



hp PAVILION 32 Monitor User Guide

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hp PAVILION 32 Monitor



About This Guide

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

WARNING! Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

CAUTION: Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

IMPORTANT: Indicates information considered important but not hazard-related (for example, messages related to property damage). An Important alert warns the user that failure to follow a procedure exactly as described could result in loss of data or in damage to hardware or software. Also contains essential information to explain a concept or to complete a task.

NOTE: Contains additional information to emphasize or supplement important points of the main text.

TIP: Provides helpful hints for completing a task.

This product incorporates HDMI technology.

Getting Started

Important safety information

An AC adapter and AC power cord are 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 AC power cord set to use with the monitor, see the Product Notices provided 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 computer 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 AC outlet, grasp the cord by

the plug.

To reduce the risk of serious injury, read the Safety & Comfort Guide (provided with your user guides). It describes proper workstation setup and proper posture, health, and work habits for computer users. The Safety & Comfort Guide also provides important electrical and mechanical safety information. The Safety & Comfort Guide is also available on the Web at <http://www.hp.com/ergo>.

IMPORTANT: 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 capability. 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.

Product features and components

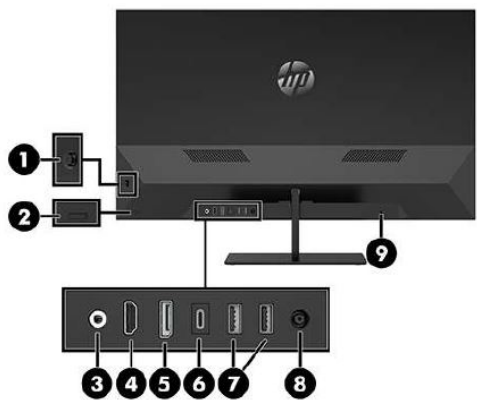
Features

The monitor features include the following:

- 81.3 cm (32-inch) diagonal viewable area with 2560 × 1440 resolution, plus full-screen support for lower resolutions; includes custom scaling for maximum image size while preserving original aspect ratio
- Nonglare panel with an LED backlight
- Wide viewing angle to allow viewing from a sitting or standing position, or moving from side to side
- Edge-to-edge anti-glare cover glass
- DisplayPort, USB Type-C (video only), and HDMI video inputs
- Audio-out (headphone) jack
- USB 3.0 hub with one USB Type-C upstream port and two USB Type-A downstream ports (connect to USB devices)
- USB Type-C port with power delivery up to 15 W
- Tilt capability
- Removable stand for flexible monitor head mounting solutions
- Plug and Play capability if supported by your operating system
- 100 mm integrated VESA mounting
- Security cable slot provision on the back of the monitor for an optional security cable
- On-screen display (OSD) adjustments in several languages for easy setup and screen optimization
- HP Display Assistant software for adjusting monitor settings and enabling theft deterrence features
- High-Bandwidth Digital Content Protection (HDCP) copy protection on all digital inputs
- Energy saver feature to meet requirements for reduced power consumption

NOTE: For safety and regulatory information, see the Product Notices provided in your documentation kit. To access the latest user guide, go to <http://www.hp.com/support>, and follow the instructions to find your product. Then select User Guides.

Rear components



Component	Icon	Function
1	OSD joystick control	Opens the OSD menu, selects an item from the menu, or closes the OSD menu.
2	Power button	Turns the monitor on or off.
3	Audio-out port	Connects an analog audio device to the monitor.
4	HDMI port	Connects an HDMI cable to the source device.
5	DisplayPort port	Connects a DisplayPort cable to the source device.
6	USB Type-C port	Connects to a USB Type-C enabled source to provide USB 3.0 upstream data, and power delivery up to 15 W to power and charge the battery of a connected device.
7	USB Type-A downstream ports (2)	Connects optional USB devices to the monitor.
8	Power connector	Connects an AC adapter to the monitor.
9	Security cable slot	Connects a security cable to a stationary object. NOTE: The security cable is designed to act as a deterrent, but it may not prevent the monitor from being mishandled or stolen.

Setting up the monitor

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 nonuniformity of color or disorientation of the liquid crystals. If this occurs, the screen will not recover to its normal condition.

If installing a stand, position the monitor facedown on a flat surface covered with protective sheet foam or a nonabrasive cloth. This prevents the screen from getting scratched, defaced, or broken and prevents damage to the control buttons.

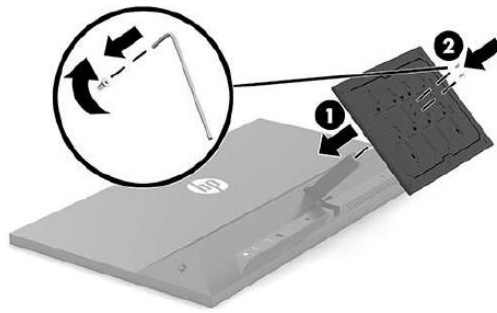
Attaching the monitor stand

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

TIP: Consider the placement of the monitor, because the bezel might cause interfering reflections from surrounding light and bright surfaces.

