

OptiPlex Tower Plus 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.

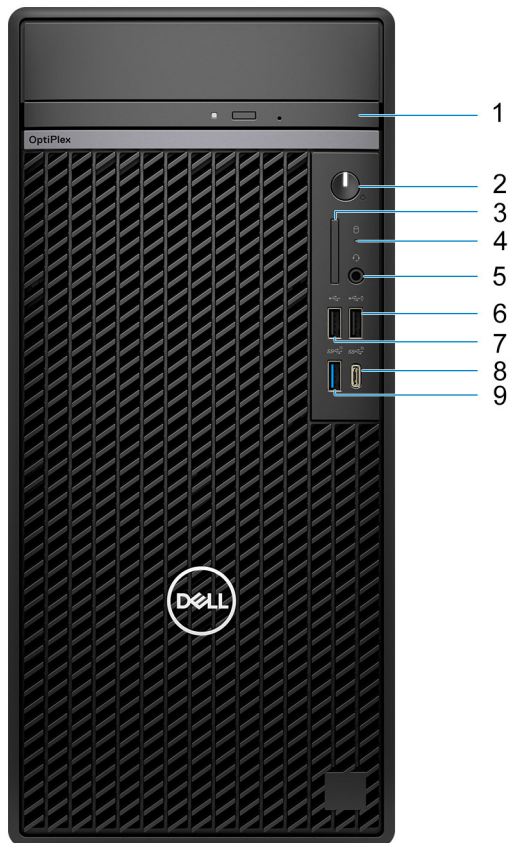
Chapter 1: Views of OptiPlex Tower Plus 7010.....	6
Front.....	6
Back.....	7
Chapter 2: Specifications of OptiPlex Tower Plus 7010.....	9
Dimensions and weight.....	9
Processor.....	9
Chipset.....	11
Operating system.....	12
Memory.....	12
Memory matrix.....	13
External ports.....	13
Internal slots.....	14
Ethernet.....	14
Wireless module.....	15
Audio.....	15
Storage.....	16
RAID (Redundant Array of Independent Disks).....	19
Media-card reader.....	19
Power ratings.....	20
Power supply connector.....	20
GPU—Integrated.....	20
Video port resolution (GPU—Integrated).....	21
External display support (GPU—Integrated).....	21
GPU—Discrete.....	21
Video port resolution.....	22
External display support (GPU—Discrete).....	22
Hardware security.....	23
Environmental.....	23
Regulatory compliance.....	24
Operating and storage environment.....	24
Chapter 3: Engineering specifications.....	25
Physical system dimensions.....	25
Add-in card dimensions.....	25
System board connector maximum add-in card allowable dimensions.....	25
PCIe lane details	27
Dust filter.....	27
PCIe add-in cards.....	27
SD-card 4.0 reader.....	27
Serial port PCIe add-in card.....	28
PS/2 Serial add-in bracket.....	28
USB Type-A 3.2 Gen2 card.....	29
Powered USB 12/24 V add-in card.....	29

Powered serial PCIe add-in card.....	31
USB 3.1 Gen 2 Type-C PCIe add-in card.....	32
i225 PCIe x1 2.5 GbE NIC Card.....	34
Thunderbolt 4 PCIe Add-In Card.....	34
Ethernet.....	35
Intel Ethernet Connection WGi219-LM.....	35
Intel Ethernet Connection i225.....	36
Wireless module.....	37
Intel AX211, 2x2 MIMO, 2400 Mbps, 2.4/5/6 GHz, Wi-Fi 6E (WiFi 802.11ax), Bluetooth 5.3.....	37
Realtek RTL8852BE, 1x1, Wi-Fi 5 (WiFi 802.11ac), Bluetooth 5.3.....	38
GPU—Integrated.....	39
Intel UHD Graphics 730.....	39
Intel UHD Graphics 770.....	39
GPU—Discrete.....	40
NVIDIA GeForce RTX 3050, 8 GB GDDR6.....	40
NVIDIA GeForce RTX 3070, 8 GB GDDR6.....	41
AMD Radeon RX6300, 2 GB, GDDR5.....	41
AMD Radeon RX6500, 4 GB, GDDR6.....	42
GPU and PSU matrix.....	42
HDD Preloaded bracket and cable matrix.....	43
Storage.....	43
2.5-inch, 1 TB, 5400 RPM, SATA, HDD	43
2.5-inch, 2 TB, 5400 RPM, SATA, HDD	43
2.5-inch, 500 GB, 7200 RPM, SATA, HDD	44
2.5-inch, 1 TB, 7200 RPM, SATA, HDD	45
2.5-inch, 500 GB, 7200 RPM, SATA, HDD, Self-Encrypting, Opal 2.0, FIPS	45
3.5-inch, 4 TB, 5400 RPM, SATA, HDD	46
3.5-inch, 1 TB, 7200 RPM, SATA, HDD	46
M.2 2230, 512 GB, PCIe NVMe, Class 25 SSD.....	47
M.2 2230, 1 TB, PCIe NVMe, Class 25 SSD.....	48
M.2 2230, 256 GB, PCIe NVMe, Class 35 SSD.....	48
M.2 2230, 512 GB, PCIe NVMe, Class 35 SSD.....	49
M.2 2230, 1 TB, PCIe NVMe, Class 35 SSD.....	49
M.2 2230, 256 GB, PCIe NVMe, Opal Self-Encrypting Class 35 SSD.....	50
M.2 2280, 512 GB, PCIe NVMe, Class 40 SSD, self-encrypting drive.....	51
M.2 2280, 1 TB, PCIe NVMe, Class 40 SSD, self-encrypting drive.....	51
M.2 2280, 512 GB, PCIe NVMe, Class 40 SSD.....	52
M.2 2280, 1 TB, PCIe NVMe, Class 40 SSD.....	52
M.2 2280, 2 TB, PCIe NVMe, Class 40 SSD.....	53
8x DVD±RW, slimline	54
Media-card reader	54
Power.....	55
Thermal dissipation.....	55
CMOS battery.....	56
Accessories.....	56
Security.....	56
Software security.....	56
Trusted Platform Module.....	57
Mil-SPEC.....	57
Acoustic noise emission information tower.....	58

Chassis enclosure and ventilation requirements.....	59
System management features.....	60
Dell Client Command Suite for In-Band systems management	60
Out of Band Systems Management.....	60
Chapter 4: Getting help and contacting Dell.....	61

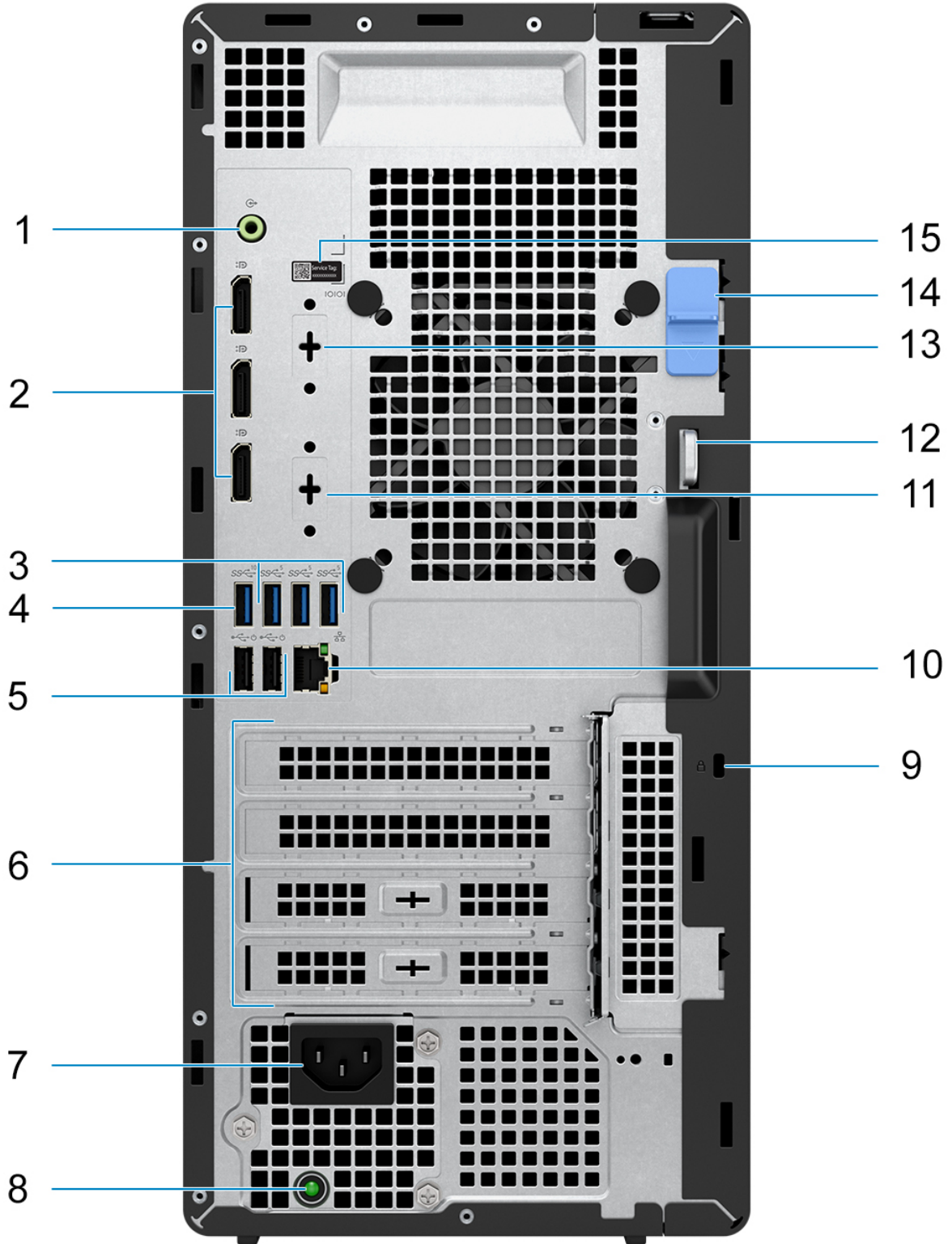
Views of OptiPlex Tower Plus 7010



Front



1. Optical disk-drive (optional)
2. Power button with diagnostic LED
3. SD-card slot (optional)
4. Hard-drive activity light
5. Universal audio jack port
6. USB 2.0 (480 Mbps) port with PowerShare
7. USB 2.0 (480 Mbps) port
8. USB 3.2 Gen 2x2 (20 Gbps) Type-C port
9. USB 3.2 Gen 2 (10 Gbps) port

