

Latitude 7420

Technical Guide Book



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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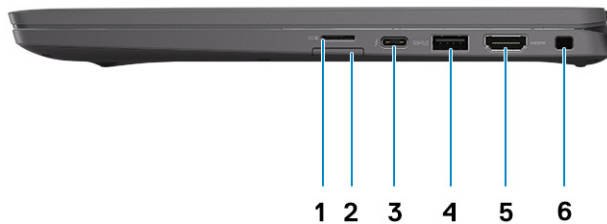
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Views of Latitude 7420

Topics:

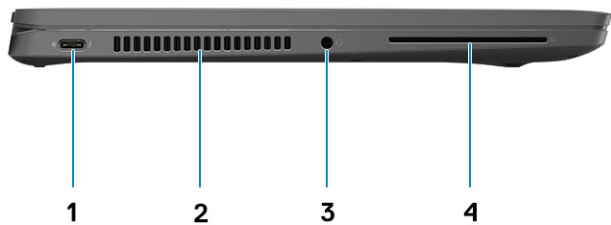
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Right



- | | |
|--|--|
| 1. micro-SD card slot | 2. micro-SIM card slot (optional with WWAN configuration only) |
| 3. Thunderbolt 4 with Power Delivery/DisplayPort Alt Mode/USB 4 type-C | 4. SuperSpeed USB 3.2 Gen 1 Type-A with PowerShare |
| 5. HDMI 2.0 port | 6. Wedge security lock slot |

Left



1.

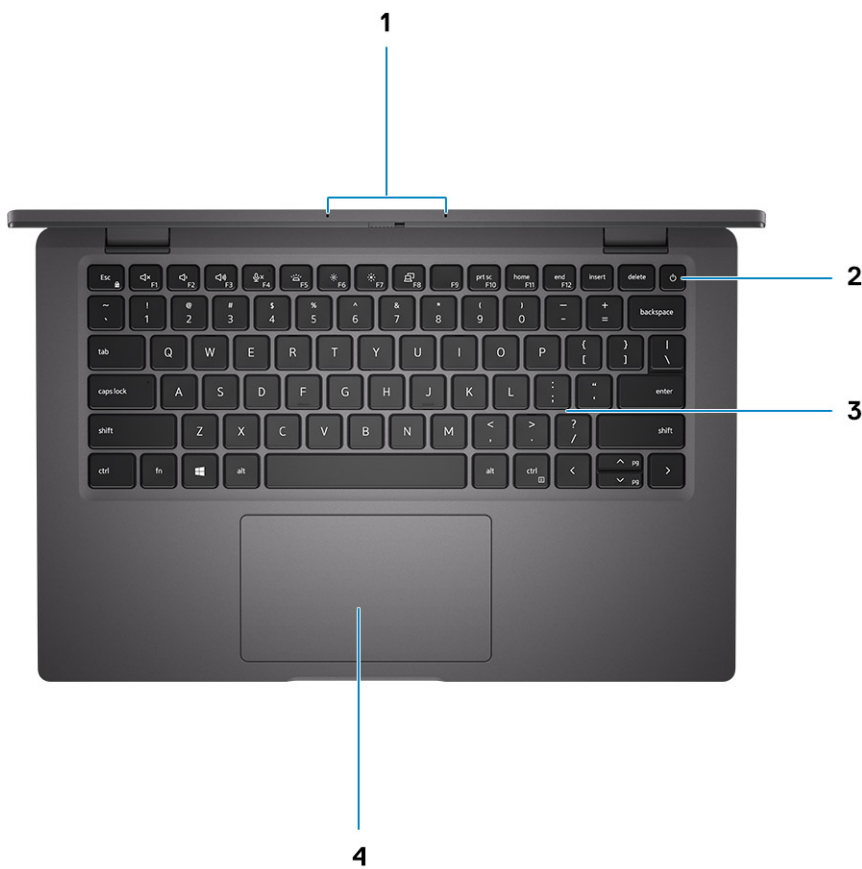
Thunderbolt 4 with Power Delivery/DisplayPort Alt Mode/USB 4 type-C
2.

Air vents
3.

Headset (headphone and microphone combo) port
4.

Smart card reader slot (optional)