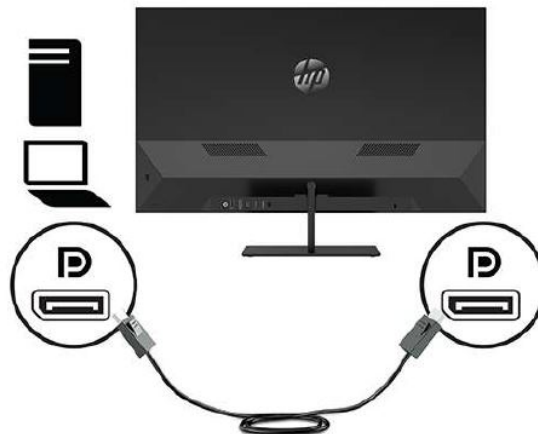
1. Position the monitor head facedown on a flat surface covered by a clean, dry cloth.
2. Press the base onto the neck of the stand on the back of the monitor (1). Then install two screws (included)

using the hexagonal wrench (included) (2).

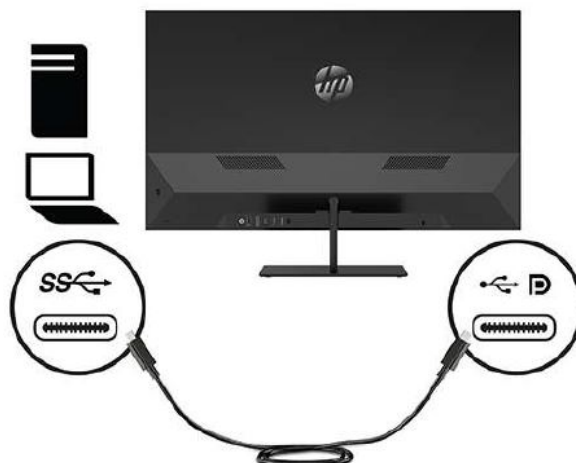


Connecting the cables

1. Place the monitor in a convenient, well-ventilated location near the computer.
2. Connect a video cable.
 - Connect one end of a DisplayPort cable to the DisplayPort port on the back of the monitor and the other end to the DisplayPort port on the source device.



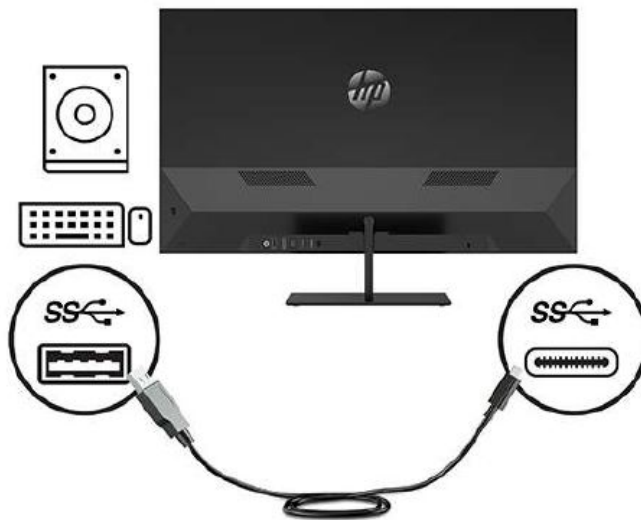
- Connect one end of a USB Type-C cable to the USB Type-C port on the back of the monitor and the other end to the USB Type-C port on the source device.



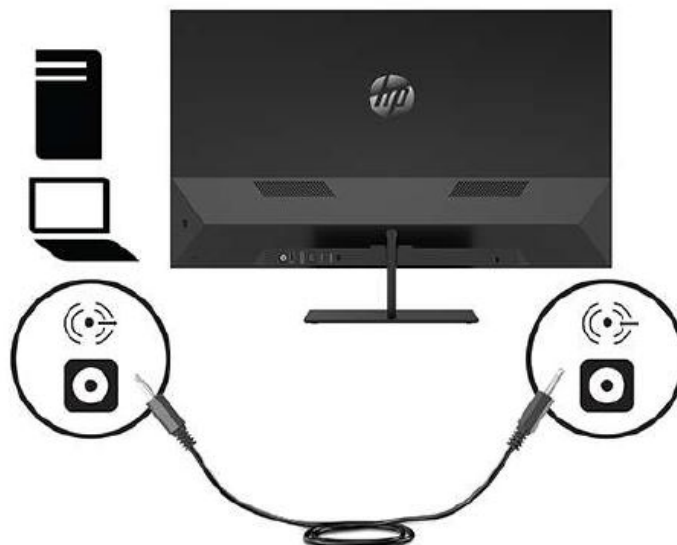
- Connect one end of an HDMI cable to the HDMI port on the back of the monitor and the other end to the source device.



