V9950 Series

Graphics Card

V9950 Ultra / Deluxe / TVD / 256M
V9950 / Deluxe / TVD / 128M
V9950 Ultra / TD / 128M
V9950 / TD / 128M
V9950SE 256 / 128M

USER'S MANUAL

Hardware Guide

E1390

Revised Edition V2

August 2003

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Notices

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

This equipment 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 manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or 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 circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adpater or extension cord. These devices could interrupt the grounding circuit.
- Make sure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, make sure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

Macrovision Corporation Product Notice

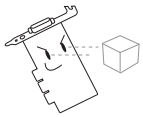
This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only *unless otherwise authorized by Macrovision Corporation*. Reverse engineering or disassembly is prohibited.

Conventions used in this guide

To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.



IMPORTANT: Information that you MUST follow to complete a task.

NOTE: Tips and additional information to aid in completing a task.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS Websites**

   The ASUS websites worldwide provide updated information on ASUS hardware and software products. The ASUS websites are listed in the ASUS Contact Information on page viii.

2. **Optional Documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

ASUS contact information

ASUSTeK COMPUTER INC. (Asia-Pacific)

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ASUS COMPUTER INTERNATIONAL (America)

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General Email: tmd1@asus.com
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Support Email: tsd@asus.com

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Support Email: www.asuscom.de/support (for online support)

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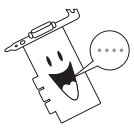
General Tel: +9714-283-1774
General Fax: +9714-283-1775
Web Site: www.ASUSarabia.com

1. Introduction

Thank you for purchasing an **ASUS V9950 Series Graphics Card**! Powered by the **NVIDIA™ GeForce FX™ 5900 Series** graphics processing unit (GPU), the **ASUS V9950** series delivers breakthrough leading-edge graphics performance. Enjoy superior image fidelity regardless of the CPU (central processing unit) employed by the computer system. With the **ASUS V9950** series, you will experience stunning yet realistic 3D graphics.

Highlights

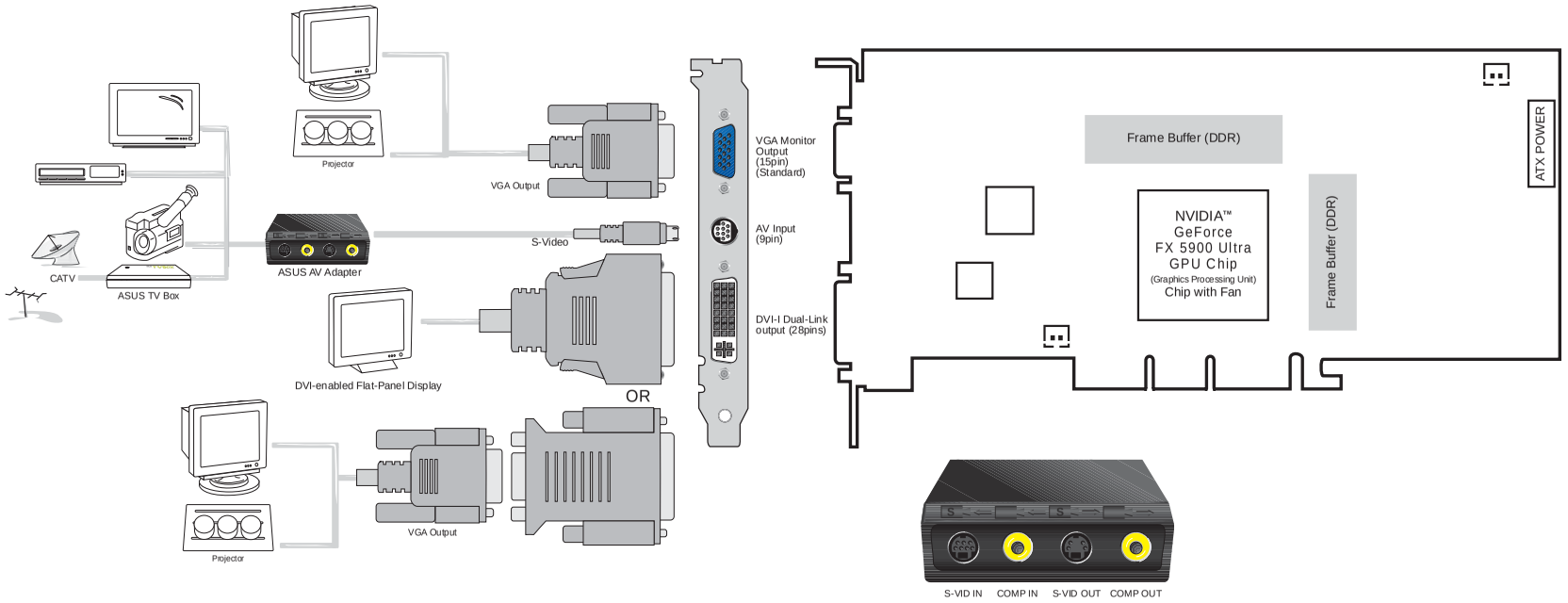
- **Powered by NVIDIA® GeForce FX 5900 Series GPU**
  ~ The most programmable and precise GPU with the powerful CineFX2.0 engine
  ~ Delivers cinema-quality video to your PC
- **Built-in 256/128MB DDR frame buffer with 256-bit bus**
  ~ Provides the most resolution and color depth
- **Advanced CineFX 2.0 shader engine**
  ~ Delivers 2x floating-point pixel shading power and a visible performance boost on pixel shader programs
- **NVIDIA® UltraShadow technology**
  ~ This new patent pending UltraShadow technology introduces stunning visual shadow effects that create distinctive looks and digital environments
- **Intellisample HCT (Hi-resolution Compression Technology)**
  ~ Intelligent antialiasing captures a higher-resolution version of each image, then resizes and resamples it for output to your your screen, smoothing away imperfections
- **Anisotropic Texture filtering**
  ~ Produces higher image quality for most uses of texturing, color and Z compression
- **ASUS innovative GameFace Technology**
  ~ real-time audio/video communication feature, elevates the interactive gaming experience by enabling point-to-point video conferencing functions and online gaming at the same time
- **AGP 8X support**
  ~ By adding support for the newest AGP 8X (AGP 3.0) standard, the V9950 series takes advantage of the new peak AGP bandwidth of 2.1 GB/s to offer even higher graphics
- **nVIEW™ display technology**
  ~ Supports TV encoder at 1024 x 768 resolution and two independent display pipelines, providing the ultimate multiple display flexibility and user control
- **DirectX® 9.0 and OpenGL® 1.4 support**
  ~ Ensures broad application support
- **High-resolution LCD screen support**
  ~ Supports up to 1600 x 1200 maximum LCD monitor resolution



Actual screen resolution varies depending on LCD monitor resolution.

ASUS V9950 Ultra / Deluxe /TVD Layout

256/128MB DDR Frame Buffer



Item Checklist

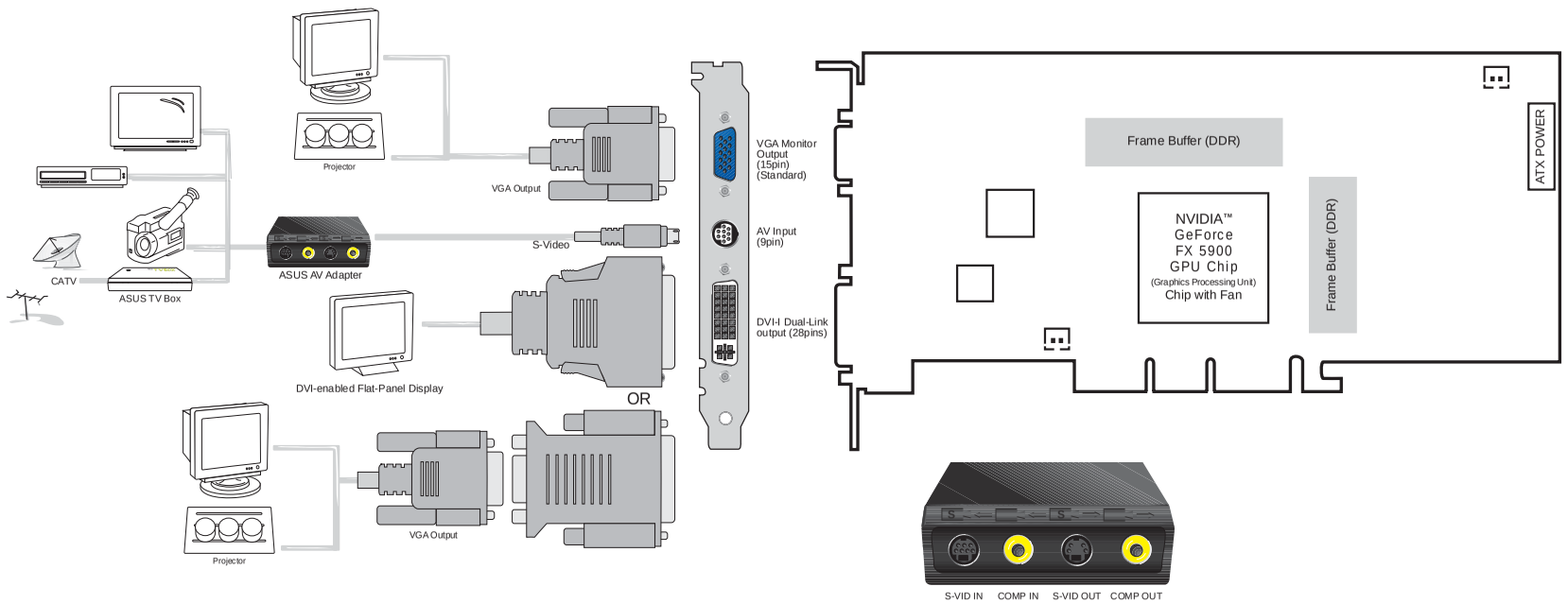
- ☑ ASUS V9950 / Ultra / Deluxe / TVD Graphics Card (PAL or NTSC)
- ☑ This User's Manual
- ☑ ASUS V9950 Series Driver and Utility CD

Notes

- Use the same TV standard for all devices.
- Drawings are for reference only, actual card layout may vary

