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

http://www.gigabyte.com.tw

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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.

# <u>Precautions for Products With Modems, Telecommunications, or</u> <u>Local Area Network Options</u>

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 resent 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.

### <u>R&TTE Directive (applicable to products fitted with European modems)</u>

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
	On	Ethernet Link active
Link/ACT	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	Hardware Checksum off Loading(IP, TCP, UDP)
for FE605M	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:

## <u>GN-FE605</u>

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

## <u>GN-FE605M</u>

\$\langle 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 5for 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

- $\checkmark \qquad \text{Microsoft windows 95 } \ 98 \ \text{ME}$
- ✓ Microsoft windows NT4.0 \ NT3.51
- ✓ SCO Unix 5.04
- ✓ Linux Driver

- ✓ Microsoft windows  $2000 \setminus XP$
- ✓ Windows for Workgroup 3.11
- ✓ Unixware 7

 $\checkmark \quad FreeBSD \ 3.2 \setminus 4.x$ 

*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.

Network			? ×
Identification Se	rvices Protocols	Adapters Bind	lings
Network Adapte	s:		
■\$*(1) Intel(R) F	'RO/100+ Manag	ement Adapter	
Add	<u>R</u> emove	Properties	<u>U</u> pdate
	0+ Management /	Adapter (Bus 0 Slo	t 14]
		OK	Cancel

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

Select No	etwork Adapter ?	×
<b>H</b>	Click the Network Adapter that matches your hardware, and then click OK. If you have an installation disk for this component, click Have Disk.	
<u>N</u> etwork	Adapter:	
SCo	om 3C508 ISA 16-bit Ethernet Adapter	
💷 💷 3Co	om Etherlink II Adapter (also II/16 and II/16 TP)	3
🗾 💵 3Co	om Etherlink III ISA/PCMCIA Adapter	
🗾 💵 3Co	om EtherLink III PCI Bus-Master Adapter (3C590)	
🗾 💵 3Co	om Etherlink16/EtherLink16 TP Adapter	-
BB on-	em East Etherl ink DCI 10/100BASE T Adapter (20595)	
	<u>H</u> ave Disk	1 I
		-
	OK Cancel	

*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.

Insert Dis	k	×
F	Insert disk with software provided by the software or hardware manufacturer. If the files can be found at a different location, for example on another drive type a new path to the files below.	OK Cancel
	E:	

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

Select OEM Option 🛛 🕅
Choose a software supported by this hardware manufacturer's disk.
VIA Rhine Family Fast Ethernet Adapter Driver
OK Cancel <u>H</u> elp

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

Windows NT Setup	×
Copying: ntutil.dll	
To: D:\WINNT\System32	
50%	
Cancel	

*Step8*. Check the "VIA VT6105 Rhine Ill Fast Ethernet Adapter" under "Network Adapters" and click the Close button.

Network ? ×
Identification Services Protocols Adapters Bindings
Network Adapters:
[1] Intel(R) PR0/100+ Management Adapter      [2] VIA VT6105 Rhine III Fast Ethernet Adapter
Add <u>R</u> emove <u>Properties Update</u> Item Notes: VIA Rhine Family Fast Ethernet Adapter
Close Cancel

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.

Microsoft TCP/IP Properties
IP Address DNS WINS Address Routing
An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.
Adapter: [2] VIA VT6105 Rhine III Fast Ethernet Adapter
© Obtain an IP address from a DHCP server
IP Address:         192.168.10.29
Subnet Mask: 255 . 255 . 255 . 0
Default <u>G</u> ateway:
A <u>d</u> vanced
OK Cancel Apply

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

Network	Settings Change
	You must shut down and restart your computer before the new settings will take effect.
_	Do you want to restart your computer now?
	<u>Yes</u> <u>N</u> o

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.

Found New Hardware	
<b>HR</b>	Ethernet Controller
Please w	vait

*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.

