SUS 3DexPlorer® 3000 3DP-V3000 Graphics Card

USER'S MANUAL Hardware & Video Drivers

USER'S NOTICE

No part of this manual, including the products and software described in it, may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any language in any form or by any means, except documentation kept by the purchaser for backup purposes, without the express written permission of ASUSTeK COMPUTER INC. ("ASUS").

ASUS PROVIDES THIS MANUAL "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY OR FITNESS FOR A PAR-TICULAR PURPOSE. IN NO EVENT SHALL ASUS, ITS DIRECTORS, OFFICERS, EMPLOYEES OR AGENTS BE LIABLE FOR ANY INDIRECT, SPECIAL, INCIDEN-TAL, OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGES FOR LOSS OF PROFITS, LOSS OF BUSINESS, LOSS OF USE OR DATA, INTERRUPTION OF BUSI-NESS AND THE LIKE), EVEN IF ASUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES ARISING FROM ANY DEFECT OR ERROR IN THIS MANUAL OR PRODUCT.

Products and corporate names appearing in this manual may or may not be registered trademarks or copyrights of their respective companies, and are used only for identification or explanation and to the owners' benefit, without intent to infringe.

- Intel, LANDesk, and Pentium are registered trademarks of Intel Corporation.
- IBM and OS/2 are registered trademarks of International Business Machines.
- Symbios is a registered trademark of Symbios Logic Corporation.
- Windows and MS-DOS are registered trademarks of Microsoft Corporation.
- Sound Blaster AWE32 and SB16 are trademarks of Creative Technology Ltd.
- Adobe and Acrobat are registered trademarks of Adobe Systems Incorporated.

The product name and revision number are both printed on the board itself. Manual revisions are released for each board design represented by the digit before and after the period of the manual revision number. Manual updates are represented by the third digit in the manual revision number.

For previous or updated manuals, BIOS, drivers, or product release information, contact ASUS at http://www.asus.com.tw or through any of the means indicated on the following page.

SPECIFICATIONS AND INFORMATION CONTAINED IN THIS MANUAL ARE FUR-NISHED FOR INFORMATIONAL USE ONLY, AND ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE, AND SHOULD NOT BE CONSTRUED AS A COM-MITMENT BY ASUS. ASUS ASSUMES NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS OR INACCURACIES THAT MAY APPEAR IN THIS MANUAL, INCLUD-ING THE PRODUCTS AND SOFTWARE DESCRIBED IN IT.

Copyright © 1997 ASUSTeK COMPUTER INC. All Rights Reserved.

Product Name:	ASUS 3DP-V3000
Manual Revision:	1.02
Release Date:	October 1997

ASUS CONTACT INFORMATION

ASUSTeK COMPUTER INC.

Marketing Info

Address:150 Li-Te Road, Peitou, Taipei, Taiwan 112, ROCTelephone:+886-2-894-3447Fax:+886-2-894-3449Email:info@asus.com.tw

Technical Support

Fax:	+886-2-895-9254
BBS:	+886-2-896-4667
Email:	tsd@asus.com.tw
WWW:	www.asus.com.tw
Gopher:	gopher.asus.com.tw
FTP:	ftp.asus.com.tw/pub/ASUS

ASUS COMPUTER INTERNATIONAL

Marketing Info

Address:	721 Charcot Avenue, San Jose, CA 95131, USA
Telephone:	+1-408-474-0567
Fax:	+1-408-474-0568
Email:	info-usa@asus.com.tw

Technical Support

BBS:	+1-408-474-0569
Email:	tsd-usa@asus.com.tw
WWW:	www.asus.com

ASUS COMPUTER GmbH

Marketing Info

Address:	Harkort Str. 25, 40880 Ratingen, BRD, Germany
Telephone:	49-2102-445011
Fax:	49-2102-442066
Email:	info-ger@asus.com.tw

