

**GN-FE605(M) 10/100
Fast Ethernet PCI Adapter
User's Guide**

<http://www.gigabyte.com.tw>

Rev. 1.0 First Edition

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1. Safety, Care and Regulatory Information

Important safety information

Read and follow all instructions marked on the product and in the documentation before you operate your system. Retain all safety and operating instructions for future use.

The product should be operated only from the type of power source indicated on the rating label.

If your computer has a voltage selector switch, make sure that the switch is in the proper position for your area. The voltage selector switch is set at the factory to the correct voltage.

The plug-socket combination must be accessible at all times because it serves as the main disconnecting device.

All product shipped with a three-wire electrical grounding-type plug only fits into a grounding-type power outlet. This is a safety feature. The equipment grounding should be in accordance with local and national electrical codes. The equipment operates safely when it is used in accordance with its marked electrical ratings and product usage instructions

Do not use this product near water or a heat source.

Set up the product on a stable work surface or so as to ensure stability of the system.

Openings in the case are provided for ventilation. Do not block or cover these openings. Make sure you provide adequate space around the system for ventilation when you set up your work area. Never insert objects of any kind into the ventilation openings.

To avoid electrical shock, always unplug all power cables and modem cables from the wall outlets before removing covers.

Allow the product to cool before removing covers or touching internal components.

Precautions for Products With Laser Devices

Observe the following precautions for laser devices:

Do not open the CD-ROM drive, make adjustments, or perform procedures on a laser device other than those specified in the product's documentation.

Only authorized service technicians should repair laser devices.

Precautions for Products With Modems, Telecommunications, or Local Area Network Options

Observe the following guidelines when working with options:

Do not connect or use a modem or telephone during a lightning storm. There may be a risk of electrical shock from lightning.

To reduce the risk of fire, use only No. 26 AWG or larger telecommunications line cord.

Do not plug a modem or telephone cable into the network interface controller (NIC) receptacle.

Disconnect the modem cable before opening a product enclosure, touching or installing internal components, or touching an uninsulated modem cable or jack.

Do not use a telephone line to report a gas leak while you are in the vicinity of the leak.

Federal Communications Commission (FCC) Statement

Note: 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.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Neither the provider nor the manufacturer are responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC part 68 (applicable to products fitted with USA modems)

The modem complies with Part 68 of the FCC Rules. On this equipment is a label that contains, among other information, the FCC registration number and Ringer Equivalence Number (REN) for this equipment. You must, upon request, provide this information to your telephone company.

If your telephone equipment causes harm to the telephone network, the Telephone Company may discontinue your service temporarily. If possible, they will notify in advance. But, if advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC.

Your telephone company may make changes in its facilities, equipment, operations, or procedures that could affect proper operation of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

The FCC prohibits this equipment to be connected to party lines or coin-telephone service.

The FCC also requires the transmitter of a FAX transmission be properly identified (per FCC Rules Part 68, Sec. 68.381 (c) (3)).

/ for Canadian users only /

Canadian Department of Communications Compliance Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of Industry Canada.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le règlement sur le brouillage radioélectrique édicté par Industrie Canada.

DOC notice (for products fitted with an Industry Canada-compliant modem)

The Canadian Department of Communications label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational and safety requirements. The Department does not guarantee the equipment will operate to the user satisfaction.

Before installing this equipment, users ensure that it is permissible to be connected to the facilities of the local Telecommunications Company. The equipment must also be installed using an acceptable method of connection. The customer should be aware that compliance with the above conditions might not prevent degradation of service in some situations. Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user to this equipment, or equipment malfunctions, may give the telecommunications

company cause to request the user to disconnect the equipment.

Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present are connected together. This precaution may be particularly important in rural areas.

Caution: Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.

NOTICE: The Load Number (LN) assigned to each terminal device denotes the percentage of the total load to be connected to a telephone loop which is used by the device, to prevent overloading. The termination on a loop may consist of any combination of devices subject only to the requirement that the sum of the Load Numbers of all the devices does not exceed 100.

/ for European users only /

European Community Directive Conformance Statement

This product is in conformity with the protection requirements of EC Council Low Voltage Directive (Safety) 73/23/EEC, EMC Directive 89/336/EEC on the approximation of the laws of the Member States relating to electro-magnetic compatibility.

R&TTE Directive (applicable to products fitted with European modems)

This modem does not require any physical and/or software additional switch settings from the User and is suitable for use only on telephone lines provided with Multi-Frequency Dialing facilities.

The equipment has been approved in accordance with Council Decision 99/5/EC on radio equipment and terminal telecommunication equipment and the mutual recognition of their conformity.

2. Introduction

Welcome to the Gigabyte GN-FE605(M) 10/100 Fast Ethernet PCI Adapter User's Guide. Before start, please check your Ethernet Card is GN-FE605 or FE605M. The user's guide provides instructions for configuration software for the Gigabyte GN-FE605(M) 10/100 Fast Ethernet PCI Adapter to your system. To start the installation, read through each chapter for required information.

Contents of Your Shipment

Before the installation procedures, please ensure the components are not damaged during the shipping. The shipment of the NIC includes:

Antistatic bag (used for protecting the networking interface card during the shipment). Do not remove the product from its packaging until it is ready for installation.

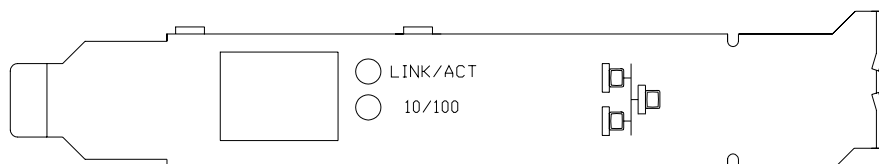
The installation CD with the network driver software and documentation.

One Wake On LAN cable

Contact your network supplier immediately for any missing or damaged components. If you require returning the damaged product (NIC), you must pack it in the original packing material or the warranty will be voided.

GN-FE605(M) Fast Ethernet PCI Adapter Indicator Description

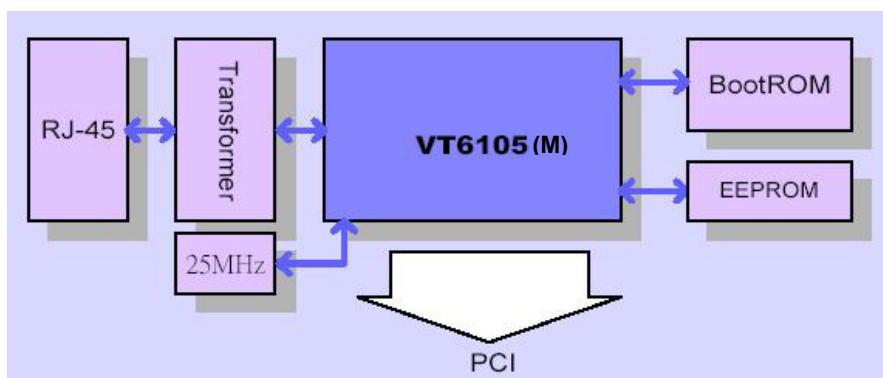
The faceplate on the 10/100 BASE-T NIC provides an RJ-45 connector for connecting the card to another network device.



Fast Ethernet Port LED indicator description

LED	Status	Description
10/100	On	100Mbps Ethernet link active
	Off	10Mbps Ethernet link active
Link/ACT	On	Ethernet Link active
	Off	No connection
	Blinking	Package transmit

GN-FE605(M) Fast Ethernet PCI Adapter Block Diagram



3. Adapter Specifications

Feature	Value
Interfaces	10/100-T Full/Half Duplex MAC
Crossover	Auto MDI/MDIX
Controller-Processor	VIA-VT6105(M)
PCI Bus support	PCI 2.2/2.1
Communication Standard	IEEE 802.3 10 Base-T Ethernet IEEE 802.3u 100 Base-TX Fast Ethernet
Network Management	WOL : Wake on LAN ACPI 1.0 DMI 2.0
Advanced Function for FE605M	Hardware Checksum off Loading(IP, TCP, UDP) LBFO : Load Balance and Fail Over
Supported OS	Windows 95/98, ME, NT3.5 or later Windows2000 and Windows XP RedHat6.2 or later FreeBSD4.2, SCO3.2.4, SCO5.X, Unixware7 DOS6.22
LED Indicators	Speed, Link, Active
Temperature	Operating temperature 0°C to 50°C Storage temperature -25°C to 55°C
Humidity	5% to 90% non-condensing
Dimension	120mm * 42mm
Weight	Gross Weight 60 ± 5 g

4. Key Features

GN-FE605(M) 10/100 Fast Ethernet PCI Adapter contains the several features. These features provide respective advantages to your system. The key features of the adapter are:

GN-FE605

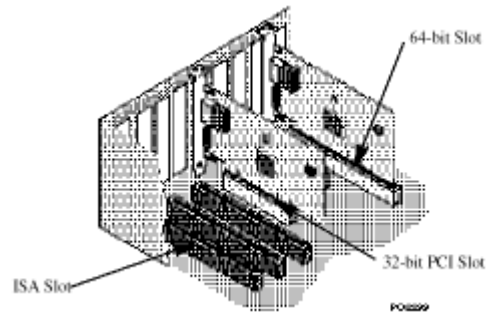
- ◇ 10/100-T Full/Half Duplex MAC
- ◇ Auto-Negotiation with Automatic Crossover MDI/MDIX
- ◇ Wake on LAN
- ◇ ACPI 1.0
- ◇ DMI 2.0

GN-FE605M

- ◇ 10/100-T Full/Half Duplex MAC
- ◇ Auto-Negotiation with Automatic Crossover MDI/MDIX
- ◇ Hardware Checksum off Loading (IP, TCP, UDP)
- ◇ Support IEEE802.1q VLAN Tagging support
- ◇ Support IEEE802.1p Priority Tagging support
- ◇ LBFO : Load Balance and Fail Over
- ◇ Wake on LAN power management
- ◇ ACPI 1.0
- ◇ DMI 2.0

5. Installation Procedures

5.1 Insert the Networking Interface Card



- Step1.* Switch off the computer, unplug the power cord, and remove the computer's cover.
- Step2.* Select an unused PCI bus-master slot and remove its protective bracket.
- Step3.* Push the Adapter into the slot until the adapter is securely seated. Then secure the adapter bracket with a screw.
- Step4.* Attached the Wake-On-LAN cable (Optional). If you require Wake-On-LAN capability from a powered-off state, attach one end of the 3-pin Wake-On-LAN cable to the connector on the top edge of the card, and the other end to the "5 V Standby" connector on the computer's motherboard.
- Step5.* Connect the Adapter directly to a 10BASE-T or 100BASE-TX hub or switch using UTP cable (Category 3,4 or 5 for 10BASE-T ; Category 5 for 100BASE-TX). The maximum allowable length of UTP cable connections is 100 meters (328ft). When inserting an RJ-45 plug, be sure the tab on the plug clicks into position to ensure that it is properly seated.
- Step6.* Put back the computer cover and plug in the power cord.
- Step7.* Turn the power on. The computer's PCI BIOS automatically assigns resources to the Adapter.

5.2 Install the Network Driver

You can install the Network drivers from the Gigabyte Software CD. The Software CD that accompanies the GN-FE605(M) PCI Adapter contains all the network operating system drivers supported by this Adapter. The instructions of software installation are given as README files on the CD. Review the root directory README for overview information, and for full installation details, see the README and referenced instruction files in the sub-directory

appropriate to your network operating system.

Note: Before installing the networking interface card, make sure your system meets the requirements listed for your operating system.

Note: If you are installing a driver in a computer with other existing adapters, be sure to update all the adapters and ports with the same new software. This will ensure that all adapters will work correctly.

5.3 Software Drivers

- | | |
|------------------------------------|-------------------------------|
| ✓ Microsoft windows 95 \ 98 \ ME | ✓ Microsoft windows 2000 \ XP |
| ✓ Microsoft windows NT4.0 \ NT3.51 | ✓ Windows for Workgroup 3.11 |
| ✓ SCO Unix 5.04 | ✓ Unixware 7 |
| ✓ Linux Driver | ✓ FreeBSD 3.2 \ 4.x |

Note: Please refer to Appendix(B) 、(C) for the “Windows” driver installation. For the other Operating Systems, like Unix..., please refer to the text file in the CD for the further information.

6. Troubleshooting

If you are facing any problems with the GN-FE605(M) 10/100 Fast Ethernet PCI Adapter, use the following checklists to identify and correct the problem.

1. Make sure the adapter card is fully and firmly seated in the slot connector.
2. Check the length and rating of connecting cables.
3. Make sure the PCI slot is not deactivated at the BIOS level. The CMOS setup utility in PCI computers ordinarily provides the option to activate or deactivated PCI slots.
4. Replace the questioned adapter with another verified adapter then run the diagnostic test again.
5. Install the questioned adapter in another PCI computer then run the test again.
6. Remove all other PCI adapters from the computer then run the test again. If the verification / diagnostic run is normal, then there is probably an interrupt number conflict which will must be resolved manually by a CMOS setup utility run after you have reinstalled all of the expansion cards.

7. Appendix

(A)Wake-On-LAN (WOL)

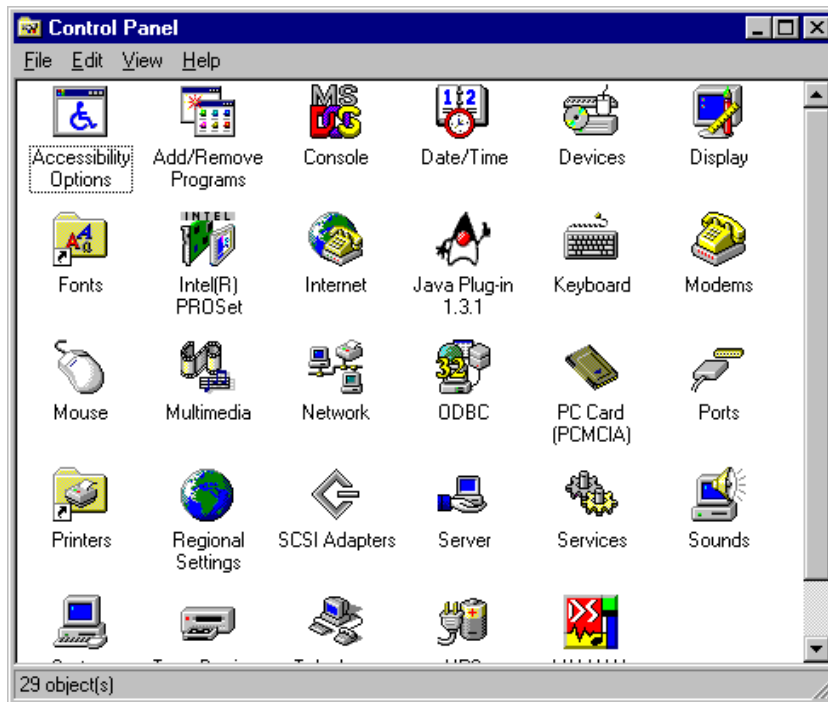
A Wake-On-LAN is an ACPI function allowing a powered Off computer to be powered On from a remote station. The ACPI can provide power management support systems through hardware and operating system cooperation. While the PC is powered Off the network card is always active and monitoring the network. When a wake-up packet is detected, the card signals the motherboard to power up the PC. With the PC powered On, maintenance and other support tasks can be performed. By using Wake-on-LAN technology today, you can:

- Power up your PC or multiple PCs from a remote location
- Manage networks more efficiently
- Save bandwidth during the day by transmitting large files at night
- Help your company save on its energy bill
- Eliminate trips back to work to troubleshoot a problem
- Be on the leading edge when new applications for Wake-on-LAN technology become available

(B) Driver Installation For GN-FE605

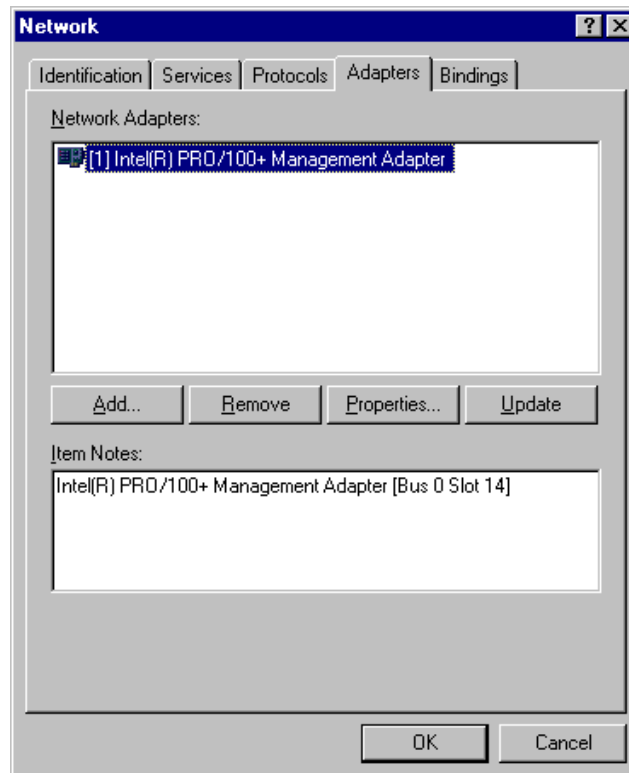
Windows NT4.0

Step1. Click the **Start** button, select **Setting**, and **Control Panel**.

