

Dell Precision 5540

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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Introduction

Welcome—Getting Started

The Dell Precision 5540 Technical Guide Book contains information about the hardware configuration, chassis views and system BIOS and how to contact Dell for any technical support.

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 5540 mobile workstation.

Product overview

Dell Precision 5540 offers the following:

- 9th Generation Intel Core i5/i7/i9 and Xeon CPUs
- CM246 chipset
- Two SODIMM dual-channel DDR4 memory
- Wi-Fi 802.11b/g/n + Wi-Fi 4 (WiFi 802.11n) + Wi-Fi 5 (WiFi 802.11ac) + Wi-Fi 6 (WiFi 802.11ax)+ Bluetooth 5.0
- ALC3266-CG with Waves MaxxAudio Pro
- One 2.5-inch hard drive and/or M.2 2280 PCIe NVMe solid-state drive

Chassis

This chapter illustrates the multiple chassis views along with the ports and connectors and also explains the FN hot key combinations.

Topics:

- [System Overview](#)
- [Hot key combinations](#)

System Overview



Figure 1. Front View

- | | | | |
|---|---|---|----------|
| 1 | Power button with light indicator / Power button with fingerprint reader without light indicator (optional) | 2 | Keyboard |
| 3 | Palmrest | 4 | Touchpad |

Front Open View

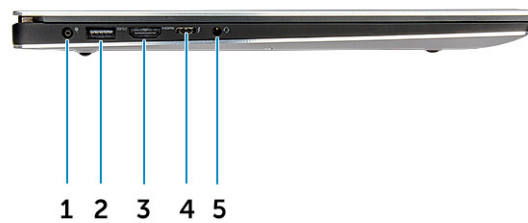
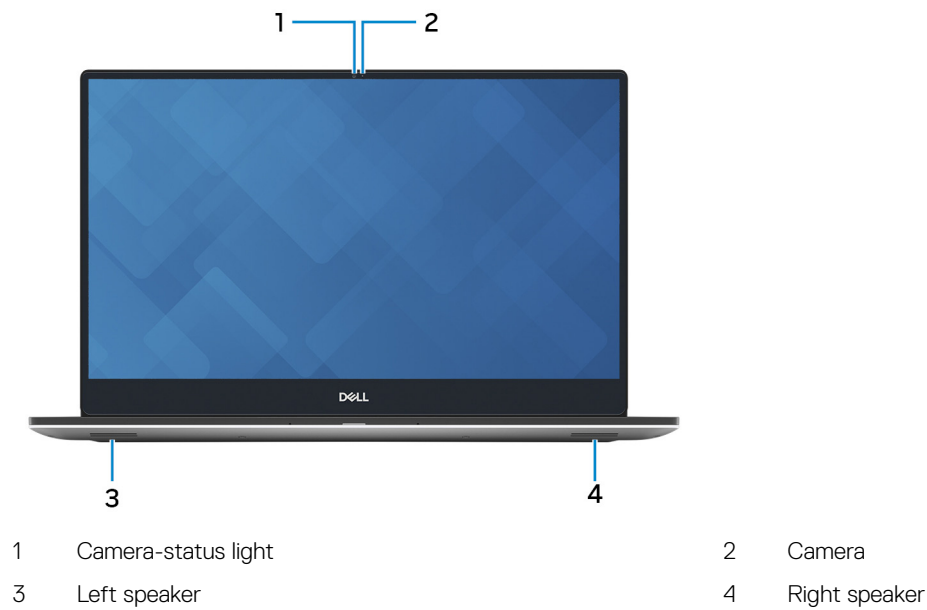


Figure 2. Left View

- | | | | |
|---|----------------------|---|------------------------------------|
| 1 | Power connector port | 2 | USB 3.1 Gen 1 port with PowerShare |
| 3 | HDMI port | 4 | Thunderbolt 3 Type-C port |
| 5 | Headset port | | |

