Dell OptiPlex 7070 Ultra

Setup and Specifications

Notes, cautions, and warnings

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

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

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

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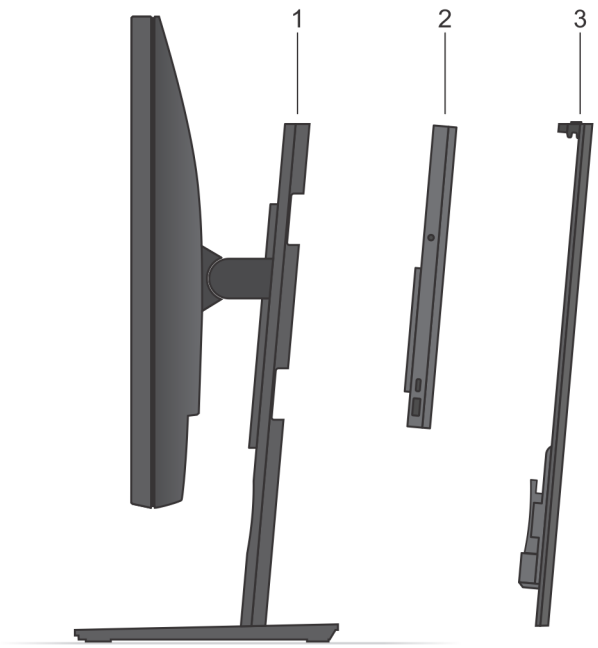
1

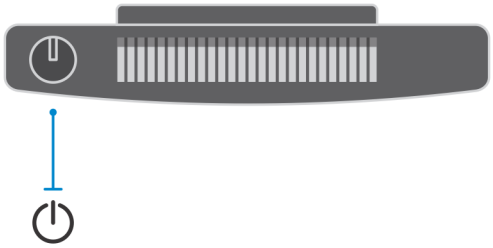
Views

Exploded view



1. Stand
2. OptiPlex 7070 Ultra
3. Stand cover

Top view



: Power button

Bottom view

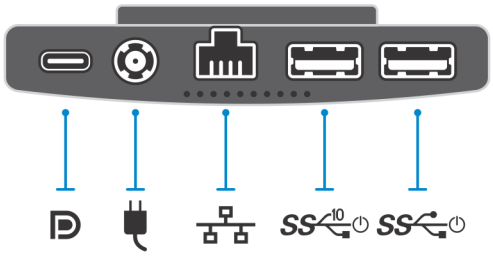


Table 1. Bottom view

Callout	Description
	USB 3.1 Gen 2 Type-C port with DisplayPort Alt Mode/Power Delivery
	Power-adapter port
	Network RJ-45 port
	USB 3.1 Gen 2 Type-A port with SmartPower
	USB 3.1 Gen 1 Type-A port with SmartPower

Left and right view

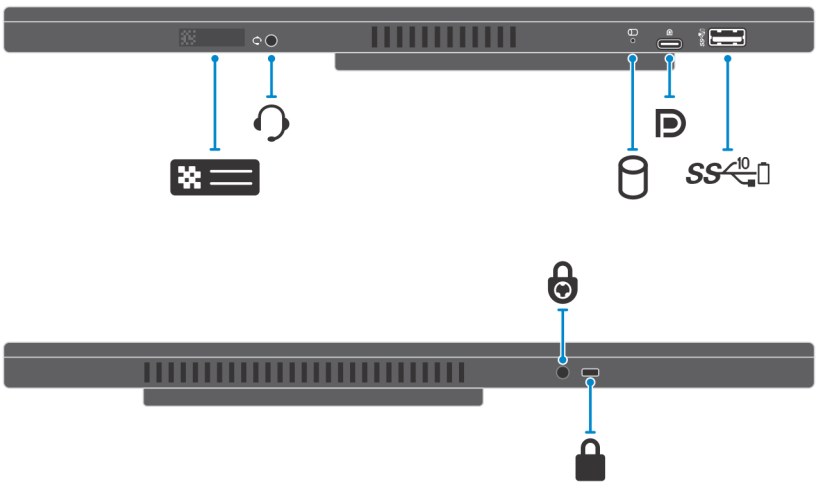


Table 2. Left and right view

Callout	Description
	Service tag location
	Universal audio jack
	Hard-drive status LED
	USB 3.1 Gen 2 Type-C port with DisplayPort Alt Mode
	USB 3.1 Gen 2 Type-A port with PowerShare
	Security screw hole
	Security lock slot

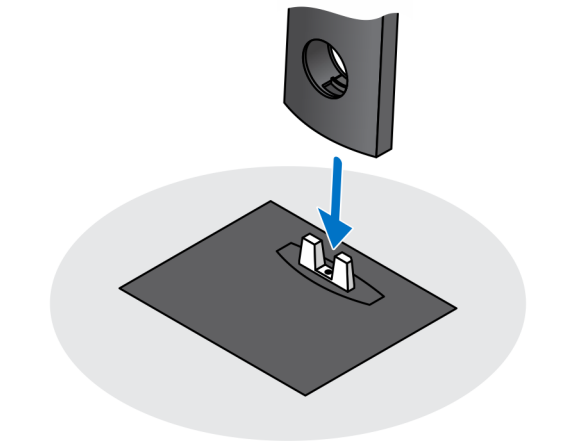
2

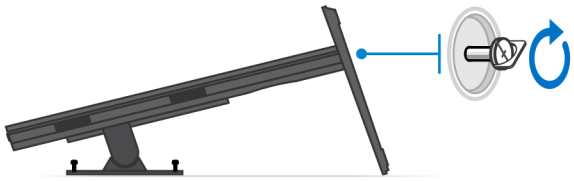
Set up your OptiPlex 7070 Ultra

Installing the device on a fixed stand

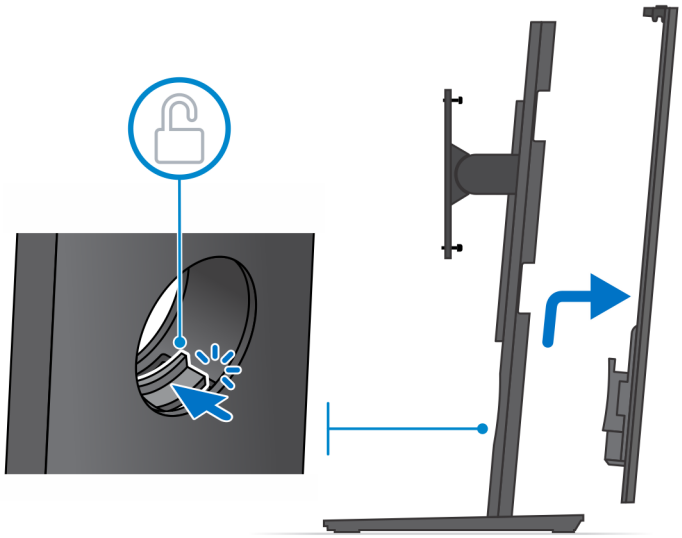
Steps

1. Align and insert the slots on the fixed stand into the tab on the stand base.
2. Lift and tilt the stand base.
3. Tighten the captive screw to secure the stand to the base.

