

User's Manual
for
MVGA-NVTNT2A
MVGA-NVTNT2AL

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Rev. B

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FCC Requirement



This device has been certified to comply with the limits for a Class B computing device pursuant to Subpart J of Part 15 of the FCC Rules. See instructions if interference to radio reception is suspected.

WARNING: This equipment generates and uses radio frequency energy and, if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio or television reception.

It has been tested and found to comply with the limits for a Class B compliant device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause 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 the receiving antenna
- Relocate the computer away from the receiver
- Move the computer away from the receiver
- Plug the computer into a different outlet so that the computer and the receiver are on different branch circuits
- Ensure that the card's mounting screws, attachment connector screws, and ground wires are tightly secured
- Ensure that slot covers are installed in all unused slots

If necessary, consult your dealer, service representative, or an experienced radio/television technician for additional suggestions.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. It is the responsibility of the user to correct such interference.

The user may find the following booklet prepared by the Federal Communications Commission helpful:

How to Identify and Resolve Radio-TV Interference Problems.

This booklet is available from the Government Printing Office, Washington, D.C. 20402, Stock No. 004-000345-4.

NOTE: You must use shielded interface cables with a ferrite bead in order to maintain compliance with the limits for a Class B device.

CAUTION:	CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT
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Notice

The information in this document is subject to change in order to improve reliability, design, or function without prior notice and does not represent a commitment on the part of this company.

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Our company warrants this product against defects in materials and workmanship for a period of one (1) year from the date of purchase. During the warranty period, a product determined by us to be defective in form or function will be repaired or at our option, to be replaced at no charge. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or as a result of service or modification other than by us.

This warranty is in lieu of any other warranty expressed or implied. In no event shall we be held liable for incidental or consequential damages, such as lost revenue or lost business opportunities arising from the purchase of a this product.

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1. Introduction

The MVGA-NVTNT2A/AL (TwiN-Textel) architecture is the second generation integrated, 128-bit 3D Processor that processes 2 pixels-per-clock cycle enabling single-pass multi-texturing. MVGA-NVTNT2A/AL 32-bit color pipeline, 24-bit Z-buffering, 8-bit stencil buffer and per-pixel mip-mapping precision delivers unsurpassed quality and performance allowing developers to write standards based applications with stunning visual effects and realism.

Features

High performance 2D/3D processor Riva TNT2

SDRAM/SGRAM memory on board

128-bit wide frame buffer interface up to 32Mbyte memory devices

TwiN-Textel(TNT)32bit graphics pipeline providing 2 texture mapped , lit pixels per clock and single pass multi-texture rendering

32-bit ARGB rendering with destination alpha

24-bit Z buffer , 8-bit stencil buffer

Supports Windows 95' (OSR2.1), 98', & NT 4.0(sp3), Windows2000

Optimized for Direct3D acceleration with complete support for DirectX 5.X, 6.X and OpenGL

Integrated true-color 250MHz RAMDAC interface

High performance 128-bit 2D/GUI/DirectDraw acceleration

Video acceleration for DirectShow MPEG 1/2 and Indeo

AGP 4x/2x interface with full sideband support

Supports high screen resolutions up to 1920x1200@75Hz

Supports DDC1/2B monitor

DVD sub-picture alpha blend composite

1MB Flash-ROM on board (optional)

NTSC and PAL digital output port supporting external digital TV encoders(optional)

System Requirements

Pentium/Pentium II/Pentium III motherboard with AGP bus.

Microsoft Windows 95 (OSR2.1)/ Windows 98/ Windows 2000 or Windows NT 4.0 with service pack 3(sp3)

DirectX 5.X/6.X driver

Package Contents

MVGA-NVTNT2A/AL Without TV-OUT

MVGA-NVTNT2A/AL adapter

AutoRun Driver CD-Title

User's Manual

IVI's WINDVD CD-Title (optional)

MVGA-NVTNT2A/AL With TV-OUT

MVGA-NVTNT2A/AL adapter

AutoRun Driver CD-Title

User's Manual

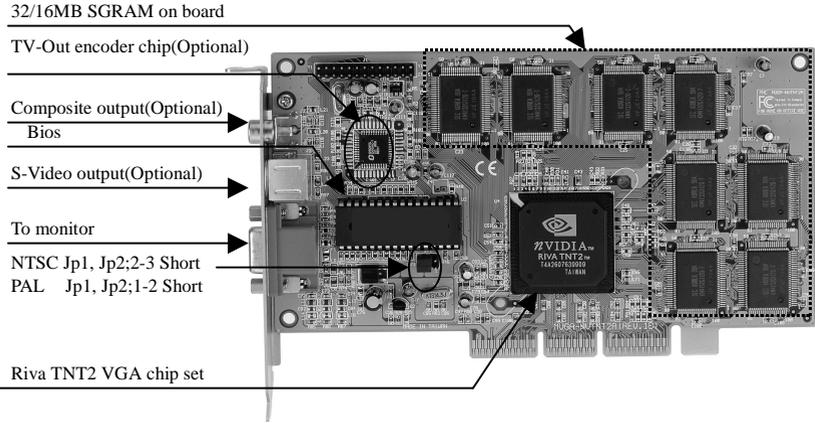
IVI's WINDVD CD-Title (optional)

