2.4GHz IEEE 802.11g WLAN Cardbus Adapter

GW-NS54GMZ

PLANEX COMMUNICATIONS INC.

Contents

Chapter 1. Introduction

1.1 Overview

This guide explains how to install the following hardware and software on a laptop computer using the Microsoft® Windows® operating platform:

- GW-NS54GMZ Client Card Adapter
- GW-NS54GMZ Adapter Driver for Windows XP, 2000, 98SE, or ME
- GW-NS54GMZ Wireless Adapter Configuration Utility

1.2 Installation

The installation procedure includes two main steps:

1. Installing the Driver
2. Installing the Configuration Utility

1.2.1 Adapter Windows Driver

The Windows XP, 2000, 98SE, or ME adapter driver provides the interface between the GW-NS54GMZ and the desktop or laptop computer.

Chapter 2. **Driver Installation** gives detailed instructions on how to install the adapter's Windows driver.

1.2.2 Adapter Configuration Utility

The Configuration Utility is used to configure the adapter. Chapter 3. **Configuration Utility Installation** explains how to install the utility.

1.3 System Requirements

The minimum system requirements for installing and using the adapter are as follows:

- Microsoft Windows XP, 2000, 98SE, or ME Operating System
- 400 MHz or higher CPU
- 128 MB of RAM
- 800 Kbytes of free disk space for installation of the driver and configuration utility
- CD-ROM drive
- Windows Driver User's Manual

1.4 Package Contents

The package includes the following items:

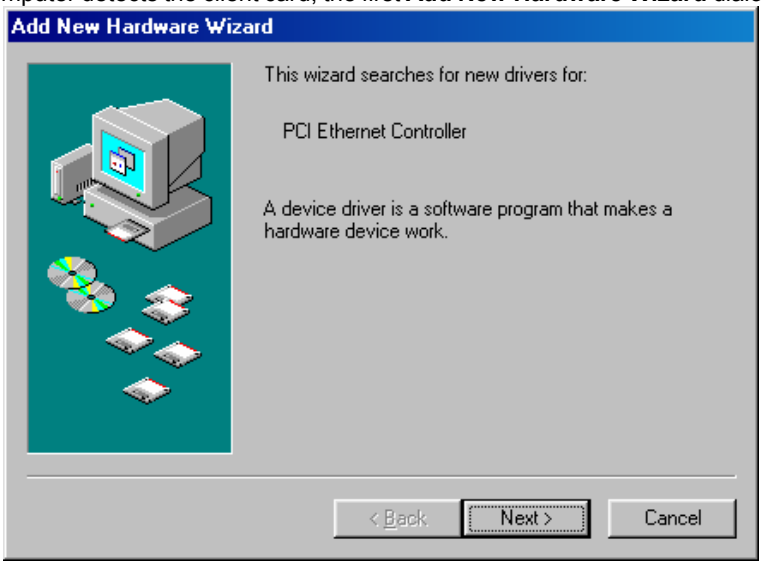
- 1 x GW-NS54GMZ
- 1 x Quick Installation Guide
- 1 x CD-ROM (User's Manual / Driver & Utility)
- 1 x Warranty Card

Chapter 2. Driver Installation

This chapter explains how to install both the adapter and the adapter's GW-NS54GMZ Windows® drivers in a client card slot of a Windows® based (XP, 2000, 98SE, or ME) PC computer.

2.1 Installing the Windows 98SE Driver

1. When the computer detects the client card, the first **Add New Hardware Wizard** dialog box is displayed:

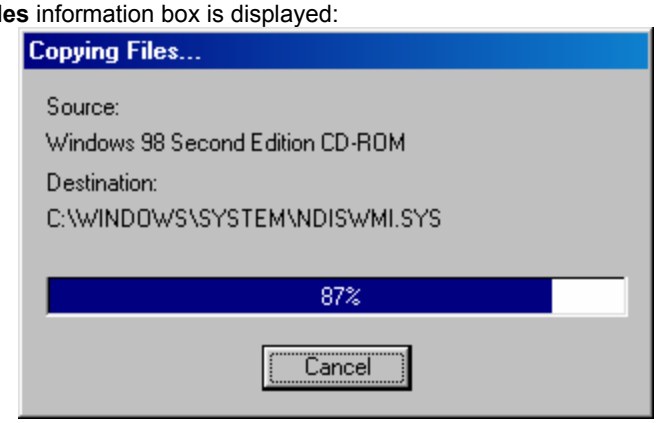


2. Click **Next** to continue.
3. The second **Add New Hardware Wizard** dialog box will then appear:

4. Click the **Search for the best driver for your device** radio button.
5. Click **Next** to continue.
6. The next **Add New Hardware Wizard** dialog box will then appear:

7. Check the **CD-ROM drive** box.
8. Click **Next** to continue.
9. The next **Add New Hardware Wizard** dialog box will then appear:

10. Click **Next** to continue.
11. The **Copying Files** information box is displayed:



12. The final **Add New Hardware Wizard** dialog box will then appear:

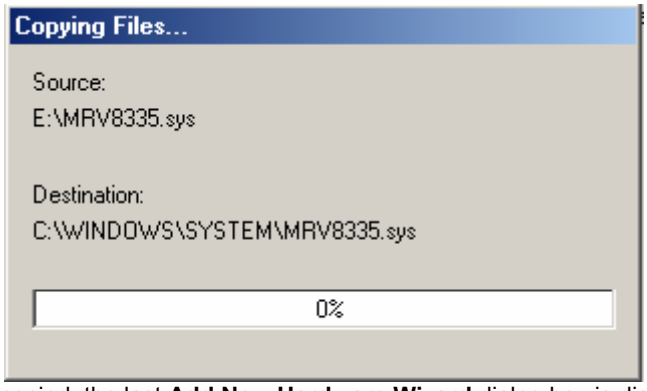
13. Click **Finish** to complete the installation.
14. The **System Settings Change** dialog box is displayed:

15. Click **Yes** to restart the computer.

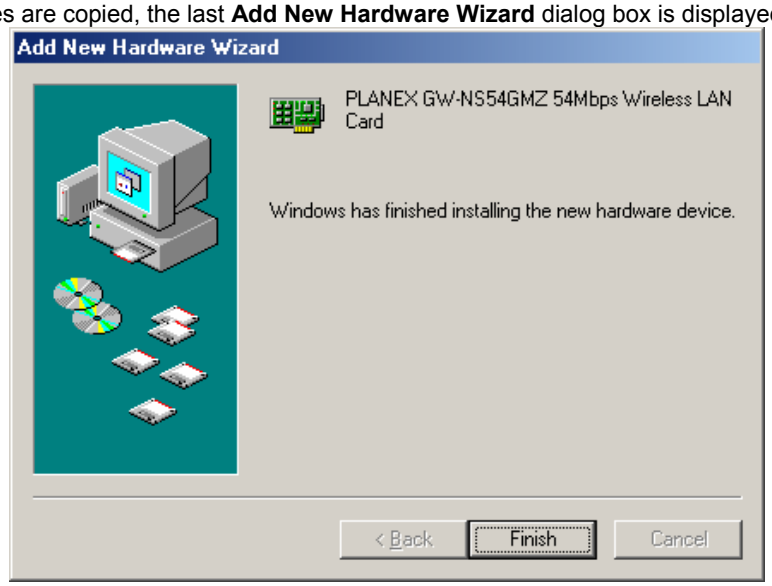
2.2 Installing the Windows ME Driver

1. When the computer finds the client card, the **Add New Hardware Wizard** dialog box will be displayed:

2. Click the **Automatic search for a better driver** radio button.
3. Click **Next** to continue.
4. The **Copying Files** information box will appear:



5. After the files are copied, the last **Add New Hardware Wizard** dialog box is displayed:

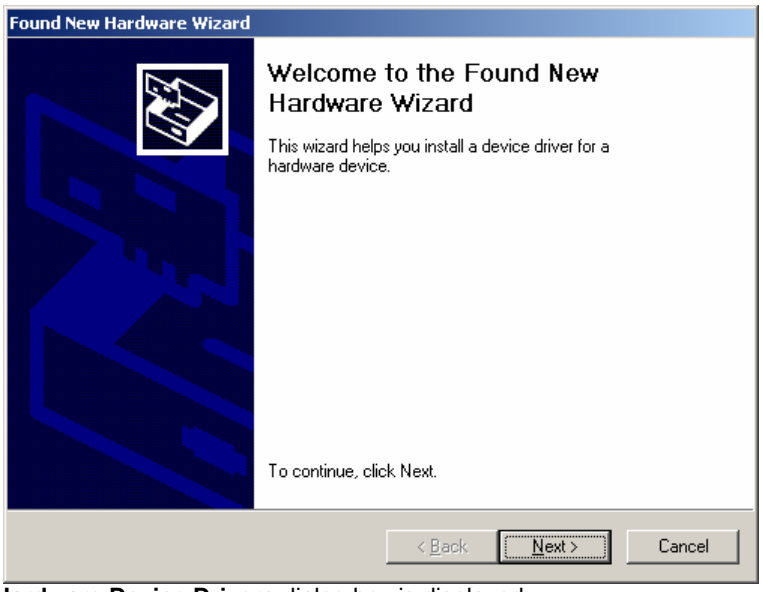


6. Click **Finish** to complete the installation.
7. The **System Setting Change** dialog box will then appear:

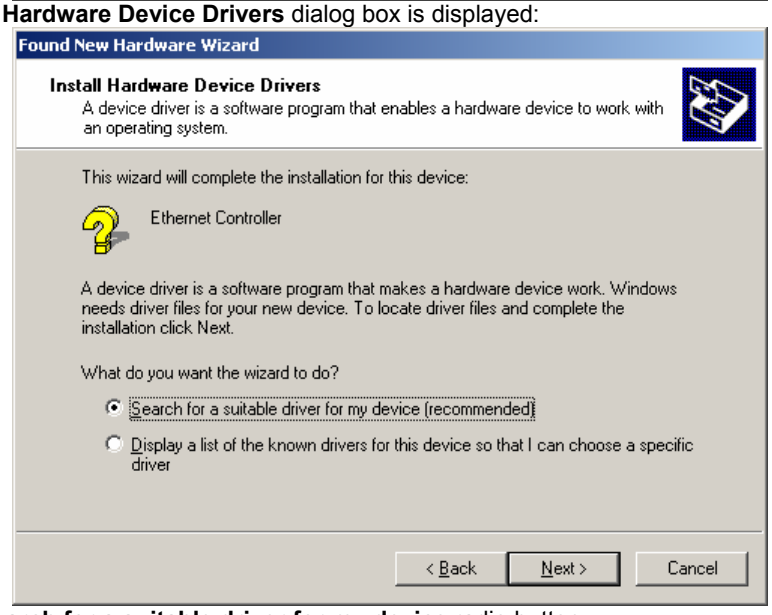
8. To complete the installation, click **Yes** to reboot the system.