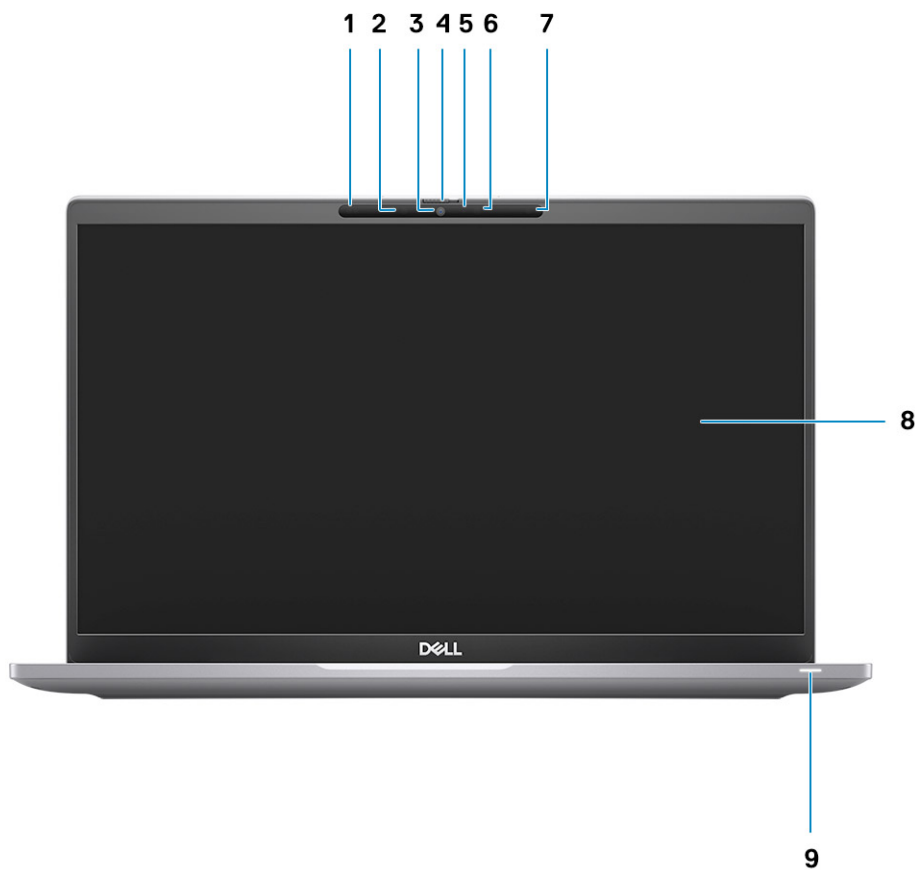
Palmrest



1. Microphone array
3. Keyboard

2. Power button (optional with Fingerprint reader)
4. Touchpad

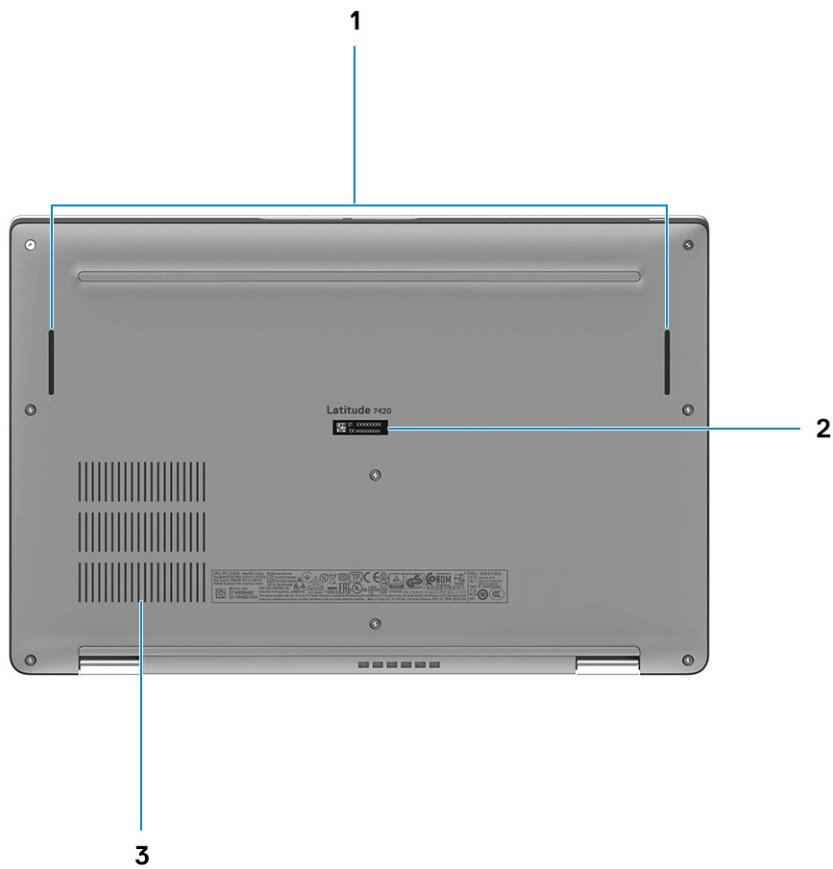
Display



1. Proximity sensor (optional)
3. RGB or IR Camera (optional)
5. Camera status LED
7. Ambient Light Sensor (ALS) (optional)
9. LED indicator

2. IR emitter (optional)
4. Camera shutter
6. IR emitter (optional)
8. LCD panel

Bottom



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

Modes

NOTE: The modes are applicable only to Latitude 7420 2-in-1 (an upsell option).

Tablet mode



Laptop mode



Tent mode



Stand mode



Battery Charge and Status LED

Table 1. 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.

Specifications of Latitude 7420

Topics:

- Dimensions and weight
- Processor
- Chipset
- Operating system
- Memory
- External ports
- Internal slots
- Wireless module
- Audio
- Storage
- Media-card reader
- Keyboard
- Camera
- Touchpad
- Power adapter
- Battery
- Display
- Fingerprint reader in power button
- GPU—Integrated
- Operating and storage environment


Dimensions and weight

The following table lists the height, width, depth, and weight of your Latitude 7420.

Table 2. Dimensions and weight

Description		Values
Height:		
	Front height	<ul style="list-style-type: none"> • 17.27 mm (0.68 in.) - Carbon Fiber • 16.90 mm (0.67 in.) - Aluminium • 17.06 mm (0.67 in.) - Carbon Fiber (2-in-1) • 16.40 mm (0.64 in.) - Aluminium (2-in-1)
	Rear height	<ul style="list-style-type: none"> • 18.88 mm (0.74 in.) - Carbon Fiber • 18.00 mm (0.708 in.) - Aluminium • 18.91 mm (0.74 in.) - Carbon Fiber (2-in-1) • 18.70 mm (0.736 in.) - Aluminium (2-in-1)
Width		<ul style="list-style-type: none"> • 321.35 mm (12.65 in.) - Carbon Fiber • 321.35 mm (12.65 in.) - Aluminium • 321.35 mm (12.65 in.) - Carbon Fiber (2-in-1) • 321.35 mm (12.65 in.) - Aluminium (2-in-1)
Depth		<ul style="list-style-type: none"> • 208.69 mm (8.22 in.) - Carbon Fiber • 208.69 mm (8.22 in.) - Aluminium

Table 2. Dimensions and weight (continued)

Description	Values
	<ul style="list-style-type: none"> 208.69 mm (8.22 in.) - Carbon Fiber (2-in-1) 208.69 mm (8.22 in.) - Aluminium (2-in-1)
Weight (minimum)	<ul style="list-style-type: none"> 1.22 kg (2.70 lb) - Carbon Fiber 1.31 kg (2.89 lb) - Aluminium 1.36 kg (3.00 lb) - Carbon Fiber (2-in-1) 1.46 kg (3.23 lb) - Aluminium (2-in-1) <p> NOTE: The weight of your computer depends on the configuration ordered and manufacturing variability.</p>

Processor

The following table lists the details of the processors supported by your Latitude 7420.

