Latitude 5520

Setup and Specifications



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.

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

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Set up your Latitude 5520

- i NOTE: The images in this document may differ from your computer depending on the configuration you ordered.
- 1. Connect the power adapter and press the power button.



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

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

- Connect to a network for Windows updates.
 - NOTE: If connecting to a secured wireless network, enter the password for the wireless network access when prompted.
- If connected to the Internet, sign in with or create a Microsoft account. 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
	SupportAssist
~	Proactively checks the health of your computer's hardware and software. The SupportAssist OS Recovery tool troubleshoots issues with the operating system. For more information, see the SupportAssist documentation at www.dell.com/support.
	i NOTE: In SupportAssist, click the warranty expiry date to renew or upgrade your warranty.

Table 1. Locate Dell apps (continued)

Resources	Description
	Dell Update
30	Updates your computer with critical fixes and latest device drivers as they become available. For more information about using Dell Update, see the knowledge base article SLN305843 at www.dell.com/support.
	Dell Digital Delivery
	Download software applications, which are purchased but not pre-installed on your computer. For more information about using Dell Digital Delivery, see the knowledge base article 153764 at www.dell.com/support.

Views of Latitude 5520

Topics:

- Right view
- Left view
- Palm-rest view
- Display view
- Bottom view
- System board layout
- Keyboard shortcuts
- Battery charge and status LED

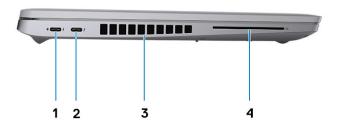
Right view



- 1. micro-SD card slot
- 3. USB 3.2 Gen 1 port
- 5. HDMI 1.4 port for 10th Generation Intel Core i5/i7 processors
 - HDMI 2.0 port for 11th Generation Intel Core i3/i5/i7 processors
- 7. Wedge-shaped lock slot

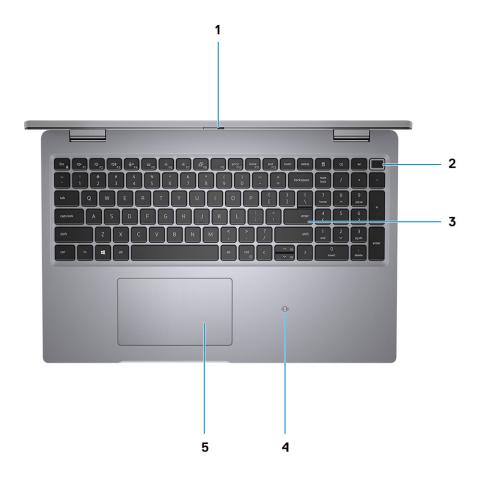
- 2. Universal audio port
- 4. USB 3.2 Gen 1 port with PowerShare
- 6. RJ-45 Ethernet port

Left view



- Gen 2/Power Delivery for 10th Generation Intel Core i5/i7 processors
 - Thunderbolt 4 port with DisplayPort Alt Mode/USB4/ Power Delivery for 11th Generation Intel Core i3/i5/i7 processors
- 3. Air vents
- 1. Thunderbolt 3 port with DisplayPort Alt Mode/USB 3.2 2. Thunderbolt 3 port with DisplayPort Alt Mode/USB 3.2 Gen 2/Power Delivery for 10th Generation Intel Core i5/i7 processors
 - Thunderbolt 4 port with DisplayPort Alt Mode/USB4/ Power Delivery for 11th Generation Intel Core i3/i5/i7 processors
 - 4. Smart card reader slot (optional)

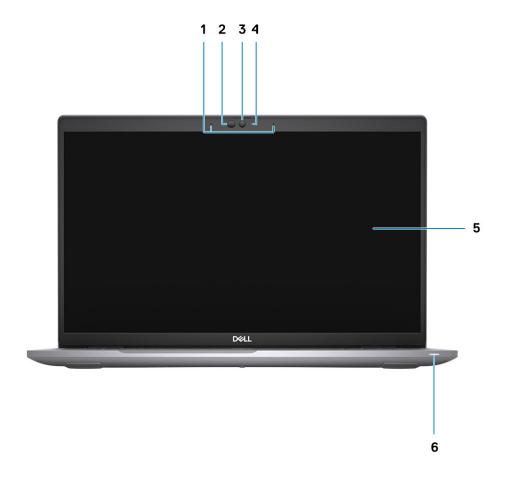
Palm-rest view



- 1. Privacy shutter
- 3. Keyboard
- 5. Clickpad

- 2. Power button with fingerprint reader—(optional)
- 4. NFC/Contactless smart card reader—(optional)

