



V7100 Series

TwinView™ GPU Graphics Card

USER'S MANUAL

Hardware & Video Drivers

AGP-V7100 / Pure / 32M

AGP-V7100 / Pure / 16M

AGP-V7100 / T / 32M

AGP-V7100 / T / 16M

AGP-V7100 / DVI / 32M

AGP-V7100 / DVI / 16M

AGP-V7100/ 2V1D

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FCC & DOC COMPLIANCE

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.

WARNING! 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.

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I. Introduction

Thank you for purchasing an ASUS AGP-V7100 TwinView™ GPU Graphics Card. With this purchase, you join a legion of mainstream graphics enthusiasts.

Powered by the NVIDIA™ GeForce2 MX™ graphics processing unit (GPU), the ASUS AGP-V7100 delivers not only breakthrough leading-edge graphics performance but also ergonomically pleasing image fidelity regardless of the CPU (central processing unit) your computer system is using.

With the ASUS AGP-V7100, you will not only see but also experience stunning, dynamic, realistic 3D worlds and characters.

Highlights

- **Powered by the World's Newest Graphics Processing Unit (GPU)** NVIDIA™ GeForce2 MX™
- **Built-in 32/16MB video memory with up to 2.7GB/sec bandwidth** Provides more resolutions and color depths
- **TwinView™ true dual-display support (TV-out/DVI models only)** Brings more productivity
- **Dual-texture pixel-fill capacities with two new hypertexel pipelines** Sets a new milestone for realism
- **700 Mtexel fill rate, 20 Mtriangles/sec through T&L/Setting** Performs up to 1.5x improvement over GeForce™
- **ASUS SmartDoctor™ Technologies** Provide the greatest security to your valuable system
- **Optimized for DirectX® 7 and OpenGL® Features** Ensures broad application support

Available Models

ASUS AGP-V7100 / 2V1D

- 32MB Frame Buffer + VGA1 + VGA2 + DVI

ASUS AGP-V7100 / DVI / 32M or 16M

- 32/16MB Frame Buffer + VGA + DVI

ASUS AGP-V7100 / T / 32M or 16M

- 32/16MB Frame Buffer + VGA + TV-out

ASUS AGP-V7100 / Pure / 32M or 16M

- 32/16MB Frame Buffer + VGA

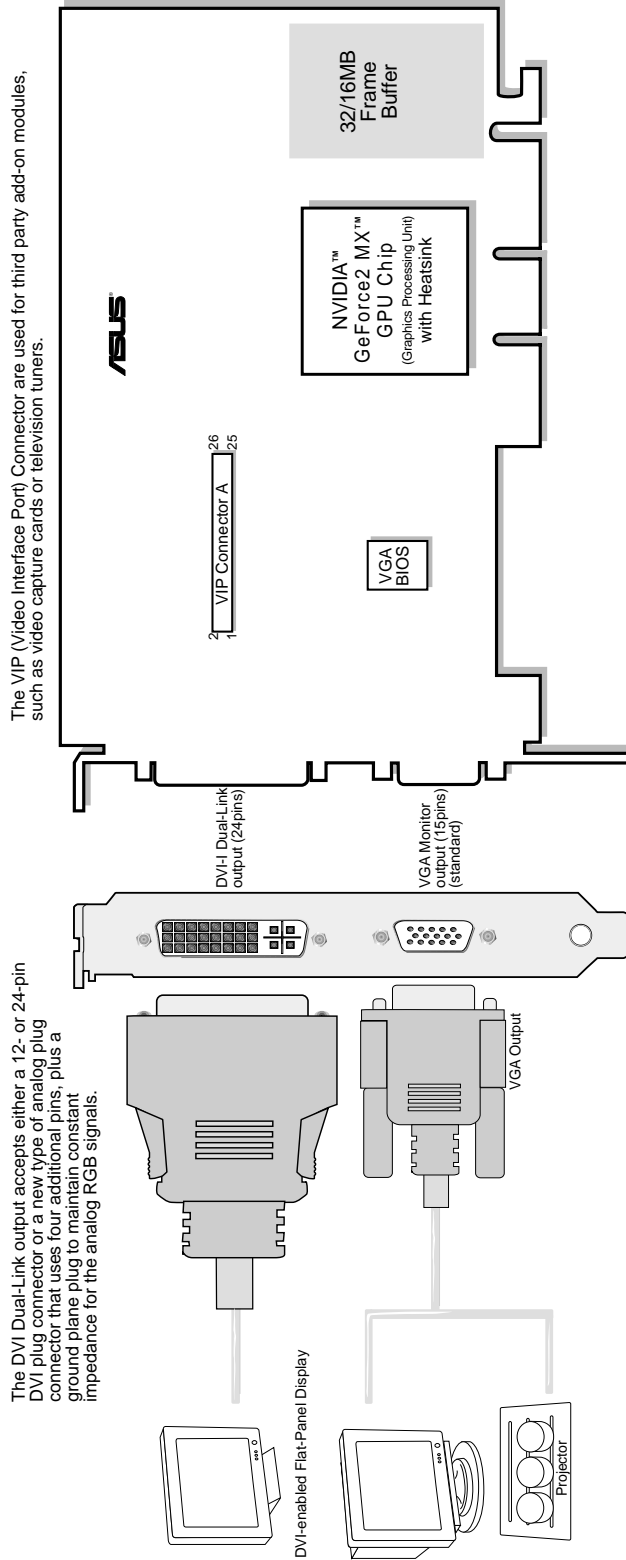
1. Introduction

Features

- AGP 4X/2X with Fast Writes and Execute Mode
- Two new Hypertexel pipelines process two texture per pixel, in true color, at full speed up to 700 million fill rate
- Built-in 32/16MB high speed video memory with up to 2.7GB/sec bandwidth
- Four texture mapped, filtered, lit pixels per clock cycle
- Second generation Transform and Lighting (T&L) Engine
- Up to 20 million triangles per second at peak rates
- Optimized for Direct3D acceleration with complete support for DirectX 7 features, such as multi-texturing, bump mapping, light maps, reflection maps, full scene anti-aliasing, trilinear and 8-tap anisotropic filtering (better than trilinear mipmapping)
- Fully 1.2 compliant OpenGL support
- 32-bit colors, Z/stencil buffer
- Multi-buffering (double, triple, quad buffering) for smooth animation and video playback
- TwinView™ Architecture (for models with TV-out/DVI models only) with simultaneous and independent dual-display control and dual-video output
- Multiple video windows with hardware color space conversion and filtering (YUV 4:2:2 and 4:2:0)
- Integrated 350MHz RAMDAC supporting from 640x480 up to 2048x1536 in true color
- BRDF (Bidirectional Reflectance Distribution Function) support
- Video acceleration for Direct Show and MPEG-1, MPEG-2, and Indeo

2. Hardware Setup

ASUS AGP-V7100 / DVI Layout 32/16MB Frame Buffer



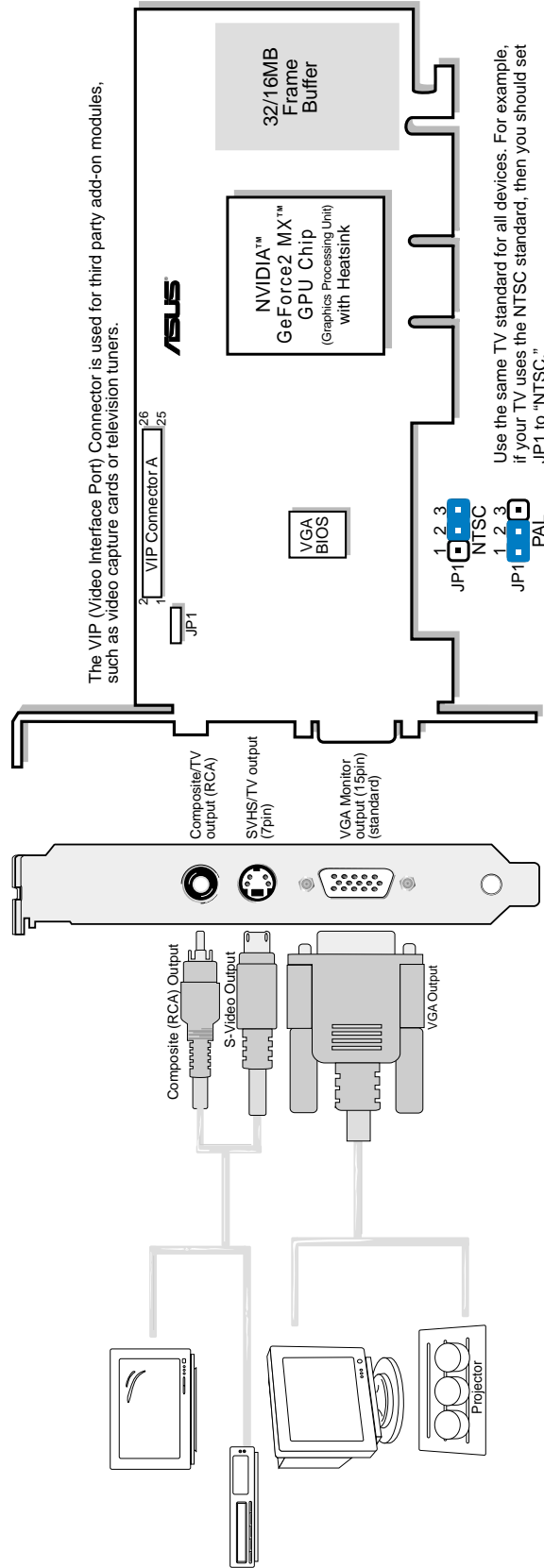
Item Checklist

- ASUS AGP-V7100 / DVI Graphics Card
- This User's Manual
- ASUS V7100 Series Driver & Utility CD Disc

2. H/W Setup
AGP-V7100 / DVI

2. Hardware Setup

ASUS AGP-V7100 / T Layout 32/16MB Frame Buffer



Item Checklist

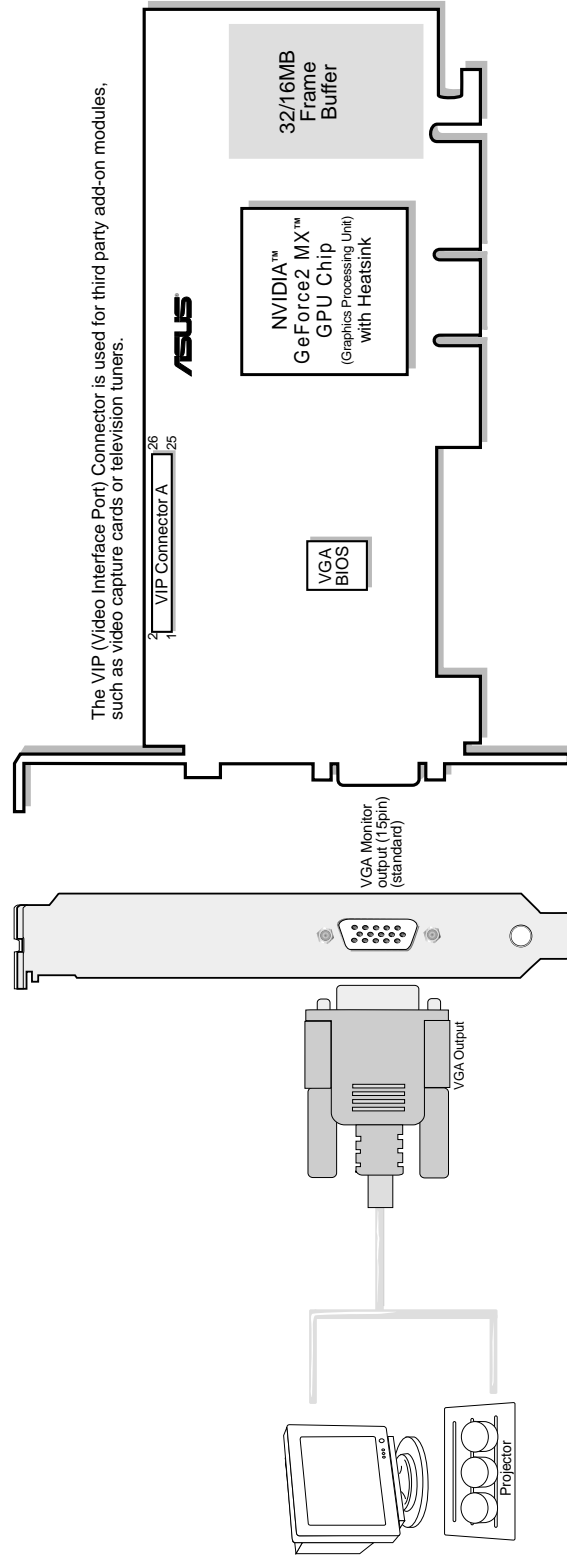
- ASUS AGP-V7100 / T Graphics Card (PAL or NTSC)
- This User's Manual
- ASUS V7100 Series Driver & Utility CD Disc

Notes

- Use the same TV standard for all devices.