Found New Hardware Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< <u>B</u> ack <u>N</u> ext > Cancel

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

Found New Hardware Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy <u>d</u> isk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< <u>B</u> ack <u>N</u> ext > Cancel

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

Found New Hardware Wizard
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
Ethernet Controller Windows found a driver for this device. To install the driver Windows found, click Next.
e :\fetndis.inf
The wizard also found other drivers that are suitable for this device. To view a list of these drivers or install one of these drivers, select the following check box, and then click Next.
< <u>B</u> ack <u>Next</u> > Cancel

*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-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.

Add New Hardware Wiz	ard
	<ul> <li>What do you want Windows to do?</li> <li>Search for the best driver for your device. (Recommended).</li> <li>Display a list of all the drivers in a specific location, so you can select the driver you want.</li> </ul>
	< <u>B</u> ack Next > Cancel

*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.

Add New Hardware Wizard		
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search. Floppy disk drives CD-ROM drive Microsoft Windows Update Specify a location: E:\WIN98	
	< <u>B</u> ack Next > Cancel	

*Step5*. Click on the **Next** button.

Add New Hardware Wizard				
	Windows driver file search for the device:			
	VIA VT6105 Rhine III Management Adapter			
	Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.			
🏽 🍪 🍣	Location of driver:			
	E:\FETNDIS.INF			
	< <u>B</u> ack Next > Cancel			

Step6. Windows98 starts copying the files. If it asks for certain files on Windows98 CD-ROM, insert your Windows98 CD-ROM and specify a path. (If Drive E is your CD-ROM drive, enter e:\win98.)

Insert Dis	k	$\times$
8	Please insert the disk labeled "Windows 98 CD-ROM", and then click OK	
	OK	

*Step7*. After the file copy has completed, click on the **Finish** button.



*Step8.* 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.

Network	Settings Change
?	To finish setting up your new hardware, you must restart your computer Do you want to restart your computer now?
	<u>Yes</u> <u>N</u> o

### (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.

Network			? ×
Identification Se	rvices   Protocols	Adapters Bin	idings
Network Adapter	18:		
■₽ <mark>[1] Intel(R) F</mark>	°RO/100+ Manag	ement Adapter	
<u>A</u> dd	<u>R</u> emove	Properties	<u>U</u> pdate
Item Notes:			
Intel(R) PRO/10	10+ Management /	Adapter (Bus O SI	ot 14]
		OK	Cancel

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

Select No	etwork Adapter
<b>HE</b>	Click the Network Adapter that matches your hardware, and then click OK. If you have an installation disk for this component, click Have Disk.
<u>N</u> etwork	Adapter:
■2 3Co ■2 3Co ■2 3Co ■2 3Co	m 3C508 ISA 16-bit Ethernet Adapter m Etherlink II Adapter (also II/16 and II/16 TP) m Etherlink III ISA/PCMCIA Adapter m EtherLink III PCI Bus-Master Adapter (3C590) m Etherlink16/EtherLink16 TP Adapter m Etherlink16/EtherLink16 TP Adapter
	<u>H</u> ave Disk
	OK Cancel

*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.

Insert Dis	k	×
f	Insert disk with software provided by the software or hardware manufacturer. If the files can be found at a different location, for example on another drive type a new path to the files below.	OK Cancel
	E:	

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

Select OEM Option 🛛 🕅
Choose a software supported by this hardware manufacturer's disk.
VIA Rhine Family Fast Ethernet Adapter Driver
OK Cancel <u>H</u> elp

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

Windows NT Setup	×
Copying: ntutil.dll	
To: D:\WINNT\System32	
	,
50%	
Cancel	

*Step8*. Check the "VIA VT6105M Rhine Ill Fast Ethernet Adapter" under "Network Adapters" and click the Close button.

Network			? ×
Identification Se	rvices   Protocols	Adapters Bir	ndings
Network Adapte	rs:		
[1] Intel(R) PR0/100+ Management Adapter [2] VIA VT6105M Rhine III Management Adapter			
<u>A</u> dd	<u>R</u> emove	Properties	<u>U</u> pdate
<u>I</u> tem Notes: VIA Rhine Famil	y Fast Ethernet Ad	Japter	
		Close	Cancel

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.

