

# OptiPlex Small Form Factor 7010

## Technical Guidebook

## Notes, cautions, and warnings

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

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

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

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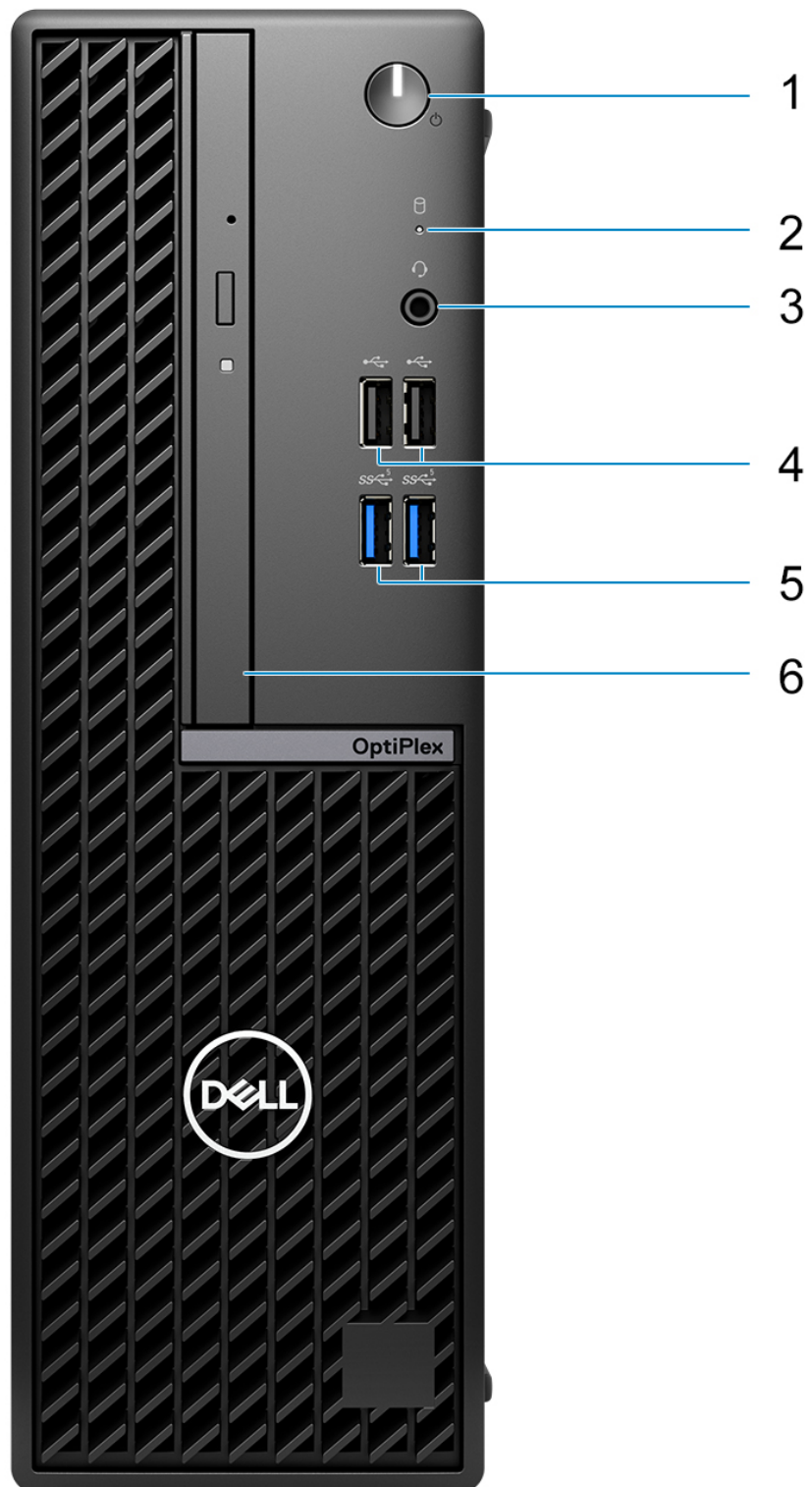
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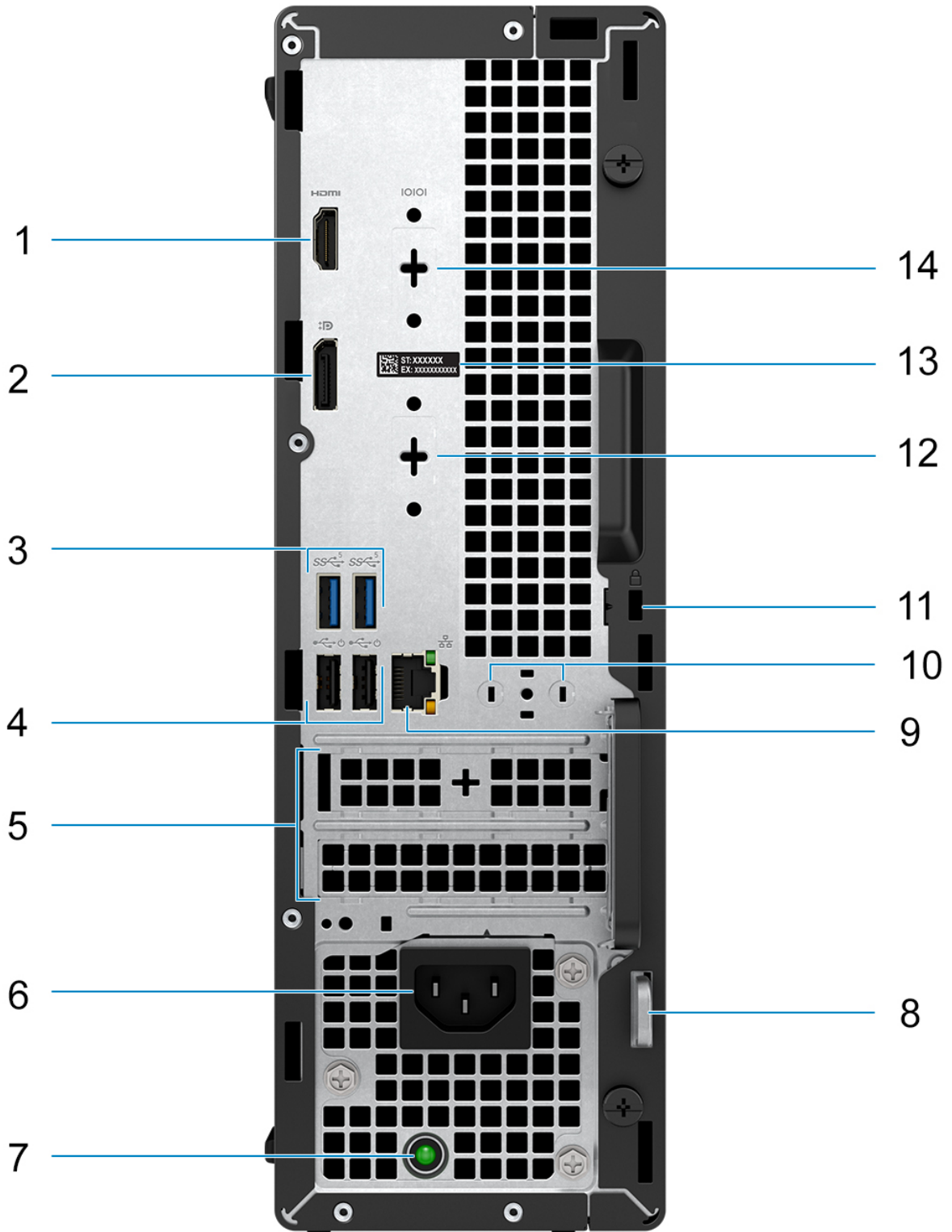
# Views of OptiPlex Small Form Factor 7010

## Front






1. Power button with diagnostic LED
2. Hard-drive activity light
3. Universal audio jack port
4. Two USB 2.0 ports
5. Two USB 3.2 Gen 1 ports
6. Slim optical drive (optional)

# Back






1. One HDMI 1.4b port
  -  **NOTE:** Maximum resolution up to 1920 x 1200 @ 60Hz.
2. One DisplayPort 1.4a port (HBR2)
  -  **NOTE:** Maximum resolution up to 4096 x 2304 @60Hz.
3. Two USB 3.2 Gen 1 ports
4. Two USB 2.0 ports with Smart Power On
5. Two expansion card slots
6. Power cable connector
7. Power-supply diagnostics light
8. Padlock ring
9. RJ45 Ethernet port 10/100/1000 Mbps
10. External antenna connector (optional)
11. One Security-cable slot (for Kensington locks)
12. One video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA) (optional)
  -  **NOTE:** Maximum resolution
    - **HDMI 2.1:** up to 4096 x 2160 @60Hz
    - **DisplayPort 1.4a (HBR3):** up to 5120 x 3200 @60Hz
    - **VGA:** up to 1920 x 1200 @60Hz
13. Service Tag label
14. One Serial port (optional)

# Specifications of OptiPlex Small Form Factor 7010

## Dimensions and weight

The following table lists the height, width, depth, and weight of your OptiPlex Small Form Factor 7010.