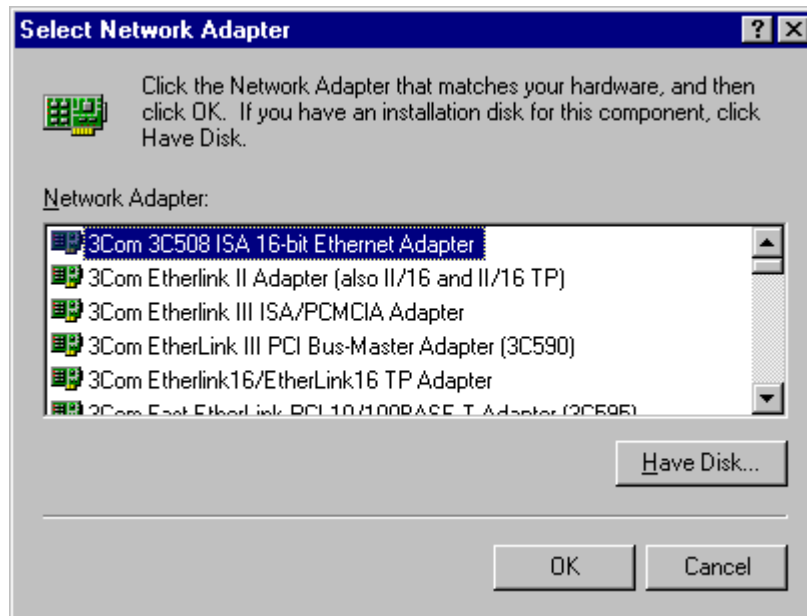


Step2. Double-Click on the “**Network**” icon. The Network dialog will be displayed.

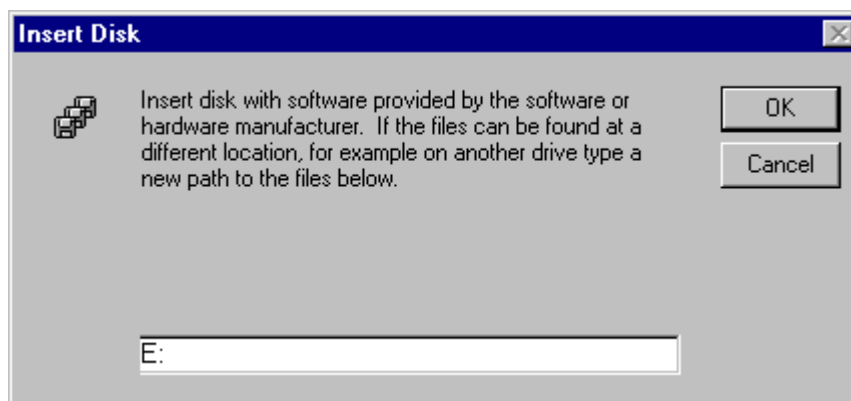
Step3. In the Network window, click on the “**Adapters**” tab. Click on the **Add** button.



Step4. From the list of network adapters, click on the **Have Disk..** button.



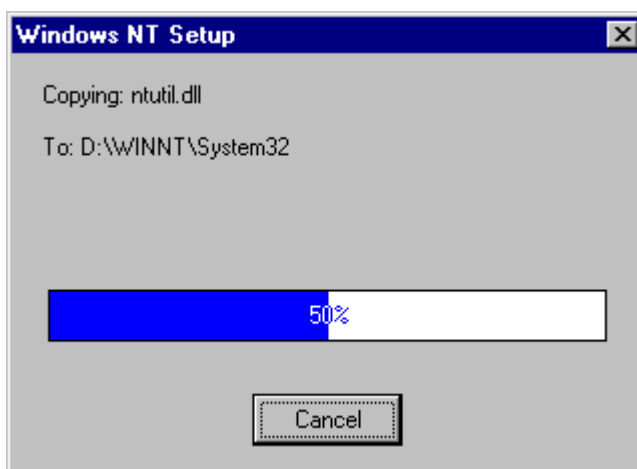
Step5. Insert the supplied driver CD into your CD-ROM. Enter E:\ (where “E” is the CD-ROM drive.) as the driver path and click on the **OK** button.



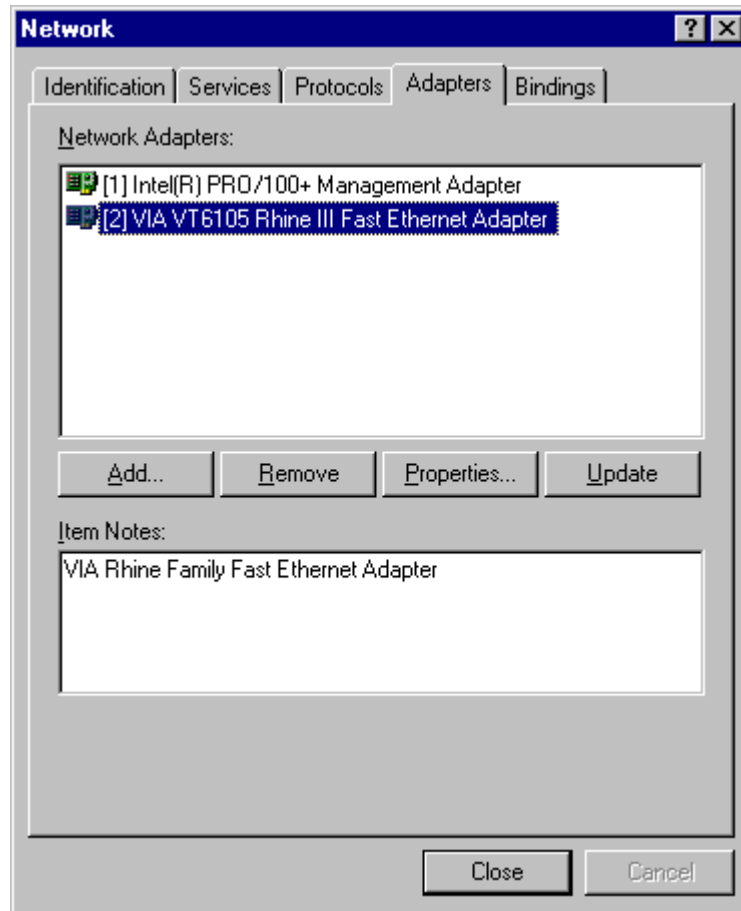
Step6. The next screen allows you to select a Connection Type. Select the communication rate type and click on the **OK** button.



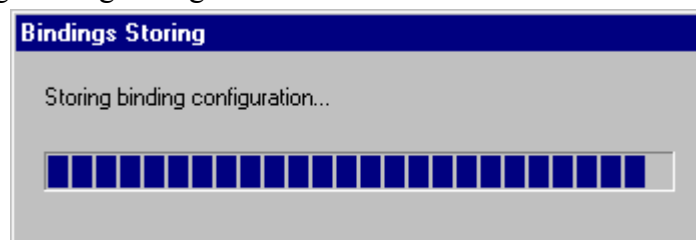
Step7. Windows will copy the required files to the directory.



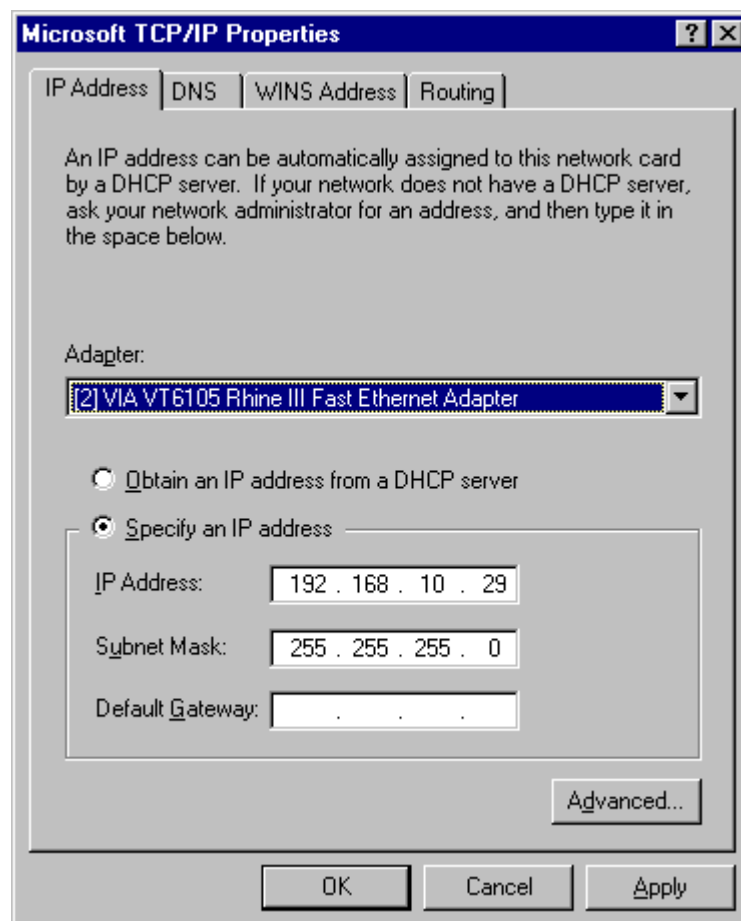
Step8. Check the “VIA VT6105 Rhine III Fast Ethernet Adapter” under “**Network Adapters**” and click the **Close** button.



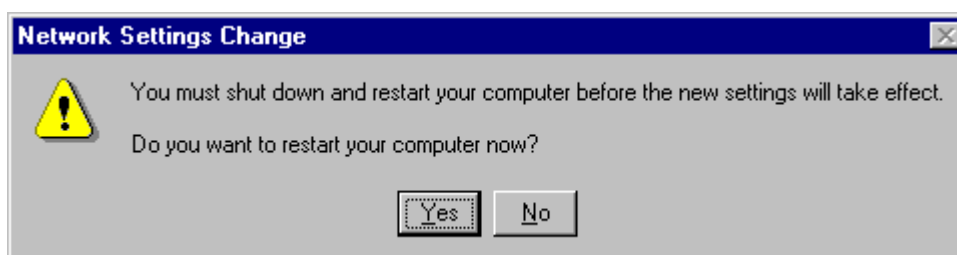
Step9. Storing binding configuration...



Step10. If the TCP/IP protocol has been installed, the IP address entry screen will appear. Enter the IP address, subnet mask, gateway address and other required values and click on the **Apply** button. Consult with your network administrator and if required, set DNS and WINS address as well. After these values have been entered, click on the **OK** button.



Step11. Remove the CD and click on the Yes button to restart the computer.

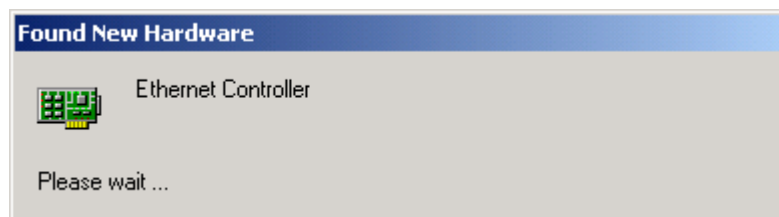


Windows 2000/XP

Note: For the Windows 2000 and XP are the same driver. For the following instruction is for the Windows 2000.

Step1. Set the GN-FE605 to a PCI slot on your PC, and switch on the power of the computer.

Step2. The system automatically detects the network adapter as Windows2000 starts.



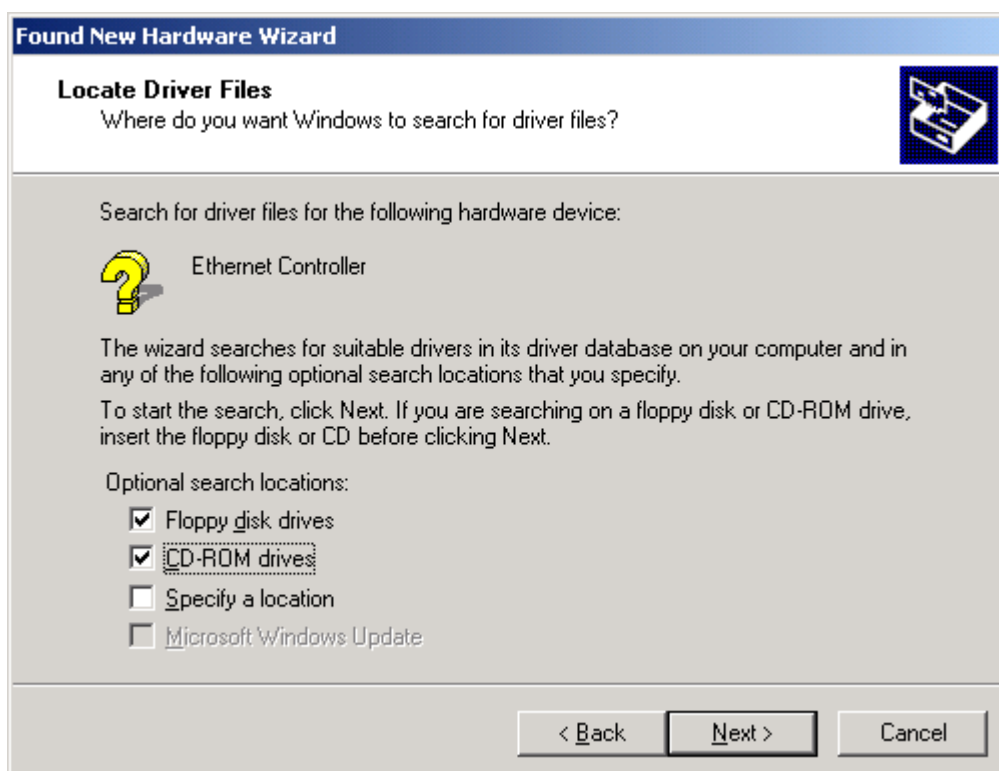
Step3. The following window will be displayed. Click on the **Next** button to continue.



