM with dual SIM (DSSA)	Supported	Supported

**Table 12. WWAN module specifications (continued)**

Description	Option one	Option two
	<p><b>NOTE:</b> The availability of eSIM functionality embedded on the module is dependent on the region and specific carrier requirements.</p>	<p><b>NOTE:</b> The availability of eSIM functionality embedded on the module is dependent on the region and specific carrier requirements.</p>
Antenna diversity	Supported	Supported
Radio On/Off	Supported	Supported
Wake on wireless	Supported	Supported
Temperature	<ul style="list-style-type: none"> <li>Normal operating temperature: -10°C to +55°C</li> <li>Extended Operating temperature: -30°C to +75°C</li> </ul>	<ul style="list-style-type: none"> <li>Normal operating temperature: -10°C to +55°C</li> <li>Extended Operating temperature: -30°C to +75°C</li> <li>Storage temperature: -40°C to +85°C</li> </ul>
Antenna connector	<ul style="list-style-type: none"> <li>WWAN main antenna x 1</li> <li>WWAN diversity antenna x 1</li> </ul>	<ul style="list-style-type: none"> <li>WWAN main antenna x 1</li> <li>WWAN diversity antenna x 1</li> <li>4x4 MIMO antenna x 2</li> </ul>
<p><b>NOTE:</b> For instructions on how to find your computer's International Mobile Equipment Identity (IMEI) number, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>		

## Audio

The following table lists the audio specifications of your Precision 3590.

**Table 13. Audio specifications**

Description	Values
Audio controller	Realtek Waves, MaxxAudio 13.0
Stereo conversion	Supported
Internal audio interface	High definition audio interface
External audio interface	Universal Audio Jack/HDMI 2.1 TMDS port
Number of speakers	2
Internal-speaker amplifier	Not supported
External volume controls	Keyboard shortcut controls
Speaker output:	
Average speaker output	2 W
Peak speaker output	2 W
Subwoofer output	Not supported
Microphone	Digital-array microphones in camera assembly

# Storage

This section lists the storage options on your Precision 3590.

Your Precision 3590 supports one of the following storage configurations:

- One M.2 2230 or 2280 solid state drive
- One M.2 2230 solid state drive


**Table 14. Storage specifications**

Storage type	Interface type	Capacity
M.2 2230 or 2280 solid state drive	PCIe Gen4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2230 solid state drive	PCIe Gen4 NVMe, up to 64 Gbps	Up to 1 TB
M.2 2230 solid state drive self-encrypting drive	PCIe Gen4 NVMe, up to 64 Gbps	512 GB

# Media-card reader

The following table lists the media cards that are supported on your Precision 3590.

**Table 15. Media-card reader specifications**

Description	Values
Media-card type	One micro-SD card slot
Media-cards supported	<ul style="list-style-type: none"><li>• microSecure Digital (mSD)</li><li>• microSecure Digital High Capacity (mSDHC)</li><li>• microSecure Digital Extended Capacity (mSDXC)</li></ul>
 <b>NOTE:</b> The maximum capacity supported by the media-card reader varies depending on the standard of the media card that is installed on your computer.	

# Keyboard

The following table lists the keyboard specifications of your Precision 3590.

**Table 16. Keyboard specifications**

Description	Values
Keyboard type	Standard keyboard
Keyboard layout	QWERTY
Number of keys	<ul style="list-style-type: none"><li>• English US, English International, English UK, Canada (Bilingual), Arabic, Chinese (Traditional), French (Canadian), Greek, Hebrew, Korean, Russian, Thai, Ukrainian: 99 keys</li><li>• Bulgarian, English UK, French (Canadian), Spanish (Latin America), Brazilian, Belgian, Czech/Slovak (MUI), Danish, Estonian, French (European), German, Hungarian, Italian, Nordic (MUI), Norwegian, Portugese Iberian, Slovenian, Spanish (Castilian), Spanish (Latin America), Swedish/</li></ul>

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

Description	Values
	Finnish, Swiss/European (MUI), Turkish, Turkish (F): 100 keys • Japanese - 103 keys
Keyboard size	X=18.05 mm key pitch Y=18.05 mm key pitch
Keyboard shortcuts	Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key. ⓘ <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.  For more information, see <a href="#">Keyboard function keys</a> .

## Keyboard function keys

The **F1-F12** keys at the top of the keyboard are function keys. By default, these keys are used to perform specific functions defined by the software application in use.

**Table 17. List of keyboard shortcuts**

Key	Primary behavior
F1	Mute audio
F2	Decrease volume
F3	Increase volume
F4	Mute microphone
F5	Keyboard backlight ⓘ <b>NOTE:</b> Toggle to cycle the keyboard backlight status through off, low-backlight, and high-backlight.
F6	Decrease brightness
F7	Increase brightness
F8	Switch to external display
F10	Print Screen
F11	Home
F12	End
Copilot	Launch Copilot in Windows ⓘ <b>NOTE:</b> If Copilot in Windows is not available on your computer, the CoPilot key launches Windows Search. For more information about Copilot in Windows, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a> .

