

# Dell S2415H User's Guide

Model: S2415H  
Regulatory model: S2415Hb



# Notes, Cautions, and Warnings



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



**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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# About Your Monitor


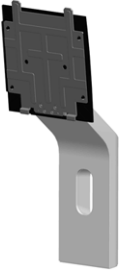
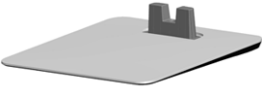
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## Package Contents

Your monitor ships with the components shown below. Make sure that you have received all the components and [Contact Dell](#) 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.

	Monitor
	Stand Riser
	Stand Base

	<p>Cable Cover</p>
	<p>Power Cable (Varies by Country)</p>
	<p>Power Adapter</p>
	<p>HDMI Cable</p>
	<ul style="list-style-type: none"> <li>• Quick Setup Guide</li> <li>• Safety, Environmental, and Regulatory Information</li> </ul>

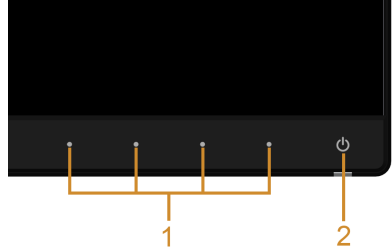
# Product Features

The **Dell S2415H** flat panel monitor has an active matrix, Thin-Film Transistor (TFT), Liquid Crystal Display (LCD), and Light Emitting Diode (LED) backlight. The monitor features include:

- 60.47 cm (23.8-inch) viewable area display (measured diagonally).  
1920 x 1080 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.
- Mega Dynamic Contrast Ratio (8,000,000:1).
- Tilt capability.
- Ultra-thin bezel minimizes the bezel gap in multi-monitor usage, enabling easier set up with an elegant viewing experience.
- Extensive digital connectivity with HDMI (MHL) helps future-proof your monitor.
- Removable stand and Video Electronics Standards Association (VESA™) 100 mm mounting holes for flexible mounting solutions.
- Plug and play capable.
- Color gamut of 72% (CIE1931).
- On-Screen Display (OSD) adjustments for easy setup and screen optimization.
- Energy Saver feature for Energy Star compliance.
- Security-lock slot.
- Stand lock.
- Capability to switch from wide aspect to standard aspect ratio while maintaining image quality.
- BFR/PVC-reduced.
- TCO-Certified Displays.
- Arsenic-Free glass and Mercury-Free for the panel only.
- 0.5 W standby power when in the sleep mode.
- Energy Gauge shows the energy level being consumed by the monitor in real time.

# Identifying Parts and Controls

## Front View



Front Panel Controls

Label	Description
1	Function buttons (For more information, see <a href="#">Operating the Monitor</a> )
2	Power On/Off button (with LED indicator)



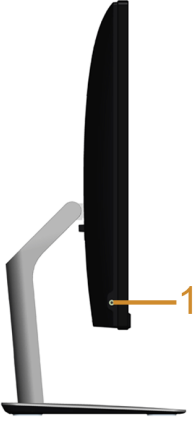
# Back View



**Back View with Monitor Stand**

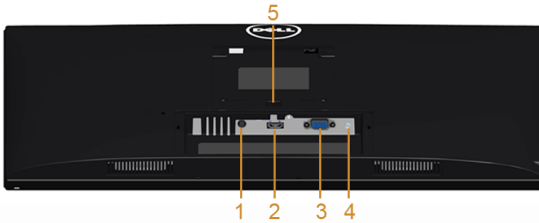
Label	Description	Use
1	VESA mounting holes (100 mm x 100 mm - behind attached VESA cover)	Wall mount monitor using VESA-compatible wall mount kit (100 mm x 100 mm).
2	Regulatory label	Lists the regulatory approvals.
3	Stand release button	Releases stand from monitor.
4	Security lock slot	Secures monitor with security lock (security lock not included).
5	Barcode serial number label	Refer to this label if you need to contact Dell for technical support.
6	Cable management slot	Uses to organize cables by placing them through the slot.

## Side View



Label	Description	Use
1	Headphone port	Connect a headphone.

## Bottom View



### Bottom View without Monitor Stand

Label	Description	Use
1	Power adapter port	Connect the power adapter.
2	HDMI (MHL) port	Connect your computer with HDMI cable or MHL devices with MHL cable (optional).
3	VGA port	Connect your computer with VGA cable (optional).
4	Audio Line-In port	Connect to your computer audio output (optional).
5	Stand lock	Lock the stand to the monitor using a M3 x 6 mm screw (screw not included).

# Monitor Specifications

## Flat Panel Specifications

Model	S2415H
Screen type	Active matrix - TFT LCD
Panel type	In Plane Switching (IPS)
Viewable image	
Diagonal	604.70 mm (23.8 inches)
Horizontal, Active Area	527.04 mm (20.75 inches)
Vertical, Active Area	296.46 mm (11.67 inches)
Area	156246.28 mm <sup>2</sup> (242.18 inch <sup>2</sup> )
Pixel pitch	0.2745 mm x 0.2745 mm
Viewing angle	178° (vertical) typical 178° (horizontal) typical
Luminance output	250 cd/m <sup>2</sup> (typical)
Contrast ratio	1000 to 1 (typical) 8,000,000 to 1 (Mega Dynamic Contrast On)
Faceplate coating	Glare with Hard coating (3H)
Backlight	LED edgelight system
Response time	6 ms (typical) with Overdrive
Color depth	16.77 million colors
Color gamut	CIE 1931* (72%)

\* Color gamut (typical) is based on CIE1976 (85%) and CIE1931 (72%) test standards.

## Resolution Specifications

Model	S2415H
Horizontal scan range	30 kHz to 83 kHz (automatic)
Vertical scan range	56 Hz to 75 Hz (automatic)
Maximum preset resolution	1920 x 1080 at 60 Hz

# Supported Video Modes

<b>Model</b>	<b>S2415H</b>
Video display capabilities (VGA & HDMI playback)	480i, 480p, 576i, 576p, 720p, 1080i, 1080p

# 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	60.0	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, 1280 x 1024	64.0	60.0	108.0	+/+
VESA, 1280 x 1024	80.0	75.0	135.0	+/+
VESA, 1152 x 864	67.5	75.0	108.0	+/+
VESA, 1600 x 900	75.0	60.0	162.0	+/+
VESA, 1920 x 1080	67.5	60.0	148.5	+/+

## MHL Source Display Modes

Display Mode	Frequency (Hz)
640 x 480p	60
720 x 480p	60
720 x 576p	50
1280 x 720p	60
1280 x 720p	50
1920 x 1080i	60
1920 x 1080i	50
1920 x 1080p	30
1920 x 1080p	60
1920 x 1080p	50
720 (1440) x 480i	60
720 (1440) x 576i	50

## Electrical Specifications



Model		S2415H
Video input signals		<ul style="list-style-type: none"> <li>Analog RGB, 0.7 Volts +/- 5%, positive polarity at 75 ohm input impedance</li> <li>HDMI 1.4 (MHL 2.1), 600mV for each differential line, 100 ohm input impedance per differential pair</li> </ul>
Synchronization input signals		Separate horizontal and vertical synchronizations, polarity-free TTL level, SOG (Composite SYNC on green)
AC/DC adapter*	Input voltage/frequency/current	100 -240 VAC / 50 or 60 Hz $\pm$ 3 Hz/1.7 A (maximum)
	Output voltage/current	Output: 19.5 VDC / 3.34 A
Inrush current		115 V/230V: 150 A (Max.)**

\*Qualified Compatible AC/DC adapters.

\*\*The AC source must be using chroma 6530 3KV source or other same level AC source.



