OptiPlex All-in-One 7420

Technical Guidebook

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Regulatory Type: W31C002/W32C002
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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

High Performance and Energy Efficient

To determine the specifications and features of your OptiPlex All-in-One 7420 follow the guidance provided.

High Performance and Energy Efficient processors can be determined as follows:

- **High Performance**: Computers that are shipped with a 46 W, 60 W, or 65 W processor and a power-supply unit.
- **Energy Efficient**: Computers that are shipped with a 35 W processor and a power adapter.

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Views of OptiPlex All-in-One 7420

Right



Figure 1. Right view of OptiPlex All-in-One 7420

1. **USB 3.2 Gen 2 (10 Gbps) with PowerShare port**

   Connect devices such as external storage devices, printers, and external displays. Provides a data transfer speed of up to 10 Gbps.

   Supports Power Delivery that enables two-way power supply between devices. Provides up to 10 W power output that enables faster charging.

   NOTE: PowerShare enables you to charge your USB devices even when your computer is turned off.

   NOTE: If a USB device is connected to the PowerShare port before the computer is turned off or in hibernate state, you must disconnect and connect it again to enable charging.

Left



Figure 2. Left view of OptiPlex All-in-One 7420

1. **Storage drive activity light**

   The activity light turns on when the computer reads from or writes to storage drives.

2. **Universal audio port**

   Connect headphones or a headset (headphone and microphone combo).

Front



Figure 3. Front view of OptiPlex All-in-One 7420

1. **Left microphone**

   Provides digital sound input for audio recording and voice calls.

2. **Right microphone**

   Provides digital sound input for audio recording and voice calls.

3. **Retractable camera**

   Enables you to video-chat, capture photos, and record videos. To protect your privacy, this camera can be retracted when it is not in use.

4. **Right speaker**

   Provides audio output.

5. **Left speaker**

   Provides audio output.

Retractable camera

Accessing the retractable camera

NOTE: Press down on the retractable camera at the top of your computer. The retractable camera pops up above the display, allowing you to access it. To conceal your retractable camera and protect your privacy, press down on the retractable camera until it clicks into place.



Figure 4. Locating the retractable camera

Retractable camera view

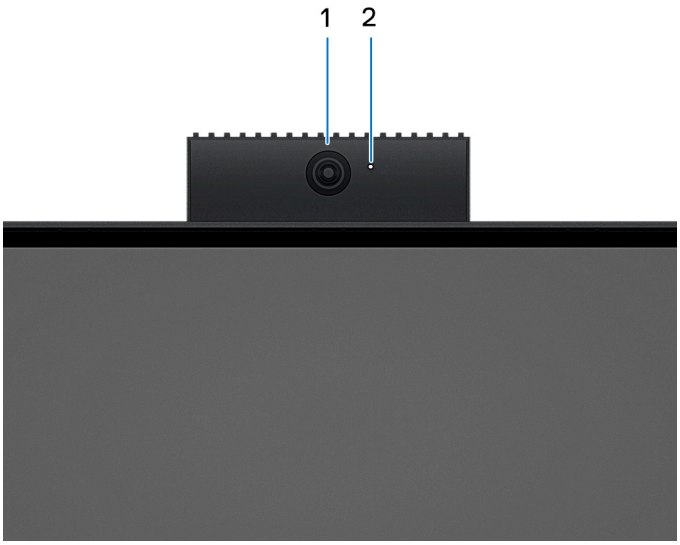


Figure 5. Retractable camera

1. **Camera**

   Enables you to video chat, capture photos, and record videos.

2. **Camera-status light**

   Turns on when the camera is in use.

Bottom

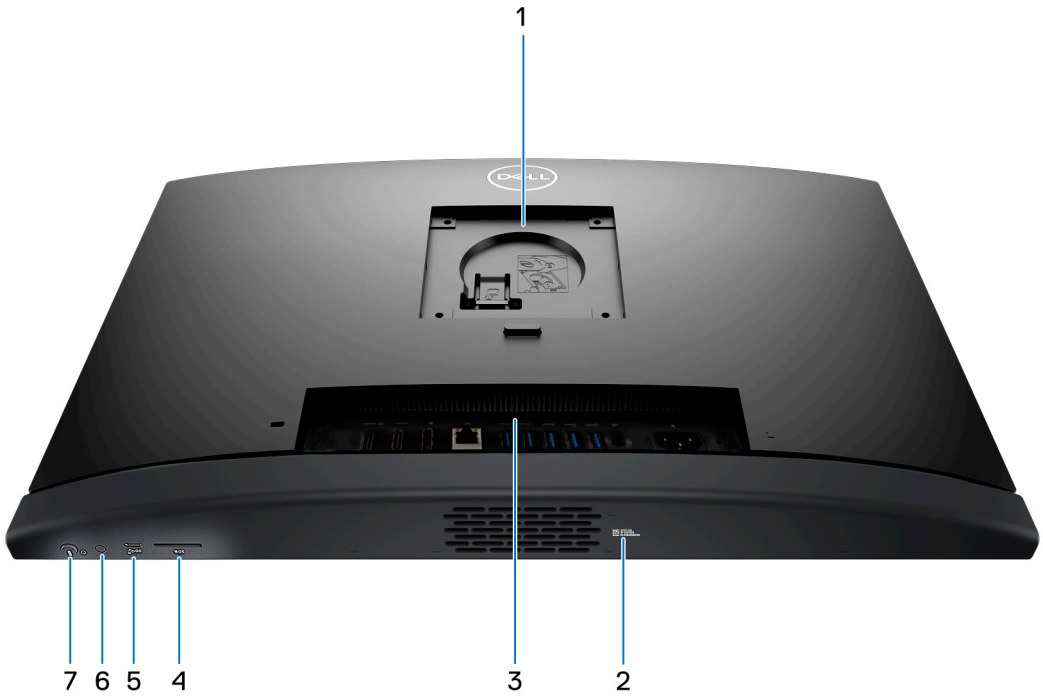


Figure 6. Bottom view of OptiPlex All-in-One 7420

1. **Stand/VESA mount location**

   Allows for the installation of a 100 mm x 100 mm screw pitch VESA connection for use in standard environmental conditions, or one of the stands offered by Dell for your OptiPlex All-in-One 7420 .

2. **Service Tag label**

   The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.

3. **Back panel**

   Connect USB, audio, video, and other devices.

4. **SD-card slot**

   Insert an SD card here to read from and write to the SD card.

5. **USB 3.2 Gen 2 (10 Gbps) Type C port**

   Connect devices such as external storage devices and printers. Provides a data transfer rate of up to 10 Gbps.

6. **Display Built-in Self Test (BIST)/Display input button**

   Press and hold this button until your computer initiates the Built-in Self Test (BIST).

   NOTE: Press to switch display input to and from the device connected to the HDMI-in port on the back panel. This feature is only available on computers shipped with a High Performance processor.

7. **Power button**

   Press to turn on the computer if it is turned off, in sleep state, or in hibernate state.

   When the computer is turned on, press the power button to put the computer into sleep state; press and hold the power button for 10 seconds to force shut-down the computer.

   NOTE: You can customize the power-button behavior in Windows.

Back panel

For computers with an Energy Efficient processor:

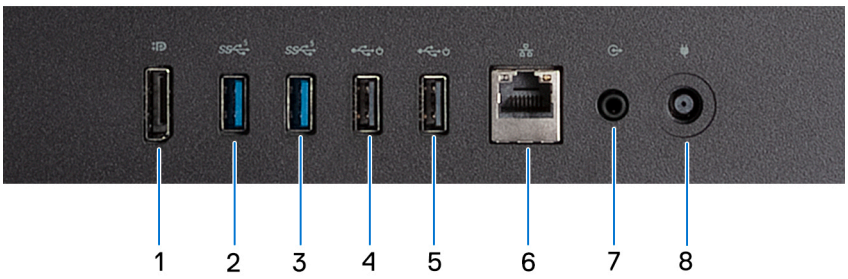


Figure 7. Back panel view of OptiPlex All-in-One 7420 with an Energy Efficient processor

1. **DisplayPort ++ 1.4a**

   Connect an external display or a projector. Can support video output of up to 5120 x 3200 at 60 Hz.

2. **USB 3.2 Gen 1 (5 Gbps) port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 5 Gbps.

3. **USB 3.2 Gen 1 (5 Gbps) port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 5 Gbps.

4. **USB 2.0 (480 Mbps) with SmartPower On Port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 480 Mbps.

NOTE: When USB wake is enabled in the BIOS the computer will power on or wake from hibernation when a USB mouse or keyboard that is connected to this port is used.

5. **USB 2.0 (480 Mbps) with SmartPower On Port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 480 Mbps.

   NOTE: When USB wake is enabled in the BIOS the computer will power on or wake from hibernation when a USB mouse or keyboard that is connected to this port is used.

6. **Network port**

   Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access.

7. **Audio line-out port, retaskable**

   Connect speakers.

8. **Power-adapter port**

   Connect a power adapter to provide power to your computer.

For computers with a High Performance processor:

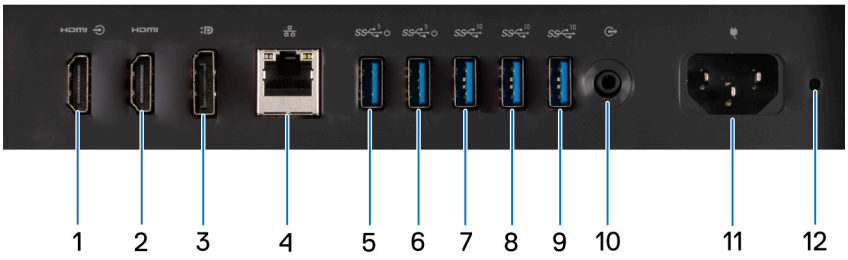


Figure 8. Back panel view of OptiPlex All-in-One 7420 with a High Performance processor

1. **HDMI-in 1.4b port**

   Connect a gaming console, Blu-ray player, or other HDMI-out enabled device.

2. **HDMI-out 2.1 port**

   Connect to a TV, external display or another HDMI-in enabled device. Provides video and audio output and supports video output of up to 4096 x 2160 at 60Hz.

