Latitude 5320

Setup and specifications guide

Regulatory Model: P138G/P139G
Regulatory Type: P138G001/139G001
January 2021
Rev. A00

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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1

Set up your Latitude 5320

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 Technologies 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

Dell apps	Details
	My Dell Centralized location for key Dell applications, help articles, and other important information about your computer. It also notifies you about the warranty status, recommended accessories, and software updates if available.
	Dell Product Registration Register your computer with Dell.

Table 1. Locate Dell apps (continued)

Dell apps	Details
	Dell Help & Support Access help and support for your computer.
	SupportAssist Proactively checks the health of your computer's hardware and software. **NOTE:** Renew or upgrade your warranty by clicking the warranty expiry date in SupportAssist.
	Dell Update Updates your computer with critical fixes and important device drivers as they become available.
	Dell Digital Delivery Download software applications including software that is purchased but not pre-installed on your computer.

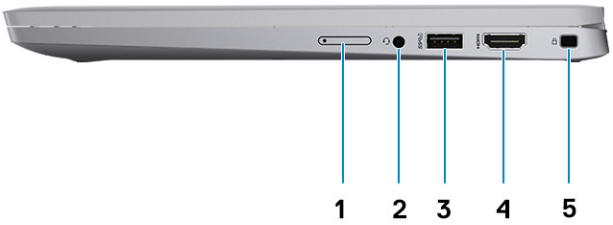
2

Chassis overview

Topics:

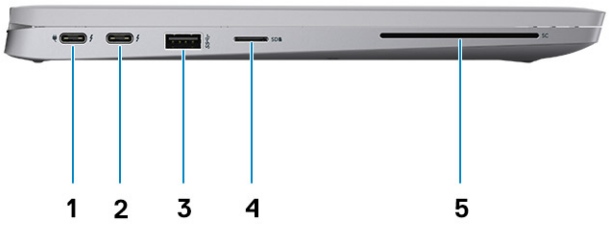
- Right
- Left
- Palm-rest
- Display
- Bottom
- Modes
- Battery Charge and Status LED

Right



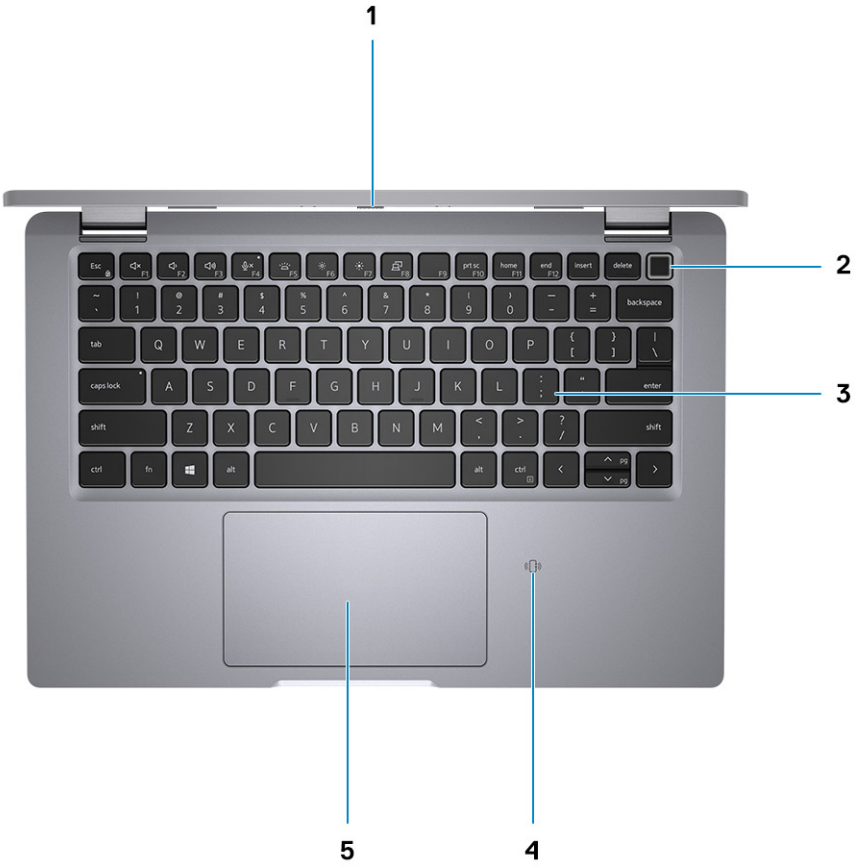
1. micro-SIM card tray (optional)
2. Universal audio jack
3. USB 3.2 Gen1 port with PowerShare
4. HDMI 2.0 port
5. Wedge-shaped lock slot

