MS - 8839

nVIDIA GeForce2 MX

**Graphics Accelerator** 



# **FCC-B Radio Frequency Interference Statement**

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 when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

#### Notice 1

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

#### Notice 2

Shielded interface cables and A.C. power cord, if any, must be used in order to comply with the emission limits.

# VOIR LA NOTICE D'INSTALLATION AVANT DE RACCORDER AU RESEAU.



# **Copyright Notice**

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## **Trademarks**

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VGA is a trademark of International Business Machines Corporation. Pentium is a registered trademark of Intel Corporation.

Windows is a registered trademark of Microsoft Corporation.

# **Revision History**

Revision	Revision History	Date
V 1.0	First Release	Aug. 2001

# **Important Safety Precautions**

Always read and follow these basic safety precautions carefully when handling any piece of electronic component.

- 1. Keep this User's Manual for future reference.
- 2. Keep this equipment away from humidity.
- 3. Lay this equipment on a reliable flat surface before setting it up.
- 4. The openings on the enclosure are for air convection hence protects the equipment from overheating.
- 5. Make sure the voltage of the power source and adjust properly 110/220V before connecting the equipment to the power inlet.
- 6. Place the power cord such a way that people can not step on it. Do not place anything over the power cord.
- 7. Always Unplug the Power Cord before inserting any add-on card or module.
- 8. All cautions and warnings on the equipment should be noted.
- 9. Never pour any liquid into the opening that could damage or cause electrical shock.
- 10. If any of the following situations arises, get the equipment checked by a service personnel:
  - The power cord or plug is damaged
  - Liquid has penetrated into the equipment
  - The equipment has been exposed to moisture
  - The equipment has not work well or you can not get it work according to User's Manual
  - The equipment has dropped and damaged
  - If the equipment has obvious sign of breakage
- 11. DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT UNCONDITIONED, STORAGE TEMPERATURE ABOVE 60°C (140°F), IT MAY DAMAGE THE EQUIPMENT.

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# Overview

Congratulations on purchasing MS-8839 GeForce2 MX-200, a high performance graphics accelerator that enables you to experience the realistic and exciting 3D world.

Based on nVIDIA GeForce2 MX-200<sup>TM</sup> GPU, MS-8839 uses the first shading GPU (Graphics Processing Unit) with the new nVIDIA Shading Rasterizer and a High Definition Video Processor (HDVP). Incorporating a radical new per-pixel shading architecture, GeForce2 MX<sup>TM</sup> is the real-time, per-pixel shading processor, raising image quality to never-before-seen heights for interactive content.

MS-8839 GeForce2 MX-200 delivers the industry fastest Direct3D and OpenGL acceleration, and continues *n*VIDIA's tradition of providing leadership, single-chip, integrated VGA, 2D, 3D and high definition digital video performance, enabling a range of applications from 3D games to HDTV, DVD, digital content creation, internet browsing and general productivity.

## **Features**

## **Chip List**

**Q** *n*VIDIA GeForce2 MX-200™: 2D & 3D accelerator processor

#### General Features

- Optimized for Direct3D acceleration with complete support for Microsoft DirectX 5.0, 6.0, 7.0 and 8.0
- AGP 4x fast writes
- Support 64-bit SDRAM
- 64-bit Memory Interface
- 256-bit 2D and 3D graphics accelerator
- □ 350MHz Palette-DAC
- nVIDIA Shading Rasteriser
- 4 Texels per Clock
- Integrated second-generation transform and lighting engine
- 32-bit color with 32-bit Z/stencil
- Cube Environment mapping
- DirectX and S3TC texture compression
- 700 Mtexel fill rate
- 20M triangles/s setup
- 1.3 GB/s memory bandwidth
- S-Video connector for TV-out function

# High Quality Video Playback

 DVD and HDTV ready motion compensation for MPEG-2 decoding up to 1920x1080i ATSC format

# **Full Software Support**

- Windows® 98/ME Display Drivers
- Q. Windows® 2000, Windows® NT 4.0 Display Drivers
- OpenGL ICD for Windows® 2000, Windows® NT 4.0, and Windows® 98/ME

