Latitude 5521

Setup and Specifications

Regulatory Model: P104F
Regulatory Type: P104F003/P104F004
August 2021
Rev. A01

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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Contents

Chapter 1: Set up your Latitude 5521 5

Chapter 2: Views of Latitude 5521 7

Right view 7
Left 8
Display 9
Bottom view 10
Palmrest 11
Battery charge and status LED 11

Chapter 3: Specifications of Latitude 5521 12

Dimensions and weight 12
Processor 13
Chipset 13
Operating system 13
Memory 14
External ports 14
Internal slots 15
Wireless module 15
WWAN module 16
Audio 16
Storage 17
Intel Optane memory 17
Media-card reader 18
Keyboard 18
Clickpad 18
Camera 19
Power adapter 19
Battery 20
Display 22
Fingerprint reader (optional) 23
GPU—Integrated 23
GPU—Discrete 23
Sensor and control specifications 23
Security options—Contacted smartcard reader 23
Security options—Contactless smartcard reader 24
Security 26
Security Software 26
Computer environment 26

Chapter 4: ComfortView Plus 28

Chapter 5: Keyboard shortcuts 29

Chapter 6: Getting help..... 31
Contacting Dell..... 31

1

Set up your Latitude 5521

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: 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, see the knowledge base articles SLN151664 and SLN151748 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.

     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.

Table 1. Locate Dell apps (continued)

Resources	Description
	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. **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 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.

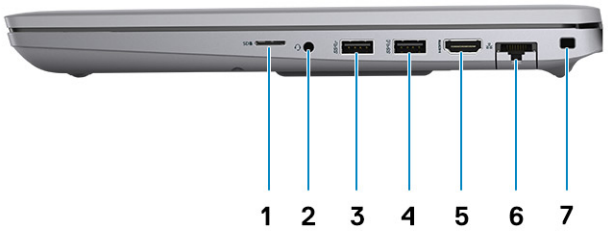
2

Views of Latitude 5521

Topics:

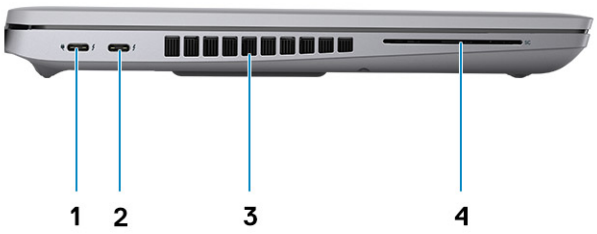
- Right view
- Left
- Display
- Bottom view
- Palmrest
- Battery charge and status LED

