Declaration of Conformity

We, Manufacturer/Importer
(full address)

G.B.T. Technology Trading GMbH
Ausschlager Weg 41, 1F 20537 Hamburg, Germany

declare that the product
(description of the apparatus, system, installation to which it refers)

VGA Card

GV-R80T256V

is in conformity with
(reference to the specification under which conformity is declared)
in accordance with 89/336 EEC-EMC Directive

☐ **EN 55011**	Limits and methods of measurement of radio disturbance characteristics of industrial, scientific and medical (ISM) high frequency equipment	☒ **EN 61000-3-2**	Disturbances in supply systems caused
		☒ **EN 61000-3-3**	Disturbances in supply systems caused by household appliances and similar electrical equipment "Voltage fluctuations"
☐ **EN 55013**	Limits and methods of measurement of radio disturbance characteristics of broadcast receivers and associated equipment	☒ **EN 55024**	Information Technology equipment-Immunity characteristics-Limits and methods of measurement
☐ **EN 55014-1**	Limits and methods of measurement of radio disturbance characteristics of household electrical appliances, portable tools and similar electrical apparatus	☐ **EN 50082-1**	Generic immunity standard Part 1: Residual, commercial and light industry
		☐ **EN 50082-2**	Generic immunity standard Part 2: Industrial environment
☐ **EN 55015**	Limits and methods of measurement of radio disturbance characteristics of fluorescent lamps and luminaries	☐ **EN 55014-2**	Immunity requirements for household appliances tools and similar apparatus
☐ **EN 55020**	Immunity from radio interference of broadcast receivers and associated equipment	☐ **EN 50091- 2**	EMC requirements for uninterruptible power systems (UPS)
☒ **EN 55022**	Limits and methods of measurement of radio disturbance characteristics of information technology equipment		
☐ **DIN VDE 0855** ☐ **part 10** ☐ **part 12**	Cabled distribution systems: Equipment for receiving and/or distribution from sound and television signals		

☒ **CE marking** CE (EC conformity marking)

The manufacturer also declares the conformity of above mentioned product with the actual required safety standards in accordance with LVD 73/23 EEC

☐ **EN 60065**	Safety requirements for mains operated electronic and related apparatus for household and similar general use	☐ **EN 60950**	Safety for information technology equipment including electrical business equipment
☐ **EN 60335**	Safety of household and similar electrical appliances	☐ **EN 50091-1**	General and Safety requirements for uninterruptible power systems (UPS)

Manufacturer/Importer

Signature : *Timmy Huang*

(Stamp)

Date : Setp. 29, 2004

Name : Timmy Huang

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2.1077(a)

Responsible Party Name: G.B.T. INC. (U.S.A.)

Address: 17358 Railroad Street
City of Industry, CA 91748

Phone/Fax No: (818) 854-9338/ (818) 854-9339

hereby declares that the product

Product Name: VGA Card

Model Number: GV-R80T256V

Conforms to the following specifications:

FCC Part 15, Subpart B, Section 15.107(a) and Section 15.109 (a),Class B Digital Device

Supplementary Information:

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

Representative Person's Name: ERIC LU

Signature: *Eric Lu*

Date: Setp. 29, 2004

GV-R80T256V

Radeon X800XT Graphics Accelerator

USER'S MANUAL

Rev. 101
12MD-R80T256V-101

English

Chapter 1 User's Manual

Copyright

Copyright by **GIGA-BYTE TECHNOLOGY CO., LTD. ("GBT")** No part of this manual may be reproduced or transmitted in any from without the expressed, written permission of **GBT**.

Trademarks

Third-party brands and names are the property of their respective owners.

Notice

Due to rapid change in technology, some of the specifications might be out of date before publication of this booklet.

The author assumes no responsibility for any errors or omissions which may appear in this document nor does it make a commitment to update the information contained herein.

Please do not remove any labels on VGA card , this may void the warranty of this VGA card.

English

Table of Contents

1. INTRODUCTION 4
- 1.1. PREFACE 4
- 1.2. KEY FEATURES 4

2. HARDWARE INSTALLATION 5
- 2.1. UNPACKING 5
- 2.2. BOARD LAYOUT 6
- 2.3. HARDWARE INSTALLATION 7

3. SOFTWARE INSTALLATION 9
- 3.1. WIN® XP DRIVER AND UTILITIES INSTALLATION 9
  - 3.1.1. Operating System Requirement 9
  - 3.1.2. DirectX Installation 10
  - 3.1.3. Driver Installation 12
  - 3.1.4. Utilities on Driver CD 15
  - 3.1.5. Taskbar Icon 18
  - 3.1.6. Display Properties Pages 22
- 3.2. WIN® 98/98SE / WIN® 2000 / WIN® ME DRIVER INSTALLATION 31

4. Troubleshooting Tips 32

5. Appendix 33
- 5.1. How to reflash the BIOS 33
- 5.2. Resolutions and Color Depth Table (In Windows® XP) 34

1. INTRODUCTION

1.1. PREFACE

The GV-R80T256V features world's first 16-pipeline architecture for twice the rendering power, 256MB of memory to accelerate latest 3D games and new SMARTSHADER™ 2.1 technology supporting DirectX® 9.0 and the latest OpenGL® functionality to give developers the freedom to create more complicated and realistic visual effects than ever before. The GV-R80T256V supports the new AGP 8X standard, which allows large volumes of texture and vertex data to be transferred faster from system memory to the chip.

1.2. KEY FEATURES

- Powered by RADEON™ X800XT Visual Processing Unit (VPU)
- First to fully support DirectX® 9.x
- Supports the new AGP 8X standard
- First 16-pixel pipeline architecture
- All new 256-bit memory interface
- 256MB DDR III memory accelerates the latest 3D games
- First to use pixel shaders to accelerate video
- Supports DVI-I connector
- VIVO Function
- Supports HDTV

2. HARDWARE INSTALLATION

2.1. UNPACKING

The GV-R80T256V package contains the following:

- The GV-R80T256V graphics accelerator
- USER'S MANUAL
- Driver CD
- Power DVD CD
- Power Director
- Game CD
- DVI-I to D-Sub adapter
- Video in cable
- HDTV cable

WARNING!

Expansion cards contain very delicate Integrated Circuit (IC) chips. To protect them against damage from static electricity, you should follow some precautions whenever you work on your computer.

1. Turn off your computer and unplug power supply.
2. 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.
3. Place components on a grounded antistatic pad or on the bag that came with the components whenever the components are separated from the system.

The card contains sensitive electric components, which can be easily damaged by static electricity, so the card should be left in its original packing until it is installed.