# **System Requirements**

To install MS-8839 GeForce2 MX-200, your system needs to meet the following requirements:

Computer Intel Pentium® II/III/4 processor, Intel

Celeron processor, or compatible system

**Expansion Slot** AGP slot

**Monitor** VGA support, minimum 640x480

resolution

Operating system Windows® 98/ME, Windows® NT 4.0,

Windows® 2000

CD-ROM Double Speed or Higher

# **Display Modes**

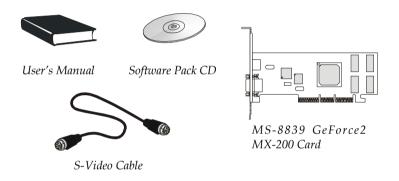
Resolution	Color	Vertical Refresh (Hz)
640x480	8bit, 16bit, 32bit	60, 75, 85, 100, 120, 140, 160, 200, 240
800x600	8bit, 16bit, 32bit	60, 75, 85, 100, 120, 140, 160, 200, 240
1024x768	8bit, 16bit, 32bit	60, 75, 85, 100, 120, 140, 160, 200
1280x1024	8bit, 16bit, 32bit	60, 75, 85, 100, 120
1600x1200	8bit, 16bit, 32bit	60, 75, 85
1920x1200	8bit, 16bit, 32bit	60, 75
2048x1536	8bit, 16bit	60

**Note:** The Display Modes listed above are for your reference; the actual settings may be different on your system because of using different monitor.

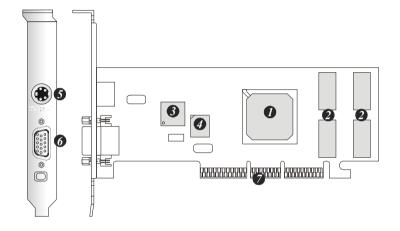
# **Package Contents**

Unpack the package and inspect all the items carefully. If any item contained is damaged or missing, please contact your local dealer as soon as possible. Also, keep the box and packing materials in case you need to ship the unit in the future.

Your MS-8839 GeForce2 MX-200 card package should contain the following items:



# Card Layout



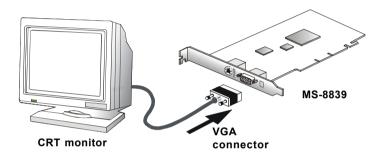
## MS-8839 GeForce2 MX-200

- 1. nVIDIA GeForce2 MX-200<sup>TM</sup> GPU
- 2. 32/64 MB SDRAM
- 3. Bt869KRF Video Chipset
- 4. VGA Flash BIOS
- **5.** S-Video Connector
- 6. VGA Connector
- 7. AGP Interface

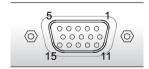
## Connectors

## VGA Connector (DB 15 Pin)

MS-8839 provides a standard VGA connector, which allows you to connect a CRT monitor. To connect a CRT monitor, simply plug your monitor cable into the VGA connector on your MS-8839 card, and make sure that the other end of the cable is properly connected to your monitor (refer to your monitor manual for more information).



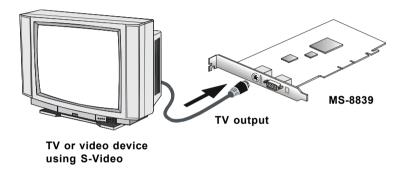
## **VGA Connector Pin Definition**



Analog Video Display Connector (DB15-S)		
Pin	Signal Description	
1	Red	
2	Green	
3	Blue	
4	Not used	
5	Ground	
6	Ground	
7	Ground	
8	Ground	
9	5V	
10	Ground	
11	Not used	
12	SDA	
13	Horizontal Sync	
14	Vertical Sync	
15	SCL	

#### S-Video Connector

MS-8839 card provides a S-Video connector, which allows you to connect a TV or video input device. To connect a TV or video device, simply plug one end of the S-Video cable into the S-Video connector on your MS-8839 card, and the other end to the video input connector (e.g. S-VIDEO IN) on your TV or video devices. (To use the TV-out function, please refer to the instruction in *Chapter 3. Software Installation.*)



#### S-Video Connector Pin Definition



# **Card Installation**

To install MS-8839 GeForce2 MX-200 card to your computer, please follow the steps below:

## Installation on new system

- 1. Remove the computer case.
- 2. Locate the AGP slot on your mainboard. Warning: Inserting your MS-8839 card into a wrong type of slot (e.g. PCI slot) will damage your card (refer to your mainboard manual for more information).