Technical Support

BBS:	49-2102-448690
Email:	tsd-ger@asus.com.tw
Hotline:	49-2102-499712

CONTENTS

I. Introduction7
Item Checklist7
Key Benefits7
Features7
II. Hardware Installation8
ASUS 3DP-V3000 Layout8
ASUS 3DP-V3000 Connection Examples9
Installation Procedures10
New Systems10
Systems with Existing VGA Card10
III. Windows 9511
Device Connection Notes:
Monitor Out and Video Out (optional)11
Video In (optional) 11
1. Installation for an Installed ASUS 3DP-V300012
1.1 Windows 95 12
1.2 Win95 OSR 2.0/2.1
2. Replacing an Existing VGA Card14
3. Video Driver Uninstallation15
3.1 Using the Autorun Screen15
3.2 Using the Windows 95 Control Panel
4. DirectX5 Installation
5. Video Utility (optional)17
ASUS LIVE300017
6. PowerPlayer18

CONTENTS

IV. Microsoft Windows NT	
Windows NT 4.0	
Installation Procedures	
Windows NT 3.51	
Installation Procedures	
1.1. Installation Procedures in DOS	
V. Windows 3.x	
1.2. Installation Procedures in Windows 3.x	
1.3. Installation of Video for Windows	
VI. Display Information	
VI. Display Information Resolution Table	
VI. Display Information Resolution Table 4MB Video Memory	25 25 25
VI. Display Information Resolution Table 4MB Video Memory VIP Connectors	25 25 26
VI. Display Information	25 25 26 26
 VI. Display Information Resolution Table	25 25 26 26 26 26
 VI. Display Information	25 25 25 26 26 26 26 28
 VI. Display Information	25 25 26 26 26 26 26 26 26 28

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.

I. Introduction

Thank you for purchasing the ASUS 3DP-V3000 Graphics & Video Accelerator. With the SGS-THOMSON RIVA 128TM built in, the ASUS 3DP-V3000 provides you with fast acceleration in both 2D/3D graphics and high quality scalable video playback, which can fully support 3D Gaming and Multimedia Applications.

Item Checklist

- ☑ ASUS 3DP-V3000
- ☑ This User's Manual
- ☑ ASUS Driver & Utility CD

Key Benefits

- Supports professional graphics design, gaming, learning, and business applications
- Flicker free, high refresh rates reduce eye strain
- Powerful 3D rendering
- Crisp, realistic images
- Striking cinema-quality video

Features

- Built-in SGS-THOMSON RIVA 128[™] 128-bit 3D Multimedia Accelerator
- User-friendly Installation for Windows 95 and Windows 3.x.
- Built-in VIP Bus Connectors for TV Tuner, Video Capture, MPEG-1, and MPEG-II
- Acceleration for Windows 95 APIs, including Direct3D and DirectDraw (+ VPE)
- Acceleration for WinNT APIs, including Direct3D, DirectDraw, OpenGL MCD
- Massive array of floating point Geometry Processing Units
- 128-bit 2D/GUI/DirectDraw Acceleration
- Video Acceleration (including acceleration for MPEG-I, MPEG-II, and Indeo)
- X and Y up and down video scaling
- 230MHz Palette-DAC
- 4MB 128-bit 100MHz SGRAM frame buffer interface with 1.6GB/s bus bandwidth
- Excellent performance at high resolutions and color depths

IMPORTANT! External devices and ASUS Video cards both have NTSC and PAL versions. You must make sure that all your devices and the ASUS Video card are of the same type or else you will not have video capabilities.

ASUS 3DP-V3000 Layout



NOTE: The input and output connectors are optional. If either the input and output connectors are not available, the respective Video Utility will also not be available.

II. Hardware Installation ASUS 3DP-V3000 Connection Examples



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 PCI 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 (see WARNING!).
- 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 PCI 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. Install the ASUS 3DP-V3000 display drivers with your current VGA card.
- 2. Shut down your computer and unplug all electrical cords.
- 3. Replace the existing VGA card with the ASUS 3DP-V3000 graphics card.
- 4. Restart your computer the ASUS 3DP-V3000 graphics card should be automatically detected and the display drivers automatically updated.

Device Connection Notes:

Monitor Out and Video Out (optional)

NOTE: There is a limitation in the signal output. Only one device can be used as an output device at one time. Choose one output device and disconnect the other. To use another output device, power off your system, disconnect the current output device and connect the other output device, then power on your system.

Video In (optional)

Connect your input device(s) and then run the program "ASUS LIVE3000" under Windows 95 in order to see the external input device(s). See Section III for instructions on installation.

