OptiPlex All-in-One Plus 7410

Technical Guidebook

Regulatory Model: W31C Regulatory Type: W31C001 January 2023 Rev. A00



Notes, cautions, and warnings

(i) NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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

© 2023 Dell Inc. or its subsidiaries. All rights reserved. Dell Technologies, Dell, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

Contents

Chapter 1: Views of OptiPlex All-in-One Plus 7410	5
Right	
Left	6
Display	7
Retractable camera	8
Bottom	10
Back panel	11
Chapter 2: Specifications of OptiPlex All-in-One Plus 7410	12
Dimensions and weight	
Processor	12
Chipset	13
Operating system	14
Memory	14
External ports	15
Internal slots	15
Ethernet	16
Wireless module	16
Audio	16
Storage	17
Media-card reader	17
Camera	18
Power ratings	18
Power supply connector	19
Display	19
GPU—Integrated	
GPU—Discrete	21
Hardware security	21
Environmental	21
Operating and storage environment	22
Chapter 3: Engineering specifications	
Physical system dimensions	23
Add-in card dimensions	24
Slot limitations	24
Stands and mounts	
Fixed stand	25
Height Adjustable Stand (HAS)	
Height Adjustable Stand with Optical Disk Drive	
VESA mount	28
Ethernet	
Intel Ethernet Connection i219-LM	28
Wireless module	29
Intel AX201, 2x2 MIMO, 2400 Mbps, 2.40 GHz /5 GHz, Wi-Fi 6 (WiFi 802.11ax), Bluetooth 5.2.	

Intel AX211, 2x2 MIMO, 2400 Mbps, 2.4/5/6 GHz, Wi-Fi 6E (WiFi 802.11ax), Bluetooth 5.3	
Realtek RTL8852BE, 2x2, Wi-Fi 6 (Wi-Fi 802.11 a/b/g/n/ac/ax), Bluetooth 5.3	
GPU—Integrated	
Intel UHD Graphics 730	33
Intel UHD Graphics 770	33
GPU—Discrete	
AMD Radeon RX 6500, 4 GB, GDDR6	
Video port and resolution matrix	
Storage	
M.2 2230, 256 GB, PCIe NVMe Gen4 x4, Class 35 SSD	
M.2 2230, 512 GB, PCIe NVMe Gen4 x4, Class 35 SSD	
M.2 2230, 1 TB, PCIe NVMe Gen4 x4, Class 35 SSD	36
M.2 2230, 256 GB, PCIe NVMe Gen4 x4, Opal Self-Encrypting, Class 35 SSD	
M.2 2280, 512 GB, PCIe NVMe Gen4 x4, Class 40 SSD	
M.2 2280, 1 TB, PCIe NVMe Gen4 x4, Class 40 SSD	38
M.2 2280, 2 TB, PCIe NVMe Gen4 x4, Class 40 SSD	
M.2 2280, 512 GB, PCIe NVMe Gen4 x4, Opal Self-Encrypting Class 40 Solid-State Drive	39
M.2 2280, 1 TB, PCIe NVMe Gen4 x4, Opal Self-Encrypting Class 40 Solid-State Drive	
Media-card reader	40
Power ratings	41
Thermal dissipation	
CMOS battery	42
Accessories	42
Security	42
Software security	
Trusted Platform Module	43
Mil-SPEC	
Acoustic noise emission information	45
Chassis enclosure and ventilation requirements	46
System management features	
Dell Client Command Suite for In-Band systems management	
Out-of-Band Systems Management	47
hapter 4: Dell ComfortView	48
hapter 5: Dell Optimizer	49
hapter 6: Getting help and contacting Dell	

Views of OptiPlex All-in-One Plus 7410

Right



1. USB 3.2 Gen 2 port with PowerShare

Connect devices such as external storage devices, printers, and external displays.

Provides data transfer speeds 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.

- (i) 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



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).

Display



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

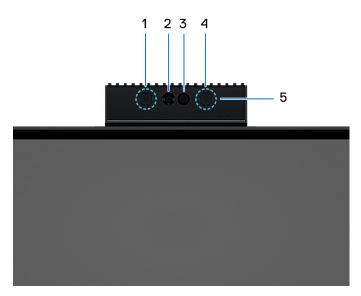
Locating the retractable camera

() NOTE: To access your retractable camera, press down on the retractable camera located at the top of your computer. To conceal your retractable camera and protect your privacy, press down on the retractable camera until it clicks into place.



() NOTE: Depending on the configuration ordered your computer may have a 5MP RGB + Infrared camera or a FHD RGB camera.

Retractable camera for computers shipped with 5MP RGB + Infrared camera



1. Infrared emitter

Emits infrared light, which enables the infrared camera to sense and track motion.