You can run the secondary tasks that are indicated by the symbols on the function keys by pressing the function key with **fn**, for example, **fn** and **F1**. See the table below for the list of secondary tasks and the key combinations to run them.

ⓘ **NOTE:** Keyboard characters may differ depending on the keyboard language configuration. Keys that are used for tasks remain the same, regardless of the keyboard language.

**NOTE:** You can define the primary behavior of function keys in the **Function Key Behavior** menu of the BIOS setup program.

**Table 18. Secondary tasks of keyboard keys**

Key combination for task	What the task does
<b>fn</b> and <b>F1</b>	Operating system and application-specific F1 behavior
<b>fn</b> and <b>F2</b>	Operating system and application-specific F2 behavior
<b>fn</b> and <b>F3</b>	Operating system and application-specific F3 behavior
<b>fn</b> and <b>F4</b>	Operating system and application-specific F4 behavior
<b>fn</b> and <b>F5</b>	Operating system and application-specific F5 behavior
<b>fn</b> and <b>F6</b>	Operating system and application-specific F6 behavior
<b>fn</b> and <b>F7</b>	Operating system and application-specific F7 behavior
<b>fn</b> and <b>F8</b>	Operating system and application-specific F8 behavior
<b>fn</b> and <b>F9</b>	Operating system and application-specific F9 behavior
<b>fn</b> and <b>F10</b>	Operating system and application-specific F10 behavior
<b>fn</b> and <b>F11</b>	Operating system and application-specific F11 behavior
<b>fn</b> and <b>F12</b>	Operating system and application-specific F12 behavior

## Keys with alternate characters

There are other keys on your keyboard with alternate characters. The symbols that are shown at the bottom of these keys are the main characters that are displayed when the key is pressed; the symbols that are shown at the top of these keys are displayed when the key is pressed with the shift key. For example, if you press **2**, **2** is displayed; if you press **Shift** and **2**, **@** is displayed.

## Camera

The following table lists the camera specifications of your Precision 3590.

**Table 19. Camera specifications**

Description	Values
Number of cameras	One
Camera type	<ul style="list-style-type: none"> <li>FHD RGB camera</li> <li>FHD RGB+IR camera</li> <li>FHD RGB+IR camera with Ambient Light Sensor, Express Sign-In with Presence Detection and Intelligent Privacy</li> </ul>
Camera location	Front camera
Camera sensor type	CMOS sensor technology
Camera resolution:	
Still image	2.07 megapixel
Video	1920 x 1080 (FHD) at 30 fps
Infrared camera resolution:	



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

Description		Values
	Still image	0.23 megapixels
	Video	640 x 360 at 30 fps
Diagonal viewing angle:		
	Camera	80 degrees
	Infrared camera	86.60 degrees

## Touchpad

The following table lists the touchpad specifications of your Precision 3590.

**Table 20. Touchpad specifications**

Description		Values
Touchpad resolution:		>300 DPI
Touchpad dimensions:		
	Horizontal	115 mm (4.52 in.)
	Vertical	67 mm (2.64 in.)
Touchpad gestures		For more information about touchpad gestures are available on: <ul style="list-style-type: none"> <li>Windows, see the Microsoft Knowledge Base article at <a href="https://support.microsoft.com">support.microsoft.com</a>.</li> <li>Ubuntu, see <a href="https://ubuntu.com/support">ubuntu.com/support</a>.</li> </ul>


## Power adapter

The following table lists the power adapter specifications of your Precision 3590.

**Table 21. Power adapter specifications**

Description	Option one	Option two	Option three
Type	65 W adapter, USB-C	100 W adapter, USB-C	130 W adapter, USB-C
Power-adapter dimensions:			
Height	27.94 mm (1.10 in.)	26.41 mm (1.04 in.)	22.09 mm (0.87 in.)
Width	51.05 mm (2.01 in.)	59.94 mm (2.36 in.)	66.04 mm (2.60 in.)
Depth	112.01 mm (4.41 in.)	121.92 mm (4.80 in.)	143 mm (5.63 in.)
Input voltage	100 VAC-240 VAC	100 VAC-240 VAC	100 VAC-240 VAC
Input frequency	50 Hz-60 Hz	50 Hz-60 Hz	50 Hz-60 Hz
Input current (maximum)	1.70 A	1.70 A	1.80 A
Output current (continuous)	• 20 V/3.25 A (continuous)	• 20 V/5 A (continuous)	• 20 V/6.50 A (continuous)

