User Guide

About This Guide

This guide provides information on monitor features, setting up the monitor, using the software and technical specifications.

WARNING!   Text set off in this manner indicates that failure to follow directions could result in bodily harm or loss of life.

CAUTION: Text set off in this manner indicates that failure to follow directions could result in damage to equipment or loss of information.

NOTE: Text set off in this manner provides important supplemental information.

TIP: Text set off in this manner provides helpful hints.

HDMI ™
HIGH-DEFINITION MULTIMEDIA INTERFACE

This product incorporates HDMI technology.

Table of contents

1   Product features

HP monitors

NOTE: Some models described in this guide may not be available in your country or region.

The monitor models and features include:

- 50.8 cm (20-inch) diagonal viewable area display with 1600 x 900 resolution, plus full-screen support for lower resolutions: includes custom scaling for maximum image size while preserving original aspect ratio

- 54.6 cm (21.5-inch) diagonal viewable area display with 1920 x 1080 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio

- 58.4 cm (23-inch) diagonal viewable area display with 1920 x 1080 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio

- 63.5 cm (25-inch) diagonal viewable area display with 1920 x 1080 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio

- 68.6 cm (27-inch) diagonal viewable area display with 1920 x 1080 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio

- LED backlight that consumes less energy than traditional CCFL backlights

- Tilt capability and wide viewing angle to allow viewing from a sitting or standing position, or moving side-to-side

- Video signal input to support VGA analog

- Video signal input to support DVI digital

- Video signal input to support high-definition multimedia interface (HDMI)

- Plug and play capability if supported by your operating system

- Security slot provision on rear of monitor for optional cable lock

- On-Screen Display (OSD) adjustments in several languages for easy setup and screen optimization

- My Display for adjusting monitor settings

- High-bandwidth digital content protection (HDCP) on DVI and HDMI (for select models with HDMI) inputs

- Software and documentation disc that includes monitor drivers and product documentation

- Energy saver feature to meet requirements for reduced power consumption

NOTE: For safety and regulatory information, refer to the *Product Notices* provided on your media disc, if one is included, or in your documentation kit. To locate updates to the user guide for your product, go to http://www.hp.com/support, and select your country. Select **Drivers & Downloads**, and then follow the on-screen instructions.

2   Safety and maintenance guidelines

Important safety information

A power cord is included with the monitor. If another cord is used, use only a power source and connection appropriate for this monitor. For information on the correct power cord set to use with the monitor, refer to the *Product Notices* provided on your media disc, if one is included, or in your documentation kit.

⚠ WARNING!   To reduce the risk of electric shock or damage to the equipment:

• Plug the power cord into an AC outlet that is easily accessible at all times.

• Disconnect power from the monitor by unplugging the power cord from the AC outlet.

• If provided with a 3-pin attachment plug on the power cord, plug the cord into a grounded (earthed) 3-pin outlet. Do not disable the power cord grounding pin, for example, by attaching a 2-pin adapter. The grounding pin is an important safety feature.

For your safety, do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

To reduce the risk of serious injury, read the *Safety and Comfort Guide*. It describes proper workstation, setup, posture, and health and work habits for computer users, and provides important electrical and mechanical safety information. This guide is located on the Web at http://www.hp.com/ergo.

⚠ CAUTION: For the protection of the monitor, as well as the computer, connect all power cords for the computer and its peripheral devices (such as a monitor, printer, scanner) to some form of surge protection device such as a power strip or Uninterruptible Power Supply (UPS). Not all power strips provide surge protection; the power strips must be specifically labeled as having this ability. Use a power strip whose manufacturer offers a Damage Replacement Policy so you can replace the equipment, if surge protection fails.

Use the appropriate and correctly sized furniture designed to properly support your HP LCD monitor.

⚠ WARNING!   LCD monitors that are inappropriately situated on dressers, bookcases, shelves, desks, speakers, chests, or carts may fall over and cause personal injury.

Care should be taken to route all cords and cables connected to the LCD monitor so that they cannot be pulled, grabbed, or tripped over.

📝 NOTE: This product is suitable for entertainment purposes. Consider placing the display in a controlled luminous environment to avoid interference from surrounding light and bright surfaces that may cause disturbing reflections from the screen.

Maintenance guidelines

To enhance the performance and extend the life of the monitor:

- Do not open the monitor cabinet or attempt to service this product yourself. Adjust only those controls that are covered in the operating instructions. If the monitor is not operating properly or has been dropped or damaged, contact an authorized HP dealer, reseller, or service provider.

- Use only a power source and connection appropriate for this monitor, as indicated on the label/back plate of the monitor.

- Be sure the total ampere rating of the products connected to the outlet does not exceed the current rating of the electrical outlet, and the total ampere rating of the products connected to the cord does not exceed the rating of the cord. Look on the power label to determine the ampere rating (AMPS or A) for each device.

