

HD2250 22-inch Widescreen LCD Monitor

USERGUIDE



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Connecting your monitor

To set up your monitor, first unpack the box, unwrap the components, then make your cable connections.

Connecting video inputs

► **To connect video sources to your monitor:**

- 1 Position your computer and your monitor so you can reach the back of each.
- 2 If your computer has a digital video connector (DVI), connect a DVI video cable (not included) to the white connector on the display.

- OR -

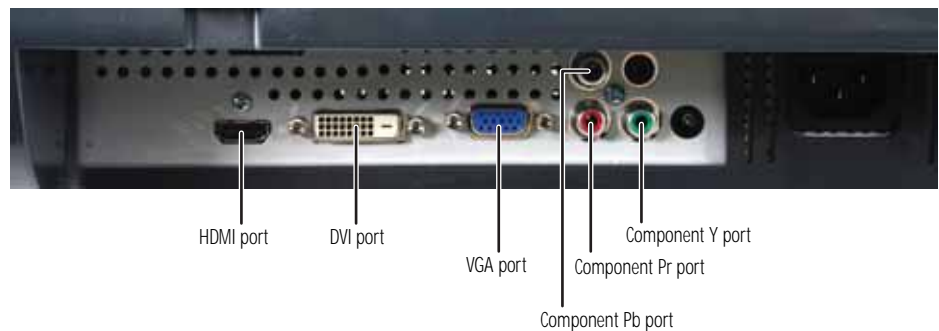
Connect the blue VGA video cable to the blue VGA video connector on the display.

- OR -

Connect an HDMI cable to the HDMI port on the display, or connect component video cables to the component video ports on the display.

✓ **Important**

For best audio and video performance, we suggest using HDMI. The digital audio signal is conveyed along the same cable as the digital video signal, and no additional audio connection is required. You may need to set your video source's audio mode to **PCM** or **ANALOG** to hear the audio. See your source device's user guide for more information.



- 3 Make sure that your computer is turned off, then connect the other end of the video cable to the matching video port on the back of your computer.

Connecting power

► **To connect power:**

- 1 Position your monitor so you can reach the back, then connect the power cord to the power connector under the back of your monitor.



- 2 Plug the power cord into a correctly grounded power outlet. We recommend using a surge protector to protect your monitor from voltage spikes.

- 3 To make sure that your monitor's power is correctly connected, check the power button on the front button panel. The power icon on the power button should be glowing purple. If the power icon is not visible, power is not connected.

Connecting a security cable

You can secure your monitor to your computer desk (or to another heavy object) with a cable lock. To connect a cable lock, follow the cable lock's instructions to connect it to the Kensington lock slot on the back of your monitor (cable lock not included).

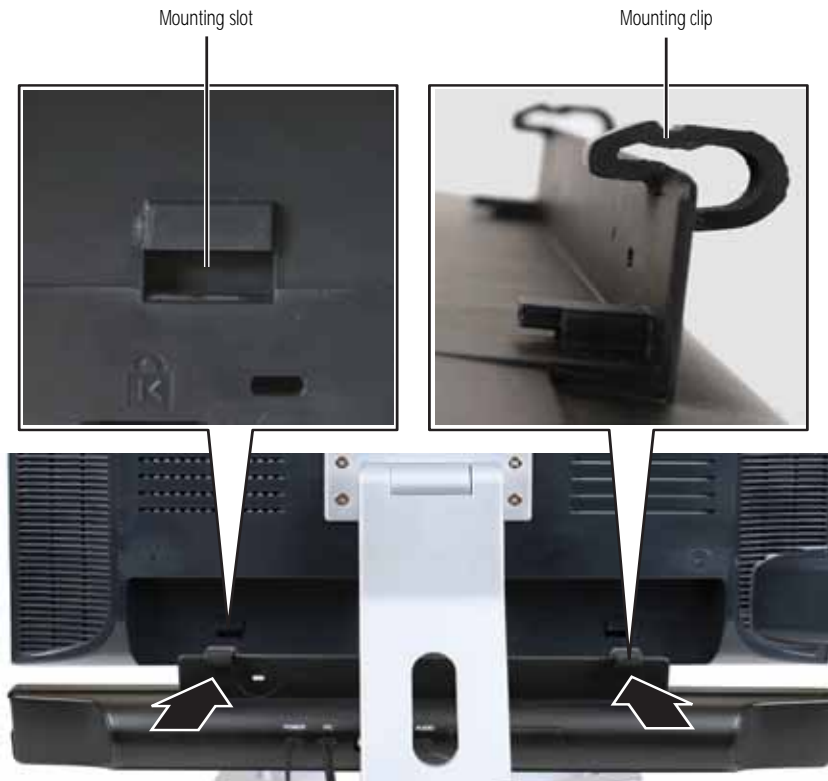


Setting up the optional speaker bar

In the United States, an optional speaker bar is available for mounting underneath your monitor. You can order a speaker bar from www.gateway.com.

► **To install the speaker bar:**

- 1 Turn off your monitor.
- 2 Tilt the screen back, then match the mounting clips on each side of the speaker bar with the mounting slots underneath your monitor.



- 3 Slide the speaker bar onto the bottom of your monitor until it snaps into place. Make sure that it is secure by pulling it downward.
- 4 Plug the speaker bar's power plug into the power connector on your monitor.



