

Garnet ADSL Modem PCI GAN-1030

User's Guide

ver 3.3



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FCC NOTICE

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.
OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITION:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDERSIRED OPERATION.

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 in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio

communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE : The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

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Chapter 1. Overview

1.1 Introduction

Garnet ADSL(Asymmetric Digital Subscriber Line) Modem GAN-1030 is an internal PC card(PCI) that provides users faster connectivity than conventional access technologies by offering up to 8 Mbps of downstream line rate and up to 640 Kbps of upstream over existing phone lines, which is asymmetric.

It also provides interoperability and industry standards and protocols. Garnet ADSL Modem supports either G.992.1(G.dmt) or Splitterless G.992.2(G.lite) standards via software upgrades.

Garnet ADSL Modem is suitable to be installed into PC, with Plug and Play function.

1.2 Features

- Using Garnet ADSL Modem, you will experience stable, high speed Internet access and can connect to other multimedia service networks that ADSL delivers over existing PSTN copper wires.
- Garnet ADSL Modem, using existing phone lines, can help greatly reduce cost for installing new lines, i.e. optical cables, for high-speed network transmission.
- Compared with conventional dial-up modems, Garnet ADSL Modem provides high-speed network access always on, irrespective of subscriber numbers. You can simultaneously have phone conversation.
- Garnet ADSL Modem offers multiple applications such as Internet access, messenger service, E-mail, file transfer, data download and upload and etc.
- Garnet ADSL Modem is a customer premise terminal, co-operating with Central Office equipments. So, the Central Office can effectively manage subscriber network.
- Garnet ADSL Modem users can easily monitor with network monitoring program, which enables users to see speed of data streams, supports physical connect and disconnect and diagnose hardware malfunctioning.

1.3 Specifications

- Dimension : 145(L)mm X 75(W)mm X 21(H)mm
- Operating Temperature : 0~45 °C
- Operating Humidity : 10% to 90%, non-condensing

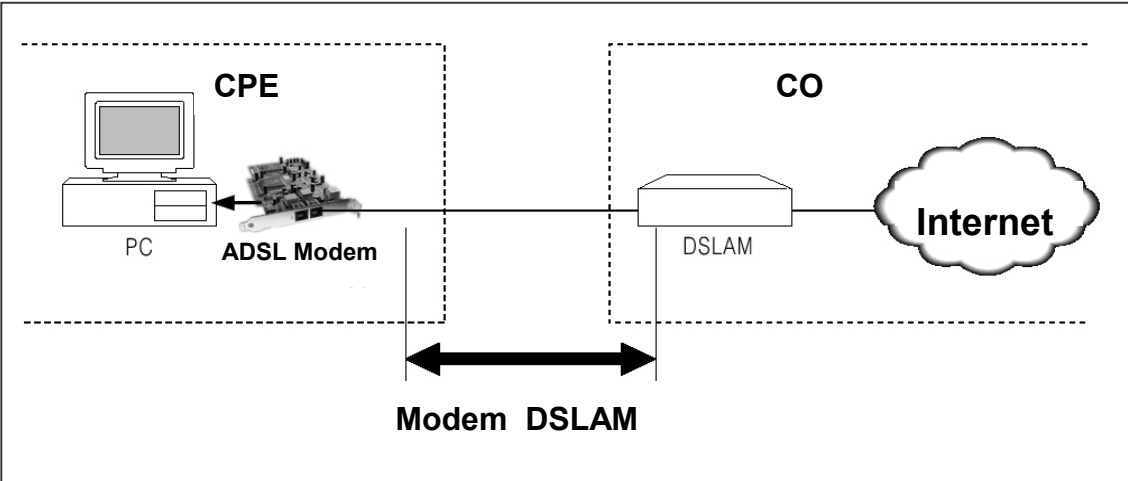
- Power Consumption: 5.35W
- Frequency Range : 0.11~1.1MHz(Down) / 30KHz~110KHz(Up)
- Modulation : DMT (Discrete Multi Tone)
- Data Rates : Downstream : Max. 8Mbps
Upstream : Max. 640Kbps
- Interface : PCI Specification 2.1 or higher
- Minimum System Requirements :
 - Pentium-based PCI bus PC, Pentium 400MHz or higher PCI slot , 32M bytes RAM
 - Monitor Minimum Resolution of 1024 x 768
 - CD-ROM drive
 - 30M bytes for Software only
- Virtual Path & Channel : 8bits VPI, 16bits VCI Address
- WAN Protocol : RFC1483, RFC2364