Microsoft TCP/IP Properties
IP Address DNS WINS Address Routing
An IP address can be automatically assigned to this network card by a DHCP server. If your network does not have a DHCP server, ask your network administrator for an address, and then type it in the space below.
Adapter:
[2] VIA VT6105M Rhine III Management Adapter
<ul> <li><u>O</u>btain an IP address from a DHCP server</li> <li><u>Specify an IP address</u></li> </ul>
IP Address: 192 . 168 . 10 . 20
Subnet Mask: 255 . 255 . 0
Default <u>G</u> ateway:
A <u>d</u> vanced
OK Cancel Apply

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

Network	Settings Change
⚠	You must shut down and restart your computer before the new settings will take effect.
	Do you want to restart your computer now?
	<u>Yes</u>

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.

Found Ne	w Hardware
<b>HR</b>	Ethernet Controller
Please w	vait

*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.

Found New Hardware Wizard		
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.		
This wizard will complete the installation for this device:		
VIA VT6105M Rhine III Management Adapter		
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next. What do you want the wizard to do?		
·		
Search for a suitable driver for my device (recommended)		
<ul> <li>Display a list of the known drivers for this device so that I can choose a specific driver</li> </ul>		
< <u>B</u> ack <u>N</u> ext > Cancel		

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

Found New Hardware Wizard	
Locate Driver Files Where do you want Windows to search for driver files?	
Search for driver files for the following hardware device:	
VIA VT6105M Rhine III Management Adapter	
The wizard searches for suitable drivers in its driver database on your com any of the following optional search locations that you specify. To start the search, click Next. If you are searching on a floppy disk or CD insert the floppy disk or CD before clicking Next.	
Optional search locations: Floppy disk drives CD-ROM drives	
□ <u>Specify a location</u>	
Microsoft Windows Update	
< <u>B</u> ack <u>N</u> ext >	Cancel

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

Found New Hardware Wizard
Driver Files Search Results The wizard has finished searching for driver files for your hardware device.
The wizard found a driver for the following device:
VIA VT6105M Rhine III Management Adapter
Windows found a driver for this device. To install the driver Windows found, click Next.
e :\fetndis.inf
< <u>B</u> ack Cancel

*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.

Add New Hardware Wiz	ard
	<ul> <li>What do you want Windows to do?</li> <li>Search for the best driver for your device. (Recommended).</li> <li>Display a list of all the drivers in a specific location, so you can select the driver you want.</li> </ul>
	< <u>B</u> ack Next > Cancel

*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.

Add New Hardware Wiz	ard
	Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search. Floppy disk drives CD-ROM drive Microsoft Windows Update Specify a location: E:\WIN98
	< <u>B</u> ack Next > Cancel

*Step5*. Click on the **Next** button.

Add New Hardware Wizard		
	Windows driver file search for the device:	
	VIA VT6105M Rhine III Management Adapter	
	Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.	
<b>*</b>	Location of driver:	
	E:\FETNDIS.INF	
Ť		
	< <u>B</u> ack Next > Cancel	

Step6. Windows98 starts copying the files. If it asks for certain files on Windows98 CD-ROM, insert your Windows98 CD-ROM and specify a path. (If Drive E is your CD-ROM drive, enter e:\win98.)

Insert Dis	k	×
8	Please insert the disk labeled "Windows 98 CD-ROM", and then click OK	
	OK	
*Step7*. After the file copy has completed, click on the **Finish** button.



*Step8.* 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.

Network	Network Settings Change 🛛 🕅				
?	To finish setting up your new hardware, you must restart your computer Do you want to restart your computer now?				
	<u>Yes</u> <u>N</u> o				

## (D) SNMP ONLY FOR GN-FE605M

## ∽ <u>Introduction</u>

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



#### ∽ <u>SNMP service operation</u>

### 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.

## ∽ <u>SNMP extension agent operation</u>

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.

