WM610-M
54M Wireless LAM Module
OEM Guide

User's Manual

Rev 1.0

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference 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 communications. 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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this 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.

IMPORTANT NOTE:
FCC Radiation Exposure Statement:

This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

About this manual

This User's Manual describes how to install and operate your 54M Wireless LAN Module. Please read this manual before you install the product.

This manual includes the following topics:

- Product description and features.
- Software installation procedure.

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Chapter 1 - Introduction

Thank you for purchasing the 54M Wireless LAN Module. This high-speed Wireless LAN Module provides you with an innovative wireless networking solution. The Adapter is easy to set up and use. With this innovative wireless technology, you can share files and printers on the network—without inconvenient wires!

The Module is a network Module with a rate of 1, 2, 5.5, 6, 9, 11, 12, 24, 36, 48 and 54 Mbps operating in the ISM band using Direct Sequence Spread Spectrum (DSSS) transmission implementing the IEEE 802.11g draft standard. This Module provides Device Drivers for Windows Operating Systems. It also provides tools for the configuration of the Module. The tool, as well as the installation steps of the plug-and-play procedure for the Windows operating systems, is described in this document.

Features

The 54M Wireless LAN Module offers compliance with the IEEE 802.11g draft specification. This feature allows them to communicate with other wireless devices that support the standard. Features of the Module are:

- **Uses 2.4GHz frequency band, which complies with worldwide requirement**
- **Wireless interface following the IEEE 802.11g and 802.11b standard**
- **Using MiniPCI interface**
- **Enciphering/deciphering of wireless data by the implementation of the WEP/WPA/WPA2 algorithm**
- **Wire-free access to networked resources from anywhere beyond the notebook**
- **Allows users move between Access Points without resetting their connection reconfiguration**
- **Delivers data rate up to 54 Mbps**
- **Supports 1, 2, 5.5, 6, 9, 11, 12, 24, 36, 48 and 54 Mbps rates**
- **Provide Wireless LAN Card Configuration utility**
- **The module uses external Antenna**
- **Supports most popular operating systems**

What is Wireless LAN?

Wireless Local Area Network (WLAN) systems offer a great number of advantages over traditional wired systems. WLAN is flexible and easy to setup and manage. They are also more economical than wired LAN systems.

Using radio frequency (RF) technology, WLAN transmit and receive data through the air. WLAN combine data connectivity with user mobility. For example, users can roam from a conference room to their office without being disconnected from the LAN.

Using WLAN, users can conveniently access-shared information, and network administrators can configure and augment networks without installing or moving network cables.

WLAN technology provides users with many convenient and cost saving features:

- **Mobility:** WLAN provide LAN users with access to real-time information anywhere in their organization, providing service opportunities that are impossible with wired networks.
- **Ease of Installation:** Installing is easy for novice and expert users alike, eliminating the need to install network cables in walls and ceilings.
- **Scalability**: WLAN can be configured in a variety of topologies to adapt to specific applications and installations. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to full infrastructure networks of thousands of users roaming over a broad area.

Wireless LAN Modes

Wireless LANs can be configured in one of two ways:

Ad-hoc Networking	Also known as a peer-to-peer network, an ad-hoc network is one that allows all workstations and computers in the network to act as servers to all other users on the network. Users on the network can share files, print to a shared printer, and access the Internet with a shared modem. However, with ad-hoc networking, users can only communicate with other wireless LAN computers that are in the wireless LAN workgroup, and are within range.
Infrastructure Networking	Infrastructure networking differs from ad-hoc networking in that it includes an access point. Unlike the ad-hoc structure where users on the LAN contend the shared bandwidth, on an infrastructure network the access point can manage the bandwidth to maximize bandwidth utilization.

	Additionally, the access point enables users on a wireless LAN to access an existing wired network, allowing wireless users to take advantage of the wired networks resources, such as Internet, email, file transfer, and printer sharing. Infrastructure networking has the following advantages over ad-hoc networking: • **Extended range:** each wireless LAN computer within the range of the access point can communicate with other wireless LAN computers within range of the access point. • **Roaming:** the access point enables a wireless LAN computer to move through a building and still be connected to the LAN. • **Wired to wireless LAN connectivity:** the access point bridges the gap between wireless LANs and their wired counterparts.