Left



1. Thunderbolt 4 port with DisplayPort Alt Mode/USB4/Power Delivery
2. Thunderbolt 4 port with DisplayPort Alt Mode/USB4/Power Delivery
3. USB 3.2 Gen 1 port
4. micro-SD card slot
5. Smart card reader slot (optional)

Palm-rest

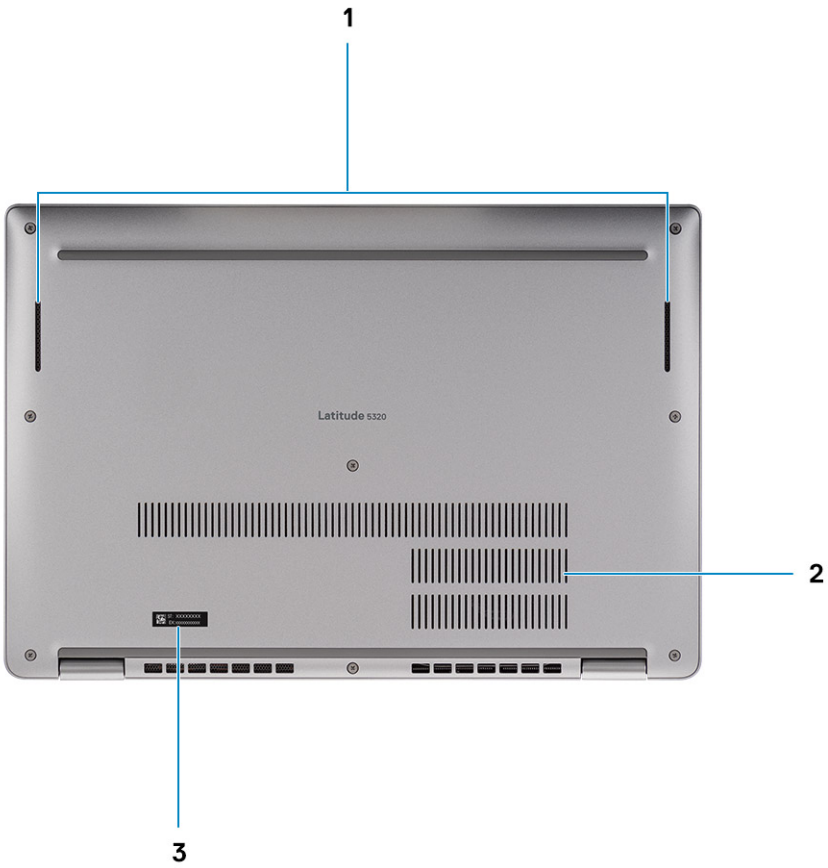


1. Privacy shutter
2. Power button with fingerprint reader (optional)
3. Keyboard
4. NFC/contactless card (optional)
5. Clickpad

Display

1. Proximity sensor (optional)
2. IR LED (optional)
3. RGB IR Camera (optional)
4. RGB LED (optional)
5. Microphone
6. Ambient Light Sensor (ALS) (optional)
7. LCD panel
8. Battery indicator LED/diagnostic LED

Bottom



1. Speakers
2. Thermal vent
3. Service Tag label

Modes

NOTE: The modes are applicable only to Latitude 5320 2-in-1 (an upsell option).