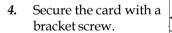
**Bracket** 

MS-8839

Mainboard

screw

3. Put the card directly over the AGP slot and press one end of the card into the slot first. Slightly but firmly press the other end until it is fully seated in the slot.



- Install all other cards and devices and connect all the cables, and then replace the case.
- **6.** Connect the monitor. Now, you are ready to install the software on your computer.

## Installation on system with existing VGA card

To replace the existing VGA card with MS-8839, please follow the steps below:

- If your operating environment is Windows NT system, switch your display driver to standard VGA first (refer to Windows NT documentation for more information). If you are using Windows 98/ME/2000, skip this step.
- Turn off the computer and unplug all the cables and power cords.
- **3.** Remove the computer case.
- **4.** Remove the existing VGA card. Locate the AGP slot on your mainboard.
  - **Warning:** Inserting your MS-8839 card into a wrong type of slot (e.g. PCI slot) will damage your card (refer to your mainboard manual for more information).
- Put the card directly over the AGP slot and press one end of the card into the slot first. Slightly but firmly press the other end until it is fully seated in the slot.
- **6.** Secure the card with a bracket screw.
- 7. Replace the case.
- 8. Connect the monitor (see previous section).
- 9. Restart the computer. Now, you are ready to install the driver for MS-8839 card.

This chapter describes how to install MSI VGA card's software for Windows 98/ME/2000 or NT, including the driver and useful utilities.

# **Drivers for Windows 98/ME**

To install the driver for MS-8839 card to your computer running Windows 98/ME, please follow the steps below:

- 1. Turn on the computer.
- 2. Insert the CD-ROM provided into the CD-ROM drive. The "Autorun" will launch the setup program, and shows the setup screen as below:



**Tip:** If, on your computer, the "Autorun" program does not execute automatically, please 1) enable the CD-ROM drive's auto-detect function from **Control Panel**; or 2) find and run the **setup.exe** manually from the CD-ROM.

**Note:** The figures in this section are based on the tested platform and for reference only; the actual displays and information (such as settings, driver's version, etc.) on your system may be different.

3. Click the "nVIDIA VGA Drivers" button on the setup program. You can easily complete the dirver installation through the on-screen instructions.



**4.** After finishing the installation, restart the computer as instruction.

# **Drivers for Windows 2000/NT**

Note: For Windows® NT 4.0 users, "Service Pack 3" or later version must be installed before installing the driver.

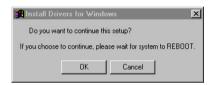
To install the driver for MS-8839 card to your computer running Windows 2000/NT, please follow the steps below:

- 1. Turn on the computer.
- 2. Insert the CD-ROM provided into the CD-ROM drive. The "Autorun" will launch the setup program, and shows the setup screen as below:



**Tip:** If, on your computer, the "Autorun" program does not execute automatically, please 1) enable the CD-ROM drive's auto-detect function from **Control Panel**; or 2) find and run the **setup.exe** manually from the CD-ROM.

3. Click the "nVIDIA VGA Drivers" button on the setup program. You can easily complete the dirver installation through the on-screen instructions.



**Note:** Under Windows 2000, it will pop up the "**Digital Signature**" message (as shown below) during the installation. Press **Yes** to continue installation.



**4.** After finishing the installation, restart the computer as instruction.

# **Install Optional Software**

After restarting the computer, you can install the optional software from the CD-ROM provided, such as *Microsoft DirectX 8.0*, *Adobe Acrobat Reader*, *and MSI 3D Turbo 2001*. Simply click the button you select and follow the on-screen instructions to complete installation.

