Precision 5470

Setup and Specifications

D&LL Technologies

Notes, cautions, and warnings

(i) **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.**
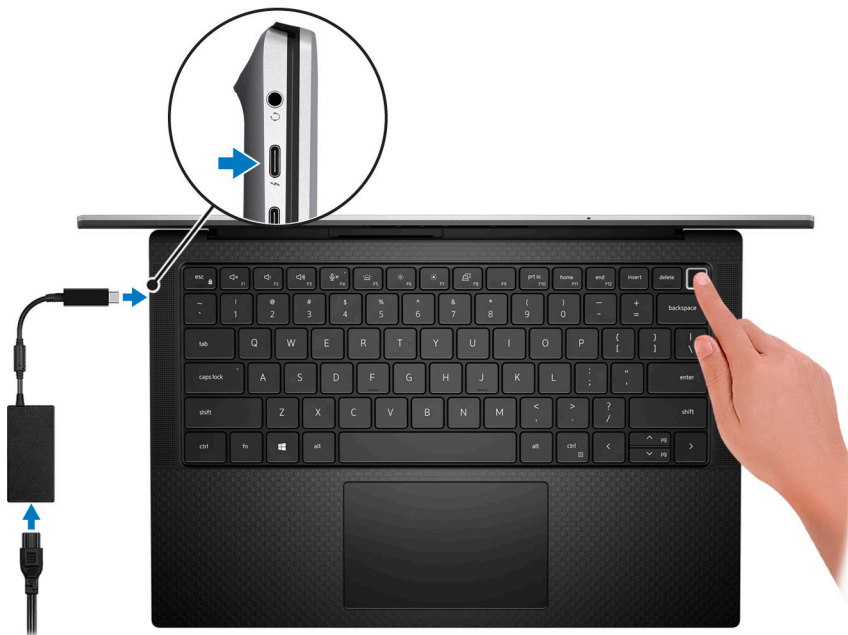
Contents

Contents

Set up your Precision 5470

About this task

(i) **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.

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

2. Finish operating system setup.

   For Ubuntu:

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

   For Windows:

   Follow the on-screen instructions to complete the setup. When setting up, Dell recommends that you:
   ● Connect to a network for Windows updates.
     (i) **NOTE:** If connecting to a secured wireless network, enter the password for the wireless network access when prompted.
   ● If connected to the internet, sign-in with or create a Microsoft account. If not connected to the internet, create an offline account.

   ● On the **Support and Protection** screen, enter your contact details.

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

Table 1. Locate Dell apps

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

Views of Precision 5470

Right

1. **microSD-card slot**

   Reads from and writes to the micro-SD card. The computer supports the following card types:

   - microSecure Digital (micro-SD)
   - microSecure Digital High Capacity (micro-SDHC)
   - microSecure Digital Extended Capacity (micro-SDXC)

2. **Thunderbolt 4.0 ports with Power Delivery and DisplayPort**

   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.

   (i) **NOTE:** You can connect a Dell Docking Station to the Thunderbolt 4 ports. For more information, see the knowledge base article 000124295 at www.dell.com/support.

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

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

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

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

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

Left

1. **Universal audio jack**

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

2. **Thunderbolt 4.0 ports with Power Delivery and DisplayPort**

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

3. **Smart card reader slot**

Provides physical electronic authorization for access control to the resources.

Supports both Contactless and Contacted Smart Cards.

Provides personal identification, authentication, data storage, and application processing.

Top

1. **Microphone**

Provides digital sound input for audio recording, voice calls, and so on.

2. **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 four seconds to force shut-down the computer.

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

(i) **NOTE:** You can customize power-button behavior in Windows. For more information, see *Me and My Dell* at www.dell.com/support/manuals.