 **Note : Data Rates can differ according to distance between DSLAM and modem, wire gauge, PC specification and other network environments.**

Trademark Notification

- ▶ Garnet™ is a registered trademark of Garnet Systems Co., Ltd.
- ▶ Windows™ and Internet Explorer™ is a registered trademark of Microsoft Corporation.
- ▶ Conexant™ is a trademark of Conexant Systems Inc.

 <Figure 1. One example for DSLAM to Modem>



Chapter 2. Installation

2.1 Before Installation

Please be advised that if you do not yet subscribe phone service, it is impossible to get ADSL service. In this case, please contact your local service provider to have new telephone service.

And please be informed that telephone service providers do not service all ADSL applications. Please contact your local Central Office on the applications and ADSL service providers may support different service protocols. Prior to installation, please contact your service providers for Service Protocols.

Followings are List of the directories of the Installation Driver for each Operating System. Please refer the locations of the Driver for installations.

A. Under RFC2364 (PPPoA) Service

- For Windows 95 : D:\Drivers\PPPoA\Win95(No Support)
- For Windows 98/SE : D:\Drivers\PPPoA\Win98
- For Windows NT4.0 : D:\Drivers\PPPoA\Winnt40(No Support)
- For Windows 2000 : D:\Drivers\PPPoA\Win2K

B. Under RFC1483 (PPPoE) Service

- For Windows 95 : D:\Drivers\PPPoE\Win95
- For Windows 98/SE : D:\Drivers\PPPoE\Win98
- For Windows NT4.0 : D:\Drivers\PPPoE\Winnt40
- For Windows 2000 : D:\Drivers\PPPoA\Win2K

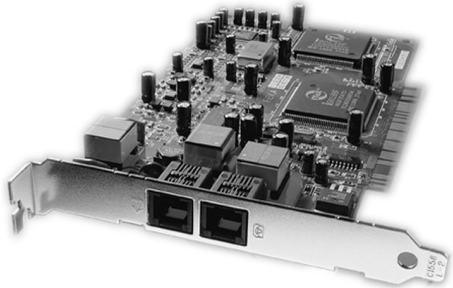
C. Values to check from your Service Provider

- VPI
- VCI
- Framing
- User ID & Password

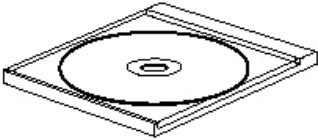
2.2.Delivery Check

Following materials are provided in the package.

