Video-158PCI *Series*

4389

geFORCE4 MX440

Quick Start Guide

Video-158PCI Series

2D/3D Graphics Accelerator
Quick Start Guide

Version 3.00

This guide is intended to let you install the hardware and software and start to use the card quickly. For more detailed information, please refer to manual file and other readme files in the Software and Documents CD, or online/URL http://www.jaton.com.

FEATURES

- 256-bit graphics engine
- 64MB DDR SDRAM built-in onboard
- 2 dual 128bit pixel pipelines rendering
- Integrated hardware transform engine
- Integrated hardware lighting engine
- Programmable Vertex Shader
- Programmable Pixel Shader
- HRAA-High-Resolution antialiasing
- DirectX® and S3TC® texture compression
- Dual cube environment mapping capability
- Hardware accelerated real-time shadows

PERFORMANCE

- up to 1.1billion AA samples per second fill rate
- up to 6.4 GB/sec. Memory Bandwidth
- True, reflective bump mapping
- High-performance 2D rendering engine

- High-quality HDTV/DVD playback
- Motion compensation
- Full screen, Full frame video playback of HDTV/DVD content
- Hardware color-space conversion (YUV 4:2:2 and 4:2:0)
- Multiple video windows supported for CSC and filtering
- Integrate TV encoder provides best-in-class TVout (Video-158PCI-64TV)
- Integrated dual 250MHz RAMDACs drives two independent CRT display (Twin RGB option Only)

COMPATIBILITY

- nVIDIA Unified Driver Architecture
- Full-compliant professional OpenGL 1.3 support for all Windows operating systems
- Windows®98, Windows®Me, Windows®2000, Windows®XP, Windows®NT™4.0
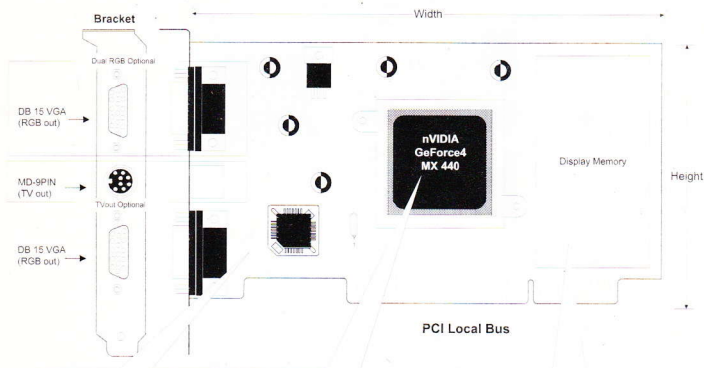- API support DirectX® 8.1 and lower

SYSTEM REQUIREMENT

- Intel Pentium® II or higher, or compatible system with PCI Bus Extension Slot
- CD-ROM drive, Quad speed or faster
- Hard Drive with at least 10MB Free space
- MS Windows®98/Me , or Windoiws®NT™4.0, or Windows®2000, or Windows®XP operating system

CHECK LIST

- Video-158PCI-64TV, or Video-158PCI-64Twin accelerator
- Software & Documents CD
- Quick Start Guide (Printed)

Hardware Description

Product Name / PCB Version		Core Chipset	PCB Size	Memory / Size	
Video-158PCI-64TV	82158M/V1	nVIDIA GeForce4 MX440	W = 5.7" x H = 3.7"	8M*16 DDR SDRAM x 4	64MB
Video-158PCI-64Twin	82158M/V1	nVIDIA GeForce4 MX440	W = 5.7" x H = 3.7"	8M*16 DDR SDRAM x 4	64MB