**Table 21. Power adapter specifications (continued)**

Description		Option one	Option two	Option three
		<ul style="list-style-type: none"> <li>15 V/3 A (continuous)</li> <li>9 V/3 A (continuous)</li> <li>5 V/3 A (continuous)</li> </ul>	<ul style="list-style-type: none"> <li>15 V/3 A (continuous)</li> <li>9 V/3 A (continuous)</li> <li>5 V/3 A (continuous)</li> </ul>	<ul style="list-style-type: none"> <li>5 V/1 A (continuous)</li> </ul>
Rated output voltage		<ul style="list-style-type: none"> <li>20 VDC</li> <li>15 VDC</li> <li>9 VDC</li> <li>5 VDC</li> </ul>	<ul style="list-style-type: none"> <li>20 VDC</li> <li>15 VDC</li> <li>9 VDC</li> <li>5 VDC</li> </ul>	<ul style="list-style-type: none"> <li>20 VDC</li> <li>5 VDC</li> </ul>
Temperature range:				
	Operating	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
	Storage	-20°C to 70°C (-4°F to 158°F)	-40°C to 70°C (-4°F to 158°F)	-40°C to 70°C (-4°F to 158°F)
 <b>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.</b>				


## Battery


The following table lists the battery specifications of your Precision 3590.


**Table 22. Battery specifications**

Description		Option one	Option two	Option three	Option four
Battery type		3 cell, 42 Wh, ExpressCharge, ExpressCharge Boost	3 cell, 42 Wh, Long Cycle Life, ExpressCharge	3 cell, 54 Wh, ExpressCharge, ExpressCharge Boost	3 cell, 54 Wh, Long Cycle Life, ExpressCharge
Battery voltage		11.40 VDC	11.40 VDC	11.40 VDC	11.40 VDC
Battery weight (minimum)		0.19 kg (0.41 lb)	0.19 kg (0.41 lb)	0.22 kg (0.48 lb)	0.22 kg (0.48 lb)
Battery dimensions:					
	Height	5.73 mm (0.22 in.)	5.73 mm (0.22 in.)	5.73 mm (0.22 in.)	5.73 mm (0.22 in.)
	Width	263 mm (10.35 in.)	263 mm (10.35 in.)	263 mm (10.35 in.)	263 mm (10.35 in.)
	Depth	68.90 mm (2.71 in.)	68.90 mm (2.71 in.)	68.90 mm (2.71 in.)	68.90 mm (2.71 in.)
Temperature range:					
	Operating	<ul style="list-style-type: none"> <li>Charge: 0°C to 45°C (32°F to 113°F)</li> <li>Discharge: 0°C to 70°C (32°F to 158°F)</li> </ul>	<ul style="list-style-type: none"> <li>Charge: 0°C to 45°C (32°F to 113°F)</li> <li>Discharge: 0°C to 70°C (32°F to 158°F)</li> </ul>	<ul style="list-style-type: none"> <li>Charge: 0°C to 45°C (32°F to 113°F)</li> <li>Discharge: 0°C to 70°C (32°F to 158°F)</li> </ul>	<ul style="list-style-type: none"> <li>Charge: 0°C to 45°C (32°F to 113°F)</li> <li>Discharge: 0°C to 70°C (32°F to 158°F)</li> </ul>
	Storage	-20°C to 65°C (-4°F to 149°F)	-20°C to 65°C (-4°F to 149°F)	-20°C to 65°C (-4°F to 149°F)	-20°C to 65°C (-4°F to 149°F)
Battery operating time		Varies depending on operating	Varies depending on operating	Varies depending on operating	Varies depending on operating

**Table 22. Battery specifications (continued)**

Description	Option one	Option two	Option three	Option four
<p>Battery charging time (approximate)</p> <p> <b>NOTE:</b> Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information about Dell Power Manager, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>	<p>conditions and can significantly reduce under certain power-intensive conditions.</p> <p><b>Express Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 45°C normal express charge.</li> <li>46°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul> <p><b>Standard Charge/ Predominately AC User Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul> <p><b>Express Charge Boost Charge Method (Fast Charge for Initial 35%):</b></p> <ul style="list-style-type: none"> <li>16°C to 45°C target charge time from 0% to 35% RSOC is 20 minutes for Accelerated Charge.</li> </ul>	<p>conditions and can significantly reduce under certain power-intensive conditions.</p> <p><b>Express Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 45°C normal express charge.</li> <li>46°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul> <p><b>Standard Charge/ Predominately AC User Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul>	<p>conditions and can significantly reduce under certain power-intensive conditions.</p> <p><b>Express Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 45°C normal express charge.</li> <li>46°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul> <p><b>Standard Charge/ Predominately AC User Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul> <p><b>Express Charge Boost Charge Method (Fast Charge for Initial 35%):</b></p> <ul style="list-style-type: none"> <li>16°C to 45°C target charge time from 0% to 35% RSOC is 20 minutes for Accelerated Charge.</li> </ul>	<p>conditions and can significantly reduce under certain power-intensive conditions.</p> <p><b>Express Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 45°C normal express charge.</li> <li>46°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul> <p><b>Standard Charge/ Predominately AC User Charge Method:</b></p> <ul style="list-style-type: none"> <li>0°C to 15°C maximum allowable charge time from 0% to 100% RSOC is 4 hours.</li> <li>16°C to 50°C maximum allowable charge time from 0% to 100% RSOC is 3 hours.</li> </ul>
Coin-cell battery	CR2032	CR2032	CR2032	CR2032