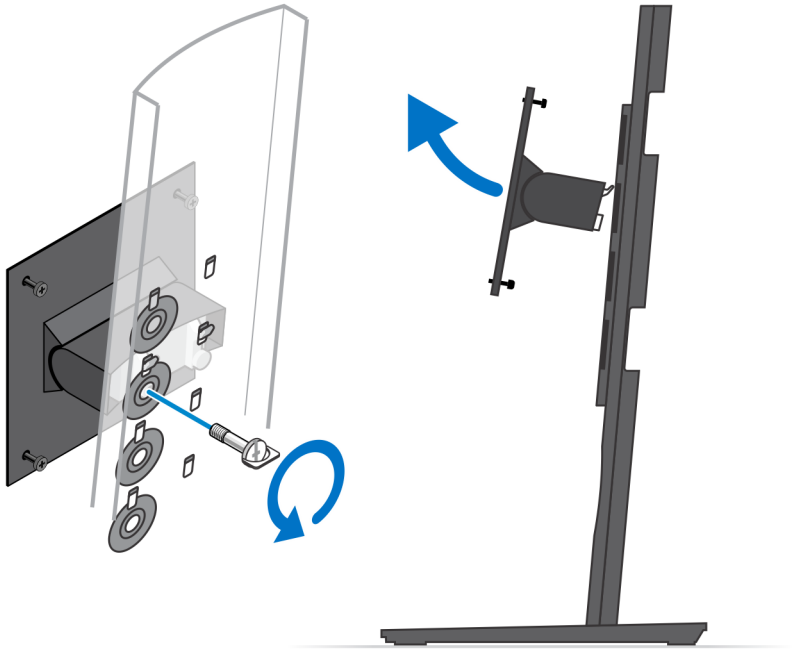




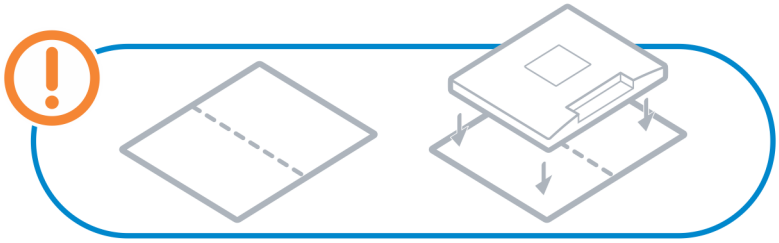
4. Slide the release latch on the stand, until you hear a click, to release the stand cover.
5. Slide and lift the cover to release it from the stand.

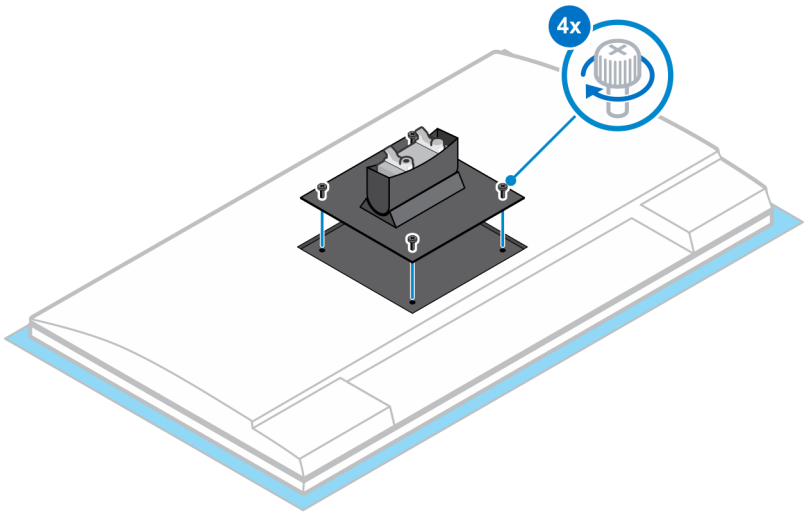


6. Remove the screw that secures the stand mounting bracket to the stand.
7. Lift the mounting bracket to release the hooks on the bracket from the slots on the stand.

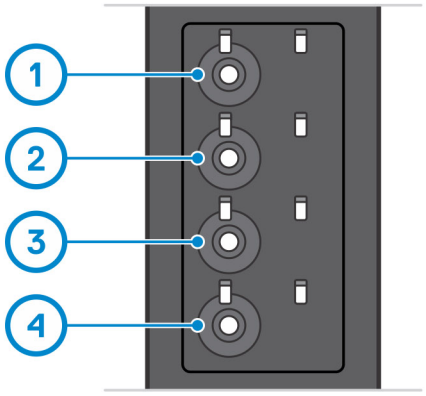


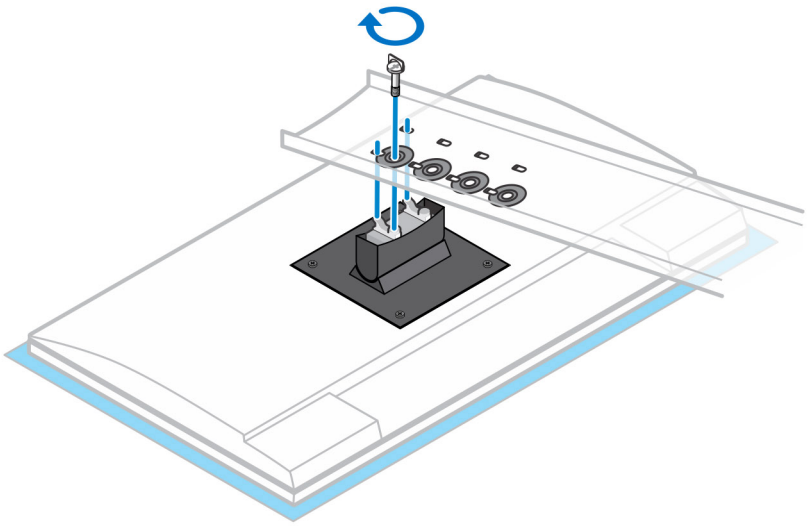
8. To avoid any damage to the monitor, ensure that you place the monitor on a protective sheet.
9. Align the screws on the mounting bracket with the screw holes on the monitor.
10. Tighten the four captive screws to secure the mounting bracket to the monitor.



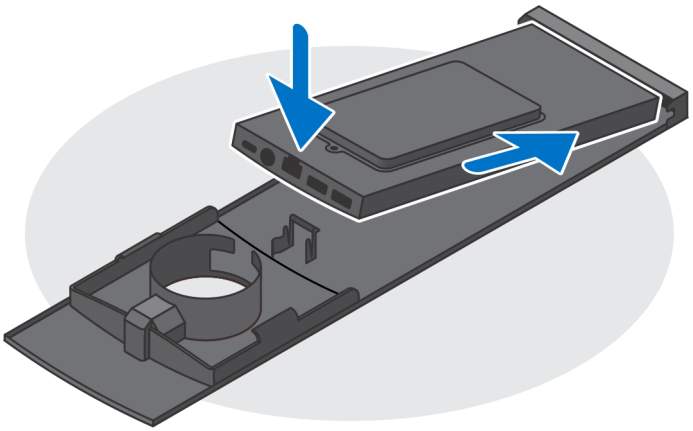


11. Select the height at which you want to mount the monitor and align the hooks on the mounting bracket with the slots on the stand.
12. Replace the screw to secure the fixed stand to the monitor.



