Dell 24 USB-C Monitor - P2421DC

User's Guide



Monitor Model: P2421DC Regulatory Model: P2421DCc

Ø	NOTE: A NOTE indicates important information that helps you make better use of your computer.
\triangle	CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.
\triangle	WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

Copyright © 2020 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

2020 - 03

Contents

41	oout your monitor b
	Package contents
	Product features
	Identifying parts and controls
	Front view
	Back view
	Side view
	Bottom view
	Monitor specifications
	Resolution specifications
	Supported video modes
	Preset display modes
	MST Multi-Stream Transport (MST) Modes 16
	Electrical specifications
	Physical characteristics
	Environmental characteristics
	Power management modes
	Plug and play capability
	LCD monitor quality and pixel policy 25
	Maintenance guidelines
	Cleaning your monitor
Se	etting up the monitor
	Attaching the stand
	Pell



Connecting your monitor
Connecting the DP cable
Connecting the monitor for DP Multi-Stream Transport (MST) function
Connecting the USB Type-C cable
Connecting the monitor for USB-C Multi-Stream Transport (MST) function
Organizing cables
Removing the stand
Wall mounting (optional)
Operating your monitor
Power on the monitor
USB-C charging options
Using the control buttons
OSD controls
Using the On-Screen Display (OSD) menu
Accessing the OSD menu
Menu and Power button lock
OSD warning messages
Setting up your monitor
Setting the maximum resolution
If you have a Dell desktop or a Dell portable computer with internet access
If you have a non Dell desktop, portable computer, or graphics card 55
Using the tilt, swivel, and vertical extension 57
Tilt, Swivel



Vertical Extension	57
Rotating the Monitor	58
Troubleshooting	61
Self-Test	61
Built-in diagnostics	62
Setting USB-C Prioritization when USB-C Charging is to On During Power Off	
Common problems	65
Product-specific problems	68
Appendix	70
Safety Instructions	70
FCC notices (U.S. Only) and other regulatory informat	ion 70
Contacting Dell	70



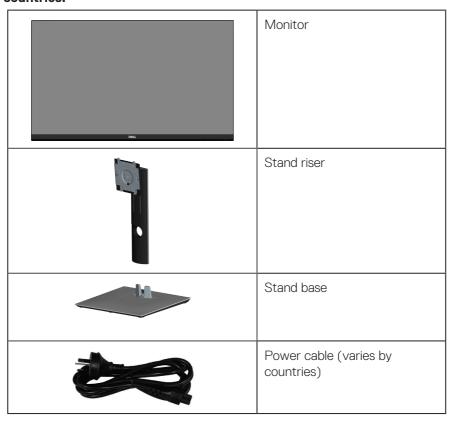
About your monitor

Package contents

Your monitor ships with the components shown below. Ensure that you have received all the components and see Contacting Dell for more information if something is missing.



NOTE: Some items may be optional and may not ship with your monitor. Some features or media may not be available in certain countries





	DP 1.2 cable (1.8 m length)
	USB Type-C cable (C to C, 1.8 m length)
	Cable Tie
Softy of logatory Softy of loga	Quick Setup Guide Safety and Regulatory Information



Product features

The Dell P2421DC monitor has an active matrix, Thin-Film Transistor (TFT), Liquid Crystal Display (LCD), anti-static, and LED backlight. The monitor features include:

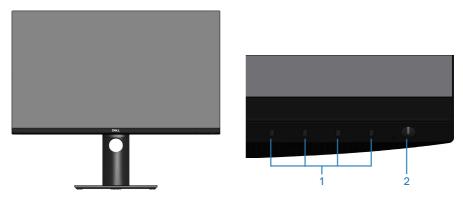
- 60.45 cm (23.8 in.) viewable area display (measured diagonally). 2560 x 1440 resolution, with full-screen support for lower resolutions.
- Wide viewing angle to allow viewing from a sitting or standing position, or while moving from side-to-side.
- Color gamut of 99% sRGB.
- High Dynamic Contrast Ratio.
- Tilt, swivel, height, and rotate adjustment capabilities.
- Removable stand and Video Electronics Standards Association (VESA™) 100 mm mounting holes for flexible mounting solutions.
- Digital connectivity with DisplayPort and HDMI.
- Equipped with 4 USB downstream ports.
- Single USB Type-C to supply power to compatible notebook while receiving video signal.
- Plug and play capability if supported by your system.
- On-Screen Display (OSD) adjustments for ease of set-up and screen optimization.
- Software and documentation media includes an Information File (INF), Image Color Matching File (ICM), and product documentation.
- Security lock slot.
- Stand lock.
- Capability to switch from wide aspect to standard aspect ratio while maintaining the image quality.
- 0.3 W standby power when in the sleep mode.
- Optimize eye comfort with a flicker-free screen.

MARNING: The possible long-term effects of blue light emission from the monitor may cause damage to the eyes, including eye fatigue, digital eye strain, and so on. ComfortView feature is designed to reduce the amount of blue light emitted from the monitor to optimize eye comfort.



Identifying parts and controls

Front view

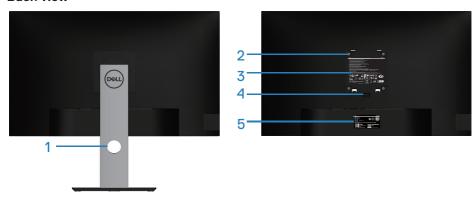


Control buttons

Label	Description	Use
1	Function buttons	Use the function buttons to adjust items in the OSD menu. (For more information, see Using the control buttons)
2	Power On/Off button	Use the power button to turn the monitor On and Off.



Back view



Back View with monitor stand

Label	Description	Use
1	Cable management slot	Use to organize cables by routing them through the slot.
2	VESA mounting holes (behind VESA cover)	VESA mounting holes (100 mm x 100 mm). Use for Wall mounting the monitor through a VESA-compatible wall mount kit.
3	Regulatory information label	Lists the regulatory approvals.
4	Stand release button	Releases stand from monitor.
5	Regulatory label (including Barcode serial number and Service Tag label)	Lists the regulatory approvals. Refer to this label if you need to contact Dell for technical support. The Service Tag is a unique alphanumeric identifier that enables Dell service technicians to identify the hardware components in your computer and access warranty information.



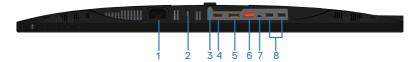
Side view



Label	Description	Use
1	USB 3.0 downstream	Connect your USB device.
	port x 2	NOTE: You can only use this port after
		you have connected the USB Type-C
		cable to the computer and USB Type-C
		port on the monitor.



Bottom view



Bottom view without monitor stand

Label	Description	Use
1	Power connector	Connect the power cable (shipped with your monitor).
2	Security-lock slot	Secure your monitor using a security lock (purchased separately) to prevent unauthorized movement of your monitor.
3	Stand lock feature	To lock the stand to the monitor using a M3 x 6 mm screw (screw not included).
4	HDMI port	Connect your computer with HDMI cable.
5	DisplayPort (in)	Connect your computer with DisplayPort cable (shipped with your monitor).
6	DisplayPort (out)	DP output for MST (multi-stream transport) capable monitor. DP 1.1 monitor can only be connected as the last monitor in the MST chain. To enable MST, refer to instruction on section "Connecting the monitor for DP Multi-Stream Transport (MST) function". NOTE: Remove the rubber plug when use DP
		out port.
7	USB Type-C port	You can attach the monitor to PC using a USB type C cable (shipped with your monitor), to get the monitor experience as below: support data transmission speed up to USB 3.1. Display resolution up to 2560 x 1440@60 Hz on Display Port™ 1.2 alternate mode. Power delivery of 20 V/3.25 A, 15 V/3 A, 9 V/3 A, 5 V/3 A.
		NOTE: USB Type-C is not supported on versions of Windows prior to Windows 10.