ASUS V9950 / Deluxe / TVD Layout

128MB DDR Frame Buffer



Item Checklist

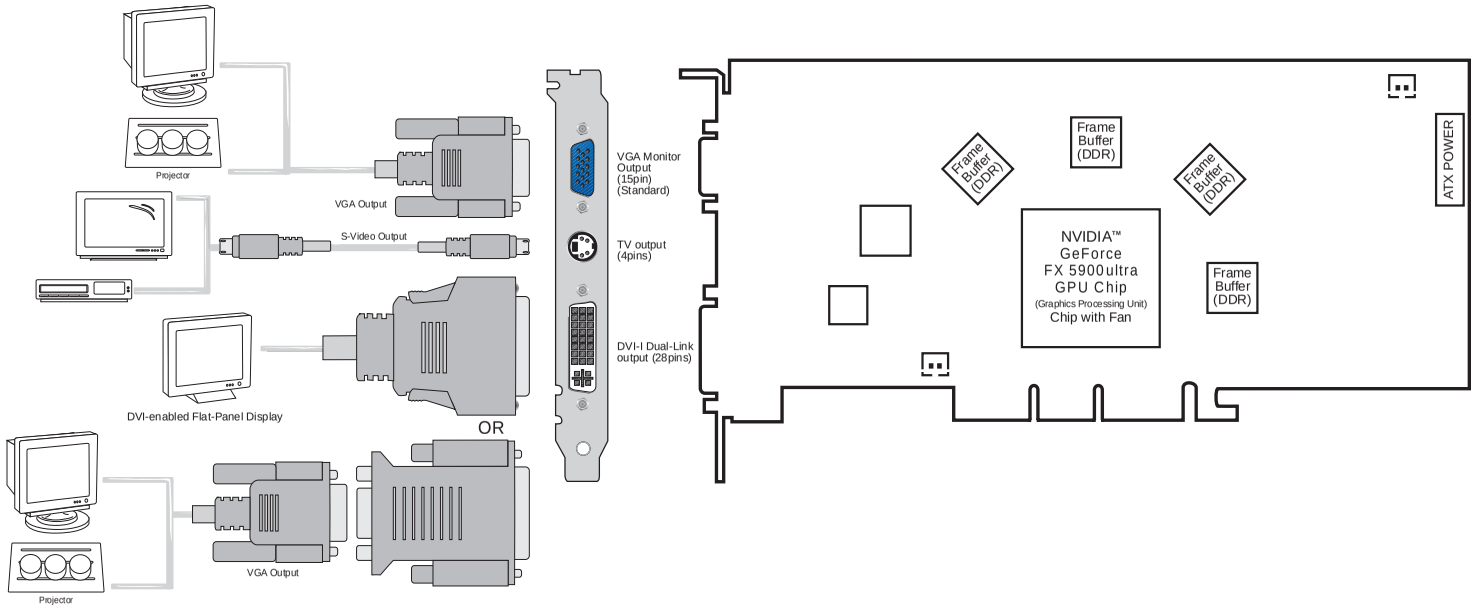
- ☑ ASUS V9950 / Deluxe / TVD Graphics Card (PAL or NTSC)
- ☑ This User's Manual
- ☑ ASUS V9950 Series Driver and Utility CD

Notes

- Use the same TV standard for all devices.
- Drawings are for reference only, actual card layout may vary

ASUS V9950 Ultra / TD Layout

256MB DDR Frame Buffer



Item Checklist

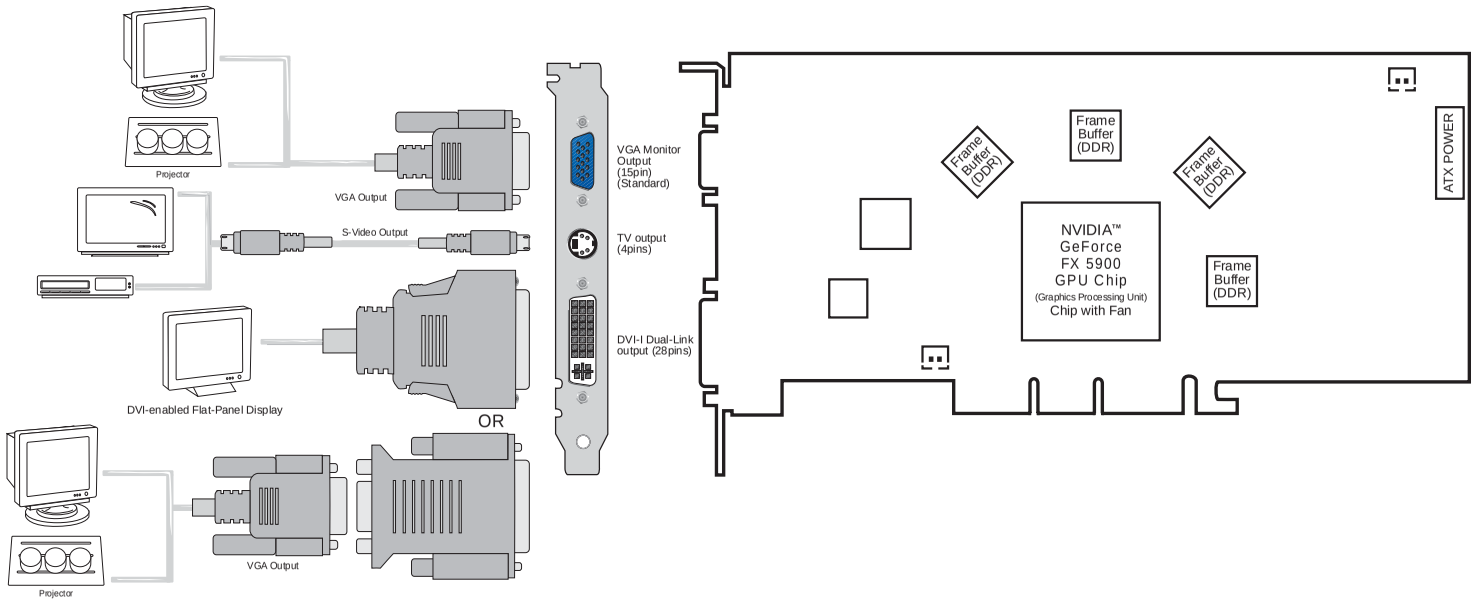
- ☑ ASUS V9950 Ultra / TD 256M Graphics Card (PAL or NTSC)
- ☑ This User's Manual
- ☑ ASUS V9950 Series Driver and Utility CD

Notes

- Use the same TV standard for all devices.
- Drawings are for reference only, actual card layout may vary

ASUS V9950 / TD Layout

128MB DDR Frame Buffer



Item Checklist

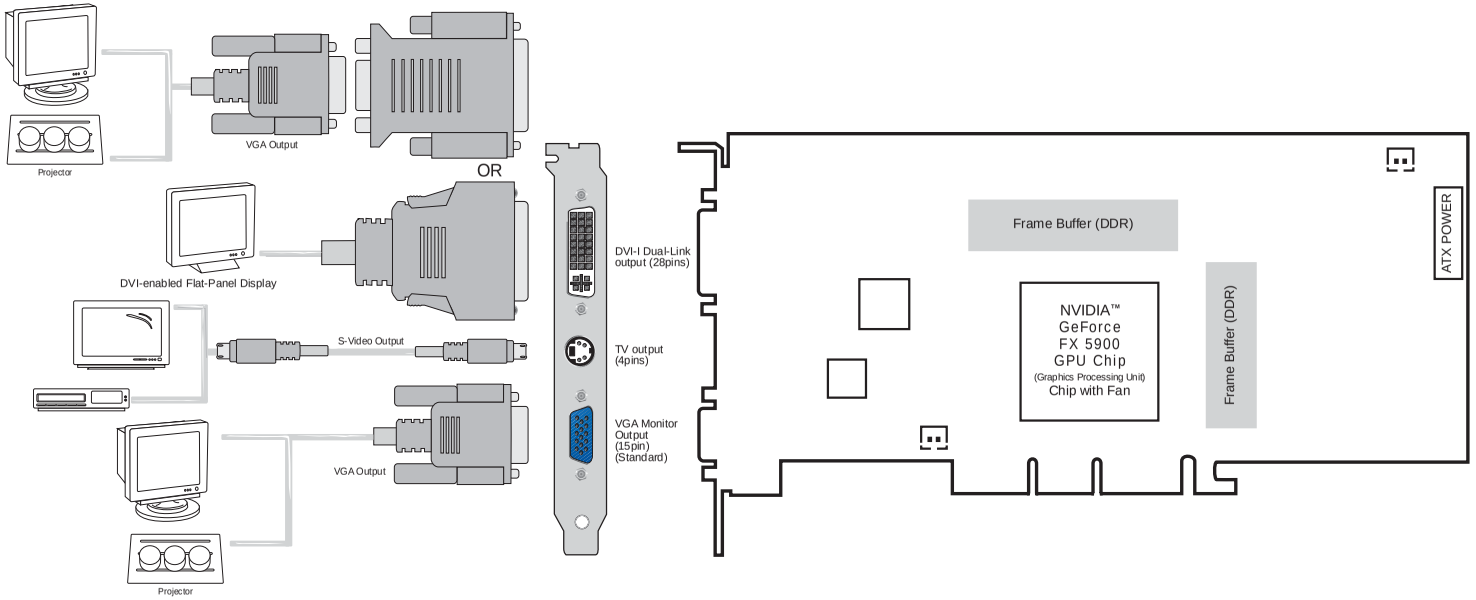
- ☑ ASUS V9950 / TD Graphics Card (PAL or NTSC)
- ☑ This User's Manual
- ☑ ASUS V9950 Series Driver and Utility CD

Notes

- Use the same TV standard for all devices.
- Drawings are for reference only, actual card layout may vary

ASUS V9950SE Layout

256/128MB DDR Frame Buffer



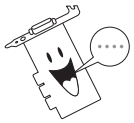
Item Checklist

- ☑ ASUS V9950SE Graphics Card (PAL or NTSC)
- ☑ This User's Manual
- ☑ ASUS V9950 Series Driver and Utility CD

Notes

- Use the same TV standard for all devices.
- Drawings are for reference only, actual card layout may vary

3. Card installation



This VGA card can only be installed on motherboards with an AGP (Accelerated Graphics Port) slot.

3.1 For systems without an existing VGA card

1. Unplug all power cables from the wall sockets.
2. Remove the system unit cover.
3. Locate the AGP expansion slot on the motherboard. Make sure that the slot is not obstructed by cables or other components.
4. Remove the metal bracket cover opposite the AGP slot. Save the screw for later use.
5. Remove your new VGA card from its plastic packaging.
6. Align the card golden connectors over the AGP slot. Insert one end of the card and press down firmly. Press down the other end until the card is completely seated on the slot.
7. Anchor the card mounting bracket to the rear of the chassis and secure it with a screw.
8. Replace the system unit cover.
9. Use a video signal cable to connect your analog monitor VGA connector (15-pin male) to the connector on the card (15-pin female).
10. Connect the power cables.
11. Proceed to section “4. Display driver installation”.