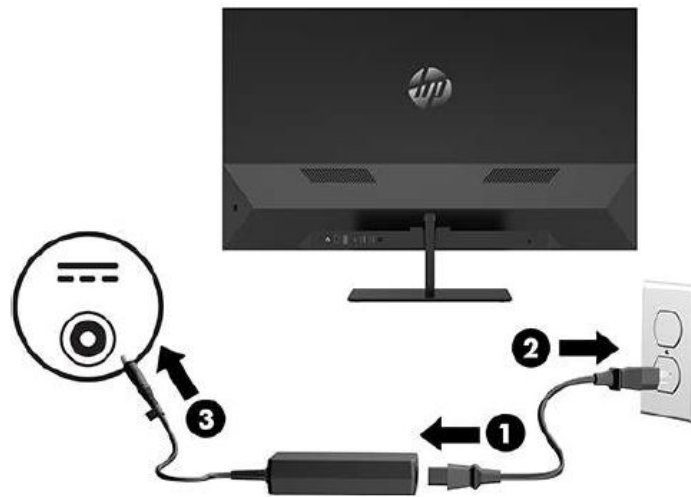
3. Connect the USB upstream cable's Type-C connector to the USB upstream port on the back of the monitor and the cable's Type-A connector to the USB downstream port on the source device.



4. Connect one end of an audio cable to the headphone jack on the monitor and the other end to optional powered stereo speakers, headphones, earbuds, a headset, or a television.



5. Connect one end of the power cord to the AC adapter (1) and the other end to the AC outlet (2). Then connect the AC adapter to the monitor (3).





WARNING!

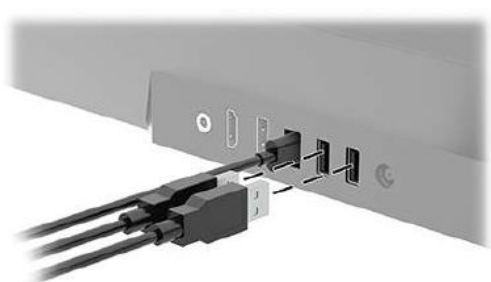
- To reduce the risk of electric shock or damage to the equipment:
- Do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Plug the power cord into a grounded (earthed) AC outlet that is easily accessible at all times.
- Disconnect power from the equipment by unplugging the power cord from the AC 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 the power cord from the AC outlet, grasp the cord by the plug.

Connecting USB devices

USB ports are used to connect devices such as a USB storage device, USB keyboard, or USB mouse. There are two downstream USB ports on the monitor that provide standard USB connections.

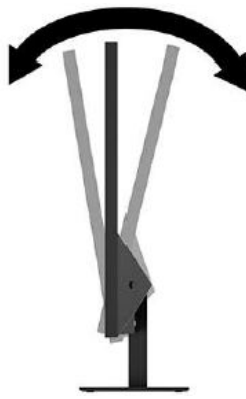
Component	Icon	Function
USB 3.0 standard downstream ports (2)		Connect optional USB devices to the monitor
USB Type-C port (1)		Connects to a USB Type-C enabled source to provide video, audio, USB 3.0 upstream data, and power delivery up to 15 W to power and charge the battery of connected devices

NOTE: You must connect the USB upstream cable from the computer to the monitor to enable the USB downstream ports on the monitor. For detailed instructions, see [Connecting the cables](#) on page 4.



Adjusting the monitor

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



Turning on the monitor

1. Press the power button on the source device to turn it on.
2. Press the power button on the back of the monitor to turn it on.



IMPORTANT: Burn-in damage may occur on monitors that display the same static image on screen for two or more consecutive hours. To avoid burn-in damage, always activate a screen saver application or turn off the monitor when it will not be in use for a prolonged period. Image retention is a condition that may occur on all LCD screens. A burned-in image on the monitor is not covered under the HP warranty.

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.

When the monitor is turned on, a Monitor Status message displays for five seconds. The message shows which input is the current active signal, the status of the auto-switch source setting (On or Off; factory default is On), 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 monitor.

Mounting the monitor

The monitor head can be attached to a wall, swing arm, or other mounting fixture.

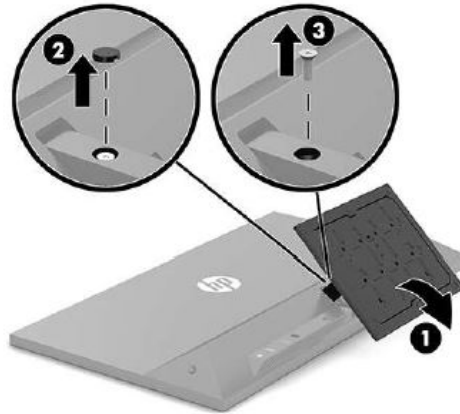
NOTE: This apparatus is intended to be supported by a UL Listed or CSA Listed wall-mount bracket.

CAUTION: This monitor supports the VESA industry standard 100 mm mounting holes. To attach a third-party mounting solution to the monitor head, four 4 mm, 0.7 pitch, 10 mm–long screws are required. Longer screws may damage the monitor. It is important to verify that the manufacturer's mounting solution is compliant with the VESA standard and is rated to support the weight of the monitor head. For best performance, it is important to use the power and video cables provided with the monitor.

Removing the monitor stand

CAUTION: Before beginning to disassemble the monitor, be sure the monitor is turned off and all cables are disconnected.