Table 3. Processor

Description	Option one	Option two	Option three	Option four
Processor type	11 th Generation Intel Core i5-1135G7 (Non-vPro)	11 th Generation Intel Core i5-1145G7 (vPro)	11 th Generation Intel Core i7-1165G7 (Non-vPro)	11 th Generation Intel Core i7-1185G7 (vPro)
Processor wattage	<ul style="list-style-type: none"> Maximum TDP: 28 W cTDP: 13 W - 15 W 	<ul style="list-style-type: none"> Maximum TDP: 28 W cTDP: 13 W - 15 W 	<ul style="list-style-type: none"> Maximum TDP: 28 W cTDP: 13 W - 15 W 	<ul style="list-style-type: none"> Maximum TDP: 28 W cTDP: 13 W - 15 W
Processor core count	4	4	4	4
Processor thread count	8	8	8	8
Processor speed	2.40 GHz to 4.20 GHz	2.60 GHz to 4.40 GHz	2.80 GHz to 4.70 GHz	3.00 GHz to 4.80 GHz
Processor cache	8 MB	8 MB	12 MB	12 MB
Integrated graphics	Intel Iris X ^e Graphics	Intel Iris X ^e Graphics	Intel Iris X ^e Graphics	Intel Iris X ^e Graphics

Chipset

The following table lists the details of the chipset supported by your Latitude 7420.

Table 4. Chipset

Description	Values
Chipset	Tiger Lake U PCH
Processor	11 th Generation Intel Core i5/i7
DRAM bus width	64-bit
Flash EPROM	32 MB
PCIe bus	Up to Gen4


Operating system

Your Latitude 7420 supports the following operating systems:

- Windows 10 Home (64-bit)
- Windows 10 Pro (64-bit)
- Ubuntu Linux 20.04 (64-bit) (available on laptop only)

Memory

Table 5. Memory specifications

Description	Values
Slots	Built on system board  NOTE: not upgradable
Type	Dual-channel Low-Power Dual Data Rate (LPDDR4x)
Speed	4267 MHz
Maximum memory	32 GB
Minimum memory	8 GB
Configurations supported	<ul style="list-style-type: none">• 8 GB, 2 x 4 GB• 16 GB, 2 x 8 GB• 32 GB, 2 x 16 GB

External ports

The following table lists the external ports on your Latitude 7420.


Table 6. External ports

Description	Values
USB ports	<ul style="list-style-type: none">• One SuperSpeed USB 3.2 Gen 1 Type-A with PowerShare• Two Thunderbolt 4 with Power Delivery/DisplayPort Alt Mode/USB 4 type-C
Audio port	One Combo Mic/Headphone Jack
Video port	<ul style="list-style-type: none">• One HDMI 2.0• Two Thunderbolt 4 with DisplayPort Alt Mode
Media-card reader	One microSD-card 4.0 slot
Power-adaptor port	USB Type-C port with Power Delivery
Security-cable slot	One Wedge shaped lock slot

Internal slots

The following table lists the internal slots of your Latitude 7420.


Table 7. Internal slots

Description	Values
M.2	One M.2 2230/2280 Keyed M slot for solid-state drive  NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article Article Number: 144170 at www.dell.com/support .

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module that is supported on your Latitude 7420.

Table 8. Wireless module specifications

Description	Values
Model number	Intel AX201  NOTE: Built on system board and not replaceable as a standalone part
Transfer rate	<ul style="list-style-type: none">• 2.4 GHz 40M: Up to 574 Mbps• 5 GHz 80M: Up to 1.2 Gbps• 5 GHz 160M: Up to 2.4 Gbps
Frequency bands supported	2.4 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none">• Wi-Fi 802.11a/b/g• Wi-Fi 4 (Wi-Fi 802.11n)• Wi-Fi 5 (Wi-Fi 802.11ac)• Wi-Fi 6 (802.11ax)
Encryption	<ul style="list-style-type: none">• 64-bit and 128-bit WEP• TKIP• 128-bit AES-CCMP• 256-bit AES-GCMP
Bluetooth	Bluetooth 5.1

WWAN modules

The following list provides the mobile broadband module options available on Latitude 7420

- Qualcomm Snapdragon X20 Gigabit LTE CAT 16 (DW5821e; e-SIM enabled), WW excluding China, Turkey, US
- Qualcomm Snapdragon X20 Gigabit LTE CAT 16 (DW5821e) WW
- Qualcomm Snapdragon X20 Gigabit LTE CAT 16 (DW5821e) for AT&T, Verizon, and Sprint, US only
- Qualcomm Snapdragon X20 LTE-A CAT 9 (DW5829e; e-SIM enabled) WW excluding China, Turkey, US
- Qualcomm Snapdragon X20 LTE-A CAT 9 (DW5829e) WW
- Qualcomm Snapdragon X20 LTE-A CAT 9 (DW5829e) for AT&T, Verizon, and Sprint, US only

Audio

The following table lists the audio specifications of your Latitude 7420.

Table 9. Audio specifications

Description		Values
Audio controller		Realtek ALC3281-CG, High Definition Audio
Stereo conversion		Supported
Internal audio interface		High definition audio
External audio interface		Universal audio jack
Number of speakers		Two
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

Your computer supports the following configuration: The primary drive of your computer varies with the storage configuration.