3.2 For systems with an existing VGA card

1. Boot your computer.
2. Click on the **Start** button. Select **Settings**, then **Control Panel**.
3. Double-click the **System** icon in the Control Panel. Select the **Device Manager** tab.
4. Double-click the **Display adapters** icon, highlight the current VGA driver and click on **Remove**.
6. Select **Standard VGA** as your display driver then click **Ok** to close the dialog box.
7. Shut down the computer.
8. Unplug all cables from the wall sockets and remove computer cover.
9. Remove existing VGA card.
10. Follow steps #5 to #11 in section 3.1 above to install new VGA card into the AGP slot.

4. Display driver installation

You can install the display drivers for your graphics card using any of the recommended methods in this section depending on your operating system.

4.1 Install ASUS enhanced driver

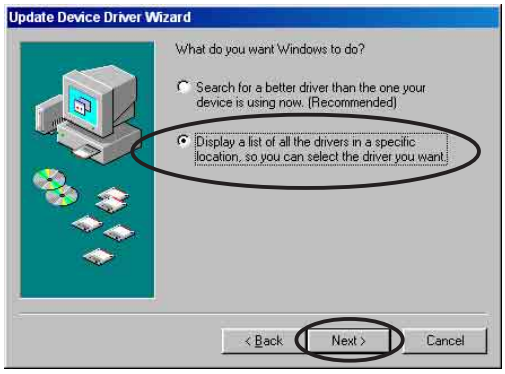
The ASUS fine-tuned enhanced driver delivers the best 3D performance on your video output.

4.1.1 Windows 98SE/ME

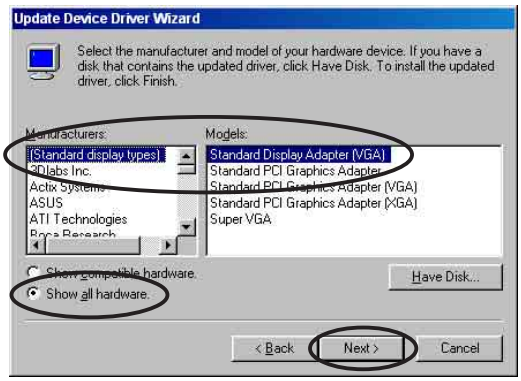
Before you install the ASUS enhanced driver, make sure to change the Windows display driver setting to “Standard Display Adapter (VGA)”. Perform the following procedures to change the Windows display driver settings.

1. Boot your computer.
2. Click on the **Start** button. Select **Settings**, then **Control Panel**.
3. Double-click the **System** icon in the Control Panel. Select the **Device Manager** tab.
4. Double-click on **Display Adapters**.
5. Select the current display adapter then click on **Properties**.
6. From the Properties dialog box, select the **Driver** tab then click on **Update Driver**. Click Next on the succeeding screen.

7. Select the “*Display a list of all the drivers in a specific location, so you can select the driver you want.*” option button, then click **Next**.



8. From the Update Device Driver Wizard dialog box, select **Show all hardware**. Select **(Standard display types)** from the Manufacturers list box and select **Standard Display Adapter (VGA)** from the Models list box then click **Next**.

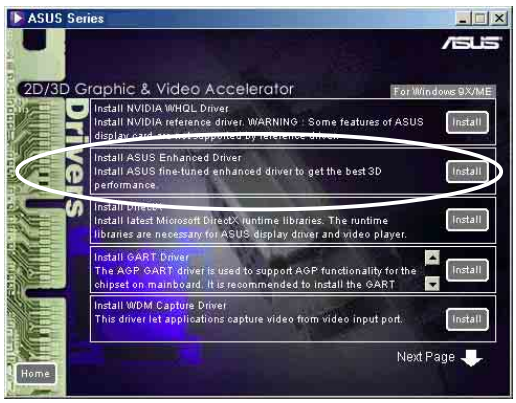


9. The system prompts an update driver warning, click **Yes**.
10. Click **Next** on the succeeding screen prompts and click on **Finish** then **Yes** to restart your computer.

Method 1: ASUS Quick Setup Program (when Autorun is enabled)

1. Insert the support CD into your CD-ROM drive.
2. From the 2D/3D Graphics & Video Accelerator main menu, click **Drivers**.

3. Click **Install ASUS Enhanced Driver** from the **Drivers menu** to copy the necessary files to your computer.
4. Follow the succeeding screen instructions.

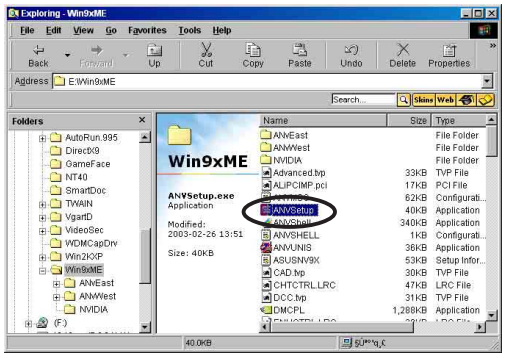


5. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.

Method 2: ASUS Quick Setup Program (when Autorun is disabled)

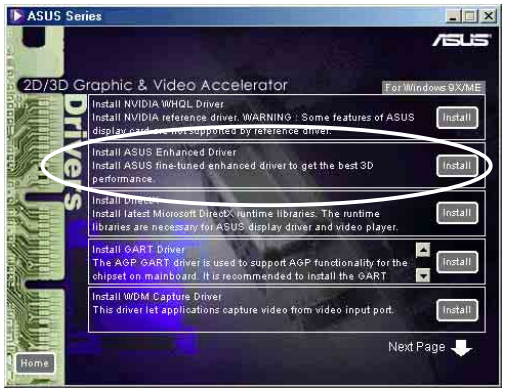
1. Boot your computer.
2. Insert the support CD into the CD-ROM drive.
3. Double-click the CD drive icon in **My Computer** or run the setup utility from the following path :

   \Win9xME\ANVSetup.exe



4. From the main menu, click **Drivers**.

5. Click **Install ASUS Enhanced Driver** from the **Drivers menu** to copy the necessary files to your computer.
6. Follow the succeeding screen instructions.



7. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **OK**.

Method 3: Plug and Play

Before proceeding with the following steps, replace your old VGA card with an ASUS graphic card.

1. Boot your computer.
2. When Windows detects your ASUS graphics card, the **New Hardware Found** dialog box appears.
3. Click **Driver from disk provided by hardware manufacturer**.

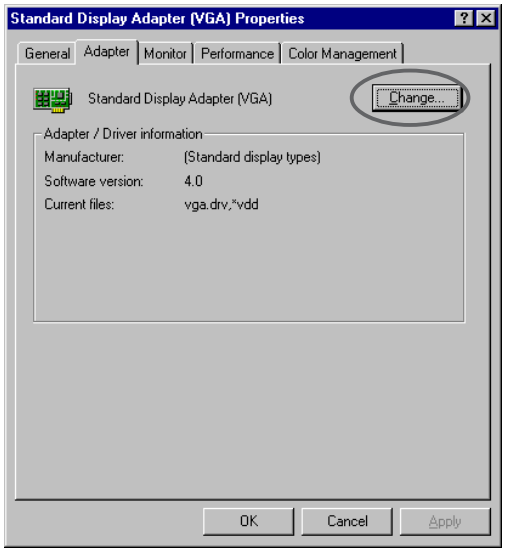
4. When Setup prompts you for the location of the driver, type the following path, assuming that your CD-ROM drive is D:

   D:\WIN9xMe

5. Click **Finish** to install the driver.
6. When Setup has finished installing all the necessary files to your computer, it prompts you to restart your computer. Click **Yes** to restart your computer and complete setup.

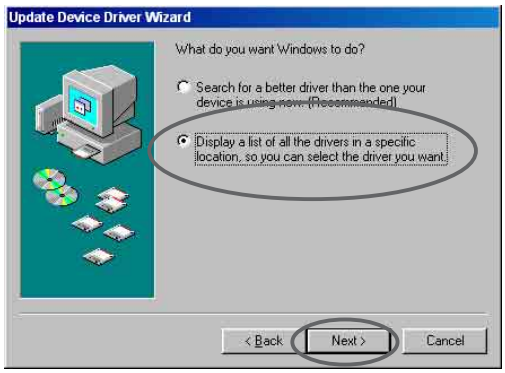
Method 4: Display Property Page

1. Boot your computer.
2. Right-click on the Windows desktop and click **Properties**.
3. From the Properties dialog box, select the **Settings** tab, then click **Advanced to display** the **Standard Display Adapter (VGA) Properties** dialog box.
4. Click **Change** on the **Adapter** tab to display the **Update Device Driver Wizard** dialog box.



5. From the Update Device Driver Wizard, click **Next**

6. Click the **"Display a list of all the drivers in a specific location, so you can select the driver you want"** option button then click **Next.**

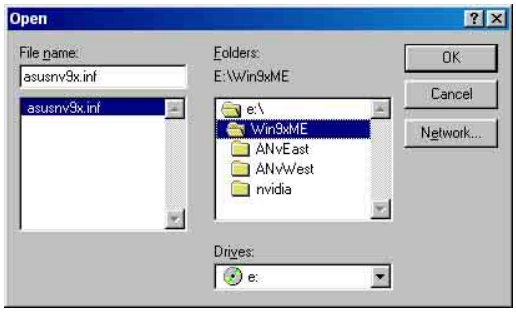


7. From the combo list box, click **Next**.

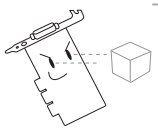
8. Click **Show all hardware** then **Have Disk**... to display **Install From Disk** dialog box.

7. Type the location of the ASUSNV9X.INF file (WIN9X folder) in the text box or click **Browse** to search from the available drives.

8. From the **Open** dialog box click the **Drives** combo list box to display a list of available drives, select your CD-ROM drive.
9. From the **Folders** box, double-click the **WIN9xME** folder and select ASUSNV9X.INF in the **File name** box.



10. Click **OK** to display the list of compatible video cards. Select the VGA card type for your operating system and click **OK**.
11. From the **Update Driver Warning** box, click **Yes** to confirm the setting up of the ASUS enhanced display drivers.
12. Follow the succeeding screen instructions.
13. When Setup prompts that it has finished installing all the necessary files to your computer, click **Finish**.
14. When you are returned to the **Standard Display Adapter (VGA) Properties** dialog box, click **Close**.
15. In the **Display Properties** box, click **Close**.
16. The system prompts you to restart your computer. Click **Yes** to restart your computer and complete setup.



- The quick setup program works only when the primary display detected is an ASUS graphics card.