2. Hardware Setup

ASUS AGP-V7100 / Pure Layout 32/16MB Frame Buffer



Item Checklist

- ASUS AGP-V7100 / Pure Graphics Card
- This User's Manual
- ASUS V7100 Series Driver & Utility CD Disc

2. HW Setup
AGP-V7100 Pure

2. Hardware Setup

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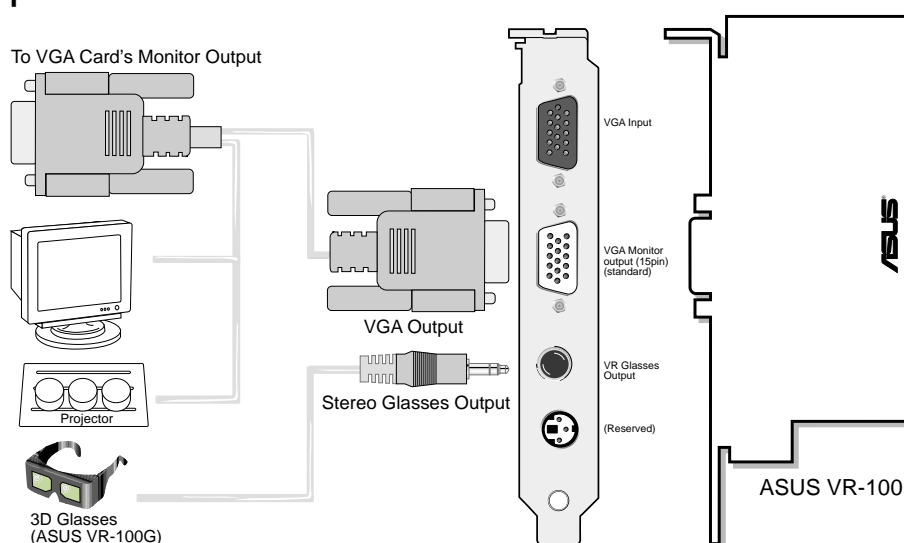
2. Hardware Setup

ASUS VR-100 Optional Upgrade Kit

The ASUS VR-100 Optional Upgrade Kit enables the ASUS VR-100G 3D Glasses to be used with Pure models of the V7100 Series cards. *See your dealer for more information on the ASUS VR-100 Optional Upgrade Kit.*

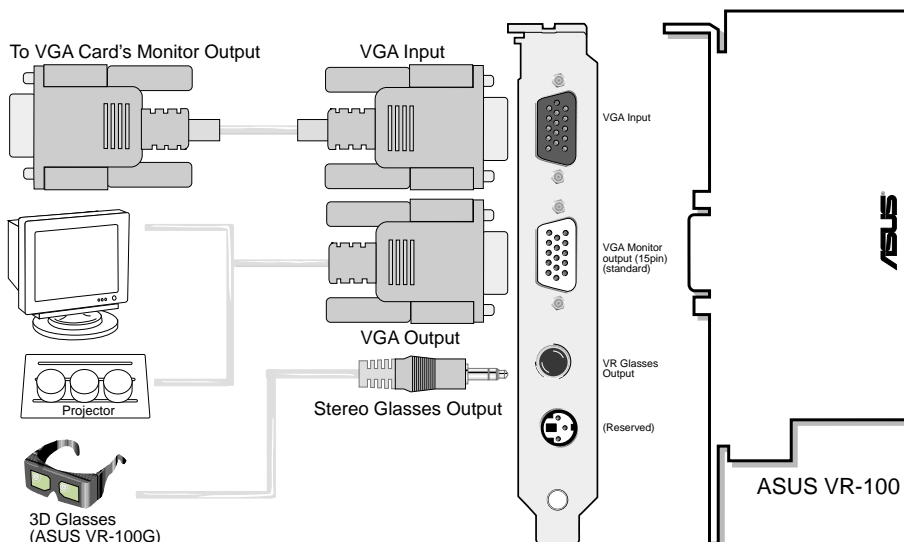
The monitor cable that came with your kit may be of the Y- or standard type. Connect your cable accordingly.

Y-Type Connection



When using a Y-type cable, you do not need to connect the VGA Input of the VR-100 to your VGA card's monitor output (see diagram above).

Standard Connection



You must anchor the ASUS VR-100's mounting bracket with a screw to a free expansion slot in your computer chassis.

2. H/W Setup
ASUS VR-100

2. Hardware Setup

NOTE: This graphics card series can only be installed in motherboards with an AGP slot.

WARNING! Computer boards and components contain very delicate Integrated Circuit (IC) chips. To protect the computer board and other components against damage from static electricity, you must follow some precautions.

1. Make sure that you unplug your power supply when adding or removing expansion cards or other system components. Failure to do so may cause severe damage to both your motherboard and expansion cards.
2. Keep all components such as the host adapter in its antistatic bag until you are ready to install it.
3. Use a grounded wrist strap before handling computer components. If you do not have one, touch both of your hands to a safely grounded object or to a metal object, such as the power supply case. Hold components by the edges and try not to touch the IC chips, leads, or circuitry.
4. Place components on a grounded antistatic pad or on the bag that came with the component whenever the components are separated from the system.

Installation Procedures

New Systems

1. Unplug all electrical cords on your computer.
2. Remove the system unit cover.
3. Locate the AGP bus expansion slot. Make sure this slot is unobstructed.
4. Remove the corresponding expansion slot cover from the computer chassis.
5. Ground yourself to an antistatic mat or other grounded source .
6. Pick up the board (still in its sleeve) by grasping the edge bracket with one hand and then remove the plastic sleeve.
7. Position the card directly over the AGP slot and insert one end of the board in the slot first. Firmly but gently press the bus connector on the bottom of the card down into the slot. Be sure the metal contacts on the bottom of the host adapter are securely seated in the slot.
8. Anchor the board's mounting bracket to the computer chassis using the screw from the slot cover that you set aside previously.
9. Replace the cover on the system unit.
10. Connect your analog monitor's 15-pin VGA connector to the card and fasten the retaining screws (if any).
11. Connect other cables and devices if available -You are now ready to install the software drivers and utilities.

Systems with Existing VGA Card

1. Change your display driver to Standard VGA.
2. Shut down your computer and unplug all electrical cords.
3. Replace the existing VGA card with your graphics card.
4. Restart your computer.
5. Install the ASUS V7100 series display driver.

3. Software Setup

Operating System Requirements

NOTE: This graphics card requires a motherboard with an AGP slot.

Windows 98

Windows 98 supports full Direct3D and AGP features. If you are still using the beta version of Windows 98 and you want to fully take advantage the Direct3D and AGP features, you must upgrade it to the release version before installing the AGP display driver.

Windows 98 includes VGARTD for the major chipsets but it is recommended that you install VGARTD from the ASUS AGP-V7100 Series CD to make sure that you have the latest version of VGARTD (*see 3. Software Setup | Install GART Driver*).

NOTES

- VGARTD stands for Virtual Graphics Address Remapping Table Driver, which is necessary to use the DIME feature of AGP. DIME means Direct Memory Execute, which is accessed *directly* by most AGP chips (when VGARTD is installed) for complex texture-mapping operations.
- For other notes or release information, see the README files in the installation CD disc.
- This Manual assumes that your CD-ROM disc drive is drive D: and that Windows is in C:\WINDOWS. Replace either with the actual location, if necessary.

IMPORTANT!

- **To avoid damage to your graphics card**, unplug your computer's power supply before inserting your graphics card into the AGP slot.
- Make sure that the power supply of your motherboard can provide enough electrical current on the 3.3V lead to maintain normal operation.
- The ASUS VR-100 Optional Upgrade Kit must be installed to enable the the ASUS VR-100G 3D glasses to be used with the Pure models.
- **Windows 98 and VIA Systems:** If your motherboard has a VIA-based chipset, the VIA VGARTD must be installed in normal mode.

3. Software Setup

Display Driver Installation

You can use one of the recommended methods to install the display drivers for your graphics card, depending on your operating system.

NOTE: The screen displays in this manual may not reflect exactly the screen contents displayed on your screen. The contents of the support CD are subject to change at any time without notice.

Windows 98

Method 2 and Method 3 will not install the appropriate AGP GART driver if your motherboard does not use the Intel AGPset. Installing the AGP GART driver will ensure that the AGPset's AGP functions are available. Method 2 and Method 3 will not install also the DirectX runtime libraries. DirectX must be installed so that your video player can take advantage of hardware acceleration. *See 3. Software Setup | Install GART Driver and 3. Software Setup | Install DirectX* later in this manual for the setup steps.

Method 1: ASUS Quick Setup Program

NOTE: *See 3. Software Setup | Drivers | Install Display Driver* for more information.

1. Start Windows.
2. Switch display to Windows' Standard Display Adapter (VGA) mode and then restart Windows.
3. Insert the CD installation disc into your CD-ROM drive.
4. The Install Shell appears. Click **Drivers** and then click **Install Display Driver** on the **Drivers** dialog box.



5. Follow the onscreen instructions to complete the setup.
6. When Setup has finished installing all the necessary files on your computer, it will prompt you to restart your computer. Click **Yes...** and then **Finish** to restart your computer and to complete Setup.

3. Software Setup

Method 2: Display Property Page

1. Start Windows.
2. Switch display to Windows' Standard Display Adapter (VGA) mode and then restart Windows.
3. Right-click the Windows desktop and click **Properties**.
4. Click the **Settings** tab and then click **Advanced**. The **Standard Display Adapter (VGA) Properties** dialog box appears.
5. Click **Change** on the **Adapter** tab. The **Update Device Driver Wizard** dialog box appears. Click **Next**, click **Display a list of all the drivers...** and then click **Next**.
6. Click **Show all hardware** and then click **Have Disk...**. When the **Install From Disk** dialog box appears, type the location of the ASUSNV9X.INF file (WIN9X folder) and then proceed to step 9. Otherwise, proceed to the next step.
7. Click **Browse** to search the CD-ROM drive. In the **Drives** box of the **Open** dialog box, select your CD-ROM drive and then click **OK**.
8. In the **Folders** box, double-click the WIN9x folder and then select ASUSNV9X.INF in the **File name** box.
9. Click **OK**. A list of video cards appears. Select your VGA card type for your operating system and then click **OK**.
10. The **Update Driver Warning** box appears. Click **Yes** to confirm the setting up of the ASUS enhanced display drivers and then follow the onscreen instructions to start the setup.
11. Setup will prompt you when it has finished installing all the necessary files on your computer. Click **Finish** to close Setup.
12. When you are returned to the **Standard Display Adapter (VGA) Properties** box, click **Close**. The **Display Properties** box appears. Click **Close**.
13. The system will prompt you to restart your computer. Click **Yes** to restart your computer and to complete Setup.

