

Dell Precision 5530

Technical Guidebook



Notes, cautions, and warnings

 | **NOTE:** A NOTE indicates important information that helps you make better use of your product.

 | **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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

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Product View and Technical Specifications

This chapter consists of the product view features along with technical specifications. The product view features calls out the different ports, connectors and components available in Precision 5530 mobile workstation.



Topics:

- [System Overview](#)
- [Technical Specifications](#)
- [System top view](#)
- [System bottom view](#)
- [Palm rest](#)
- [Electrical block diagram](#)

System Overview

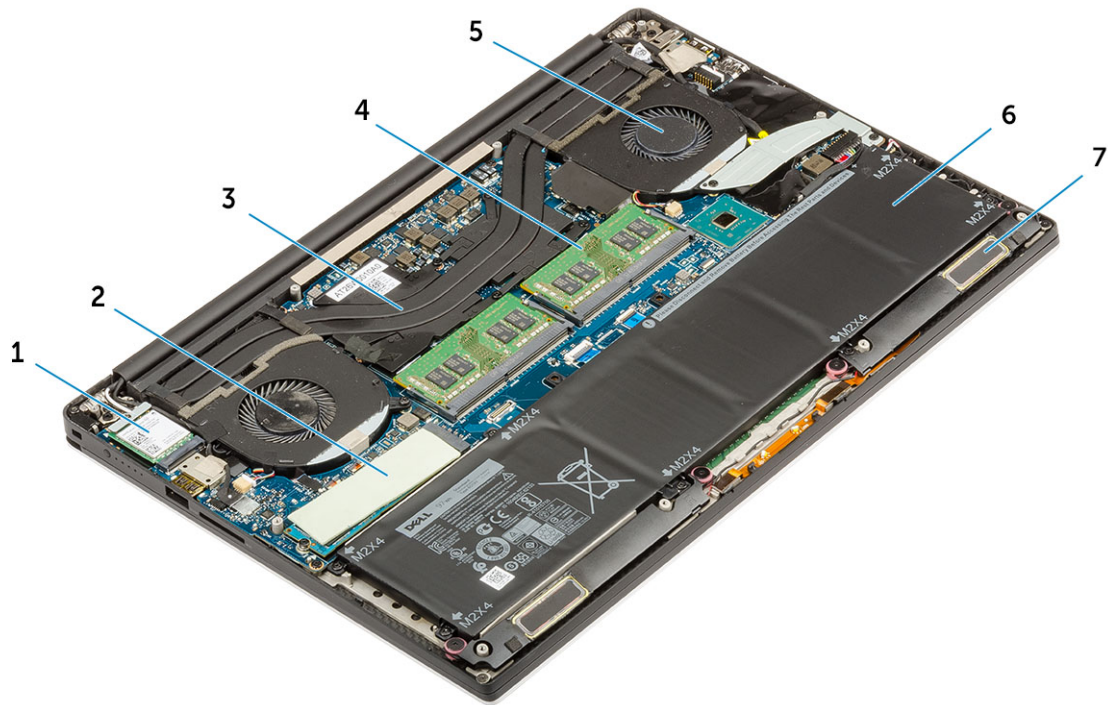


Figure 1. Inside View — Back

- | | | | |
|---|------------|---|----------------|
| 1 | WLAN card | 2 | M.2 PCIe SSD |
| 3 | heatsink | 4 | memory modules |
| 5 | system fan | 6 | battery |
| 7 | speakers | | |



Figure 2. Front View

- | | | | |
|---|-----------------------------------|---|----------|
| 1 | Power button / fingerprint reader | 2 | Keyboard |
| 3 | Palmrest | 4 | Touchpad |

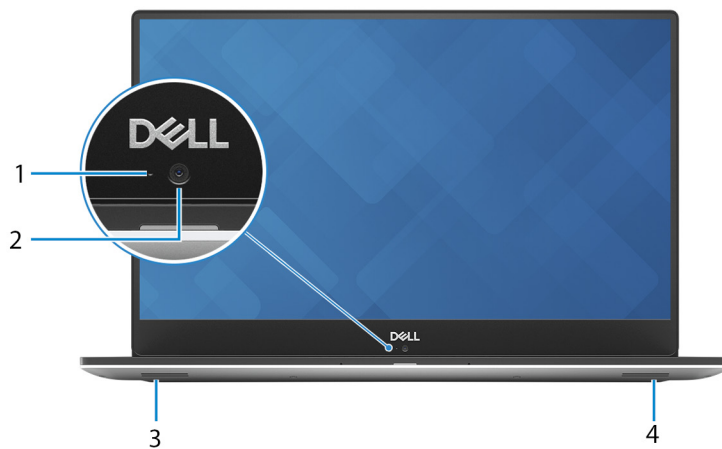


Figure 3. Front Open View

- | | | | |
|---|---------------------|---|---------------|
| 1 | Camera-status light | 2 | Camera |
| 3 | Left speaker | 4 | Right speaker |

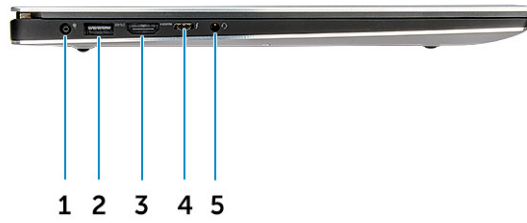


Figure 4. Left View

- | | |
|---|---|
| <ul style="list-style-type: none"> 1 Power connector port 3 HDMI port 5 Headset port | <ul style="list-style-type: none"> 2 USB 3.1 Gen 1 port with PowerShare 4 Thunderbolt 3 Type-C port |
|---|---|