8	USB 2.0	Connect your USB device.
	downstream ports x 2	NOTE: You can only use this port after you have connected the USB Type-C cable to the computer and USB Type-C port on the
		monitor.

Monitor specifications

Model	P2421DC
Screen type	Active matrix-TFT LCD
Panel type	In-Plane Switching Technology
Viewable image	
Diagonal	604.5 mm (23.8 in.)
Horizontal, Active Area	526.85 mm (20.75 in.)
Vertical, Active Area	296.35 mm (11.67 in.)
Area	156132.00 mm² (242.16 in.²)
Pixel pitch	0.2058 mm x 0.2058 mm
Pixel per inch (PPI)	123
Viewing angle	
Horizontal	178° (typical)
Vertical	178° (typical)
Luminance output	300 cd/m² (typical)
Contrast ratio	1000 to 1 (typical)
Faceplate coating	Anti-glare with 3H hardness, Haze 25%
Backlight	LED edgelight system
Response time (Gray to	8 ms (Normal)
Gray)	5 ms (Fast)
Color depth	16.7 Million colors, 8 Bit(6 Bit + A-FRC)
Color gamut	99% sRGB



Connectivity	1 x HDMI 1.4
	1 x DP 1.2 (in)
	1 x DP 1.2 (out)
	1 x USB Type-C port
	2 x USB 3.0 port - Side
	2 x USB 2.0 port - Bottom
Bezel width (edge of monit	or to active area)
Тор	5.4 mm
Left/Right	5.5 mm
Bottom	20.3 mm
Adjustability	
Height adjustable stand	130 mm
Tilt	-5° to 21°
Swivel	-45° to 45°
Pivot	-90° to 90°
Dell display manager compatibility	Easy Arrange and other key features
Security	Security-lock slot (cable lock optional purchase)

Resolution specifications

Model	P2421DC
Horizontal scan range	29 kHz to 113 kHz
Vertical scan range	49 Hz to 75 Hz (automatic)
Maximum preset resolution	2560 x 1440 at 60 Hz



Supported video modes

Model	P2421DC
' ' '	480i, 480p, 576i, 576p, 720p, 1080i, 1080p,
(HDMI/DP)	1440p

Preset display modes

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal / Vertical)
VESA, 720 x 400	31.5	70.1	28.3	-/+
VESA, 640 x 480	31.5	59.9	25.2	-/-
VESA, 640 x 480	37.5	75.0	31.5	-/-
VESA, 800 x 600	37.9	60.3	40.0	+/+
VESA, 800 x 600	46.9	75.0	49.5	+/+
VESA, 1024 x 768	48.4	60.0	65.0	-/-
VESA, 1024 x 768	60.0	75.0	78.8	+/+
VESA, 1152 x 864	67.5	75.0	108.0	+/+
VESA, 1280 x 768	47.8	59.9	79.5	-/+
VESA, 1280 x 1024	64.0	60.0	108.0	+/+
VESA, 1280 x 1024	79.9	75.0	135.0	+/+
VESA, 1600 x 1200	75.0	60.0	162.0	+/+
VESA, 1680 x 1050	65.3	60.0	146.3	-/+
VESA, 1920 x 1080	67.5	60.0	148.5	+/+
VESA, 1920 x 1200	74.6	59.9	193.3	-/+
VESA, 2048 x 1080	66.6	60.0	147.2	+/-
VESA, 2560 x 1440	88.8	60.0	241.5	+/-



MST Multi-Stream Transport (MST) Modes

MST Source Monitor	Maximum number of external monitor that can be supported
	2560 x 1440/60 Hz
2560 x 1440/60 Hz	2

NOTE: Maximum external monitor resolution supported is 2560 x 1440 60Hz only.

Electrical specifications

Model	P2421DC
Video input signals	HDMI 1.4, 600 mV for each differential line, 100 ohm input impedance per differential pair
	DP 1.2, 600 mV for each differential line, 100 ohm input impedance per differential pair
	USB Type-C, 600 mV for each differential line, 90 ohm input impedance per differential pair
AC input voltage/ frequency/current	100 VAC to 240 VAC / 50 Hz or 60 Hz ± 3 Hz / 2.5 A (typical)
Inrush current	120 V: 30 A (Max.) at 0 °C (cold start)
	240 V: 60 A (Max.) at 0 °C (cold start)



Physical characteristics

Model	P2421DC
Signal cable type	Digital: DP, 20 pins
	Digital: USB Type-C, 24 pins
Dimensions (with stand)	
Height (extended)	486.1 mm (19.14 in.)
Height (compressed)	356.1 mm (14.02 in.)
Width	537.8 mm (21.17 in.)
Depth	166.0 mm (6.54 in.)
Dimensions (without stand)
Height	322.1 mm (12.68 in.)
Width	537.8 mm (21.17 in.)
Depth	42.7 mm (1.68 in.)
Stand dimensions	
Height (extended)	400.8 mm (15.78 in.)
Height (compressed)	353.4 mm (13.91 in.)
Width	206.0 mm (8.11 in.)
Depth	166.0 mm (6.54 in.)
Weight	
Weight with packaging	7.69 kg (16.95 lb)
Weight with stand assembly and cables	5.76 kg (12.70 lb)
Weight without stand assembly (no cables)	3.77 kg (8.31 lb)
Weight of stand assembly	1.54 kg (3.40 lb)
Front-frame gloss	Black frame 2-4 gloss units



Environmental characteristics

Model	P2421DC
Compliant Standards	

- ENERGY STAR certified monitor
- EPEAT registered where applicable. EPEAT registration varies by country. See **www.epeat.net** for registration status by country.
- TCO-certified display.
- RoHS-compliant
- BFR/PVC free monitor (excluding external cables)
- Meets NFPA 99 leakage current requirements.
- Arsenic-free glass and Mercury-free for the panel only
- Energy Gauge shows the energy level being consumed by the monitor in real time.

Temperature				
Operating	0 °C to 40 °C (32 °F to 104 °F)			
Non-operating	• Storage: -20 °C to 60 °C (-4 °F to 140 °F)			
	• Shipping: -20 °C to 60 °C (-4 °F to 140 °F)			
Humidity				
Operating	10% to 80% (non-condensing)			
Non-operating	• Storage 10% to 90% (non-condensing)			
	Shipping 10% to 90% (non-condensing)			
Altitude				
Operating (maximum)	5,000 m (16,400 ft)			
Non-operating (maximum)	12,192 m (40,000 ft)			
The word discinction	• 444.60 BTU/hour (maximum)			
Thermal dissipation	• 83.79 BTU/hour (typical)			



Power management modes

If you have VESA's DPM compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. This is referred to as Power Save Mode*. If the computer detects input from the keyboard, mouse or other input devices, the monitor automatically resumes functioning. The following table shows the power consumption and signaling of this automatic power saving feature.

* Zero power consumption in off mode can only be achieved by disconnecting the power cable from the monitor.