**Table 1. Dimensions and weight**

Description	Values
Height	290.00 mm (11.42 in.)
Width	92.60 mm (3.65 in.)
Depth	292.80 mm (11.53 in.)
Weight  <b>NOTE:</b> The weight of your computer depends on the configuration ordered and manufacturing variability.	<ul style="list-style-type: none"> <li>Weight (minimum): 3.68 kg (8.10 lb)</li> <li>Weight (maximum): 4.87 kg (10.72 lb)</li> </ul>

## Processor

The following table lists the details of the processors supported by your OptiPlex Small Form Factor 7010.

**Table 2. Processor**

Description	Option one	Option two	Option three	Option four	Option five	Option six
Processor type	13 <sup>th</sup> Generation Intel Core i3-13100	13 <sup>th</sup> Generation Intel Core i5-13400	13 <sup>th</sup> Generation Intel Core i5-13500	13 <sup>th</sup> Generation Intel Core i5-13600	Intel Celeron G6900	Intel Pentium G7400
Processor wattage	60 W	65 W	65 W	65 W	46 W	46 W
Processor total core count	4	10	14	14	2	2
Performance-cores	4	6	6	6	2	2
Efficient-cores	0	4	8	8	0	0
Processor total thread counts	8	16	20	20	2	4
 <b>NOTE:</b> Intel® Hyper-Threading Technology is only available on Performance-cores.						
Processor speed	3.40 GHz to 4.50 GHz	2.50 GHz to 4.60 GHz	2.50 GHz to 4.80 GHz	2.70 GHz to 5.00 GHz turbo	Up to 3.40 GHz	Up to 3.70 GHz
Performance-cores frequency						
Processor base frequency	3.40 GHz	2.50 GHz	2.50 GHz	2.70 GHz	3.70 GHz	3.40 GHz
Maximum turbo frequency	4.50 GHz	4.60 GHz	4.80 GHz	5.00 GHz	NA	NA
Efficient-cores frequency						
Processor base frequency	NA	1.8 GHz	1.8 GHz	2.00 GHz	NA	NA
Maximum turbo frequency	NA	3.30 GHz	3.50 GHz	3.70 GHz	NA	NA
Processor cache	12 MB	20 MB	24 MB	24 MB	4 MB	6 MB
Integrated graphics	Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 710	Intel UHD Graphics 710

# Chipset

The following table lists the details of the chipset supported by your OptiPlex Small Form Factor 7010.

**Table 3. Chipset**

Description	Values
Chipset	Intel Q670
Processor	Intel Core i3/i5/Intel Celeron/Pentium
DRAM bus width	64-bit/128-bit
Flash EPROM	32 MB RPMC+16 MB nRPMC
PCIe bus	Up to Gen3

# Operating system

Your OptiPlex Small Form Factor 7010 supports the following operating systems:

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

# Memory

The following table lists the memory specifications of your OptiPlex Small Form Factor 7010.

**Table 4. Memory specifications**

Description	Values
Memory slots	Two-UDIMM slots
Memory type	DDR4
Memory speed	Up to 3200 MT/s
Maximum memory configuration	64 GB
Minimum memory configuration	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB, 32 GB
Memory configurations supported	<ul style="list-style-type: none"><li>• 4 GB, 1 x 4 GB, DDR4, 3200 MT/s, single-channel</li><li>• 8 GB, 1 x 8 GB, DDR4, 3200 MT/s, single-channel</li><li>• 8 GB, 2 x 4 GB, DDR4, 3200 MT/s, dual-channel</li><li>• 16 GB, 1 x 16 GB, DDR4, 3200 MT/s, single-channel</li><li>• 16 GB, 2 x 8 GB, DDR4, 3200 MT/s, dual-channel</li><li>• 32 GB, 1 x 32 GB, DDR4, 3200 MT/s, single-channel</li><li>• 32 GB, 2 x 16 GB, DDR4, 3200 MT/s, dual-channel</li><li>• 64 GB, 2 x 32 GB, DDR4, 3200 MT/s, dual-channel</li></ul>

## Memory matrix

The following table lists the memory configurations supported on your OptiPlex Small Form Factor 7010.

**Table 5. Memory matrix**

Configuration	Slot	
	DIMM1	DIMM2
4 GB DDR4	4 GB	NA
8 GB DDR4	8 GB	NA
8 GB DDR4	4 GB	4 GB
16 GB DDR4	16 GB	NA
16 GB DDR4	8 GB	8 GB
32 GB DDR4	32 GB	NA
32 GB DDR4	16 GB	16 GB
64 GB DDR4	32 GB	32 GB

## External ports

The following table lists the external ports of your OptiPlex Small Form Factor 7010.

**Table 6. External ports**

Description	Values
Network port	One RJ-45 Ethernet port 10/100/1000 Mbps
USB ports	<ul style="list-style-type: none"> <li>• Two USB 3.2 Gen 1 (5 Gbps) ports (Front)</li> <li>• Two USB 2.0 (480 Mbps) ports (Front)</li> <li>• Two USB 3.2 Gen 1 (5 Gbps) ports (Rear)</li> <li>• Two USB 2.0 (480 Mbps) ports with Smart Power On (Rear)</li> </ul>
Audio port	<ul style="list-style-type: none"> <li>• One Universal audio jack (Front)</li> </ul>
Video port	<ul style="list-style-type: none"> <li>• One optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA) <ul style="list-style-type: none"> <li> ⓘ <b>NOTE:</b> The maximum resolution supported by HDMI 2.1 is up to 4096 x 2160 @60Hz.</li> <li> ⓘ <b>NOTE:</b> The maximum resolution supported by DisplayPort 1.4a (HBR3) is up to 5120 x 3200 @60Hz.</li> <li> ⓘ <b>NOTE:</b> The maximum resolution supported by VGA is up to 1920 x 1200 @60Hz.</li> </ul> </li> <li>• One DisplayPort 1.4a port (HBR2)</li> <li>• One HDMI 1.4b port (Rear) <ul style="list-style-type: none"> <li> ⓘ <b>NOTE:</b> The maximum resolution supported by HDMI 1.4b port is 1920 x 1200 @ 60 Hz.</li> </ul> </li> </ul>
Media-card reader	Not supported
Power-adaptor port	Not supported
Security-cable slot	<ul style="list-style-type: none"> <li>• Security-cable slot (for Kensington locks)</li> </ul>

**Table 6. External ports (continued)**

Description	Values
	<ul style="list-style-type: none"> <li>One Padlock ring</li> </ul>

## Internal slots

The following table lists the internal slots of your OptiPlex Small Form Factor 7010.

**Table 7. Internal slots**

Description	Values
Expansion	<ul style="list-style-type: none"> <li>One Half-height Gen3 PCIe x16 slot</li> <li>One Half-height Gen3 PCIe x1 slot</li> </ul>
M.2	<ul style="list-style-type: none"> <li>One M.2 2230 slot for WiFi and Bluetooth combo card</li> <li>One M.2 2230/2280 slot for solid-state drive</li> </ul> <p><b>NOTE:</b> To learn more about the features of different types of M.2 cards, search in the Knowledge Base Resource at <a href="http://www.dell.com/support">www.dell.com/support</a>.</p>
SATA slots	Two SATA 3.0 slots for 2.5-inch/3.5-inch hard drive and slim optical drive

## Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your OptiPlex Small Form Factor 7010.