- For optimum performance, check the following:
  - Make sure the DMA mode is enabled when using IDE DMA 33/66/100/133 hard disk drives. To set parameters, click on Start->Control Panel->System->Device Manager->Disk Drives->Properties->Settings->Options->DMA.

  - Run the Disk Defragmenter (defrag.exe), especially when the hard disk is almost full.

- Make sure the system power supply can provide the minimum power requirement of the graphics card.

3.1.2 Windows 2000/XP

Method 1: ASUS Quick Setup Program

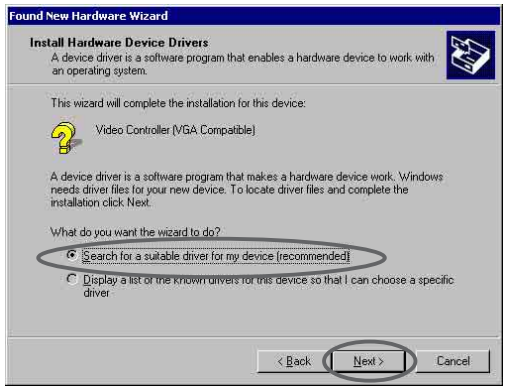
1. Boot your computer.
2. When Windows detects your ASUS graphics card, the **Found New Hardware Wizard** dialog box appears.
3. Click **Cancel** to enter the Windows desktop.
4. Insert the support CD into your CD-ROM drive.

5. From the 2D/3D Graphic & Video Accelerator main menu, click **Drivers** then **Install ASUS Enhanced Driver** on the **Driver** dialog box.
6. Follow the onscreen instructions.
7. When Setup has finished installing all the necessary files on your computer, it will prompt you to restart your computer. Click **Yes** to restart your computer and complete Setup.

Method 2: Plug and Play

1. Boot your computer.
2. When Windows detects your ASUS graphics card, the **Found New Hardware Wizard** dialog box appears.
3. Click **Next**.

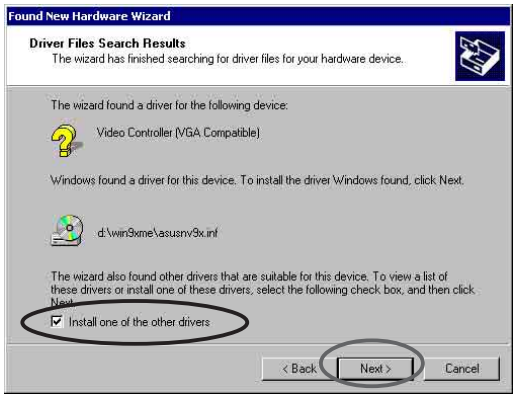
4. From the **Found New Hardware Wizard** dialog box, select "*Search for a suitable driver for my device (recommended)*" then click **Next**.



5. Insert the support CD into your CD-ROM drive to launch the **Locate Driver Files** item of the **Found New Hardware Wizard** dialog box.

6. Check **CD-ROM drives**, uncheck all other options then click **Next** to search for the drivers of your graphics card.

7. When the wizard has finished searching for driver files for your graphics card, check **Install one of the other drivers** then click **Next** from the **Driver Files Search Results** item of the **Found New Hardware Wizard** dialog box.

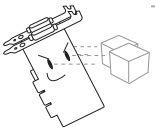


8. When prompted to select the display driver to install in your system, select the one that is located in the D:\WIN2KXP\ASUS and click **Next**.

9. Follow succeeding onscreen instructions.

10. When Setup has finished installing all the necessary files to your computer, it will prompt you to restart your computer, click **OK** to restart your computer and complete Setup.

4.1.4 Windows NT 4.0



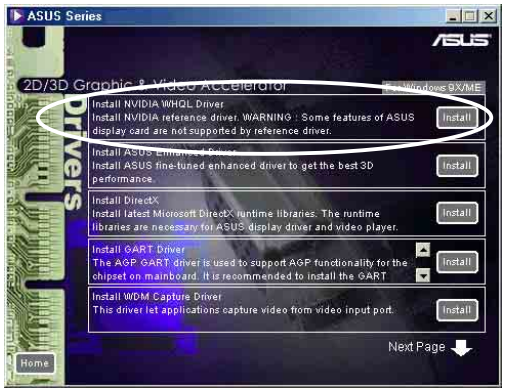
Before installing the display driver in Windows NT 4.0, make sure that you have installed **Windows NT 4.0 Service Pack 3 or later to take full advantage of the AGP features of your card.**

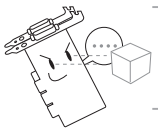
1. Boot Windows NT system and log on as Administrator.
2. Switch display properties to VGA mode (16 colors, 640 x 480 pixels), then restart your computer.
3. After startup, right-click the Windows NT desktop and click **Properties**.
4. Select the **Settings** tab.
5. Select **Change Display Type**.
6. Select **Adapter Type** and click **Change**.
7. Click **Have Disk**.
8. Insert the support CD.
9. Assuming that your CD-ROM drive letter is D, type **D:\NT40** or click **Browse** to select the path of the display driver for Windows NT then click **OK.**
10. Select your **ASUS VGA Card model** then click **OK**.
11. Windows NT will once again prompts for confirmation. Confirm installation of display drivers to copy all the necessary files. When done, click **Close** to return to the **Display Properties** box then click **Apply.**
12. The **System Settings Change** dialog box appears. Click **Yes** to reboot computer.
13. Windows NT restarts the default settings. The Display applet appears to allow for mode selection.

4.2 NVIDIA WHQL driver

The NVIDIA reference driver to Microsoft's Windows Hardware Quality Labs (WHQL) is a procedure to guarantee that this video graphics card is compatible with the Windows operating system.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is not enabled, double-click the CD drive icon in **My Computer** or run **Setup.exe** in the root directory of your support CD to launch the 2D/3D Graphics & Video Accelerator installation program.
3. From the main menu, click **Drivers**.
4. Click **Install NVIDIA WQHL Driver** from the **Drivers dialog box** to copy the necessary files to your computer.
5. Setup prompts you when it has finished copying all the files to your computer. Click **OK** to finish the installation.



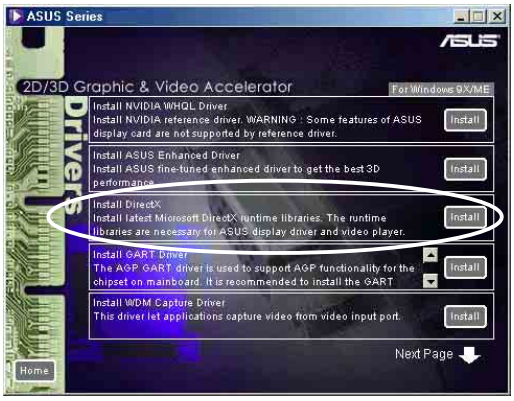


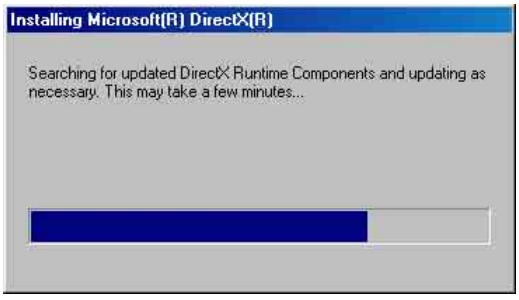
Some features of ASUS display card is not supported by this reference drive.

4.3 DirectX driver

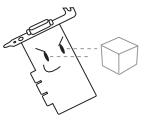
Microsoft DirectX allows 3D hardware acceleration in Windows 98SE.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is not enabled, double-click the CD drive icon in **My Computer** or run **Setup.exe** in the root directory of your support CD to launch the 2D/3D Graphics & Video Accelerator installation program.
3. From the main menu, click **Drivers**.
4. Click **Install DirectX** from the **Drivers dialog box** to copy the necessary files to your computer.





5. Setup prompts that it has finished copying all the files to your computer. Click **OK** to finish the installation.



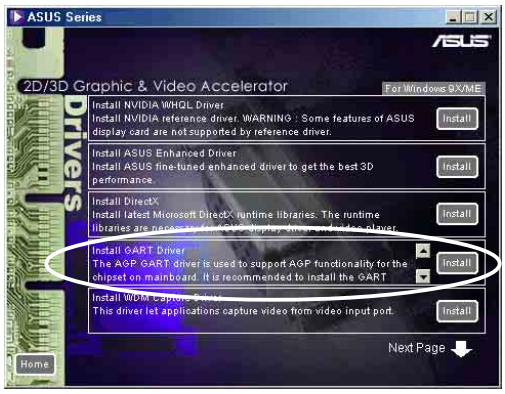
Some games written for older DirectX versions may not work properly under DirectX 9. Make sure that your applications or games support DirectX 9 before installing the DirectX 9 runtime libraries. DirectX 9 currently cannot be uninstalled by regular means, such as outlined in **Uninstall Display Driver**.

4.4 GART driver

The AGP GART Driver is used to support AGP functionality for the chipset on your PC's motherboard. It is recommended to install the GART driver if it is newer than the one you have installed in your system. The GART driver is only necessary for an AGP graphics card.

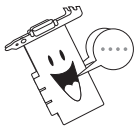
Installation dialog boxes are slightly different for each chipset. Follow the screen instructions to finish the GART driver installation. The succeeding steps assume that you are installing for an Intel chipset.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is not enabled, double-click the CD drive icon in **My Computer** or run **Setup.exe** in the root directory of your support CD to launch the 2D/3D Graphics & Video Accelerator installation program.
3. From the installation menu, click **Drivers**.
4. Click **Install GART Driver** from the **Drivers dialog box** to install AGP support for motherboards with Intel®, AMD®, VIA®, SiS®, NVIDIA® or ALi® chipsets.



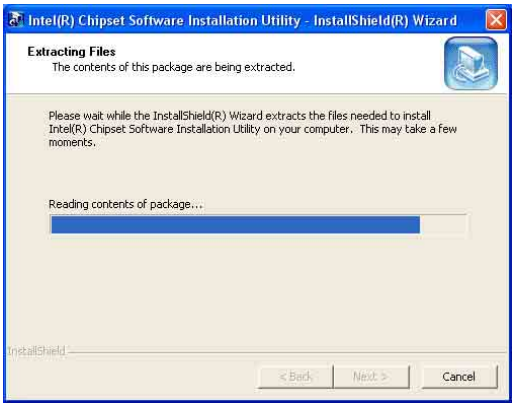
5. The **AGP VGARTD Driver Detection** box appears with the chipset detected on your motherboard.
6. Select an option to install the displayed VGART driver or to select from a list. Click on the option buttons to select then click **OK**.