3. **Precision touchpad**

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

Front
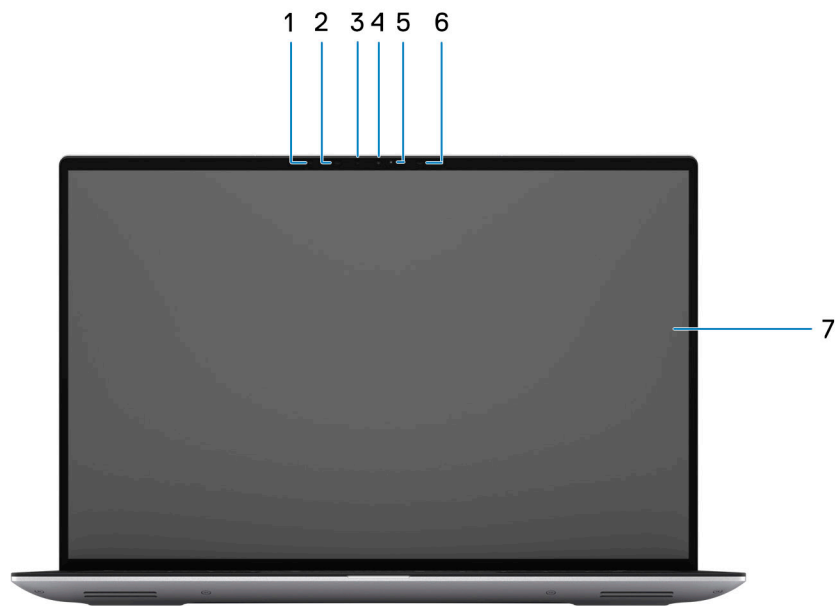
1. **Ambient-light sensor**

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

2. **Infrared LED**
3. **Infrared camera**

   Enhances security when paired with Windows Hello face authentication.

4. **RGB camera**

   Enables you to video chat, capture photos, and record videos.

5. **LEN indicator**
6. **Infrared LED**
7. **LCD panel**

   Provides visual output to the user.

Bottom
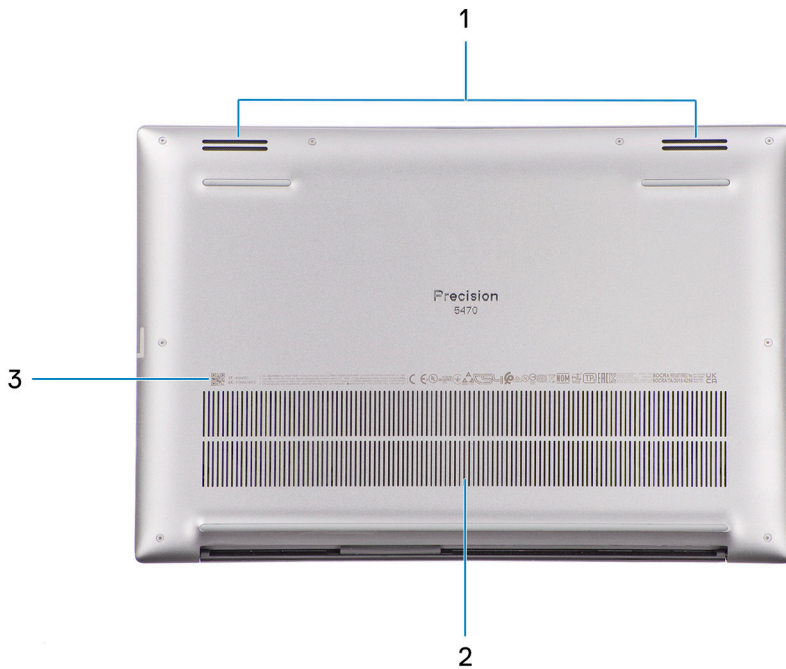
1. **Speakers**

   Provide audio output.

2. **Air vents**

   Air is pulled by the internal fans through the air vents.