Display view



- 1. Dual-array microphones
- 3. Camera (FHD RGB IR/HD RGB IR/HD RGB)
- 5. Display panel

- 2. IR emitter/Ambient Light Sensor (ALS)—(optional)
- 4. Camera status LED
- 6. Battery indicator LED

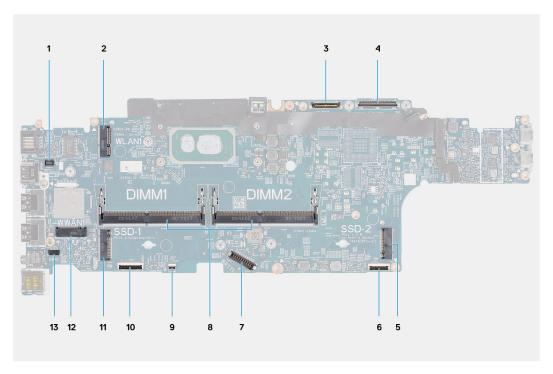
Bottom view



- 1. Speakers
- 3. Service tag label

- 2. microSIM-card slot (optional)
- 4. Air vent

System board layout



- 1. Fingerprint reader connector
- 2. WLAN connector
- 3. Camera/IR cable connector
- 4. eDP/display cable connector
- 5. Solid-state drive—SSD-2 slot
- 6. Clickpad cable connector
- 7. Battery cable connector
- 8. Memory modules
- 9. Battery LED board connector
- 10. USH board connector
- 11. Solid-state drive—SSD-1 slot
- 12. WWAN connector
- 13. Speaker cable connector

Keyboard shortcuts

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

Table 2. List of keyboard shortcuts

Keys	Primary Behavior	Secondary Behavior (Fn + Key)
Fn + Esc	Escape	Toggle Fn-key lock
Fn + F1	Mute audio	F1 behavior
Fn + F2	Decrease volume	F2 behavior
Fn + F3	Increase volume	F3 behavior
Fn + F4	Mic Mute	F4 behavior

Table 2. List of keyboard shortcuts (continued)

Keys	Primary Behavior	Secondary Behavior (Fn + Key)
Fn + F5	Keyboard backlight (i) NOTE: Not applicable for non-	F5 behavior
	backlight keyboard.	
Fn + F6	Decrease screen brightness	F6 behavior
Fn + F7	Increase screen brightness	F7 behavior
Fn + F8	Switch to external display	F8 behavior
Fn + F9	Disable camera	F9 behavior
Fn + F10	Print Screen	F10 behavior
Fn + F11	Home	F11 behavior
Fn + F12	End	F12 behavior
Fn + Right Ctrl	Emulates right click	

Battery charge and status LED

Table 3. Battery charge and status LED Indicator

Power Source	LED Behavior	computer 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) Computer is turned on.
- S4 (Hibernate) The computer consumes the least power compared to all other sleep states. The computer is almost at an OFF state, expect for a trickle power. The context data is written to hard drive.
- S5 (OFF) The computer is in a shutdown state.

Specifications of Latitude 5520

Topics:

- Dimensions and weight
- Processors
- Chipset
- Operating system
- Memory
- Ports and connectors
- Communications
- Audio
- Storage
- Media-card reader
- Keyboard
- Camera
- Clickpad
- Power adapter
- Battery
- Display
- Fingerprint reader (optional)
- Video
- Security
- Computer environment
- Sensor and control

Dimensions and weight

Table 4. Dimensions and weight

Description		Values
Height:		
	Front	0.78 in. (19.87 mm)
	Rear	0.87 in. (22.15 mm)
٧	Vidth	14.08 in. (357.80 mm)
С	Pepth	9.29 in. (236.20 mm)
Weight (maximum)		3.50 lb (1.59 kg) (i) NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.