Laptop

Tablet

Stand

Tent

Battery Charge and Status LED

Table 2. Battery Charge and Status LED Indicator

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

3

Specifications of Latitude 5320

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

Topics:

- Dimensions and weight
- Processor
- Chipset
- Operating system
- Memory
- Intel Optane memory
- Ports and connectors
- Communications
- Audio
- Storage
- Intel Optane Memory H20 with Solid State Storage (optional)
- Media-card reader
- Keyboard
- Camera
- Clickpad
- Power adapter
- Battery
- Display
- Fingerprint reader (optional)
- Video
- Operating and storage environment
- Sensor and control

Dimensions and weight

Table 3. Dimensions and weight

Description	Values
Height:	16.96 mm (0.67 in.)
Width	305.70 mm (12.04 in.)
Depth	207.50 mm (8.17 in.)
Weight (minimum)	Laptop - 1.20 kg (2.65 lb) 2-in-1 - 1.32 kg (2.90 lb) **NOTE:** The weight of your system depends on the configuration ordered and the manufacturing variability.

Processor

The following table lists the details of the processors supported by your Latitude 5320.

Table 4. Processor

Description	Option one	Option two	Option three	Option four
Processor type	11th Generation Intel Core i3-1125G4	11th Generation Intel Core i5-1135G7	11th Generation Intel Core i5-1145G7	11th Generation Intel Core i7-1185G7
Processor wattage	17.50 W	17.50 W	17.50 W	17.50 W
Processor core count	4	4	4	4
Processor thread count	8	8	8	8
Processor speed	2.00 GHz to 3.70 GHz	2.40 GHz to 4.20 GHz	2.60 GHz to 4.40 GHz	3.00 GHz to 4.80 GHz
Processor cache	8 MB	8 MB	8 MB	12 MB
Integrated graphics	Intel UHD Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics	Intel Iris Xe Graphics
NOTE: i5 and i7 will have Intel UHD graphics if the system is configured with a single-channel memory configuration. **NOTE:** Intel UHD Graphics with single-channel memory configuration **NOTE:** Intel Iris X^e graphics with dual-channel memory configuration				

Chipset

Table 5. Chipset

Description	Values
Chipset	Intel PCH-LP
Processor	11th Generation Intel Core i3/i5/i7
DRAM bus width	64-bit
Flash EPROM	32 MB
PCIe bus	Up to Gen3

Operating system

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

Memory

Table 6. Memory specifications

Description	Values
Slots	Onboard memory
Type	DDR4
Speed	3200 MHz
Maximum memory	32 GB
Minimum memory	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB, 32 GB
Configurations supported	• 4 GB, DDR4, 3200 MHz, single-channel, integrated • 8 GB, DDR4, 3200 MHz, dual-channel, Integrated • 16 GB, DDR4, 3200 MHz, dual-channel, integrated • 32 GB, DDR4, 3200 MHz, dual-channel, integrated

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:

- 11th Generation or higher Intel Core i3/i5/i7 processor
- Windows 10 64-bit version or higher (Anniversary Update)
- Latest version of Intel Rapid Storage Technology driver

Table 7. Intel Optane memory

Description	Values
Type	M.2 2280, PCIe NVMe, Intel Optane memory H20
Interface	Gen 3 PCIe x4 NVMe
Connector	M.2 2280
Configurations supported	32 GB + 512 GB
Capacity	32 GB + 512 GB

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

Table 8. External ports and connectors (continued)

External:	
Audio	One Universal Audio Jack
Video	• One HDMI 2.0 port • Two DisplayPorts over Type-C
Media card reader	One microSD-card slot
Docking port	Supported through Type-C
Power adapter port	USB-C power-adapter port
Security	One wedge-shaped lock slot

Table 9. Internal ports and connectors

Internal:	
M.2	• M.2 2230 slot for WiFi and Bluetooth combo card • One M.2 2230 slot for solid-state drive • One M.2 2280 slot for solid-state drive/Intel Optane • One M.2 3042 slot for WWAN card **NOTE:** To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.