Right view



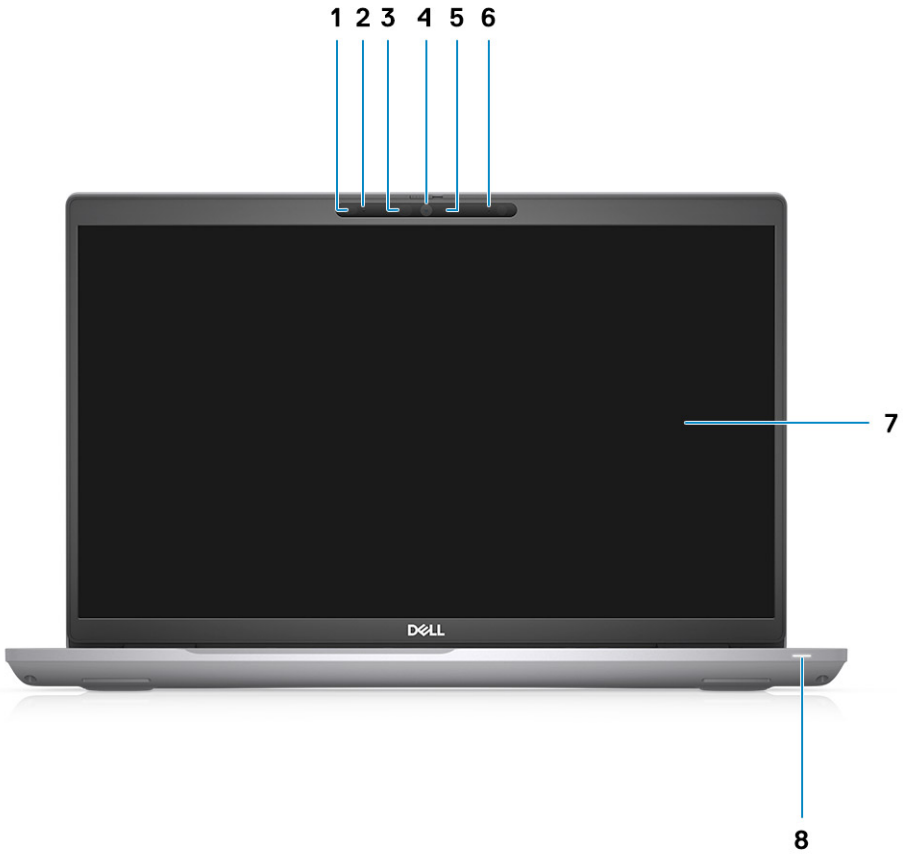
1. microSD card reader
2. Universal audio port
3. USB 3.2 Gen 1 port
4. USB 3.2 Gen 1 port with PowerShare
5. HDMI 2.0 port
6. RJ-45 Ethernet port
7. Wedge-shaped lock slot

Left



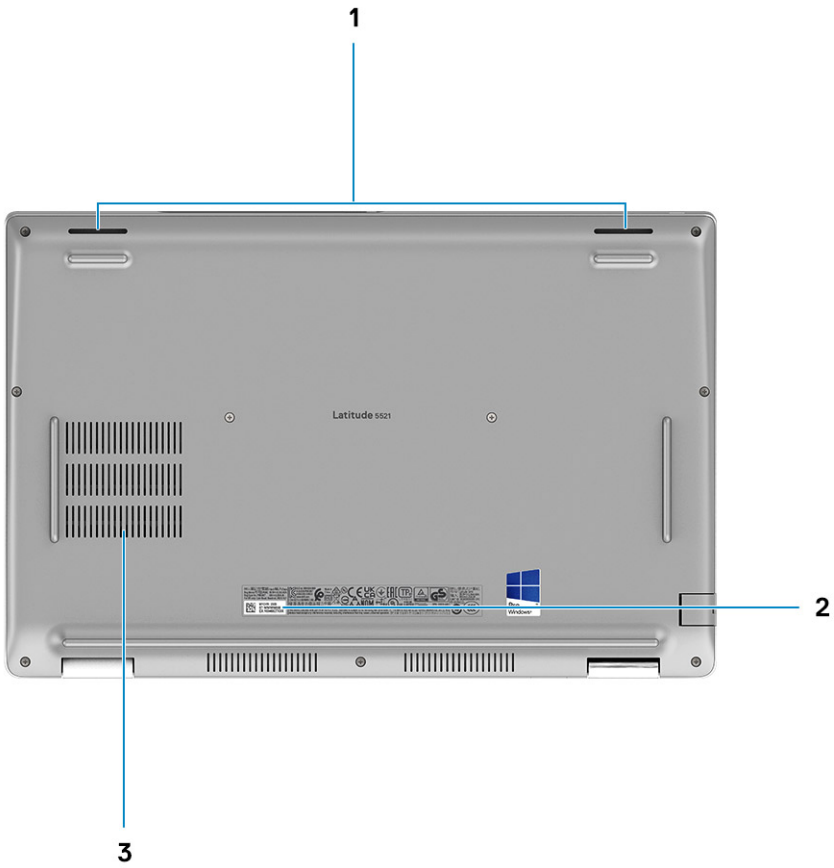
1. USB4.0 Type-C port with DisplayPort 2.0 port/Power Delivery/Thunderbolt
2. USB4.0 Type-C port with DisplayPort 2.0 port/Power Delivery/Thunderbolt
3. Fan vents
4. Smart card reader (optional)