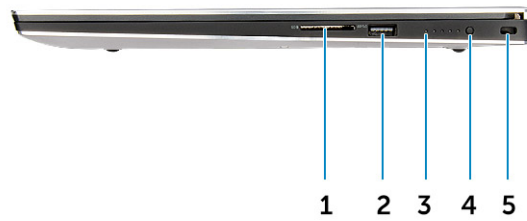


Figure 5. Right View

- | | |
|---|--|
| <ul style="list-style-type: none"> 1 Memory card reader 3 Battery-charge status lights 5 Noble wedge security slot | <ul style="list-style-type: none"> 2 USB 3.1 Gen 1 port with PowerShare 4 Battery-charge status button |
|---|--|

Technical Specifications

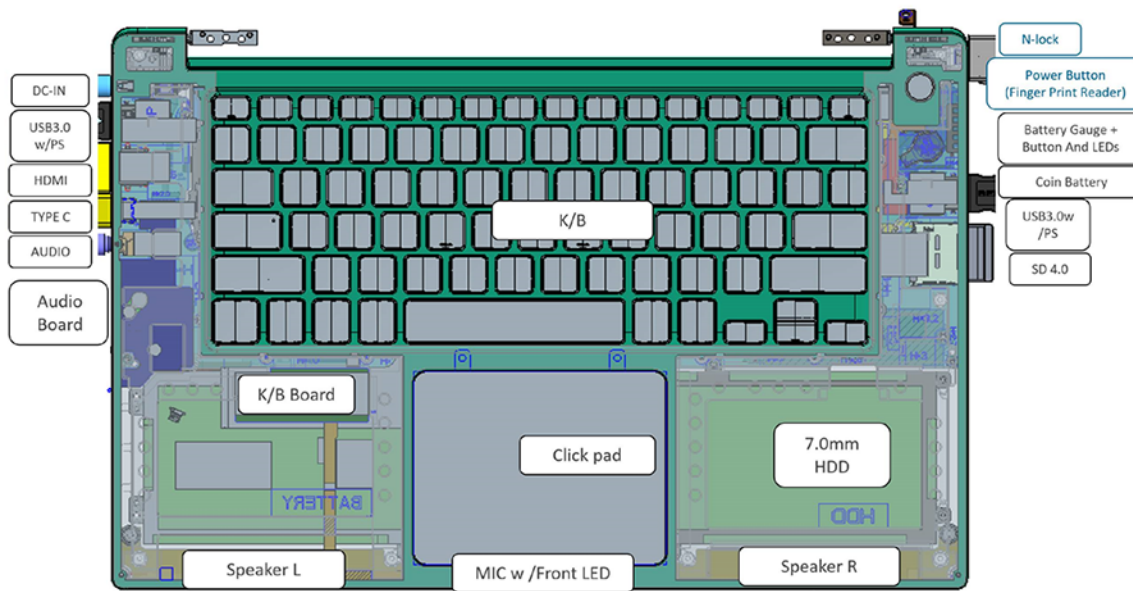
This topics lists out the technical specifications for Precision 5530 computer.

Table 1. Specifications

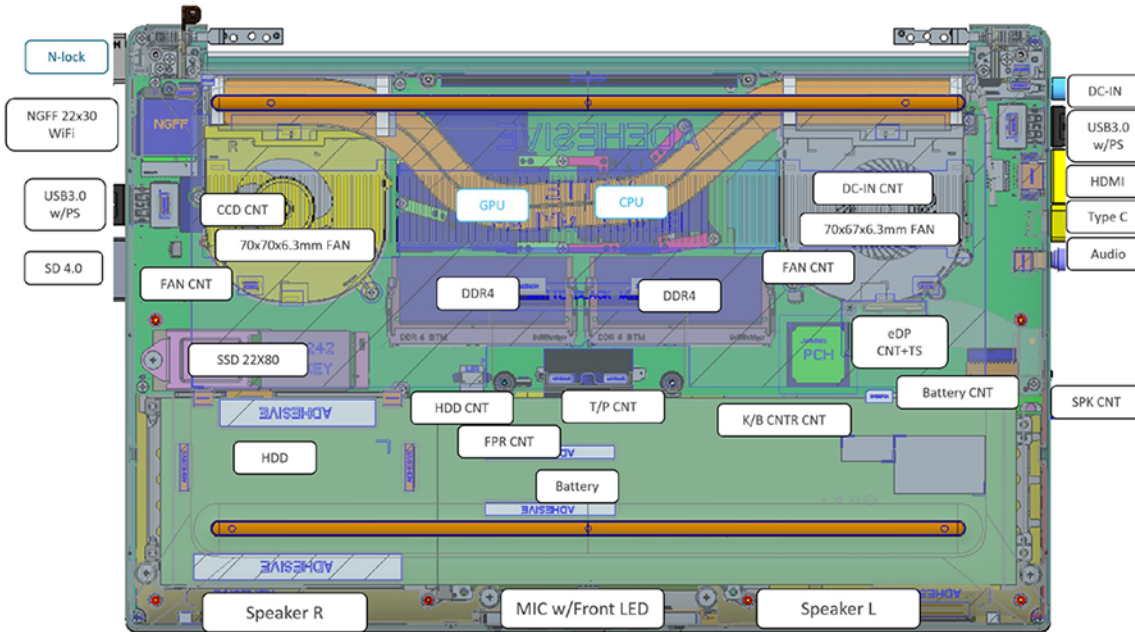
Type	Feature
Processor family	<ul style="list-style-type: none">Intel 8th Generation Core i5 (vPro)Intel 8th Generation Core i7 (vPro)Intel 8th Generation Core i9 (vPro)Xeon processors
Operating System	<ul style="list-style-type: none">Windows 10 Pro 64-bitMicrosoft Windows 10 Home 64-bitMicrosoft Windows 10 Pro National Academic (64-bit)Microsoft Windows 10 Home National Academic (64-bit)Windows 10 Pro 64-bit for workstationsRedHat Enterprise Linux 7.5Ubuntu 16.04 LTS
Memory	Up to 32 GB 2 SODIMM slots at 2666 MHz DDR4
Chipset	<ul style="list-style-type: none">Integrated: Intel CM246
Graphics	Discrete option: NVIDIA Quadro P1000/ P2000 / 4GB GDDR5
Display	<ul style="list-style-type: none">15.6-inch UltraSharp FHD IPS (1920x1080) Wide View Anti-Glare LED-backlit with Premium Panel Guarantee (72% color gamut)15.6-inch UltraSharp UHD IGZO (3840x2160) Touch Wide View LED-backlit with Premium Panel Guarantee (100% Minimum Adobe color gamut)
Storage options	<ul style="list-style-type: none">500GB 2.5-inch 7mm SATA (7200 RPM) Hard Drive1TB 2.5-inch 7mm SATA (5400 RPM) Hard Drive2TB 2.5-inch 7mm SATA (5400 RPM) Hard Drive256GB 2.5-inch 7mm SATA Solid State Drive Class 20360GB 2.5-inch 7mm SATA Solid State Drive Class 20512GB 2.5-inch 7mm SATA Solid State Drive Class 20512GB 2.5-inch 7mm SATA SED Solid State Drive Class 201TB 2.5-inch 7mm SATA Solid State Drive Class 20M.2 PCIe 256GB SSD Class 40M.2 PCIe 512GB SSD Class 40M.2 PCIe 512GB SED SSD Class 40M.2 PCIe 1TB SSD Class 40M.2 PCIe 2TB SSD Class 40
Multimedia	<ul style="list-style-type: none">High Quality SpeakersHeadphone/Headset/Microphone combo jackIntegrated, noise reducing array microphones

