Dell P2018H

User's Guide



Monitor Model: P2018H Regulatory Model: P2018Hc

| 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

Package contents

Your monitor ships with the components shown in the table below. If any component is missing, contact Dell technical support. For more information see Contacting Dell.

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





| | VGA cable |
|---|---|
| | DP Cable |
| 0 | USB 3.0 Upstream Cable (Enables the USB Ports on the Monitor) |
| | Quick Setup Guide Safety and Regulatory Information |



Product features

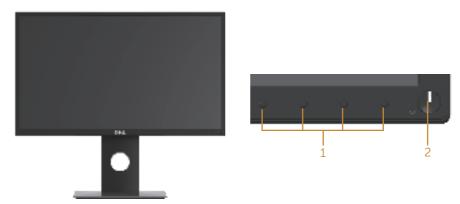
The **Dell P2018H** flat panel display has an active matrix, Thin-Film Transistor (TFT), Liquid Crystal Display (LCD), and LED backlight. The monitor features include:

- **P2018H**: 49.5 cm (19.5 inch) viewable area display (measured diagonally). 1600 x 900 resolution, plus full-screen support for lower resolutions.
- Plug and play capability if supported by your system.
- VGA, HDMI and DisplayPort connectivity.
- Equipped with 1 USB upstream port and 2 USB2.0 / 2 USB3.0 downstream ports.
- On-Screen Display (OSD) adjustments for ease of set-up and screen optimization.
- Security-cable slot.
- Tilt,swivel,height and rotate adjustment capabilities.
- Removable stand and Video Electronics Standards Association (VESA[™]) 100 mm mounting holes for flexible mounting solutions.
- 0.3 W power consumption when in the sleep mode.
- Optimize eye comfort with a flicker-free screen.
- The possible long-term effects of blue light emission from the monitor may cause damage to the eyes, including eye fatigue or digital eye strain.
 ComfortView feature is designed to reduce the amount of blue light emitted from the monitor to optimize eye comfort.



Identifying parts and controls

Front View



Front panel controls

| Label Description | |
|---|--|
| 1 Function buttons (For more information, see Operating your monitor) | |
| 2 Power on/off button (with LED indicator) | |



Back View



Back View without monitor stand

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 | Release stand from monitor. |
| 4 | Security lock slot | Secures monitor with security lock(sold separately). |
| 5 | Barcode, serial number, and Service Tag label | Refer to this label if you need to contact Dell for technical support. |
| 6 | Dell Soundbar mounting slots | Attaches the optional Dell Soundbar. NOTE: Please remove the plastic strip covering the mounting slots before affixing the Dell Soundbar. |
| 7 | Cable management slot | Use to organize cables by placing them through the slot. |



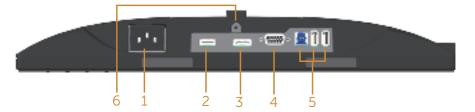
Side View



| Label | Description | Use |
|-------|---------------------|--|
| 1 | USB downstream port | Connect your USB device. |
| | | NOTE: To use this port, you must connect the USB cable (shipped with your monitor) to the USB-upstream port on the monitor and to your computer. |



Bottom View



Bottom view without monitor stand

| Label | Description | Use |
|-------|--|---|
| 1 | Power port | Connect the power cable. |
| 2 | HDMI port | Connect your computer with HDMI cable (optional). |
| 3 | DP port | Connect your computer to the monitor using a DP cable. |
| 4 | VGA port | Connect your computer with VGA cable. |
| 5 | USB connector (x2 downstream, x1 upstream) | Connect the USB cable that came with your monitor to the computer. Once the cable is connected, you can use the USB connectors on the rear side and bottom side of the monitor. |
| 6 | Stand lock feature | To lock the stand to the monitor using a M3 x 6mm screw (screw not included). |



Monitor specifications

| Model | P2018H |
|------------------------------------|---|
| Screen type | Active matrix - TFT LCD |
| Panel type | TN (Twisted Nematic) |
| Viewable image | |
| Diagonal | 494.11 mm (19.45 in) |
| Horizontal, Active Area | 433.92 mm (17.08 in) |
| Vertical, Active Area | 236.34 mm (9.30 in) |
| Area | 1025.53 cm ² (158.96 in ²) |
| Pixel pitch | 0.271 mm x 0.263 mm |
| Pixel per inch (PPI) | 94 |
| Viewing angle (vertical / | 160° (vertical) typical |
| horizontal) | 170° (horizontal) typical |
| Brightness | 250 cd/m² (typical) |
| Contrast ratio | 1000: 1 (typical) |
| | 4 Million: 1 (Dynamic) |
| Aspect ratio | 16:9 |
| Display screen coating | Anti-glare with 3H hardness |
| Backlight | White LED edgelight system |
| Response time | 5 ms (black to white) |
| Color depth | 16.7 million colors |
| Color support | 84% (CIE 1976), 72% (CIE 1931) |
| Built-in devices | USB 3.0 super-speed hub (with 1x USB 3.0 upstream port, 2x USB 3.0 downstream ports and 2x USB2.0 downstream ports) |
| Dell display manager compatibility | Yes |