- 5 Plug the speaker bar's audio plug into the audio jack on your monitor.



✓ Important

For best audio performance, if your video connection uses HDMI, the digital audio is also conveyed along the same cable, and no additional audio connection is required. You may need to set your video source's audio mode to **PCM** or **ANALOG** to hear the audio. See your source device's user guide for more information.

■
▶ **To remove the speaker bar:**

- 1 Disconnect all audio and power cables from the speaker bar.
 - 2 Press the two clips on the back of your monitor, then slide the speaker bar back.
-

Starting your monitor

▶ **To start your monitor:**

- 1 Touch the power button on the front of monitor. The power LED on the power button changes from purple (off) to orange (standby).



- 2 Turn on your computer. After your computer is running, the power LED on your monitor's power button should be blue. Allow about 10 seconds for the display image to appear. If the power LED is not blue or you do not see a display image, check the connections. For more troubleshooting information, see ["Troubleshooting" on page 12](#).
 - 3 Adjust the tilt of your monitor for the best viewing angle.
 - 4 Use the on-screen display (OSD) to adjust other monitor settings. For more information, see ["Adjusting monitor settings" on page 6](#).
-

Adjusting monitor settings

Use your monitor controls (located on your monitor itself) and computer controls (accessible through Windows) to adjust the display image. For more information about computer controls, see [“Changing Windows screen settings” on page 10](#).

Using the EzTouch menu buttons


This monitor features an on-screen display (OSD) and EzTouch menu buttons that let you adjust contrast, brightness, and other settings for your monitor. Your monitor saves changes you make to the settings, even if you turn off your monitor.

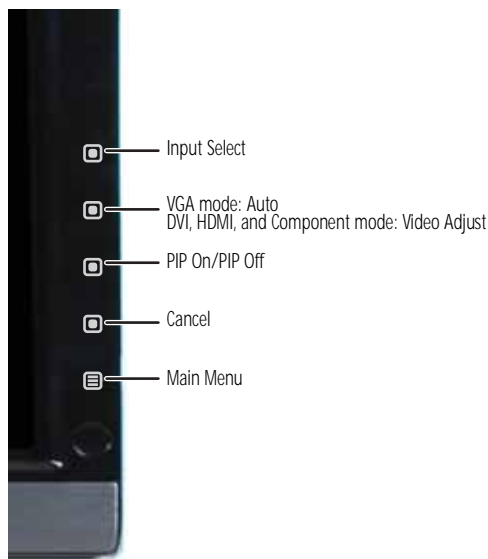
Your monitor has two levels of menus, and the functionality of the touch buttons depends on the menu that is currently open:








- The shortcut menu lets you quickly change some of the most commonly adjusted settings.
- The main menu lets you precisely adjust all levels of settings.

Using the shortcut menu

► **To use the shortcut menu:**

- 1 Touch  **Menu** on the front of your monitor. The rest of the button icons light up and the shortcut menu opens.
- 2 To use an EzTouch menu button, lightly touch its icon. For adjusting a setting's values, you can touch and hold touch buttons as you would conventional buttons.




- Touch  **Input Select** to select an available video source.
- Touch  **Auto** (VGA mode) or  **Video Adjust** (DVI, HDMI, and component modes) to adjust your display image to the ideal settings.
- Touch  **PIP On** to turn on Picture-in-Picture, and touch  **PIP Off** to turn it off.
- Touch  **Cancel** to exit the shortcut menu.
- Touch  **Main Menu** to open the main menu.
- To turn off the button icons and close the menu, wait about ten seconds without touching a button.

■

Using the main menu

► To use the main menu:

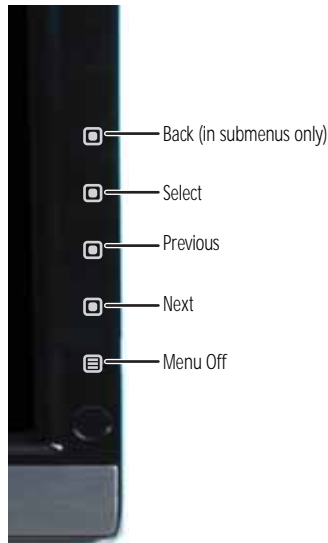
- 1 Touch  **Menu** on the front of your monitor. The rest of the button icons light up and the shortcut menu opens.



Tip






To use a button, lightly touch its icon. For adjusting a setting's values, you can touch and hold touch buttons as you would conventional buttons.

- 2 Touch  **Main Menu**. The main menu opens.

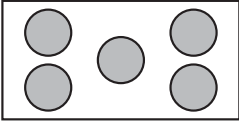
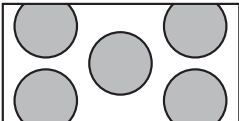
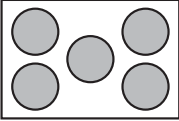
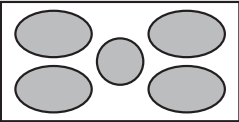


Tip

While the OSD is active, on-screen labels appear next to the buttons to help you identify them.

- 3 Touch  **Previous** or  **Next** to highlight a setting, then touch  **Select** to open the selected menu or setting.
- 4 Touch the indicated buttons to adjust the setting or change the option.
- 5 Touch  **Back** to return to a previous menu.
- 6 When you have finished making all adjustments, touch  **Menu Off** to exit.

