

RADEON® X850 Series

User's Guide

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Documentation Updates

ATI is constantly improving its product and associated documentation. To maximize the value of your ATI product, you should ensure that you have the latest documentation. ATI's documentation contains helpful installation/configuration tips and other valuable feature information.

(i) IMPORTANT SAFETY INSTRUCTIONS

- Read Instructions All the safety and operating instructions should be read before the product is operated.
- Retain Instructions The safety and operating instructions should be retained for future reference.
- Heed Warnings All warnings on the product and the operating instructions should be adhered to.
- Compatibility This option card is for use only with IBM AT or compatible UL Listed personal computers that have Installation Instructions detailing user installation of card cage accessories.
- Grounding For continued protection against risk of electric shock
 and fire, this accessory should be installed only in products equipped
 with a three-wire grounding plug, a plug having a third (grounding)
 pin. This plug will only fit into a grounding-type power outlet. This is a
 safety feature. If you are unable to insert the plug into the outlet,
 contact your electrician to replace the obsolete outlet. Do not defeat
 the safety purpose of the grounding-type plug.
- Secure Attachment All card securement pins shall be completely tightened as to provide continuous bonding between the option card and the PC chassis.
- Outdoor Antenna Grounding Since an outdoor antenna or cable system is connected to the product, be sure that the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to the antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection of grounding electrodes, and requirements for the grounding electrode.
- Lightning For added protection for this product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet, and disconnect the antenna or cable system. This will prevent damage to the product due to lightning and power-line surges.
- Power Lines An outside antenna system should not be located in the vicinity of overhead power lines or other light or power circuits, or where it can fall into such power lines or circuits.
- Antenna Installation When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them may be fatal.
- Note to CATV System Installer This reminder is provided to call
 the CATV systems installer's attention to Section 820-40 of the NEC,
 which provides guidelines for proper grounding and, in particular,
 specifies that the cable ground shall be connected to the grounding
 system of the building, as close to the point of cable entry as
 practical.

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CHAPTER 1:

Introduction

System Requirements

Hardware	 Intel® Pentium® 4/III; Celeron II™. 128 MB of system memory; 256 MB or more for best performance. Motherboard with free PCI Express™ slot and correct PCIe chipset driver. Note: The RADEON® X850 Series requires a free expansion slot next to the PCI Express™ slot. CD-ROM drive (for installation software). PCI Express™ compatible system with a specialized 12v graphics card power connector. 350 watt or greater power supply recommended. Consult your computer system manual to ensure the power supply is designed to accommodate a high-end graphics card with a peak dissipation above 75 watts.
Operating System	Windows® XP (Home or Pro)Windows® 2000
Monitor	 High-resolution MultiSync or multi-frequency monitors or any other type of VGA monitor. Digital flat-panel (DFP) displays or digital CRT display.

External Connectors.

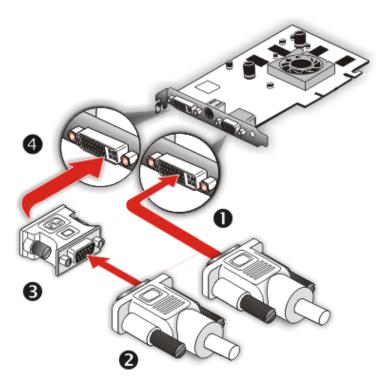
- 2 DVI-I outputs.
- S-Video output.

CHAPTER 2:

Using Multiple Displays

Connecting Your Monitors

Your RADEON® X850 Series provides hardware support for two DVI-I monitor or two VGA monitors using the supplied DVI-I-to-VGA adapter. It also provides TV output via a S-Video Out or Composite Out connector.



Connections and Adapters for the RADEON® X850 Series Card

- DVI Monitor Connector.
- VGA Monitor Connector. To connect a VGA monitor to the DVI-I connector, plug the supplied DVI-I-to-VGA adapter into the DVI-I connector, then plug your monitor cable into the adapter

Connections and Adapters for the RADEON® X850 Series Card

6	DVI-I-to-VGA Adapter.
4	DVI-I Backplate Connection. To connect a flat panel, plug the monitors DVI-I connector into the DVI-I connection.