Select Program Folder		×
Select Program Folder	Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue. Program Folders: VSNMF Existing Folders: Accessories Administrative Tools Statup VIA NIC ControlSet WinZip WS_FTP Server	
	< <u>B</u> ack <u>N</u> ext > Cancel	-



## 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.

## ∽ <u>MIB-II and RMON counter support</u>

## 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 uncast address.

19	IfOutNUcastPkts	Counter (32-bit), Read-Only	The total number of packets that higher-protocols requested be transmitted to an non-uncast 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	etherStatsPkts1024to1518Octet s	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.) • 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	HistoryControlBucketsRequeste d	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(13600), 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.) • 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	Gague (010000), 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	<ul> <li>The method of sampling the selected variable and calculating the value to be compared against the thresholds(The 2 possible value is listed below.)</li> <li>absoluteValue(1) the value of the selected variable will be compared directly with the thresholds at the end of the sampling interval.</li> <li>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.</li> </ul>
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

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		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.) • 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.) • none(1)

			<ul> <li>log(2)</li> <li>snmp-trap(3) send an SNMP trap</li> <li>log-and-trap(4)</li> </ul>
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.) • 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 (0255), Read-Write	An implementation dependent description of the event that activated this log entry.

### (E) NIC Control Set for GN-FE605(M)

## ∽ <u>Introduction</u>

#### **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



## ∽ <u>Installation</u>

## 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.

### 

## 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

Hysic Computer       Dism       Property         Computer Name       TEVTV-6F-W2K       User Name       TEVTV-6F-W2K         User Name       Service       Client       User Name       Tevtront.         Monogement NIC       Protocol       Service       Client       User Name         WAN Minicet (IP)       Tevtront.       Tevtront.       Tevtront.       Tevtront.         WAN Minicet (IP)       Tevtront.       Tevtront.       Tevtront.       Tevtront.       Tevtront.         WIA VT6105M       Property       H/W ID       Ms. ptiminport.       Tevtront.       Tevtront.       Tevtront.         WIA VT6105M       Property       H/W ID       Ms. ptiminport.       Tevtront.       Tevtront.       Tevtront.       Tevtront.         WIA VT6105M </th <th>Network Component</th> <th>NIC Control Set</th> <th>: My Computer</th>	Network Component	NIC Control Set	: My Computer
IDEm         Property           VIA VT6105M         H/W ID         ms.pbinniport           Rhine III         Display Name         Direct Parallel           Bind Name         (Y4007206-8F36-4893-9925-080A1F745457)           PriP DevNode ID         RODTI/MS_PTIMINIPORT(0000           Consenert GUID         (Y400226-8F36-4893-9925-080A1F745457)           Class GLID         (+0366972-8525-11CE-6FC1-080028E10318)		Comp User Netw 0.5.	suter Name TEVID-6F-W2K Name tevinchen ork Group Windows 2000 (Professionel)
Bine Jit         Display Name         Direct Paralel           Bind Name         (74007206-8F36-4893-9926-0B0A1F745457)           PhP Devhide ID         ROOTIMS_PTI/MNERT(0000           Component GUD         (74007206-8F36-4893-9926-0B0A1F745457)           Class GUD         (40368772-8225-1)CE-8FC1-080028E10338)		NA VIG105M F	Nhine III Management Adapter 🔺
Bine III         Display Name         Direct Parallel           Bind Name         (74002206-8F36-4893-9925-080A1F745457)           PriP DevNode ID         ROOTINS_PT0/INNPORT(0000           Component GUID         (74002206-8F36-4893-9925-080A1F745457)           Class GUID         (40365972-6325-110E-6F1-080028E10318)		NAN Miniport (	Rhine III Management Adapter 🔺 (P) 1 2TP) 🗶
PrP DevNode ID         ROOT\MS_PTI/UNIPORT(0000           Component GUID         (74007206-8F36-4893-9926-0B0A1F745457)           Class GUID         (4036E972-E325-11CE-8F01-080028E10318)	Management NIC	RPVIA VT6105MF RPWAN Miniport ( RPWAN Miniport ( Rem	Ahine III Management Adapter   IP)  I 2TP  Property
Component GUID (74007206-8F36-4893-9926-0B0A1F745457) Class GUID (4036E972-E325-11CE-8FC1-080028E10318)	Management NIC	BYVIA VT6105M F BYWAN Miniport ( BYWAN Miniport ( Rem H/W ID	Rhine III Management Adapter
Class GLID (4D36E972-E325-L1CE-EFCL-080028E10318)	Management NIC	WAN WIG105MF WAN Minport ( Rem H/W ID Display Name Bind Name	Rhine III Management Adapter  P) Property Ms.ptiminport Direct Parallel
	Management NIC	Weight A VT6305M F     WAN Miniport (     WWAN Miniport (     WWAN Miniport (     WWAN Miniport (     Wight (     WAN Miniport (     Wight (     WAN Miniport (	Ahine III Management Adapter
Characteristics [NGF_NOT_USER_REMOVABLE] [NCF_HIDDEN] [NGF_VIRTUA	Management NIC	WYDA VT6305M F WAN Minipot ( WWAN Minipot ( BWWAN Minipot ) Biglay Marie Bind Name PhP DevNade (D) Component GUD	Rhine III Menegement Adapter         Image: Comparison of the comparis
	Management NIC	WAN VT6105MF WAN Miniport ( Rem H/W ID Display Name Bind Name PinP DexNode ID Component GUID Class GLID	Phine III Management Adapter         Image: Comparison of Comparison