- 1. Insert the CD-ROM provided into the CD-ROM drive. The "Autorun" will launch the setup program.
- 2. Choose the **Drivers** tab on the setup screen.
- 3. Click the software's button that you want to install, then follow the on-screen instructions to complete the installation.

## Surf the Web

Since our products are under continual improvement, and there may be the latest version of driver and BIOS for the products you have purchased, please visit our website on the World Wide Web to get the latest news. Also, we collect lots of useful website on the World Wide Web for you. Simply click the button you select and go to these websites.

- Insert the CD-ROM provided into the CD-ROM drive, and enter the setup program.
- 2. Choose the **WebSite** tab on the setup screen.
- 3. Click the corresponding button to launch your browser and access the website.

**Note:** To surf these websites or, you have to make connection to the Internet first.

# **More Information**

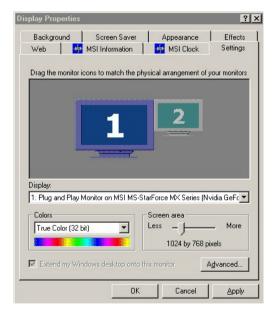
To browse the contents of the CD-ROM provided, simply click the "Browse CD" button under each tabs; and, you can use the **Manual** tab to learn more on your MSI products.

- 1. Insert the CD-ROM provided into the CD-ROM drive, and enter the setup program.
- 2. Click the "About CD" button to learn more about the CD-ROM.
- 3. Choose the Manual tab on the setup screen.
- 4. Click the corresponding button to get the more information.

# **Display Adjustment**

After you have completed the driver installation, the setup program adds many specific options into Windows **Display Properties**. You can configure the specific display properties of MS-8839 GeForce2 MX-200 to obtain optimized performance.

To launch the display properties window, click at in the task bar, choose [Settings] → [Control Panel], and double-click the [Display] icon. Also, you may simply right-click on the blank Windows desktop area and choose the "Properties" item in the pop-up menu. The "Display Properties" window will show on your screen as below:



**Note:** The figures in this section are for reference only; the actual information on display properties screens may be different on different operating systems.

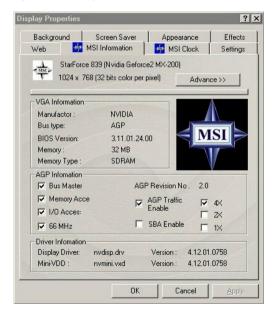
In this section, we list the most important information on how to configure these specific options of MS-8839.

## **Display Settings**

Launch the "Display Properties" window as the instructoins above, and click the **Settings** tab, you will see a figure as shown in *page 16*. This screen shows the information of display adapter, colors, the range of display area, and the refresh rate.

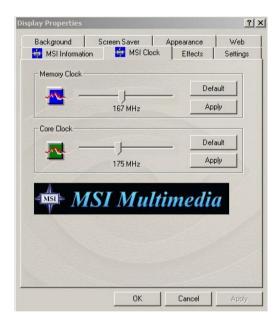
#### **MSI Information**

This screen shows the detail information of your MS-8839 card, including the model name, display mode, version of driver and BIOS, memory size, AGP mode, and so on.



#### MSI Clock

This screen shows the settings of MS-8839 card's core clock and memory clock, and it provides you the overclocking function. Simply use the mouse to adjust the slide bar to the value you want, then click on "Apply" button.

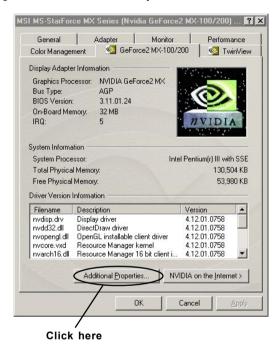




**WARNING:** Overclocking may cause the display to be abnormal. It is recommended to use the Default settings for most stable performance.

# GeForce2 MX-100/200

This screen shows the detail information of GeForce2 MX, including the bus type, BIOS version, memory size, and so on.



