

User's Guide

Dell P2815Q

Model No.: P2815Q

Regulatory model: P2815Qf





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



CAUTION: A CAUTION indicates potential damage to hardware or loss of data if instructions are not followed.



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

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Contents

Dell Display Manager User's Guide	6
Overview	6
Using the Quick Settings Dialog	6
Setting Basic Display Functions	7
Assigning Preset Modes to Applications	7
Applying Energy-Conservation Features	9
About Your Monitor	10
Package Contents	10
Product Features	11
Identifying Parts and Controls	12
Monitor Specifications	16
Power Management Modes	16
Pin Assignments	17
Plug and Play Capability	21
Flat-Panel Specifications	22
Resolution Specifications	23
Electrical Specifications	23
Preset Display Modes	23
MHL Source Display Modes	24
Physical Characteristics	25
Environmental Characteristics	26
LCD Monitor Quality & Pixel Policy	26
Maintenance Guidelines	27
Caring for Your Monitor	27

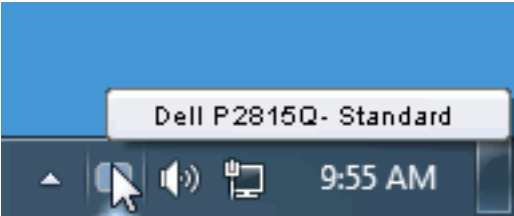
Setting Up the Monitor	28
Attaching the Monitor	28
Connecting Your Monitor	29
Connecting the black DisplayPort (DP to DP) cable.	29
Connecting the black DisplayPort (Mini DP to DP) cable	29
Connecting the black HDMI cable	30
Connecting the Monitor for DP Multi-Stream Transport (MST) function	30
Connecting the USB 3.0 cable.	31
Using the Mobile-High Definition Link (MHL)	32
Organizing Your Cables	33
Attaching the Cable Cover	33
Removing the Monitor Stand	34
Wall Mounting (Optional)	35
Operating the Monitor	36
Power On the Monitor	36
Using the Front-Panel Controls	36
Front-Panel Keys.	37
Using the On-Screen Display (OSD) Menu	38
Accessing the Menu System	38
OSD Messages.	49
Setting the Maximum Resolution	52
Using the Tilt, Swivel, and Vertical Extension	53
Rotating the Monitor.	55
Adjusting the Rotation Display Settings of Your System.	56

Troubleshooting	57
Self-Test	57
Built-in Diagnostics	58
Common Problems	59
Product-Specific Problems	62
Universal Serial Bus (USB) Specific Problems	63
Mobile High-Definition Link (MHL) Specific Problems	63
Appendix	64
FCC Notices (U.S. Only) and Other Regulatory Information	64
Contact Dell	64
Setting Up Your Monitor	65
Setting the display resolution to 3840 x 2160 (Maximum)	65
If you have a Dell desktop or a Dell portable computer with Internet access	66
If you have a non Dell desktop, portable computer, or graphics card	65
Procedures for setting up dual monitors in Windows Vista® , Windows® 7 or Windows® 8 or Windows® 8.1	67
For Windows Vista®	67
For Windows® 7	69
For Windows® 8 or Windows® 8.1	71
Setting Display Styles For Multiple Monitor	73

Dell Display Manager User's Guide

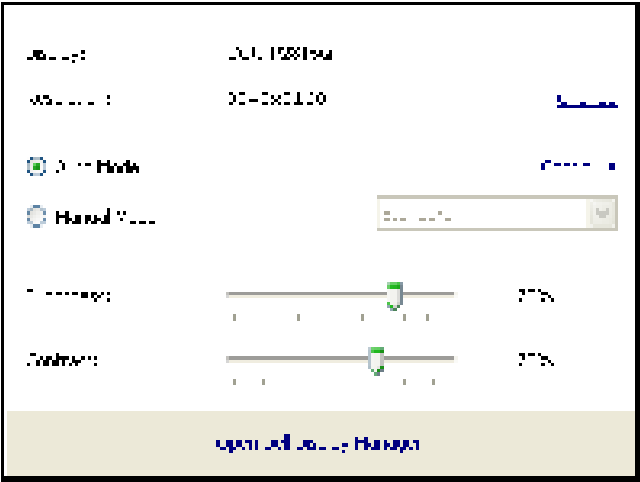
Overview

Dell Display Manager is a Windows application used to manage a monitor or a group of monitors. It allows manual adjustment of the displayed image, assignment of automatic settings, energy management, image rotation and other features on select Dell models. Once installed, Dell Display Manager will run each time the system starts and will place its icon in the notification tray. Information about monitors connected to the system is always available when hovering over the notification tray icon.



Using the Quick Settings Dialog

Clicking Dell Display Manager's notification tray icon opens the Quick Settings dialog box. When more than one supported Dell model is connected to the system, a specific target monitor can be selected using the menu provided. The Quick Settings dialog box allows convenient adjustment of the monitor's Brightness and Contrast levels, Preset Modes can be manually selected or set to Auto Mode, and the screen resolution can be changed.

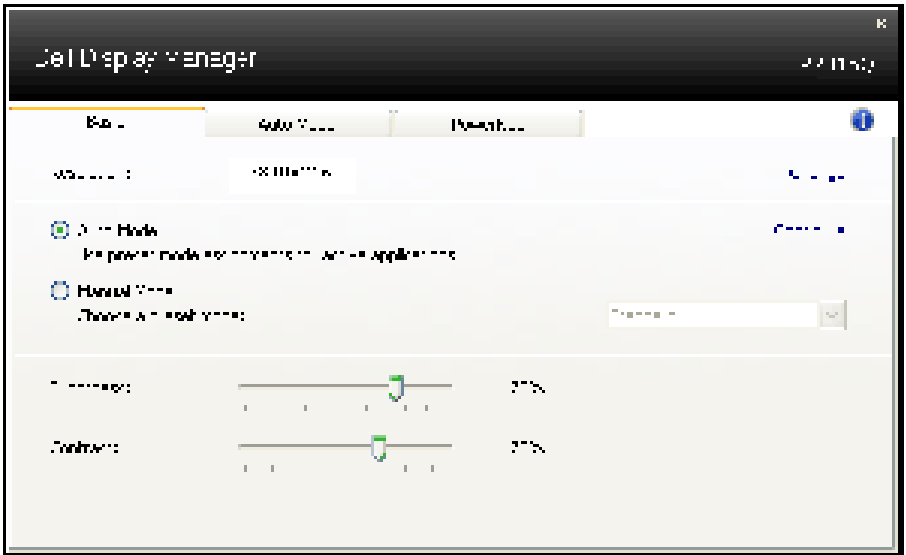


The Quick Settings dialog box also provides access to Dell Display Manager's advanced user interface which is used to adjust Basic functions, configure Auto Mode and access other features.

Setting Basic Display Functions

A Preset Mode for the selected monitor can be manually applied using the menu on the Basic tab. Alternatively, Auto Mode can be enabled. Auto Mode causes your preferred Preset Mode to be applied automatically when specific applications are active. An onscreen message momentarily displays the current Preset Mode whenever it changes.

The selected monitor's Brightness and Contrast can also be directly adjusted from the Basic tab.



Assigning Preset Modes to Applications

The Auto Mode tab allows you to associate a specific Preset Mode with a specific application, and apply it automatically. When Auto Mode is enabled, Dell Display Manager will automatically switch to the corresponding Preset Mode whenever the associated application is activated. The Preset Mode assigned to a particular application may be the same on each connected monitor, or it can vary from one monitor to the next.

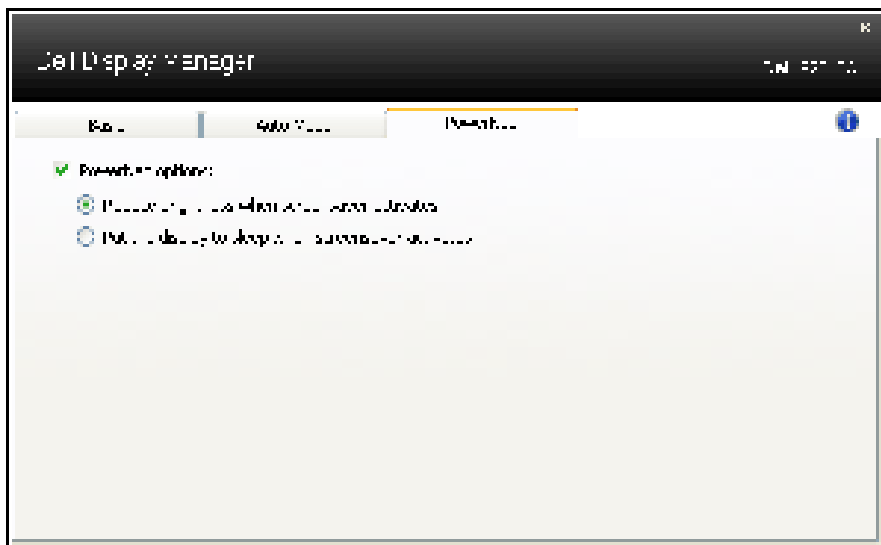
Dell Display Manager is pre-configured for many popular applications. To add a new application to the assignment list, simply drag the application from the desktop, Windows Start Menu or elsewhere, and drop it onto the current list.

 **NOTE:** Preset Mode assignments targeting batch files, scripts, and loaders, as well as non-executable files such as zip archives or packed files, are not supported and will be ineffective.



Applying Energy-Conservation Features

On supported Dell models, the PowerNap tab will be available to provide energy conservation options. When the screensaver activates, the monitor's Brightness can automatically be set to minimum level or the monitor can be put to sleep in order to save additional power.



About Your Monitor

Package Contents

Your monitor ships with all the components shown below. Ensure that you have received all the components and **Contact Dell** if anything 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.
-  **NOTE:** To set up with any other stand, please refer to the respective stand setup guide for setup instructions.

	• Monitor
	• Stand
	• Cable Cover
	• Power Cable (varies with countries)
	• DisplayPort cable (Mini-DP to DP)

	• USB 3.0 Upstream Cable (Enables the USB Ports on the Monitor)
	• Drivers and Documentation Media • Quick Setup Guide • Product and Safety Information Guide

Product Features

The Dell P2815Q flat-panel display has an active matrix, Thin-Film Transistor, Liquid Crystal Display (LCD), and LED backlight. The monitor's features include:

- 71.12cm (28.0 inches) diagonal viewable image size, 3840 x 2160 resolution, plus 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.
- Tilt, swivel, vertical extension and rotate adjustment capabilities.
- Removable pedestal and Video Electronics Standards Association (VESA) 100 mm mounting holes for flexible mounting solutions.
- 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 which includes an information file (INF), Image Color Matching File (ICM), Dell Display Manager software application and product documentation.
- ENERGY STAR-compliant.
- Security lock slot.
- Asset Management Capability.
- EPEAT Gold Rating.
- Dell Display Manager software included (comes in the CD shipped with the monitor).
- BFR/PVC-free (Halogen-free) excluding external cables.
- TCO compliant.
- Energy gauge shows the energy level being consumed by the monitor in real time.