1. Installation for an Installed ASUS 3DP-V3000

"New hardware found" refers to the prompt for drivers when installing Windows 95 with the ASUS 3DP-V3000 VGA card already installed. This Manual assumes that your CD-ROM disc drive is drive **D**: and that Windows 95 is in **C:\windows**. Replace either with the actual location, if necessary.

1.1 Windows 95

When installing Windows 95, a **New Hardware Found** window will appear:

Select **Do not install a driver** and follow the steps on the next page.



1.2 Win95 OSR 2.0/2.1

When installing Windows 95 OSR 2.0/2.1, the **Update Device Driver Wizard** window will appear:

This wizard will complete the installation of the Standard PCI Graphics Adapter (VGA). Click **Cancel.**

The vessel will complete the real alaren of Marvined PD Graphen Adapter (NGG) Ap reacting processed divers, natively, and bidened factors in the trace score diver. If you have a sink or (2)-PDM that come will the devess work Area.
Terr Net Could

III. Windows 95

Insert the ASUS 3DP-V3000 installation CD with your current VGA card. The ASUS Windows 95 Install Shell will appear. If it does not appear, run **D:\setup.exe**. You will be presented with a list of install options.

Click **Install 3DP-V3000 Display Driver** and follow the installation steps.

The Setup program window appears.

Click $\underline{N}ext > to install 3DP-V3000 display drivers on your computer.$

The Features window will be displayed.







Click <u>N</u>ext > to continue with the Setup program.

The Check Setup Information window will appear.

Click $\underline{N}ext > to begin the file transfer.$

The **Installing Microsoft DirectX 5** dialog box will automatically appear because the 3DP-V3000 display driver requires DirectX 5 to have access to the advanced 3D features.

This box indicates that the **Setup program** is searching for the updated DirectX Runtime Components and updating as necessary.



Including Microsoft(Fi) Dismo(Pi)(in) S	
Sean hing the updated Three SC Runtime Components and update received at This way take a real valuated.	(a.e)

III. Windows 95

2. Replacing an Existing VGA Card

If wish to replace an existing VGA card with the ASUS 3DP-V3000 graphics card, the current display drivers must be replaced first. To replace, insert the ASUS 3DP-V3000 installation CD. The ASUS Windows 95 Install Shell will appear. If it does not appear, run **D:\setup.exe**. You will be presented with a list of install options.

Click **Install 3DP-V3000 Display Driver** and the **Setup program** window will appear. Click **Next** > to install the 3DP-V3000 display drivers on your computer.

The **Features** window will be displayed. Click **<u>Next</u>** > to continue with the **Setup program**.

The **Installing Microsoft DirectX 5** dialog box will automatically appear because the 3DP-V3000 display driver requries DirectX 5 to have access to the advanced 3D features. Click <u>Next</u> > to begin the file transfer.

This box indicates that the **Setup program** is searching for the updated DirectX Runtime Components and updating as necessary.

After all drivers are installed, power off your system and replace your VGA card with the ASUS 3DP-V3000. Restart your computer and the drivers should be installed automatically.



3. Video Driver Uninstallation

If you want to install other graphics cards or if you no longer need the 3DP-V3000 display drivers, you can use one of the following procedures to completely uninstall the drivers from Windows 95 to save disk space.

3.1 Using the Autorun Screen

Insert the ASUS 3DP-V3000 installation CD.

Select Remove 3DP-V3000 Display Driver

in the ASUS Windows 95 Install Shell and follow the uninstallation steps.



3.2 Using the Windows 95 Control Panel

Click Start, and then point to Settings.

Click Control Panel.

Double-click the Add/Remove Programs icon.

Click the Install/Uninstall tab.

Select **ASUS 3DP-V3000 V1.02** (driver version) from the list.

Click Add/<u>R</u>emove.

During uninstallation, a **"Remove Shared File?"** dialog box will display asking you to remove some shared files. Click the <u>Yes</u> or **Yes To** <u>All</u> button to remove the shared files that are no longer used.



Ten Loga

100

No No In All

4. DirectX5 Installation

Microsoft DirectX5 allows 3D hardware acceleration support in Windows 95. For Software MPEG support in Windows 95, you must first install the **Microsoft DirectX 5** libraries, then you may install the MPEG Video Player.

Reinsert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD.