- M.2 2230, PCIe x4 NVMe, Class 35 Solid-State Drive
- M.2 2280, PCIe x4 NVMe, Class 40 Solid-State Drive
- M.2 2280, PCIe x4 NVMe, Class 40 Solid-State Drive, Self Encrypting Drive

Table 10. Storage specifications

Form factor	Interface type	Capacity
M.2 2230, Class 35 Solid-State Drive	Gen 3 PCIe x4 NVMe	Up to 512 GB
M.2 2280, Class 40 Solid-State Drive	Gen 3 PCIe x4 NVMe	Up to 1 TB
M.2 2280, Class 40 Solid-State Drive, Self Encrypting Drive	Gen 3 PCIe x4 NVMe	Up to 512 GB

Media-card reader

Table 11. Media-card reader specifications


Description	Values
Type	micro-SD 4.0 card slot

Table 11. Media-card reader specifications (continued)

Description	Values
Cards supported	<ul style="list-style-type: none"> • Micro Secure Digital (mSD) • Micro Secure Digital High Capacity (mSDHC) • Micro Secure Digital Extended Capacity (mSDXC)

Keyboard

Table 12. Keyboard specifications

Description	Values
Type	<ul style="list-style-type: none"> • Non-backlit, Without Numberpad, Bottom Mount • Backlit, Without Numberpad, Bottom Mount
Layout	QWERTY/KANJI
Number of keys	<ul style="list-style-type: none"> • United States and Canada: 79 keys • United Kingdom: 80 keys • Japan: 83 keys
Size	X=19.05 mm key pitch Y=18.05 mm key pitch
Shortcut keys	<p>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.</p> <p> NOTE: You can define the primary behavior of the function keys (F1–F12) changing Function Key Behavior in BIOS setup program.</p>

Camera

Table 13. Camera specifications

Description	Value				
Number of cameras	One	One	One	One	One
Type	Integrated 2.7 mm HD RGB Webcam	Integrated 2.7 mm HD RGB/IR Webcam with ALS and Proximity Sensor	Integrated 6 mm HD RGB Webcam	Integrated 6 mm HD RGB/IR Webcam with ALS and Proximity Sensor	Integrated 6 mm FHD RGB/IR Webcam with ALS and Proximity Sensor
Location	Front	Front	Front	Front	Front
Sensor type	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology	CMOS sensor technology
Resolution (RGB):					
Still Image	0.92	0.92	0.92	0.92	2

Table 13. Camera specifications (continued)

Description	Value				
Video	1280 x 720 at 30 fps	1280 x 720 at 30 fps	1280 x 720 at 30 fps	1280 x 720 at 30 fps	1920 x 1080 at 30 fps
Diagonal viewing angle	74.9°	75.8°	78.6°	87°	87.6°
Resolution (IR):					
Still Image	NA	0.23	NA	0.23	0.23
Video	NA	640 x 360 at 15 fps	NA	640 x 360 at 15 fps	640 x 360 at 15 fps
Diagonal viewing angle	NA	75.8°	NA	87°	87.6°

Touchpad

Table 14. Touchpad specifications

Description	Option 1	Option 2
Resolution:		
Horizontal	3339	1337
Vertical	1994	761
Dimensions:		
Horizontal	115 mm (4.52 in.)	115 mm (4.52 in.)
Vertical	65 mm (2.56 in.)	65 mm (2.56 in.)

Power adapter

The following table lists the power adapter specifications of your Latitude 7420.

Table 15. Power adapter specifications

Description	Option one	Option two
Type	65 W, USB Type-C	90 W, USB Type-C
Input voltage	100 VAC to 240 VAC	100 VAC to 240 VAC
Input frequency	50 Hz to 60 Hz	50 Hz to 60 Hz
Input current (maximum)	1.70 A	1.50 A
Output current (continuous)	<ul style="list-style-type: none"> 5 V/3 A (Continuous) 9 V/3 A (Continuous) 15 V/3 A (Continuous) 20 V/3.25 A (Continuous) 	<ul style="list-style-type: none"> 5 V/3 A (Continuous) 9 V/3 A (Continuous) 15 V/3 A (Continuous) 20 V/4.5 A (Continuous)
Rated output voltage	<ul style="list-style-type: none"> 5 VDC 9 VDC 	<ul style="list-style-type: none"> 5 VDC 9 VDC

Table 15. Power adapter specifications (continued)

Description		Option one	Option two
		<ul style="list-style-type: none"> 15 VDC 20 VDC 	<ul style="list-style-type: none"> 15 VDC 20 VDC
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)
Dimensions			
	Width (mm/inch)	112 mm (4.41 in.)	130 mm (5.1 in.)
	Depth (mm/inch)	51 mm (2.01 in.)	66 mm (2.6 in.)
	Height (mm/inch)	28 mm (1.1 in.)	22 mm (0.8 in.)
Weight (kg/lb)		201 g (0.44 lb)	291 g (0.64 lb)

Battery

Table 16. Battery specifications

Specifications		Option 1	Option 2
Type		4-cell, 63 WHr, optional with ExpressCharge or Long Life Cycle	3-cell, 42 WHr, optional with ExpressCharge or Long Life Cycle
Voltage (VDC)		15.2 VDC	11.40 VDC
Weight (maximum)		0.264 kg (0.582lb)	0.212 kg (0.467lb)
Dimensions:			
	Height	92.8 mm (3.654 in.)	92.8 mm (3.654 in.)
	Width	238 mm (9.37 in.)	238 mm (9.37 in.)
	Depth	5.7 mm (0.224 in.)	5.7 mm (0.224 in.)
Temperature range:			
	Operating	<ul style="list-style-type: none"> Charging: 0°C to 45°C (32°F to 113°F) Discharging: 0°C to 65°C (32°F to 149°F) 	
	Storage	-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.	
Battery Charging time (approximate)		<ul style="list-style-type: none"> ExpressCharge Boost (0% up to 35%) : 20 minutes Express charge : 2 hours Standard charge: 3 hours <p>i 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</p>	