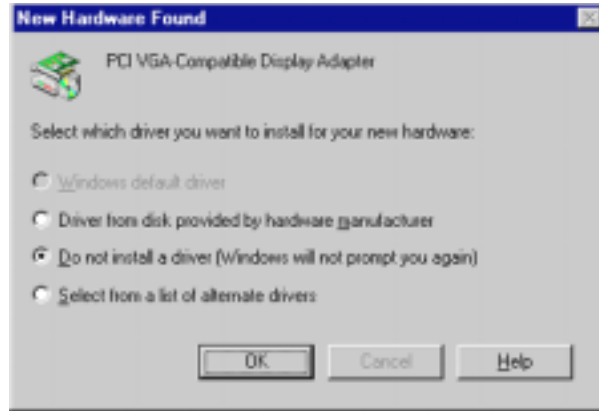


3. Software Setup

Method 3: Plug and Play

NOTE: Before proceeding with these steps, replace first your old VGA card with an ASUS AGP-V7100 series graphics card.

1. Start Windows.
2. When Windows detects your ASUS AGP-V7100 series 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 D:\WIN9x to direct Setup to the INF file and then click **Finish** to install the driver.
5. 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 to complete Setup.



3. Software Setup

Windows 2000

Method 1: ASUS Quick Setup Program

1. Start Windows.
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 CD installation disc into your CD-ROM drive.
5. The ASUS Windows 2000 Install Shell appears. Click **Drivers** and then click **Install Display Driver** on the **Driver** dialog box.
6. Follow the onscreen instructions to complete the setup.
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 to complete Setup



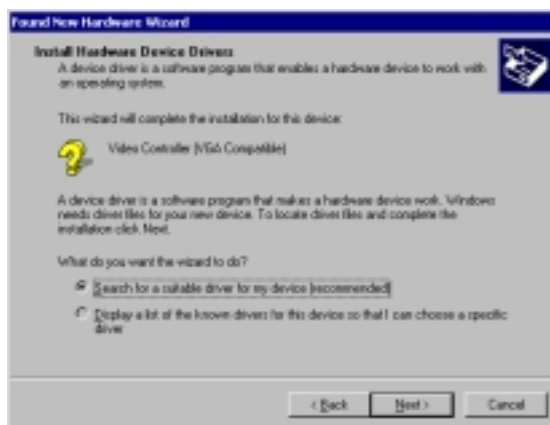
3. Software Setup

Method 2: Plug and Play

1. Start Windows.
2. When Windows detects your ASUS graphics card, the **Found New Hardware Wizard** dialog box appears.



3. Click **Next**.
4. When the next **Found New Hardware Wizard** dialog box appears, select **Search for a suitable driver for my device (recommended)** and then click **Next**.



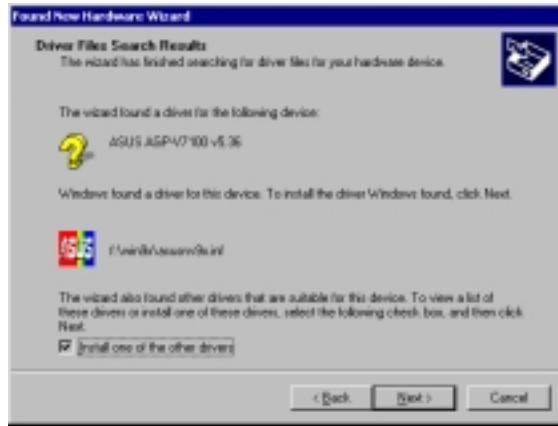
5. Insert the CD installation disc into your CD-ROM drive to bring up the **Locate Driver Files** item of the **Found New Hardware Wizard** dialog box.



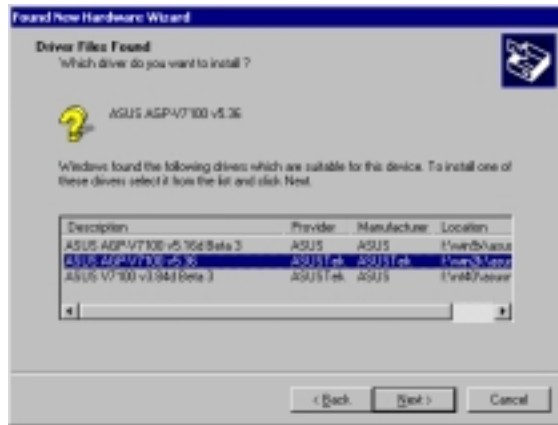
6. Check **CD-ROM drives**, uncheck all other options and then click **Next** to search for the drivers of your graphics card.

3. Software Setup

- 7. When the wizard has finished searching for driver files for your graphics card, select **Install one of the other drivers** and 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:\WIN2K and then click **Next**.



- 9. Follow the onscreen instructions to complete the setup.
- 10. When Setup has finished installing all the necessary files on your computer, it will prompt you to restart your computer.

Click **OK** to restart your computer and to complete Setup.

3. S/W Setup
Display Drivers

3. Software Setup

Windows NT 4.0

Method 1: Display Property Page

WARNING! 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.** (You may download service packs at <http://www.microsoft.com/ntworkstation/downloads>.)

NOTE: The following steps assume your CD-ROM drive letter is D.

1. Start Windows NT, switch display properties to VGA mode (16 colors, 640 x 480 pixels), then restart your computer to make the change.
2. After your computer restarts, right-click the desktop and click **Properties**.
3. Click the **Settings** tab.
4. Select **Change Display Type**.
5. Select **Adapter Type** and click **Change**.
6. Click **Have Disk**.
7. Insert the CD installation disc.
8. Type **D:\NT40** or click **Browse** to select the path of the display driver for Windows NT. Click **OK**.
9. Select **ASUS V7100** and then click **OK**.
10. Windows NT will once again prompt for confirmation. All appropriate files are then copied to the hard disk. When all files are copied, go back to the **Display Properties** box by clicking **Close**. Click **Apply**.
11. The **System Settings Change** dialog box is displayed. Click **Yes** to restart Windows.
12. Windows NT will restart with the default settings. The Display applet will appear to allow for mode selection.

3. Software Setup

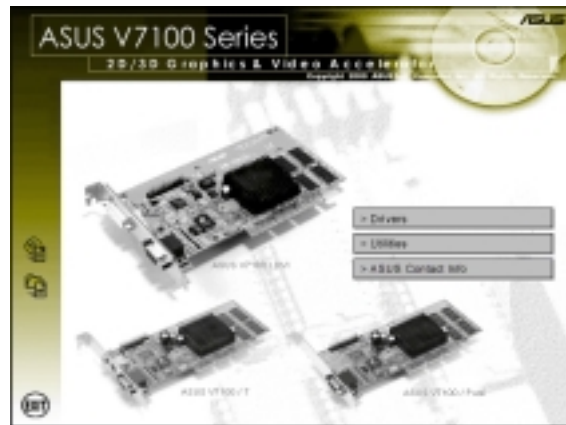
Drivers

- NOTES:**
- 1) The screen displays in this manual may not reflect exactly the screen contents displayed on your screen. The contents of the support CD are subject to change at any time without notice.
 - 2) Unless otherwise indicated, the procedures under **Drivers** apply to all the operating systems supported, namely, Windows 98, Windows 2000, and Windows NT 4.0.

Install Display Driver

1. Insert the CD installation disc into your CD-ROM drive or 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.

Click **Drivers**.



2. **Windows 98:** The **Drivers** box appears. Click **Install Display Driver** to install all the drivers and utilities into your computer. Setup will install the drivers in the following order: Display Driver (Direct3D and OpenGL Drivers), DirectX runtime libraries, and VGART driver. Just follow the on-screen instructions to complete the installation.



Windows 2000: Setup will only copy the display drivers.

Windows NT 4.0: SETUPNT.TXT will appear. Follow the instructions to install the display driver. You may refer to the installation procedures earlier in **3. Software Setup | Windows NT 4.0 | Method 1: Display Property Page**.



If you prefer to install the drivers individually, follow the steps on the following pages.

3. Software Setup

Install DirectX

Windows 98 Only

Microsoft DirectX allows 3D hardware acceleration support in Windows 98. For Software MPEG support in Windows 98, you must first install Microsoft DirectX, and then an MPEG-compliant video player.

1. Insert the CD installation disc into your CD-ROM drive or 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.

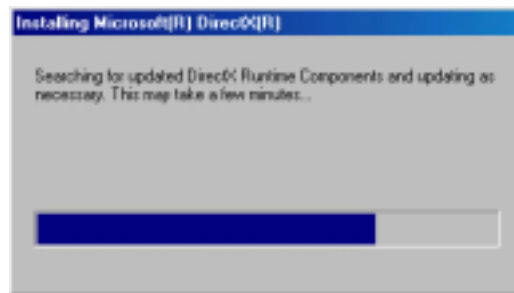
Click **Drivers**.



2. The **Drivers** box appears. Click **Install DirectX** to select the DirectX version you want to install.



3. The installation program will automatically install the DirectX 7 runtime libraries into your system.



4. Setup will prompt when it has finished copying all the files to your computer. Click **OK** to finish the installation.



WARNING! Some games written for older DirectX versions may not work properly under DirectX 7. Make sure that your applications or games support DirectX 7 before installing the DirectX 7 runtime libraries. DirectX 7 currently cannot be uninstalled by regular means, such as outlined in **3. Software Setup | Uninstall Display Driver**.

3. Software Setup

Install GART Driver

Windows 98 Only

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.

NOTE: Installation dialogs are slightly different for each chipset. Follow the on-screen instructions to finish the GART driver installation. The succeeding steps assume that you are installing for an Intel chipset.

1. Insert the CD installation disc into your CD-ROM drive or 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.

Click **Drivers**.



2. The **Drivers** box appears. Click **Install GART Driver** to install AGP support for motherboards with Intel, AMD, VIA, SiS, or ALi chipsets.



3. The **AGP VGARTD Driver Detection** box appears with the chipset detected on your motherboard. Click **OK** to install the appropriate driver for your AGPset.



3. S/W Setup
Drivers

3. Software Setup

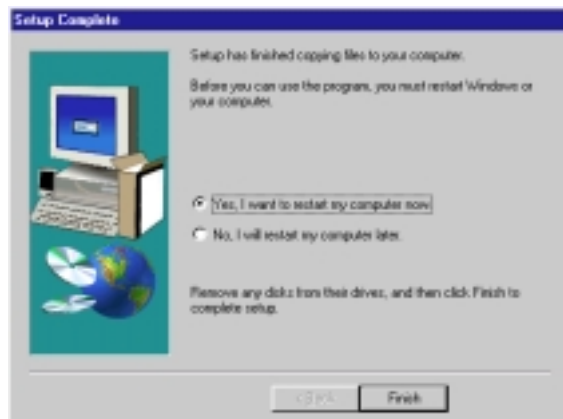
4. If you selected **No...**, on the previous screen before clicking **OK**, you will be presented with a selection of other drivers. Make your driver selection and click **Install**.



5. When the **Welcome** screen appears, click **Next** to continue.



6. Once the driver installation is finished, click **Finish**.



3. Software Setup

Uninstall Display Driver

If you want to update your display drivers or if you no longer need the display drivers for your card, you can use one of the following procedures to completely uninstall the drivers from your system to save disk space.