- Install the monitor near an outlet that you can easily reach. Disconnect the monitor by grasping the plug firmly and pulling it from the outlet. Never disconnect the monitor by pulling the cord.

- Turn the monitor off when not in use. You can substantially increase the life expectancy of the monitor by using a screen saver program and turning off the monitor when not in use.

  NOTE: Monitors with a "burned-in image" are not covered under the HP warranty.

- Slots and openings in the cabinet are provided for ventilation. These openings must not be blocked or covered. Never push objects of any kind into cabinet slots or other openings.

- Do not drop the monitor or place it on an unstable surface.

- Do not allow anything to rest on the power cord. Do not walk on the cord.

- Keep the monitor in a well-ventilated area, away from excessive light, heat or moisture.

- When removing the monitor stand, you must lay the monitor face down on a soft area to prevent it from getting scratched, defaced, or broken.

Cleaning the monitor

1. Turn off the monitor and unplug the power cord from the back of the unit.

2. Dust the monitor by wiping the screen and the cabinet with a soft, clean antistatic cloth.

3. For more difficult cleaning situations, use a 50/50 mix of water and Isopropyl alcohol.

CAUTION: Spray the cleaner onto a cloth and use the damp cloth to gently wipe the screen surface. Never spray the cleaner directly on the screen surface. It may run behind the bezel and damage the electronics.

CAUTION: Do not use cleaners that contain any petroleum based materials such as benzene, thinner, or any volatile substance to clean the monitor screen or cabinet. These chemicals may damage the monitor.

Shipping the monitor

Keep the original packing box in a storage area. You may need it later if you move or ship the monitor.

3 Setting up the monitor

To set up the monitor, ensure that the power is turned off to the monitor, computer system, and other attached devices, then follow the instructions below.

Use caution when setting up the monitor

To prevent damage to the monitor, do not touch the surface of the LCD panel. Pressure on the panel may cause non-uniformity of color or disorientation of the liquid crystals. If this occurs the screen will not recover to its normal condition.

If installing a stand, lay the monitor face down on a flat surface covered with a protective sheet foam or non-abrasive cloth. This prevents the screen from getting scratched, defaced or broken as well as damage to the front panel buttons.

NOTE: Your monitor may look different from the monitor in this illustration.

Attaching the monitor base

CAUTION: The screen is fragile. Avoid touching or applying pressure to the screen; doing so can cause damage.

TIP: For monitor displays with glossy bezels, consider the placement of the display, because the bezel might cause interfering reflections from surrounding light and bright surfaces.

1. Lift the monitor from its box and place it face down on a flat surface.

2. Insert the stand into the slot on the back of the display head until it clicks.
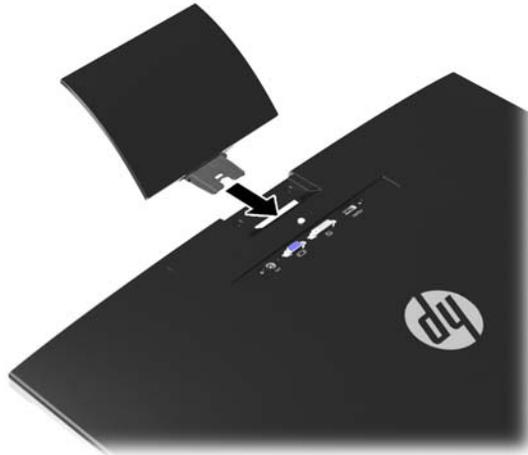
3. Attach the base to the stand.

📝 **NOTE:** For the 25" and 27" models, tighten the screw on the bottom of the base by hand. For all other models, attach the base to the stand and the plastic hook will automatically lock.

Rear components
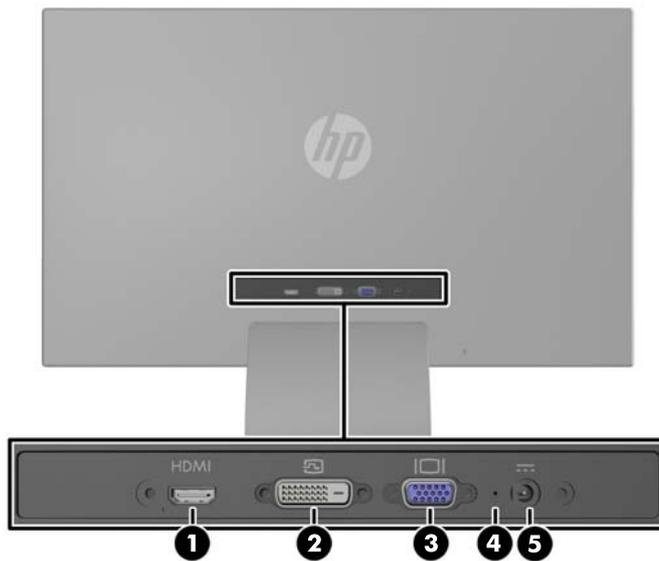
Component		Function
1	HDMI*	Connects the HDMI cable from the computer to the monitor.
2	DVI-D	Connects the DVI-D cable from the computer to the monitor.
3	VGA	Connects the VGA cable from the computer to the monitor.
4	DC Power LED	Illuminates when power adapter is connected to the monitor.
5	DC Power Connector	Connects the DC power adapter to the monitor.