| Connectivity | 1xDP (ver 1.2) |
|-------------------------|---|
| | 1xHDMI (ver 1.4) |
| | 1xVGA |
| | 1xUSB3.0 port - Upstream |
| | 2xUSB3.0 port - Side |
| | 2xUSB2.0 port - Bottom |
| Border width (edge of | 18.1mm (Top) |
| monitor to active area) | 13.8mm(Left/Right) |
| | 18.8mm(Bottom) |
| Security | Security lock slot (cable lock sold separately) |
| Adjustability | Height adjustable stand (130mm) |
| | Tilt (5°/21°) |
| | Swivel (45°) |
| | Pivot (90°) |

Resolution specifications

| Model | P2018H |
|---------------------------|------------------------------|
| Horizontal scan range | 30 kHz to 83 kHz (automatic) |
| Vertical scan range | 56 Hz to 76 Hz (automatic) |
| Maximum preset resolution | 1600 x 900 at 60 Hz |

Supported video modes

| Model | P2018H |
|--|--|
| Video display capabilities (VGA, HDMI & DP 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, 1152 x 864 | 67.5 | 75.0 | 108.0 | +/+ |
| VESA, 1600 x 900 | 60.0 | 60.0 | 108.0 | +/+ |

Electrical specifications

| Model | P2018H |
|---------------------|--|
| Video input signals | • Analog RGB, 0.7 Volts +/-5%, positive polarity at 75 ohm input impedance |
| | HDMI 1.4, 600mV for each differential line,100 ohm input impedance per differential pair |
| | • DisplayPort 1.2**, 600mV for each differential line, 100 ohm input impedance per differential pair |
| AC input voltage/ | 100 VAC to 240 VAC / 50 Hz or 60 Hz ± 3 Hz / |
| frequency/current | 1.5A (typical) |
| Inrush current | • 120 V: 30 A (Max.) at 0°C (cold start) |
| | • 240 V: 60 A (Max.) at 0°C (cold start) |



Physical characteristics

| Model | P2018H |
|---|-------------------------------------|
| Signal cable type | Digital: detachable, HDMI, 19 pins. |
| | Digital: detachable, DP, 20 pins. |
| | Analog: detachable, D-Sub, 15 pins |
| | Universal Serial Bus: USB, 9 pins |
| Dimensions (with stand) | |
| Height (extended) | 468.8 mm (18.46 in) |
| Height (compressed) | 338.8 mm (13.34 in) |
| Width | 461.5 mm (18.17 in) |
| Depth | 180.0 mm (7.09 in) |
| Dimensions (without stand) | |
| Height | 273.2 mm (10.76 in) |
| Width | 461.5 mm (18.17 in) |
| Depth | 50.1 mm (1.97 in) |
| Stand dimensions | |
| Height (extended) | 400.8 mm (15.78 in) |
| Height (compressed) | 354.4 mm (13.95 in) |
| Width | 242.6 mm (9.55 in) |
| Depth | 180.0 mm (7.09 in) |
| Weight | |
| Weight with packaging | 6.13 kg (13.51 lb) |
| Weight with stand assembly and cables | 4.73 kg (10.42 lb) |
| Weight without stand assembly (no cables) | 2.40 kg (5.29 lb) |
| Weight of stand assembly | 1.90 kg (4.19 lb) |
| Front-frame gloss | 2 - 4 |



Environmental characteristics

| Model | P2018H | | |
|---|---|--|--|
| Compliant Standards | | | |
| Energy Saver feature for Energy | / Star certified Monitor | | |
| EPEAT registered where applica | able. EPEAT registration varies by country. | | |
| See www.epeat.net for registr | ration status by country | | |
| TCO-certified display | | | |
| BFR/PVC- Free monitor (exclud | ding external cables) | | |
| Energy Gauge shows the energy | y level being consumed by the monitor in real time. | | |
| Temperature | | | |
| Operating | 0°C to 40°C (32°F to 104°F) | | |
| Non-operating | • Storage: -20°C to 60°C (-4°F to 140°F) | | |
| | • Shipping: -20°C to 60°C (-4°F to 140°F) | | |
| Humidity | | | |
| Relative Humidity | Operating: 10% to 80% (non-condensing) | | |
| | • Storage: 5% to 90% (non-condensing) | | |
| | • Shipping: 5% to 90% (non-condensing) | | |
| Altitude | | | |
| Operating (maximum) | 5,000 m (16,400 ft) | | |
| Non-operating (maximum) | 12,192 m (40,000 ft) | | |
| Thermal dissination | • 143.4 BTU/hour(maximum) | | |
| Thermal dissipation • 47.8 BTU/hour(typical) | | | |