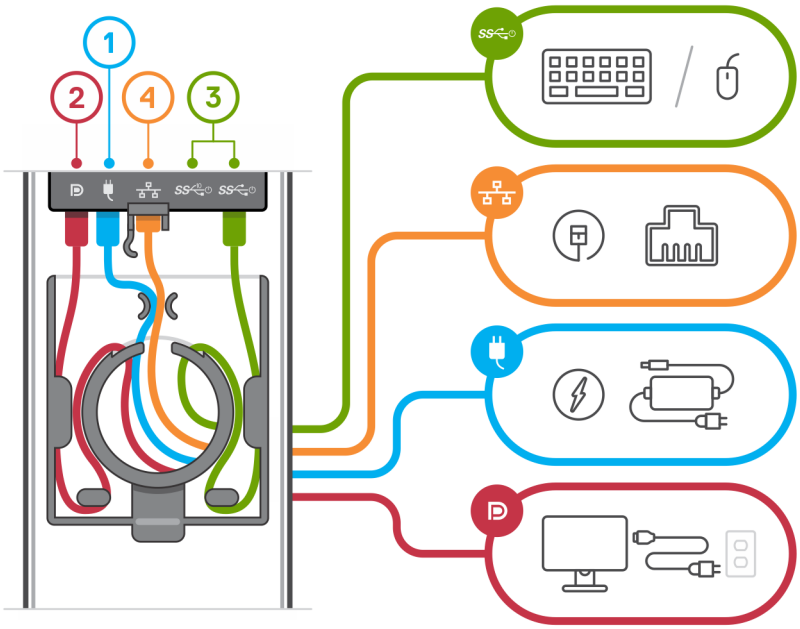


13. Align the vents on the device with the vents on the stand cover.
14. Lower the device in the stand until you hear a click.

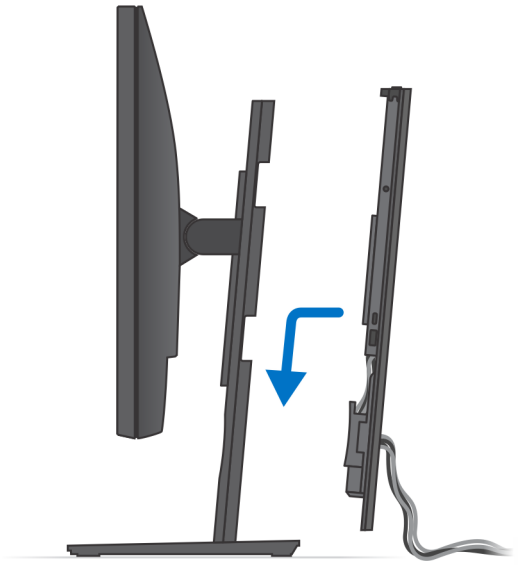


15. Connect the power, network, keyboard, mouse, and display cables to the device and to the power outlet.

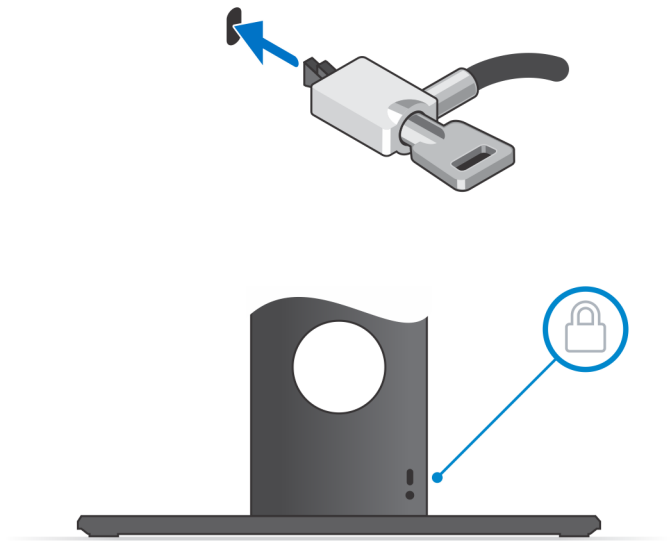
NOTE: To avoid any pinching or crimping of the cables while closing the stand cover, it is recommended that you route the cables as indicated in the image.



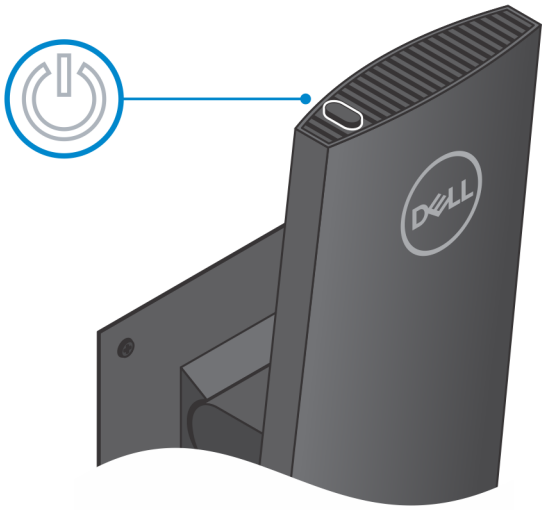
16. Slide the back cover, along with the device, into the stand until you hear a click.



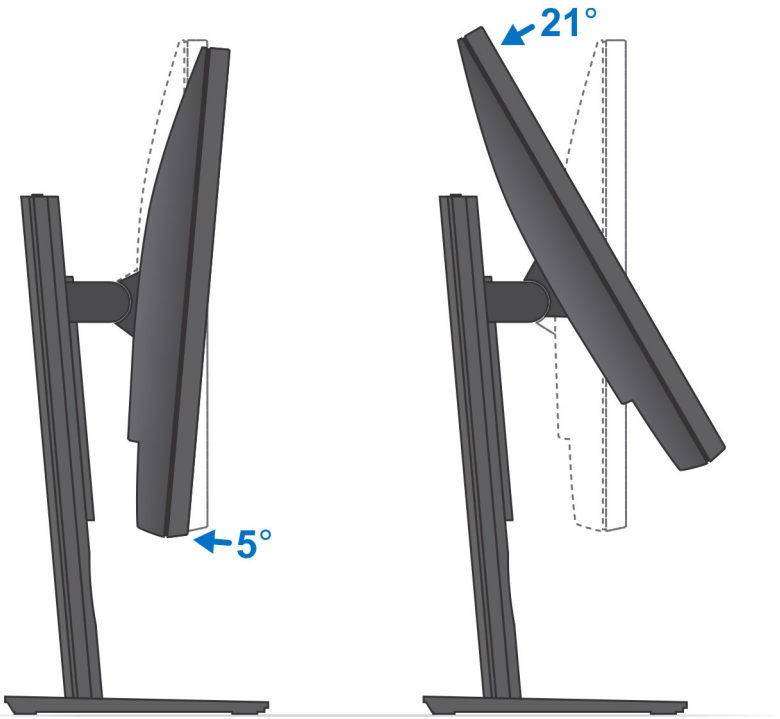
17. Lock the device and the stand cover.