7. If you selected **Yes, install its VGART driver** on the previous screen before clicking **OK**, skip to step #8. Otherwise, if you selected **No, I want to select the other drivers**, you will be presented with a selection of other drivers. Highlight your driver selection from the combo list box and click **Install**.



The appropriate driver for your chipset appears as default.

8. Follow the succeeding instructions to complete the setup or click **Cancel** to abort installation.



9. Setup prompts that it has finished copying all the files to your computer. Click **OK** to finish the installation.

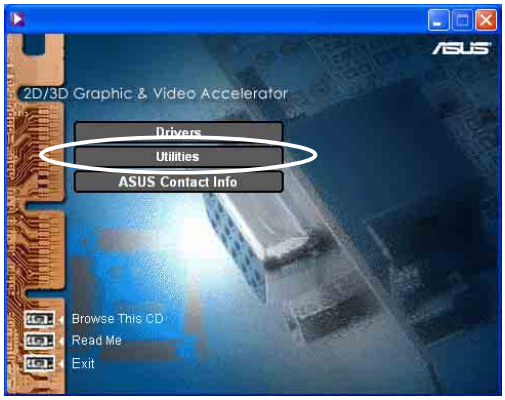
5. ASUS VideoSecurity

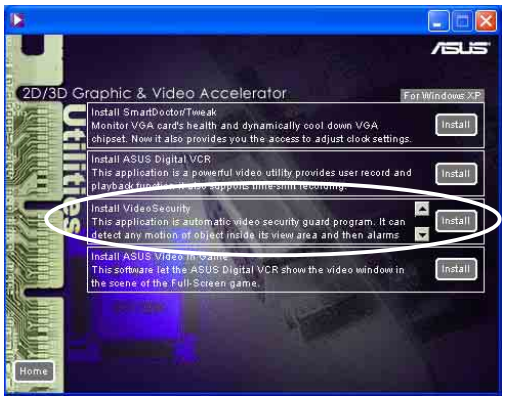
The ASUS VideoSecurity is available only for Deluxe/TVD models since this application requires a video input support.

5.1 Install VideoSecurity

VideoSecurity is a powerful video stream comparison and detection utility that helps in detecting potential errors or intrusions at a specific time interval by using a video capture devices.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is not enabled, double-click the CD drive icon in **My Computer** or run **Setup.exe** in the root directory of your support CD to launch the 2D/3D Graphics & Video Accelerator installation program.
3. From the main menu, click **Utilities**.
4. Click **Install VideoSecurity** from the **Utilities menu** to copy the necessary files to your computer.





5. From the Welcome screen, click **Next** then follow succeeding screen instructions to complete setup.

5.2 Using ASUS VideoSecurity

The ASUS VideoSecurity lets you detect intruders into your system and environmental changes and monitor a specified location or any incoming visitor. If VideoSecurity detects any deviation from the norm that you set, it may give an error message or not. Regardless of any messages, VideoSecurity will record:

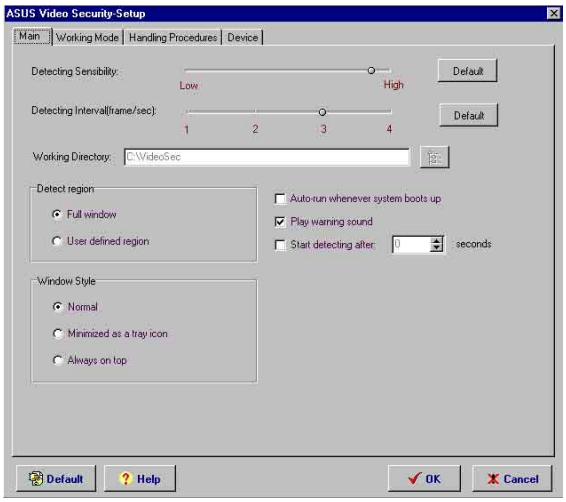
- The last two detected snapshot image files from the video captured stream (saved into a access file named watch dog.mdb). Any image processing or editing software can then be used to view, modify, or distribute them.

5.2.1 Limitations

Because of differences in hardware sensitivity, VideoSecurity may not completely detect all possible errors. Before you execute VideoSecurity, there are some limitations you have to understand so that you can appropriately use it.

- Due to changing temperatures, the captured image of some CCDs will be twisted, which may give a wrong detection.
- If the features (e.g., color, luminance) of the object are similar to that of background, the object may not be detected clearly.
- The CCD cannot capture the object smoothly and immediately when an object moves too fast.

VideoSecurity is designed for the widest environments possible and error conditions, therefore it is necessary to tune the parameters in VideoSecurity Setup Wizard to get the best detection results.



5.2.2 Setup Wizard

Setup Wizard guides you through setting up the VideoSecurity features.

1. To open Setup Wizard, click the **Start** button, and then point to **Programs**, **ASUS Video Security**, and then click **Setup Wizard**. The **Video Security Setup Wizard** dialog box appears.

The following descriptions are only for selected features of the ASUS VideoSecurity utility. For a full description of the features described in this manual and other features, refer to the ASUS VideoSecurity Online Help (HTML) format included with your support CD. You may also click the **Help** button to open the online help file.

Detecting Sensibility

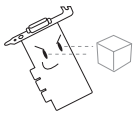
This is an important parameter when setting up VideoSecurity. Your environment may change often but VideoSecurity is concerned only when there is a change in the environment. Make sure that you select a suitable sensitivity for your environment.

Detecting Interval(frame/sec)

This sets the scan rate. Default is *2 frames*/sec. The higher the scan rate, the more accurate is the detection. Higher rates, however, entails a higher CPU usage. Do not use a high rate when you plan to use VideoSecurity while using other applications.

Working Directory

The **Working Directory** is the folder where the utility stores its temporary working and log files. The default is C:\VIDEOSEC. The directory is user-configurable. When VideoSecurity is ran, a sub-directory automatically created under the main directory, using the current date and time as the folder name. For example, “1999.11.30_12.30.20” means that VideoSecurity was started on 30 November 1999 at 12:30:20 PM.



Do not change the working folder’s name while VideoSecurity is running. Otherwise, a fatal runtime error will occur.

Detect Region

- **Full window** detects all visible area when watchdog function is on.
- **User define region** detects only the area defined by the user whe watchdog function is on. Feature will take effect only when VideoSecurity runs the next time.

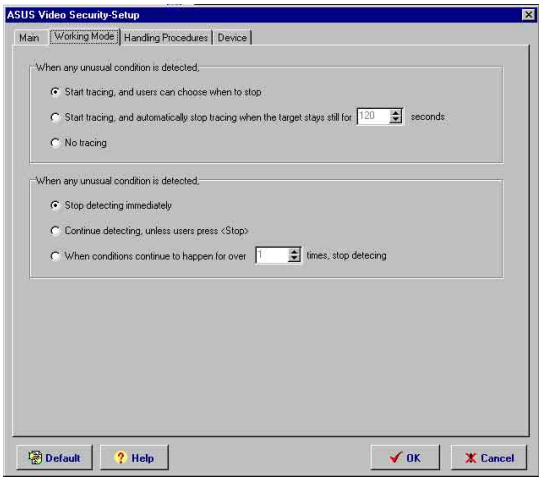
Window Style

- **Normal Window** is the default style, that is, VideoSecurity will function as a standard Windows program.
- **Minimized as a tray icon** lets you hide the main VideoSecurity window. This is useful when you don’t want anyone to know you are monitoring. When this option is selected, the VideoSecurity icon will appear on the taskbar in the lower-right corner of your screen. Whenever VideoSecurity detects a problem, it will run. You may also run VideoSecurity by clicking the icon.

- **Always on Top** is like a Normal Window except that the main window and control panel is shown always on top of other programs or utilities. You may right click to enable or disable this function at the main window anytime.

Working Mode

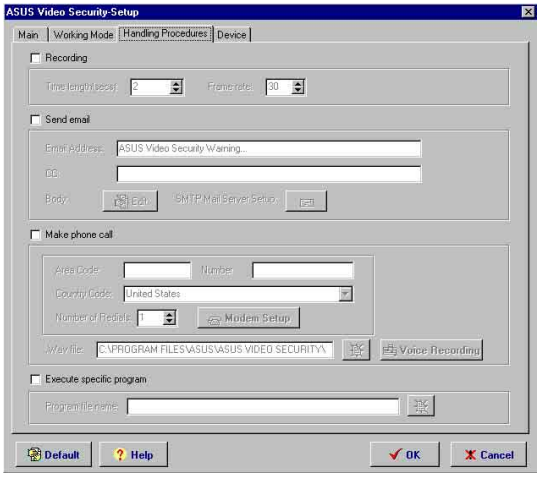
Click the Working Mode tab to define tracing procedure. VideoSecurity not only detects errors or problems in your card, but also detects an intrusion.



This box appears when an error occurs. Use this Tracing Box to choose the error processing method for tracing.

Handling Procedure

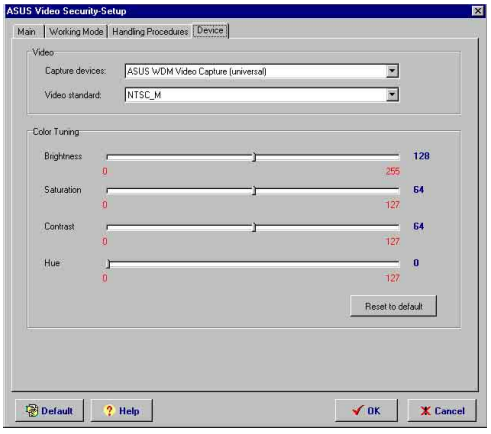
Click the Handling Procedure tab to set up personalized handling procedure through Recording, Send email, Make phone call or Execute specific program. VideoSecurity will execute procedures set up by the user once any error is detected.



Devices

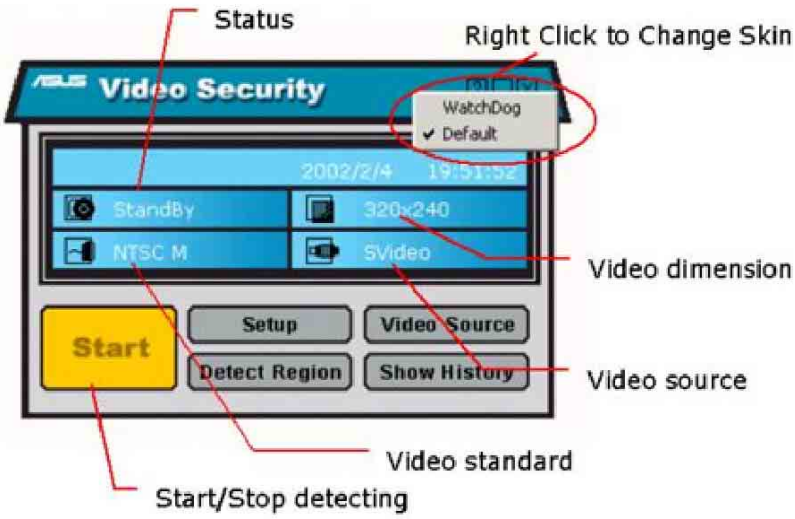
Click the Devices tab to select capture devices and video standard.