Power management modes

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

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

| VESA Modes | Horizontal Sync | Vertical Sync | Video | Power Indicator | Power Consumption |
|------------------|--------------------|------------------|---------|--------------------|--|
| Normal operation | Active | Active | Active | White | 39.00 W (maximum)** |
| | | | | | 13.30 W (typical,without USB load) |
| Active-off mode | Inactive | Inactive | Blanked | White (Glowing) | Less than 0.3 W |
| Switch off | - | - | - | Off | Less than 0.3 W |

| Power Consumption P _{on} | 9.33 W |
|-----------------------------------|-----------|
| Total Energy Consumption (TEC) | 29.57 kWh |

^{**} Maximum power consumption with max luminance.

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





NOTE: This monitor is ENERGY STAR-certified.

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

consumption that could exceed the ENERGY STAR specified limit.

MOTE:

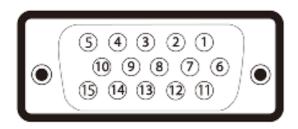
P_{on}: Power consumption of On Mode as defined in Energy Star 8.0 version.

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



Pin assignments

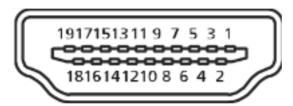
VGA connector



| 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 5V/3.3V |
| 10 | GND-sync |
| 11 | GND |
| 12 | DDC data |
| 13 | H-sync |
| 14 | V-sync |
| 15 | DDC clock |



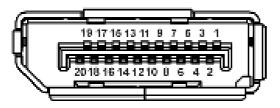
HDMI connector



| Pin Number | 19-pin Side of the Connected Signal Cable |
|------------|---|
| 1 | T.M.D.S. Data 2+ |
| 2 | T.M.D.S. Data 2 Shield |
| 3 | T.M.D.S. Data 2- |
| 4 | T.M.D.S. Data 1+ |
| 5 | T.M.D.S. Data 1 Shield |
| 6 | T.M.D.S. Data 1 - |
| 7 | T.M.D.S. Data 0+ |
| 8 | T.M.D.S. Data 0 Shield |
| 9 | T.M.D.S. Data 0- |
| 10 | T.M.D.S. Clock + |
| 11 | T.M.D.S. Clock Shield |
| 12 | T.M.D.S. Clock - |
| 13 | CEC |
| 14 | Reserved (N.C. on device) |
| 15 | SCL |
| 16 | SDA |
| 17 | DDC/CEC Ground |
| 18 | +5V Power |
| 19 | Hot Plug Detect |



DisplayPort connector



| Pin Number | 20-pin Side of the Connected Signal Cable |
|------------|---|
| 1 | ML_Lane 3 (n) |
| 2 | GND |
| 3 | ML_Lane 3 (p) |
| 4 | ML_Lane 2 (n) |
| 5 | GND |
| 6 | ML_Lane 2 (p) |
| 7 | ML_Lane 1 (n) |
| 8 | GND |
| 9 | ML_Lane 1 (p) |
| 10 | ML_Lane 0 (n) |
| 11 | GND |
| 12 | ML_Lane 0 (p) |
| 13 | CONFIG1 |
| 14 | CONFIG2 |
| 15 | AUX CH (p) |
| 16 | GND |
| 17 | AUX CH (n) |
| 18 | Hot Plug Detect |
| 19 | Return |
| 20 | DP_PWR |



Universal serial bus (USB) interface

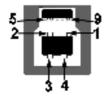
This section gives you information about the USB ports that are available on the monitor.

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

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

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

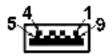
USB 3.0 upstream connector



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

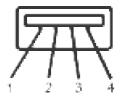


USB 3.0 downstream connector



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

USB 2.0 Downstream Connector



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



USB Ports

- · 1 x USB 3.0 upstream bottom
- · 2 x USB 3.0 downstream bottom
- · 2 x USB 3.0 downstream side



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



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



Plug and play capability

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

LCD monitor quality and pixel policy

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

Maintenance guidelines

Cleaning your monitor

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

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

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

- To clean your 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.