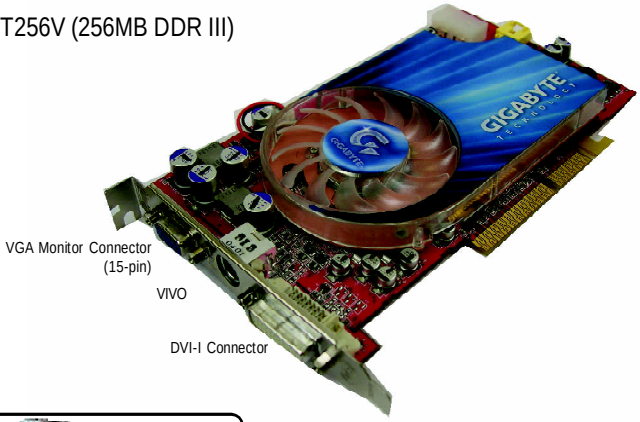
Unpacking and installation should be done on a grounded anti-static mat. The operator should be wearing an anti-static wristband, grounded at the same point as the anti-static mat.

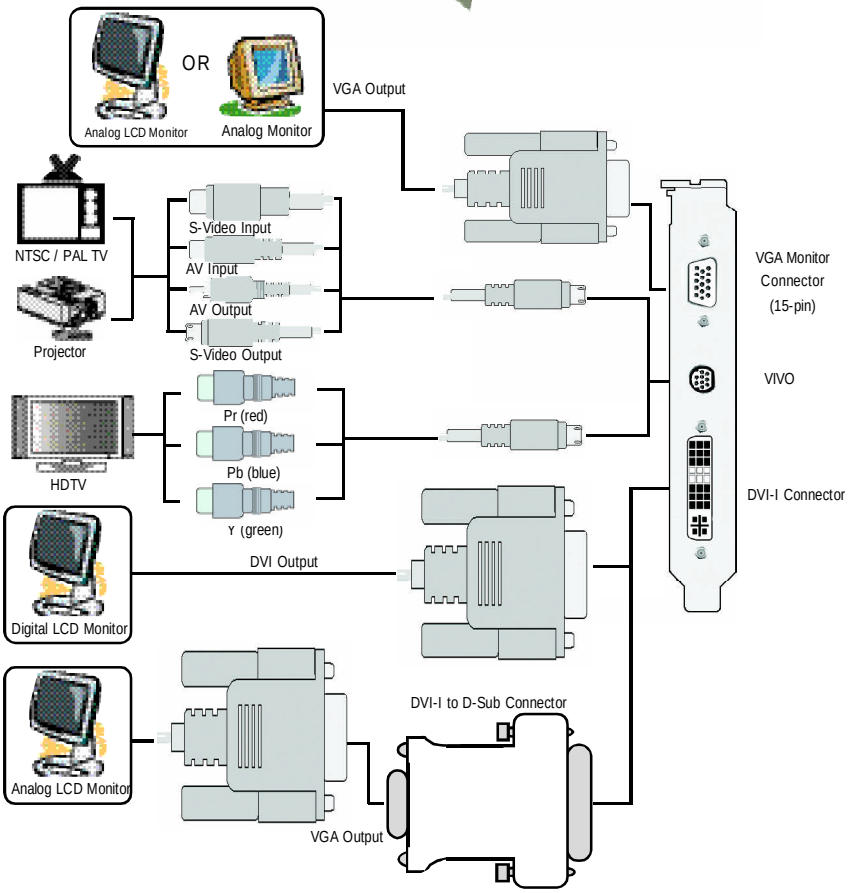
Inspect the card carton for obvious damage. Shipping and handling may cause damage to your card. Be sure there are no shipping and handling damages on the card before proceeding.

- **DO NOT APPLY POWER TO YOUR SYSTEM IF IT HAS BEEN DAMAGED ON THE CARD.**
- **In order to ensure your graphics card working correctly, please use official Gigabyte BIOS only. Use none official gigabyte BIOS might cause problem on the graphics card.**

2.2. BOARD LAYOUT

GV-R80T256V (256MB DDR III)





2.3. HARDWARE INSTALLATION

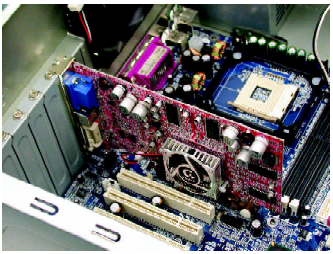
Installing Your Graphics card.

Now that you have prepared your computer, you are ready to install your graphics accelerator card.

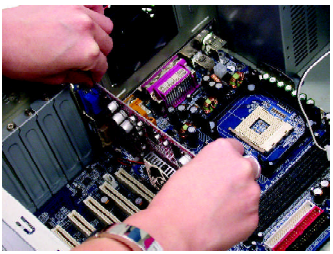
To install your graphics accelerator card:

1. Power off the computer and monitor, then disconnect the display cable from the back of your computer.

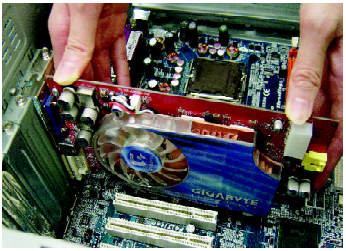
2. Remove the computer cover. If necessary, consult your computer's manual for help in removing the cover.



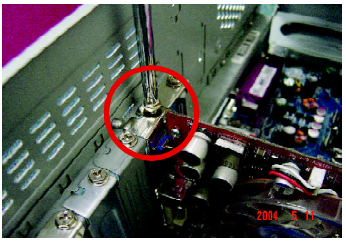
3. Remove any existing graphics card from your computer.
   Or, if your computer has any onboard graphics capability, you may need to disable it on the motherboard. For more information, see you computer documentation.

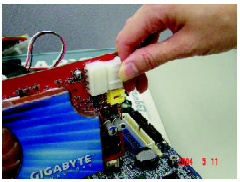


4. Locate the AGP slot. If necessary, remove the metal cover from this slot; then align your graphics card with the AGP slot, and press it in firmly until the card is fully seated.



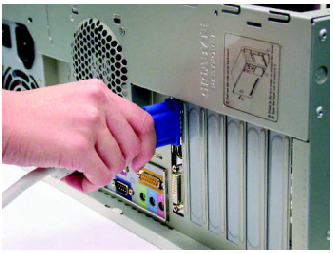
5. Replace the screw to fasten the card in place, and replace the computer cover.





After installation, please connect the power cable to your GV-R80T256V graphics card, or system will not boot.