* select models

NOTE: Some models described in this guide may not be available in your country or region.

Connecting the cables

1. Place the monitor in a convenient, well-ventilated location near the computer.

2. Connect a signal cable.

📝 **NOTE:** The monitor is capable of supporting analog, digital, or HDMI input. The video mode is determined by the video cable used. The monitor will automatically determine which inputs have valid video signals. The inputs can be selected by pressing the +/source button on the front panel or through the On-Screen Display (OSD) feature by pressing the Menu button.

● For analog operation, use a VGA signal cable. Connect the VGA signal cable to the VGA connector on the rear of the monitor and the other end to the VGA connector on the computer.
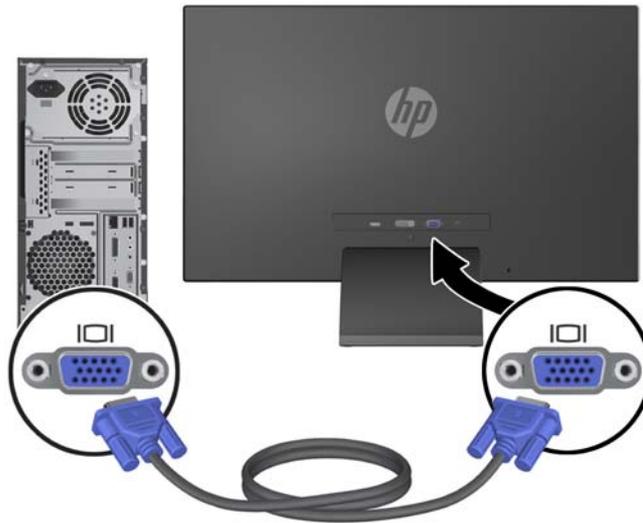
● For DVI digital operation, use a DVI-D signal cable. Connect the DVI-D signal cable to the DVI connector on the rear of the monitor and the other end to the DVI connector on the computer.
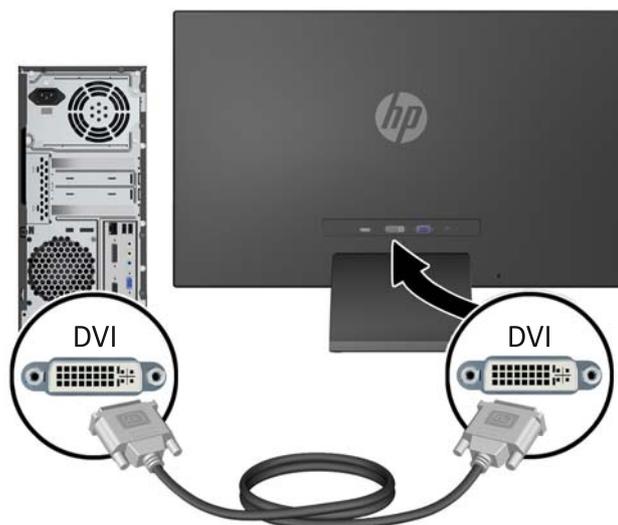
OR

- Connect one end of the HDMI cable to the HDMI connector on the back of the monitor (select models) and the other end of the HDMI cable to the input device. The HDMI cable is not included. Connect the HDMI signal cable to the HDMI connector on the rear of the monitor and the other end to the HDMI connector on the computer.
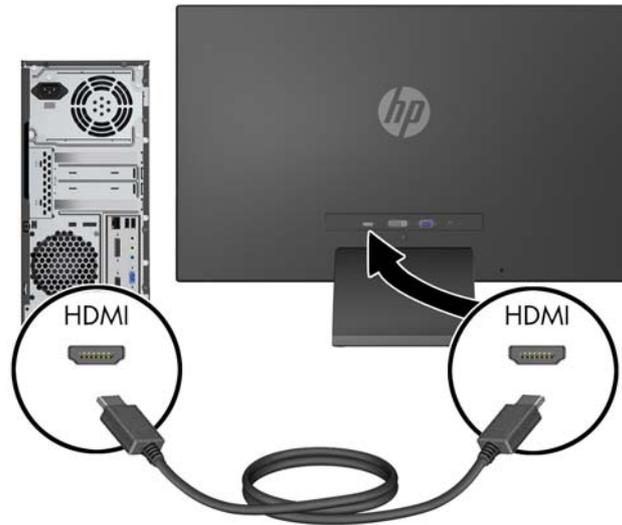
3. Connect the round end of the power supply cord to the monitor, and then connect one end of the power cord to the power supply and the other end to a grounded electrical outlet.
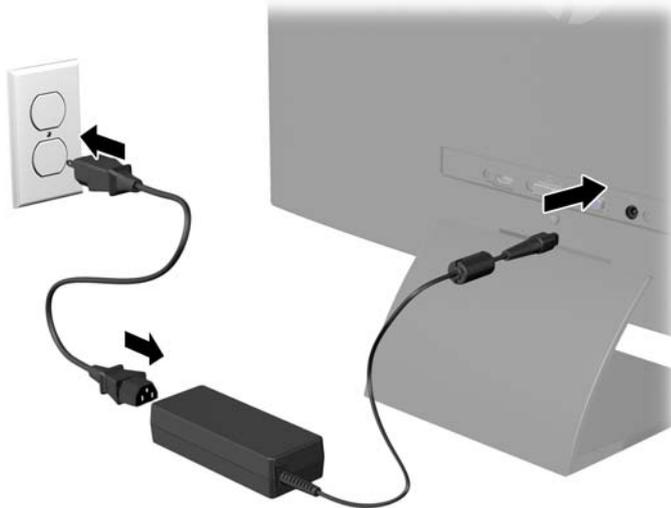
⚠ **WARNING!** To reduce the risk of electric shock or damage to the equipment:

Do not disable the power cord grounding plug. The grounding plug is an important safety feature.

Plug the power cord into a grounded (earthed) electrical outlet that is easily accessible at all times.

Disconnect power from the equipment by unplugging the power cord from the electrical outlet.

For your safety, do not place anything on power cords or cables. Arrange them so that no one may accidentally step on or trip over them. Do not pull on a cord or cable. When unplugging from the electrical outlet, grasp the cord by the plug.

Front panel controls

Control			Function
1	▣	Menu	Opens, selects or exits the OSD menu.
2	↺	Auto adjustment	Press and hold to automatically adjust the screen image. **NOTE:** This item can only be used with a VGA input signal.
3	▤ /-	Quick View/Minus	If the OSD menu is on, press to navigate backward through the OSD menu and decrease adjustment levels. If the OSD menu is inactive, press to activate the Quick View button that chooses different settings (HP Enhance+, Movie, Photo, Gaming, Text, Custom)
4	▣ /+	Plus/source	If the OSD menu is on, press to navigate forward through the OSD menu and increase adjustment levels. If the OSD menu is inactive, press to activate the source button that chooses the video signal input (VGA, DVI, or HDMI)
5	OK	OK	If the OSD menu is on, press to select the highlighted menu item.
6	⏻	Power	Turns the monitor on or off.

NOTE: The front panel controls on the 25" and 27" models are inactive unless they are illuminated. To activate the controls, tap on the area where the icons are located. All icons will become illuminated and active. The backlight for the icons will turn off upon exit from the OSD or when the OSD times out.

NOTE: To view an OSD menu simulator, visit the HP Customer Self Repair Services Media Library at http://www.hp.com/go/sml.

Adjusting the monitor

Tilt the monitor panel forward or backward to set it to a comfortable eye level.

Turning on the monitor

1. Press the power button on the front of the monitor to turn it on.

2. Press the power button on the computer to turn it on.

⚠ **CAUTION:** Burn-in image damage may occur on monitors that display the same static image on screen for a prolonged period of time.* To avoid burn-in image damage on the monitor screen, you should always activate a screen saver application or turn off the monitor when it is not in use for a prolonged period of time. Image retention is a condition that may occur on all LCD screens. Monitors with a "burned-in image" are not covered under the HP warranty.

* A prolonged period of time is 12 consecutive hours of non-use.

📝 **NOTE:** If pressing the power button has no effect, the Power Button Lockout feature may be enabled. To disable this feature, press and hold the monitor power button for 10 seconds.

📝 **NOTE:** You can disable the power LED in the OSD menu. Press the Menu button on the front of the monitor, then select **Management** > **Bezel Power LED** > **Off**.

When the monitor is powered on, a Monitor Status message is displayed for five seconds. The message shows which input (VGA, DVI, or HDMI) is the current active signal, the status of the auto-switch source setting (On or Off; factory default is On), the default source signal (factory default is Auto-switch), the current preset display resolution, and the recommended preset display resolution.

The monitor automatically scans the signal inputs for an active input and uses that input for the display. If two or more inputs are active, the monitor will display the default input source. If the default source is not one of the active inputs, then the monitor will display the highest ranking priority input in the following order: DVI, HDMI, then VGA. You can change the default source in the OSD by pressing the front panel Menu button and selecting **Source Control** > **Default Source**.

HP watermark and image retention policy

The monitor models provide ultra-wide viewing angles and advanced image quality suitable for a wide variety of advanced image quality applications. This panel technology, however, is not suitable for applications that exhibit static, stationary or fixed images for long periods of time without the use of screen savers. These types of applications may include camera surveillance, video games, marketing logos, and templates that are displayed on the screen for a prolonged period of time. Static images may cause image retention damage that could look like stains or watermarks on the monitor's screen.