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

3. **Service Tag and regulatory labels**

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

Service Tag

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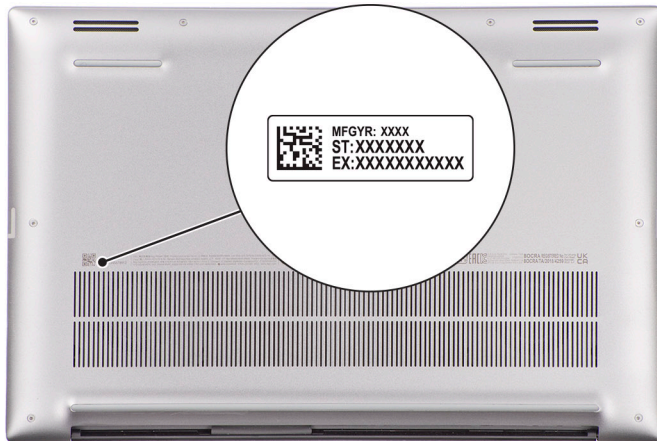
Battery charge and status light

The following table lists the battery charge and status light behavior of your Precision 5470.

Table 2. Battery charge and status light behavior

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

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

Specifications of Precision 5470

Dimensions and weight

The following table lists the height, width, depth, and weight of your Precision 5470.

Table 3. Dimensions and weight

Description	Values
Height:	
Front height	0.29 in. (7.49 mm)
Rear height	0.43 in. (11.09 mm)
Width	12.22 in. (310.60 mm)
Depth	8.27 in. (210.35 mm)
Weight ⓘ **NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability.	3.26 lb (1.48 kg)

Processor

The following table lists the details of the processors supported by your Precision 5470.

Table 4. Processor

Description	Option one	Option two	Option three	Option four	Option five
Processor type	12th Generation Intel Core i5-12500H, vPro Essential	12th Generation Intel Core i5-12600H, vPro Enterprise	12th Generation Intel Core i7-12700H, vPro Essential	12th Generation Intel Core i7-12800H, vPro Enterprise	12th Generation Intel Core i9-12900H, vPro Enterprise
Processor wattage	45 W	45 W	45 W	45 W	45 W
Processor core count	4 P cores and 8 E cores	4 P cores and 8 E cores	6 P cores and 8 E cores	6 P cores and 8 E cores	6 P cores and 8 E cores
Processor thread count	16	16	20	20	20
Processor speed	P Cores 3.30 GHz to 4.50 GHz, E Cores 1.80 GHz to 2.50 GHz	P Cores 3.30 GHz to 4.50 GHz, E Cores 2.00 GHz to 2.70 GHz	P Cores 3.50 GHz to 4.70 GHz, E Cores 1.70 GHz to 2.30 GHz	P Cores 3.70 GHz to 4.80 GHz, E Cores 1.80 GHz to 2.40 GHz	P cores 3.80 GHz to 5.00 GHz, E cores 1.80 GHz to 2.50 GHz
Processor cache	18 MB	18 MB	24 MB	24 MB	24 MB
Integrated graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics

Chipset

The following table lists the details of the chipset supported by your Precision 5470.

Table 5. Chipset

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

Operating system

Your Precision 5470 supports the following operating systems:

- Windows 11 Pro, 64-bit with Downgrade Rights (DGR)
- Windows 11 Pro National Education, 64-bit
- Windows 11 Home, 64-bit with DGR
- RedHat Enterprise Linux 8.7
- Ubuntu Linux 20.04 (64-bit)

Memory

The following table lists the memory specifications of your Precision 5470.

Table 6. Memory specifications

Description	Values
Memory slots	Integrated on system board
Memory type	LPDDR5
Memory speed	5200 MHz
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory configurations supported	8 GB, 2 x 4 GB, LPDDR5, 5200 MHz, integrated, dual-channel 16 GB, 2 x 8 GB, LPDDR5, 5200 MHz, integrated, dual-channel 32 GB, 2 x 16 GB, LPDDR5, 5200 MHz, integrated, dual-channel 64 GB, 2 x 32 GB, LPDDR5, 5200 MHz, integrated, dual-channel

External ports

The following table lists the external ports on your Precision 5470.

Table 7. External ports

Description	Values
USB ports	Four Thunderbolt 4 ports with PowerDelivery and DisplayPort (USB Type-C)
Audio port	One universal audio jack
Video port/ports	Thunderbolt 4 ports with DisplayPort (USB Type-C)
Media-card reader	One SD-card slot
Power-adapter port	Thunderbolt 4 ports with PowerDelivery (USB Type-C)
Security-cable slot	One wedge-shaped security slot

Internal slots

The following table lists the internal slots of your Precision 5470.