6. Plug the display cable into your card; then turn on the computer and monitor. If your graphics card came with a DVI connector, you can connect a flat panel display to the appropriate connector as shown below.



To Flat Panel Display

To VGA Monitor

VIVO 9-pin

You are now ready to proceed with the installation of the graphics card drivers. Please refer to the next chapter for detailed instructions.

3. SOFTWARE INSTALLATION

In this manual, we assume that your CD-ROM Drive letter to be Drive D:

The installation of Win® 98/98SE / Win® 2000 / Win® ME / Win® XP drivers is very simple. When you insert the driver CD into your CD-ROM drive, you can see the AUTORUN window (if it does not show up, run "D:\setup.exe"). Then you can follow the guides to set up your graphics card driver. (Please follow the subsection 3.1.3 "Driver installation" to install the driver for your graphics accelerator.)

3.1. WIN® XP DRIVER AND UTILITIES INSTALLATION

3.1.1. Operating System Requirement

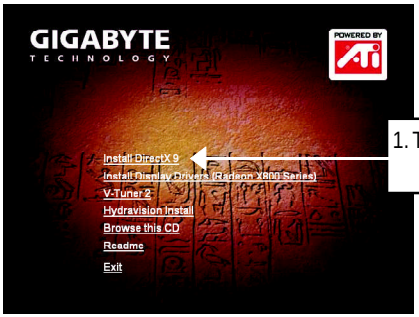
- When installing the graphics card drivers, please make sure you have installed DirectX 9 or later version for your system.

- If you install the graphics card drivers for a motherboard built on SIS or VIA chipset, please install the appropriate driver program for the motherboard. Or contact the nearest dealer of the motherboard for the motherboard driver.

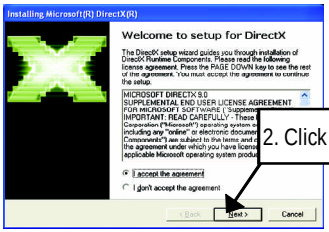
3.1.2. DirectX Installation

Install Microsoft DirectX 9 (or later version) to enable 3D hardware acceleration support for Windows® 98 / 98SE / Windows® 2000 / Windows® ME or Windows® XP to achieve better 3D performance.

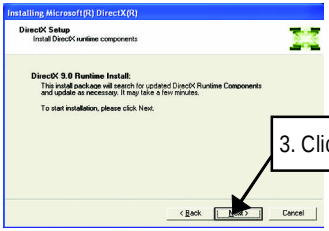
Note: For software MPEG support in Windows® 98/ 98SE/ 2000 / ME / XP, you must install DirectX 9 (or later version) first.



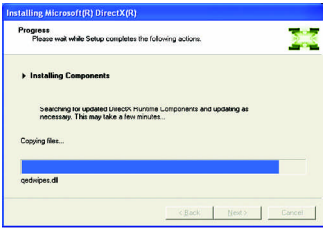
1. To install DirectX driver, click **Install DirectX 9**.

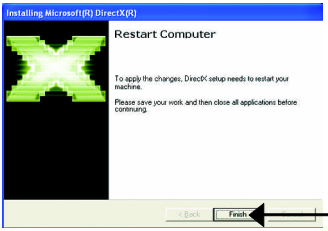


2. Click **Next**.



3. Click **Next**.





4. Click **Finish**.

Then the DirectX 9 installation is completed.

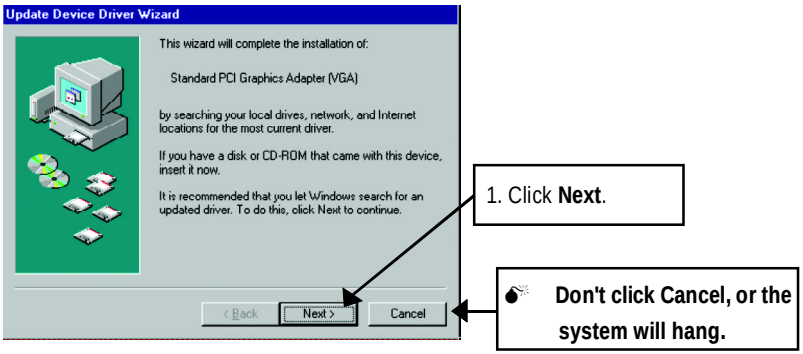
3.1.3. Driver Installation

The following is the step-by-step installation guide of graphics card driver.

Step 1: New Hardware Found

After GV-R80T256V is inserted into your computer for the first time, the Windows will automatically detect a new hardware in the system and a "New Hardware Found" message will pop up. Please select "Do not install a driver" and press **OK**.

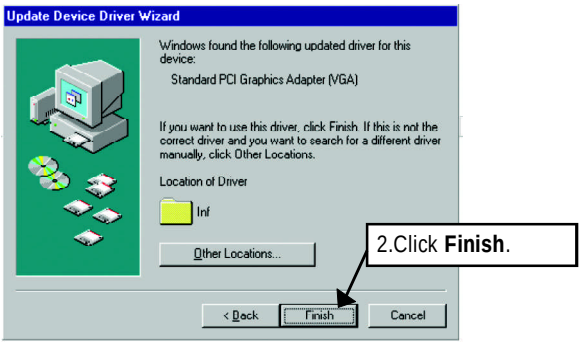
Step 2: Update Device Driver Wizard: Standard PCI Graphics Adapter(VGA)



Step 3: Update Device Driver Wizard: Finish

At this moment, system will ask for your Windows CD in order to complete the VGA driver installation. If you don't have the CD, you can press C:\Windows\System directory.

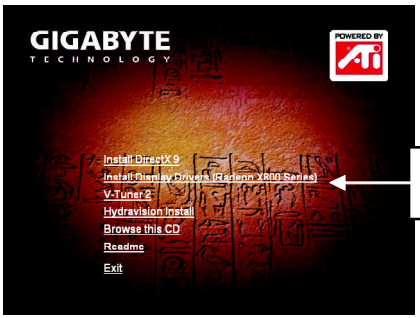
Step 4: System Setting Change

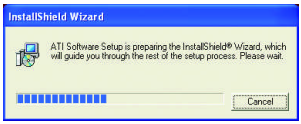


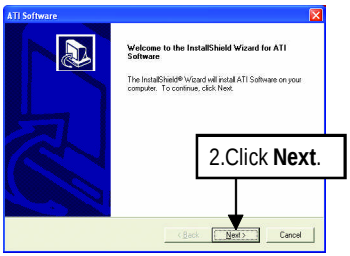
After the system has finished loading, insert the GV-R80T256V driver CD disk into your CD-ROM, and then the AUTORUN window appears automatically. If it does not show up, please run "D:\setup.exe."