Notes on Wireless LAN Configuration

When configuring a wireless LAN (WLAN), be sure to note the following points:

- Optimize the performance of the WLAN by ensuring that the distance between access points is not too far. In most buildings, WLAN Adapters operate within a range of 100 ~ 300 feet, depending on the thickness and structure of the walls.
- Radio waves can pass through walls and glass but not metal. If there is interference in transmitting through a wall, it may be that the wall has reinforcing metal in its structure. Install another access point to circumvent this problem.
- Floors usually have metal girders and metal reinforcing struts that interfere with WLAN transmission.

Chapter 2 – Driver Installation for Windows

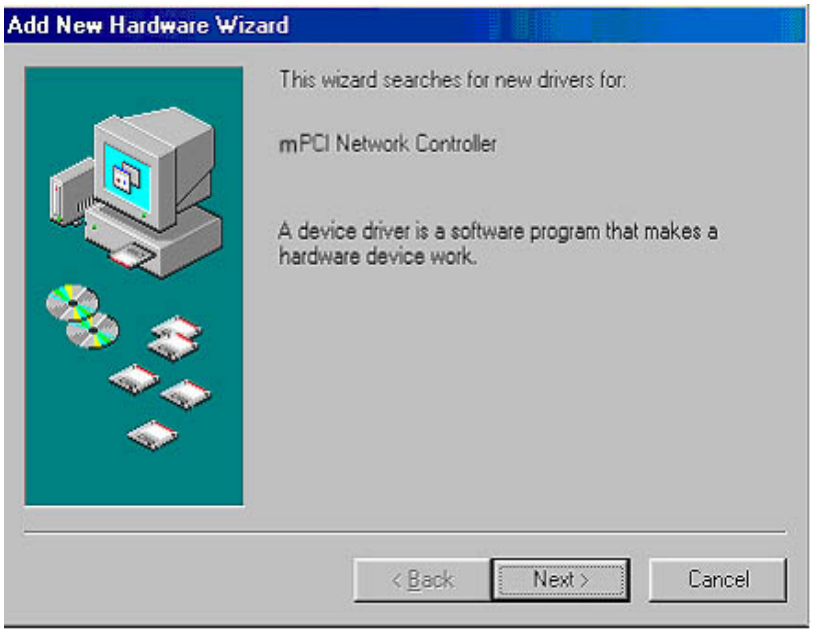
The following sections cover Wireless LAN Module driver installation in the Windows Operating Systems.

Note!	***You have to install your hardware first before you begin to install the drivers.***

Driver installation for Windows 98

Follow the steps below to install the Wireless LAN Module drivers for Windows 98.

1. Insert driver CD-ROM and turn off your notebook.
2. Release the screws and open the miniPCI slot cover (It should located on the back of your notebook) carefully.
3. Insert the miniPCI Wireless LAN Card to miniPCI slot of notebook securely. (Refer to Chapter 2 – Hardware installation.)
4. Turn on your notebook.
5. After Windows 98 detects the Wireless LAN Module, the *Add New Hardware Wizard* window appears. Clicks **Nex**t to continue the installation.



6. A screen appears prompting you to select an installation method. Select **Search for the best driver for your device. (Recommended)** and click **Next** to continue.

7. Ensure that the **CD-ROM drive** is selected. Inserts the driver CD-ROM into your CD-ROM drive and clicks **Next** to continue.

8. The following screen appears showing the driver search result. Click **Next** to continue the installation.

9. Windows 98 copies files to your hard disk. The following screen will appear to inform you when the software installation has finished. Click **Finish** to finish the installation.

10. The following screen will ask you to restart your computer to finish the installation. Click **Yes** to reboot the system. After system reboot, the Wireless LAN Utility will be installed automatically. Please go to Chapter 4 to install the utility.