2.3 Installing the Windows 2000 Driver

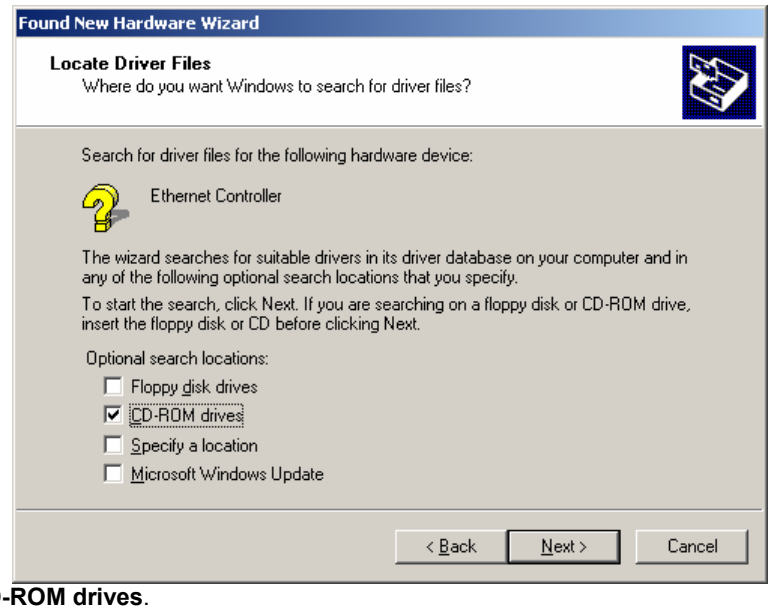
1. When the computer detects the Client Card, the **Found New Hardware Wizard** dialog box is displayed:



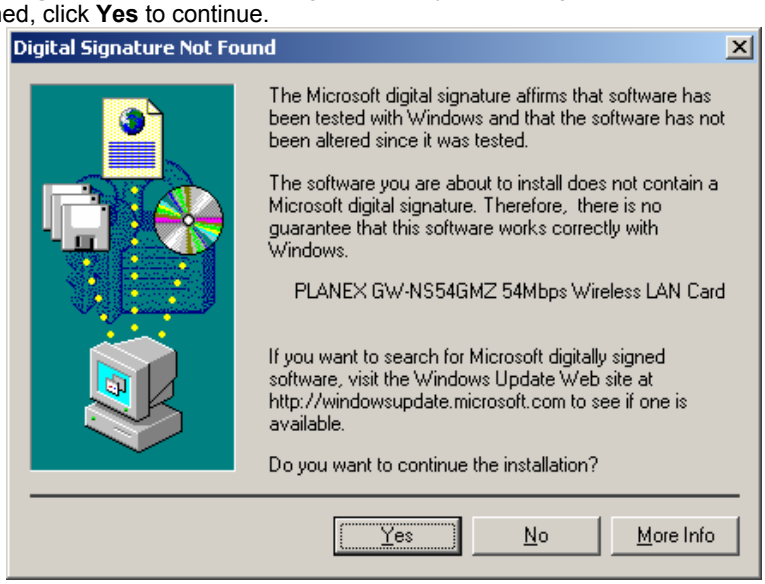
2. The **Install Hardware Device Drivers** dialog box is displayed:



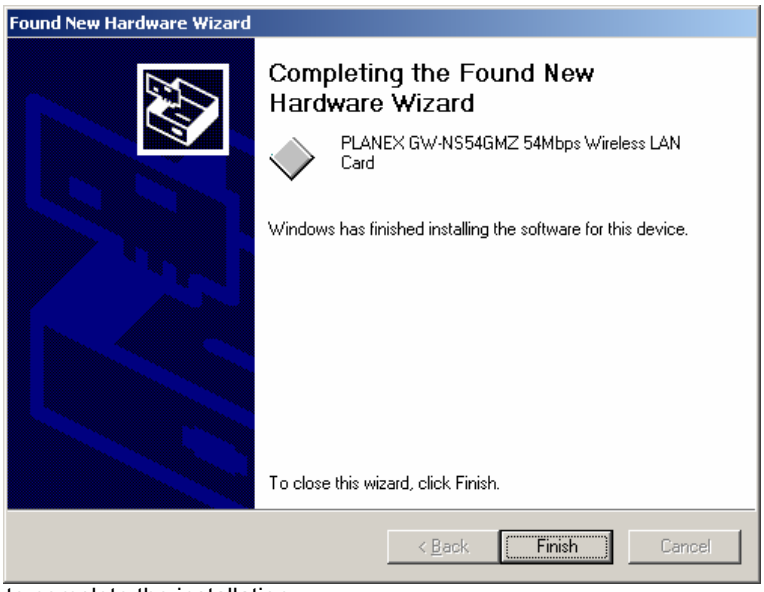
3. Click the **Search for a suitable driver for my device** radio button.
4. Click **Next** to continue.
5. The **Locate Driver Files** dialog box is displayed:



6. Choose **CD-ROM drives**.
7. Click **Next** to continue.
8. If the **Digital Signature Not Found** dialog box displays a warning that the software is not Microsoft digitally signed, click **Yes** to continue.



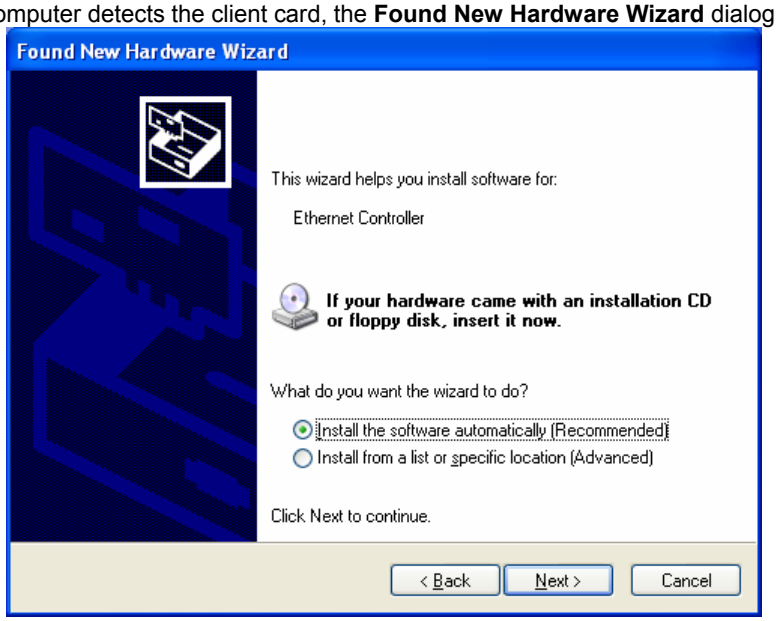
9. The **Completing the Found New Hardware Wizard** dialog box will then be displayed:



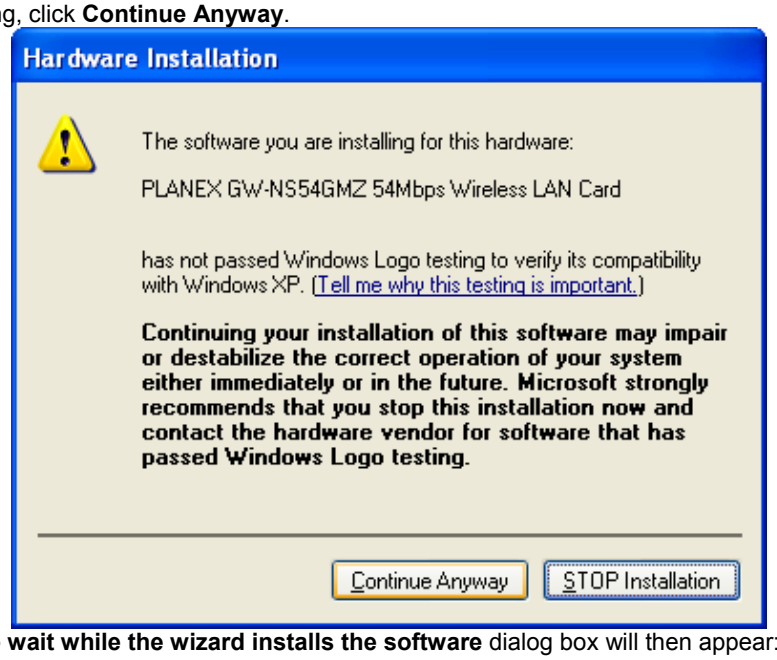
10. Click **Finish** to complete the installation.