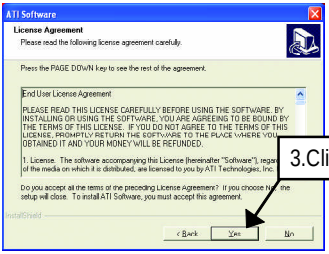
Step 5: Driver Setup

(Pictures below are shown in Windows XP)

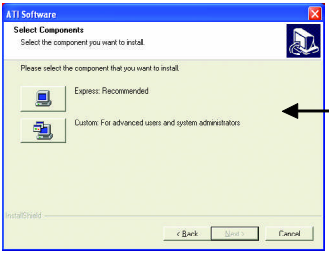




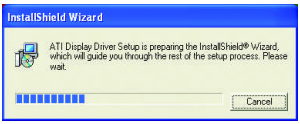


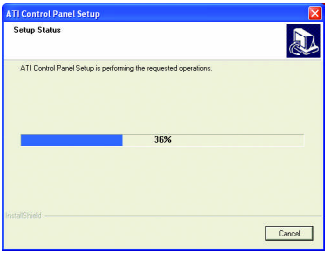


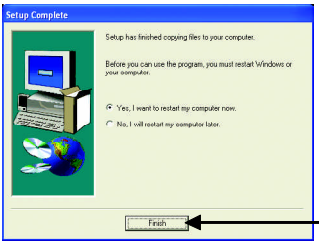
3.Click **Yes**.



4. Click **Express** or **Custom** icon.





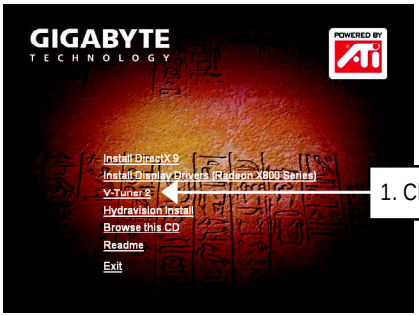


5. Click **Finish** and restart computer.

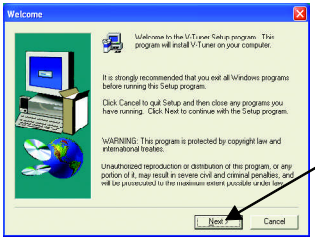
3.1.4. Installing Utilities on Driver CD

The utilities include Display Driver and V-Tuner 2 utilities. Please follow the steps below.

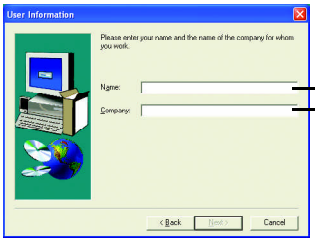
- Install V-Tuner 2 :



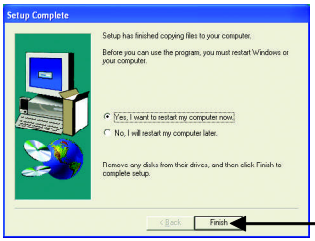
1. Click **V-Tuner 2**.



2.Click **Next**.

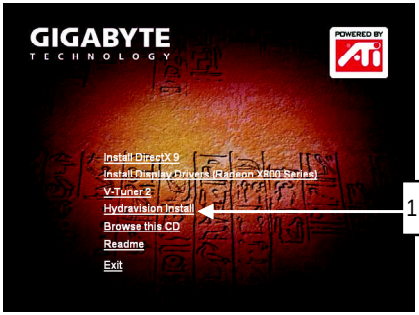


3. Enter your name and company.

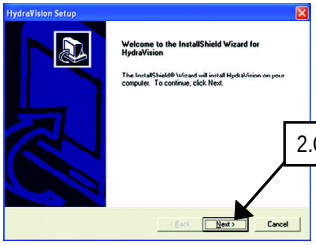


4. Click **Finish** and restart computer.

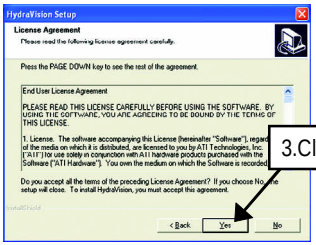
● HYDRAVISION™ Installation:



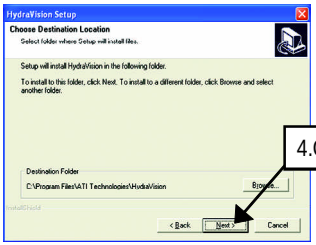
1. Click **Hydravision Install**.



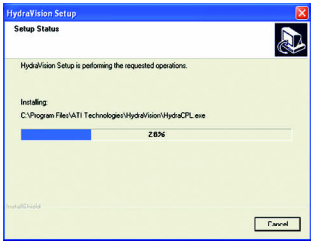
2.Click **Next**.

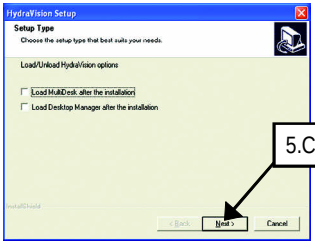


3.Click **Yes**.

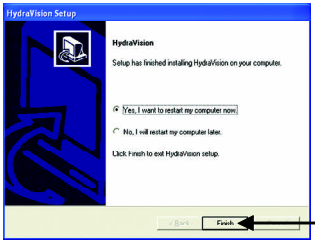


4.Click **Next**.





5.Click **Next**.

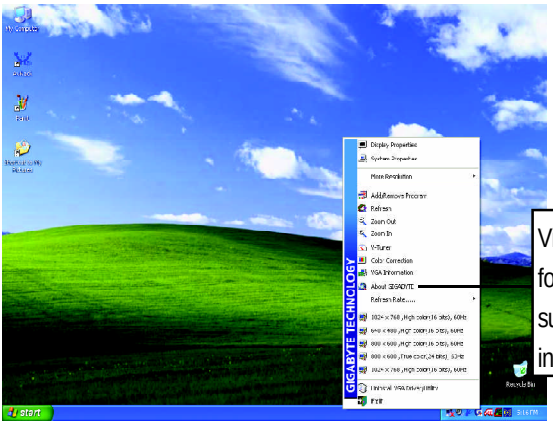


6. Click **Finish** and restart computer.

3.1.5. Taskbar Icon

After installation of the display drivers, you will find an GBT icon on the taskbar's status area. Right-clicking this icon opens the GBT control panel, showing a menu composed of shortcut of the graphics card's enhanced functions as well as other functions.
You may click the **Display Properties** item, and then click **Settings**. Click **Advanced** after clicking **Settings**. Click appropriate tabs to change your display settings.