OSD Menu	Description
Main menu	<p>Auto—Automatically adjusts the picture to optimum settings. (VGA mode only)</p> <p>Picture—Opens the Picture menu, where you can adjust brightness, contrast, and gamma.</p> <p>PIP Settings—Opens the PIP Settings menu, where you can adjust the source, position, size, and transparency of the Picture-in-Picture image.</p> <p>Video adjust—Opens the Video Adjust menu, where you can adjust the sharpness, video scaling, overscan, noise reduction, film mode detection, and auto video enhance values of the video image from a source such as component video.</p> <p>Geometry—Opens the Geometry menu, where you can adjust image size and minimize distortions. (VGA mode only)</p> <p>Advanced—Opens the Advanced menu, where you can adjust color balance, change the OSD language, and display information about current monitor settings.</p> <p>Reset—Resets your monitor to the factory settings for the currently selected video source.</p>
Picture menu	<p>Brightness—Adjusts the amount of light in the darkest portion of the picture. Use the lowest brightness setting you are comfortable with to maximize the life of the monitor backlights. You may need to readjust brightness after your monitor warms up.</p> <p>Contrast—Adjusts the level of white between the lightest and darkest portions of an image.</p> <p>Gamma—Customizes the gamma level. High gamma levels increase white levels and low gamma levels increase contrast.</p>

OSD Menu	Description
PIP Settings menu	<p>PIP Display—Toggles the display of the PIP window.</p> <p>Source—Sets the source of the video used in the PIP window.</p> <p>Position—Sets the position of the PIP window on the main screen.</p> <p>Size—Sets the size of the PIP window.</p> <p>Transparency—Sets the transparency of the PIP window. The PIP window can be from almost transparent to completely opaque. When the PIP window is transparent, you are able to see through the PIP video display to your Windows desktop, which makes it easier to access your computer programs while watching video.</p> <p>Swap—Switches the PIP image to the main image, and the main image to the PIP image.</p> <p>PIP Picture—Opens a menu where you can set the PIP brightness, contrast, saturation, and tint/hue.</p>
Video Adjust menu	<p>Unless otherwise indicated, these settings apply only to SD (standard definition) video at 480i and below. Where "PC input" is indicated, the resolutions that apply are from 800 × 600 to 1680 × 1050.</p> <p>Sharpness—Adjusts sharpness for video images.</p> <p>Video Scaling—Sets video aspect ratios and scaling between Wide, Zoom, 1:1, and Panoramic modes. PC input: sets resolution aspect ratios and scaling between Wide, Zoom, and 1:1.</p> <p><i>Wide mode</i> stretches a standard broadcast or full-frame image to fill the entire screen. Widescreen (1.76:1) images fill the entire screen without distortion, while widescreen (1.85:1 and 2.35:1) images appear without distortion but with black bars at the top and bottom. PC input: Stretches the image to fit the entire screen.</p>  <p><i>Zoom mode</i> crops off a portion of a widescreen image in order to fill the entire screen with a distortion-free and black bar-free image. PC input: Zooms the image to fill the screen from top to bottom with black bars on the left and right sides of the image.</p>  <p><i>1:1 mode</i> preserves a movie's original aspect ratio, so a standard broadcast or full-frame movie appears with black bars on the left and right of the image. PC input: Preserves the original aspect ratio of the resolution by using black bars on the left and right sides and variable sizes of black bars on the top and bottom of the image (depends on resolution).</p>  <p><i>Panoramic mode</i> uses selective distortion to stretch a standard broadcast or full-frame image to fill the entire screen. Unlike Wide mode, Panoramic mode stretches only the left and right sides of the image, and leaves the center of the image distortion free.</p>  <p>Overscan—A video signal is often displayed slightly cut off at all edges. If overscan is turned off, you may notice video anomalies on the edges of the video being displayed. This is normal and is part of the data embedded in any broadcast video signal. To avoid seeing these anomalies, turn Overscan on. (Component and HDMI video only)</p> <p>Noise Reduction—Uses noise reduction filters that adapt to the amount of noise and motion from the video source.</p> <p>Film Mode Detection—Film Mode Detection detects frame rates of the source image and adapts the frame rate of the display for ultimate image quality.</p> <p><i>Bad Edit Detection and Correction</i>—corrects incorrectly synchronized video.</p> <p>Auto Video Enhance—Enables DCDi, Cross Color Reduction, and MADi for optimized video performance.</p> <p><i>DCDi by Faroudja</i>—Directional Correlation De-interlacing reduces jagged edge artifacts on diagonal lines.</p> <p><i>Cross Color Reduction</i>—Reduces cross-color artifacts, such as unintentional flashing colors or rainbow patterns, that result from some types of video signals.</p> <p><i>MADi</i>—Motion-Adaptive De-Interlacing ensures a more static (flicker-free) display image for image sections not containing moving elements, and ensures smoother edges for moving elements.</p>