Battery options	3-cell, 56Wh (0.2C) 6-cell, 97Wh (0.2C)
Power options	130W AC Adapter
Connectivity	<ul style="list-style-type: none"> 10/100/1000 Gigabit Ethernet via USB-to-Ethernet Dongle provided in box Wireless LAN Options: <ul style="list-style-type: none"> Intel Wireless-AC 9260 2x2 802.11ac + BT5.0 (vPro) Qualcomm QCA6174A 2x2 802.11ac + BT5.0
Ports, Slots and Chassis	<ul style="list-style-type: none"> 2 x USB 3.1 Gen 1 port with PowerShare Thunderbolt 3 (USB 3.1 Gen 2 Type-C) Type-C port HDMI 2.0 port Noble cable lock slot Memory card reader, (SD,SDHC,SD3.0,SD4.0, including SDXC) 4.5mm DC-In Power interface
Input device	<ul style="list-style-type: none"> Backlit keyboard Multi-touch Touchpad

System top view



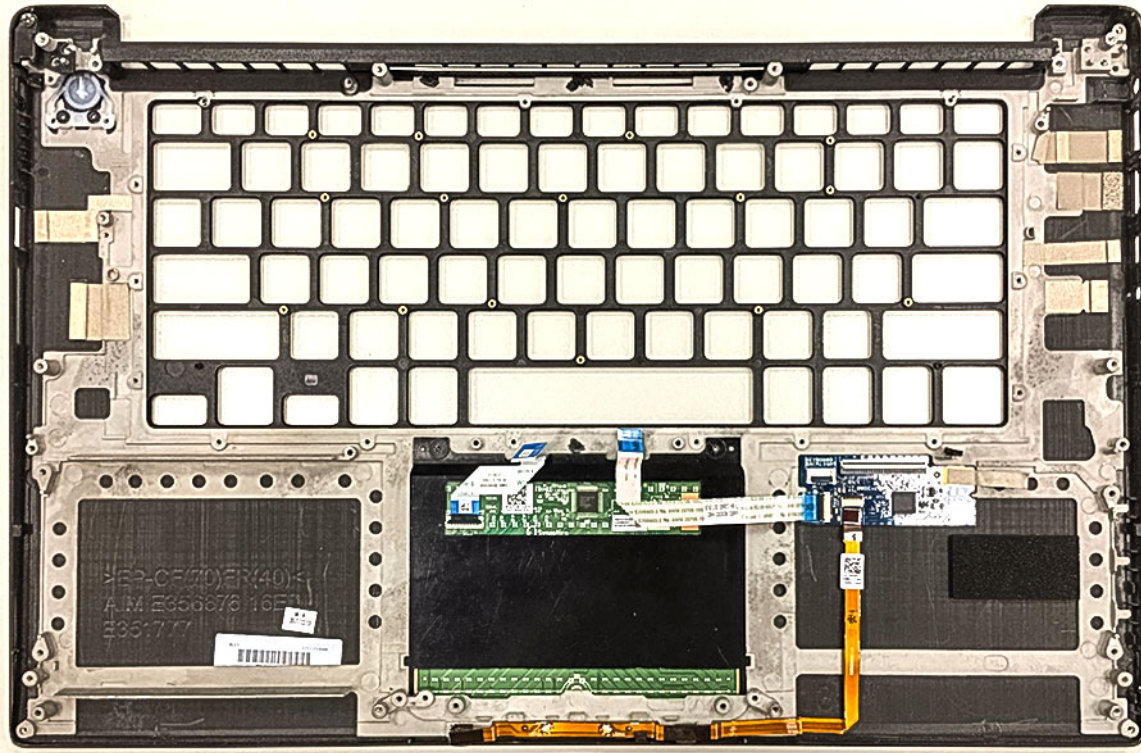
System bottom view



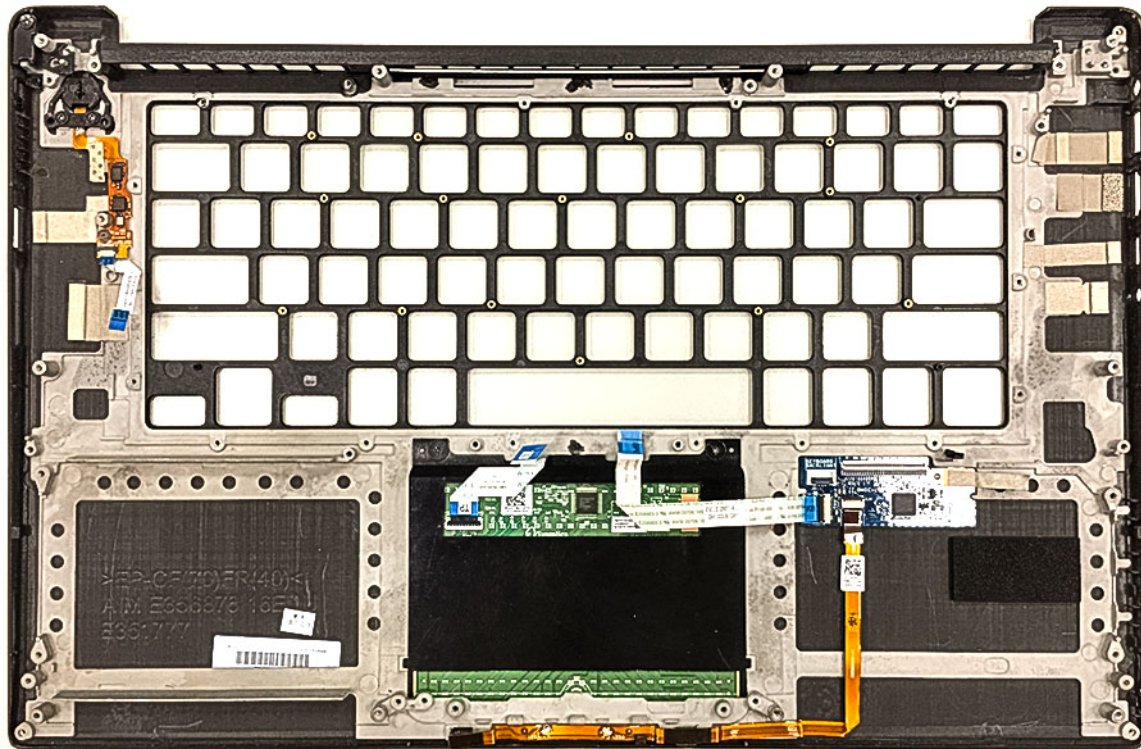
Palm rest

After removing the palm rest, we are left with the palmrest assembly, which needs no further tear down. The technician need to replace the palm rest assembly for any malfunction.

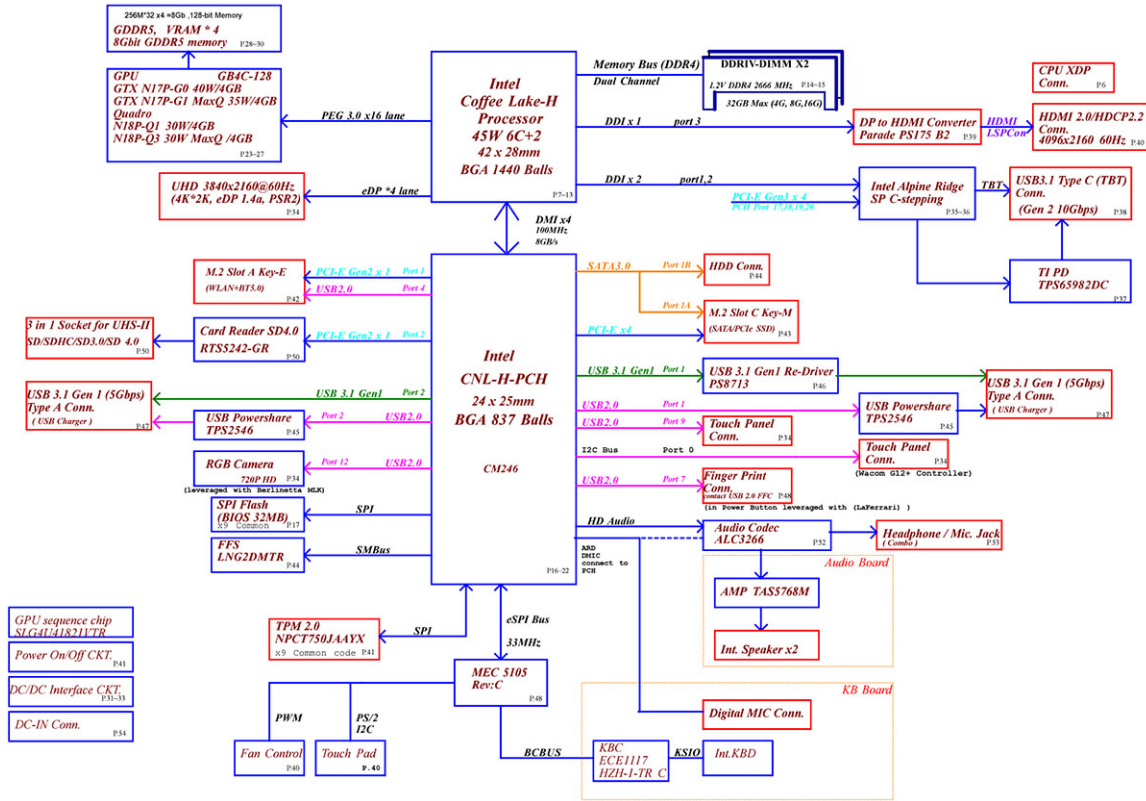
Palm rest assembly with power button with light indicator.