2.4 Installing the Windows XP Driver

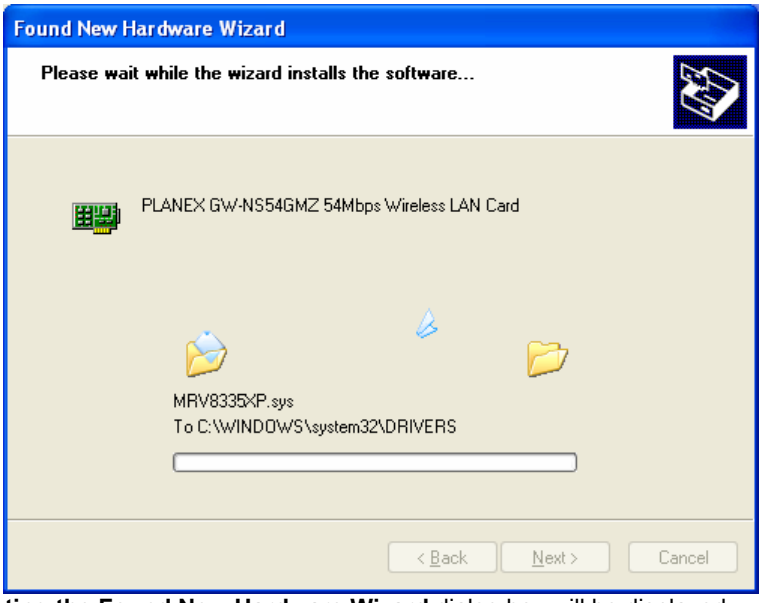
1. When the computer detects the client card, the **Found New Hardware Wizard** dialog box is displayed:



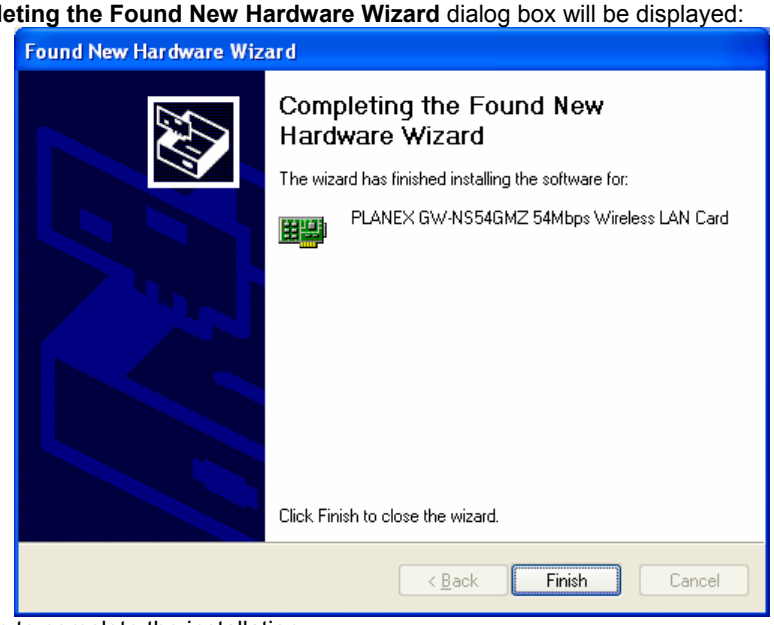
2. Make sure your Installation CD is already in the CD-ROM
3. Check the **Install the software automatically (Recommended)** radio button.
4. Click **Next** to continue.
5. If the **Hardware Installation** dialog box displays a warning that the software has not passed Windows Logo Testing, click **Continue Anyway**.



6. The **Please wait while the wizard installs the software** dialog box will then appear:



7. The **Completing the Found New Hardware Wizard** dialog box will be displayed:



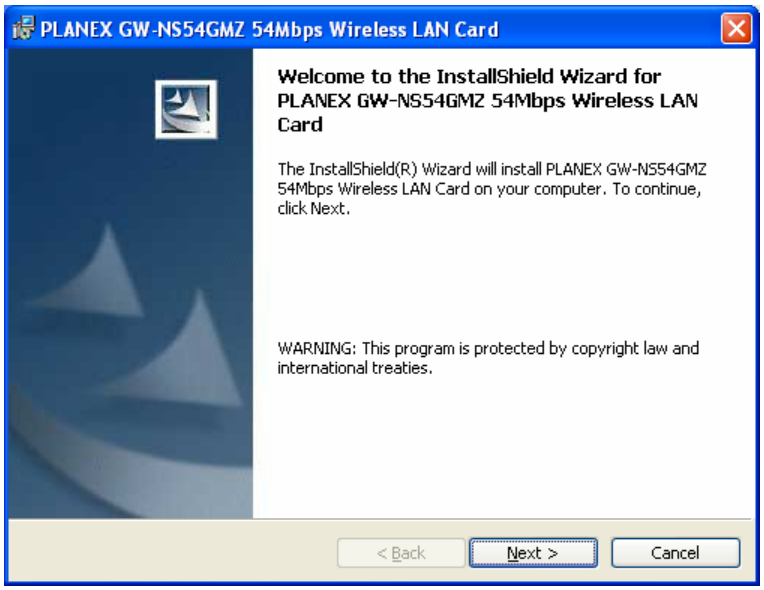
8. Click **Finish** to complete the installation.

Chapter 3. Configuration Utility Installation

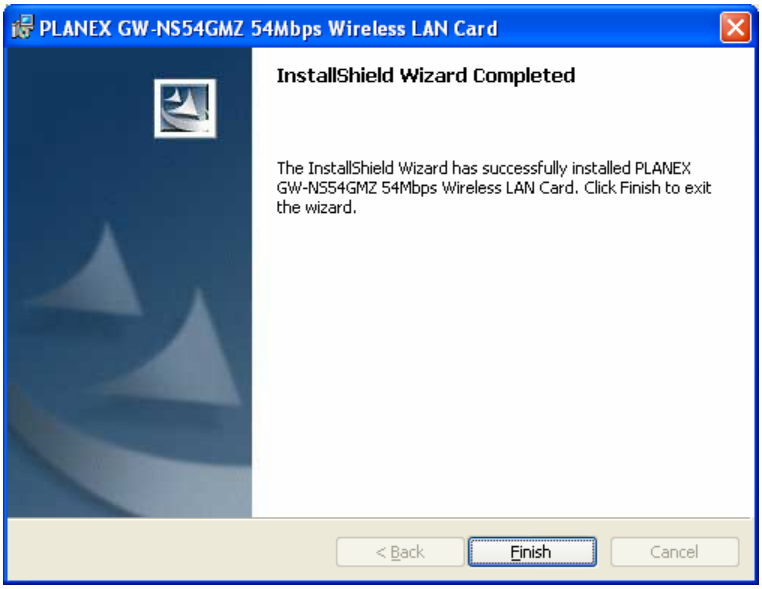
Installing the Configuration Utility

1. Insert the CD-ROM into your computer's CD drive.
2. The installation program should start automatically. Click **Install Utility** to being installation. If it does not automatically, run the program from the CD-ROM **path:\Utility\Release\setup.exe**.

3. On the screen above, click **Next** to begin installation.



4. Continue though the procedure until you see the screen below.



5. Click **Finish** to close the installation program.

Chapter 4. Configuration Utility

4.1 Overview

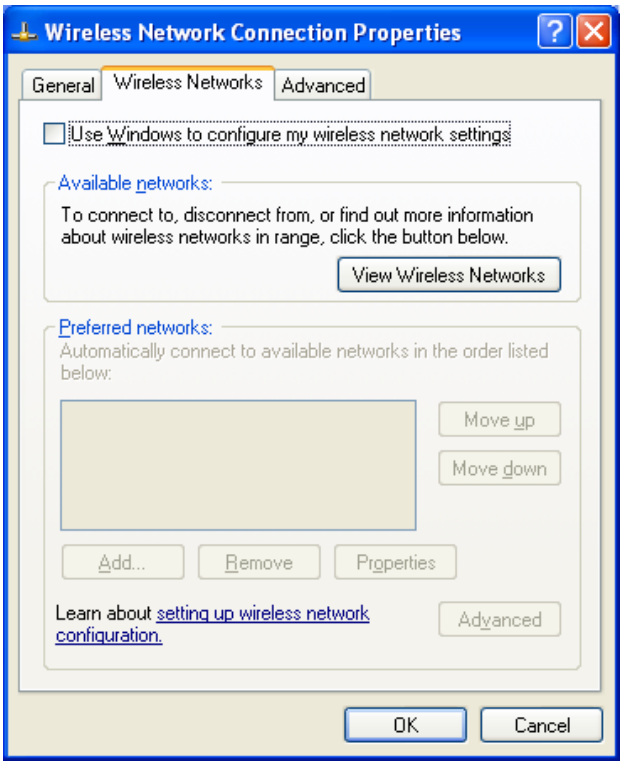
The GW-NS54GMZ Wireless Adapter Configuration Utility is a Microsoft® Windows® application that allows for the configuration and management of GW-NS54GMZ client cards. The Configuration Utility sets up profiles and performs other wireless network management tasks. See the **Installation Guide** for instructions on how to install the Configuration Utility.

4.1.1 Windows XP Users

For Windows XP, use either the Zero Configuration Utility or the GW-NS54GMZ Configuration Utility to configure the GW-NS54GMZ wireless adapter card.

To use the GW-NS54GMZ Configuration Utility:

1. Open the Zero Configuration Utility Window: Start ➔ Settings ➔ Control Panel ➔Network Connections
2. Right click the **Wireless Network Connection** icon and select **Properties**, then select **Wireless Networks tab**.
3. Uncheck the **Use Windows to configure my wireless settings** checkbox.



When the GW-NS54GMZ Configuration Utility is opened, it will automatically close the Windows XP Zero Configuration Utility.

Once the user exits the GW-NS54GMZ Configuration Utility, the Windows XP Zero Configuration Utility is restored to managing the wireless configuration.

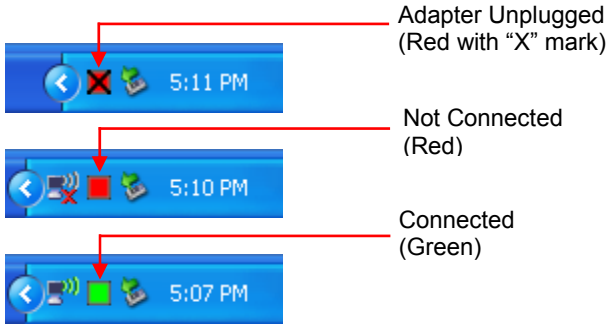
4.1.2 Running the Configuration Utility

Once installed, the Configuration Utility can be accessed from the Start menu by the following means:

Start ➔ Programs ➔ bRoad Lanner Wave ➔ PLANEX GW-NS54GMZ utility

4.1.3 Tray Status Icons

Different icons in the system tray indicate the status of the wireless connection:



4.1.4 Configuration Utility Window

The **Configuration Utility** window displays the following tabs:

- **Network Status** – displays the status of the network to which the user is connected. The Configuration Utility initializes on this page. See **Network Status Tab** for details.
- **Profile Manager** – displays the current profile and allows the user to set attributes for network type, security options, and protocols, as well as create/modify/delete profiles. See **Profile Manager Tab** for details.
- **Site Survey** – shows a list of all of stations within range of the adapter. See **Site Survey Tab** for details.
- **Statistics** – displays statistics for the current session. See **Statistics Tab** for details.
- **Advanced** – allows you to set protocol parameters. See **Advanced Tab** for details.
- **Admin** – allows you to import and export profiles. See **Admin Tab** for details.
- **About** – displays the Configuration Utility's version number. See **About Tab** for details.