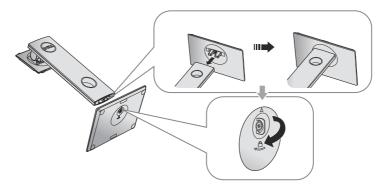
Setting up the monitor

Attaching the stand

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

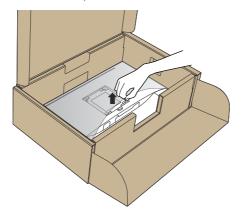
To attach the monitor stand

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

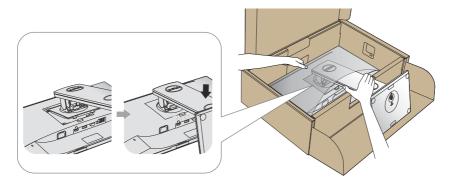




5. Lift the cover, as shown, to expose the VESA area for stand assembly.



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



- 7. Place the monitor upright.
- NOTE: Lift the monitor carefully to prevent it from slipping or falling.



Connecting your monitor

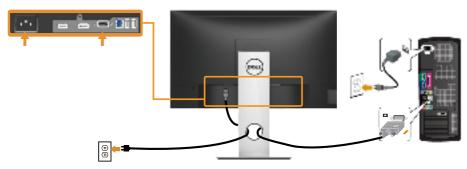


NOTE: Do not connect all cables to the computer at the same time. It is recommend to route the cables through the cable-management slot before you connect them to the monitor.

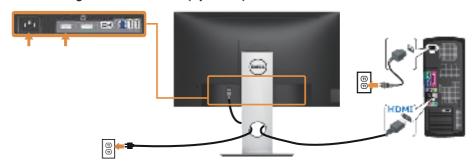
To connect your monitor to the computer:

- 1. Turn off your computer and disconnect the power cable.
- 2. Connect the VGA, HDMI or DP cable from your monitor to the computer.

Connecting the VGA cable



Connecting the HDMI cable (optional)





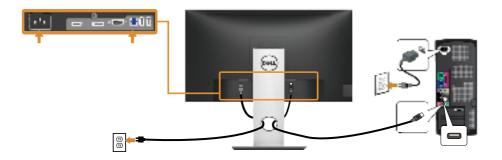
Connecting the DP cable



Connecting the USB 3.0 cable

After you have completed connecting the DP/HDMI cable, follow the procedures below to connect the USB 3.0 cable to the computer and complete your monitor setup:

- 1. Connect the upstream USB 3.0 port (cable supplied) to an appropriate USB 3.0 port on your computer. (See Bottom View for details.)
- 2. Connect the USB 3.0 peripherals to the downstream USB 3.0 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 Universal serial bus (USB) specific problems.
- **5.** Use the cable slot on the monitor stand to organize the cables.





Organizing cables

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



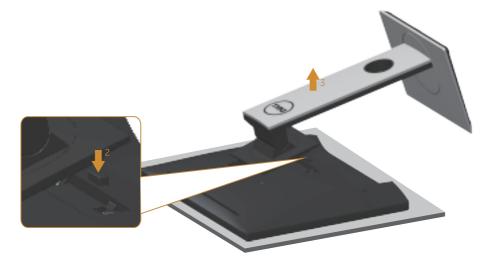


Disconnecting the monitor stand

- NOTE: To prevent scratches on the LCD screen while removing the stand, ensure that the monitor is placed on a soft and 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 set-up instructions.

To remove the stand:

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





Wall mounting (optional)



(Screw dimension: M4 x 10 mm).

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 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 or CSA or GS-listed wall mount bracket with minimum weight/load bearing capacity of 9.6 kg.



Operating your monitor

Power on the monitor

Press the button to turn on the monitor.



Language options

Set the OSD display to one of the eight languages.







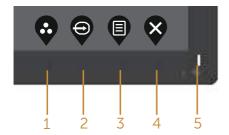






Using the front panel controls

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



The following table describes the front panel buttons:

| Front Panel Button | | Description |
|--------------------|--|--|
| 1 | Q | Use this button for choose from a list of preset modes. |
| | Shortcut key/Preset Modes | |
| 2 | • | Use the input source menu to select between the different video signals that may be |
| | Shortcut key/Input Source | connected to your monitor. |
| 3 | Menu | Use the menu button at launch your on-screen display (OSD) and select the OSD menu. See |
| | | Accessing the Menu System. |
| 4 | Exit | Use this button to go back to the main menu or exit the OSD main menu. |
| 5 | • | Use the power button to turn the monitor on and off. |
| | Power On/Off button (with LED indicator) | Solid white light indicates the monitor is turned on. Blinking white light indicates it is in power-save mode. |



OSD controls

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



| | Front Panel Button | Description |
|---|--------------------|--|
| 1 | ♦ Up | Use the up button to increase values or move up in a menu. |
| 2 | Down | Use the down button to decrease values or move down in a menu. |
| 3 | ♥ ok | Use the OK button to confirm your selection in a menu. |
| 4 | Sack | Use the back button to go back to the previous menu. |



Using the on-screen display (OSD) menu

Accessing the Menu System

- NOTE: Any changes you make are automatically saved when you move to another menu, exit the OSD menu, or wait for the OSD menu to automatically close.
 - 1. Press the button to display the OSD main menu.