1. Disconnect and remove all cables from the monitor.
2. Position the monitor head facedown on a flat surface covered by a clean, dry cloth.
3. Push the base down toward the flat surface (1).
4. Remove the plastic cap from the neck of the stand (2).
5. Remove the screw from the neck of the stand (3) using the hexagonal wrench (included),



6. Remove the stand from the monitor head.



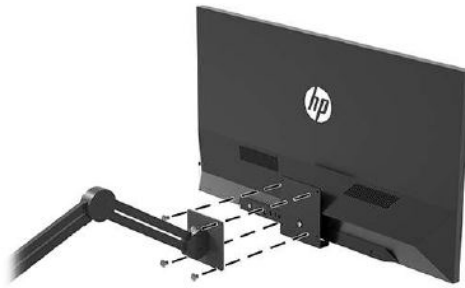
Attaching the monitor head to a mounting device

1. Remove the monitor head from the stand. See Removing the monitor stand on page 10.
2. Insert the tab at the bottom of the VESA bracket into the slot on the back of the monitor head (1), and then tighten the screw (2).



IMPORTANT: Follow the mounting device manufacturer's instructions when mounting the monitor to a wall or swing arm.

3. Attach the monitor to the wall or swing arm of your choice by inserting four mounting screws through the holes on the mounting device and into the screw holes on the VESA bracket that was installed on the back of the monitor.



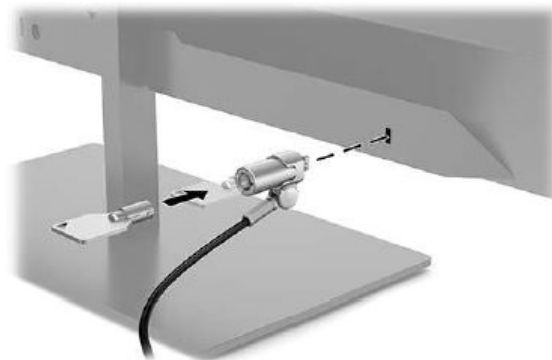
HP watermark and image retention policy

The monitor is designed with IPS (In-Plane Switching) screen technology, which provides ultra-wide viewing angles and advanced image quality. IPS screens are suitable for a wide variety of advanced image-quality applications. This 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.

Image retention damage on monitors that are in use 24 hours per day is 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 monitor when the system is idle.

Installing a security cable

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



Using the monitor

Downloading the monitor drivers

You can download and install the following files from <http://www.hp.com/support>.

- INF (Information) file
- ICM (Image Color Matching) files (one for each calibrated color space)
- HP Display Assistant — adjusts the monitor settings and enables theft deterrence features

To download the files:

1. Go to <http://www.hp.com/support>.
2. Select Software and Drivers.
3. Select your product type.

4. Enter your HP monitor model in the search field.

Using the on-screen display (OSD) menu

Use the OSD menu to adjust the screen image based on your preferences. You can access and make adjustments in the OSD menu using the OSD joystick on the back of the monitor.

To access the OSD menu and make adjustments, do the following:

1. If the monitor is not already on, press the power button to turn on the monitor.
2. To access the OSD menu, press the center of the OSD joystick on the back of the monitor.
3. Move the joystick up, down, left, or right to navigate, select, and adjust the menu choices.

The following table lists the menu selections in the OSD menu.

Main Menu	Description
Brightness	Adjusts the brightness level of the screen.
Color Control	Selects and adjusts the screen color.
Input Control	Selects the video input signal.
Image Control	Adjusts the screen image.
Power Control	Adjusts the power settings.
Menu Control	Adjusts the OSD menu controls.
Management	Enables/disables DDC/CI support and returns all OSD menu settings to the default settings.
Information	Selects and displays important information about the monitor.
Exit	Exits the OSD menu screen.

Adjusting Low Blue Light Mode

Decreasing the blue light emitted by the monitor reduces the blue light exposure to your eyes. This monitor allows you to select a setting to reduce blue light output and create a more relaxing and less stimulating image while you read content on the screen.

To adjust the blue light output from the monitor:

1. Press one of the four rear panel Function buttons to activate the buttons, and then press the Menu button to open the OSD menu. Select Color Control and Viewing Mode.
2. Select your desired setting:
 1. Low Blue Light: TUV certified. Reduces blue light for improved eye comfort
 2. Reading: Optimizes blue light and brightness for indoor viewing
 3. Night: Adjusts to the lowest blue light and reduces the impact on sleep
3. Select Save and Return to save your setting and close the menu. Select Cancel if you don't want to save the setting.
4. Select Exit from the Main menu.

WARNING! To reduce the risk of serious injury, read the Safety & Comfort Guide. It describes proper workstation setup and proper posture, health, and work habits for computer users. The Safety & Comfort Guide also provides important electrical and mechanical safety information. The Safety & Comfort Guide is available on the Web at <http://www.hp.com/ergo>.

Using Auto-Sleep Mode

The monitor supports an OSD menu option called Auto-Sleep Mode that allows you to enable or disable a reduced power state for the monitor. When Auto-Sleep Mode is enabled (enabled by default), the monitor will enter a reduced power state when the computer signals low power mode (absence of either horizontal or vertical sync signal).

Upon entering this reduced power state (sleep mode), the monitor screen is blanked, the backlight is turned off, and the power light turns amber. The monitor draws less than 1 W of power when in this reduced power state. The monitor will wake from the sleep mode when the computer sends an active signal to the monitor (for example, if you activate the mouse or keyboard).