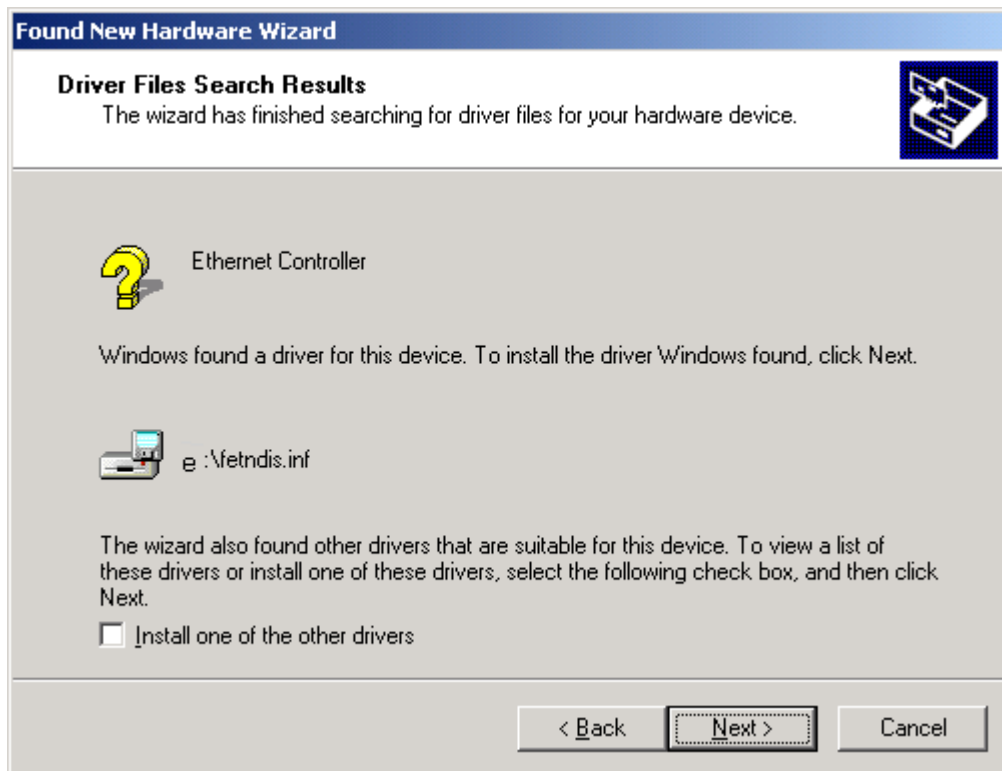
Step4. Select “Search for a suitable driver for my device” and click on the **Next** button.



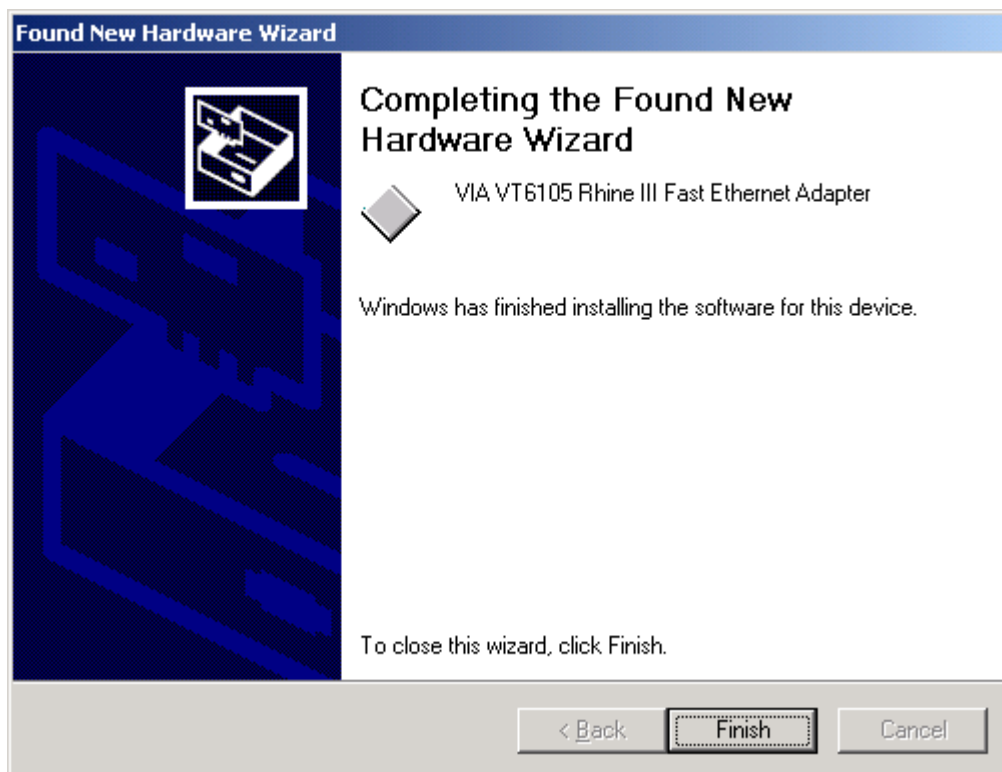
Step5. In the next window, you can specify a search location then click on the **Next** button.



Step 6. The setup wizard reports that a driver for the device has been found. Click on the **Next** button to initiate driver installation.



Step 7. After the file copy has completed, the wizard reports that software for the device has been installed. Click on the **Finish** button.

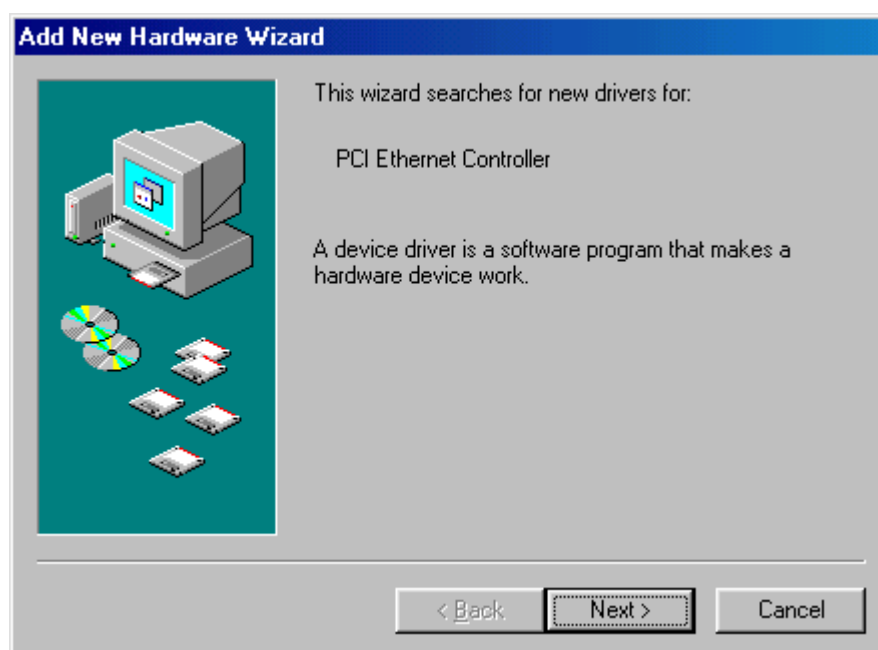


Windows 95/98/Me

Note: For the Windows 95, 98 and Me are the same driver. For the following instruction is for the Windows 98.

Step1. Set the GN-FE605 to a PCI slot on your PC, and switch on the power of the computer.

Step2. The system automatically detects the Ethernet adapter at Windows98 startup, and a “**Add New Hardware Wizard**” window appears on the screen. Click on the **Next** button.



Step3. Select “Search for the best driver for your device” and click on the **Next** button.



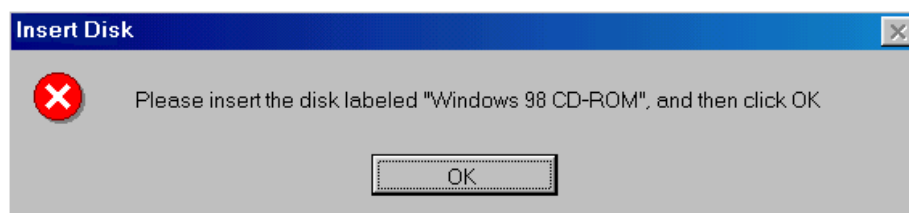
Step4. In the next window, you can specify the location of the driver to be installed. Insert the supplied driver CD into your CD-ROM, and click on the **Next** button.



Step 5. Click on the **Next** button.



Step 6. Windows98 starts copying the files. If it asks for certain files on Windows 98 CD-ROM, insert your Windows98 CD-ROM and specify a path. (If Drive E is your CD-ROM drive, enter e:\win98.)



Step 7. After the file copy has completed, click on the **Finish** button.



Step 8. You will be asked to restart the computer. Remove the driver CD from the drive and click on the **Yes** button to restart the computer. After the driver installation has completed, follow the procedure below to verify that the driver has been installed properly.



(C) Driver Installation For GN-FE605M

Windows NT4.0

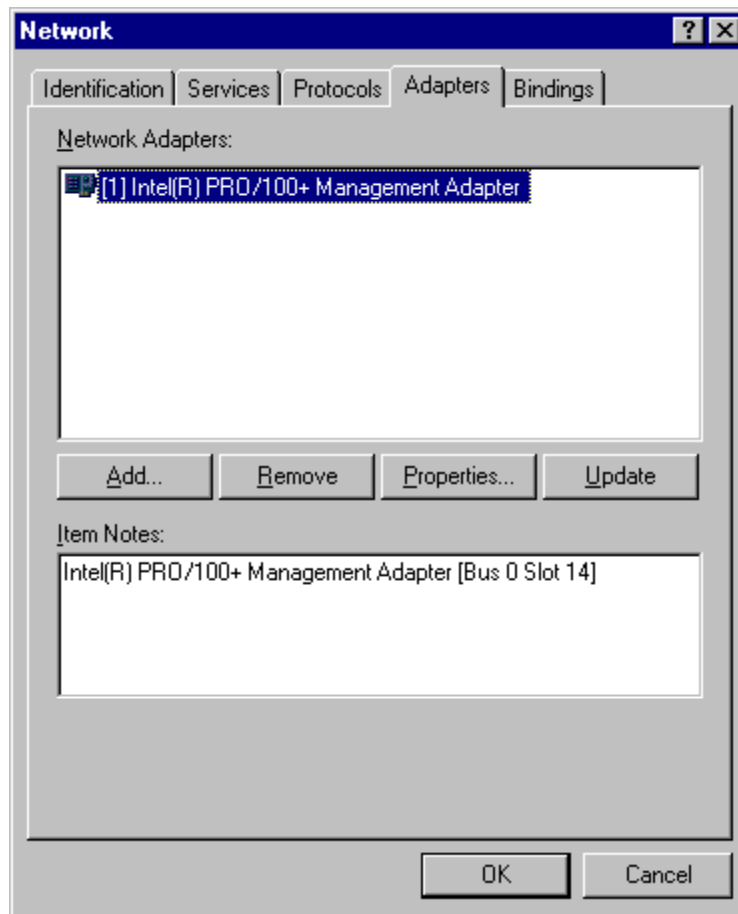
Step1. Set the GN-FE605M to a PCI slot on your PC, and switch on the power of the computer.

Step2. Click the **Start** button, select **Setting**, and **Control Panel**.

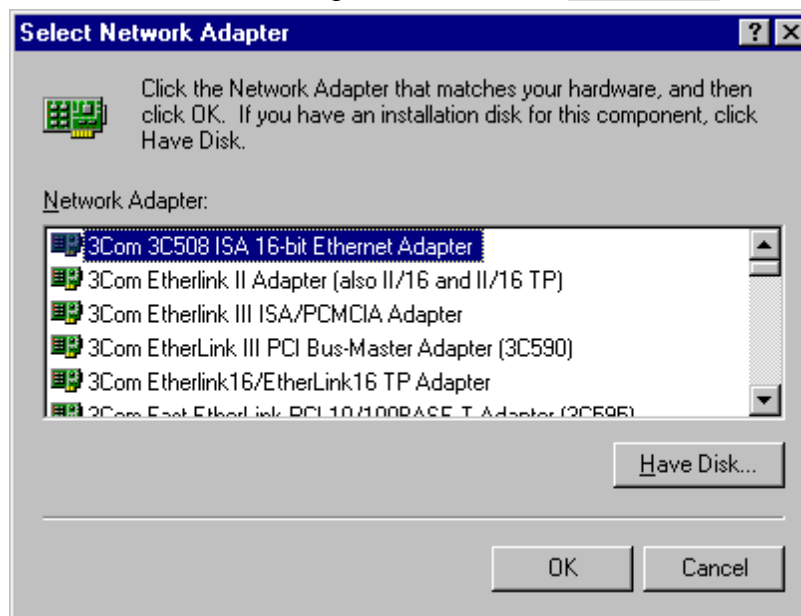


Step2. Double-Click on the “**Network**” icon. The Network dialog will be displayed.

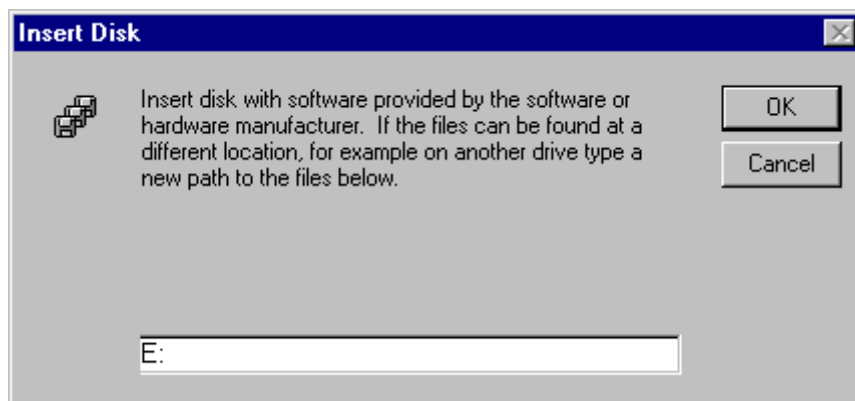
Step3. In the Network window, click on the “**Adapters**” tab. Click on the **Add** button.



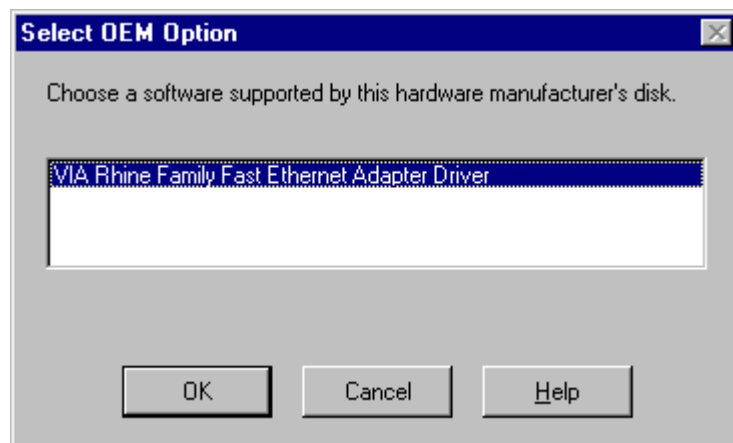
Step4. From the list of network adapters, click on the **Have Disk..** button.