Identifying Parts and Controls

Front View



Front panel controls

1.	Function buttons (For more information, see Operating the Monitor)
2	Power On/Off button (with LED indicator)

Back View



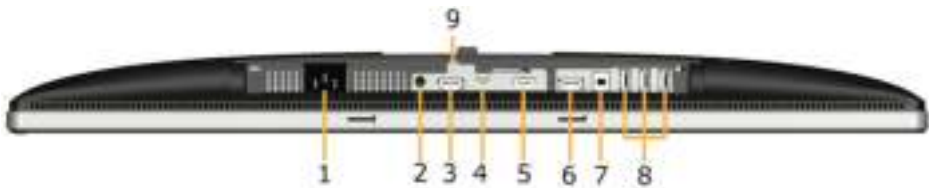
Back View with monitor stand

Label	Description	Use
1	VESA mounting holes (100 mm)	To mount the monitor.
2	Regulatory rating label	Lists the regulatory approvals.
3	Stand release button	Release stand from monitor.
4	Security lock slot	Use a security lock to secure your monitor. (security lock not included).
5	Service Tag Label	The Dell service tag is used for Dell warranty and customer service management purposes and for records of the base system.
6	USB downstream port	Connect your USB devices. This USB port supports BC 1.2 compliance charging devices, at 1.5A max for fast charging.
7	Barcode serial number label	Refer to this label if you need to contact Dell for technical support.
8	Cable management slot	Use to organize cables by placing them through the slot.

Side View



Bottom View



Label	Description	Use
1	AC power connector	To connect the monitor power cable.
2	Audio Out	Connect the Soundbar mini stereo plug (Supports two-channel output).
3	DisplayPort in connector	Connect your computer with DP cable.
4	Mini DisplayPort in connector	Connect your computer with Mini DP to DP cable.
5	HDMI (MHL) connector	Connect your computer with HDMI cable. Connect your MHL devices with MHL cable.
6	DisplayPort out (MST) connector	DisplayPort 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 <u>Connecting the Monitor for DP Multi-Stream Transport (MST) function.</u>
7	USB upstream port	Connect the USB cable that came with your monitor to the monitor and the computer. Once this cable is connected, you can use the USB connectors on the monitor.
8	USB downstream port	Connect your USB device. You can use this connector only after you have connected the USB cable to the computer and USB upstream connector on the monitor.
9	Stand lock feature	To lock the stand to the monitor using a M3 x 6 mm screw (screw not included).



NOTE: Headphone usage is not supported for the audio line-out connector.

Monitor Specifications

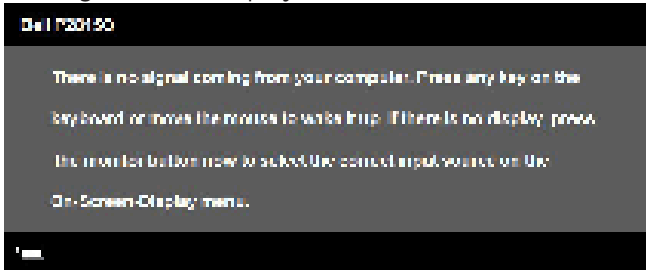
The following sections give you information about the various power management modes and pin assignments for the various connectors of your monitor.

Power Management Modes

If you have VESA’s DPM compliance display card or software installed in your PC, the monitor automatically reduces its power consumption when not in use. This is referred to as Power Save Mode. If the computer detects input from 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:

VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption *
Normal operation	Active	Active	Active	White	100 W (Maximum) ** 75 W (Typical)
Active-off mode	Inactive	Inactive	Off	Glowing white	Less than 0.5 W
Switch off	-	-	-	Off	Less than 0.5 W *

The OSD will only function in the *normal operation* mode. When any button except power button is pressed in Active-off mode, the following messages will be displayed:



Activate the computer and monitor to gain access to the **OSD**.



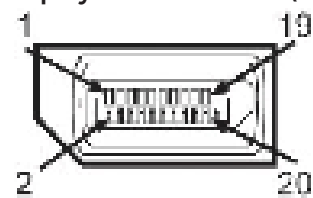
NOTE: The Dell P2815Q monitor is ENERGY STAR®-compliant.



- * Zero-power consumption in OFF mode can only be achieved by disconnecting the main cable from the monitor.
- ** Maximum power consumption with max luminance and contrast.

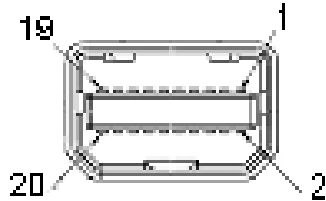
Pin Assignments

DisplayPort connector (DP in and DP out)



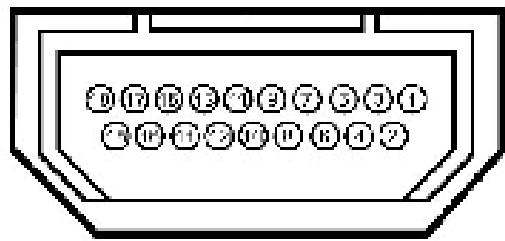
Pin Number	20-pin Side of the Connected Signal Cable
1	ML0(p)
2	GND
3	ML0(n)
4	ML1(p)
5	GND
6	ML1(n)
7	ML2(p)
8	GND
9	ML2(n)
10	ML3(p)
11	GND
12	ML3(n)
13	GND
14	GND
15	AUX(p)
16	GND
17	AUX(n)
18	HPD
19	DP_PWR_Return
20	+3.3 V DP_PWR

Mini DisplayPort Connector



Pin Number	20-pin Side of the Connected Signal Cable
1	GND
2	Hot Plug Detect
3	ML3(n)
4	GND
5	ML3(n)
6	GND
7	GND
8	GND
9	ML2(n)
10	ML0(p)
11	ML2(p)
12	ML0(p)
13	GND
14	GND
15	ML1(n)
16	AUX(p)
17	ML1(p)
18	AUX(n)
19	GND
20	+3.3 V DP_PWR

HDMI (MHL) connector



Pin Number	19-pin Side of the Connected Signal Cable
1	TMDS DATA 2+
2	TMDS DATA 2 SHIELD
3	TMDS DATA 2-
4	TMDS DATA 1+
5	TMDS DATA 1 SHIELD
6	TMDS DATA 1-
7	TMDS DATA 0+
8	TMDS DATA 0 SHIELD
9	TMDS DATA 0-
10	TMDS CLOCK
11	TMDS CLOCK SHIELD
12	TMDS CLOCK-
13	No Connection
14	No Connection
15	DDC CLOCK (SDA)
16	DDC DATA (SDA)
17	GND
18	+5 V POWER
19	HOT PLUG DETECT

Universal Serial Bus (USB) Interface

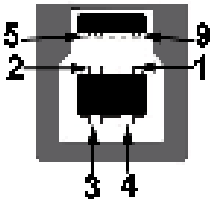
This section gives you information about the USB ports that are available on the monitor.

 **NOTE:** This monitor is Super-Speed USB 3.0 compatible.

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

 **NOTE:** Up to 1.5 A on USB downstream port (port with  lightning icon) with BC 1.2 compliant devices.

USB Upstream Connector



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

USB Downstream Connector



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

USB Ports

- 1 upstream - bottom facing
- 4 downstream - 3 bottom facing and 1 back facing
- Power Charging Port- (USB ports with  lightning icon) ; supports fast current charging capability if the device is BC 1.2 compatible.

 **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 with its Extended Display Identification Data (EDID) using Display Data Channel (DDC) protocols so that the system can configure itself and optimize the monitor settings. Most monitor installations are automatic. You can select different settings if required.

Flat-Panel Specifications

Model number	Dell P2815Q monitor
Screen type	Active matrix - TFT LCD
Panel Type	TN
Viewable image dimensions:	
Diagonal	711.2 mm (28.0 inches)
Horizontal	620.9 mm (24.45 inches)
Vertical	341.3 mm (13.44 inches)
Area	211913.2 mm ² (328.61 inches ²)
Pixel pitch	0.16 mm
Viewing angle:	
Horizontal	170° typical
Vertical	160° typical
Luminance output	300 cd/m ² (typical)
Contrast ratio	1000 to 1 (typical)
Faceplate coating	Antiglare with hard-coating 3H
Backlight	LED light bar system
Response Time	5 ms (typical)
Color Depth	1.073 B colors
Color Gamut	72 % (typical) **

** P2815Q color gamut (typical) is based on CIE1976 (84 %) and CIE1931 (72 %) test standards.

Resolution Specifications

Model number	Dell P2815Q monitor
Scan range - Horizontal - Vertical	31 kHz to 114 kHz (automatic) 24 Hz to 85 Hz (automatic)
Maximum preset resolution	DP/Mini-DP/HDMI: 3840 x 2160 at 30 Hz MHL: 1920 x 1080 at 60 Hz

Electrical Specifications

Model number	Dell P2815Q monitor
Video input signals	- DisplayPort*, 600mV for each differential line, 100 ohm input impedance per differential pair - HDMI (MHL), 600mV for each differential line, 100 ohm input impedance per differential pair
Synchronization input signals	Separate horizontal and vertical synchronizations, polarity-free TTL level, SOG (Composite SYNC on green)
AC input voltage / frequency / current	100 VAC to 240 VAC/50 Hz or 60 Hz $\pm$ 3 Hz/1.5 A (Max.)
Inrush current	120 V: 40 A (Max.) at 0 °C 240 V: 80 A (Max.) at 0 °C

*Supports DP 1.2 (CORE) specification. Excludes Fast AUX transaction, 3D stereo transport , HBR Audio (or high data rate audio).

Preset Display Modes

The following table lists the preset modes for which Dell guarantees image size and centering:

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (Horizontal/ Vertical)
VESA, 720 x 400	31.5	70.0	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 800	49.7	59.8	83.5	-/+
VESA, 1280 x 1024	64.0	60.0	108.0	+/+
VESA, 1280 x 1024	80.0	75.0	135.0	+/+
VESA, 1680 x 1050	62.3	60.0	146.3	-/+
VESA, 1600 x 1200	75.0	60.0	162.0	+/+
VESA, 1920 x 1080	67.5	60.0	148.5	+/+
VESA, 1920 x 1200	74.6	59.9	193.3	-/+
VESA, 3840 x 2160	65.7	30.0	262.8	+/+

MHL Source Display Modes

Display Mode	Frequency (Hz)
640 x 480p	59.9
720 x 480p	59.9
720 x 576p	50.0
1280 x 720p	60.0
1280 x 720p	50.0
1920 x 1080i	60.0
1920 x 1080i	50.0
1920 x 1080p	24 / 25 / 30 / 60
720 (1440) x 480i	60.0
720 (1440) x 576i	50.0

Physical Characteristics

The following table lists the monitor's physical characteristics:

Model Number	Dell P2815Q monitor
Connector type	DP, black connector (include DP in and DP out) Mini DP HDMI (MHL) USB 3.0
Signal cable type	DisplayPort Mini DP to DP HDMI MHL USB 3.0
Dimensions: (with stand)	
Height (extended)	550.3 mm (21.67 inches)
Height (compressed)	435.3 mm (17.14 inches)
Width	661.3 mm (26.04 inches)
Depth	204.1 mm (8.03 inches)
Dimensions: (without stand)	
Height	381.7 mm (15.03 inches)
Width	661.3 mm (26.04 inches)
Depth	56.2 mm (2.21 inches)
Stand dimensions:	
Height (extended)	428.5 mm (16.87 inches)
Height (compressed)	313.5 mm (12.34 inches)
Width	263.0 mm (10.35 inches)
Depth	204.1 mm (8.03 inches)
Weight:	
Weight with packaging	11.12 kg (24.47 lb)
Weight with stand assembly and cables	7.80 kg (17.16 lb)
Weight without stand assembly (For wall mount or VESA mount considerations - no cables)	5.19 kg (11.42 lb)

Weight of stand assembly	2.20 kg (4.85 lb)
Front frame gloss	Black Frame - 5.0 gloss unit (max.)