Protocol: All network protocols currently installed in this computer

Network Component	NIC Control Set : My Computer	
E 🚑 My Computer - 😅 VIA VT6105M Rhine III M	User Network Versi	puter Name TEV/0-6F-W2K Name bevinchen vork Group Windows 2000 (Professional) ion 5.00.2195 Service Pack 2
Management NIC	NEC Protocol	Service Clent
	Thernet Proto	col (TCP/JP)
Management NIC	Thernet Proto	col (TCP/IP)
Management NIC	ารี Internet Proto มีโLayer 2 Tunnal มีโMessane-priori	col (TCP/IP)  ing Protocol  thd TCP/IP Protocol (SMB session)
Management NIC	Thernet Proba Layer 2 Tunnal Memory HJW ID Display Name	col (TCP/IP)  ing Protocol  red TCP/IP Protocol  Property
Management NIC	Toternet Protoci Totayer 2 Tunnel Totayer 2 Tunnel Totayer 2 Tunnel Totayer 2 Tunnel Bind Name	col (TCP/IP)  ing Protocol  red TCP (IP Protocol (SMB session)  Property  ms_topip Jatemet Protocol (TCP/IP)  TCpp
Menagement NIC	Therest Proto Theyer 2 Tunnel These Horn Display Name End Name Component GUID	cel (TCP/IP)  ing Protocol  fred TCP/IP Protocol  Freperty  ms_topp Internet Protocol (TCP/IP)  Tcpp (6EA/CS26-6FCD-HD1B-9E17-829DA26109FB)
Management NIC	Thernet Proto Dayer 2 Tunnal Thessane-nrien Bom HJW ID Display Name Bind Name Component GUID Class GUID	col (TCP/IP) ing Protocol ind TCP/IP Enchand (SMB session)  Property ms_topp Internet Protocol (TCP/IP) TCpp (6EAC5326-6FCD-4D1B-9E17-829DA26109FB) (4D36E975-E325-L1CE-EPCL-080028E10318)
Management NIC	Thermet Proto Layer 2 Tunnel Thessane-minn Rem H/W ID Display Name Bind Name Component GUID Class GUID Description	col (TCP/IP) ing Protocol ind TCP/IP Protocol (SMB session)  Property ms_topin Internet Protocol (TCP/IP) TCPIn {664/C5326-6FCD-4018-9E17-829DA26109FB} {40365975-E325-L1CE-6PCL-680028E10318} Transmission Control Protocol/Internet Protocol, The default will
Management NIC	Thernet Proto Dayer 2 Tunnal Thessane-nrien Bom HJW ID Display Name Bind Name Component GUID Class GUID	col (TCP/IP) ing Protocol ind TCP/IP Enchand (SMB session)  Property ms_topp Internet Protocol (TCP/IP) TCpp (6EAC5326-6FCD-4D1B-9E17-829DA26109FB) (4D36E975-E325-L1CE-EPCL-080028E10318)