2. Infrared camera

Enhances security when paired with Windows Hello face authentication.

3. Camera

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

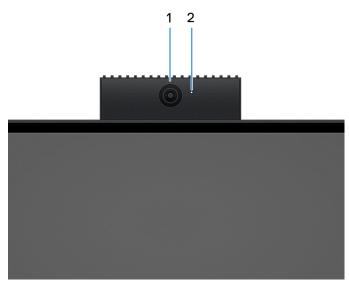
4. Infrared emitter

Emits infrared light, which enables the infrared camera to sense and track motion.

5. Camera-status light

Turns on when the camera is in use.

Retractable camera for computers shipped with FHD RGB 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



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 Plus 7410.

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

Reads from and writes to the SD card.

5. USB 3.2 Gen 2x2 Type C port

Connect devices such as external storage devices and printers. Provides data transfer rate of up to 20 Gbps.

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

Press and hold for your computer to enter a display Built-in Self Test (BIST).

Press to switch display input to and from the device connected to the HDMI-in port on the back panel.

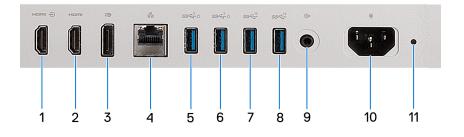
7. Power button

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.

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

Back panel



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 port with Smart Power on

Connect devices such as external storage devices and printers. Provides data transfer speeds 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 port with Smart Power on

Connect devices such as external storage devices and printers. Provides data transfer speeds 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 port

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

8. USB 3.2 Gen 2 port

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

9. Audio line-out port, retaskable

Connect an audio device.

10. Power-cable connector

Connect a power cable to provide power to your computer.

11. Power-supply diagnostics light

Indicates the power-supply state.

Specifications of OptiPlex All-in-One Plus 7410

Dimensions and weight

The following table lists the height, width, depth, and weight of your OptiPlex All-in-One Plus 7410.

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 (i) NOTE: The weight of your computer depends on the configuration ordered and manufacturing variability.	 Maximum: 6.76 kg (14.90 lb) Minimum: 6.33 kg (13.95 lb) 	

Processor

The following table lists the details of the processors supported by your OptiPlex All-in-One Plus 7410.

Table 2. Processor

Description	Option one	Option two	Option three	Option four	Option five	Option six
Processor type	13th Generation Intel Core i3-13100	13th Generation Intel Core i5-13400	13th Generation Intel Core i5-13500, vPro	13th Generation Intel Core i5-13600, vPro	13th Generation Intel Core i7-13700, vPro	13th Generation Intel Core i9-13900, vPro
Processor wattage	60 W	65 W	65 W	65 W	65 W	65 W
Processor total core count	4	10	14	14	16	24
Performance- cores	4	6	6	6	8	8
Efficient-cores	Not applicable	4	8	8	8	16
Processor total thread counts	8	16	20	20	24	32
i NOTE: Intel®	• • Hyper-Threading	Technology is only	available on Perforn	nance-cores.		
Processor speed	Up to 4.5 GHz	Up to 4.6 GHz	Up to 4.8 GHz	Up to 5 GHz	Up to 5.2 GHz, Turbo Boost Max	Up to 5.6 GHz, Thermal Velocity Boost
Performance-cor	es frequency	•	•	-		
Processor base frequency	3.4 GHz	2.5 GHz	2.5 GHz	2.7 GHz	2.1 GHz	2 GHz
Maximum turbo frequency	4.5 GHz	4.6 GHz	4.8 GHz	5 GHz	5.1 GHz	5.2 GHz
Efficient-cores fr	equency	•	•	-		
Processor base frequency	Not applicable	1.8 GHz	1.8 GHz	2 GHz	1.5 GHz	1.5 GHz
Maximum turbo frequency	Not applicable	3.3 GHz	3.5 GHz	3.7 GHz	4.1 GHz	4.2 GHz
Processor cache	12 MB	20 MB	24 MB	24 MB	30 MB	36 MB
Integrated graphics	Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 770

Chipset

The following table lists the details of the chipset supported by your OptiPlex All-in-One Plus 7410.

Table 3. Chipset

Description	Values	
Chipset	Q670	
Processor	13th Generation Intel Core i3/i5/i7/i9	

Table 3. Chipset (continued)

Description	Values
DRAM bus width	64-bit
Flash EPROM	32 MB + 16 MB
PCle bus	Up to Gen3

Operating system

Your OptiPlex All-in-One Plus 7410 supports the following operating systems:

- Windows 11 Home, 64-bit
- Windows 11 Pro, 64-bit
- Windows 11 Pro Downgrade (Windows 10 image)
- Windows 11 Pro National Education, 64-bit
- Windows 10 CMIT Government Edition (China only)
- Ubuntu Linux 22.04 LTS, 64-bit

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 Plus 7410 will RTS with Windows 11 version v20H2 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 Plus 7410 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 Plus 7410.