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	127 W (maximum)**
					25 W (typical)
Active-off mode	Inactive	Inactive	Blanked	White (Glowing)	Less than 0.3 W
Switch off	-	-	-	Off	Less than 0.3 W

Power Consumption Pon	17.7 W
Total Energy Consumption (TEC)	56.72 kWh

^{**} Maximum power consumption with max luminance, and USB active.

This document is informational only and reflects laboratory performance. Your product may perform differently, depending on the software, components and peripherals you ordered and shall have no obligation to update such information. Accordingly, the customer should not rely upon this information in making decisions about electrical tolerances or otherwise. No warranty as to accuracy or completeness is expressed or implied.





NOTE: This monitor is ENERGY STAR certified.

This product qualifies for ENERGY STAR in the factory default settings which can be restored by "Factory Reset" function in the OSD menu. Changing the factory default settings or enabling other features may increase power consumption that could exceed the ENERGY STAR specified limit.

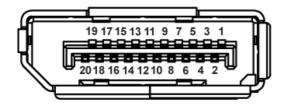
M NOTE:

Pon: Power consumption of On Mode as defined in Energy Star 8.0 version.

TEC: Total energy consumption in KWh as defined in Energy Star 8.0 version.



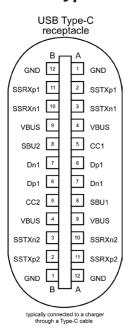
DisplayPort connector



Pin Number	20-pin Side of the Connected Signal Cable
1	MLO (p)
2	GND
3	MLO (n)
4	ML1 (p)
5	GND
6	ML1 (n)
7	ML2 (p)
8	GND
9	ML2 (n)
10	ML3 (p)
11	GND
12	ML3 (n)
13	GND
14	GND
15	AUX (p)
16	GND
17	AUX (n)
18	Hot Plug Detect
19	Re-PWR
20	+3.3 V DP_PWR



USB Type-C connector



Pin	Signal	Pin	Signal
A1	GND	B12	GND
A2	SSTXp1	B11	SSTXp1
A3	SSTXn1	B10	SSTXn1
A4	VBUS	В9	VBUS
A5	CC1	B8	SBU2
A6	Dp1	B7	Dn1
A7	Dn1	B6	Dp1
A8	SBU1	B5	CC2
A9	VBUS	B4	VBUS
A10	SSRXn2	B3	SSRXp2
A10	SSRXp2	B2	SSRXp2
A12	GND	B1	GND



Universal serial bus (USB) interface

This section gives you information about the USB ports that are available on the monitor.

NOTE: This monitor is Super-Speed USB 3.0 and High-Speed USB 2.0 compatible.

Transfer Speed	Data Rate	Power Consumption*
Super-speed	5 Gbps	4.5 W (Max, each port)
High speed	480 Mbps	4.5 W (Max, each port)
Full speed	12 Mbps	4.5 W (Max, each port)

Transfer Speed	Data Rate	Power Consumption*
High speed	480 Mbps	2.5 W (Max, each port)
Full speed	12 Mbps	2.5 W (Max, each port)
Low speed	1.5 Mbps	2.5 W (Max, each port)

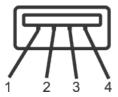
USB 3.0 downstream connector



Pin Number	9-pin Side of the Connector
1	VCC
2	D-
3	D+
4	GND
5	SSRX-
6	SSRX+
7	GND
8	SSTX-
9	SSTX+



USB 2.0 downstream connector



Pin Number	4-pin Side of the Connector
1	VCC
2	DMD
3	DPD
4	GND

USB ports

- · 2 x USB 2.0 downstream bottom
- · 2 x USB 3.0 downstream side



NOTE: USB 3.0 functionality requires a USB 3.0-capable computer.



NOTE: The monitor's USB interface works only when the monitor is On or in the power save mode. If you turn Off the monitor and then turn it On, the attached peripherals may take a few seconds to resume normal functionality.



Plug and play capability

You can install the monitor in any Plug and Play-compatible system. The monitor automatically provides the computer system with its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so the system can configure itself and optimize the monitor settings. Most monitor installations are automatic, you can select different settings if desired. For more information about changing the monitor settings, see Operating your monitor.

LCD monitor quality and pixel policy

During the LCD Monitor manufacturing process, it is not uncommon for one or more pixels to become fixed in an unchanging state which are hard to see and do not affect the display quality or usability. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at www.dell.com/support/monitors.

Maintenance guidelines

Cleaning your monitor

MARNING: Before cleaning the monitor, unplug the monitor power cable from the electrical outlet.

CAUTION: Read and follow the Safety Instructions before cleaning the monitor.

For best practices, follow the instructions in the list below while unpacking, cleaning or handling your monitor:

- To clean your screen, lightly dampen a soft, clean cloth with water. If
 possible, use a special screen-cleaning tissue or solution suitable for the antistatic coating. Do not use benzene, thinner, ammonia, abrasive cleaners or
 compressed air.
- Use a lightly-dampened cloth to clean the monitor. Avoid using detergent of any kind as some detergents leave a milky film on the monitor.
- If you notice white powder when you unpack your monitor, wipe it off with a cloth.
- Handle your monitor with care as the black-colored monitor may get scratched and show white scuff marks.
- To help maintain the best image quality on your monitor, use a dynamically changing screen saver and turn off your monitor when not in use.



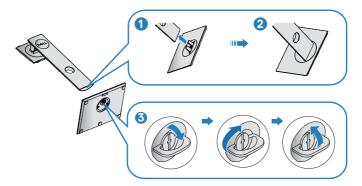
Setting up the monitor

Attaching the stand

- NOTE: The stand is detached when the monitor is shipped from the factory.
- NOTE: This is applicable for a monitor with a stand. If you have purchased a third-party stand refer to the respective stand setup guide for the set up instructions.

To attach the monitor stand.

- 1. Follow the instructions on the flaps of carton to remove the stand from the top cushion that secures it.
- 2. Insert the stand base blocks fully into the stand slot.
- 3. Lift the screw handle and turn the screw clockwise.
- **4.** After fully tightening the screw, fold the screw handle flat within the recess.



- 5. Lift the cover to expose the VESA area for stand assembly.
- **6.** Attach the stand assembly to the monitor.
 - a. Fit the two tabs on the upper part of the stand to the groove on the back of the monitor.
 - **b.** Press the stand down till it snaps into place.





7. Place the monitor upright.



Connecting your monitor

- MARNING: Before you begin any of the procedures in this section, follow the Safety Instructions.
- NOTE: Do not connect all cables to the computer at the same time. It is recommend to route the cables through the cable-management slot before you connect them to the monitor.

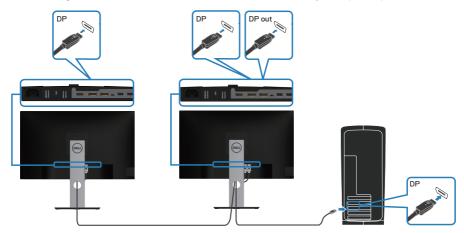
To connect your monitor to the computer:

- 1. Turn Off your computer and disconnect the power cable.
- 2. Connect the DP/USB Type-C cable from your monitor to the computer.