Table 8. Internal slots

Description	Values
M.2	M.2 solid-state drive (one M.2 2230 or M.2 2280) (i) **NOTE:** To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at www.dell.com/support.

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module supported on your Precision 5470.

Table 9. Wireless module specifications

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

Table 9. Wireless module specifications (continued)

Description	Values
Encryption	64-bit and 128-bit WEP 128-bit AES-CCMP - TKIP
Bluetooth	Bluetooth 5.2

Audio

The following table lists the audio specifications of your Precision 5470.

Table 10. Audio specifications

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

Storage

This section lists the storage options on your Precision 5470.

- M.2 2230 PCIe NVMe Gen4 x4, Class 35 SSD
- M.2 2280 PCIe NVMe Gen4 x4, Class 40 SSD
- M.2 2280 PCIe NVMe Gen3 x4, Class 40 SED (Self-Encrypting Drive)
- M.2 2280 PCIe NVMe Gen4 x4, Class 40 SED (Self-Encrypting Drive)

Table 11. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 Class 35 SSD	PCIe NVMe Gen4 x4	256 GB
M.2 2280 Class 40 SSD	PCIe NVMe Gen4 x4	Up to 4 TB

Table 11. Storage specifications (continued)

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

Media-card reader

The following table lists the media cards supported by your Precision 5470.

Table 12. Media-card reader specifications

Description	Values
Media-card type	micro-SD card
Media-cards supported	● micro-Secure Digital (SD) ● micro-Secure Digital High Capacity (SDHC) ● micro-Secure Digital Extended Capacity (SDXC)
ⓘ **NOTE:** The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

Keyboard

The following table lists the keyboard specifications of your Precision 5470.

Table 13. Keyboard specifications

Description	Values
Keyboard type	Backlit keyboard
Keyboard layout	QWERTY
Number of keys	● United States and Canada: 79 keys ● United Kingdom: 80 keys ● Japan: 83 keys
Keyboard size	X=19.05 mm key pitch Y=18.05 mm key pitch
Keyboard shortcuts	Some keys on your keyboard have two symbols on them. These keys can be used to type alternate characters or to perform secondary functions. To type the alternate character, press Shift and the desired key. To perform secondary functions, press Fn and the desired key. ⓘ **NOTE:** You can define the primary behavior of the function keys (F1–F12) changing **Function Key Behavior** in BIOS setup program.

Camera

The following table lists the camera specifications of your Precision 5470.

Table 14. Camera specifications

Description		Values
Number of cameras		One
Camera type		HD RGB and IR camera
Camera location		Front camera
Camera sensor type		CMOS sensor technology
Camera resolution:		
	Still image	0.92 megapixel
	Video	1280 x 720 (HD) at 30 fps
Infrared camera resolution:		
	Still image	0.25 megapixel
	Video	640 x 400 at 30 fps
Diagonal viewing angle:		
	Camera	75.8 degrees
	Infrared camera	75.8 degrees

Touchpad

The following table lists the touchpad specifications of your Precision 5470.

Table 15. Touchpad specifications

Description		Values
Touchpad resolution:		>300 dpi
Touchpad dimensions:		
	Horizontal	105.95 mm (4.17 in.)
	Vertical	65.30 mm (2.57 in.)
Touchpad gestures		For more information about touchpad gestures available on Windows, see the Microsoft knowledge base article at support.microsoft.com.

Power adapter

The following table lists the power adapter specifications of your Precision 5470.