Table 4. Memory specifications

Description	Values
Memory slots	Two SoDIMM slots
Memory type	Dual-channel DDR5
Memory speed	4800 MHz
Maximum memory configuration	64 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, or 32 GB
Memory configurations supported	• 8 GB, 1 x 8 GB, DDR5, 4800 MHz

Table 4. Memory specifications (continued)

Description	Values		
	 16 GB, 1 x 16 GB, DDR5, 4800 MHz 16 GB, 2 x 8 GB, DDR5, 4800 MHz, dual-channel 32 GB, 1 x 32 GB, DDR5, 4800 MHz 32 GB, 2 x 16 GB, DDR5, 4800 MHz, dual-channel 64 GB, 2 x 32 GB, DDR5, 4800 MHz, dual-channel 		

External ports

The following table lists the external ports of your OptiPlex All-in-One Plus 7410.

Table 5. External ports

Description	Values
Network port	One RJ45 Ethernet Port 10/100/1000 Mbps
USB ports	 One USB 3.2 Gen 2 port with PowerShare One USB 3.2 Gen 2x2 Type-C port Two USB 3.2 Gen 2 ports Two USB 3.2 Gen 1 ports with Smart Power On
Audio port	One universal audio portOne audio line-out port, retaskable
Video port	 One DisplayPort++ 1.4a port One HDMI-in 1.4b port One HDMI-out 2.1 port
Media-card reader	One SD-card slot
Power-adapter port	One power-cable connector
Security-cable slot	One security-cable slot (wedge-shaped)

Internal slots

The following table lists the internal slots of your OptiPlex All-in-One Plus 7410.

Table 6. Internal slots

Description	Values
M.2	 One M.2 2230 slot for WiFi and Bluetooth combo card Two M.2 2230/2280 slots for solid-state drive (i) 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.

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your OptiPlex All-in-One Plus 7410.

Table 7. 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 Plus 7410.

Table 8. 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	
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 (Wi-Fi 802.11n) Wi-Fi 5 (Wi-Fi 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	Bluetooth wireless card	Bluetooth wireless card	Bluetooth wireless card	

Audio

The following table lists the audio specifications of your OptiPlex All-in-One Plus 7410.

Table 9. Audio specifications

Description	Values
Audio controller	Realtek ALC3289
Stereo conversion	Supported
Internal audio interface	High definition audio interface
External audio interface	One universal audio portOne audio line-out port, retaskable
Number of speakers	Two stereo speakers
Internal-speaker amplifier	Supported, Realtek Amplifier ALC1302

Table 9. Audio specifications (continued)

Description		Values
External volume controls		Not supported
Speaker output:		
Average speaker output		5 W
	Peak speaker output	6 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 Plus 7410.

Your OptiPlex All-in-One Plus 7410 supports one of the following storage configurations:

- One M.2 2230/2280 solid-state drive
- Two M.2 2230/2280 solid-state drives

The primary drive of your OptiPlex All-in-One Plus 7410 varies with the storage configuration. For computers the primary drive is the M.2 drive where the operating system is installed.

Table 10. Storage specifications

Storage type	Interface type	Capacity
M.2 2230 solid-state drive, Class 35	PCle Gen3 x4 NVMe, up to 64 Gbps	Up to 1 TB
M.2 2280 solid-state drive, Class 40	PCle Gen3 x4 NVMe, up to 64 Gbps	Up to 2 TB
M.2 2230 solid-state drive, self- encrypting, Class 35	PCle Gen3 x4 NVMe, up to 64 Gbps	Up to 256 GB
M.2 2280 solid-state drive, self- encrypting, Class 40	PCle Gen3 x4 NVMe, up to 64 Gbps	Up to 1 TB

Media-card reader

The following table lists the media cards supported by your OptiPlex All-in-One Plus 7410.

Table 11. 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 me	

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 Plus 7410.

Table 12. Camera specifications

Desc	cription	Values	
Num	ber of cameras	One	
Cam	era type	 FHD RGB camera 5MP RGB + Infrared camera 	
Cam	era location	Retractable camera	
Cam	era sensor type	CMOS sensor technology	
Cam	era resolution:		
	Still image	FHD RGB Camera: 2.07 megapixels5MP RGB Camera: 4.92 megapixels	
	Video	 FHD RGB Camera: 1920 x 1080 (FHD) at 30 fps 5MP RGB Camera: 2560 x 1920 (5MP) at 30 fps 	
Infra	red camera resolution:		
	Still image	0.23 megapixel, only on computers with a 5MP camera	
	Video	640 x 360 (nHD) at 30 fps, only on computers with a 5MP camera	
Diag	onal viewing angle:		
	Camera	FHD RGB Camera: 82 degrees5MP RGB Camera: 85.90 degrees	
	Infrared camera	76.1 degrees, only on computers with a 5MP camera	

Power ratings

The following table lists the power rating specifications of OptiPlex All-in-One Plus 7410.