**Table 8. Ethernet specifications**

Description	Values
Model number	Intel WGI219LM
Transfer rate	10/100/1000 Mbps


## Wireless module

The following table lists the Wireless Local Area Network (WLAN) module specifications of your OptiPlex Small Form Factor 7010.

**Table 9. Wireless module specifications**

Description	Option one	Option two	Option three
Model number	Intel AX210	Realtek RTL8852BE	Realtek RTL8822CE
Transfer rate	Up to 2400 Mbps	Up to 1201 Mbps	Up to 433 Mbps
Frequency bands supported	2.40 GHz/5 GHz/6 GHz	2.40 GHz/5 GHz	2.40 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> <li>Wi-Fi 6E (WiFi 802.11ax)</li> </ul>	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> <li>Wi-Fi 6 (WiFi 802.11ax)</li> </ul>	<ul style="list-style-type: none"> <li>WiFi 802.11a/b/g</li> <li>Wi-Fi 4 (WiFi 802.11n)</li> <li>Wi-Fi 5 (WiFi 802.11ac)</li> </ul>

**Table 9. Wireless module specifications (continued)**

Description	Option one	Option two	Option three
Encryption	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>TKIP</li> </ul>	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>TKIP</li> </ul>	<ul style="list-style-type: none"> <li>64-bit/128-bit WEP</li> <li>AES-CCMP</li> <li>TKIP</li> </ul>
Bluetooth wireless card	Bluetooth wireless card	Bluetooth wireless card	Bluetooth wireless card
	 <b>NOTE:</b> 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 Small Form Factor 7010.

**Table 10. Audio specifications**

Description	Values	
Audio controller	Realtek ALC3246-CG	
Stereo conversion	Supported	
Internal audio interface	High definition audio	
External audio interface	Universal Audio Jack port, Audio Line-out	
Number of speakers	One	
Internal-speaker amplifier	Codec built-in amp	
External volume controls	Not supported	
Speaker output:		
	Average speaker output	2 W
	Peak speaker output	2.5 W
Subwoofer output	Not supported	
Microphone	Internal Mic not available	

## Storage

This section lists the storage options on your OptiPlex Small Form Factor 7010.

**Table 11. Storage matrix**

Storage	2.5-inch hard-disk drive	3.5-inch hard-disk drive	M.2 2230/2280 socket	M.2 via PCIe card
M.2 solid-state drive	No	No	Yes	No
M.2 solid-state drive + 2.5-inch hard-disk drive	Yes	No	Yes	No
M.2 solid-state drive + 3.5-inch hard-disk drive	No	Yes	Yes	No

**Table 11. Storage matrix (continued)**

Storage	2.5-inch hard-disk drive	3.5-inch hard-disk drive	M.2 2230/2280 socket	M.2 via PCIe card
M.2 solid-state drive + M.2 solid-state drive (via M.2 expansion card)	No	No	Yes	Yes
M.2 solid-state drive + 3.5-inch hard-disk drive + M.2 solid-state drive (via M.2 expansion card)	No	Yes	Yes	Yes
M.2 solid-state drive + 2.5-inch hard-disk drive + M.2 solid-state drive (via M.2 expansion card)	Yes	No	Yes	Yes
2.5-inch hard-disk drive	Yes	No	No	No
3.5-inch hard-disk drive	No	Yes	No	No

**Table 12. Storage specifications**

Storage type	Interface type	Capacity
2.5-inch hard-disk drive	SATA 3.0	Up to 1 TB
3.5-inch hard-disk drive	SATA 3.0	Up to 2 TB
M.2 2230 solid-state drive, Class 35	PCIe NVMe, up to 64 Gbps	Up to 1 TB
M.2 2280 solid-state drive, Class 40, Self-Encrypting drive	PCIe NVMe, up to 64 Gbps	Up to 1 TB
M.2 2230 solid-state drive, Class 25	PCIe NVMe, up to 64 Gbps	Up to 1 TB

## Power ratings

The following table lists the power rating specifications of OptiPlex Small Form Factor 7010.

**Table 13. Power ratings**

Description	Option one	Option two
Type	180 W internal power supply unit (PSU), 85% Efficient, 80 Plus Bronze	300 W internal power supply unit (PSU), 92% Efficient, 80 Plus Platinum
Input voltage	90 VAC - 264 VAC	90 VAC - 264 VAC
Input frequency	47 Hz - 63 Hz	47 Hz - 63 Hz
Input current (maximum)	3.0 A	4.2 A
Output current (continuous)	<ul style="list-style-type: none"> <li>• 12 VA / 15 A</li> <li>• 12 VB / 14 A</li> </ul> Standby mode: <ul style="list-style-type: none"> <li>• 12 VA / 1.5 A</li> <li>• 12 VB / 3.3 A</li> </ul>	<ul style="list-style-type: none"> <li>• 12 VA / 18 A</li> <li>• 12 VB / 18 A</li> </ul> Standby mode: <ul style="list-style-type: none"> <li>• 12 VA / 1.5 A</li> <li>• 12 VB / 3.3 A</li> </ul>
Rated output voltage	<ol style="list-style-type: none"> <li>1. +12 VA</li> <li>2. +12 VB</li> </ol>	<ol style="list-style-type: none"> <li>1. +12 VA</li> <li>2. +12 VB</li> </ol>
Temperature range		
Operating	5°C to 45°C (41°F to 113°F)	5°C to 45°C (41°F to 113°F)



**Table 13. Power ratings (continued)**

Description	Option one	Option two
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 Small Form Factor 7010.

**Table 14. Power supply connector**

Power supply unit	Connectors
180 W (80 Plus Bronze)	<ul style="list-style-type: none"> <li>Two 4 pin connectors for processor</li> <li>One 8 pin connector for system board</li> </ul>
300 W (80 Plus Platinum)	<ul style="list-style-type: none"> <li>Two 4 pin connectors for processor</li> <li>One 8 pin connector for system board</li> </ul>

## GPU—Integrated

The following table lists the specifications of the integrated Graphics Processing Unit (GPU) supported by your OptiPlex Small Form Factor 7010.

**Table 15. GPU—Integrated**

Controller	External display support	Memory size	Processor
Intel UHD Graphics 710	One DisplayPort 1.4a (HBR2, 4096 x 2304 @60Hz max. resolution)/ One HDMI 1.4b port (1920x1200@60Hz max. resolution)	Shared system memory	Intel Celeron G6900 and Intel Pentium Gold G7400 processors
Intel UHD Graphics 730	One DisplayPort 1.4a (HBR2, 4096 x 2304 @60Hz max. resolution)/ One HDMI 1.4b port (1920x1200@60Hz max. resolution)	Shared system memory	13th Generation Intel Core i3-13100 and i5-13400 processors
Intel UHD Graphics 770	One DisplayPort 1.4a (HBR2, 4096 x 2304 @60Hz max. resolution)/ One HDMI 1.4b port (1920x1200@60Hz max. resolution)	Shared system memory	13th Generation Intel Core i5-13500,i5-13600, processors

## Video port resolution (GPU—Integrated)

**Table 16. Video port resolution (GPU—Integrated)**

Graphics card	Video ports	Maximum supported resolution
Intel UHD Graphics	<ul style="list-style-type: none"> <li>One HDMI 1.4b port</li> <li>One DisplayPort 1.4a port (HBR2)</li> <li>One video port (HDMI 2.1/ Displayport 1.4a (HBR3)/VGA) (optional)</li> </ul>	<ul style="list-style-type: none"> <li>HDMI 1.4b port - 1920 x 1200 @ 60 Hz</li> <li>DisplayPort 1.4a port - 4096 x 2304 @60Hz</li> <li>One video port (HDMI 2.1/ Displayport 1.4a (HBR3)/VGA)</li> </ul>