Environmental Characteristics

The following table lists the environmental conditions for your monitor:

Model Number	Dell P2815Q monitor
Temperature - Operating - Non-operating	0 °C to 40 °C (32 °F to 104 °F) Storage: -20 °C to 60 °C (-4 °F to 140 °F) Shipping: -20 °C to 60 °C (-4 °F to 140 °F)
Humidity - Operating - Non-operating	10 % to 80 % (non-condensing) Storage: 5 % to 90 % (non-condensing) Shipping: 5 % to 90 % (non-condensing)
Altitude - Operating - Non-operating	5,000 m (16,400 ft) max 12,191 m (40,000 ft) max
Thermal dissipation	341.3 BTU/hour (maximum) 256.0 BTU/hour (typical)

LCD Monitor Quality & Pixel Policy

During the LCD Monitor manufacturing process, it is not uncommon for one or more pixels to become fixed in an unchanging state. The visible result is a fixed pixel that appears as an extremely tiny dark or bright discolored spot. When the pixel remains permanently lit, it is known as a "bright dot." When the pixel remains black, it is known as a "dark dot."

In almost every case, these fixed pixels are hard to see and do not detract from display quality or usability. A display with 1 to 5 fixed pixels is considered normal and within competitive standards. For more information, see Dell Support site at:

<http://www.dell.com/support/monitors>.

Maintenance Guidelines

Caring for Your Monitor



CAUTION: Read and follow the safety instructions before cleaning the monitor.



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

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

- To clean your antistatic screen, slightly 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 slightly dampened, warm cloth to clean the plastics. Avoid using detergent of any kind as some detergents leave a milky film on the plastics.
- If you notice a white powder when you unpack your monitor, wipe it off with a cloth. This white powder occurs during the shipping of the monitor.
- Handle your monitor with care as a darker-colored monitor may scratch and show white scuff marks more than a lighter-colored monitor.
- To help maintain the best image quality on your monitor, use a dynamically changing screen saver and power off your monitor when not in use.

Setting Up the Monitor

Attaching the Monitor



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

NOTE: This is applicable for a monitor with a stand. When any other stand is bought, please refer to the respective stand setup guide for the set up instructions.



To attach the monitor stand:

1. Remove the cover and place the monitor on a flat surface.
2. Fit the two tabs on the upper part of the stand to the groove on the back of the monitor.
3. Press the stand till it snaps into place.

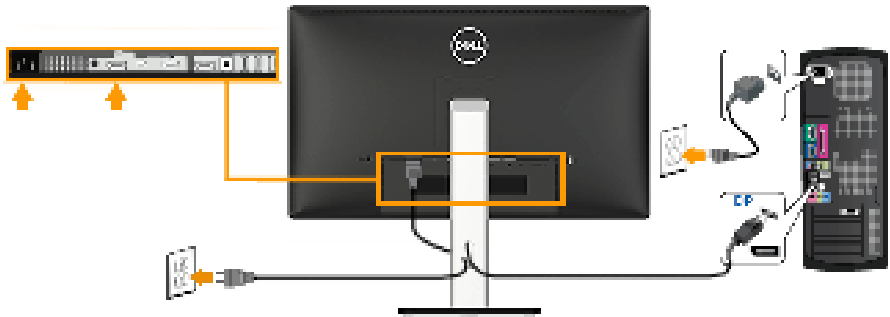
Connecting Your Monitor

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

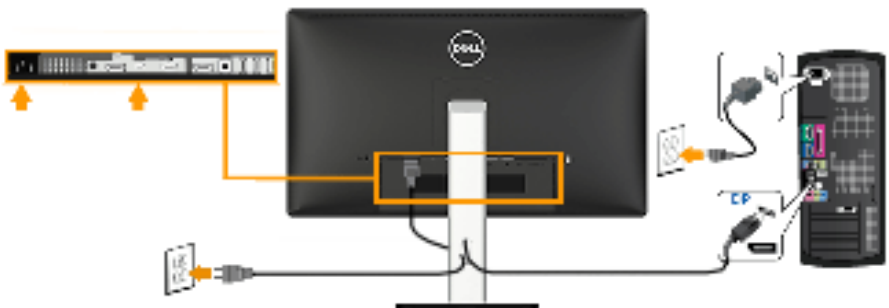
To connect your monitor to the computer:

1. Turn off your computer and disconnect the power cable.
2. Connect the the black (DisplayPort/Mini DP/HDMI) display connector cable to the corresponding video port on the back of your computer. Do not use the three cables at the same time. Use all the cables only when they are connected to the three different computers with appropriate video systems.

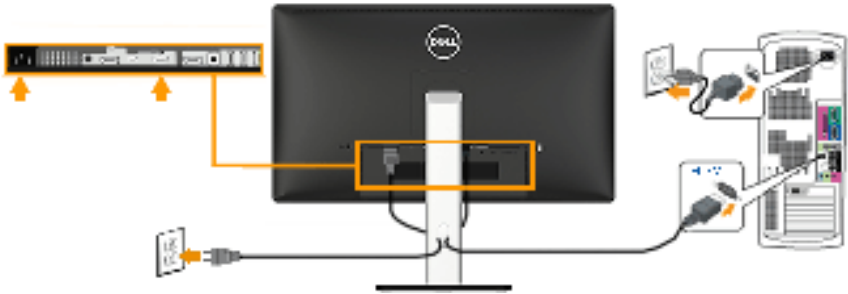
Connecting the black DisplayPort (DP to DP) cable



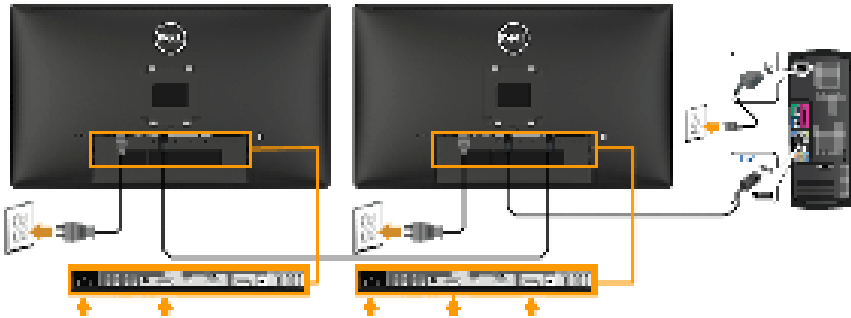
Connecting the black DisplayPort (Mini DP to DP) cable



Connecting the black HDMI 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 DP 1.2 with MST option.
-  **Note:** The graphics are used for the purpose of illustration only. Appearance on the computer may vary.

Connecting the USB 3.0 cable

After you have completed connecting the DP/Mini DP/HDMI cable, follow the procedures below to connect the USB cable to the computer and complete your monitor setup:

1. Connect the upstream USB port (cable supplied) to an appropriate USB port on your computer. (See **Bottom View** for details.)
2. Connect the USB peripherals to the downstream USB ports on the monitor.
3. Plug the power cables for your computer and monitor into a nearby outlet.
4. Turn on the monitor and the computer. If your monitor displays an image, installation is complete. If it does not display an image, see **Solving Problems**.
5. Use the cable slot on the monitor stand to organize the cables.



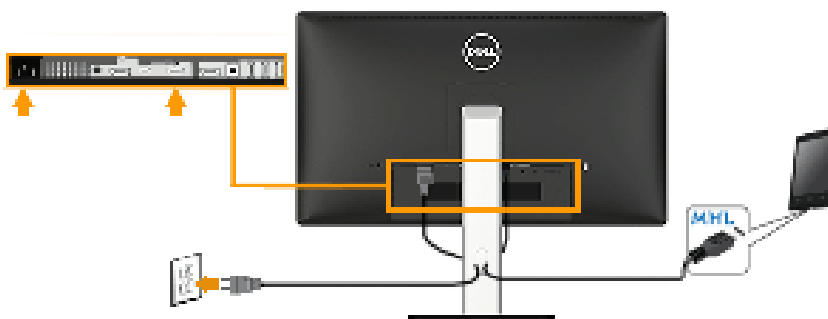
Using the Mobile-High Definition Link (MHL)

-  **Note:** This monitor is MHL certified.
-  **Note:** To use the MHL function, use only MHL-certified cable and source devices that support MHL output.
-  **Note:** Some MHL source devices may take more than a few seconds or longer to output an image, depending on MHL source devices.
-  **Note:** When the connected MHL source device enters Standby mode, the monitor will display black screen or show the message below, depending on MHL source device's output.



To enable MHL connection, please perform the below steps:

1. Plug the power cable on your monitor into a AC outlet.
2. Connect the (micro) USB port on your MHL source device to HDMI (MHL) port on the monitor with a MHL certified cable (See **Bottom View** for details.)
3. Turn On the monitor and the MHL source device.



4. Select input source on monitor to HDMI (MHL) by using OSD Menu (See **Using the On-Screen Display (OSD) Menu** for details.)
5. If it does not display an image, see **Mobile High-Definition Link (MHL) Specific Problems**.

Organizing Your Cables



After attaching all necessary cables to your monitor and computer, (See **Connecting Your Monitor** for cable attachment), organize all cables as shown above.

Attaching the Cable Cover



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



To attach the Cable Cover:

1. Fit the two tabs on the bottom part of the Cable Cover to the groove on the back of the monitor
2. Press the Cable Cover till it snaps into place.

Removing the Monitor Stand

-  **Note:** To prevent scratches on the LCD screen while removing the stand, ensure that the monitor is placed on a soft, clean surface.
-  **Note:** This is applicable for a monitor with a stand. When any other stand is bought, please refer to the respective stand setup guide for the removal instructions.



To remove the stand:

1. Place the monitor on a flat surface.
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).

Refer to the instructions that come with the VESA-compatible base mounting kit.

1. Place the monitor panel on a soft cloth or cushion on a stable, flat table.
2. Remove the stand.
3. Use a screwdriver to remove the four screws securing the plastic cover.
4. Attach the mounting bracket from the wall-mounting kit to the LCD.
5. Mount the LCD on the wall by following the instructions that came with the base-mounting kit.

 **NOTE:** For use only with UL-listed wall-mount bracket with minimum weight/load bearing capacity of 5.3 kg .

Operating the Monitor

Power On the Monitor

Press the  button to turn on the monitor.



Using the Front-Panel Controls

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



Front-Panel Keys		Description
A	 Preset modes	Use the Preset modes key to choose from a list of preset color modes. See Using the OSD Menu .
B	 Brightness / Contrast	Use the Brightness / Contrast key to direct access to the "Brightness" and "Contrast" control menu.
C	 Menu	Use the Menu key to open the on-screen display (OSD).
D	 Exit	Use the Exit key to exit on-screen display (OSD) from menu and sub-menus.