Windows 98

Method1: Using the Autorun Screen

1. Insert the CD installation disc into your CD-ROM drive or 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.

Click **Drivers**.

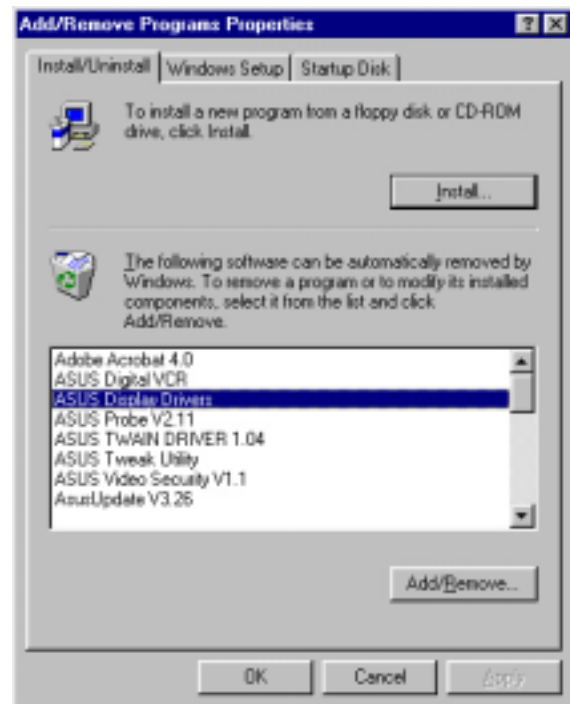
2. Click **Uninstall Display Driver** and follow the on-screen directions.



3. SW Setup
Uninstall Driver

Method 2: Using Control Panel

1. Click **Start**, and then point to **Settings**.
2. Click **Control Panel**.
3. Double-click the **Add/Remove Programs** icon.
4. Click the **Install/Uninstall** tab.
5. Click **ASUS Display Drivers** from the list.
6. Click **Add/Remove**.
7. The system will prompt you to restart your computer. Click **Yes** to restart.



3. Software Setup

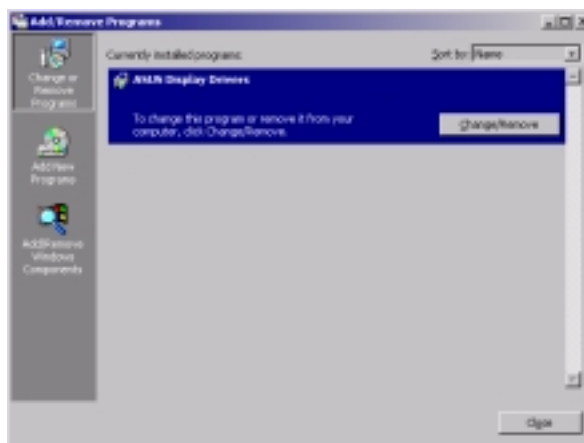
Windows 2000

Method 1: Using the Autorun Screen

See **Windows 98 | Method 1: Using the Autorun Screen** earlier in this section for the procedures.

Method 2: Using Control Panel

1. Click **Start**, and then point to **Settings**.
2. Click **Control Panel**.
3. Double-click the **Add/Remove Programs** icon.
4. Click the **Change/Remove Programs** icon.
5. Click **ASUS Display Drivers** from the list.
6. Click **Change/Remove**.
7. The system will prompt you to restart your computer. Click **Yes** to restart.



Windows NT 4.0

Method 1: Using Control Panel

1. Click **Start**, and then point to **Settings**.
2. Click **Control Panel**.
3. Double-click the **Add/Remove Programs** icon.
4. Click the **Install/Uninstall** tab.
5. Click **ASUS Display Drivers** from the list.
6. Click **Add/Remove**.
7. The system will prompt you to restart your computer. Click **Yes** to restart.

3. Software Setup

Run ASUS VGA Live Update

Windows 98 Only

The ASUS VGA Live Update is a utility that allows you to update your VGA card's BIOS and drivers. The use of this utility assumes that you are properly connected to the Internet through an Internet Service Provider (ISP).

1. Insert the CD installation disc into your CD-ROM drive or 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.

Click **Drivers** and when the **Drivers** box appears, click **Run ASUS VGA LiveUpdate**.



2. Select an update method from the drop-down list box and then click **Next**.
 - *Update BIOS/Driver from the Internet* lets you update the BIOS or driver from the Internet. The updating (running the flash utility or the installation program) will be done automatically.
 - *Download BIOS/Driver from the Internet* lets you download the BIOS or driver to a folder in your computer.

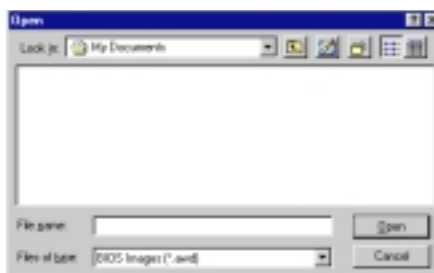


3. After you have selected your preferred update method, you will need to select an Internet site. Choose the site that is closest to you and then click **Next** or click **Auto Select**.

Follow any on-screen instructions or prompts to complete setup.



If you selected *Download BIOS/Driver from the Internet*, you will be prompted for a destination folder. Create or select an existing folder to save the file or files that you selected.



3. SW Setup
VGA LiveUpdate

3. Software Setup

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3. Software Setup

Utilities

Install ASUS Tweak Utility

The ASUS Tweak Utility lets you control the core clock speed and the memory interface speed of your graphics card.

WARNING! Use this option with caution. Using this inappropriately may damage your card and cause your system to be unstable.

1. Insert the CD installation disc into your CD-ROM drive or 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.

Click **Utilities**.



2. The **Utilities** box appears. Click **Install ASUS Tweak Utility**.



3. When the **Welcome** box appears, click **Next**.



To complete the installation, simply follow the on-screen instructions or prompts.

3. Software Setup

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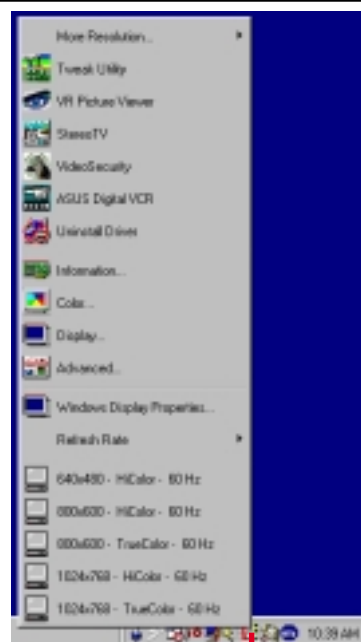
4. Software Reference

ASUS Control Panel

(Windows 98/Windows 2000 only)

After installation of the display drivers, you will find an ASUS icon on the taskbar's status area. Clicking or right-clicking this icon opens the ASUS Control Panel, showing a menu composed of shortcuts of the graphics board's enhanced and other functions.

NOTE: Instead of clicking the ASUS Control Panel icon, you may right-click the Windows 98/2000 desktop, click **Properties**, and then click **Settings**. Under Windows 98/2000, click **Advanced** after clicking **Settings**. Click the appropriate tab to change your display settings.



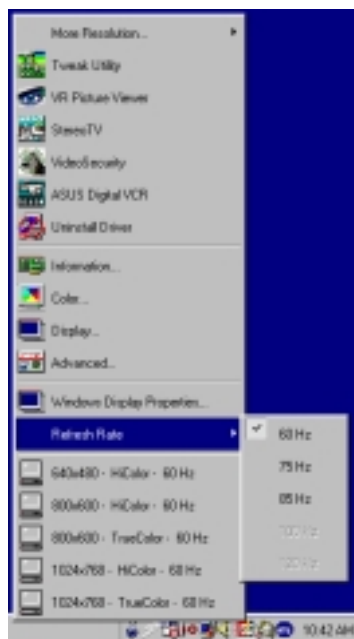
ASUS Control Panel icon 

Refresh Rate

Refresh Rate lets you change the refresh rate of your current screen resolution.

WARNING! Be sure that the refresh rate that you select is supported by your monitor. Selecting a refresh rate that is beyond your monitor's specification may damage it. **Press ESC to restore your original settings in case of problems.**

1. Click/right-click the ASUS Control Panel icon, point to **Refresh Rate**, and then click the desired refresh rate.



2. The system will prompt you whether you want to keep the setting you just selected. Click **OK** to keep the setting, otherwise, click **Cancel** or press ESC.

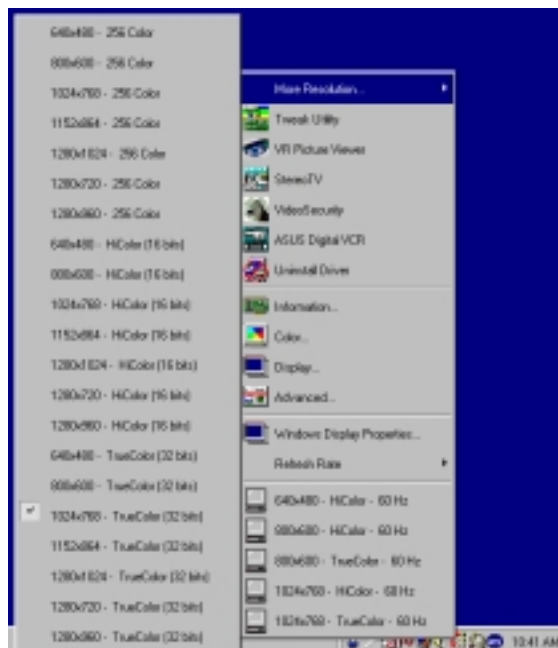


4. Software Reference

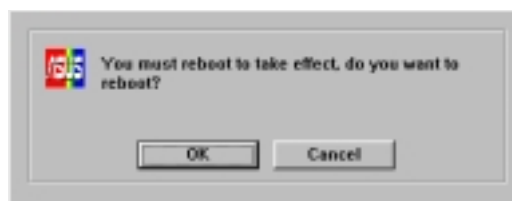
More Resolution

More Resolution lets you change the screen resolution of your monitor.

1. Click/right-click the ASUS Control Panel icon, point to **More Resolution**, and then click the desired screen resolution. The system will automatically set the resolution selected without restarting your computer.



WINDOWS95 USERS: You will be prompted to restart your computer if you select a screen resolution with a different color depth, for example, from 800x600 HiColor to 800x600 TrueColor. Click **OK** to restart your computer to make the change.



Information

Information lists the relevant information about your card. Aside from this, it has links to the ASUSTeK COMPUTER, INC. web site for updated information about the graphics board, latest drivers, and other information.



4. Software Reference



Color

Color allows you to make color adjustments, such as brightness, contrast, and gamma values for each or all of the RGB colors. These adjustments can be made for Desktop, D3D/Game, Video, and OpenGL. The color settings of Desktop, D3D/Game, and OpenGL are not adjustable under 8-bit color depth.

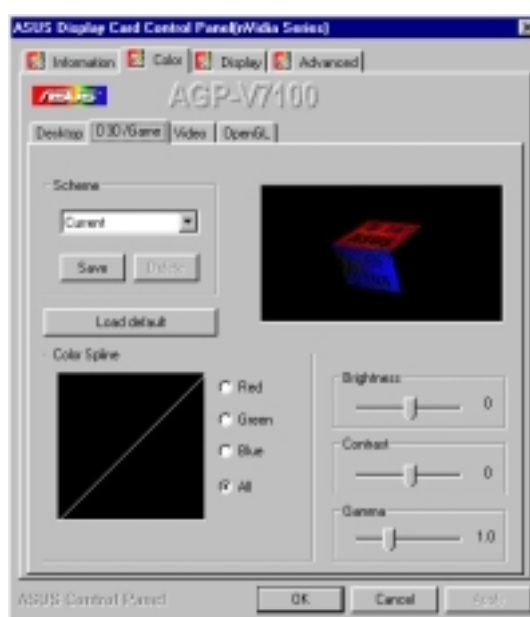
Desktop

Desktop lets you adjust the color of your Windows desktop.