The following subsections explain how to use the Configuration Utility.

4.1.5 Auto Link Feature

Auto Link is a new feature integrated in PLANEX GW-NS54GMZ that offers users a simple way to configure a BLW-54PM in conjunction with the Configuration Utility. The Auto Link dialog box pops up automatically when a non-configured PLANEX BLW-54PM or an Auto Link configured PLANEX BLW-54PM appears in the vicinity of a client card that is not connected to an AP or Ad-Hoc network. For details on how to use this feature, see **Auto Link**.

4.1.6 WPA Configuration

4.1.6.1 Security Infrastructure Setup

Implementing a security infrastructure to monitor physical access to WLAN networks is more difficult than monitoring access on wired networks. Unlike wired networks where a physical connection is required, anyone within range of a wireless Access Point can send and receive frames, as well as listen for frames being sent.

IEEE 802.11 defines a set of standards and protocols for use in minimizing the security risks on wireless networks. Two of the security standards are as follows:

- **802.1x** — 802.1x authentication provides authenticated access to 802.11 wireless networks and to wired Ethernet networks. 802.1x minimizes wireless network security risks by providing user and computer identification, centralized authentication, and encryption services based on the WEP algorithm. 802.1x supports Extensible Authentication Protocol (EAP). EAP allows the use of different authentication methods, such as smart cards and certificates.
- **Wi-Fi Protected Access (WPA)** — WPA is an implementation based on a subset of the 802.11i standard. WPA provides enhanced security for wireless networks when used with TKIP and Message Integrity Check (MIC) algorithms.

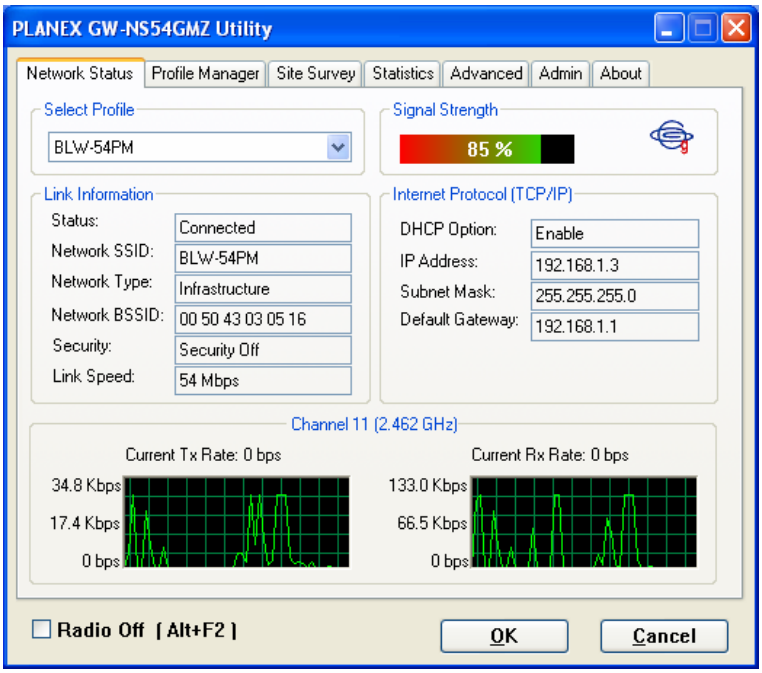
4.1.6.2 WPA Connectivity

The GW-NS54GMZ Configuration Utility currently supports the following Authentication Modes:

- WPA-PSK
- 802.1x EAP/TLS
- 802.1x PEAP- See **Security Tab** for details on configuring security options.

4.2 Network Status Tab

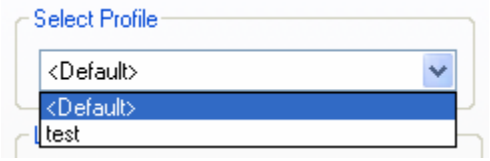
The **Network Status** tab displays the status of the network. When the **PLANEX GW-NS54GMZ Utility** initializes, it displays the **Network Status** tab:



4.2.1 Select Profile

The **Select Profile** window displays the name of the profile in use. Additional information about the profile is provided in the **Profile Manager**.

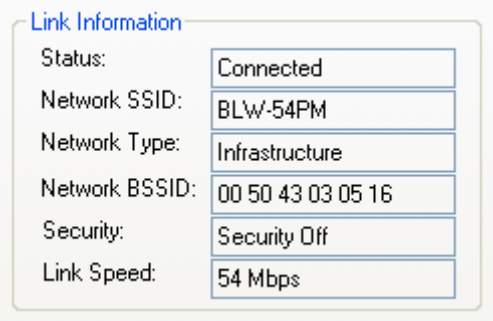
Select one of the profiles previously defined by clicking the **down arrow** and highlighting a profile from the pulldown list.



Profiles are created, modified, and deleted through the **Profile Manager**.

4.2.2 Link Information

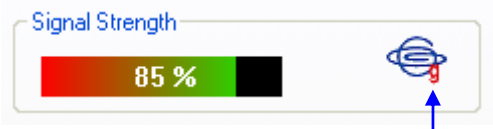
The **Link Information** section contains current information about the wireless connection:



- **Status** – the status of the wireless network connection:
  - **Card Unplugged** – adapter is plugged in, but not recognized
    See **Troubleshooting** for possible solutions.
  - **Connected** – card is plugged in and connected to a wireless network
  - **Not connected** – card is plugged in, but cannot find a wireless network
    See **Troubleshooting** for possible solutions.
  - **No Radio** – card is plugged in, but the radio is turned off. Uncheck the **Radio Off** box to turn the radio on.
- **Network SSID** – network SSID label (i.e., Network Name). The Network Name is a text string of up to 32 characters.
- **Network Type** – type of environment to which you are connected The choices are **Infrastructure** mode or **Ad Hoc** mode.
  - **Infrastructure Mode:** In this mode, wireless clients send and receive information through APs. When a wireless client communicates with another, it transmits to the AP. The AP receives the information and rebroadcasts it. Other devices then receive the information. APs are strategically located within an area to provide optimal coverage for wireless clients. A large WLAN uses multiple APs to provide coverage over a wide area. APs can connect to a LAN through a wired Ethernet connection. APs send and receive information from the LAN through the wired connection.
  - **Ad Hoc Mode**: In this mode, wireless clients send and receive information to other wireless clients without using an AP. This type of WLAN only contains wireless clients. Use Ad Hoc mode to network computers at home or in small office, or to set up a temporary wireless network for a meeting.
- **Network BSSID** – Network Basic Service Set Identifier. The BSSID is a 48-bit identity used to identify a particular BSS within an area. In Infrastructure BSS networks, the BSSID is the MAC address of the AP. In independent BSS or Ad Hoc networks, the BSSID is generated randomly.
- **Security** – reports the type and level of security set. The security level is set through the **Profile Setting** of the **Profile Manager** tab. WEP settings can also be configured through the **Site Survey** tab when connecting to a network.
- **Link Speed** – connection speed, (i.e., 54 Mbps, 48 Mbps, etc.)

4.2.3 Signal Strength / Wireless Mode Indicator

The color-coded **Signal Strength** bar displays the signal strength of the last packet received by the adapter:



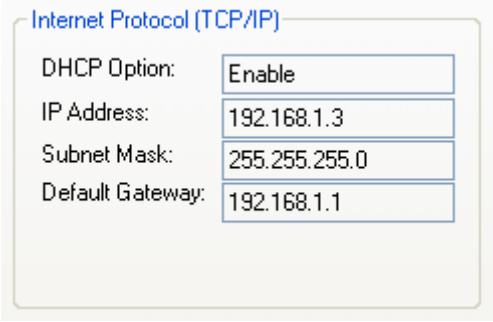
b means connected to an 802.11b capable AP.
g means connected to an 802.11g capable AP.

Signal strength is reported as a percentage. A signal in the red area indicates a bad connection. A signal in the green area indicates a good connection.

The Wireless Mode indicator shows client card's operating data rates. There are two modes: 802.11b and 802.11g (backward compatible to 802.11b).

4.2.4 Internet Protocol (TCP/IP)

The Internet Protocol specifies the format of packets, also called datagrams, and the addressing scheme. Most networks combine IP with a higher-level protocol called TCP, which establishes a virtual connection between a destination and a source.

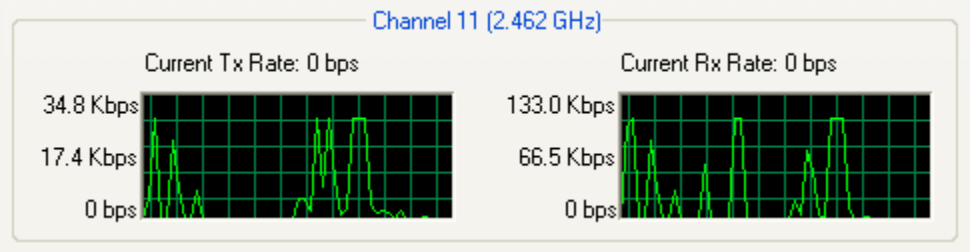


The parameters of the Internet Protocol are:

- **DHCP Option** – Dynamic Host Configuration Protocol. Either enabled or disabled.
- **IP Address** – an identifier for a computer or device on a TCP/IP network. The format of an IP address is a 32-bit numeric address written as four numbers separated by periods. Each number can be 0 to 255.
- **Subnet Mask** – a mask used to determine what subnet an IP address belongs to. An IP address has two components, the network address and the host address. The first two numbers represent a Class B network address, and the second two numbers identify a particular host on this network.
- **Default Gateway** – the default node on a network that serves as an entrance to another network. In enterprises, the gateway is the computer that routes the traffic from a workstation to the outside network that is serving the Web pages. For home users, the gateway is the ISP that connects the user to the internet.

4.2.5 Actual Throughput Performance

This section of the **Network Status** tab displays the Current Tx Rate and the Current Rx Rate of the channel being monitored.



Note: These are actual throughput diagrams (without the WLAN overhead delivered by the client card).