3. **DisplayPort ++ 1.4a**

   Connect an external display or a projector. Can support video output of up to 5120 x 3200 at 60 Hz.

4. **Network port**

   Connect an Ethernet (RJ45) cable from a router or a broadband modem for network or Internet access.

5. **USB 3.2 Gen 1 (5 Gbps) with SmartPower On port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 5 Gbps.

   NOTE: When USB wake is enabled in the BIOS the computer will power on or wake from hibernation when a USB mouse or keyboard that is connected to this port is used.

6. **USB 3.2 Gen 1 (5 Gbps) with SmartPower On port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 5 Gbps.

   NOTE: When USB wake is enabled in the BIOS the computer will power on or wake from hibernation when a USB mouse or keyboard that is connected to this port is used.

7. **USB 3.2 Gen 2 (10 Gbps) port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 10 Gbps.

8. **USB 3.2 Gen 2 (10 Gbps) port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 10 Gbps.

9. **USB 3.2 Gen 2 (10 Gbps) port**

   Connect devices such as external storage devices and printers. Provides a data transfer speed of up to 10 Gbps.

10. **Audio line-out port, retaskable**

    Connect an audio device.

11. **Power-cable connector**

    Connect a power cable to provide power to your computer.

12. **Power-supply diagnostics light**

    Indicates the power-supply state.

3

Specifications of OptiPlex All-in-One 7420

Dimensions and weight

The following table lists the height, width, depth, and weight of your OptiPlex All-in-One 7420.

Table 1. Dimensions and weight

Description	Values
Height:	
Front height	354.30 mm (13.95 in.)
Rear height	354.30 mm (13.95 in.)
Width	540 mm (21.26 in.)
Depth	57.90 mm (2.28 in.)
Weight **NOTE:** The weight of your computer depends on the configuration ordered and manufacturing variability.	• Minimum: 5.61 kg (12.37 lb) • Maximum: 6.32 kg (13.93 lb)

Processor

The following tables list the details of the processors supported by your OptiPlex All-in-One 7420.

High Performance processors

Table 2. High Performance processors

Description	Option one	Option two	Option three	Option four	Option five
Processor type	14th Gen Intel Core i3-14100	14th Intel Core i5-14500 vPro	14th Gen Intel Core i5-14600 vPro	14th Gen Intel Core i7-14700 vPro	Intel 300
Processor wattage	60 W	65 W	65 W	65 W	46 W
Processor total core count	4	14	14	20	2
Performance-cores	4	6	6	8	2
Efficient-cores	None	8	8	12	None
Processor total thread counts	8	20	20	28	4
NOTE: Intel® Hyper-Threading Technology is only available on Performance-cores.					
Processor speed	Up to 4.70 GHz	Up to 5 GHz	Up to 5.20 GHz	Up to 5.40 GHz, Turbo Max Boost	3.90 GHz
Performance-cores frequency					
Processor base frequency	3.50 GHz	2.60 GHz	2.70 GHz	2.10 GHz	3.90 GHz
Maximum turbo frequency	4.70 GHz	5 GHz	5.20 GHz	5.30 GHz	Not applicable
Efficient-cores frequency					
Processor base frequency	Not applicable	1.90 GHz	2 GHz	1.50 GHz	Not applicable
Maximum turbo frequency	Not applicable	3.70 GHz	3.90 GHz	4.20 GHz	Not applicable
Processor cache	12 MB	24 MB	24 MB	33 MB	6 MB
Integrated graphics	Intel UHD Graphics 730	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 710

Energy Efficient processors

Table 3. Energy Efficient processors

Description	Option one	Option two	Option three	Option four
Processor type	14th Gen Intel Core i3-14100T	14th Gen Intel Core i5-14500T vPro	14th Gen Intel Core i5-14600T vPro	Intel 300T
Processor wattage	35 W	35 W	35 W	35 W
Processor total core count	4	14	14	2
Performance-cores	4	6	6	2
Efficient-cores	None	8	8	None
Processor total thread counts	8	20	20	4
Processor speed	Up to 4.40 GHz	Up to 4.80 GHz	Up to 5.10 GHz	3.40 GHz
Processor base frequency	2.70 GHz	1.70 GHz	1.80 GHz	3.40 GHz
Maximum turbo frequency	4.40 GHz	4.80 GHz	5.10 GHz	Not applicable
Processor base frequency	Not applicable	1.20 GHz	1.30 GHz	Not applicable
Maximum turbo frequency	Not applicable	3.40 GHz	3.60 GHz	Not applicable
Processor cache	12 MB	24 MB	24 MB	6 MB
Integrated graphics	Intel UHD Graphics 730	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 710

Chipset

The following table lists the details of the chipset supported by your OptiPlex All-in-One 7420.

Table 4. Chipset

Description	Values
Chipset	Q670
Processor	• 14th Gen Intel Core i3/i3T/i5 vPro/i5T vPro/i7 vPro • Intel 300/300T
DRAM bus width	64-bit
Flash EPROM	32 MB + 16 MB
PCIe bus	Up to Gen4

Operating system

Your OptiPlex All-in-One 7420 supports the following operating systems:

- Windows 11 Home, 64-bit

- Windows 11 Pro, 64-bit
- Windows 11 Pro National Education, 64-bit
- Ubuntu Linux 22.04 LTS, 64-bit
- Dell Hybrid Client on Ubuntu Linux 22.04 LTS, 64-bit
- Dell ThinOS
- Windows 10 IoT Enterprise LTSC 2021

For more information about Dell OS Recovery image, see *How to Download and Use the Dell OS Recovery Image in Microsoft Windows*, at Dell support site.

Commercial platform Windows 11 N-2 and 5-year operating system supportability:

All newly introduced 2019 and later commercial platforms (Latitude, OptiPlex, and Dell Precision) will qualify and ship with the most current factory installed Semi-Annual Channel Windows 11 version (N) and qualify (but not ship) the previous two versions (N-1, N-2). The OptiPlex All-in-One 7420 will RTS with Windows 11 version v23H2 at time of launch, and this version will determine the N-2 versions that are initially qualified for this platform.

For future versions of Windows 11, Dell continues to test the commercial platform with coming Windows 11 releases during device production and for five years post-production, including both fall and spring releases from Microsoft.

For additional information about N-2 and 5-year Windows operating system supportability, see the Dell Windows as a Service (WaaS), at Dell support site.

EOML 411

The OptiPlex All-in-One 7420 continues to test the coming Semi-Annual Channel Windows 11 version releases for five years post-production, including both fall and spring releases from Microsoft.

Memory

The following table lists the memory specifications of your OptiPlex All-in-One 7420.

Table 5. Memory specifications

Description	Values
Memory slots	Two SoDIMM slots
Memory type	DDR5
Memory speed	• 4800 MT/s • 5200 MT/s • 5600 MT/s **NOTE:** Depending on the memory configuration, the processor installed on your computer, and the country of purchase, the speed of the installed memory may vary.
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, or 32 GB
Memory configurations supported	**For computers shipped with an Intel 300/300T or 14th Gen Intel Core i3-14100/i3-14100T/i5-14500T vPro/ i5-14500 vPro processor:** • 8 GB: 1 x 8 GB, DDR5, 4800 MT/s, single-channel • 16 GB: 1 x 16 GB, DDR5, 4800 MT/s, single-channel • 16 GB: 2 x 8 GB, DDR5, 4800 MT/s, dual-channel • 32 GB: 1 x 32 GB, DDR5, 4800 MT/s, single-channel • 32 GB: 2 x 16 GB, DDR5, 4800 MT/s, dual-channel • 64 GB: 2 x 32 GB, DDR5, 4800 MT/s, dual-channel

Table 5. Memory specifications (continued)

Description	Values
	For computers shipped with a 14th Gen Intel Core i5-14600T vPro processor: ● 8 GB: 1 x 8 GB, DDR5, 5600 MT/s, single-channel ● 16 GB: 1 x 16 GB, DDR5, 5600 MT/s, single-channel ● 16 GB: 2 x 8 GB, DDR5, 5600 MT/s, dual-channel ● 32 GB: 1 x 32 GB, DDR5, 5600 MT/s, single-channel ● 32 GB: 2 x 16 GB, DDR5, 5600 MT/s, dual-channel ● 64 GB: 2 x 32 GB, DDR5, 5200 MT/s, dual-channel **For computers shipped with a 14th Gen Intel Core i5-14600 vPro/i7-14700 vPro processor:** ● 8 GB: 1 x 8 GB, DDR5, 5600 MT/s, single-channel ● 16 GB: 1 x 16 GB, DDR5, 5600 MT/s, single-channel ● 16 GB: 2 x 8 GB, DDR5, 5600 MT/s, dual-channel ● 32 GB: 1 x 32 GB, DDR5, 5600 MT/s, single-channel ● 32 GB: 2 x 16 GB, DDR5, 5600 MT/s, dual-channel ● 64 GB: 2 x 32 GB, DDR5, 5600 MT/s, dual-channel

External ports

The following table lists the external ports of your OptiPlex All-in-One 7420.

Table 6. External ports

Description	Values
Network port	One RJ45 Ethernet Port 10/100/1000 Mbps
USB ports	**For computers shipped with an Energy Efficient processor:** ● One USB 3.2 Gen 2 (10 Gbps) with PowerShare port ● One USB 3.2 Gen 2 (10 Gbps) Type-C port ● Two USB 3.2 Gen 1 (5 Gbps) ports ● Two USB 2.0 (480 Mbps) with SmartPower On ports **For computers shipped with a High Performance processor:** ● One USB 3.2 Gen 2 (10 Gbps) with PowerShare port ● One USB 3.2 Gen 2 (10 Gbps) Type-C port ● Three USB 3.2 Gen 2 (10 Gbps) ports ● Two USB 3.2 Gen 1 (5 Gbps) with SmartPower On ports
Audio port	● One universal audio port ● One audio line-out port, retaskable
Video port	● One DisplayPort++ 1.4a port ● One HDMI-in 1.4b, only for computers shipped with a High Performance processor ● One HDMI-out 2.1, only for computers shipped with a High Performance processor
Media-card reader	One SD-card slot
Power-adapter port	● One power-adapter port, only for computers shipped with an Energy Efficient processor

Table 6. External ports (continued)

Description	Values
	• One power-cable connector, only for computers shipped with a High Performance processor
Security-cable slot	One security-cable slot (3 mm x 7 mm, T-Bar design)

Internal slots

The following table lists the internal slots of your OptiPlex All-in-One 7420.