Table 16. Power adapter specifications

Description		Option one	Option two
Type		90 W AC adapter, USB-C (UMA only)	130 W AC adapter, USB-C (Discrete only)
Power-adapter dimensions:			
	Height	22 mm (0.8 in.)	22 mm (0.8 in.)
	Width	66 mm (2.6 in.)	66 mm (2.6 in.)
	Depth	130 mm (5.1 in.)	143 mm (5.6 in.)
Input voltage		100 VAC x 240 VAC	100 VAC x 240 VAC
Input frequency		50 Hz / 60 Hz	50 Hz / 60 Hz
Input current (maximum)		1.50 A	1.80 A
Output current (continuous)		20 V/4.50 A 15 V/3 A 9 V/3 A 5 V/3 A	20 V/6.50 A 5 V/1 A
Rated output voltage		20 VDC 15 VDC 9 VDC 5 VDC	20 VDC 5 VDC
Temperature range:			
	Operating	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)
	Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)

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

Battery

The following table lists the battery specifications of your Precision 5470.

Table 17. Battery specifications

Description		Values
Battery type		4-cell, 72 WHr, Lithium-ion, ExpressChargeBoost, ExpressCharge
Battery voltage		15.40 VDC
Battery weight (maximum)		0.285 kg (0.63 lb)
Battery dimensions:		
	Height	8.25 mm (0.32 in.)

Table 17. Battery specifications (continued)

Description		Values
	Width	255.20 mm (10.05 in.)
	Depth	65.70 mm (2.59 in.)
Temperature range:		
	Operating	• Charge: 0°C to 50°C (32°F to 122°F) • Discharge: 0°C to 70°C (32°F to 158°F)
	Storage	−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.
Battery charging time (approximate) ⓘ **NOTE:** Control the charging time, duration, start and end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, *Me and My Dell* on www.dell.com.		**Express Charge Method:** • 0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16 - 45°C normal express charge • 46 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours **Standard Charge/Predominately AC User Charge Method:** • 0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours • 16 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours **Express Charge Boost Charge Method (Fast Charge for Initial 35%):** • 16 - 45°C target charge time from 0 to 35% RSOC is 20 mins for Accelerated Charge
Coin-cell battery		No coin-cell. Supported by main battery

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

Display

The following table lists the display specifications of your Precision 5470.

Table 18. Display specifications

Description		Option one	Option two
Display type		14-inch Full High Definition+ (FHD+)	14-inch Quad High Definition (QHD+)
Display-panel technology		Wide-viewing angle (WVA) narrow bent, TÜV low blue light	Wide-viewing angle (WVA), WLED, TÜV low blue light
Display-panel dimensions (active area):			
	Height	188.49 mm (7.42 in.)	188.50 mm (7.42 in.)
	Width	301.59 mm (11.87 in.)	301.59 mm (11.87 in.)
	Diagonal	355.6 mm (14.00 in.)	355.6 mm (14.00 in.)
Display-panel native resolution		1920 x 1200	2560 x 1600

Table 18. Display specifications (continued)

Description	Option one	Option two
Luminance (typical)	500 nits	500 nits
Megapixels	2.30	4.09
Color gamut	100% sRGB	100% sRGB
Pixels Per Inch (PPI)	161 ppi	216 PPI
Contrast ratio (min.)	1200:1	1000:1
Response time (max.)	35 ms	35 ms
Refresh rate	60 Hz	60 Hz
Horizontal view angle	+/- 88 degrees	+/- 88 degrees
Vertical view angle	+/- 88 degrees	+/- 88 degrees
Pixel pitch	0.1572 mm	0.1178 mm
Power consumption (maximum)	2.85 W	3.70 W
Anti-glare vs glossy finish	Anti-glare	Anti-Reflection and Anti-Smudge on touch screen
Touch options	No	Yes with active pen support

Fingerprint reader

The following table lists the fingerprint-reader specifications of your Precision 5470.

(i) **NOTE:** The fingerprint reader is located on the power button.

Table 19. Fingerprint reader specifications

Description	Values
Fingerprint-reader sensor technology	Trans-capacitive sensing
Fingerprint-reader sensor resolution	500 DPI
Fingerprint-reader sensor pixel size	- X: 108 - Y: 88

Sensor

The following table lists the sensor of your Precision 5470.

Table 20. Sensor

Sensor support
Ambient Light Sensor
IR User
Accelerometer

Table 20. Sensor (continued)

Sensor support
Adaptive Thermal Performance (Lap vs. Desk mode) requires Gyro/Accelerometer ⓘ **NOTE:** This is for thermal only.
Hall Effect Sensor

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Precision 5470.