Bracket Number	Output Optional	Physical Dimension	Appropriate To Use
P122	B MD 9Pin + VGA	L = 4.750", W = 0.730"	For generic PC systems
P132	VGA + VGA	L = 4.750", W = 0.730"	For generic PC systems
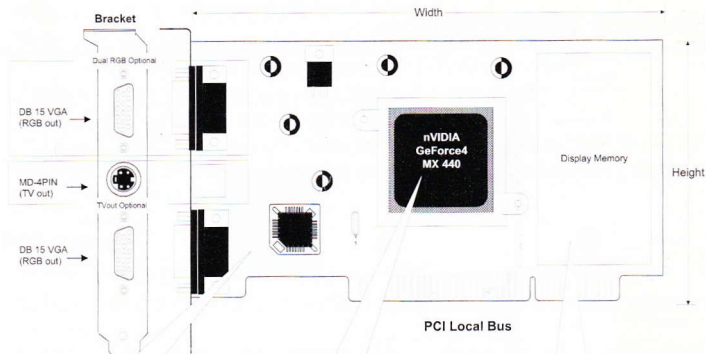
Product Name / PCB Version		Core Chipset	PCB Size	Memory / Size	
Video-158PCI-64TV	82158M/V1	nVIDIA GeForce4 MX440	W = 5.7" x H = 3.7"	8M*16 DDR SDRAM x 4	64MB
Video-158PCI-64Twin	82158M/V1	nVIDIA GeForce4 MX440	W = 5.7" x H = 3.7"	8M*16 DDR SDRAM x 4	64MB

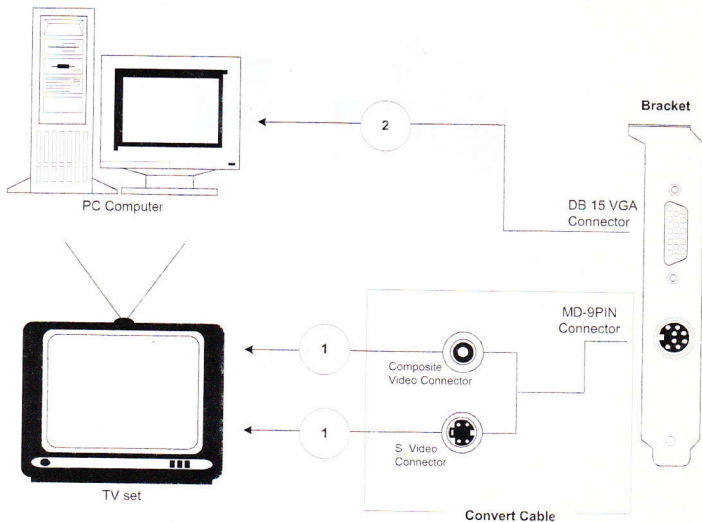| Bracket Number	Output Optional	Physical Dimension	Appropriate To Use
P122	B MD 4Pin + VGA	L = 4.750", W = 0.730"	For generic PC systems
P132	VGA + VGA	L = 4.750", W = 0.730"	For generic PC systems
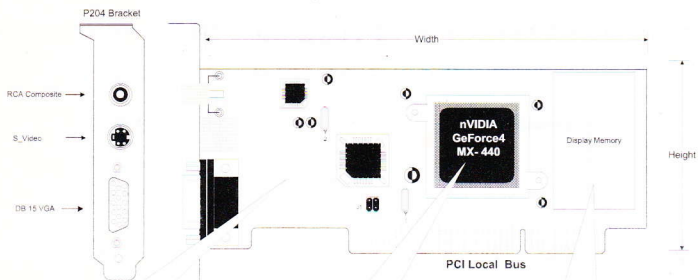
Product Name / PCB revision / Size			Core Chipset	Memory / Size	
Video-158PCI-64TV	82158N/V1	W 5.6"xH 2.45"	nVIDIA GeForce4 MX-440	8M*16DDR x4	64MB