Table 13. Power ratings

Description	Option one	Option two	
Туре	160 W internal power supply unit (PSU), 80 Plus Bronze240 W 80 Plu		
Input voltage	90 VAC-264 VAC	90 VAC-264 VAC	
Input frequency	47 Hz-63 Hz	47 Hz–63 Hz	
Input current (maximum)	2.80 A	3.80 A	
Output current (continuous)	Operating: • 19.50 VA: 7 A • 19.50 VB: 5 A Standby:	Operating: • 19.50 VA: 8 A • 19.50 VB: 9 A Standby:	

Table 13. Power ratings (continued)

Description		Option one	Option two
		 19.50 VA: 0.50 A 19.50 VB: 1.75 A 	 19.50 VA: 0.50 A 19.50 VB: 1.75 A
Rated output voltage		19.50 VA19.50 VB	19.50 VA19.50 VB
Ten	nperature range:		
	Operating	5°C to 42°C (41°F to 107.6°F)	5°C to 42°C (41°F to 107.6°F)
	Storage	-40°C to 70°C (-40°F to 158°F)	-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 Plus 7410.

Table 14. Power supply connector

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
240 W internal power supply unit (PSU), 80 Plus Platinum	 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 Plus 7410.

Table 15. Display specifications

Description		Option one	Option two
Display type		Full High Definition (FHD), ComfortView Plus	Full High Definition (FHD), ComfortView Plus
Touch option	ns	No	Touch support, with 10 touch points
Display-pane	el technology	In-Plane Switching (IPS)	In-Plane Switching (IPS)
Display-pane	el 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-pane	el native resolution	1920 x 1080	1920 x 1080
Luminance (typical)		250 nits	300 nits
Megapixels		2.07	2.07

Table 15. Display specifications (continued)

Description	Option one	Option two
Color gamut	99% (sRGB)	99% (sRGB)
Pixels Per Inch (PPI)	92	92
Contrast ratio (min.)	700:1, minimum1000:1, typical	700:1, minimum1000:1, 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 Plus 7410.

Table 16. GPU—Integrated

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) 	Shared system memory	13th Generation Intel Core i3/i5
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) 	Shared system memory	13th Generation Intel Core i5 vPro/i7 vPro/i9 vPro

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your OptiPlex All-in-One Plus 7410.

Table 17. GPU—Discrete

Controller	External display support	Memory size	Memory type
AMD Radeon RX 6500	 One DisplayPort++ 1.4a port (5120 x 3200 at 60 Hz) One HDMI-out 2.1 port (4096 x 2160 at 60 Hz) 	4 GB	GDDR6

Hardware security

The following table lists the hardware security of your OptiPlex All-in-One Plus 7410.

Table 18. 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 Plus 7410.

Table 19. 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
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 Plus 7410.

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

Table 20. Computer environment

Operating	Storage
0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
10% to 90% (non-condensing)	0% to 95% (non-condensing)
0.26 GRMS	1.30 GRMS
40 G†	160 G†
-15.2 m to 3048 m (-49.87 ft to 10000 ft)	-15.2 m to 10668 m (-49.87 ft to 35000 ft)
	0°C to 35°C (32°F to 95°F) 10% to 90% (non-condensing) 0.26 GRMS 40 G† -15.2 m to 3048 m (-49.87 ft to 10000

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.

Engineering specifications

Physical system dimensions

The following table provides the physical dimensions of your OptiPlex All-in-One Plus 7410.

(i) **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 21. Physical system dimensions

Feature	Values	
Non-touch chassis dimensions (syste	em without stand)	
Height	354.3 mm (13.95 in.)	
Width	540 mm (21.26 in.)	
Depth	57.9 mm (2.28 in.)	
Maximum weight	6.76 kg (14.90 lb)	
Minimum weight	6.33 kg (13.95 lb)	
Touch chassis dimensions (system w	ithout stand)	
Height	354.3 mm (13.95 in.)	
Width	540 mm (21.26 in.)	
Depth	57.90 mm (2.28 in.)	
Maximum weight	6.76 kg (14.90 lb)	
Minimum weight	6.33 (13.95 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)	
Height adjustable stand with optical disk drive dimensions		
Height	374.6 mm (14.75 in.)	
Width	313.8 mm (12.35 in.)	
Depth	240 mm (9.45 in.)	
Weight	2.33 kg (5.15 lb.)	

