

Technical specifications

NOTE: Offerings may vary by region. The following specifications are only those required by law to ship with your computer. For more information about the configuration of your computer, go to Help and Support in your Windows operating system and select the option to view information about your computer.

Topics:

- Processors
- Chipset
- Operating system
- Memory
- Storage
- Audio and Speaker
- Graphics and Video controller
- Media-card reader
- Communications
- Ports and connectors
- Power adapter
- Battery
- Dimensions and weight
- Keyboard
- Touchpad
- Fingerprint reader
- Display
- Camera
- Security
- Service and support
- Operating and storage environment

Processors

Table 3. Processors

Processors	Wattage	Core count	Thread count	Speed	Cache	Integrated graphics
10th Generation Intel Core i5-10400H, vPro	45 W	4	8	2.60 GHz to 4.60 GHz	8 MB	Intel UHD Graphics 630
10th Generation Intel Core i7-10750H	45 W	6	12	2.60 GHz to 5.0 GHz	12 MB	Intel UHD Graphics 630
10th Generation Intel Core i7-10850H, vPro	45 W	6	12	2.70 GHz to 5.1 GHz	12 MB	Intel UHD Graphics 630
10th Generation Intel Core i7-10875H, vPro	45 W	8	16	2.30 GHz to 5.10 GHz	16 MB	Intel UHD Graphics 630

Table 3. Processors (continued)

Processors	Wattage	Core count	Thread count	Speed	Cache	Integrated graphics
10th Generation Intel Core i9-10885H, vPro	45 W	8	16	2.40 GHz to 5.30 GHz	16 MB	Intel UHD Graphics 630
Intel Xeon W-10855M, vPro	45 W	6	12	2.80 GHz to 5.10 GHz	12 MB	Intel UHD Graphics P630
Intel Xeon W-10885M, vPro	45 W	8	16	2.40 GHz to 5.30 GHz	16 MB	Intel UHD Graphics P630

Chipset

Table 4. Chipset

Description	Values
Chipset	Intel WM490
Processor	10th Generation Intel Core i5/i7/i9/Xeon
DRAM bus width	64-bit
Flash EPROM	32 MB
PCIe bus	Up to Gen3

Operating system

Your Precision 7550 supports the following operating systems:

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Windows 10 Enterprise (64-bit)
- Windows 10 Pro Education (64-bit)
- Windows 10 Pro China (64-bit)
- Windows 10 Pro for Workstations (64-bit)
- Red Hat Enterprise Linux 8.2 (Certification Only)
- Ubuntu 18.04 SP1

Memory

The following table lists the memory specifications of your Precision 7550:

Table 5. Memory specifications

Description	Values
Slots	Four-SODIMM slots
Type	Dual channel DDR4
Speed	2666 MHz, 2933 MHz, 3200 MHz

Table 5. Memory specifications (continued)

Description	Values
Maximum memory	128 GB
Minimum memory	8 GB
Memory size per slot	4 GB, 8GB, 16 GB, 32 GB
Configurations supported	• 8 GB, 1 x 8 GB, DDR4, 2666 MHz, ECC, SODIMM • 16 GB, 1 x 16 GB, DDR4, 2666 MHz, ECC, SODIMM • 16 GB, 2 x 8 GB, DDR4, 2666 MHz, ECC, SODIMM • 32 GB, 1 x 32 GB, DDR4, 2666 MHz, ECC, SODIMM • 32 GB, 2 x 16 GB, DDR4, 2666 MHz, ECC, SODIMM • 32 GB, 4 x 8 GB, DDR4, 2666 MHz, ECC, SODIMM • 64 GB, 4 x 16 GB, DDR4, 2666 MHz, ECC, SODIMM • 128 GB, 4 x 32 GB, DDR4, 2666 MHz, ECC, SODIMM • 8 GB, 1 x 8 GB, DDR4, 2933 MHz, ECC, SODIMM • 16 GB, 1 x 16 GB, DDR4, 2933 MHz, ECC, SODIMM • 16 GB, 2 x 8 GB, DDR4, 2933 MHz, ECC, SODIMM • 32 GB, 1 x 32 GB, DDR4, 2933 MHz, ECC, SODIMM • 32 GB, 2 x 16 GB, DDR4, 2933 MHz, ECC, SODIMM • 32 GB, 4 x 8 GB, DDR4, 2933 MHz, ECC, SODIMM • 64 GB, 4 x 16 GB, DDR4, 2933 MHz, ECC, SODIMM • 128 GB, 4 x 32 GB, DDR4, 2933 MHz, ECC, SODIMM • 8 GB, 1 x 8 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 16 GB, 1 x 16 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 16 GB, 2 x 8 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 32 GB, 1 x 32 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 32 GB, 2 x 16 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 32 GB, 4 x 8 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 64 GB, 4 x 16 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 128 GB, 4 x 32 GB, DDR4, 2933 MHz, Non-ECC, SODIMM • 8 GB, 1 x 8 GB, DDR4, 3200 MHz SuperSpeed, Non-ECC, SODIMM • 16 GB, 1 x 16 GB, DDR4, 3200 MHz SuperSpeed, Non-ECC, SODIMM • 16 GB, 2 x 8 GB, DDR4, 3200 MHz SuperSpeed, Non-ECC, SODIMM • 32 GB, 4 x 8 GB, DDR4, 3200 MHz SuperSpeed, Non-ECC, SODIMM • 64 GB, 4 x 16 GB, DDR4, 3200 MHz SuperSpeed, Non-ECC, SODIMM