Connecting the DP cable



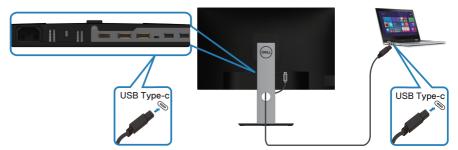
Connecting the monitor for DP Multi-Stream Transport (MST) function





- NOTE: Supports the DP MST feature. To make use of this feature, your PC Graphics Card must be certified to DP1.2 with MST option.
- NOTE: Remove the rubber plug when using DP out port.

Connecting the USB Type-C cable



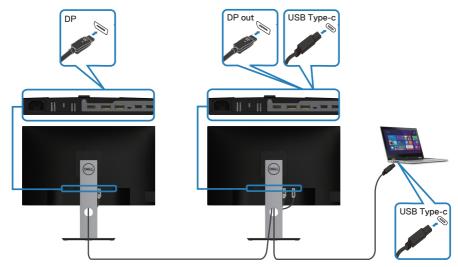
The USB Type-C port on your monitor:

- Can be used as USB Type-C or DisplayPort 1.2, alternatively.
- Supports USB Power Delivery (PD), with profiles up to 65 W.
- NOTE: Regardless of the power requirement/actual power consumption of your laptop, or the remaining power runtime in your battery, the monitor is designed to supply power delivery of up to 65 W to your laptop.

Rated power (on laptops that have USB Type-C with PowerDelivery)	Maximum charging power
45 W	45 W
65 W	65 W
90 W	Not supported
130 W	Not supported



Connecting the monitor for USB-C Multi-Stream Transport (MST) function

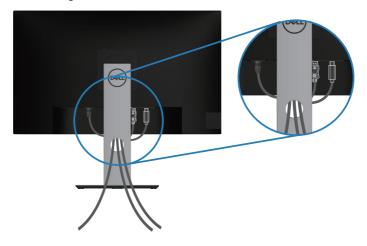


- NOTE: The maximum number of supported monitor via MST is subjected to the bandwith of the USB-C source.
- NOTE: Remove the rubber plug when using DP out port.



Organizing cables

Use the cable-management slot to route the cables connected to your monitor.



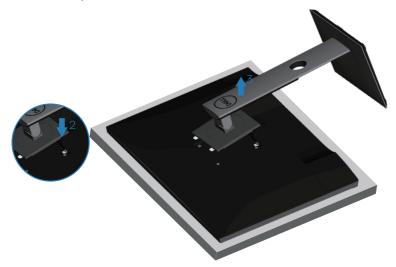


Removing the stand

- NOTE: To prevent scratches on the screen when removing the stand, ensure that the monitor is placed on a soft and clean surface.
- NOTE: The following procedure is applicable only for the stand that shipped with your monitor. If you are connecting a third-party stand, see the documentation that shipped with the stand.

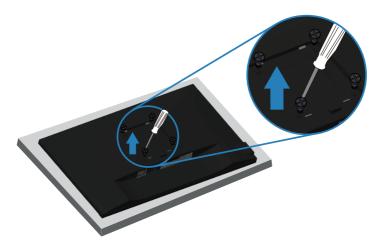
To remove the stand:

- 1. Place the monitor on a soft cloth or cushion.
- 2. Press and hold the stand release button.
- **3.** Lift the stand up and away from the monitor.





Wall mounting (optional)



(Screw dimension: M4 x 10 mm).

See the documentation that shipped with the VESA-compatible wall mounting kit.

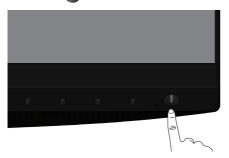
- 1. Lay the monitor on a soft cloth or cushion at the edge of the desk.
- 2. Remove the stand. See Removing the stand for details.
- 3. Remove the four screws that secure the panel to the monitor.
- 4. Attach the mounting bracket from the wall mounting kit to the monitor.
- **5.** To mount the monitor on the wall, see the documentation that shipped with the wall mounting kit.
- NOTE: For use only with UL or CSA or GS-listed wall mount bracket with minimum weight/load bearing capacity of 15.08 kg.



Operating your monitor

Power on the monitor

Press the button to turn on the monitor.



Language options





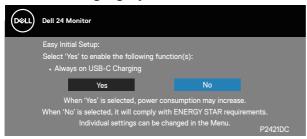








USB-C charging options





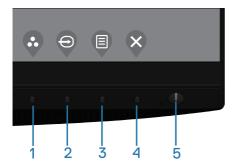






Using the control buttons

Use the control buttons at the front of the monitor to adjust the settings on your monitor.



Control buttons

The following table describes the control buttons

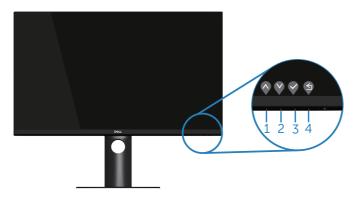
	Control Buttons	Description
1	©	Use this button for choose from a list of preset modes.
	Shortcut key/Preset Modes	
2	9	Use the input source menu to select between the different video signals that may be
	Shortcut key/Input Source	connected to your monitor.



3	Menu	Use the Menu button at launch your on-screen display (OSD) and select the OSD menu. See Accessing the OSD menu.
4	Exit	Use this button to go back to the main menu or exit the OSD main menu.
5	U	Use the power button to turn the monitor on and off.
	Power On/Off button (with LED indicator)	Solid white light indicates the monitor is turned on. Blinking white light indicates it is in powersave mode.

OSD controls

Use the buttons on the front of the monitor to adjust the image settings.



	Control Buttons	Description
1	Up	Use the $\ensuremath{\mathbf{Up}}$ button to increase values or move up in a menu.
2	Down	Use the Down button to decrease values or move down in a menu.
3	♥ OK	Use the OK button to confirm your selection in a menu.



4



Back

Use the **Back** button to go back to the previous menu.

Using the On-Screen Display (OSD) menu

Accessing the OSD menu

NOTE: Any changes you make are automatically saved when you move to another menu, exit the OSD menu, or wait for the OSD menu to automatically close.

1. Press the putton to display the OSD main menu.

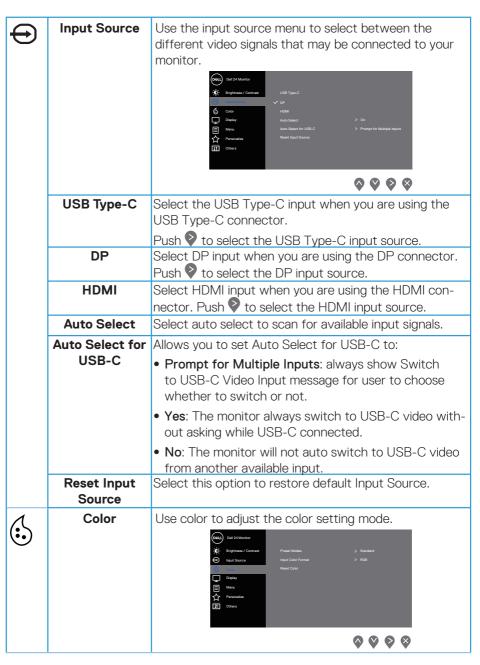


- 2. Press the and buttons to move between the setting options. As you move from one icon to another, the option is highlighted.
- **3.** Press the ♥ or ♥ or ♥ button once to activate the highlighted option.
- **4.** Press \bigcirc and \bigcirc button to select the desired parameter.
- **5.** Press and then use the and buttons, according to the indicators on the menu, to make your changes.
- **6.** Select the ^⑤ to return to previous menu or ^⑥ to accept and return to previous menu.