Click the "Additional Properties" button, you may access further settings on Direct3D and OpenGL.

## **Direct3D Settings**

This screen allows you to adjust the Performance and Compatibility options, Mipmapping, and PCI Texture Memory Size for your 3D games.

# Performance and Compatibility Options

This option contains many items that allow you to set the options influencing the performance and compatibility in your 3D games.

#### **Mipmapping**

This option allows you to set the mipmapping levels, decide to get higher application performance or have better image effects.



Click here

# **PCI Texture Memory Size**

This option allows you to adjust the size of the PCI texture memory. For some applications using Direct3D technology, setting higher value in this field may significantly increase the performance. However, this option does not work on the display adapter using AGP bus.

Click the "More Direct3D" button to access additional settings of Direct3D.

## **Texel Alignment**

This option allows you to change the addressing scheme of hardware texture for texel. Use the mouse to adjust the slide bar to the value you want, which will change the texel origin between the upper-left corner and the center position.

# **OpenGL Settings**

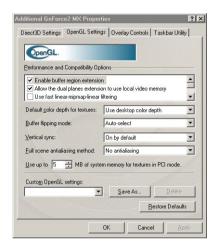
This screen allows you to adjust the Performance and Compatibility options for your OpenGL application.

# Performance and Compatibility Options

This option contains many items that allow you to set the options influencing the performance and compatibility in your OpenGL application.

# Default Color Depth for Textures

This option allows you to choose the default color depth for texture.



### **Buffer Flipping Mode**

When using OpenGL application under full-screen mode, turn on page flipping function may significantly increase the performance.

## **Vertical Sync**

This option allows you to choose the type of vertical sync.

# **Full Scene Antialiasing Method**

This option allows you to choose the method of full scene antialiasing.

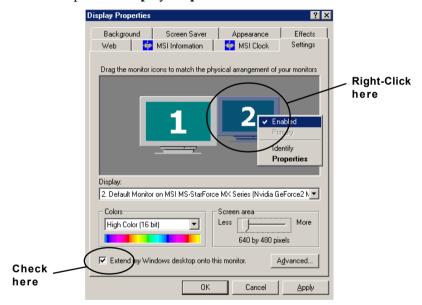
# TwinView (optional)

If your MSI 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 the second device or copying your desktop on the second device.

## **Extending the Desktop**

When the second vedio output device (TV or monitor) is connected:

1. Open the **Display Properties** windows.



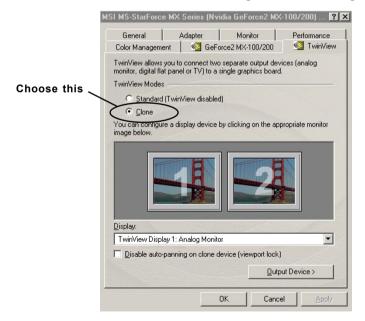
- 2. Under the **Settings** tab, right-click on the icon of the second device in the main screen, and choose "Enabled" item in the pop-up menu.
- **3.** The option "Extend my Windows desktop onto this monitor" will be checked as default.
- **4.** Click "Apply" button to enable the function, or "OK" to accept and exit the setup screen.

Note: When the extending function is enabled, you can move your mouse, place the icons and show program windows on the second device. However, some certain programs do not support this function. If your program stops working or intermittently when using more than one monitor, please disable the function.

#### Copying the Desktop

When the second vedio output device (TV or monitor) is connected:

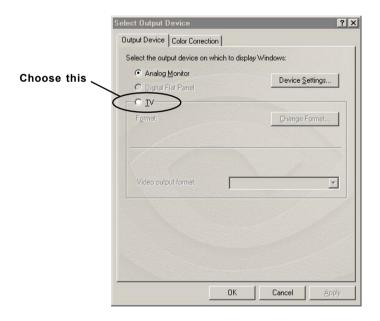
- 1. Open the **Display Properties** windows.
- Under the Settings tab, click the "Advanced" button, and then choose the TwinView tab.
- 3. Choose the "Clone" radio button, and click "Apply" button to enable the function, or "OK" to accept and exit the setup screen.