Table 7. Internal slots

Description	Values
M.2	**For computers shipped with an Energy Efficient processor:** • One M.2 2230 slot for WiFi and Bluetooth combo card • One M.2 2230/2280 slot for solid-state drive **For computers shipped with a High Performance processor:** • One M.2 2230 slot for WiFi and Bluetooth combo card • Two M.2 2230/2280 slots for solid-state drive **NOTE:** To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at www.dell.com/support.
SATA	Not supported

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your OptiPlex All-in-One 7420.

Table 8. Ethernet specifications

Description	Values
Model number	Intel i219-LM
Transfer rate	10/100/1000 Mbps

Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your OptiPlex All-in-One 7420.

Table 9. Wireless module specifications

Description	Option one	Option two	Option three
Model number	AX201	Intel AX211	Realtek RTL8852BE
Transfer rate	Up to 2400 Mbps	Up to 2400 Mbps	Up to 1201 Mbps
Frequency bands supported	2.4 GHz/5 GHz	2.4 GHz/5 GHz/6 GHz	2.4 GHz/5 GHz

Table 9. Wireless module specifications (continued)

Description	Option one	Option two	Option three
Wireless standards	• 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)	• Wi-Fi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)
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 wireless card	Bluetooth 5.2	Bluetooth 5.3	Bluetooth 5.3
	NOTE: The version of the Bluetooth wireless card may vary depending on the operating system that is installed on your computer.		

Audio

The following table lists the audio specifications of your OptiPlex All-in-One 7420.

Table 10. Audio specifications

Description		Values
Audio controller		• Realtek ALC3246, only for computers shipped with an Energy Efficient processor • Realtek ALC3289, only for computers shipped with a High Performance processor
Stereo conversion		Supported
Internal audio interface		High-definition audio interface
External audio interface		• One universal audio port • One audio line-out port, retaskable
Number of speakers		Two stereo speakers
Internal-speaker amplifier		• Supported for computers shipped with an Energy Efficient processor • Realtek Amplifier ALC1302, only for computers shipped with a High Performance processor
External volume controls		Not supported
Speaker output:		
	Average speaker output	2 W
	Peak speaker output	2.5 W
Subwoofer output		Not supported
Microphone		Two microphones in the retractable-camera assembly

Storage

This section lists the storage options on your OptiPlex All-in-One 7420.

Your OptiPlex All-in-One 7420 supports one of the following storage configurations:

- One M.2 2230/2280 solid-state drive
- Up to two M.2 2230/2280 solid-state drives, only for computers shipped with a High Performance processor

The primary drive of your OptiPlex All-in-One 7420 is the M.2 drive where the operating system is installed on.

Table 11. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 solid-state drive, Class 25	PCIe Gen4 x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2230 solid-state drive, Class 35	PCIe Gen4 x4 NVMe, up to 64 Gbps	Up to 1 TB
M.2 2280 solid-state drive, Class 40	PCIe Gen4 x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2230 solid-state drive, self-encrypting, Class 35	PCIe Gen4 x4 NVMe, up to 64 Gbps	Up to 256 GB
M.2 2280 solid-state drive, self-encrypting, Class 40	PCIe Gen4 x4 NVMe, up to 64 Gbps	Up to 512 GB

Media-card reader

The following table lists the media cards supported by your OptiPlex All-in-One 7420.

Table 12. Media-card reader specifications

Description	Values
Media-card type	One SD-card slot
Media-cards supported	• Secure Digital (SD) • Secure Digital High Capacity (SDHC) • Secure Digital Extended Capacity (SDXC)
NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

Camera

The following table lists the camera specifications of your OptiPlex All-in-One 7420.

Table 13. Camera specifications

Description	Values
Number of cameras	One
Camera type	FHD RGB camera
Camera location	Retractable camera
Camera sensor type	CMOS sensor technology
Camera resolution:	

Table 13. Camera specifications (continued)

Description		Values
	Still image	2.07 megapixel
	Video	1920 x 1080 (FHD) at 30 fps
Diagonal viewing angle:		82 degrees

Power

The following table lists the power adapter specifications of your OptiPlex All-in-One 7420.

Power adapter

NOTE: The power adapter specification is only applicable to computers shipped with an Energy Efficient processor.

Table 14. Power adapter specifications

Description		Option one	Option two
Type		130 W AC adapter	180 W AC adapter
Connector dimensions:			
	External diameter	7.40 mm (0.29 in.)	7.40 mm (0.29 in.)
	Internal diameter	5.10 mm (0.20 in.)	5.10 mm (0.20 in.)
Power-adapter dimensions:			
	Height	154.70 mm (6.09 in.)	155 mm (6.10 in.)
	Width	76.20 mm (3 in.)	76.20 mm (3 in.)
	Depth	25.4 mm (1 in.)	30 mm (1.18 in.)
Input voltage		100 VAC–240 VAC	100 VAC–240 VAC
Input frequency		50 Hz–60 Hz	50 Hz–60 Hz
Input current (maximum)		2.50 A	2.34 A
Output current (continuous)		6.70 A	9.23 A
Rated output voltage		19.50 VDC	19.50 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)

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.

Power-supply unit

NOTE: The power rating specification is only applicable to computers shipped with a High Performance processor.

Table 15. Power rating

Description		Values
Type		160 W internal power supply unit (PSU), 80 Plus Bronze
Input voltage		90 VAC–264 VAC
Input frequency		47 Hz–63 Hz
Input current (maximum)		2.80 A
Output current (continuous)		Operating: • 19.50 VA: 7 A • 19.50 VB: 5 A Standby: • 19.50 VA: 0.50 A • 19.50 VB: 1.75 A
Rated output voltage		• 19.50 VA • 19.50 VB
Temperature range:		
	Operating	5°C to 42°C (41°F to 107.6°F)
	Storage	-40°C to 70°C (-40°F to 158°F)

Power supply connector

The following table lists the Power supply connector specifications of your OptiPlex All-in-One 7420.

Table 16. Power supply connector

Power supply	Connectors
160 W internal power supply unit (PSU), 80 Plus Bronze	• One 8-pin connector for processor • One 6-pin connector for system board • One 6-pin connector for control signal • One 2-pin connector for LED

Display

The following table lists the display specifications of your OptiPlex All-in-One 7420.

Table 17. Display specifications

Description	Option one	Option two
Display type	Full High Definition (FHD), ComfortView Plus	Full High Definition (FHD), ComfortView Plus
Touch options	No	Touch support, with 10 touch points

Table 17. Display specifications (continued)

Description		Option one	Option two
Display-panel technology		In-Plane Switching (IPS)	In-Plane Switching (IPS)
Display-panel dimensions (active area):			
	Height	296.46 mm (11.67 in.)	296.46 mm (11.67 in.)
	Width	527.04 mm (20.75 in.)	527.04 mm (20.75 in.)
	Diagonal	604.70 mm (23.81 in.)	604.70 mm (23.81 in.)
Display-panel native resolution		1920 x 1080	1920 x 1080
Luminance (typical)		250 nits	300 nits
Megapixels		2.07	2.07
Color gamut		99% (sRGB)	99% (sRGB)
Pixels Per Inch (PPI)		92	92
Contrast ratio (min.)		• 700:1, minimum • 1000:1, typical	• 700:1, minimum • 1000:1, typical
Response time (max.)		• 25 ms, minimum • 14 ms, typical	• 20 ms, minimum • 14 ms, typical
Refresh rate		60 Hz	60 Hz
Horizontal view angle		• +/- 85 degrees, minimum • +/- 89 degrees, typical	• +/- 85 degrees, minimum • +/- 89 degrees, typical
Vertical view angle		• +/- 85 degrees, minimum • +/- 89 degrees, typical	• +/- 85 degrees, minimum • +/- 89 degrees, typical
Pixel pitch		0.27 mm	0.27 mm
Power consumption (maximum)		14.11 W	17.26 W
Anti-glare vs glossy finish		Anti-glare	Anti-glare

GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your OptiPlex All-in-One 7420.

Table 18. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel UHD Graphics 710	• One DisplayPort++ 1.4a port (5120 x 3200 at 60 Hz) • One HDMI-out 2.1 port (4096 x 2160 at 60 Hz), only for computers shipped with a High Performance processor	Shared system memory	Intel 300/300T

Table 18. GPU—Integrated (continued)

Controller	External display support	Memory size	Processor
Intel UHD Graphics 730	• One DisplayPort++ 1.4a port (5120 x 3200 at 60 Hz) • One HDMI-out 2.1 port (4096 x 2160 at 60 Hz), only for computers shipped with a High Performance processor	Shared system memory	14th Gen Intel Core i3/i3T
Intel UHD Graphics 770	• One DisplayPort++ 1.4a port (5120 x 3200 at 60 Hz) • One HDMI-out 2.1 port (4096 x 2160 at 60 Hz), only for computers shipped with a High Performance processor	Shared system memory	14th Gen Intel Core i5 vPro/i5T vPro/i7 vPro

Hardware security

The following table lists the hardware security of your OptiPlex All-in-One 7420.

Table 19. Hardware security

Hardware security
Kensington security-cable slot
Chassis intrusion switch
Trusted Platform Module (Discrete TPM Enabled)
SafeBIOS including Dell Off-host BIOS Verification
BIOS Resilience
BIOS Recovery, and additional BIOS Controls
SafeID including Trusted Platform Module (TPM) 2.0
Self-Encrypting Drives (SED)
D-Pedigree (Secure Supply Chain Functionality)

Environmental

The following table lists the environmental specifications of your OptiPlex All-in-One 7420.

Table 20. Environmental

Feature	Values
Recyclable packaging	Yes
BFR/PVC—free chassis	Yes
Vertical orientation packaging support	Yes
Multi-Pack packaging	No
Energy-Efficient Power Supply	Yes

Table 20. Environmental (continued)

Feature	Values
ENV0424 compliant	Yes

NOTE: Wood-based fiber packaging contains a minimum of 35% recycled content by total weight of wood-based fiber. Packaging that contains without wood-based fiber can be claimed as Not Applicable. The anticipated required criteria for EPEAT 2018.