Use mouse to fine tune the Video Security screen and then click **OK** when done.



5.2.3 Running ASUS VideoSecurity

Click the ASUS icon on the taskbar's status area. Clicking this icon opens the ASUS Control Panel, then click the ASUS VideoSecurity to run VideoSecurity.



Detect Region

Click the Detect Region button to define your VideoSecurity video window. Use your mouse to drag your intended rectangular region.

6. ASUS GameFace

6.1 Introduction

The revolutionary ASUS GameFace is a real-time audio/video communication feature that enhances interactive gaming experience by enabling point-to-point video conferencing functions and online gaming to take place simultaneously thus allowing you to see and talk to your opponents while playing full-screen online games!

Visit the ASUS website (www.asus.com) for more information about the ASUS GameFace technology.

6.2 Install ASUS GameFace

The revolutionary ASUS GameFace is a real-time audio/video communication feature that enhances interactive gaming experience by enabling point-to-point video conferencing functions and online gaming to take place at the same time thus allowing you to see and talk to your opponents while playing full-screen online games!

1. Insert the support CD into your CD-ROM drive.
2. If autorun is not enabled, double-click the CD drive icon in **My Computer** or run **Setup.exe** in the root directory of your support CD to launch the 2D/3D Graphics & Video Accelerator installation program.

3. From the main menu, click **Utilities**.
4. Click **Install ASUS GameFace** from the **Utilities menu** to copy the necessary files to your computer.

5. From the Welcome screen, click **Next**.

6. Follow the succeeding screen instructions.

7. Click **Finish** after the installation is complete.

6.3 Using ASUS GameFace

Follow the given instructions to use ASUS GameFace.

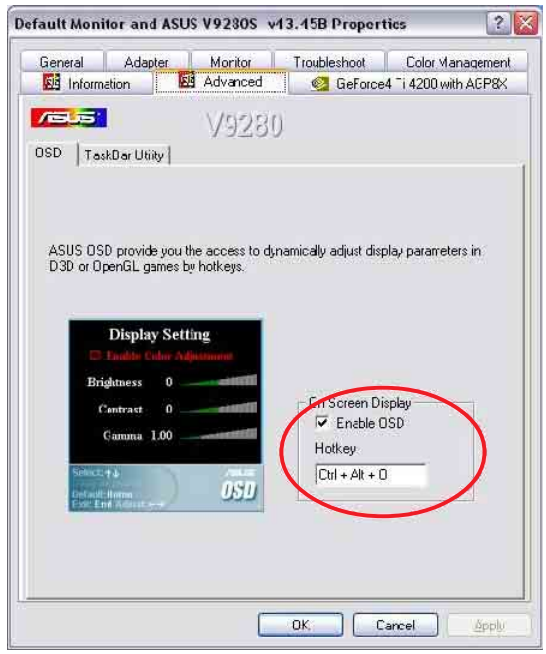
STEP 1: Enabling ASUS OSD

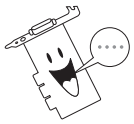
1.a Open **Display Properties** dialog box from desktop or control panel.

1.b Select **Advanced** tab on Settings page.

1.c Select **OSD** from in Advanced tab.

1.d Check the **Enable OSD** check box and input the appropriate hotkey.





You can also enable the On-Screen Display (OSD) in the GameFace application.

STEP 2: Launch ASUS GameFace

- ASUS GameFace automatically detects the connected audio/ video WDM capture device upon start-up. You can change the input device from **Options** in the **Tool** menu if you have more than one audio/video device.

STEP 3: Local Playback Mode

3.a Select **Local Play/Stop** from the File menu to start local playback when local video is not playing.

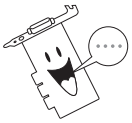
3.b Select **Local Play/Stop** from the File menu to stop local playback when playing local video.

3.c You can also press the **Play/Stop** button to start or stop local playback.

STEP 4: Network Playback Mode

4.a Connect to remote computer:

- Input the computer name (Local Area Network) or IP Address in the combo box.
- Select **New Call** from the File menu or press the “Make a Call” button.
- You will see and hear the remote audio/video signal if the remote computer accepts the call.



For the computer name and IP addresses go to **Tools-> Info** for lists of information.

4.b Waiting for connection:

- Launch ASUS GameFace
- A message box appears on an incoming call. Click **Yes** to accept the call.
- Select **End Call** from the File menu or press the "End the Call" button to disconnect.

STEP 5: GameFace Settings

5.a Select **Option** from the Tool menu.

5.b Select **GameFace Option Dialogue**

5.c Enter GameFace page to adjust transparency, position and hotkey settings.

STEP 6: Launch Game and show GameFace

6.a Begin your game.

6.b After entering Full-Screen mode, press the hotkey (default is **Ctrl+Alt+V**) to activate GameFace.

6.c Press the On-Screen Display hotkey to show the OSD menu.

6.d Use the arrow keys to select the GameFace application page and adjust the Transparency, Position X, Position Y, Size or toggle to enable or disable GameFace.

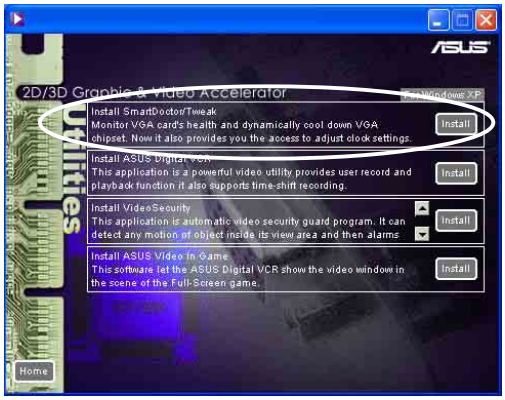
7. ASUS SmartDoctor

The bundled ASUS SmartDoctor application is not a full version. It only supports the ASUS Tweak utility.

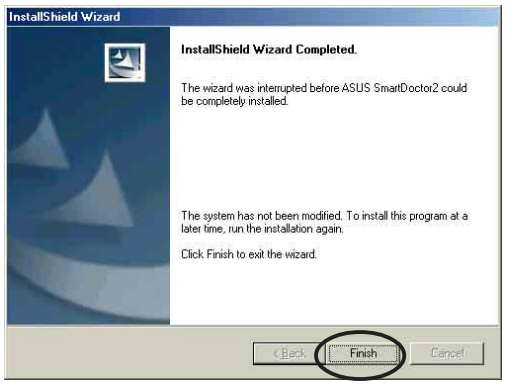
7.1 Install Smart Doctor

The Smart Doctor utility monitors the VGA card's condition and significantly cools down the VGA chipset. The utility also allows you to adjust the VGA graphic card clock settings.

1. Insert the support CD into your CD-ROM drive.
2. If autorun is not enabled, double-click the CD drive icon in **My Computer** or run **Setup.exe** in the root directory of your support CD to launch the 2D/3D Graphics & Video Accelerator installation program.
3. From the main menu, click **Utilities**.
4. Click **Install SmartDoctor** from the **Utilities menu** to copy the necessary files to your computer.
5. Follow the succeeding screen instructions.



6. Click **Finish**, after the setup is complete.



The Smart Doctor utility works only for VGA card models with a built-in monitor chipset. If the monitor chipset is not present, the ASUS Tweak utility will be installed.

7.2 Using ASUS Tweak Utility

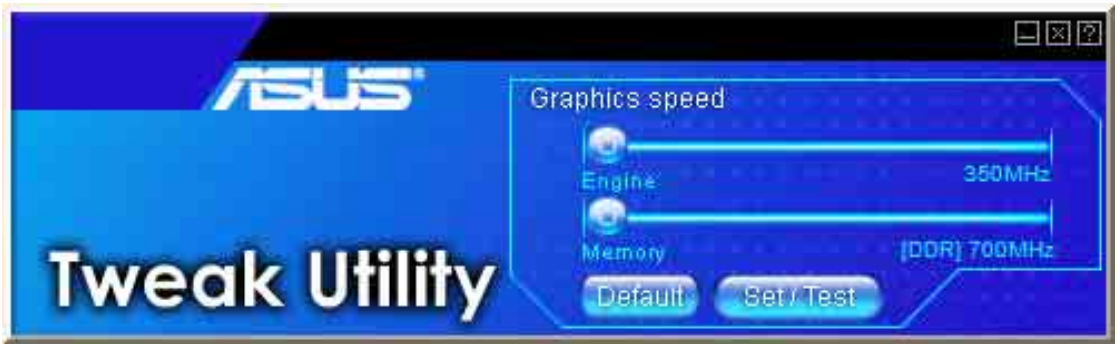
The ASUS Tweak utility is designed to adjust the working frequency of the graphic engine and video memory.

Use ASUS Tweak Utility with extreme caution and only if you are well acquainted with your display card. Inappropriate use may damage your graphic card, its components and even your system.