Palm rest assembly with finger print reader function without light indicator.



Electrical block diagram



Marketing System Configurations

This chapter lists the operating system configurations supported in Precision 5530 computer. It also lists the processor, memory, storage options available for this system. It will help the team in identifying whether a specific configuration is supported by the system.

Operating system configurations

This topic lists the operating system supported by Precision 5530

Table 2. Operating systems

Windows 10	<ul style="list-style-type: none"> • Microsoft Windows 10 Pro 64-bit • Microsoft Windows 10 Pro National Academic (64-bit) • Microsoft Windows 10 Home 64-bit • Microsoft Windows 10 Home National Academic (64-bit) • Microsoft Windows 10 Pro for Workstation (64-bit) • Microsoft Windows 10 Pro for Enterprise (64-bit)
Other	<ul style="list-style-type: none"> • Ubuntu 16.04 LTS • RedHat Enterprise Linux 7.5

Processor

Precision 5530 is shipped with Intel 8th generation core processor technology.

Table 3. Processor specifications

Processor support list	UMA Graphics
Coffee Lake H-Processors	
Intel Xeon E-2176M (6-core 2.7GHz, 4.4GHz Turbo, 12MB 45W)	Intel UHD Graphics P630
Intel Core i9 (6-core 2.9GHz, 4.8GHz Turbo, 12MB 45W)	Intel UHD Graphics 630
Intel Core i7 (6-core 2.6GHz, 4.3GHz Turbo, 9MB 45W)	Intel UHD Graphics 630
Intel Core i5 (4-core 2.3GHz, 4.0GHz Turbo, 8MB 45W)	Intel UHD Graphics 630

Memory

Precision 5530 supports a maximum of 32 GB of memory with Core i processors when you use two 16 GB DIMMs.

Table 4. Memory specifications

Memory type	2x DDR4 SoDIMM
Memory capacity per slot	up to 16 GB
Memory speed	2666 MHz
Minimum memory	8 GB
Maximum memory	32 GB

DIMM configurations

- 8 G x 1
- 16 G x 1
- 4 G x 2
- 8 G x 2
- 16 G x 2

Security options

This topic lists the security information.

Table 5. Security options

Trusted Platform Module (TPM) 2.0	Integrated on system board
-----------------------------------	----------------------------

Table 6. Service and Support

3-year warranty/Next Business Day on-site	Standard
---	----------

NOTE: Service may be provided by third party. Technician will be dispatched if necessary following phone-based troubleshooting, subject to parts availability, and other terms of service contract.

ProSupport	Optional
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Engineering specifications

This chapter lists out the specification of each and every component in a comprehensive format. Specific features/models/configurations/options discussed in the document may or may not be available.

System dimensions

This topic lists out the dimensions of the computer in detail.

Weight (pounds/kilogram)	<ul style="list-style-type: none"> 3.93 lb/1.78 kg (Non-Touch) 4.5 lb/2.04 kg (Touch)
--------------------------	---

Dimensions inches

Height	<ul style="list-style-type: none"> Less than 21 mm / 0.83 inches (Z peak) 11.2 mm / 0.44 inches (Z front) 17 mm / 0.66 inches - (Z rear)
Width	357 mm (14.06 inches)
Depth	235 mm (9.26 inches)

NOTE: System weight and shipping weight is based on a typical configuration and may vary based on the actual configuration.

Operating Conditions

This topics lists the operating conditions of the Precision 5530 computer. For information on Product Safety, EMC and Environmental Data Sheets, see http://www.dell.com/content/topics/global.aspx/about_dell/values/regulatory_compliance/dec_conform?c=us&cs=04&l=en&s=bsd&redirect=1

Table 7. Operating conditions

Temperature Range	<ul style="list-style-type: none"> Operating: 0 °C to 40 °C (32 °F to 104 °F) Storage: -40 °C to 65 °C (-40 °F to 149 °F)
Relative humidity	<ul style="list-style-type: none"> Operating : 20 % to 80 % (non-condensing) Storage: 5% to 95% (non-condensing)
Altitude (maximum)	<ul style="list-style-type: none"> Operating : 0 m to 3048 m (0 to 10,000 ft); 0° to 40°C (32° to 104°F) Storage: 0 m to 10668 m (0 to 35,000 ft)
Vibration	<ul style="list-style-type: none"> Operating: 2 to 600 Hz at 0.66 Grms Storage: 2 to 600 Hz at 1.3 Grms
Shock	<ul style="list-style-type: none"> Operating: 140 G with pulse duration of 2 msec +/- 5% (equivalent to 70 in/sec) Storage: 160 G with pulse duration of 2 msec +/- 5% (equivalent to 80 in/sec)

Adapter options

This topic lists the adapter specifications for Precision 5530.