RCA cable

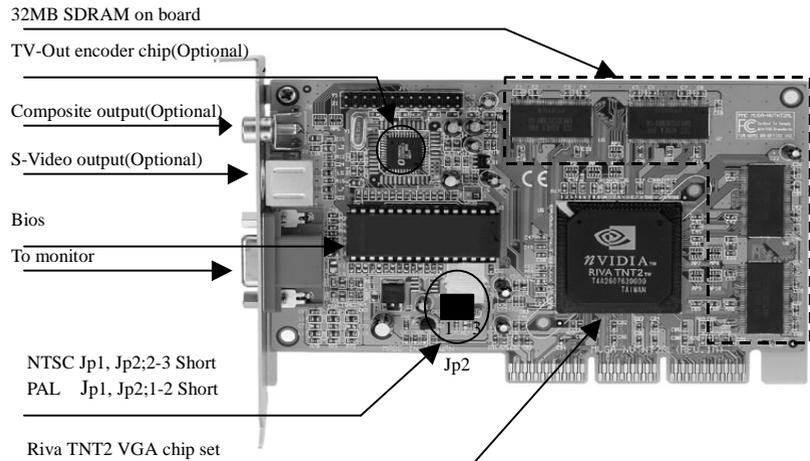
S-VIDEO cable (optional)

2. Hardware Installation

Adapter Configuration



MVGA-NVTNT2A



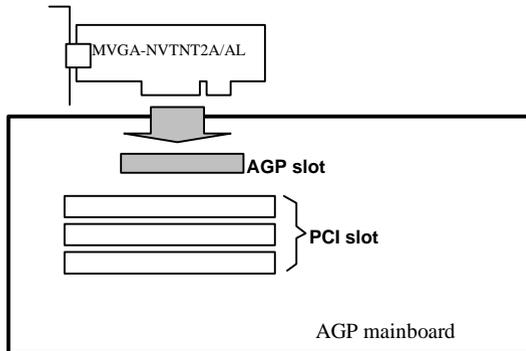
MVGA-NVTNT2AL

Installing the MVGA-NVTNT2A/AL adapter card

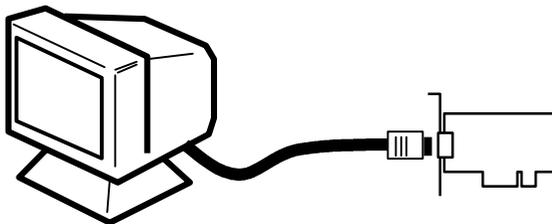
1. Turn OFF your computer, remove the computer case, and then ground yourself by touching the power supply of the computer.

Note: Before installing the MVGA-NVTNT2A/AL card you must first set the VGA option to either standard VGA or Standard Display VGA.

2. Remove your old graphics card, and install your new MVGA-NVTNT2A/AL card into the AGP slot.



3. Align and secure the mounting bracket of the card to the computer and replace the computer case.
4. Connect the monitor cable to the DB-15 connector of the card.



5. Turn ON your computer.

3. Software install

Autorun Instruction

1. Insert the AutoRun CD-ROM driver (wait a few seconds). You will see a windows show below.

2. If you can not see that windows, please click 'MVGA-NVTNT2A/AL' from right side windows.



2. Click-on '**Install Driver**' to install the VGA driver.
3. Click-on '**DirectX**' to install Microsoft DirectX onto your Windows 95/98 system. Not necessary, if it has already been installed in your system.
4. Click-on '**Readme**', to view detailed information regarding the various Drivers/Programs and FAQ's located on the CD.
5. Click-on '**Browse CD**' to view the contents of the CD.
6. Click-on '**Exit**' to exit the AutoRun tool .

Installing drivers onto your Windows 95/98

1. Insert the AutoRun driver into the CD-ROM drive, and click-on '**Install Driver**' to setup the VGA driver. Please click '**OK**'.

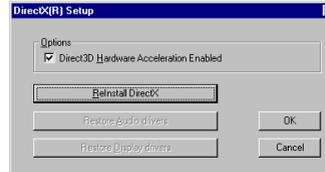


2. After the installation is complete, the system will ask you whether you want to restart your computer now. Please click '**OK**', to reboot your system and activate the program.



Installing DirectX on your Windows 95/98

1. There is no need to re-install DirectX, if it is already on your system. However, if you don't have it and want to install it click-on '**ReInstall DirectX**' to install the DirectX program.
2. When it is done, please click '**OK**' to reboot windows.