Operating and storage environment

This table lists the operating and storage specifications of your OptiPlex All-in-One 7420.

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

Table 21. 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% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.26 GRMS	1.30 GRMS
Shock (maximum)	40 G†	160 G†
Altitude range	-15.2 m to 3048 m (-49.87 ft to 10000 ft)	-15.2 m to 10668 m (-49.87 ft to 35000 ft)
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.		

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

† Measured using a 2 ms half-sine pulse.

4

Engineering specifications

Physical system dimensions

The following table provides the physical dimensions of your OptiPlex All-in-One 7420.

NOTE: System weight and shipping weight are based on a typical configuration and may vary based on your system configuration. A typical configuration includes integrated graphics, one hard drive, and one optical drive.

Table 22. Physical system dimensions

Feature	Values
Non-touch chassis dimensions (system without stand)	
Height	354.30 mm (13.95 in.)
Width	540 mm (21.26 in.)
Depth	57.9 mm (2.28 in.)
Maximum weight	6.32 kg (13.93 lb)
Minimum weight	5.61 kg (12.37 lb)
Touch chassis dimensions (system without stand)	
Height	354.30 mm (13.95 in.)
Width	540 mm (21.26 in.)
Depth	57.90 mm (2.28 in.)
Maximum weight	6.32 kg (13.93 lbs)
Minimum weight	5.61 kg (12.37 lb)
Basic fixed stand dimensions	
Height	224 mm (8.82 in.)
Width	234 mm (9.21 in.)
Depth	179.70 mm (7.07 in.)
Weight	1.90 kg (4.18 lb)
Height adjustable stand dimensions	
Height	366 mm (14.41 in.)
Width	288 mm (11.34 in.)
Depth	220 mm (8.66 in.)
Weight	2.87 kg (6.32 lb)
Packaging parameters with basic fixed stand (includes packaging material)	
Height	• ROW: 798 mm (31.42 in.) • DAO: 833 mm (32.80 in.)
Width	495 mm (19.49 in.)
Depth	193 mm (7.60 in.)

Table 22. Physical system dimensions (continued)

Feature	Values
Shipping weight (including packaging materials)	12.04 kg (26.54 lb)
Packaging parameters with height adjustable stand	
Height	• ROW: 798 mm (31.42 in.) • DAO: 833 mm (32.80 in.)
Width	495 mm (19.49 in.)
Depth	193 mm (7.60 in.)
Shipping weight (including packaging materials)	12.96 kg (28.57 lb)

Add-in card dimensions

Slot limitations

The following table lists the system board connector maximum add-in card allowable dimensions of your OptiPlex All-in-One 7420.

Table 23. M.2 2230 slot for Wi-Fi card

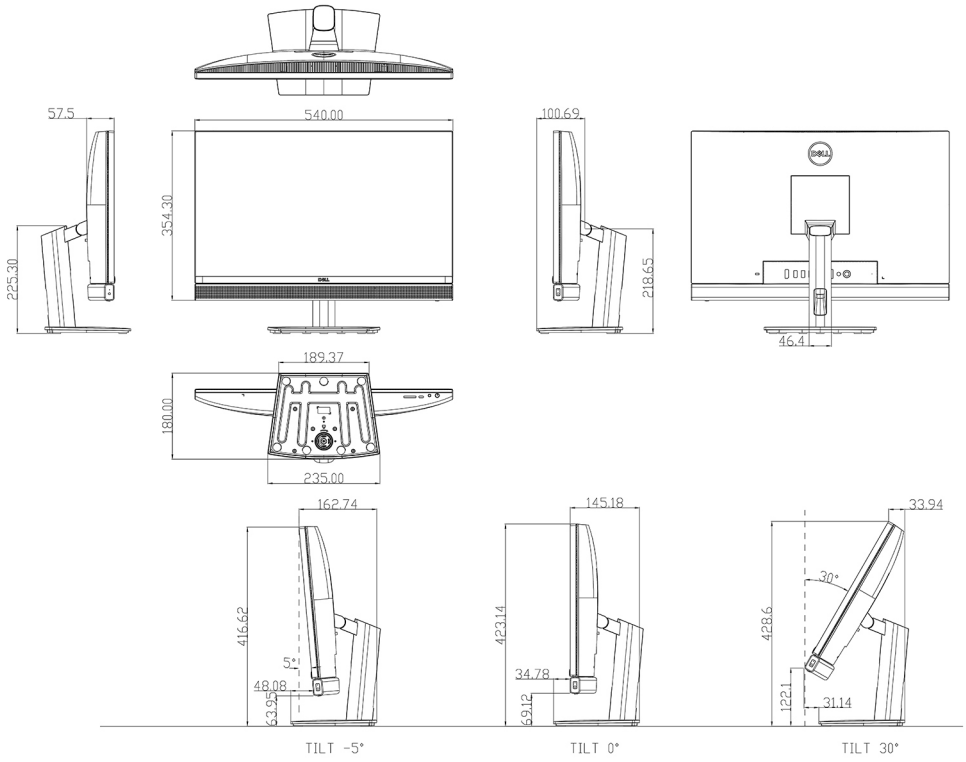
Voltage	3.3 V
Width	0.86 in. (22 mm)
Length	1.18 in. (30 mm)
Thickness	0.14 in. (3.65 mm)
Maximum wattage	6.6 W

Table 24. M.2 2230/2280 slot for solid-state drive

Voltage	3.3 V
Width	0.86 in. (22 mm)
Length	• 2230: 1.18 in. (30 mm) • 2280: 3.15 in. (80 mm)
Thickness	0.14 in. (3.65 mm)
Maximum Wattage	8.25 W

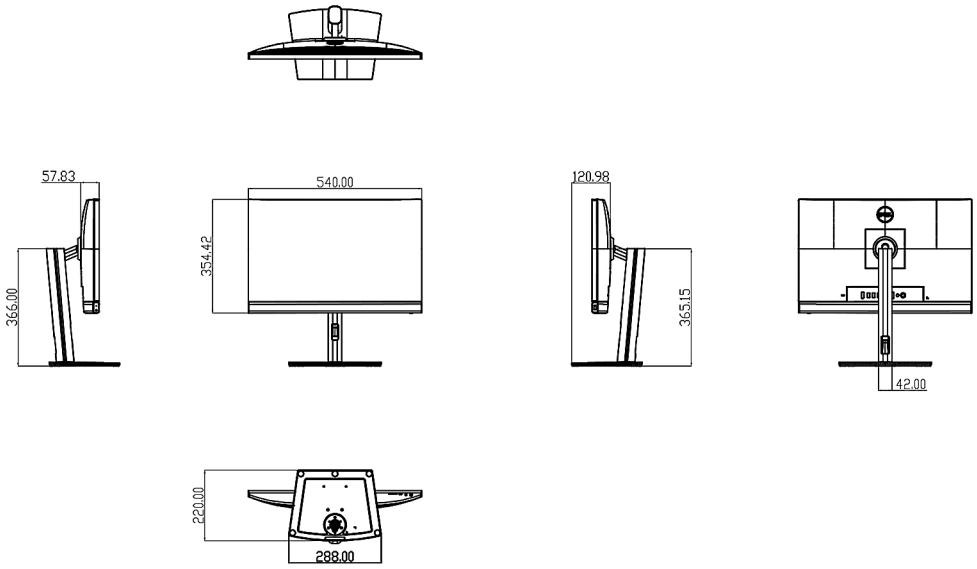
Stands and mounts

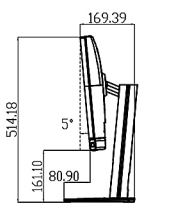
Fixed stand



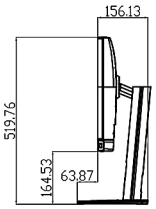
NOTE: The unit of measurements is in millimeter (mm).

Height Adjustable Stand (HAS)

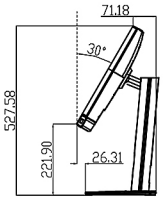




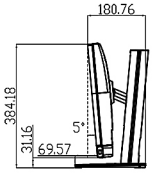
LIFT TOP, TILT -5°



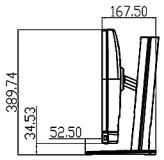
LIFT TOP, TILT 0°



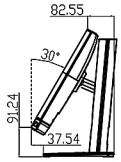
LIFT TOP, TILT 30°



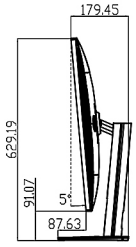
LIFT BOTTOM, TILT -5°



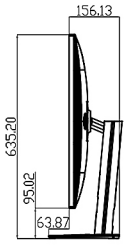
LIFT BOTTOM, TILT 0°



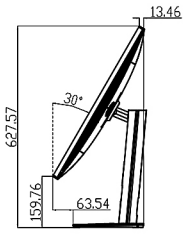
LIFT BOTTOM, TILT 30°



LIFT TOP, TILT -5°
ROTATE 90°



LIFT TOP, TILT 0°
ROTATE 90°



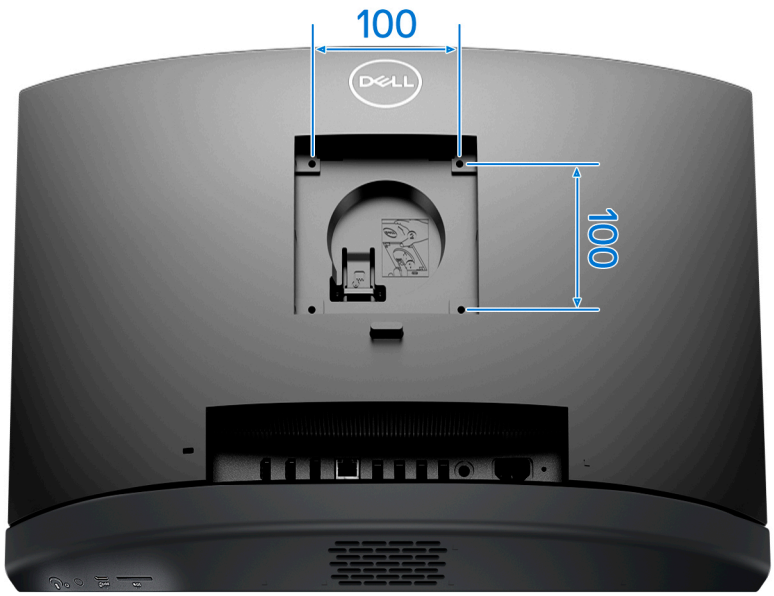
LIFT TOP, TILT 30°
ROTATE 90°

NOTE: The unit of measurements is in millimeter (mm).