Note: If you use multiple monitors, the RADEON® X850 Series card must be the primary graphics card. Normally, the system BIOS determines which graphics card will be the primary.

To connect your monitors

- **1** Power off your computer and monitors.
- **2** Plug the monitor cables into their appropriate connectors.
- **Power on** your monitors first, and then restart your computer so that Windows® can detect the new hardware settings.
- **4** When the **New Hardware Found** Wizard appears, at the appropriate prompt insert the ATI Installation CD to load the drivers for your RADEON® X850 Series card.

Display Configurations

Your RADEON® X850 Series graphics card provides dual display functionality and TV Out. The following table lists the different ways you can connect displays to your card.

Display Configuration	Connector(s) Used	Comments
Single DFP display	DVI-I connector	DFP - digital flat panel display.
Single CRT display	DVI-I connector with DVI-I-to-VGA adapter	CRT- cathode ray tube analog display.
Single TV	S-Video Out	The S-Video out can also support a composite connection via the S-Video-to-Composite adapter.
Single HDTV display	S-Video Out to HDTV (YPrPb) cable	HDTV - High Definition Television

Display Configuration	Connector(s) Used	Comments
DFP display + TV	DVI-I connector + S-Video out	
CRT display + TV	DVI-I-to-VGA adapter + S-Video Out	UNSUPPORTED CONFIGURATION if the CRT display is attached to the DVI-I connector via the DVI-I-to-VGA adapter.
CRT display + HDTV	DVI-I-to-VGA adapter + S-Video Out to HDTV (YPrPb) cable	
DFP display + HDTV	DVI-I connector + S-Video Out to HDTV (YPrPb) cable	
CRT display + DFP display	DVI-I-to-VGA adapter + DVI-I connector	
CRT display + CRT display	DVI-I-to-VGA adapter + DVI-I-to- VGA adapter	The DVI-I connector can support a CRT display using the DVI-I-to-VGA adapter
DFP display + DFP display + TV	DVI-I connector + DVI-I connector + S-Video Out	The TV display will "clone" the image of one of the other two displays
DFP display + DFP display + HDTV	DVI-I connector + DVI-I connector + S-Video Out to HDTV (YPrPb) cable	
CRT display + DFP display + HDTV	DVI-I-to-VGA adapter + DVI-I connector + S- Video Out to HDTV (YPrPb) cable	
CRT display + CRT display + TV	DVI-I-to-VGA adapter + DVI-I-to- VGA adapter + S- Video Out	UNSUPPORTED CONFIGURATION

CHAPTER 3:

CATALYST™ Control Center

The CATALYSTTM Control Center is a graphical representation of the display features of the installed ATI hardware and software. Use the CATALYSTTM Control Center to fine-tune your graphic settings, enable or disable connected display devices, and change the orientation of your desktop. Many of the features show you a preview of the changes before they are applied.

The CATALYSTTM Control Center offers you two views of the software: Standard view is a simplified view that includes wizards to get the inexperience user up and running. The Advance view allows the advanced user to access and configure the complete feature set of the software.

The CATALYSTTM Control Center can be customized for easy access to the features you use most.

Use the CATALYSTTM Control Center to access a comprehensive online help system, or connect to the ATI Web site.

Launching CATALYST™Control Center

CATALYSTTM Control Center can be launched from one of the following access points:

- · Windows Start Menu
- Windows System Tray
- · Predefined Hotkeys
- Desktop Shortcuts
- Via an ATI MMC Application

Launching CATALYST™ Control Center Using the Start Menu

From the windows task bar, click the **Start** button:

- For Windows XP, point to All Programs>ATI Control Environment>CATALYSTTM Control Center.
- For Windows 2000, point to **Programs>ATI Control Environment>CATALYST**TM **Control Center**.

Other Quick Launch Access Points

To launch CATALYSTTM Control Center from MMC

You can also access the CATALYSTTM Control Center while an ATI multimedia application, like TV Player, is running. Simply click the CATALYSTTM Control Center icon in the multi-media application's control panel, if available.

Launching CATALYST™ Control Center Using Hot Keys

You can press a predefined key (like **F7**) or combination of keys (like **Ctrl+A**). You can define your hot key by using the <u>Hot Key Manager</u>.