Processors

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

Table 5. Processors

Processors	Wattage	Core count	Thread count	Speed	Cache	Integrated graphics
10 th Generation Intel Core i5-10210U	15 W	4	8	1.60 GHz to 4.20 GHz	6 MB	Intel UHD Graphics
10 th Generation Intel Core i5-10310U	15 W	4	8	1.70 GHz to 4.40 GHz	6 MB	Intel UHD Graphics
10 th Generation Intel Core i7-10610U	15 W	4	8	1.80 GHz to 4.90 GHz	8 MB	Intel UHD Graphics
11 th Generation Intel Core i3-1125G4	17.50 W	4	8	2.00 GHz to 3.70 GHz	8 MB	Intel UHD Graphics
11 th Generation Intel Core i5-1135G7	17.50 W	4	8	2.40 GHz to 4.20 GHz	8 MB	Intel Iris Xe Graphics (i) NOTE: System with single-channel memory is shown as Intel UHD Graphics in Intel Graphics Command Center (IGCC).
11 th Generation Intel Core i5-1145G7	17.50 W	4	8	2.60 GHz to 4.40 GHz	8 MB	Intel Iris X ^e Graphics (i) NOTE: System with single-channel memory is shown as Intel UHD Graphics in Intel Graphics Command Center (IGCC).
11 th Generation Intel Core i7-1185G7	17.50 W	4	8	3.00 GHz to 4.80 GHz	12 MB	Intel Iris X ^e Graphics (i) NOTE: System with single-channel memory is shown as Intel UHD Graphics in Intel Graphics Command Center (IGCC).

Chipset

Table 6. Chipset

Description	Values
Chipset	Intel PCH-LP
Processor	 10th Generation Intel Core i5/i7 processors 11th Generation Intel Core i3/i5/i7 processors
DRAM bus width	64-bit
Flash EPROM	32 MB

Table 6. Chipset (continued)

Description	Values
PCle bus	 Up to Gen 3 for 10th Generation Intel Core i5/i7 processors Up to Gen 4 for 11th Generation Intel Core i3/i5/i7 processors

Operating system

- Windows 10 Pro, 64-bit
- Ubuntu Linux 20.04 LTS, 64-bit

Memory

Table 7. Memory specifications

Description	Values
Slots	Two SO-DIMM slots
Туре	DDR4, Dual-channel
Speed	 2667 MHz for 10th Generation Intel Core i5/i7 processors 3200 MHz for 11th Generation Intel Core i3/i5/i7 processors
Maximum memory	64 GB
Minimum memory	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB, 32 GB
Configurations supported	 4 GB, 1 x 4 GB, DDR4, 3200 MHz 8 GB, 2 x 4 GB, DDR4, 3200 MHz 8 GB, 1 x 8 GB, DDR4, 3200 MHz 16 GB, 2 x 8 GB, DDR4, 3200 MHz 16 GB, 1 x 8 GB, DDR4, 3200 MHz 32 GB, 2 x 16 GB, DDR4, 3200 MHz

Ports and connectors

Table 8. External ports and connectors

External:	
USB	 One USB 3.2 Gen 1 port One USB 3.2 Gen 1 port with PowerShare Two Thunderbolt 4 ports with DisplayPort Alt Mode/ USB4/Power Delivery for 11th Generation Intel Core i3/i5/i7 processors Two Thunderbolt 3 ports with DisplayPort Alt Mode/USB 3.2 Gen2/Power Delivery for 10th Generation Intel Core i5/i7 processors
Audio	One universal audio port

Table 8. External ports and connectors (continued)

External:		
Video	 One HDMI 2.0 port for 11th Generation Intel Core i3/i5/i7 processors One HDMI 1.4 port for 10th Generation Intel Core i5/i7 processors 	
Media card reader	One micro-SD card slot	
Docking port	Supported through USB Type-C	
Power adapter port	Type-C power input	
Security	One security-cable slot (wedge-shaped)	
Communication	RJ45 port microSIM card (optional)	
Card slot	Smart card reader slot (optional)	

Table 9. Internal ports and connectors

Internal:	
M.2	 M.2 2230 slot for Wi-Fi and Bluetooth combo card M.2 3042 for WWAN UMA: Two M.2 2280 slot for solid-state drive DSC: One 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.