Installing drivers onto your Windows NT 4.0 (SP3)

1. Start Windows NT, switch display properties to VGA mode (16 colors, 640x480 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 **“Display Type”**.
5. Select Adapter Type and click **“Change”**
6. Click **“Have Disk”**.
7. Insert the AutoRun driver into the CD-ROM drive.
8. Click (assuming your CD-ROM disc driver X) **“Browse CD”** to select the path **X:\NVTNT2\NT4.0** of the display driver for Windows NT.
9. You will see a list of NVTNT2 Series driver. Select NT4.0 driver 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 Setting 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.

4. Display Information

Resolution Table 32MB Video Memory

Resolution	Vertical Frequency	Horizontal Frequency	Color Depth		
			8bpp= 256 colors Standard	16bpp= 65kcolors Standard	32bpp= 16.7Mcolors Standard
640 x 480	60Hz	31.3KHz			
	70Hz	35.0KHz			
	72 Hz	36.0KHz			
	75 Hz	37.6KHz			
	85Hz	43.0KHz			
	100Hz	51.0KHz			
	120Hz	61.8KHz			
	140Hz	73.0KHz			
	144Hz	75.3KHz			
	150Hz	78.6KHz			
	170Hz	91.9KHz			
	200Hz	108.2KHz			
240Hz	133.0KHz				
800 X 600	60Hz	38.0KHz			
	70Hz	43.6KHz			
	72 Hz	45.0KHz			
	75 Hz	47.1KHz			
	85Hz	52.9KHz			
	100Hz	63.7KHz			
	120Hz	77.2KHz			
	140Hz	91.0KHz			
	144Hz	94.2KHz			
	150Hz	98.0KHz			
	170Hz	112.9KHz			
	200Hz	135.2KHz			
240Hz	166.0KHz				
1024 X 768	60Hz	48.4KHz			
	70Hz	56.1KHz			
	72 Hz	57.5KHz			

1024 X 768	75 Hz	60.1KHz			
	85Hz	68.9KHz			
	100Hz	81.7KHz			
	120Hz	98.2KHz			
	140Hz	116.6KHz			
	144Hz	120.2KHz			
	150Hz	125.7KHz			
1152 X 864	60Hz	53.7KHz			
	70Hz	62.9KHz			
	72 Hz	65.0KHz			
	75 Hz	67.9KHz			
	85Hz	77.9KHz			
	100Hz	91.7KHz			
	120Hz	111.2KHz			
1280 X 1024	60Hz	64.4KHz			
	70Hz	74.1KHz			
	72 Hz	76.5KHz			
	75 Hz	80.1KHz			
	85Hz	91.0KHz			
	100Hz	108.7KHz			
	120Hz	131.5KHz			
1600 X 1200	60Hz	74.6KHz			
	70Hz	87.5KHz			
	72 Hz	90.2KHz			
	75 Hz	84.1KHz			
	85Hz	131.4KHz			
1920 X 1080	60Hz	67.2KHz			
	70Hz	78.5KHz			
	72 Hz	81.0KHz			
	75 Hz	84.5KHz			
1920 X 1200	60Hz	74.5KHz			
	70Hz	87.2KHz			
	72 Hz	90.2KHz			
	75 Hz	93.9KHz			

5. MVGA-NVTNT2A/AL FAQ

Q: *While installing on a Windows 95' or 98' operating system, my computer loses the Vertical Sync.*

A: Please check your monitor's specifications. Some monitors connect the DDC signal to ground: Which causes the BIOS to not detect your monitor. Therefore, causing your MVGA-NVTNT2A/AL to not receive any data or refresh rates.

Q: *I can't install the driver on my Windows 95' system.*

A: If your operating system isn't the OSR2.1 version, you won't be able to install the driver.

to fix the problem:

Please change your operating system to the OSR2.1 version.
Windows 95' OSR2.1 Installation.

1. Install Windows 95' OSR2.1
2. Execute USBSUPP
3. Install DirectX ver 5.0 or higher
4. Install the VGA driver

Q: *What is the performance difference between 16MB memory and 32MB memory on board?*

A: When tested with the 3D Winmark, they tested the same. However, when test with 2D Winbench, the 32MB memory out performed the 16MB memory.

Q: *The image on my monitor keeps on flickering and the driver can't change the refresh rate.*

A: The problem is due to a failed DDC monitor detection.

To fix the problem:

1. Go to 'Settings' 'Control Panel' 'Display'
2. Select 'Settings'
3. Select 'Advanced Properties'
4. Select 'Monitor'
5. Select 'Change'
6. Select 'Show All Devices' and choose your monitor type.
If your monitor type is not listed, Please select one that is as similar as possible.

Q: *How do I change the resolution, color, and refresh-rate on my Windows 95/98' system?*

A: Open the 'My Computer' folder and select the 'Control Panel' icon. Double-click on 'Display' then select 'Settings'. A new menu will appear choose 'Color Palette' to change the Color values. Choose 'Desktop area' to change the Resolution (screen image size). From the same screen click-on 'Advanced Properties' to access the Refresh-rate.

Q: *How do I change the resolution, color, and refresh-rate on my Windows NT system?*

A: The procedure is basically the same as above, for the 95' & 98' system. Except that you must select '**Test**', then '**OK**', so that the changes can take affect.