Click Install Microsoft DirectX5

DirectX5 Setup Screen Appears

Check **Direct 3D Hardware Acceleration Enabled** and then click the **Reinstall DirectX** button.



3 80 1096 N 3 80 21 39 N 3 80 1096 N 3 80 1096 N 3 80 1096 N 1 80 1096	H evidend S avtrolled d evidend d evidend
1.00.2139 N 1.00.1096 N 1.00.1096 N 1.00.0196 N	s avotaled st installed st installed
3.00.1096 N 3.00.1096 N 5.00.0096	et installed 4 installed
3.90,1096 N 1.00,0196	e extained.
1.00.0056	
and the second sec	
5.00 17:95	
:16	A tracalled
0.00, 1996 Cr	stilled
10	o put allert
uselonarum Ernable	a
eg00	
area in	
	1.001.1996 Cr N

If your system already has DirectX5 installed, the screen will show "Certified" next to each component. You may click either the "**Ok**" or "**Cancel**" button to cancel the installation.

After reinstalling DirectX5, you will be prompted to restart your machine. Click the "Ok" button.

Corporere	Version	
DisciDiaw (Im)	4.%5.组织的	Certilect
Privacy Digitar DL	4.03.80.21.39	Certified
Davast 3D (tm)	4 05 30 25 55	DetRed
Deecfound Im	4 05 03 01 95	Certified
Prinary Sound Ori	4,30,00,5000	Cerliled :
SoundElaster 16	A 31 D3 D300	Leekked
Discella fel	4.65.83.04.95	Conduct
Did DirectPlay	4.03.90 1096	Certified
Options		
golans 17 gees (10 Haule	non Auselenstein E	nabied
Qolani P Quecito Haula Berne	non Ausselenation E al Durotit	inabina
Qohani 17 QonacQo Hando Bernet	non Austein atum E al Daesdii	

III. Windows 95

5. Video Utility (optional)

ASUS LIVE3000

ASUS LIVE3000 must be installed in order to use the video-in function on the 3DP-V3000.

After installation, you may run the program through the "Start" button-Programs-ASUS LIVE3000-LIVE3000 or remove the program using the unInstallSHIELD.

When first using ASUS LIVE3000, you must choose Options-Video Source from the pull-down menu.

Video Source allows you to select:

- Video Connector type:
- Select your local Video Standard
- Adjust Color if necessary.



6. PowerPlayer

PowerPlayer is a video player that allows you to view VCD (*.DAT) or MPEG (*.MPG) CD titles.

Reinsert your CD or double click on your CD drive icon in My Computer to bring up the autorun screen or run Setup.exe in the root directory of the CD.



ס	
owe	Win
rPla	Idov
yer	9 SV

Follow the self-explanatory instructions to complete the installation.



Moving your cursor over the buttons will give the command name. If you need help, click the "?" button.



LIMITATIONS:

- Do not run PowerPlayer with full screen under 1280x1024 16bit high color or 1600x1200 16bit high color resolution modes, it will not function properly.
- Do not overlap other windows over PowerPlayer, it will not function properly.

IV. Microsoft Windows NT

Windows NT 4.0

Installation Procedures

- 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 ASUS 3DP-V3000 Installation CD.
- 8. Type **D:\NT40** (assuming your CD-ROM disc drive is in drive D) or click **Browse** to select the path of the display driver for Windows NT. Click **OK.**
- 9. You will see a list of ASUS 3DP-V3000 drivers. Select ASUS 3DP-V3000 and then click OK.
- 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.

IV. Microsoft Windows NT

Windows NT 3.51

After installing your graphics card, WinNT3.51 will default to the standard VGA mode (640x480, 16 colors). The procedure below describes how you install ASUS 3DP-V3000 series display driver for WinNT3.51.

Installation Procedures

- 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 ASUS 3DP-V3000 Installation CD.
- 8. Type **D:\NT351** (assuming your CD-ROM disc drive is in drive D) or click **Browse** to select the path of the display driver for Windows NT. Click **OK**.
- 9. You will see a list of ASUS 3DP-V3000 drivers. Select **ASUS 3DP-V3000** 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.