Communications

Ethernet

Table 10. Ethernet specifications

Description	Values
Model number	
Transfer rate	10/100/1000 Mbps

Wireless module

Table 11. Wireless module specifications

Description	Values		
Model number	Intel Wi-Fi 6 AX201	Intel Wi-Fi 6 AX210	Qualcomm QCA61x4A
Transfer rate	Up to 2400 Mbps	Up to 2400 Mbps	Up to 867 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz

Table 11. Wireless module specifications (continued)

Description	Values		
Wireless standards	 Wi-Fi 802.11a/b/g Wi-Fi 4 (Wi-Fi 802.11n) Wi-Fi 5 (Wi-Fi 802.11ac) Wi-Fi 6 (Wi-Fi 802.11ax) 	 Wi-Fi 802.11a/b/g Wi-Fi 4 (Wi-Fi 802.11n) Wi-Fi 5 (Wi-Fi 802.11ac) Wi-Fi 6 (Wi-Fi 802.11ax) 	 Wi-Fi 802.11a/b/g Wi-Fi 4 (Wi-Fi 802.11n) Wi-Fi 5 (Wi-Fi 802.11ac)
Encryption	64-bit/128-bit WEPAES-CCMPTKIP	64-bit/128-bit WEP AES-CCMP TKIP	64-bit/128-bit WEP AES-CCMP TKIP
Bluetooth	Bluetooth 5.1	Bluetooth 5.2	Bluetooth 5.0

WWAN module

Table 12. Wireless module specifications

Description	Values	
Model number	Intel XMM 7360 Global LTE-Advanced, CAT9	
Transfer rate	Up to 450 Mbps DL/50 Mbps UL (Cat 9)	
Frequency bands supported	(1,2,3,4,5,7,8,11,12,13,17,18,19,20,21,26,28,29,30,38,39,40,41,66), HSPA+ (1, 2, 4,5, 8)	
Wireless standards	Not Applicable	
Encryption	Not Applicable	
Bluetooth	Not Applicable	

Audio

Table 13. Audio specifications

Description		Values	
Controller		REALTEK ALC3204	
Stereo conversion		Supported	
Internal interface		High definition audio interface	
External interface		Universal Audio port	
Speakers		Two	
Internal speaker amplif	ier	Supported (audio codec integrated)	
External volume controls		Keyboard shortcut controls	
Speaker output:			
	Average	2 W	
	Peak	2.5 W	

Table 13. Audio specifications (continued)

Description	Values
Subwoofer output	Not supported
Microphone	Dual-array microphones

Storage

Your computer supports one of the following configurations:

- One M.2 2230, Gen 3 PCle x4 NVMe, Class 35 SSD (slot 1)
- One M.2 2230, Gen 3 PCle x4 NVMe, Class 35 SSD (slot 1) with one M.2 2280, Gen 4 PCle x4 NVMe, Class 40 SSD (slot 2)
- One M.2 2280, Gen 3 PCIe x4 NVMe, Classs 40 SSD (slot 1)
- One M.2 2280, Gen 3 PCle x4 NVMe, Classs 40 SSD (slot 1) with M.2 2280, Gen 4 PCle x4 NVMe, Class 40 SSD (slot 2)
- One M.2 2280, Gen 4 PCle x4 NVMe, Class 40 SSD (slot 2)
- One M.2 2280, Gen 3 PCle x4 NVMe, Class 40 SSD, Self-encrypting drive (slot 1)
- One M.2 2280, Gen 3 PCle x4 NVMe, Class 40 SSD, Self-encrypting drive (slot 1) with one M.2 2280, Gen 4 PCle x4 NVMe, Class 40 SSD (slot 2)

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

Table 14. Storage specifications

Form factor	Interface type	Capacity
M.2 2230, Class 35 solid-state drive	Gen 3 PCle x4 NVMe	Up to 512 GB
M.2 2280, Class 40 solid-state drive	Gen 3 PCle x4 NVMe	Up to 1 TB
M.2 2280, Class 40 solid-state drive	Gen 4 PCle x4 NVMe	Up to 2 TB
M.2 2280, Class 40 solid-state drive, Self-encrypting drive	Gen 3 PCle x4 NVMe	Up to 512