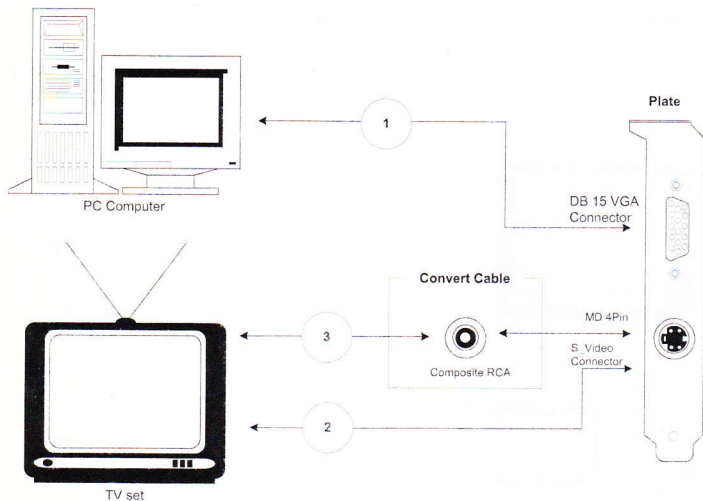Low profile PC system bracket(s) only available for PCB revision herein.

Alternative Bracket(s)			
Bracket Number	Output Optional	Physical Dimension	Appropriate To Use
P104	VGA + S_Video + RCA Composite	L = 4.750", W = 0.725"	For generic PC system
P204	VGA + S_Video + RCA Composite	L = 3.118", W = 0.725"	For low profile PC use only

- Video-158PCI-64TV is built-in MD 9Pin or MD-4Pin port for TVout.

- Video-158PCI-64Twin is built-in second RGB out optional port with no MD 9Pin or MD-4Pin TVout.

- Video-158PCI-64TV in low profile desined that is built-in both S_Video and RCA Composite ports for TVout.

Display Devices Connection. (TVout with MD 9Pin)

PC Computer

Bracket

2

DB 15 VGA
Connector

MD-9PIN
Connector

1   Composite
     Video Connector

1   S Video
     Connector

TV set

Convert Cable

Display Devices Connection. (TVout with MD 4Pin)

PC Computer

Plate

DB 15 VGA Connector

Convert Cable

Composite RCA

MD 4Pin

S Video Connector

TV set

Display Devices Connection. (TVout with MD 4Pin and RCA composite)

Plate

RCA Composite
Connector

S_Video
Connector

DB 15 VGA
Connector

TV set

PC Computer
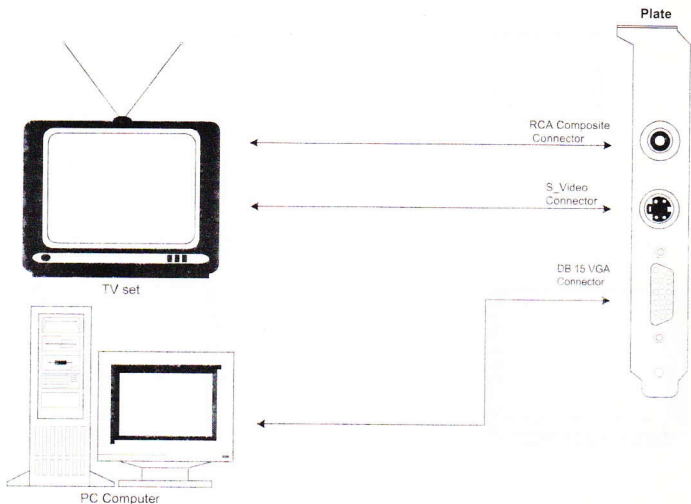
Display Devices Connection. (Dual RGB)

Plate

DB 15 VGA Connector

(Additional output Connector)

CRT Monitor 2

DB 15 VGA Connector

(Default output Connector)