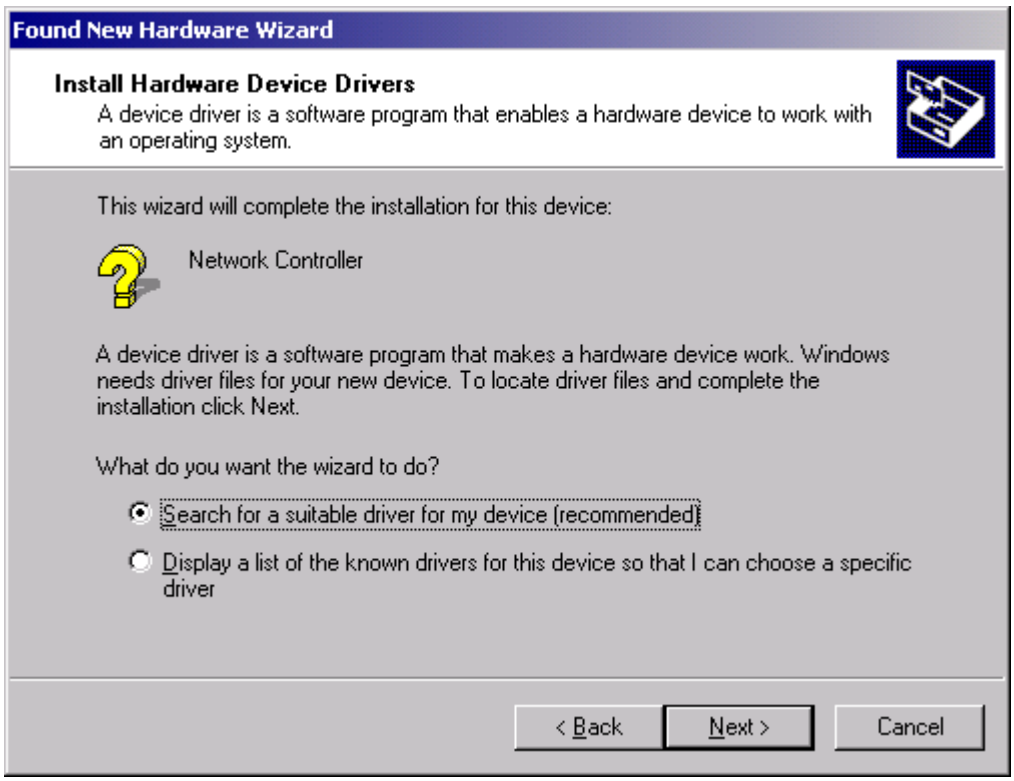
Note!	In most cases, Windows will automatically copy all of the files needed for networking. If Windows asks you for the files and prompts you to input the path to the files. Follow the instructions on your screen, and then click **OK** to continue.

Driver installation for Windows 2000

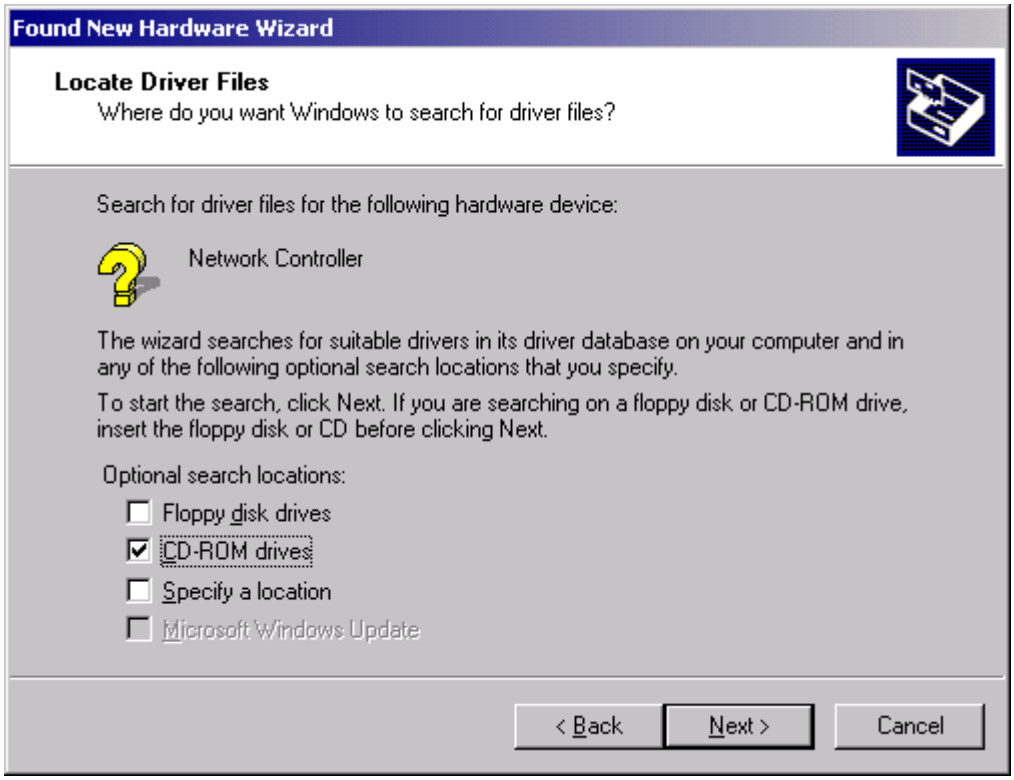
Follow the steps below to install the MiniPCI Wireless LAN Card drivers for Windows 2000.