Media-card reader

Table 15. Media-card reader specifications

Description	Values
Туре	One microSD-card
Cards supported	 Secure Digital (SD) 4.0 Secure Digital High Capacity (SDHC) Secure Digital Extended Capacity (SDXC)

Keyboard

Table 16. Keyboard specifications

Description	Values	
Туре	Extended single-point non-backlit keyboard Extended single-point backlit keyboard	
Layout	QWERTY	

Table 16. Keyboard specifications (continued)

Description	Values
Number of keys	United States and Canada: 99 keysUnited Kingdom: 100 keysJapan: 103 keys
Size	X=18.05 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.
	NOTE: You can define the primary behavior of the function keys (F1–F12) by changing the Function Key Behavior in system setup program. Keyboard shortcuts

Camera

Table 17. Camera specifications

Desc	cription	Values
Num	ber of cameras	Two
Турє		FHD RGB Infrared camera or HD RGB Infrared camera
Loca	tion	Front camera
Sens	or type	CMOS sensor technology
Resc	lution	
	Camera	
	Still image	0.92 megapixel
	Video	1280 x 720 (HD/FHD) at 30 fps
	Infrared camera	
	Still image	0.23 megapixel
	Video	640 x 480 (VGA) at 30 fps
Diag	onal viewing angle	
	Camera	FHD: 87.6 degreesHD: 87 degrees
	Infrared camera	FHD: 87.6 degreesHD: 87 degrees

Table 18. Full HD Webcam

Description	Values
Number of cameras	One

Table 18. Full HD Webcam (continued)

Des	Description		Values
Туре)		HD RGB camera
Loca	ition		Front camera
Sens	Sensor type		CMOS sensor technology
Resc	olution		
	Camer	a	
		Still image	0.92 megapixels
	Video		1280 x 720 (HD) at 30 fps
Diag	Diagonal viewing angle		78.6 degrees

Clickpad

Table 19. Clickpad specifications

Description		Values
Resolution		>=300 dpi
Dimensions:		
	Horizontal	115 mm (4.53 inch)
	Vertical	67 mm (2.64 inch)

Power adapter

Table 20. Power adapter specifications

Description	Values			
Туре	65 W	90 W	130 W	
Diameter/Size (connector)	USB-C	USB-C	USB-C	
Input voltage	100 VAC x 240 VAC	100 VAC x 240 VAC	100 VAC x 240 VAC	
Input frequency	50 Hz to 60 Hz	50 Hz to 60 Hz	50 Hz to 60 Hz	
Input current (maximum)	1.7 A	1.5 A	1.8 A	
Output current (continuous)	 20 V/3.25 A (Continuous) 15 V/3 A (Continuous) 9.0 V/3 A (Continuous) 5.0 V/3 A (Continuous) 	 20 V/4.5 A (Continuous) 15 V/3 A (Continuous) 9.0 V/3 A (Continuous) 5.0 V/3 A (Continuous) 	20 V/6.5 A (Continuous)5.0 V/1 A (Continuous)	
Rated output voltage	20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/5 VDC	
Weight	0.20 Kg (0.44 lb)	0.29 Kg (0.64 lb)	0.50 Kg (1.10 lb)	
Temperature range:				
Operating	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	0°C to 40°C (32°F to 104°F)	

Table 20. Power adapter specifications (continued)

Description		Values			
	Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	

Battery

(i) NOTE: Dell recommends that you charge the battery regularly for optimal power consumption. If your battery charge is completely depleted, connect the power adapter, turn on your computer, and then restart your computer to reduce the power consumption.