18. Press the power button to turn on the device.



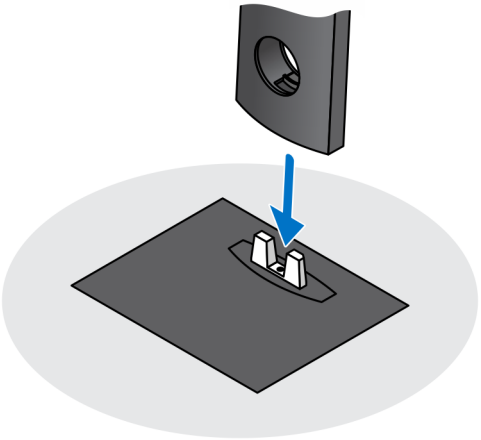
Monitor tilt angle

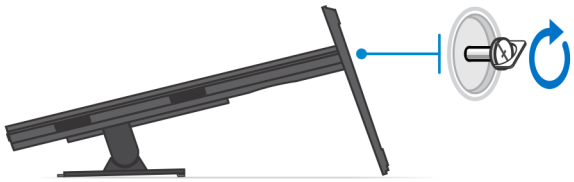


Installing the device on a height-adjustable stand

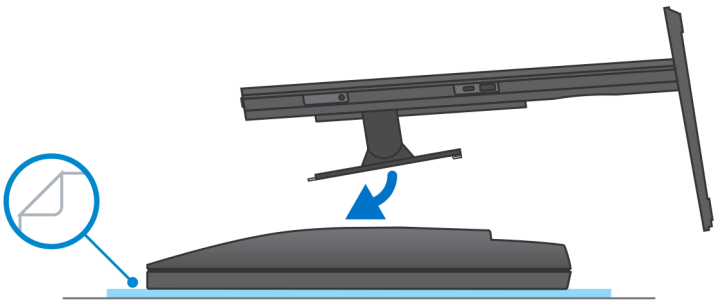
Steps

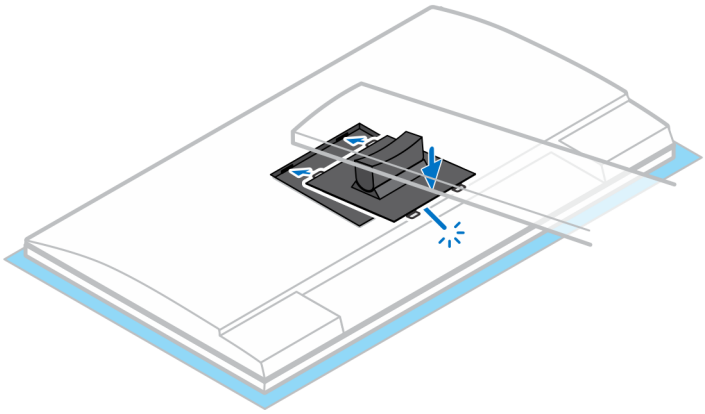
1. Align and insert the slots on the height-adjustable stand into the tab on the stand base.
2. Lift and tilt the stand base.
3. Tighten the captive screw to secure the stand to the base.



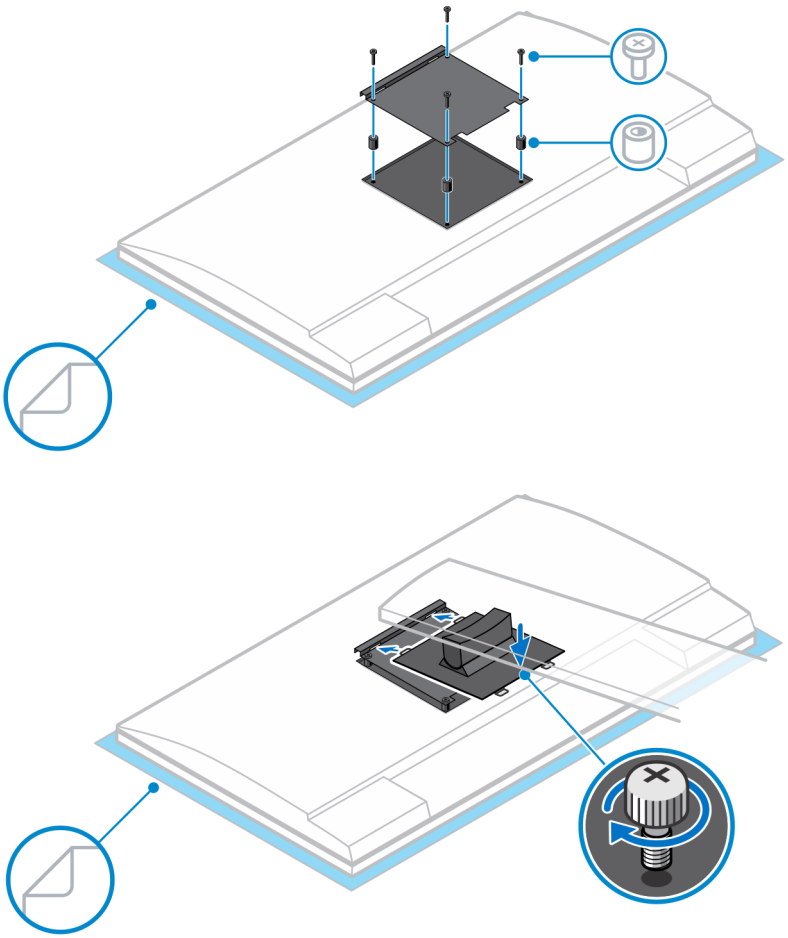


4. To avoid any damage to the monitor, ensure that you place the monitor on a protective sheet.
5. For installing the height-adjustable stand to the monitor:
   a) Align and insert the hooks on the mounting bracket on the stand into the slots on the monitor, until you hear a click.