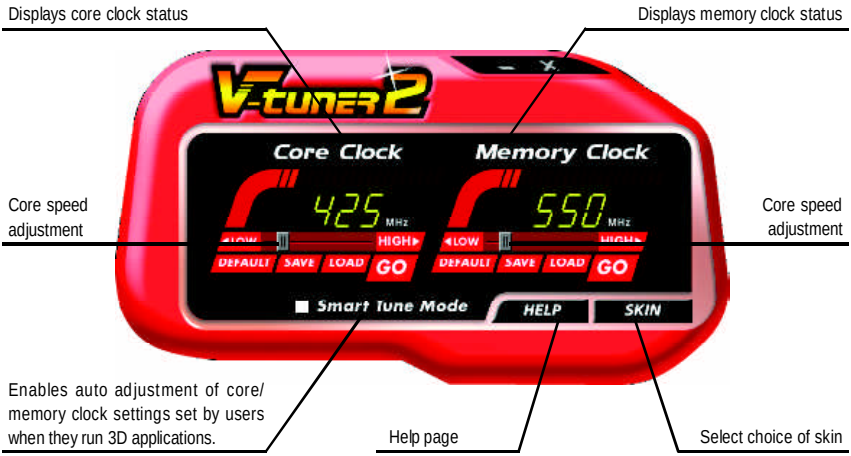
Right-click the icon.



Visit GBT website for updated information about the graphics card, such as its latest drivers, and other information.

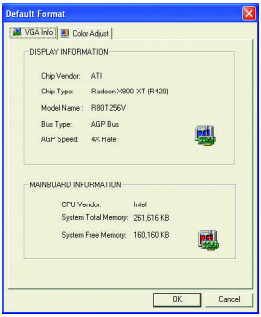
V-Tuner 2 (Overclock Utility)

V-Tuner 2 lets you adjust the working frequency of the graphic engine and video memory (Core Clock and Memory Clock).



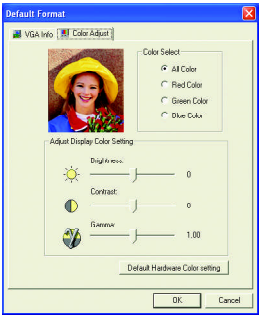
VGA Information

VGA Info lists the relevant information about your card.

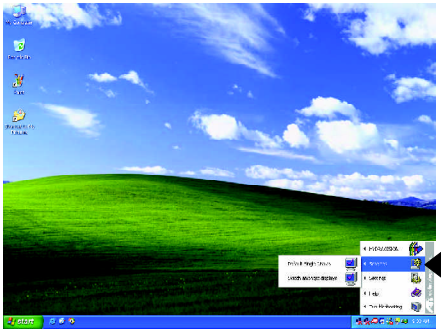


Color Adjust

Color Adjust allows you to make color adjustments, such as brightness, contrast and gamma values for each or all of RGB colors.



After installation of the display drivers, you will find an ATI icon on the taskbar's status area. Clicking this icon opens the ATi control panel.



HYDRAVISION™

HYDRAVISION™ and the Desktop Manager are activated whenever Windows® starts. Installing HYDRAVISION™ adds menu options to the ATI Icon.

Click the ATI icon to access the application's features and Help, or to unload the HYDRAVISION™ Desktop Manager.

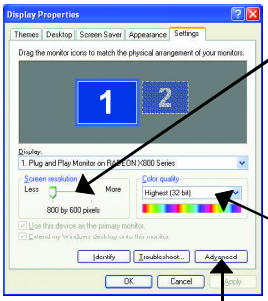
HYDRAVISION™ is primarily software designed for multiple monitor settings. The GV-R80T256V graphic card that has more than one display output can benefit fully from this software. The GV-R80T256D with only one display output can still take advantage of the many features of HYDRAVISION™. HYDRAVISION™ installation enables the Desktop Manager and creates a Windows® program group for HYDRAVISION™ display management software.

3.1.6. Display Properties Pages

The screen shows the information of display adapter, color, the range of display area and the refresh rate.

Settings (Resolutions and Color depth for Windows)

The Setting properties page allows you to adjust the Direct 3D settings.



You can move the slider to change screen resolution.

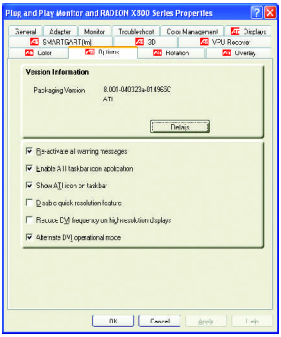
You can select the color depth.

Click **Advanced** icon for adapter and setting.

Display Matrix	Model	GV-R80T256V
	CRT+TV	Yes
	CRT+DVI	Yes
	DVI+TV	Yes
	DVI+TV+CRT	Yes

Click **Advanced** to access detailed settings:

Options Properties

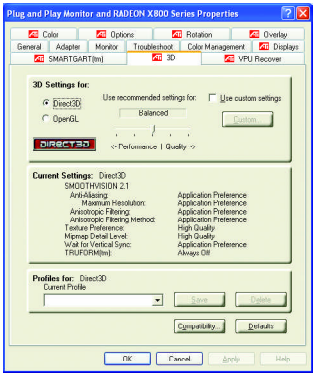


- **Version Information** provides the Packing version number information.
- **Details button** provides access to the Details tab which lists the card's hardware details and driver information.
- **Re-activate all warning messages** allows you to reactivate any disabled graphics warning messages.
- **Enable ATI taskbar icon application** enables or disables the ATI taskbar icon. However, this feature must be enabled for ATI hotkey support.

- **Show ATI icon on taskbar** adds or removes the ATI icon from the taskbar.
- **Disable quick resolution feature** is accessible by left-clicking the ATI icon on the taskbar.
- **Reduce DVI frequency on high-resolution displays** resolves display corruption or the problem of no image being presented at high resolutions (for example 1280x1024 @75Hz) using a digital DVI display. (This setting is not functional with a DVI-to-VGA adapter.)
- **Alternate DVI operational mode** can be used if you are experiencing display corruption on your DVI flat panel.

Direct 3D Properties:

The Direct 3D properties page allows you to adjust the Direct 3D settings.