Display



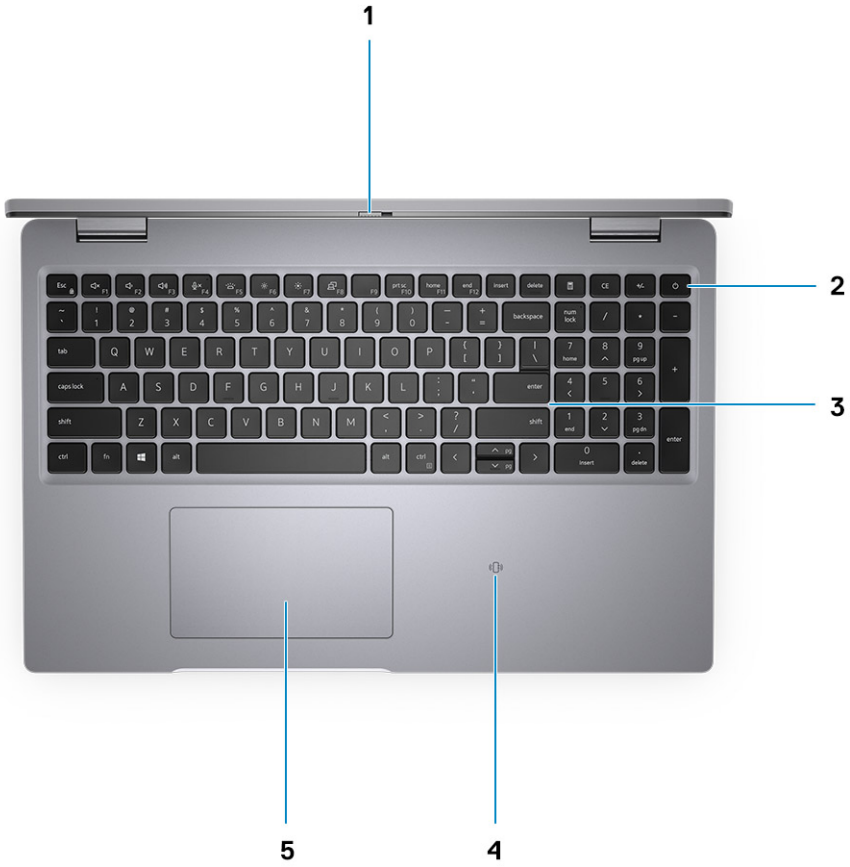
1. Proximity sensor (optional)
2. Microphone
3. IR LED (optional)
4. RGB camera/ RGB IR camera (optional)
5. Camera indicator LED (optional)
6. Microphone
7. LCD panel
8. LED activity light

Bottom view



1. Speakers
2. Service tag label
3. Fan vents

Palmrest



1. Camera shutter
2. Power button with fingerprint reader (optional)
3. Keyboard
4. Contactless smart card reader (Optional)
5. Clickpad

Battery charge and status LED

Table 2. 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.

3

Specifications of Latitude 5521

Topics:

- Dimensions and weight
- Processor
- Chipset
- Operating system
- Memory
- External ports
- Internal slots
- Wireless module
- WWAN module
- Audio
- Storage
- Intel Optane memory
- Media-card reader
- Keyboard
- Clickpad
- Camera
- Power adapter
- Battery
- Display
- Fingerprint reader (optional)
- GPU—Integrated
- GPU—Discrete
- Sensor and control specifications
- Security options—Contacted smartcard reader
- Security options—Contactless smartcard reader
- Security
- Security Software
- Computer environment

Dimensions and weight

The following table lists the height, width, depth, and weight of your Latitude 5521.