V. Windows 3.x

This Manual assumes that you have already installed the ASUS 3DP-V3000 graphics & video card and your CD-ROM disc drive is drive **D**: and that the Windows 3.x directory is in **C:\windows**. Replace these with the actual location, if necessary. The ASUS 3DP-V3000 Video drivers for Windows 3.x can be installed under DOS mode or Windows 3.x.

1.1. Installation Procedures in DOS

- 1. Start your computer and enter DOS mode.
- 2. Type D: and change to the \WIN31 directory.
- 3. Type install and the install screen will appear.



- 4. Type **c:\windows** or the path to your Windows 3.x directory.
- 5. The installation program will install the appropriate language support into Windows.
- 6. When completed, keep your ASUS driver CD in your CD-ROM disc drive and launch Windows 3.x.
- 7. The ASUS Video installation screen will appear. You may select other items to install.

1.2. Installation Procedures in Windows 3.x

- 1. Start your computer in DOS mode.
- 2. Change to your Windows 3.x directory.
- 3. Type SETUP. The System Information screen will appear.

System Information	
Computer:	MS-DOS System
Display:	VGA
Mouse:	Microsoft, or IBM PS/2
Keyboard:	Enhanced 101 or 102 key US and Non US keyboards
Keyboard Layout:	US
Language:	US
Codepage :	English (437)
Network:	No Network Installed

- 4. Go to the **Display** section and then select **VGA**. Switch to the standard VGA mode (16 colors, 640 x 480 pixels), then start Windows by typing WIN.
- 5. Insert the ASUS 3DP-V3000 installation CD and run **D:\setup.exe**. A list of install options will appear.



6. Click Install Windows 3.x Display Driver and follow the installation steps.

V. Windows 3.x Installation in Win3.x

1.3. Installation of Video for Windows

For Software MPEG support in Windows 3.x, you must first install **Microsoft Video for Windows**, then you may install your own **MPEG Video Player**.

NOTE: ASUS does not provide an MPEG Video Player.

- 1. Start Windows 3.x.
- 2. Insert the ASUS 3DP-V3000 Installation CD.
- 3. Run **D:\setup.exe.** A list of install options will appear.



4. Click Install Win32s Runtime Library.

NOTE: Part of the driver's code is written with 32bit API, which will need the **Win32s Runtime Library** to be executable. It is recommended that you install **Win32s Runtime Library** once you have installed the Windows 3.x driver.

5. Click **Install Video for Windows** if you have not installed Video for Windows.

NOTE: You must install **Win32S Runtime Library** first. Otherwise, the DCI driver of Video for Windows will not be enabled.



(This page was intentionally left blank)				

VI. Display Information

Resolution Table

4MB Video Memory

Resolution	Vertical	Horizontal	Color Depth		
	Frequency	Frequency	8bpp = 256 colors Standard	16bpp = 65K colors High Color	32bpp = True Color
640 x 480	60Hz 72Hz 75Hz 85Hz 100Hz 120Hz	31.4KHz 36.1KHz 37.6KHz 43.0KHz 50.9KHz 61.8KHz	\checkmark	\checkmark	$ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$
800 x 600	60Hz 72Hz 75Hz 85Hz 100Hz 120Hz	37.9KHz 45.1KHz 47.1KHz 53.5KHz 63.6KHz 77.3KHz	$\begin{array}{c} \checkmark \\ \checkmark \end{array}$	* * * * *	* * * * *
1024 x 768	60Hz 72Hz 75Hz 85Hz 100Hz 120Hz	48.4KHz 57.6KHz 60.2KHz 68.7KHz 81.9KHz 98.8KHz	$\begin{array}{c} \checkmark \\ \checkmark \end{array}$	* * * * * * * *	× × × × ×
1152 x 864	60Hz 72Hz 75Hz 85Hz 100Hz 120Hz	53.6KHz 64.9KHz 67.7KHz 77.2KHz 91.4KHz 110.8KHz			
1280 x 1024	60Hz 72Hz 75Hz 85Hz 100Hz	64.0KHz 77.0KHz 80.4KHz 91.2KHz 108.5KHz	$\begin{array}{c} \checkmark \\ \checkmark \\ \checkmark \\ \checkmark \\ \checkmark \\ \checkmark \\ \checkmark \end{array}$		
1600 x 1200	60Hz 72Hz 75Hz 85Hz	74.9KHz 89.9KHz 93.8KHz 107.1KHz	\checkmark		