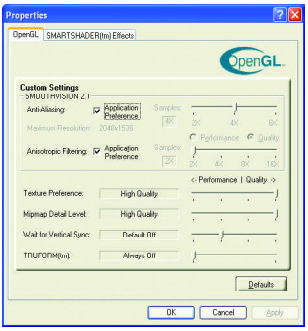


- **3D Settings for radio buttons**
  Selects either Direct 3D® or OpenGL® as the format to be altered in the workspace.
- **Performance/Quality silder**
  Controls the overall performance/image quality of your graphic application. Moving the slider to the left will maxi mize application performance, while moving the slider to the right will maximize image quality.

- **Use Custom Settings checkbox**
  When **Custom Settings** is selected, the Main Settings slider is disabled, allowing you to move each individual slider in the Custom Settings section below. Setting the individual sliders gives you complete control over your application experience. Using Custom Settings is recommended for advanced users only.
- **Custom button**
  Opens the Custom Properties dialog. Using custom settings is recommended for advanced users only. For more information, refer to the Custom Properties Dialog section.
- **Current Settings**
  Shows the current settings for either Direct 3D® or OpenGL®, whichever is selected.
- **Profiles for**
  Allows you to save a unique profile of the custom settings you have selected. Once you have completed making your custom settings, click OK in the Custom Properties dialog. Enter a name in Current Profile and click the Save button. Saved profiles are selected from the Current Profile drop-down window.To delete a profile, select it from the Current Profile drop-down window and press the Delete button.
- **Compatibility settings button**
  Accesses advanced settings that may solve compatibility issues for a few specific Direct 3D® or OpenGL® applications, whichever is selected. For more information, refer to the Compatibility Dialog section.
- **Defaults**
  Resets to the dialog's default values.

OpenGL Properties:

The OpenGL properties page gives you complete control of the OpenGL settings.



- **SMOOTHVISION 2.1 Anti-Aliasing slider**

  SMOOTHVISION. (Anti-Aliasing) improves image quality by removing jagged edges from 3D images, resulting in smoother, more natural-looking objects. Anti-Aliasing can be applied using different sample patterns and sample points such as 2X or 4X. Moving this slider to the right increases sampling to provide the most realistic 3D image.

  Select the **Application Preference** checkbox for high-quality images, with a negligible reduction in the application's performance.Deselect the **Application Preference** checkbox to customize the anti-aliasing.

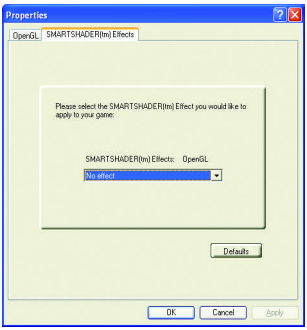
- **SMOOTHVISION 2.1**
  - **Anisotropic Filtering checkbox** uses a texture filtering technique that blends multiple texture samples together. Selecting **Application Preference** will result in high quality textures, with a negligible reduction in the application's performance.
  - **Anisotropic Filtering slider** By moving this slider to the right, as the number of samples taken increases, the quality of the final image increases significantly. 16X provides extremely detailed, crisp-looking images as a result of the largest number of texture samples possible.
- **Texture Preference slider**

  Selecting this decides whether your application should use high quality or high performance textures. Moving the slider to the right delivers the highest quality experience. Moving the slider to the left emphasizes a high performance solution while still providing good visuals.
- **Mipmap Detail Level slider**

  This will allow you to choose the texture quality of the mipmaps the application will use. Mipmaps are a collection of different sized textures of the same image. As the user moves closer to a 3D object the image quality should increase, requiring a higher quality texture of the same image. The base mipmap is the highest quality texture, and all subsequent mipmaps are smaller sized textures of the same image. Moving the slider to the right selects a higher quality base mipmap, delivering the highest quality application experience. Moving the slider to the left selects a lower quality mipmap, delivering the highest application performance.
- **Wait for Vertical Sync silder**

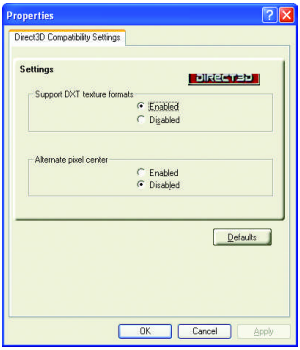
  This will lower the frame rate of full screen games but reduce the image tearing that can occur with the higher frame rate. Selecting **Application Preference** allows the application to decide whether or not it should display its frames at the refresh rate of the monitor. Selecting **Always Off** allows the application to run at its highest possible frame rate, regardless of the monitor's refresh rate

■ SMARTSHADER. Effects



- SMARTSHADER™ Effects drop-down list SMARTSHADER™ applies preset pixel effects on OpenGL® or Direct 3D® applications. Choose the desired effect and click OK.
- Defaults button Restores the default settings.

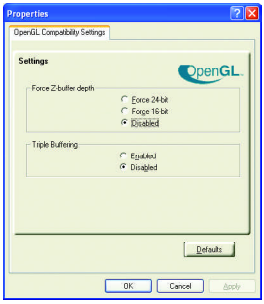
■ Direct 3D® Compatibility Settings



- Support DXT texture formats
  There are a few applications that can only support a limited number of texture formats. By selecting Disabled, the driver will not support DXT texture formats, thus reducing the number of texture formats supported.
- Alternate pixel center
  May eliminate problems with some Direct 3D® games which display vertical and horizontal lines around textures, or text that appears incorrect. However, this setting should only be used if you are experiencing the symptoms mentioned, as it may cause problems with other games.

- Defaults button Resets to the dialog's default values.

■ OpenGL® Compatibility Settings



- **Force Z-buffer depth**

  Explicitly set the Z-Buffer depth. Most applications will work best when Disabled is selected

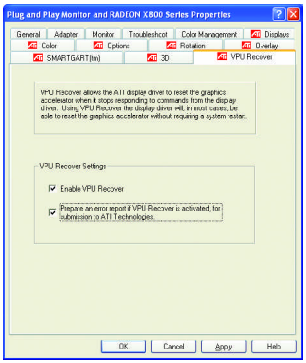
- **Triple Buffering**

  Improves the frame rate of games when Wait for Vertical Sync is enabled in Custom Settings. Enabling Triple Buffering may decrease application performance as there will be less frame-buffer memory available. If there is insufficient memory available to support this feature it will be automatically disabled. It is recommended that this feature remain disabled.

- **Defaults button**

  Resets to the dialog's default values.

■ VPU Recover:



- **Enable VPU Recover checkbox**

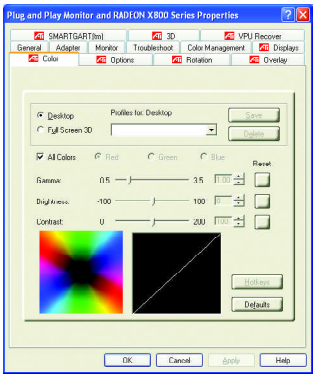
  Enables VPU Recover.