**Table 16. Video port resolution (GPU—Integrated)**

Graphics card	Video ports	Maximum supported resolution
		(optional) - maximum resolution supported by HDMI 2.1 is up to 4096 x 2160 @60Hz, DisplayPort 1.4a (HBR3) is up to 5120 x 3200 @60Hz, VGA is up to 1920 x 1200 @60Hz

## External display support (GPU—Integrated)

Display support for the integrated graphics card

**Table 17. Display support specifications**

Graphics card	Supported external displays
Intel UHD Graphics 710/730/770	4
Intel UHD Graphics 710/730/770 + optional module	4

 **NOTE:** MST/daisy-chaining supports 4 displays.

## GPU—Discrete

**Table 18. GPU—Discrete**

Controller	External display support	Memory size	Memory type
AMD Radeon RX6500	Two DisplayPort 1.4a ( DP1.4a*2)	4 GB	GDDR6
AMD Radeon RX6300	Two DisplayPort 1.4a ( DP1.4a*2)	2 GB	GDDR6

## Video port resolution (GPU—Discrete)

**Table 19. Video port resolution (GPU—Discrete)**

Graphics card	Video port	Maximum supported resolution
AMD Radeon RX6300	Two DisplayPort 1.4a ( DP1.4a*2)	5120 x 3200 @ 60 Hz is the maximum resolution for one port configuration
AMD Radeon RX6500	Two DisplayPort 1.4a ( DP1.4a*2)	5120 x 3200 @ 60 Hz is the maximum resolution for one port configuration

## External display support (GPU—Discrete)

**Table 20. External display support (GPU—Discrete)**

Graphics Card	Video ports	Number of supported external displays	DisplayPort Multi-Stream Transport (MST) support
AMD Radeon RX6300	Two DisplayPort 1.4a (DP1.4a*2)	4	Supported

**Table 20. External display support (GPU—Discrete) (continued)**

Graphics Card	Video ports	Number of supported external displays	DisplayPort Multi-Stream Transport (MST) support
AMD Radeon RX6500	Two DisplayPort 1.4a (DP1.4a*2)	4	Supported

**NOTE:** DisplayPort Multi-Stream Transport (MST) allows you to daisy chain monitors that have DisplayPort 1.2 and above ports and MST support. For more information about using DisplayPort Multi-Stream Transport, see [www.dell.com/support](http://www.dell.com/support).

## Hardware security

The following table lists the hardware security of your OptiPlex Small Form Factor 7010.

**Table 21. Hardware security**

Hardware security
Kensington security-cable slot
Padlock loop
Chassis lock slot support
Chassis intrusion switch
Lockable cable covers
SafelD including Trusted Platform Module (TPM) 2.0
Smart card keyboard (FIPS)
Microsoft 10 Device Guard and Credential Guard (Enterprise SKU)
Microsoft Windows Bitlocker
Local hard drive data wipe through BIOS (Secure Erase)
Self-encrypting storage drives (Opal, FIPS)
Trusted Platform Module TPM 2.0
China TPM
Intel Secure Boot
Intel Authenticate
SafeBIOS: includes Dell Off-host BIOS Verification, BIOS Resilience, BIOS Recovery, and additional BIOS Controls
OptiPlex SFF Cable Cover

## Environmental

The following table lists the environmental specifications of your OptiPlex Small Form Factor 7010.

**Table 22. Environmental**

Feature	Values
Recyclable packaging	Yes
BFR/PVC—free	No
Vertical orientation packaging support	No
Multi-Pack packaging	Yes

**Table 22. Environmental (continued)**

Feature	Values
Energy-Efficient Power Supply	Standard
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.

## Regulatory compliance

The following table lists the regulatory compliance of your OptiPlex Small Form Factor 7010.

**Table 23. Regulatory compliance**

Regulatory compliance
<a href="#">Product Safety, EMC and Environmental Datasheets</a>
<a href="#">Dell Regulatory Compliance Home Page</a>
<a href="#">Dell and the Environment</a>

## Operating and storage environment

This table lists the operating and storage specifications of your OptiPlex Small Form Factor 7010.

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

**Table 24. Computer environment**

Description	Operating	Storage
Temperature range	10°C to 35°C (50°F to 95°F)	-40°C-70°C (-40°F-158°F)
Relative humidity (maximum)	20% to 80% (non-condensing, Max dew point temperature = 26°C)	5% to 95% (non-condensing, Max dew point temperature = 33°C)
Vibration (maximum)*	0.26 GRMS random at 5 Hz to 350 Hz	1.37 GRMS random at 5 Hz to 350 Hz
Shock (maximum)	Bottom/Right half-sine pulse 40G, 2 ms	105G, 2 ms half-sine pulse
Altitude range	-15.2 m to 3048 m (-49.8 ft to 10,000 ft)	-15.2 m to 10,668 m (-49.8 ft to 35,000 ft)
Airborne Contaminants	ISA-71 G1**&#224;: <300A/month copper coupon corrosion AND <200A/month of silver coupon corrosion	ISA-71 G1**&#224;: <300A/month copper coupon corrosion AND <200A/month of silver coupon corrosion

**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.

# Engineering specifications

## Physical system dimensions

The following table provides the physical dimensions of your OptiPlex Small Form Factor 7010.

**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 25. Physical system dimensions**

Feature	Values
Chassis volume	7.86 liter
Chassis Weight	<ul style="list-style-type: none"> <li>3.677 kg/8.106 lb (minimum)</li> <li>4.869 kg/10.725 lb (maximum)</li> </ul>
Height	290.00 mm (11.42 in.)
Width	92.60 mm (3.65 in.)
Depth	292.80 mm (11.53 in.)
Shipping Weight (includes packaging materials)	8.79 kg (19.4 lb)
Packaging dimensions:	
Height	264.00 mm (10.38 in.)
Width	487.00 mm (19.19 in.)
Depth	394.00 mm (15.50 in.)

## Add-in card dimensions

### System board connector maximum add-in card allowable dimensions

The following table lists the system board connector maximum add-in card allowable dimensions of your OptiPlex Small Form Factor 7010.

**Table 26. System board connector maximum add-in card allowable dimensions**

Feature	Values
<b>PCIe x16 connector</b>	Half-height Gen3 PCIe x16 slot
Voltage	3.3 V/12 V
Height	110.99 mm (4.37 in.)
Length	266.70 mm (10.50 in.)
Maximum wattage	75 W
<b>PCIe x1 connector</b>	Half-height Gen3 PCIe x1 slot

**Table 26. System board connector maximum add-in card allowable dimensions (continued)**

Feature	Values
Voltage	3.3 V/12 V
Height	110.99 mm (4.37 in.)
Length	114.30 mm (4.50 in.)
Maximum wattage	25 W

**Table 27. M.2 2230 slot for Wi-Fi card and Bluetooth combo card**

Voltage	3.3 V
Width	22.00 mm (0.86 in.)
Length	30.00 mm (1.18 in.)
Thickness	3.65 mm (0.14 in.)
Maximum wattage	6.6 W

**Table 28. M.2 2280 slot for solid-state drive**

Voltage	3.3 V
Width	22.00 mm (0.86 in.)
Length	80.00 mm (3.14 in.)
Thickness	3.65 mm (0.14 in.)
Maximum Wattage	6.6 W

**Table 29. M.2 2230 slot for solid-state drive**

Voltage	3.3 V
Width	22.00 mm (0.86 in.)
Length	30.00 mm (1.18 in.)
Thickness	2.30 mm (0.09 in.)
Maximum wattage	6.6 W

## PCIe add-in cards

### Serial port PCIe add-in card

**Table 30. Serial port PCIe add-in card**

Feature	Values
Interface	<ul style="list-style-type: none"> <li>RS-232</li> <li>IEEE1284</li> </ul>
Data rates	<ul style="list-style-type: none"> <li>50 bps ~115.2 Kbps (serial)</li> <li>maximum 1.8 Mbps (parallel)</li> </ul>
<b>Controller details</b>	
Controller	SUNIX SUN2212 (16C950 UART compatible)
Controller bus architecture	<ul style="list-style-type: none"> <li>PCI Express 2.0</li> </ul>