Main menu for digital (VGA/HDMI/DP) input





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



| Icon | Menu and Submenus | Description |
|--|-------------------------|--|
| \overline{\over | Brightness/ Contrast | Use this menu to activate brightness/contrast adjustment. Columbia Colum |
| | Brightness | Brightness adjusts the luminance of the backlight. Press the button to increase the brightness and press the button to decrease the brightness (min. 0 / max. 100). NOTE: Manual adjustment of brightness is disabled when dynamic contrast is switched on. |
| | Contrast | Adjust the brightness first, and then adjust the contrast only if further adjustment is necessary. Press the button to increase the contrast and press the button to decrease the contrast (min. 0 / max. 100). The contrast function adjusts the degree of difference between darkness and lightness on the monitor screen. |





Auto Adjust

Use this key to activate automatic setup and adjust menu.





The following dialog appears on a black screen as the monitor self-adjusts to the current input:

Auto Adjustment in Progress...

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 settings.



NOTE: Auto adjust does not occur if you press the button while there are no active video input signals or attached cables.

This 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. Del 20 Monitor Prightness / Contract ViGA Diplay Reset (Input Source Reset |
|----------|-----------------------|--|
| | VGA | Select VGA input when you are using the analog (VGA) connector. Push > to select the VGA input source. |
| | DP | Select DP input when you are using the DP connector. Push > to select the DP input source. |
| | HDMI | Select HDMI input when you are using the HDMI connector. Push > to select the HDMI input source. |
| | Auto Select | Select auto select to scan for available input signals. |
| | Reset Input Source | Select this option to restore default Input Source. |
| • | Color | Use color to adjust the color setting mode. |



Preset Modes

When you select preset modes, you can choose standard, comfortview, multimedia, movie, game, warm, cool, or custom color from the list.

- Standard: Loads the monitor's default color settings. This is the default preset mode.
- ComfortView: Decreases the level of blue light emitted from the screen to make viewing more comfortable for your eyes.
- NOTE: Optimize eye comfort with a flickerfree screen.
- CAUTION: The possible long-term effects of blue light emission from the monitor may cause damage to the eyes, including eye fatigue or digital eye strain. See the Safety Instructions.
- Movie: Loads color settings ideal for movies.
- Game: Loads color settings ideal for most gaming applications.
- Warm: Increases the color temperature. The screen appears warmer with a red/yellow tint.
- Cool: Decreases the color temperature. The screen appears cooler with a blue tint.
- Custom Color: Allows you to manually adjust the color settings.







Input Color Allows you to set the video input mode to: **Format** • RGB: Select this option if your monitor is connected to a computer or DVD player using the HDMI cable. • YPbPr: Select this option if your DVD player supports only YPbPr output. $\Diamond \Diamond \Diamond \Diamond \Diamond$ **Reset Color** Allows your monitor color settings to the factory settings.



| 1 | |
|------------------------|---|
| Display | Use the display to adjust image. |
| | COLUMN Delit 20 Monator → Brightness / Contrast Aspect Ratio Auto Adjust Horiscontial Position > 50 Horiscontial Position > 50 Brand Source Column Pass Column Pass Column Pass Reset Display |
| Aspect Ratio | Adjusts the image ratio to wide 16:9, 4:3 or 5:4 |
| Horizontal Position | Use ◊ or ◊ buttons to adjust image left and right. Minimum is '0' (-). Maximum is '100' (+). |
| Vertical Position | Use ◊ or ◊ buttons to adjust image up and down. Minimum is '0' (-). Maximum is '100' (+). |
| Sharpness | This feature can make the image look sharper or softer. Use ᡐ 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 😵 buttons 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. |
| Dynamic Contrast | Allows you to increase the level of contrast to provide sharper and more detailed image quality. |
| | 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. |
| Reset Display | Select this option to restore default display 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. |
|--------------|---|
| Language | Language options set the OSD display to one of the eight languages (English, Spanish, French, German, Brazilian Portuguese, Russian, Simplified Chinese, or Japanese). |
| Rotation | Rotates the OSD by 90 degrees counter-clockwise. You can adjust the menu according to your display rotation. |
| Transparency | Select this option to change the menu transparency by pressing the and buttons from 0 to 100. |
| Timer | OSD hold time: sets the length of time the OSD will remain active after the last time you pressed a button. Use of or to adjust the slider in 1 second increments, from 5 to 60 seconds. |
| Reset Menu | Reset all OSD settings to the factory preset values. |





Personalize

Select this option to adjust the settings of the personalization.