D3D/Game

D3D/Game lets you make your favorite color settings for D3D games.



Video

Video lets you make your favorite color settings for videos.



OpenGL

OpenGL lets you make your favorite color settings for OpenGL applications.



4. SW Reference
Color

4. Software Reference

General Functions

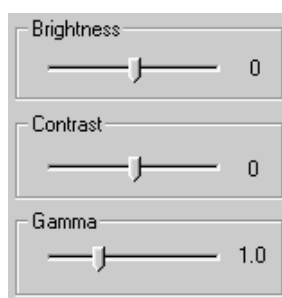
Brightness / Contrast / Gamma
Brightness / Contrast / Gamma sliders let you calibrate the brightness, contrast, and gamma output of your display card.

Desktop

Changes to your color settings are shown immediately on your monitor. You may change the preview picture by clicking **Load** from the **Desktop** box.

D3D/Game / OpenGL

Changes to your color settings are shown immediately on your monitor.



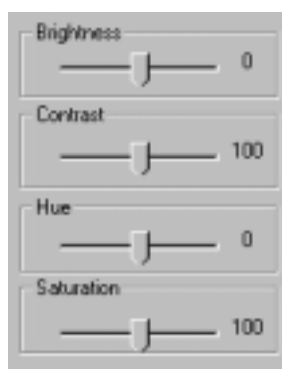
Dragging a slider to the left decreases the level and to the right increases it. The number at the right of each slider displays the brightness (value range: -128 to +128, default: 0), contrast (-30 to 30, default: 0), or gamma value (0.2 to 3.0, default: 1.0).

Brightness / Contrast / Hue / Saturation

Brightness / Contrast / Hue / Saturation sliders let you calibrate the brightness, contrast, hue, and saturation output of your display card.

Video

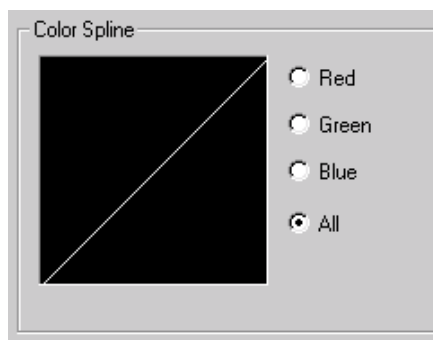
Changes to your settings can be viewed on the displayed picture (shown as race horses).



Dragging a slider to the left decreases the level and to the right increases it. The number at the right of each slider displays the brightness (value range: -100 to 100, default: 0), contrast (0 to 200, default: 100), hue (-180 to 180, default: 0), or saturation value (0 to 200, default: 100).

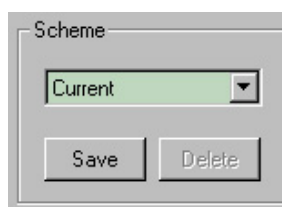
Color Spline

Color Spline shows how each (R, G, or B) or all channels are distributed when you move the Brightness, Contrast, or Gamma slider to make your adjustments. You can adjust all channels at once (**All**) or individual channels (**R**, **G**, or **B**).



Scheme

Scheme lists schemes that you can use to change the appearance of many screen elements simultaneously. You can use existing schemes, or create and save your own scheme by saving your current settings, or delete unwanted schemes. You may want to save a scheme that you created for some special situations, such as when you want to use the same settings when playing a certain game or a movie.



4. Software Reference

Important Notes

D3D/Game

The color settings of **D3D/Game** take effect only when you are playing a **full-screen** DirectDraw/Direct3D game.

Video

Only one overlay is allowed at a time with ASUS AGP-V7100. That is, when you click *Video* first and then run your favorite video player, you can only see the adjustments you made to the settings in the preview window because the video player cannot use the hardware acceleration function (overlay). On the other hand, if you run your video player first before opening *Video*, the preview window will show a warning message. The message may also appear when you click *Video* and the dialog box is on the wrong monitor in a Windows 98/2000 multiple display environment.

4. Software Reference



Display

Display lets you make monitor adjustments, such as position, size, and refresh rate.

WARNING! Adjusting position or size, especially refresh rate is a highly dangerous operation. Selecting a value that is beyond your monitor's specification may damage it. **Press ESC to restore your original settings in case of problems.**

VGA

Adjustment

Position sets the screen position

Size sets the screen size

Synchronization

Adjusts the synchronization polarity settings

Disable Monitor Check

Lets you disable the specification check of your monitor. That is, you may select all the resolutions and refresh rates that the VGA card can support.

Note: Choosing a resolution or refresh rate beyond the monitor specifications may damage your monitor.

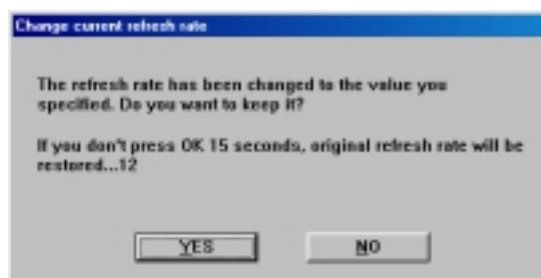
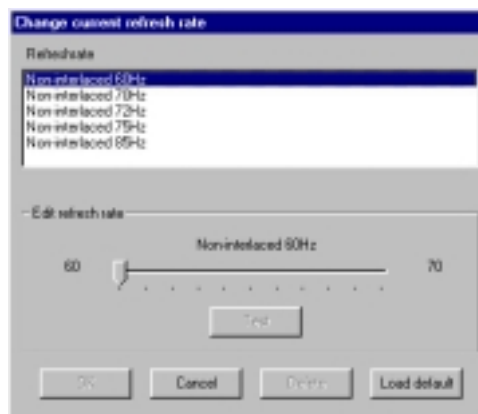


Change current refresh rate (Windows 98 only)

Displays the **Change current refresh rate** box to let you customize a new refresh rate.

To change the current refresh rate

1. Click **Change current refresh rate**.
2. In the **Refresh rate** list under **Change current refresh rate**, click the nearest default refresh rate and then adjust the **Edit refresh rate** slider to the rate you want, click **Test** and then click **YES** when prompted to add the new refresh rate into the list. Otherwise, the original refresh rate will be restored.



Load default

Restores the settings to their defaults.

4. Software Reference

Change refresh rate

Displays the **Change refresh rate** box to let you change the refresh rate of any screen resolution.

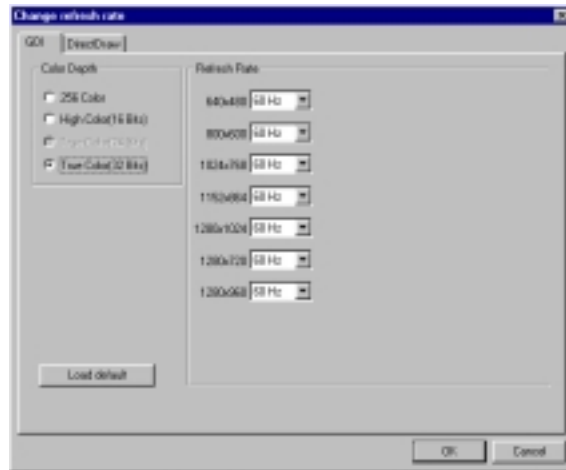
GDI

(Windows 98 only)

GDI lets you change the refresh rate of the Windows desktop.

To change the refresh rate

1. Click **Change refresh rate**.
2. In the **Refresh Rate** list under the **GDI** tab, select the refresh rate you want to use. A **Test** button appears to let you test the selected refresh rate and resolution combination. Click **YES** when prompted whether to keep the new refresh rate. Otherwise, the original refresh rate will be restored.

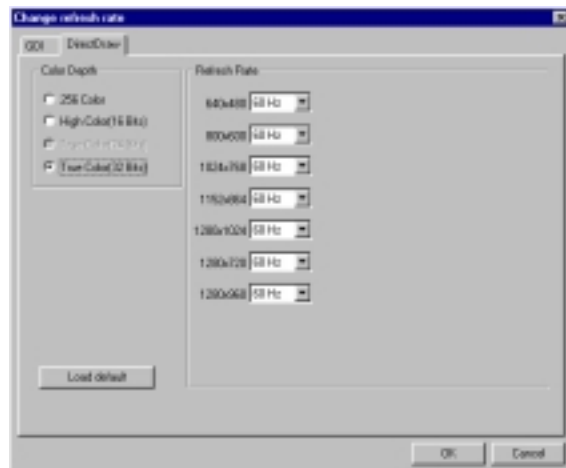


DirectDraw

DirectDraw lets you change the refresh rate of DirectDraw. It is most useful when you are playing a **full-screen** game.

To change the refresh rate

1. Click **Change refresh rate**.
2. In the **Refresh Rate** list under the **DirectDraw** tab, select the refresh rate you want to use.



4. Software Reference

TV

NOTE: This tab will not be available if your card is a pure model (cards without a TV Out connector).

Switch Device

Lets you assign hot keys to switch between devices.

Scheme

Scheme lists schemes that you can use to change the appearance of many screen elements simultaneously. You can use existing schemes, or create and save your own scheme by saving your current settings, or delete unwanted schemes. You may want to save a scheme that you created for some special situations, such as when you want to use the same settings when playing a certain a movie.

Standard

Sets the TV signal format, for example, PAL or NTSC.

Black Level

Sets the brightness of the TV display.

Contrast

Sets the contrast of the TV display.

Flicker Filter

Sets the anti-flicker effect.

Position

Sets the screen position.

Output type

Displays the connection status of composite and S-Video.

Scan Type

Sets the scan type of the TV display.



4. Software Reference



Advanced

Advanced provides some advanced settings for the ASUS VR-100G 3D Glasses (setting is available only on models with the ASUS VR-100 Optional Upgrade Kit) and Direct3D and OpenGL, which are software interfaces for your graphics cards.

Direct3D VR

VR Effect

Lists all parameters to fine tune the stereoscopic effects for your Direct 3D games.

Enable Stereoscopic Mode

When selected, this enables you to use the stereoscopic mode when playing games or watching 3D videos. This mode is available only on models with the ASUS VR-100 Optional Upgrade Kit.

NOTE: You must quit all running DirectDraw/ Direct3D applications and then restart them for this option to take effect.

Load Default

Restores the settings to their defaults.

Depth

Adjust this to add more depth to the scene. When set to a too high value, eye discomfort/fatigue may occur.

Embossment

Adjust this to add more to the illusion of objects being pulled or popping out of the screen. See **On Screen Display** later in this section for details. When set to a too high value, eye discomfort/fatigue may occur.

Direction

Move the slider to the left when adjusting Embossment does not give the expected effects (e.g., some objects being pulled or popping out of the screen and other objects being pulled into the screen) to some games. This should not be a concern because only a few games require the default “+” setting to be changed, that is setting it to “-”.



Foreground

Foreground is set in conjunction with Background to extend or stretch the histogram chart on the D3D OSD box to scale the depth of 3D objects. Some games require only a little range of Z to make bad stereoscopic effect. On the D3D OSD box, move the Foreground slider to the left to adjust Foreground to the Z value of objects stretched toward 0.0. On the Advanced dialog box (see above), several current games set their Foreground to 60.