**CAUTION: To avoid damage to the monitor, use only the adapter designed for this particular Dell monitor.**

Brand	Manufacturer	Model	Polarity
Dell	Delta	DA65NM111-00	
Dell	Chicony	HA65NS5-00	

## Speaker Specifications

Model	S2415H
Speaker rated power	2 x 3 W
Frequency Response	200 Hz - 20 kHz
Impedance	4 ohm

## Physical Characteristics

Model	S2415H
Connector type	15-pin D-subminiature (Blue connector); HDMI (MHL); Audio-In; Headphone-Out
Signal cable type	<ul style="list-style-type: none"> <li>Digital: detachable, HDMI, 19 pins</li> <li>Digital: detachable, MHL, 19 pins</li> </ul>
<b>Dimensions (with stand)</b>	
Height	404.6 mm (15.93 inches)
Width	539.1 mm (21.23 inches)
Depth	180.0 mm (7.09 inches)
<b>Dimensions (without stand)</b>	
Height	321.1 mm (12.64 inches)
Width	539.1 mm (21.23 inches)
Depth	45.9 mm (1.81 inches)
<b>Stand dimensions</b>	
Height	318.9 mm (12.56 inches)
Width	190.0 mm (7.48 inches)
Depth	180.0 mm (7.09 inches)
<b>Weight</b>	
Weight with packaging	6.83 kg (15.06 lb)
Weight with stand assembly and cables	4.72 kg (10.41 lb)

Weight without stand assembly (For wall mount or VESA mount considerations - no cables)	3.24 kg (7.14 lb)
Weight of stand assembly	1.01 kg (2.23 lb)
Front frame gloss	14%~20%

## Environmental Characteristics

<b>Model</b>	<b>S2415H</b>
<b>Temperature</b>	
Operating	0 °C to 40 °C (32 °F to 104 °F)
Non-operating	<ul style="list-style-type: none"> <li>Storage: -20 °C to 60 °C (-4 °F to 140 °F)</li> <li>Shipping: -20 °C to 60 °C (-4 °F to 140 °F)</li> </ul>
<b>Humidity</b>	
Operating	10% to 80% (non-condensing)
Non-operating	<ul style="list-style-type: none"> <li>Storage: 5% to 90% (non-condensing)</li> <li>Shipping: 5% to 90% (non-condensing)</li> </ul>
<b>Altitude</b>	
Operating	5,000 m (16,404 ft) (maximum)
Non-operating	12,192 m (40,000 ft) (maximum)
<b>Thermal dissipation</b>	<ul style="list-style-type: none"> <li>122.83 BTU/hour (maximum)</li> <li>61.42 BTU/hour (typical)</li> </ul>

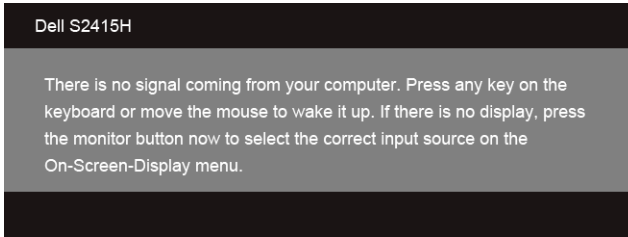
## Power Management Modes

If you have VESA's DPM™ compliant 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.

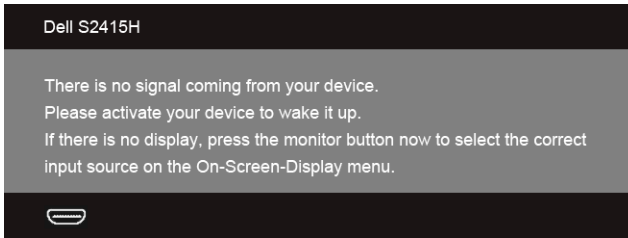
VESA Modes	Horizontal Sync	Vertical Sync	Video	Power Indicator	Power Consumption
Normal operation	Active	Active	Active	White	36 W (maximum)** 18 W (typical)
Active-off mode	Inactive	Inactive	Blanked	White (Breathing)	Less than 0.5 W
Switch off	-	-	-	Off	Less than 0.5 W

Energy Star	Power Consumption
$P_{\text{On}}$	16.7 W
$E_{\text{TEC}}$	52.5 kWh

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



or



\* Zero power consumption in OFF mode can only be achieved by disconnecting the power adapter from the monitor.

\*\* Maximum power consumption with maximum luminance.

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



**NOTE:** This monitor is **ENERGY STAR** certified.



**NOTE:**

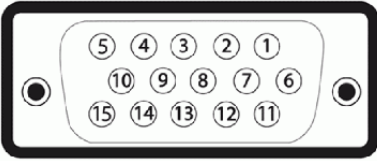
$P_{\text{On}}$ : Power consumption of on mode as defined in Energy Star 7.0 version.

$E_{\text{TEC}}$ : Total energy consumption in kWh as defined in Energy Star 7.0 version.



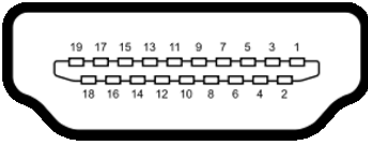
# Pin Assignments

## VGA Connector



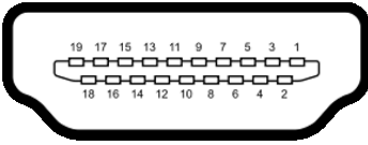
Pin Number	15-pin Side of the Connected Signal Cable
1	Video-Red
2	Video-Green
3	Video-Blue
4	GND
5	Self-test
6	GND-R
7	GND-G
8	GND-B
9	Computer 5 V/3.3 V
10	GND-sync
11	GND
12	DDC data
13	H-sync
14	V-sync
15	DDC clock

## HDMI 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	CEC
14	Reserved (N.C. on device)
15	DDC CLOCK (SCL)
16	DDC DATA (SDA)
17	DDC/CEC Ground
18	+5V POWER
19	HOT PLUG DETECT

## 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	GND
6	TMDS DATA 1-
7	MHL+
8	TMDS DATA 0 SHIELD
9	MHL-
10	TMDS CLOCK+
11	GND
12	TMDS CLOCK-
13	CEC
14	Reserved (N.C. on device)
15	DDC CLOCK (SCL)
16	DDC DATA (SDA)
17	GND
18	VBUS (+5V, 900mA maximum)
19	CBUS

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

## Maintenance Guidelines

### Cleaning Your Monitor



**WARNING:** 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 anti-static screen, lightly dampen a soft, clean cloth with water. If possible, use a special screen-cleaning tissue or solution suitable for the anti-static coating. Do not use benzene, thinner, ammonia, abrasive cleaners, or compressed air.
- Use a lightly-dampened, warm 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 a darker-colored monitor may get scratched 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 turn Off your monitor when not in use.


# Setting Up the Monitor

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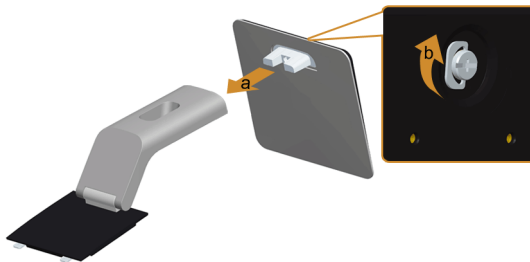
## Attaching the Stand

 **NOTE:** The stand riser and stand base are detached when the monitor is shipped from the factory.

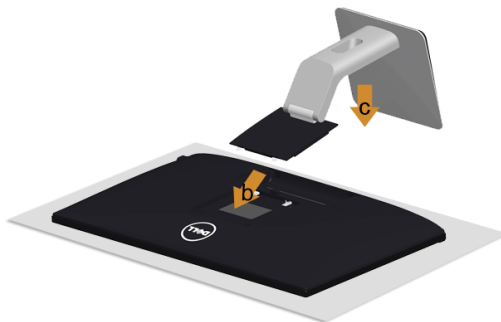
 **NOTE:** The procedure below is applicable for the default stand. If you purchased any other stand, see the documentation shipped with the stand to set it up.

 **WARNING:** Place monitor on a flat, clean, and soft surface to avoid scratching the display panel.

- 1 Assemble the stand riser to stand base.