Monitors in use for 24 hours per day that result in image retention damage are not covered under the HP warranty. To avoid image retention damage, always turn off the monitor when it is not in use or use the power management setting, if supported on your system, to turn off the display when the system is idle.

Locating the rating label

The rating label on the monitor provides the product number and serial number. You may need these numbers when contacting HP about the monitor model. The rating label is located on the bottom of the monitor.

Installing a cable lock

You can secure the monitor to a fixed object with an optional cable lock available from HP.
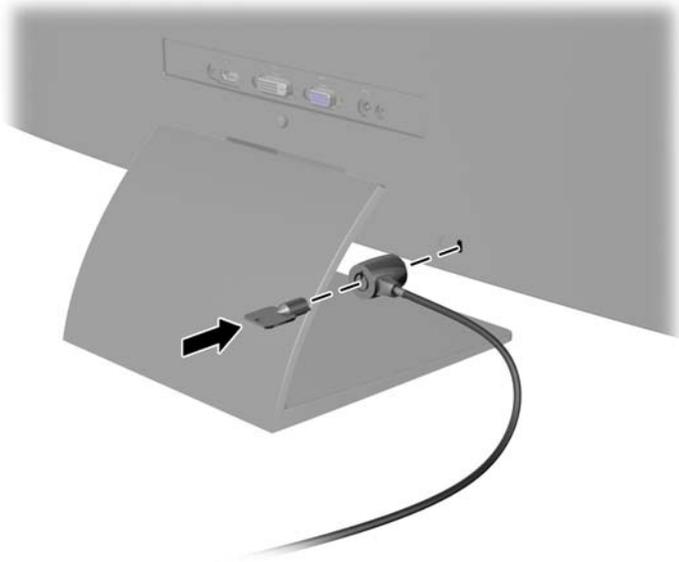
Downloading the monitor drivers

After you determine that you need to update, you can install the .INF and .ICM files from the disc or download them.

Installing from the disc

To install the .INF and .ICM files on the computer from the disc:

1. Insert the disc in the computer optical drive. The disc menu is displayed.

2. View the **HP Monitor Software Information** file.

3. Select **Install Monitor Driver Software**.

4. Follow the on-screen instructions.

5. Ensure that the proper resolution and refresh rates appear in the Windows Display control panel.

> **NOTE:** You may need to install the digitally signed monitor .INF and .ICM files manually from the disc in the event of an installation error. Refer to the HP Monitor Software Information file on the disc.

Downloading from the Web

If you do not have a computer or source device with an optical drive, you can download the latest version of .INF and .ICM files from the HP monitors support Web site:

1. Go to http://www.hp.com/support and select the appropriate country and language.

2. Select **Drivers & Downloads**, type your monitor model in the **Find my product** search field, and click **Go**.

3. If necessary, select your monitor from the list.

4. Select your operating system, and then click **Next**.

5. Click **Driver - Display/Monitor** to open the list of drivers.

6. Click on the driver.

7. Click the **System Requirements** tab, and then verify that your system meets the program minimum requirements.

8. Click **Download** and follow the on-screen instructions to download the software.

NOTE: You may need to install the digitally signed monitor .INF and .ICM files manually from the disc in the event of an installation error. Refer to the HP Monitor Software Information file on the disc.

4   Using *My Display* software

The disc provided with the monitor includes *My Display* software. Use *My Display* software to choose preferences for optimum viewing. You can select settings for gaming, movies, photo editing or just working on documents and spreadsheets. You can also easily adjust settings such as brightness, color, and contrast using *My Display* software.

Installing the software

To install the software:

1. Insert the disc in your computer disc drive. The disc menu is displayed.

2. Select the language.

    > **NOTE:**   This choice selects the language you will see while installing the software. The language of the software itself will be determined by the operating system language.

3. Click **Install My Display Software**.

4. Follow the on-screen instructions.

5. Restart the computer.

Using the software

To open the *My Display* software:

1. Click the **HP My Display** icon on the taskbar.

    Or

    Click **Windows Start** ™ on the taskbar.

2. Click **All Programs**.

3. Click **HP My Display**.

4. Select **HP My Display**.

    For additional information, refer to the on-screen **Help** within the software.

Downloading the software

If you prefer to download the *My Display* software, follow the instructions below.

1. Go to http://www.hp.com/support and select the appropriate country and language.

2. Select **Drivers & Downloads**, type your monitor model in the **Find by product** search field, and click **Go**.

3. If necessary, select your monitor from the list.

4. Select your operating system, and then click **Next**.

5. Click **Utility - Tools** to open the list of utilities and tools.

6. Click **HP My Display**.

7. Click the **System Requirements** tab, and then verify that your system meets the program minimum requirements.

8. Click **Download** and follow the on-screen instructions to download *My Display*.

A Support and troubleshooting

Solving common problems

The following table lists possible problems, the possible cause of each problem, and the recommended solutions.