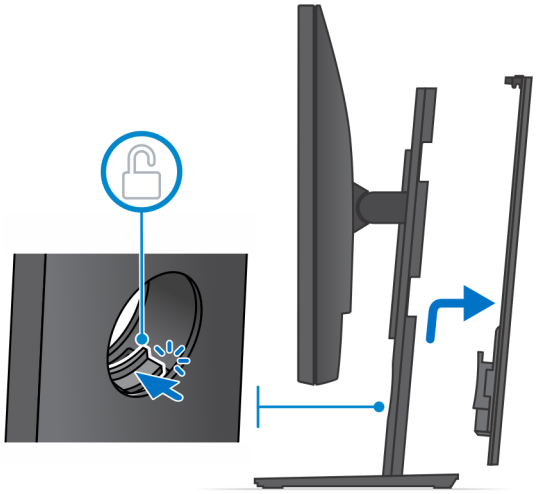


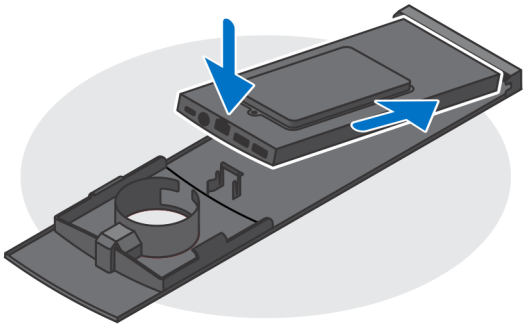


6. For installing QR to VESA bracket for E-Series monitor:
   a) Align the screw holes on the QR to VESA bracket with the screw holes on the monitor.
   b) Install the four screw spacers and the screws to secure the QR to VESA bracket to the monitor.
   c) Align and insert the QR tabs on the stand into the slots on the QR to VESA bracket on the monitor.
   d) Tighten the thumb screw to secure the stand to the QR to VESA bracket.



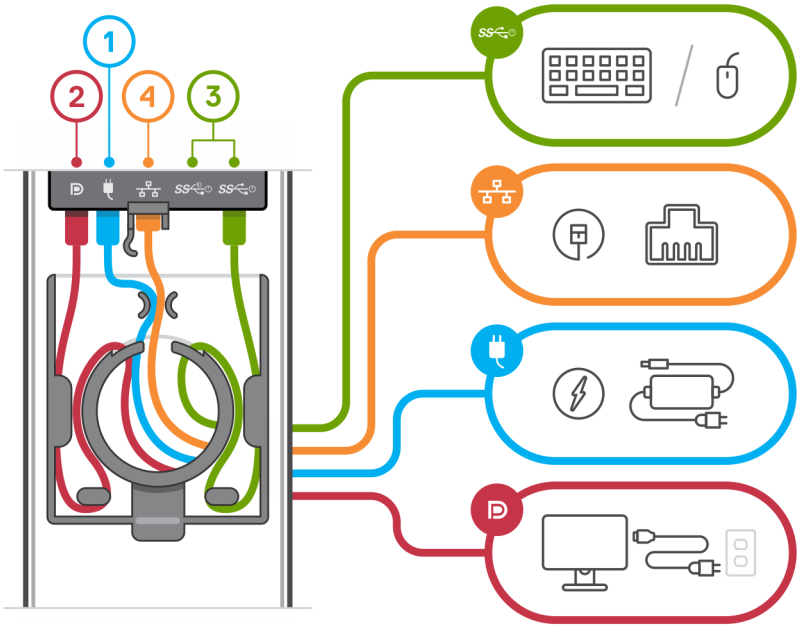
7. To release the stand cover, slide the release latch until you hear a click.
8. Slide and lift the cover to release it from the stand.
9. Align the vents on the device with the vents on the stand cover.
10. Lower the device in the stand until you hear a click.



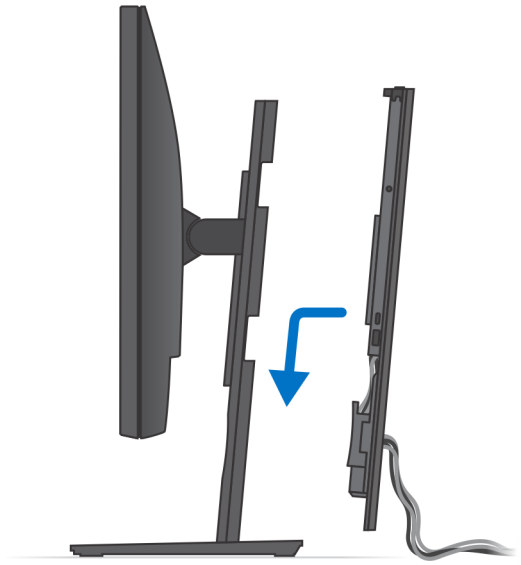


11. Connect the power, network, keyboard, mouse, and display cables to the device and to the power outlet.

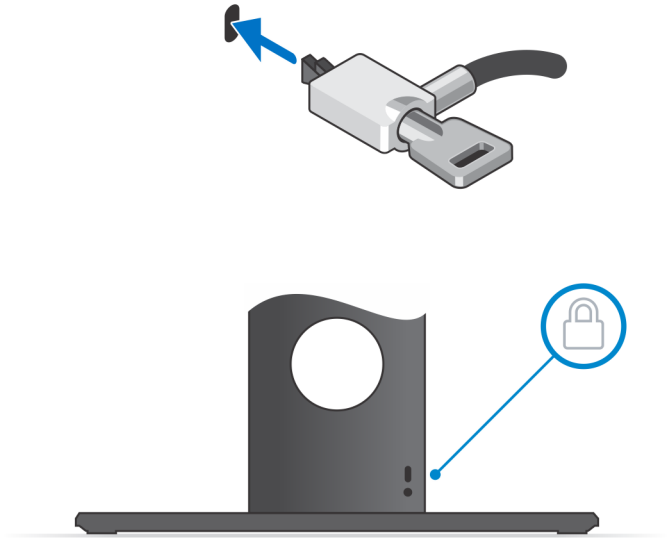
NOTE: To avoid any pinching or crimping of the cables while closing the stand cover, it is recommended that you route the cables as indicated in the image.



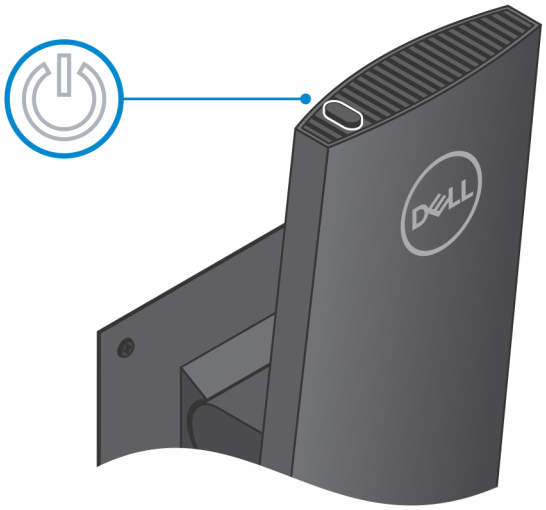
12. Slide the back cover, along with the device, into the stand until you hear a click.