CRT Monitor 1
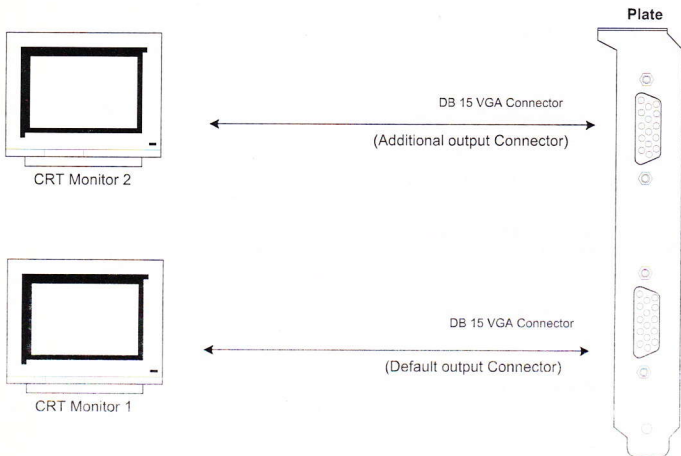
Operable TVout Cables

Jaton video card has built TVout connectors onboard in a vary alternative arrangement, and the suitable convert cables for these connectors may also code in different to the user's documentation. The following description is the updated inforamtion for users to verify the convert cable with his/her purchase of Jaton video card.

MD 9Pin TV out Convert Cable

	Cable Code
Length = 8 In	CB9D0001

TV out From MD 9Pin connector to S_Video or RCA Composite

TV OUT ▶

MD 9Pin

TV OUT ▶ MD 4Pin (S_Video)

TV OUT ▶ RCA Composite
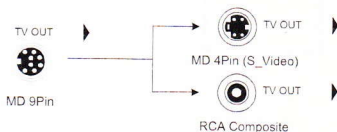
MD 4Pin TV out Convert Cable

	Cable Code
Length = 3 In	CB4D0002

TV out From MD 4Pin connector to RCA Composite

TV OUT ▶

MD 4Pin

TV OUT ▶ RCA Composite

S_Video Extended Cable

	Cable Code
Length = 5 Ft	n/a

TV out From MD 4Pin connector to S_Video directly

TV OUT ▶

MD 4Pin

TV OUT ▶ S_Video

- These cables mentioned above are sold separately.

- Please go to www.togopc.com for pricing and availabe.

Hardware Installation

Installation Procedures
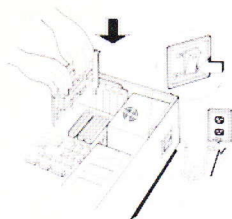
> ## !! WARNING !!
> Discharge static electricity by touching the **GROUND** such as metal part of your case connected with good power ground before you handle the electronic circuit boards.

The manufacturer assumes no liability for any damage, caused directly or indirectly, by improper installation of any components by unauthorized service personnel. If you do not feel comfortable performing the installation, consult with a qualified computer technician

Steps:

1. Turn OFF all powers to your system, including any peripherals (printer, external drives, modem, etc.).
2. Disconnect the power cord and the monitor cable from the back of the computer.
3. Unfasten the cover mounting screws on your system and remove the system cover. Refer to your system user manual for instructions to determine the location of the mounting screws.
4. Remove the retaining screw that holds the slot cover in place. Slide the slot cover out and put the screw aside (you will need it to secure the adapter).
5. To install the adapter in PCI expansion slot, carefully line up the gold-fingered edge connector on the adapter directly above the expansion slot connector on the motherboard. Then press the adapter into place, completely. Use the (remaining) screw

you removed to secure the adapter-retaining bracket in place.
6.   Replace the computer cover. Secure the cover with the mounting screws you removed in Step 3.

You have now completed the installation of your new graphics adapter on your system.

📇 Upgrade Steps:

To add or change your video adapter to an existing system, you may proceed a few steps before you install the new hardware and software (video display driver). The following are some of the considerations:

1.   To change a new adapter, please remove the existing video driver, or replace it to SVGA driver from Windows®98/Me system before you remove the existing hardware.

2.   To add a new adapter, ensure the mainboard that has available IRQ for new devices, and there is no conflict between the others.

3.   If you try adding this video adapter to an ALL-IN-ONE mainboard (which is video port built-in already), then you must disable that port first. Otherwise, that will be a problem for the new video adapter setup.