Table 21. Physical system dimensions (continued)

Feature	Values	
Packaging parameters with basic fixed stand (includes packaging material)		
Height	798 mm (31.42 in.)	
Width	495 mm (19.49 in.)	
Depth	193 mm (7.60 in.)	
Shipping weight (including packaging materials)	12.05 kg (26.56 lb)	
Packaging parameters with height adjustable stand		
Height	798 mm (31.42 in.)	
Width	495 mm (19.49 in.)	
Depth	193 mm (7.60 in.)	
Shipping weight (including packaging materials)	13.07 kg (28.81 lb)	
Packaging parameters with height adjustable stand with optical disk drive		
Height	798 mm (31.42 in.)	
Width	495 mm (19.49 in.)	
Depth	193 mm (7.60 in.)	
Shipping weight (including packaging materials)	11.80 kg (26.02 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 Plus 7410.

Table 22. M.2 2230 slot for Wi-Fi card

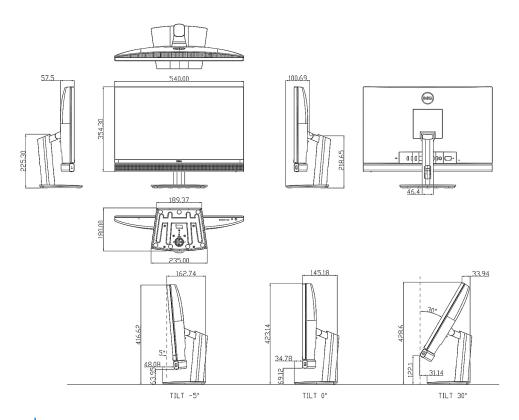
Voltage	3.3 V
Width	0.86 in. (22 mm)
Length	1.18 in. (30 mm)
Thickness	0.14 in. (3.65 mm)
Maximum wattage	6.6 W

Table 23. M.2 2230/2280 slot for solid-state drive

Voltage	3.3 V
Width	0.86 in. (22 mm)
Length	 2230: 1.18 in. (30.00 mm) 2280: 3.15 in. (80.00 mm)
Thickness	0.14 in. (3.65 mm)
Maximum Wattage	8.25 W

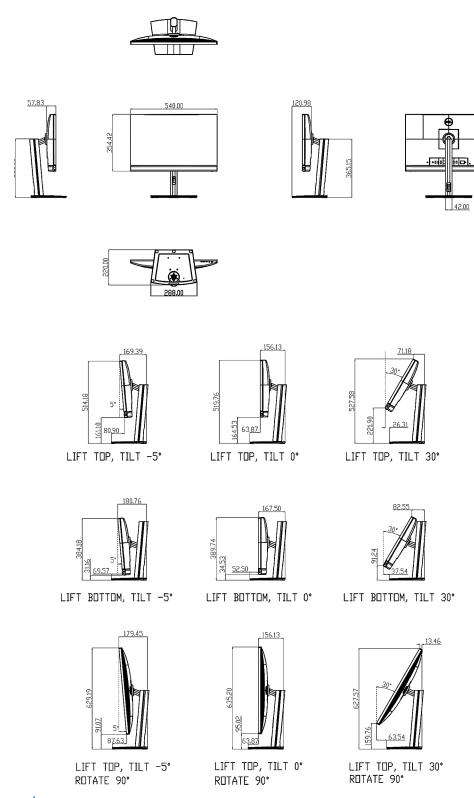
Stands and mounts

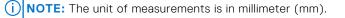
Fixed stand



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

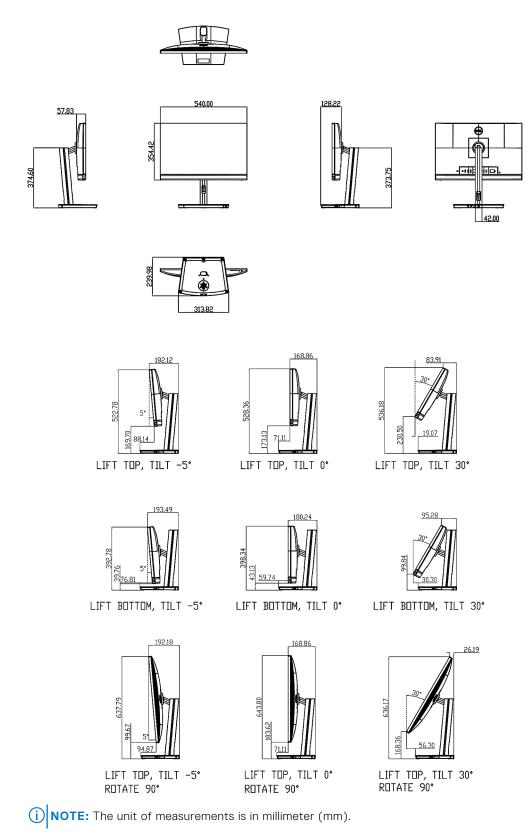
Height Adjustable Stand (HAS)





() 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.