OSD Menu	Description
Geometry menu (VGA mode only)	H Position —Moves the display image left and right.
	V Position —Moves the display image up and down.
	Clock —Minimizes any vertical bars or stripes visible on the screen background. The horizontal screen size will also change.
	Phase —Minimizes any horizontal distortion and clears or sharpens the displayed characters.
Advanced menu	Color —Customizes the color levels.
	Language —Changes the language of the OSD.
	LED Mode —Changes the brightness of the Standby and Power LED to Day Mode or Nite Mode. When watching movies in a darkened room, you may want to change the LED mode to Nite Mode to avoid an over-bright, distracting power LED indicator.
	DVI Video mode —Changes the DVI video mode by enabling either RGB Color Space (used for digital input) and YUV Color Space (used for analog TV input such as NTSC, PAL, and SECAM).
	Information —Displays current screen resolution and input source for the main display.
	Resolution reminder —If the computer display resolution (VGA and DVI) is not set to 1680 × 1050, displays a reminder that you should change your computer's settings to use the optimum 1680 × 1050 resolution. If you prefer using your monitor at a resolution less than 1680 × 1050, use this option to turn off the Resolution Reminder. For information on changing your computer's display resolution, see "Changing Windows screen settings" on page 10 .
	UltraResponse —If you experience video quality problems with shadows in fast-moving images, you can disable this to return to the display's native response time.
Reset All —Resets all values to the factory settings.	

Using Picture-in-Picture (PIP)

Picture-in-Picture (PIP) is a convenient way to view video from multiple video sources at the same time. Refer to the following chart to determine which combinations of video sources can be used as a PIP display.

Main display	PIP display			
	VGA**	DVI**	Component (Y Pb Pr)	HDMI
VGA	-	OK	No	OK
DVI	OK	-	OK	No
Component (Y Pb Pr)	No	OK	-	OK
HDMI	OK	No	OK	-

Only 480i component (Y Pb Pr) video can be used with VGA as a PIP. With this combination, the Swap feature is not available. To switch to full-screen component video when 480i content is used as a PIP, touch the **Input Select** button in the **Shortcut** menu.

If a 480p source is input to the Y Pb Pr jacks and Y Pb Pr is a PIP display within a VGA main display, the PIP image will be distorted. Change the output of your external Y Pb Pr device to 480i if PIP is required with VGA to eliminate the PIP distortion. For more information, see your Y Pb Pr device's user guide.

** For some video resolutions, refresh rates, and video scaling modes, PIP may not be allowed. If you receive a message that PIP is not available, try the following:

- Adjust the refresh rate in Windows to 60 Hz. See Windows online Help for more information.
- Adjust the video scaling mode to Wide on your monitor.
- Change the resolution of the Windows desktop to match your monitor's full resolution of 1680 × 1050. For more information see ["Changing color depth and screen resolution" on page 10](#).

Changing Windows screen settings

Adjusting the color depth and screen area are two of the most basic display settings you may need to change. You can also adjust settings such as the screen background and screen saver.

Changing color depth and screen resolution

Color depth and screen resolution are two of the most basic monitor settings you may need to change to suit your needs.

Color depth is the number of colors your computer uses to display images on your monitor. Most images look best displayed with the maximum number of colors available. If the color in your images seems "false" or "jumpy," especially after you have played a game or run a video-intensive program, check the color depth setting and return it to the highest color setting, if necessary.

Screen resolution is the number of pixels (individual colored dots) your computer uses to display images on your monitor. The higher the resolution, the more information and screen components (such as icons and menu bars) can be displayed on your monitor.



Help

For more information about adjusting the screen, click **Start**, then click **Help and Support**. Type **adjusting monitor settings** in the **Search Help** box, then press **ENTER**.

► To change the color depth or screen resolution in Windows Vista:

- 1 Click **Ⓜ (Start)**, **Control Panel**, then under **Appearance and Personalization**, click **Adjust Screen Resolution**. The *Display Settings* dialog box opens.
- 2 To change the color depth, click the **Colors** list, then click the color depth you want.
 - **Low (8-bit)** = 256 colors
 - **Medium (16-bit)** = 65,500 colors
 - **Highest (24-bit)** = 16,700,000 colors
- 3 To change the screen resolution, drag the **Resolution** slider to the size you prefer.
- 4 Click **Apply**. If the new settings do not look right, click **No**. If the new settings make the screen illegible and you cannot click **No**, the settings return to their previous values after several seconds.
- 5 Click **OK**, then click **Yes** to save your changes.
 -

► To change the color depth or screen resolution in Windows XP:

- 1 Right-click any empty space on the desktop, then click **Properties**. The *Display Properties* dialog box opens.
- 2 Click the **Settings** tab.
- 3 To change the color depth, click the arrow button to open the **Color quality** list, then click the color depth you want.
 - **Low (8-bit)** = 256 colors
 - **Medium (16-bit)** = 65,500 colors
 - **Highest (24-bit)** = 16,700,000 colors
- 4 To change the screen resolution, drag the **Resolution** slider to the size you prefer.
- 5 Click **OK**, then click **Yes**.
 -

EzTune software

When installed onto your computer, EzTune™ software (included on CD) lets you control many of the monitor settings from your computer. With EzTune, you can:

- Change the orientation of the image (landscape to portrait). (Requires the optional height-adjustable stand available in the United States at www.gateway.com.)
- Change brightness, contrast, and color balance
- Change screen geometry
- Set the display position and resolution

For more information, see the program's CD or the installed program's online help.