### TV Mode Support: NTSC, NTSC-EIA (Japan), and PAL

The default setting for TV-out function is PAL (for Europe region). If you want to use this function in different area, please adjust the proper settings (e.g. NTSC for Taiwan and USA region). Otherwise, the display in TV may be abnormal.

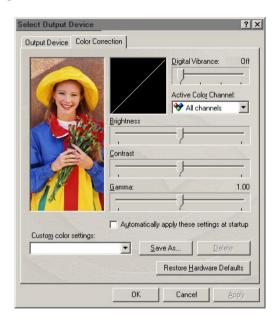
- 1. Click the "Output Device" button (see the figure in page 23), and choose the "Output Device" item in the pop-up box.
- 2. Under the **Output Device** tab, select the "TV" radio button and select a proper output format within the following field.



#### **Color Correction**

This option allows you to adjust the proper values of *Digital Vibrance*, *Brightness*, *Contrast*, and *Gamma* through the software.

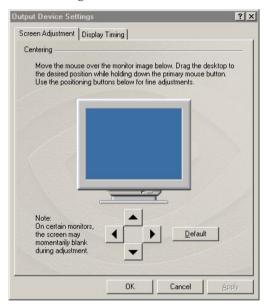
- 1. Click the "Output Device" button (see the figure in page 23), and choose the "Color Correction" item in the pop-up box.
- **2.** Under the **Color Correction** tab, control the slide bar to the proper value in the relative fields.



## Screen Adjustment

This option allows you to adjust the proper position of display image through the software.

- 1. Click the "Output Device" button (see the figure in page 23), and choose the "Screen Adjustment" item in the pop-up box.
- 2. Click on the ♠ , ◀ , ▼ , ▶ buttons to set the proper position of the image.



This chapter provides you the general methods to solve the possible problems that might happen on your system. Before you consult our authorized dealer for further service, try these helpful hints to solve your problems in advance.

If you cannot find the effective solutions, or you still need help after this chapter, please contact your local dealer or visit our website for technical support and service.

# General Help

Q: Where can I find more information about my VGA card?



Please visit our website at: http://www.msi.com.tw

Q: How do I know my VGA driver's version? How to update it?



To get the information of your VGA card's driver, simply click  $\mathfrak{B}$  Start , choose Settings  $\rightarrow$  Control Panel  $\rightarrow$  Display to open the **Display Properties** window, in which contains the detail information you want. (Please refer to *Chapter 3*) *Software Installation* for more instructions.)



If it is needed to update your VGA card's driver, please download the correct, latest driver for your VGA card from our website. Usually, the driver file is an executable file (.exe), simply double-click on the file and follow the on-screen instructions to complete the updating procedure.

# Display Problem

- Q: My monitor displays nothing after the system boots up.
- Your VGA card may not be installed correctly. Please check the installation procedure as described in *Chapter 2 Hardware Installation*.
- Make sure that your monitor are connected to the VGA card properly, and the power is turned on.
- **Q:** The image is poor quality; the screen image is off-center; or the image's shape become deformed.
- Your VGA card's driver may not be installed correctly. Please re-install the driver and restart the computer (*see instructions in Chapter 3 Software Installation*).
- The **Display Properties** in your system may not be set roperly. Click **Start**, choose **Settings Ontrol Panel Display** to set the optimized values.
- Try to adjust your monitor's control settings (e.g. brightness, contrast, and so on). Please refer to your monitor manual for more information.
- Q: How do I change the resolution settings on my computer?

- **Q:** How do I know if my VGA card is running under AGP 4x mode? If not, how could I use AGP 4x mode?
- Make sure that your mainboard supports AGP 4x mode. Refer to your mainboard documentation for relative information.
- Check the BIOS setting for the AGP mode (*if any, please see your mainboard documentation*).
- **Q:** My monitor displays become abnormal after the system running for minutes (blank screen, color blocks, rolling or overlapping screen image).
- Properties. If the values are set too high (exceeding the recommended spec.), please try the default values.
- Keep your monitor away from magnetic objects, such as speakers without antimagnetic design or your mobile phone. The magnet and electromagnetic wave will influence and damage your monitor.
- If the problem happens continuously, please contact your local dealer for further service.