Back




1. Re-tasking line-out/line-in audio port
2. Three DisplayPort 1.4a ports (HBR2)
 -  **NOTE:** Maximum resolution up to 4096 x 2304 @60Hz
3. Three USB 3.2 Gen 1 (5 Gbps) ports
4. One USB 3.2 Gen 2 (10 Gbps) port
5. Two USB 2.0 (480 Mbps) ports with Smart Power On
6. Four expansion card slots
7. Power cord connector port
8. Power supply diagnostic light
9. Security-cable slot (for Kensington locks)
10. RJ45 Ethernet port (10/100/1000 Mbps)
11. One video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA/USB Type-C with DisplayPort Alt mode) (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
 - **USB Type-C with DisplayPort Alt mode:** up to 5120 x 3200 @60Hz
12. Padlock ring
13. Serial port (optional)
14. Release latch
15. Service tag label

Specifications of OptiPlex Tower Plus 7010

Dimensions and weight

The following table lists the height, width, depth, and weight of your OptiPlex Tower Plus 7010.

Table 1. Dimensions and weight

Description	Values
Height	367.00 mm (14.45 in.)
Width	169.00 mm (6.65 in.)
Depth	300.80 mm (11.84 in.)
Weight  NOTE: The weight of your computer depends on the configuration ordered and manufacturing variability.	<ul style="list-style-type: none"> • Minimum - 5.93 kg (13.07 lb) • Maximum - 9.63 kg (21.24 lb)

Processor

The following table lists the details of the processors supported by your OptiPlex Tower Plus 7010.

Table 2. Processor



Description	Option one	Option two	Option three	Option four	Option five
Processor type	13 th Generation Intel Core i3-13100	13 th Generation Intel Core i5-13400	13 th Generation Intel Core i5-13500	13 th Generation Intel Core i5-13600	13 th Generation Intel Core i5-13600K, vPro
Processor wattage	60 W	65 W	65 W	65 W	125 W
Processor total core count	4	10	14	14	14
Performance-cores	4	6	6	6	6
Efficient-cores	0	4	8	8	8
Processor total thread counts	8	16	20	20	20
 NOTE: 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	3.50 GHz to 5.10 GHz
Performance-cores frequency					
Processor base frequency	3.40 GHz	2.50 GHz	2.50 GHz	2.70 GHz	3.50 GHz
Maximum turbo frequency	4.50 GHz	4.60 GHz	4.80 GHz	5.00 GHz	5.10 GHz
Efficient-cores frequency					
Processor base frequency	NA	1.80 GHz	1.80 GHz	2.00 GHz	2.60 GHz
Maximum turbo frequency	NA	3.30 GHz	3.50 GHz	3.70 GHz	3.90 GHz
Processor cache	12 MB	20 MB	24	24 MB	24MB
Integrated graphics	Intel UHD Graphics 730	Intel UHD Graphics 730	Intel UHD Graphics 770	Intel UHD Graphics 770	Intel UHD Graphics 770

Table 3. Processor

Description	Option six	Option seven	Option eight	Option nine
Processor type	13 th Generation Intel Core i7-13700	13 th Generation Intel Core i7-13700K, vPro	13 th Generation Intel Core i9-13900	13 th Generation Intel Core i9-13900K, vPro
Processor wattage	65 W	125 W	65 W	125 W
Processor total core count	16	16	24	24
Performance-cores	8	8	8	8
Efficient-cores	8	8	16	16
Processor total thread counts	24	24	32	32
 NOTE: Intel® Hyper-Threading Technology is only available on Performance-cores.				
Processor speed	up to 5.20 GHz Turbo Boost Max	up to 5.40 GHz Turbo Boost Max	up to 5.60 GHz Thermal Velocity Boost	up to 5.80 GHz Thermal Velocity Boost
Performance-cores frequency				
Processor base frequency	2.10 GHz	3.40 GHz	2.00 GHz	3.00 GHz
Maximum turbo frequency	5.10 GHz	5.30 GHz	5.20 GHz	5.40 GHz
Efficient-cores frequency				
Processor base frequency	1.50 GHz	2.50 GHz	1.50 GHz	2.20 GHz
Maximum turbo frequency	4.10 GHz	4.20 GHz	4.20 GHz	4.30 GHz
Processor cache	30 MB	30 MB	36 MB	36 MB
Integrated graphics	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 Tower Plus 7010.

Table 4. Chipset

Description	Values
Chipset	Intel Q670
Processor	13 th Generation Intel Core i3/i5/i7/i9
DRAM bus width	64-bit/128-bit

Table 4. Chipset (continued)

Description	Values
Flash EPROM	32MB RPMC+16MB nRPMC
PCIe bus	Upto Gen4

Operating system

Your OptiPlex Tower Plus 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 11 CMIT Government Edition, (China only)
- Ubuntu Linux 22.04 LTS

Memory

The following table lists the memory specifications of your OptiPlex Tower Plus 7010.

Table 5. Memory specifications

Description	Values
Memory slots	Four-UDIMM slots
Memory type	DDR5
Memory speed	<ul style="list-style-type: none"> • 3600 MHz • 4000 MHz • 4400 MHz
Maximum memory configuration	128 GB
Minimum memory configuration	8 GB
Memory size per slot	8 GB, 16 GB, and 32 GB
Memory configurations supported	<ul style="list-style-type: none"> • 8 GB, 1 x 8 GB, DDR5, 4400 MHz, single-channel • 16 GB, 1 x 16 GB, DDR5, 4400 MHz, single-channel • 16 GB, 2 x 8 GB, DDR5, 4400 MHz, dual-channel • 32 GB, 1 x 32 GB, DDR5, 4400 MHz, single-channel • 32 GB, 2 x 16 GB, DDR5, 4400 MHz, dual-channel • 32 GB, 4 x 8 GB, DDR5, 4000 MHz, dual-channel • 64 GB, 2 x 32 GB, DDR5, 4400 MHz, dual-channel • 64 GB, 4 x 16 GB, DDR5, 4000 MHz, dual-channel • 128 GB, 4 x 32 GB, DDR5, 3600 MHz, dual-channel

Memory matrix

The following table lists the memory configurations supported on your OptiPlex Tower Plus 7010.

Table 6. Memory matrix

Configuration	Slot			
	UDIMM1	UDIMM2	UDIMM3	UDIMM4
8 GB DDR5	8 GB	NA	NA	NA
16 GB DDR5	16 GB	NA	NA	NA
16 GB DDR5	8 GB	8 GB	NA	NA
32 GB DDR5	32 GB	NA	NA	NA
32 GB DDR5	16 GB	16 GB	NA	NA
32 GB DDR5	8 GB	8 GB	8 GB	8 GB
64 GB DDR5	32 GB	32 GB	NA	NA
64 GB DDR5	16 GB	16 GB	16 GB	16 GB
128 GB DDR5	32 GB	32 GB	32 GB	32 GB

External ports

The following table lists the external ports of your OptiPlex Tower Plus 7010.

Table 7. External ports

Description	Values
Network port	<ul style="list-style-type: none"> 1 RJ45 Ethernet Port 10/100/1000 Mbps
USB ports	<p>Front:</p> <ul style="list-style-type: none"> One USB 2.0 (480 Mbps) port One USB 2.0 (480 Mbps) port with PowerShare One USB 3.2 Gen 2 (10 Gbps) port One USB 3.2 Gen 2x2 (20 Gbps) Type-C port <p>Rear:</p> <ul style="list-style-type: none"> Two USB 2.0 (480 Mbps) ports with Smart Power On One USB 3.2 Gen 2 (10 Gbps) port Three USB 3.2 Gen 1 (5 Gbps) ports
Audio port	<ul style="list-style-type: none"> Front : Universal audio jack port Rear : One Re-tasking line out/line in audio port
Video port	<ul style="list-style-type: none"> Three DisplayPort 1.4a (HBR2) <ul style="list-style-type: none"> NOTE: Maximum resolution up to 4096 x 2304 @60Hz One Optional video port (DisplayPort 1.4a (HBR3)/HDMI 2.1/VGA) (optional) <ul style="list-style-type: none"> NOTE: Maximum resolution <ul style="list-style-type: none"> 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

Table 7. External ports (continued)

Description	Values
	<ul style="list-style-type: none"> o USB Type-C with DisplayPort Alt mode: up to 5120 x 3200 @60Hz <p>NOTE: Download and install the latest Intel Graphics driver from www.dell.com/support to enable multiple displays.</p>
I/O port	One Serial port (optional)
Media-card reader	One SD-card slot (optional)
Power-adaptor port	NA
Security-cable slot	<ul style="list-style-type: none"> • Security-cable slot (for Kensington locks) • Padlock ring

Internal slots

The following table lists the internal slots of your OptiPlex Tower Plus 7010.

Table 8. Internal slots

Description	Values
Expansion	<ul style="list-style-type: none"> • 1 Full-height Gen 4 PCIe x16 slot • 1 Full-height Gen 3 PCIe x4 open-end slot • 1 Full-height PCI-32 slot • 1 Full-height Gen 3 PCIe x1 slot
SATA	<ul style="list-style-type: none"> • 4 SATA slots for 2.5-inch/3.5-inch hard drive and slim optical drive
M.2	<ul style="list-style-type: none"> • One M.2 2230 slot for WiFi and Bluetooth combo card • Three M.2 2230/2280 slots for solid-state drives <p>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.</p>

Ethernet

The following table lists the wired Ethernet Local Area Network (LAN) specifications of your OptiPlex Tower Plus 7010.