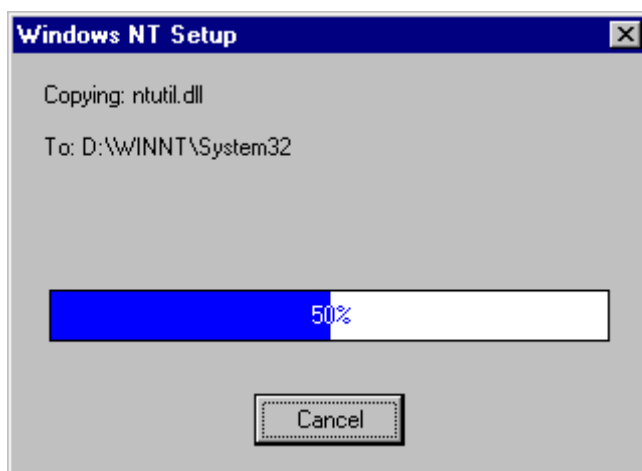
Step5. Insert the supplied driver CD into your CD-ROM. Enter E:\ (where “E” is the CD-ROM drive.) as the driver path and click on the **OK** button.



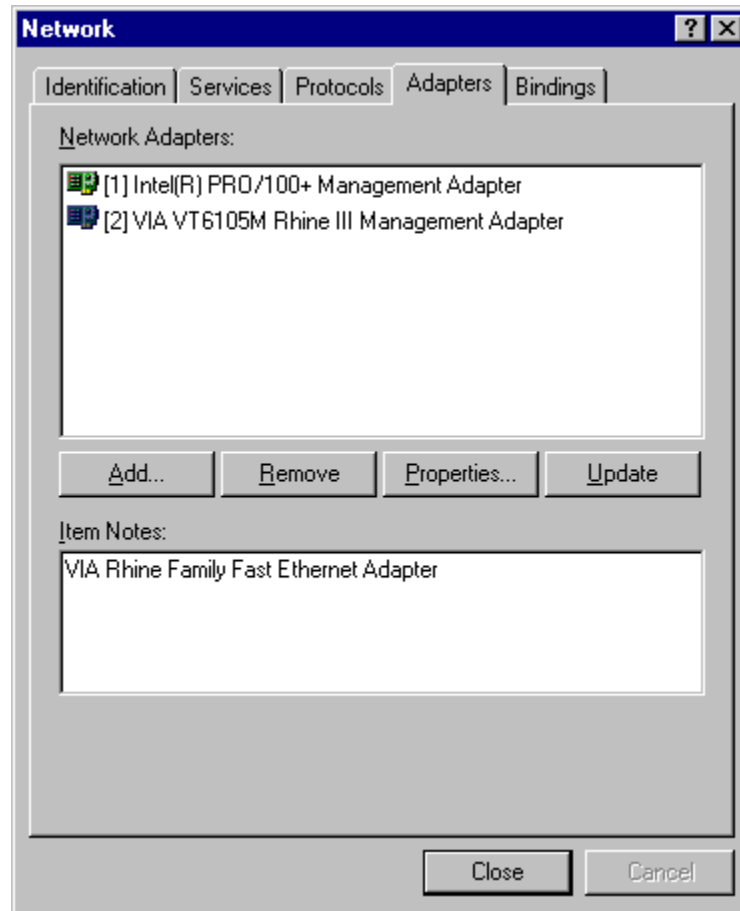
Step6. The next screen allows you to select a Connection Type. Select the communication rate type and click on the **OK** button.



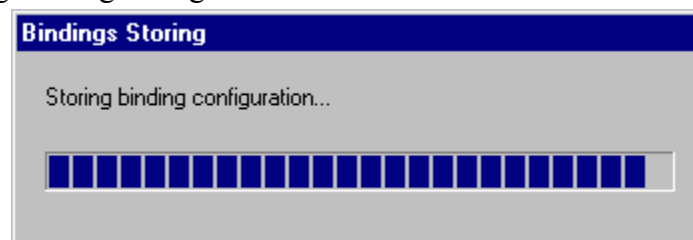
Step7. Windows will copy the required files to the directory.



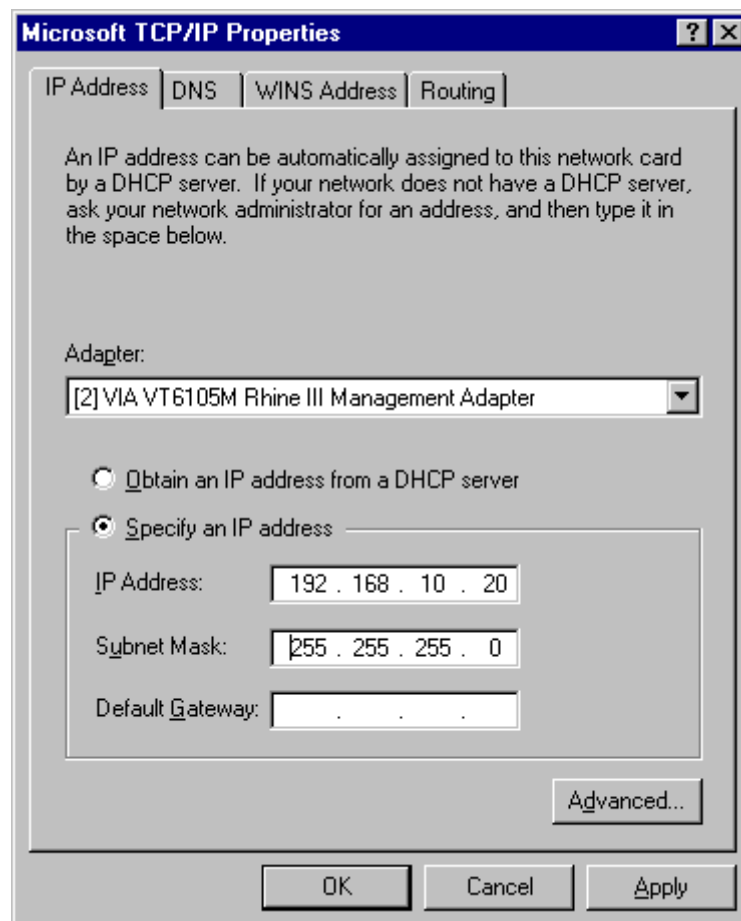
Step8. Check the “VIA VT6105M Rhine III Fast Ethernet Adapter” under “**Network Adapters**” and click the **Close** button.



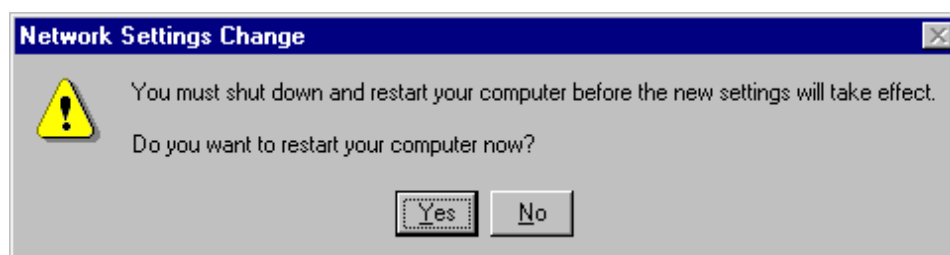
Step9. Storing binding configuration...



Step10. If the TCP/IP protocol has been installed, the IP address entry screen will appear. Enter the IP address, subnet mask, gateway address and other required values and click on the **Apply** button. Consult with your network administrator and if required, set DNS and WINS address as well. After these values have been entered, click on the **OK** button.



Step11. Remove the CD and click on the Yes button to restart the computer.

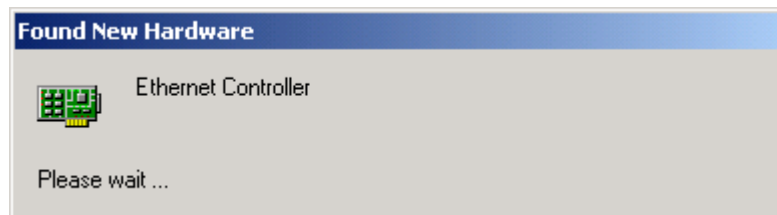


Windows 2000/XP

Note: For the Windows 2000 and XP are the same driver. For the following instruction is for the Windows 2000.

Step1. Set the GN-FE605M to a PCI slot on your PC, and switch on the power of the computer.

Step2. The system automatically detects the network adapter as Windows2000 starts.



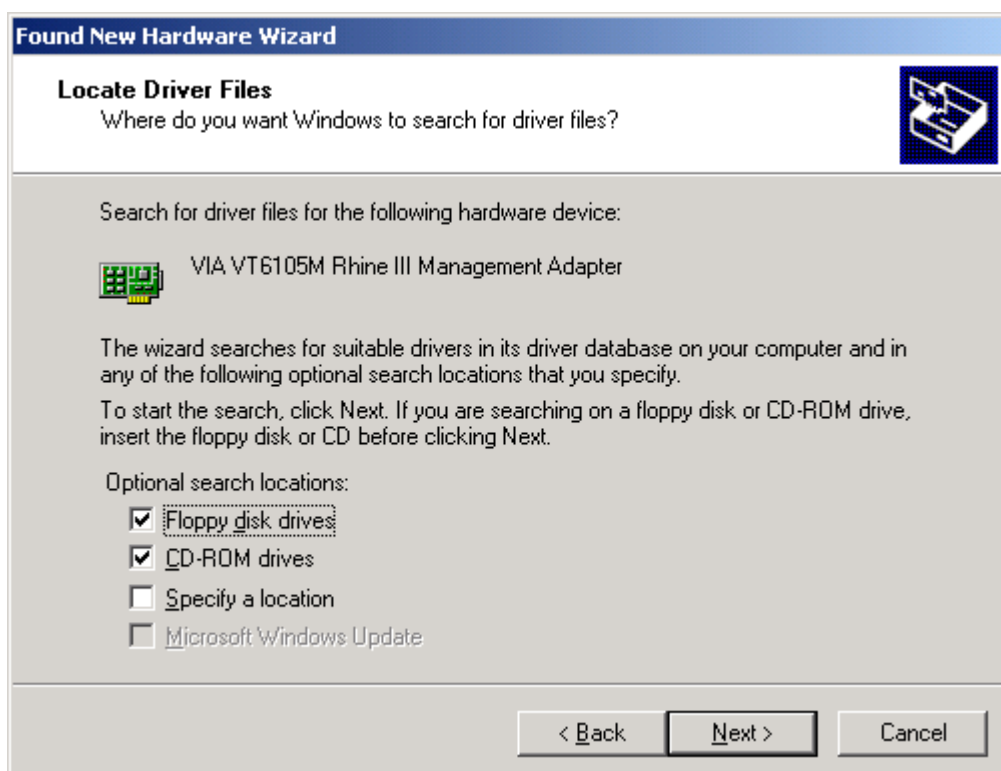
Step3. The following window will be displayed. Click on the **Next** button to continue.



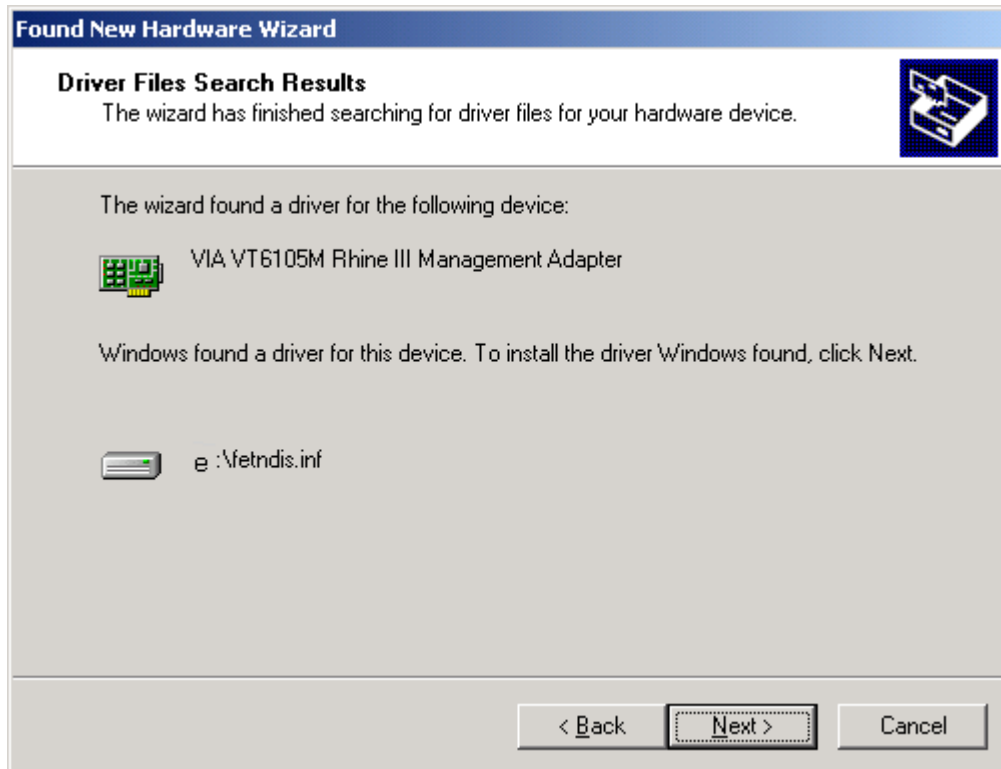
Step4. Select “**Search for a suitable driver for my device**” and click on the **Next** button.



Step5. In the next window, you can specify a search location then click on the **Next** button.



Step6. The setup wizard reports that a driver for the device has been found. Click on the **Next** button to initiate driver installation.



Step7. After the file copy has completed, the wizard reports that software for the device has been installed. Click on the **Finish** button.