Shortcut Key 1

User can select one of the following: preset modes, brightness/contrast, auto adjust, input source, aspect ratio, rotation to set the shortcut key 1.



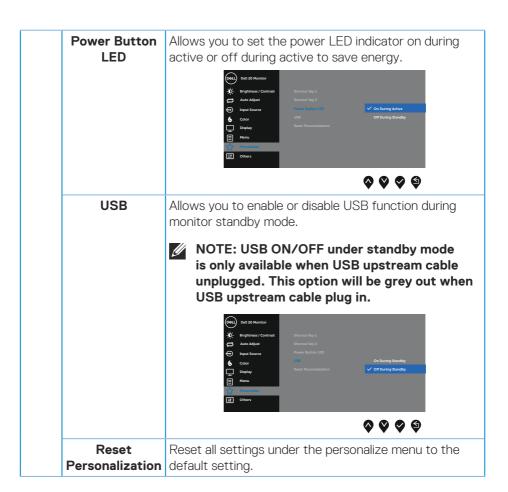


Shortcut Key 2

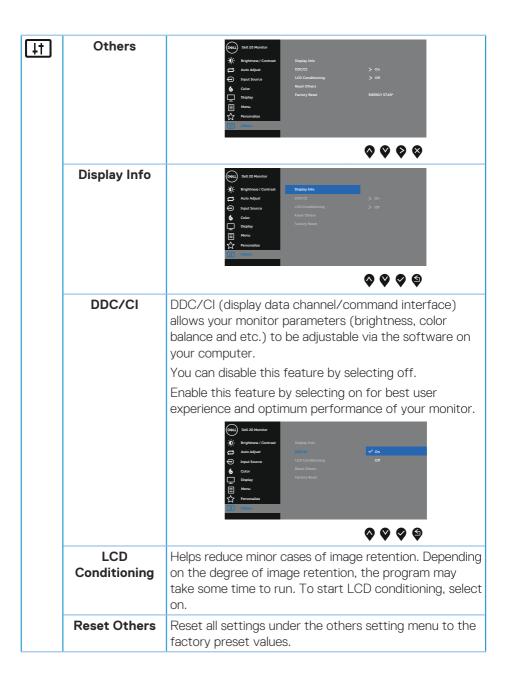
User can select one of the following: preset modes, brightness/contrast, auto adjust, input source, aspect ratio, rotation to set the shortcut key 2.



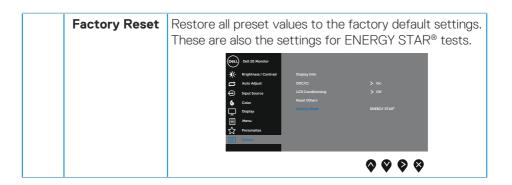












NOTE: Your monitor has a built-in feature to automatically calibrate the brightness to compensate for LED aging.

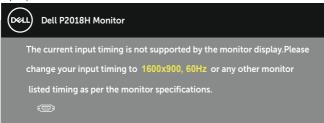


OSD warning messages

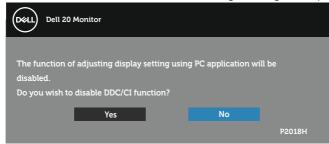
When the **Dynamic Contrast** feature is enabled (in these preset modes: **Game** or **Movie**), the manual brightness adjustment is disabled.



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

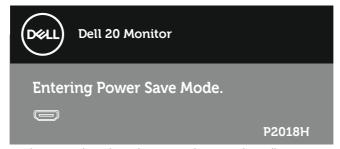


This means that the monitor cannot synchronize with the signal that it is receiving from the computer. See Monitor specifications for the Horizontal and Vertical frequency ranges addressable by this monitor. Recommended mode is 1600 x 900. Before the **DDC/CI** function is disabled, the following message is displayed:

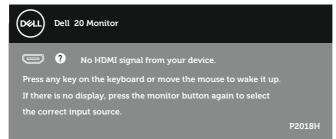




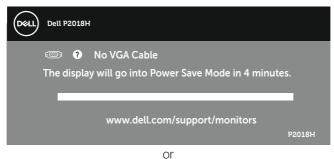
When the monitor enters the **Power Save Mode**, the following message appears:



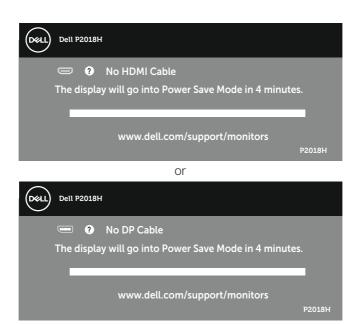
If you press any button other than the power button, the following messages will appear depending on the selected input:



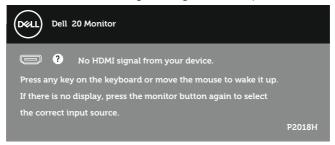
If VGA, HDMI or DP cable is not connected, a floating dialog box as shown below appears. The monitor will enter Power Save Mode after 4 minutes if left at this state.