Table 8. AC Adapter

Wattage	130W
AC input voltage range	100 to 240 Vac
AC input current (low AC range/high AC range)	0.9A-1.8A
AC input frequency	50 - 60 Hz
AC output frequency	6.67A
Rated output voltage	+19.5 V DC

Graphics options

This topic lists the graphic specifications.

Table 9. Graphics specification

Graphics controller	NVIDIA Quadro P1000	NVIDIA Quadro P2000
Graphics memory	4 GB GDDR5	4 GB GDDR5
Bus type	PCIe X 16 Gen3	PCIe X 16 Gen3
Memory interface	128-Bit	128-Bit
Clock speeds	<ul style="list-style-type: none">1303 MHz graphics core (min at P0)3004 MHz memory	<ul style="list-style-type: none">1215 MHz graphics core (min at P0)3004 MHz memory
Estimated maximum power consumption	30W	30W
Display support	VGA/LVDS/eDP/DVI/DisplayPort/HDMI	VGA/LVDS/eDP/DVI/DisplayPort/HDMI
Maximum Color Depth	Up to 10bit/color	Up to 10bit/color
Maximum Vertical Refresh Rate	<ul style="list-style-type: none">Up to 395Hz at 1920x1080Up to 118Hz at 3840x2160	<ul style="list-style-type: none">Up to 395Hz at 1920x1080Up to 118Hz at 3840x2160
Operating Systems Graphics/ Video API Support	DirectX 12, OpenGL 4.5	DirectX 12, OpenGL 4.5
Supported Resolutions and Max Refresh Rates (Hz) Analog and/or Digital)	<ul style="list-style-type: none">Digital: 5820x2880 at 60Hz (dual DP)Analog: 1920x1200 at 60Hz	<ul style="list-style-type: none">Digital: 5820x2880 at 60Hz (dual DP)Analog: 1920x1200 at 60Hz
Number of displays supported	Up to 3	Up to 3

Monitor support- undocked and with Dell Docks

Support for 3 displays

Table 10.

Undocked

Maximum number of displays =3

Two external monitors + LCD

- LCD (FHD/UHD)
- HDMI 2.0a (max. 4096x2160@30Hz)
- Type-C

Dell Dock

Maximum number of displays =3

Max resolutions for video ports inless noted:

VGA max. 1920x1200@60Hz
DVI max 1920x1200@60Hz
DP max. 3840x2160@60Hz
HDMI 1.4 (max. 3840x2160@60Hz)
60 HZ supported with Universal cable Type-C (max. 3840x2160@60Hz)

- VGA (always driven)
- mDP (max. 3840x2160@30Hz)
- HDMI 1.4 (max. 3840x2160@30Hz)

Dell Thunderbolt Dock

Maximum number of displays =3

Three from system and dock ports:

- DP
- HDMI 3840x2160@60Hz
- mDP
- VGA
- Type-C

Camera option

This topics lists out the detailed camera specifications.

Table 11. Camera specification

Camera type	HD fixed focus
Sensor type	CMOS sensor technology
Resolution: Motion video	Up to 1280 X 720 (0.92 MP)
Resolution: Still image	Up to 1280 X 720 (0.92 MP)
Imaging rate	Up to 30 frames per second

Storage options

This topic lists out the detailed specifications of each hard drive and SSD.

Table 12. 500 GB HDD 5400 RPM

Capacity (GB)	500 GB
Dimensions inches (W x D x H)	Approx (2.760 x 3.959 x 0.276 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	550, 000 hours

Logical blocks	976,773,168
Power consumption (reference only)	idle 0.7 W. Active 3.10 W

Environmental operating conditions (non-condensing)

Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op Shock (@2 ms)	350 G

Environmental non-operating (non-condensing)

Temperature range	-40°C to 65°C
Relative humidity range	5% to 9%

Table 13. 1 TB hard drive 5400 RPM

Capacity (GB)	1 TB
Dimensions inches (W x D x H)	Approx (2.760 x 3.959 x 0.276 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	550, 000 hours
Logical Blocks	1,953,525,168
Power consumption (reference only)	idle 0.7 W. Active 3.10 W

Environmental operating conditions (non-condensing)

Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op Shock (@2 ms)	350 G

Environmental non-operating (non-condensing)

Temperature range	-40°C to 65°C
Relative humidity range	5% to 9%

NOTE: For hard drives, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less.

Table 14. 2 TB hard drive 5400 RPM

Capacity (GB)	2 TB
Dimensions inches (W x D x H)	Approx (2.760 x 3.959 x 0.276 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	550, 000 hours
Logical Blocks	1,953,525,168
Power consumption (reference only)	idle 0.7 W. Active 3.10 W

Environmental operating conditions (non-condensing)

Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op Shock (@2 ms)	350 G

Environmental non-operating (non-condensing)

Temperature range	-40°C to 65°C
Relative humidity range	5% to 9%

Table 15. 2.5-inch 256 GB Solid State Drive (SSD)

Capacity (GB)	256 GB
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	800,000 hours
Logical Blocks	500,118,192
Power consumption (reference only)	idle 0.5 W. Active 2.5 W

Table 16. 2.5-inch 360 GB Solid State Drive (SSD)

Capacity (GB)	360 GB
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	800,000 hours
Logical Blocks	703,282,608
Power consumption (reference only)	idle 0.5 W. Active 2.5 W

Table 17. 2.5-inch 512 GB Solid State Drive (SSD)

Capacity (GB)	512 GB
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	800,000 hours
Logical Blocks	1,000,215,216
Power consumption (reference only)	idle 0.5 W. Active 2.5 W

Table 18. 2.5-inch 512 GB Solid State Drive (SSD) – SED

Capacity (GB)	512 GB
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)

Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	800,000 hours
Logical Blocks	1,000,215,216
Power consumption (reference only)	idle 0.5 W. Active 2.5 W

Table 19. 2.5-inch 1 TB Solid State Drive (SSD)

Capacity (GB)	1 TB
Dimensions inches (W x D x H)	Approximately (2.75 x 3.94 x 0.268 inches)
Interface type and maximum speed	Up to 6 Gb/s (SATA 3.0)
MTBF	800,000 hours
Logical Blocks	3,907,029,168
Power consumption (reference only)	idle 0.5 W. Active 2.5 W

Table 20. M.2 PCIe 256GB SSD Class 40

Capacity (GB)	256GB
Interface type and maximum speed	PCIe x 4 lanes
Logical Blocks	3,907,029,168
Power consumption (reference only)	

Table 21. M.2 PCIe 512GB SSD Class 40

Capacity (GB)	512GB
Interface type and maximum speed	PCIe x 4 lanes
Power consumption (reference only)	

Table 22. M.2 PCIe 2TB SSD Class 40

Capacity (GB)	2 TB
Interface type and maximum speed	PCIe x 4 lanes
Power consumption (reference only)	

Table 23. M.2 PCIe 512GB SED SSD Class 40

Capacity (GB)	512GB
Interface type and maximum speed	PCIe x 4 lanes
Logical Blocks	3,907,029,168
Power consumption (reference only)	

Table 24. M.2 PCIe 1TB SSD Class 40

Capacity (GB)	1TB
Interface type and maximum speed	PCIe x 4 lanes
Logical Blocks	3,907,029,168
Power consumption (reference only)	

Table 25. M.2 PCIe 512GB SSD Class 50

Capacity (GB)	512GB
Interface type and maximum speed	PCIe x 4 lanes
Logical Blocks	3,907,029,168
Power consumption (reference only)	

Table 26. M.2 PCIe 1TB SSD Class 50

Capacity (TB)	1TB
Interface type and maximum speed	PCIe x 4 lanes
Logical Blocks	3,907,029,168
Power consumption (reference only)	

Battery specifications

This topics lists out the detailed battery specifications.

Table 27. Battery

	56 WHr	97 WHr
Charging time		
Type	Lithium ion	Lithium ion
Dimension		
Length	223.2 mm	332 mm
Width	71.8 mm	96.0 mm
Weight	0.55 lb (250.00 g)	0.992 lb (450.00 g)
Height	7.2 mm	7.7 mm
Voltage	11.4 VDC	11.4 VDC
Typical Amp-hour capacity	4.91 Ah	8.070 Ah
Typical Watt-hour capacity	56-WHr	92-WHr
Temperature		
Operating	<ul style="list-style-type: none"> • 0°C to 35°C (32°F to 95°F) • Charge: 0°C to 50°C (32°F to 122 °F) • Discharge: 0°C to 70°C (32 °F to 158 °F) 	<ul style="list-style-type: none"> • 0°C to 35°C (32°F to 95°F) • Charge: 0 °C to 50 °C (32 °F to 122 °F) • Discharge: 0 °C to 70 °C (32 °F to 158 °F)
Non-operating	-40°C to 65°C (-40°F to 149°F)	-40°C to 65°C (-40°F to 149°F)

56 WHr

97 WHr

Charging time

Charging time		
Express Charge mode	<ul style="list-style-type: none"> · 0~15°C: 4 hours · 16~45°C: 2 hours · 46~60°C: 3 hours 	<ul style="list-style-type: none"> · 0~15°C: 4 hours · 16~45°C: 2 hours · 46~60°C: 3 hours
Standard mode	<ul style="list-style-type: none"> · 0~15°C: 4 hours · 16~60°C: 3 hours 	<ul style="list-style-type: none"> · 0~15°C: 4 hours · 16~60°C: 3 hours
ExpressCharge capable	Yes	Yes
BATTMAN capable	Yes	No
3YR LLC Battery, non-EC	No	No
Life span (approximate)	300 discharge/charge cycles (1 year warranty)	300 discharge/charge cycles (1 year warranty)

Keyboard

Table 28. Keyboard Specifications

Number of keys	80 (U.S and Canada) 81 (Europe) 82 (Brazil) 84 (Japan)
Layout	QWERTY / Kanji
Size	Full sized (X: 19.05–mm, Y: 18.05 mm key pitch)
Backlit keyboard option	Easy enable/disable via hotkey <Fn+F10 Key> variable brightness levels

Touchpad

Table 29. TouchPad

X/Y position resolution	(1952, 3220)
Sensor-active area:	X-axis: 102.40 mm (4.03 inches) Y-axis: 62.40 mm (2.45 inches)
Multi-Touch	Support 5 fingers
Supported Gestures	Windows 10
Cursor moving	Supported
Clicking/ tapping	Supported
Click & Drag	Supported

Supported Gestures

Windows 10

2-Finger scroll	Supported
2-Finger pinch	Supported
3-Finger (Invoke Cortana)	Supported
3-Finger (Multitasking)	Supported
4-Finger (Invoke Action Center)	Supported
4-Finger (Switch Desktop)	Supported

Display specifications

This topic lists out the detailed display specifications.