4.   The driver installation for upgrade system is as the same as below, if an error occur when you proceed step 1,2 or 3, please consult with your system's dealer or the existing hardware manufacturers support.

Software Installation

There are many of different ways you can proceed the display driver installation for all of the Windows operating systems. We have provided those procedures on step by step in details in the **User's Manual** on our Software & Document CD. The followings are moderate processes, which have initialed with Microsoft InstallShield® program.

Microsoft Windows®98/Me

Since the Microsoft InstallShield® program has been added into our software's CD, the Display Driver Installation and its procedures are much easier for users to run with Windows® 98/Me operating systems. When you power-up the computer and boot-up to Windows, the Plug-and-Play detects new hardware and it pops-up install wizard. Do Not **[Cancel]** because you must place a default display setting from Microsoft Windows for your video adapter, then restart your Windows. After the desktop is loaded completely, insert the software's CD into CD ROM drive and proceed to the display driver installation which provided from hardware manufacturer.

1. Autorun feature brings-up the "Welcome Screen", and you may point to "display driver" then press on it.

2. Microsoft InstallShield® Wizard has start loading its setup process, please wait until it
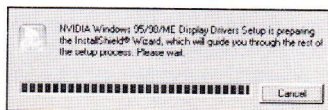
is finished.

3. Click on "Next" to continue the process.

4. Windows system will copy all driver files from source media to your local hard disk, please wait until the process has completed.

    C:\WINDOWS\HELP\nvwcpit.hlp

    48%

    Cancel

5. Click on "Finish" to restart your computer, the new display driver will be in place after Windows boots-up.

Welcome to the InstallShield Wizard for NVIDIA

Welcome to NVIDIA Setup. This will install NVIDIA Display Drivers on your computer.

Next >   Cancel

InstallShield Wizard Complete

The InstallShield Wizard has successfully installed NVIDIA Windows 95/98/ME Display Drivers. Before you can use the program, you must restart your computer.

Yes, I want to restart my computer now.

No, I will restart my computer later.
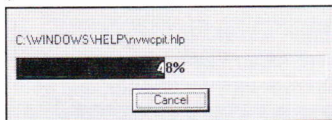
Finish

Microsoft Windows® NT™4.0

The procedure of display driver installation requests setup with Microsoft service pack 6 or above first. After your windows desktop has fully loaded service pack 6, then you may insert the software CD into CD ROM drive and follow the install steps below:

1. Autorun feature brings-up the "Welcome Screen", and you may point to "display driver" then press on it.

2. Microsoft InstallShield® Wizard has preparing its setup, please wait until it is finished.
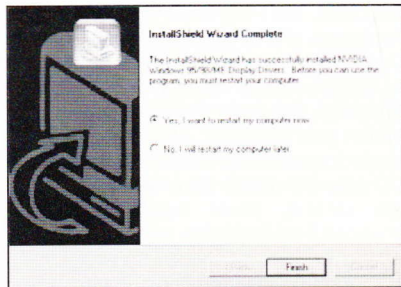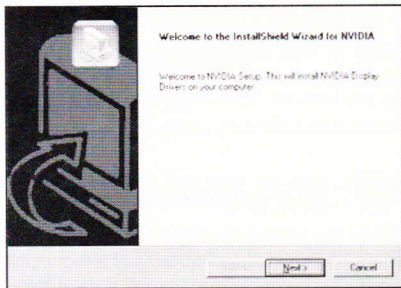
    NVIDIA Windows NT 4.0 Display Drivers Setup is preparing the
    InstallShield® Wizard, which will guide you through the rest of the
    setup process. Please wait.

    Cancel

3. Click on "Next" to continue.

4. Scroll down and Select on the "Video-158PCI Series, nVIDIA GeForce4 MX 440", then click on "OK" for next screen.

    Click the Display adapters that matches your hardware, and then click OK. If
    you don't know which model you have, click OK. This list shows only what
    was found on the installation disk.