Background

Background is set in conjunction with Foreground to extend or stretch the histogram chart on the D3D OSD box to scale the depth of 3D objects. On the D3D OSD box, move the Foreground slider to the left to adjust Foreground to the Z value of objects toward 1.0. On the Advanced dialog box (see above), several current games set their Background to 100.

Blind

Lets you discard “garbage” or crop the unwanted areas of your leftmost/rightmost display. Setting this to 0 will not discard any of the display area while setting it to a higher value will clear them.

Tips

1. Make sure that the 3D objects of your games do not appear extremely separated between the scenes of two eyes, especially near objects.
2. Make some objects appear outside your screen and other objects inside the screen. A ratio of 1:3 to 1:5 of objects outside and inside is recommended.
3. For car racing games, you can use Embossment to make just your car appear outside the screen.
4. For first-person shooting games, you can use Embossment to make just your hand/weapon appear outside the screen.

4. SW Reference
Direct3D VR

4. Software Reference

IMPORTANT: Before enabling stereoscopic mode and using your stereoscopic or 3D glasses (ASUS VR-100G), make sure that your monitor can support the selected refresh rate (interlaced mode) under the following display modes:

16 bits: 640 x 480, 800 x 600, 960 x 720, 1024 x 768, 1152 x 864

32 bits: 640 x 480, 800 x 600

WARNING! To prevent discomfort and eye fatigue when using your stereoscopic or 3D glasses, DO NOT try to use your 3D glasses for an extended period of time. Take frequent short breaks to give your muscles and eyes a chance to rest by taking off your 3D glasses and then looking up and focusing on distant objects.

Mode

Line Interleave

Select for better compatibility with most monitors, particularly monitors with less bandwidth or less range of horizontal/vertical frequency. Stereoscopic visual quality, however, will be poor because only half the number of vertical lines are generated with this mode.

Page Flipping

Select for the best stereoscopic visual quality. Page Flipping provides double vertical resolution compared with Line Interleave. Your monitor must be able to support the high frequency (at least 100Hz) necessary for this mode.

Refresh Rate

To prevent eye discomfort and fatigue, high refresh rates are preferred. Some monitors, however, may not be able to support a high refresh rate. Make sure that your monitor supports a selected refresh rate; otherwise, your monitor may become unstable, for example, a blank screen may occur.

Scheme

Scheme lists schemes that you can use to change the appearance of many screen elements simultaneously. You can use existing schemes, or create and save your own scheme by saving your current settings, or delete unwanted schemes. You may want to save a scheme that you created for some special situations, such as when you want to use the same settings when playing a certain game or a movie.

On Screen Display

Enable OSD

When selected, this lets you open the D3D On Screen Display (you may use the defined **Hotkey**) and then adjust onscreen the settings of your 3D glasses and display card when playing Direct 3D games.

Hotkey

This lets you assign hot keys to enable onscreen display or OSD. To use this function, select **Enable OSD**. You may want to change the default hot key (CTRL + ALT + O) when it conflicts with hot keys of certain games, video players, or Windows programs.

To change the default hot keys

1. With your mouse cursor in the **Hotkey** box, press the hot key combination of your choice (you can only define CTRL + ALT key combinations). Hot keys automatically include CTRL+ALT. Press any valid key (you cannot use ESC, ENTER, TAB, SPACEBAR, PRINT SCREEN, or BACKSPACE) you want to add to this combination. For example, to define the hot key combination CTRL+ALT+D, press D.

NOTE: The hot keys will be available only if you selected the **Enable OSD** check box.

4. Software Reference

OSD Settings



Beetle Crazy Cup™ is copyright © 2000 by INFORGRAMES
Original idea and development by XPIRAL™ (Efecto Caos S.L.)

The OSD settings include **Depth, Embossment, Direction, Background, Foreground, Blind, Brightness, Contrast, and Gamma.** See **4. Software Reference | Advanced** for a description of the 3D glasses settings and **4. Software Reference | Color** for a description of the display settings.

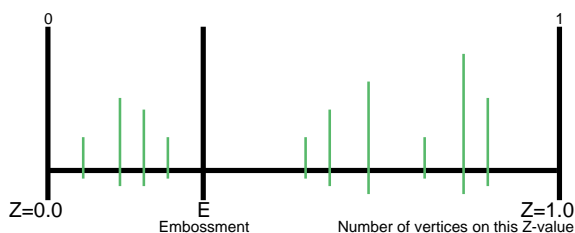
When selected, this lets you to adjust onscreen the settings of your 3D glasses and display card when playing games or watching 3D videos. These settings include **Eyes, Distance, Embossment, Background, Foreground, Blind, Brightness, Contrast, and Gamma.** See **4. Software Reference | Advanced** for a description of the 3D glasses settings and **4. Software Reference | Color** for a description of the display settings.

Use the UP or DOWN arrow keys on your keyboard to select a setting that you want to change or adjust and the PLUS or MINUS keys to move or drag the slider.

To restore the settings to their defaults, press the HOME key.

To close the onscreen display, press the END key.

OSD Histogram Chart



The OSD Histogram Chart lets you determine at which Z range 3D objects are located and how they gather. For example, if this chart (simulated) was displayed on a car racing game, the vertices to the left of the E line could be the model of your car and to the right of the E line could be the road, houses, other cars or trees in front of your car.

So, with this information, you could

- Adjust Embossment by moving the E line.
- Adjust Foreground/Background, thus stretching the histogram to make objects more evenly distributed.

NOTE: Using the histogram chart requires games using Direct3D 6.0 or earlier.

Known Issues on Specific Games

See the included support CD for the latest information (D3DVR.TXT in the WIN9X folder).

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4. Software Reference

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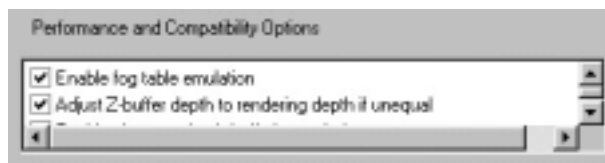
4. Software Reference

Direct3D

Windows 98 Only



Performance and Compatibility Options



Enable fog table emulation

Some old games do not correctly query the D3D hardware capabilities and expect table fog support. Choosing this option will ensure that such games will run properly.

Adjust Z-buffer depth to rendering depth if unequal

This option forces the hardware to automatically adjust the depth of its Z-buffer to the depth that the application requests. Normally, you will want to keep this option enabled, unless your work absolutely requires a specific Z-buffer depth.

Enable alternate depth buffering technique

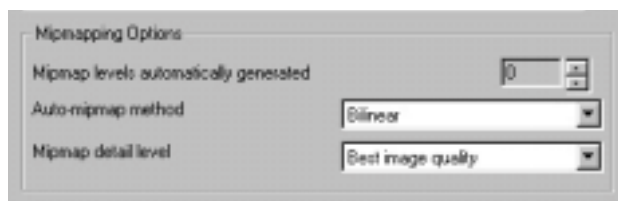
This option lets the hardware use a different mechanism for depth buffering in 16-bit applications. Enabling this setting can produce higher quality rendering of 3D images.

Display logo when running Direct3D applications

This option lets you display the Nvidia logo in the lower corner of the screen while running Direct3D applications.

4. Software Reference

Mipmapping Options



Mipmap levels automatically generated

This option lets the hardware automatically generate mipmaps to increase the efficiency of texture transfers across the bus and provide higher application performance.

Auto-mipmap method

This option lets you choose the auto-mipmap method. Choose bilinear method for a generally improved performance or anisotropic method for a generally higher quality image.

Mipmap detail level

This option lets you adjust the level of detail bias for mipmaps. A lower bias will increase the application performance.

Command Buffer Location



Command Buffer Location lets you choose the location of the command buffer. Default setting is **Strict AGP**.

Strict AGP

This option forces all the command buffer into the AGP memory. Choose for best performance.

PCI

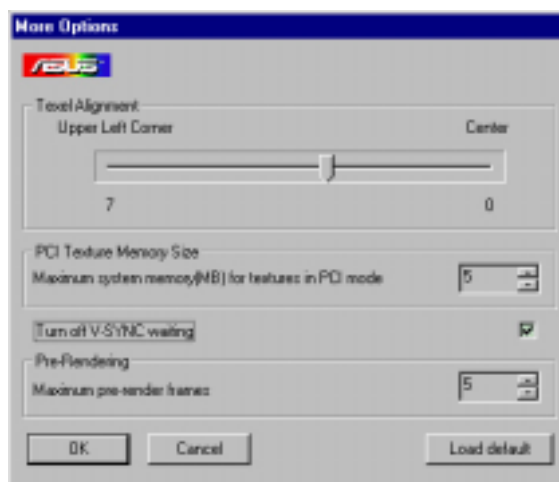
This option forces the command buffer to be created into the PCI memory. If you are experiencing stability problems with your system (especially with some Socket 7 motherboards), choose this option for better compatibility.

PCI with reduced heap

This option forces the command buffer to be created into the PCI memory. This, however, also reduces the AGP heap size by an amount equal to the size of the command buffer. If you are experiencing stability problems with your system (especially with some Socket 7 motherboards), choose this option for best compatibility. Performance is, however, poorer using this option compared with the **PCI** option.

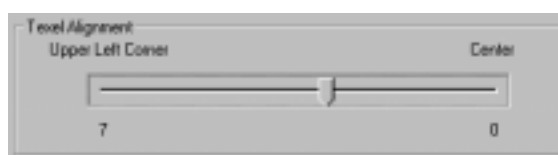
4. Software Reference

More Options



Texel Alignment

Changing these values will change where the texel origin is defined. The default values conform to the Direct3D specifications. Some software may expect the texel origin to be defined elsewhere. The image quality of such applications will improve if the texel origin is redefined.

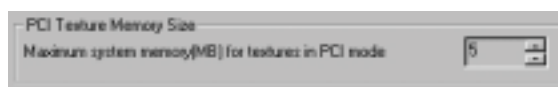


Dragging the slider to the left positions the texel origin toward the upper left corner and to the right positions it toward the center (range: 0 to 7, default: 3).

PCI Texture Memory Size

NOTE: This setting applies only to PCI display adapters or to AGP display adapters running in PCI compatibility mode.

PCI Texture Memory Size lets you set the amount of system memory for texture storage.



Clicking the up arrow increases the memory size while clicking the down arrow decreases the size of system memory for textures. The maximum amount of system memory for texture storage depends on the physical memory installed on your system.

Turn off V-SYNC waiting

Turn off V-SYNC waiting lets an image to be immediately rendered to the screen without waiting to be synchronized with the vertical retrace of the monitor. This option allows for frame rates higher than the refresh rate of your monitor. This may, however, produce visual artifacts and tearing, resulting in reduced image quality.



Pre-Rendering

Maximum pre-render frames allows you to limit the number of frames the CPU can prepare before they are processed by the graphics chip when vertical sync is turned off. Reduce this value if you experience, while playing games, a noticeable delay in the response of the input devices connected to your computer.

4. Software Reference

OpenGL VR

VR Effect

Enable Stereoscopic Mode

When selected, this enables you to use the stereoscopic mode when running OpenGL 3D applications and games. This mode is available only with the ASUS Deluxe model or a Deluxe/TVR model—models with Video-In/TV-Out—or models with the ASUS VR-100 Optional Upgrade Kit.

Eyes

Distance between both eyes. Adjust this to bring objects into focus. Default: 0.

View Angle

The angle by which your two viewing directions intersect. Adjust this to add more depth to the scene. When set to a too high value, eye discomfort/fatigue may occur.