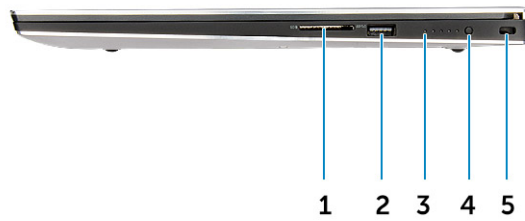


Figure 3. Right View

- | | | | |
|---|------------------------------|---|------------------------------------|
| 1 | Memory card reader | 2 | USB 3.1 Gen 1 port with PowerShare |
| 3 | Battery-charge status lights | 4 | Battery-charge status button |
| 5 | Noble wedge security slot | | |

Hot key combinations

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. The symbol shown on the lower part of the key refers to the character that is typed out when the key is pressed. If you press

shift and the key, the symbol shown on the upper part of the key is typed out. For example, if you press 2, 2 is typed out; if you press Shift + 2, @ is typed out.

The keys F1-F12 at the top row of the keyboard are function keys for multi-media control, as indicated by the icon at the bottom of the key. Press the function key to invoke the task represented by the icon. For example, pressing F1 mutes the audio (refer to the table below).

However, if the function keys F1-F12 are needed for specific software applications, multi-media functionality can be disabled by pressing Fn + Esc. Subsequently, multi-media control can be invoked by pressing Fn and the respective function key. For example, mute audio by pressing Fn + F1.

NOTE: Keyboard characters may differ depending on the keyboard language configuration. Keys used for shortcuts remain the same across all language configurations.

Table 1. Hot key combination

Fn key combination	Description
Fn+ F1	Speaker Mute
Fn+ F2	Volume Down
Fn+ F3	Volume Up
Fn+ F4	Play previous track/chapter
Fn+ F5	Play/Pause

Fn key combination	Description
Fn+ F6	Play next track/chapter
Fn+ F7	Task view
Fn+ F8	Display Toggle (Win + P)
Fn+ F9	Search
Fn+ F10	Increase Keyboard Back light Brightness (optional)
Fn+ F11	Panel Brightness Down
Fn+ F12	Panel Brightness Up
Fn+ PrtScr	Wireless

Table 2. List of keyboard shortcuts

Function key	Behavior
Fn+B	Pause/break
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

Marketing System Configurations

This chapter lists the operating system configurations supported in Precision 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.

Processor specifications

NOTE: Processor numbers are not a measure of performance. Processor availability is subject to change and may vary by region/country.

Table 3. Processor specifications

Processor Type	Values
Intel Core Processor i9-9980HK	8 Core, 16MB Cache, 2.40GHz up to 5.00GHz Turbo, 45W
Intel Core Processor i9-9880H	8 Core, 16MB Cache, 2.30GHz up to 4.80GHz Turbo, 45W, vPro
Intel Xeon Processor E-2276M	6 Core, 12M Cache, 2.80GHz up to 4.70GHz Turbo, 45W, vPro
Intel Core Processor i7-9850H	6 Core, 12M Cache, 2.60GHz up to 4.6GHz Turbo, 45W, vPro
Intel Core Processor i7-9750H	6 Core, 12M Cache, 2.60GHz up to 4.5GHz Turbo, 45W
Intel Core Processor i5-9400H	4 Core, 8M Cache, 2.50GHz up to 4.3GHz Turbo, 45W, vPro

Storage specifications

NOTE: The 2.5 inches drives are not available with the 97 WHr battery.

Table 4. Storage specifications

Storage specifications
2.5" 7mm 500GB 7200RPM SATA Hard Drive
2.5" 7mm 500GB 7200RPM SATA FIPS Hard Drive
2.5" 7mm 1TB 7200RPM SATA Hard Drive
2.5" 7mm 2TB 5400RPM SATA Hard Drive
256GB M.2 NVMe PCIe SSD Class 40
512GB M.2 NVMe PCIe SSD Class 40
1TB M.2 NVMe PCIe SSD Class 40
2TB M.2 NVMe PCIe SSD Class 40
512GB M.2 NVMe PCIe SED SSD Class 40
1TB M.2 NVMe PCIe SED SSD Class 40

Storage specifications

512GB M.2 NVMe PCIe SSD Class 50

1TB M.2 NVMe PCIe SSD Class 50

Port and connector specifications

Table 5. Ports and connectors

Features	Specification
USB	• Two USB 3.1 Gen 1 ports with PowerShare • One Thunderbolt 3 port (USB 3.1 Gen 2 Type-C) with power delivery
Security	One security-cable slot (wedge-shaped)
Audio	One headset (headphone and microphone combo) port
Video	One HDMI 2.0b port
Memory Card reader	One SD-card slot

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.