Table 3. Dimensions and weight

Description	Values
Height:	
Front height	22.67 mm (0.89 in.)
Rear height	24.05 mm (0.95 in.)
Width	357.80 mm (14.09 in.)
Depth	233.30 mm (9.19 in.)
Weight (minimum)	1.79 kg (3.95 lb)

Table 3. Dimensions and weight (continued)

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

Processor

The following table lists the details of the processors supported by your Latitude 5521.

Table 4. Processor

Description	Option one	Option two	Option three
Processor type	11th Generation Intel Core i5-11400H	11th Generation Intel Core i5-11500H	11th Generation Intel Core i7-11850H
Processor wattage	45 W	45 W	45 W
Processor core count	6	6	8
Processor thread count	12	12	16
Processor speed	2.70 GHz to 4.50 GHz	2.90 GHz to 4.60 GHz	2.50 GHz to 4.80 GHz
Processor cache	12 MB	12 MB	24 MB
Integrated graphics	Intel UHD Graphics	Intel UHD Graphics	Intel UHD Graphics

Chipset

The following table lists the details of the chipset supported by your Latitude 5521.

Table 5. Chipset

Description	Values
Chipset	Intel WM590
Processor	11th Generation Intel Core i5/i7
DRAM bus width	Two channels, 64-bit
Flash EPROM	32 MB
PCIe bus	Up to Gen 3.0

Operating system

Your Latitude 5521 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Pro National Academic, 64-bit
- Windows 10 Home, 64-bit
- Windows 10 Pro, 64-bit
- Ubuntu 20.04 LTS, 64-bit

Memory

The following table lists the memory specifications of your Latitude 5521.

Table 6. Memory specifications

Description	Values
Memory slots	Dual-channel
Memory type	DDR4
Memory speed	3200 MHz
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, 32 GB
Memory configurations supported	• 8 GB, 1 x 8 GB, DDR4, 3200 MHz • 16 GB, 1 x 16 GB, DDR4, 3200 MHz • 16 GB, 2 x 8 GB, DDR4, 3200 MHz • 32 GB, 1 x 32 GB, DDR4, 3200 MHz • 32 GB, 2 x 16 GB, DDR4, 3200 MHz • 64 GB, 2 x 32 GB, DDR4, 3200 MHz

External ports

The following table lists the external ports of your Latitude 5521.

Table 7. External ports

Description	Values
Network port	One RJ-45 port
USB ports	• One USB 3.2 Gen 1 (Type-A) port • One USB 3.2 Gen 1 (Type-A) port with PowerShare • Two USB4 Type-C® port with Power Delivery/ DisplayPort/Thunderbolt™4
Audio port	One Universal Audio Jack
Video port	One HDMI 2.0 port
Media-card reader	One microSD card slot
Power-adapter port	DC-in USB Type-C
Security-cable slot	One Wedge-shaped lock slot

Internal slots

The following table lists the internal slots of your Latitude 5521.

Table 8. Internal slots

Description	Values
M.2	• Two M.2 2230 slots for solid-state drive 128 GB/256 GB/512 GB • Two M.2 2280 slots for solid-state drive 256 GB/512 GB/1 TB/2 TB • Two M.2 2280 slots for Self-Encrypting solid-state drive 256 GB/512 GB • One M.2 2280 slots for 32 GB Intel® Optane™ Memory + 512 GB QLC 3D NAND **NOTE:** Intel® Optane™ Memory requires Gen 3 storage through Platform Controller Hub • One SATA slot for 7 mm HDD 500 GB/1 TB/2 TB **NOTE:** To learn more about the features of different types of M.2 cards, see the knowledge base article 000144170 at www.dell.com/support.

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your Latitude 5521.

Table 9. Wireless module specifications

Description	Option one	Option two	Option three
Model number	Qualcomm QCA61x4A	Intel AX201	Intel AX210
Transfer rate	Up to 867 Mbps	Up to 2400 Mbps	Up to 2400 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz
Wireless standards	• Wi-Fi 802.11a/b/g • WiFi 802.11n • WiFi 802.11ac	• Wi-Fi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)	• Wi-Fi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6E (WiFi 802.11ax)
Encryption	• 64-bit and 128-bit WEP • 128-bit AES-CCMP • TKIP	• 64-bit and 128-bit WEP • 128-bit AES-CCMP • TKIP	• 64-bit and 128-bit WEP • 128-bit AES-CCMP • TKIP
Bluetooth	5.0	5.2	5.2

WWAN module

The following table lists the Wireless Wide Area Network (WWAN) module supported on your Latitude 5521.