4.2.6 Radio On/Off Box

Clicking the **Radio Off** check box turns off the radio. Unchecking the box turns on the radio:

Another way to turn the radio on or off is to right-click the **Configuration Utility** icon in the **System Tray** and select the **Turn Radio Off** option. When the radio is off, click **Turn Radio On** to turn the radio back on.

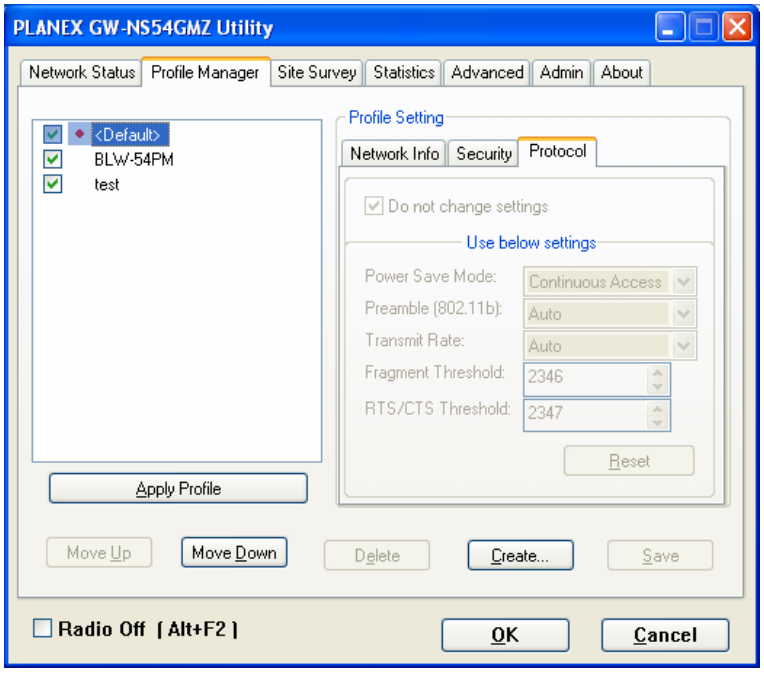
You can also use the system hot key Alt+F2 to turn the radio on/off.

When the radio is off, there is no radio activity, and the following property pages are disabled:

- Site Survey
- Statistics
- Advanced

4.3 Profile Manager Tab

Clicking on the **Profile Manager** tab displays the **Profile Manager** dialog box. The Profile Manager displays the profiles available and allows you to create, modify, and delete profiles:



(1) Profile List Window

The window on the left side of this tab lists all available profiles. Highlighting a profile selects it. If the **Default** box is checked, that profile is used in auto-configuration mode when the link is lost. If it is unchecked, that profile is excluded in auto-configuration. The controls associated with this window are:

- **Apply Profile** – applies the profile selected. Apply the profile by double-clicking on the desired profile.
- **Move Up / Move Down** – move the list up and down in the window. All profiles with the Network Type set to Infrastructure are displayed before the profiles with the Network Type set to Ad Hoc.
- **Delete** – deletes a profile
- **Create** – creates a profile
- **Save** – saves changes made to a selected profile

(2) Profile Setting

The Profile Settings are used to display information about the profile selected in the **Profile List** window. The information is divided into three tabs: **Network Info**, **Security**, and **Protocol**.

4.3.1 Network Info Tab

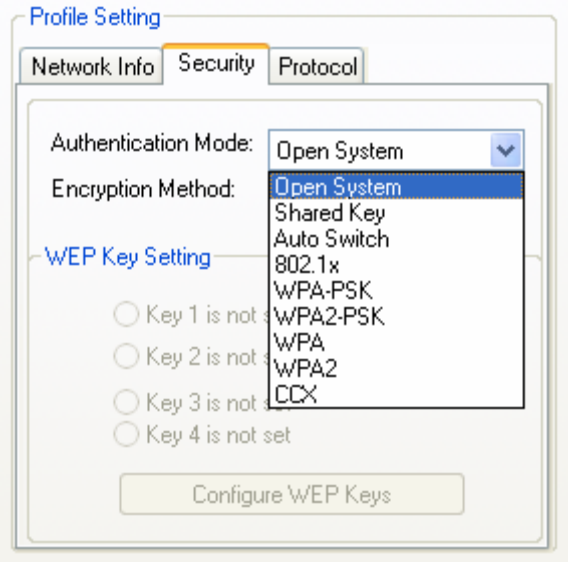
The **Profile Manager** initially displays the **Network Info** tab:

The **Network Info** tab contains the following fields:

- **Profile Name** – the profile selected.
- **Network SSID** – the network SSID label.
- **Network Type** – the type of environment to which you are connected. The choices are **Infrastructure** mode or **Ad Hoc** mode.
- **Wireless Mode** – the choices are **Auto**, **802.11g** or **802.11b** mode.
- **Prefer Channel** – the channel being used.

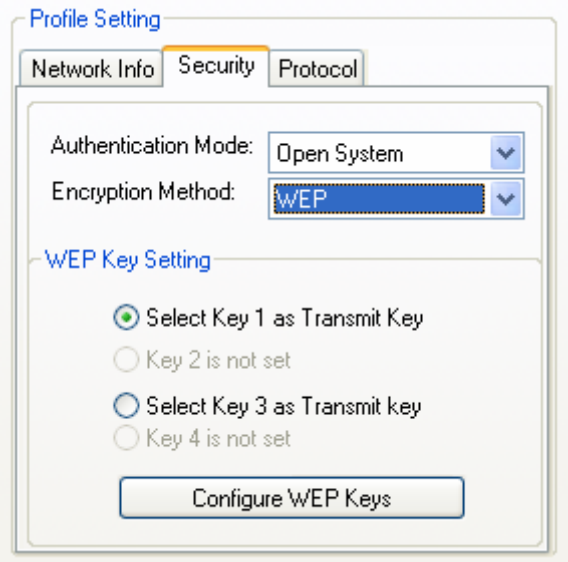
4.3.2 Security Tab

This section describes the Security tab configuration. See Chapter 4.1.6 **WPA Configuration** for information on security infrastructure and WPA connectivity. Clicking the **Security** tab displays the security options:



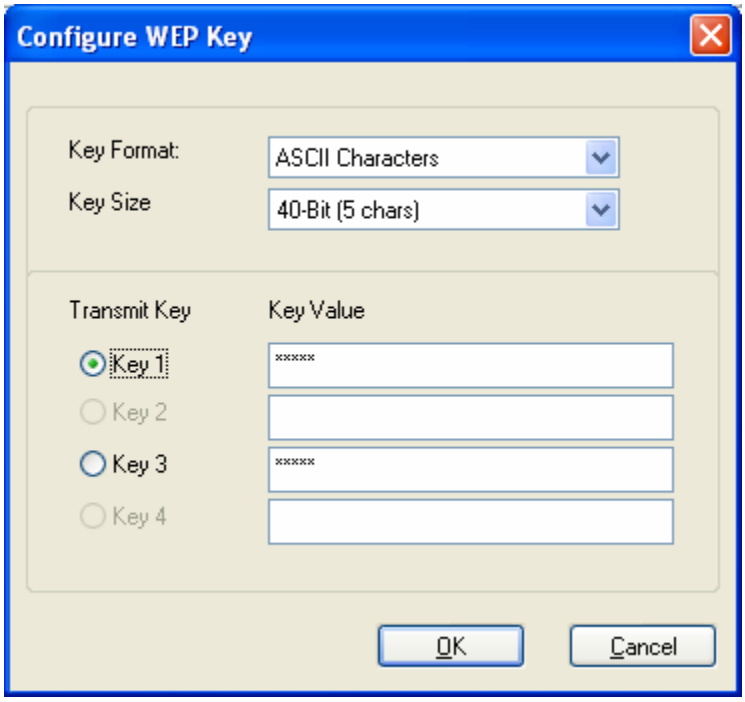
The Security tab contains the following fields:

- **Authentication Mode** – options are Open System, Shared Key, Auto Switch, 802.1x, WPA-PSK, WPA2-PSK, WPA, WPA2 and CCX. To connect to an AP through the Radius Server, the user can select either WPA 802.1x EAP/TLS or WPA 802.1x PEAP as the Authentication Mode.
- **Encryption Method** – options are TKIP, AES, WEP, or Security Off, depending on the Authentication Mode.
- **WEP Key Setting** – if WEP Encryption Method is selected, the WEP keys can be configured:



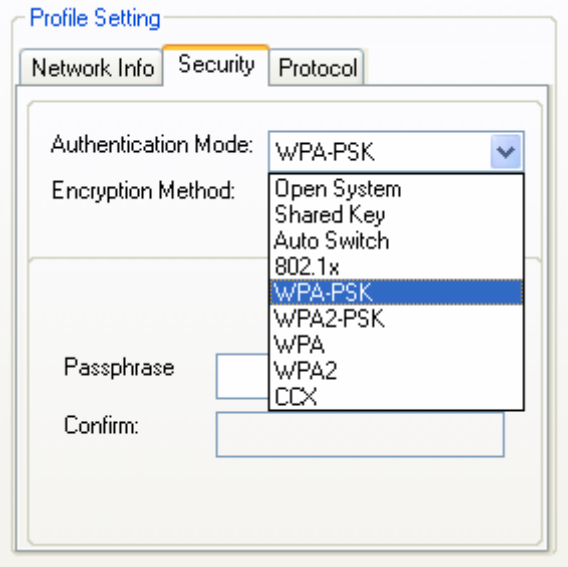
4.3.2.1 Configure WEP Keys

Clicking the **Configure WEP Keys** button displays the **Configure WEP Key** dialog box:

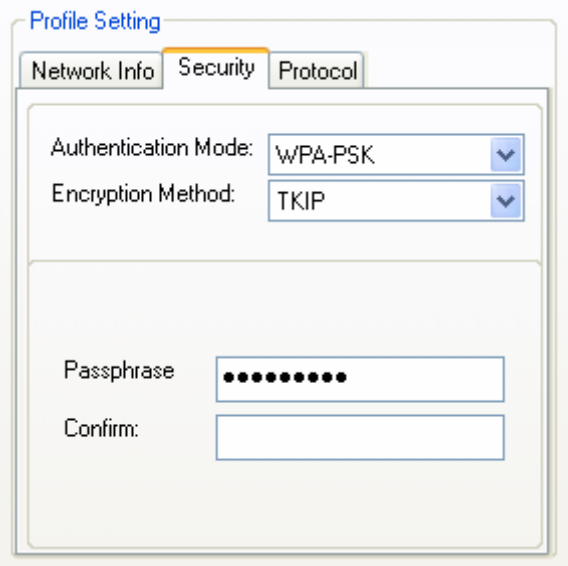


- **Key Format** – either ASCII characters or hexadecimal digits.
- **Key Size** – 40-bit or 104-bit:
  - 40-bit, 5 character ASCII key size (40-bit, 10 character hexadecimal)
  - 104-bit, 13 character ASCII key size (104-bit, 26 character hexadecimal)
- **Transmit Keys** – there are four transmit keys. The key value is displayed in ASCII or hexadecimal, depending on the format selected. Likewise, the key size shown depends on the key size selected.