1. Insert Driver CD-ROM and Turn off your notebook.
2. Release the screws and open the miniPCI slot cover (It should located on the back of your notebook) carefully.
3. Insert the MiniPCI Wireless LAN Card to MiniPCI slot of notebook securely. (Refer to Chapter 2 – Hardware installation.)
4. Turn on your notebook
5. After Windows 2000 detects the MiniPCI Wireless LAN Card, the *Found New Hardware Wizard* window appears. Click **Next** to start the installation.

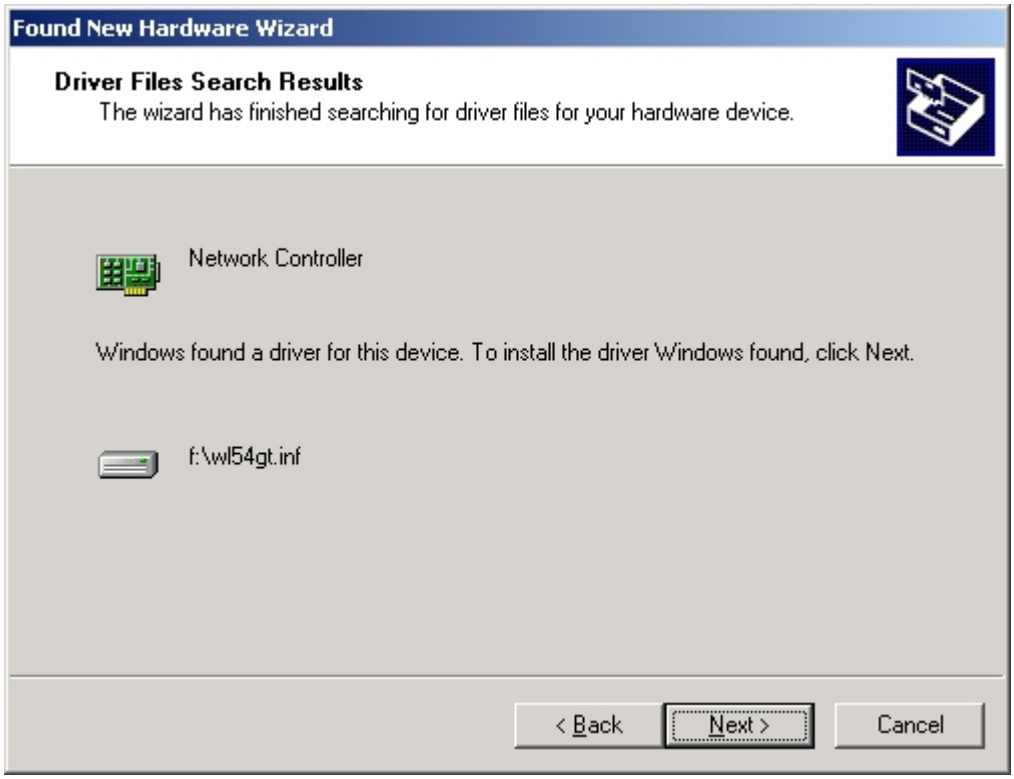
6. A screen appears prompting you to select an installation method. Select **Search for a suitable driver for my device (recommended)** and click **Next** to continue.