You can disable the Auto-Sleep Mode in the OSD menu. Press the center of the OSD joystick control to open the OSD menu. In the OSD menu, press Power Control, select Auto-Sleep Mode, and then select Off.

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 or video is flashing.	Power cord is disconnected.	Connect the power cord.
	Power button is turned off.	Press the 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. For more information, see Connecting the cables on page 4 .
	System is in sleep mode.	Press any key on the keyboard or move the mouse to inactivate the screen blanking utility.
	Video card is incompatible.	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 setting 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 the monitor supports.	Change the settings to a supported setting. See Reset display resolutions on page 20 .
The monitor is off but it did not seem to enter a low-power mode.	The monitor's power saving control is disabled.	Open the OSD menu and select Power Control , select Auto-Sleep Mode , and then set auto-sleep to On .
OSD Lockout is displayed.	The monitor's OSD Lockout function is enabled.	Press and hold the Menu button 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 Lockout function.

Button lockouts

Holding down the power button or Menu button for ten seconds will lock out the functionality of that button.

You can restore the functionality by holding the button down again for ten seconds. This functionality is only available when the monitor is powered on, displaying an active signal, and the OSD menu is closed.

Contacting support

To resolve a hardware or software problem, go to <http://www.hp.com/support>. Use this site to get more information about your product, including links to discussion forums and instructions on troubleshooting. You can also find information on how to contact HP and open a support case.

Preparing to call technical support

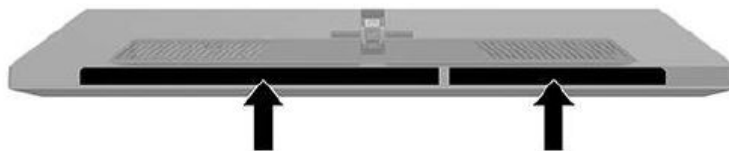
If you cannot solve a problem using the troubleshooting tips in this section, you may need to call technical support. Have the following information available when you call:

- 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

Locating the serial number and product number

The serial number and product number are located on a label under the front bezel of the monitor. You may need these numbers when contacting HP about the monitor.

The model number and serial number can also be found in the OSD menu. Open the OSD menu, scroll down and select the Management tab. Then select the Information tab.



Maintaining the monitor

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 AC 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: A burned-in image on the monitor screen is 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 power cord.
- Keep the monitor in a well-ventilated area, away from excessive light, heat, or moisture.

- When removing the monitor stand, you must position the monitor facedown 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 AC outlet.
2. Disconnect any external devices.
3. Dust the monitor by wiping the screen and the cabinet with a soft, clean antistatic cloth.
4. For more difficult cleaning situations, use a 50/50 mix of water and isopropyl alcohol.

IMPORTANT:

- 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.
- 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.
- The cloth should be moist, but not wet. Water dripping into the ventilation or other points of entry can cause damage to the monitor. Allow the unit to air-dry before use.

Shipping the monitor

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

Technical specifications

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

For the latest specifications or additional specifications on this product, go to <http://www.hp.com/go/quickspecs/> and search for your monitor model to find the model-specific QuickSpecs

Display	81.3 cm wide screen	32-inch wide screen
Type	VA	
Viewable image size	81.3 cm diagonal	32-inch diagonal
Tilt	-5° to 25°	
Weight		
Without stand	7.06 kg	15.56 lbs
With stand	8.74 kg	19.27 lbs
Dimensions (including stand)		
Height	51.50 cm	20.28 in
Depth	21.10 cm	8.31 in
Width	73.89 cm	20.09 in
Maximum graphic resolution	2560 × 1440 (60 Hz)	
Optimum graphic resolution	2560 × 1440 (60 Hz)	
Dot pitch	0.27675 (H) × 0.83025 (V) mm	
Pixels per inch	91.79 PPI	
Horizontal frequency	24 kHz to 94 kHz	
Vertical refresh rate	50 Hz to 76 Hz	
Environmental requirements		
Operating temperature	5°C to 35°C	41°F to 95°F
Storage temperature	-34°C to 60°C	-29°F to 140°F
Relative humidity	20% to 80%	
Operating altitude	0 m to 5,000 m	0 to 16,400 ft
Storage altitude	0 m to 12,192 m	0 to 40,000 ft
Power source	100 V ac to 240 V ac 50/60 Hz	
Measured power consumption		
Full power	90 W	
Typical settings	50 W	
Sleep	<0.5 W	

Off	<0.3 W
Input terminal	One analog audio-out (headphone) jack, one DisplayPort port, one HDMI port, one USB Type-C port (upstream, video only), and two USB Type-A ports (downstream)

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.