Front-Panel Keys



Front-Panel Keys		Description
A	 Up	Use the Up key to adjust (increase ranges) items in the OSD menu.
B	 Down	Use the Down key to adjust (decrease ranges) items in the OSD menu.
C	 OK	Use the OK key to confirm your selection.
D	 Back	Use the Back key to go back to the previous menu.

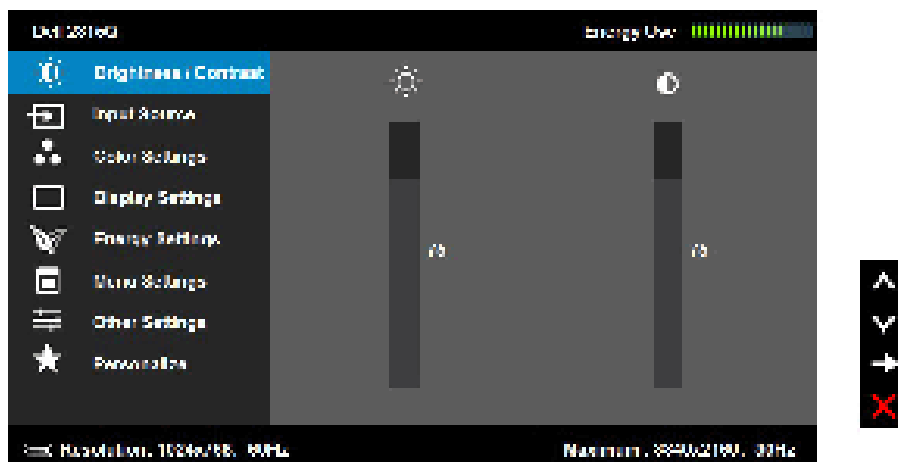
Using the On-Screen Display (OSD) Menu

Accessing the Menu System

 **NOTE:** If you change the settings and then either proceed to another menu or exit the OSD menu, the monitor automatically saves those changes. The changes are also saved if you change the settings and then wait for the OSD menu to disappear.

1. Press the  button to open the OSD menu and display the main menu.

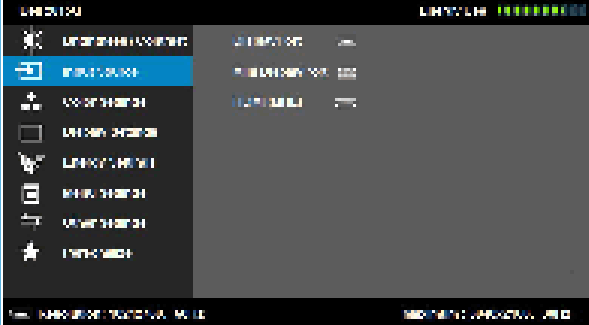
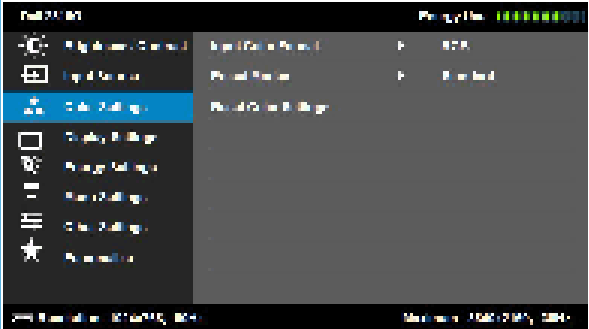
Main Menu

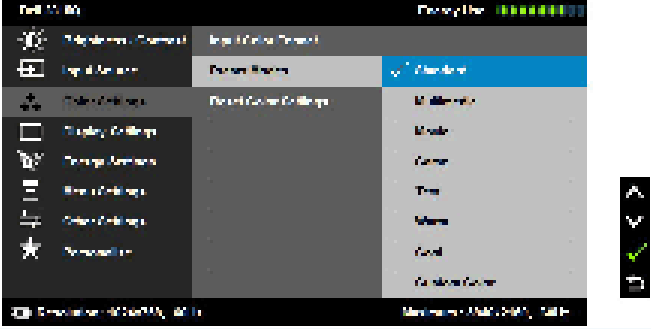


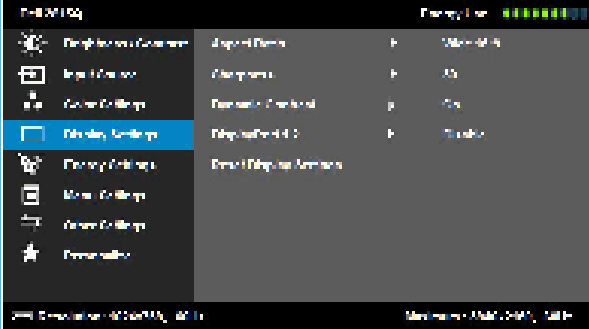
2. Press the  and  buttons to toggle between options in the Menu. As you move from one icon to another, the option name is highlighted.
3. To select the highlighted item on the menu press the  button again.
4. Press the  and  buttons to select the desired parameter.
5. Press the  button to enter the slide bar and then use the  or  buttons, according to the indicators on the menu, to make your changes.
6. Select the  to return to previous menu without accepting current settings or  to accept and return to previous menu.

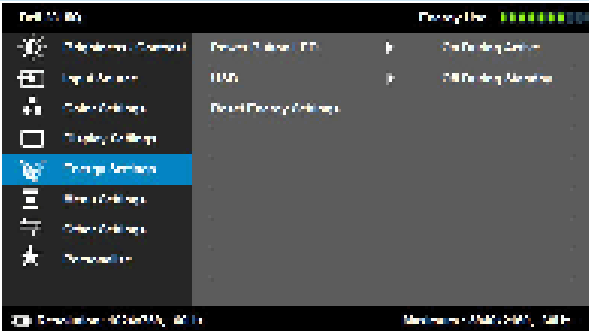
The table below provides a list of all the OSD menu options and their functions.

Icon	Menu and Submenus	Description
	Energy Use	This meter shows the energy level being consumed by the monitor in real time.
	Brightness/Contrast	Use the Brightness and Contrast menu to adjust the Brightness/Contrast.
		
	Brightness	Allows you to adjust the brightness or luminance of the backlight. Press the ▲ key to increase brightness and press the ▼ key to decrease brightness (min 0 ~ max 100).
	Contrast	Allows you to adjust the contrast or the degree of difference between darkness and lightness on the monitor screen. Adjust brightness first, and adjust contrast only if you need further adjustment. Press the ▲ key to increase contrast and press the ▼ key to decrease contrast (min 0 ~ max 100).

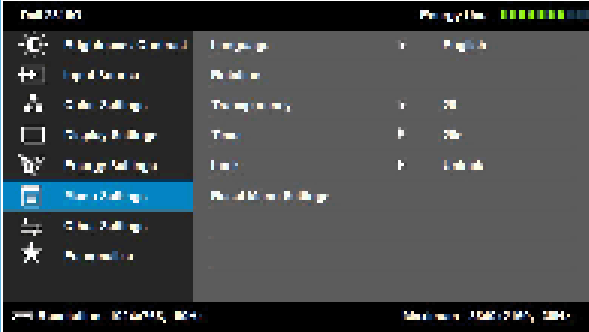
	Input Source Use the Input Source menu to select between different video signals that may be connected to your monitor. 
	DisplayPort Select DisplayPort input when you are using the DisplayPort (DP) connector. Push  to select the DisplayPort input source. Mini DisplayPort Select Mini DisplayPort input when you are using the Mini DisplayPort (Mini DP) connector. Push  to select the Mini DisplayPort input source. HDMI (MHL) Select HDMI (MHL) input when you are using the HDMI (MHL) connector. Push  to select the HDMI (MHL) input source.
	Color Settings Use the Color Settings menu to adjust the monitor's color settings. 
	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 to DVI adapter. • YPbPr: Select this option if your monitor is connected to a DVD player by YPbPr to DVI cable; or if the DVD color output setting is not RGB.

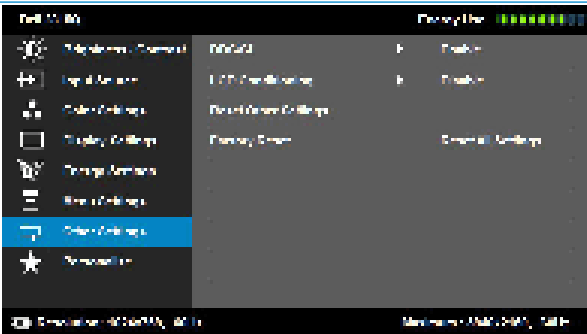
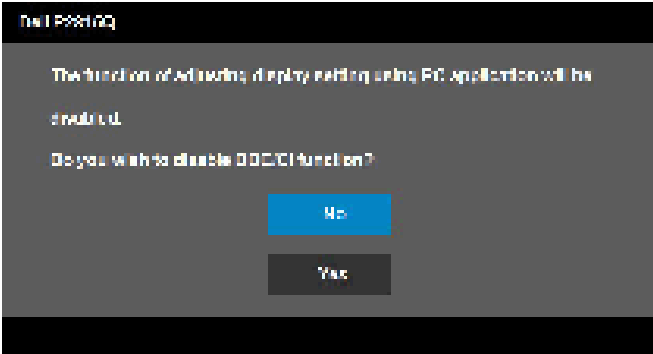
Preset Modes	Allows you to choose from a list of preset color modes.  • Standard: Loads the monitor's default color settings. This is the default preset mode. • Multimedia: Loads color settings ideal for multimedia applications. • Movie: Loads color settings ideal for movies. • Game: Loads color settings ideal for most gaming applications. • Text: Loads color settings ideal for office environment. • 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 ▼ keys to adjust the Red, Green, and Blue values and create your own preset color mode.
Hue	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 ▲ or ▼ to adjust the hue from '0' to '100'. Press ▲ to increase the monochrome appearance of the video image. Press ▼ to increase the colorful appearance of the video image. NOTE: Hue adjustment is available only when you select Movie or Game preset mode.