- **Prepare an Error Report checkbox**

  When VPU Recover is activated a dialog will prompt you to submit an automatically generated error report to ATI. This error report will help ATI to determine the cause of the problem and help create more stable drivers. To disable this feature, deselect the Prepare an Error Report checkbox.

Color Properties:

The Color Properties is used to adjust the color settings. It also allows gamma control for video playing of the Video Overlay. The color settings affect all display devices mapped to the view.You can change red, green, and blue display colors. Set Desktop and Video Overlay brightness (gamma) levels can also be changed.

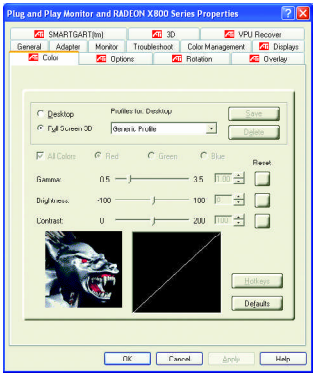


- **Desktop** increases or decreases the color brightness of your desktop. The higher the gamma value, the higher the brightness and contrast of your display.

- **All Colors checkbox** adjust the RGB individually or adjust all three colors at the same time.

- **Gamma/Brightness/Contrast** adjust the color by moving the slider with your mouse, to increase or decrease the color gamma/brightness/contrast of Direct 3D and OpenGL games played in fullscreen mode. (NOTE: Game Gamma is NOT supported in Windows NT4.0)

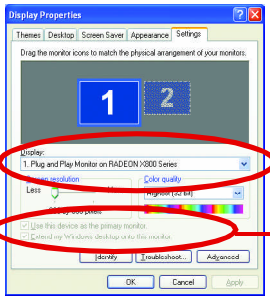
- **Default** resets the desktop brightness and color settings to the default values.



- **Full Screen 3D radio button** Select Full Screen 3D to configure the color settings for your 3D application. Note that the configured settings will only be apparent within a full screen 3D application environment.

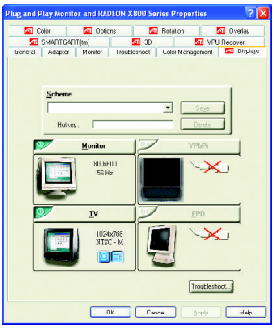
Display Properties:

If your VGA card is equipped with a S-Video connector, you can use a second output device (e.g. a TV or a computer monitor) as part of your operating desktop extending your desktop to second device or copying your desktop on the second device.



Select Display Type

Enable / Disable "Extend my windows desktop onto this monitor"



The Display tab provides the multi monitor features. Here you can enable/disable display devices and swap the assignment of **Primary** and **Secondary** displays.

Connecting your graphics card to a TV or VCR

To connect your GV-R80T256V graphics card to a TV (or VCR), use an S-Video cable. However, most TVs (and VCRs) have a Composite video input, in which case you can use the supplied

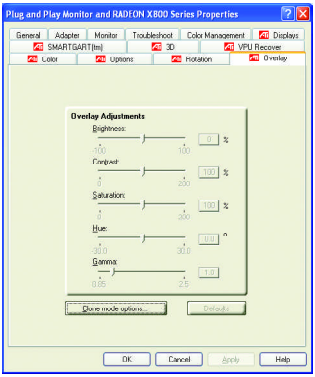
S-Video-to-Composite video adapter.

1. Turn off your computer and your television (or VCR).
2. Ensure your graphics card was installed correctly. **(**For information about placing the card in your computer and installing the enhanced graphics driver, see the user's manual.)
3. Determine if your television (or VCR) has an S-Video or Composite video connection.
4. Looking at the back of your computer, locate your S-Video Out. Using an S-Video cable or the supplied adapter cable, attach one end of the cable to your graphics card and the other to your television (or VCR).
5. Turn on your television (or VCR) then your computer.

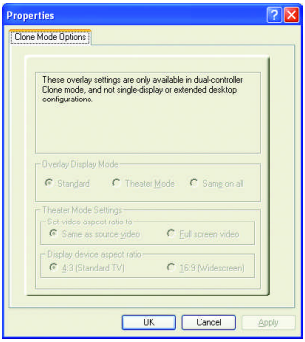
Overlay Properties:

The Overlay Properties is used to adjust the Brightness / Contrast / Saturation / Hue / Gamma settings.

Overlay properties allows for the viewing of full-motion video on your PC. However, there is only one video overlay, which is only available on the **Primary** display**.** The video overlay controls are automatically activated during playback of any video file type that supports overlay adjustments.

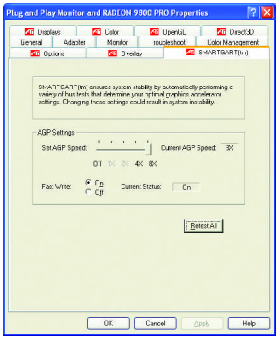


- **Overlay Adjustments**
  - **Brightness** allows you to adjust the brightness of the video image.
  - **Contrast** allows you to adjust the contrast in the video image.
  - **Saturation** allows you to adjust the vividness of the color. Sliding it all the way to the left removes all color and produces a black and white picture.
  - **Hue** allows you to adjust the pureness or tint of the red, green and blue components of the color.
  - **Gamma** allows you to adjust the overall intensity of the video image.
- **Difaults button** allows you to reset the Overlay settings to default values.
- **Theater Mode checkbox** allows you to display video playback in full screen on a secondary monitor, if available and enabled.



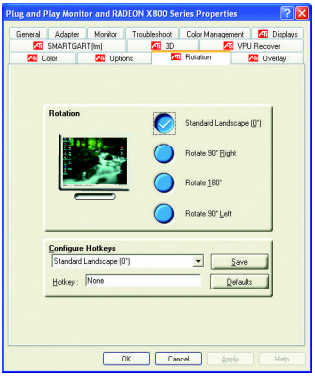
SMARTGART(tm) Properties:

The SMARTGART™ Properties ensures system stability by automatically performing a variety of bus tests that determine your optimal graphics accelerator settings. Changing these settings might result in system instability.



Rotation :

Use the Rotation tab to rotate the image on your display up to 180 degrees. This feature is useful when using a flat panel display that can be physically rotated to different positions.



3.2. Win® 98/98SE / Win® 2000 / Win® ME DRIVER INSTALLATION

With Windows running on your computer, you need to install the graphics card driver to take advantage of the higher performance, resolutions, and special graphics features of the graphics card. To ensure you install the latest driver, insert the Installation CD that shipped with your graphics card.