Power management

Energy declaration

When connected to a computer that supports the VESA Display Power Management Signaling (DPMS) Protocol, your monitor can conserve significant energy by reducing power consumption during periods of non-use. When your computer goes into the energy saving mode, your monitor will then enter the Active Off mode (sleep). In the Active Off mode the Power LED will still show orange.

Use these conventions and the power can be reduced to the following levels:

VESA State	LED Indicator	Power Consumption
On	Blue	<55 W
Standby	Orange	<2 W
Off	Purple	<1 W

To “wake” your monitor when it is in Standby/Active Off mode, move the mouse or press any keyboard key.

You can change your monitor’s power management settings using the Windows Control Panel. For more information, see your computer’s *User Guide*.

Maintaining

To keep your monitor in optimal working order:

- Do not block the ventilation holes.
- Do not expose your monitor to rain or use near water.
- Keep your monitor away from radiators or heat vents.
- Keep your monitor out of direct sunlight.



Caution

Do not use any type of abrasive pad or glass cleaner. You will permanently scratch the screen.

- To clean your monitor, use a soft cloth slightly moistened with water only. Wipe the cabinet, screen, and controls.

Troubleshooting



Important

Make sure that your monitor has warmed up for approximately 30 minutes before making any judgments about the picture quality.

If you have problems with your monitor, the information in this troubleshooting section may help you solve them.

No power

Make sure that the power cord is connected correctly to both the back of your monitor and the power outlet. For more information about connecting the power cord, see [“Connecting your monitor” on page 2](#).

No picture

- Touch **Menu**, then **Input Select** to make sure that you have selected the correct video source.
- Make sure that the power cord is connected correctly to both the back of your monitor and the power outlet. For more information about connecting the power cord, see ["Connecting power" on page 2](#).
- Make sure that the video cable is connected securely to the back of your monitor and computer. For more information about connecting the video cable, see ["Connecting video inputs" on page 2](#).
- Make sure that your monitor is turned on.
- If the power LED is orange:
 - Make sure that your computer is turned on.
 - Move the mouse or press any key on the keyboard to bring your monitor out of sleep mode.
 - Restart your computer with your monitor turned on.
 - Make sure that the video cable is not damaged.
 - Check the end of the video cable for any pins that might be bent or pushed in.
- Turn off your monitor and unplug the video cable from the back of your computer. Turn your monitor back on and wait for ten seconds. If your monitor is functioning correctly, a "No Signal" message appears. For more information about connecting the video cable, see ["Connecting video inputs" on page 2](#).

Display colors are wrong

- Touch **Menu**, **Main Menu**, then touch **Auto** to automatically adjust the display image to the ideal settings. (VGA mode only)
- Restart your computer with your monitor turned on.
- Make sure that the video cable is connected securely to the back of your monitor and your computer. For more information about connecting the video cable, see ["Connecting video inputs" on page 2](#).
- Make sure that the video cable is not damaged.
- Check the end of the video cable for any pins that might be bent or pushed in.




Picture has shadows or "ghosts"

- Touch **Menu**, **Main Menu**, then touch **Auto** to automatically adjust the display image to the ideal settings. (VGA mode only)
- Remove any extension cables or switchboxes.
- Make sure that the video cable is connected securely to the back of your monitor and your computer. For more information about connecting the video cable, see ["Connecting video inputs" on page 2](#).
- Make sure that the video cable is not damaged.
- Check the end of the video cable for any pins that might be bent or pushed in.
- Make sure that your monitor connection is using the VGA cable that came with your monitor.

Color is not uniform

- Touch **Menu**, **Main Menu**, then touch **Auto** to automatically adjust the display image to the ideal settings. (VGA mode only)
- Make sure that your monitor warms up for at least 30 minutes before making a final judgment about color uniformity or brightness.

Image is not sized or centered correctly

- Touch  **Menu**,  **Main Menu**, then touch  **Auto** to automatically adjust the display image to the ideal settings. (VGA mode only)
- Use the position controls to adjust the image. For instructions on how to adjust the display image position, see [“Adjusting monitor settings” on page 6](#).

Your monitor has pixels that are always dark or too bright

- This condition is normal and inherent in the TFT technology used in active-matrix LCD screens. Gateway's inspection standards keep these to a minimum. If you feel these pixels are unacceptably numerous or dense on your display, contact Gateway Customer Care to identify whether a repair or replacement is justified based on the number of pixels affected.

Configuring video settings

The image looks stretched or fuzzy when you connect your monitor to your computer.

- You must adjust the operating system's display settings to match your monitor's optimal (*native*) 1680 × 1050 setting. For information on adjusting settings in Windows, see [“Changing color depth and screen resolution” on page 10](#).

You do not see 1680 × 1050 available in the Windows display control panel.

- Make sure that your video card can display at 1680 × 1050 resolution.
- This may be caused by older video drivers on your computer. See the Gateway support Web site (www.gateway.com) for updated video drivers for your computer. You can also go directly to your video card's support Web site for the most up-to-date video drivers. The Web sites for the major video card manufacturers are:

ATI®: www.ati.com

Intel®: www.intel.com

Nvidia®: www.nvidia.com

When you run your games, you do not see support for widescreen displays.

- Newer games are adding support for widescreen displays as the widescreen format becomes more popular. Check the game's Web site for updates. You can also consult the following Web site for specific settings and options to configure older games to support widescreen: www.widescreengamingforum.com.