Storage

Your computer supports the following configurations:

- M.2 2230, solid-state drive (class 35)
- M.2 2280, solid-state drive (class 40)
- M.2 2280, solid-state drive (class 50)

The primary drive of your computer varies with the storage configuration.

Table 6. Storage specifications

Storage type	Interface type	Capacity
M.2 2230, Gen 3 PCIe x4 NVMe, Class 35 solid-state drive	Gen 3 PCIe NVMe	Up to 256 GB
M.2 2280, Gen 3 PCIe x4 NVMe, Class 40 solid-state drive	Gen 3 PCIe NVMe	Up to 2 TB
M.2 2280, Gen 3 PCIe x4 NVMe, Class 50 solid-state drive	Gen 3 PCIe NVMe	Up to 1 TB
M.2 2280, Gen 3 PCIe x4 NVMe, Class 40 SED solid-state drive	Gen 3 PCIe NVMe	Up to 1 TB

Audio and Speaker

The following table lists the audio specifications of your Precision 7550.

Table 7. Audio specifications

Description	Values
Type	4 Channel High Definition Audio
Controller	Realtek ALC3281
Stereo conversion	Supported
Internal interface	High definition audio interface
External interface	Universal Audio Jack
Speakers	2
Internal speaker amplifier	Supported (audio codec integrated)
External volume controls	Keyboard shortcut controls
Speaker output average	2 W
Speaker output peak	2.5 W
Subwoofer output	Not supported
Microphone	Dual-array microphones

Graphics and Video controller

Table 8. Integrated graphics specifications

Controller	External display support	Memory size	Processor
Intel UHD Graphics 630	mDP/HDMI/Type-C	Shared system memory	10th Generation Intel Core i5/i7/i9
Intel UHD Graphics P630	mDP/HDMI/Type-C	Shared system memory	Intel Xeon

Table 9. Discrete graphics specifications

Controller	External display support	Memory size	Memory Type
NVIDIA Quadro T1000	mDP/HDMI/Type-C	4 GB	GDDR6
NVIDIA Quadro T2000	mDP/HDMI/Type-C	4 GB	GDDR6
NVIDIA Quadro RTX3000	mDP/HDMI/Type-C	6 GB	GDDR6
NVIDIA Quadro RTX4000	mDP/HDMI/Type-C	8 GB	GDDR6
NVIDIA Quadro RTX5000	mDP/HDMI/Type-C	16 GB	GDDR6

Media-card reader

The following table lists the media cards supported by your Precision 7550.

Table 10. Media-card reader specifications

Description	Values
Media-card type	1 SD card
Media-cards supported	- Secure Digital (SD) - Secure Digital High Capacity (SDHC) - Secure Digital Extended Capacity (SDXC)
 NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

Communications

Ethernet

Table 11. Ethernet specifications

Description	Values
Model number	Intel Ethernet Connection I219-LM
Transfer rate	10/100/1000 Mbps

Wireless LAN module

Table 12. Wireless LAN module specifications

Description	Values
Model number	Intel Wi-Fi 6 AX201
Transfer rate	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz
Wireless standards	Wi-Fi 802.11a/b/g

Table 12. Wireless LAN module specifications (continued)

Description	Values
	• Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth	Bluetooth 5.1

WWAN module

Table 13. WWAN module specifications

Description	Values
Model number	Qualcomm Snapdragon X20 LTE (DW5821e)
Transfer rate	Up to 1 Gbps DL/150 Mbps UL (Cat 16)
Frequency bands supported	• (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) • HSPA+ (1, 2, 4, 5, 6, 8, 9,19)
Network standards	• LTE FDD/TDD • WCDMA/HSPA+ • GPS/GLONASS/Beidou/Galileo
Host interface	USB 3.2 Gen 1/ USB 2.0
Power supply	DC 3.135 V to 4.4 V, Typical 3.3 V
Antenna connector	• WWAN Main Antenna x 1 • WWAN Diversity Antenna x 1 • 4 x 4 MIMO Antenna x 2