- a Attach the stand riser to the stand base.
  - b Tighten the thumbscrew below the stand base.
- 2 Attach the stand assembly to the monitor.



- a Remove the cover and place the monitor on it.
- b Insert the two tabs on the upper part of the stand in the slots on the back of the monitor.
- c Press the stand down till it snaps into place.

# Connecting Your Monitor

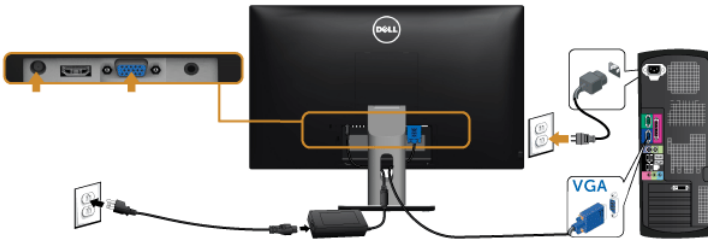
**⚠ WARNING:** Before you begin any of the procedures in this section, follow the [Safety Instructions](#).

**✍ NOTE:** Do not connect all cables to the computer at the same time.

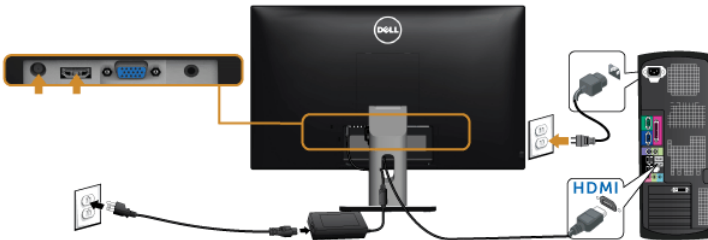
To connect your monitor to the computer:

- 1 Turn Off your computer and disconnect the power cable.
- 2 Connect the VGA/HDMI/audio cable from your monitor to the computer.

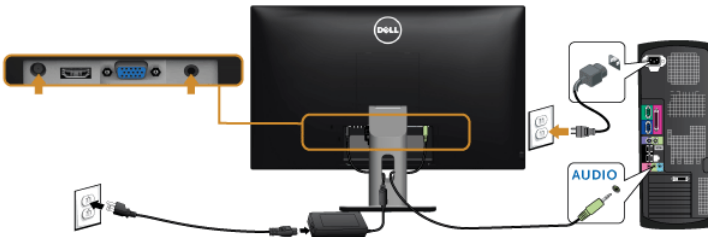
## Connecting the blue VGA cable







## Connecting the HDMI cable

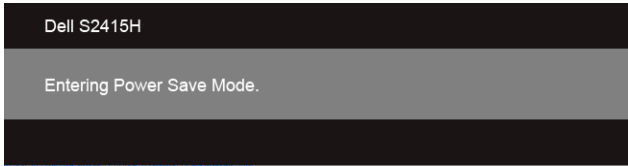


## Connecting the audio cable



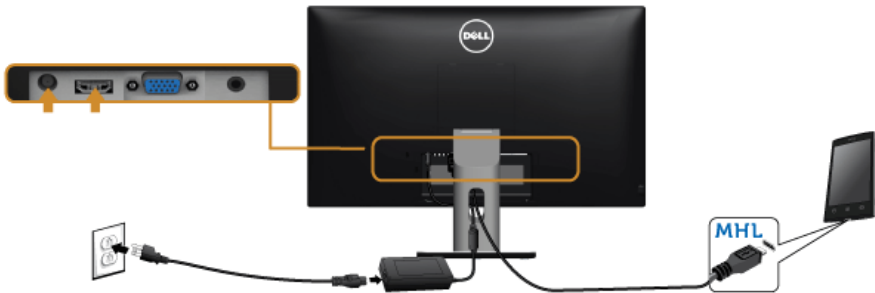
## Using the Mobile-High Definition Link (MHL)

-  **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 displays a black screen or the message below, depending on MHL source device's output.



To enable MHL connection, please perform the below steps:

- 1 Plug the power adapter to your monitor and to a power outlet.
- 2 Connect the (micro) USB port on you 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 the monitor 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.


- 1 Insert the two tabs on the bottom part of the cable cover in the slots on the back of the monitor.
- 2 Press the cable cover till it snaps into place.





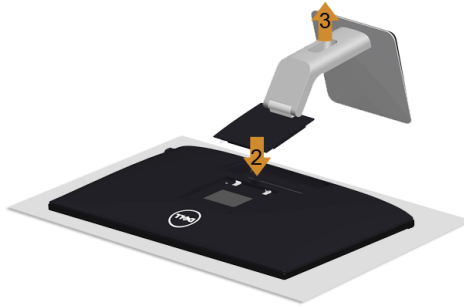
## Removing the Monitor Stand

 **CAUTION:** To prevent scratches on the LCD screen while removing the stand, make sure that the monitor is placed on a soft, clean surface.

 **NOTE:** The procedure below is applicable for the default stand. If you purchased any other stand, see the documentation shipped with the stand to set it up.

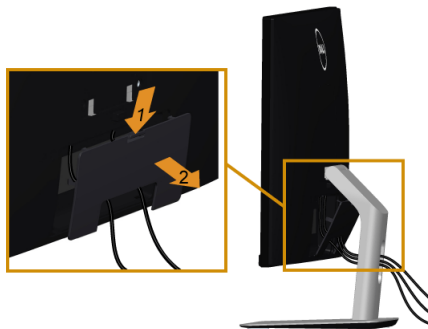
To remove the stand:

- 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.

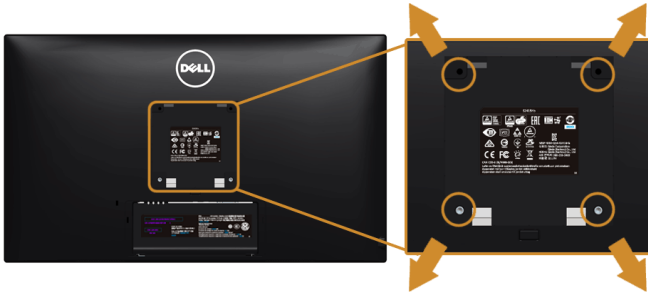



## Removing the Cable Cover

- 1 Press the tab on the cable cover.
- 2 Remove the two tabs on the bottom part of the cable cover from the slots on the back of the monitor.




## Wall Mounting (Optional)



 **NOTE:** Use M4 x 10 mm screws to connect the monitor to the wall-mounting kit.

Refer to the instructions that come with the VESA-compatible wall 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 Phillips crosshead screwdriver to remove the four screws securing the plastic cover.
- 4 Attach the mounting bracket from the wall mounting kit to the monitor.
- 5 Mount the monitor on the wall by following the instructions that comes with the wall mounting kit.

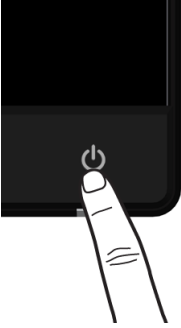
 **NOTE:** For use only with UL-listed wall mount bracket with minimum weight/load bearing capacity of 5.88 kg (12.96 lb).

# Operating the Monitor

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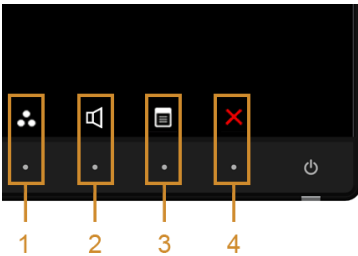
## Power On the Monitor

Press the  button to turn On the monitor.







## Using the Front Panel Controls

Use the control buttons on the front of the monitor to adjust the characteristics of the image being displayed. As you use these buttons to adjust the controls, an OSD shows the numeric values of the characteristics as they change.