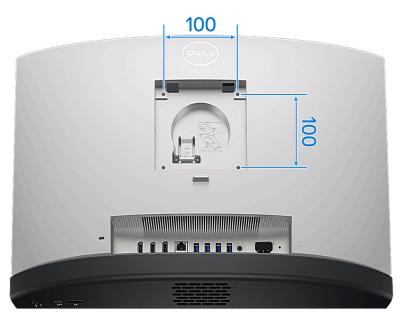
Height Adjustable Stand with Optical Disk Drive



() 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 Plus 7410 is 100x100 mm.



Ethernet

Intel Ethernet Connection i219-LM

The following table lists the i219-LM specifications.

Table 24. 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 24. 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 LANPXE 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 Intel AX201 specifications.

Table 25. Intel AX201 specifications

Host interface	CNVi2 (Connectivity Integration 2 nd 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 EnterpriseWPA3

Table 25. Intel AX201 specifications (continued)

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 140-2FISMA
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 5.2BLE
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.

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

Table 26. Intel AX211 specifications

Host interface	CNVio
Network standard	IEEE 802.11a/b/g/n/ac/ax, 160 MHz channel use, MU-MIMO, new 6 GHz band

Table 26. Intel AX211 specifications (continued)

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
	(i) 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 EnterpriseWPA3
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 140-2FISMA
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 5.3BLE
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)

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 27. Realtek RTL8852BE specifications

Host interface	Wi-Fi - PCleBluetooth - 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 WindowsLinux
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 5.3BLE
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
Operating temperature	0°C to + 70°C
Storage temperature	-40°C to +85°C
() NOTE: *Other names and brands may be claim	ed as the property of others

GPU—Integrated

Intel UHD Graphics 730

Table 28. Intel UHD Graphics 730

Feature	Specifications
Bus type	Integrated
Memory type	Shared memory
Graphics level	Intel Core i3/i5
Estimated Maximum Power Consumption (TDP)	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)
External ports	One DisplayPort 1.4a portOne HDMI 2.1 port
Multiple display support	 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)
	 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)

Intel UHD Graphics 770

Table 29. Intel UHD Graphics 770

Feature	Specifications
Bus type	Integrated
Memory type	Shared memory
Graphics level	Intel Core i5 vPro/i7 vPro/i9 vPro
Estimated Maximum Power Consumption (TDP)	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)
External ports	One DisplayPort 1.4a portOne HDMI 2.1 port
Multiple display support	 With 2 displays Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated DP1.4a HBR3 (5120 x 3200 at 60 Hz)

Table 29. Intel UHD Graphics 770 (continued)

Feature	Specifications
	 Internal FHD panel (1920 x 1080 at 60 Hz) + On-board integrated HDMI 2.1 (4096 x 2160 at 60 Hz)
	 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)

GPU—Discrete

AMD Radeon RX 6500, 4 GB, GDDR6

The following table lists the AMD Radeon RX 6500 specifications.

Table 30. AMD Radeon RX 6500 specifications

Feature	Values
Dedicated graphics memory	4 GB, GDDR6
Memory bus	64-bit
Memory config	SAMSUNG K4ZAF325BM-HC16MICRON MT61K512M32KPA-16:C
Width	x16
Approximate wattage	40 W
Base clock	500 MHz
Boost clock	2612 MHz (maximum frequency)
NVIDIA CUDA cores	Not applicable
G-Sync / Freesync ready	Freesync
Supported APIs	DirectX 12
Maximum resolution	3840 x 2160 at 60 Hz

Video port and resolution matrix

The following table lists the Video port and resolution matrix of your OptiPlex All-in-One Plus 7410.

Table 31. 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, 256 GB, PCIe NVMe Gen4 x4, Class 35 SSD

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

Table 32. 256 GB SSD specifications

Capacity	256 GB	
Height (approximate)	3.5 mm (0.17 in.)	
Width (approximate)	22.00 mm (0.87 in.)	
Depth (approximate)	30.00 mm (1.18 in.)	
Interface type	PCle 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 	
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 33. 512 GB SSD specifications

Capacity	512 GB
Height (approximate)	3.5 mm (0.17 in.)
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCle 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

Table 33. 512 GB SSD specifications (continued)

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, 1 TB, PCIe NVMe Gen4 x4, Class 35 SSD

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

Table 34. 1 TB SSD specifications

Capacity	1 TB	
Height (approximate)	3.5 mm (0.17 in.)	
Width (approximate)	22.00 mm (0.87 in.)	
Depth (approximate)	30.00 mm (1.18 in.)	
Interface type	PCle 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 35. 256 GB SSD, self-encrypting drive specifications

Capacity	256 GB
Height (approximate)	2.38 mm (0.09 in.)
Width (approximate)	22.00 mm (0.87 in.)