Table 21. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel Iris Xe Graphics	4 x Four Thunderbolt 4 ports with DisplayPort	Shared system memory	Intel 12th Generation Intel Core i5/i7/i9

Multiple display support matrix

The following table lists the multiple display support matrix for your Precision 5470.

Table 22. Multiple display support matrix

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

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Precision 5470.

Table 23. GPU—Discrete

Controller	External display support	Memory size	Memory type
NVIDIA RTX A1000 laptop	One DisplayPort 1.4	4 GB	GDDR6

Multiple display support matrix

The following table lists the multiple display support matrix for your Precision 5470.

Table 24. Multiple display support matrix

Graphics Card	Direct Graphics Controller Direct Output Mode
NVIDIA RTX A1000 laptop	MS Hybrid

Hardware security

The following table lists the hardware security of your Precision 5470.

Table 25. Hardware security

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

Smart-card reader

Contactless smart-card reader

This section lists the contactless smart-card reader specifications of your Precision 5470.

Table 26. Contactless smart-card reader specifications

Title	Description	Dell ControlVault 3 Contactless Smart-card reader with NFC
Felica Card Support	Reader and software capable of supporting Felica contactless cards	Yes
Prox (Proximity) (125 kHz) Card support	Reader and software capable of supporting Prox/Proximity/125 kHz contactless cards	No
ISO 14443 Type A Card Support	Reader and software capable of supporting ISO 14443 Type A contactless cards	Yes
ISO 14443 Type B Card Support	Reader and software capable of supporting ISO 14443 Type B contactless cards	Yes
ISO/IEC 21481	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO/IEC 18092	Reader and software capable of supporting ISO/IEC 21481 compliant contactless cards and tokens	Yes
ISO 15693 Card Support	Reader and software capable of supporting ISO15693 contactless cards	Yes
NFC Tag Support	Supports reading and processing of NFC compliant tag information	Yes
NFC Reader Mode	Support for NFC Forum Defined Reader mode	Yes

Table 26. Contactless smart-card reader specifications (continued)

Title	Description	Dell ControlVault 3 Contactless Smart-card reader with NFC
NFC Writer Mode	Support for NFC Forum Defined Writer mode	Yes
NFC Peer-to-Peer Mode	Support for NFC Forum Defined Peer to Peer mode	Yes
NFC Proximity OS Interface	Enumerates NFP (Near Field Proximity) device for OS to utilize	Yes
PC/SC OS interface	Personal Computer/Smart-Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers	Yes
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

(i) **NOTE:** 125 Khz proximity cards are not supported.

Table 27. Supported cards

Manufacturer	Card	Supported
HID	jCOP readertest3 A card (14443a)	Yes
	1430 1L	
	DESFire D8H	
	iClass (Legacy)	
	iClass SEOS	
NXP/Mifare	Mifare DESFire 8K White PVC Cards	Yes
	Mifare Classic 1K White PVC Cards	
	NXP Mifare Classic S50 ISO Card	
G&D	idOnDemand - SCE3.2 144K	Yes
	SCE6.0 FIPS 80K Dual+ 1 K Mifare	
	SCE6.0 nonFIPS 80K Dual+ 1 K Mifare	
	SCE6.0 FIPS 144K Dual + 1K Mifare	
	SCE6.0 nonFIPS 144K Dual + 1 K Mifare	
	SCE7.0 FIPS 144K	
Oberthur	idOnDemand - OCS5.2 80K	Yes
	ID-One Cosmo 64 RSA D V5.4 T=0 card	
	ID-One Cosmo 128K V5.5 card	
Gemalto	TOP DL GX4 144K card	Yes
Sony	Felica RC-S962	Yes
	Felica RC-S966	Yes
PIVKey	C910 PKI	Yes

Table 27. Supported cards (continued)

Manufacturer	Card	Supported
IDENTIV	PIV programmed cards	Yes

Contacted smart-card reader

The following table lists the contacted smart-card reader specifications of your Precision 5470.