4.3.2.2 WPA-PSK Support in Infrastructure Mode



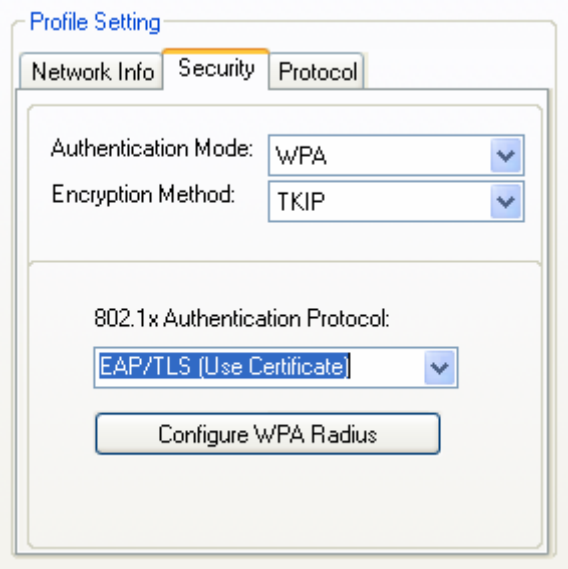
- In Infrastructure Mode, if WPA-PSK is selected as the Authentication Mode, TKIP is automatically selected as the Encryption Method.
- Enter the network passphrase in the **Passphrase** and **Confirm** fields.
- WPA-PSK is not supported in Ad-Hoc network mode.

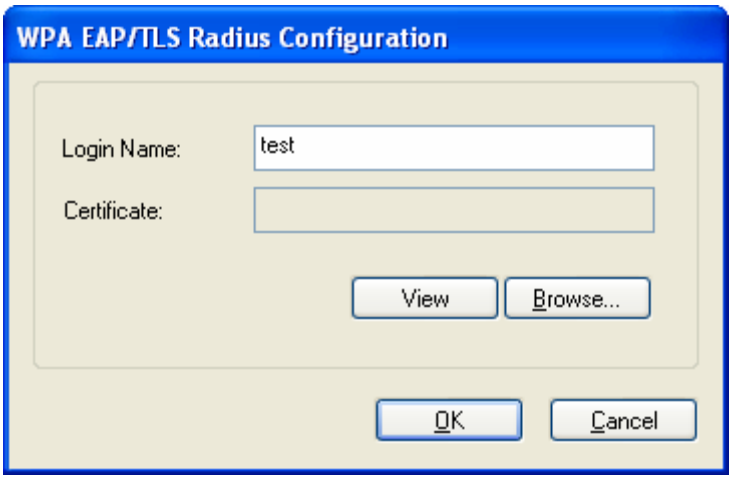


4.3.2.3 WPA (802.1x EAP/TLS) Support in Infrastructure Mode

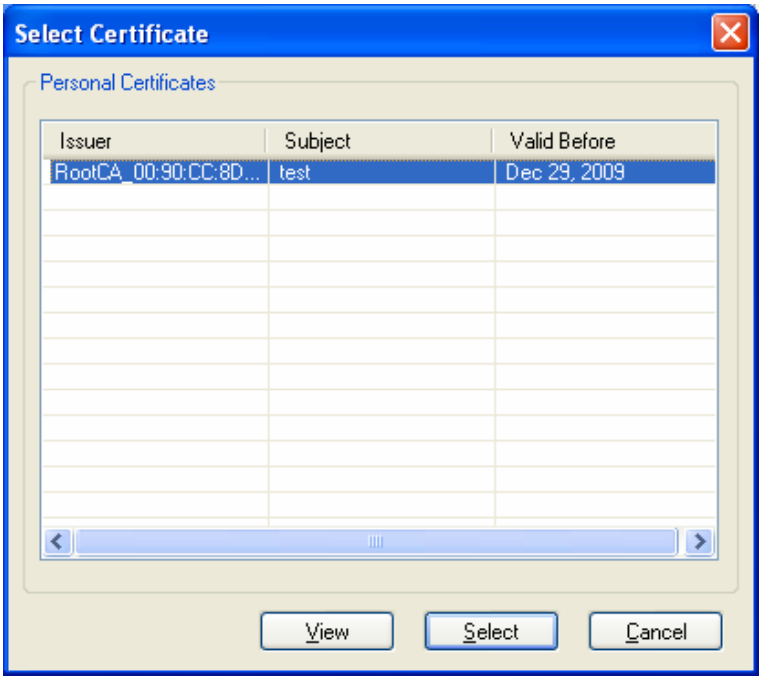
To connect to an AP through the Radius Server, the user can select WPA as the Authentication Mode.

1. In Infrastructure Mode, the user can select TKIP or WEP as the Encryption Method.
2. Select EAP/TLS (Use Certificate) as the 802.1x Authentication Protocol.
3. Click the Configure WPA Radius button to configure security settings.

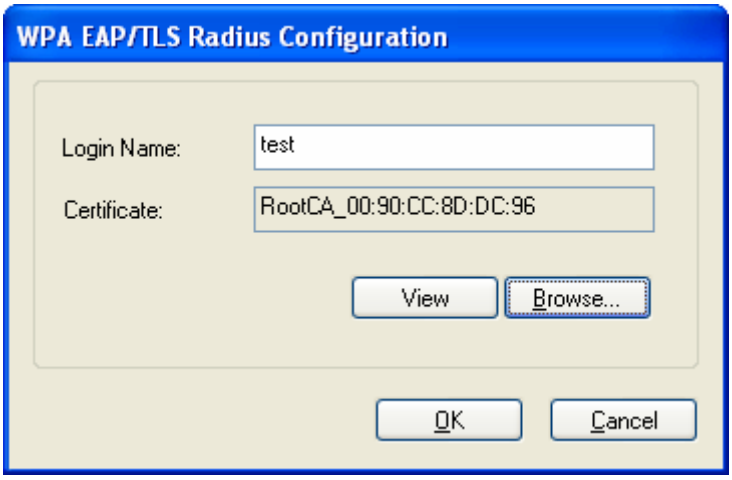




3. Click the Browse button to activate the dialog for selecting a certificate.



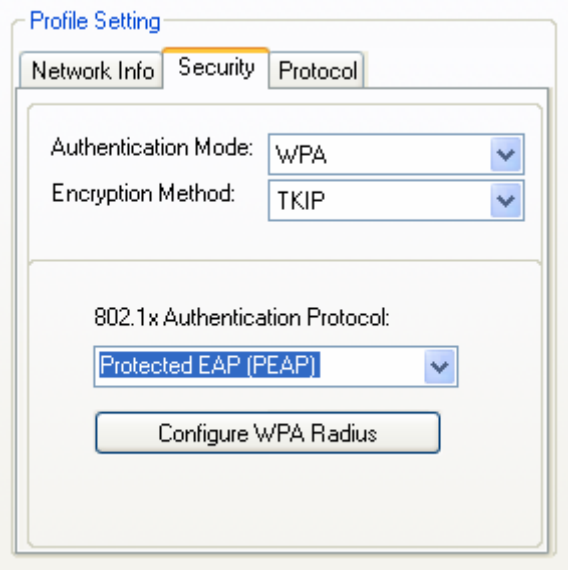
4. Before clicking the OK button to exit the dialog, make sure that the Login Name is entered.

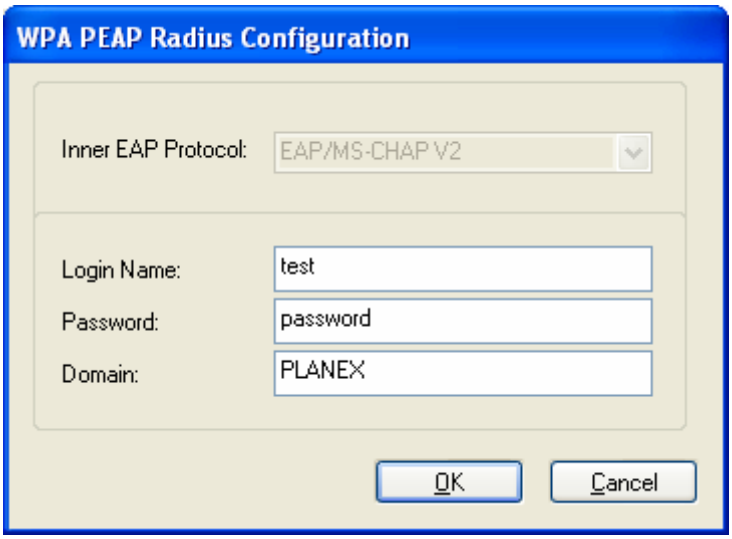


4.3.2.4 WPA (802.1x PEAP) Support in Infrastructure Mode

To connect to an AP through the Radius Server, the user can select WPA as the Authentication Mode.