Table 16. Battery specifications (continued)

Specifications	Option 1	Option 2
	see, https://www.dell.com/support/home/product-support/product/power-manager/docs	
Life span (approximate)	<ul style="list-style-type: none"> Standard: 1 Year or 300 discharge/charge cycles Long Life Cycle (LCL) capable: 3 Years or 1000 discharge/charge cycles (Optional) 	
ExpressCharge	Supported on Express Charge Capable Battery	Supported on Express Charge Capable Battery
User replaceable	No (FRU [¶])	No (FRU)
Coin-cell battery	Main battery reserves 2% of capacity for RTC function.	
Coin-cell Operating time	68 days with 3-cell 42 WHr battery <i>i</i> NOTE: Varies depending on operating conditions and can significantly reduce under certain power-intensive conditions.	

i **NOTE:**

For batteries with the ExpressCharge feature, the battery will typically have at least an 80% charge after about an hour of charging with the system off, and fully charged in about 2 hours with the system off.

Enabling ExpressCharge requires that both the computer and the battery used be ExpressCharge capable. If these requirements are not met, ExpressCharge will not be enabled.

[¶] : Field Replaceable Part

Display

Table 17. Display specifications

Description	Values					
Type	14 in. Full High Definition (FHD)	14 in. Full High Definition (FHD)	14 in. Full High Definition (FHD)	14 in. Full High Definition (FHD)	14 in. Ultra High Definition (UHD)	14 in. Full High Definition (FHD) for 2-in-1
Panel technology	WVA	WVA	WVA	WVA	WVA	WVA
Luminance (typical)	250 nits	400 nits	300 nits	300 nits	400 nits	300 nits
Dimensions (Active Area):						
Height	173.95 mm (6.85 in.)	173.95 mm (6.85 in.)	173.95 mm (6.85 in.)	173.95 mm (6.85 in.)	173.95 mm (6.85 in.)	173.95 mm (6.85 in.)
Width	309.40 mm (12.18 in.)	309.40 mm (12.18 in.)	309.40 mm (12.18 in.)	309.40 mm (12.18 in.)	309.40 mm (12.18 in.)	309.40 mm (12.18 in.)
Diagonal	355.60 mm (14 in.)	355.60 mm (14 in.)	355.60 mm (14 in.)	355.60 mm (14 in.)	355.60 mm (14.00 in.)	355.60 mm (14.00 in.)
Native Resolution	1920 x 1080	1920 x 1080	1920 x 1080	1920 x 1080	3840 x 2160	1920 x 1080

Table 17. Display specifications (continued)

Description	Values					
Megapixels	2.07	2.07	2.07	2.07	8.29	2.07
Pixels per Inch (PPI)	157 PPI	157 PPI	157 PPI	157 PPI	314.7 PPI	157 PPI
Contrast Ratio (typ)	500:1	600:1	1000:1	600:1	1000:1	1000:1
Response Time (max)	35 ms	35 ms	35 ms	35 ms	40 ms	35 ms
Refresh Rate	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Horizontal View Angle	80°	80°	80°	80°	80°	80°
Vertical View Angle	80°	80°	80°	80°	80°	80°
Pixel Pitch	0.161 x 0.161	0.161 x 0.161	0.161 x 0.161	0.161 x 0.161	0.0805 x 0.0805	0.161 x 0.161
Power Consumption (maximum)	3.2 W	2.5 W	4.1 W	3.5 W	3.75 W	1.8 W
Anti-glare vs glossy finish	Anti-glare	Anti-glare	Anti-glare	Anti-Glare, SafeScreen	Anti-glare	Anti-Reflection/ Anti-Smudge coating
Touch options	No	No	Yes	Yes	No	Yes
Stylus support	No	No	No	No	No	Yes (optional Wacom pen)

Fingerprint reader in power button

Table 18. Fingerprint reader specifications

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

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your Latitude 7420.

Table 19. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel Iris Xe Graphics	<ul style="list-style-type: none"> One HDMI 2.0 port Two Thunderbolt 4 ports with DisplayPort Alt Mode 	Shared system memory	11 th Generation Intel Core i5/i7

Operating and storage environment

This table lists the operating and storage specifications of your Latitude 7420.

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

Table 20. 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)*	0.26 GRMS	1.37 GRMS
Shock (maximum)	105 G†	40 G†
Altitude range	-15.2 m to 3048 m (-50 ft to 10,000 ft)	-15.2 m to 10668 m (-50 ft to 35,000 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.

Engineering specifications

Topics:

- Communications
- Graphics options
- Supported hard drives
- Accessories
- NFC
- Smart card reader
- Security
- System management features
- Dell low blue light display

Communications

Wireless communication

Intel Wi-Fi 6 AX201 2x2 (Gig+) + Bluetooth 5.1

Table 21. Intel Wi-Fi 6 AX201 2x2 (Gig+) + Bluetooth 5.1 specifications

Feature	Values
Host interface	M.2 2230 form factor: <ul style="list-style-type: none"> • Wi-Fi - PCIe • Bluetooth - USB
Network standard	IEEE 802.11a/b/g/n/ac/ax, 160MHz channel use, MU-MIMO
Wi-Fi alliance certifications	<ul style="list-style-type: none"> • Wi-Fi Certified a/b/g/n/ac with wave 2 features • Designed to be Wi-Fi Certified ax (Wi-Fi 6) • WMM • WMM-PS • WPA • WPA2 • WPS2 • Protected Management Frames • Wi-Fi Direct (For Windows only)
Operating frequency bands	<ul style="list-style-type: none"> • 2.4 Ghz • 5 Ghz
Data rate	<ul style="list-style-type: none"> • 2.4 GHz 40M - Up to 574 Mbps • 5 GHz 80M - Up to 1.2 Gbps • 5 GHz 160M - Up to 2.4 Gbps
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication	<ul style="list-style-type: none"> • WPA and WPA2 Personal and Enterprise • WPA3 (pending OS support)