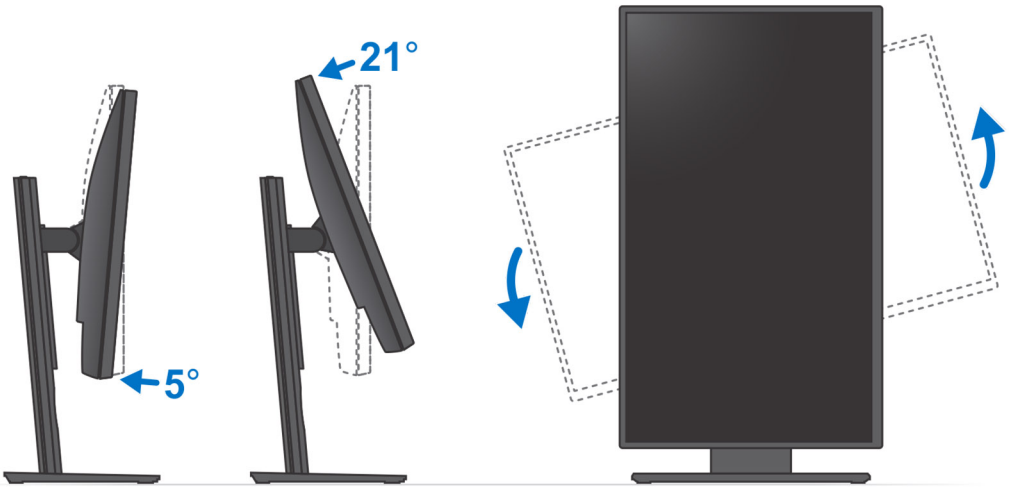
13. Lock the device and the stand cover.

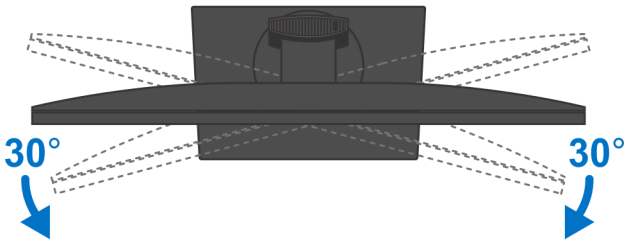


14. Press the power button to turn on the device.



Stand tilt, pivot, and swivel images

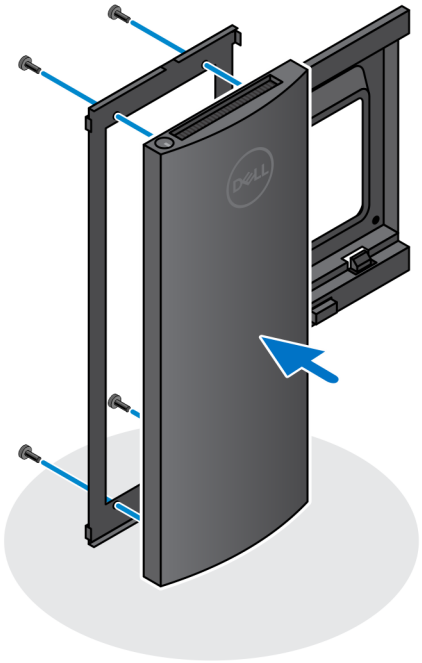




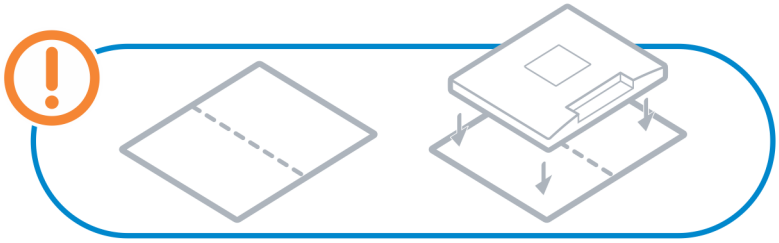
Installing device on offset VESA mount

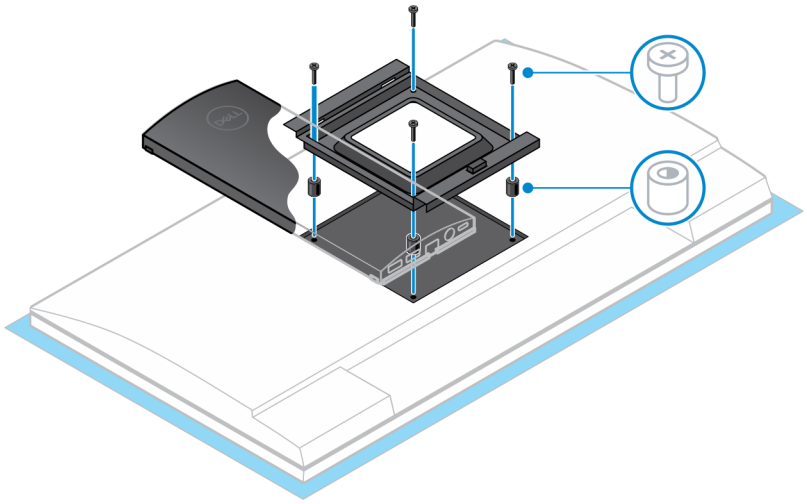
Steps

1. Align the screw holes on the device with the screw holes on the offset VESA mount.
2. Install the four screws to secure the device to the offset VESA mount.

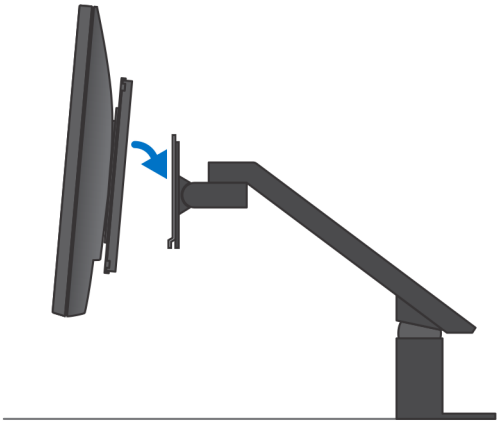


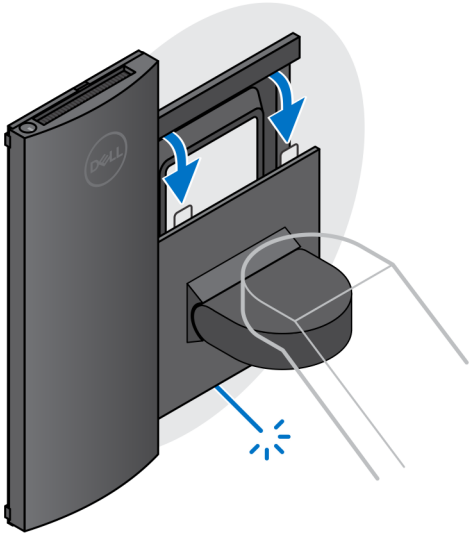
3. To avoid any damage to the monitor, ensure that you place the monitor on a protective sheet.
4. Align the screw holes on the offset VESA mount with the screw holes on the monitor.
5. Install the four screw spacers and the screws to secure the offset VESA mount to the monitor.