Some adjustments may require you to make changes to the Windows System Registry. We recommend making a complete system backup before changing the System Registry.

When you display video from a component video source, the video looks overly compressed.

- See your video device's user manual to adjust the video or TV format output to 16:9. Setting this option to 4:3 results in compressed video. This is done differently on all brands of video devices, so it is important that you read your video device's user guide or the help tools within your video device's software.

You see black bars on left and right of the video.

- Touch  **Menu**,  **Video Adjust**, then touch  **Video Scaling**. To fill more of the screen, choose **Wide**, **Zoom**, **1:1** (normal), or **Panoramic** modes.

When you try to use Picture in Picture (PIP) component video at 480p, 720p, or 1080i, either no video is displayed or you see corrupted video.

- This is a normal operation of your monitor. If you want to view component video in PIP, adjust the video output of your external device to 480i.

You need to know whether you can connect the HDMI output of your external video device to the DVI port of your monitor.



Important

Although the HDMI interface supports audio, no audio is sent to your monitor. You must separately connect the audio output of your video device to an external audio amplifier.

- Yes, you can. When using the digital connection, your video content remains completely digital from your external video device (such as a cable box, HD DVR, or DVD player). This results in a superior digital image. Also, in this configuration the PIP can support the input of all HD resolutions.

Gaming

You need to know whether you can connect your game console to this monitor.

- Yes, you can, if your game console supports HDMI or component video. Using optional video cables, you can connect your game console directly to your monitor. If your game console supports Component (YPbPr), this results in the best picture quality.

Speaker bar does not work

I installed the speaker bar, but no sound is coming out of the speakers.

- Make sure that the speaker bar power cord is plugged into the speaker bar power connector under your monitor.
- Check the position of the audio input selection switch on the left side of the speaker bar.
- If you are using HDMI as the audio and video source, make sure that the HDMI audio cable is connected to the HDMI audio output on your monitor. Also make sure that your HDMI audio source is set to **PCM** or **Analog** audio.

I checked all the connections, but I still do not get any sound.

- Your headphone/speaker jack may have been muted using Windows sound controls. To check your headphone/speaker mute settings, click the speaker icon in the Windows taskbar, or click **Start, Control Panel, Sounds and Audio Devices**, the **Volume** tab, then click **Advanced**. For optimum volume control using the speaker bar, we recommend that you set the Windows volume mid-way between the lowest and highest setting.

I want to plug in my headphones, but there is a headphone jack on both sides of the speaker bar. Which should I use?

- You can use either jack or both jacks at the same time.

The sound coming from the speakers sounds distorted.

- Turn down the volume until the distortion disappears.
- Check the audio output volume of the sound device the speaker bar is connected to. If the audio device's output volume is set too high, the speaker bar's sound may always be distorted. To adjust the audio device's output volume, see the device's user guide. To adjust the volume in Windows XP, click the speaker icon in the Windows taskbar, or click **Start, Control Panel, Sounds and Audio Devices**, the **Volume** tab, then click **Advanced**. For optimum volume control using the speaker bar, we recommend that you set the Windows volume mid-way between the lowest and highest setting.

I plugged my microphone into the speaker bar's microphone jack, but my computer cannot record any sound.

- Make sure that the speaker bar's pink microphone plug is connected to the microphone jack on your computer.
- Your microphone jack may have been muted using Windows sound controls. To check your microphone's mute settings, click the speaker icon in the Windows taskbar, or click **Start, Control Panel, Sounds and Audio Devices**, the **Volume** tab, then click **Advanced**.

HDCP

What is HDCP and how should you troubleshoot it?

High-bandwidth Digital Content Protection (HDCP) is a specification developed by the Intel® Corporation to protect digital entertainment content that uses a digital visual interface (DVI).

HDCP encrypts the transmission of digital content (signal) between the video source (computer, DVD player, or set-top box) and the digital display (monitor, digital television/DTV, or projector). HDCP is not designed to prevent copying or recording of digital content, but only to protect the integrity of the content as transmitted.

You see “noise” or “trash” on the screen.

- When your display’s digital capabilities exceed a digital broadcast signal, the signal is increased (*up-converted*) to match the display capabilities. Up-converting can cause “noise” or “trash.” The signal on DVI-D is HDCP encoded. Stop and restart the source to allow renegotiation.

How HDCP works.

- Implementation of HDCP requires a license obtainable from the Digital Content Protection, LLC, which then issues a set of unique secret device keys to all authorized devices. During authentication, the receiving device only accepts content after it acknowledges the keys. To further prevent stealing of the data or line tapping, the transmitter and receiver generate a shared secret value that is constantly checked throughout the transmission. After authentication is established, the transmitter encrypts the data and sends it to the receiver for decryption.

You lose the signal to the display while watching a movie on a HDCP-equipped component.

- The component must be restarted to establish renegotiation.

For example, while watching a movie on a HDCP-enabled DVD player, you change the receiving device (DTV, monitor, or projector) input to watch broadcast TV, then change the input back to watch the DVD movie. However, you are unable to watch the movie. This is because when the input was changed, the receiver lost the HDCP signal. Restart the HDCP-enabled DVD player to allow renegotiation.

A movie starts, but then slowly fades to static.

- The receiving device is not HDCP compatible or it is not negotiating correctly. Restart the video source and re-plug all video cables from the source to the TV.