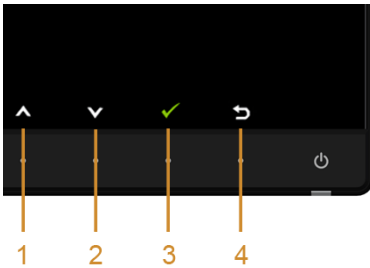
The following table describes the front panel buttons:





Front Panel Button	Description
1  Shortcut key/ Preset Modes	Use this button to choose from a list of preset color modes.

2		Use this button to directly access the <b>Volume</b> level bar.
	<b>Shortcut key/ Volume</b>	
3		Use the <b>MENU</b> button to launch the On-Screen Display (OSD) and select the OSD Menu. See <a href="#">Accessing the Menu System</a> .
	<b>Menu</b>	
4		Use this button to go back to the main menu or exit the OSD main menu.
	<b>Exit</b>	

## Front Panel Button


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




Front Panel Button	Description
1  <b>Up</b>	Use the <b>Up</b> button to adjust (increase ranges) items in the OSD menu.
2  <b>Down</b>	Use the <b>Down</b> button to adjust (decrease ranges) items in the OSD menu.
3  <b>OK</b>	Use the <b>OK</b> button to confirm your selection.
4  <b>Back</b>	Use the <b>Back</b> button 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.

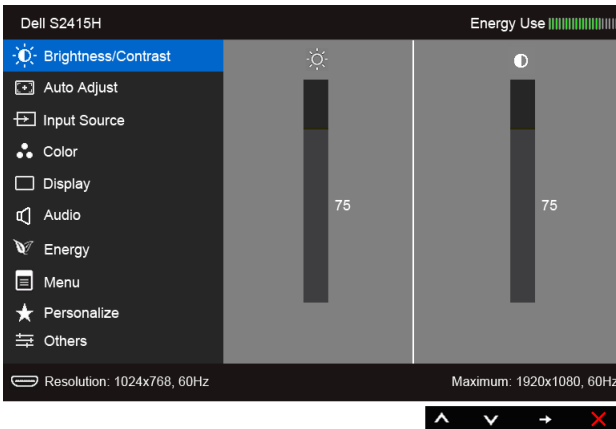
- 1 Press the  button to launch the OSD menu and display the main menu.










### Main Menu for VGA input


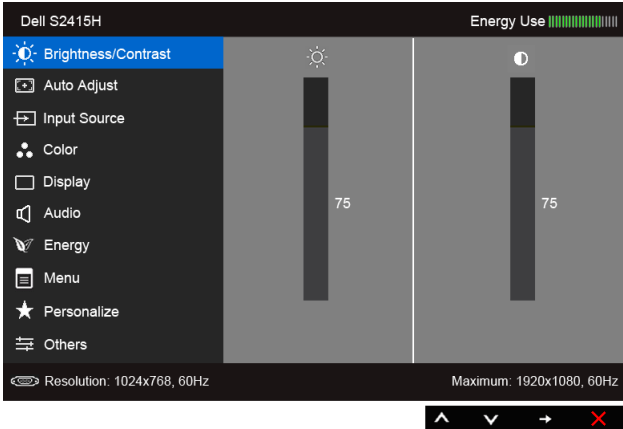






or

### Main Menu for HDMI (MHL) input



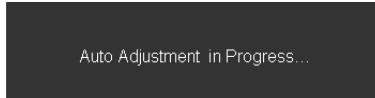
- 2 Use  and  to move between the options in the menu. As you move from one icon to another, the option name is highlighted. See the following table for a complete list of all the options available for the monitor.
- 3 Use  to activate the highlighted option.
- 4 Use  and  to select the desired parameter.
- 5 Use  to enter the slide bar and then use  and , according to the indicators on the menu, to make your changes.
- 6 Select  to return to the main menu.

Icon	Menu and Submenus	Description
	<b>Brightness/Contrast</b>	Use this menu to activate <b>Brightness/Contrast</b> adjustment.
		
<b>Brightness</b>	<b>Brightness</b> adjusts the luminance of the backlight.	Use  to increase the brightness and use  to decrease the brightness (min. 0 / max. 100).
<b>NOTE:</b> Manual adjustment of <b>Brightness</b> is disabled when <b>Dynamic Contrast</b> is switched On.		
<b>Contrast</b>	Adjust the <b>Brightness</b> first, and then adjust the <b>Contrast</b> only if further adjustment is necessary.	Use  to increase the contrast and use  to decrease the contrast (min. 0 / max. 100).
The <b>Contrast</b> function adjusts the degree of difference between darkness and lightness on the monitor screen.		



**Auto Adjust** Even though your computer recognizes your monitor on startup, the **Auto Adjustment** function optimizes the display settings for use with your particular setup.

**Auto Adjustment** allows the monitor to self-adjust to the incoming video signal. After using **Auto Adjustment**, you can further tune your monitor by using the **Pixel Clock** (Coarse) and **Phase** (Fine) controls under **Display** menu.



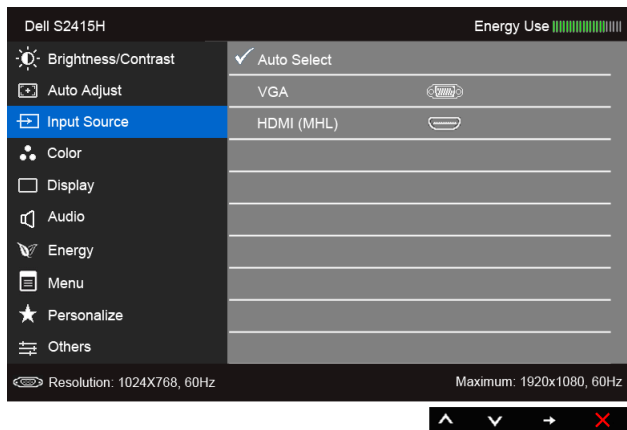
**NOTE:** In most cases, **Auto Adjust** produces the best image for your configuration.

**NOTE:** **Auto Adjust** option is only available when you are using the analog (VGA) connector.





## Input Source

Use the **Input Source** menu to select between the different video signals that may be connected to your monitor.



**Auto Select** Use  to select **Auto Select**, the monitor scans for available input sources.

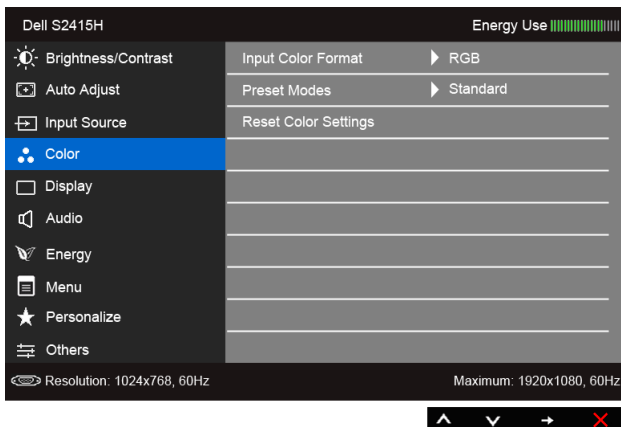
**VGA** Select the **VGA** input when you are using the analog (VGA) connector. Use  to select the VGA input source.

**HDMI (MHL)** Select the **HDMI (MHL)** input when you are using the HDMI connector. Use  to select the HDMI (MHL) input source.



## Color

Use the **Color** menu to adjust the color setting mode.



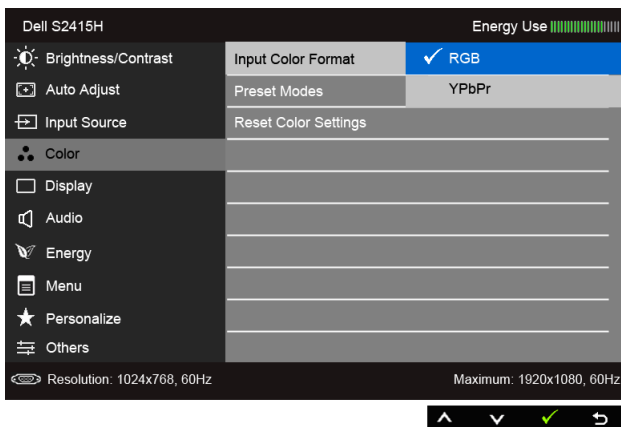
### Input Color Format

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; or MHL devices using the MHL cable.