Table 10. WWAN module specifications

Description	Values
Model number	Intel 7360 (DW5820e)
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	• LTE Category 16 • UMTS/HSPA+
Encryption	Not supported
Global Navigation Satellite System (GNSS)	Supports GPS, BDS, and GLONASS
NOTE: For instructions on how to find your computer's IMEI (International Mobile Station Equipment Identity) number, see the knowledge base article 000143678 at www.dell.com/support.	

Audio

The following table lists the audio specifications of your Latitude 5521.

Table 11. Audio specifications

Description		Values
Audio controller		Realtek ALC3204 with Waves MaxxAudio Pro
Stereo conversion		24-bit DAC (Digital-to-Analog) and ADC (Analog-to-Digital)
Internal audio interface		Intel HDA (high-definition audio)
External audio interface		Universal audio jack
Number of speakers		2
Internal-speaker amplifier		Supported (audio codec integrated)
External volume controls		Keyboard shortcut controls
Speaker output:		
	Average speaker output	2 W
	Peak speaker output	2.5 W
Subwoofer output		Not supported
Microphone		Dual-array microphones

Storage

This section lists the storage options on your Latitude 5521.

Your computer supports one of the following configurations:

- One 2.5-inch hard drive
- Two M.2 2230/2280 solid state drive

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

- with a M.2 drive, the M.2 drive is the primary drive
- without a M.2 drive, the 2.5-inch hard drive is the primary drive

Table 12. Storage specifications

Storage type	Interface type	Capacity
2.5-inch 5400 rpm SATA hard-disk drive	SATA up to 6 Gbps	up to 2 TB
2.5-inch 7200 rpm SATA hard-disk drive	SATA up to 6 Gbps	up to 1 TB
2.5-inch 7200 rpm SED SATA hard-disk drive	SATA AHCI, up to 6 Gbps	500 GB
M.2 2230 solid-state drive PCIe NVMe	PCIe Gen3x4 NVMe, up to 32 Gbps	up to 512 GB
M.2 2280 solid-state drive PCIe NVMe	PCIe Gen3x4/Gen4x4 NVMe, up to 32 Gbps	up to 2 TB
M.2 2280 Opal Self Encrypting solid-state drive PCIe NVMe	PCIe Gen3x4 NVMe, up to 32 Gbps	1 TB

Intel Optane memory

Intel Optane memory functions only as a storage accelerator. It neither replaces nor adds to the memory (RAM) installed on your computer.

NOTE: Intel Optane memory is supported on computers that meet the following requirements:

- 7th Generation or higher Intel Core i3/i5/i7 processor
- Windows 10 64-bit version or higher
- Latest version of Intel Rapid Storage Technology driver

Table 13. Intel Optane memory

Description	Values
Type	Memory/Storage/Storage accelerator
Interface	PCIe Gen3.0x4
Connector	M.2 2280
Configurations supported	32 GB, 512 GB
Capacity	Up to 512 GB

Media-card reader

The following table lists the media cards supported by your Latitude 5521.

Table 14. Media-card reader specifications

Description	Values
Media-card type	microSD card slot
Media-cards supported	• Micro Secure Digital (mSD) • Micro Secure Digital High Capacity (mSDHC) • Micro Secure Digital Extended Capacity (mSDXC)
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 Latitude 5521.

Table 15. Keyboard specifications

Description	Values
Keyboard type	• Standard keyboard • RGB backlit keyboard
Keyboard layout	QWERTY
Number of keys	• United States and Canada: 102 keys • United Kingdom: 103 keys • Japan: 106 keys
Keyboard size	X=18.6 mm key pitch Y=19.05 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. Keyboard shortcuts

Clickpad

The following table lists the Clickpad specifications of your Latitude 5521.