    Models:
    NVIDIA Quadro4 750 XGL
    NVIDIA Quadro4 900 XGL
    Video-118PCI Series, NVIDIA GeForce2 MX 100/200
    Video-118PCI Series, NVIDIA GeForce2 MX/MX 400
    Video-158PCI Series, NVIDIA GeForce4 MX 440
    Video-88PCI-16, NVIDIA TNT2 VANTA
    Video-88PCI-32Plus, NVIDIA RIVA TNT2 M64

    OK   Cancel

Video-158PCI *Series*

Display Driver
NT Service Pack
Software DVD
Document
Browse CD
Registration
Registration (On Line)
About
http://www.jaton.com

Exit

Welcome to the InstallShield Wizard for NVIDIA

Welcome to NVIDIA Setup. This will install NVIDIA Display
Drivers on your computer.

Next >   Cancel

5. Windows system will transmit all driver files from source media to your local hard disk, please wait until the process has completed.
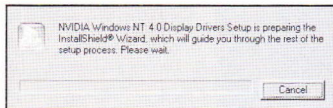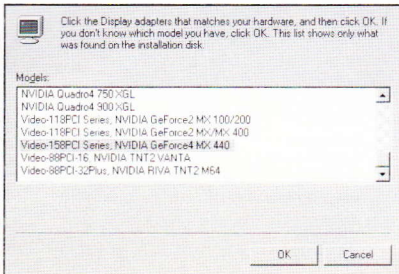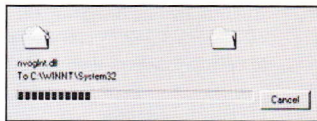

6. Click on "Finish" to restart your computer, the new display driver will be in place after Windows boots-up.

Windows® 2000 Display Driver:
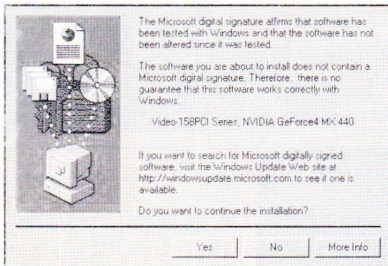
Microsoft Windows®2000 detects this new hardware and places the appropriate display driver from its system folder automatically - it doesn't matter you have added a new driver or changed the existing one. To maximum the video board acceleration and increase its performance, you may install the manufacturer display driver as the follows:
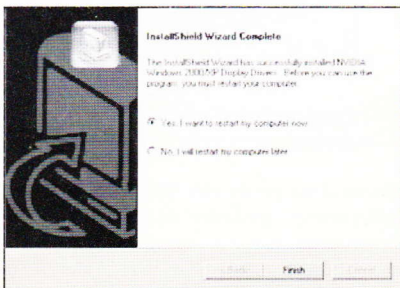
1. Autorun feature brings-up the

"Welcome Screen", and you may point to "display driver" then press on it.

2. Microsoft InstallShield® Wizard has start
    loading its setup process, please wait until
    it is finished.

    NVIDIA Windows 2000/XP Display Drivers Setup is preparing the InstallShield® Wizard, which will guide you through the rest of the setup process. Please wait.

    ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮ Cancel

3. Click on "Next" to continue the
    process.

    Welcome to the InstallShield Wizard for NVIDIA

    Welcome to NVIDIA Setup. This will install NVIDIA Display Drivers on your computer.

    Next >   Cancel

4. Click on "Yes" to continue this
    installation. Otherwise, you may
    terminate the process by clicking on
    "No".

    The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested.

    The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.

    Video-158PCI Series, NVIDIA GeForce4 MX 440

    If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available.

    Do you want to continue the installation?

    Yes   No   More Info

5. Click on "Finish" to restart your
    computer, the new display driver will
    be in place after Windows boots-up.

    InstallShield Wizard Complete

    The InstallShield Wizard has successfully installed NVIDIA Windows 2000/XP Display Drivers. Before you can use the program, you must restart your computer.