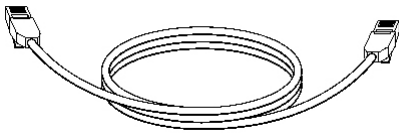
A. Garnet ADSL Modem GAN-1030



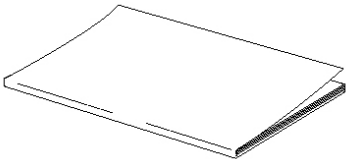
B. Driver CD



C. RJ 11 cable

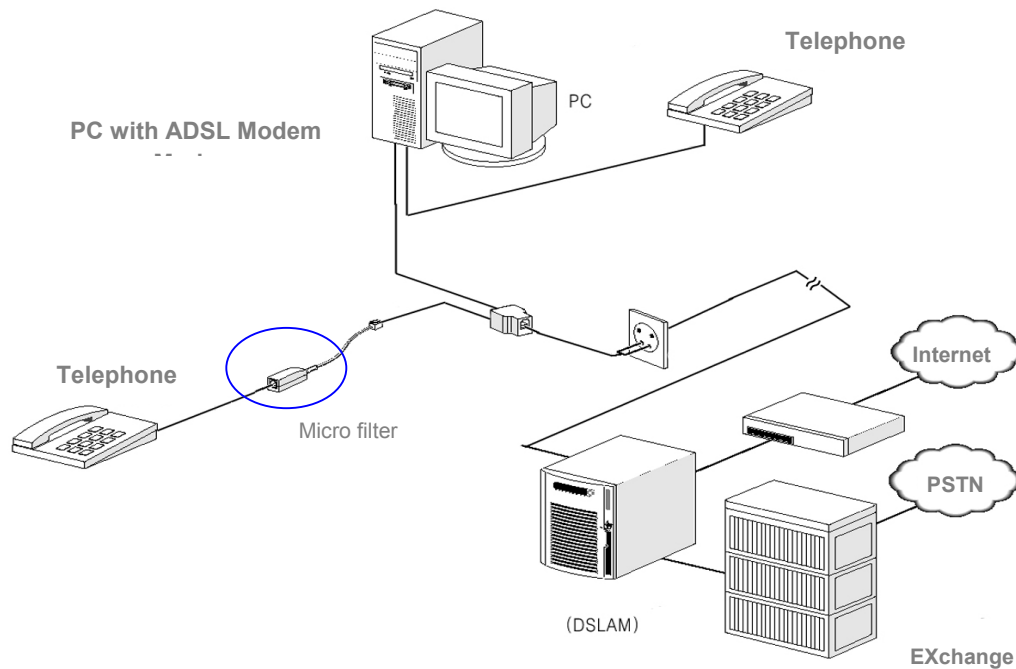


D. User's Guide



A micro filter is built in the modem. If you have two or more phones in one phone line, one or more Micro filters are needed to prevent signal disturbance. To purchase micro filters, please contact your service provider.

<Figure 2. One example for ADSL Network Configuration>



2.3 GAN-1030 PCI Card Installation

1. Turn off your computer and all attached peripheral devices (printer, monitor, etc.) and unplug them from the electrical outlet.

⚠ CAUTION : To avoid risk of electric shock, make sure your computer and all peripheral devices are turned off and unplugged.

2. Remove the cover of your computer. For specific instructions on this procedure, consult your system's user's guide.

3. Select one of the PCI expansion bus slots (Generally, PCI slots are white and located on the lower part of mother boards). Remove and save the screw on the slot cover. You will need it to secure the modem in place.

4. Hold the modem upright by the metal edge, and carefully slide it into the expansion slot. Gently apply pressure to the upper metal edge only, making sure it snaps into place.

5. When the modem is firmly in an expansion slot, fasten the modem into place with the screw that fits into the top notch of the metal bracket.

6. Carefully replace the computer cover in accordance with the instructions in your system's user's guide.

7. There are two modular telephone jacks on the bracket of the modem which connect the modem to a telephone line and to a telephone handset (optional: for users subscribed both ADSL and telephone service only).

Make the cable connections between the modem and the telephone line in the following order.

7-1 Plug one end of your modular telephone cord into the modem's jack marked . The cord will snap into place when the connection is made.

7-2 After the cord has been connected to the modem, plug the other end of the cord into the wall jack.