Table 16. Clickpad specifications

Description	Values
Clickpad resolution:	>300 dpi

Table 16. Clickpad specifications (continued)

Description		Values
Clickpad dimensions:		
	Horizontal	115 mm (4.53 in.)
	Vertical	67 mm (2.64 in.)
Clickpad gestures		For more information about Clickpad gestures available on Windows, see the Microsoft knowledge base article 4027871 at support.microsoft.com.

Camera

The following table lists the camera specifications of your Latitude 5521.

Table 17. Camera specifications

Description		Option 1	Option 2	Option 3
Number of cameras		One	One	One
Camera type		• RGB HD camera	HD RGB + Ir camera	FHD RGB + Ir camera, proximity sensor/express sign-in
Camera location		Front camera	Front camera	Front camera
Camera sensor type		CMOS sensor technology	CMOS sensor technology	CMOS sensor technology
Camera resolution:				
	Still image	5 megapixel	0.92 megapixel	2.07 megapixels
	Video	1280 x 720 (VGA/HD) at 30 fps	1280 x 720 (HD) at 30 fps	1920 x 1080 (FHD) at 30 fps
Infrared camera resolution:				
	Still image	N/A	0.23	0.23
	Video	N/A	640 x 360 at 15 fps	640 x 360 at 15 fps
Diagonal viewing angle:				
	Camera	78.6 degrees	87 degrees	87.60 degrees
	Infrared camera	87 degrees	87 degrees	87.60 degrees

Power adapter

The following table lists the power adapter specifications of your Latitude 5521.

Table 18. Power adapter specifications

Description	Option one	Option two
Type	90 W AC adapter, USB-C	130 W AC adapter, USB-C

Table 18. Power adapter specifications (continued)

Description		Option one	Option two
		NOTE: 90 W is supported only in UMA configuration.	
Input voltage		100 VAC x 240 VAC	100 VAC x 240 VAC
Input frequency		50 Hz x 60 Hz	50 Hz x 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
Weight		0.64 lbs (0.29 kg)	0.77 lbs (0.35 kg)
Dimensions (inches)		0.87 x 2.60 x 5.12	0.87 x 2.60 x 5.63
Dimensions (mm)		22 x 66 x 130	22 x 66 x 143
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 Latitude 5521.

Table 19. Battery specifications

Description		Option one	Option two	Option three
Battery type		4-cell 64 WHr, Polymer, Long Cycle Life, ExpressCharge capable	4-cell 64 WHr, Polymer, non-Long Cycle Life, ExpressCharge capable	6 Cell 97 WHr ExpressCharge capable
Battery voltage		15.20 V	15.20 V	11.40 VDC
Battery weight (maximum)		0.283 kg (0.62 lb)	0.283 kg (0.62 lb)	0.429 kg (0.95 lb)
Battery dimensions:				
	Height	7.60 mm	7.60 mm	7.70 mm (0.30 in.)
	Width	226.60 mm	226.60 mm	332 mm (13.1 in.)
	Depth	81.40 mm	81.40 mm	82.00 mm (3.22 in.)

Table 19. Battery specifications (continued)

Description		Option one	Option two	Option three
Temperature range:				
	Operating	• Charge: 0 °C to 45 °C, 32 °F to 113 °F • Discharge: 0 °C to 70 °C, 32 °F to 158 °F	• Charge: 0 °C to 45 °C, 32 °F to 113 °F • Discharge: 0 °C to 70 °C, 32 °F to 158 °F	0°C to 50°C (32°F to 122°F)
	Storage	-20°C (-4°F) to 65°C (149°F)	-20°C (-4°F) to 65°C (149°F)	-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.	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.
Battery charging time (approximate)		4Hrs hours (when the computer is off) **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/	4Hrs hours (when the computer is off) **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/	4 Hrs hours (when the computer is off) **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/
Approximate life span (discharge/charge cycles)		• 3 years warranty	• 1 year warranty	• 1 year warranty
Coin-cell battery		CR2032	CR2032	CR2032

Display

The following table lists the display specifications of your Latitude 5521.