- **Q:** The DVD video playback is poor quality (skipping frames, color blocks, etc.), why?
- Change the refresh rate, color and resolution settings to proper values.
- Enable the DMA mode for your DVD drive. However, not all DVD drives support this function, please see your DVD drive's documentation for more infromation.
- Q: Some certain DVD video cannot play on my system, why?
- Make sure that the DVD video is inserted into your DVD drive correctly.
- The DVD video has region limitation in its specification. For Taiwan region, you should choose the DVD video of Region 3. Please contact the vendor to get a copy of DVD video that is compatible with the region code of your DVD drive.
- **Q:** My VGA card has a video output connector, but I saw nothing on my TV?
- This function is disabled by default. Please enable it by selecting the "Clone" radio button from the **TwinView** tab under **Display Properties**.
- Check the connection between the video device and your computer carefully.

MSI<sup>TM</sup> Live Update Series is a useful utility for you to upgrade your MSI mainboard and VGA card. Using this utility, you can conveniently download and update the BIOS and the drivers automatically on-line, but not have to spend much time in searching the whole website to find the BIOS or drivers you want.

# **Installing MSI Live Update Series**

To use this feature, you have to install the software program first; you can: 1) from the CD-ROM provided in the package; 2) from the MSI website.

#### Install From the CD-ROM

- Insert the CD-ROM provided into the CD-ROM drive, and enter the setup program.
- 2. Choose the **Utility** tab on the setup screen.
- 3. Click the "MSI Live Update Series" button. Then, follow the on-screen instructions to complete the installation.

#### Install From the MSI Website

- 1. Make connection to Internet, and go to MSI's website at: www.msi.com.tw
- 2. Click the "Live Update Series" button from the top of the homepage to enter the setup page.
- 3. Choose and click the download/install button from FTP 1 or FTP 2. Then, follow the on-screen instructions to complete the installation.

# **Using MSI Live Update Series**

After the installation is completed, you can launch the utility by 1) double-click the "MSI Live Update Series" icon from the desktop; or, 2) go to start and choose the "MSI Live Update Series" item. The setup screen should appear as below, in which contains four parts: Live BIOS, Live Driver, Live VGA BIOS, and Live VGA Driver.





**Tip:** The Live BIOS and Live Driver options are used for MSI mainboard, and the Live VGA BIOS and Live VGA Driver options are used for your MSI VGA card.

### Live VGA Driver Update

1. To run MSI Live VGA Driver, click the <Live VGA Driver> item on the left column of the main page.





**Note:** The model name and driver/BIOS version appear in the instruction are for reference only; the actual result should depend on the card you installed.

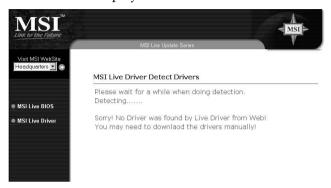
2. This utility will check your platform and VGA card's information first, and shows these information as a list:



- 3. Click the graph button at the bottom to connect to MSI Live Update Series Server. Then, it will automatically connect to the Internet and compare the version of the driver in the database.
- **4.** It may take several minutes to detect the required drivers. Please wait while proceeding detection.



**5.** The results are displayed as below:



Supported driver not found



Supported driver found

- 6. Click the download/install button at the right side of the table to download and update the driver. All actions wilproceed automatically.
  - 7. Follow the on-screen instructions to complete the update



Select a folder to save the driver file





### Downloading





**Driver updating** 

A-5



Restart the computer



## Note:

**1.** Always push <Yes> button when Internet Explorer asks the security question.



**2.** Click <Yes> button when Internet Explorer shows the Security Warning for installing and running the <InstallFromTheWeb Client>.