Table 35. 256 GB SSD, self-encrypting drive specifications (continued)

Depth (approximate)	30.00 mm (1.18 in.)		
Interface type	PCle Gen4		
Speed (maximum)	64 Gb/s (up to 4 lanes)		
MTBF	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 2280, 512 GB, PCIe NVMe Gen4 x4, Class 40 SSD

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

Table 36. 512 GB SSD specifications

Capacity	512 GB		
Height (approximate)	2.38 mm (0.17 in.)		
Width (approximate)	22.00 mm (0.87 in.)		
Depth (approximate)	80.00 mm (3.15 in.)		
Interface type	PCle 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 37. 1 TB SSD specifications

Capacity	1 TB		
Height (approximate)	2.38 mm (0.17 in.)		
Width (approximate)	22.00 mm (0.87 in.)		
Depth (approximate)	80.00 mm (3.15 in.)		
Interface type	PCle 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 38. 2 TB SSD specifications

Capacity	2 TB		
Height (approximate)	2.38 mm (0.09 in.)		
Width (approximate)	22.00 mm (0.87 in.)		
Depth (approximate)	80.00 mm (3.15 in.)		
Interface type	PCle 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		

Table 38. 2 TB SSD specifications (continued)

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, Opal Self-Encrypting Class 40 Solid-State Drive

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

Table 39. 512 GB SSD, self-encrypting drive specifications

540 OD			
Capacity	512 GB		
Height (approximate)	2.38 mm (0.09 in.)		
Width (approximate)	22.00 mm (0.87 in.)		
Depth (approximate)	80.00 mm (3.15 in.)		
Interface type	PCle 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%		

M.2 2280, 1 TB, PCIe NVMe Gen4 x4, Opal Self-Encrypting Class 40 Solid-State Drive

The following table lists the M.2 2280, 1 TB SSD, self-encrypting drive specifications.

Table 40. 1 TB SSD, self-encrypting drive specifications

Capacity	1 TB	
Height (approximate)	2.38 mm (0.09 in.)	
Width (approximate)	22.00 mm (0.87 in.)	
Depth (approximate)	80.00 mm (3.15 in.)	

Table 40. 1 TB SSD, self-encrypting drive specifications (continued)

Interface type	PCle Gen3		
Speed (maximum)	32 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 - L12) Active: 4.5 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 Plus 7410.

Table 41. 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 		
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 Plus 7410.

Description	Values		
Туре	160 W (80 PLUS Bronze)	240 W (80 PLUS Platinum)	
Diameter (connector)	Not supported	Not supported	
Input voltage	90 VAC to 264 VAC	90 VAC to 264 VAC	
Input frequency	47 Hz to 63 Hz	47 Hz to 63 Hz	
Input current (maximum)	3.60 A	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 	 +19.50 VA/8 A +19.50 VB/9 A Standby mode: +19.50 VA/0.50 A +19.50 VB/1.75 A 	
Rated output voltage	 +19.50 VA +19.50 VB 	 +19.50 VA +19.50 VB 	
BTUs/h (based on PSU max wattage)	546	750	
Active PFC	APFC Power Supply is offered with OptiPlex All-in-One Plus 7410.		
Temperature range			
Operating	5°C to 42°C (41°F to 107°F)	5°C to 42°C (41°F to 107°F)	
Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)	
Compliance	-		
Erp Lot6 Tier 2 requirement	Yes	Yes	
80Plus compliant	Yes	Yes	
Energy Star 8.0 compliant	Yes	Yes	
GS mark compliant	Yes	Yes	
FEMP Standby Power Compliant	Yes	Yes	

Table 42. Power ratings specifications

Thermal dissipation

The following table lists the thermal dissipation of your OptiPlex All-in-One Plus 7410.

Table 43. Thermal dissipation

Power supply unit	Heat dissipation	Voltage
160 W (80 Plus Bronze)		100 VAC–240 VAC, 50 Hz–60 Hz, 3.6 A/1.8 A
240 W (80 Plus Platinum)	750 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 Plus 7410.

Table 44. CMOS battery

Brand	Туре	Voltage	Composition	Battery life
KTSMAXELLTIANQIU	CR2032	3 V		Continuous discharge under 15 kΩ load to 2 V End-Voltage. 20°C±2°C 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 Plus 7410.