Problem	Possible Cause	Solution
Screen is blank.	Power cord is disconnected.	Connect the power cord.
	Power button is turned off.	Press the front panel power button. **NOTE:** If pressing the power button has no effect, press and hold the power button for 10 seconds to disable the power button lockout feature.
	Video cable is improperly connected.	Connect the video cable properly. Refer to Connecting the cables on page 7 for more information.
	System is in sleep mode.	Press any key on the keyboard or move the mouse to inactivate the screen blanking utility.
	Video card compatibility.	Open the OSD menu and select the Input Control menu. Set Auto-Switch Input to Off and manually select the input.
Image appears blurred, indistinct, or too dark.	Brightness is too low.	Open the OSD menu and select Brightness to adjust the brightness scale as needed.
Check Video Cable is displayed on screen.	Monitor video cable is disconnected.	Connect the appropriate video signal cable between the computer and monitor. Be sure that the computer power is off while connecting the video cable.
Input Signal Out of Range is displayed on screen.	Video resolution and/or refresh rate are set higher than what the monitor supports.	Change the settings to a supported setting (see Recognizing preset display resolutions on page 23).
The monitor is off but it did not seem to enter into a low-power sleep mode.	The monitor's power saving control is disabled.	Open the OSD menu and select Power Control > Auto-Sleep Mode and set auto-sleep to On.
OSD Lockout is displayed.	The monitor's OSD Lockout function is enabled.	Press and hold the Menu button on the side panel for 10 seconds to disable the OSD Lockout function.
Power Button Lockout is displayed.	The monitor's Power Button Lockout function is enabled.	Press and hold the power button for 10 seconds to unlock the power button function.

Button lockouts

Holding down the power button or Menu button for ten seconds will lock out the functionality of the buttons. You can restore the functionality by holding the buttons down again for ten seconds. This functionality is only available when the display is powered on, displaying an active signal, and the OSD is not active.

Product support

For additional information on using your monitor, go to http://www.hp.com/support. Select your country or region, select **Troubleshooting**, and then enter your model in the search window and click the **Go** button.

NOTE: The monitor user guide, reference material, and drivers are available at http://www.hp.com/support.

If the information provided in the guide does not address your questions, you can contact support. For U.S. support, go to http://www.hp.com/go/contactHP. For worldwide support, go to http://welcome.hp.com/country/us/en/wwcontact_us.html.

Here you can:

- Chat online with an HP technician

NOTE: When support chat is not available in a particular language, it is available in English.

- Find support telephone numbers
- Locate an HP service center

Preparing to call technical support

If you cannot solve a problem using the troubleshooting tips in this section, you may need to call technical support. Have the following information available when you call:

- Monitor model number
- Monitor serial number
- Purchase date on invoice
- Conditions under which the problem occurred
- Error messages received
- Hardware configuration
- Name and version of the hardware and software you are using

B   Technical specifications

📝 **NOTE:** All specifications represent the typical specifications provided by HP's component manufacturers; actual performance may vary either higher or lower.

📝 **NOTE:** Some models described in this guide may not be available in your country or region.

50.8 cm / 20" models

Display	50.8 cm wide screen	20 inches wide screen
Viewable Image Size	50.8 cm diagonal	20–inch diagonal
Tilt	-5 to 25°	
Maximum Weight (Unpacked)	2.8 kg	6.2 lbs
Dimensions (include base)		
Height	36.6 cm	14.5 inches
Depth	17.1 cm	6.73 inches
Width	46.6 cm	18.4 inches
Maximum Graphic Resolution	1600 x 900 (60 Hz) analog input	
	1600 x 900 (60 Hz) digital input	
Optimum Graphic Resolution	1600 x 900 (60 Hz) analog input	
	1600 x 900 (60 Hz) digital input	
Text Mode	720 × 400	
Dot Pitch	0.277 (H) × 0.277 (V) mm	
Pixels Per Inch	92 PPI	
Horizontal Frequency	24 to 83 kHz	
Vertical Refresh Rate	50 to 76 Hz	
Environmental Requirements Temperature		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity	20 to 70%	
Power Source	100 – 240 VAC 50/60 Hz	
Altitude:		
Operating	0 to 5000 m	0 to 16,400 feet
Storage	0 to 12192 m	0 to 40,000 feet
Measured Power Consumption:		

Full Power	22 watts
Typical Settings	20 watts
Sleep	<0.5 watts
Switch Off	<0.5 watts
Input Terminal	One VGA connector; one DVI connector