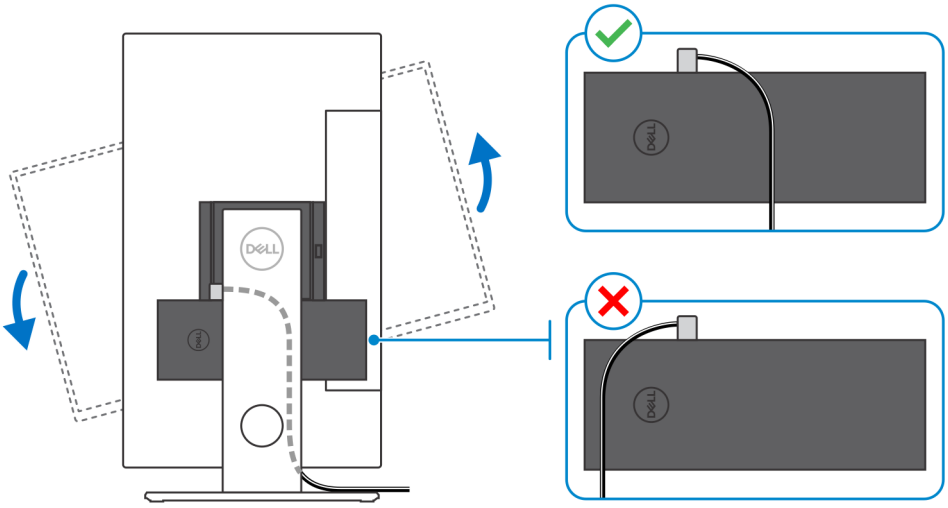
6. Insert the hooks on the mounting bracket of the monitor arm stand into the slots on the offset VESA mount on the monitor.
7. Lower the monitor on the monitor arm stand until you hear a click.





NOTE: To install the offset VESA mount on a Dell E-Series monitor, remove the VESA cover from the back of the monitor and secure the offset VESA mount along with the device to the monitor.

NOTE: **While orienting the monitor horizontally, route the security lock cable to the right side of the device to avoid any impact to WLAN performance.**



3

Powering the system

OptiPlex 7070 Ultra can be powered using a AC adapter (4.5 mm input power source) or through the USB Type-C cable connected to your display. During normal operation, when the device is connected with a single power source (primary power source), connecting a second power source and disconnecting the primary power source will shut down the device. However, if the secondary power source is disconnected while the primary power source is connected, the system continues to operate normally.

When the device is powered with both the power sources—AC adapter and USB Type-C cable, the AC adapter is the primary power source and USB Type-C is the secondary power source. Disconnecting the AC adapter will shut down the system. If the secondary power source is disconnected, the system continues to operate normally.

NOTE: Hotswap between the AC adapter and USB Type-C power source is not supported.

Table 3. Powering the system

Primary Power Source	Secondary power source connected	Power source disconnected	Operation
AC Adapter	Rear Type-C	AC Adapter	Shut down
AC Adapter	Rear Type-C	Rear Type-C	Normal
Rear Type-C	AC Adapter	AC Adapter	Normal
Rear Type-C	AC Adapter	Rear Type-C	Shut down

Topics:

- Type-C display settings

Type-C display settings

When using a Dell USB Type-C display to power on your OptiPlex 7070 Ultra, to avoid any power loss to the device when the display is turned off or on Standby mode, ensure that the **Always on USB-C Charging setting** on the display is enabled.

On turning on the Dell USB Type-C display for the first time, the **Easy initial setup** is displayed. Click **Yes**, to enable the **Always on USB-C charging** option.

If you miss enabling the option on Easy Initial setup window, then you can enable the setting using the on-screen display menu available on the display. For more information on enabling the option, see the documentation that is shipped with your display.

NOTE: The "USB-C Always On Charging" firmware option may not be present on all Dell USB Type-C displays. You can enable the USB-C Always On charging feature only after you update the firmware. Download the Dell display firmware, at Dell.com/support.

4

Smart power enablement

Deep sleep is disabled in the BIOS by default. If the system is connected to a USB keyboard and Deep sleep is enabled in the BIOS, the system will not power on or wake from hibernation when a key is pressed on the USB keyboard.

Enable USB Wake support:

1. Press <F12> when the Dell logo appears to initiate a one-time boot menu. Go to BIOS Setup.
2. Select Power Management.
3. Navigate to **USB Wake Support**
4. Turn on **Enable USB Wake Support**
5. Navigate to **Deep Sleep control**
6. Disable **Deep Sleep**

5

Specifications of OptiPlex 7070 Ultra

Processors

Table 4. Processors

Processors	Wattage	Core count	Thread count	Speed	Cache	Integrated graphics
8th Generation Intel Core i3-8145U	25 W	2	4	2.10 GHz to 3.90 GHz	4 MB	Intel UHD Graphics 620
8th Generation Intel Core i5-8265U	25 W	4	8	1.60 GHz to 3.90 GHz	6 MB	Intel UHD Graphics 620
8th Generation Intel Core i5-8365U	25 W	4	8	1.60 GHz to 4.10 GHz	6 MB	Intel UHD Graphics 620
8th Generation Intel Core i7-8565U	25 W	4	8	1.80 GHz to 4.60 GHz	8 MB	Intel UHD Graphics 620
8th Generation Intel Core i7-8665U	25 W	4	8	1.90 GHz to 4.80 GHz	8 MB	Intel UHD Graphics 620

Chipset

Table 5. Chipset

Description	Values
Chipset	Integrated with the processor
Processor	8th Generation Intel Core i3/i5/i7
DRAM bus width	64 bit
Flash EPROM	32 MB
PCIe bus	Up to Gen 3.0

Operating system

- Windows 10 Home (64-bit)
- Windows 10 Professional (64-bit)
- Windows 10 Pro National Academic (64-bit)
- Ubuntu 18.04 LTS

Memory

Table 6. Memory specifications

Description	Values
Slots	Two SO-DIMM slots
Type	Dual-channel DDR4

Description	Values
Speed	2400 MHz
Maximum memory	64 GB
Minimum memory	4 GB
Memory size per slot	4 GB, 8 GB, 16 GB, 32 GB
Configurations supported	• 4 GB (1 x 4 GB) • 8 GB (1 x 8 GB, 2 x 4 GB) • 16 GB (1 x 16 GB, 2 x 8 GB) • 32 GB (1 x 32 GB, 2 x 16 GB) • 64 GB (2 x 32 GB)

Storage

Your computer supports the following configuration:

- One 2.5 inch, 7 mm hard drive and One M.2 2230 solid-state drive

Table 7. Storage specifications

Storage type	Interface type	Capacity
2.5-inch 5400 rpm hard drive	SATA AHCI	Up to 2 TB
2.5-inch 7200 rpm hard drive	SATA AHCI	Up to 1 TB
2.5 inch 7200 rpm FIPS Self Encrypting Opal 2.0 hard drive	FIPS	Up to 500 GB
M.2 PCIe NVMe Class 35 solid-state drive	PCIe x2 Gen 3 NVMe	Up to 1 TB
M.2 PCIe NVMe Class 35 Self Encrypting Opal 2.0 solid-state drive	PCIe x4 Gen 3 NVMe	Up to 256 GB