Table 45. Accessories
Accessories
Audio
Dell Premier Wireless ANC Headset - WL7022
Keyboard
Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
Mouse
Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
Stylus
Targus Stylus for Capacitive Touch Devices
Additional monitor
Qualified with select Dell UltraSharp, Professional, and E-series monitors
Locks
Kensington 2.0 Chassis Lock, Kensington Desktop and Peripheral Locking Kit, Kensington MicroSaver 2.0 Keyed Laptop Lock

Stands

- Fixed stand
- Height Adjustable Stand
- Height Adjustable Stand with Optical Disk Drive •

Kensington MicroSaver Twin Laptop Lock.

Security

Software security

The following table lists the software security details of your OptiPlex All-in-One Plus 7410.

Table 46. Software security

Security options	
McAfee Small Business Security 30-day free trial	
McAfee Small Business Security 12-month subscription	

Table 46. Software security (continued)

Security options
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 Plus 7410.

Table 47. Trusted Platform Module (TPM)

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

Mil-SPEC

The OptiPlex All-in-One Plus 7410 meets military specifications for the following MIL-STD 810H tests verified by SGS laboratories:

Table 48. 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 	Pass

Table 48. Military specifications (continued)

Test category	Test method	Test parameters	Result
		 Duration: 7x24 hr/cycle Climate category A1: Hot dry 	
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 hrs 	Pass
Low temperature (Operation)	MIL-STD-810H, Method 502.7, Procedure II	 Test temperature: -29°C Duration: 24 hrs 	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
Bench handling	MIL-STD-810H, Method 516.8, Procedure VI	• Lifted edge of chassis raised 100m (4 in.) above horizontal bench top.	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
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) Test result: No visible damage, the unit works normal. 	Pass
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 both test 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	Non-Operational. 185 g, 2 ms Half Sine 2 shocks/ axis/direction for a total of 12 shocks	Fail

Table 48. Military specifications (continued)

Test category	Test method	Test parameters	Result
		() NOTE: Dell to use noted test to replace MIL- STD-8108, Method 516.8, Procedure V, Table 516.8-XIII	

Acoustic noise emission information

The following table lists the acoustic noise emission information of your OptiPlex All-in-One Plus 7410.

Declared noise emission values are in accordance with ISO 9296. Testing performed in compliance with ISO 7779 with operating modes defined by ECMA-74.

Table 49. OptiPlex All-in-One Plus 7410 with i9-13900 processor/2 x 32 GB memory/M.2 SSD/240 W Power supply

Component	Test Configuration
CPU	13 th Generation Intel Core i9-13900
Memory	32 GB + 32 GB
HDD (#, capacity)	M.2 solid-state drive
ODD	DVD, Height Adjustable Stand with Optical Disk Drive
Graphics Adapter	Intel UHD Graphics 770
Power supply	240 W Platinum

Table 50. Declared Sound Power (LWAd)

Operating Mode	Sound Power, Declared mean A- wieghted level, L _{WA,m} (bels)	Sound Power, Statistical adder for verification, K _V (bels)	
Idle	2.50	0.4	
Storage Operating	2.50	0.4	
CPU Stressed	3.90	0.4	
ODD Operating	4.40	0.4	

Table 51. A-Weighted Sound Pressure Level (dB)

Operating Mode	Sound Pressure Declared mean A weighted emission level, L _{pA,m} , Operator (dB)	Sound Power, Statistical adder for verification, K _V , Bystander (bels)
Idle	17.70	15.20
Storage Operating	17.70	15.20
CPU Stressed	31.90	26.50
ODD Operating	39.20	33.40

All tests are conducted according to ISO 7779 and declared according to ISO 9296 except CPU Stressed. This test mode is not specified in ISO 7779, but was measured using the same microphone distances and measurement techniques defined for the other reported operating modes.

Declared Sound Power 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 35°C. 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 I 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 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 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

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.

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.

(i) 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.

Dell Optimizer

This section details the Dell Optimizer specifications of your OptiPlex All-in-One Plus 7410.

On OptiPlex All-in-One Plus 7410 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.
- Presence Detection, including Intelligent Privacy and ExpressSign-in—The Intel Context Sensing Technology's proximity sensor detects your presence to instantly wake up the computer and login using the IR camera and Windows Hello feature. Windows locks when you walk away. This feature is only available on computers shipped with a 5MP RGB + Infrared camera.
- 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.

6

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 52. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell app	Deell
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 on how to find the Service Tag for your computer, see Locate the Service Tag on your computer.
Dell knowledge base articles for a variety of computer concerns	 Go to www.dell.com/support. On the menu bar at the top of the Support page, select Support > Knowledge Base. 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.

(i) 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.