Table 21. Intel Wi-Fi 6 AX201 2x2 (Gig+) + Bluetooth 5.1 specifications (continued)


Feature	Values
Authentication protocols	<ul style="list-style-type: none"> • 802.1X EAP-TLS • EAP-TTLS/MSCHAPv2 • PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA)
Encryption	<ul style="list-style-type: none"> • 64-bit and 128-bit WEP • TKIP • 128-bit AES-CCMP • 256-bit AES-GCMP
Product safety	<ul style="list-style-type: none"> • UL • C-UL • CB(IEC60950-1)
Management capabilities alerting	Support for Intel AMT
Government compliance	<ul style="list-style-type: none"> • FIPS 140-2 • FISMA
Client utility	Intel PRO/Set Wireless Software v21 and later
Antenna diversity	Supported
Radio On/Off	Supported
Roaming	Support seamless roaming between access points
Wake On wireless	Supported
Wireless display	Native Miracast support by Windows 10
Wireless PAN standard	Dual Mode Bluetooth 5.1, BLE
Bluetooth version	Bluetooth 5.1
Bluetooth data rates	Up to 3 Mbps
Bluetooth operating frequency bands	2.4 GHz
Bluetooth profiles supported	Support for Microsoft Inbox Bluetooth profiles in Windows 10
Bluetooth data encryption	128-bit encryption
Bluetooth output power	Power class 1
Temperature	<ul style="list-style-type: none"> • Operating temperature 0°C to + 50°C (Full performance at shield temperatures up to 80°C) • Storage temperature of -40°C to +70°C
Humidity	Up to 90% RH non-condensing (at temperatures of 25°C to 35°C)

Mobile Broadband - LTE-A WWAN

Qualcomm Snapdragon X20 Gigabit LTE, CAT 16, DW5821e WWAN Module

Table 22. Qualcomm Snapdragon X20 LTE, CAT 16, DW5821e, WWAN Module for AT&T, Verizon, and Sprint, US (DAO), South Korea, Taiwan, Indonesia and (EMEA/APJ/ROW)

Specifications	Values
Form Factor	M.2 3042 Key-B single side
Host interface	USB 3.0/2.0
Network standard	LTE FDD/TDD, WCDMA/HSPA+, GPS/GLONASS/ Beidou / Galileo
Transfer rate	Up to 1 Gbps DL/150 Mbps UL (Cat 16)
Operating Frequency Bands	(1,2,3,4,5,7,8,12,13,14,17,18,19,20,25,26,28,29,30,32,38,39,40,41,42,43,46,66), HSPA+ (1, 2, 4, 5, 6, 8, 9, 19)
Power supply	DC 3.135 V to 4.4 V, Typical 3.3 V
SIM card	Supported through external SIM slot
eSIM with Dual SIM (DSSA)	Supported
Antenna Diversity	Availability dependent on the region and carrier requirements
Radio On/Off	Supported
Wake On Wireless	Supported
Temperature	<ul style="list-style-type: none"> Operating: -30°C to 70°C (-22°F to 158°F) Storage: -40°C to 85°C (-40°F to 185°F)
Antenna connector	<ul style="list-style-type: none"> WWAN Main Antenna X 1 WWAN Diversity Antenna X 1 4 x 4 MIMO Antenna x 2

 **NOTE:** This module is available only on 2-in-1 configurations.


Qualcomm Snapdragon X20 LTE-A, CAT 9, DW5829e WWAN Module

Table 23. Qualcomm Snapdragon X20 LTE-A, DW5829e, CAT 9, WWAN Module for AT&T, Verizon, and Sprint, US (DAO), South Korea, Taiwan, Indonesia and (EMEA/APJ/ROW)

Specifications	Values
Form Factor	M.2 3042 Key-B single side
Host interface	USB 3.0/2.0
Network standard	LTE FDD/TDD, WCDMA/HSPA+, GPS/GLONASS/ Beidou / Galileo
Transfer rate	Up to 450 Mbps DL/75 Mbps UL (Cat 9)
Operating Frequency Bands	(1,2,3,4,5,7,8,12,13,14,17,18,19,20,25,26,28,29,30,32,38,39,40,41,66), HSPA+ (1, 2, 4, 5, 8)
Power supply	DC 3.135 V to 4.4 V, Typical 3.3 V

Table 23. Qualcomm Snapdragon X20 LTE-A, DW5829e, CAT 9, WWAN Module for AT&T, Verizon, and Sprint, US (DAO), South Korea, Taiwan, Indonesia and (EMEA/APJ/ROW) (continued)

Specifications	Values
SIM card	Supported through external SIM slot
eSIM with Dual SIM (DSSA)	Supported
Antenna Diversity	Availability dependent on the region and carrier requirements
Radio On/Off	Supported
Wake On Wireless	Supported
Temperature	<ul style="list-style-type: none"> Operating: -30°C to 70°C (-22°F to 158°F) Storage: -40°C to 85°C (-40°F to 185°F)
Antenna connector	<ul style="list-style-type: none"> WWAN Main Antenna X 1 WWAN Diversity Antenna X 1