**YPbPr:** Select this option if your monitor is connected to a DVD player by YPbPr using HDMI cable; or MHL devices by YPbPr using the MHL cable.

Or if the DVD (or MHL devices) color output setting is not RGB.





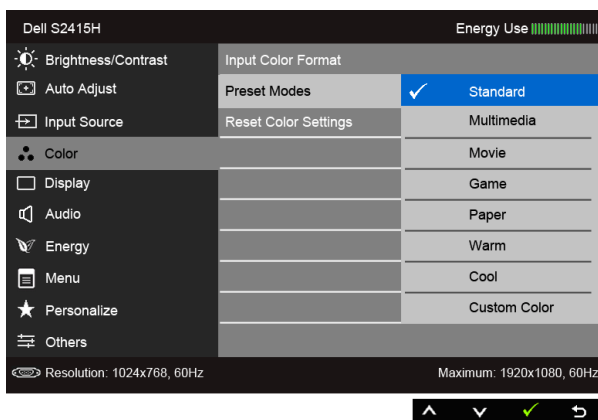


## Preset Modes



When you select **Preset Modes**, you can choose **Standard**, **Multimedia**, **Movie**, **Game**, **Paper**, **Warm**, **Cool**, or **Custom Color** from the list.

- **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.
- **Paper**: Loads brightness and sharpness settings ideal for viewing text. Blend the text background to simulate paper media without affecting color images. Applies to RGB input format only.
- **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.

Use  and  to adjust the three colors (R, G, B) 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'.

Use  to increase the green shade of the video image.


Use  to increase the purple shade 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'.

Use  to increase the monochrome appearance of the video image.

Use  to increase the colorful appearance of the video image.

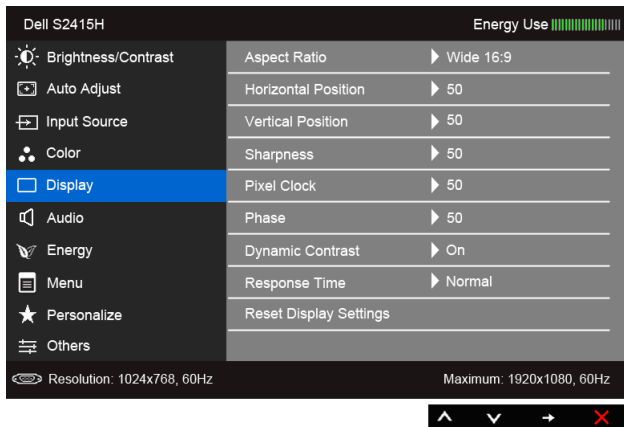
**NOTE:** Saturation adjustment is available only when you select **Movie** or **Game** preset mode.

---

**Reset Color Settings** Reset your monitor's color settings to the factory settings.

---



**Display** Use the **Display** menu to adjust image.





---

**Aspect Ratio** Adjusts the image ratio to **Wide 16:9**, **4:3**, or **5:4**.

---



**Horizontal Position** Use  or  to adjust the image left or right.  
Minimum is '0' (-).  
Maximum is '100' (+).

---

**Vertical Position** Use  or  to adjust the image up or down.  
Minimum is '0' (-).  
Maximum is '100' (+).



**NOTE: Horizontal Position** and **Vertical Position** adjustments are only available for "VGA" input.

---

**Sharpness** This feature can make the image look sharper or softer.  
Use  or  to adjust the sharpness from '0' to '100'.

---

**Pixel Clock** The **Phase** and **Pixel Clock** adjustments allow you to adjust your monitor to your preference.

Use  or  to adjust for best image quality.

---

**Phase** If satisfactory results are not obtained using the **Phase** adjustment, use the **Pixel Clock** (coarse) adjustment and then use **Phase** (fine) again.

**NOTE: Pixel Clock** and **Phase** adjustments are only available for "VGA" input.

---

**Dynamic Contrast** Allows you to increase the level of contrast to provide sharper and more detailed image quality.

Use  to select the **Dynamic Contrast "On"** or **"Off"**.

**NOTE: Dynamic Contrast** provides higher contrast if you select **Game** or **Movie** preset mode.

---

**Response Time** Allows you to set the **Response Time** to **Normal** or **Fast**.

---

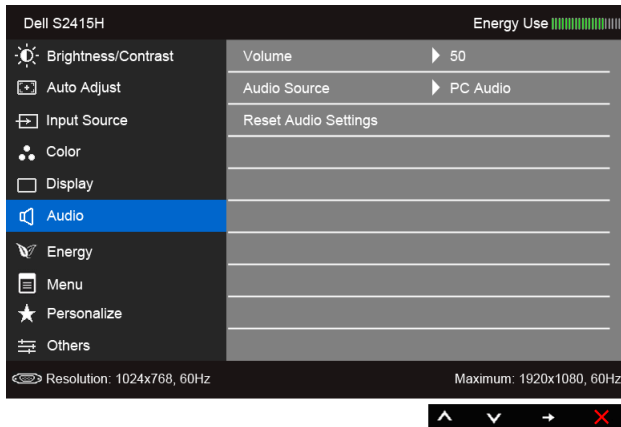
---

## Reset Display Settings

Select this option to restore default display settings.





## Audio



---

### Volume

Allows you to set the volume level of audio source.

Use  or  to adjust the volume level from '0' to '100'.

---

### Audio Source

Allows you to set the audio source to **PC Audio** or **HDMI (MHL)**.

**NOTE: Audio Source** option is only available when you are using the HDMI (MHL) connector.

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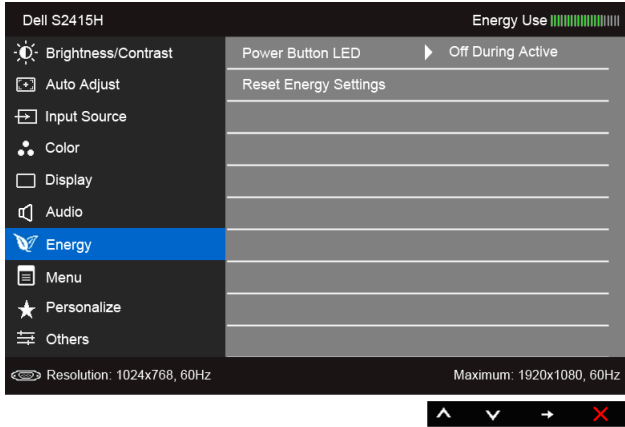
### Reset Audio Settings

Select this option to restore default audio settings.

---



## Energy



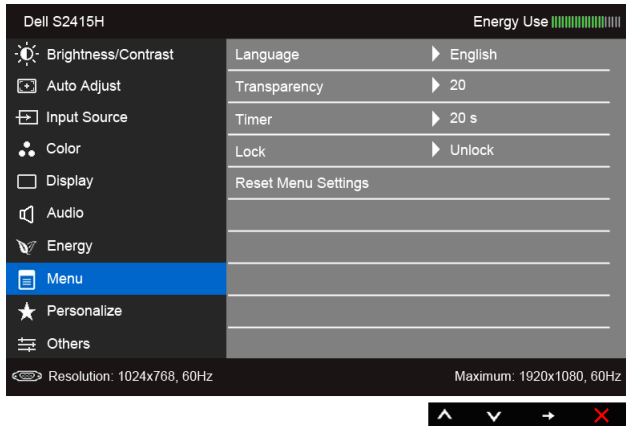
**Power Button LED** Allows you to set the power LED indicator On or Off to save energy.