Table 28. Contacted smart-card reader specifications

Title	Description	Dell ControlVault 3 Smart-card reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5 V powered smart-card	Yes
ISO 7816 -3 Class B Card Support	Reader capable of reading 3 V powered smart-card	Yes
ISO 7816 -3 Class C Card support	Reader capable of reading 1.8 V powered smart-card	Yes
T=0 support	Cards support character level transmission	Yes
T=1 support	Cards support block level transmission	Yes
EMVCo Compliant	Compliant with EMVCo (for electronic payment standards) smart-card standards as posted to www.emvco.com	Yes
EMVCo Certified	Formally certified based on EMVCO smart-card standards	Yes
PC/SC OS interface	Personal Computer/Smart-Card specification for integration of hardware readers into personal computer environments	Yes
CCID driver compliance	Common driver support for Integrated Circuit Card Interface Device for OS level drivers.	Yes
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

Operating and storage environment

This table lists the operating and storage specifications of your Precision 5470.

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

Table 29. 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†

Table 29. Computer environment (continued)

Description	Operating	Storage
Altitude range	-15.2 m to 3048 m (4.64 ft to 10000 ft)	-15.2 m to 10668 m (4.64 ft to 35000 ft)
⚠ **CAUTION: Operating and storage temperature ranges may differ among components, so operating or storing the device outside these ranges may impact the performance of specific components.**		

* Measured using a random vibration spectrum that simulates user environment.

† Measured using a 2 ms half-sine pulse.

Low blue light

⚠ **WARNING: Prolonged exposure to blue light from the display may lead to long-term effects such as eye strain, eye fatigue, or damage to the eyes.**

Blue light is a color in the light spectrum which has a short wavelength and high energy. Chronic exposure to blue light, particularly from digital sources, may disrupt sleep patterns and cause long-term effects such as eye strain, eye fatigue, or damage to the eyes.

The display on this computer is designed to minimize blue light and complies with TÜV Rheinland's requirement for low blue light displays.

Low blue light mode is enabled at the factory, so no further configuration is necessary.

To reduce the risk of eye strain, it is also recommended that you:

● Position the display at a comfortable viewing distance between 20 and 28 inches (50 and 70 cm) from your eyes.
● Blink frequently to moisten your eyes, wet your eyes with water, or apply suitable eye drops.
● Look away from your display, and gaze at a distant object at 20 ft (609.60 cm) away for at least 20 seconds during each break.
● Take an extended break for 20 minutes every two hours.

Keyboard shortcuts of Precision 5470

(i) **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**.

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

Table 30. List of keyboard shortcuts

Function key	Primary behavior
F1	Mute audio
F2	Decrease volume
F3	Increase volume
F4	Mute Microphone
F5	Click keyboard backlight (optional). (i) **NOTE:** Non-backlight keyboards have F10 function key without the backlight icon and do not support toggle keyboard backlight function. (i) **NOTE:** Toggle to cycle the keyboard backlight status through off, low-backlight, and high-backlight
F6	Decrease brightness
F7	Increase brightness
F8	Switch Display
F10	Print screen
F11	Home
F12	End

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

Table 31. Secondary behavior

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

Table 31. Secondary behavior (continued)

Function key	Secondary behavior
Fn + F5	Operating system and application specific F5 behavior
Fn + F6	Operating system and application specific F6 behavior
Fn + F8	Operating system and application specific F8 behavior
F9	Operating system and application specific F9 behavior
Fn + F10	Operating system and application specific F10 behavior
Fn + F11	Operating system and application specific F11 behavior
Fn + F12	Operating system and application specific F12 behavior
Fn + 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

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 32. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell app	
Tips	
Contact Support	In Windows search, type `Contact Support`, and press Enter.
Online help for operating system	www.dell.com/support/windows
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals and documents.	Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at www.dell.com/support. For more information on how to find the Service Tag for your computer, see Locate the Service Tag on your computer.
Dell knowledge base articles for a variety of computer concerns	1. Go to www.dell.com/support. 2. On the menu bar at the top of the Support page, select **Support** > **Knowledge Base**. 3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.

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

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