Launching CATALYST™ Control Center Using the Desktop Shortcut

When you first installed CATALYSTTM Control Center the setup wizard provided you with the option of placing a shortcut on the desktop. If you selected this option, simply double-click the CATALYSTTM Control Center desktop shortcut.

Launching CATALYST™ Control Center Using the System Tray

Right-click the **ATI** icon in the Windows® System Tray and select CATALYSTTM Control Center from the popup menu.



Displays Manager

The Displays Manager is the central location for configuring your display devices and arranging your desktop. Use the Displays Manager to quickly change your display setup, arrange your desktop in a multi-monitor environment, and enable TV Out.

Displays Manager appears in both Standard and Advanced views. Use the Standard View wizard to help you configure your display preferences. Advanced View is for more experienced users who prefer to manually configure their desktop settings.



Standard View



Advanced V	liew liew

3D Settings

Use 3D settings to adjust features found in 3D applications, such as graphic-design, CAD programs and games.

3D Settings is available in the simplified standard view and advanced view.

Use standard view to adjust the overall performance and quality of your graphic application. Use the advanced view to individually configure the following settings:

- · Standard Settings
- · Anti-aliasing
- · Anisotropic Filtering
- Texture Preference
- CATALYSTTM A.I.
- Mipmap Detail Level
- TRUFORMTM
- SMARTSHADERTM
- · API-specific

Video

Use the Video aspect to use preconfigured profiles that best match your viewing environment. Switch to the Advanced view to manually adjust video overlay and choose a preferred viewing mode, such as Widescreen or Fullscreen modes.

To access the Video aspect:

 Select Video in the CATALYSTTM Control Center Standard or Advanced view.

Display Options

Display Options gives you additional control to optimize performance of OpenGL® and Direct 3D® applications.

Use 3D Refresh Rate Override to set a refresh rate of your choice when a full-screen application or game has a default refresh rate that is lower than optimal.

Choose one of the Display Detection Options to prevent screen flicker when detecting a display.

If you are using an older TV or one that has non-standard inputs that may not be automatically detected, use Force TV Detection. Such a TV, once detected, will appear in the Display Manager aspect and can be configured as required. However, some features that rely on automatic detection, such as extended desktop, will not be supported.

To access Display Options:

 Select Display Options in the CATALYSTTM Control Center Advanced view.

Color

Use the Color aspect to adjust the color settings for your desktop and full-screen games. The Preview effects area shows your changes to gamma, brightness, and contrast in real time.

To access the Color aspect:

• Select Color in the CATALYSTTM Control Center advanced view.

VPU Recover

VPU Recover is a tool capable of detecting the rare situation when the graphics processor is no longer able to respond to display driver commands. When this occurs, VPU Recover attempts to reset the graphics processor so that you are able to continue using your computer without interruption or loss of data.

To access VPU Recover

 Select VPU Recover in the CATALYSTTM Control Center Advanced view.

Monitor Properties

Use the Monitor Properties page to configure your Display Data Channel (DDC) monitor's attributes, to information about the connected monitor, and adjust the output display's position and size.

To access Monitor Properties

 Select Monitor Properties in the CATALYSTTM Control Center advanced view.

Component Video Properties

The component video aspect of the CATALYSTTM Control Center adds further support for your ATI HDTV Component Video Adapter.

Component Video Properties is made up of:

- Formats
- Adjustments
- Advanced

To access Component Video Properties

 Select Component Video Properties in the CATALYSTTM Control Center advanced view.

TV Properties

If your graphics card has support for TV Out use the TV Properties to configure your TV settings.

The TV Properties is comprised of three features:

- Image Quality
- · Screen Adjustment
- Format

Use Image Quality to adjust the contrast, saturation, and flicker of your screen.

Use Screen Adjustment to set the video mode, enable overscan, and change the position and size of the screen.

Use the Format feature to determine how your graphics card establishes the TV signal format.

To access TV Properties

 Select TV Properties in the CATALYSTTM Control Center advanced view.

Digital Panel Properties

Use the Digital Panel Properties to configure the DVI settings and Image Scaling to improve image quality without impacting performance. Use Troubleshoot to add EDID information to the Force button of the Displays Manager.