How to determine whether a component is HDCP compliant.

- If the video source device does not have a DVI or HDMI connection, it is not HDCP compliant.

DCDi by Faroudja

What is DCDi by Faroudja?

DCDi® by Faroudja is a video mode algorithm that stands for Directional Correlation De-Interlacing. It was initially designed for fast-action video-based material. Its general purpose is to reduce jagged edges along diagonal lines caused by interpolation. Utilizing this algorithm, DCDi does not simply weave together two fields of video that match. DCDi creates new information through interpolation which “smooths” the diagonal edges. DCDi constantly monitors edge transitions and fills in any of the gaps that need smoothing.

You have your monitor connected to your notebook's VGA port, but you see no image on the screen.

You have two options:

- If your notebook supports dual displays, you can use both your notebook's display and this monitor in extended desktop multi-monitor mode. See Windows Help to learn how to enable multiple monitors.
- You can also use this monitor as your primary monitor and not use the notebook's screen. Notebook computers typically have an FN key combination that lets you toggle between your notebook's display and an externally attached display. On Gateway notebooks, this key combination is FN+F4. The F4 key is located along the top row of keys. See your notebook's user guide for more information.

Specifications

Specifications are subject to change without notice or obligation. Many products for Gateway and its subsidiaries are custom engineered by our suppliers to Gateway specifications and may vary from similarly marketed products.

Panel size	22 inches (diagonal)
Panel type	22-inch viewable TFT active matrix TN High brightness, non-glare
Pixel resolution	1680 × 1050 (native) (60 Hz)
Pixel pitch	0.0111 × 0.0111 inches (0.282 mm × 0.282 mm)
Aspect ratio	16:10
Brightness	300 cd/m ²
Contrast ratio	1000:1
Viewing angles	160° horizontal, 160° vertical
Response time	<i>UltraResponse</i> enabled: 4 ms (typical) <i>UltraResponse</i> disabled: 5 ms (typical)
Frequency	Horizontal: 48-76 KHz Vertical: 24-83 Hz
Lamp type/life	40,000 -50,000 hours (minimum)
Colors	16.7 million
OSD languages	English, French, Spanish, Italian, Japanese
Connections and inputs	<ul style="list-style-type: none"> ▪ Analog (VGA): 15-pin mini d-sub VGA ▪ Digital (DVI-D): 24-pin DVI-D (supports 480i, 480p, 720p, and 1080i) Includes HDCP (High-bandwidth Digital Content Protection) ▪ HDMI video (supports 480i, 480p, 720p, and 1080i) ▪ HDMI audio (output) ▪ Component Y Pb Pr (supports 480i, 480p, 720p, 1080i, and 1080p) ▪ AC power input ▪ Speaker bar power output
Included cables	15-pin mini d-sub analog VGA (right-angle) Power
Power consumption	Normal operation: <55 W Standby mode: <2 W Off: <1 W
Power input	100~240 VAC, 50/60 Hz (built-in power supply)
Certifications	CSA, cUS, FCC Class B, CE, VCCI, and TCO'99 where applicable.
Wall mount bracket	VESA 4 × 3.937 inches (4 × 100 mm)
Weight	Net weight (with stand): 13.44 lbs. (6.1 kg) Gross weight (with packaging): 17.85 lbs. (8.1 kg)
Dimensions	20.24 × 16.85 × 7.2 inches (514 × 428 × 182 mm)
Temperature	Operating: 41 ~ 95°F (5 ~ 35°C) Storage: -4 ~ 140°F (-20 ~ 60°C)
Humidity	Operating: 20~80% (non-condensing) Storage: 5~90% (non-condensing)

Altitude Operating: 12,000 feet (3,658 m)
Storage: 40,000 feet (12,192 m)

Security Kensington lock slot

Video modes

Resolution	Horizontal frequency (kHz)	Vertical frequency (Hz)	Available in DVI mode
720 × 400	31.469	70	N
640 × 480	31.469	60	Y
640 × 480	37.9	72	N
640 × 480	37.5	75	N
800 × 600	35.1	56	N
800 × 600	37.879	60	Y
800 × 600	48.1	72	N
800 × 600	46.875	75	N
1024 × 768	48.363	60	Y
1024 × 768	56.5	70	N
1024 × 768	60.123	75	N
1152 × 864	67.5	75	N
1280 × 1024	64	60	Y
1280 × 1024	80	75	N
1440 × 900	55.935	60	Y
1440 × 900	70.635	75	N
1680 × 1050	65.29	60	Y
1680 × 1050	82.3	75	N

Safety, Regulatory, and Legal Information

- [Important safety information](#)
- [Environmental information](#)
- [Regulatory compliance statements](#)
- [Notices](#)

Important safety information

Warning

Always follow these instructions to help guard against personal injury and damage to your Gateway product.

Warning

Do not use Gateway products in areas classified as hazardous locations. Such areas include patient care areas of medical and dental facilities, oxygen-laden environments, or industrial facilities.

Your Gateway product is designed and tested to meet the latest standards for safety of information technology equipment. However, to ensure safe use of this product, it is important that the safety instructions marked on the product and in the documentation are followed.