Communications

Wireless module

Table 10. Wireless module specifications

Description	Values		
Model number	Intel Wi-Fi 6 AX201	Intel AX210	Qualcomm QCA61x4A
Transfer rate	Up to 2.40 Gbps	Up to 2.40 Gbps	Up to 867 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz
Wireless standards	• WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)	• WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)	• WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP	• 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

The following table lists the Wireless Wide Area Network (WWAN) module that is supported on Latitude 5320.

Table 11. Wireless Wide Area Network module specifications

Description	Option 1
Model number	Intel XMM 7360 Global LTE-Advanced (DW5820e) CAT9
Form factor	M.2 3042 form factor
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)
Power supply	DC 3.135 V to 4.4 V, typical 3.3 V
Temperature	• Normal operating temperature: -10°C to + 55°C • Extended operating temperature: -20°C to +65°C
Antenna connector	• WWAN Main Antenna x 1 • WWAN Diversity Antenna x 1
Wake on Wireless	Supported
Network standards	LTE FDD/TDD, WCDMA/HSPA+, GNSS/ Beidou

Audio

Table 12. Audio specifications

Description		Values
Controller		Realtek ALC3254
Stereo conversion		Supported
Internal interface		High-definition audio
External interface		Universal Audio Jack
Speakers		Two
Internal speaker amplifier		Supported (audio codec integrated)
External volume controls		Keyboard shortcut controls
Speaker output:		
	Average	2 W
	Peak	2.5 W
Subwoofer output		Not supported
Microphone		Digital-array microphones

Storage

Your computer supports one of the following configurations:

- M.2 2230, PCIe x4 NVMe, Class 35 SSD
- M.2 2280, PCIe x4 NVMe, Class 40 SSD
- M.2 2230, PCIe x4 NVMe, Class 35 SED
- M.2 2280, PCIe x4 NVMe, Class 40 SED

The primary drive of your computer varies with the storage configuration. For systems with a M.2 drive, the M.2 drive is the primary drive.

Table 13. Storage specifications

Storage type	Interface type	Capacity
M.2 2230, PCIe x4 NVMe, Class 35 SSD	Gen 3 PCIe x4 NVMe	128 GB, 256 GB, 512 GB
M.2 2280, PCIe x4 NVMe, Class 40 SSD	Gen 3 PCIe x4 NVMe	256 GB, 512 GB, 1 TB
M.2 2280, PCIe x4 NVMe, Class 40 SSD	Gen 4 PCIe x4 NVMe	2 TB
M.2 2230, PCIe x4 NVMe, Class 35 SED	Gen 3 PCIe x4 NVMe	256 GB
M.2 2280, PCIe x4 NVMe, Class 40 SED	Gen 3 PCIe x4 NVMe	256 GB, 512 GB, 1 TB

Intel Optane Memory H20 with Solid State Storage (optional)

Intel Optane Memory technology utilizes 3D XPoint memory technology and functions as a non-volatile storage cache/accelerator and/or storage device depending on the Intel Optane Memory installed in your computer.

Intel Optane Memory H20 with Solid State Storage functions as both a non-volatile storage cache/accelerator (enabling enhanced read/write speeds for hard-drive storage) and a solid-state storage solution. It neither replaces nor adds to the memory (RAM) installed on your computer.

Table 14. Intel Optane Memory H20 with Solid State Storage specifications

Description	Values
Interface	PCIe 3 x4 NVMe ● One PCIe 3 x2 for Optane memory ● One PCIe 3 x2 for solid-state storage
Connector	M.2
Form factor	2280
Capacity (Intel Optane memory)	Up to 32 GB
Capacity (solid-state storage)	Up to 512 GB

NOTE: Intel Optane Memory H20 with Solid State Storage is supported on computers that meet the following requirements:

- 11th Generation or higher Intel Core i3/i5/i7 processors
- Windows 10 64-bit version or higher (Anniversary Update)
- Intel Rapid Storage Technology driver version 18.1.0.1027 or higher