## Live VGA BIOS Update (optional)

- 1. To run MSI Live VGA BIOS, click the <Live VGA BIOS> item on the left column of the main page.
- 2. This utility will detect your system; if your VGA card does not support the Live VGA BIOS function, the screen as below will appear\*:



- \* For more information on the MSI SafeBIOS™, please see page A-12
- 3. If your VGA card supports the function, it will appear the setup page that contains the warning massage about the risk of BIOS update. Select <Yes> to continue or <No> to return to the main page without anything changed.



4. If you select <Yes> to continue, it will check the information and BIOS version of your VGA card, and shows these data as a list:



- 5. Click the graph button at the bottom to connect to MSI Live Update Series Server.
- 6. Then, MSI Live VGA BIOS will automatically connect to Internet and search the supported BIOS on the database of MSI. The results will be displayed as below:



Supported BIOS not found



Supported BIOS found

7. If it found one (or several) supported BIOS for your VGA card, click the download/install button at the right side of the table to download and start to update the BIOS. All actions will proceed automatically.



**Note:** Your monitor may go **BLANK** during the software EEPROM being erased, please wait for a while.

8. Follow the on-screen instructions to complete the update.



Select a folder to save the BIOS file



### Downloading



Asking to continue





Restart the computer after the BIOS updated



1. Always push <Yes> button when Internet Explorer asks the security question.

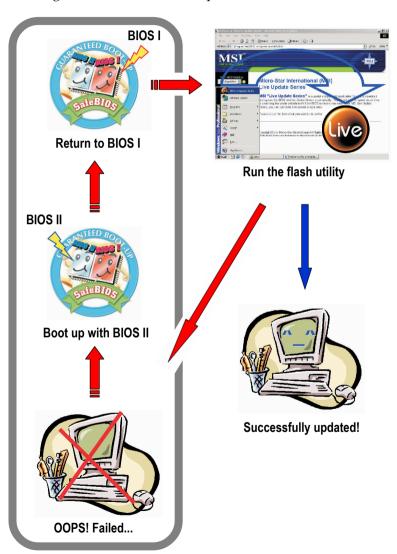


2. Click <Yes> button when Internet Explorer shows the Security Warning for installing and running the <InstallFromTheWeb Client>.



# SafeBIOS<sup>TM</sup> (optional)

The diagram below describes the procedure in brief:





Our products are under continual improvement, and there may be the newer version of BIOS to solve the existing problems on displays or installaton. When you use the flash utility\* to update the BIOS on the card, it is unavoidably with some danger to your devices because of some unexpected factors (e.g. main power interruption during updating). If, unfortunately, the updating procedure is failed and the VGA card cannot work anymore --- this powerful technology can solve your problems!

Once you are not able to update the BIOS successfully, and have to use this function to save your VGA card, please follow the steps below:

- 1. Turn off the power and remove the computer case.
- 2. Locate the jumpler J1 on the VGA card, and set it to short pin 1-2 to enter the BIOS II mode (safe mode) when booting up system the next time.
- 3. Do not replace the case first and turn on the power.

4. With the BIOS II, you should be able to boot up the system normally. After entering the OS, set the J1 back to short pin 2-3 to enter the BIOS I mode (work mode); now you can restore the original BIOS or you can try to update the BIOS using the flash utility\* again.



**Warning:** It is very dangerous doing this procedure under such status, please do not touch any other components in the computer. Otherwise, both the components and the user may be in danger of electrical shock or damage.

- 5. If the updating is still failed\*\*, repeat the steps 3 to 4; if the updating is successfully, the BIOS data is written to the chip successfully.
- **6.** Replace the case and restart the computer.
- \* NOTE: To update the BIOS, you must only use the special flash utility (MSI Live Update Series) provided from MSI, which can fully support the SafeBIOS<sup>TM</sup> technology. If the third party's utility is used during the updating, it will erase the data in BIOS II.
- \*\* If you always encounter problems during updating the BIOS and driver, it may be that the mainboard's chipset driver not installed. Please install the chipset driver from your mainboard vendor first and try again.