Table 9. 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) modules supported on your OptiPlex Tower Plus 7010.

Table 10. Wireless module specifications

Description	Option one	Option two
Model number	Intel AX211 i NOTE: Intel AX211 is always tied with External SMA antenna	Realtek RTL8852BE
Transfer rate	2400 Mbps	1201 Mbps
Frequency bands supported	2.40 GHz/5 GHz/6 GHz i NOTE: The 6 GHz frequency is supported on computers installed with Windows 11 operating system only.	2.40 GHz/5 GHz
Wireless standards	<ul style="list-style-type: none"> • WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6E (WiFi 802.11ax) 	<ul style="list-style-type: none"> • WiFi 802.11a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac) • Wi-Fi 6 (WiFi 802.11ax)
Encryption	<ul style="list-style-type: none"> • 64-bit/128-bit WEP • AES-CCMP • TKIP 	<ul style="list-style-type: none"> • 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth	Bluetooth wireless card	Bluetooth wireless card

Audio

The following table lists the audio specifications of your OptiPlex Tower Plus 7010.

Table 11. Audio specifications

Description	Values
Audio type	High Definition Audio
Audio controller	Realtek ALC3246-CG
Internal audio interface	HDA (high-definition audio)
External audio interface	<ul style="list-style-type: none"> • Front : Universal audio jack port • Rear : One Re-tasking line out/line in audio port

Storage

This section lists the storage options on your OptiPlex Tower Plus 7010.

Table 12. Storage Matrix

Storage	1st M.2 socket (2230/2280)	2nd M.2 socket (2230/2280)	3rd M.2 socket (2230/2280)	1st 2.5-inch hard-drive	2nd 2.5-inch hard-drive	1st 3.5-inch hard-drive	2nd 3.5-inch hard-drive
M.2 solid-state drive (2230/80)	Yes(SSD0, Primary M.2 PCIe for boot function.)	No	No	No	No	No	No
M.2 solid-state drive (2230/80) X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	No	No	No	No	No
M.2 solid-state drive (2230/80) X3	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	Yes(SSD2)	No	No	No	No
M.2 solid-state drive (2230/80)+2.5-inch hard-drive	Yes(SSD0, Primary M.2 PCIe for boot function.)	No	No	Yes(SATA-0)	No	No	No
M.2 solid-state drive (2230/80) + 2.5-inch hard-drive X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	No	No	Yes(SATA-0)	Yes(SATA-1)	No	No
M.2 solid-state drive (2230/80) +3.5-inch hard-drive	Yes(SSD0, Primary M.2 PCIe for boot function.)	No	No	No	No	Yes(SATA-0)	No
M.2 solid-state drive (2230/80) +3.5-inch hard-drive X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	No	No	No	No	Yes(SATA-0)	Yes(SATA-1)
M.2 solid-state drive (2230/80) X2+2.5-inch hard-drive	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	No	Yes(SATA-0)	No	No	No
M.2 solid-state drive (2230/80) X2+2.5-inch hard-drive X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	No	Yes(SATA-0)	Yes(SATA-1)	No	No
M.2 solid-state drive (2230/80) X2+3.5-inch hard-drive	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	No	No	No	Yes(SATA-0)	No

Table 12. Storage Matrix (continued)

Storage	1st M.2 socket (2230/2280)	2nd M.2 socket (2230/280)	3rd M.2 socket (2230/280)	1st 2.5-inch hard-drive	2nd 2.5-inch hard-drive	1st 3.5-inch hard-drive	2nd 3.5-inch hard-drive
	for boot function.)						
M.2 solid-state drive (2230/80) X2+3.5-inch hard-drive X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	No	No	No	Yes(SATA-0)	Yes(SATA-1)
M.2 solid-state drive (2230/80) X3+2.5-inch hard-drive	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	Yes(SSD2)	Yes(SATA-0)	No	No	No
M.2 solid-state drive (2230/80) X3+2.5-inch hard-drive X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	Yes(SSD2)	Yes(SATA-0)	Yes(SATA-1)	No	No
M.2 solid-state drive (2230/80) X3+3.5-inch hard-drive	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	Yes(SSD2)	No	No	Yes(SATA-0)	No
M.2 solid-state drive (2230/80) X3+3.5-inch hard-drive X2	Yes(SSD0, Primary M.2 PCIe for boot function.)	Yes(SSD1)	Yes(SSD2)	No	No	Yes(SATA-0)	Yes(SATA-1)
2.5-inch hard-drive	No	No	No	Yes(SATA-0, Primary SATA for boot function.)	No	No	No
2.5-inch hard-drive X2	No	No	No	Yes(SATA-0, Primary SATA for boot function.)	Yes(SATA-1)	No	No
3.5-inch hard-drive	No	No	No	No	No	Yes(SATA-0, Primary SATA for boot function.)	No
3.5-inch hard-drive X2	No	No	No	No	No	Yes(SATA-0, Primary SATA for boot function.)	Yes(SATA-1)

Table 12. Storage Matrix (continued)

Storage	1st M.2 socket (2230/2280)	2nd M.2 socket (2230/2280)	3rd M.2 socket (2230/2280)	1st 2.5-inch hard-drive	2nd 2.5-inch hard-drive	1st 3.5-inch hard-drive	2nd 3.5-inch hard-drive
2.5-inch hard-drive+3.5-inch hard-drive	No	No	No	Yes(SATA-0,Primary SATA for boot function.)	No	Yes(SATA-1)	No
3.5-inch hard-drive+2.5-inch hard-drive				Yes(SATA-1)		Yes(SATA-0,Primary SATA for boot function.)	
2.5-inch hard-drive X2+3.5-inch hard-drive	No	No	No	Yes(SATA-0,Primary SATA for boot function.)	Yes(SATA-1)	Yes(SATA-2)	No
3.5-inch hard-drive+2.5-inch hard-drive X2				Yes(SATA-1)	Yes(SATA-2)	Yes(SATA-0,Primary SATA for boot function.)	
2.5-inch hard-drive X2+3.5-inch hard-drive X2	No	No	No	Yes(SATA-0,Primary SATA for boot function.)	Yes(SATA-1)	Yes(SATA-2)	Yes(SATA-3)
3.5-inch hard-drive X2+2.5-inch hard-drive X2	No	No	No	Yes(SATA-2)	Yes(SATA-3)	Yes(SATA-0,Primary SATA for boot function.)	Yes(SATA-1)

Table 13. Storage specifications

Storage type	Interface type	Capacity
2.5-inch, 7200 RPM, hard-disk drive	SATA 3.0	Up to 1 TB
3.5-inch, 5400 RPM, hard-disk drive	SATA 3.0	Up to 4 TB
3.5-inch, 7200 RPM, hard-disk drive	SATA 3.0	Up to 2 TB
M.2 2230 solid-state drive	PCIe NVMe, Class 25	Up to 1 TB
M.2 2230 solid-state drive	PCIe NVMe, Class 35	Up to 1 TB
M.2 2230 Opal Self-Encrypting solid-state drive	PCIe NVMe, Class 35	256 GB
M.2 2280 solid-state drive	PCIe NVMe, Class 40	Up to 2 TB

Table 13. Storage specifications (continued)

Storage type	Interface type	Capacity
M.2 2280 Opal Self-Encrypting solid-state drive	PCIe NVMe, Class 40	Up to 1 TB

RAID (Redundant Array of Independent Disks)

For optimal performance when configuring drives as a RAID volume, Dell recommends drive models that are identical.

NOTE: RAID is not supported on Intel Optane configurations.

RAID 0 (Striped, Performance) volumes benefit from higher performance when drives are matched because the data is split across multiple drives: any IO operations with block sizes larger than the stripe size will split the IO and become constrained by the slowest of the drives. For RAID 0 IO operations where block sizes are smaller than the stripe size, whichever drive the IO operation targets will determine the performance, which increases variability and results in inconsistent latencies. This variability is particularly pronounced for write operations and it can be problematic for applications that are latency sensitive. One such example of this is any application that performs thousands of random writes per second in very small block sizes.

RAID 1 (Mirrored, Data Protection) volumes benefit from higher performance when drives are matched because the data is mirrored across multiple drives: all IO operations must be performed identically to both drives, thus variations in drive performance when the models are different, results in the IO operations completing only as fast as the slowest drive. While this does not suffer the variable latency issue in small random IO operations as with RAID 0 across heterogeneous drives, the impact is nonetheless large because the higher performing drive becomes limited in all IO types. One of the worst examples of constrained performance here is when using unbuffered IO. To ensure writes are fully committed to non-volatile regions of the RAID volume, unbuffered IO bypasses cache (for example by using the Force Unit Access bit in the NVMe protocol) and the IO operation will not complete until all the drives in the RAID volume have completed the request to commit the data. This kind of IO operation completely negates any advantage of a higher performing drive in the volume.

Care must be taken to match not only the drive vendor, capacity, and class, but also the specific model. Drives from the same vendor, with the same capacity, and even within the same class, can have very different performance characteristics for certain types of IO operations. Thus, matching by model ensures that the RAID volumes is comprised of an homogeneous array of drives that will deliver all the benefits of a RAID volume without incurring the additional penalties when one or more drives in the volume are lower performing.

OptiPlex Tower Plus 7010 supports RAID with more than one hard drive configuration.

Media-card reader

The following table lists the media cards supported by your OptiPlex Tower Plus 7010.

Table 14. Media-card reader specifications

Description	Values
Media-card type	SD card (optional)
Media-cards supported	<ul style="list-style-type: none">Secure Digital (SD)Secure Digital High Capacity (SDHC)Secure Digital Extended Capacity (SDXC)
NOTE: The maximum capacity supported by the media-card reader varies depending on the standard of the media card installed in your computer.	