 **NOTE:** This module is available only on laptop configurations.

Graphics options

Intel Iris Xe Graphics

Table 24. Intel Iris Xe Graphics specifications

Intel Iris Graphics	
Bus Type	Integrated
Dynamic Frequency Max Graph	1.3 GHz
Execution Unit	<ul style="list-style-type: none"> 11th Generation Intel Core i5-1135G7 and i5-1145G7: 80 11th Generation Intel Core i7-1165G7 and i7-1185G7: 96
Memory interface	Unified Memory Architecture (UMA)
Graphics level	11 th Generation Intel Tiger Lake Intel Core i processors: GT2
Estimated Maximum Power Consumption (TDP)	28 W—including in the CPU power
Maximum Resolution	4096 x 2304 @60 Hz
Maximum color depth	24 bits
Maximum vertical refresh rate	Up to 85 Hz depending on resolution
Number of Supported Displays	4
Technology supported	DirectX 12.1, OpenGL 4.6, Intel Quick Sync Video, OpenCL 2.2 Support

Supported hard drives

M.2 2230 128 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive

Table 25. M.2 2230 128 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive

Features	Specifications
Capacity	128 GB
Dimensions	22.00 mm x 30.00 mm x 2.38 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s (Up to 4 lanes)
MTTF	1.4 M hours
Logical blocks	250,069,680
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none">• Idle : 5 mW (PS4)• Active : 3.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2230 256 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive

Table 26. M.2 2230 256 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive

Features	Specifications
Capacity	256 GB
Dimensions	22.00 mm x 30.00 mm x 2.38 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s (Up to 4 lanes)
MTTF	1.4 M hours
Logical blocks	500,118,192
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none">• Idle : 5 mW (PS4)• Active : 3.5 W
Environmental Operating Conditions (Non-Condensing)	

Table 26. M.2 2230 256 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive (continued)

Features	Specifications
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2230 512 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive

Table 27. M.2 2230 512 GB Gen 3 PCIe x4 NVMe Class 35 Solid-State Drive

Features	Specifications
Capacity	512 GB
Dimensions	22.00 mm x 30.00 mm x 2.38 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s (Up to 4 lanes)
MTTF	1.4 M hours
Logical blocks	1,000,215,216
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none"> Idle : 5 mW (PS4) Active : 3.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280 256 GB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive

Table 28. M.2 2280 256 GB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive

Features	Specifications
Capacity	256 GB
Dimensions	22.00 mm x 80.00 mm x 2.38 mm

Table 28. M.2 2280 256 GB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive (continued)

Features	Specifications
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s
MTTF	1.4 M hours
Logical blocks	500,118,192
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle : 5 mW (PS4) • Active : 4.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280 512 GB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive

Table 29. M.2 2280 512 GB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive

Features	Specifications
Capacity	512 GB
Dimensions	22.00 mm x 80.00 mm x 2.38 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s
MTTF	1.4 M hours
Logical blocks	1000,215,216
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle : 5 mW (PS4) • Active : 4.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C

Table 29. M.2 2280 512 GB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive (continued)

Features	Specifications
Relative humidity range	5% to 95%

M.2 2280 1 TB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive

Table 30. M.2 2280 1 TB Gen 3 PCIe x4 NVMe Class 40 Solid-State Drive

Features	Specifications
Capacity	1 TB
Dimensions	22.00 mm x 80.00 mm x 3.73 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s
MTTF	1.4 M hours
Logical blocks	2000,409,264
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle : 5 mW (PS4) • Active : 4.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280 256 GB Gen 3 PCIe x4 NVMe Opal Self-Encrypting Class 40 Solid-State Drive

Table 31. M.2 2280 256 GB Gen 3 PCIe x4 NVMe Opal Self-Encrypting Class 40 Solid-State Drive

Features	Specifications
Capacity	256 GB
Dimensions	22.00 mm x 80.00 mm x 2.38 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s (Up to 4 lanes)
MTTF	1.4 M hours
Logical blocks	500,118,192
Power Source	

Table 31. M.2 2280 256 GB Gen 3 PCIe x4 NVMe Opal Self-Encrypting Class 40 Solid-State Drive (continued)

Features	Specifications
Power consumption (reference only)	<ul style="list-style-type: none"> Idle : 5 mW (PS4) Active : 4.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280 512 GB Gen 3 PCIe x4 NVMe Opal Self-Encrypting Class 40 Solid-State Drive

Table 32. M.2 2280 512 GB Gen 3 PCIe x4 NVMe Opal Self-Encrypting Class 40 Solid-State Drive

Features	Specifications
Capacity	512 GB
Dimensions	22.00 mm x 80.00 mm x 2.38 mm
Interface type and maximum speed	Gen 3 PCIe 32 Gb/s
MTTF	1.4 M hours
Logical blocks	1000,215,216
Power Source	
Power consumption (reference only)	<ul style="list-style-type: none"> Idle : 5 mW (PS4) Active : 4.5 W
Environmental Operating Conditions (Non-Condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Non-op shock (@0.5 ms)	1500G
Environmental Non-Operating Conditions (Non-Condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

Accessories

Table 33. Accessories

Accessories	
Mouse	Dell Premium Rechargeable Mobile Wireless Mouse - MS7421W
Monitor	Dell UltraSharp 27 4K USB-C Monitor - U2720Q
Dock	Dell Thunderbolt Dock – WD19TB
Cables, Dongles, Adapters	<ul style="list-style-type: none"> • Dell Mobile Adapter Speakerphone - MH3021P • Dell USB-C Mobile Adapter - DA300 • Dell USB-C Mobile Adapter - DA310
Power	Dell Notebook Power Bank Plus USBC, 65 Wh - PW7018LC
Carrying cases	Dell Professional Sleeve 14
Keyboards	Dell Premium Wireless Keyboard and Mouse - KM7321W
Stylus	Dell Premium Active Pen - PN579X
Sensors	<ul style="list-style-type: none"> • Ambient Light Sensor • IR User Proximity Detection • Digital Compass(Magnetometer) • Accelerometer • Gyro • Adaptive Thermal Performance (Lap vs. Desk mode) requires Gyro/Accelerometer - note, for thermal only. • Proximity for SAR compliance (for the WWAN module) Near Field Proximity Sensor • Hall Effect Sensor