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

 **CAUTION:** Dell 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.

# Display

The following table lists the display specifications of your Precision 3590.

**Table 23. Display specifications**

Description		Option one	Option two	Option three
Display type		15.6-inch Full High Definition (FHD)	15.6-inch Full High Definition (FHD)	15.6-inch Full High Definition (FHD), ComfortView Plus Low Blue Light, Battery Saving
Touch options		No	Yes	No
Display-panel technology		In-Plane Switching (IPS)	In-Plane Switching (IPS)	In-Plane Switching (IPS)
Display-panel dimensions (active area):				
	Height	193.60 mm (7.62 in.)	193.60 mm (7.62 in.)	193.60 mm (7.62 in.)
	Width	344.20 mm (13.55 in.)	344.20 mm (13.55 in.)	344.20 mm (13.55 in.)
	Diagonal	396 mm (15.60 in.)	396 mm (15.60 in.)	396 mm (15.60 in.)
Display-panel native resolution		1920 x 1080	1920 x 1080	1920 x 1080
Luminance (typical)		250 nits	250 nits	400 nits
Megapixels		2.07	2.07	2.07
Color gamut		45% NTSC	45% NTSC	100% sRGB
Pixels Per Inch (PPI)		141	141	141
Contrast ratio (typical)		700:1	700:1	800:1
Response time (maximum)		35 millisecond	35 millisecond	35 millisecond
Refresh rate		60 Hz	60 Hz	60 Hz
Horizontal view angle		+/- 80 degrees	+/- 80 degrees	+/- 80 degrees
Vertical view angle		+/- 80 degrees	+/- 80 degrees	+/- 80 degrees
Pixel pitch		0.179 x 0.179 mm	0.179 x 0.179 mm	0.179 x 0.179 mm
Power consumption (maximum)		4.60 W	4.60 W	4.50 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	Anti-glare

## Fingerprint reader (optional)

The following table lists the specifications of the optional fingerprint-reader of your Precision 3590.

**Table 24. Fingerprint reader specifications**

Description	Values
Fingerprint-reader sensor technology	Capacitive
Fingerprint-reader sensor resolution	500 dpi
Fingerprint-reader sensor pixel size	108 x 88

## Sensor

The following table lists the sensor of your Precision 3590.

**Table 25. Sensor**

Sensor support
Ambient light sensor
Accelerometer in the base: ST Micro LIS2DW12TR
Accelerometer in the hinge-up (Upsell config with Emza/ALS/IR camera): ST Micro LNG2DMTR

## GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Precision 3590.

**Table 26. GPU—Integrated**

Controller	Memory size	Processor
Intel Arc Graphics	Shared system memory	For Intel Core H processors and requires 128-bit (dual-channel) memory with minimum of 16 GB memory
Intel Graphics	Shared system memory	Intel Core Ultra 5/7

## GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Precision 3590.


**Table 27. GPU—Discrete**

Controller	Memory size	Memory type
NVIDIA RTX 500 Ada Generation	4 GB	GDDR6

## External display support

The following table lists the external display support for your Precision 3590.

**Table 28. External display support**

Graphics card	Supported external displays with laptop display enabled	Supported external displays with laptop display disabled
Intel Arc Graphics	3	4
Intel Graphics	3	4
 <b>NOTE:</b> For more information about external display support, see the External Display Connection Guide on <a href="http://www.dell.com/support">www.dell.com/support</a> .		

## Hardware security

The following table lists the hardware security of your Precision 3590.

**Table 29. Hardware security**

Hardware security
Trusted Platform Module (TPM) 2.0 discrete
FIPS 140-2 certification for TPM
TCG Certification for TPM (Trusted Computing Group)
Finger Print Reader in Power Button available with and without ControlVault 3 Plus
ControlVault 3 Plus Advanced Authentication with FIPS 140-3 Level 3 Certification
Contacted Smart Card and ControlVault 3 Plus
Contactless Smart Card, NFC, and ControlVault 3 Plus
SED SSD NVMe, SSD, and hard drive (Opal and non-Opal) per SDL
FIPS 201 Full Scan FPR and ControlVault 3 Plus