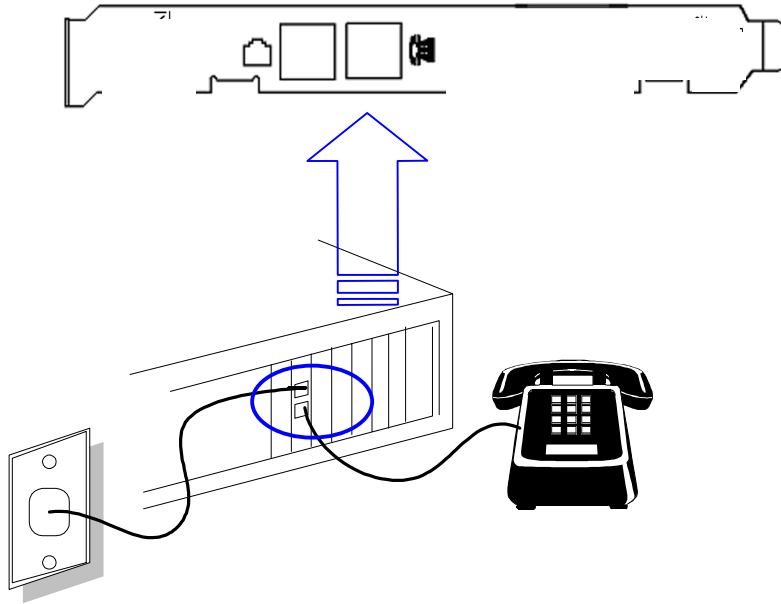
7-3 If you want to use a telephone on the same line, plug the cord from the telephone into the modem's jack marked as .

8. Plug in the power cables for the computer and all peripherals.

9. Turn ON your computer and verify everything has been reconnected properly.

10. Install modem driver provided according to the following section.

 **Figure 3. Illustration for ADSL modem Connection**



<Figure 3. Illustration for ADSL modem Connection>

2.4 Windows 98 SE Software Installation

NOTE: This procedure describes the installation of Garnet ADSL Modem on a new system. If you are reloading or upgrading a current installation, the existing Garnet drivers and supporting software should first be uninstalled.

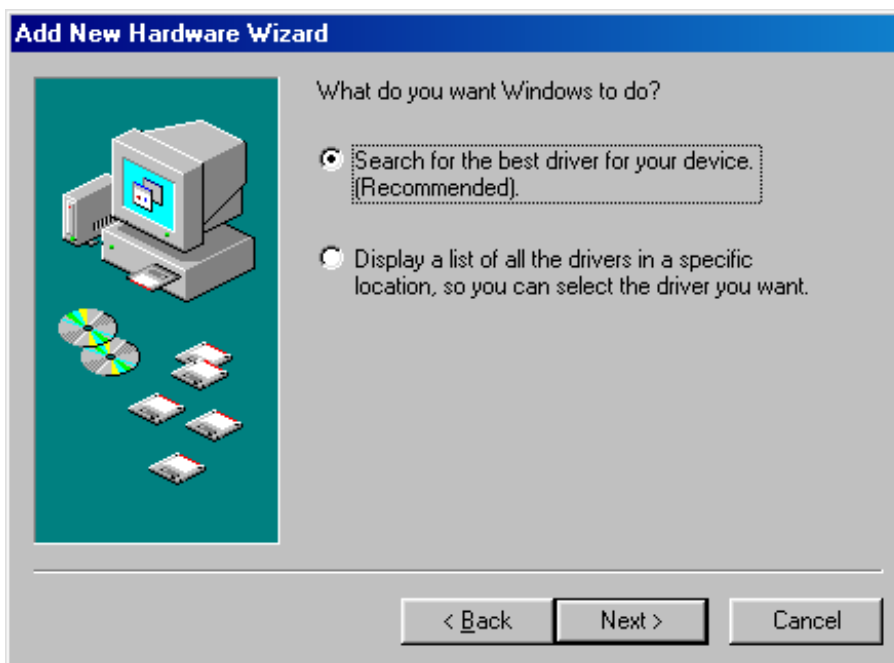
Window 98 SE will detect the Garnet hardware as three logical devices: PCI System Peripheral, and PCI ADSL LAN Adapter.