Preset	Pixel format	Horz freq (kHz)	Vert freq (Hz)	
1	640 × 480	31.469	59.940	
2	720 × 400	31.469	70.087	
3	800 × 600	37.879	60.317	
4	1024 × 768	48.363	60.004	
5	1280 × 720	45.000	60.000	
6	1280 × 1024	63.981	60.020	
7	1440 × 900	55.935	59.887	
8	1600 × 900	60.000	60.000	
9	1600 × 1200	75.000	60.000	
10	1680 × 1050	65.290	59.954	
11	1920 × 1080	67.500	60.000	
12	1920 × 1200	74.556	59.885	
13	2560 × 1440	88.787	59.951	
14	2560 × 1440	111.03	74.968	

Preset	Timing name	Pixel format	Horz freq (kHz)	Vert freq (Hz)
1	480i	720 × 480	15.734	59.94
2	480p	720 × 480	31.469	59.94
3	720p60	1280 × 720	45.000	60.00
4	1080i60	1920 × 1080	33.750	60.00
5	576i	720 × 576	15.625	50.00
6	576p	720 × 576	31.250	50.00
7	720p50	1280 × 720	37.500	50.00
8	1080i50	1920 × 1080	28.125	50.00
9	1080p60	1920 × 1080	67.500	60.00

10	1080p50	1920 × 1080	56.250	50.00
11	480p	640 × 480	31.469	60.00

Energy saver feature

The monitor supports a reduced power state. The reduced power state will be initiated if the monitor detects the absence of either the horizontal sync signal 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 turns 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 state.

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

NOTE: The above energy saver feature works only when the monitor is connected to a computer that has energy saver features.

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

Accessibility

HP is working to weave diversity, inclusion and work/life into the fabric of our company, so it is reflected in everything we do. Here are some examples of how we are putting differences to work to create an inclusive environment focused on connecting people to the power of technology throughout the world.

Finding the technology tools you need

Technology can unleash your human potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology helps increase, maintain, and improve the functional capabilities of electronic and information technology. For more information, see Finding the best assistive technology on page 23.

Our commitment

HP is committed to providing products and services that are accessible for people with disabilities. This commitment supports our company's diversity objectives and helps us ensure that the benefits of technology are available to all.

Our accessibility goal is to design, produce, and market products and services that can be effectively used by everyone, including people with disabilities, either on a stand-alone basis or with appropriate assistive devices.

To achieve our goal, this Accessibility Policy establishes seven key objectives to guide our actions as a company. All HP managers and employees are expected to support these objectives and their implementation in accordance with their roles and responsibilities:

- Raise the level of awareness of accessibility issues within our company, and provide our employees with the training they need to design, produce, market, and deliver accessible products and services.
- Develop accessibility guidelines for products and services, and hold product development groups accountable for implementing these guidelines where competitively, technically, and economically feasible.
- Involve people with disabilities in the development of accessibility guidelines, and in the design and testing of products and services.
- Document accessibility features and make information about our products and services publicly available in an accessible form.
- Establish relationships with leading assistive technology and solution providers.
- Support internal and external research and development that will improve assistive technology relevant to our products and services.
- Support and contribute to industry standards and guidelines for accessibility.

International Association of Accessibility Professionals (IAAP)

IAAP is a not-for-profit association focused on advancing the accessibility profession through networking, education, and certification. The objective is to help accessibility professionals develop and advance their careers and to better enable organizations to integrate accessibility into their products and infrastructure.

HP is a founding member, and we joined to participate with other organizations to advance the field of accessibility. This commitment supports our company's accessibility goal of designing, producing, and marketing products and services that can be effectively used by people with disabilities.

IAAP will make our profession strong by globally connecting individuals, students, and organizations to learn from one another. If you are interested in learning more, go to <http://www.accessibilityassociation.org> to join the online community, sign up for newsletters, and learn about membership options.

Finding the best assistive technology

Everyone, including people with disabilities or age-related limitations, should be able to communicate, express themselves, and connect with the world using technology. HP is committed to increasing accessibility awareness within HP and with our customers and partners. Whether it's large fonts that are easy on the eyes, voice recognition that lets you give your hands a rest, or any other assistive technology to help with your specific situation—a variety of assistive technologies make HP products easier to use. How do you choose?

Assessing your needs

Technology can unleash your potential. Assistive technology removes barriers and helps you create independence at home, at work, and in the community. Assistive technology (AT) helps increase, maintain, and improve the functional capabilities of electronic and information technology.

You may choose from many AT products. Your AT assessment should allow you to evaluate several products, answer your questions, and facilitate your selection of the best solution for your situation. You will find that professionals qualified to do AT assessments come from many fields, including those licensed or certified in physical therapy, occupational therapy, speech/language pathology, and other areas of expertise. Others, while not certified or licensed, may also provide evaluation information. You will want to ask about the individual's experience, expertise, and fees to determine if they are appropriate for your needs.

Accessibility for HP products

The following links provide information on accessibility features and assistive technology, if applicable, included in various HP products. These resources will help you select the specific assistive technology features and product(s) most appropriate for your situation.

- HP Elite x3—Accessibility Options (Windows 10 Mobile)
- HP PCs—Windows 7 Accessibility Options
- HP PCs—Windows 8 Accessibility Options
- HP PC's—Windows 10 Accessibility Options
- HP Slate 7 Tablets—Enabling Accessibility Features on Your HP Tablet (Android 4.1/Jelly Bean)
- HP SlateBook PCs—Enabling Accessibility Features (Android 4.3, 4.2/Jelly Bean)
- HP Chromebook PCs—Enabling Accessibility Features on Your HP Chromebook or Chromebox (Chrome OS)
- HP Shopping—peripherals for HP products

If you need additional support with the accessibility features on your HP product, see [Contacting support](#) on page 28.