    ⦿ Yes, I want to restart my computer now.

    ○ No, I will restart my computer later.

    < Back   Finish   Cancel

⊞ Windows® XP Display Driver:

Microsoft Windows® XP detects this new hardware and places the appropriate display driver from its system folder automatically - it doesn't matter you have added a new driver or changed the existing one. To maximum the video board acceleration and increase its performance, you may install the manufacturers display driver as the follows:
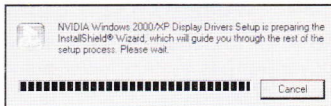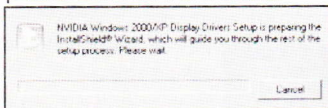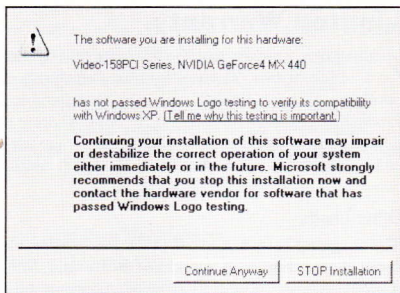
1. Autorun feature brings-up the "Welcome Screen", and you may point to "display driver" then press on it.

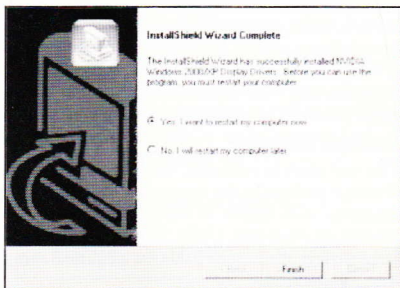2. Microsoft InstallShield® Wizard has start loading its setup process; please wait until it is finished.

    > NVIDIA Windows 2000/XP Display Drivers Setup is preparing the InstallShield® Wizard, which will guide you through the rest of the setup process. Please wait.
    >
    > Cancel

3. Click on "Next" to continue the process.

Video-158PCI Series

Display Driver
DirectX
Software DVD
Document
Browse CD
Registration
Registration (On Line)
About
http://www.jaton.com

GEFORCE
MX440

EXIT

Welcome to the InstallShield Wizard for NVIDIA

Welcome to NVIDIA Setup. This will install NVIDIA Display Drivers on your computer.

Next >   Cancel

4. Click on "Continue Anyway" to complete this installation. Otherwise, you may terminate the process by clicking on "No".

> ⚠ The software you are installing for this hardware:
>
> Video-158PCI Series, NVIDIA GeForce4 MX 440
>
> has not passed Windows Logo testing to verify its compatibility with Windows XP. [Tell me why this testing is important.]
>
> **Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.**
>
> Continue Anyway | STOP Installation

5. Click on "Finish" to restart your computer, the new display driver will be in place after Windows boots-up.

> **InstallShield Wizard Complete**
>
> The InstallShield Wizard has successfully installed NVIDIA Windows 2000/XP Display Drivers. Before you can use the program, you must restart your computer.
>
> ⦿ Yes, I want to restart my computer now.
>
> ○ No, I will restart my computer later.
>
> Finish

Notice:

We believe that all steps mentioned above are clear and the correct procedures for installing display drivers from the manufacturers software's CD to your operating system. Any procedures other than these processes have not been specified.

Limited Warranty.

Manufacturer warrants that the products sold hereunder are free from defects in material and workmanship for a period of two (2) years from manufacturing date. This limited warranty applies only to the original purchaser of Jaton Product and is not transferable. This limited warranty does not apply if failure to the Product Registration, or over thirty (30) days from purchase (original invoice date). This Limited Warranty does not cover any incompatibilities due to the user's computer, hardware, software or any related system configuration in which the Jaton Products interfaces. Proof of purchase will be requiring before any consideration by Manufacturer occurs.

Other Limits.