Garnet Software Installation

After the Garnet hardware has been installed and the PC cover replaced, turn the power on. Windows will detect Tigris as new hardware and will prompt you to install the related drivers. You should have the Garnet and Windows 98 SE CD-ROMs ready. During the installation, it may be necessary to swap the CD-ROMs in order to install the appropriate software.



1. Add New Hardware Wizard will automatically pop up. Click next.



2. Click Search for the best driver.. and click Next to proceed.



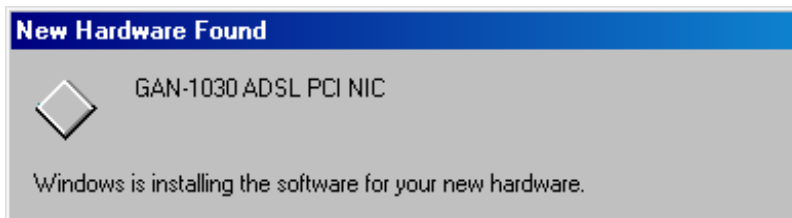
3. Insert installation driver CD and click Browse and select the directory according to the service protocol available by the ADSL service provider and O/S in your computer system.



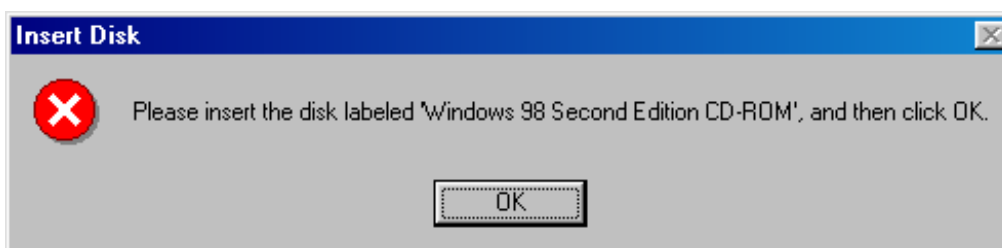
4. Correct driver program is found. Click Next in this picture.



5. Click Finish in this picture. Windows will direct next steps.



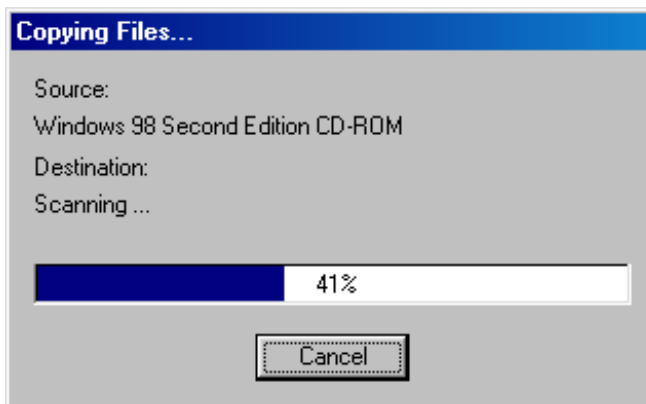
6. Windows is searching for the driver installation program required by the device.



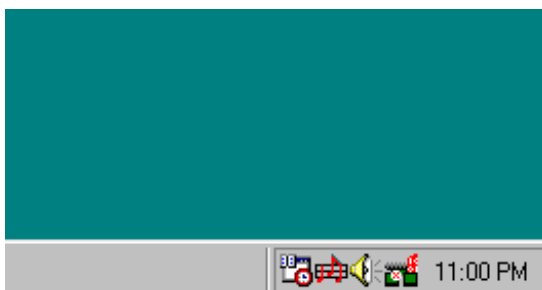
7. Please insert Windows 98 CD in the CDROM drive in this picture.