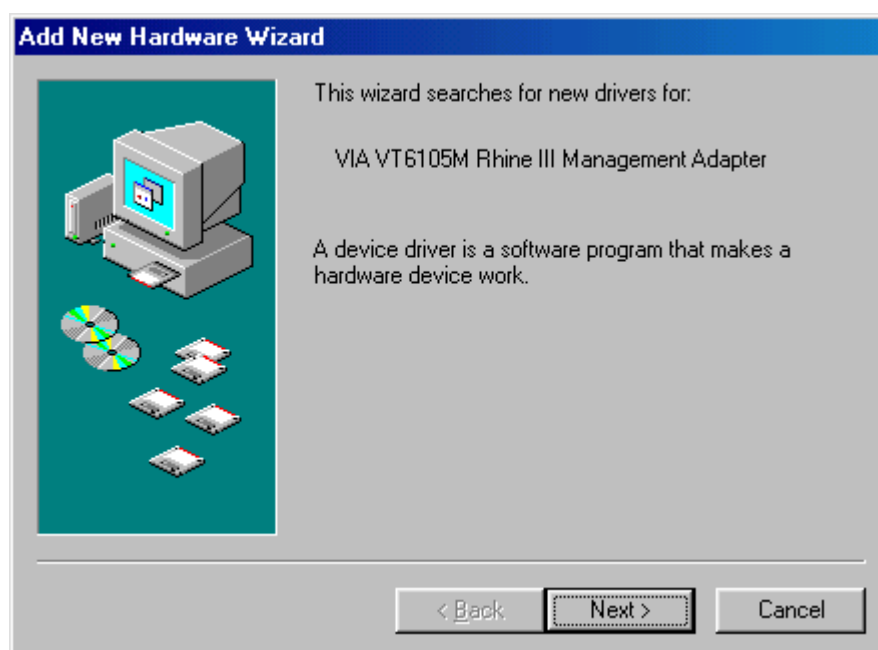


Windows 95/98/Me

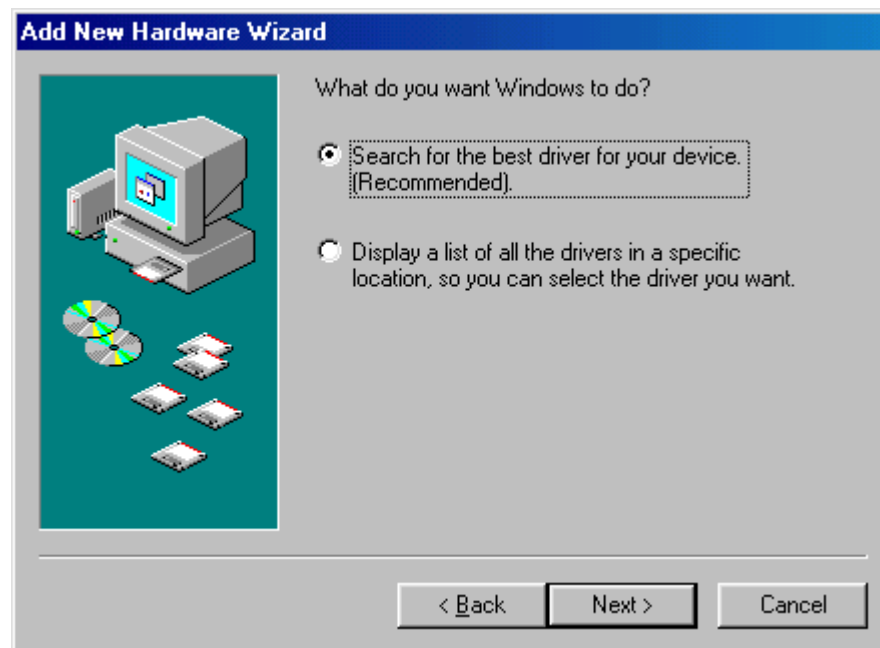
Note: For the Windows 95, 98 and Me are the same driver. For the following instruction is for the Windows 98.

Step1. Set the GN-FE605M to a PCI slot on your PC, and switch on the power of the computer.

Step2. The system automatically detects the Ethernet adapter at Windows98 startup, and a “**Add New Hardware Wizard**” window appears on the screen. Click on the **Next** button.



Step3. Select “Search for the best driver for your device” and click on the **Next** button.



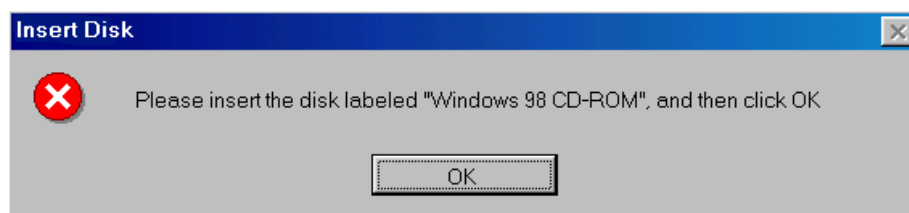
Step4. In the next window, you can specify the location of the driver to be installed. Insert the supplied driver CD into your CD-ROM, and click on the **Next** button.



Step 5. Click on the **Next** button.



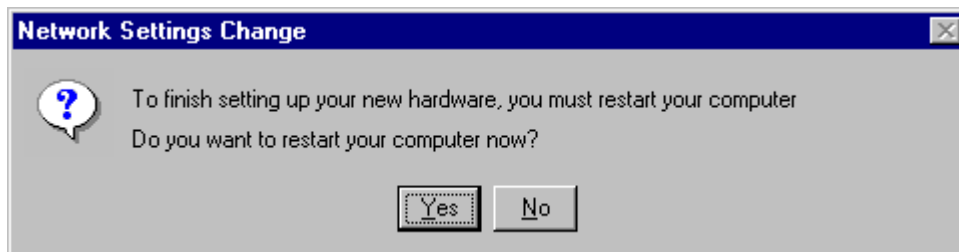
Step 6. Windows98 starts copying the files. If it asks for certain files on Windows 98 CD-ROM, insert your Windows98 CD-ROM and specify a path. (If Drive E is your CD-ROM drive, enter e:\win98.)



Step 7. After the file copy has completed, click on the **Finish** button.



Step 8. You will be asked to restart the computer. Remove the driver CD from the drive and click on the **Yes** button to restart the computer. After the driver installation has completed, follow the procedure below to verify that the driver has been installed properly.



(D) SNMP ONLY FOR GN-FE605M

☞ Introduction

Network statistics and control information are easily retrieved by using standard SNMP protocol. Network administrator could use MIB browser to get the information from remote host if it is SNMP protocol available.

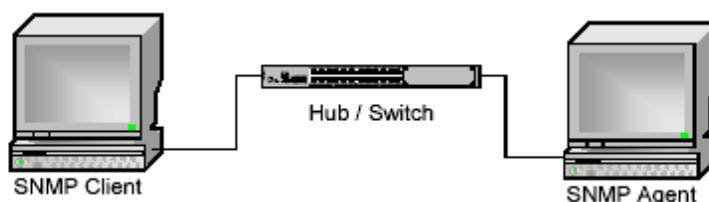
GN-FE605M 10/100Mbps Fast Ethernet PCI Adapter supports standard MIB-II counters and some of the RMON counters in the device driver. However, there are some other component should be installed for the full SNMP operations.

1. **SNMP service:** SNMP service in Microsoft platform is provided by Microsoft. Users need to install SNMP service for SNMP protocol.
2. **SNMP extension agent:** SNMP extension agent is a vendor provided software. For the RMON counter support, a SNMP extension agent is provided by VIA to make it visible for MIB browser because RMON is not the default support counter in Microsoft SNMP service.

☞ Configuration Example

Configuration	SNMP Client
PC	Clone PC
MB	ASUS P3B-F
DRAM	SDRAM 128MB
NIC	VT6105M
NIC Driver	3.06
OS	Windows 98 SE
SNMP Client Software	MG-SOFT MIB Browser Professional Edition 7.0.0.3730

Configuration	SNMP Agent
PC	Clone PC
MB	ASUS P3B-F
DRAM	SDRAM 128MB
NIC	VT6105M
NIC Driver	3.06
OS	Windows 2000 Professional
SNMP Agent Module	Windows SNMP Service
SNMP Agent Trap Module	Windows SNMP Trap Service



☞ **SNMP service operation**

[*Install SNMP service in Windows 2000/XP*](#)

In Microsoft windows 2000 and XP, SNMP service installation procedure is listed as the following:

1. Click **Start**, point to **Settings**, click **Control Panel**, double-click **Add/Remove Programs**, and then click **Add/Remove Windows Components**.
2. In **Components**, click **Management and Monitoring Tools** (but do not select or clear its check box), and then click **Details**.
3. Select **Simple Network Management Protocol** check box, and click **OK**.
4. Click **Next** to do the installation.

Note:

1. You must be logged on as an administrator or a member of the Administrators group in order to complete this procedure. If your computer is connected to a network, network policy settings might also prevent you from completing this procedure.
2. SNMP starts automatically after installation.

[*Install SNMP service in Windows 98*](#)

In Microsoft windows and 98, SNMP service installation procedure is listed as the following:

1. Click **Start**, point to **Settings**, click **Control Panel**, double-click **Network**, and then click **Add**.
2. In the **select Network Components Type** dialog box, double click **Service**.
3. In the **select Network Service** dialog box, click **Have Disk**.
4. In the **Install From Disk** dialog box, type the path to the **\TOOLS\RESKIT\NETADMIN\SNMP** directory on the windows 98 compact disc, and then click **OK**.
5. In the **select Network Service** dialog box, select **Microsoft SNMP agent** from the **Models** list, and then click **OK**.

6. In the **System Setting Change** dialog box, click **OK** to restart the system and finish the installation.

Note:

1. SNMP starts automatically after system restart.

[Install SNMP service in Windows NT4](#)

In Microsoft windows NT4, SNMP service installation procedure is listed as the following:

1. Click **Start**, point to **Settings**, click **Control Panel**, double-click **Network**.
2. In the **Network** dialog box, click **Services** tab.
3. In the **Services** tab, click **Add**.
4. In the **Select Network Service** dialog box, select **SNMP Service** from the **Network Service** list, and then click **OK**.
5. In the **Windows NT Setup** dialog box, type the Windows NT Source Path, and then click **Continue**.
6. After **Windows NT Setup** finish file-copy, in the **Windows SNMP Properties** dialog box click **OK**.
7. In the **Network** dialog box, **SNMP Service** will add to the **Network Services** list control in the **Services** tab, and then click **Close**.
8. In the **System Setting Change** dialog box, click **OK** to restart the system and finish the installation.

Note:

1. You must be logged on as an administrator or a member of the Administrators group in order to complete this procedure. If your computer is connected to a network, network policy settings might also prevent you from completing this procedure.
2. SNMP starts automatically after installation.

[Start or stop SNMP service in Windows 2000/XP](#)

1. Click **Start**, point to **Settings**, and click **Control Panel**. Double-click **Administrative Tools** and then double-click **Computer Management**.

2. In the console tree, click **Services**.
3. In the details pane, click **SNMP Service**
4. On the **Action** menu, click **Start, Stop, or Restart**.

☞ **SNMP extension agent operation**

[*Install SNMP extension agent in Windows 2000/XP*](#)

In Microsoft windows 2000 and XP, SNMP service installation procedure is listed as the following:

1. Make sure you install **Windows SNMP Service** before install SNMP extension agent.
2. In the folder contains SNMP extension agent package, there are two version of setup program.
3. A Self-Extracting EXE and the VSNMP subfolder contains uncompressed setup program.
4. Double Click on the **Self-Extracting EXE** or the **setup.exe** in the VSNMP subfolder to launch the setup program.
5. Following the instruction of the setup program, to finish the setup of **SNMP extension agent**.

Note:

1. You must be logged on as an administrator or a member of the Administrators group in order to complete this procedure. If your computer is connected to a network, network policy settings might also prevent you from completing this procedure.
2. SNMP extension agent starts automatically after installation.
3. The setup program will prompt your to remove previous installation and to update miniport driver of your network adaptor if needed before installation.

[*Install SNMP extension agent in Windows 98*](#)

In Microsoft windows and 98, SNMP extension agent installation procedure is listed as the following:

1. Make sure you install **Windows SNMP Service** before install VIS SNMP

extension agent.

2. In the folder contains SNMP extension agent package, there are two version of setup program.
3. A Self-Extracting EXE and the VSNMP subfolder contains uncompressed setup program.
4. Double Click on the **Self-Extracting EXE** or the **setup.exe** in the VSNMP subfolder to launch the setup program.
5. Following the instruction of the setup program, to finish the setup of **SNMP extension agent**.

Note:

1. SNMP extension agent starts automatically after system restart.

[Install SNMP extension agent in Windows NT4](#)

In Microsoft windows NT4, SNMP extension agent installation procedure is listed as the following:

1. Make sure you install **Windows SNMP Service** before install VIS SNMP extension agent.
2. In the folder contains SNMP extension agent package, there are two version of setup program.
3. A Self-Extracting EXE and the VSNMP subfolder contains uncompressed setup program.
4. Double Click on the **Self-Extracting EXE** or the **setup.exe** in the VSNMP subfolder to launch the setup program.
5. Following the instruction of the setup program, to finish the setup of **SNMP extension agent**.

Note:

1. SNMP extension agent starts automatically after system restart.

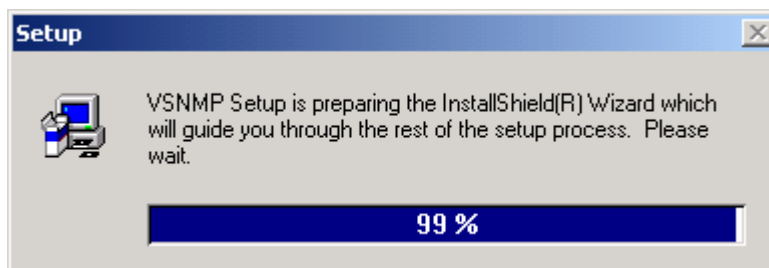
Install SNMP extension agent from Gigabyte CD

You can also install SNMP service directly from the Gigabyte CD.

1. Insert the CD into the CD-ROM drive. The CD autorun program starts.
Click **FE605M \ Install SNMP Service Driver**.



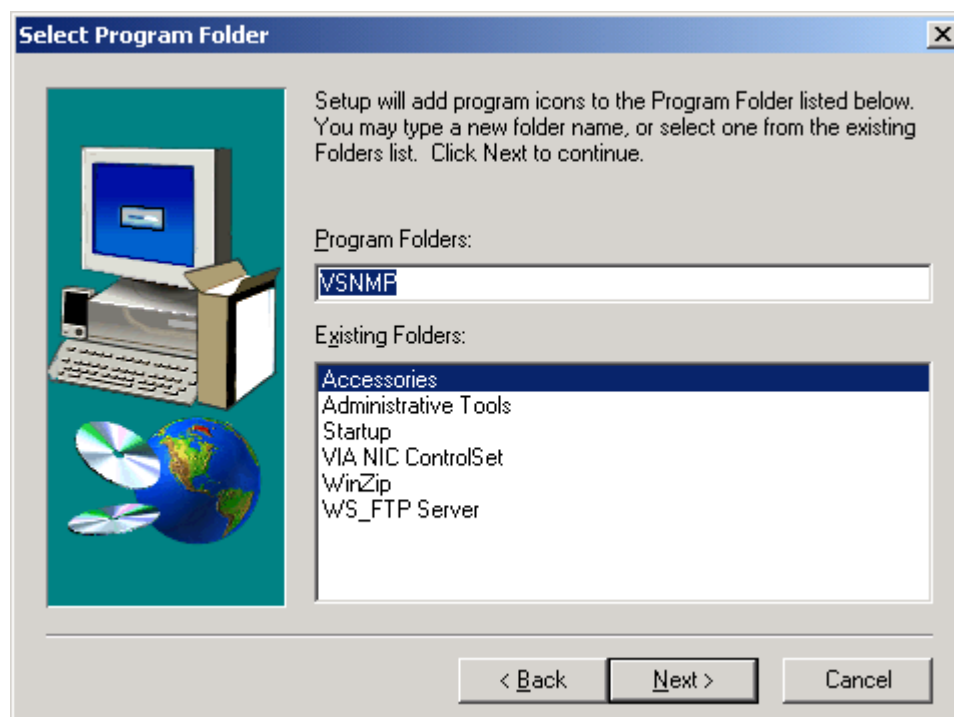
2. The Setup Winzard will be displayed.