Additional links to external partners and suppliers that may provide additional assistance:

- Microsoft Accessibility information (Windows 7, Windows 8, Windows 10, Microsoft Office)
- Google Products accessibility information (Android, Chrome, Google Apps)
- Assistive Technologies sorted by impairment type
- Assistive Technologies sorted by product type
- Assistive Technology vendors with product descriptions

- Assistive Technology Industry Association (ATIA)

Standards and legislation

Standards

Section 508 of the Federal Acquisition Regulation (FAR) standards was created by the US Access Board to address access to information and communication technology (ICT) for people with physical, sensory, or cognitive disabilities. The standards contain technical criteria specific to various types of technologies, as well as performance-based requirements which focus on functional capabilities of covered products. Specific criteria cover software applications and operating systems, web-based information and applications, computers, telecommunications products, video and multi-media, and self-contained closed products.

Mandate 376 – EN 301 549

The EN 301 549 standard was created by the European Union within Mandate 376 as the basis for an online toolkit for public procurement of ICT products. The standard specifies the functional accessibility requirements applicable to ICT products and services, together with a description of the test procedures and evaluation methodology for each accessibility requirement.

Web Content Accessibility Guidelines (WCAG)

Web Content Accessibility Guidelines (WCAG) from the W3C's Web Accessibility Initiative (WAI) helps web designers and developers create sites that better meet the needs of people with disabilities or age-related limitations. WCAG advances accessibility across the full range of web content (text, images, audio, and video) and web applications. WCAG can be precisely tested, is easy to understand and use, and allows web developers flexibility for innovation. WCAG 2.0 has also been approved as ISO/IEC 40500:2012.

WCAG specifically addresses barriers to accessing the web experienced by people with visual, auditory, physical, cognitive, and neurological disabilities, and by older web users with accessibility needs. WCAG 2.0 provides characteristics of accessible content:

- Perceivable (for instance, by addressing text alternatives for images, captions for audio, adaptability of presentation, and color contrast)
- Operable (by addressing keyboard access, color contrast, timing of input, seizure avoidance, and navigability)
- Understandable (by addressing readability, predictability, and input assistance)
- Robust (for instance, by addressing compatibility with assistive technologies)

Legislation and regulations

Accessibility of IT and information has become an area of increasing legislative importance. This section provides links to information on key legislation, regulations, and standards.

- United States
- Canada
- Europe
- United Kingdom
- Australia
- Worldwide

United States

Section 508 of the Rehabilitation Act specifies that agencies must identify which standards apply to the procurement of ICT, perform market research to determine the availability of accessible products and services, and document the results of their market research. The following resources provide assistance in meeting Section 508 requirements:

- www.section508.gov

- Buy Accessible

The U.S. Access Board is currently updating the Section 508 standards. This effort will address new technologies and other areas where the standards need to be modified. For more information, go to Section 508 Refresh.

Section 255 of the Telecommunications Act requires telecommunications products and services to be accessible to people with disabilities. FCC rules cover all hardware and software telephone network equipment and telecommunications equipment used in the home or office. Such equipment includes telephones, wireless handsets, fax machines, answering machines, and pagers. FCC rules also cover basic and special telecommunications services, including regular telephone calls, call waiting, speed dialing, call forwarding, computer-provided directory assistance, call monitoring, caller identification, call tracing, and repeat dialing, as well as voice mail and interactive voice response systems that provide callers with menus of choices. For more information, go to Federal Communication Commission Section 255 information.

21st Century Communications and Video Accessibility Act (CVAA)

The CVAA updates federal communications law to increase the access of persons with disabilities to modern communications, updating accessibility laws enacted in the 1980s and 1990s to include new digital, broadband, and mobile innovations. Regulations are enforced by the FCC and documented as 47 CFR Part 14 and Part 79.

- FCC Guide on the CVAA

Other U.S. legislation and initiatives

- Americans with Disabilities Act (ADA), Telecommunications Act, the Rehabilitation Act and others

Canada

The Accessibility for Ontarians with Disabilities Act was established to develop and implement accessibility standards to make goods, services, and facilities accessible to Ontarians with disabilities and to provide for the involvement of persons with disabilities in the development of the accessibility standards. The first standard of the AODA is the customer service standard; however, standards for transportation, employment, and information and communication are also being developed. The AODA applies to the Government of Ontario, the Legislative Assembly, every designated public sector organization, and to every other person or organization that provides goods, services, or facilities to the public or other third parties and that has at least one employee in Ontario; and accessibility measures must be implemented on or before January 1, 2025. For more information, go to Accessibility for Ontarians with Disability Act (AODA) .

Europe

EU Mandate 376 ETSI Technical Report ETSI DTR 102 612: "Human Factors (HF); European accessibility requirements for public procurement of products and services in the ICT domain (European Commission Mandate M 376, Phase 1)" has been released.

Background: The three European Standardization Organizations have set up two parallel project teams to carry out the work specified in the European Commission "Mandate 376 to CEN, CENELEC and ETSI, in Support of Accessibility Requirements for Public Procurement of Products and Services in the ICT Domain."