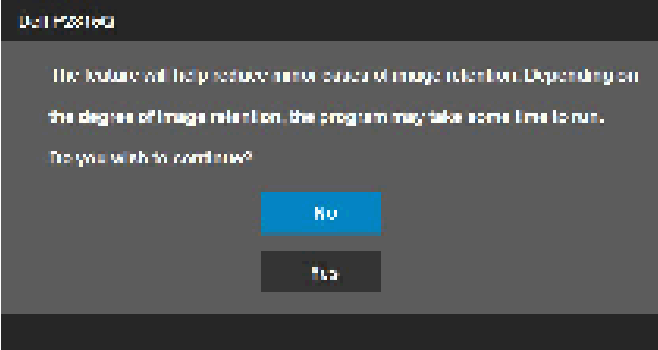
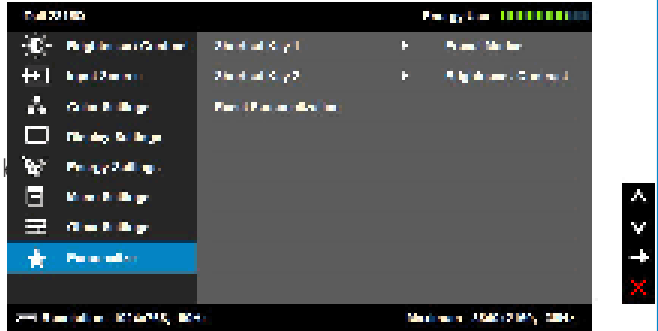
	Saturation	This feature can adjust the color saturation of the video image. Use ▲ or ▼ to adjust the saturation from '0' to '100'. Press ▲ to increase the monochrome appearance of the video image. Press ▼ to increase the colorful appearance of the video image. NOTE: Saturation adjustment is available only when you select Movie or Game preset mode.
	Reset Color Settings	Resets your monitor's color settings to the factory defaults.
	Display Settings	Use the Displays Settings menu to adjust the monitor's display settings. 
	Aspect Ratio	Adjust the image ratio to Wide 16:9, Auto Resize, 4:3 or 1:1. NOTE: Aspect Ratio is applicable when input horizontal pixels is not greater than 2560, gray-out otherwise.
	Sharpness	This feature can make the image look sharper or softer. Use ▲ or ▼ to adjust the sharpness from '0' to '100'.
	Dynamic Contrast	Dynamic Contrast adjusts the contrast ratio to 2M to 1. Press the ⏻ button to select the Dynamic Contrast "On" or "Off". NOTE: Dynamic Contrast provides higher contrast if you select Game or Movie preset mode.

	DisplayPort 1.2	Press the  key to enable or disable DisplayPort 1.2. To use the DP MST (Daisy Chain) feature, enable DP 1.2. NOTE: Ensure your graphics card can support these features before selecting DP 1.2. Wrong setting may result in blank screen. Some graphics card do not support MCCC (Monitor Control Command Set) at DP 1.2. In these cases, DDM (Dell Display Manager) may not run. DisplayPort 1.2 is disabled when input source is HDMI.
	Reset Display Settings	Select this option to restore default display settings.
	Energy Settings	
	Power Button LED	Allows you to set the power LED indicator on or off to save energy.
	USB	By turning on or off to control USB power supply while monitor under standby mode but without USB upstream cable .
	Reset Energy Settings	Select this option to restore default Energy Settings.



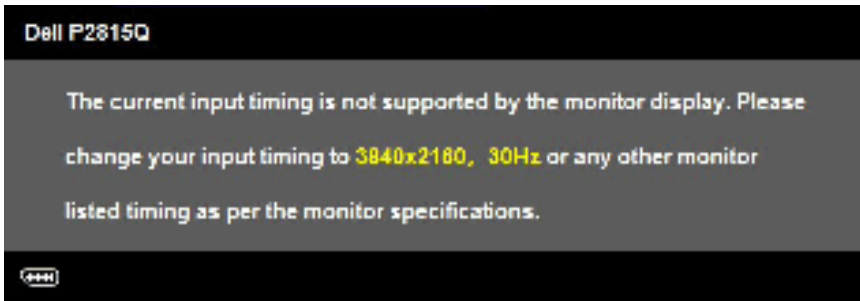
Menu Settings	Select this option to adjust the settings of the OSD such as the languages of the OSD, the amount of time the menu remains on screen, and so on. 
Language	Allows you to set the OSD display to one of eight languages: English, Spanish, French, German, Portuguese, Russian, Simplified Chinese, or Japanese.
Rotation	Rotates the OSD by 90 degrees counter-clockwise. You can adjust the menu according to your Display Rotation.
Transparency	Allows you to adjust the OSD background from opaque to transparent.
Timer	Allows you to set the time for which the OSD remains active after you press a key on the monitor. Use the ▲ and ▼ keys to adjust the slider in 1 second increments, from 5 to 60 seconds.
Lock	Controls user access to adjustments. When Lock is selected, no user adjustments are allowed. All keys are locked except ⏮ key. NOTE: When the OSD is locked, pressing the menu key takes you directly to the OSD settings menu, with 'OSD Lock' pre-selected on entry. Press and hold ⏮ key for 10 seconds to unlock and allow user access to all applicable settings.
Reset Menu Settings	Select this option to restore default menu settings.

	Other Settings	
	DDC/CI	DDC/CI (Display Data Channel/Command Interface) allows a software on your computer to adjust the monitor display settings like the brightness, color balance etc. Enable (Default): Optimizes the performance of your monitor and provides a better customer experience. Disable: Disables the DDC/CI option and the following message appears on the screen. 

	LCD Conditioning This feature will help reduce minor cases of image retention. If an image appears to be stuck on the monitor, select LCD Conditioning to help eliminate any image retention. Using the LCD Conditioning feature may take some time. LCD Conditioning feature cannot remove severe cases of image retention or burn-in. NOTE: Use LCD Conditioning only when you experience a problem with image retention. The below warning message appears once user selects "Enable" LCD Conditioning.  The screen shows a warning message: "This feature will help reduce minor cases of image retention. Depending on the degree of image retention, the program may take some time to run. Do you wish to continue?" with "Yes" and "No" buttons.
	Reset Other Settings Select this option to restore default other settings, such as DDC/CI.
	Factory Reset Resets all OSD settings to the factory preset values.
	Personalize Users can choose a feature from "Preset Modes", "Brightness/Contrast", "Input Source", "Aspect Ratio" and "Rotation" set it as a shortcut key.  The screen shows the "Personalize" menu with options: "Preset Mode", "Brightness/Contrast", "Input Source", "Aspect Ratio", "Rotation", and "Preset Mode". The "Preset Mode" option is highlighted. On the right, there are navigation buttons: "Up", "Down", "Left", "Right", and "Exit".

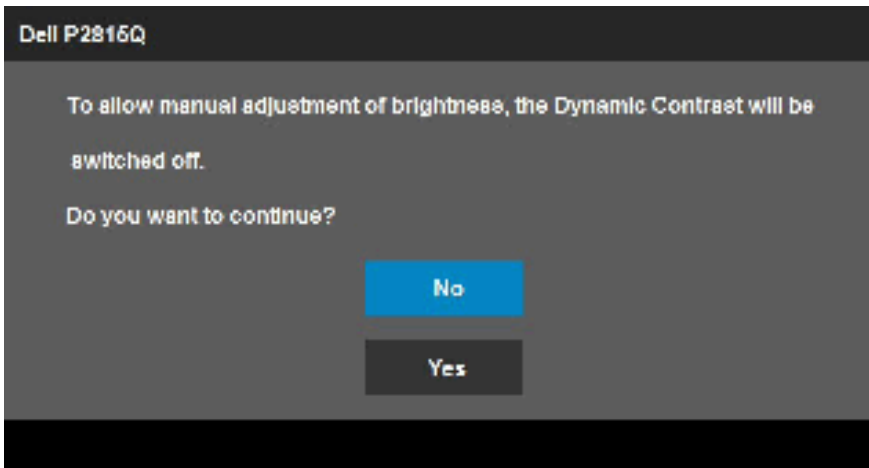
OSD Messages

When the monitor does not support a particular resolution mode you will see the following message:

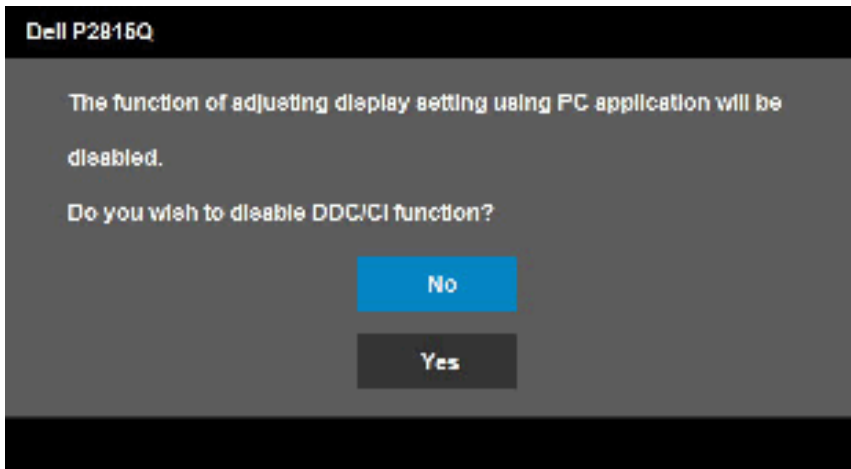


This means that the monitor cannot synchronize with the signal that it is receiving from the computer. See [Monitor Specifications](#) for the horizontal and vertical frequency ranges addressable by this monitor.

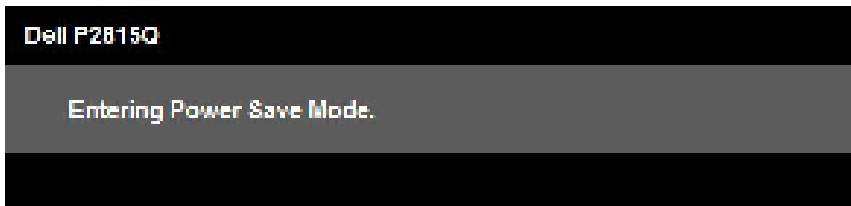
When the Dynamic Contrast feature is enabled (in these preset modes: Game or Movie), the manual brightness adjustment is disabled.



You will see the following message before the DDC/CI function is disabled.

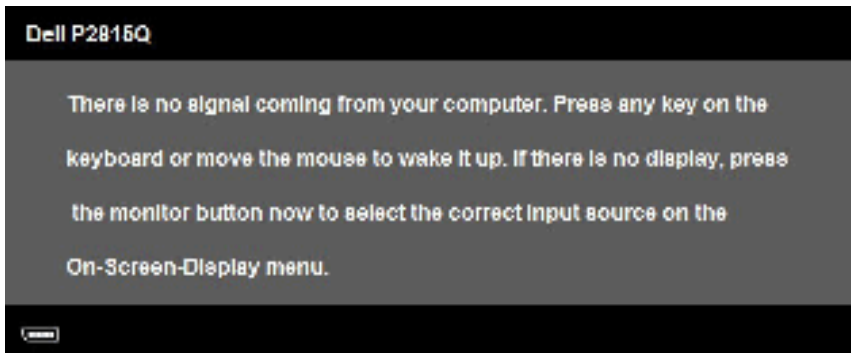


When the monitor enters the **Power Save** mode, the following message appears:

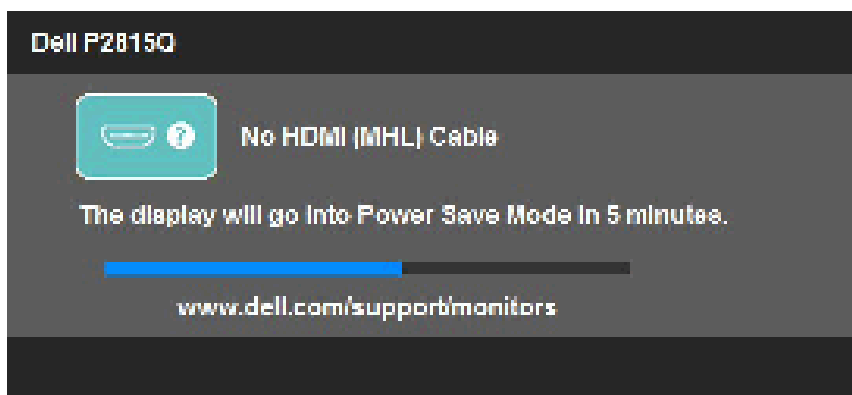
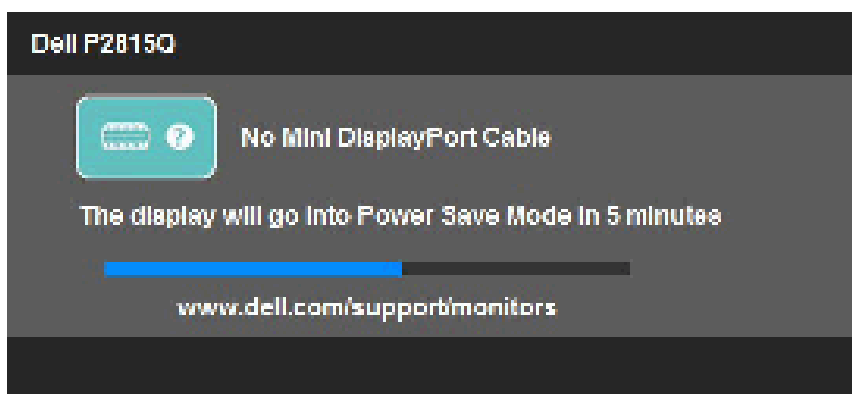
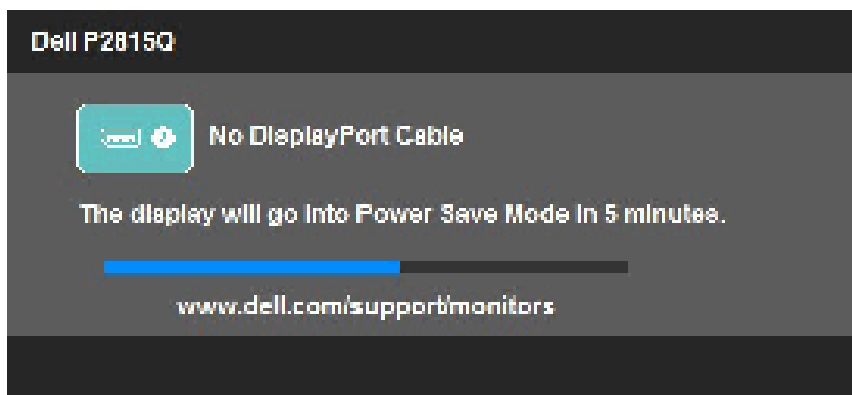


Activate the computer and wake up the monitor to gain access to the OSD.

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



If DP or Mini DP or HDMI (MHL) cable is not connected, a floating dialog box as shown below appears. The monitor will enter **Power Save Mode after 5 minutes** if left at this state.



See **Solving Problems** for more information.

Setting the Maximum Resolution

To set the Maximum resolution for the monitor:

In Windows® 7, Windows® 8, Windows® 8.1:

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 3480 x 2160.
4. Click OK.

If you do not see 3840 x 2160 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 service tag, and download the latest driver for your graphics card.

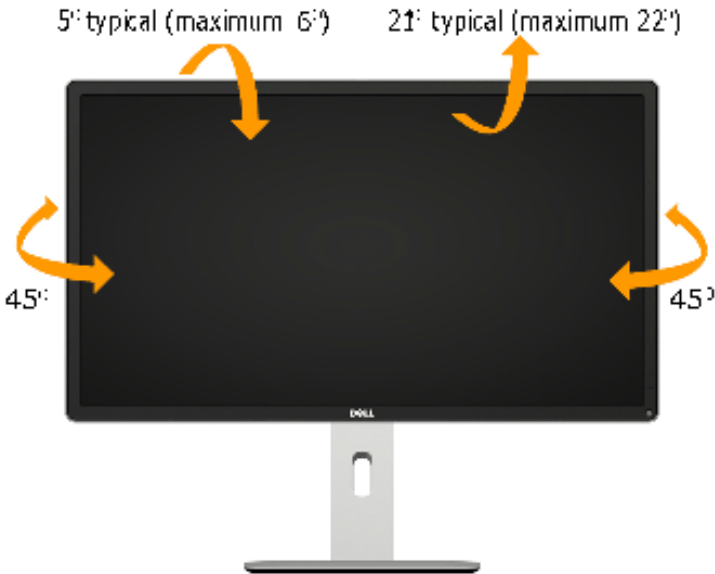
If you are using a non-Dell computer (portable or desktop):

- 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.

Using the Tilt, Swivel, and Vertical Extension

Tilt, Swivel

With the stand assembly, 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

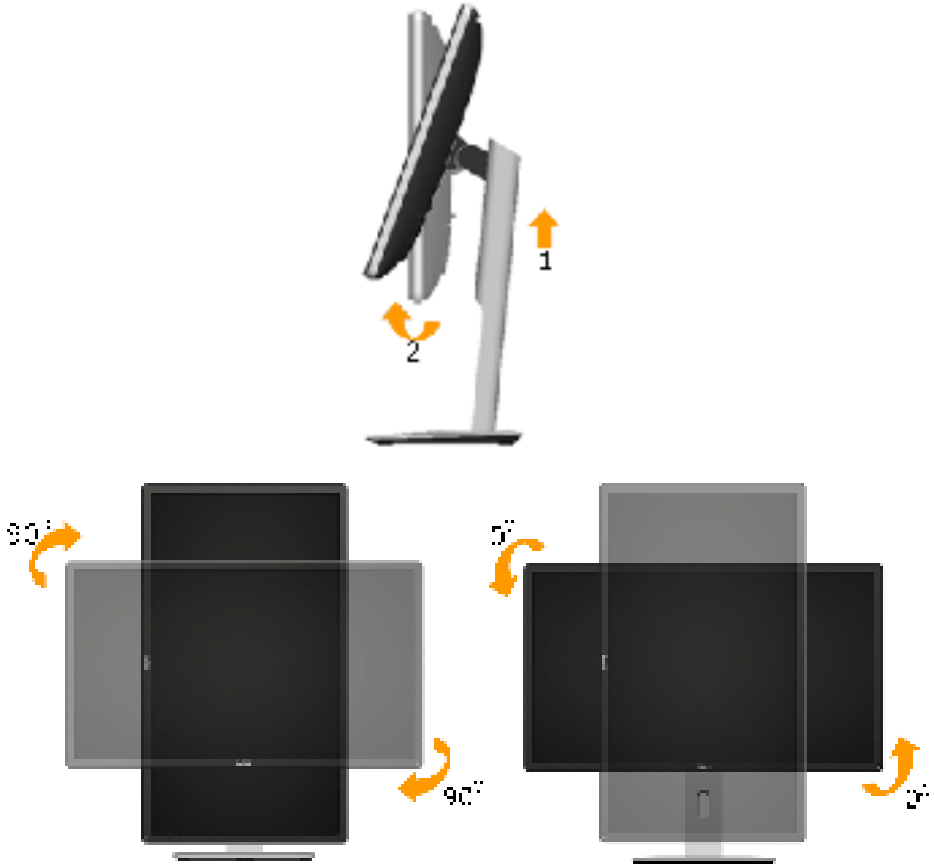


NOTE: The stand extends vertically up to 115 mm. The figure below illustrates how to extend the stand vertically.



Rotating the Monitor

Before you rotate the monitor, your monitor should be fully vertically extended (Vertical Extension) and fully tilted (Tilt) 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.

If you have an nVidia graphics card, click the nVidia tab, in the left-hand column select NVRotate, and then select the preferred rotation.

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

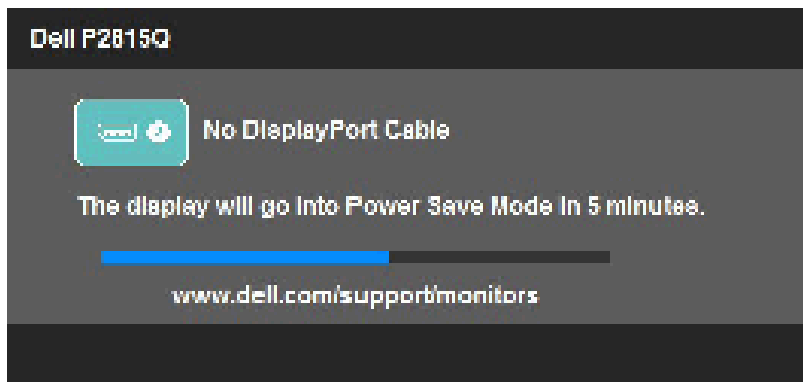
Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

1. Turn off both your computer and the monitor.

Unplug the video cable from the back of the computer. To ensure proper Self-Test operation, remove all video cables from the back of computer.

2. Turn on the monitor.

The floating dialog box should appear on-screen (against a black background) if the monitor cannot sense a video signal and is working correctly. While in self-test mode, the power LED remains white. Also, depending upon the selected input, one of the dialogs shown below will continuously scroll through the screen.



3. This box also appears during normal system operation, if the video cable becomes disconnected or damaged. The monitor will enter **Power Save Mode after 5 minutes** if left at this state.
4. Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after you use the previous procedure, check your video controller and computer, because your monitor is functioning properly.

Built-in Diagnostics

Your monitor has a built-in diagnostic tool that helps you determine if the screen abnormality you are experiencing 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.
3. Press and hold the **Button 1** and **Button 4** on the front panel simultaneously for 2 seconds. A gray screen appears.
4. Carefully inspect the screen for abnormalities.
5. Press the **Button 4** on the front panel again. The color of the screen changes to red.
6. Inspect the display for any abnormalities.
7. Repeat steps 5 and 6 to inspect the display in green, blue, black, white and text screens.

The test is complete when the white screen appears. To exit, press the **Button 4** again.