54.6 cm / 21.5" models

Display	54.6 cm wide screen	21.5 inches wide screen
Viewable Image Size	54.6 cm diagonal	21.5–inch diagonal
Tilt	–5 to 25°	
Maximum Weight (Unpacked)	3.0 kg	6.61 lbs
Dimensions (include base)		
Height	38.5 cm	15.2 inches
Depth	17.1 cm	6.73 inches
Width	49.9 cm	19.7 inches
Maximum Graphic Resolution	1920 x 1080 (60 Hz) analog input	
	1920 x 1080 (60 Hz) digital input	
Optimum Graphic Resolution	1920 x 1080 (60 Hz) analog input	
	1600 x 900 (60 Hz) digital input	
Text Mode	720 × 400	
Dot Pitch	0.2480 (H) × 0.2480 (V) mm	
Pixels Per Inch	102 PPI	
Horizontal Frequency	24 to 94 kHz	
Vertical Refresh Rate	50 to 76 Hz	
Environmental Requirements Temperature		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	–20 to 60° C	-4 to 140° F
Relative Humidity	20 to 70%	
Power Source	100 – 240 VAC 50/60 Hz	
Altitude:		
Operating	0 to 5000 m	0 to 16,400 feet
Storage	0 to 12192 m	0 to 40,000 feet
Measured Power Consumption:		
Full Power	28 watts	

Typical Settings	26 watts	
Sleep	<0.5 watts	
Switch Off	<0.5 watts	
Input Terminal	One VGA connector; one DVI connector; one HDMI connector	

58.4 cm / 23" models

Display	58.4 cm wide screen	23 inches wide screen
Viewable Image Size	58.4 cm diagonal	23–inch diagonal
Tilt	-5 to 25°	
Maximum Weight (Unpacked)	3.5 kg	7.72 lbs
Dimensions (include base)		
Height	40.4 cm	15.95 inches
Depth	17.1 cm	6.73 inches
Width	53.23 cm	20.96 inches
Maximum Graphic Resolution	1920 x 1080 (60 Hz) analog input	
	1920 x 1080 (60 Hz) digital input	
Optimum Graphic Resolution	1920 x 1080 (60 Hz) analog input	
	1920 x 1080 (60 Hz) digital input	
Text Mode	720 x 400	
Dot Pitch	0.265 (H) x 0.265 (V) mm	
Pixels Per Inch	96 PPI	
Horizontal Frequency	24 to 94 kHz	
Vertical Refresh Rate	50 to 76 Hz	
Environmental Requirements Temperature		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity	20 to 70%	
Power Source	100 – 240 VAC 50/60 Hz	
Altitude:		
Operating	0 to 5000 m	0 to 16,400 feet
Storage	0 to 12192 m	0 to 40,000 feet
Measured Power Consumption:		
Full Power	30 watts	
	28 watts	

Typical Settings	<0.5 watts	
Sleep	<0.5 watts	
Switch Off		
Input Terminal	One VGA connector; one DVI connector; one HDMI connector	

63.5 cm / 25" models

Display	63.5 cm wide screen	25 inches wide screen
Viewable Image Size	63.5 cm diagonal	25–inch diagonal
Tilt	-5 to 25°	
Maximum Weight (Unpacked)	4.41 kg	9.71 lbs
Dimensions (include base)		
Height	42.94 cm	16.91 inches
Depth	19.23 cm	7.57 inches
Width	57.77 cm	22.74 inches
Maximum Graphic Resolution	1920 x 1080 (60 Hz) analog input 1920 x 1080 (60 Hz) digital input	
Optimum Graphic Resolution	1920 x 1080 (60 Hz) analog input 1920 x 1080 (60 Hz) digital input	
Text Mode	720 × 400	
Dot Pitch	0.288 (H) x 0.288 (V) mm	
Pixels Per Inch	88 PPI	
Horizontal Frequency	24 to 94 kHz	
Vertical Refresh Rate	50 to 76 Hz	
Environmental Requirements Temperature		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity	20 to 70%	
Power Source	100 – 240 VAC 50/60 Hz	
Altitude:		
Operating	0 to 5000 m	0 to 16,400 feet
Storage	0 to 12192 m	0 to 40,000 feet
Measured Power Consumption:		
Full Power	30 watts 28 watts	

Typical Settings	<0.5 watts	
Sleep	<0.5 watts	
Switch Off		
Input Terminal	One VGA connector; one DVI connector; one HDMI connector	

68.6 cm / 27" models

Display	68.6 cm wide screen	27 inches wide screen
Viewable Image Size	68.6 cm diagonal	27–inch diagonal
Tilt	-5 to 25°	
Maximum Weight (Unpacked)	5.3 kg	11.68 lbs
Dimensions (include base)		
Height	45.46 cm	17.9 inches
Depth	19.24 cm	7.58 inches
Width	62.26 cm	24.51 inches
Maximum Graphic Resolution	1920 x 1080 (60 Hz) analog input	
	1920 x 1080 (60 Hz) digital input	
Optimum Graphic Resolution	1920 x 1080 (60 Hz) analog input	
	1920 x 1080 (60 Hz) digital input	
Text Mode	720 × 400	
Dot Pitch	0.311 (H) x 0.311 (V) mm	
Pixels Per Inch	82 PPI	
Horizontal Frequency	24 to 94 kHz	
Vertical Refresh Rate	50 to 76 Hz	
Environmental Requirements Temperature		
Operating Temperature	5 to 35° C	41 to 95° F
Storage Temperature	-20 to 60° C	-4 to 140° F
Relative Humidity	20 to 70%	
Power Source	100 – 240 VAC 50/60 Hz	
Altitude:		
Operating	0 to 5000 m	0 to 16,400 feet
Storage	0 to 12192 m	0 to 40,000 feet
Measured Power Consumption:		
Full Power	35 watts	
	32 watts	