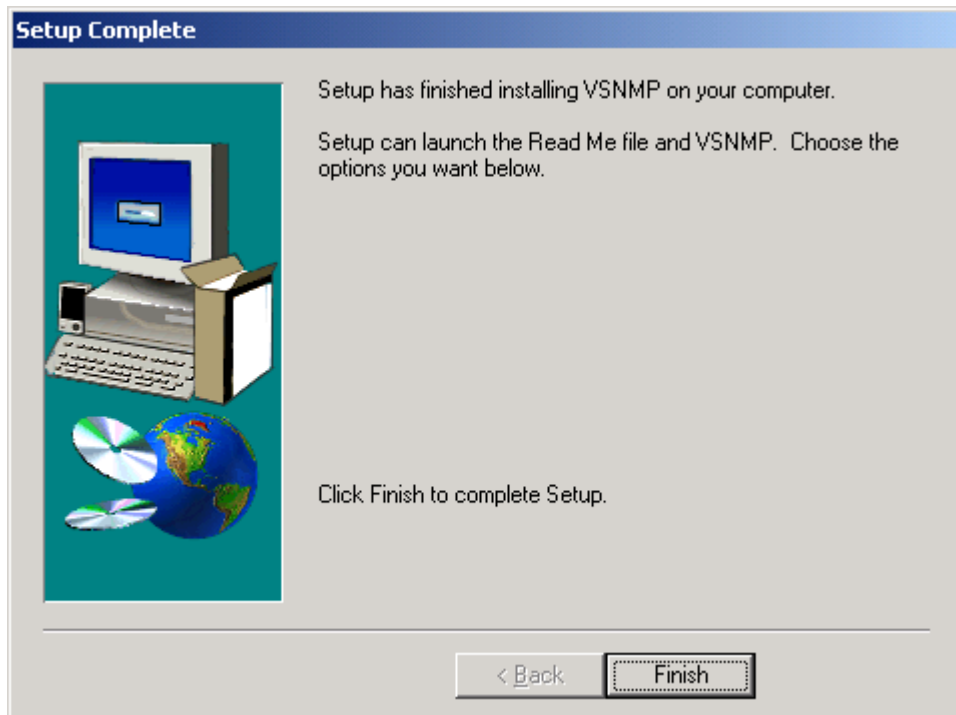
3. click **Next**.



4. Click **Next**.



5. Click **Finish** to complete Setup.



[Remove SNMP extension agent in Windows platform](#)

1. Click **Start**, point to **Settings**, and click **Control Panel**. Double-click **Add/Remove Programs**.
2. In the list of installed program , choose **SNMP**.
3. Click Add/Remove button to remove SNMP extension agent.

➤ **MIB-II and RMON counter support**

[MIB-II counters](#)

Currently, GN-FE605M 10/100Mbps Fast Ethernet PCI Adapter support most of the standard MIB-II counters. The table below lists the MIB-II interface group supported OIDs.

	OID in Interface Group	Attribute	Description
1	ifNumber	Integer (32-bit), Read-Only	The number of network interfaces (regardless of their current status) present on this system.
2	IfIndex	Integer (32-bit), Read-Only	A unique value for each interface.
3	IfDescr	OCTET STRING, Read-Only	A textual string containing information about the interface.
4	IfType	Integer (32-bit), Read-Only	The type of interface.
5	ifMTU	Integer (32-bit), Read-Only	The size of largest datagram which can be sent/received on the interface, specified in octets.
6	ifSpeed	Gague (32-bit), Read-Only	An estimate of the interface's bandwidth in bits per second.
7	ifPhysAddress	OCTET STRING, Read-Only	The interface's physical address.
8	ifAdminStatus	Integer (32-bit), Read-Write	The desired state of the interface.
9	ifOperstatus	Integer (32-bit), Read-Only	The current operational state of the interface.
10	ifLastChange	TimerTick, Read-Only	The value of sysUpTime at the time the interface entered its current operational state.
11	ifInOctets	Counter (32-bit), Read-Only	The total number of octets received on the interface.
12	ifInUcastPkts	Counter (32-bit), Read-Only	The total number of unicast packets delivered to a higher-layer protocol.
13	ifInNUcastPkts	Counter (32-bit), Read-Only	The total number of non-unicast packets delivered to a higher-layer protocol.
14	ifInDiscards	Counter (32-bit), Read-Only	The number of inbound packets which were chosen to be discarded even though no error had been detected.
15	ifInErrors	Counter (32-bit), Read-Only	The number of inbound packets that contained errors.
16	ifInUnknowProtos	Counter (32-bit), Read-Only	The number of packets received via the interface which were discarded because of an unknown or unsupported protocol.
17	ifOutOctets	Counter (32-bit), Read-Only	The total number of octets transmitted out of the interface.
18	ifOutUcastPkts	Counter (32-bit), Read-Only	The total number of packets that higher-protocols requested be transmitted to an unicast address.

19	IfOutNUcastPkts	Counter (32-bit), Read-Only	The total number of packets that higher-protocols requested be transmitted to an non-unicast address.
20	IfOutDiscards	Counter (32-bit), Read-Only	The number of outbound packets which were chosen to be discarded even though no errors had been detected to prevent their being transmitted.
21	IfOutErrors	Counter (32-bit), Read-Only	The number of outbound packets that could not be transmitted because of errors.
22	IfOutQLen	Gague (32-bit), Read-Only	The length of output packet queue.
23	IfSpecific	Object Identifier, Read-Only	A reference to MIB definitions specific to the particular media being used to realize the interface.

[RMON counters](#)

Currently, GN-FE605M 10/100Mbps Fast Ethernet PCI Adapter support some of the standard RMON counters. The table below lists the RMON Ethernet Statistics, History, Alarm and Event group supported OIDs.

	OID in Statistics Group	Attribute	Description
1	etherStatsIndex	Integer (32-bit), Read-Only	The value of this object uniquely identifies this etherStats entry.
2	etherStatsDataSource	Object Identifier, Read-Write	This object identifies the source of the data that this etherStats entry is configured to analyze.
3	etherStatsDropEvents	Counter (32-bit), Read-Only	The total number of events in which packets were dropped by the probe due to lack of resources.
4	etherStatsOctets	Counter (32-bit), Read-Only	The total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).
5	etherStatsPkts	Counter (32-bit), Read-Only	The total number of packets (including bad packets, broadcast packets, and multicast packets) received.
6	etherStatsBroadcastPkts	Counter (32-bit), Read-Only	The total number of good packets received that were directed to the broadcast address.
7	etherStatsMulticastPkts	Counter (32-bit), Read-Only	The total number of good packets received that were directed to a multicast address.
8	etherStatsCRCAlignErrors	Counter (32-bit), Read-Only	The total number of packets received that had a length (excluding framing bits, but including FCS octets) of between 64 and 1518 octets, inclusive, but had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
9	etherStatsUndersizePkts	Counter (32-bit), Read-Only	The total number of packets received that were less than 64 octets long (excluding framing bits, but including FCS octets) but were otherwise well formed.
10	etherStatsOversizePkts	Counter (32-bit), Read-Only	The total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets) but were otherwise well formed.
11	etherStatsFragments	Counter (32-bit), Read-Only	The total number of packets received that were less than 64 octets in length (excluding framing bits but including FCS octets) and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a

			bad FCS with a non-integral number of octets (Alignment Error).
12	etherStatsJabbers	Counter (32-bit), Read-Only	The total number of packets received that were longer than 1518 octets (excluding framing bits, but including FCS octets), and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
13	etherStatsCollisions	Counter (32-bit), Read-Only	The best estimate of the total number of collisions on this Ethernet segment.
14	etherStatsPkts64Octets	Counter (32-bit), Read-Only	The total number of packets (including bad packets) received that were 64 octets in length (excluding framing bits but including FCS octets).
15	etherStatsPkts65to127Octets	Counter (32-bit), Read-Only	The total number of packets (including bad packets) received that were between 65 and 127 octets in length inclusive (excluding framing bits but including FCS octets).
16	etherStatsPkts128to255Octets	Counter (32-bit), Read-Only	The total number of packets (including bad packets) received that were between 128 and 255 octets in length inclusive (excluding framing bits but including FCS octets).
17	etherStatsPkts256to511Octets	Counter (32-bit), Read-Only	The total number of packets (including bad packets) received that were between 256 and 511 octets in length inclusive (excluding framing bits but including FCS octets).
18	etherStatsPkts512to1023Octets	Counter (32-bit), Read-Only	The total number of packets (including bad packets) received that were between 512 and 1023 octets in length inclusive (excluding framing bits but including FCS octets).
19	etherStatsPkts1024to1518Octets	Counter (32-bit), Read-Only	The total number of packets (including bad packets) received that were between 1024 and 1518 octets in length inclusive (excluding framing bits but including FCS octets).
20	EtherStatsOwner	OCTET STRING, Read- Write	The entity that configured this entry and is therefore using the resources assigned to it.
21	EtherStatsStatus	Integer, Read-Write	The status of this etherStats entry. (The 4 possible value is listed below.) <ul style="list-style-type: none"> ● valid(1) ● createRequest(2) ● underCreation(3) ● invalid(4)

	OID in History Group	Attribute	Description
1	historyControlIndex	Integer (16-bit), Read-Only	An index that uniquely identifies an entry in the historyControl table
2	HistoryControlDataSource	Object Identifier, Read-Write	This object identifies the source of the data for which historical data was collected and placed in a media-specific table on behalf of this historyControlEntry.
3	HistoryControlBucketsRequested	Integer (16-bit), Read-Write	The requested number of discrete time intervals over which data is to be saved in the part of the media-

			specific table associated with this historyControlEntry.
4	HistoryControlBucketsGranted	Integer (16-bit), Read-Only	The number of discrete sampling intervals over which data shall be saved in the part of the media-specific table associated with this historyControlEntry.
5	HistoryControlInterval	Integer(1..3600), Read-Write	The interval in seconds over which the data is sampled for each bucket in the part of the media-specific table associated with this historyControlEntry.
6	HistoryControlOwner	OCTET STRING, Read- Write	The entity that configured this entry and is therefore using the resources assigned to it.
7	HistoryControlStatus	Integer, Read-Write	The status of this ether historyControl Stats entry.(The 4 possible value is listed below.) <ul style="list-style-type: none"> ● valid(1) ● createRequest(2) ● underCreation(3) ● invalid(4)
8	EtherHistoryIndex	Integer (16-bit), Read-Write	The history of which this entry is a part.
9	EtherHistorySampleIndex	Integer (32-bit), Read-Only	An index that uniquely identifies the particular sample this entry represents among all samples associated with the same historyControlEntry.
10	EtherHistoryIntervalStart	TimerTick, Read-Only	The value of sysUpTime at the start of the interval over which this sample was measured.
11	EtherHistoryDropEvents	Counter (32-bit), Read-Only	The total number of events in which packets were dropped by the probe due to lack of resources during this sampling interval.
12	EtherHistoryOctets	Counter (32-bit), Read-Only	The total number of octets of data (including those in bad packets) received on the network (excluding framing bits but including FCS octets).
13	EtherHistoryPkts	Counter (32-bit), Read-Only	The number of packets (including bad packets) received during this sampling interval.
14	EtherHistoryBroadcastPkts	Counter (32-bit), Read-Only	The number of good packets received during this sampling interval that were directed to the broadcast address.
15	EtherHistoryMulticastPkts	Counter (32-bit), Read-Only	The number of good packets received during this sampling interval that were directed to a multicast address.
16	EtherHistoryCRCAlignErrors	Counter (32-bit), Read-Only	The number of packets received during this sampling interval that had a length (excluding framing bits but including FCS octets) between 64 and 1518 octets, inclusive, but had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
17	EtherHistoryUndersizePkts	Counter (32-bit), Read-Only	The number of packets received during this sampling interval that were less than 64 octets long (excluding framing bits but including FCS octets) but were otherwise well formed.
18	EtherHistoryOversizePkts	Counter (32-bit), Read-Only	The number of packets received during this sampling interval that were longer than 1518 octets (excluding framing bits but including FCS octets) but were otherwise well formed.

19	EtherHistoryFragments	Counter (32-bit), Read-Only	The total number of packets received during this sampling interval that were less than 64 octets in length (excluding framing bits but including FCS octets) had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
20	EtherHistoryJabbers	Counter (32-bit), Read-Only	The number of packets received during this sampling interval that were longer than 1518 octets (excluding framing bits but including FCS octets), and had either a bad Frame Check Sequence (FCS) with an integral number of octets (FCS Error) or a bad FCS with a non-integral number of octets (Alignment Error).
21	EtherHistoryCollisions	Counter (32-bit), Read-Only	The best estimate of the total number of collisions on this Ethernet segment during this sampling interval.
22	EtherHistoryUtilization	Gauge (0..10000), Read-Only	The best estimate of the mean physical layer network utilization on this interface during this sampling interval, in hundredths of a percent.

	OID in Alarm Group	Attribute	Description
1	alarmIndex	Integer (16-bit), Read-Only	An index that uniquely identifies an entry in the alarm table. Each such entry defines a diagnostic sample at a particular interval for an object on the device.
2	alarmInterval	Integer, Read-Write	The interval in seconds over which the data is sampled and compared with the rising and falling thresholds.
3	alarmVariable	Object Identifier, Read-Write	The object identifier of the particular variable to be sampled. Only variables that resolve to an ASN.1 primitive type of INTEGER (INTEGER, Counter, Gauge, or TimeTicks) may be sampled.
4	alarmSampleType	Integer, Read-Write	The method of sampling the selected variable and calculating the value to be compared against the thresholds. (The 2 possible value is listed below.) <ul style="list-style-type: none"> absoluteValue(1) the value of the selected variable will be compared directly with the thresholds at the end of the sampling interval. deltaValue(2) the value of the selected variable at the last sample will be subtracted from the current value, and the difference compared with the thresholds.
5	alarmValue	Integer, Read-only	The value of the statistic during the last sampling period. This is the value that is compared with the rising and falling thresholds.
6	alarmStartupAlarm	Integer, Read-Write	The alarm that may be sent when this entry is first set to valid. If the first sample after this entry becomes valid is greater than or equal to the risingThreshold and alarmStartupAlarm is equal to risingAlarm(1) or risingOrFallingAlarm(3), then a single rising alarm will be generated. If the first sample after this entry becomes valid is less than or equal to the fallingThreshold and alarmStartupAlarm is equal to fallingAlarm(2) or risingOrFallingAlarm(3), then a single falling alarm will be generated.
7	alarmRisingThreshold	Integer,	A threshold for the sampled statistic. When the current