7.2.1 Functions

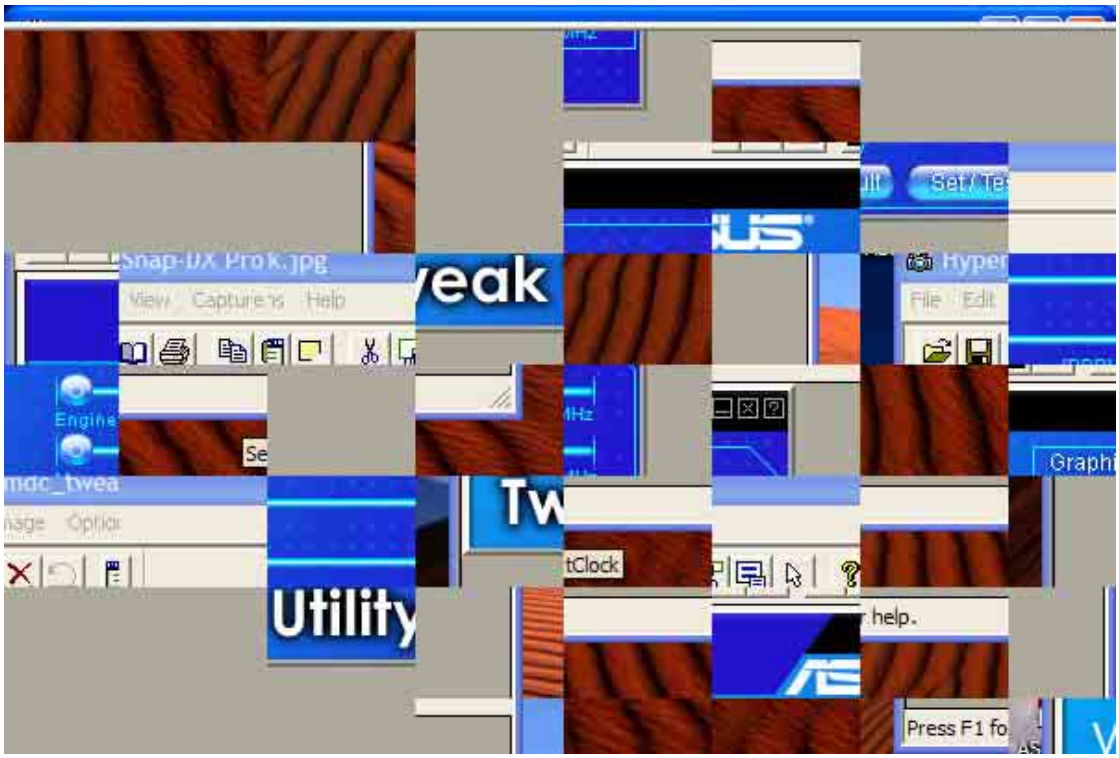
- Timing adjustment includes engine and memory clock.
- 2D Test lets you test your settings.
- Timing test run when clock is larger than default setting and use current setting at next startup.
- GPU Cooling. Tweak automatically reduces the speed of the GPU. When processing the GPU automatically throttles back to reduce component temperatures and increase longevity.
- Dynamic Overclocking. Tweak prevents excessive overclocking that may exhaust and shorten the GPU's life.

Use overclocking only when you need to run high-speed graphic applications.



7.2.2 Set/Test

When you click the **Set/Test** button, the **Tweak Utility tests the graphic card onscreen memory and displays the following screen while testing.**



8. ASUS Home Theater Software

The ASUS Home Theater is available only for Deluxe/TVD models since this application requires a video input support.

8.1 Introduction

The ASUS Home Theater is an integrated software with various multimedia applications. It allows you to enjoy multimedia entertainment such as watching TV, listening to MP3s, playing DVD, sorting and viewing video or pictures in one friendly user interface. You can easily turn your PC into a multimedia center with ASUS Home Theater!

A. Watch TV on your PC!

- TV Recording
- Time-shifting Playback function for temporary leave.
- Multi-channel previewing
- Scheduled recording
- Still image capture

B. Enjoy MP3s on your PC

- Listening to MP3 music
- Radio recording and playback
- Information display

C. Sort Videos on your PC!

- Sort recordings fromt TV/DVD/ Video
- Display recordings from TV/DVD/ Video
- Instant Preview feature
- Still image capture
- Slide show with music

D. Sort pictures on your PC!

- Sort pictures from TV/DVD/Video
- Display pictures from TV/DVD/ Video
- Instant preview feature
- Print pictures

E. Play DVD/VCD on your PC!

- DVD/VCD playback
- Still image capture feature
- 5.1 channel audio support

F. Timeshifting feature!

Don't you hate that annoying phone call during your favorite TV show or an important game? ASUS has the perfect answer. The "Timeshifting" feature allos you to simultaneously watch, replay and record a TV program on same computer. You can now view, stop and replay any part of a show without missing the rest due to unexpected interruption.

When do you need Timeshifting?

- **Scenario 1**

Let's say you programmed to record a program that starts at 9 o'clock and ends at 11 o'clock, but you arrived home at 10. With **Timeshifting**, you don't have to wait until 11 o'clock to watch what you recorded because the feature permits play and record functions at the same time.

- **Scenario 2**

Five more minutes in the most important game of the year, and your phone starts ringing and your caller ID indicates that it's from your boss. What do you do? Continue to watch the game and lose your job or engage in a long boring conversation and miss the game. No more dilemna. Click the Pause button, the computer will continue to record the rest of the game. Get rid of your boss, click Play and continue where you left off.

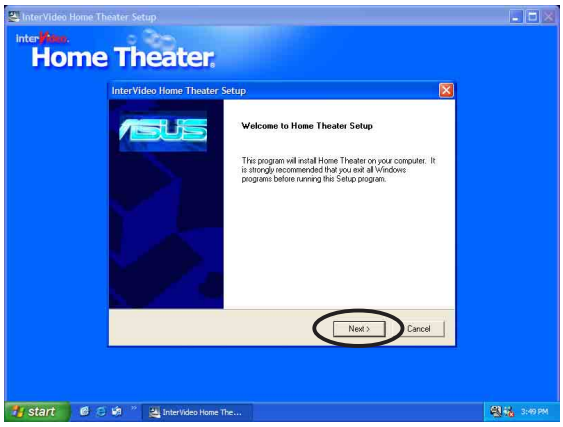
- **Scenario 3**

Nice play by the goalie! Want to see it again? **Timeshifting** gives you instant replay capability without missing a beat, because the feature allows continous recording even when you select the replay/rewind function.

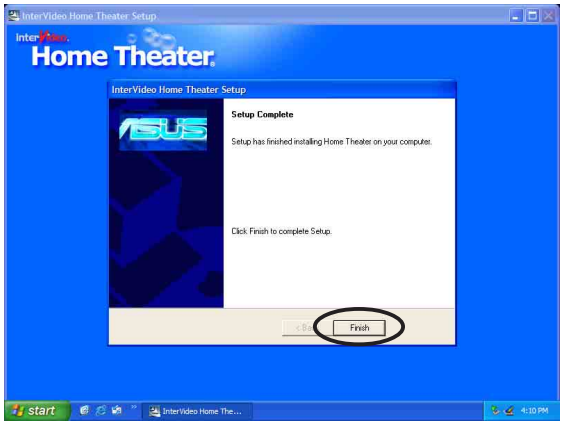
8.2 Installing ASUS Home Theater

The ASUS Home Theater enables you to watch TV, listen to MP3s, view DVDs or video clips and browse pictures on your PC.

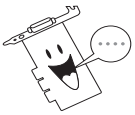
1. Insert the ASUS Home Theater support CD into your CD-ROM drive.
2. Double click the CD drive icon in **My Computer** to bring up the autorun screen or run **Setup.exe** in the root directory of your CD-ROM drive.
3. From the welcome screen, click Next and follow succeeding instructions to copy the necessary files to your computer.



4. Click on **Finish** to complete setup.



9. PowerDirector Pro



The PowerDirector Pro is available only for Deluxe/TVD models.

9.1 Introduction

Ever thought about directing your own movie? How about having all the creative controls and being in charge of the entire editing and post-production process? Well, today's computing technology has made all this possible for anyone who has recording devices, capture devices, a computer, and of course, the sensational new software application, PowerDirector.

Admittedly, video editing software is not without its drawbacks. Since the advent of computers and its incredible growth in usage and processing speed power, video editing software applications have taken off to astronomical heights. Yet, a great inherent limitation, such as requiring a huge amount of disk space because of the raw video data it captures, still remains. This is why many still choose to edit with analog devices.

What makes PowerDirector the megastar of its industry in one quick flash is its ability to save precious producing time because of its Smart Video Rendering Technology (SVRT). Say goodbye to raw video data, which is usually captured in .AVI format, and say hello to plenty of hard drive space with the MPEG and DV AVI formats. No additional compression nor decompression is required when producing scenes with MPEG or DV AVI formats that do not contain effects, which saves you huge amounts of time compared to our competitors that compress and decompress the entire movie!

Additional SVRT features includes:

• altering video speeds

• detecting scenes

• capturing directly from DV camcorders in real-time or non real-time

• a disc wizard that creates and burns movie discs in a cinch!

• adding titles to clips

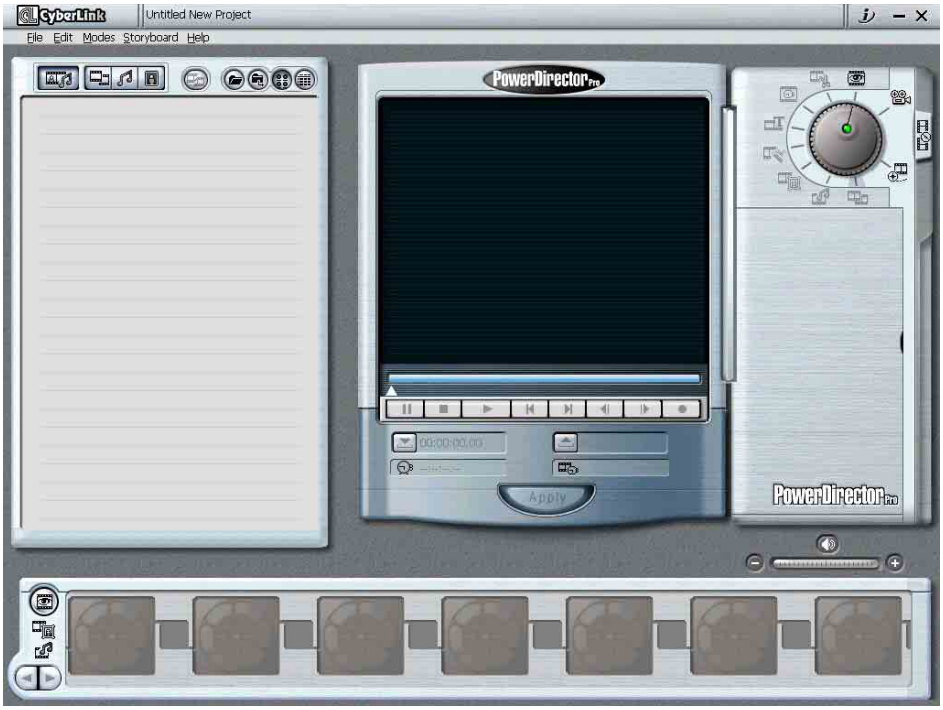
• adding audio streams to clips

• picture-in-pictures (adding video or images to an existing video clip)

• a huge collection of transitions, video and titles effects

• master audio files

• watermarks

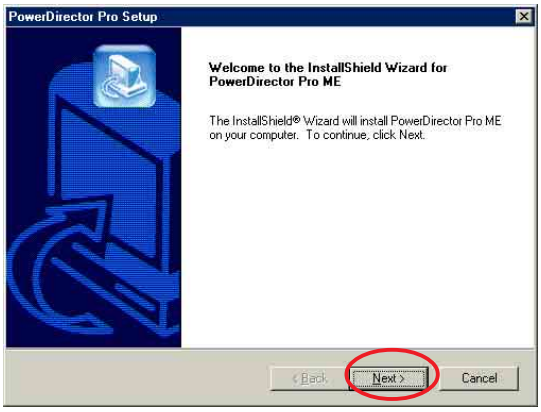


9.2 Install PowerDirector Pro

Follow the given steps to install PowerDirector Pro.