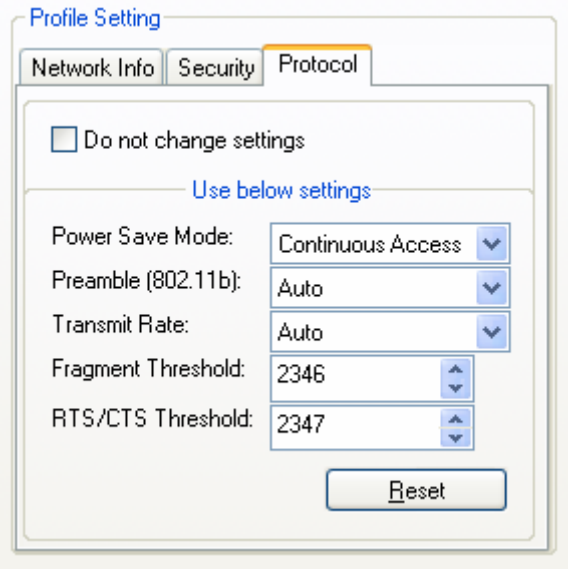
1. In Infrastructure Mode, the user can then select TKIP or WEP as the Encryption Method.
2. Select Protected EAP (PEAP) as the 802.1x Authentication Protocol.
3. Click on the Configure WPA Radius button to configure security settings.
4. Make sure to enter all of the required information.





4.3.3 Protocol

Set or change protocol information from the Protocol tab.



(1) Do not change settings

If this box is checked, the protocol setting is not changed when the profile is applied.

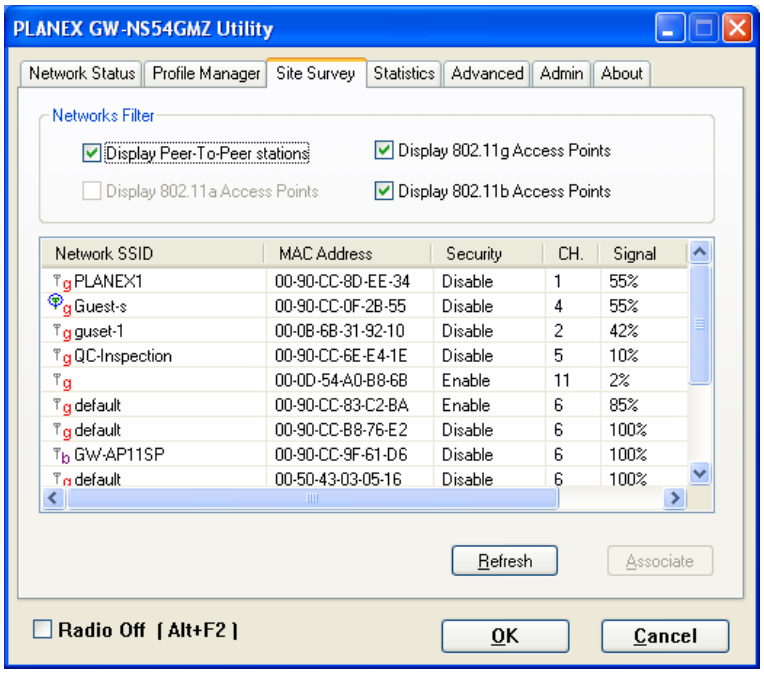
(2) Use below settings

Some of the protocol settings below can be changed if the **Do not change setting** box is unchecked:

- **Power Save Mode** – Sets the power mode. Available options are Continuous Access or Max Power Save. The default is Continuous Access.
- **Preamble (802.11b) – Sets the Radio Preamble to Auto or Long. This option takes effect only when attaching to an 802.11b network.**
- **Transmit Rate** – The range of the data rate depends on the type of AP that the client card is connected to. The default setting is **Auto Select**.
- **Fragment Threshold** – Sets the fragmentation threshold (the size that packets are fragmented into for transmission). The default setting is 2346.
- **RTS/CTS Threshold** – Sets the packet size at which the AP issues a Request-To-Send (or Clear-to-Send) frame before sending the packet. The default setting is 2346.
- **Reset button** – Clicking **Reset** returns the protocol settings to their default values.

4.4 Site Survey Tab

Clicking on the **Site Survey** tab displays the **Site Survey** dialog box:



This tab shows a list of all of the peer-to-peer and AP stations within range of the adapter.

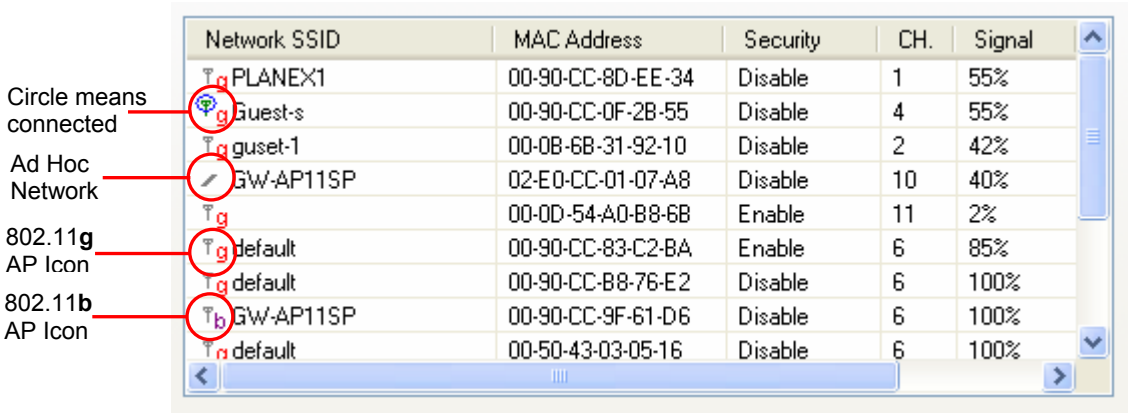
4.4.1 Networks Filter

This section lets you customize which sites are displayed in the Site Survey list window:

- **Display Peer-To-Peer stations** – checking this box displays all of the peer-to-peer stations within range.
- **Display 802.11a Access Points** – this product no to support 802.11a function.
- **Display 802.11g Access Points** – checking this box displays all of the 802.11g APs within range.
- **Display 802.11b Access Points** – checking this box displays all of the 802.11b APs within range.

4.4.2 Site Survey List Window

This window reports information on the Ad Hoc or AP stations detected:



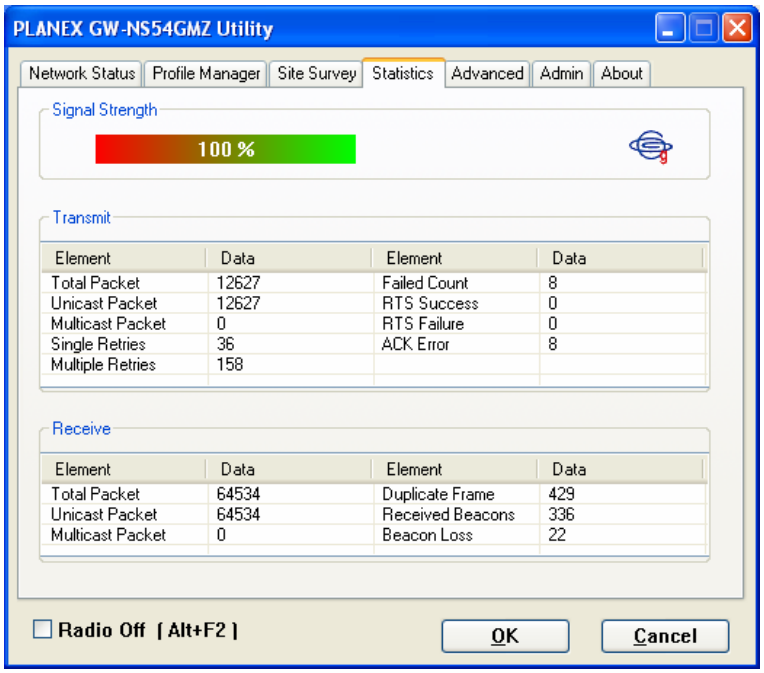
- **Network SSID** – the network SSID label; i.e., the Network Name. The Network Name is a text string.
- **MAC Address** – the MAC address, a hardware address that uniquely identifies each node of a network.
- **Security** – security enabled or disabled.
- **CH.** – displays the channel used by the detected device.
- **Signal** – displays the detected device's signal strength as a percentage.
- **Icons** – the following icons may be displayed to the left of the Network SSID:
  - an antenna icon with a superscript **b** indicates an 802.11b AP.
  - an antenna icon with a superscript **g** indicates an 802.11g AP.
  - a circle around the antenna icon means the adapter is connected to this network.
  - a slash icon indicate an Ad Hoc network.

4.4.3 Refresh Button

Clicking the **Refresh** button requests a survey of all wireless networks in the area.

4.5 Statistics Tab

Clicking on the **Statistics** tab displays statistics for the current connect session:

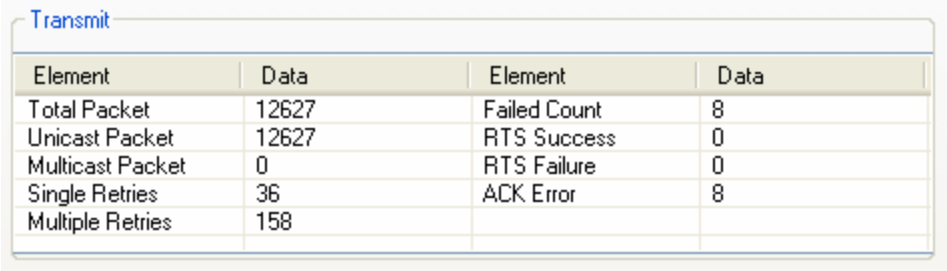


4.5.1 Signal Strength

The color-coded Signal Strength bar displays the signal strength of the last packet received by the adapter. Signal strength is reported as a percentage. A signal in the red area indicates a bad connection. A signal in the green area indicates a good connection.

4.5.2 Transmit Window

The **Transmit** window displays information on the packets sent:



- **Total Packet** – reports the total number of packets transmitted.
- **Unicast Packet** – reports the number of packets transmitted by the adapter that were destined for a single network node.
- **Multicast Packet** – reports the number of packets transmitted by the adapter that were destined

for more than one network node.

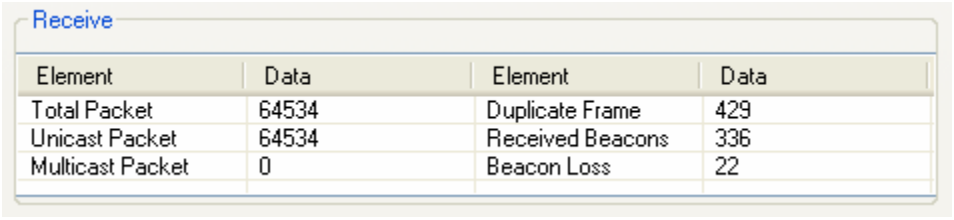
- **Single Retries** – reports the number of packets that required one retry before the adapter received an acknowledgement.