Icon	Menu and Sub- menus	Description
- Ö -	Brightness/ Contrast	Use this menu to activate Brightness/Contrast adjustment.
		Coal 24 Monday Proposition Total Total
		◊ ◊ ◊
	Brightness	Brightness adjusts the luminance of the backlight.
		Press the button to increase the brightness and press the button to decrease the brightness (min. 0 / max. 100).
	Contrast	Adjust the brightness first, and then adjust the contrast only if further adjustment is necessary.
		Press the button to increase the contrast and press the button to decrease the contrast (min. 0 / max. 100).
		The contrast function adjusts the degree of difference between darkness and lightness on the monitor screen.







Preset Modes

When you select **preset modes**, you can choose **Standard**, **Comfortview**, **Movie**, **Game**, **Warm**, **Cool**, or **Custom color** from the list.

- **Standard**: Loads the monitor's default color settings. This is the default preset mode.
- ComfortView: Decreases the level of blue light emitted from the screen to make viewing more comfortable for your eyes.

NOTE: To reduce the risk of eye strain and neck/ arm/back/shoulders pain from using the monitor for long periods of time, we suggest you to:

- Set the screen about 20 to 28 in. (50-70 cm) from your eyes.
- Blink frequently to moisten or rewet your eyes when working with the monitor.
- Take regular and frequent breaks for 20 minutes every two hours.
- Look away from your monitor and gaze at a distant object at 20 feet away for at least 20 seconds during the breaks.
- Perform stretches to relieve tension in the neck/ arm/back/ shoulders during the breaks.
- Movie: Loads color settings ideal for movies.
- Game: Loads color settings ideal for most gaming applications.
- Warm: Increases the color temperature. The screen appears warmer with a red/yellow tint.
- Cool: Decreases the color temperature. The screen appears cooler with a blue tint.
- Custom Color: Allows you to manually adjust the color settings.



Press the and buttons to adjust the three colors (R, G, B) values and create your own preset color mode.





Input Color Format

Allows you to set the video input mode to:

- **RGB**: Select this option if your monitor is connected to a computer or DVD player using the HDMI cable.
- YPbPr: Select this option if your DVD player supports only YPbPr output.









This feature can shift the color of the video image to green or purple. This is used to adjust the desired flesh tone color. Use \bigcirc or \bigcirc to adjust the hue from 0 to 100.

Press to increase the green shade of the video image.

Press v to increase the purple shade of the video image.



NOTE: Hue adjustment is available only when you select Movie and Game mode.



	1	
	Saturation	This feature can adjust the color saturation of the video image. Use \bigcirc or \bigcirc to adjust the saturation from 0 to 100.
		Press of to increase the monochrome appearance of the video image.
		Press \bigcirc to increase the colorful appearance of the video image.
		NOTE: Saturation adjustment is available only when you select Movie and Game mode.
	Reset Color	Allows your monitor color settings to the factory settings.
무	Display	Use the display to adjust image. Description of Contract
		⋄⋄

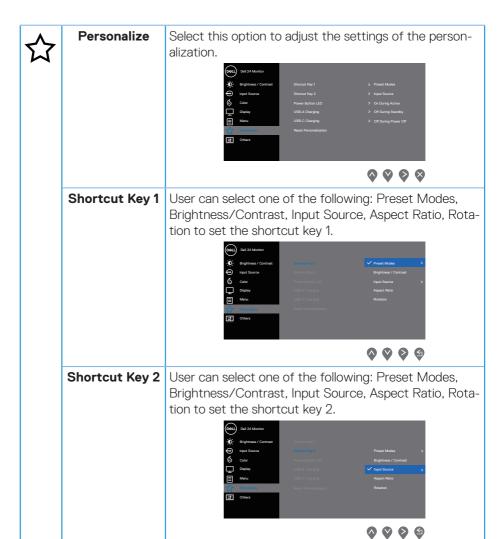


Aspect Ratio	Adjusts the image ratio to wide 16:9, 4:3 or 5:4
Sharpness	This feature can make the image look sharper or softer. Use \bigcirc or \bigcirc to adjust the sharpness from 0 to 100.
Response Time	User can select between fast or normal.
MST	DP Multi Stream Transport, Set to On enables MST(DP out), Set to Off disables MST function. NOTE: When DP/USB-C upstream cable and DP downstream cable is connected, monitor will set MST = On automatically, this action will only be done once after Factory Reset or Display Reset.
USB-C	Allows you to specify the priority to transfer the data
Prioritization	with high resolution (High Resolution) or high speed (High Data Speed) when using the USB Type-C port/DisplayPort. When using the USB Type-C port/DisplayPort. Well property to the pro
	pack and is powered directly from the monitor USB Type-C port (such as the Dell OptiPlex Ultra Desktop), changing USB-C Prioritization on the fly would interrupt the power from monitor to the PC.Please set USB-C Charging to On During Power Off and refer to Setting USB-C Prioritization when USB-C Charging is set to On During Power Off .
Reset Display	Select this option to restore default display settings.

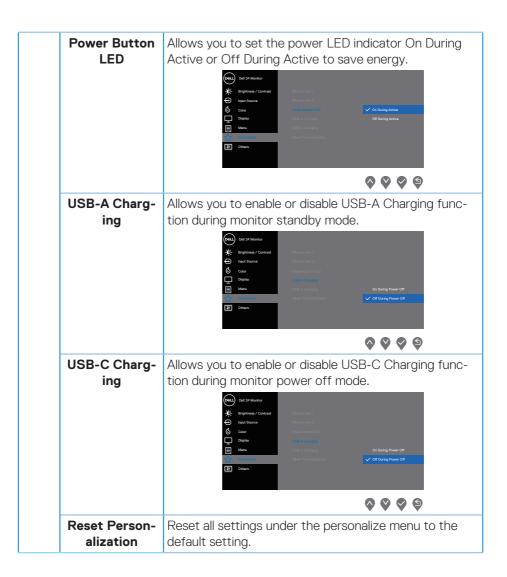


l	
Menu	Select this option to adjust the settings of the OSD, such as, the languages of the OSD, the amount of time the menu remains on screen and so on.
	toput Stancio Cator Transparency Display Lock → Deside Lock → Deside Filter Mans Filter Mans
	◊ ◊ ◊
Language	Language options set the OSD display to one of the eight languages (English, Spanish, French, German, Brazilian Portuguese, Russian, Simplified Chinese, or Japanese).
Rotation	Rotates the OSD by 90 degrees counter-clockwise. You can adjust the menu according to your display rotation.
Transparency	Select this option to change the menu transparency by pressing the open and open buttons from 0 to 100.
Timer	OSD hold time: sets the length of time the OSD will remain active after the last time you pressed a button.
	Use \bigcirc or \bigcirc to adjust the slider in 1 second increments, from 5 to 60 seconds.
Lock	Controls user access to adjustments. User can select one of the following: Menu Buttons, Power Button, Menu + Power Buttons, Disable. (For more information, see Menu and Power button lock).
Reset Menu	Reset all OSD settings to the factory preset values.