Typical Settings	<0.5 watts
Sleep	<0.5 watts
Switch Off	
Input Terminal	One VGA connector; one DVI connector; one HDMI connector

Recognizing preset display resolutions

The display resolutions listed below are the most commonly used modes and are set as factory defaults. This monitor automatically recognizes these preset modes and they will appear properly sized and centered on the screen.

NOTE: Some models described in this guide may not be available in your country or region.

20" models

Preset	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
1	640 × 480	31.469	59.94
2	720 × 400	31.469	70.087
3	800 × 600	37.879	60.317
4	1024 × 768	48.363	60.004
5	1280 × 720	45	60
6	1280 x 1024	63.981	60.02
7	1440 x 900	55.935	59.887
8	1600 x 900	60	60

22", 23", 25", 27" models

Preset	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
1	640 x 480	31.469	59.94
2	720 x 400	31.469	70.087
3	800 × 600	37.879	60.317
4	1024 × 768	48.363	60.004
5	1280 × 720	45	60
6	1280 × 1024	63.981	60.02
7	1440 × 900	55.935	59.887
8	1600 × 900	60	60
9	1680 × 1050	65.29	59.954
10	1920 × 1080	67.5	60

Preset	Timing Name	Pixel Format	Horz Freq (kHz)	Vert Freq (Hz)
1	480p	720 × 480	31.469	60
2	576p	720 × 576	31.25	50
3	720p50	1280 × 720	37.5	50
4	720p60	1280 × 720	45	60
5	1080p60	1920 x 1080	67.5	60
6	1080p50	1920 x 1080	56.25	50

Power adapters

Manufacturer	Model Number	Power Supply Rating	Monitor Models
LiteOn	PA-1041–71TA-LF	40W/12V	50.8 cm/20-inch, 54.6 cm/21.5-inch, and 58.4 cm/23-inch
LiteOn	PA-1041-91AM-LF	40W/19V	54.6 cm/21.5-inch, 58.4 cm/23-inch, and 63.5 cm/25-inch
APD	DA-50F19–AAAF	50W/19V	63.5 cm/25-inch and 68.6 cm/27-inch

Entering user modes

The video controller signal may occasionally call for a mode that is not preset if:

- You are not using a standard graphics adapter.

- You are not using a preset mode.

It this occurs, you may need to readjust the parameters of the monitor screen by using the on-screen display. Your changes can be made to any or all of these modes and saved in memory. The monitor automatically stores the new setting, then recognizes the new mode just as it does a preset mode. In addition to the factory preset modes, there are at least 10 user modes that can be entered and stored.

Energy saver feature

The monitors support a reduced power state. The reduced power state will be entered into if the monitor detects the absence of either the horizontal sync signal and/or the vertical sync signal. Upon detecting the absence of these signals, the monitor screen is blanked, the backlight is turned off, and the power light is turned amber. When the monitor is in the reduced power state, the monitor will utilize 0.5 watts of power. There is a brief warm up period before the monitor will return to its normal operating mode.

Refer to the computer manual for instructions on setting energy saver features (sometimes called power management features).

NOTE: The above power saver feature only works when connected to computers that have energy saver features.

By selecting the settings in the monitor's Energy Saver utility, you can also program the monitor to enter into the reduced power state at a predetermined time. When the monitor's Energy Saver utility causes the monitor to enter the reduced power state, the power light blinks amber.

C   Accessibility

HP designs, produces, and markets products and services that can be used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

Supported assistive technologies

HP products support a wide variety of operating system assistive technologies and can be configured to work with additional assistive technologies. Use the Search feature on the external source connected to your monitor to locate more information about assistive features.

NOTE: For additional information about a particular assistive technology product, contact customer support for that product.

Contacting support

We are constantly refining the accessibility of our products and services and welcome feedback from users. If you have an issue with a product or would like to tell us about accessibility features that have helped you, please contact us at (888) 259-5707, Monday through Friday, 6 a.m. to 9 p.m. Mountain Time. If you are deaf or hard-of-hearing and use TRS/VRS/WebCapTel, contact us if you require technical support or have accessibility questions by calling (877) 656-7058, Monday through Friday, 6 a.m. to 9 p.m. North American Mountain Time.

NOTE: Support is in English only.