NFC

Table 34. NFC Specifications

NFC: Near Field Communications	
NFC Standard	ISO/IEC 18092 and ISO/IEC 21481
Cards Supported	Type1 / Type 2 / Type 3 / Type 4; ISO/IEC 14443-4 stands-based PICC; ISO/IEC 15693 stands-based VICC ; ISO/IEC 18000-3 ; Kovio
Operating temperature	-30°C (86°F) to +85° C (185°F)
Humidity	Up to 90% RH non-condensing (at temperatures of 25°C to 35°C)

Smart card reader

Table 35. Contactless smart card reader

Type	FIPS 201 Contacted / Contactless Smart Card reader
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Table 35. Contactless smart card reader (continued)

ISO certification	ISO14443A
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Security

Table 36. 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 37. Security Software specifications

Specifications
Dell Client Command Suite
Optional Dell Data Security and Management Software
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

System management features

Dell commercial systems come with a number of systems management options that are include by default for In-Band management with our Dell Client Command Suite. In-Band management meaning that the Operating System is functional and the device is connected to a network so that it can be managed. The Dell Client Command Suite of tools can be leveraged individually or with a systems management console like SCCM, LANDESK, KACE, etc.

We also offer Out-of-Band management as an option. Out-of-band management is when the system does not have a functional operating system or is turned off and you still want to be able to manage the system in that state.

Dell Client Command Suite for In-Band systems management

Dell Client Command Suite is a free toolkit available for download, for all Latitude Rugged tablets at dell.com/support, automates and streamlines systems management tasks, saving time, money, and resources. It consists of the following modules that can be used independently, or with a variety of systems management consoles such as SCCM.

Dell Client Command Suite's integration with VMware Workspace ONE Powered by AirWatch, now allows customers to manage their Dell client hardware from the cloud, using a single Workspace ONE console.

Dell Command | Deploy enables easy operating system (OS) deployment across all major OS deployment methodologies and provides numerous system-specific drivers that have been extracted and reduced to an OS-consumable state.

Dell Command | Configure is a graphical user interface (GUI) admin tool for configuring and deploying hardware settings in a pre-OS or post-OS environment, and it operates seamlessly with SCCM and Airwatch and can be self-integrated into LANDesk and KACE. Simply, this is all about the BIOS. Command | Configure allows you to remotely automate and configure over 150+ BIOS settings for a personalized user experience.

Dell Command | PowerShell Provider can do the same things as Command | Configure, but with a different method. PowerShell is a scripting language that allows customers to create a customized and dynamic configuration process.

Dell Command | Monitor is a Windows Management Instrumentation (WMI) agent that provides IT admins with an extensive inventory of the hardware and health-state data. Admins can also configure hardware remotely by using command line and scripting.

Dell Command | Power Manager (end-user tool) is a GUI-based factory-installed battery management tool that allows end users to choose the battery management methods that meet their personal preferences or work schedule without sacrificing IT's capability to control those settings with Group Policy.

Dell Command | Update (end-user tool) is factory-installed and allows admins to individually manage and automatically present and install Dell updates to the BIOS, drivers, and software. Command | Update eliminates the time-consuming hunting and pecking process of update installation.

Dell Command | Update Catalog provides searchable metadata that allows the management console to retrieve the latest system-specific updates (driver, firmware or BIOS). The updates are then delivered seamlessly to end-users using the customer's systems management infrastructure that is consuming the catalog (like SCCM).

Dell Command | vPro Out of Band console extends hardware management to systems that are offline or have an unreachable OS (Dell exclusive features).

Dell Command | Integration Suite for System Center - This suite integrates all the key components of the Client Command Suite into Microsoft System Center Configuration Manager 2012 and Current Branch versions.

Out of Band Systems Management

Both the Intel vPro and Intel Standard Manageability options **must be configured in our factory at the time of purchase, as they are NOT field upgradable**. They offer out-of-band management and DASH compliance (https://registry.dmtf.org/registry/results/field_initiative_name%3A%22DASH%201.0%22).

Intel vPro—Available on the Latitude 7420 with Intel Core i5 and i7 processors and offers the most complete set of out-of-band management features including KVM, IPv6 support, graceful shutdown, and all the features from previous versions of vPro. It uses the latest version of Intel's Active Management Technology (AMT) which is currently at version 12.0.


To learn more about Intel ISM, visit Intel's website at <https://software.intel.com/en-us/blogs/2009/03/27/what-is-standard-manageability>.

Intel Standard Manageability (ISM)—ISM offers a limited set of out-of-band features like remote power on/off, Serial-over-LAN redirect, and Wake-on-LAN.

To learn more about Intel ISM, visit Intel's website at <https://software.intel.com/en-us/blogs/2009/03/27/what-is-standard-manageability>.

Dell low blue light display

This section explains about Dell low blue light 4K display panel.

 **WARNING:** The possible long-term effects of blue light emission from the display may cause personal injury such as digital eye strain, eye fatigue, and damage to the eyes. Using the monitor for extended periods of time may also cause pain in parts of the body such as neck, arm, back, and shoulder.

Dell low blue light display optimizes eye comfort with a flicker-free screen. This feature is designed to reduce the amount of blue light that is emitted from the monitor to optimize eye comfort.

To reduce the risk of eye strain and neck/arm/back/shoulder pain from using the monitor for long periods of time, we suggest you to:

1. Set the distance of the screen between 20 inches to 28 inches (50 cm-70 cm) from your eyes.
2. Blink frequently to moisten your eyes or wet your eyes with water after prolonged usage of the monitor.
3. Take regular and frequent breaks for 20 minutes every two hours.
4. Look away from your monitor and gaze at a distant object at 20 ft away for at least 20 s during the breaks.
5. Perform stretches to relieve tension in the neck, arm, back, and shoulders during the breaks.

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 38. List of keyboard shortcuts


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

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.