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



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



Setting up your monitor

Setting the maximum resolution

To set the maximum resolution for the monitor:

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

- 1. For Windows 8 and Windows 8.1, 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 1600 x 900
- 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 **1600 x 900**.
- 4. Click Apply.

If you do not see 1600×900 as an option, you may need to update your graphics driver. Depending on your computer, complete one of the following procedures: If you have a Dell desktop or portable computer:

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

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

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



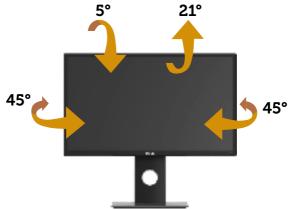
Using the Tilt, Swivel, and Vertical Extension



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, Swivel

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



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

Vertical Extension



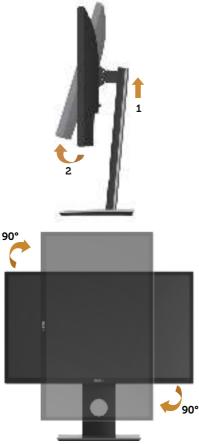
NOTE: The stand extends vertically up to 130 mm. The figure below illustrates how to extend the stand vertically.





Rotating the Monitor

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







NOTE: When in the Portrait View Mode, you may experience performance degradation in graphic-intensive applications (3D Gaming and etc.).

Adjusting the Rotation Display Settings of Your System

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

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

To adjust the Rotation Display Settings:

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



Troubleshooting

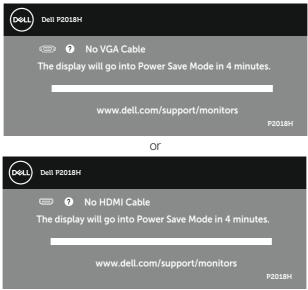
MARNING: Before you begin any of the procedures in this section, follow the Safety Instructions.

Self-test

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

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

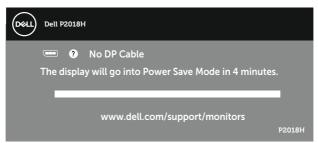
If the monitor is working correctly, it detects that there is no signal and one of the following message appears. While in self-test mode, the power LED remains white.



or







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

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

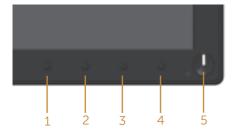


Built-in diagnostics

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



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



To run the built-in diagnostics:

- 1. Ensure that the screen is clean (no dust particles on the surface of the screen).
- 2. Unplug the video cable(s) from the back of the computer or monitor. The monitor then goes into the self-test mode.
- 3. Press and hold **Button 1** on the front panel simultaneously for 5 seconds. A gray screen appears.
- **4.** Carefully inspect the screen for abnormalities.
- 5. Press Button 1 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 1** 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 | Possible Solutions |
|------------------------------|---|
| No video/power LED off | Ensure that the video cable connecting the monitor and the computer is properly connected and secure. Verify that the power outlet is functioning properly using any other electrical equipment. Ensure that the correct input source is selected via the Input Source menu. |
| No video/power LED on | Increase brightness and contrast controls using the OSD. Perform monitor self-test feature check. Check for bent or broken pins in the video cable connector. Run the built-in diagnostics. Ensure that the correct input source is selected via the Input Source menu. |
| Poor focus | Eliminate video extension cables. Reset the monitor to Factory Settings (Factory Reset). Change the video resolution to the correct aspect ratio. |
| Shaky/jittery video | Reset the monitor to Factory Settings (Factory Reset). Check environmental factors. Relocate the monitor and test in another room. |
| Missing pixels | Cycle power on-off. Pixel that is permanently Off is a natural defect that can occur in LCD technology. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at www.dell.com/support/monitors. |
| Stuck-on pixels | Cycle power on-off. Pixel that is permanently off is a natural defect that can occur in LCD technology. For more information on Dell Monitor Quality and Pixel Policy, see Dell Support site at www.dell.com/support/monitors. |
| Brightness problems | Reset the monitor to Factory Settings (Factory Reset). Adjust brightness & contrast controls via OSD. |
| Geometric distortion | Reset the monitor to Factory Settings (Factory Reset). Adjust horizontal & vertical controls via OSD. |
| Horizontal/vertical lines | Reset the monitor to Factory Settings (Factory Reset). Perform monitor self-test feature check and determine if these lines are also in self-test mode. Check for bent or broken pins in the video cable connector. Run the built-in diagnostics. |