1. Insert the support CD into your CD-ROM drive.
2. Double click the CD drive icon in **My Computer** to bring up the autorun screen.
3. Select a language from the combo list box then click **Next**.

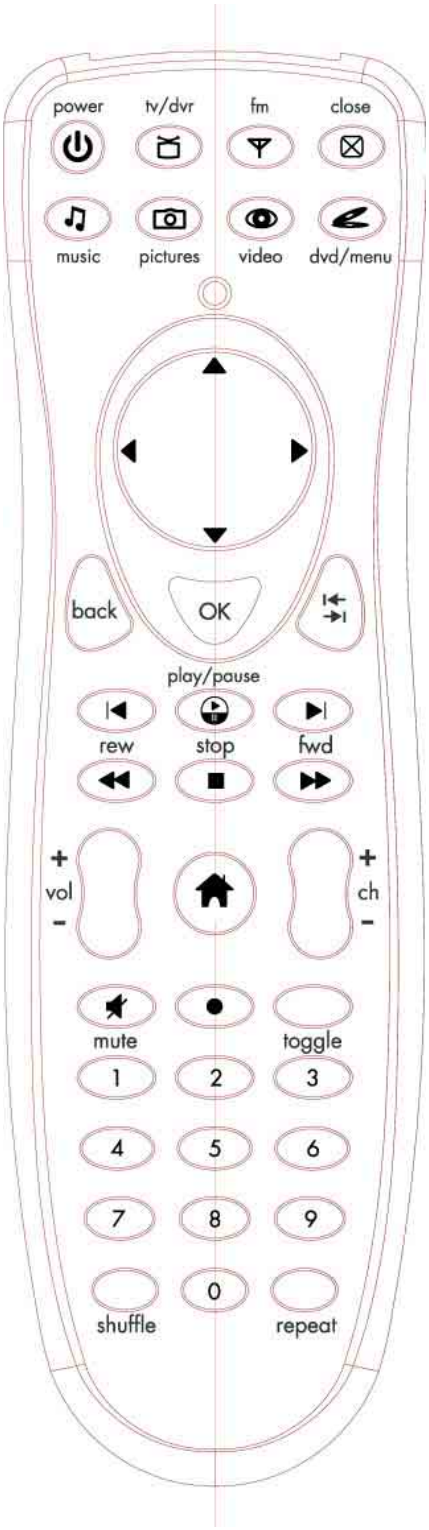
4. The **PowerDirector Pro Setup** window appears. Click **Next** to start the installation.
5. Follow the succeeding on-screen instructions to complete setup.



10. Remote Control Functions

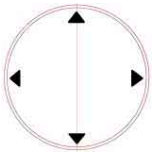
ASUS Remote Controller

The ASUS Remote Control is bundled on Deluxe models only.

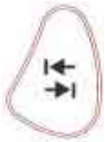
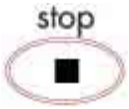
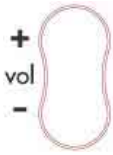
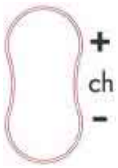


ASUS Remote Controller Layout

Remote control button functions

Button	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
	TV Mode	-	-	-	-
	-	-	-	-	-
	Close App	Close App	Close App	Close App	Close App
	-	Music Mode	-	-	-
	-	-	Pictures Mode	-	-
	-	-	-	Video Mode	-
	-	-	-	-	DVD Mode
	Mouse/ Arrow Keys	Mouse/ Arrow Keys	Mouse/ Arrow Keys	Mouse/ Arrow Keys	Mouse/ Arrow Keys
	LMouse/ Back	LMouse/ Back	LMouse/ Back	LMouse/ Back	LMouse/ Back
	OK	OK	OK	OK	OK

Remote control button functions (cont')

Button	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
	-	-	-	-	-
	Previous Chapter	Previous Chapter	Previous Chapter	Previous Chapter	Previous Chapter
	Play/ Pause	Play/ Pause	Play/ Pause	Play/ Pause	Play/ Pause
	Next Chapter	Next Chapter	Next Chapter	Next Chapter	Next Chapter
	Rewind	-	-	Rewind	Rewind
	Stop	Stop	Stop	Stop	Stop
	Fast Forward	-	-	Fast Forward	Fast Forward
	Volume Up/Down	Volume Up/Down	Volume Up/Down	Volume Up/Down	Volume Up/Down
	Home/ Launch	Home/ Launch	Home/ Launch	Home/ Launch	Home/ Launch
	Channel Up/Down	-	-	-	-

Remote control button functions (cont')

Button	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
	Mute	Mute	Mute	Mute	Mute
	Record	-	-	-	-
	Remote Toggle	Remote Toggle	Remote Toggle	Remote Toggle	Remote Toggle
	1	-	-	-	-
	2	-	-	-	-
	3	-	-	-	-
	4	-	-	-	-
	5	-	-	-	-
	6	-	-	-	-
	7	-	-	-	-

Remote control button functions (cont')

Button	Mode 1	Mode 2	Mode 3	Mode 4	Mode 5
	8	-	-	-	-
	9	-	-	-	-
	-	Shuffle	Shuffle	-	-
	0	-	-	-	-
	-	Repeat	-	Repeat	Repeat

The FM control function is supported only in PC systems with available FM tuner features.

Features:

1. Innovation design of ASUS Remote Controller for controlling ASUSDVD XP/PowerVCR II/EPG software with desktop PC.
2. Mouse mode can be used as mouse function while you aren't in front of your computer.
3. Receiver with USB Port, it's easy to connect with your computer.

Specifications:

- Operation Voltage : 3V ; Battery : AAA Battery x 2 (alkaline battery recommended)
- Receiver Inter face : USB Port

11. Resolution Table

Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = 16.7M colors True Color
640 x 480	60Hz	31.5	√	√	√
	70Hz	34.9	√	√	√
	72Hz	37.9	√	√	√
	75Hz	37.5	√	√	√
	85Hz	43.3	√	√	√
	100Hz	51.0	√	√	√
	120Hz	61.8	√	√	√
	140Hz	72.9	√	√	√
	144Hz	75.2	√	√	√
	150Hz	78.7	√	√	√
	170Hz	90.3	√	√	√
	200Hz	108.0	√	√	√
	240Hz	132.9	√	√	√
800 x 600	60Hz	37.9	√	√	√
	70Hz	43.8	√	√	√
	72Hz	48.2	√	√	√
	75Hz	46.9	√	√	√
	85Hz	53.7	√	√	√
	100Hz	63.7	√	√	√
	120Hz	77.2	√	√	√
	140Hz	91.1	√	√	√
	144Hz	94.0	√	√	√
	170Hz	112.7	√	√	√
	200Hz	135.1	√	√	√
	240Hz	166.2	√	√	√
1024 x 768	60Hz	48.4	√	√	√
	70Hz	56.4	√	√	√
	72Hz	57.5	√	√	√
	75Hz	60.0	√	√	√
	85Hz	68.7	√	√	√
	100Hz	81.7	√	√	√
	120Hz	98.8	√	√	√
	140Hz	116.6	√	√	√
	144Hz	120.2	√	√	√
	150Hz	125.7	√	√	√
	170Hz	144.1	√	√	√
	200Hz	172.8	√	√	√
	240Hz	212.1	√	√	
1152 x 864	60Hz	53.7	√	√	√
	70Hz	62.9	√	√	√
	72Hz	64.9	√	√	√
	75Hz	67.5	√	√	√
	85Hz	77.1	√	√	√
	100Hz	91.3	√	√	√
	120Hz	111.2	√	√	√
	140Hz	131.3	√	√	√
	144Hz	135.2	√	√	
	150Hz	141.4	√	√	√
	170Hz	162.9	√	√	√
	200Hz	194.9	√	√	
1280 x 960	60Hz	60.0	√	√	√
	70Hz	69.9	√	√	√
	72Hz	72.1	√	√	√
	75Hz	75.2	√	√	√
	85Hz	86.0	√	√	√
	100Hz	101.7	√	√	√
	120Hz	123.5	√	√	√
	140Hz	145.1	√	√	√
	144Hz	150.5	√	√	
	150Hz	157.2	√	√	√
	170Hz	179.8	√	√	

Resolution Table (cont')

Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = 16.7M colors True Color
1280 x 1024	60Hz	64.0	√	√	√
	70Hz	74.6	√	√	√
	72Hz	76.8	√	√	√
	75Hz	80.0	√	√	√
	85Hz	91.3	√	√	√
	100Hz	108.5	√	√	√
	120Hz	131.7	√	√	√
	140Hz	155.9	√	√	√
	144Hz	159.6	√	√	
	150Hz	167.3	√	√	√
	170Hz	191.8	√	√	
1600 x 900	60Hz	55.9	√	√	√
	70Hz	65.6	√	√	√
	72Hz	67.5	√	√	√
	75Hz	70.5	√	√	√
	85Hz	80.4	√	√	√
	100Hz	95.3	√	√	√
	120Hz	115.4	√	√	√
	140Hz	136.8	√	√	
	144Hz	140.4	√	√	
	150Hz	146.8	√	√	
1600 x 1200	60Hz	75.0	√	√	√
	70Hz	87.5	√	√	√
	72Hz	90.1	√	√	√
	75Hz	94.0	√	√	√
	85Hz	106.1	√	√	√
	100Hz	127.5	√	√	√
	120Hz	154.5	√	√	
1920 x 1080	60Hz	67.1	√	√	√
	70Hz	78.7	√	√	√
	72Hz	81.1	√	√	√
	75Hz	84.6	√	√	√
	85Hz	96.4	√	√	√
	100Hz	113.9	√	√	
1920 x 1200	60Hz	74.6	√	√	√
	70Hz	87.4	√	√	√
	72Hz	90.0	√	√	√
	75Hz	94.0	√	√	√
	85Hz	106.7	√	√	√
	100Hz	126.7	√	√	
1920 x 1440	60Hz	89.4	√	√	√
	70Hz	104.9	√	√	√
	72Hz	108.5	√	√	
	75Hz	112.5	√	√	√
	85Hz	129.4	√	√	
2048 x 1536	60Hz	95.5	√	√	√
	70Hz	111.9	√	√	
	72Hz	115.3	√	√	
	75Hz	121.3	√	√	