To access Digital Panel Properties

 Select Digital Panel Properties in the CATALYSTTM Control Center advanced view.

Hotkeys Manager

The Hotkeys Manager allows you to create shortcut key combinations to quickly perform tasks such as changing a graphics setting or opening an application. A hot key is a combination of one or more modifier keys, such as Ctrl, Alt, or Shift, and any letter from the alphabet.

To access Hotkeys Manager

• Click the Hotkeys button in the CATALYSTTM Control Center.

OVERDRIVE™ 3

Use OVERDRIVETM 3 to maximize the performance of the visual processing unit (VPU) on your graphics card. An on-chip thermal sensor constantly monitors the temperature of the VPU allowing the maximum clock speed to be maintained while avoiding overheating. If the VPU gets too hot, OVERDRIVETM 3 will automatically decrease the clock speed until a safe temperature is reached. OVERDRIVETM 3 will never reduce the graphics processor speed below the default clock speed.

Use the Automated clock configuration utility to obtain the ATI recommended OVERDRIVETM 3 speeds for the graphics processor clock and video memory clock. Alternatively, manually set these speeds to meet your specific requirements. Finally, OVERDRIVETM 3 can be configured to run when the computer is booted or only when running 3D applications.

①

If your computer cannot restart after setting a higher clock speed, press and hold the **SHIFT** key during system start-up until you hear three beeps. Once your computer has full booted, disable **Enable** new clock settings at logon.

To access OVERDRIVE™ 3

 Select OVERDRIVE™ 3 in the CATALYST™ Control Center advanced view.

Profiles Manager

Use profiles to create customized environments for your desktop, video, and 3D applications. Define and save your own personal video settings that can be quickly activated manually, through a hot key, or by file association.

Note: A profile applies to a specific graphics card. If there is more than one graphics card installed in your computer, you need to select the appropriate card before creating, loading, or activating a profile.

To access the Profiles Manager

• Click the Profiles button in the CATALYSTTM Control Center.

Preferences

Use the Preferences page to restore factory defaults, change skins, or enable\disable the System Tray icon.

The CATALYSTTM Control Center Preferences page contains the following options:

- Hide Tooltips
- · Always on Top
- Enable System Tray menu
- Restore factory defaults
- · Show Toolbar Text

- Select Language
- · Select a Skin

To access Preferences

• Click the Preferences button in the CATALYSTTM Control Center.

Help

The CATALYSTTM Control Center Help feature allows you to access the comprehensive online help system and technical information about your computer and graphics card, and provides an Internet link to ATI Technologies.

The CATALYSTTM Control Center Help feature offers the following options:

- · Search Help topics
- Go to ATI.com
- · Information Center
- About CATALYSTTM Control Center

To access Help

- Click the Help button in the CATALYST $^{\mathrm{TM}}$ Control Center.
- or
- Press the F1 key at any time to get specific help on the feature or aspect you are using.

CHAPTER 4:

Using TV Display and Capture Features

This chapter describes how to use the TV display and video capture features of your RADEON® X850 Series card.

Using TV Out

Your RADEON® X850 Series has TV Out capability.

Viewing Your PC's Display on a TV

You can attach your RADEON® X850 Series to a TV and a monitor at the same time. You can also connect it to your VCR and record your monitor's display.



IMPORTANT INFORMATION for European Customers

Some PC monitors in Europe **cannot** be used simultaneously with TV display. When you enable TV display in Europe, the refresh rate for the monitor and TV is set to 50 Hz. Some monitors may not support this refresh rate **and could be damaged**.

- Please check the documentation supplied with your monitor to see if your monitor supports a refresh rate of 50 Hz.
- If your monitor does not support 50 Hz (or if you are not sure), turn
 off your monitor before turning on your PC when using your TV as a
 display.

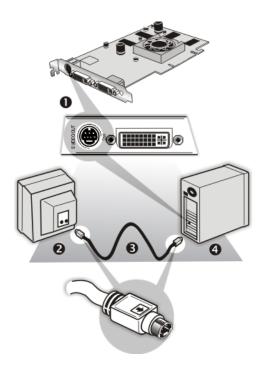
TV display is ideal for giving presentations and watching movies, or playing games on a screen larger than a typical monitor. The following tips will help you get the most out of your TV Out feature.