**Table 30. Serial port PCIe add-in card (continued)**

Feature	Values
	<ul style="list-style-type: none"> <li>Single-Lane (x1)</li> </ul>
Driver support	Windows 10 (64-bit)
Half-height serial add-in dongle	Optional
<b>Environment</b>	
Operating temperature	0°C to 60°C (32°F–140°F)
Operating humidity	5% to 95% RH
Storage temperature	-20°C to 85°C (-4°F to 185°F)

## Parallel port PCIe add-in card

**Table 31. Parallel port PCIe add-in card**

Feature	Values
Interface	<ul style="list-style-type: none"> <li>RS-232</li> <li>IEEE1284</li> </ul>
Data rates	<ul style="list-style-type: none"> <li>50 bps ~115.2 Kbps (serial)</li> <li>maximum 1.8 Mbps (parallel)</li> </ul>
<b>Controller details</b>	
Controller	SUNIX SUN2212 (16C950 UART compatible)
Controller bus architecture	<ul style="list-style-type: none"> <li>PCI Express 2.0</li> <li>Single-Lane (x1)</li> </ul>
Driver support	Windows 10 (64-bit)
Half-height parallel add-in dongle	Optional
<b>Environment</b>	
Operating temperature	0°C to 60°C (32°F–140°F)
Operating humidity	5% to 95% RH
Storage temperature	-20°C to 85°C (-4°F to 185°F)

## PS/2 Serial add-in bracket

The following table lists the PS/2 Serial add-in bracket specifications.

**Table 32. PS/2 Serial add-in bracket specifications**

Feature	Values
Interface	UART
Data rates	250 kbps / 235 kbps
<b>Controller details</b>	
Controller	Microchip DEC1515
Controller bus architecture	PCIe
Driver support	N/A
Half-height serial add-in dongle	N/A

**Table 32. PS/2 Serial add-in bracket specifications (continued)**

Feature	Values
<b>Environment</b>	
Operating temperature	0°C to 70°C (32°F to 158°F) / -40°C to 85°C (-40°F to 185°F)
Operating humidity	60% RH
Storage temperature	-65°C to 150°C (-85°F to 302°F)

## Dust filter

The following table lists the dust filter specifications of your OptiPlex Small Form Factor 7010.

**Table 33. Dust filter**

Feature	Values
Type	0.20 mm (0.008 in.)
Mesh count	2540 mm (100.00 in.)
Weave	PW
Silk diameter	0.05 mm (0.002 in.)
Open area	61 %
Thickness	0.10 mm (0.004 in.)
Remark	PET

## Ethernet

### Intel Ethernet Connection i219-LM

The following table lists the i219-LM specifications.

**Table 34. Intel Ethernet Connection i219-LM specifications**

Feature	Values
External connector type	RJ45
Data rate	10/100/1000 Mbps
<b>Controller Details</b>	
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



**Table 34. Intel Ethernet Connection i219-LM specifications (continued)**

Feature	Values
Hardware certifications	N/A
Boot ROM support	EEPROM (Located in SPI)
<b>Network Transfer Mode</b>	
Network transfer rate	10 Mb (full/half-duplex)
10BASE-T (full-duplex) 20 Mbps	100 Mb (full/half-duplex)
100BASE-TX (half-duplex) 100 Mbps	1000 Mb (full-duplex)
<b>Environmental</b>	
Operating temperature range	0°C–85°C (32°F–185°F)
Operating humidity	20% to 80% (non condensing)
Operating system driver Support	<ul style="list-style-type: none"> <li>● Windows (x64)</li> <li>● Ubuntu</li> <li>● Neokylin</li> </ul>
Manageability	<ul style="list-style-type: none"> <li>● Wakeup On LAN</li> <li>● PXE 2.1</li> </ul>
Management capabilities alerting	Optional Intel Standard Manageability (must be made at time of purchase).

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


### 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 35. Realtek RTL8852BE specifications**

Host interface	<ul style="list-style-type: none"> <li>● Wi-Fi - PCIe</li> <li>● Bluetooth - USB</li> </ul>
Network standard	IEEE 802.11a/b/g/n/ac/ax, MU-MIMO
Wi-Fi Alliance certifications	<ul style="list-style-type: none"> <li>● Wi-Fi certified a/b/g/n/ac/ax</li> <li>● WMM*</li> <li>● WPA</li> <li>● WPA2*</li> <li>● WPA3*</li> <li>● Wi-Fi Direct (Windows only)</li> </ul>
Operating frequency bands	<ul style="list-style-type: none"> <li>● 2.4 GHz</li> <li>● 5 GHz</li> </ul>
Data rate	<ul style="list-style-type: none"> <li>● 2.4 GHz 40M: Up to 574 Mbps</li> <li>● 5 GHz 80M: Up to 1201 Mbps</li> </ul>
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity

**Table 35. Realtek RTL8852BE specifications (continued)**

Authentication	<ul style="list-style-type: none"> <li>● WPA* and WPA2* Personal and Enterprise</li> <li>● WPA3* Personal and Enterprise</li> </ul>
Client utility	Native Wi-Fi and Bluetooth Microsoft UI support
Software support	<ul style="list-style-type: none"> <li>● Microsoft WHQL certified for Windows</li> <li>● Linux</li> </ul>
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	<ul style="list-style-type: none"> <li>● Dual Mode Bluetooth 5.3</li> <li>● BLE</li> </ul>
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
 <b>NOTE:</b> *Other names and brands may be claimed as the property of others	

## Realtek RTL8821CE, 1x1, Wi-Fi 5 (Wi-Fi 802.11ac), Bluetooth 5.0

The following table lists the Realtek RTL8821CE specifications.

**Table 36. Realtek RTL8821CE specifications**

Host interface	<ul style="list-style-type: none"> <li>● Wi-Fi - PCIe</li> <li>● Bluetooth - USB</li> </ul>
Network standard	IEEE 802.11a/b/g/n/ac, MU-MIMO
Wi-Fi Alliance certifications	<ul style="list-style-type: none"> <li>● Wi-Fi certified a/b/g/n/ac</li> <li>● WMM</li> <li>● WPA</li> <li>● WPA2</li> <li>● Wi-Fi Direct (Windows only)</li> </ul>
Operating frequency bands	<ul style="list-style-type: none"> <li>● 2.4 GHz</li> <li>● 5 GHz</li> </ul>
Data rate	<ul style="list-style-type: none"> <li>● 2.4 GHz 40M: Up to 150 Mbps</li> <li>● 5 GHz 80M: Up to 433 Mbps</li> </ul>
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication	<ul style="list-style-type: none"> <li>● Open</li> <li>● Shared</li> <li>● WPA</li> <li>● WPA-PSK</li> <li>● WPA2</li> </ul>

**Table 36. Realtek RTL8821CE specifications (continued)**

	<ul style="list-style-type: none"> <li>• WPA2-PSK</li> </ul>
Client utility	Native Wi-Fi and Bluetooth Microsoft UI support
Software support	<ul style="list-style-type: none"> <li>• Microsoft WHQL certified for Windows</li> <li>• Linux</li> </ul>
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	<ul style="list-style-type: none"> <li>• Dual Mode Bluetooth 5.0</li> <li>• BLE</li> </ul>
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

## Intel AX210, 2x2 MIMO, 2400 Mbps, 2.40 Ghz /5 Ghz/6 GHz, Wi-Fi 6E (WiFi 802.11ax), Bluetooth 5.3

The following table lists the Intel AX210 specifications.