Setting up your system

- Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.
- Do not use this product near water or a heat source such as a radiator.
- Set up the system on a stable work surface.
- The product should only be operated from the type of power source indicated on the rating label.
- If your product has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.
- Openings in the monitor case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space, at least 6 inches (15 cm), around the system for ventilation when you set up your work area. Never insert objects of any kind into the monitor ventilation openings.
- Some products are equipped with a three-wire power cord to make sure that the product is properly grounded when in use. The plug on this cord will only fit into a grounding-type outlet. This is a safety feature. If you are unable to insert the plug into an outlet, contact an electrician to install the appropriate outlet.
- If you use an extension cord with this system, make sure that the total ampere rating on the products plugged into the extension cord does not exceed the extension cord ampere rating.

Care during use

Warning

To prevent electric shock, never remove the cover. No user serviceable parts inside. Refer servicing to qualified service personnel.

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill anything on the system. The best way to avoid spills is to avoid eating and drinking near your system.
- Do not expose the monitor to rain or use near water. If the monitor does get exposed to moisture, unplug it and allow it to dry for 24 hours. Call Gateway Customer Care for advice on whether the monitor is safe to turn back on.
- When the monitor is turned off, a small amount of electrical current still flows through the monitor. To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before cleaning the system.
- Unplug the system from the wall outlet and refer servicing to qualified personnel if:
 - The power cord or plug is damaged.
 - Liquid has been spilled into the system.
 - The system does not operate properly when the operating instructions are followed.
 - The system was dropped or the cabinet is damaged.
 - The system performance changes.

Replacement parts and accessories

Use only replacement parts and accessories recommended by Gateway.

Environmental information

EPA ENERGY STAR®



As an ENERGY STAR Partner, Gateway has determined that this product meets or exceeds the ENERGY STAR 4.0 performance guidelines for computer energy efficiency and power management.

ENERGY STAR Power Management (standard in the Windows operating system) places inactive components (CPU, hard drives, and other components except memory) into a low-power Sleep mode. Sleep mode uses less energy to run your computer, saves on your energy costs, and helps protect the environment by reducing greenhouse gas emissions.

Your computer was shipped with Sleep mode enabled. While your computer is in Sleep mode, the power indicator flashes. To use your computer after it has entered Sleep mode, move the mouse, press a key on the keyboard, or press the power button to "wake" it up.

For more information about the power management features of your Gateway desktop computer, see "Changing power-saving settings" in the online *User Guide*.

For more information about the power management features of your Gateway notebook, see "Managing Power" in the online *Reference Guide*.

? Help

For more information about Sleep mode in Windows Vista, click **Start**, then click **Help and Support**. Type **sleep** in the **Search Help** box, then press ENTER.

Recycling



Mercury Warning

Lamp(s) inside this product contain mercury and must be recycled or disposed of according to local, state, or federal laws.

The product you have purchased contains extracted natural resources that have been used in the manufacturing process. This product may contain substances known to be hazardous to the environment or to human health.

To prevent releases of harmful substances into the environment and to maximize the use of our natural resources, Gateway provides the following information on how you can responsibly recycle or reuse most of the materials in your "end of life" product.

Waste Electrical and Electronic Equipment (commonly known as WEEE) should never be disposed of in the municipal waste stream (residential garbage collection). The "Crossed-Out Waste Bin" label affixed to this product is your reminder to dispose of your "end of life" product properly.



Substances such as glass, plastics, and certain chemical compounds are highly recoverable, recyclable, and reusable. You can do your part for the environment by following these simple steps:

- When your electrical or electronic equipment is no longer useful to you, "take it back" to your local or regional waste collection administration for recycling.
- In some cases, your "end of life" product may be "traded in" for credit towards the purchase of new Gateway equipment. Call Gateway to see if this program is available in your area.
- If you need further assistance in recycling, reusing, or trading in your "end of life" product, you may contact us at the Customer Care number listed in your product's user guide and we will be glad to help you with your effort.

Finally, we suggest that you practice other environmentally friendly actions by understanding and using the energy-saving features of this product (where applicable), recycling the inner and outer packaging (including shipping containers) this product was delivered in, and by disposing of or recycling used batteries properly.

With your help, we can reduce the amount of natural resources needed to produce electrical and electronic equipment, minimize the use of landfills for the disposal of "end of life" products, and generally improve our quality of life by ensuring that potentially hazardous substances are not released into the environment and are disposed of properly.

For additional recycling information specific to your area, please go to www.mpccorp.com/services/shared/recycle.html.

Regulatory compliance statements

United States of America

Federal Communications Commission (FCC) Unintentional emitter per FCC Part 15

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio and television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment to an outlet on a different circuit from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Compliance Accessories: The accessories associated with this equipment are: shielded video cable. These accessories are required to be used in order to ensure compliance with FCC rules.

FCC declaration of conformity

Model: HD2250



Caution

Changes or modifications not expressly approved by Gateway could void the FCC compliance and negate your authority to operate the product.



California Proposition 65 Warning

This product contains chemicals known to the State of California to cause cancer, birth defects, and/or other reproductive harm. For additional information regarding this product warning, go to www.gateway.com/prop65.

Responsible party:

Gateway, Inc.
7565 Irvine Center Drive
Irvine, CA 92618 USA

This device complies with Part 15 of the FCC Rules. Operation of this device is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada

Industry Canada (IC) Unintentional emitter per ICES-003

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

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