**Reset Energy Settings** Select this option to restore default **Energy** settings.



## 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.





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**Language** **Language** options set the OSD display to one of the eight languages (English, Spanish, French, German, Brazilian Portuguese, Russian, Simplified Chinese, or Japanese).

---

**Transparency** Select this option to change the menu transparency by using  and  (min. 0 / max. 100).

---

**Timer** **OSD Hold Time:** sets the length of time the OSD will remain active after the last time you pressed a button.  
Use  or  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 buttons are locked.

**NOTE:**

**Lock** function – Either soft lock (through the OSD menu) or hard lock (press and hold the button beside the power button for 10 seconds)

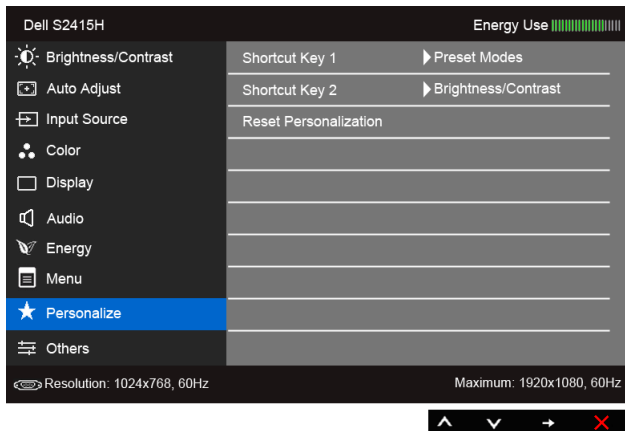
**Unlock** function – Only hard unlock (press and hold the button beside the power button for 10 seconds)

---

**Reset Menu Settings** Reset all OSD settings to the factory preset values.

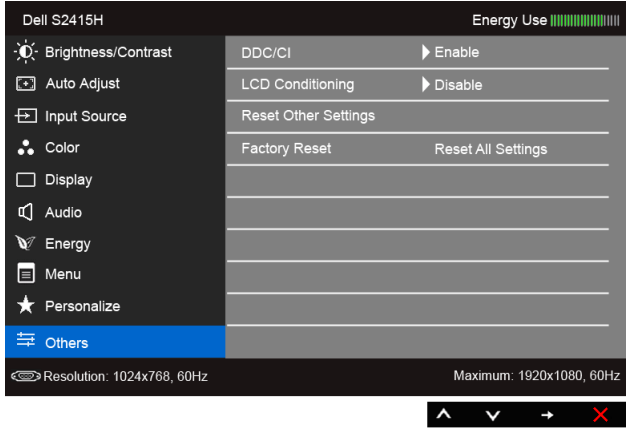
---

**Personalize** Users can choose a feature from **Preset Modes**, **Brightness/Contrast**, **Auto Adjust**, **Input Source**, **Aspect Ratio**, or **Volume** and set it as a shortcut key.





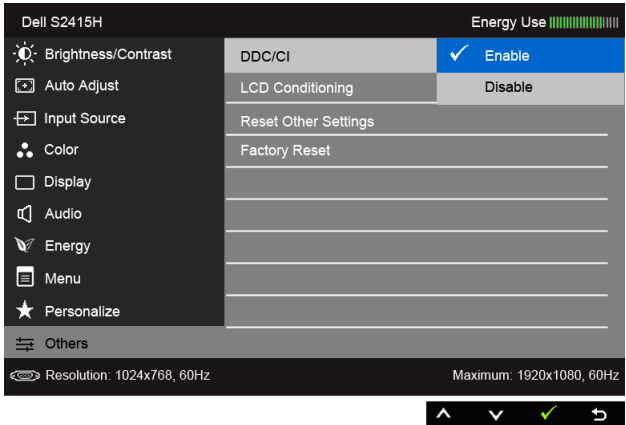
## Others



**DDC/CI** DDC/CI (Display Data Channel/Command Interface) allows your monitor parameters (brightness, color balance, and etc.) to be adjustable via the software on your computer.

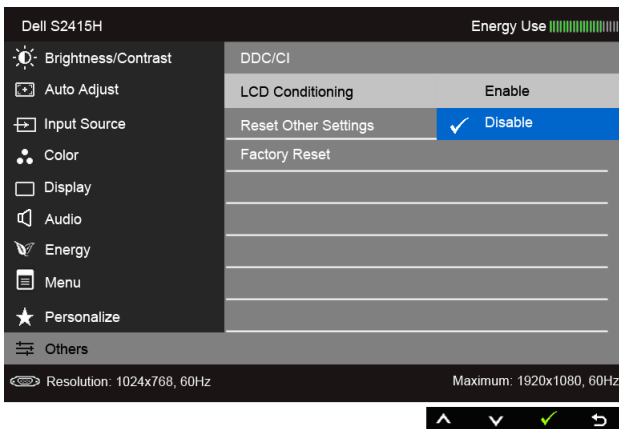
You can disable this feature by selecting **Disable**.

Enable this feature for best user experience and optimum performance of your monitor.




## LCD Conditioning

Helps reduce minor cases of image retention. Depending on the degree of image retention, the program may take some time to run. You can enable this feature by selecting **Enable**.



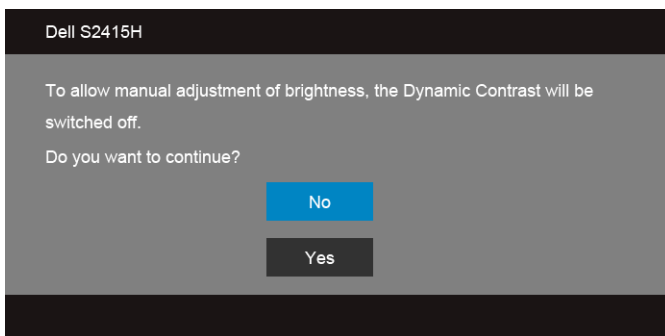
**Reset Other Settings** Reset all settings under the **Others** menu to the factory preset values.

**Factory Reset** Reset all settings to the factory preset values.

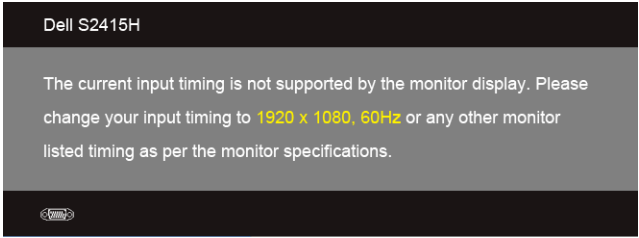
 **NOTE:** This monitor has a built-in feature to automatically calibrate the brightness to compensate for LED aging.

## OSD Warning Messages

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

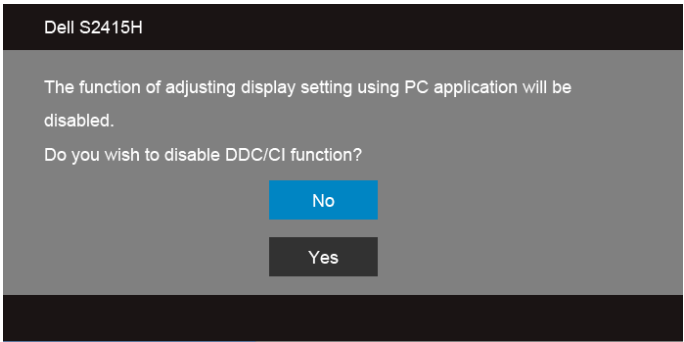


When the monitor does not support a particular resolution mode, you will see the following message:

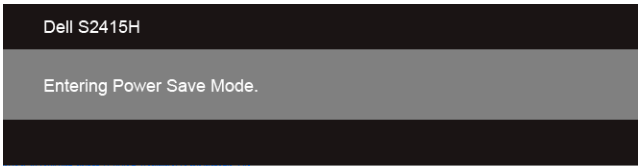


This means that the monitor cannot synchronize with the signal that it is receiving from the computer. See [Monitor Specifications](#) for the Horizontal and Vertical frequency ranges addressable by this monitor. Recommended mode is 1920 x 1080.