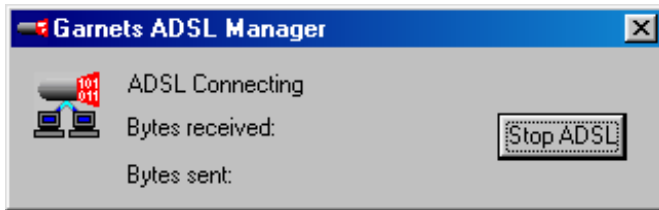
8. Click OK in this picture.



9. Windows is copying files from CDROM. Wait until all files are copied and driver program installation is finished.



10. When the driver installation program is properly installed, as shown in the picture, the green quadrangle icon will popped up on the system tray. Double click the icon.



11. The picture proves that the driver program is properly installed and working for the ADSL PCI Modem. Close the picture.

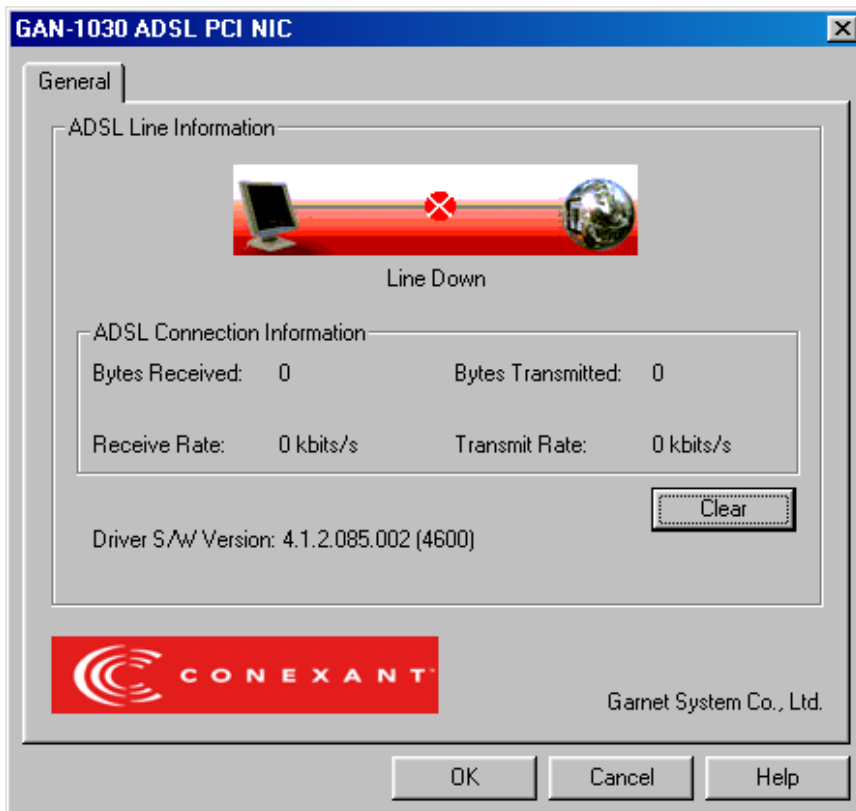
2.5 Running the Garnet ADSL Manager Program



1. Click My Computer and Control Panel.



2. You can find the Garnet ADSL Manager program icon in the picture. Double click the icon.



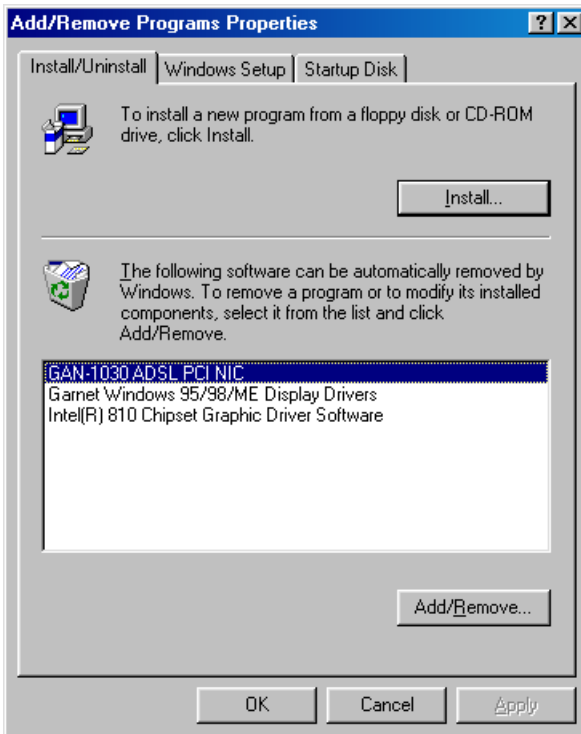
3. The program shows how the Garnet ADSL Modem is managed, data transmission speed and Driver program version. Click OK.