 **NOTE:** WWAN configuration not available with computers with IR camera.

Ports and connectors

Table 14. Ports and connectors

Description	Values
External:	
Network	1 RJ-45 port 10/100/1000 Mbps
USB	• 1 USB 3.2 Gen 1 Type-A port • 1 USB 3.2 Gen 1 Type-A port with PowerShare • 2 USB 3.2 Gen 2 Type-C Thunderbolt 3 ports
Audio	1 Universal audio Jack
Video	1 HDMI 2.0 port, 1 Mini DisplayPort 1.4* UMA with HBR2
Memory card reader	1 SD 6.0

Table 14. Ports and connectors (continued)

Description	Values
Smart card reader	1 Smart card reader
Micro Subscriber Identity Module (uSIM) Card	1 Micro SIM card
Power port	DC-in port (7.4 mm standard plug)
Security	1 Wedge-shaped security slot
Internal:	
M.2	• Three PCIe expansion card slots • Two SATA M.2 2280 slot for solid-state drive • Three NVMe M.2 2280 slot for solid-state drive  NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.

Power adapter

Table 15. Power adapter specifications

Description	Values
Type	180 W adapter
Diameter (connector)	7.40 mm
Dimensions (L x W x H)	23 mm x 75 mm x 152 mm (0.91 in. x 2.95 in. x 5.98 in.)
Weight	1.28 lbs/ 0.58 kg
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

Table 16. Battery specifications

Description	Values		
Type	6-cell, 68 WHr, Lithium-ion, ExpressChargeBoost	6-cell, 95 WHr, Lithium-ion, ExpressCharge Boost	6-cell, 95 WHr, Lithium-ion LcL

Table 16. Battery specifications (continued)

Description		Values		
Voltage		11.40 VDC	11.40 VDC	11.40 VDC
Weight (maximum)		0.39 Kg (0.86 lb)	0.43 kg (0.95 lb)	0.43 kg (0.95 lb)
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)
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.
Charging time (approximate)		Express Charge Method: 0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours 16 - 45°C normal express charge¹ 46 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours <i>i</i> NOTE: 0 to 80% RSOC in 60 minutes; 0 to 100% RSOC in 120 minutes	Express Charge Method: 0 - 15°C maximum allowable charge time from 0 to 100% RSOC is 4 hours 16 - 45°C normal express charge¹ 46 - 50°C maximum allowable charge time from 0 to 100% RSOC is 3 hours <i>i</i> NOTE: 0 to 80% RSOC in 60 minutes; 0 to 100% RSOC in 120 minutes	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
		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 20mins for Accelerated Charge	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 20mins for Accelerated Charge	
Life span (approximate)		300 discharge/charge cycles	300 discharge/charge cycles	1000 discharge/charge cycles
Coin-cell battery		Supported	Supported	Supported

Table 16. Battery specifications (continued)

Description	Values		
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.

Dimensions and weight

Table 17. Dimensions and weight

Description	Values
Height:	
Front	25.00 mm (00.98 in.)
Rear	27.36 mm (1.08 in.)
Width	360.00 mm (14.17 in.)
Depth	242.00 mm (9.53 in.)
Weight (starting at)	2.45 kg (5.42 lb) <i>i</i> NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.

Keyboard

Table 18. Keyboard specifications

Description	Values
Type	Standard keyboard
Layout	QWERTY
Number of keys	- United States and Canada: 101 keys - United Kingdom: 102 keys - Japan: 105 keys
Size	X=18.70 mm key pitch Y=18.05 mm key pitch
Shortcut keys	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. <i>i</i> NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.

Touchpad

Table 19. Touchpad specifications

Description		Values
Resolution:		
	Horizontal	1084
	Vertical	984
Dimensions:		
	Horizontal	3.92 inches (99.50 mm)
	Vertical	80 mm (3.15 in.)

Fingerprint reader

The following table lists the fingerprint-reader specifications of your Precision 7550.

Table 20. Fingerprint reader on power button specifications

Description	Values
Fingerprint-reader sensor technology	Capacitive
Fingerprint-reader sensor resolution	500 / 363 ppi
Fingerprint-reader sensor pixel size	• X: 108 / 76 • Y: 88 / 100
Fingerprint-reader sensor	• Horizontal: 8.40 mm x 6.90 mm • Vertical: 8.40 mm x 5.25 mm

Table 21. Fingerprint reader on palmrest specifications

Description	Values
Fingerprint-reader sensor technology	Capacitive
Fingerprint-reader sensor resolution	508 dpi
Fingerprint-reader sensor pixel size	360

Display

The following table lists the display specifications of your Precision 7550.