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:

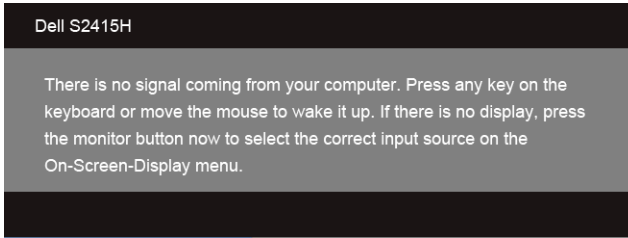


Activate the computer and wake up the monitor to gain access to the [OSD](#).

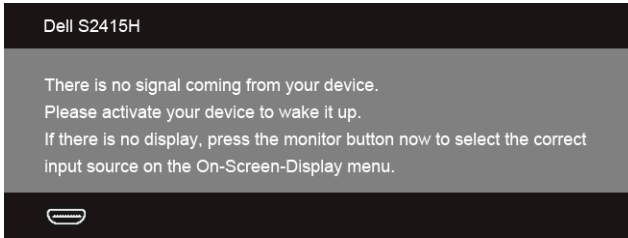
If you press any button other than the power button, one of the following messages will appear depending on the selected input:



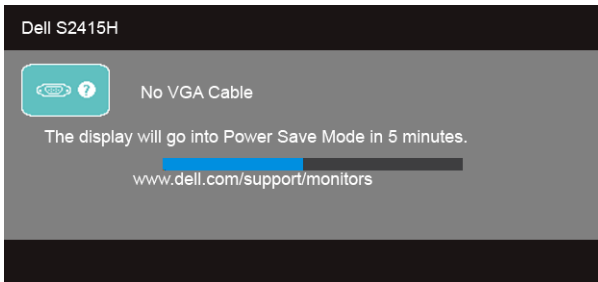
## VGA/HDMI (MHL) input



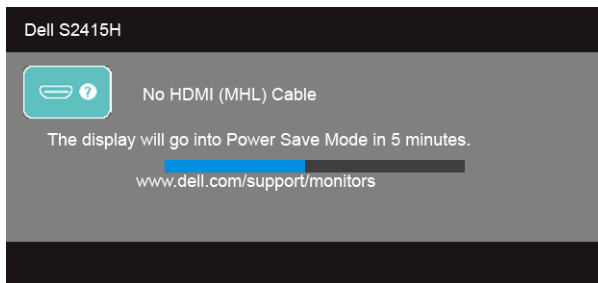
or



If either VGA or HDMI (MHL) input is selected and the corresponding cable is not connected, a floating dialog box as shown below appears.



or



See [Troubleshooting](#) for more information.

# Setting the Maximum Resolution

To set the maximum resolution for the monitor:

In Windows<sup>®</sup> 7, Windows<sup>®</sup> 8, and Windows<sup>®</sup> 8.1:

- 1 For Windows<sup>®</sup> 8 and Windows<sup>®</sup> 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 **1920 x 1080**.
- 4 Click **OK**.

In Windows<sup>®</sup> 10:

- 1 Right-click on the desktop and click **Display settings**.
- 2 Click **Advanced display settings**.
- 3 Click the dropdown list of **Resolution** and select **1920 x 1080**.
- 4 Click **Apply**.

If you do not see 1920 x 1080 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 <http://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.

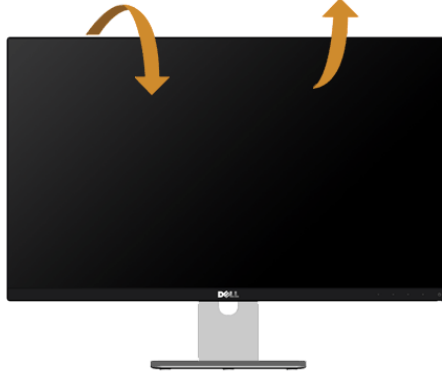
# Using Tilt


 **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 set up instructions.

## Tilt

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

5° typical ( 6° maximum )    21° typical ( 22° maximum )



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

# Troubleshooting

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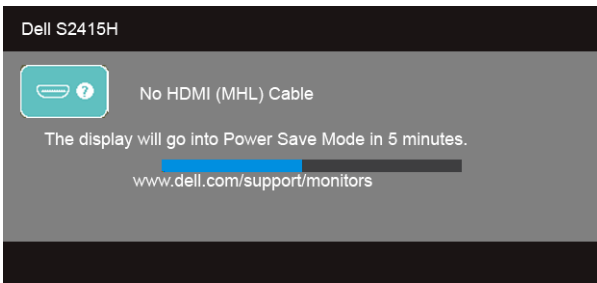
**WARNING:** Before you begin any of the procedures in this section, follow the [Safety Instructions](#).

## Self-Test

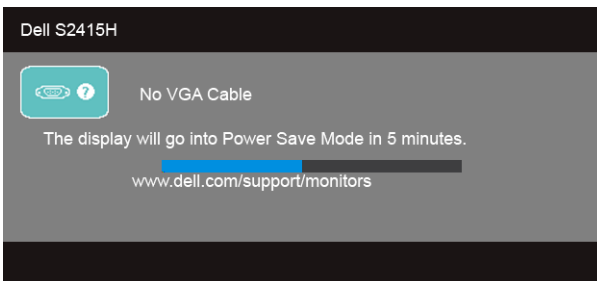
Your monitor provides a self-test feature that allows you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark, run the monitor self-test by performing the following steps:

- 1 Turn off both your computer and the monitor.
- 2 Unplug the video cable from the back of the computer. To ensure proper Self-Test operation, remove all Digital and the Analog cables from the back of computer.
- 3 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.



or




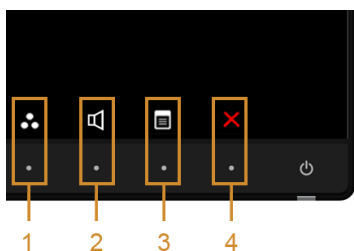
- 4 This box also appears during normal system operation, if the video cable becomes disconnected or damaged.
- 5 Turn Off your monitor and reconnect the video cable; then turn On both your computer and the monitor.

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 Make sure 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 **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 **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 text screen appears. To exit, press **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	<ul style="list-style-type: none"><li>• Ensure that the video cable connecting the monitor and the computer is properly connected and secure.</li><li>• Verify that the power outlet is functioning properly using any other electrical equipment.</li><li>• Ensure that the power button is depressed fully.</li><li>• Ensure that the correct input source is selected in the <a href="#">Input Source</a> menu.</li></ul>
No Video/Power LED on	No picture or no brightness	<ul style="list-style-type: none"><li>• Increase brightness &amp; contrast controls via OSD.</li><li>• Perform monitor self-test feature check.</li><li>• Check for bent or broken pins in the video cable connector.</li><li>• Run the built-in diagnostics.</li><li>• Ensure that the correct input source is selected in the <a href="#">Input Source</a> menu.</li></ul>
Poor Focus	Picture is fuzzy, blurry, or ghosting	<ul style="list-style-type: none"><li>• Perform <b>Auto Adjust</b> via OSD.</li><li>• Adjust the <b>Phase</b> and <b>Pixel Clock</b> controls via OSD.</li><li>• Eliminate video extension cables.</li><li>• Reset the monitor to factory settings.</li><li>• Change the video resolution to the correct aspect ratio.</li></ul>
Shaky/Jittery Video	Wavy picture or fine movement	<ul style="list-style-type: none"><li>• Perform <b>Auto Adjust</b> via OSD.</li><li>• Adjust the <b>Phase</b> and <b>Pixel Clock</b> controls via OSD.</li><li>• Reset the monitor to factory settings.</li><li>• Check environmental factors.</li><li>• Relocate the monitor and test in another room.</li></ul>
Missing Pixels	LCD screen has spots	<ul style="list-style-type: none"><li>• Cycle power On-Off.</li><li>• Pixel that is permanently Off is a natural defect that can occur in LCD technology.</li><li>• For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: <a href="http://www.dell.com/support/monitors">http://www.dell.com/support/monitors</a>.</li></ul>
Stuck-on Pixels	LCD screen has bright spots	<ul style="list-style-type: none"><li>• Cycle power On-Off.</li><li>• Pixel that is permanently off is a natural defect that can occur in LCD technology.</li><li>• For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at: <a href="http://www.dell.com/support/monitors">http://www.dell.com/support/monitors</a>.</li></ul>
Brightness Problems	Picture too dim or too bright	<ul style="list-style-type: none"><li>• Reset the monitor to factory settings.</li><li>• <b>Auto Adjust</b> via OSD.</li><li>• Adjust brightness &amp; contrast controls via OSD.</li></ul>