The forgoing is in lieu of all other warranties, expressed or implied. Including but not limited to the implied warranties of merchantability and fitness for a particular purpose. Manufacturer does not warrant against damages or defects arising out of improper or abnormal use of handling of the products; against defects or damages arising from improper installation (where installation is by persons other than Manufacturer), against defects in products or components not manufactured or installed by Manufacturer, or against damages result from non-manufacturer made products or components. This warranty does not apply if the Product has been damaged by accident, abuse, nor misuse. This warranty also does not apply to products upon which repairs have been affected or attempted by persons other than pursuant to written authorization by Manufacturer.

Exclusive Obligation.

This warranty is exclusive. The sole and exclusive obligation of Manufacturer shall repair or replace the defective products in the manner and for the period provided above. Manufacturer shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, and strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, Manufacturer shall not be liable for incidental, special, or consequential damage.

Other Statements.

Manufacturer's employees or representatives' **ORAL OR OTHER WRITTEN STATEMENTS DO NOT CONSTITUE WARRANTIES**, shall not be relied upon by Buyer, and are not a part of the contract for sale or this Limited Warranty.

Terms and Conditions.

Direct Jaton Customer: This warranty applies only for a period of two (2) years from purchase date of

	Jaton original invoice.
Reseller/ Vendor:	This warranty applies only for a period of two (2) years from manufacturing date.
Registered User:	This warranty applies only for a period of two (2) years from purchase date and register within 30 days of purchase date from legal reseller.
Others:	If the products do not conform to this Limited Warranty (as herein above described), Manufacturer should charge services such as repair, replacement whether based on its costs. Shipping and installation of the replacement Products or replacement parts shall be at User's expanse.

Services agreement:
(1)   All applicants shall completed a service request form from Manufacturer.
(2)   All returned checks will be charged a $20.00 fee by Manufacturer.
(3)   All repair and replacement services allow 4-6 weeks from the date of receiving by Manufacturer.
(4)   All products without warranties require service processing fee $20 (payment in advance), which is not refundable.

Entire Obligation.
This Limited Warranty states the entire obligation of Manufacturer with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in force and effect. Some states do not allow limitation of implied warranties, or exclusive or limitation on product incidental or consequential damages, so above limitation may not apply to you. This warranty gives you specific legal rights. You may have other rights, which may vary from state to state.

This warranty applies only to this product, and is governed by the law of the State of California.

Reducing Warranty Claim Rejections.

To reduce the potential of incurring damages not covered by Manufacturers warranties, we strongly recommend the following:

- Read your manuals before installing peripherals and/or before making changes to the machine's configuration.
- Ask your dealer if there are any known problems with the system requirements or installation procedures for any add-on products that your are purchasing.

- Buy industry standard products where compatibility issue are more likely to surface;
- If you are unsure about installation for a new product, contact your dealer's service department.

We believe it is important for you to know and understand what your warranty coverage provides and what it does not.

We also want you to be aware that most hardware warranties only relate to the function of the hardware. In most cases, no assurances are given by the manufacturer that the hardware item will work in conjunction with any other hardware item. If a computer product is not working because it is not compatible with another product, or because it has not been properly installed and set-up, the manufacturer does not pay for the service time. To help avoid these inconveniences, contact a professional consultant that one can help you determine the possibility of incompatibility issue before you purchase add-on or accessories.

FCC Shielded Cable Warning:

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. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

"SHIELD INTERFERENCE CABLE (S) MUST BE USED ACCORDING TO FCC 15.27©."

CAUTION:

Changes or modifications not expressly approved by the Manufacturer could void your authority to operate this equipment in accordance with FCC rules and regulations.

TRADEMARK AND COPYRIGHT:

Warranty Service Use Only

Serial Number - ten or eleven digit code, the serial number consists of the following parts:

Packaging Type   Manufactured Date Code   Production Numerical Code

A   **00 8**   **000015**

Year Month

XXXXX-XXX-XX   S/N: A008000015

xxxx/xxxx   00.0   XXXX XX XXXXXX

Product Label and Manufactured Date Code