**Table 37. Intel AX210 specifications**

Host interface	<ul style="list-style-type: none"> <li>• Wi-Fi - PCIe</li> <li>• Bluetooth - USB</li> </ul>
Network standard	IEEE 802.11a/b/g/n/ac/ax, 160MHz channel use, MU-MIMO, new 6GHz band
Wi-Fi Alliance certifications	<ul style="list-style-type: none"> <li>• Wi-Fi CERTIFIED 6</li> <li>• Wi-Fi CERTIFIED a/b/g/n/ac</li> <li>• WMM</li> <li>• WMM-Power Save</li> <li>• WPA2</li> <li>• WPA3</li> <li>• WPS</li> <li>• PMF</li> <li>• Wi-Fi Direct</li> <li>• Wi-Fi Agile Multiband</li> </ul>
Operating frequency bands	<ul style="list-style-type: none"> <li>• 2.4 Ghz</li> <li>• 5 Ghz</li> <li>• 6 Ghz</li> </ul>
Data rate	<ul style="list-style-type: none"> <li>• 2.4 GHz 40M: Up to 574 Mbps</li> <li>• 5/6 GHz 80M: Up to 1.2 Gbps</li> <li>• 5/6 GHz 160M: Up to 2.4 Gbps</li> </ul>

**Table 37. Intel AX210 specifications (continued)**

Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Security methods	<ul style="list-style-type: none"> <li>• WPA2 Personal and Enterprise</li> <li>• WPA3</li> </ul>
Authentication protocols	<ul style="list-style-type: none"> <li>• 802.1X EAP-TLS</li> <li>• EAP-TTLS/MSCHAPv2</li> <li>• PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')</li> </ul>
Encryption	<ul style="list-style-type: none"> <li>• 64-bit and 128-bit WEP</li> <li>• TKIP</li> <li>• 128-bit AES-CCMP</li> <li>• 256-bit AES-GCMP</li> </ul>
Product safety	<ul style="list-style-type: none"> <li>• UL</li> <li>• C-UL</li> <li>• CB (IEC60950-1)</li> </ul>
Management capabilities alerting	Support for Intel AMT
Government compliance	<ul style="list-style-type: none"> <li>• FIPS 140-2</li> <li>• FISMA</li> </ul>
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	<ul style="list-style-type: none"> <li>• Dual Mode Bluetooth 5.3</li> <li>• BLE</li> </ul>
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)

## GPU—Integrated

### Intel UHD Graphics 710

**Table 38. Intel UHD Graphics 710 specifications**

<b>Intel UHD Graphics 710</b>	
Bus Type	Integrated

**Table 38. Intel UHD Graphics 710 specifications (continued)**

<b>Intel UHD Graphics 710</b>	
Memory type	Shared memory
Graphics Level	Intel Pentium G7400/Celeron G6900: GT0.5 (UHD)
Overlay Planes	Yes
Operating Systems Graphics/ Video API Support	DirectX 12, OpenGL (4.6)
Supports maximum resolution	<ul style="list-style-type: none"> <li>On board HDMI1.4b (1920 x 1200 @ 60 Hz max. resolution)</li> <li>On board DP1.4a (HBR2)(4096 x 2304 @ 60 Hz)</li> <li>One video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA) (optional, maximum resolution supported by HDMI 2.1 is up to 4096 x 2160 @60Hz, DisplayPort 1.4a (HBR3) is up to 5120 x 3200 @60Hz, VGA is up to 1920 x 1200 @60Hz)</li> </ul>
Maximum vertical refresh rate	Up to 60 Hz depending on resolution
External ports	<ul style="list-style-type: none"> <li>One HDMI 1.4b port</li> <li>One DisplayPort 1.4a port (HBR2)</li> <li>One Optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA)</li> </ul>
Multiple display support	Up to 4 displays via DisplayPort Multi-Streaming Technology (MST)

## Intel UHD Graphics 730

**Table 39. Intel UHD Graphics 730 specifications**

<b>Intel UHD Graphics 730</b>	
Bus Type	Integrated
Memory type	Shared memory
Graphics Level	Intel core i3/i5: GT1 (UHD)
Overlay Planes	Yes
Operating Systems Graphics/ Video API Support	DirectX 12, OpenGL (4.6)
Supports maximum resolution	<ul style="list-style-type: none"> <li>On board HDMI1.4b (1920 x 1200 @ 60 Hz max. resolution)</li> <li>On board DP1.4a (HBR2)(4096 x 2304 @ 60 Hz)</li> <li>One video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA) (optional, maximum resolution supported by HDMI 2.1 is up to 4096 x 2160 @60Hz, DisplayPort 1.4a (HBR3) is up to 5120 x 3200 @60Hz, VGA is up to 1920 x 1200 @60Hz)</li> </ul>
Maximum vertical refresh rate	Up to 60 Hz depending on resolution
External ports	<ul style="list-style-type: none"> <li>One HDMI 1.4b port</li> <li>One DisplayPort 1.4a port (HBR2)</li> <li>One Optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA)</li> </ul>
Multiple display support	Up to 4 displays via DisplayPort Multi-Streaming Technology (MST)

# Intel UHD Graphics 770

**Table 40. Intel UHD Graphics 770 specifications**

Intel UHD Graphics 770	
Bus Type	Integrated
Memory type	Shared memory
Graphics Level	Intel core i5: GT1 (UHD)
Overlay Planes	Yes
Operating Systems Graphics/ Video API Support	DirectX 12, OpenGL (4.6)
Supports maximum resolution	<ul style="list-style-type: none"> <li>On board HDMI1.4b (1920 x 1200 @ 60 Hz max. resolution)</li> <li>On board DP1.4a (HBR2)(4096 x 2304 @ 60 Hz)</li> <li>One video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA) (optional, maximum resolution supported by HDMI 2.1 is up to 4096 x 2160 @60Hz, DisplayPort 1.4a (HBR3) is up to 5120 x 3200 @60Hz, VGA is up to 1920 x 1200 @60Hz)</li> </ul>
Maximum vertical refresh rate	Up to 60 Hz depending on resolution
External ports	<ul style="list-style-type: none"> <li>One HDMI 1.4b port</li> <li>One DisplayPort 1.4a port (HBR2)</li> <li>One Optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA)</li> </ul>
Multiple display support	Up to 4 displays via DisplayPort Multi-Streaming Technology (MST)

## GPU—Discrete

### AMD Radeon RX6300, 2 GB, GDDR6

The following table lists the AMD Radeon RX6300 specifications.

**Table 41. AMD Radeon RX6300 specifications**

Feature	Values
Dedicated graphics memory	2 GB, GDDR6
Memory bus	32-bit
Memory config	<ul style="list-style-type: none"> <li>SAMSUNG: K4ZAF325BM-HC16, DPN: 3PNGN</li> <li>HYNIX: H56G42AS4DX014 , DPN MFN30</li> </ul>
Width	Single slot
Approximate wattage	TBP: 32 W
Base clock	N/A
Boost clock	N/A
NVIDIA CUDA cores	N/A
G-Sync / Freesync ready	Freesync (AMD Interlock)
Supported APIs	DirectX 12 (AMD Interlock)

**Table 41. AMD Radeon RX6300 specifications (continued)**

Feature	Values
Maximum resolution	8K 120Hz, 8K@60Hz is the maximum resolution for one port config.
HDMI support	No
HDCP support	Yes
I/O ports	Two DisplayPort 1.4a ports

## AMD Radeon RX6500, 4 GB, GDDR6

The following table lists the AMD Radeon RX6500 specifications.

**Table 42. AMD Radeon RX6500 specifications**

Feature	Values
Dedicated graphics memory	4 GB, GDDR6
Memory bus	64-bit
Memory config	<ul style="list-style-type: none"><li>• SAMSUNG: K4ZAF325BM-HC16, DPN: 3PNGN</li><li>• HYNIX: H56G42AS4DX014 , DPN MFN30</li></ul>
Width	Single slot
Approximate wattage	TBP: 51 W
Base clock	N/A
Boost clock	N/A
NVIDIA CUDA cores	N/A
G-Sync / Freesync ready	Freesync (AMD Interlock)
Supported APIs	DirectX 12 (AMD Interlock)
Maximum resolution	8K 120Hz, 8K@60Hz is the maximum resolution for one port config.
HDMI support	No
HDCP support	Yes
I/O ports	Two DisplayPort 1.4a ports

## Hard-disk drive Preloaded bracket matrix

The following table lists the hard-disk drive preloaded bracket information of your OptiPlex Small Form Factor 7010.

**Table 43. Hard-disk drive Preloaded bracket matrix**

Hard-disk drive Preloaded bracket	Available
3.5 in. Caddy/Bracket	Yes
2.5 in. Caddy/Bracket	No

# Storage

## M.2 2230, 256 GB, PCIe NVMe, Opal Self-Encrypting Class 35 SSD

The following table lists the M.2 2230, 256 GB SSD, self-encrypting drive specifications.