Geometric Distortion	Screen not centered correctly	<ul style="list-style-type: none"> <li>• Reset the monitor to factory settings.</li> <li>• <b>Auto Adjust</b> via OSD.</li> <li>• Adjust horizontal &amp; vertical controls via OSD.</li> </ul> <p><b>NOTE:</b> When using HDMI input, the positioning adjustments are not available.</p>
Horizontal/Vertical Lines	Screen has one or more lines	<ul style="list-style-type: none"> <li>• Reset the monitor to factory settings.</li> <li>• Perform <b>Auto Adjust</b> via OSD.</li> <li>• Adjust <b>Phase</b> and <b>Pixel Clock</b> controls via OSD.</li> <li>• Perform monitor self-test feature check and determine if these lines are also in self-test mode.</li> <li>• Check for bent or broken pins in the video cable connector.</li> <li>• Run the built-in diagnostics.</li> </ul> <p><b>NOTE:</b> When using HDMI input, the <b>Pixel Clock</b> and <b>Phase</b> adjustments are not available.</p>
Synchronization Problems	Screen is scrambled or appears torn	<ul style="list-style-type: none"> <li>• Reset the monitor to factory settings.</li> <li>• Perform <b>Auto Adjust</b> via OSD.</li> <li>• Adjust <b>Phase</b> and <b>Pixel Clock</b> controls via OSD.</li> <li>• Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode.</li> <li>• Check for bent or broken pins in the video cable connector.</li> <li>• Restart the computer in Safe Mode.</li> </ul>
Safety Related Issues	Visible signs of smoke or sparks	<ul style="list-style-type: none"> <li>• Do not perform any troubleshooting steps.</li> <li>• Contact Dell immediately.</li> </ul>
Intermittent Problems	Monitor malfunctions on & off	<ul style="list-style-type: none"> <li>• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.</li> <li>• Reset the monitor to factory settings.</li> <li>• Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode.</li> </ul>
Missing Color	Picture missing color	<ul style="list-style-type: none"> <li>• Perform monitor self-test.</li> <li>• Ensure that the video cable connecting the monitor to the computer is connected properly and is secure.</li> <li>• Check for bent or broken pins in the video cable connector.</li> </ul>
Wrong Color	Picture color not good	<ul style="list-style-type: none"> <li>• Change the settings of the <b>Preset Modes</b> in the <b>Color</b> menu OSD depending on the application.</li> <li>• Adjust R/G/B value under <b>Custom Color</b> in <b>Color</b> menu OSD.</li> <li>• Change the <b>Input Color Format</b> to PC RGB or YPbPr in the <b>Color</b> menu OSD.</li> <li>• Run the built-in diagnostics.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Use the Power Management feature to turn off the monitor at all times when not in use (for more information, see <a href="#">Power Management Modes</a>).</li> <li>• Alternatively, use a dynamically changing screensaver.</li> </ul>
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## 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	<ul style="list-style-type: none"> <li>• Check the <b>Aspect Ratio</b> setting in the <b>Display</b> menu OSD.</li> <li>• Reset the monitor to factory settings.</li> </ul>
Cannot adjust the monitor with the buttons on the front panel	OSD does not appear on the screen	<ul style="list-style-type: none"> <li>• Turn Off the monitor, unplug the monitor power cable, plug it back, and then turn On the monitor.</li> <li>• Check whether the OSD menu is locked. If yes, press and hold the button beside the Power button for 10 seconds to unlock (for more information, see <a href="#">Lock</a>).</li> </ul>
No Input Signal when user controls are pressed	No picture, the LED light is white	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Check whether the signal cable is plugged in properly. Re-plug the signal cable if necessary.</li> <li>• Reset the computer or video player.</li> </ul>
The picture does not fill the entire screen	The picture cannot fill the height or width of the screen	<ul style="list-style-type: none"> <li>• Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen.</li> <li>• Run the built-in diagnostics.</li> </ul>



# Mobile High-Definition Link (MHL) Specific Problems

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<b>Specific Symptoms</b>	<b>What You Experience</b>	<b>Possible Solutions</b>
MHL interface is not working	Can not see MHL device image shown on the monitor	<ul style="list-style-type: none"><li>• Ensure your MHL cable and MHL device are MHL certified.</li><li>• Check your MHL device is turned On.</li><li>• Check your MHL device is not in Standby mode.</li><li>• Check physical MHL cable connection is corresponding to input source selected on OSD Menu: HDMI (MHL).</li><li>• Wait for 30 seconds after connecting MHL cable as some MHL devices require longer recovery time.</li></ul>

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# Speakers Specific Problems

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<b>Specific Symptoms</b>	<b>What You Experience</b>	<b>Possible Solutions</b>
No sound coming from the speakers	Cannot hear any sound	<ul style="list-style-type: none"><li>• Turn Off the monitor, unplug the monitor power cord, replug it, and then turn On the monitor.</li><li>• Check the audio cable connection is connected correctly to the computer Audio Line Out port.</li><li>• Unplug the headphone jack from the headphone port.</li><li>• Reset the monitor to factory settings.</li></ul>

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# Appendix

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## 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 Safety, Environmental, 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](http://www.dell.com/regulatory_compliance).

## Contact Dell

 **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](http://www.dell.com/support/monitors).

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

- 1 Visit [www.dell.com/support](http://www.dell.com/support).
- 2 Verify your country or region in the **Choose A Country/Region** drop-down menu at the top-left corner of the page.
- 3 Click **Contact Us** next to the country dropdown.
- 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

For maximum display performance with Microsoft® Windows® operating systems, set the display resolution to **1920 x 1080** pixels by performing the following steps:

In Windows® 7, Windows® 8, and 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 **1920 x 1080**.
- 4 Click **OK**.

In Windows® 10:

- 1 Right-click on the desktop and click **Display settings**.
- 2 Click **Advanced display settings**.
- 3 Click the dropdown list of **Resolution** and select **1920 x 1080**.
- 4 Click **Apply**.

If you do not see the recommended resolution 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 given steps.

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

- 1 Go to **www.dell.com/support**, enter your service tag, and download the latest driver for your graphics card.
- 2 After installing the drivers for your graphics adapter, attempt to set the resolution to **1920 x 1080** again.



**NOTE:** If you are unable to set the resolution to 1920 x 1080, 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, and 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 Refer to the graphic 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 **1920 x 1080** again.

In Windows® 10:

- 1 Right-click on the desktop and click **Display settings**.
- 2 Click **Advanced display settings**.
- 3 Click the dropdown list of **Resolution** and select **1920 x 1080**.
- 4 Identify your graphics controller supplier from the description at the top of the window (e.g. NVIDIA, ATI, Intel etc.).
- 5 Refer to the graphic card provider website for updated driver (for example, <http://www.ATI.com> OR <http://www.NVIDIA.com>).
- 6 After installing the drivers for your graphics adapter, attempt to set the resolution to **1920 x 1080** again.



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