Power ratings

The following table lists the power rating specifications of OptiPlex Tower Plus 7010.

Table 15. Power ratings

Description	Option one	Option two
Type	260 W internal power supply unit (PSU), 85% Efficient, 80 Plus Bronze	500 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)	4.2 A	7.0 A
Output current (continuous)	<ul style="list-style-type: none"> • 12 VA/18 A • 12 VB/15 A Standby mode: <ul style="list-style-type: none"> • 12 VA/1.5 A • 12 VB/3.3 A 	<ul style="list-style-type: none"> • 12 VA/18 A • 12 VB/18 A • 12 VC/12 A Standby mode: <ul style="list-style-type: none"> • 12 VA/1.5 A • 12 VB/3.3 A • 12 VC/0 A
Rated output voltage	<ul style="list-style-type: none"> • +12 VA • +12 VB 	<ul style="list-style-type: none"> • +12 VA • +12 VB • +12 VC
Temperature range:		
Operating	5°C–45°C (41°F–113°F)	5°C–45°C (41°F–113°F)
Storage	-40°C–70°C (-40°F–158°F)	-40°C–70°C (-40°F–158°F)

Power supply connector

The following table lists the Power supply connector specifications of your OptiPlex Tower Plus 7010.

Table 16. Power supply connector

260 W (80 PLUS Bronze)	<ul style="list-style-type: none"> • Two 4 pin connectors for processor • One 8 pin connector for system board
500 W (80 PLUS Platinum)	<ul style="list-style-type: none"> • Two 4 pin connectors for processor • One 8 pin connector for system board • One 6 pin and one 2 + 6 pin connectors for graphic card

GPU—Integrated

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

Table 17. GPU—Integrated

Controller	External display support	Memory size	Processor
Intel UHD Graphics 730	Three DisplayPort 1.4a (HBR2) ports	Shared system memory	13 th Generation Intel Core i3/i5

Table 17. GPU—Integrated (continued)

Controller	External display support	Memory size	Processor
Intel UHD Graphics 770	Three DisplayPort 1.4a (HBR2) ports	Shared system memory	13 th Generation Intel Core i5/i7/i9

Video port resolution (GPU—Integrated)

Table 18. Video port resolution (GPU—Integrated)

Graphics card	Video ports	Maximum supported resolution
Intel UHD Graphics	<ul style="list-style-type: none"> Three DisplayPort 1.4a port (HBR2) One Optional video port (DisplayPort 1.4a (HBR3)/VGA/USB Type-C with DisplayPort Alt mode) 	<ul style="list-style-type: none"> DisplayPort 1.4a port - 4096 x 2304 @ 60 Hz One Optional video port - <ul style="list-style-type: none"> 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 USB Type-C with DisplayPort Alt mode: up to 5120 x 3200 @60Hz

External display support (GPU—Integrated)

Display support for the integrated graphics card

Table 19. Display support specifications

Graphics card	Supported external displays
Intel UHD Graphics 730/770	4
Intel UHD Graphics 730/770 + optional module	5

GPU—Discrete

The following table lists the specifications of the discrete Graphics Processing Unit (GPU) supported by your OptiPlex Tower Plus 7010.

Table 20. GPU—Discrete

Controller	External display support	Memory size	Memory type
AMD Radeon RX6300	Two DisplayPort 1.4a ports	2 GB	GDDR6
AMD Radeon RX6500	Two DisplayPort 1.4a ports	4 GB	GDDR6
NVIDIA GeForce RTX 3050	<ul style="list-style-type: none"> Three DisplayPort 1.4a ports One HDMI 2.1 	8 GB	GDDR6
NVIDIA GeForce RTX 3070	<ul style="list-style-type: none"> Three DisplayPort 1.4a ports (Display Port 1.2) 	8 GB	GDDR6X

Table 20. GPU—Discrete (continued)

Controller	External display support	Memory size	Memory type
	Certified. DP 1.3/1.4 Ready) <ul style="list-style-type: none"> One HDMI 2.1 		

Video port resolution

The following table lists the video port resolution for your OptiPlex Tower Plus 7010.

Table 21. Video port resolution

Graphics card	Video ports	Maximum supported resolution
AMD Radeon RX6300	<ul style="list-style-type: none"> 2 DisplayPort 1.4a ports 	<ul style="list-style-type: none"> 5120 x 2880 @60 Hz is the maximum resolution for one port configuration. (Requires DSC compression).
AMD Radeon RX6500	<ul style="list-style-type: none"> 2 DisplayPort 1.4a ports 	<ul style="list-style-type: none"> 5120 x 2880 @60 Hz is the maximum resolution for one port configuration. (Requires DSC compression).
NVIDIA GeForce RTX 3050	<ul style="list-style-type: none"> 2 DisplayPort 1.4a ports 1 HDMI 2.1 port 	<ul style="list-style-type: none"> DisplayPort 1.4a port - 5120 x 3200 @60 Hz (Requires 2 DP 1.4a links and DSC compression). HDMI 2.1 port - 3840 x 2160 @60 Hz.
NVIDIA GeForce RTX 3070	<ul style="list-style-type: none"> 3 DisplayPort 1.4a ports (Display Port 1.2 Certified. DP 1.3/1.4 Ready) 1 HDMI 2.1 port 	<ul style="list-style-type: none"> DisplayPort 1.4a port - 5120 x 3200 @60 Hz (Requires 2 DP 1.4a links and DSC compression). HDMI 2.1 port - 3840 x 2160 @60 Hz.

External display support (GPU—Discrete)

Table 22. 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 ports	2	Supported
AMD Radeon RX6500	Two DisplayPort 1.4a ports	2	Supported
Nvidia GeForce RTX 3050 OEM	<ul style="list-style-type: none"> Three DisplayPort 1.4a ports (Display Port 1.2 Certified. DP 1.3/1.4 Ready) One HDMI 2.1 	4	Supported
Nvidia GeForce RTX 3070	<ul style="list-style-type: none"> Three DisplayPort 1.4a ports (Display Port 1.2 Certified. DP 1.3/1.4 Ready) One HDMI 2.1 	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.

Hardware security

The following table lists the hardware security of your OptiPlex Tower Plus 7010.

Table 23. Hardware security

Hardware security
Kensington security-cable slot
Padlock ring
Chassis lock slot support
Chassis intrusion switch
Lockable cable covers
Supply chain tamper alerts
SafelD including Trusted Platform Module (TPM) 2.0
Smart card keyboard (FIPS)
Microsoft Windows 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

Environmental

The following table lists the environmental specifications of your OptiPlex Tower Plus 7010.

Table 24. Environmental

Feature	Values
Recyclable packaging	Yes
BFR/PVC—free	No
Vertical orientation packaging support	No
Multi-Pack packaging	Yes (optional)
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 Tower Plus 7010.

Table 25. Regulatory compliance

Regulatory compliance
Product Safety, EMC and Environmental Datasheets
Dell Regulatory Compliance Home page
Dell and the Environment

Operating and storage environment

This table lists the operating and storage specifications of your OptiPlex Tower Plus 7010.

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

Table 26. Computer environment

Description	Operating	Storage
Temperature range	10°C-35°C (50°F-95°F)	-40°C-70°C (-40°F-158°F)
Relative humidity (maximum)	20% to 80% (non-condensing) (non-condensing, Max dew point temperature = 26°C)	0% to 95% (non-condensing) 5% to 95% (non-condensing, Max dew point temperature = 33°C)
Vibration (maximum)*	0.26 GRMS random at 5 Hz-350 Hz	1.37 GRMS random at 5 Hz-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)
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 Tower Plus 7010.

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 27. Physical system dimensions

Feature	Values
Chassis volume	18.70 liters
Chassis Weight	9.63 kg (21.24 lb)
Chassis dimensions	
Height	367.00 mm (14.45 in.)
Width	169.00 mm (6.65 in.)
Depth	300.80 mm (11.84 in.)
Shipping Weight (includes packaging materials)	12.11 kg (26.69 lb)
Packaging dimensions	
Height	353 mm (13.90 in.)
Width	494 mm (19.44 in.)
Depth	396 mm (15.59 in.)

Add-in card dimensions

System board connector maximum add-in card allowable dimensions

Table 28. System board connector maximum add-in card allowable dimensions

Feature	Values
PCI connector	1
Voltage	3.3 V/5 V/12 V/-12 V
Height	110.99 mm (4.37 in.)
Length	266.70 mm (10.50 in.)
Maximum wattage	25 W
PCIe x16 connector	1
Voltage	3.3 V/12 V

Table 28. System board connector maximum add-in card allowable dimensions (continued)

Feature	Values
Height	110.99 mm (4.37 in.)
Length	266.70 mm (10.50 in.)
Maximum wattage	75 W
PCIe x4 connector	1
Voltage	3.3 V/12 V
Height	110.99 mm (4.37 in.)
Length	167.64 mm (6.60 in.)
Maximum wattage	25 W
PCIe x1 connector	1
Voltage	3.3 V/12 V
Height	110.99 mm (4.37 in.)
Length	114.30 mm (4.50 in.)
Maximum wattage	10 W

Table 29. M.2 2230 slot for Wi-Fi 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 30. 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	3.80 mm (0.15 in.)
Maximum Wattage	8.25 W

Table 31. 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	3.65 mm (0.14 in.)
Maximum wattage	6.6 W

PCIe lane details

Table 32. PCIe lane details

Expansion Slot Type	Voltage	Maximum Height	Maximum Length	Maximum Wattage	Cards supported
PCI connector	3.3 V/5 V/12 V/-12 V	110.99 mm (4.37 in.)	266.70 mm (10.50 in.)	25 W	Yes
PCIe x16 connector	3.3 V/12 V	110.99 mm (4.37 in.)	266.70 mm (10.50 in.)	75 W	Yes
PCIe x4 connector	3.3 V/12 V	110.99 mm (4.38 in.)	167.64 mm (6.60 in.)	25 W	Yes
PCIe x1 connector	3.3 V/12 V	110.99 mm (4.37 in.)	114.30 mm (4.50 in.)	10 W	Yes

Total Add-in-Card does not exceed 75 W/125 W/150 W depending on PSU option.