Embossment

Adjust this to add more to the illusion of objects being pulled or popping out of the screen. See **On Screen Display** later in this section for details. When set to a too high value, eye discomfort/fatigue may occur. To achieve a better stereoscopic visual quality, set **Embossment** in conjunction with **View Angle**.



Mode

Line Interleave

Select for better compatibility with most monitors, particularly monitors with less specifications. Stereoscopic visual quality, however, will be poor because only half the number of vertical lines are generated with this mode.

Page Flipping

Select for the best stereoscopic visual quality. Page Flipping provides double vertical resolution compared with Line Interleave. Your monitor must be able to support the high frequency (at least 100Hz) necessary for this mode.

Refresh Rate

To prevent eye discomfort and fatigue, high refresh rates are preferred. Some monitors, however, may not be able to support a high refresh rate. Make sure that your monitor supports a selected refresh rate; otherwise, your monitor may become unstable, for example, a blank screen may occur.

Scheme

Scheme lists schemes that you can use to change the appearance of many screen elements simultaneously. You can use existing schemes, or create and save your own scheme by saving your current settings, or delete unwanted schemes. You may want to save a scheme that you created for some special situations, such as when you want to use the same settings when playing a certain game or a movie.

IMPORTANT: Before enabling OpenGL stereoscopic mode and using your stereoscopic or 3D glasses (ASUS VR-100G), make sure that you select a high resolution. The equivalent Stereo Mode resolution of a particular resolution is lower, thus:

16 bits: 2048x1536 → 1024x768 Stereo Mode

32 bits: 1280x960 → 640x480 Stereo Mode, 1280x1024 → 640x480 Stereo Mode, 1600x900 → 800x600 Stereo Mode, 1600x1200 → 800x600 Stereo Mode

WARNING! To prevent discomfort and eye fatigue when using your stereoscopic or 3D glasses, DO NOT try to use your 3D glasses for an extended period of time. Take frequent short breaks to give your muscles and eyes a chance to rest by taking off your 3D glasses and then looking up and focusing on distant objects.

4. Software Reference

On Screen Display

Enable OSD

When selected, this lets you open the D3D On Screen Display (you may use the defined **Hotkey**) and then adjust onscreen the settings of your 3D glasses and display card when playing games or watching 3D videos.

Hotkey

This lets you assign hot keys to enable onscreen display or OSD. To use this function, select **Enable OSD**. You may want to change the default hot key (CTRL + ALT + O) when it conflicts with hot keys of certain games, video players, or Windows programs.

To change the default hot keys

1. With your mouse cursor in the **Hotkey** box, press the hot key combination of your choice (you can only define CTRL+ALT key combinations). Hot keys automatically include CTRL+ALT. Press any valid key (you cannot use ESC, ENTER, TAB, SPACEBAR, PRINT SCREEN, or BACKSPACE) you want to add to this combination. For example, to define the hot key combination CTRL+ALT+D, press D.

NOTE: The hot keys will be available only if you selected the **Enable OSD** check box.

OSD Settings



Unreal Tournament™ is copyright © 1999 by Epic Games, Inc.

When selected, this lets you to adjust onscreen the settings of your 3D glasses and display card when playing games or watching 3D videos. These settings include **Eyes**, **View Angle**, **Embossment**, **Brightness**, **Contrast**, and **Gamma**. See **4. Software Reference | Advanced** for a description of the 3D glasses settings and **4. Software Reference | Color** for a description of the display settings.

Use the UP or DOWN arrow keys on your keyboard to select a setting that you want to change or adjust and the PLUS or MINUS keys to move or drag the slider.

To restore the settings to their defaults, press the HOME key.

To close the onscreen display, press the END key.

Known Issues on Selected Games/Applications

See the included support CD for the latest information (OPENGLVR.TXT in the WIN9X folder).

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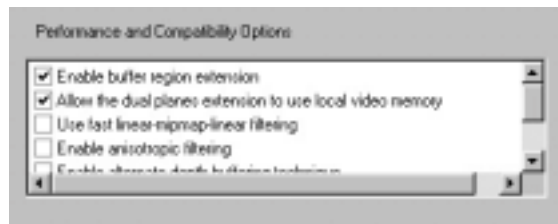
4. Software Reference

OpenGL

Windows 98 Only



Performance and Compatibility Options



Enable buffer region extension

This option allows the drivers to use the OpenGL extension `GL_KTX_buffer_region`.

Allow the dual planes extension to use local video memory

This option allows the use of local video memory when the `GL_KTX_buffer_region` extension is enabled.

Use fast linear-mipmap-linear filtering

This option allows increased application performance at the expense of some image quality loss. In many cases, the loss of image quality may not be noticeable.

Enable anisotropic filtering

This option allows OpenGL to use anisotropic filtering for improved image quality.

Enable alternate depth buffering technique

This option lets the hardware use a different mechanism, for depth buffering in 16-bit applications. Enabling this setting produces higher quality rendering of 3D images.

Disable support for enhanced CPU instruction sets

This option disables driver support for enhanced 3D instruction sets by certain CPUs.

Enable full scene antialiasing

This option lets OpenGL use full scene antialiasing.

4. Software Reference

Default color depth for textures



Default color depth for textures determines whether textures of a specific color depth should be used by default in OpenGL applications. Options are **Use desktop color depth** (default), **Always use 16 bpp**, and **Always use 32 bpp**.

Buffer flipping mode



Buffer flipping mode determines the buffer flipping mode for full-screen OpenGL applications. Options are **Auto-select** (default), **Use block transfer**, and **Use page flip**.

Vertical sync



Vertical sync lets you specify how vertical sync is handled in OpenGL. Options are **Always off** (default), **Off by default**, and **On by default**.

Maximum system memory (MB) for textures in PCI mode



Maximum system memory (MB) for textures in PCI mode lets you set the amount of system memory for texture storage.

NOTE: This setting applies only to PCI display adapters or to AGP display adapters running in PCI compatibility mode.

Clicking the up arrow increases the memory size while clicking the down arrow decreases the size of system memory for textures. The maximum amount of system memory for texture storage depends on the physical memory installed on your system.

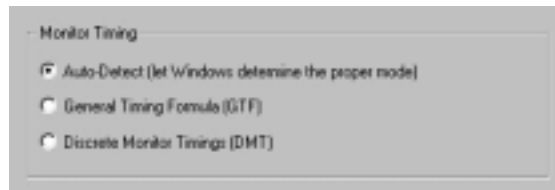
4. Software Reference

Other

Windows 98 Only



Monitor Timing



Monitor Timing lets you select the proper timing mode for your monitor.

Auto-Detect (let Windows determine the proper mode)

This option allows Windows to receive the proper timing information directly from the monitor itself. This is the default setting.

NOTE: Some older monitors may not support this feature.

General Timing Formula (GTF)

GTF is a standard used by most new hardware.

Discrete Monitor Timings (DMT)

DMT is an older standard still in use on some hardware. Select this option if your hardware requires DMT.

4. Software Reference

Using the Utilities



ASUS Tweak Utility

WARNING! Use the ASUS Tweak Utility with extreme caution and only if you are well acquainted with your display card. Using this inappropriately may damage your card, its components, and your system.

To run the ASUS Tweak Utility, click **Start** and point to **Programs, Asus, Tweaking Utilities**, and then click **Tweak**.

Timing Adjustment

Timing Adjustment lets you adjust the working frequency of the graphic engine and video memory.

Use tweak settings on next startup

Selecting this allows you to use your settings when Windows starts.

Graphics Speed

Engine

Lets you adjust the working frequency of the graphic engine

Memory

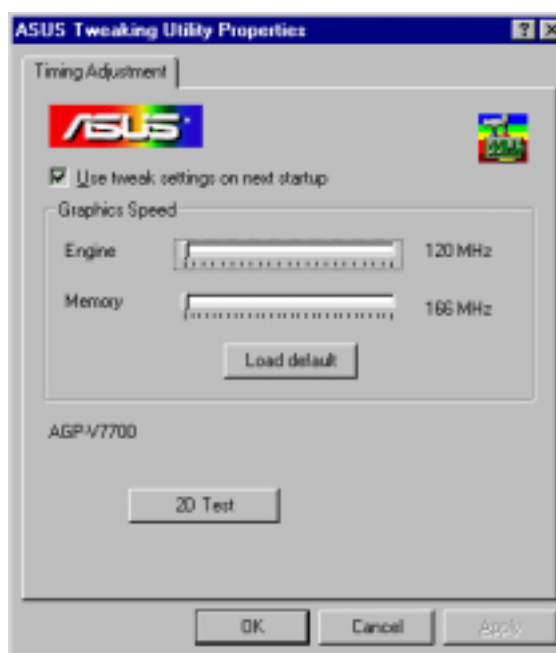
Lets you adjust the working frequency of the video memory.

Load default

Restores the settings to their defaults.

2D Test

Lets you test your settings.



4. Software Reference

Tweak Safe Mode Recovery

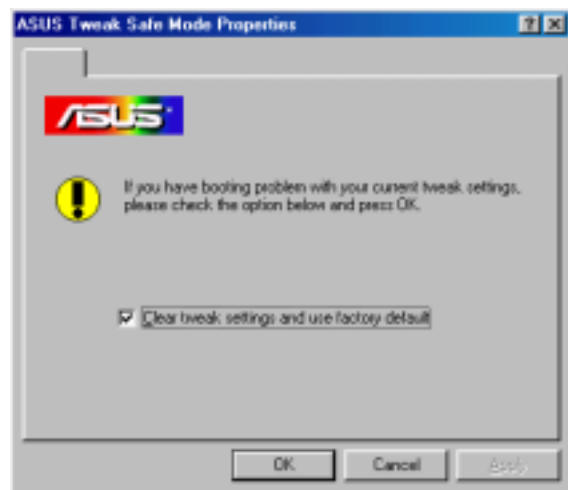
Timing Adjustment (Safe Mode) lets you restore the working frequency of the graphic engine and video memory to their factory default settings. This mode is used when you encounter problems when starting or restarting Windows using your customized tweak settings.

Using Tweak Safe Mode Recovery

1. Restart Windows in safe mode. To start Windows in safe mode, hold the F8 key until the Windows Startup Menu appears. For some machines and Windows 98, you can use CTRL to bring up the Startup Menu. Enter the number for **Safe mode** and then press ENTER.
2. In Windows, click **Start** and point to **Programs, Asus, Tweak Utility**, and then click **Tweak Safe Mode Recovery**.
3. The **ASUS Tweak Safe Mode Properties** box appears. Click the appropriate settings.

Timing Adjustment (Safe Mode)

Select the **Clear tweak settings and use factory default** box to change back the timing adjustment settings to their factory defaults and then click **OK** to restart Windows properly.



4. Software Reference



ASUS VR PictureViewer

Optional

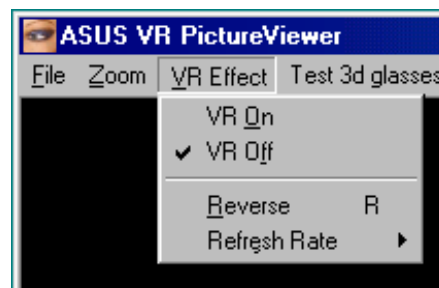
ASUS VR PictureViewer lets you view stereo images, size your stereo image, set the VR effect of your 3D glasses (ASUS VR-100G), and test your 3D glasses' functionality.



To run ASUS VR PictureViewer, click or right-click the ASUS Control Panel icon (see **4. Software Reference | ASUS Control Panel**) on the taskbar's status area to display the ASUS Control Panel, point to **VR PictureViewer**, and then click it.