VII. Hardware Information VIP Connectors

VIP uses two dual row 0.1" center connectors — Connector A and Connector B. Connector A is a 26-pin connector, which is the same as the standard Feature Connector. Connector B is a 14-pin connector consisting of the power pins, ground, VRST#, and I2S. On the master side, Connector A is male, and Connector B is female. This applies to either the graphics adapter card or the motherboard. Slave modules will have the opposite mating connectors. Connector B on the slave side must be shrouded to prevent the danger of wrong insertion. Connector A can be configured as a standard Feature Connector, VIP, or Connector A (video) of VMI 1.4. On power up, the graphics chip (master) is configured in the standard feature connector mode. All VIP slaves must be disabled and tri-stated on power up.

VIP Module Mechanical Specification



VII. Hardware Information

VIP CONNECTOR A						
	(26 Pin Dual Row Header, 0.100 in. centers)					
Standa	rd Feature	VIP	Standard Feature		VIP	
Conne	ctor	Mode	Connector		Mode	
Pin #	Signal Name	Signal Name	Pin #	Signal Name	Signal Name	
1	Ground	Ground	2	P0	VID [0]	
3	Ground	Ground	4	P1	VID [1]	
5	Ground	Ground	6	P2	VID [2]	
7	EVIDEO #	HAD [1]	8	P3	VID [3]	
9	ESYNC #	HAD [0]	10	P4	VID [4]	
11	EDCLK #	HCTL	12	P5	VID [5]	
13	N/C	SCL	14	P6	VID [6]	
15	Ground	Ground	16	P7	VID [7]	
17	Ground	Ground	18	DCLK	PIXCLK	
19	Ground	Ground	20	BLANK #	VIPCLK	
21	Ground	Ground	22	HSYNC	N/C	
23	N/C	VIRQ #	24	VSYNC	N/C	
25	N/C	SDA	26	Ground	Ground	

VIP CONNECTOR B (14 Pin Dual Row Header, 0.100 in. centers)					
Standa Connec	rd Feature tor	VIP Mode	IP Standard Feature lode Connector		VIP Mode
Pin #	Signal Name	Signal Name	Pin # Signal Name		Signal Name
1	-	+3.3V	2	-	+3.3V
3	-	+3.3V	4	-	+3.3V
5	-	Ground	6	-	Ground
7	-	+5V	8	-	+5V
9	-	+5V	10	-	VRST #
11	-	SCLK	12	-	Ground
13	-	LRCLK	14	-	PCMDATA

VIII. Troubleshooting

Description

After installing the driver, Windows 95 doesn't prompt me to restart and the driver still doesn't work after I restart my computer.

Recommended Action

You may have installed similar drivers before. Try the following steps to install:

- 1. Right-click **My Computer** on the desktop.
- 2. Select **Properties.** The **System Properties** dialog box appears.
- 3. Click the **Device Manager** tab. Be sure that **View devices by type** is selected.
- 4. Double-click **Display adapters**. If **Display adapters** does not appear, jump to step 8 and continue.
- 5. The name of your card will be listed in the box. Double-click it.
- 6. The properties box of your card appears. Click the **Driver** tab.
- 7. Click **Change Driver...** and follow the installation steps.
- 8. Click **Other devices**. Your card should be listed.
- 9. Click the name of your card to bring up the properties box of your card. Select the **Driver** tab.
- 10. Click Change Driver... and follow the installation steps.

After installation and restarting, Windows 95 informs me that the display setting is still incorrect. There may be a conflict between a previous and the current display drivers. This is caused by the incomplete removal of the previous display driver. Try the following steps to remove it:

- 1. Right-click My Computer on the desktop.
- 2. Select **Properties**. The **System Properties** dialog box appears.
- 3. Click the **Device Manager** tab. Be sure that **View devices by type** is selected.
- 4. Double-click **Display adapters**.
- 5. You will find two (or more) conflicting adapters.
- 6. Disable all previous adapters by selecting them and clicking **Remove**.
- 7. Close Device Manager and restart Windows 95.
- 8. Your display driver should work correctly this time.

It depends on the display characteristics of your monitor. Consult your monitor documentation for the proper configuration.

My monitor is not capable of high resolution or refresh rate.