Connecting to a TV or VCR

To connect your RADEON® X850 Series card to a TV or VCR, use an S-Video cable. Many TVs (and VCRs) have a Composite video input, in which case you can use the supplied S-Video-to-Composite video adapter. If your TV has cable input only, you can connect your graphics card to your TV through your VCR or an RF modulator that is available from most electronics stores.

To connect S-Video Out

- 1 Power off your computer and your TV (or VCR).
- **2** Determine if your TV (or VCR) supports either a S-Video or Composite video connection.
- 3 Looking at the back of your PC, locate your S-Video Out. Using an S-Video cable or the supplied adapter cable, attach one end of the cable to your graphics card and the other to your TV (or VCR). Refer to the illustration.
- 4 Power on your TV (or VCR) first, then your computer.



Connecting Your S-Video Out to a TV or VCR

0	S-Video Connection on graphics card
2	TV or VCR
8	S-Video Cable (with or without S-Video-to-Composite Adapter)
4	Computer

Using a Monitor vs. Using TV Display

Using your TV for your computer's display can be useful, however, the display on your monitor may change or looked squashed. This distortion occurs because the display adjusts to fit the dimensions of your TV. To correct the monitor's display, use the monitor's control buttons to adjust its display size and position.

Some single-frequency monitors may not work with TV display enabled. If you experience problems when TV display is enabled, disable TV display to restore your monitor's display.

Viewing Text on a TV

A TV is designed primarily to show moving images. The large dot pitch of a TV will yield poor quality static images. The small text sizes commonly used for PC desktops can appear blurred or unclear on a TV. You can compensate for this degradation by using larger fonts.

Switching to a larger display font

- 1 Access the Display Properties dialog by right-clicking on the desktop or navigating through Windows® **Control Panel**.
- 2 Click the Settings tab, the Advanced button, and then the General tab.
- In the Display section, select Large (120 DPI) from the Font Size (or DPI Setting) drop-down list.
- 4 Click **Apply**. If prompted, click **Yes** to restart your Computer.

Using A TV As The Only Display

If you plan to move your computer to a place where you are using TV display only, make sure that you have the TV display feature enabled prior to removing the monitor.

The maximum display resolution for TV is 1024x768. Choosing a resolution higher than this will cause the TV display to disappear if it is the only display device.

Using Games and Applications

Some older games and applications may program your RADEON® X850 Series directly to run under a specific display mode. This may cause your TV display to turn off automatically or become scrambled (your PC monitor or portable LCD display will not be affected). Your TV display will be restored once you exit the game or if you restart your computer.

Connecting to HDTV

View computer output directly on your High Definition Television (HDTV) or other component input device. Provide a big-screen experience for your computer that is ideal for playing games, giving presentations, watching movies, and browsing the Internet.

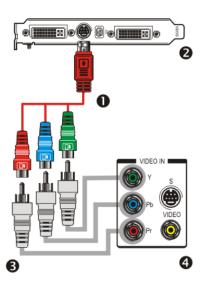
HDTV uses YPbPr connectors to receive input. YPbPr stands for the following:

- Y = Green
- Pb = Blue
- Pr = Red

The HDTV Component Video Adapter can be used in place of the standard A/V Output cable to connect to an HDTV or other component input device, using component video cables.

①

You must have a monitor attached to your computer before installing the ATI HDTV. For proper operation of your ATI Component Video Adapter, ATI display drivers must be correctly installed.



ATI HDTV Cable



ATI HDTV Video Output Cable

ATI HDTV Cable

- Backplate of the ATI Graphics Card
- Male RCA Patch Cables available from consumer electronics dealer
- Typical HDTV Video Input Connections

Note: Input and output cables lengths should not exceed 50 feet (15m).

Installing your ATI HDTV video cable

1 Turn on your component input device, and set it to YPbPr input.

Note: See your HDTV or component input device manual for configuration information specific to your device.

2 Turn on your computer.

Note: Your TV will not display anything until Windows starts. This can take several minutes.

Using Your ATI HDTV Video Cable

Use the HDTV Video Cable to watch DVD movies and play video games on your High Definition Television.