Physical specifications

Table 6. Dimensions and weight

Features	Specification
Height	11.2 mm (0.44 in)
Width	357 mm (14.06 in)
Depth	235 mm (9.26 in)
Weight	1.8 kg (3.97 lb)

NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.

BIOS defaults

Table 7. BIOS defaults

System Configuration	SATA Operation	RAID On
	Drives	SATA-0, SATA-1, and M.2 PCIe SSD-0
	SMART Reporting	Disabled
	USB Configuration	Default Enabled: Enable Boot Support, Enabled Thunderbolt Ports; Always Allow Dell Docks; Enabled External USB Port , Security level- User Authorization
Video	USB PowerShare	Disabled
	Audio	Enabled, microphone enabled, and Internal speaker enabled
	Keyboard Illumination	Bright
	Miscellaneous Devices	Camera enabled, SD card enabled
Performance	LCD Brightness	AC 100%, DC 50%
	Multiple Core Support:	All
	Intel SpeedStep™:	Enabled

Virtualization Support	C States Control:	Enabled
	Intel TurboBoost	Enabled
	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

Communication specifications

Table 8. Communication specifications

Features	Specifications
Network adapter	Ethernet via USB-to-Ethernet Dongle provided in box.
Wireless	- Intel Wi-Fi 6 AX200 2x2 .11ax 160MHz + Bluetooth 5.0 - Intel Wireless-AC 9260 2x2 802.11ac + BT5.0 (vPro) - Qualcomm QCA6174A 2x2 802.11ac + BT5.0 - Bluetooth 5.0

Video specifications

Table 9. Video

Controller	Type	CPU Dependency	Graphics memory type	Capacity	External display support
Integrated Intel UHD 630	GFX	Intel HD GFX	Integrated	Shared system memory	HDMI 2.0
Nvidia Quadro T1000 w/4GB GDDR5	Discrete	Intel Xeon E-2276M	GDDR5	4 GB	HDMI 2.0
Nvidia Quadro T2000 w/4GB GDDR5	Discrete	Intel Xeon E-2276M	GDDR5	4 GB	HDMI 2.0

Audio specifications

Table 10. Audio specifications

Features	Specification
Controller	Waves MaxxAudio Pro
Type	Integrated
Interface	• High-quality speakers • Dual-array microphones

Display specifications

Table 11. Display specifications

Features	Specification
Type	• UltraSharp FHD IGZO4, 1920x1080, AG, NT, W/Prem Panel Guar, 100% sRGB color gamut, Titan Gray. • UltraSharp FHD IGZO4, 1920x1080, AG, NT, w/Prem Panel Guar, 100% sRGB color gamut, Platinum Silver. • 15.6" Ultrasharp UHD IGZO4, 3840x2160, Touch, w/Prem Panel Guar, 100% Adobe color gamut, Titan Gray. • 15.6" Ultrasharp UHD IGZO4, 3840x2160, Touch, w/Prem Panel Guar, 100% Adobe color gamut, Platinum Silver. • 15.6" Ultrasharp OLED UHD, 3840x2160, non-touch, w/Prem Panel Guar, 100% DCI-P3 color gamut, Titan Gray • 15.6" Ultrasharp OLED UHD, 3840x2160, non-touch, w/Prem Panel Guar, 100% DCI-P3 color gamut, Platinum Silver. • OLED Panel