**Table 44. 256 GB SSD, self-encrypting drive specifications**

Capacity	256 GB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	500,118,192
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW (PS4)</li> <li>● Active: 3.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2230, 256 GB, PCIe NVMe, Class 35 SSD

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

**Table 45. 256 GB SSD specifications**

Capacity	256 GB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	500,118,192
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW (PS4)</li> <li>● Active: 3.50 W</li> </ul>



**Table 45. 256 GB SSD specifications (continued)**

<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2230, 512 GB, PCIe NVMe, Class 35 SSD

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

**Table 46. 512 GB SSD specifications**

Capacity	512 GB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW (PS4)</li> <li>● Active: 3.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

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

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

**Table 47. 1 TB SSD specifications**

Capacity	1 TB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)

**Table 47. 1 TB SSD specifications (continued)**

Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW (PS4)</li> <li>• Active: 3.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 512 GB, PCIe NVMe, Class 40 SSD

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

**Table 48. 512 GB SSD specifications**

Capacity	512 GB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW ( PS4 - L1.2)</li> <li>• Active: 5 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

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

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

**Table 49. 1 TB SSD specifications**

Capacity	1 TB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe
Speed (maximum)	64 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW ( PS4 - L1.2)</li> <li>● Active: 5 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 512 GB, PCIe NVMe, Class 40 SSD, self-encrypting drive

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

**Table 50. 512 GB SSD, self-encrypting drive specifications**

Capacity	512 GB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 mW ( PS4 - L1.2)</li> <li>● Active: 4.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C

**Table 50. 512 GB SSD, self-encrypting drive specifications (continued)**

Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## M.2 2280, 1 TB, PCIe NVMe, Class 40 SSD, self-encrypting drive

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

**Table 51. 1 TB SSD, self-encrypting drive specifications**

Capacity	1 TB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	80.00 mm (3.15 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW ( PS4 - L1.2)</li> <li>• Active: 4.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## 2.5-inch, 500 GB, 7200 RPM, SATA, HDD

**Table 52. 2.5-inch, 500 GB, 7200 RPM, SATA, HDD specifications**

Capacity	500 GB
Speed	7200 RPM
Height (approximate)	7.11 mm (0.28 in.)
Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.58 mm (3.96 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps

**Table 52. 2.5-inch, 500 GB, 7200 RPM, SATA, HDD specifications (continued)**

MTBF	550,000 hours
Logical blocks	976,773,168
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 0.7 W</li> <li>• Active: 3.25 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

## 2.5-inch, 1 TB, 7200 RPM, SATA, HDD

**Table 53. 2.5-inch, 1 TB, 7200 RPM, SATA, HDD specifications**

Capacity	1 TB
Speed	7200 RPM
Height (approximate)	7.11 mm (0.28 in.)
Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.58 mm (3.96 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	1,953,525,168
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 0.7 W</li> <li>• Active: 3.25 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

## 3.5-inch, 1 TB, 7200 RPM, SATA, HDD

**Table 54. 3.5-inch, 1 TB, 7200 RPM, SATA, HDD specifications**

Capacity	1 TB
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**Table 54. 3.5-inch, 1 TB, 7200 RPM, SATA, HDD specifications (continued)**

Speed	7200 RPM
Height (approximate)	26.10 mm (1.02 in.)
Width (approximate)	147.06 mm (5.79 in.)
Depth (approximate)	101.60 mm (4.00 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	1,953,525,168
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 W</li> <li>● Active: 10 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	65G @2ms
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

## 3.5-inch, 2 TB, 7200 RPM, SATA, HDD

**Table 55. 3.5-inch, 2 TB, 7200 RPM, SATA, HDD specifications**

Capacity	2 TB
Speed	7200 RPM
Height (approximate)	25.40 mm (1.00 in.)
Width (approximate)	147.06 mm (5.79 in.)
Depth (approximate)	101.60 mm (4.00 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	3,907,029,168
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>● Idle: 5 W</li> <li>● Active: 10 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	65G @2ms
<b>Environmental non-operating conditions (non-condensing)</b>	

**Table 55. 3.5-inch, 2 TB, 7200 RPM, SATA, HDD specifications (continued)**

Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

## M.2 2230, 512 GB, PCIe NVMe, Class 25 SSD

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

**Table 56. 512 GB SSD specifications**

Capacity	512 GB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	1,000,215,216
<b>Power source</b>	
Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW (PS4)</li> <li>• Active: 3.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

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

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

**Table 57. 1 TB SSD specifications**

Capacity	1 TB
Height (approximate)	3.50 mm ( 0.17 in. )
Width (approximate)	22.00 mm (0.87 in.)
Depth (approximate)	30.00 mm (1.18 in.)
Interface type	PCIe
Speed (maximum)	32 Gb/s (up to 4 lanes)
MTBF	1.4M hours
Logical blocks	2,000,409,264
<b>Power source</b>	

**Table 57. 1 TB SSD specifications (continued)**

Power consumption (reference only)	<ul style="list-style-type: none"> <li>• Idle: 5 mW (PS4)</li> <li>• Active: 3.50 W</li> </ul>
<b>Environmental operating conditions (non-condensing)</b>	
Temperature range	0°C to 70°C
Relative humidity range	10% to 90%
Op shock	1500G
<b>Environmental non-operating conditions (non-condensing)</b>	
Temperature range	-40°C to 70°C
Relative humidity range	5% to 95%

## Power ratings

The following table lists the power ratings specifications of your OptiPlex Small Form Factor 7010.

**Table 58. Power ratings specifications**

Description	Values	
Type	180 W, 85% efficient (80 Plus Bronze)	300 W (80 Plus Platinum)
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 A	4.2 A
Output current (continuous)	<ul style="list-style-type: none"> <li>• 12 VA / 15 A</li> <li>• 12 VB / 14 A</li> </ul> Standby mode: <ul style="list-style-type: none"> <li>• 12 VA / 1.5 A</li> <li>• 12 VB / 3.3 A</li> </ul>	<ul style="list-style-type: none"> <li>• 12 VA / 18 A</li> <li>• 12 VB / 18 A</li> </ul> Standby mode: <ul style="list-style-type: none"> <li>• 12 VA / 1.5 A</li> <li>• 12 VB / 3.3 A</li> </ul>
Rated output voltage	<ul style="list-style-type: none"> <li>• +12 VA</li> <li>• +12 VB</li> </ul>	<ul style="list-style-type: none"> <li>• +12 VA</li> <li>• +12 VB</li> </ul>
<b>Temperature range</b>		
Operating	5°C to 45°C (41°F to 113°F)	5°C to 45°C (41°F to 113°F)
Storage	-40°C to 70°C (-40°F to 158°F)	-40°C to 70°C (-40°F to 158°F)
<b>Compliance</b>		
Erp Lot6 Tier 2 requirement	Yes	Yes
80 Plus compliant	Yes	Yes
Energy Star 8.0 compliant	Yes	Yes
GS mark compliant	Yes	Yes
FEMP Standby Power Compliant	Yes	Yes



# Thermal dissipation

The following table lists the thermal dissipation of your OptiPlex Small Form Factor 7010.

**Table 59. Thermal dissipation**

Power supply unit	Heat dissipation	Voltage
180 W (80 Plus Bronze)	614 BTU/hr	100 VAC-240 VAC, 50 Hz-60 Hz, 3A/1.5 A
300 W (80 Plus Platinum)	1023 BTU/hr	100 VAC-240 VAC, 50 Hz-60 Hz, 4.2A/2.1 A

# CMOS battery

The following table lists the CMOS battery specifications of your OptiPlex Small Form Factor 7010.