Media-card reader

Table 15. Media-card reader specifications

Description	Values
Type	One microSD-card slot
Cards supported	● micro-Secure Digital (mSD) ● micro-Secure Digital High Capacity (mSDHC)

Table 15. Media-card reader specifications (continued)

Description	Values
	• 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

Table 16. Keyboard specifications

Description	Values
Type	• Standard non-backlit keyboard • Standard backlit keyboard
Layout	QWERTY
Number of keys	• United States and Canada: 79 keys • United Kingdom: 80 keys • Japan: 83 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) changing **Function Key Behavior** in BIOS setup program. Keyboard shortcuts

Camera

Table 17. Camera specifications

Description	Values		
Number of cameras	One	One	One
Type	HD RGB camera	HD RGBIr camera	FHD RGBIr camera
Location	Front camera	Front camera	Front camera
Sensor type	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology
Resolution			
Camera			
Still image	0.92 megapixel	0.92 megapixels	2.07 megapixels
Video	1280 x 720 (HD) at 30 fps	1280 x 720 (HD) at 30 fps	1920 x 1080 (FHD) at 30 fps
Infrared camera			

Table 17. Camera specifications (continued)

Description		Values		
	Still image	NA	0.23	0.23
	Video	NA	640 x 360	640 x 360
Diagonal viewing angle				
	Camera	78.6 degrees	87 degrees	87.6 degrees
	Infrared camera	NA	87 degrees	87.6 degrees

Clickpad

Table 18. Clickpad specifications

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

Power adapter

Table 19. Power adapter specifications

Description		Option 1	Option 2	Option 3	Option 4
Type		45 W AC adapter, USB-C	65 W AC adapter, USB-C	90 W AC adapter, USB-C	60 W AC adapter USB-C
Input voltage		100 VAC x 240 VAC	100 VAC x 240 VAC	100 VAC x 240 VAC	100 VAC x 240 VAC
Input frequency		50 Hz x 60 Hz	50 Hz x 60 Hz	50 Hz x 60 Hz	50 Hz x 60 Hz
Input current (maximum)		1.3 A	1.7 A	1.5 A	1.7 A
Output current (continuous)		• 20 V/2.25 A (Continuous) • 15 V/3 A (Continuous) • 9 V/3 A (Continuous) • 5 V/3 A (Continuous)	• 20 V/3.25 A (Continuous) • 15 V/3 A (Continuous) • 9 V/3 A (Continuous) • 5 V/3 A (Continuous)	• 20 V/4.50 A (Continuous) • 15 V/3 A (Continuous) • 9 V/3 A (Continuous) • 5 V/3 A (Continuous)	• 20 V/3 A (Continuous) • 15 V/3 A (Continuous) • 9 V/3 A (Continuous) • 5 V/3 A (Continuous
Rated output voltage		20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/15 VDC/9 VDC/5 VDC	20 VDC/15 VDC/9 VDC/5 VDC
Temperature range:					
	Operating	0 °C (32 °F) to 40 °C (104 °F)	0 °C (32 °F) to 40 °C (104 °F)	0 °C (32 °F) to 40 °C (104 °F)	0°C (32°F) to 40 °C (104°F)

Table 19. Power adapter specifications (continued)

Description		Option 1	Option 2	Option 3	Option 4
	Storage	-40 °C (-40 °F) to 70 °C (158 °F)	-40 °C (-40 °F) to 70 °C (158 °F)	-40 °C (-40 °F) to 70 °C (158 °F)	- 40° C to 70°C (158°F)