Table 30. Display specifications

	15.6-inch 16:9 FHD WLED Non-Touch Display, 1080p	15.6-inch 16:9 UHD WLED Touch Display, 2160p
Type	FHD WLED	UHD
Luminance/Brightness (typical)	400 nits	360 nits
Diagonal	15.6 inches	15.6 inches
Native Resolution	1920 x 1080	3840 x 2160
Megapixels (millions of pixels)	2.07	8.29
Pixels per Inch (PPI)	141	282
Contrast Ratio (min)	1500:1	1500:1
Refresh Rate	60 Hz	60 Hz
Horizontal Viewing Angle	+/- 89 degrees	+/- 89 degrees
Vertical Viewing Angle	+/- 89 degrees	+/- 89 degrees
Pixel Pitch	0.18 mm	0.09 mm
Power Consumption (max)	4.22W	9.23W

BIOS defaults

Table 31. BIOS defaults

	SATA Operation	RAID On
	Drives	SATA-0, SATA-1, and M.2 PCIe SSD-0
	SMART Reporting	Disabled
System Configuration	USB Configuration	Default Enabled: Enable Boot Support, Enabled Thunderbolt Ports; Always Allow Dell Docks; Enabled External USB Port , Security level- User Authorization

	USB PowerShare	Disabled
	Audio	Enabled, microphone enabled, and Internal speaker enabled
	Keyboard Illumination	Bright
	Miscellaneous Devices	Camera enabled, SD card enabled
Video	LCD Brightness	AC 100%, DC 50%
Performance	Multiple Core Support:	All
	Intel SpeedStep™:	Enabled
	C States Control:	Enabled
	Intel TurboBoost	Enabled
Virtualization Support	Virtualization	Enabled
	VT for Direct I/O:	Enabled
	Trusted Execution	Disabled
Security	Password	
	Password Configuration	Min=4, Max=32
	Password Bypass	Disabled
	Password Change	Permitted
	Non-Admin Setup Changes	Disabled
	UEFI Capsule Firmware Updates	Enabled
	TPM 2.0 Security	Enabled
	Computrace	Deactivate
	CPU XD Support	Enabled
	OROM Keyboard Access	Enabled
	Admin Setup Lockout	Disabled
	Master Password Lockout	Disabled
SupportAssist System Resolution	Auto OS Recovery Threshold	2
	SupportAssist OS Recovery	Enabled

HOT KEY DEFINITION

Table 32. HOT KEY DEFINITION

Primary Function (FnKeys)	Secondary Function	Primary Behavior
Esc	Function Lock	Industry standard ESC behavior. Fn lock allows the user to toggle the BIOS control for primary/secondary Fn row assignment directly from the keyboard

Primary Function (FnKeys)	Secondary Function	Primary Behavior
		rather than from BIOS setup. (OSD is recommended)
Mute	Fn+F1=OS/App specific F1 command	Press will initiate OS volume OSD and mute or unmute the system volume
Volume down	Fn+F2=OS/App specific F2 command	Press will initiate Win 8 volume OSD and decrease volume 1 step. Press and hold will initiate key repeat and rapidly decrease the volume. If mute is active when the key is pressed, mute will be turned off with the first key press and decreased 1 step (out of 100) with each additional press.
Volume up	Fn+F3=OS/App specific F3 command	Press will initiate Win 8 volume OSD and increase volume 1 step. Press and hold will initiate key repeat and rapidly increase the volume. If mute is active when the key is pressed, mute will be turned off with the first key press and increased 1 step (out of 100) with each additional press.
Previous / Rewind	Fn+F4=OS/App specific F4 command	Press will initiate Windows default previous command from within Windows applications. Press and hold will initiate rewind function in Windows Media Player until release. Alt+F4 and Ctrl+F4 shall perform the same scan code in both "multi-media first" and "function key first" mode under the OS.
Play/Pause	Fn+F5=OS/App specific F5 command	Press will initiate Windows default play/pause command from within Windows applications.
Next / Fast Forward	Fn+F6=OS/App specific F6 command	Press will initiate Windows default next command from within Windows applications. Press and hold will initiate fast forward function in Windows Media Player until release.
Display Switch	Fn+F7=OS/App specific F7 command Fn+F8=OS/App specific F8 command	Windows key + P
Search	Fn+F9=OS/App specific F9 command	Press to launch search on charms menu in Win8 and search via Start in Win7
Keyboard backlighting On/Off	Fn+F10=OS/App specific F10 command	For Backlit keyboard use only; non-backlit KB has no print on the keycap. (If equipped) Default keyboard backlight level will be set to 100%. Press will cycle keyboard backlight to the next level in the sequence: 100%, 50%, off,
Brightness Step Down	Fn+F11=OS/App specific F11 command	Press will initiate Win 8 screen brightness OSD and decrease brightness one step. Each subsequent press will decrease screen

Primary Function (FnKeys)	Secondary Function	Primary Behavior
Brightness Step Up	Fn+F12=OS/App specific F12 command	<p>brightness one step. Press and hold will initiate key repeat and quickly decrease screen brightness</p> <p>Press will initiate Win 8 screen brightness OSD and increase brightness one step. Each subsequent press will decrease screen brightness one step. Press and hold will initiate key repeat and quickly decrease screen brightness.</p>
OS/App Specific PrtScrn command	Wireless/airplane mode	<p>Press will initiate Scrn print.</p> <p>Secondary wireless/airplane mode behavior:</p> <ul style="list-style-type: none"> Wireless devices shall be turned on by default. The wireless devices mean Wi-Fi, Bluetooth, and WWAN. Default setting shall not be affected by reboots, hibernates, or lid opening/closing until the user changes it. Once the user has changed the default settings, the new setting shall be retained and not altered by subsequent reboots, hibernates, or lid opening/closing.
Insert	Sleep	Industry "Insert"
Delete		Industry "Delete"

Getting help

Contacting Dell

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

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

- 1 Go to **Dell.com/support**.
- 2 Select your support category.
- 3 Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
- 4 Select the appropriate service or support link based on your need.