Features	Specification
	Active Matrix Organic Light Emitting Diode (AMOLED) panel
	Color Depth: 8 bit+2 bit FRC
	Color Gamut: DCI-P3 Typ.100%
	Response Time: 1ms
	Interface type: eDP1.4b + PSR2 (4lane)
	Polarizer type: Anti Glare
	Display Mode: Wide view angle: 80/80/80/80 for U/D/L/R (Min)
Height (Active area)	• FHD - 194.5 mm (7.66 inches) • UHD - 194.5 mm (7.66 inches)
Width (Active area)	• FHD - 345.6 mm (13.61 inches) • UHD - 345.6 mm (13.55 inches)
Diagonal	• FHD - 396.52 mm (15.61 inches) • UHD - 396.52 mm (15.61 inches)
Megapixels	• FHD - 2.07 • UHD - 8.29
Pixels Per Inch (PPI)	• FHD - 141 • UHD - 282 • UHD - 3840 x 2160
Contrast ratio	• FHD - 1500:1 • UHD - 1500:1 • OLED - 100,000:1
Refresh rate	60 Hz
Horizontal viewing angle (min)	+/- 89 degrees
Vertical viewing angle (min)	+/- 89 degrees
Pixel pitch	• FHD - 0.18 mm • UHD - 0.09 mm
Power consumption (max)	• 4.22 W (FHD 100% sRGB color gamut) • 9.23 W (UHD Adobe 100% color gamut) • 4.3 W (OLED UHD 100% color gamut, Titan Gray) • 14.8 (OLED UHD 100% color gamut, Platinum Silver)

Keyboard specifications

Table 12. Keyboard specifications

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

Camera

Table 13. Camera specifications

Features	Specification
Resolution	HD Camera: • Still image: 0.92 megapixels • Video: 1280x720 at 30 fps • Infrared camera (optional) • Still image: 0.92 megapixel • Video: 340 x 340 @ 30 fps
Diagonal viewing angle	• Camera - 66 degrees

Touchpad specifications

Table 14. Touchpad specifications

Features	Specifications
Resolution	• Horizontal: 1952 • Vertical: 3220
Dimensions	• Width: 4.03 inches (102.40 mm) • Height: 2.45 inches (62.40 mm)
Multi-touch	Support 5 fingers

Power supply specifications

Table 15. Power supply

Features	Specification
Input Voltage	100 – 240 VAC
Input frequency	50 – 60 Hz
Type	130 W AC Adapter

Power adapter

Table 16. Power adapter specifications

Features	Specification
Type	130W adapter
Input Voltage	100 to 240 VAC
Adapter size	Height:22 mm (0.86 inches)
	Width:66 mm (2.59 inches)
	Depth:143 mm (5.62 inches)
Input frequency	50 Hz to 60 Hz
Output current	130 W - 6.67 A (continuous)
Rated output voltage	19.5 VDC
Temperature range (Operating)	0° to 40° C (32° to 104° F)
Temperature range (Non-Operating)	40° to 70° C (-40° to 158° F)

Battery

 **NOTE:** 97 WHr battery is not available with the 2.5 inch drives.

Table 17. Battery specifications

Features	Specifications
Type	56 WHr lithium-ion polymer 3 cell battery 97 WHr lithium-ion polymer 6 cell battery
Dimension	1 56 WHr lithium-ion polymer - Length: 223.2 mm (8.79 inch)

Features	Specifications
	- Width: 71.8 mm (2.83 inch) - Height: 7.2 mm (0.28 inch) - Weight: 250.00 g (0.55 lb)
	2 97 WHr lithium-ion polymer - Length: 332 mm (13.07 inch) - Width: 96.0 mm (3.78 inch) - Height: 7.7 mm (0.30 inch) - Weight: 450.00 g (0.992 lb)
Weight (maximum)	450.00 g (0.992 lb)
Voltage	56 WHr - 11.4 VDC 97 WHr - 11.4 VDC
Life span	300 discharge/recharge cycles
Charging time when the computer is off (approximate)	4 hours
Operating time	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions
Temperature range: Operating	0°C to 35°C (32°F to 95°F)
Temperature range: Storage	-40°C to 65°C (-40°F to 149°F)
Coin-cell battery	ML1220

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.