Battery

Table 20. Battery specifications

Description		Option 1	Option 2
Type		3-cell 42 WHr Polymer	4-cell 63 WHr Polymer
Voltage		11.40 VDC	15.20 VDC
Weight (maximum)		0.21 kg (0.46 lb)	0.26 kg (0.58 lb)
Dimensions:			
	Height	92.8 mm (3.65 in.)	92.8 mm (3.65 in.)
	Width	238 mm (9.37 in.)	238 mm (9.37 in.)
	Depth	5.70 mm (0.22 in.)	5.70 mm (0.22 in.)
Temperature range:			
	Operating	Minimum operating temperature: Charge/ Discharge : 0°C (32°F) Maximum operating temperature: ● Charge: 45°C/ 113°F ● Discharge: 70°C/ 158°F	Minimum operating temperature: Charge/ Discharge : 0°C (32°F) Maximum operating temperature: ● Charge: 45°C/ 113°F ● Discharge: 70°C/ 158°F
	Storage	Minimum storage temperature: -20°C (4°F) Maximum storage temperature: 65°C (149°F)	Minimum storage temperature: -20°C (4°F) Maximum storage temperature: 65°C (149°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.
Charging time (approximate)		● ExpressCharge Boost (0% up to 35%) : 20 minutes ● Express charge : 2 hours ● Standard charge : 3 hours **NOTE:** Control the charging time, duration, start and end time, and so on, using the Dell Power Manager application. For more information about the Dell Power Manager see, *Me and My Dell* on www.dell.com/	● ExpressCharge Boost (0% up to 35%) : 20 minutes ● Express charge : 2 hours ● Standard charge : 3 hours **NOTE:** Control the charging time, duration, start and end time, and so on, using the Dell Power Manager application. For more information about the Dell Power Manager see, *Me and My Dell* on www.dell.com/
Life span (approximate)		● 1 year for Standard battery ● 3 years for LcL battery	● 1 year for Standard battery ● 3 years for LcL battery
Coin-cell battery		No	No
ExpressCharge		Supported	Supported
User replaceable		No	No
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.

Display

Latitude 5320

Table 21. Display specifications

Description					
		Option 1	Option 2	Option 3	Option 4
Type		Full High Definition (FHD)	Full High Definition (FHD)	Full High Definition (FHD) (Privacy/Touch)	Full High Definition (FHD) (Touch)
Panel technology		Wide Viewing Angle (WVA), Super Low Power (SLP)	Wide Viewing Angle (WVA), Super Low Power (SLP), Low Blue Light (LBL)	Wide Viewing Angle (WVA), Super Low Power (SLP)	Wide Viewing Angle (WVA), Super Low Power (SLP)
Luminance (typical)		250 nits	400 nits	300 nits	300 nits
Dimensions (Active Area):					
	Height	165.24 mm (6.51 in.)	165.24 mm (6.51 in.)	165.24 mm (6.51 in.)	165.24 mm (6.51 in.)
	Width	293.76 mm (11.57 in.)	293.76 mm (11.57 in.)	293.76 mm (11.57 in.)	293.76 mm (11.57 in.)
	Diagonal	337.08 mm (13.27 in.)	337.08 mm (13.27 in.)	337.08 mm (13.27 in.)	337.08 mm (13.27 in.)
Native Resolution		1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080
Megapixels		2.07	2.07	2.07	2.07
Color gamut		45% NTSC	100% sRGB typical	100% sRGB typical	72% NTSC
Pixels per Inch (PPI)		166	166	166	166
Contrast Ratio (min)		600:1	1000:1	16:9	16:9
Response Time (max)		35 ms	35 ms	35 ms	35 ms
Refresh Rate		60 Hz	60 Hz	60 Hz	60 Hz
Horizontal View Angle		80	80	• Sharing Mode: 80/80 degrees • Privacy Mode (brightness < 40%) : 30/30 (max) degrees	80
Vertical View Angle		80	80	• Sharing Mode: 80/80 degrees • Privacy Mode (brightness < 40%) : 30/30 (max) degrees	80
Pixel Pitch		0.153 x 0.153 mm	0.153 x 0.153 mm	0.153 x 0.153 mm	0.153 x 0.153 mm
Power Consumption (maximum)		3.50 W @ Mosaic	2.52 W @ Mosaic	• Sharing mode : 3.35 W	4.8 W

Table 21. Display specifications (continued)