ETSI TC Human Factors Specialist Task Force 333 has developed ETSI DTR 102 612. Further details about the work performed by STF333 (e.g., Terms of Reference, specification of the detailed work tasks, time plan for the work, previous drafts, listing of comments received and means to contact the task force) can be found at the Special Task Force 333.

The parts relating to the assessment of suitable testing and conformity schemes were carried out by a parallel project, detailed in CEN BT/WG185/PT. For further information, go to the CEN project team website.

The two projects are closely coordinated.

- CEN project team
- European Commission mandate for e-accessibility (PDF 46KB)
- Commission takes low profile on e-accessibility

United Kingdom

The Disability Discrimination Act of 1995 (DDA) was enacted to ensure that websites are accessible to blind and disabled users in the United Kingdom.

- W3C UK Policies

Australia

The Australian government has announced their plan to implement Web Content Accessibility Guidelines 2.0. All Australian government websites will require Level A compliance by 2012, and Double A by 2015. The new standard replaces WCAG 1.0, which was introduced as a mandated requirement for agencies in 2000. Worldwide

- JTC1 Special Working Group on Accessibility (SWG-A)
- G3ict: The Global Initiative for Inclusive ICT
- Italian accessibility legislation
- W3C Web Accessibility Initiative (WAI)

Useful accessibility resources and links

The following organizations may be good resources for information about disabilities and age-related limitations.

NOTE: This is not an exhaustive list. These organizations are provided for informational purposes only. HP assumes no responsibility for information or contacts you may encounter on the Internet. Listing on this page does not imply endorsement by HP.

Organizations

- American Association of People with Disabilities (AAPD)
- The Association of Assistive Technology Act Programs (ATAP)
- Hearing Loss Association of America (HLAA)
- Information Technology Technical Assistance and Training Center (ITTATC)
- Lighthouse International
- National Association of the Deaf
- National Federation of the Blind
- Rehabilitation Engineering & Assistive Technology Society of North America (RESNA)
- Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI)
- W3C Web Accessibility Initiative (WAI)

Educational institutions

- California State University, Northridge, Center on Disabilities (CSUN)
- University of Wisconsin – Madison, Trace Center
- University of Minnesota computer accommodations program

Other disability resources

- ADA (Americans with Disabilities Act) Technical Assistance Program
- Business & Disability network
- EnableMart
- European Disability Forum
- Job Accommodation Network
- Microsoft Enable
- U.S. Department of Justice – A Guide to disability rights Laws

HP links

- Our contact webform
- HP comfort and safety guide
- HP public sector sales

Contacting support

NOTE: Support is in English only.

- Customers who are deaf or hard of hearing that have questions about technical support or accessibility of HP products:
 - Use TRS/VRS/WebCapTel to call (877) 656-7058 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
- Customers with other disabilities or age-related limitations who have questions about technical support or accessibility of HP products, choose one of the following options:
 - Call (888) 259-5707 Monday through Friday, 6 a.m. to 9 p.m. Mountain Time.
 - Complete the Contact form for people with disabilities or age-related limitations.

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Product notice





















This guide describes features that are common to most models. Some features may not be available on your product. To access the latest user guide, go to <http://www.hp.com/support> and follow the instructions to find your product. Then select User Guides.

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Documents / Resources

References

-  [Home - G3ict: The Global Initiative for Inclusive ICTs](#)
-  [Accessories | HP® Official Store](#)
-  [HP PCs - Windows 10 Accessibility Options | HP® Customer Support](#)
-  [Redirecting...](#)
-  [AccessibilityAssociation](#)
-  [Redirecting...](#)
-  [ATIA | Assistive Technology Industry Association](#)
-  [CEN - Conformance Assessment BT WG 185 project team](#)
-  [Telecommunications Access for People with Disabilities | Federal Communications Commission](#)
-  [index | HP® Official Site](#)
-  [QuickSpecs Overview](#)
-  [hp.com/support](#)
-  [ISO/IEC 40500:2012 - Information technology — W3C Web Content Accessibility Guidelines \(WCAG\) 2.0](#)
-  [Home - INCITS](#)
-  [Accessibility Technology & Tools | Microsoft Accessibility](#)
-  [Accessibilità | Agenzia per l'Italia digitale](#)
-  [Home | Section508.gov](#)
-  [Web Content Accessibility Guidelines \(WCAG\) 2.0](#)
-  [Web Accessibility Laws & Policies | Web Accessibility Initiative \(WAI\) | W3C](#)
-  [Web Accessibility Laws & Policies | Web Accessibility Initiative \(WAI\) | W3C](#)
-  [AODA | HP® Canada](#)
-  [index | HP® Official Site](#)
-  [Accessibility Requirements Tool \(ART\)](#)
-  [Public Sector Home | HP® Official Public Sector Site](#)
-  [ETSI Portal > Home](#)
-  [EURACTIV.com – EURACTIV is your one-stop-shop for in-depth news about policies and politics from EU institutions and national capitals.](#)
-  [21st Century Communications and Video Accessibility Act \(CVAA\) | Federal Communications Commission](#)
-  [Home | Section508.gov](#)