Table 20. Display specifications

Description		Option one	Option two	Option three	Option four	Option five
Display type		High Definition (HD)	Full High Definition (FHD)	Full High Definition (FHD) Touch	Full High Definition (FHD), Super Low Power (SLP), Low Blue Light	Ultra High Definition (UHD), Super Low Power (SLP), Low Blue Light
Display-panel technology		Twisted Nematic (TN)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Wide Viewing Angle (WVA)	Wide-Viewing Angle (WVA)
Display-panel dimensions (active area):						
	Height	193.60 mm (7.62 in.)	193.60 mm (7.62 in.)	193.60 mm (7.62 in.)	193.60 mm (7.62 in.)	193.60 mm (7.62 in.)
	Width	344.20 mm (13.55 in.)	344.20 mm (13.55 in.)	344.20 mm (13.55 in.)	344.20 mm (13.55 in.)	344.20 mm (13.55 in.)
	Diagonal	394.91 mm (15.55 in.)	394.91 mm (15.55 in.)	394.91 mm (15.55 in.)	394.91 mm (15.55 in.)	394.91 mm (15.55 in.)
Display-panel native resolution		1366x768	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		1049088	2073600	2073600	2073600	8.3
Color gamut		NTSC 45%	NTSC 45%	NTSC 45%	sRGB 100%	sRGB 100%
Pixels Per Inch (PPI)		100	141	141	141	140
Contrast ratio (typ)		500:1	700:1	700:1	700:1	800:1
Response time (min)		25 ms	25 ms	35 ms	35 ms	35 ms
Refresh rate		60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Horizontal view angle		40/40 +/- degrees	80/80 +/- degrees	80/80 +/- degrees	80/80 +/- degrees	80 minimum
Vertical view angle		10(U)/30(D) +/- degrees	80(U)/80(D) +/- degrees	80(U)/80(D) +/- degrees	80(U)/80(D) +/- degrees	80 minimum
Pixel pitch		0.252X0.252 mm	0.179X0.179 mm	0.179X0.179 mm	0.179X0.179 mm	0.161 x 0.161
Power consumption (maximum)		4.20 W	4.2 W	4.2 W	4.6 W	3.50 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)

The following table lists the specifications of the optional fingerprint-reader of your Latitude 5521.

Table 21. Fingerprint reader specifications

Description	Values
Fingerprint-reader sensor technology	Capacitive
Fingerprint-reader sensor resolution	508 dpi
Fingerprint-reader sensor pixel size	256 x 360

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Latitude 5521.

Table 22. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel UHD Graphics	HDMI 2.0 port/ USB Type-C with DisplayPort 2.0 port	Shared system memory	11th Generation Intel core i5/i7

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your Latitude 5521.

Table 23. GPU—Discrete

Controller	External display support	Memory size	Memory type
NVIDIA GeForce MX450	HDMI 2.0 port/ USB Type-C with DisplayPort 2.0 port	2 GB	GDDR6

Sensor and control specifications

Table 24. Sensor and control specifications

Specifications
1. Accelerometer: One on the system board
2. Accelerometer with Gyro: On the hinge-up (optional)
3. GPS (via WWAN Card only) (optional)
4. Proximity sensor (optional)

Security options—Contacted smartcard reader

Table 25. Contacted smartcard reader

Title	Description	Dell ControlVault 3 Smartcard reader
ISO 7816 -3 Class A Card Support	Reader capable of reading 5V powered smartcard	Yes

Table 25. Contacted smartcard reader (continued)