**Table 60. CMOS battery**

Brand	Type	Voltage	Composition	Battery life
SHUNWO	CR2032N	3.0 V	Lithium metal	Continuous Discharge Under 15 kΩ Load to 2.0 V End-Voltage. 20°C±2°C 1030 Hrs. or Longer.980 Hrs.or Longer after 12 mo.
DOUBLE BEST	CR2032N	3.0 V	Lithium metal	Continuous Discharge Under 15 kΩ Load to 2.0 V End-Voltage. 20°C±2°C 1030 Hrs. or Longer.980 Hrs.or Longer after 12 mo.
VIC-DAWN	CR2032N	3.0 V	Lithium metal	Continuous Discharge Under 15 kΩ Load to 2.0 V End-Voltage. 20°C±2°C 1030 Hrs. or Longer.980 Hrs.or Longer after 12 mo.

# Accessories

The following table lists the supported accessories on your OptiPlex Small Form Factor 7010.

**Table 61. Accessories**

Accessories
Keyboard and Mouse: <ul style="list-style-type: none"> <li>• Dell Pro Wireless Keyboard and Mouse - KM5221W</li> <li>• Dell Pro Wireless Keyboard and Mouse (White) - KM5221W</li> </ul>
Display: <ul style="list-style-type: none"> <li>• Dell 24 Monitor - P2422H</li> <li>• Dell UltraSharp 24 Monitor - U2422H</li> </ul>
Web Cam: <ul style="list-style-type: none"> <li>• Dell Pro Webcam - WB5023</li> <li>• Dell UltraSharp Webcam - WB7022</li> </ul>
Audio and Speakers : <ul style="list-style-type: none"> <li>• Dell Speakerphone - SP3022</li> </ul>
Audio Headsets : <ul style="list-style-type: none"> <li>• Dell Pro Stereo Headset - WH3022</li> </ul>

# Security

## Software security

The following table lists the software security details of your OptiPlex Small Form Factor 7010.

**Table 62. Software security**

Security options
SafeSupply Chain Add-on
Dell Trusted Device Agent
Absolute Control (Pro) - 1, 3, 4, and 5 year options
Absolute Resilience (Prem) - 1, 3, 4, and 5 year options
Absolute Resilience (Premium), SLED - 1, 3, 4, and 5 year options
Absolute Visibility (Std) - 1, 3, 4, and 5 year options
McAfee Business Protection
Secureworks Taegis XDR
VMware Carbon Black
CrowdStrike Falcon

## Trusted Platform Module

The following table lists the Trusted Platform Module (TPM) of your OptiPlex Small Form Factor 7010.

**Table 63. Trusted Platform Module (TPM)**

Nuvoton NPCT760JABYX
SPI interface
TPM 2.0
FIPs 140-2 certificate

## Mil-SPEC

The OptiPlex Small Form Factor 7010 meets military specifications for the following MIL-STD 810H tests:

**Table 64. Tower - Military specifications**

Test Category	Test Method	Test Parameters
Altitude Storage Transport	Method 500.6 Procedure I	Test Pressure: Equivalent to cabin altitude of 15,000ft Temperature: 21°C; Altitude Change Rate: <10 m/s Duration: 1 hour Unit is non-operational during test.
Altitude Operation/Air Carriage	Method 500.6 Procedure II	Test Pressure: Equivalent to cabin altitude of 15,000ft

**Table 64. Tower - Military specifications (continued)**

Test Category	Test Method	Test Parameters
		Temperature: 21°C; Altitude Change Rate: <10 m/s Duration: 1 hour Unit is operational during test.
High Temperature Storage and Transition	Method 501.7 Procedure I	Duration: 7 day exposure (7 X 24 hr. cycles) Temperature: 33 – 71°C Table 501.7 - III High temperature cycles, climate category A1 Hot Dry Unit is non-operational during test.
High Temperature Operational	Method 501.7 Procedure II	Duration: 5 day exposure (5 X 24 hr. cycles) Temperature: 32 – 49°C (Ambient Air) Table 501.7 - III High Temperature cycle Unit is operational during test.
Low Temperature (Exaggerated)	Method 502.7 Procedure I	Duration: 24 hour exposure Temperature: -51°C Unit is non-operational during test.
Low temperature	Method 502.7 Procedure II	Duration: 24 hour exposure Temperature: -29 °C Unit is operational during test
Humidity Induced (Storage & Transit) and Naturaland Cycles	Method 507.6 Procedure I	Duration: Refer to MIL-spec Table 507.6-II Nonhazardous test items.
Vibration Operational	Method 514.8 Procedure I - Category 4	Operational Vibration, 10-500 Hz, 1.04 Grms, random 1 hour on Bottom, Left and Back side. Unit is operational during test.
Vibration Non-Operational	Method 514.8 Procedure I - Category 24	Non-Operational Vibration, 20-2000 Hz, 7.69 Grms, Test Duration: 1hr/axis Unit is non-operational during test.
Functional Shock	Method 516.8 Procedure I	185g, 2ms Half Sine 1 shock/axis/direction for a total of 6 shocks Unit is operational during test.
Shock material to be packaged	Method 516.8 Procedure II	On-road Shock, 5.1g / 11ms (Table 516-8- VII) - Off-road Shocks 15.2g / 5ms (Table 516-8-VII) - Test unit orientations at x, y and z axis for both test.

**Table 64. Tower - Military specifications (continued)**

Test Category	Test Method	Test Parameters
		- Unit is Non-Operational during both test
Bench handling	Method 516.8 Procedure VI	Angle drops onto solid wooden bench thickness least 4.25cm (1.675 inch). Test height judgement as two conditions as rise test units at one edge 100mm (4 inch) or rise an angle of 45° about a solid wooden bench top. Unit is non-operational during test.
Sand and dust Blowing dust	Method 510.7 Procedure I	Duration: 12 hours Air velocity = 1.5 m/s (300 ft/min) to 8.9 m/s (1750 ft/min) Temperature: 60 °C Relative Humidity: 30% 6H at standard ambient temperature and 6 hours at the high storage or operating temperature Unit is non-operational during test.

## Acoustic noise emission information tower

The following table lists the acoustic noise emission information of your OptiPlex Small Form Factor 7010.

**Table 65. Acoustic noise emission information tower**

Component	Test Configuration
CPU	I5-13600 RAPTOR LAKE DT LGA C-0 65W 2.7 GHz 6+8 MS2 vPro 24 MB 32 EU Q1DF QS
Memory	DIMM,32GB*2,3200,2RX8,16G,DDR4,NU
HDD (#, capacity)	SSDR,1TB,P44,30S3,MICRON,2450
ODD	DVD+/-RW,8X,9.5T,GU90N,HLDS
Graphics Adapter	UMA

**Table 66. Declared Sound Power (LWAd)**

Operating Mode	Declared Sound Power(LWAd)
Idle	2.71
HDD Operating	2.74
CPU Stressed	2.73
ODD Operating	4.42

**Table 67. A-Weighted Sound Pressure Level (dB)**

Declared Sound Pressure (LpA)		
	Tabletop System	
Operating Mode	Operator Position	Bystander Position

**Table 67. A-Weighted Sound Pressure Level (dB) (continued)**

Declared Sound Pressure (LpA)		
Idle	16.3	15.4
HDD operating	16.1	15.4
CPU Stressed	16.2	15.4
ODD Operating	37.4	32.8

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

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

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

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

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

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

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

## Out of Band Systems Management



Intel Standard Manageability option **must be configured in our 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](https://registry.dmtf.org/registry/results/field_initiative_name%3A%22DASH%201.0%22)).

# 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 68. Self-help resources**

Self-help resources	Resource location
Information about Dell products and services	<a href="http://www.dell.com">www.dell.com</a>
My Dell app	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , and press Enter.
Online help for operating system	<a href="http://www.dell.com/support/windows">www.dell.com/support/windows</a> <a href="http://www.dell.com/support/linux">www.dell.com/support/linux</a>
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 <a href="http://www.dell.com/support">www.dell.com/support</a> .  For more information on how to find the Service Tag for your computer, see <a href="#">Locate the Service Tag on your computer</a> .
Dell knowledge base articles for a variety of computer concerns	<ol style="list-style-type: none"> <li>1. Go to <a href="http://www.dell.com/support">www.dell.com/support</a>.</li> <li>2. On the menu bar at the top of the Support page, select <b>Support &gt; Knowledge Base</b>.</li> <li>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.</li> </ol>

## Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see [www.dell.com/contactdell](http://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.