Table 21. Battery specifications

Description		Values					
Туре		3-cell lithium-ion 42 WHr, ExpressCharge Boost	4-cell lithium-ion 63 WHr	3-cell lithium-ion 42 WHr LCL	4-cell lithium-ion 63 WHr LCL		
Voltage	Э	11.40 VDC	15.20 VDC	11.40 VDC	15.20 VDC		
Weight (maxim		0.18 kg (0.40 lb)	0.25 kg (0.55 lb)	0.18 kg (0.40 lb)	0.25 kg (0.55 lb)		
Dimens	sions:						
	Height	5.70 mm (0.22 in.)	5.70 mm (0.22 in.)	5.70 mm (0.22 in.)	5.70 mm (0.22 in.)		
	Width	95.90 mm (3.78 in.)	95.90 mm (3.78 in.)	95.90 mm (3.78 in.)	95.90 mm (3.78 in.)		
	Depth	207.90 mm (8.19 in.)	238.00 mm (9.37 in.)	207.90 mm (8.19 in.)	238.00 mm (9.37 in.)		
Temper	rature						
	Operating	 Charge: 0°C to 50°C (32°F to 122°F) Discharge:0°C to 70°C (32°F to 158°F) 	 Charge: 0°C to 50°C (32°F to 122°F) Discharge:0°C to 70°C (32°F to 158°F) 	 Charge: 0°C to 50°C (32°F to 122°F) Discharge:0°C to 70°C (32°F to 158°F) 	 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)	-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.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.		
Charging time (approximate)		From 0% up to 35% in 20 minutes (ExpressCharge Boost), 2hr (Express charge), 3hr (Standard charge) (when the computer is off) (i) NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power	From 0% up to 35% in 20 minutes (ExpressCharge Boost), 2hr (Express charge), 3hr (Standard charge) (when the computer is off) i NOTE: Control the charging time, duration, start and	2hr (Express charge), 3hr (Standard charge) (when the computer is off). (i) NOTE: Control the charging time, duration, start and end	2hr (Express charge), 3hr (Standard charge) (when the computer is off). i NOTE: Control the charging time, duration, start and end time, and so on using the Dell Power		

Table 21. Battery specifications (continued)

Description	Values					
	Manager application. For more information on the Dell Power Manager see, on www.dell.com/	end time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, on www.dell.com/	time, and so on using the Dell Power Manager application. For more information on the Dell Power Manager see, on www.dell.com/	Manager application. For more information on the Dell Power Manager see, on www.dell.com/		
Life span (approximate)	1 year	1 year	3 years	3 years		
Coin-cell battery	CR-2032	CR-2032	CR-2032	CR-2032		
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.	Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.		

Display

The following table lists the display specifications of your Latitude 5520.

Table 22. Display specifications

Descr	iption	Option one	Option two	Option three	Option four	Option five
Display	y type	High Definition (HD)	Full High Definition (FHD)	Full High Definition (FHD)	Full High Definition (FHD)	Ultra High Definition (UHD)
Display-panel technology		Twisted Nematic (TN)	Thin Film Transistor (TFT), Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Thin Film Transistor (TFT), Wide Viewing Angle (WVA), Super Low Power, Low Blue Light (LBL)	Thin Film Transistor (TFT), Wide Viewing Angle (WVA), Low Blue Light (LBL)
	y-panel sions (active					
	Height	344.16 mm	344.16 mm	344.16 mm	344.16 mm	344.16 mm
	Width	193.59 mm	193.59 mm	193.59 mm	193.59 mm	193.59 mm
	Diagonal	396.24 mm	396.24 mm	396.24 mm	396.24 mm	396.24 mm
Display resolut	y-panel native tion	1366 x 768	1920 x 1080	1920 x 1080	1920 x 1080	3840 x 2160
Luminance (typical)		220 nits	250 nits	250 nits	400 nits	400 nits
Megapixels		1.05	2.07	2.07	2.07	8.29
Color	gamut	NTSC 45%	NTSC 45%	NTSC 45%	sRGB 100%	sRGB 100%

Table 22. Display specifications (continued)