Dust filter

The following table lists the dust filter specifications of your OptiPlex Tower Plus 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

PCIe add-in cards

SD-card 4.0 reader

The following table lists the SD-card 4.0 reader specifications.

Table 34. SD-card 4.0 reader specifications

Feature	Values
Interface	Input: PCI Express, Output: SD 4.0 card
Data rates	SD 4.0 UHS-II Up to 312 MB/sec
Controller details	
Controller	RTS5242

Table 34. SD-card 4.0 reader specifications (continued)

Feature	Values
Controller bus architecture	PCIe 2.1
Driver support	Yes
Environment	
Operating temperature	0°C to 70°C (32°F to 158°F)

Serial port PCIe add-in card

Table 35. Serial port PCIe add-in card

Feature	Values
Interface	<ul style="list-style-type: none"> RS-232 IEEE1284
Data rates	<ul style="list-style-type: none"> 50 bps ~115.2 Kbps (serial) maximum 1.8 Mbps (parallel)
Controller details	
Controller	SUNIX SUN2212 (16C950 UART compatible)
Controller bus architecture	<ul style="list-style-type: none"> PCI Express 2.0 Single-Lane (x1)
Driver support	Windows 10 (64-bit)
Half-height serial add-in dongle	Optional
Environment	
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 36. PS/2 Serial add-in bracket specifications

Feature	Values
Interface	UART
Data rates	250 kbps / 235 kbps
Controller details	
Controller	Microchip DEC1515
Controller bus architecture	PCIe
Driver support	N/A
Half-height serial add-in dongle	N/A
Environment	
Operating temperature	0°C to 70°C (32°F to 158°F) / -40°C to 85°C (-40°F to 185°F)


Table 36. PS/2 Serial add-in bracket specifications (continued)

Feature	Values
Operating humidity	60% RH
Storage temperature	-65°C to 150°C (-85°F to 302°F)

USB Type-A 3.2 Gen2 card

The following table lists the USB Type-A 3.2 Gen2 card specifications.

Table 37. USB Type-A 3.2 Gen2 card specifications

Feature	Values
Interface	Universal Serial Bus 3.1/3.0/2.0/1.1
Speed	<ul style="list-style-type: none"> • Super Speed+ (10 Gpbs) • Super Speed (5 Gpbs) • High Speed (480 Mbps) • Full Speed (12 Mbps) • Low Speed (1.5 Mbps)
Number of ports	Two
Printed circuit board connector	USB3.1 USB Type A port
Controller details	
Controller	PCI Express USB3.1 Host controller, Asmedia ASM 3142
Controller bus architecture	PCI Express Spec 3.0, Dual Lane (x 2)
USB standard	eXtensible Host Controller Interface (xHCI) Rev 1.1
Power	
Source	PCIe Bus Power
Output Capacity	USB Type-A Port: +5 VDC/Maximum 0.9 A/each port  NOTE: Total power output capacity is limited by system power supply.
Over Current Protection	USB Type-A Port: +5 VDC/1.5 A/each port/Power switch
Power Consumption	1.1 W @ 3.3 V (board only without power output to USB device)
Environment	
Operating temperature	0°C to 60°C (32°F to 140°F)
Operating humidity	5 to 95% RH
Storage temperature	-20°C to 70°C (-4°F to 158°F)

Powered USB 12/24 V add-in card

Table 38. Powered USB 12/24 V add-in card

Feature	Values
Bus	PCI Express Spec 1.1, Single Lane (x1)
Controller	<ul style="list-style-type: none"> • PCI Express USB 3.1 Host Controller • Asmedia ASM3142

Table 38. Powered USB 12/24 V add-in card (continued)


Feature	Values
USB standard	Enhanced Host Controller Interface (EHCI) Open Host Controller Interface (OHCI)
IRQ and IO	Assigned by system
USB Communication	
Interface	Universal Serial Bus 2.0
Speed	<ul style="list-style-type: none"> ● High Speed (480 Mbps) ● Full Speed (12 Mbps) ● Low Speed (1.5 Mbps)
Number of ports	Three ports
PCB connector	Powered USB Connector
Protection	<ul style="list-style-type: none"> ● +/-15KV ESD protection for each signal Human Body Model (HBM) ● +/-15KV IEC61000-4-2 Air Gap Discharge ● +/-8KV IEC61000-4-2 Contact Discharge ● DELL M6403_A09 Direct Pin Injection
Power	
Power source	+12VDC / PCIe GFx power connector 2x3 Type
Output power capacity	Standard USB2.0 Port: +5 VDC / Maximum 0.5 A / each port Powered USB Port: <ul style="list-style-type: none"> ● + 24 VDC / Maximum 3.0 A / each port ● +12 VDC / Maximum 3.0 A / each port  NOTE: Total power output capacity is limited by the system power supply.
Over current protection	Standard USB2.0 Port: +5 VDC / Maximum 2.0 A / 3-each port Powered USB Port: <ul style="list-style-type: none"> ● + 24 VDC / 3.0 A @30 V PTC fuse / each port ● +12 VDC / 3.0 A @16 V PTC fuse / each port
Power consumption	1.1 W @ 3.3 V (board only without power output to USB device)
Driver Support	
Supported Driver	<ul style="list-style-type: none"> ● Windows 10 (x86/x64) ● Windows 11 (x86/x64) ● 2012 R2 /2016 /2019 (X86/X64) and above ● Linux 2.6 and above
Environment	
Operating temperature	0°C to 60°C (32°F to 140°F)
Operating humidity	5% to 95% RH
Storage temperature	-20°C to 70°C (-4°F to 158°F)
Standards and Certifications	
EMC	<ul style="list-style-type: none"> ● CE ● FCC

Table 38. Powered USB 12/24 V add-in card (continued)


Feature	Values
	<ul style="list-style-type: none"> • VCCI • BSMI
Green	<ul style="list-style-type: none"> • RoHS • WEEE

Powered serial PCIe add-in card

Table 39. Powered serial PCIe add-in card

Feature	Values
Interface	RS-232
Bus	<ul style="list-style-type: none"> • PCI Express 2.0 • Single-lane (x1)
Controller	SUNIX SUN2410 (16C950 UART compatible)
IRQ and IO	Assigned by system
Serial Communication	
Interface	RS-232
Number of ports	Four ports
FIFO	128-byte hardware
Signal	<ul style="list-style-type: none"> • DCD • TxD • RxD • RTS • CTS • DTR • GND • RI
Baud rate	50 bps~115.2 Kbps
Stop bit	<ul style="list-style-type: none"> • 1 • 1.5 • 2
Parity	<ul style="list-style-type: none"> • Even • Odd • None • Mark • Space
Flow control	<ul style="list-style-type: none"> • None • Xon • Xoff • RTS/CTS
Protection	<ul style="list-style-type: none"> • +/-15KV ESD protection for each signal Human Body Model (HBM) • +/-15KV IEC61000-4-2 Air Gap Discharge • +/-8KV IEC61000-4-2 Contact Discharge • DELL M6403_A09 Direct Pin Injection
Printed circuit board connector	DB44 Female

Table 39. Powered serial PCIe add-in card (continued)

Feature	Values
Power	
Power source	PCI Express Bus Power
Output power capacity	USB Type-C Port - Power delivery +5 VDC/1.5 A/each port  NOTE: Total power output capacity is limited by the system power supply.
Over current protection	USB Type-C port - +5 VDC/1.5 A/each port/power switch
Power consumption	3.0 W @ 3.3 V (board only without power output to USB device)
Operating System	
Supported operating system	<ul style="list-style-type: none"> ● Windows 7 ● Windows 8.1 ● Windows 10 ● Ubuntu
Environment	
Operating temperature	0°C to 60°C (32°F–140°F)
Operating humidity	5% to 95% RH
Storage temperature	-20°C to 70°C (-4°F to 158°F)
Standards and Certifications	
EMC	<ul style="list-style-type: none"> ● Europe - CE, EN55022 Class B, EN55024, EN61000-3-2, and EN61000-3-3 ● US - FCC Part 15 Class B ● Japan - VCCI ● AS/NZS - C-Tick (CISPR22)
Green	<ul style="list-style-type: none"> ● RoHS ● CRoHS ● WEEE

USB 3.1 Gen 2 Type-C PCIe add-in card

Table 40. USB 3.1 Gen 2 Type-C PCIe add-in card

Feature	Values
Bus	PCI Express Spec 3.0 x 2 (compliant with x4/x8/x16 slot)
Controller	<ul style="list-style-type: none"> ● PCI Express USB 3.1 Host Controller ● Asmedia ASM3142
USB standard	eXtensible Host Controller Interface (xHCI) Rev1.1
IRQ and IO	Assigned by system
USB Communication	
Host interface	<ul style="list-style-type: none"> ● Universal Serial Bus 3.1 ● Universal Serial Bus 3.0 ● Universal Serial Bus 2.0 ● Universal Serial Bus 1.1
Speed	<ul style="list-style-type: none"> ● SuperSpeed+ (10 Gbps) ● SuperSpeed (5 Gbps)

Table 40. USB 3.1 Gen 2 Type-C PCIe add-in card (continued)

Feature	Values
	<ul style="list-style-type: none"> ● High Speed (480 Mbps) ● Full Speed (12 Mbps) ● Low Speed (1.5 Mbps)
Number of ports	Two ports ⓘ NOTE: One port supports data only, and the other port supports full feature.
USB connector	USB 3.1 Type-C port (Downstream facing port)
Protection	<ul style="list-style-type: none"> ● +/-15KV IEC61000-4-2 Air Gap Discharge ● +/-8KV IEC61000-4-2 Contact Discharge
Audio and Video	
Input interface	<ul style="list-style-type: none"> ● Standard DisplayPort Female ● DisplayPort 1.2/1.1
Output interface	USB Type-C port
Audio	Supported (Audio pass-through)
Power	
Power source	PCI Express Bus Power
Output power capacity	USB Type-C Port: USB Bus Power:+5 VDC/1.5 A/each port ⓘ NOTE: Total power output capacity is limited by the system power supply.
Over current protection	USB Type-C Port: +5 VDC/1.5 A/each port/power switch
Power consumption	3.0 W @ 3.3 V (board only without power output to USB device)
Operating System	
Supported operating system	<ul style="list-style-type: none"> ● Windows 8.1 ● Windows 10 (x86/x64)
Environment	
Operating temperature	0°C to 60°C (32°F to 140°F)
Operating humidity	5% to 95% RH
Storage temperature	-20°C to 70°C (-4°F to 158°F)
Standards and Certifications	
EMC	<ul style="list-style-type: none"> ● CE ● FCC ● VCCI ● BSMI
Green	<ul style="list-style-type: none"> ● RoHS ● CRoHS ● WEEE

i225 PCIe x1 2.5 GbE NIC Card

The following table lists the i225 PCIe x1 2.5 GbE NIC Card specifications.