Service: All network services currently installed in this computer



Network Component	NIC Control Set : My Computer	
My Computer     WIA VT61DSM Rhine III M	Dam         Property           Computer Name         TEVID/6F-W2K           User Name         tevinchen           Network Group         0.5.           Vindows 2000 (Professionel)           Version         5.00.2195 Service Pack 2           NLC         Protocol           Service         Clerit           Image: Clent for Microsoft Networks	
		soft Networks
Monagement NIC	Clent for Micro	soft Networks Property
Menagement NIC	Clent for Micro Rem HJW ID	soft Networks
	Clent for Micro	Property ms_msdient
Menagement NIC	Clent for Micro Rom H/W ID Display Name	soft Networks Property ms_msdient Client for Microsoft Networks LanmarWorkstation
Menagement NIC	Clent for Micro Rem H/W ID Display Name Bind Name	soft Networks Property ms_msdient Client for Microsoft Networks LanmarWorkstation
Monagement NIC	Client for Micro Rem H/W ID Display Name Bind Name Component GUID	Property ms_msdient Client for Microsoft Networks LannarWorkstation (569BD16=D219-4281-AE74-E7E1A61F5CFF)
Management NIC	Elent for Micro Rom HJW ID Display Name Bind Name Component GUID Class GUID	Property Ins_madient Client for Microsoft Networks LamarWorkstation (569ED1E9-D219-4201-AE74-E7E1A61F5CFF) (4036E973-E325-11CE-EFC1-08002BE10318)

#### <u>General</u>

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



#### <u>Setting</u>

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)

## <u>Statistics</u>

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

Network Component	NIC Control Set : NIC	
H 🛃 My Computer	General Setting Statistics Di	agnostics
age vor erstucer where ht		5105M Rhine III Management Adapter
	Driver Name :	FETND5B.5YS
	Driver Version :	3.3.0.327
	P Rem Prames Tx OK	Property
	General IEEE 802.3 Others	
		Property 🔺
14		
Management NIC	Frames Rx OK	204005
PROVING NO.	Frames Tx Fail	1
	Frames Rx Fail	0
A started and a started at the start	Rx:No Buffer	0
A YT6105M	Directed Bytes Tx	682126
hine III	Directed Frames Tx	5296
	Multicast Bytes Tx	0
	Multicast Frames Tx	0
	Broadcast Bytes Tx	315497
	Broadcast Frames Tx	1971
	Directed Bytes Rx	1732799
	Directed Frames Rx	5033
	Multicast Bytes Rx	143124
	1 Mukinash Ferman Din	

## **Diagnostics**

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

VNICDiag			2
My Computer NEC VEAN Help Network Component	NIC Control Set : NIC	_	-
금 🛃 My Computer - 페킹 VIA VT6105M Rhive III M	General Setting Statistics Diognostics		
Management NIC	Directrose Item	9.etus 	Pass/Fai 0/0 0/0 0/0 0/0
VCA VT6105H Rhine UU Management Adapter Adapter VLAN	Continuous		Times

## <u>About</u>

Manufacture contact information.

NIC Contro	ol Set Version 1.11
	Company Website http://www.via.com.tw/ Products
Ĺ	http://www.via.com.tw/en/Networking/networking.jsp Driver http://www.viaarena.com/?PageID=71#an
	. √ ок

## ∽ 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.

dd / Remo				x
Add V	LAN 🛁 Remov	Ve YLAN 🖾 🗧	esst value	
🗊 VIA VT61	05M Rhine III Mana	igement Aidapter		
⇒E YLAN	01 (YLAN 1D : 1)			
	1 2 2		VLAN01	_
AAN ID :		Vituarne :	VLANDI	
	<u>ه</u>		90	
	Apply		Cancel	

## 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:







# 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.

Customer:	
Phone No:	
Address:	
Email:	
Model:	
Serial:	
Date of Purchase:	
Place of Purchase:	
From Whom:	
Distributor:	

## **KEEP THIS STUB FOR YOUR PURCHASING RECORD**