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

Common Problems

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

Common Symptoms	What You Experience	Possible Solutions
No Video/Power LED off	No picture	• 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 depressed fully.
No Video/Power LED on	No picture or no brightness	• Increase brightness & contrast controls via OSD. • Perform monitor self-test feature check. • Check for bent or broken pins in the video cable connector. • Ensure that the correct input source is selected via the Input Source Select menu. • Run the built-in diagnostics.
Poor Focus	Picture is fuzzy, blurry, or ghosting	• Perform Auto Adjust via OSD. • Adjust the Phase and Pixel Clock controls via OSD. • Eliminate video extension cables. • Reset the monitor to Factory Settings. • Change the video resolution to the correct aspect ratio .
Shaky/Jittery Video	Wavy picture or fine movement	• Perform Auto Adjust via OSD. • Adjust the Phase and Pixel Clock controls via OSD. • Reset the monitor to Factory Settings. • Check environmental factors. • Relocate the monitor and test in another room.
Missing Pixels	LCD screen has spots	• 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	LCD screen has bright spots.	• 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	Picture too dim or too bright	• Reset the monitor to Factory Settings. • Auto Adjust via OSD. • Adjust brightness & contrast controls via OSD.
Geometric Distortion	Screen not centered correctly	• Reset the monitor to Factory Settings. • Auto Adjust via OSD. • Adjust brightness & contrast controls via OSD. NOTE: When using 'DVI-D', the positioning adjustments are not available.
Horizontal/Vertical Lines	Screen has one or more lines.	• Reset the monitor to Factory Settings. • Perform Auto Adjust via OSD. • Adjust Phase and Pixel Clock controls via OSD. • 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. NOTE: When using 'DVI-D', the Pixel Clock and Phase adjustments are not available.
Synchronization Problems	Screen is scrambled or appears torn.	• Reset the monitor to Factory Settings. • Perform Auto Adjust via OSD. • Adjust Phase and Pixel Clock controls via OSD. • 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	Visible signs of smoke or sparks	• Do not perform any troubleshooting steps. • Contact Dell immediately.
Intermittent Problems	Monitor malfunctions on & off	• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. • Reset the monitor to Factory Settings. • Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode.
Missing Color	Picture 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	Picture color not good	• Change the Color Setting Mode in the Color Settings OSD to Graphics or Video depending on the application. • Try different Color Preset Settings in Color Settings OSD. Adjust R/G/B value in Color Settings OSD if the Color Management is turned off. • Change the Input Color Format to PC RGB or YPbPr in the Advance Setting OSD.
Image retention from a static image left on the monitor for a long period of time	Faint shadow from the static image displayed appears on the screen	• Use the Power Management feature to turn off the monitor at all times when not in use (for more information, see <u>Power Management Modes</u>). • Alternatively, use a dynamically changing screensaver.

Product-Specific Problems

Specific Symptoms	What You Experience	Possible Solutions
Screen image is too small.	Image is centered on screen, but does not fill entire viewing area.	Reset the monitor to Factory Settings.
Cannot adjust the monitor with the buttons on the front panel.	OSD does not appear on the screen.	Turn off the monitor, unplug the power cord, plug back, and then turn on the monitor.
No Input Signal when user controls are pressed.	No picture, the LED light is white. When you press "up", "down" or "Menu" key, the message "No input signal" will appear.	- Check the signal source. Ensure the computer is not in the power saving mode by moving the mouse or pressing any key on the keyboard. - Check whether the signal cable is plugged in properly. Re-plug the signal cable if necessary. - Reset the computer or video player.
The picture does not fill the entire screen.	The picture cannot fill the height or width of the 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 DP connection to the PC.	Black screen	- Verify which DP standard (DP 1.1a or DP 1.2) is your Graphics Card certified to. Download and install the latest graphics card driver. - Some DP 1.1a graphics card cannot support DP 1.2 monitors. Change the monitor DP setting to match your graphics card by following instruction found in section <u>"Connecting the Monitor for DP Multi-Stream Transport (MST) function"</u>.

Font size too small	Generic Windows Desktop applications and fonts may appear visually small due to the monitor's high pixel density. You may scale the Windows desktop to increase the application and font size to a desired level.	• For Win 8 and earlier: 1. Go to Windows -> Control Panel -> Appearance and Personalization -> Display 2. Select the preferred scaling. Log-off or reboot for scaling to take effect. Note: Windows 8 and earlier does not support scale setting for individual display/monitor. • For Win 8.1: 1. Go to Windows -> Control Panel -> Appearance and Personalization -> Display 2. Select the preferred scaling for each display/monitor.
Screen display not at native resolution (3840 x 2160)	If your laptop is in clone or duplicate mode, the resolution displayed on the monitor will follow the resolution of the laptop.	• For the best resolution, select "Extended" mode in your Windows display setting and change the resolution of the monitor to 3840 x 2160.

Universal Serial Bus (USB) Specific Problems

Common Symptoms	What You Experience	Possible Solutions
USB interface is not working.	USB peripherals are not working.	• Check that your monitor is turned ON. • Re-connect the upstream cable to your computer. • Re-connect the USB peripherals (downstream connector) • Switch off and then turn on the monitor again. • Re-boot the computer. • Some USB devices like external portable HDD require higher electric current; connect the device directly to the computer system.
Super Speed USB 3.0 interface is slow.	Super Speed USB 3.0 peripherals working slowly or not working at all.	• Check that your computer is USB 3.0-capable. • Some computers have both USB 3.0 and USB 2.0 ports. Ensure that the correct USB port is used. • Re-connect the upstream cable to your computer. • Re-connect the USB peripherals (downstream connector). • Re-boot the computer

Mobile High-Definition Link (MHL) Specific Problems

Common Symptoms	What You Experience	Possible Solutions
MHL interface is not working.	Cannot see MHL device image shown on monitor.	• Re-connect the upstream cable • Ensure your MHL cable and MHL device are MHL certified. • Check your MHL device is turned On. • Check your MHL device is not in Standby mode. • Check physical MHL cable connection is corresponding to input source selected on OSD Menu i.e., HDMI (MHL) . • Wait for 30 seconds after connecting MHL cable as some MHL devices require longer recovery time.

Appendix



WARNING: Safety Instructions



WARNING: 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 *Product Information Guide*.

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.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference
- (2) this device must accept any interference received including interference that may cause undesired operation

Contact 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 top left of the page.
3. Click **Contact Us** on the top 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.

Setting Up Your Monitor

Setting the display resolution to 3840 x 2160 (Maximum)

For optimal display performance while using the Microsoft Windows operating systems, set the display resolution to 3840 x 2160 pixels by performing the following steps:

In Windows Windows® 7, Windows® 8 , Windows® 8.1 :

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 3840 x 2160.
4. Click OK.

If you do not see 3840 x 2160 as an option, you may need to update your graphics driver. Please choose the scenario below that best describes the computer system you are using, and follow the provided

1: If you have a Dell desktop or a Dell portable computer with Internet access

2: If you have a non Dell desktop, portable computer, or graphics card

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

1. Go to <http://www.dell.com/support>, enter your service tag, and download the latest driver for your graphics
2. After installing the drivers for your graphics adapter, attempt to set the resolution to 3840 x 2160 again.

 **NOTE:** If you are unable to set the resolution to 3840 x 2160, 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 Windows® 7, Windows® 8, Windows® 8.1:

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 etc.).
6. Please refer to the graphics card provider website for updated driver (for example, <http://www.ATI.com> OR <http://www.NVIDIA.com>).
7. After installing the drivers for your graphics adapter, attempt to set the resolution to 3480 x 2160 again.

 **NOTE:** If you are unable to set the resolution to 3840 x 2160 , please contact the manufacturer of your computer or consider purchasing a graphics adapter that will support the video resolution of 3840 x 2160.

Procedures for setting up dual monitors in Windows Vista®, Windows® 7 , Windows® 8 or Windows® 8.1

For Windows Vista®

Connect the external monitor(s) to your laptop or desktop using a video cable (VGA, DVI, DP, etc.) and follow any of the below setup methods.

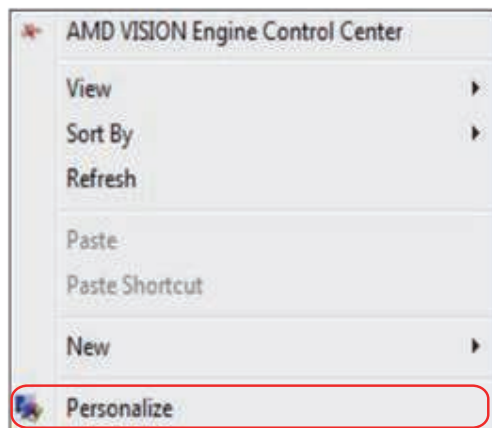
Method 1: Using keyboard shortcut “Win+P”

1. Press the **Windows logo key** + **P** on your keyboard.
2. While holding down the **Windows logo key**, press **P** to toggle between the display selections.

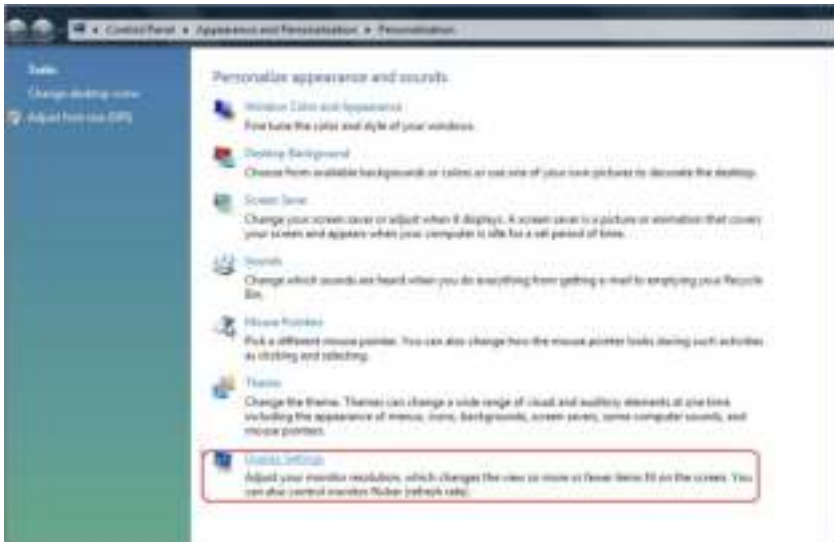


Method 2: Using the “Personalize” menu

1. Right-click on the desktop and click **Personalize**.



2. Click Display Settings.



3. Click Identify Monitors.

- You may need to restart your system and repeat steps 1 to 3 if the system does not detect the added monitor.



For Windows® 7

Connect the external monitor(s) to your laptop or desktop using a video cable (VGA, DVI, DP, etc.) and follow any of the below setup methods.

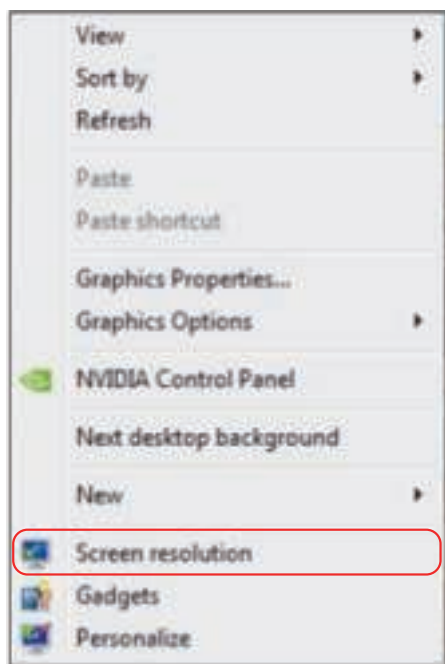
Method 1: Using keyboard shortcut “Win+P”

1. Press the **Windows logo key + P** on your keyboard.
2. While holding down the **Windows logo key**, press **P** to toggle between the display selections.



Method 2: Using the “Screen Resolution” menu

1. Right-click on the desktop and click **Screen resolution**.



2. Click **Multiple displays** to choose a display selection. If you do not see the additional monitor listed, click **Detect**.
- You may need to restart your system and repeat steps 1 to 3 if the system does not detect the added monitor.