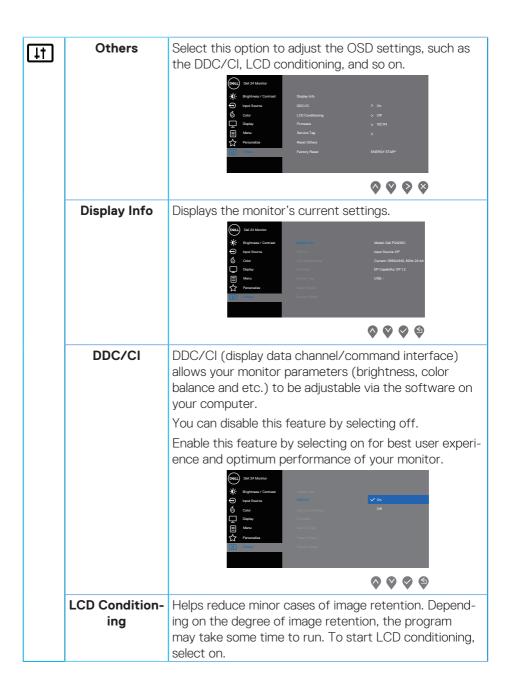




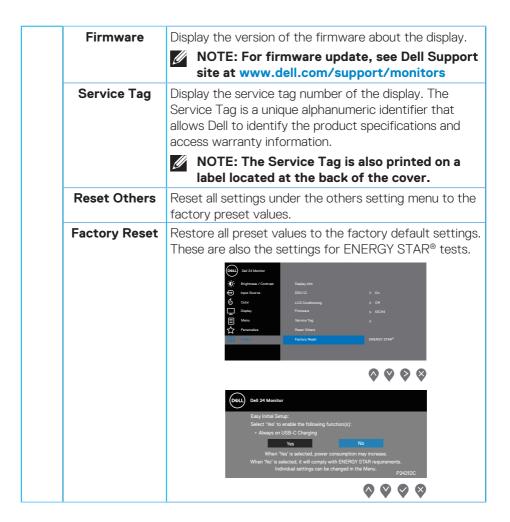














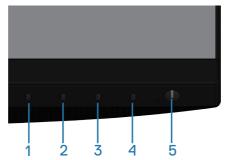
NOTE: Your monitor has a built-in feature to automatically calibrate the brightness to compensate for LED aging.



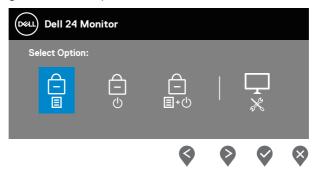
Menu and Power button lock

Controls user access to adjustments.

The default setting of Menu and Power buttons lock is Disable.



To enter the lock menu: Hold the Exit key (button 4) for 4 seconds to display the lock menu (when Menu and Power buttons unlocked), A lock menu appears and is shown on the bottom right corner of display screen.



To enter the unlock menu: Hold the Exit key (button 4) for 4 seconds to display the lock menu (when Menu and Power buttons locked), A unlock menu appears and is shown on the bottom right corner of display screen.





There are three levels of lock.

	Menu	Description
1	Menu Buttons	When "Menu Buttons" is selected, no user adjustments are allowed. All buttons are locked except Power button.
2	Power Button	When "Power Button" is selected, user is now not able to turn off the display via Power button.
3	Menu + Power Buttons ☐ ☐ ■+①	When "Menu + Power Buttons" is selected, no user adjustments are allowed and the Power button is locked.
4	Built-in Diagnostics	See Built-in diagnostics for more information.

NOTE: To get into the Lock or Unlock menu – Press and hold the Exit key (button 4) for 4 seconds.

The icon will appear on center of display screen when in the following conditions which mean Menu and Power buttons is in lock state.

- **1.** Press the Up key (button 1), Down key (button 2), Menu key (button 3) or Exit key (button 4) when in "Menu Buttons" lock state.
- 2. Press the Power key (button 5) when in "Power Button" lock state.
- 3. Press any button of the monitor when in "Menu + Power Buttons" lock state.



When Menu and Power buttons is in lock state, hold the Exit key (button 4) for 4 seconds to enter the unlock menu.

And then choose and apply to the unlock icon to release the Menu and Power buttons lock.

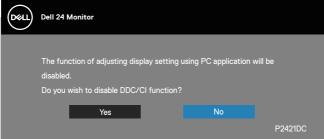
OSD warning messages

When the monitor does not support a particular resolution mode, the following message is displayed:



This means that the monitor cannot synchronize with the signal that it is receiving from the computer. See Monitor specifications for the Horizontal and Vertical frequency ranges addressable by this monitor. Recommended mode is 2560×1440 .

Before the **DDC/CI** function is disabled, the following message is displayed:

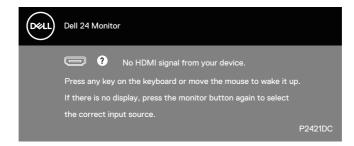


When the monitor enters the **Power Save Mode**, the following message appears:

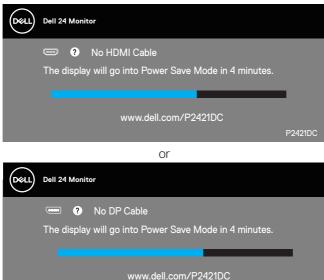


If you press any button other than the power button, the following messages will appear depending on the selected input:





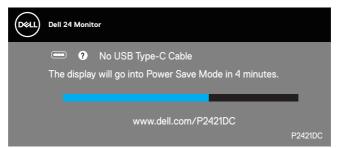
If HDMI, DP or USB Type-C cable is not connected, a floating dialog box as shown below appears. The monitor will enter Power Save Mode after 4 minutes if left at this state.



or

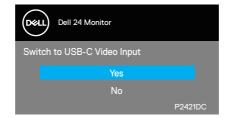
P2421DC



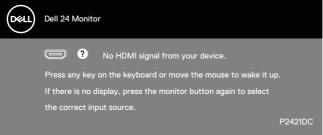


A message is displayed while the cable supporting DP alternate mode is connected to the monitor under the following conditions:

- When Auto Select for USB-C is set to Prompt for Multiple Inputs.
- When the DP cable is connected to the monitor.



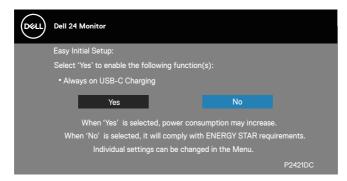
The OSD functions only in the normal operation mode. When any button is pressed in the Active-off mode, the following message will be displayed:



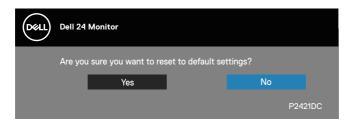
Activate the computer and the monitor to gain access to the OSD. See Troubleshooting for more information.



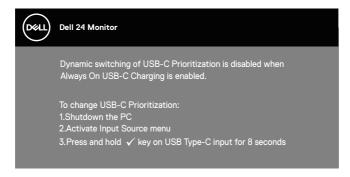
When the MST function is on and USB-C Prioritization is set to High Resolution, if Factory Reset is selected, the following message appears:



When **Yes** is selected, the following message appears:



If USB-C Charging = "On During Power Off", following warning message will appear when user manually change USB-C Prioritization away from current stored value.



See Troubleshooting for more information.



Setting up your monitor

Setting the maximum resolution

To set the maximum resolution for the monitor:

In Windows 7, Windows 8, Windows 8.1 and Windows 10:

- **1.** For Windows 8 and Windows 8.1 only, select the Desktop tile to switch to classic desktop.
- 2. Right-click on the desktop and click **Screen Resolution**.
- 3. Click the Dropdown list of the Screen Resolution and select 2560 x 1440.
- 4. Click OK.