Table 22. Display specifications

Description	Option one	Option two	Option three	Option four	Option five
Display type	15.6 in. Full High Definition (FHD)	15.6 in. Full High Definition (FHD)	15.6 in. Full High Definition (FHD)	15.6 in. Ultra High Definition (UHD)	15.6 in. Ultra High Definition (UHD)
Display-panel technology	WVA (Wide view angle)	WVA (Wide view angle)	WVA (Wide view angle)	HDR400	HDR600

Table 22. Display specifications (continued)

Description		Option one	Option two	Option three	Option four	Option five
Display-panel dimensions (active area):						
	Height	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)	193.59 mm (7.62 in.)
	Width	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)	344.16 mm (13.55 in.)
	Diagonal	394.87 mm (15.60 in.)	394.87 mm (15.60 in.)	394.87 mm (15.60 in.)	394.87 mm (15.55 in.)	394.87 mm (15.55 in.)
Display-panel native resolution		1920 x 1080	1920 x 1080	1920 x 1080	3840 x 2160	3840 x 2160
Luminance (typical)		220 nits	500 nits	500 nits	500 nits	600 nits
Megapixels		2.07	2.07	2.07	8.29	8.29
Color gamut		45% NTSC	100% DCIP3	100% DCIP3	100% Adobe	100% Adobe
Pixels Per Inch (PPI)		141	141	141	282	282
Contrast ratio (typ)		600:01	600:01	600:01	1500:1	6000:1
Response time (max)		35 ms	35 ms	35 ms	35 ms	35
Refresh rate		60 Hz	60 Hz	60 Hz	60 Hz	60
Horizontal view angle		+/- 80 degrees(min)	+/- 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)	+/- 80 degrees(min)
Pixel pitch		0.18 x 0.18 mm	0.18 x 0.18 mm	0.18 x 0.18 mm	0.090 x 0.090 mm	0.090 x 0.090 mm
Power consumption (maximum)		4.20 W	7.2 W	7.4 W	10 W	18 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Touch options		No	No	Yes	No	No

Camera

Table 23. Camera specifications

Description	Values
Number of cameras	One
Type	There are 2 camera options: HD RGB camera

Table 23. Camera specifications (continued)

Description		Values
		IR camera
Location		Front camera
Sensor type		Proximity sensor technology
Resolution		
	Camera	
	Still image	0.92 megapixel
	Video	1280 x 720 (HD) at 30 fps
	Infrared camera	
	Still image	0.30 megapixel
	Video	1280 x 720 (HD) at 30 fps
Diagonal viewing angle		
	Camera	74.9 degrees
	Infrared camera	70 degrees

Security

Table 24. Security

Security options	Precision 7550
Trusted Platform Module (TPM) 2.0	Discreet TPM 2.0 IC FIPS-140-2 Certified / TCG Certified, TCG Certification for TPM (Trusted Computing Group)
Firmware TPM	Supported
Chassis lock slot and loop support	Yes, wedge-shaped lock slot
Finger print Reader	Two Optional fingerprint reader - on Power button - FIPS fingerprint reader in the palmrest
Optional Security Hardware Authentication Bundles	- Touch Fingerprint Reader (in Power Button) with Control Vault 3.0 Advanced Authentication with FIPS 140-2 Level 3 Certification - Contacted Smart Card and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification - Touch Fingerprint Reader (in Power Button), Contacted Smart Card, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification - Touch Fingerprint Reader in Power Button, Contacted Smart Card, Contactless Smart Card, NFC, and Control Vault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification - Optional Face IR camera (Windows Hello compliant) with Proximity Sensor

Service and support

Table 25. Warranty

Warranty
3 Years Hardware Service with Onsite/In-Home Service After Remote Diagnosis
4 Years Hardware Service with Onsite/In-Home Service after Remote Diagnosis
5 Years Hardware Service with Onsite/In-Home Service after Remote Diagnosis
3 Years ProSupport with Next Business Day Onsite Service
4 Years ProSupport with Next Business Day Onsite Service
5 Years ProSupport with Next Business Day Onsite Service
3 Years ProSupport Plus with Next Business Day Onsite Service
4 Years ProSupport Plus with Next Business Day Onsite Service
5 Years ProSupport Plus with Next Business Day Onsite Service

Table 26. Accidental damage services

Accidental Damage Services
3 Years Accidental Damage Service
4 Years Accidental Damage Service
5 Years Accidental Damage Service

Operating and storage environment

This table lists the operating and storage specifications of your Precision 7550.

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

Table 27. 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)	140 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.