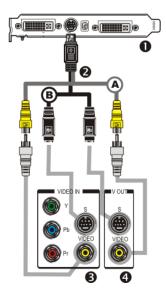
Copy-protected DVDs restrict playback to 480i and 480p modes.

For maximum performance when you watch DVD movies or play computer games on your HDTV, you should find the mode and screen resolution that provide the best result on your TV, and use those settings exclusively.

Capturing Video

The RADEON® X850 Series has the ability to capture video from your camcorder, VCR, or TV. Use your favorite video editing application to add effects, make changes, or stream your video on the Internet.

The audio and video output connectors on your TV, camcorder, or VCR will be similar those depicted in the illustration. Use Composite Video Out or S-Video Out. S-Video Out will provide better results.



Connecting Your Video Device to Your RADEON® X850 Series Card

A	Composite In and Out Connectors. Recommended connector for best picture quality.
В	S-Video In and Out Connectors.
0	ATI Graphics Card
2	Video In/Video Out Cable
3	Typical Video In of TV, VCR, or Camcorder connections
4	Typical Video Out of TV, VCR, or Camcorder connections

Connecting your media device for video capture

Use the Video In/Video Out Cable to connect to a TV, VCR, or Camcorder. Use the S-Video connectors.

To capture video to your computer

- 1 Connect the ATI Video In/Video Out cable to the Video In/Video Out connector on the ATI Graphics Adapter.
- 2 Connect the Video In of the ATI Video In\Video Out cable to the Video Out of your media device.

Note: S-Video and Composite extension cables are available from a consumer electronics dealer

- 3 Start your video capture software in record mode. For more information see the documentation that came with your video capture software.
- 4 Power on your TV or hit Play on your TV or VCR.

Note: To capture sound, you must connect the Line Out of your media device to the Line In of your sound card. Audio cables are available from a consumer electronics dealer.

Setting the Windows® Volume Control

For correct audio performance, your sound card's Line Input must be active.

To display the Line Input settings

1 Right-click the Speaker icon in the Taskbar, which usually in the lower-right corner of your screen.

If the volume icon is not in your Taskbar, do the following:

- Click Start, then click Control Panel.
- Double-click Sounds and Audio Devices.
- In the Volume tab, check Place volume icon in the taskbar.
- 2 Click Open Volume Controls.
- 3 If the Line-In volume slider is not visible, click **Options**, then click **Properties**.
- 4 Click the Line-In volume control checkbox, then click OK. If the Mute checkbox is checked, click it to cancel muting.

CHAPTER 5:

Troubleshooting

The following troubleshooting tips may help if you experience problems. ATI's documentation contains helpful installation/configuration tips and other valuable feature information. Please contact your dealer for more advanced troubleshooting information.

More troubleshooting information can be found on the ATI Website at ati.com/support/.

Uninstalling Old Graphics Card Software

To ensure successful installation of your RADEON® X850 Series card, you must uninstall the graphic drivers for the existing graphics card before removing it from your computer.

To uninstall old graphics drivers

- 1 With your current graphics card still in your computer, close all open applications.
- Click Start > Settings > Control Panel, then select Add/Remove Programs.
- 3 Select your current graphic drivers, then click **Add/Remove**:
 - The Wizard will help you remove your current display drivers.
 - Restart your system after the drivers have been removed.



If the previously installed graphics card has any additional software installed, they may also need to be removed at this point. For example, DVD Player or Multimedia applications.

Windows® New Hardware Found

Windows may start the **Add New Hardware Wizard** to install the Standard VGA Driver.

To install and detect your new hardware

- 1 Click Next to allow Windows® to search for the Standard VGA or Standard PCI Graphics Adapter. If prompted for the Windows® CD-ROM, insert it into your CD-ROM drive.
- 2 Type the following: D:\<Operating System name> for example D:\WinXP.
 - If \mathbf{D} is not your CD-ROM drive, substitute \mathbf{D} with the correct drive letter.
- 3 Click OK.
- 4 Click **Finish** to close the Wizard and then restart your system.