NOTE: The Height Adjustable Stand can go up and down by up to 100 mm, swivel left/right up to 45 degrees, and pivot up to 90 degrees.

VESA mount

The VESA mount compatibility for OptiPlex All-in-One 7420 is 100x100 mm.



Ethernet

Intel Ethernet Connection i219-LM

The following table lists the i219-LM specifications.

Table 25. Intel Ethernet Connection i219-LM specifications

Feature	Values
External connector type	RJ45
Data rate	10/100/1000 Mbps
Controller Details	
Controller bus architecture	PCI Express base specification revision 1.1
Integrated memory	Yes
Data transfer mode	Yes (Bus-Master DMA)
Power consumption (Full operation per data rate connection speed)	542 mW (Max)
Power consumption (Standby operation)	76 mW (Max)
IEEE standards compliance	802.3
Hardware certifications	N/A
Boot ROM support	EEPROM (Located in SPI)
Network Transfer Mode	
10BASE-T (full/half-duplex)	10 Mbps
100BASE-TX (full/half-duplex)	100 Mbps

Table 25. Intel Ethernet Connection i219-LM specifications (continued)

Feature	Values
1000BASE-T (full-duplex)	1000 Mbps
Environmental	
Operating temperature range	0°C–85°C (32°F–185°F)
Operating humidity	20% to 80% (non condensing)
Operating system driver Support	• Windows (x64) • Ubuntu
Manageability	• Wakeup On LAN • PXE 2.1
Management capabilities alerting	Optional Intel Standard Manageability (must be made at time of purchase).
Supported under Intel vPro technology	Yes (Bus-Master DMA)

This term does not connote an actual operating speed of 1 Gb/sec. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.

Wireless module

Intel AX201, 2x2 MIMO, 2400 Mbps, 2.40 GHz /5 GHz, Wi-Fi 6 (WiFi 802.11ax), Bluetooth 5.2

The following table lists the Intel AX201 specifications.

Table 26. Intel AX201 specifications

Feature	Values
Host interface	CNVi2 (Connectivity Integration 2nd generation)
Network standard	IEEE 802.11a/b/g/n/ac/ax, 160 MHz channel use, MU-MIMO
Wi-Fi Alliance certifications	• Wi-Fi CERTIFIED 6 • Wi-Fi CERTIFIED a/b/g/n/ac • WMM • WMM-Power Save • WPA2 • WPA3 • WPS • Protected Management Frames • Wi-Fi Direct • Wi-Fi Agile Multiband
Operating frequency bands	• 2.4 GHz • 5 GHz
Data rate	• 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.
Security methods	• WPA2 Personal and Enterprise

Table 26. Intel AX201 specifications (continued)

Feature	Values
	• WPA3
Authentication protocols	• 802.1X EAP-TLS • EAP-TTLS/MSCHAPv2 • PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA)
Encryption	• 64-bit and 128-bit WEP • TKIP • 128-bit AES-CCMP • 256-bit AES-GCMP
Product safety	• UL • C-UL • CB (IEC60950-1)
Management capabilities alerting	Support for Intel AMT
Government compliance	• 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
Wireless PAN standard	• Dual-Mode Bluetooth 5.2 • BLE
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
Bluetooth data encryption	128-bit encryption
Bluetooth output power	Power class 1
Operating temperature	0°C to + 50°C (Full performance at shield temperatures up to 80°C)
Storage temperature	-40°C to +70°C
Humidity	Up to 90% RH non-condensing (at temperatures of 25° C to 35° C)

Intel AX211, 2x2 MIMO, 2400 Mbps, 2.4/5/6 GHz, Wi-Fi 6E (WiFi 802.11ax), Bluetooth 5.3

The following table lists the Intel AX211 specifications.

NOTE: Wi-Fi 6 is supported in regions where Wi-Fi 6E is unavailable.

Table 27. Intel AX211 specifications

Description	Specifications
Host interface	CNVio
Network standard	IEEE 802.11a/b/g/n/ac/ax, 160 MHz channel use, MU-MIMO, new 6 GHz band
Wi-Fi Alliance certifications	Wi-Fi CERTIFIED 6, Wi-Fi CERTIFIED a/b/g/n/ac,WMM, WMM-Power Save, WPA2, WPA3, WPS, PMF,Wi-Fi Direct, Wi-Fi Agile Multiband **NOTE:** Other names and brands may be claimed as the property of others.
Operating frequency bands	• 2.4 GHz • 5 GHz • 6 GHz
Data rate	• 2.4 GHz 40M: Up to 574 Mbps • 5/6 GHz 80M: Up to 1.2 Gbps • 5/6 GHz 160M: Up to 2.4 Gbps
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Security methods	• WPA2 Personal and Enterprise • WPA3
Authentication protocols	• 802.1X EAP-TLS • EAP-TTLS/MSCHAPv2 • PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA)
Encryption	• 64-bit and 128-bit WEP • TKIP • 128-bit AES-CCMP • 256-bit AES-GCMP
Product safety	• UL • C-UL • CB (IEC60950-1)
Management capabilities alerting	Support for Intel AMT
Government compliance	• FIPS 140-2 • FISMA
Client utility	Intel PRO/Set wireless software v22 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
Wireless PAN standard	• Dual Mode Bluetooth 5.3 • BLE
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

Table 27. Intel AX211 specifications (continued)

Description	Specifications
Bluetooth data encryption	128-bit encryption
Bluetooth output power	Power class 1
Operating temperature	0°C to + 50°C (Full performance at shield temperatures up to 80°C)
Storage temperature	-40°C to +70°C
Humidity	Up to 90% RH non-condensing (at temperatures of 25°C to 35°C)

Realtek RTL8852BE, 2x2, Wi-Fi 6 (Wi-Fi 802.11 a/b/g/n/ac/ax), Bluetooth 5.3

The following table lists the Realtek RTL8852BE specifications.

Table 28. Realtek RTL8852BE specifications

Host interface	• Wi-Fi - PCIe • Bluetooth - USB
Network standard	IEEE 802.11a/b/g/n/ac/ax, MU-MIMO
Wi-Fi Alliance certifications	• Wi-Fi certified a/b/g/n/ac/ax • WMM* • WPA • WPA2* • WPA3* • Wi-Fi Direct (Windows only)
Operating frequency bands	• 2.4 GHz • 5 GHz
Data rate	• 2.4 GHz 40M: Up to 574 Mbps • 5 GHz 80M: Up to 1201 Mbps
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication	• WPA* and WPA2* Personal and Enterprise • WPA3* Personal and Enterprise
Client utility	Native Wi-Fi and Bluetooth Microsoft UI support
Software support	• Microsoft WHQL certified for Windows • Linux
Radio On/Off	Supported
Roaming	Support seamless roaming between access points
Wake on wireless	Supported
Wireless display	Native Miracast support by Windows
Wireless PAN standard	• Dual Mode Bluetooth 5.3 • BLE
Bluetooth data rates	Up to 3 Mbps
Bluetooth operating frequency bands	2.4 GHz

Table 28. Realtek RTL8852BE specifications (continued)

Bluetooth profiles supported	Support for Microsoft Inbox Bluetooth profiles in Windows
Bluetooth data encryption	128-bit encryption
Operating temperature	0°C to + 70°C
Storage temperature	-40°C to +85°C
NOTE: *Other names and brands may be claimed as the property of others	

GPU—Integrated

Intel UHD Graphics 710

Table 29. Intel UHD Graphics 710

Feature	Specifications
Bus type	Integrated
Memory type	Shared memory
Graphics level	Intel 300/300T
Estimated Maximum Power Consumption (TDP)	• Intel 300: 46 W • Intel 300T: 35 W
Overlay planes	Yes
Operating systems graphics/video API support	DirectX 12, OpenGL (4.6)
Maximum vertical refresh rate	• On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) • On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), for computers shipped with High Performance processors
External ports	• One DisplayPort 1.4a port • One HDMI 2.1 port, only for computers shipped with High Performance processors
Multiple display support	**NOTE:** The HDMI 2.1 port is only available on computers shipped with High Performance Processors **With 2 displays** • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only for computers shipped with High Performance processors **With 3 displays** • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only for computers shipped with High Performance processors

Intel UHD Graphics 730

Table 30. Intel UHD Graphics 730

Feature	Specifications
Bus type	Integrated
Memory type	Shared memory
Graphics level	Intel Core i3/i3T
Estimated Maximum Power Consumption (TDP)	• Intel Core i3: 60 W • Intel Core i3T: 35 W
Overlay planes	Yes
Operating systems graphics/ video API support	DirectX 12, OpenGL (4.6)
Maximum vertical refresh rate	• On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) • On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), for computers shipped with High Performance processors
External ports	• One DisplayPort 1.4a port • One HDMI 2.1 port, for computers shipped with High Performance processors
Multiple display support	**NOTE:** The HDMI 2.1 port is only available on computers shipped with High Performance Processors **With 2 displays** • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only for computers shipped with High Performance processors **With 3 displays** • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only for computers shipped with High Performance processors

Intel UHD Graphics 770

Table 31. Intel UHD Graphics 770

Feature	Specifications
Bus type	Integrated
Memory type	Shared memory
Graphics level	Intel Core i5 vPro/i5T vPro/i7 vPro
Estimated Maximum Power Consumption (TDP)	• Intel Core i5T vPro: 35 W • Intel Core i5 vPro/i7 vPro: 65 W
Overlay planes	Yes
Operating systems graphics/ video API support	DirectX 12, OpenGL (4.6)
Maximum vertical refresh rate	• On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) • On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only on computers shipped with High Performance processors
External ports	• One DisplayPort 1.4a port

Table 31. Intel UHD Graphics 770 (continued)

Feature	Specifications
	• One HDMI 2.1 port, only on computers shipped with High Performance processors
Multiple display support	**NOTE:** The HDMI 2.1 port is only available on computers shipped with High Performance Processors **With 2 displays** • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only for computers shipped with High Performance processors **With 3 displays** • Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz), only for computers shipped with High Performance processors

Video port and resolution matrix

The following table lists the Video port and resolution matrix of your OptiPlex All-in-One 7420.