Title	Description	Dell ControlVault 3 Smartcard reader
ISO 7816 -3 Class B Card Support	Reader capable of reading 3V powered smartcard	Yes
ISO 7816 -3 Class C Card support	Reader capable of reading 1.8V powered smartcard	Yes
ISO 7816-1 Compliant	Specification for the reader	Yes
ISO 7816 -2 Compliant	Specification for smartcard device physical characteristics (size, location of connection points, etc.)	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) smartcard standards as posted to www.emvco.com	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard 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
Windows Certified	Device certified by WHCK	Yes
FIPS 201 (PIV/HSPD-12) Compliant via GSA	Device compliant with FIPS 201/PIV/ HSPD-12 requirements	Yes

Security options—Contactless smartcard reader

Table 26. Contactless smartcard reader

Title	Description	Dell ControlVault 3 Contactless Smartcard reader with NFC
Felica Card Support	Reader and software capable of supporting Felica contactless cards	Yes
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

Table 26. Contactless smartcard reader (continued)

Title	Description	Dell ControlVault 3 Contactless Smartcard reader with NFC
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
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
EMVCo Compliant	Compliant with EMVCO smartcard standards as posted to www.emvco.com	Yes
EMVCo Certified	Formally certified based on EMVCO smartcard standards	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
Windows Certified	Device certified by Microsoft WHCK	Yes
Dell ControlVault support	Device connects to Dell ControlVault for usage and processing	Yes

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	

Table 27. Supported cards (continued)

Manufacturer	Card	Supported
	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	

Security

Table 28. Security specifications

Features	Specifications
Trusted Platform Module (TPM) 2.0	Integrated on system board
Fingerprint reader	Optional
Wedge-shaped lock slot	Standard

Security Software

Table 29. Security Software specifications

Specifications
Dell Client Command Suite
Optional Dell Data Security and Management Software • Dell Client Command Suite • Dell BIOS Verification • Optional Dell Endpoint Security and Management Software • VMware Carbon Black Endpoint Standard • VMware Carbon Black Endpoint Standard + Secureworks Threat Detection and Response • Dell Encryption Enterprise • Dell Encryption Personal • Carbonite • VMware Workspace ONE • Absolute Endpoint Visibility and Control • Netskope • Dell Supply Chain Defense

Computer environment

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

Table 30. 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 80% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS

Table 30. Computer environment (continued)

Description	Operating	Storage
Shock (maximum)	140 G†	160 G†
Altitude (maximum)	0 m to 3048 m (4.64 ft to 5518.4 ft)	0 m to 10668 m (4.64 ft to 19234.4 ft)

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

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

4

ComfortView Plus

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.

5

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.

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

Table 31. List of keyboard shortcuts

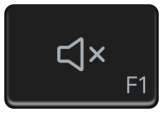
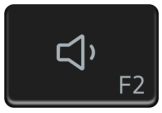
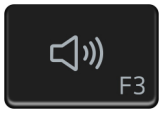
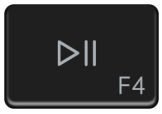
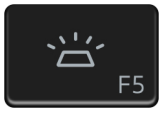
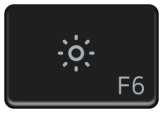
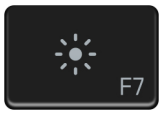
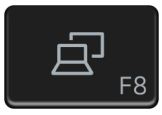
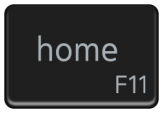
Function key	Redefined key (for multimedia control)	Behavior
		Mute audio
		Decrease volume
		Increase volume
		Play/Pause
		Toggle keyboard backlight (optional) **NOTE:** Non-backlight keyboards have F5 function key without the backlight icon and does not support toggle keyboard backlight function.
		Decrease brightness

Table 31. List of keyboard shortcuts (continued)

Function key	Redefined key (for multimedia control)	Behavior
		Increase brightness
		Switch to external display
		Print screen
		Home
		End

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

Table 32. List of keyboard shortcuts

Function key	Behavior
	Pause/Break
	Toggle scroll lock
	System request
	Open application menu
	Toggle Fn-key lock

6

Getting help

Topics:

- Contacting Dell

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.