Installing the CATALYST™ Software Suite

ATI's CATALYSTTM software suite provides you with all you need to get the most out of your ATI Graphics Accelerator card. The CATALYSTTM software suite comprises four, distinct software elements:

- · Driver.
- Multimedia Center.
- HydraVision (not included in the *Express* Install).
- · Remote Wonder Software.

To ensure you install supported software, use the ATI Installation CD-ROM that shipped with your ATI Graphics Accelerator card.

To install the CATALYST™ Software Suite

- Insert the ATI INSTALLATION CD-ROM into your CD-ROM drive.
 - If Windows® runs the CD-ROM automatically, proceed to step 6.
- Click Start.
- 3 Select Run.
- **4** Type the following: **D:\ATISETUP**If **D** is not your CD-ROM drive, substitute **D** with the correct drive letter.
- 5 Click OK.
- 6 Click **Install** under Software Install.

- 7 Click Next.
- 8 Click **Yes** to the license agreement.
- 9 Click **ATI Easy Install** to begin the Installation Wizard.
- 10 Follow the Wizard's on-screen instructions to complete the installation.

Note: The Express installation option is recommended. If your ATI Graphics Accelerator card includes a multimedia component, the software for that component will automatically be installed, along with the ATI graphics driver. Not all software components are installed using the Express installation. Custom installation allows you to select individual software components for installation.

Solution Selector

General Problems	
Problem	Possible Solution
Computer Does Not Boot-Up Properly	Verify that the installation instructions were properly followed. Check that the card is properly installed in your system and connected to your monitor. If you have problems during start-up, restart your computer in Safe Mode. While started Windows® 2000 and Windows® XP press and hold F8 until you see the Windows® Advanced Options Menu. Use the arrow keys to select Safe Mode, and press Enter. Check the system configuration utility of your operating system for the interrupt assignments. Contact ATI's Customer Care or your local technical support.

General Problems	
Problem	Possible Solution
No Display	 Check that the card is seated properly in its expansion slot. Ensure that the monitor cable is securely fastened to the card. Make sure that the monitor and computer are plugged in and receiving power. If necessary, disable any built-in graphics capabilities on your mother board. For more information, consult your computer's manual or manufacturer. (Note: some manufacturers do not allow the built-in graphics to be disabled or to become the secondary display.) Make sure that you selected the appropriate monitor when you installed your enhanced driver.
Screen Defects Appear	Check if your monitor supports the resolution, horizontal (kHz) and vertical (Hz) refresh rates as required by the graphics card. Check your current resolution, refresh rate, and color depth settings in the Settings and Monitor tabs in your Display Properties dialog. Warning! Ensure that both video card and monitor support resolution and refresh rates you select. Incompatible resolution/refresh rate selection may result in monitor damage. Refer to your monitor's documentation for recommended resolutions and refresh rates.
Off-Center Screen Image, Odd Colors or No Picture	 Try adjusting the brightness, sharpness, contrast, and color balance controls of your monitor. Try adjusting the centering and positioning controls of your monitor to position the picture on the screen. Set the monitor's RGB inputs (and sync switches, if this option is available) to 75 Ohms, with the sync set to external. Digital Flat Panel (DFP) monitor users: refer to your monitor's documentation for the appropriate cable and connector to plug into the DVI-I connector on the graphics card.
Operating System Warns that Video Card Isn't Properly Configured	Check the driver installation and make sure that all software is correctly loaded corresponding to your operating system and applications. Re-install the ATI drivers for your RADEON® X850 Series card.

HDTV/HDTV Adapter Troubleshooting		
Problem	Possible Solution	
The colors on my TV display are incorrect	Ensure that the connections between the Component Video Adapter and your HDTV are correct (Y=Green, Pb=Blue, Pr=Red).	
There is no display on my TV	 Your TV will not display anything until Windows starts; this may take several minutes. Set your TV to YPbPr input. Ensure that the HDTV Component Video Adapter is properly connected, then restart your computer. 	
DVDs will not play in 720p or 1080i modes	Copy-protected DVDs restrict playback to 480i and 480p modes.	
I can't see the entire display	If your component input device supports it, try 720p mode.	
The display appears tilted	Consult your HDTV user's manual.	
My CRT display is green	Your system is in component output mode. Restart your computer with the CRT monitor connected.	

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