| Synchronization problems | Reset the monitor to Factory Settings (Factory Reset). Perform monitor self-test feature check to determine if the scrambled screen appears in self-test mode. Check for bent or broken pins in the video cable connector. Restart the computer in the safe mode. |
|--|--|
| Safety related issues | Do not perform any troubleshooting steps.Contact Dell immediately. |
| Intermittent problems | Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. Reset the monitor to Factory Settings (Factory Reset). Perform monitor self-test feature check to determine if the intermittent problem occurs in self-test mode. |
| Missing color | Perform monitor self-test feature check. Ensure that the video cable connecting the monitor to the computer is connected properly and is secure. Check for bent or broken pins in the video cable connector. |
| Wrong color | Change the Color Setting Mode in the Color Settings OSD to Graphics or Video depending on the application. Try different Preset Modes in Color settings OSD. Adjust R/G/B value in Custom Color in Color settings OSD. Change the Input Color Format to RGB or YPbPr in the Color settings OSD. Run the built-in diagnostics. |
| Image retention from a static image left on the monitor for a long period of time | Use the Power Management feature to turn off the monitor at all times when not in use (for more information, see Power management modes). Alternatively, use a dynamically changing screensaver. |
| Video ghosting or overshooting | Change the Response Time in the Display OSD to Fast or Normal depending on your application and usage. |



Product-specific problems

| Specific Symptoms | Possible Solutions |
|---|---|
| Screen image is too small | Check the Aspect Ratio setting in the Display settings OSD. Reset the monitor to Factory Settings (Factory Reset). |
| Cannot adjust the monitor with the buttons on the front panel | Turn off the monitor, unplug the power cord, plug it back, and then turn on the monitor. Check if the OSD menu is locked. If yes, press and hold the button on the left side of the power button for 6 seconds to unlock. |
| No input signal when user controls are pressed | Check the signal source. Ensure the computer is not in standby or sleep mode by moving the mouse or pressing any key on the keyboard. Check if the video cable is plugged in properly. Disconnect and reconnect the video cable if necessary. Reset the computer or video player. |
| The picture does not fill the entire screen | Due to different video formats (aspect ratio) of DVDs, the monitor may display in full screen. Run the built-in diagnostics. |

Universal serial bus (USB) specific problems

| Specific Symptoms | Possible Solutions |
|--|--|
| USB interface is not working | Check that your monitor is turned On. Reconnect the upstream cable to your computer. Reconnect the USB peripherals (downstream connector). Switch Off and then turn On the monitor again. Reboot the computer. Some USB devices like external portable HDD require higher electric current; connect the device directly to the computer system. |
| Supre Speed USB 3.0 interface is slow | Check that your computer is USB 3.0-capable. Some computers have USB 3.0, USB 2.0, and USB 1.1 ports. Ensure that the correct USB port is used. Ensure that the correct USB port is used. Reconnect the upstream cable to your computer. Reconnect the USB peripherals (downstream connector). Reboot the computer. |
| Wireless USB peripherals stop working when a USB 3.0 device is plugged in | Increase the distance between the USB 3.0 peripherals and the wireless USB receiver. Position your wireless USB receiver as close as possible to the wireless USB peripherals. Use a USB-extender cable to position the wireless USB receiver as far away as possible from the USB 3.0 port. |

Appendix

Safety Instructions

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

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

MARNING: The possible long-term effects of blue light emission from the monitor may cause personal injury such as digital eye strain, eye fatigue and damage to the eyes. Using monitor for extended periods of time may also cause pain in parts of body such as neck, arm, back and shoulder.

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

- 1. Set the distance of the screen between 20 inches to 28 inches (50cm-70cm) from your eyes.
- 2. Blink frequently to moisten your eyes or wet your eyes with water after prolonged usage of the monitor.
- **3.** Take regular and frequent breaks for 20 minutes every two hours.
- 4. Look away from your monitor and gaze at a distant object at 20 feet away for at least 20 seconds during the breaks.
- **5.** Perform stretches to relieve tension in the neck, arm, back, and shoulders during the breaks.

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

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



Contacting Dell

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

- 1. Go to www.dell.com/contactdell.
- **2.** Verify your country or region in the Choose a Country/Region drop-down list at the bottom of the page.
- 3. Select the appropriate service or support link based on your requirement or choose the method of contacting Dell that is convenient for you. 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.
- 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.