Table 32. Video port and resolution matrix

Port type	DisplayPort++ 1.4a/HDCP 2.3 port (UMA Graphics)	HDMI-OUT port—HDMI 2.1 (UMA Graphics)
Maximum resolution—single display	5120 x 3200 at 60 Hz	4096 x 2160 at 60 Hz
Maximum resolution—dual MST	3840 x 2160 at 60 Hz, 3840 x 2160 at 60 Hz	Not applicable
Maximum resolution—triple MST	2560 x 1600 at 60 Hz, 2560 x 1600 at 60 Hz, 2560 x 1600 at 60 Hz	Not applicable

Storage

M.2 2230, 1 TB, PCIe NVMe Gen4 x4, Class 25 SSD

The following table lists the M.2 2230, 1 TB SSD specifications.

Table 33. 1 TB SSD specifications

Capacity	1 TB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	30 mm (1.18 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264

Table 33. 1 TB SSD specifications (continued)

Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4) • Active: 4 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2230, 2 TB, PCIe NVMe Gen4 x4, Class 25 SSD

The following table lists the M.2 2230, 2 TB SSD specifications.

Table 34. 2 TB SSD specifications

Capacity	2 TB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	30 mm (1.18 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	4,000,797,360
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4) • Active: 4 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	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, PCIe NVMe Gen4 x4, Class 35 SSD

The following table lists the M.2 2230, 256 GB SSD specifications.

Table 35. 256 GB SSD specifications

Capacity	256 GB

Table 35. 256 GB SSD specifications (continued)

Height (approximate)	3.50 mm (0.17 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	30 mm (1.18 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTTF	1.4M hours
Logical blocks	500,118,192
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4) • Active: 4 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	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, PCIe NVMe Gen4 x4, Class 35 SSD

The following table lists the M.2 2230, 512 GB SSD specifications.

Table 36. 512 GB SSD specifications

Capacity	512 GB
Height (approximate)	3.50 mm (0.17 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	30 mm (1.18 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTTF	1.4M hours
Logical blocks	1,000,215,216
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4) • Active: 4 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 70°C

Table 36. 512 GB SSD specifications (continued)

Relative humidity range	5% to 95%

M.2 2230, 1 TB, PCIe NVMe Gen4 x4, Class 35 SSD

The following table lists the M.2 2230, 1 TB SSD specifications.

Table 37. 1 TB SSD specifications

Capacity	1 TB
Height (approximate)	3.50 mm (0.17 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	30 mm (1.18 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4) • Active: 4 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	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, PCIe NVMe Gen4 x4, Opal Self-Encrypting, Class 35 SSD

The following table lists the M.2 2230, 256 GB SSD specifications.

Table 38. 256 GB SSD, self-encrypting drive specifications

Capacity	256 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	30 mm (1.18 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	500,118,192
Power source	

Table 38. 256 GB SSD, self-encrypting drive specifications (continued)

Power consumption (reference only)	• Idle: 5 mW (PS4) • Active: 4 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	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, PCIe NVMe Gen4 x4, Class 40 SSD

The following table lists the M.2 2280, 512 GB SSD specifications.

Table 39. 512 GB SSD specifications

Description	Values
Capacity	512 GB
Height (approximate)	2.38 mm (0.17 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	80 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4 - L1.2) • Active: 5 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280, 1 TB, PCIe NVMe Gen4 x4, Class 40 SSD

The following table lists the M.2 2280, 1 TB SSD specifications.

Table 40. 1 TB SSD specifications

Description	Values
Capacity	1 TB

Table 40. 1 TB SSD specifications (continued)

Description	Values
Height (approximate)	2.38 mm (0.17 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	80 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4 - L1.2) • Active: 5 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280, 2 TB, PCIe NVMe Gen4 x4, Class 40 SSD

The following table lists the M.2 2280, 2 TB SSD specifications.

Table 41. 2 TB SSD specifications

Description	Values
Capacity	2 TB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	80 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	4,000,797,360
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4 - L1.2) • Active: 5 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G

Table 41. 2 TB SSD specifications (continued)

Description	Values
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

M.2 2280, 512 GB, PCIe NVMe Gen4 x4, Opal Self-Encrypting Class 40 Solid-State Drive

The following table lists the M.2 2280, 512 GB SSD, self-encrypting drive specifications.

Table 42. 512 GB SSD, self-encrypting drive specifications

Description	Values
Capacity	512 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22 mm (0.87 in.)
Depth (approximate)	80 mm (3.15 in.)
Interface type	PCIe Gen4
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
Power source	
Power consumption (reference only)	• Idle: 5 mW (PS4 - L12) • Active: 5 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

Media-card reader

The following table lists the media-card reader specifications of your OptiPlex All-in-One 7420.

Table 43. Media-card reader (standard offering)

Media supported (Maximum capacity supported will vary by Flash Media Types)	
Media Supported	• Secure Digital High Capacity (SDHC) • Secure Digital Extended Capacity (SDXC) • Secure Digital (SD) 4.0 • SD UHS-I (UHS104) • SD UHS-II

Table 43. Media-card reader (standard offering) (continued)

Support Specification Versions	Secure Digital (SD) 4.0
Power source	
Max Power Requirements	0.8 A
Supply Voltage Range	3.3 V/1.8 V
Power Consumption	Standby less than 0.08 mA at 3.3 VDC
Environmental operating conditions (Non-condensing)	
Operating Temperature Range	0°C to 70°C
Relative Humidity Range	95% RH—maximum
Environmental non-operating conditions (Non-condensing)	
Operating Temperature Range	-40°C to 65°C
Relative Humidity Range	5% to 95% RH

Power ratings

The following table lists the power ratings specifications of your OptiPlex All-in-One 7420.

Table 44. Power ratings specifications

Description	Values
Type	160 W (80 PLUS Bronze)
Diameter (connector)	Not supported
Input voltage	90 VAC to 264 VAC
Input frequency	47 Hz to 63 Hz
Input current (maximum)	3.60 A
Output current (continuous)	• +19.50 VA/7.50 A • +19.50 VB/7 A Standby mode: • +19.50 VA/0.50 A • +19.50 VB/1.75 A
Rated output voltage	• +19.50 VA • +19.50 VB
BTUs/h (based on PSU max wattage)	546
Active PFC	APFC Power Supply is offered with OptiPlex All-in-One 7420.
Temperature range	
Operating	5°C to 42°C (41°F to 107°F)
Storage	-40°C to 70°C (-40°F to 158°F)
Compliance	
Erp Lot6 Tier 2 requirement	Yes
80Plus compliant	Yes
Energy Star 8.0 compliant	Yes
GS mark compliant	Yes

Table 44. Power ratings specifications (continued)

Description	Values
FEMP Standby Power Compliant	Yes

Thermal dissipation

The following table lists the thermal dissipation of your OptiPlex All-in-One 7420.

Table 45. Thermal dissipation

Power supply unit	Heat dissipation	Voltage
160 W (80 Plus Bronze)	546 BTU/hr	100 VAC–240 VAC, 50 Hz–60 Hz, 3.6 A/1.8 A

CMOS battery

The following table lists the CMOS battery specifications of your OptiPlex All-in-One 7420.

Table 46. CMOS battery

Brand	Type	Voltage	Composition	Battery life
• KTS • MAXELL • TIANQIU	CR2032	3 V	Lithium metal	Continuous discharge under 15 kΩ load to 2 V End-Voltage. 20℃±2℃ 940 hours, or longer. 910 hours or longer after 12 months.

Accessories

The following table lists the recommended accessories on your OptiPlex All-in-One 7420.

Table 47. Accessories

Accessories
Audio Dell Wired Headset - WH3024
Keyboard Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
Mouse Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
Additional monitor Dell 24 Monitor - P2423D
Stands • OptiPlex Entry 24 All-in-One Height Adjustable Stand - 3G8H3 • OptiPlex Entry 24 All-in-One Height Adjustable Stand - D4F0J

Security

Software security

The following table lists the software security details of your OptiPlex All-in-One 7420.

Table 48. Software security

Security options
McAfee Small Business Security 30-day free trial
McAfee Small Business Security 12-month subscription
McAfee Small Business Security 36-month subscription
Intel Guard Technologies & Secure Key: Software Guard (SGX), Data Guard (vPro only), Boot Guard, BIOS Guard (Core CPU's only), OS Guard (Core CPU's only) and Secure Key (i5 or greater only)
Intel Runtime BIOS Resilience (Copper Point) with attestation via Nifty Rock + Intel TXT
Support of Absolute Persistent Module BIOS agent v2
OpenXT validation required
SafeGuard and Response, powered by VMware Carbon Black and Secureworks
Next Generation Antivirus (NGAV)
Endpoint Detection and Response (EDR)
Threat Detection and Response (TDR)
Managed Endpoint Detection and Response
Incident Management Retainer
Emergency Incident Response
SafeData

Trusted Platform Module

The following table lists the Trusted Platform Module (TPM) of your OptiPlex All-in-One 7420.