If you do not see **2560 x 1440** as an option, you may need to update your graphics driver. Depending on your computer, complete one of the following procedures: If you have a Dell desktop or portable computer:

 Go to www.dell.com/support, enter your computer's Service Tag, and download the latest driver for your graphics card.

If you are using a non-Dell computer (portable or desktop):

- Go to the support site for your computer and download the latest graphic drivers.
- · Go to your graphics card website and download the latest graphic drivers.

If you have a Dell desktop or a Dell portable computer with internet access

- Go to www.dell.com/support, enter your service tag, and download the latest driver for your graphics card.
- **5.** After installing the drivers for your graphics adapter, attempt to set the resolution to 2560×1440 again.
- NOTE: If you are unable to set the resolution to 2560 x 1440, please contact Dell to inquire about a graphics adapter that supports these resolutions.

If you have a non Dell desktop, portable computer, or graphics card In Windows 7, Windows 8, Windows 8.1 and Windows 10:

- 1. For Windows 8 and Windows 8.1 only, select the Desktop tile to switch to classic desktop.
- 2. Right-click on the desktop and click **Personalization**.
- 3. Click Change Display Settings.



- 4. Click Advanced Settings.
- **5.** Identify your graphics controller supplier from the description at the top of the window (e.g. NVIDIA, ATI, Intel, and so on).
- **6.** Refer to the graphic card provider website for updated driver (for example, www.ATI.com OR www.AMD.com).
- **7.** After installing the drivers for your graphics adapter, attempt to set the resolution to **2560** x **1440** again.



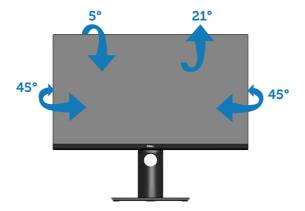
Using the tilt, swivel, and vertical extension



NOTE: These values are applicable to the stand that was shipped with your monitor. To set up with any other stand, see the documentation that shipped with the stand.

Tilt, Swivel

With the stand attached to the monitor, you can tilt and swivel the monitor for the most comfortable viewing angle.



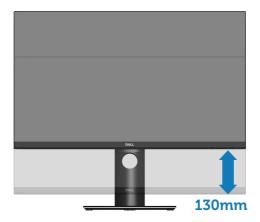
NOTE: The stand is detached when the monitor is shipped from the factory.

Vertical Extension



NOTE: The stand can be extended vertically up to 130 mm.



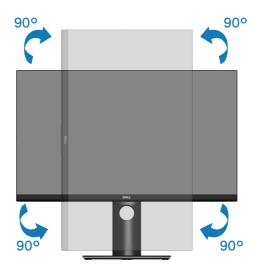


Rotating the Monitor

Before you rotate the monitor, your monitor should be fully vertically extended (Vertical Extension) and fully tilted up to avoid hitting the bottom edge of the monitor.









- NOTE: To use the Display Rotation function (Landscape versus Portrait view) with your Dell computer, you require an updated graphics driver that is not included with this monitor. To download the graphics driver, go to www.dell.com/support and see the Download section for Video Drivers for latest driver updates.
- NOTE: When in the Portrait View Mode, you may experience performance degradation in graphic-intensive applications (3D Gaming and etc.).

Adjusting the Rotation Display Settings of Your System

After you have rotated your monitor, you need to complete the procedure below to adjust the Rotation Display Settings of your system.

NOTE: If you are using the monitor with a non-Dell computer, you need to go the graphics driver website or your computer manufacturer website for information on rotating the 'contents' on your display.

To adjust the Rotation Display Settings:

- 1. Right-click on the desktop and click **Properties**.
- 2. Select the **Settings** tab and click **Advanced**.
- **3.** If you have an ATI graphics card, select the **Rotation** tab and set the preferred rotation.
- **4.** If you have an nVidia graphics card, click the **nVidia** tab, in the left-hand column select **NVRotate**, and then select the preferred rotation.
- **5.** If you have an Intel® graphics card, select the **Intel** graphics tab, click **Graphic Properties**, select the **Rotation** tab, and then set the preferred rotation.
- NOTE: If you do not see the rotation option or it is not working correctly, go to www.dell.com/support and download the latest driver for your graphics card.



Troubleshooting

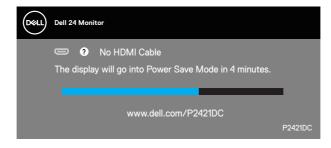
⚠ WARNING: Before you begin any of the procedures in this section, follow the Safety Instructions.

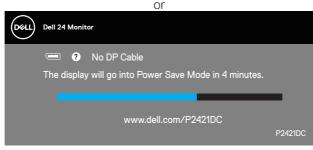
Self-Test

Your monitor provides a self-test feature that allows you to check if your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

- 1. Turn off both your computer and the monitor.
- Disconnect all video cables from the monitor. This way, the computer doesn't have to be involved.
- **3** Turn on the monitor.

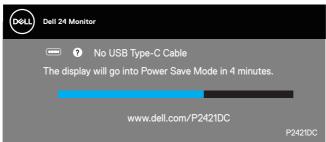
If the monitor is working correctly, it detects that there is no signal and one of the following message appears. While in self-test mode, the power LED remains white.





D&LL

or



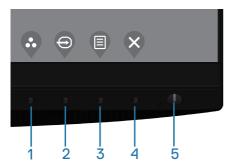
- NOTE: This box also appears during normal system operation, if the video cable is disconnected or damaged.
 - **4.** Turn Off your monitor and reconnect the video cable; then turn on your computer and the monitor.

If your monitor remains dark after you reconnect the cables, check your video controller and computer.

Built-in diagnostics

Your monitor has a built-in diagnostic tool that helps you determine if any screen abnormality you experience is an inherent problem with your monitor, or with your computer and video card.

NOTE: You can run the built-in diagnostics only when the video cable is unplugged and the monitor is in self-test mode.

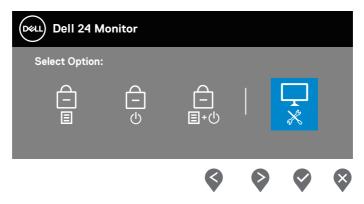


To run the built-in diagnostics:

- **1.** Ensure that the screen is clean (no dust particles on the surface of the screen).
- 2. Unplug the video cable (s) from the back of the computer or monitor. The monitor then goes into the self-test mode.



Press and hold the Exit key (button 4) for 4 seconds to enter the OSD lock/ unlock menu.





- 4. Select the icon to enable the built-in diagnostics.
- **5.** Carefully inspect the screen for abnormalities.
- **6.** Press the Up key (button 1) on the back cover again. The color of the screen changes to grey.
- 7. Inspect the display for any abnormalties.
- **8.** Repeat step 6 and 7 to inspect the display in red, green, blue, black, white and text pattern screens.

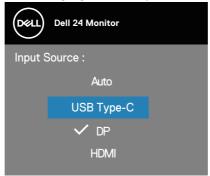
The test is complete when the text pattern screen appears. To exit, press the Up key (button 1) again.

If you do not detect any screen abnormalties upon using the built-in diagnostic tool, the monitor is functioning properly. Check the video card and computer.