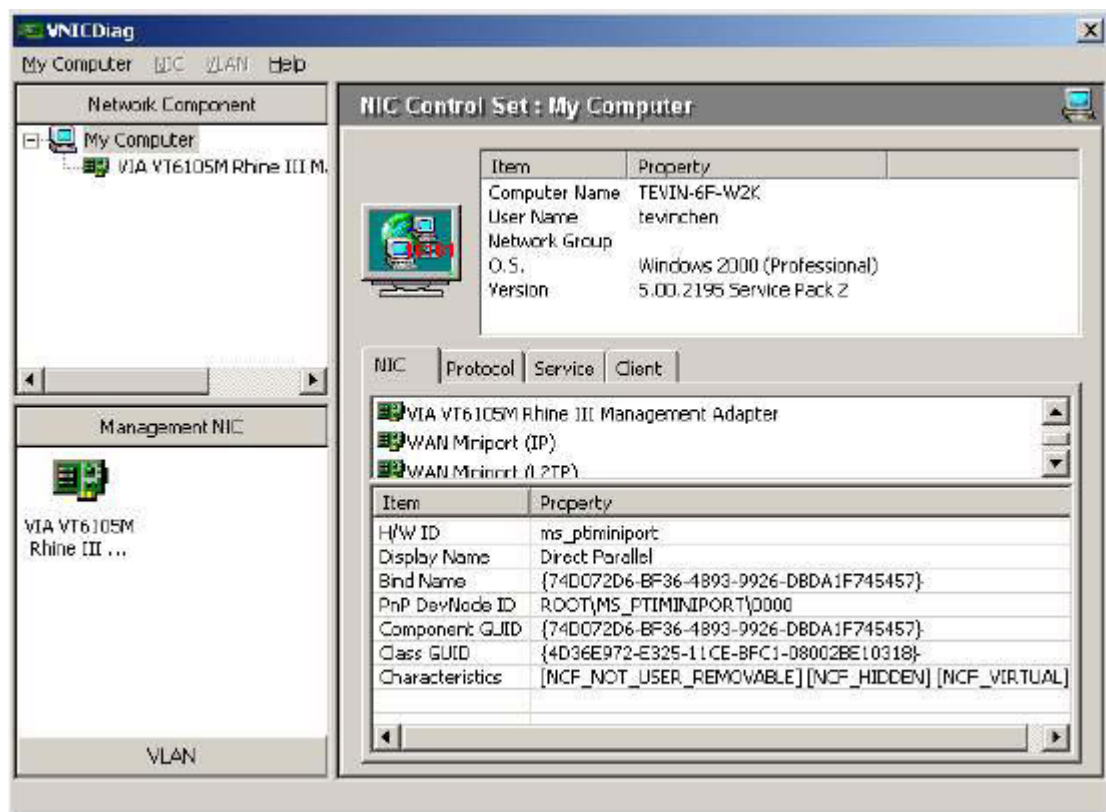
		Read-Write	sampled value is greater than or equal to this threshold, and the value at the last sampling interval was less than this threshold, a single event will be generated. A single event will also be generated if the first sample after this entry becomes valid is greater than or equal to this threshold and the associated alarmStartupAlarm is equal to risingAlarm(1) or risingOrFallingAlarm(3). After a rising event is generated, another such event will not be generated until the sampled value falls below this threshold and reaches the alarmFallingThreshold.
8	alarmFallingThreshold	Integer, Read-Write	A threshold for the sampled statistic. When the current sampled value is less than or equal to this threshold, and the value at the last sampling interval was greater than this threshold, a single event will be generated. A single event will also be generated if the first sample after this entry becomes valid is less than or equal to this threshold and the associated alarmStartupAlarm is equal to fallingAlarm(2) or risingOrFallingAlarm(3). After a falling event is generated, another such event will not be generated until the sampled value rises above this threshold and reaches the alarmRisingThreshold.
9	alarmRisingEventIndex	Integer (16-bit), Read-Write	The index of the eventEntry that is used when a rising threshold is crossed. The eventEntry identified by a particular value of this index is the same as identified by the same value of the eventIndex object.
10	alarmFallingEventIndex	Integer (16-bit), Read-Write	The index of the eventEntry that is used when a falling threshold is crossed. The eventEntry identified by a particular value of this index is the same as identified by the same value of the eventIndex object.
11	alarmOwner	OCTET STRING, Read-Write	The entity that configured this entry and is therefore using the resources assigned to it.
12	AlarmStatus	Integer, Read-Write	The status of this etherStats entry. (The 4 possible value is listed below.) <ul style="list-style-type: none"> ● valid(1) ● createRequest(2) ● underCreation(3) ● invalid(4)

	OID in Event Group	Attribute	Description
	eventTable		A list of events to be generated.
1	eventIndex	Integer (16-bit), Read-Only	An index that uniquely identifies an entry in the event table. Each such entry defines one event that is to be generated when the appropriate conditions occur.
2	eventDescription	OCTET STRING, Read-Write	A comment describing this event entry.
3	eventType	Integer, Read-Write	The type of notification that the probe will make about this event. (The 4 possible value is listed below.) <ul style="list-style-type: none"> ● none(1)

			<ul style="list-style-type: none"> ● log(2) ● snmp-trap(3) -- send an SNMP trap ● log-and-trap(4)
4	eventCommunity	OCTET STRING SIZE (0.. 127), Read-Write	If an SNMP trap is to be sent, it will be sent to the SNMP community specified by this octet string. This object shall be set to a string of length zero if it is intended that mechanism be used to specify the destination of the trap.
5	eventLastTimeSent	TimeTicks, Read- only	The value of sysUpTime at the time this event entry last generated an event. If this entry has not generated any events, this value will be zero.
6	eventOwner	OCTET STRING SIZE (0.. 127), Read-Write	The entity that configured this entry and is therefore using the resources assigned to it.
7	eventStatus	Integer, Read-Write	The status of this etherStats entry. (The 4 possible value is listed below.) <ul style="list-style-type: none"> ● valid(1) ● createRequest(2) ● underCreation(3) ● invalid(4)
	logTable		A list of events that have been logged.
1	logEventIndex	Integer (16-bit), Read-Only	The event entry that generated this log entry. The log identified by a particular value of this index is associated with the same eventEntry as identified by the same value of eventIndex.
2	logIndex	Counter (32-bit), Read-Only	An index that uniquely identifies an entry in the log table amongst those generated by the same eventEntries. These indexes are assigned beginning with 1 and increase by one with each new log entry.
3	logTime	TimeTicks, Read- only	The value of sysUpTime when this log entry was created.
4	logDescription	OCTET STRING SIZE (0..255), Read-Write	An implementation dependent description of the event that activated this log entry.

(E) NIC Control Set for GN-FE605(M)**🔑 Introduction**[Overview](#)

NIC Control Set is a Windows platform application. It provides information, setting, statistics and diagnosis functions for the NIC. Additionally, it provides multiple VLAN function for the management NIC.

[A Snapshot of NIC Control Set](#)

☞ **Installation**

Hardware Requirements

As the minimal configuration for all Windows operating systems, you must have: A PC with a 486 processor or higher and speed of at least 33 MHz, a minimum of 16 MB memory support.

Windows Platform Supports

Fundamental Functions:

Fundamental Functions are supported if you're using Windows 95/98/ME, Windows NT 4.0, Windows 2000, and Windows XP.

Advanced Management Functions:

Advanced Management Functions are only supported with Windows 2000, and Windows XP.

Installation of NIC Control Set

1. Insert the Gigabyte CD into the CD-ROM drive. The CD autorun program starts. Click **FE605(M) \ Install NIC ControlSet**.
2. The Installation Program will guide you through the subsequent steps. Just follow the instructions as they appear on the screen. You then have the option of choosing between different setup types. After completing the installation, you can start **NIC Control Set** immediately.

Uninstallation

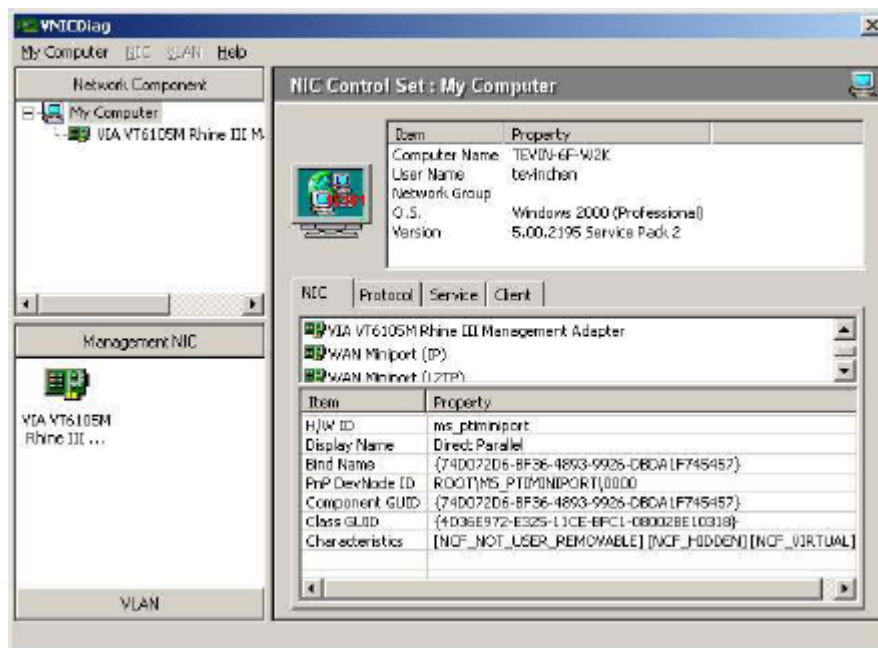
Select **NIC Control Set** from the **Start Menu** under **Settings/Control Panel/Add-Remove Programs**, and select **Remove**. This operation will delete all **NIC Control Set** program files and will remove **NIC Control Set** from the Start Menu.

➤ Fundamental Functions

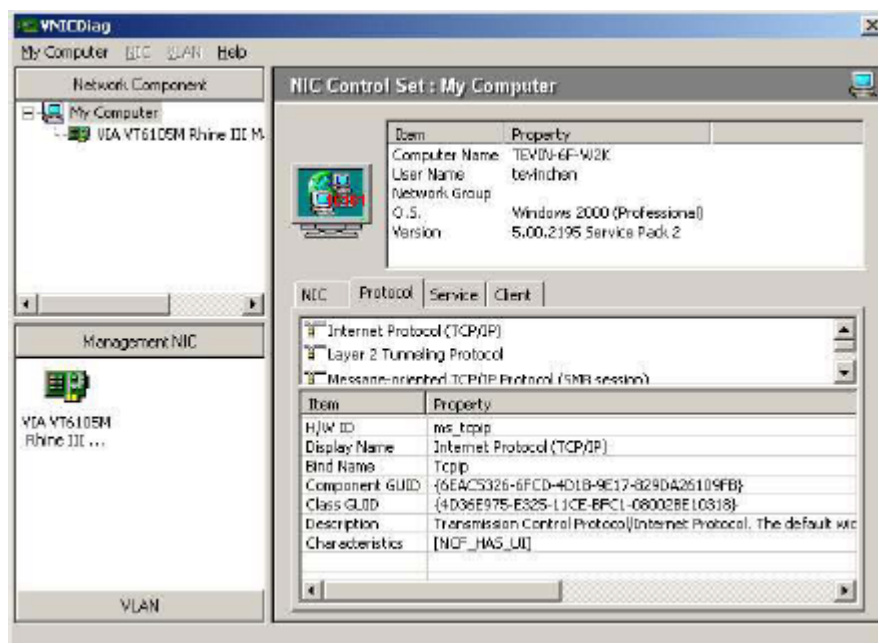
My Computer

Display the network information of this computer. In “Network Component” area, all network adapters will be displayed in it. In “Management NIC” area, only NIC with management functions (e.g. FE605M) will be displayed in it.

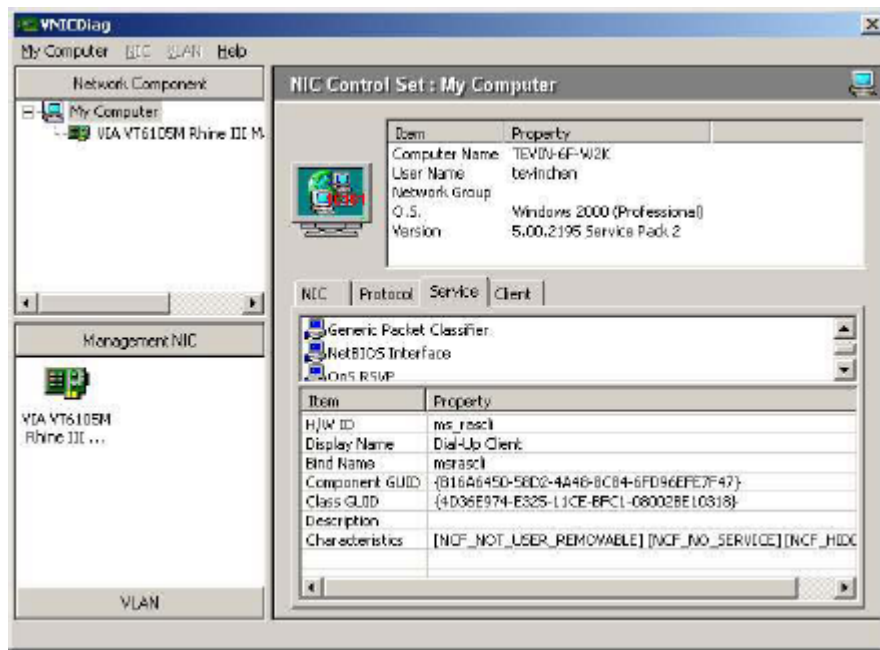
NIC: All NIC drivers currently installed in this computer



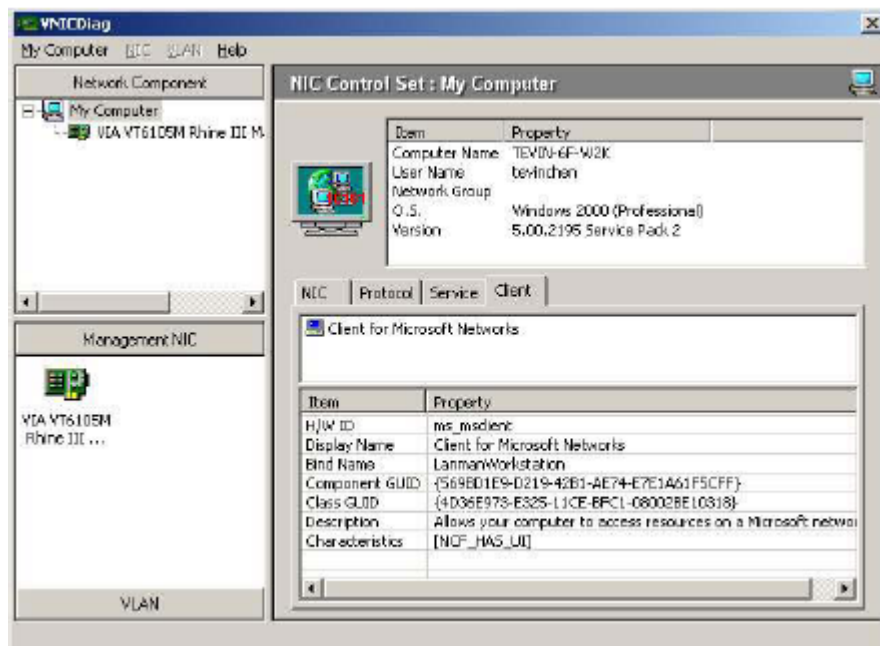
Protocol: All network protocols currently installed in this computer