Chapter 3. Uninstalling the Software

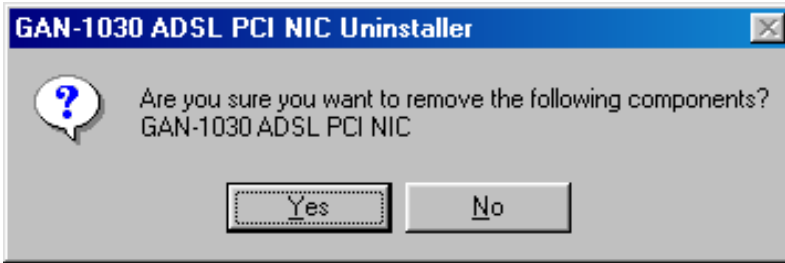
3.1 Uninstalling in the Windows 98



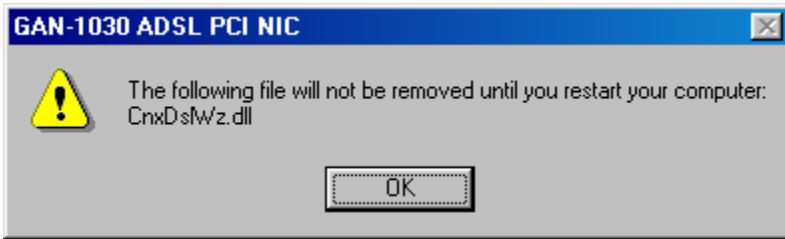
1. Click My Computer and Control Panel.



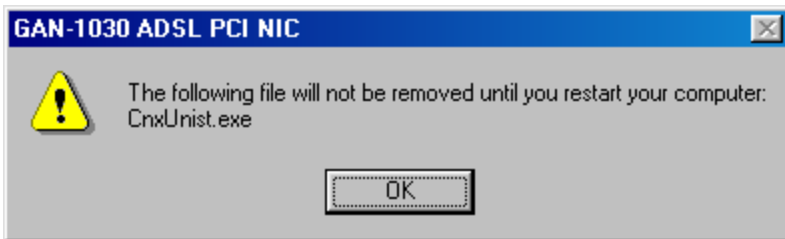
2. Click Install/Uninstall tab and select GAN-1030 ADSL PCI NIC.



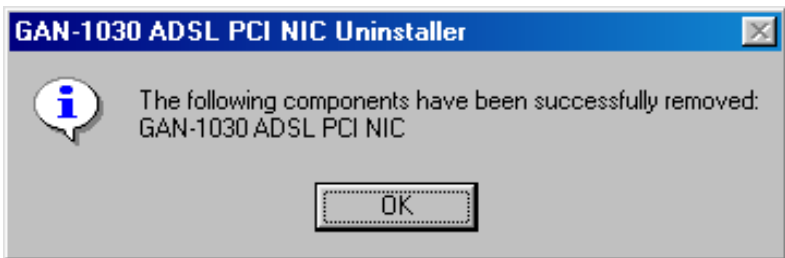
3. Windows will ask, before you remove the Driver installation program.