Table 49. Trusted Platform Module (TPM)

TPM: ST/ST33 HTPH2X32AHD8
SPI interface
TPM 2.0
FIPs 140-2 certificate

Mil-SPEC, for computers with Energy Efficient processors

The OptiPlex All-in-One 7420 meets military specifications for the following MIL-STD 810H tests verified by SGS laboratories:

Table 50. Military specifications

Test category	Test method	Test parameters	Result
Altitude (Storage/Air transport)	MIL-STD-810H, Method 500.6, Procedure I	• Test pressure: Equivalent to cabin altitude of 15,000 feet • Test temperature: 21°C • Altitude change rate: <10 m/s • Duration: 1 hour	Pass
Altitude (Operational/Air carriage)	MIL-STD-810H, Method 500.6, Procedure II	• Test temperature: 21°C • Altitude change rate: <10 m/s • Duration: 1 hour	Pass
High temperature (Storage and transition)	MIL-STD-810H, Method 501.7, Procedure I	• Test temperature: 33°C to 71°C (non-operational/ storage), Table 501.7—III High temperature cycles • Duration: 7 x 24 hours per cycle • Climate category A1: Hot dry	Pass
High temperature (Operation)	MIL-STD-810H, Method 501.7, Procedure II	• Test temperature: 32°C to 49°C (Ambient air), Table 501.7—III High temperature cycles • Duration: 5 x 24 hours per cycle • Climate category A1: Hot dry	Pass
Low temperature (Storage)	MIL-STD-810H, Method 502.7, Procedure I	• Test temperature: -51°C • Duration: 24 hours	Pass
Low temperature (Operation)	MIL-STD-810H, Method 502.7, Procedure II	• Test temperature: -29°C • Duration: 24 hours	Pass
Humidity	MIL-STD-810H, Method 507.6, Procedure I	• Induced cycles (Storage and Transit • Duration: Table 507.6-II (Hot-humid cycle B3) • Material category: Non-Hazardous items normal test duration • Duration: 12 hours, Air velocity = 1.5 m/s	Pass
Sand and dust (Blowing dust)	MIL-STD-810H, Method 510.7, Procedure I	• (300 feet/minute) to 8.90 m/s (1750 feet/minute) • Temperature: 60°C • Relative humidity: 30%	Fail

Table 50. Military specifications (continued)

Test category	Test method	Test parameters	Result
Vibration (Operation)	MIL-STD-810H, Method 514.8, Procedure I	• Common carrier unknown orientation • 1 hour/axis	Pass
Vibration (Storage)	MIL-STD-810H, Method 514.8, Procedure I	• General minimum integrity exposure • 1 hour/axis	Pass
Shock (Functional)	MIL-STD-810H, Method 516.8, Procedure I	• Pulse shape: Half-sine • Acceleration: 185 g • Pulse duration: 2 millisecond • Shock direction: 6 faces (+/-X, +/-Y, +/-Z axes) • Number of shocks: 1 shock/axis/direction (total 6 shocks)	Fail
Shock (Transportation shock)	MIL-STD-810H, Method 516.8, Procedure II	• Material to be packaged • On-road shock: 5.10 g/11 m (Table 516.8-VII) • Off-road shocks: 15.20 g/5 ms (Table 516.8-VII) • Test unit orientations: x, y, and z axis for both test • Unit is non-operational during tests • Saw tooth wave form cab be replaced by other classical wave forms necessary to meet test equipment capability.	Pass
Shock (Crash Hazard Shock)	MIL-STD-810H, Method 516.8 Procedure V	• Unit is non-operational during test • 185 g, 2 ms Half Sine 2 shocks/axis/direction for a total of 12 shocks **NOTE:** Dell to use noted test to replace MIL-STD-8108, Method 516.8, Procedure V, Table 516.8-XIII	Fail
Bench handling	MIL-STD-810H, Method 516.8, Procedure VI	• Lifted edge of chassis raised 100m (4 in.) above horizontal bench top.	Pass

Mil-SPEC, for computers with High Performance processors

The OptiPlex All-in-One 7420 meets military specifications for the following MIL-STD 810H tests verified by SGS laboratories:

Table 51. Military specifications

Test category	Test method	Test parameters	Result
Altitude (Storage/Air transport)	MIL-STD-810H, Method 500.6, Procedure I	• Test pressure: Equivalent to cabin altitude of 15,000 feet • Test temperature: 21°C • Altitude change rate: <10 m/s • Duration: 1 hour	Pass
Altitude (Operational/Air carriage)	MIL-STD-810H, Method 500.6, Procedure II	• Test temperature: 21°C • Altitude change rate: <10 m/s • Duration: 1 hour	Pass
High temperature (Storage and transition)	MIL-STD-810H, Method 501.7, Procedure I	• Test temperature: 33°C to 71°C (non-operational/ storage), Table 501.7—III High temperature cycles • Duration: 7 x 24 hours per cycle • Climate category A1: Hot dry	Pass
High temperature (Operation)	MIL-STD-810H, Method 501.7, Procedure II	• Test temperature: 32°C to 49°C (Ambient air), Table 501.7—III High temperature cycles • Duration: 5 x 24 hours per cycle • Climate category A1: Hot dry	Pass
Low temperature (Storage)	MIL-STD-810H, Method 502.7, Procedure I	• Test temperature: -51°C • Duration: 24 hours	Pass
Low temperature (Operation)	MIL-STD-810H, Method 502.7, Procedure II	• Test temperature: -29°C • Duration: 24 hours	Pass
Humidity	MIL-STD-810H, Method 507.6, Procedure I	• Induced cycles (Storage and Transit • Duration: Table 507.6-II (Hot-humid cycle B3) • Material category: Non-Hazardous items normal test duration • Duration: 12 hours, Air velocity = 1.5 m/s	Pass
Sand and dust (Blowing dust)	MIL-STD-810H, Method 510.7, Procedure I	• (300 feet/minute) to 8.90 m/s (1750 feet/minute) • Temperature: 60°C • Relative humidity: 30%	Pass

Table 51. Military specifications (continued)

Test category	Test method	Test parameters	Result
Vibration (Operation)	MIL-STD-810H, Method 514.8, Procedure I	• Common carrier unknown orientation • 1 hour/axis	Pass
Vibration (Storage)	MIL-STD-810H, Method 514.8, Procedure I	• General minimum integrity exposure • 1 hour/axis	Pass
Shock (Functional)	MIL-STD-810H, Method 516.8, Procedure I	• Pulse shape: Half-sine • Acceleration: 185 g • Pulse duration: 2 millisecond • Shock direction: 6 faces (+/-X, +/-Y, +/-Z axes) • Number of shocks: 1 shock/axis/direction (total 6 shocks)	Fail
Shock (Transportation shock)	MIL-STD-810H, Method 516.8, Procedure II	• Material to be packaged • On-road shock: 5.10 g/11 m (Table 516.8-VII) • Off-road shocks: 15.20 g/5 ms (Table 516.8-VII) • Test unit orientations: x, y, and z axis for both test • Unit is non-operational during tests • Saw tooth wave form cab be replaced by other classical wave forms necessary to meet test equipment capability.	Pass
Shock (Crash Hazard Shock)	MIL-STD-810H, Method 516.8 Procedure V	• Unit is non-operational during test • 185 g, 2 ms Half Sine 2 shocks/axis/direction for a total of 12 shocks **NOTE:** Dell to use noted test to replace MIL-STD-8108, Method 516.8, Procedure V, Table 516.8-XIII	Fail
Bench handling	MIL-STD-810H, Method 516.8, Procedure VI	• Lifted edge of chassis raised 100m (4 in.) above horizontal bench top.	Pass

Acoustic noise emission information for computers shipped with an Energy Efficient processor

The following table lists the acoustic noise emission information of your OptiPlex All-in-One 7420.

NOTE: This acoustic noise emission information specifications only apply to a OptiPlex All-in-One 7420 shipped with an Energy Efficient processor of the specified configuration.

Table 52. Category B: Test configuration for OptiPlex All-in-One 7420 with Intel 300T processor/2 x 32 GB memory/M.2 SSD/180 W power adapter

Component	Test Configuration
CPU	Intel 300T
Memory	32 GB + 32 GB
HDD (#, capacity)	M.2 solid-state drive
ODD	None
Graphics Adapter	Intel UHD Graphics 710
Power adapter	180 W

Table 53. Category B: Test results for OptiPlex All-in-One 7420 with Intel 300T processor/2 x 32 GB memory/M.2 SSD/180 W power adapter

Operating Mode	Sound Power, Declared mean A-wieghted level, $L_{WA,m}$ (bels)	Sound Power, Statistical adder for verification, K_V (bels)	Sound Pressure Declared mean A weighted emission level, $L_{pA,m}$, (dB)
Idle	2.50	0.4	18
Storage Operating	2.40	0.4	18.40
CPU Operating	2.50	0.4	17.70
ODD Operating	Not applicable	Not applicable	Not applicable

All tests are conducted according to ISO 7779 and declared according to ISO 9296 with operating modes defined by ECMA-74.

The Declared Noise Emission in accordance with ISO 9296 is as follows (all values $L_{WA,m}$ and K_V expressed in bels; 1 bel=10 decibels, re 10-12 Watts.

The Declared A-weighted Sound Pressure Level in decibels (re 2x10-5 Pa), are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 and rounded to nearest tenth of a bel per ISO 9296 section 4.4.2

Table 54. Category D: Test configuration for OptiPlex All-in-One 7420 with i5-14500T vPro processor/2 x 32 GB memory/M.2 SSD/180 W power adapter

Component	Test Configuration
CPU	14th Generation Intel Core i5-14500T vPro
Memory	32 GB + 32 GB
HDD (#, capacity)	M.2 solid-state drive
ODD	None
Graphics Adapter	Intel UHD Graphics 770
Power adapter	180 W

Table 55. Category D: Test results for OptiPlex All-in-One 7420 with i5-14500T vPro processor/2 x 32 GB memory/M.2 SSD/180 W power

Operating Mode	Sound Power, Declared mean A-wieghted level, $L_{WA,m}$ (bels)	Sound Power, Statistical adder for verification, K_V (bels)	Sound Pressure Declared mean A weighted emission level, $L_{pA,m}$, (dB)
Idle	2.80	0.4	22.90
Storage Operating	2.80	0.4	21.60
CPU Operating	3.40	0.4	27.50
ODD Operating	Not applicable	Not applicable	Not applicable

All tests are conducted according to ISO 7779 and declared according to ISO 9296 with operating modes defined by ECMA-74.

The Declared Noise Emission in accordance with ISO 9296 is as follows (all values $L_{WA,m}$ and K_V expressed in bels; 1 bel=10 decibels, re 10-12 Watts.