Setting USB-C Prioritization when USB-C Charging is set to On During Power Off

If USB-C Charging is set to **On During Power Off**, the monitor allows you to specify the **USB-C Prioritization** settings only when your PC is powered off.

- **1.** Ensure that your PC is powered off.
- **2.** Press any control button other than the power button to display the shortcut menu of **Input Source**.
- 3. Use the or button to highlight USB Type-C.



- **4.** Press and hold the \bigcirc button for approximately 8 seconds.
- **5.** The **USB-C Prioritization** configuration message will appear.



- **6.** Use the ♥ or ▶ button to specify the preferred transfer priority.
- 7. The setting will be effective after you turn on the PC.



Common problems

The following table contains general information about common monitor problems you might encounter and the possible solutions:

Common Symptoms	Possible Solutions
No Video/Power LED off	 Ensure that the video cable connecting the monitor and the computer is properly connected and secure. Verify that the power outlet is functioning properly using any other electrical equipment. Ensure that the power button is pressed. Ensure that the correct input source is selected via the Input Source menu.
No Video/Power LED on	 Increase brightness and contrast controls using the OSD. Perform monitor self-test feature check. Check for bent or broken pins in the video cable connector. Run the built-in diagnostics. Ensure that the correct input source is selected via the Input Source menu.
Poor Focus	 Eliminate video extension cables. Reset the monitor to Factory Settings (Factory Reset). Change the video resolution to the correct aspect ratio.
Shaky/Jittery Video	 Reset the monitor to Factory Settings (Factory Reset). Check environmental factors. Relocate the monitor and test in another room.
Missing Pixels	 Cycle power On-Off. Pixel that is permanently Off is a natural defect that can occur in LCD technology. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: www.dell.com/support/monitors.
Stuck-on Pixels	 Cycle power On-Off. Pixel that is permanently off is a natural defect that can occur in LCD technology. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: www.dell.com/support/monitors.

Brightness Problems	 Reset the monitor to Factory Settings (Factory Reset). Adjust brightness & contrast controls via OSD.
Geometric Distortion	Reset the monitor to Factory Settings (Factory Reset).Adjust horizontal & vertical controls via OSD.
Horizontal/Vertical Lines	 Reset the monitor to Factory Settings (Factory Reset). Perform monitor self-test feature check and determine if these lines are also in self-test mode. Check for bent or broken pins in the video cable connector. Run the built-in diagnostics.
Synchronization Problems	 Reset the monitor to Factory Settings (Factory Reset). Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode. Check for bent or broken pins in the video cable connector. Restart the computer in the safe mode.
Safety Related Issues	Do not perform any troubleshooting steps.Contact Dell immediately.
Intermittent Problems	 Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. Reset the monitor to Factory Settings (Factory Reset). Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode.
Missing Color	 Perform monitor self-test feature check. Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. Check for bent or broken pins in the video cable connector.
Wrong Color	 Change the Color Setting Mode in the Color Settings OSD to Graphics or Video depending on the application. Try different Preset Modes in Color settings OSD. Adjust R/G/B value in Custom Color in Color settings OSD. Change the Input Color Format to RGB or YPbPr in the Color settings OSD. Run the built-in diagnostics.



Image retention from a static image left on the monitor for a long period of time	 Use the Power Management feature to turn off the monitor at all times when not in use (for more information, see Power management modes). Alternatively, use a dynamically changing screensaver.
Video Ghosting or Overshooting	 Change the Response Time in the Display OSD to Fast or Normal depending on your application and usage.



Product-specific problems

Specific Symptoms	Possible Solutions
Screen image is too small	 Check the Aspect Ratio setting in the Display settings OSD. Reset the monitor to Factory Settings (Factory Reset).
Cannot adjust the monitor with the buttons on the bottom of the panel	 Turn Off the monitor, unplug the power cord, plug it back and then turn On the monitor. Check if the OSD menu is locked. If yes, press and hold the menu button for 4 seconds to unlock.
No Input Signal when user controls are pressed	 Check the signal source. Ensure the computer is not in standby or sleep mode by moving the mouse or pressing any key on the keyboard. Check if the video cable is plugged in properly. Disconnect and reconnect the video cable if necessary. Reset the computer or video player.
The picture does not fill the entire screen	 Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen. Run the built-in diagnostics.
No image when using USB Type C connection to PC or Notebook.	 Verify if the PC or Notebook USB Type C interface can support Alternate mode DP1.2. USB Type C interface of PC or Notebook can not support Alternate mode DP1.2.
No charging when using USB Type C connection to the Notebook	 Verify if the Notebook required >65 W power charging. The Notebook required >65 W power charging.
USB interface is not working	 Check that your monitor is turned ON. Reconnect the USB-C upstream cable to your computer. Reconnect the USB peripherals (downstream connector) Switch off and then turn on the monitor again. Reboot the computer. Some USB devices like external portable HDD require higher electric current; connect the device directly to the computer system.



Supre Speed USB 3.0 interface is slow.	 Check that your computer is USB 3.0-capable. Some computers have USB 3.0, USB 2.0, and USB 1.1 ports. Ensure that the correct USB port is used. Reconnect the USB-C upstream cable to your computer. Reconnect the USB peripherals (downstream connector). Reboot the computer.
Wireless USB peripherals stop working when a USB 3.0 device is plugged in	 Increase the distance between the USB 3.0 peripherals and the wireless USB receiver. Position your wireless USB receiver as close as possible to the wireless USB peripherals. Use a USB-extender cable to position the wireless USB receiver as far away as possible from the USB 3.0 port.
No Video when connected to some docking device at HDMI/DP/Type C port. There is no video when unplug/plug docking Type C cable from the notebook.	 Unplug the HDMI/DP/Type C cable from docking device. Plug the docking Type C cable to Notebook. Plug the DP/HDMI/Type C cable 7 seconds later.



Appendix

Safety Instructions

MARNING: Use of controls, adjustments, or procedures other than those specified in this documentation may result in exposure to shock, electrical hazards, and/or mechanical hazards.

For information on safety instructions, see the **Safety Environment and Regulatory Information (SERI)**.

FCC notices (U.S. Only) and other regulatory information

For FCC notices and other regulatory information, see the regulatory compliance website located at **www.dell.com/regulatory_compliance**.

Please follow these safety instructions for best performance, and long life for your monitor:

- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- 2. The equipment can be installed on wall or ceiling mounting in horizontal position.
- **3.** The monitor is equipped with a three-pronged grounded plug, a plug with a third (Grounding) pin.
- **4.** Do not use this product near water.
- **5.** Read these instructions carefully. Keep this document for future reference. Follow all warnings and instructions marked on product.
- **6.** Excessive sound pressure from earphones and headphones can cause hearing loss. Adjustment of the equalizer to maximum increases the earphones and headphones output voltage and therefore the sound pressure level.



Contacting Dell

For customers in the United States, call 800-WWW-DELL (800-999-3355).

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

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area.

To get online Monitor support content:

1. Visit www.dell.com/support/monitors.

To contact Dell for sales, technical support, or customer service issues:

- 1. Visit www.dell.com/support.
- 2. Verify your country or region in the **Choose A Country/Region** drop-down menu at the bottom of the page.
- 3. Click Contact Us on the left side of the page.
- 4. Select the appropriate service or support link based on your need.
- 5. Choose the method of contacting Dell that is convenient for you.