Description				
			• Privacy mode : 3.45 W	
Anti-glare vs glossy finish	Anti-glare	Anti-glare	Anti-glare	Anti-glare
Touch options	No	No	Yes	Yes
Adaptive sync	No	No	No	No
Stylus support	Not supported	Not supported	Not supported	Not supported

Latitude 5320 2-in-1

Table 22. Display specifications

Description		
Type		Full High Definition (FHD)
Panel technology		Wide Viewing Angle (WVA), Super Low Power (SLP)
Luminance (typical)		300 nits
Dimensions (Active Area):		
	Height	165.24 mm (6.51 in.)
	Width	293.76 mm (11.57 in.)
	Diagonal	337.08 mm (13.27 in.)
Native Resolution		1920 x 1080
Megapixels		2.07
Color gamut		72% NTSC
Pixels per Inch (PPI)		166
Contrast Ratio (min)		800:1 typ, 600:1 min
Response Time (max)		35 ms
Refresh Rate		60 Hz
Horizontal View Angle		80 min degrees
Vertical View Angle		80 min degrees
Pixel Pitch		0.153 x 0.153
Power Consumption (maximum)		4.2 W
Anti-glare vs glossy finish		Anti-glare
Touch options		Yes
Adaptive sync		No
Stylus support		Supported

Fingerprint reader (optional)

Table 23. Fingerprint reader specifications

Description	Values
Sensor technology	Capacitative
Sensor resolution	500 dpi
Sensor area	
Sensor pixel size	108 x 88

Video

Table 24. Integrated graphics specifications

Integrated graphics			
Controller	**External display support**	**Memory size**	**Processor**
Intel UHD 630 Graphics	HDMI 2.0, DP over USB Type-C	Shared system memory	11th Generation Intel Core i3
Intel Iris Xe Graphics	HDMI 2.0, DP over USB Type-C	Shared system memory	11th Generation Intel Core i5/i7

NOTE: Intel UHD Graphics with Intel Core i3 processors.

NOTE: Intel UHD Graphics with Intel Core i5/i7 processors and single-channel memory configuration.

NOTE: Intel Iris Xe Graphics with Intel Core i5/i7 processors and dual-channel memory configuration.

Operating and storage environment

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

Table 25. Computer environment

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (noncondensing)	5% to 95% (noncondensing)
Vibration (maximum)*	0.66	NA
Shock (maximum)	140	NA
Altitude (maximum)	3048	10668

* 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.

Sensor and control

Table 26. Sensor and control

Sensor support	
Sensor	Ambient Light Sensor
	Windows Adaptive Color
	Accelerometer (G sensor): Laptop: ● One on the system board. ● One on the system board and another on the hinge-up (for configuration that supports Express Sign-in feature with proximity sensor. 2-in-1: ● One on the system board and another on the hinge-up.

4

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.

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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 27. List of keyboard shortcuts

Function key	Redefined key (for multimedia control)	Behavior
F1	fn + F1	Mute audio
F2	fn + F2	Decrease volume
F3	fn + F3	Increase volume
F4	fn + F4	Play/Pause
F5	fn + F5	Toggle keyboard backlight (optional) **NOTE:** Non-backlight keyboards have F5 function key without the backlight icon and does not support toggle keyboard backlight function.
F6	fn + F6	Decrease brightness

Table 27. List of keyboard shortcuts (continued)

Function key	Redefined key (for multimedia control)	Behavior
F7	fn + F7	Increase brightness
F8	fn + F8	Switch to external display
prt sc F10	fn + prt sc F10	Print screen
home F11	fn + home F11	Home
end F12	fn + end F12	End

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

Table 28. List of keyboard shortcuts

Function key	Behavior
fn + B	Pause/Break
fn + S	Toggle scroll lock
fn + R	System request
fn + ctrl	Open application menu
fn + esc	Toggle Fn-key lock
fn + P	SafeScreen (e-Privacy) - Optional offering

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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 29. 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.	1. Go to https://www.dell.com/support/home/?app=knowledgebase. 2. Type the subject or keyword in the **Search** box. 3. 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.

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.