Description	Option one	Option two	Option three	Option four	Option five
Pixels Per Inch (PPI)	100	141	141	141	283
Contrast ratio (typ)	500:1	700:1	700:1	700:1	1000:1
Response time (max)	25 ms	25 ms	25 ms	25 ms	19 ms
Refresh rate	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Horizontal view angle	40 +/-degrees	80 +/-degrees	80 +/-degrees	80 +/-degrees	80 +/-degrees
Vertical view angle	10 (U)/30 (D) +/-degrees	80 +/-degrees	80 +/-degrees	80 +/-degrees	80 +/-degrees
Pixel pitch	TBD	0.17925 mm	0.17925 mm	0.17925 mm	0.08964 mm
Power consumption (maximum)	4.2 W	4.6 W	4.6 W	4.5 W	4.5 W
Anti-glare vs glossy finish	Anti-glare	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Touch options	No	No	Yes	No	No

Fingerprint reader (optional)

Table 23. Fingerprint reader specifications

Description	Power button option	FIPS option
Sensor technology	Capacitative	Capacitive
Sensor resolution	500 dpi	508 dpi
Sensor pixel size, X	108	256
Sensor pixel size, Y	88	360

Video

Table 24. Discrete graphics specifications

Discrete graphics					
Controller External display support Memory size Memory Type					
NVIDIA GeForce MX450	No	2 GB	GDDR6		

Table 25. Integrated graphics specifications

Integrated graphics			
Controller	External display support	Memory size	Processor
Intel Iris X ^e Graphics	HDMI 2.0, DisplayPort over USB Type-C	Shared system memory	11 th Generation Intel Core i5/i7 Processors (i) NOTE: System with single-

Table 25. Integrated graphics specifications (continued)

Integrated graphics			
Controller	External display support	Memory size	Processor
			channel memory is shown as Intel UHD Graphics in Intel Graphics Command Center (IGCC).
Intel UHD Graphics	HDMI 2.0, DisplayPort over USB Type-C	Shared system memory	11 th Generation Intel Core i3 Processors
Intel UHD Graphics	HDMI 1.4, DisplayPort over USB Type-C	Shared system memory	10 th Generation Intel Core i5/i7 Processors

Security

Table 26. Hardware Security

Hardware security options
Trusted Platform Module (TPM) 2.0 discrete
FIPS 140-2 certification for TPM
TCG (Trusted Computing Group) Certification for TPM
Fingerprint reader in power button tied to ControlVault 3
ControlVault 3 Advanced Authentication with FIPS 140-2 Level 3 Certification
Contacted Smart Card and ControlVault 3
Contactless Smart Card, NFC, and ControlVault 3
SED SSD NVMe, SSD and HDD (Opal and non-Opal) per SDL
FIPS 201 Full Scan FPR and ControlVault 3

Table 27. Data Security

Data security options	
McAfee Small Business Security 30-day trial	
McAfee Small Business Security 12-months subscription, digitally delivered	
McAfee Small Business Security 24-months subscription, digitally delivered	
McAfee Small Business Security 36-months subscription, digitally delivered	

Computer environment

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

Table 28. Computer environment

Description	Operating	Storage
Temperature range	0°C to 40°C (32°F to 104°F)	-40°C to 60°C (-40°F to 140°F)

Table 28. Computer environment (continued)

Description	Operating	Storage
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 (maximum)	-15.2 m to 3048 m (-50 ft to 10000 ft)	-15.2 m to 10668 m (-50 ft to 35000 ft)

 $[\]ensuremath{^{*}}$ Measured using a random vibration spectrum that simulates user environment.

Sensor and control

Table 29. Sensor and control

Sensor support		
Sensor	Ambient Light Sensor on the hinge-up (optional)	
	P-sensor on the hinge-up (optional)	
	Accelerometer (G sensor): One on the base (system board) and another on the hinge-up (optional)	

[†] Measured using a 2 ms half-sine pulse when the hard drive is in use.

Dell low blue light display

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.

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 30. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
Tips	*
Contact Support	In Windows search, type Contact Support, and press Enter.
Online help for operating system	www.dell.com/support/windows www.dell.com/support/linux
Troubleshooting information, user manuals, setup instructions, product specifications, technical help blogs, drivers, software updates, and so on.	www.dell.com/support
Dell knowledge base articles for a variety of computer concerns.	 Go to https://www.dell.com/support/home/? app=knowledgebase. Type the subject or keyword in the Search box. Click Search to retrieve the related articles.

Contacting Dell

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

- (i) NOTE: Availability varies by country and product, and some services may not be available in your country.
- 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.