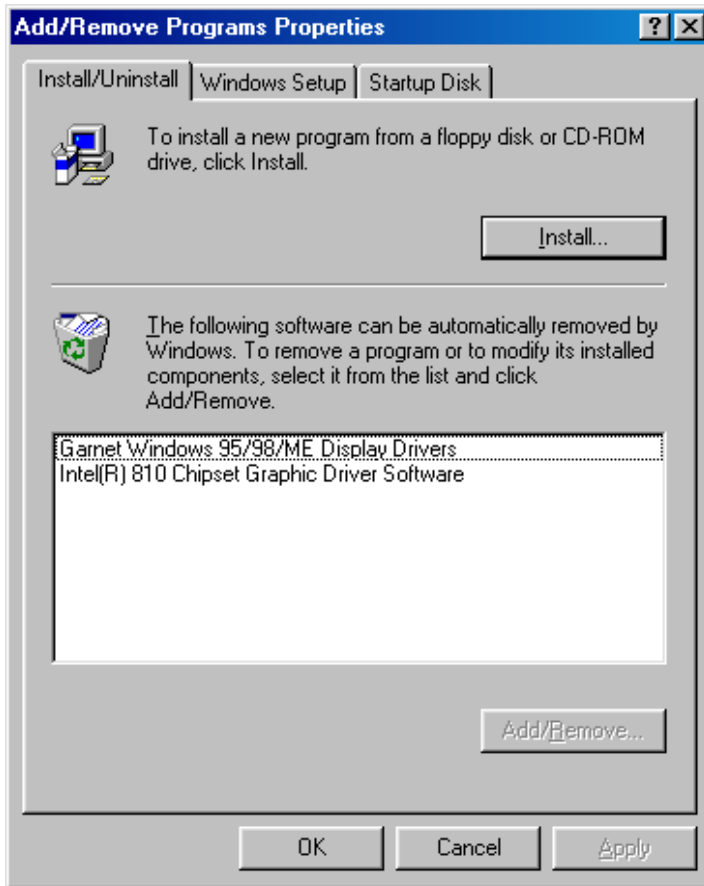
4. To be sure to make all files are completely removed from the system, click OK in this picture.



5. Click OK in this picture.



6. Click OK in this picture.



7. You can find the Driver Installation Program is completely removed. Close the Windows and reboot your computer to be sure to remove the Driver Installation Program.

Chapter 4. Appendix

4.1 Trouble-shooting

 *You would better know Modem Name, Modem No., Serial No. and what is the problem, and then ask help to your Service Provider in order to get solutions.*

Q. In installing modem in Windows 95/98, Plug-n-Play Dialog box is not showing.

A. PC does not recognize ADSL modem. In this case;

1. Modem card is most probably not securely fit into one of your PCI expansion slot or some alienated materials may be smeared in the metal edge. Check whether the modem card is firmly in an expansion slot. And try again.
2. If the same situation occurs, place the card into another PCI expansion slot.

Q. In transferring data from Driver CD during Plug-n-Play installation, you mistakenly canceled installation.

A. In this case, installation is abnormally closed. You can not perform Plug-n-Play function any more. To solve this problem, in this case you have to manually install driver;

1. Double click 'Control panel' and 'Network'. And click 'Add' and 'Have disk...' select Driver directory on the CD Rom. Installation will begin.

Q. When error message that 'cannot find ADSL Modem registry' comes out.

A. Registry value is damaged or deleted. Delete modem Driver in 'Control Panel', if any. And install Driver again.

Q. When error message that program is not working because a certain ADSL Modem program does not exist.

A. The certain Modem program is damaged or deleted. Delete modem Driver in 'Control Panel', if any. And Install Driver again

Q. When only left button of the status display icon in the system tray flashes blue?

A. Stop connecting and try several connections. If there is no response again, please contact your local service provider on ADSL line status and Modem setting values. And try again.

Q. If you would like to update driver?

A. Contact your local service provider.