The Declared A-weighted Sound Pressure Level in decibels (re 2x10-5 Pa), are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 and rounded to nearest tenth of a bel per ISO 9296 section 4.4.2

Table 56. Category D: Test configuration for OptiPlex All-in-One 7420 with i5-14600T vPro processor/2 x 32 GB memory/M.2 SSD/180 W power adapter

Component	Test Configuration
CPU	14th Generation Intel Core i5-14600T vPro
Memory	32 GB + 32 GB
HDD (#, capacity)	M.2 solid-state drive
ODD	None
Graphics Adapter	Intel UHD Graphics 770
Power adapter	180 W

Table 57. Category D: Test results for OptiPlex All-in-One 7420 with i5-14600T vPro processor/2 x 32 GB memory/M.2 SSD/180 W power adapter

Operating Mode	Sound Power, Declared mean A-wieghted level, $L_{WA,m}$ (bels)	Sound Power, Statistical adder for verification, K_V (bels)	Sound Pressure Declared mean A weighted emission level, $L_{pA,m}$, (dB)
Idle	2.50	0.4	17.40
Storage Operating	2.90	0.4	18.10
CPU Operating	2.50	0.4	21.90
ODD Operating	Not applicable	Not applicable	Not applicable

All tests are conducted according to ISO 7779 and declared according to ISO 9296 with operating modes defined by ECMA-74.

The Declared Noise Emission in accordance with ISO 9296 is as follows (all values $L_{WA,m}$ and K_V expressed in bels; 1 bel=10 decibels, re 10-12 Watts.

The Declared A-weighted Sound Pressure Level in decibels (re 2x10-5 Pa), are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 and rounded to nearest tenth of a bel per ISO 9296 section 4.4.2

Acoustic noise emission information for computers shipped with a High Performance processor

The following table lists the acoustic noise emission information of your OptiPlex All-in-One 7420.

NOTE: This acoustic noise emission information specifications only apply to a OptiPlex All-in-One 7420 shipped with an High Performance processor of the specified configuration.

Table 58. Category B: Test configuration for OptiPlex All-in-One 7420 with Intel 300 processor/2 x 32 GB memory/M.2 SSD/160 W Bronze power supply

Component	Test Configuration
CPU	Intel 300
Memory	32 GB + 32 GB
HDD (#, capacity)	M.2 solid-state drive
ODD	None
Graphics Adapter	Intel UHD Graphics 710
Power supply	160 W Bronze

Table 59. Category B: Test results for OptiPlex All-in-One 7420 with Intel 300 processor/2 x 32 GB memory/M.2 SSD/160 W Bronze power supply

Operating Mode	Sound Power, Declared mean A-wieghted level, $L_{WA,m}$ (bels)	Sound Power, Statistical adder for verification, K_V (bels)	Sound Pressure Declared mean A weighted emission level, $L_{pA,m}$, (dB)
Idle	2.70	0.4	20.20
Storage Operating	2.80	0.4	20.10
CPU Operating	2.80	0.4	20.20
ODD Operating	Not applicable	Not applicable	Not applicable

All tests are conducted according to ISO 7779 and declared according to ISO 9296 with operating modes defined by ECMA-74.

The Declared Noise Emission in accordance with ISO 9296 is as follows (all values $L_{WA,m}$ and K_V expressed in bels; 1 bel=10 decibels, re 10-12 Watts.

The Declared A-weighted Sound Pressure Level in decibels (re 2x10-5 Pa), are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 and rounded to nearest tenth of a bel per ISO 9296 section 4.4.2

Table 60. Category D: Test Configuration for OptiPlex All-in-One 7420 with i7-14700 processor vPro/2 x 32 GB memory/M.2 SSD/160 W Bronze power supply

Component	Test Configuration
CPU	14th Generation Intel Core i7-14700 vPro
Memory	32 GB + 32 GB
HDD (#, capacity)	M.2 solid-state drive
ODD	None
Graphics Adapter	Intel UHD Graphics 770
Power supply	160 W Bronze

Table 61. Category D: Test results for OptiPlex All-in-One 7420 with Intel 300 processor/2 x 32 GB memory/M.2 SSD/160 W Bronze power supply

Operating Mode	Sound Power, Declared mean A-wieghted level, $L_{WA,m}$ (bels)	Sound Power, Statistical adder for verification, K_V (bels)	Sound Pressure Declared mean A weighted emission level, $L_{pA,m}$, (dB)
Idle	2.80	0.4	20.90
Storage Operating	3.90	0.4	32.20
CPU Operating	4.10	0.4	36.60
ODD Operating	Not applicable	Not applicable	Not applicable

All tests are conducted according to ISO 7779 and declared according to ISO 9296 with operating modes defined by ECMA-74.

The Declared Noise Emission in accordance with ISO 9296 is as follows (all values $L_{WA,m}$ and K_V expressed in bels; 1 bel=10 decibels, re 10-12 Watts.

The Declared A-weighted Sound Pressure Level in decibels (re 2x10-5 Pa), are measured in accordance with ISO 7779 7.6.1, 7.6.2, and C.15.2 and declared in accordance with ISO 9296 and rounded to nearest tenth of a bel per ISO 9296 section 4.4.2

Chassis enclosure and ventilation requirements

Enclosure ventilation

If your enclosure has doors, they need to be of a type that allows at least 30% airflow through the enclosure (front and back).

Enclosure minimum clearance

Leave a 10.20 cm (4 in.) minimum clearance on all vented sides of the computer to permit the airflow required for proper ventilation.

Recommended enclosure

Do not install your computer in an enclosure that does not allow airflow/dusty environment/temperate over 35ºC. Do not put any objects to directly block air-vent. This restricts the airflow and impacts your computer's performance, possibly causing it to overheat.

Open desk minimum clearance

If your computer is installed in a corner, on a desk, or under a desk, leave at least 5.10 cm (2 in.) clearance from the back of the computer to the wall to permit the airflow required for proper ventilation.

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, that 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 I 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 I Configure allows you to remotely automate and configure over 150+ BIOS settings for a personalized user experience.

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

Dell Command I 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 | 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 I Update eliminates the time-consuming hunting and pecking process of update installation.

Dell Command I 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 un-reachable 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

For processors without vPro, the Intel Standard Manageability option **must be configured in the factory at the time of purchase, as it is NOT field upgradable.** It offers out-of-band management and DASH compliance (https://registry.dmtf.org/registry/results/field_initiative_name%3A%22DASH%201.0%22).

For processors with vPro, Intel vPro provides an enhanced level of integrated security, hardware-level security, and comprehensive cyber defense. Intel vPro allows you to remotely power on devices, streamline PC life cycle management without compromising productivity, secure repair, and maintain when needed. Intel vPro Enterprise continues to raise the bar with enterprise–grade security and manageability features for enterprise and managed businesses of all sizes. Versions are available for Windows, specific features may vary.

5

Dell ComfortView

CAUTION: Prolonged 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.

Blue light is a color in the white light spectrum which has a short wavelength and high frequency. Chronic exposure to blue light, particularly from digital sources, may disrupt sleep patterns and change our body's Circadian rhythm. Using the computer for an extended period may also cause fatigue in other body parts such as the neck, arm, back, and shoulder.

Dell low blue light displays optimize eye comfort with a flicker-free screen. The device uses flicker-free technology and maintains a stable backlight. Flicker-Free technology clears the visible flicker, brings comfortable viewing experience, and protects users from eye strain and fatigue. The ComfortView feature reduces the amount of blue light emitted from the monitor to optimize eye comfort. ComfortView mode can be enabled and configured using the **Dell CinemaColor** (DCC) application.

Dell CinemaColor

Dell CinemaColor (DCC) combines the hardware and software to deliver clear visuals that appear every bit as vibrant as the world around you. The DCC has four color profiles that optimize these settings depending on the content and your surroundings.

When you open DCC, you can choose **Movie (default)**, **ComfortView**, **Sports**, or **Animation** from the list. The ComfortView Profile optimizes eye comfort by reducing harmful blue light emissions to make extended screen time easy on your eyes compared to standard digital panels while still retaining the vibrant colors.

ComfortView mode reduces hazardous blue light by adjusting display parameters. You can adjust the Saturation, Temperature, and Contrast values to create your custom setting in the ComfortView mode.

NOTE: For more information on how to download and install DellCinema components, search about it in the Knowledge Base Resource at https://www.dell.com/support.

ComfortView Plus

ComfortView Plus is a built-in, always-on, and virtually unnoticeable low blue light solution for Dell displays. ComfortView Plus employs a hardware-based design that allows for a wider blue spectrum, with a much lower peak and reduced intensity. Dell ComfortView Plus has been certified by TÜV Rheinland as a low blue light hardware solution. This feature is enabled at the factory.

NOTE: ComfortView Plus is an optional hardware feature to be configured at the point of sale.

To reduce the risk of eye strain, it is also recommended that you:

- Position the display at a comfortable viewing distance between 20 in. to 28 in. (50 cm 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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Dell Optimizer

This section details the Dell Optimizer specifications of your OptiPlex All-in-One 7420.

On OptiPlex All-in-One 7420 with Dell Optimizer, the following features are supported:

- **Express Connect**—Automatically joins the access point with the strongest signal, and directs bandwidth to conferencing applications when in use.
- **ExpressResponse**—Prioritizes the most important applications. Applications open faster and perform better.
- **Intelligent Audio**—The audio feature enhances the audio functionality during your online meetings. The audio feature helps filter the background noise, stabilize volume, and prioritize preferred voice streaming during online meetings.

For more information about configuring and using these features, see Dell Optimizer User Guide.

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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 62. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell app	 **Figure 9. My Dell app**
Tips	 **Figure 10. 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
Access top solutions, diagnostics, drivers and downloads, and learn more about your computer through videos, manuals, and documents.	Your Dell computer is uniquely identified by a Service Tag or Express Service Code. To view relevant support resources for your Dell computer, enter the Service Tag or Express Service Code at www.dell.com/support. For more information about how to find the Service Tag for your computer, see Locate the Service Tag on your computer.
Dell knowledge base articles	1. Go to www.dell.com/support. 2. On the menu bar at the top of the Support page, select **Support** > **Knowledge Base**. 3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view 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/region and product, and some services may not be available in your country/region.

NOTE: If you do not have an active Internet connection, you can find contact information about your purchase invoice, packing slip, bill, or Dell product catalog.