Table 41. i225 PCIe x1 2.5 GbE NIC Card specifications

Feature	Values
RJ45 connection	Compatibility with cable lengths up to 100 mts using <ul style="list-style-type: none"> • CAT5e • CAT6 • CAT6A
Interface	PCIe
Data rate supported per port	2.5/1 GbE and 100/10 Mbps
Controller details	
Controller	Intel Ethernet Controller i225
Controller bus architecture	PCI Express 3.1 x1
Driver support	N/A
Bracket	Full-height bracket installed. Low-profile bracket in package.
Environment	
Operating temperature	0°C to 55°C (32°F to 131°F)
Operating humidity	Maximum: 90% non-condensing relative humidity at 35°C
Storage temperature	-40°C to 70°C (-40°F to 158°F)

Thunderbolt 4 PCIe Add-In Card

The following table lists the Thunderbolt 4 PCIe Add-In Card specifications.

Table 42. Thunderbolt 4 PCIe Add-In Card

Features	Values
Design	LP HL PWA with PCIe 4.0 x4 Full height Bracket option
Number of ports	<ul style="list-style-type: none"> • 2x Type-C I/O • 2x DP input • GPIO (requires side-band cable)
Feature	<ul style="list-style-type: none"> • 40 Gb/s (2x 20) with TB4 and USB 4.0 • Auto switch/shift to Legacy TB/USB (support backwards compatibility) • DP1.4a HBR3 Out (DP-MF and DP-alt) two streams • DP Tunnel 32 Gb/s 2 Streams, USB3 Tunnel 10 Gb/s • Hub Support, TB Networking, Universal Cable
Power	<ul style="list-style-type: none"> • Upper Port - 5 V@3 A (TB + Power Delivery Icon) • Lower Port - 5 V@1.5 A (TB Icon Only)
Drivers	<ul style="list-style-type: none"> • Windows 10 and Windows 11 • Red Hat Enterprise Linux • Ubuntu
Cables	<ul style="list-style-type: none"> • 1x Sideband cable (system to TBT4 card) • 2x DP cables x24 cm Graphics loopback (DP connector from GFX card to TBT4 card)

Table 42. Thunderbolt 4 PCIe Add-In Card (continued)

Features	Values
Manuals	<ul style="list-style-type: none"> • Product Specification Sheet and User Guide • Online Post Drivers and Docs
Certificates	<ul style="list-style-type: none"> • Intel Thunderbolt Validation • WHQL • USB 4.0 40 Gb/s
Specifications	<ul style="list-style-type: none"> • Dell standard reliability • Behavior • Materials

Ethernet

Intel Ethernet Connection WGi219-LM

The following table lists the WGi219-LM specifications.

Table 43. Intel Ethernet Connection WGi219-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	
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)
Environmental	
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"> • Windows 11 (x64) • Ubuntu • Neokylin
Manageability	<ul style="list-style-type: none"> • Wakeup On LAN • PXE 2.1

Table 43. Intel Ethernet Connection WGi219-LM specifications (continued)

Feature	Values
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.

Intel Ethernet Connection i225

The following table lists the i225 specifications.

Table 44. Intel Ethernet Connection i225 specifications

Feature	Values
External connector type	RJ45
Data rate	10/100/1000/2500 Mbps
LED indicators	<ul style="list-style-type: none"> • Link - Solid • Activity - Blinking
LED color	<ul style="list-style-type: none"> • Green - 2.5 Gbps • Yellow - 1 Gbps • LED off - 100 Mbps or 10 Mbps
Adapter Features	
Bus Type/Bus Width	PCI Express 3.1 x 1
Interrupt levels	INTA, MSI, MSI-X
Hardware certifications	FCC B, UL, CE, VCCI, BSMI, CTICK, KCC, EEE
Controller	Intel Ethernet Controller I225
Bracket	Full-height bracket installed. Low-profile bracket included in the package
Power Consumption	
Link Speed / Traffic	Typical power
10 Mbps	0.5 W
100 Mbps	0.6 W
1 Gbe	1 W
2.5 Gbe	1.9 W
Environmental	
Operating temperature range	0°C–55°C (32°F–131°F)
Storage temperature range	-40°C–70°C (-40°F–158°F)
Storage humidity	Maximum 90% non-condensing relative humidity at 35°C
Physical Dimensions	
Dimensions	68.70 mm x 65.30 mm

Wireless module

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

The following table lists the Intel AX211 specifications.


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

Table 45. 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
Wi-Fi Alliance certifications	Wi-Fi CERTIFIED 6, Wi-Fi CERTIFIED a/b/g/n/ac,WMM, WMM-Power Save, WPA2, WPA3, WPS, PMF,Wi-Fi Direct, Wi-Fi Agile Multiband  NOTE: Other names and brands may be claimed as the property of others.
Operating frequency bands	<ul style="list-style-type: none"> • 2.4 GHz • 5 GHz • 6 GHz
Data rate	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • WPA2 Personal and Enterprise • WPA3
Authentication protocols	<ul style="list-style-type: none"> • 802.1X EAP-TLS • EAP-TTLS/MSCHAPv2 • PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA)
Encryption	<ul style="list-style-type: none"> • 64-bit and 128-bit WEP • TKIP • 128-bit AES-CCMP • 256-bit AES-GCMP
Product safety	<ul style="list-style-type: none"> • UL • C-UL • CB (IEC60950-1)
Management capabilities alerting	Support for Intel AMT
Government compliance	<ul style="list-style-type: none"> • FIPS 140-2 • FISMA
Client utility	Intel PRO/Set wireless software v22 and later
Antenna diversity	Supported
Radio On/Off	Supported
Roaming	Support seamless roaming between access points
Wake on wireless	Supported

Table 45. Intel AX211 specifications (continued)

Wireless display	Native Miracast support by Windows
Wireless PAN standard	<ul style="list-style-type: none"> • Dual Mode Bluetooth 5.3 • BLE
Bluetooth data rates	Up to 3 Mbps
Bluetooth operating frequency bands	2.4 GHz
Bluetooth profiles supported	Support for Microsoft Inbox Bluetooth profiles in Windows
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, 1x1, Wi-Fi 5 (WiFi 802.11ac), Bluetooth 5.3

The following table lists the Realtek RTL8852BE specifications.

Table 46. Realtek RTL8852BE specifications

Host interface	<ul style="list-style-type: none"> • Wi-Fi - PCIe • Bluetooth - USB
Network standard	IEEE 802.11a/b/g/n/ac, MU-MIMO
Wi-Fi Alliance certifications	<ul style="list-style-type: none"> • Wi-Fi certified a/b/g/n/ac • WMM • WPA • WPA2 • Wi-Fi Direct (Windows only)
Operating frequency bands	<ul style="list-style-type: none"> • 2.4 Ghz • 5 Ghz
Data rate	<ul style="list-style-type: none"> • 2.4 GHz 40M: Up to 150 Mbps • 5 GHz 80M: Up to 433 Mbps
Power consumption	Optimized power modes (sleep states) reduce power consumption during periods of inactivity
Authentication	<ul style="list-style-type: none"> • Open • Shared • WPA • WPA-PSK • WPA2 • WPA2-PSK
Client utility	Native Wi-Fi and Bluetooth Microsoft UI support
Software support	<ul style="list-style-type: none"> • Microsoft WHQL certified for Windows • Linux
Radio On/Off	Supported
Roaming	Support seamless roaming between access points

Table 46. Realtek RTL8852BE specifications (continued)

Wake on wireless	Supported
Wireless display	Native Miracast support by Windows
Wireless PAN standard	<ul style="list-style-type: none"> • Dual Mode Bluetooth 5.0 • BLE
Bluetooth data rates	Up to 3 Mbps
Bluetooth operating frequency bands	2.4 GHz
Bluetooth profiles supported	Support for Microsoft Inbox Bluetooth profiles in Windows
Bluetooth data encryption	128-bit encryption
Operating temperature	0°C to + 70°C
Storage temperature	-40°C to +85°C

GPU—Integrated

Intel UHD Graphics 730

Table 47. Intel UHD Graphics 730 specifications

Intel UHD Graphics 730	
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"> • On board DP1.4a (HBR2)(4096 x 2304 @60 Hz)
Maximum vertical refresh rate	Up to 60 Hz depending on resolution
External ports	<p>One Optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA/USB Type-C with DisplayPort Alt mode)</p> <p>NOTE: Maximum resolution</p> <ul style="list-style-type: none"> • 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 • USB Type-C with DisplayPort Alt mode: up to 5120 x 3200 @60Hz
Multiple display support	Up to 4 displays via DisplayPort Multi-Streaming Technology (MST)

Intel UHD Graphics 770

Table 48. Intel UHD Graphics 770 specifications

Intel UHD Graphics 770	
Bus Type	Integrated
Memory type	Shared memory

Table 48. Intel UHD Graphics 770 specifications (continued)

Intel UHD Graphics 770	
Graphics Level	Intel core i5/i7/i9: 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"> On board DP1.4a (HBR2)(4096 x 2304 @ 60Hz)
Maximum vertical refresh rate	Up to 60 Hz depending on resolution
External ports	One Optional video port (HDMI 2.1/Displayport 1.4a (HBR3)/VGA/USB Type-C with DisplayPort Alt mode) ⓘ NOTE: Maximum resolution <ul style="list-style-type: none"> 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 USB Type-C with DisplayPort Alt mode: up to 5120 x 3200 @60Hz
Multiple display support	Up to 4 displays via DisplayPort Multi-Streaming Technology (MST)

GPU—Discrete

NVIDIA GeForce RTX 3050, 8 GB GDDR6

The following table lists the NVIDIA GeForce RTX 3050 specifications.