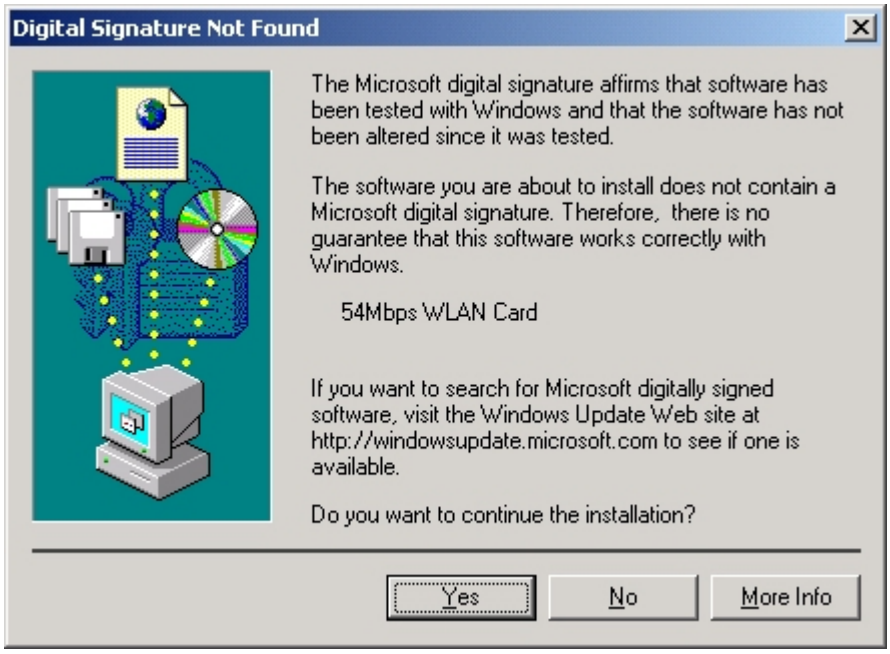
7. Ensure that the **CD-ROM driver** is selected and insert the driver CD-ROM into your CD-ROM drive and click **Next** to continue.



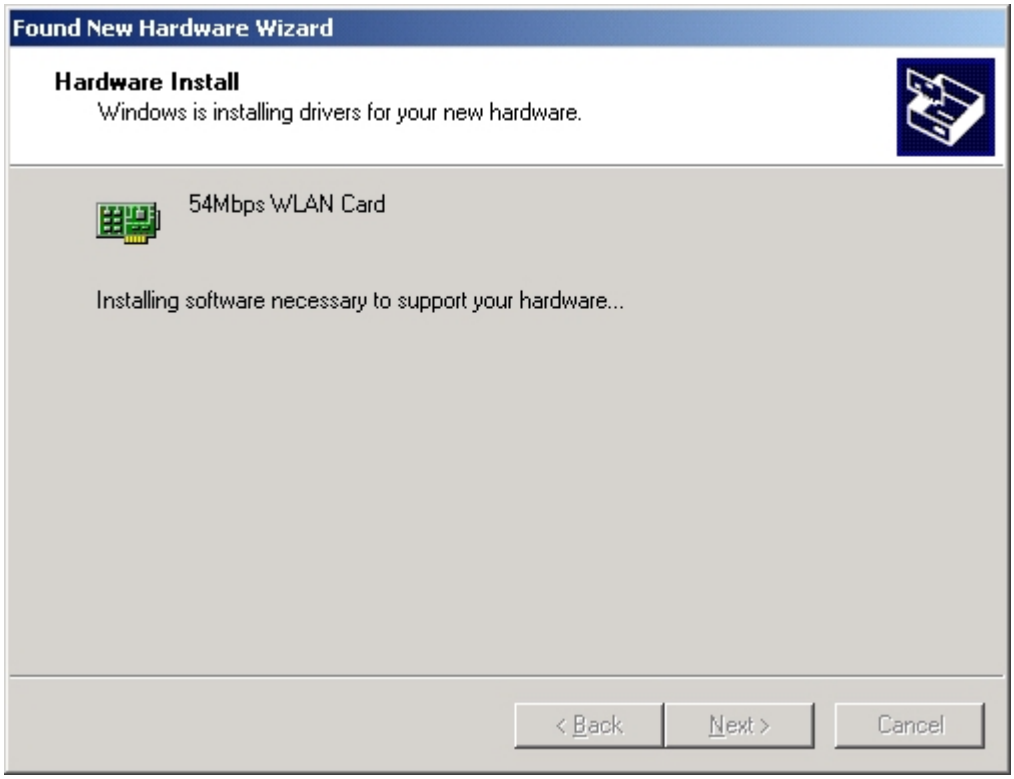
8. The following screen appears showing the driver search result. Click **Next** to continue the installation.