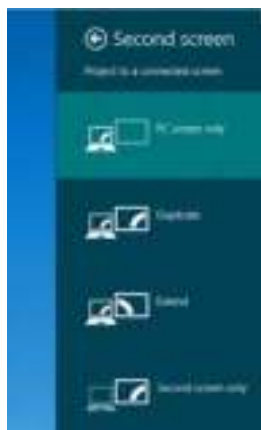


For Windows® 8 or Windows® 8.1

Connect the external monitor(s) to your laptop or desktop using a video cable (VGA, DVI, DP, HDMI etc.) and follow any of the below setup methods.

Method 1: Using keyboard shortcut “Win+P”

1. Press the **Windows logo key** + **P** on your keyboard.  
2. While holding down the **Windows logo key**, press **P** to toggle between the display selections.

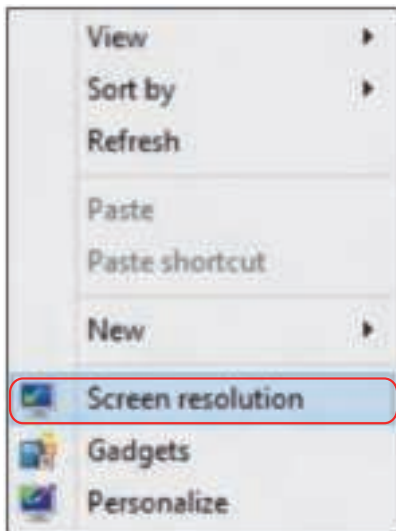


Method 2: Using the “Screen Resolution” menu

1. From the Start screen, select **Desktop** tile to switch to the Classic Windows desktop.

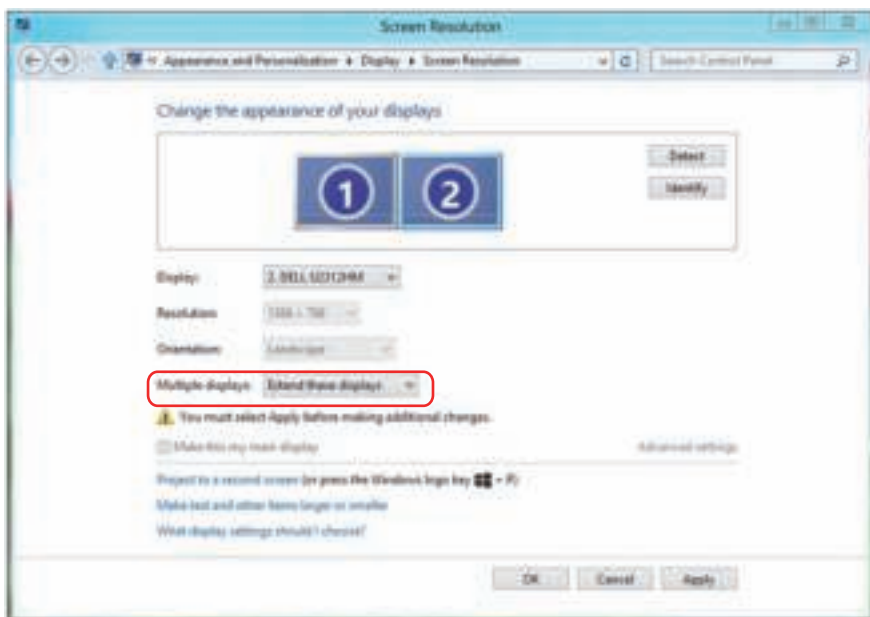


2. Right-click on the desktop and click **Screen resolution**.



3. Click **Multiple displays** to choose a display selection. If you do not see the additional monitor listed, click **Detect**.

- You may need to restart your system and repeat steps 1 to 3 if the system does not detect the added monitor.



Setting Display Styles For Multiple Monitor

After the external monitor(s) have been set up, users can select the desired display style from **Multiple displays** menu: Duplicate, Extend, Show Desktop On.

- **Duplicate these displays:** Duplicate the same screen on two monitors with the same resolution, chosen based on the monitor with a lower resolution.

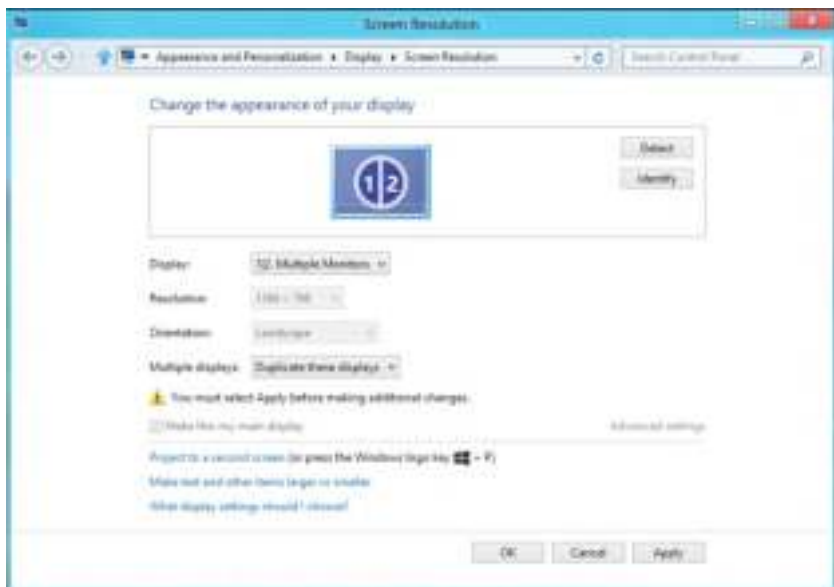
For Windows Vista®

[DUPLICATE NOT AVAILABLE]

For Windows® 7



For Windows® 8 or Windows® 8.1

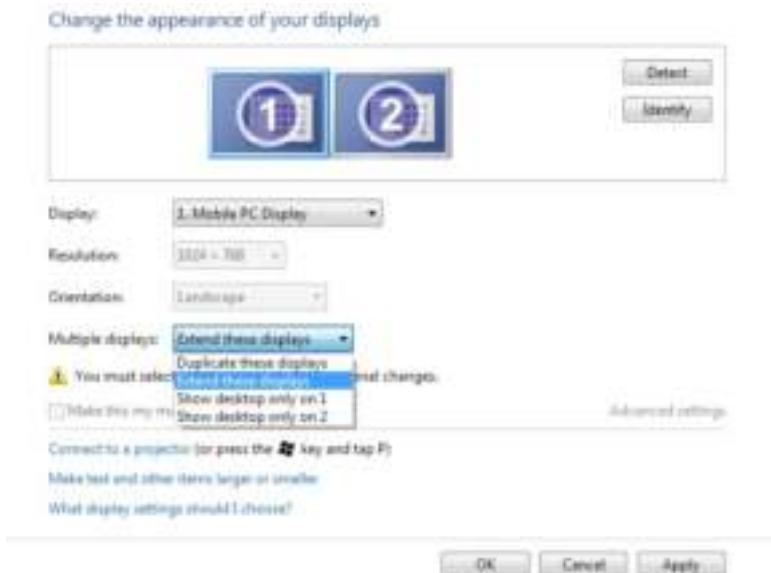


- **Extend these displays:** This option is recommended when an external monitor is connected to a laptop, and each monitor can display different screen independently to improve user convenience. The relative position of the screens can be set up here, for example monitor 1 may be set up to be to the left of monitor 2 or vice versa. This depends on the physical position of the LCD monitor in relation to the laptop. The horizontal line displayed on both monitors can be based on the laptop or external monitor. These are all adjustable options, and all a user need do is drag the monitor of the main screen to the extended monitor.

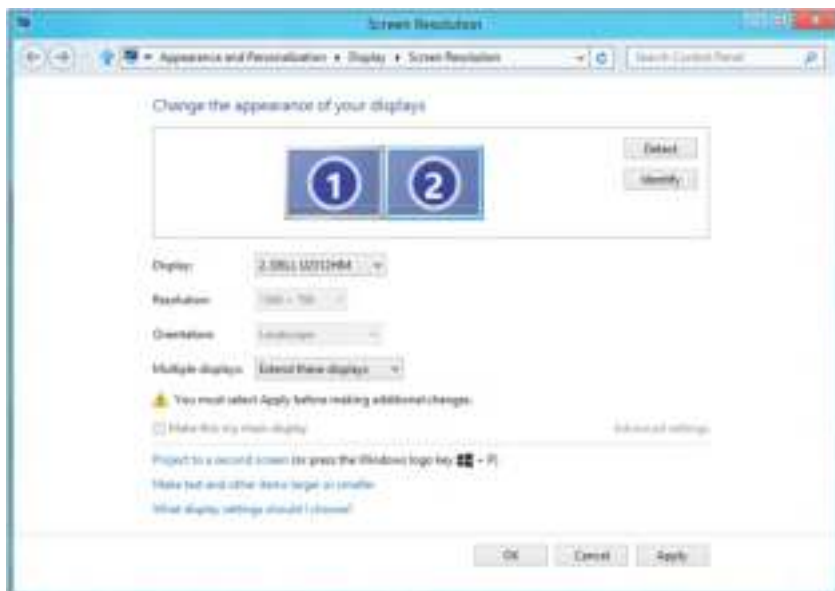
For Windows Vista®



For Windows® 7



For Windows® 8 or Windows® 8.1

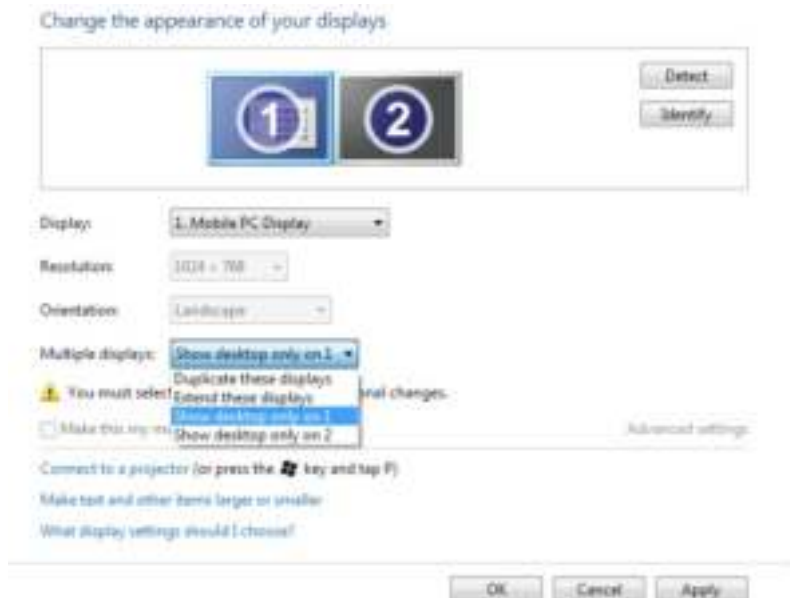


- **Show desktop only on:** Display the status of a particular monitor. This option is typically chosen when the laptop is used as a PC so the user can enjoy a large external monitor. Most current laptops support mainstream resolutions. As shown in the figure above, the resolution of the laptop monitor is only 1280 x 800, but after connecting a 28" external LCD monitor, users can immediately improve their visual enjoyment to 3840 x 2160 Full HD quality.

For Windows Vista®



For Windows® 7



For Windows® 8 or Windows® 8.1