Table 49. NVIDIA GeForce RTX 3050 specifications

Feature	Values
Dedicated graphics memory	8 GB, GDDR6
Memory bus	128-bit
Memory config	Hynix H56G42AS4DX014
Width	109.94 mm
Approximate wattage	TGP: 120 W
Base clock	1515 MHz
Boost clock	1755 MHz
NVIDIA CUDA cores	NA
G-Sync / Freesync ready	G-Sync
Supported APIs	<ul style="list-style-type: none"> DirectX 12
Maximum resolution	7680 x 4320 @ 120Hz (Requires 2 DisplayPort 1.4a links and DSC compression)
HDMI support	HDMI 2.1
HDCP support	HDCP 2.3
I/O ports	<ul style="list-style-type: none"> 3 DisplayPort 1.4a ports 1 HDMI 2.1

NVIDIA GeForce RTX 3070, 8 GB GDDR6

The following table lists the NVIDIA GeForce RTX 3070 specifications.

Table 50. NVIDIA GeForce RTX 3070 specifications

Feature	Values
Dedicated graphics memory	8 GB, GDDR6
Memory bus	256-bit
Memory config	Samsung K4Z80325BC-HC14
Width	111.15 mm
Approximate wattage	TGP: 220 W
Base clock	1500 MHz
Boost clock	1725 MHz
NVIDIA CUDA cores	NA
G-Sync / Freesync ready	G-Sync
Supported APIs	<ul style="list-style-type: none"> • DirectX 12
Maximum resolution	7680 x 4320 @ 120Hz (Requires 2 DisplayPort 1.4a links and DSC compression)
HDMI support	HDMI 2.1
HDCP support	HDCP 2.3
I/O ports	<ul style="list-style-type: none"> • 3 DisplayPort 1.4a ports (Display Port 1.2 Certified. DisplayPort 1.3/1.4 Ready) • 1 HDMI 2.1

AMD Radeon RX6300, 2 GB, GDDR5

The following table lists the AMD Radeon RX6300 specifications.

Table 51. AMD Radeon RX6300 specifications

Feature	Values
Dedicated graphics memory	2 GB, GDDR6
Memory bus	32-bit
Memory config	<ul style="list-style-type: none"> • SAMSUNG: K4ZAF325BM-HC16, DPN: 3PNGN • HYNIX: H56G42AS4DX014 , DPN MFN30
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)
Maximum resolution	8K 120Hz, 8K@60Hz is the maximum resolution for one port config.
HDMI support	No

Table 51. AMD Radeon RX6300 specifications (continued)

Feature	Values
HDCP support	Yes
I/O ports	2 DisplayPort 1.4a ports

AMD Radeon RX6500, 4 GB, GDDR6

The following table lists the AMD Radeon RX6500 specifications.

Table 52. AMD Radeon RX6500 specifications

Feature	Values
Dedicated graphics memory	4 GB, GDDR6
Memory bus	64-bit
Memory config	<ul style="list-style-type: none"> SAMSUNG: K4ZAF325BM-HC16, DPN: 3PNGN HYNIX: H56G42AS4DX014 , DPN MFN30
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	2 DisplayPort 1.4a ports

GPU and PSU matrix

The following table provides the GPU and PSU matrix of your OptiPlex Tower Plus 7010.

Table 53. GPU and PSU matrix

GFx card	Card length	Weight (kg)	Power connector	I/O connector	Single/Dual wide	PSU
AMD Radeon RX6300	6.60 in.	0.138	NA	2 DisplayPort 1.4a ports	Single	260 W
AMD Radeon RX6500	6.60 in.	0.140	NA	2 DisplayPort 1.4a ports	Single	260 W
NVIDIA GeForce RTX 3050	6.60 in.	0.174	NA	3 DisplayPort 1.4a ports /1 HDMI 2.1	Dual	500 W
NVIDIA GeForce RTX 3070	10.40 in.	0.833	NA	3 DisplayPort 1.4a ports /1 HDMI 2.1	Dual	500 W

HDD Preloaded bracket and cable matrix

The following table lists the hard-disk drive preloaded bracket information of your OptiPlex Tower Plus 7010.

Table 54. HDD Preloaded bracket and cable matrix

Hard drive Preloaded bracket	Available
3.5-inch Caddy/Bracket	Yes
2.5-inch Caddy/Bracket	No

Storage

2.5-inch, 1 TB, 5400 RPM, SATA, HDD

Table 55. 2.5-inch, 1 TB, 5400 RPM, SATA, HDD specifications

Capacity	1 TB
Speed	5400 RPM
Height (approximate)	9.50 mm (0.37 in.)
Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.45 mm (3.95 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	1,953,525,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 0.7 W ● Active: 3.10 W
Environmental operating conditions (non-condensing)	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

2.5-inch, 2 TB, 5400 RPM, SATA, HDD

Table 56. 2.5-inch, 2 TB, 5400 RPM, SATA, HDD specifications

Capacity	2 TB
Speed	5400 RPM
Height (approximate)	9.50 mm (0.37 in.)

Table 56. 2.5-inch, 2 TB, 5400 RPM, SATA, HDD specifications (continued)

Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.45 mm (3.95 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	3,907,029,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 0.7 W • Active: 3.10 W
Environmental operating conditions (non-condensing)	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

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

Table 57. 2.5-inch, 500 GB, 7200 RPM, SATA, HDD specifications

Capacity	500 GB
Speed	7200 RPM
Height (approximate)	9.50 mm (0.37 in.)
Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.45 mm (3.95 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	976,773,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 0.7 W • Active: 3.25 W
Environmental operating conditions (non-condensing)	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

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

Table 58. 2.5-inch, 1 TB, 7200 RPM, SATA, HDD specifications

Capacity	1 TB
Speed	7200 RPM
Height (approximate)	9.50 mm (0.37 in.)
Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.45 mm (3.95 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	1,953,525,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 0.7 W • Active: 3.25 W
Environmental operating conditions (non-condensing)	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

2.5-inch, 500 GB, 7200 RPM, SATA, HDD, Self-Encrypting, Opal 2.0, FIPS

Table 59. 2.5-inch, 500 GB, 7200 RPM, SATA, HDD, Self-Encrypting, Opal 2.0, FIPS specifications

Capacity	500 GB
Speed	7200 RPM OPAL SED FIPS
Height (approximate)	9.50 mm (0.37 in.)
Width (approximate)	69.85 mm (2.75 in.)
Depth (approximate)	100.45 mm (3.95 in.)
Interface	SATA 3.0
Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	976,773,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 0.7 W • Active: 3.25 W
Environmental operating conditions (non-condensing)	

Table 59. 2.5-inch, 500 GB, 7200 RPM, SATA, HDD, Self-Encrypting, Opal 2.0, FIPS specifications (continued)

Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	350G @2ms
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

3.5-inch, 4 TB, 5400 RPM, SATA, HDD

Table 60. 3.5-inch, 4 TB, 5400 RPM, SATA, HDD specifications

Capacity	4 TB
Speed	5400 RPM
Height (approximate)	26.10 mm (1.03 in.)
Width (approximate)	147.00 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	7,814,037,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 W ● Active: 10 W
Environmental operating conditions (non-condensing)	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	65G @2ms
Environmental non-operating conditions (non-condensing)	
Temperature range	-40°C to 65°C
Relative humidity range	5% to 95%

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

Table 61. 3.5-inch, 1 TB, 7200 RPM, SATA, HDD specifications

Capacity	1 TB
Speed	7200 RPM
Height (approximate)	26.10 mm (1.03 in.)
Width (approximate)	147.00 mm (5.79 in.)
Depth (approximate)	101.60 mm (4.00 in.)
Interface	SATA 3.0

Table 61. 3.5-inch, 1 TB, 7200 RPM, SATA, HDD specifications (continued)

Speed (maximum)	Up to 6 Gbps
MTBF	550,000 hours
Logical blocks	1,953,525,168
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 W ● Active: 10 W
Environmental operating conditions (non-condensing)	
Temperature range	5°C to 60°C
Relative humidity range	5% to 90%
Op shock	65G @2ms
Environmental non-operating conditions (non-condensing)	
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 62. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 mW (PS4) ● Active: 3.50 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, 1 TB, PCIe NVMe, Class 25 SSD

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

Table 63. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 mW (PS4) ● Active: 3.50 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, Class 35 SSD

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

Table 64. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 mW (PS4) ● Active: 3.50 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C

Table 64. 256 GB 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 2230, 512 GB, PCIe NVMe, Class 35 SSD

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

Table 65. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 5 mW (PS4) • Active: 3.50 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, 1 TB, PCIe NVMe, Class 35 SSD

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

Table 66. 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)

Table 66. 1 TB SSD specifications (continued)

MTBF	1.4M hours
Logical blocks	2,000,409,264
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 5 mW (PS4) • Active: 3.50 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, Opal Self-Encrypting Class 35 SSD

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

Table 67. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • Idle: 5 mW (PS4) • Active: 3.50 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, Class 40 SSD, self-encrypting drive

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

Table 68. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 mW (PS4 - L1.2) ● Active: 4.50 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, Class 40 SSD, self-encrypting drive