Ports and connectors

Table 8. External ports and connectors

Description	Values
External:	
Network	1 RJ-45 port 10/100/1000 Mbps
USB	• 1 USB 3.1 Gen 2 Type-C port with DisplayPort Alt Mode (side) • 1 USB 3.1 Gen 2 Type-A port with PowerShare (side) • 1 USB 3.1 Gen 2 Type-C port with DisplayPort Alt Mode/Power Delivery (rear) • 1 USB 3.1 Gen1 Type-A port with SmartPower (rear) • 1 USB 3.1 Gen 2 type-A port with SmartPower (rear)
Audio	Universal Audio Jack
Video	DisplayPort over USB Type-C port
Power adapter port	4.50 mm x 2.90 mm DC-in
Security	• 1 Kensington lock slot • 1 Security screw hole to secure cover

Table 9. Internal ports and connectors

Description	Values
Internal:	
M.2	• 1 M.2 slot for 2230 M.2 WiFi and Bluetooth card • 1 M.2 slot for 2230 M.2 PCIe solid-state drive **NOTE: To learn more about the features of different types of M.2 cards, see the knowledge base article SLN301626.**
SATA	1 SATA 3.0 FFC connector for hard drive

Audio

Table 10. Audio specifications

Description	Values
Controller	Realtek ALC3204-CG 4 channel high definition audio
Stereo conversion	Supported
Internal interface	High definition audio interface
External interface	Universal Audio Jack
Speakers	Not applicable

Video

Table 11. Integrated graphics specifications

Integrated graphics			
Controller	**External display support**	**Memory size**	**Processor**
Intel UHD Graphics 620	• Up to three displays supported via DisplayPort Multi-Streaming Technology (MST) • Two DisplayPort 1.2 support over USB 3.1 Type-C port	Shared system memory	8th Generation Intel Core i3/i5/i7

Communications

Ethernet

Table 12. Ethernet specifications

Description	Values
Model number	Intel i219V (non-vPro) or Intel i219LM (vPro)
Transfer rate	10/100/1000 Mbps

Wireless module

Table 13. Wireless module specifications

Description		Values
Model number	Qualcomm QCA61x4A	Intel Wi-Fi 6 AX200
Transfer rate	Up to 867 Mbps	Up to 2.4 Gbps
Frequency bands supported	2.4 GHz, 5 GHz	2.4 GHz, 5 GHz
Wireless standards	• Wi-Fi 802.11 a/b/g • Wi-Fi 4 (WiFi 802.11n) • Wi-Fi 5 (WiFi 802.11ac)	• Wi-Fi 802.11 a/b/g • Wi-Fi 4 (Wi-Fi 802.11n) • Wi-Fi 5 (Wi-Fi 802.11ac) • Wi-Fi 6 (Wi-Fi 802.11ax)
Encryption	• 64-bit/128-bit WEP • AES-CCMP • TKIP	• 64-bit/128-bit WEP • AES-CCMP • TKIP
Bluetooth	Bluetooth 4.2	Bluetooth 5.0

Power adapter

Table 14. Power adapter specifications

Description	Values
Type	65 W
Diameter (connector)	4.50 mm x 2.90 mm
Input voltage	100 VAC-240 VAC
Input frequency	50 Hz-60 Hz
Input current (maximum)	1.60 A
Output current (continuous)	3.34 A
Rated output voltage	19.50 VDC
Temperature range:	
Operating	0°C to 40°C (32°F to 104°F)
Storage	-40°C to 70°C (-40°F to 158°F)

Dimensions and weight

Table 15. Dimensions and weight

Description	Values
Height:	
Front	19.70 mm (0.78 in.)
Rear	• Without HDD: 19.70 mm (0.78 in.) • With HDD: 27.74 mm (1.09 in.)

Description	Values
Width	96.10 mm (3.78 in.)
Depth	256.20 mm (10.09 in.)
Weight (maximum)	maximum 0.65 kg (1.43 lb) **NOTE: The weight of your computer depends on the configuration ordered and the manufacturing variability.**

Accessories

Table 16. Accessories

Accessories	
Stands and Mounts	OptiPlex Ultra Fixed Stand
	OptiPlex Ultra Height Adjustable Stand
	OptiPlex Ultra Offset VESA Mount
Cables	OptiPlex Ultra USB C to USB C cable, 0.6 meter
	OptiPlex Ultra USB-A to USB-B 3.0 cable, 0.6 meter
	OptiPlex Ultra USB C to DisplayPort cable, 0.6 meter
	OptiPlex Ultra USB-C to DisplayPort cable, 1.0 meter
	OptiPlex Ultra USB-C to HDMI cable, 1.0 meter
	OptiPlex Ultra USB-C to DVI cable, 1.0 meter
	OptiPlex Ultra USB-C to VGA cable, 1.0 meter
Keyboards and Mice	Dell KB216 Multimedia Keyboard
	Dell KB813 Smartcard Keyboard
	Dell KM636 Wireless Keyboard and Mouse Combo
	Dell KM717 Premium Wireless Keyboard and Mouse Combo
	Dell KB522 Multimedia Wired Keyboard
	Dell MS116 Wired Mouse
	Dell Laser Scroll USB 6-Buttons Silver and Black Mouse
	Dell MS819 Wired Mouse with Fingerprint Reader
	Dell WM326 Wireless Mouse
	Dell WM527 Wireless Mouse
Monitors	Qualified with select Dell Professional, UltraSharp, and E series monitors
Audio	External speakers, Dell Pro Stereo Headsets
Locks	Kensington Desktop and Peripheral Locking Kit
	Kensington MicroSaver 2.0 Keyed Laptop Lock
	Kensington MicroSaver Twin Laptop Lock
External Optical Disk Drive	Dell USB Slim DVD/RW Drive - DW316

Energy Star and Trusted Platform Module (TPM)

Table 17. Energy star and TPM

Features	Specifications
Energy Star	Energy Star 7 compliant
TPM	• Hardware trusted Platform Module (Discrete TPM Enabled) • Firmware Trusted Platform Module only (Discrete TPM Disabled)
Environmental, Ergonomic and Regulatory standards	Environmental Standards (eco-labels): ENERGY STAR, EPEAT Registered, TCO Certified, CEL, WEEE, Japan Energy Law, South Korea E-standby, South Korea Eco-label, EU RoHS, China RoHS. Please see your local representative or www.dell.com for specific details.

Computer environment

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

Table 18. Computer environment

Description	Operating	Storage
Temperature range	0°C to 35°C (32°F to 95°F)	-40°C to 65°C (-40°F to 149°F)
Relative humidity (maximum)	10% to 90% (non-condensing)	0% to 95% (non-condensing)
Vibration (maximum)*	0.66 GRMS	1.30 GRMS
Shock (maximum)	110 G†	160 G†
Altitude (maximum)	-15.2 m to 3048 m (4.64 ft to 10000 ft)	-15.2 m to 10668 m (4.64 ft to 35065.61 ft)

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

† Measured using a 2 ms half-sine pulse when the hard drive is in use.