9. The following screen appears. Click **Yes** to continue



10. The Windows has finished installing software for the device. Click **Finish** to finish the installation.



Then system will start to install Wireless LAN Utility. Please refer to procedures at Chapter 4.

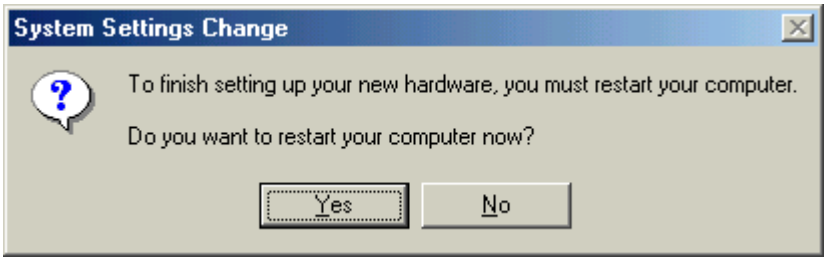
Driver installation for Windows ME

Follow the steps below to install the MiniPCI Wireless LAN Card drivers for Windows ME.

1. Insert Driver CD-ROM and Turn off your notebook.
2. Release the screws and open the miniPCI slot cover (It should located on the back of your notebook) carefully.
3. Insert the MiniPCI Wireless LAN Card to MiniPCI slot of notebook securely. (Refer to Chapter 2 – Hardware installation.)
4. Turn on your notebook
5. After Windows ME detects the miniPCI Wireless LAN Card, the *Add New Hardware Wizard* window appears. Select **Automatic search for a better driver (Recommended)** and insert the driver CD-ROM into CD-ROM drive and click **Next** to continue.

6. The system will find the setup files and follow the instruction to copy files to your hard disk. The following screen will appear when the software installation has finished. Click **Finish** to finish the installation.

7. The following screen will ask you to restart your computer to finish the hardware setting up. Click **Yes** to reboot the system. After system reboot, the Wireless LAN Utility will be installed automatically. Please go to Chapter 4 to install the utility.



Note!	In most cases, Windows will automatically copy all of the files needed for networking. If Windows asks you for the files and prompts you to input the path to the files. Follow the instructions on your screen, and then click **OK** to continue.

Driver installation for Windows XP

Follow the steps below to install the MiniPCI Wireless LAN Card drivers for Windows XP.

1. Insert the driver CD to your CD-ROM and turn off notebook.
2. Release the screws and open the miniPCI slot cover (It should located on the back of your notebook) carefully.
3. Insert the MiniPCI Wireless LAN Card to miniPCI slot of notebook securely. (Refer to Chapter 2 – Hardware installation.)
4. Turn on your notebook.
5. After Windows XP detects the miniPCI Wireless LAN Card, the *Found New Hardware Wizard* window appears. Select **Install the software automatically [Recommended]** and insert the driver CD-ROM into CD-ROM drive and click **Next** to continue.

6. Click **Continue Anyway** to continue the installation.

7. The Windows has finished installing software for the device. Click **Finish** to finish the installation

Then system will start to install Wireless utility automatically.

End Product Labeling

The final end product must be labeled in a visible area with the following:
" Contains Transmitter Module FCC ID: N89-WM610M"or "Contains
TX FCC ID: N89-WM610M".