Service: All network services currently installed in this computer

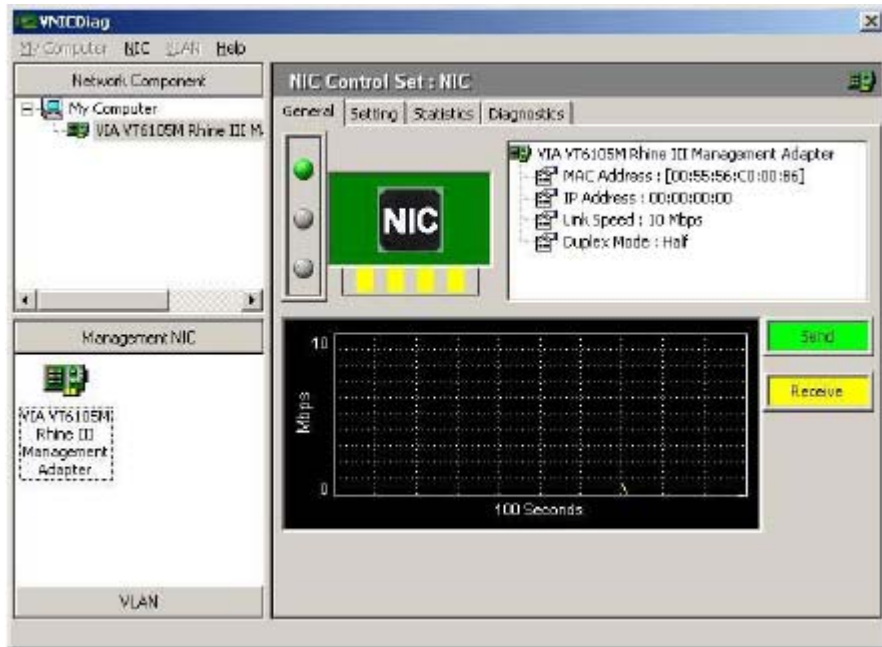


Client: All network clients currently installed in this computer



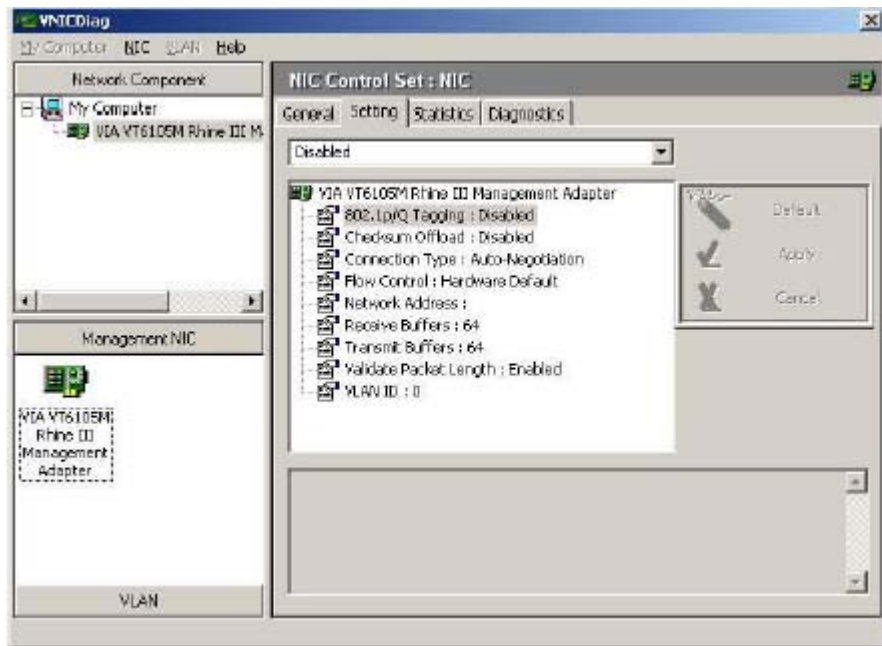
General

Display the basic information of the NIC. (e.g. MAC Address, Link Speed, Duplex Mode, ...)



Setting

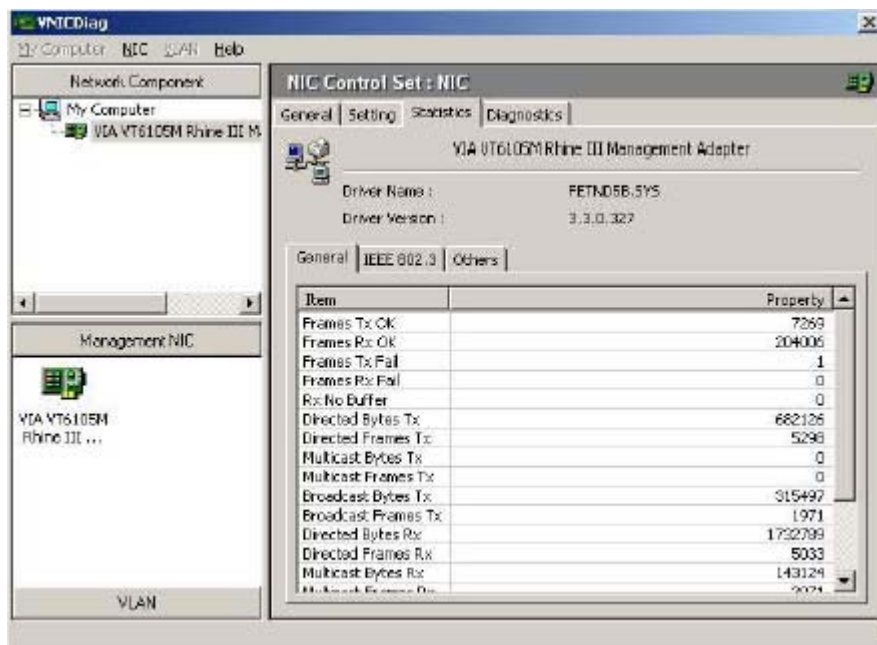
Display and set the parameters for the NIC (e.g. Connection Type...).



Note: Some of the functions are only for FE605M. (e.g. 802.1p/Q Tagging, Checksum Offload, VLAN ID)

Statistics

Display all the statistics information of the NIC (e.g. counter of frames with Tx OK, counter of frames with Rx OK...).



Diagnostics

Diagnose the hardware functionality. (e.g. MAC registers read/write test, PHY registers read/write test, ...)



About

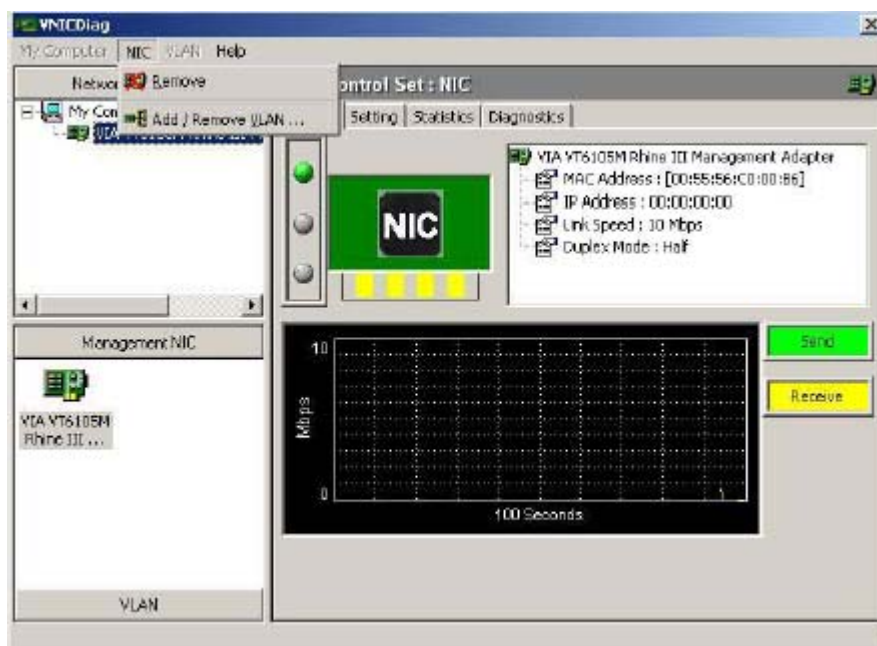
Manufacture contact information.



➤ **Advanced Management Functions(Only For FE605M)**

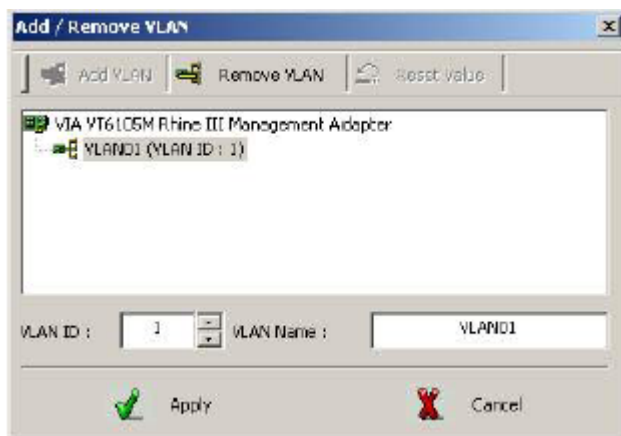
VLAN settings

VLAN setting in NIC Control Set only supported in management adapters (e.g. FE605M).

Add/Remove VLAN

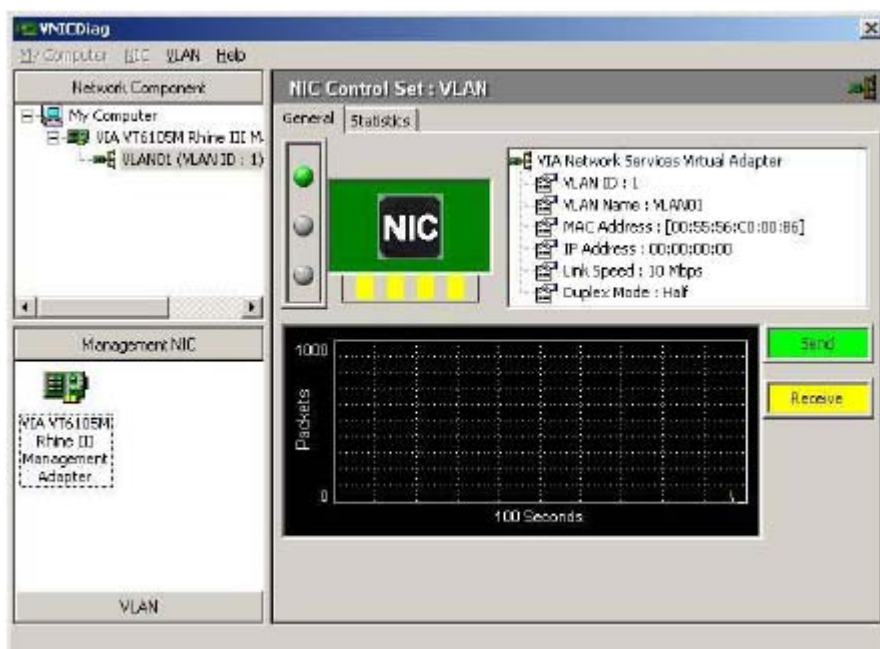
Setting for add/remove VLAN

User should specify VLAN ID and VLAN name in the dialog box.



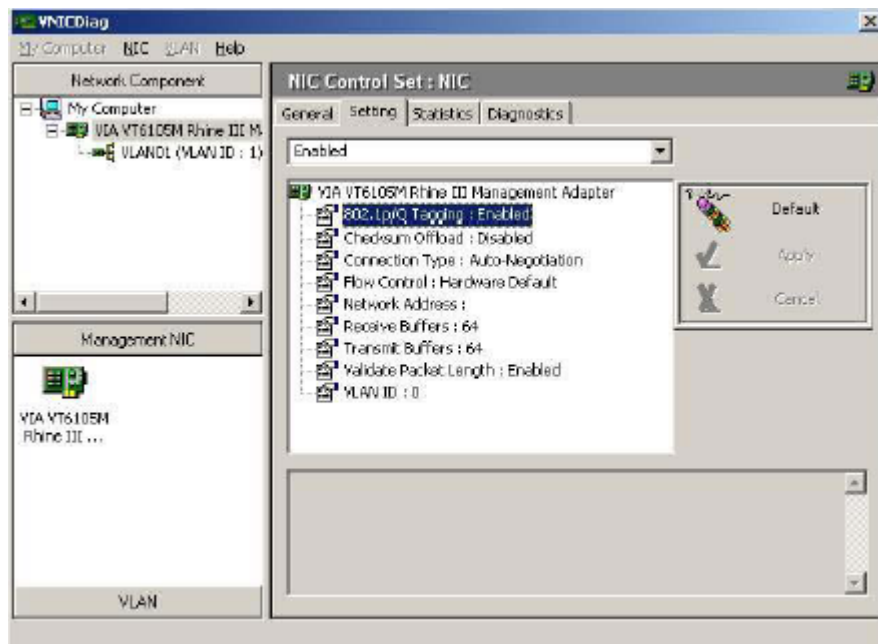
VLAN01 (VLAN ID = 1) added

VLAN01 (VID = 1) will be displayed in VLAN area in NIC Control Set.

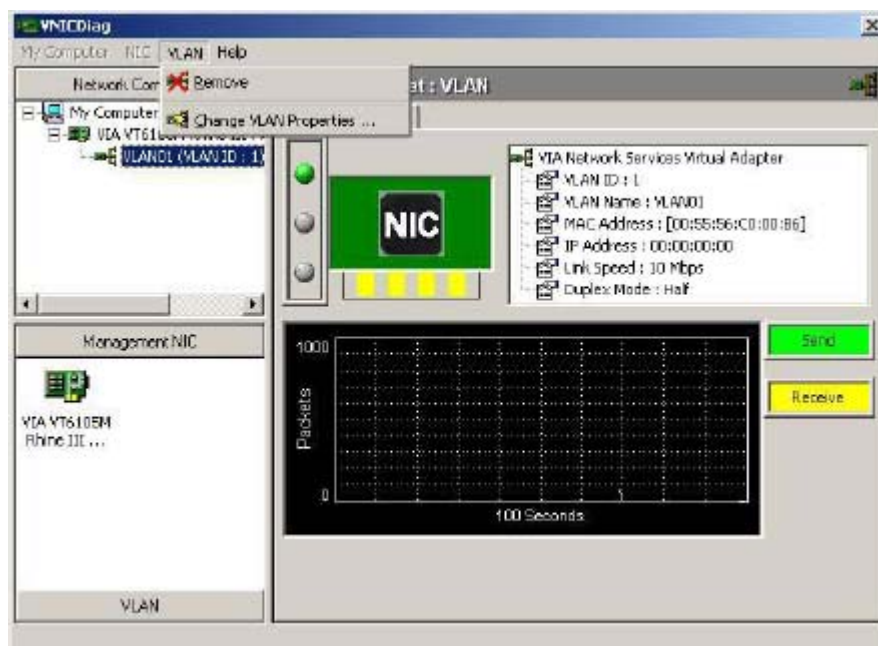


Driver setting changed by NIC Control Set

NIC Control Set will enable 802.1p/Q Tagging automatically if VLAN is created in VT6105M:



Remove VLAN/Change VLAN property



8. Limited Warranty

1-Year Warranty

Gigabyte warrants to the original consumer/purchaser that the adapter product free from defects in material and workmanship for no limited time from the original manufactory shipment date. This warranty does not cover the adapter product if it is damaged in the process of being installed or improperly used.

Gigabyte may replace or repair the adapter product with either new or reconditioned parts. Repaired or replaced adapter products will be returned to you at the same revision level as received or higher at Gigabyte's option. Gigabyte reverses the right to replace discounted adapter products with an equivalent generation adapter product.

KEEP THIS STUB FOR YOUR PURCHASING RECORD

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Model:	
Serial:	
Date of Purchase:	
Place of Purchase:	
From Whom:	
Distributor:	