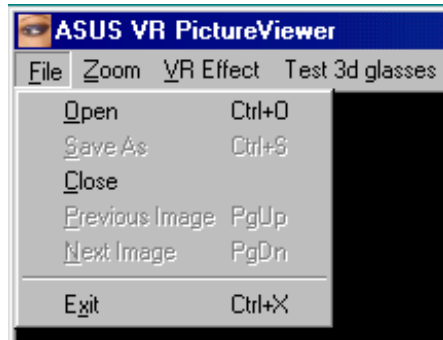
Opening or Displaying a Stereoscopic or 3D File

1. Click the **VR Effect** menu and then click **VR On** to enable stereoscopic display.



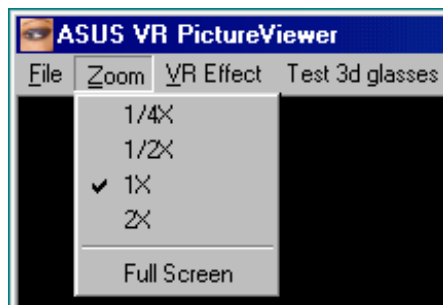
4. Software Reference

- Click the **File** menu and then click **Open** to select a file. Select the file from the **Open** dialog box or select another folder and then click **Open**. The 3D image appears on the VrViewer main window (see preceding page for an opened 3D image file. Note that the 3D effect is not shown in this picture).



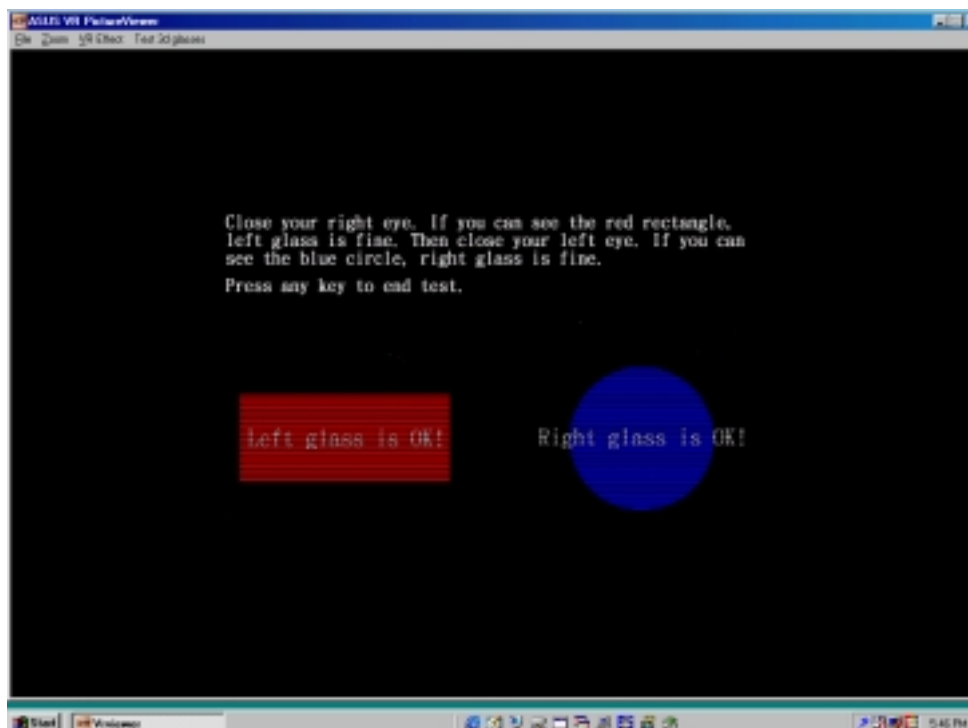
Changing the View

- Click the **Zoom** menu and then click the desired zoom percentage.



Testing the 3D Glasses

- Click the **Test 3D glasses** and then follow the onscreen instructions.



5. Resolution Table

Maximum Refresh Rate

Resolution	Color Depth		
	8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = 16.7M colors True Color
640 x 480	240	240	240
800 x 600	240	240	240
1024 x 768	240	240	240
1152 x 864	200	200	170
1280 x 960	170	170	150
1280 x 1204	170	170	170
1600 x 900	150	150	120
1600 x 1200	120	120	100
1920 x 1080	100	100	85
1920 x 1200	100	100	85
1920 x 1440	85	85	75
2048 x 1536	75	75	75

5. Resolution
Max Refresh Rate

5. Resolution Table

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6. Troubleshooting

Description	Recommended Action
<i>After installation and re-starting, Windows 95/98 informs me that the display setting is still incorrect.</i>	<ul style="list-style-type: none">• Make sure the “Assign IRQ to VGA” option is enabled in the BIOS.• Check if there is enough IRQ for VGA.• Uninstall the driver, restart, and reinstall the driver.
<i>My monitor is not capable of high resolution or refresh rate.</i>	<ul style="list-style-type: none">• It depends on the display characteristics of your monitor. Consult your monitor documentation for the proper configuration.
<i>DirectX or the other applications report no AGP memory available.</i>	<ul style="list-style-type: none">• Windows 95 is not OSR2.1 or later.• DirectX version is not 6.0 or later.• You have not installed appropriate drivers for the AGP chipset. (e.g. VGARTD.VXD for Intel 440LX).• Incorrect BIOS setting. BIOS must support at least 64MB for AGP aperture size.
<i>Games or applications report “No 3D acceleration hardware found.”</i>	<ul style="list-style-type: none">• 3D works only in 16- or 32-bit color depth. Switch your color depth display mode to 16-bit (high color) or 32-bit (true color).• Check necessary libraries, such as DirectX or OpenGL.• Try to switch to a lower resolution.
<i>I cannot enable AGP memory or run I-Base test.</i>	<ul style="list-style-type: none">• You may be using a motherboard with an Aladdin IV AGPset. To get the best compatibility, the display card uses AGP Bus Master mode instead of AGP execute mode for motherboards using this AGPset.
<i>My MPEG player displays bad quality video clips.</i>	<ul style="list-style-type: none">• You must install DirectX 6 or later so that your player can take advantage of the hardware acceleration mode (DirectDraw).• Try to switch to a lower resolution, color depth, or refresh rate. Switching to a lower mode allows your player to use hardware acceleration mode.• Switch dual view mode to VGA or TV mode.
<i>I can't use VideoSecurity with my USB CCD or IEEE 1394 CCD.</i>	<ul style="list-style-type: none">• VideoSecurity currently only supports S-Video or Composite CCDs. Any device used must be connected to an ASUS video card.
<i>I am using Video Security and it seems my hard disk space is almost exhausted.</i>	<ul style="list-style-type: none">• This is a very important issue when you decide to use VideoSecurity with the “never stop” option. You must be aware of the free space of your hard disk—it must be enough for storing temporary files in the current working directory. If disk space is exhausted, VideoSecurity will not store any information and give you a warning message.

6. Troubleshooting

I am using VideoSecurity and I set the password option. I have forgotten my password, though. Is there a way to recover my password?

- The only way to remove password protection is to recall the original password that you assigned. The password protection is still active even when you uninstall VideoSecurity and install a new copy. Make sure that the password that you assigned can be easily remembered. You may write down your password and store it in a safe place.

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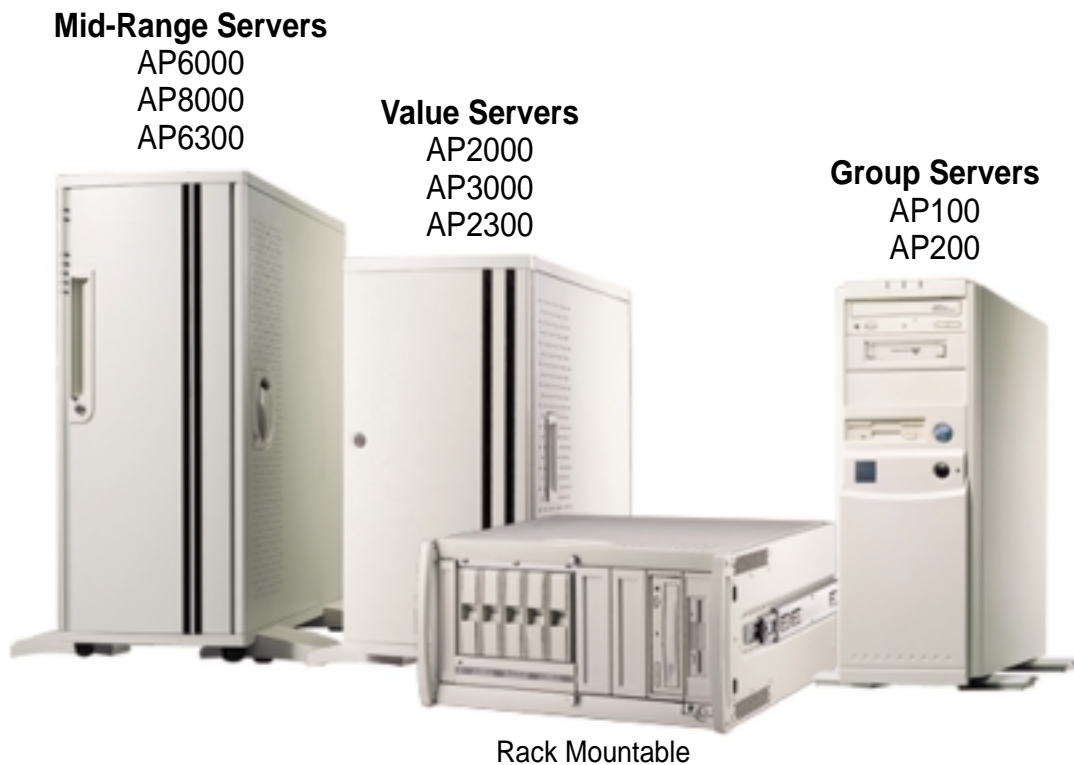
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AP100	1 Slot1	1	1	3	0
AP200	2 Slot1	1	1	3	0
AP2000	2 Slot1	1	1	4	3 or 5*
AP3000	2 Xeon™	2	2	4	3 or 5*
New! AP2300	2 Socket370	4	2 Ultra3	4	3 or 5*
AP6000	2 Slot1	1	1	4	8**
AP8000	2 Xeon™	2	2	4	8**
New! AP6300	2 Socket370	4	2 Ultra3	4	8**

* Three 1.6-inch or five 1-inch SCA-2 SCSI hard drives

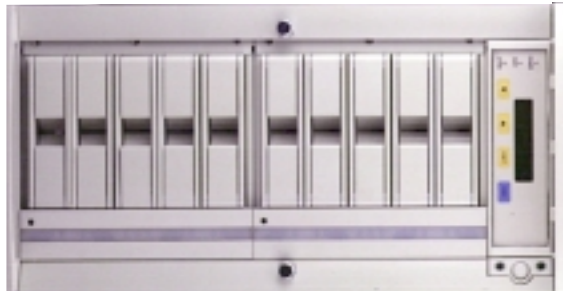
** Eight 1.6-inch or 1-inch SCSI hard drives



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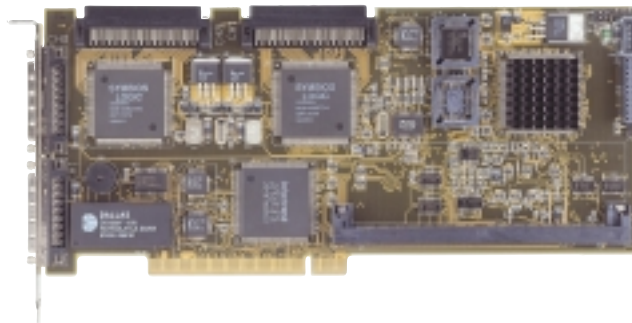
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