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

Table 69. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> ● Idle: 5 mW (PS4 - L1.2) ● Active: 4.50 W
Environmental operating conditions (non-condensing)	
Temperature range	0°C to 70°C

Table 69. 1 TB SSD, self-encrypting drive 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, Class 40 SSD

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

Table 70. 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
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • 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, Class 40 SSD

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

Table 71. 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)

Table 71. 1 TB SSD specifications (continued)

MTBF	1.4M hours
Logical blocks	2,000,409,264
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • 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, Class 40 SSD

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

Table 72. 2 TB SSD specifications

Capacity	2 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	4,000,797,360
Power source	
Power consumption (reference only)	<ul style="list-style-type: none"> • 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%

8x DVD±RW, slimline

Table 73. 8x DVD±RW, slimline specifications

Height (without bezel)	9.50 mm (0.37 in.)
Width (without bezel)	128.00 mm (5.04 in.)
Depth (without bezel)	126.01 mm (4.97 in.)
Weight (maximum)	140 grams
Interface	SATA 1.5
Speed (maximum)	Up to 1.5 Gbps
Disc capacity	Standard
Internal buffer size	0.5 MB
Access times (typical)	Supplier dependent
Maximum data transfer rates	
Writes	8x DVD/ 24x CD
Reads	8x DVD/ 24x CD
Power source	
DC power requirements	5 V
DC current	1300 mA
Environmental operating conditions (non-condensing)	
Operating temperature range	5°C to 60°C
Relative humidity range	10% to 90% RH
Maximum wet bulb temperature	29°C
Altitude range	0 m to 3048 m
Environmental non-operating conditions (non-condensing)	
Operating temperature range	-40°C to 65°C
Relative humidity range	5% to 95% RH
Maximum wet bulb temperature	38°C
Altitude range	0 m to 10600 m

Media-card reader

The following table lists the media-card reader specifications on your OptiPlex Tower Plus 7010.

Table 74. Media-card reader (standard offering)

Media supported (Maximum capacity that is supported will vary by Flash Media Types)	
Media Supported	SDXC, SDHC, SD Secure Digital (SD) 4.0 UHS-II Secure Digital (SD) 3.0 UHS-I
Support Specification Versions	Secure Digital (SD) 4.0
Power source	

Table 74. Media-card reader (standard offering) (continued)

Max Power Requirements	1.2 A
Supply Voltage Range	3.3 V
Power Consumption	MS 0.08 mA
Environmental operating conditions (Non-condensing)	
Operating Temperature Range	0°C to 70°C
Relative Humidity Range	N/A
Environmental non-operating conditions (Non-condensing)	
Operating Temperature Range	N/A
Relative Humidity Range	N/A

Power

NOTE: The form factor utilizes a more efficient Active Power Factor Correction (APFC) power supply. Dell recommends only Universal Power Supplies (UPS) based on Sine Wave output for APFC PSUs, not an approximation of a Sine Wave, Square Wave, or quasi-Square Wave. If you have questions, please contact the manufacturer to confirm the output type. Offering and availability may vary by region.

Table 75. OptiPlex Tower Plus 7010 - Power supply unit specifications

Description	Values	
Type	260 W (80 PLUS Bronze)	500 W (80 PLUS Platinum)
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 Tower Plus 7010.

Table 76. Thermal dissipation

Power supply unit	Heat dissipation	Voltage
260 W (80 Plus Bronze)	$260 * 3.412 = 888$ BTU/hr	100 to 240 VAC, 50 to 60 Hz, 4.2 A/2.1 A
500 W (80 Plus Platinum)	$500 * 3.412 = 1706$ BTU/hr	100 to 240 VAC, 50 to 60 Hz, 7.0 A/3.5 A

CMOS battery

The following table lists the CMOS battery specifications of your OptiPlex Tower Plus 7010.

Table 77. CMOS battery

Brand	Type	Voltage	Composition	Battery life
MITSUBISHI	CR2032	3.0 V	Lithium metal	Continuous Discharge Under 15 kΩ Load to 2.0 V End-Voltage. 20°C±2°C 940 Hrs. or Longer.910 Hrs.or Longer after 12 mo.

Accessories

The following table lists the supported accessories on your OptiPlex Tower Plus 7010.

Table 78. Accessories

Accessories
Dell Pro Webcam - WB5023
Dell Slim Conferencing Soundbar - SB522A
Dell Premier Wireless ANC Headset - WL7022
Dell 24 Monitor - P2422H
Dell 27 Monitor - P2723D
Dell UltraSharp 24 Monitor - U2422H
Dell Premier Multi-Device Wireless Keyboard and Mouse - KM7321W
OptiPlex MT Cable Cover

Security

Software security

The following table lists the software security details of your OptiPlex Tower Plus 7010.

Table 79. Software security

Security options
McAfee Small Business Security 30-day Free Trial
McAfee Small Business Security 12-month subscription
McAfee Small Business Security 36-month Subscription
Intel Guard Technologies & Secure Key: Software Guard (SGX), Data Guard (vPro only), Boot Guard, BIOS Guard (Core CPU's only), OS Guard (Core CPU's only) and Secure Key (i5 or greater only)
Intel Runtime BIOS Resilience (Copper Point) with attestation via Nifty Rock + Intel TXT
Support of Absolute Persistent Module BIOS agent v2
OpenXT validation required

Table 79. Software security (continued)

Security options
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
Dell Encryption
Dell Endpoint Security Suite Enterprise

Trusted Platform Module

The following table lists the Trusted Platform Module (TPM) of your OptiPlex Tower Plus 7010.

Table 80. Trusted Platform Module (TPM)

TPM: Nuvoton NPCT760JABYX
SPI interface
TPM 2.0
FIPs 140-2 certificate

Mil-SPEC

The OptiPlex Tower Plus 7010 meets military specifications for the following MIL-STD 810H tests:

Table 81. Tower - Military specifications

Test Category	Test Method	Test Parameters
Altitude Storage Transport	Method 500.6 Procedure I	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Test Pressure: Equivalent to cabin altitude of 15,000ft • Temperature: 21°C; Altitude Change Rate: <10 m/s • Duration: 1 hour • Unit is operational during test.
Low Temperature (Exaggerated)	Method 502.7 Procedure I	<ul style="list-style-type: none"> • Duration: 24 hour exposure • Temperature: -51 °C • Unit is operational during test

Table 81. Tower - Military specifications (continued)

Test Category	Test Method	Test Parameters
Low Temperature	Method 502.7 Procedure II	<ul style="list-style-type: none"> Duration: 24 hour exposure Temperature: -29 °C Unit is operational during test
Humidity Induced (Storage & Transit) and Naturaland Cycles	Method 507.6 Procedure I	<ul style="list-style-type: none"> Duration: Refer to MIL-spec Table 507.6-II Non-hazardous test items.
Vibration Operational	Method 514.8 Procedure I -Category 4	<ul style="list-style-type: none"> Operational Vibration, 10-500 Hz, 1.04 Grms, random 1 hour on Bottom, Left and Back side. Unit is operational during test.
Shock Material to be Packaged	Method 516.8 Procedure II	<ul style="list-style-type: none"> 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. Unit is non-operational during both test
Bench Handling	Method 516.8 Procedure VI	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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.
Crash Hazard ShockTest	Method 516.8 Procedure V	<ul style="list-style-type: none"> 185g, 2ms Half Sine 2 shocks/axis/ direction for a total of 12shocks. Unit is non-operational during test.

Acoustic noise emission information tower

The following table lists the acoustic noise emission information of your OptiPlex Tower Plus 7010.

Table 82. Acoustic noise emission information tower

Component	Test Configuration
CPU	I9-13900K RAPTOR LAKE DT LGA B-0 125 W 3 GHz 8+16 P2K vPro 36 MB 32 EU Q1EQ QS
Memory	DIMM, 32 GB*4, 4800, 2RX8,16, DDR5, NU

Table 82. Acoustic noise emission information tower (continued)

Component	Test Configuration
HDD (#, capacity)	S5DR, 2 TB, G44, 80S2, KIOXIA, XG8
ODD	DVD+/-RW, 8X, 9.5T, GU90N, HLDS
Graphics Adapter	UMA

Table 83. Declared Sound Power (LWAd)

Operating Mode	Declared Sound Power(LWAd)
Idle	3.11
HDD Operating	3.1
CPU Stressed	3.1
ODD Operating	4.87

Table 84. A-Weighted Sound Pressure Level (dB)

Declared Sound Pressure (LpA)		
	Tabletop System	
Operating Mode	Operator Position	Bystander Position
Idle	21.8	18
HDD Operating	22.2	18.4
CPU Stressed	21.9	18
ODD Operating	38.4	31.6

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 10.2 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 5.1 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 included 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 | Configure is a graphical user interface (GUI) admin tool for configuring and deploying hardware settings in a pre-OS or post-OS environment, and it operates seamlessly with SCCM and Airwatch and can be self-integrated into LANDesk and KACE. Simply, this is all about the BIOS. Command | Configure allows you to remotely automate and configure over 150+ BIOS settings for a personalized user experience.

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

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

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

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

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

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

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

Out of Band Systems Management

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).

Intel vPro provides an enhanced level of built-in 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.



Systems that are configured with Intel Core processors support Intel vPro. Check the processor specifications section for the list of Intel vPro enabled processors.

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 85. Self-help resources

Self-help resources	Resource location
Information about Dell products and services	www.dell.com
My Dell app	
Tips	
Contact Support	In Windows search, type <code>Contact Support</code> , 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	<ol style="list-style-type: none"> 1. Go to www.dell.com/support. 2. On the menu bar at the top of the Support page, select Support > Knowledge Base. 3. In the Search field on the Knowledge Base page, type the keyword, topic, or model number, and then click or tap the search icon to view the related articles.

Contacting Dell

To contact Dell for sales, technical support, or customer service issues, see www.dell.com/contactdell.

 **NOTE:** Availability varies by country/region and product, and some services may not be available in your country/region.

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