To install the graphics card driver for Win® 98/98SE / Win® 2000 / Win® ME, please insert the Installation CD. Then the AUTORUN window will show up. Click **Install Display Driver** item, and follow the wizard to install the driver.

If Windows® does not show the CD automatically, please run following steps:

1. Click the Start button on the control bar.
2. Select Run.
3. Type the following: D:\SETUP.exe
   (If D is not your CD-ROM drive, substitute D with the correct drive letter.)
4. Click "OK".
5. Click on "Install Display Drivers" to begin the Installation Wizard.
6. Click "Next".
7. Click "Yes" to the license agreement.
8. Follow the Wizard's on-screen instructions to complete the installation.

Please make sure the Windows® 2000 have installed Windows® 2000 Service Pack (or later) before installing the graphics accelerator driver.

4. Troubleshooting Tips

The following troubleshooting tips may help if you experience problems. Contact your dealer or GBT for more advanced troubleshooting information.

- Check that the card is seated properly in the AGP slot.
- Ensure that the display cable is securely fastened to the card's display connector.
- Make sure that the monitor and computer are plugged in and receiving power.
- If necessary, disable any built-in graphics capabilities on your motherboard. For more information, consult your computer's manual or manufacturer.

  (NOTE: Some manufacturers do not allow the built-in graphics to be disabled or to become the secondary display.)
- Make sure you selected the appropriate display device and graphics card when you installed the graphics driver.
- If you have problems during bootup, start your computer in Safe Mode. In Windows® 98 SE and Windows® Me, press and hold the CTRL key until the Microsoft® Windows® Startup Menu appears on the screen. Then select the number for Safe Mode, and press Enter. (You can also use F8 to bring up the Microsoft Windows® Startup Menu.) In Safe Mode, bring up the Device Manager and check for duplicate display adapter and monitor entries if you are only using one graphics card.
- For more assistance, use the Troubleshooting Guide located in the Windows® Help or contact your computer manufacturer.

If necessary, adjust your monitor's setting by monitor's adjust panel to make the screen looks focused, crisp, and sharp. (Please refer to the monitor's manual.)

5. Appendix

5.1. How to reflash the BIOS

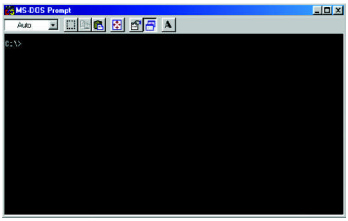
We use GV-AR64SH VGA card and Atiflash BIOS flash utility as example.

How to reflash the BIOS for your graphics card?

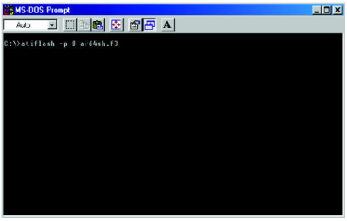
1. Extract the BIOS Zip file downloaded from Gigabyte website to drive C: or A:

2. Restart the computer in MS-DOS mode by choosing "Restart in MS-DOS mode" in the Shut Down Windows dialog box.(This option is only available with Windows 98/98SE. For Windows 2000/ME/XP, you need a startup disk to restart the computer in MS-DOS mode.)

3. Change the command path to the file location C:\> or A:\>. This procedure assumes drive C.



4.Type **atiflash -p 0 filename** (ex:ar64sh.f3) at the C:\> prompt and press **Enter**. (atiflash is the name of the flash utility).



5. Reboot your PC when it's done.

5.2. Resolutions and Color Depth Table (In Windows® XP)

GV-R80T256V 2D Single Display Modes

Display Screen Resolution	Refresh Rate (Hz)	Color Depth (bpp) 8bpp(256 color) Standard mode	16bpp(65K color) High mode	32bpp(16.7M) True mode
640 x 480	60	✓	✓	✓
	72	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	90	✓	✓	✓
	100	✓	✓	✓
	120	✓	✓	✓
	160	✓	✓	✓
	200	✓	✓	✓
800 x 600	47	✓ (interlaced)	✓ (interlaced)	✓ (interlaced)
	56	✓	✓	✓
	60	✓	✓	✓
	70	✓	✓	✓
	72	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	90	✓	✓	✓
	100	✓	✓	✓
	120	✓	✓	✓
	160	✓	✓	✓
	200	✓	✓	✓
1024 x 768	43	✓ (interlaced)	✓ (interlaced)	✓ (interlaced)
	60	✓	✓	✓
	70	✓	✓	✓
	72	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	90	✓	✓	✓
	100	✓	✓	✓
	120	✓	✓	✓
	150	✓	✓	✓
	160	✓	✓	✓
	200	✓	✓	✓

To be continued...

Display Screen Resolution	Refresh Rate (Hz)	Color Depth (bpp) 8bpp(256 color) Standard mode	16bpp(65K color) High mode	32bpp(16.7M) True mode
1152 x 864	43	✓ (interlaced)	✓ (interlaced)	✓ (interlaced)
	47	✓ (interlaced)	✓ (interlaced)	✓ (interlaced)
	60	✓	✓	✓
	70	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	100	✓	✓	✓
1280 x 768	56	✓	✓	✓
	60	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
1280 x 960	60	✓	✓	✓
	70	✓	✓	✓
	72	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	100	✓	✓	✓
	120	✓	✓	✓
	160	✓	✓	✓
1280 x 1024	43	✓ (interlaced)	✓ (interlaced)	✓ (interlaced)
	47	✓ (interlaced)	✓ (interlaced)	✓ (interlaced)
	60	✓	✓	✓
	70	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	90	✓	✓	✓
	100	✓	✓	✓
	120	✓	✓	✓
1600 x 1200	60	✓	✓	✓
	70	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
	100	✓	✓	✓

To be continued...

Display Screen Resolution	Refresh Rate (Hz)	Color Depth (bpp) 8bpp(256 color) Standard mode	16bpp(65K color) High mode	32bpp(16.7M) True mode
1792 x 1344	60	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
1800 x 1440	60	✓	✓	✓
	70	✓	✓	✓
1856 x 1392	60	✓	✓	✓
	72	✓	✓	✓
	75	✓	✓	✓
1920 x 1080	60	✓	✓	✓
	75	✓	✓	✓
1920 x 1200	60	✓	✓	✓
	75	✓	✓	✓
	85	✓	✓	✓
1920 x 1440	60	✓	✓	✓
	75	✓	✓	✓
2048 x 1536	60	✓	✓	✓
	66	✓	✓	✓

* Lower maximum refresh rates at some resolutions when using lower bandwidth memory configuration.