Note: After the adapter sends a packet, it waits for an acknowledgment from the receiving radio to confirm that the packet was successfully received. If the acknowledge is not received within a specified period of time, the adapter retransmits the packet.

- **Multiple Retries** – reports the number of packets that required more than one retry before the adapter received an acknowledgement.
- **Failed Count** – reports the number of packets that were not successfully transmitted because the adapter did not received an acknowledgment within the specified period of time.
- **RTS Success** – reports the number of RTS attempts that were successful.
- **RTS Failure** – reports the number of RTS attempts that were not successful.
- **ACK Error** – reports the number of unicast transmit attempts for which no ACK was received.

4.5.3 Receive Window

The **Receive** window displays information on the packets received:

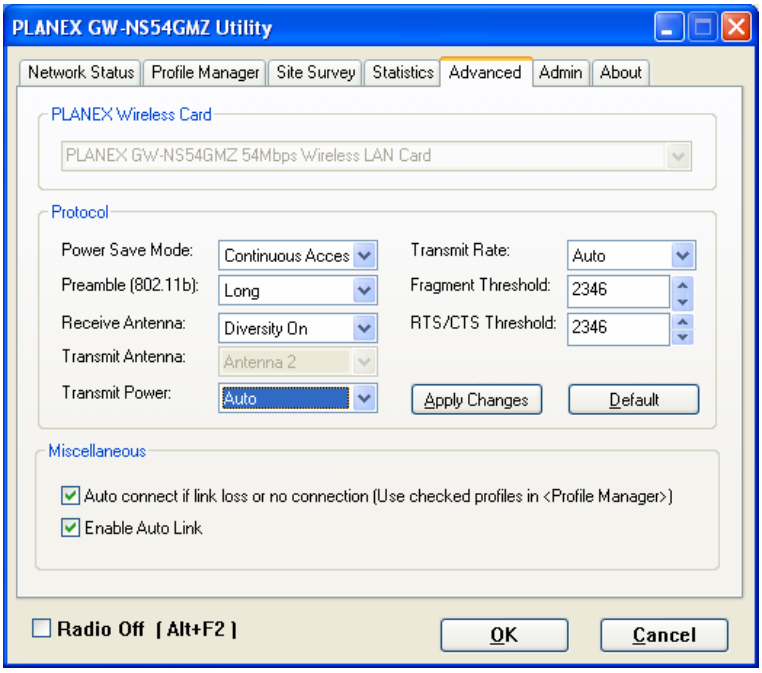


- **Total Packet** – Reports the total number of packets received.
- **Unicast Packet** – Reports the number of packets received by the adapter that were destined for a single network node.
- **Multicast Packet** – Reports the number of packets received by the adapter that were destined for more than one network node.
- **Duplicate Frame** – Reports the number of duplicate frames received.
- **Received Beacons** — Reports the number of beacons received after an association is established.
- **Beacon Loss** — Reports the number of missing beacons after an association is established.

4.6 Advanced Tab

Clicking on the **Advanced** tab displays the **Advanced** dialog box.

This tab displays the advanced parameters available. The major components of this tab are described in the following sections.

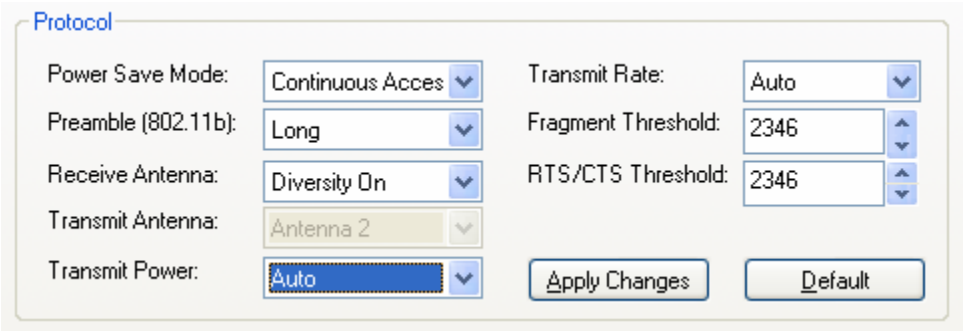


4.6.1 PLANEX Wireless Card

This window reports the type of GW-NS54GMZ WLAN adapter installed.

4.6.2 Protocol

This section of the Advanced tab sets the **Protocol** options:

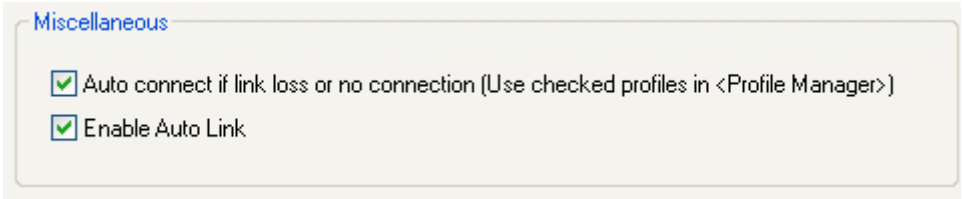


- **Power Save Mode** – sets the power mode, either:
  - Continuous Access
  - Max Power Save
- **Preamble (802.11b)** – sets the radio preamble (takes effect only when attaching to 802.11b networks):
  - Auto
  - Long
- **Receive Antenna** – sets the Receive Antenna mode, either:
  - Diversity On
  - Diversity Off
- **Transmit Antenna** – Transmit Antenna mode is set to Antenna 2
- **Transmit Rate** – the range of the data rate depends on the type of AP that the client card is connected to. The default setting is **Auto Select**.
- **Fragment Threshold** – sets the fragmentation threshold (i.e., the size that packets are fragmented into for transmission). The default setting is 2346.
- **RTS/CTS Threshold** – sets the packet size at which the AP issues a RTS (or CTS) frame before sending the packet. The default setting is 2346.

The **Apply Changes** or **Default** buttons configure the options according to the changes entered or apply the default values.

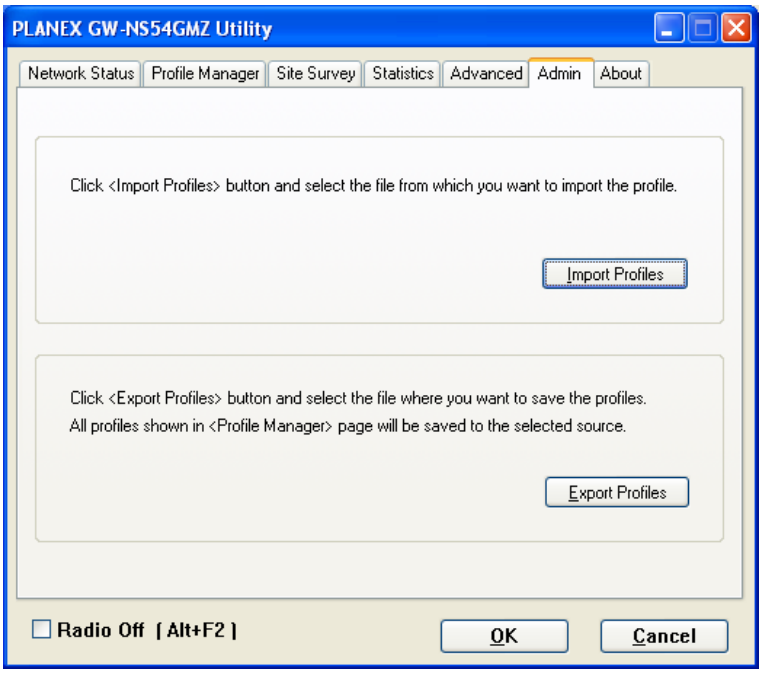
4.6.3 Miscellaneous

- **Auto connect if link loss or no connection** (Use checked profiles in **Profile Manager**) – Unchecking this box disables the auto-configuration feature. Whenever there is a link loss, auto-configuration tries to establish a connection according to the checked profiles in the Profile Manager.
- **Enable Auto Link** – This option allows the user to enable/disable the Auto Link feature (see **Auto Link**)



4.7 Admin Tab

Clicking the **Admin** tab displays the **Admin** dialog box. This tab allows you to import and export profiles.



4.7.1 Import Profiles

To import a profile:

1. Click the **Import Profiles** button.
2. Select the path and filename of the profile.
3. Click **Open**.

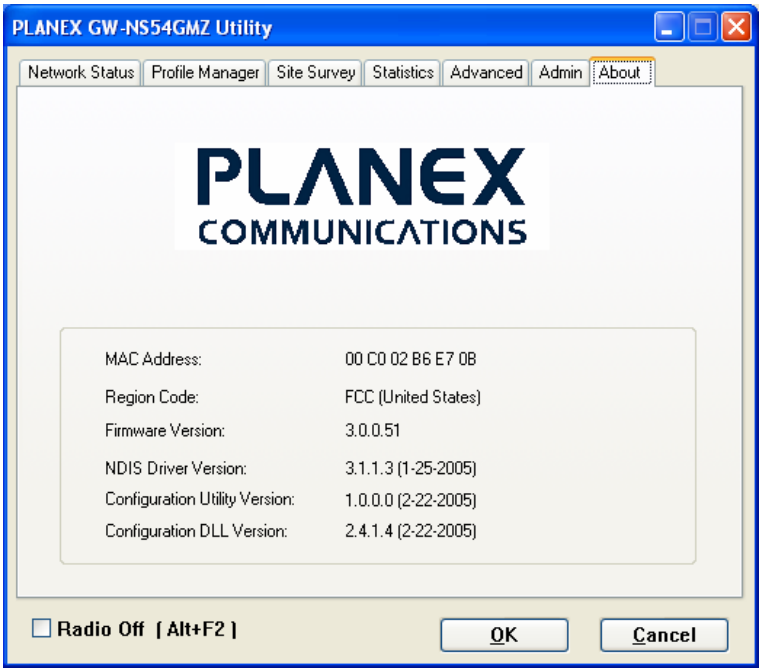
4.7.2 Export Profiles

To export a profile:

1. Click the **Export Profiles** button.
2. Select the path and filename of the profile.
3. Click **Save**.

4.8 About Tab

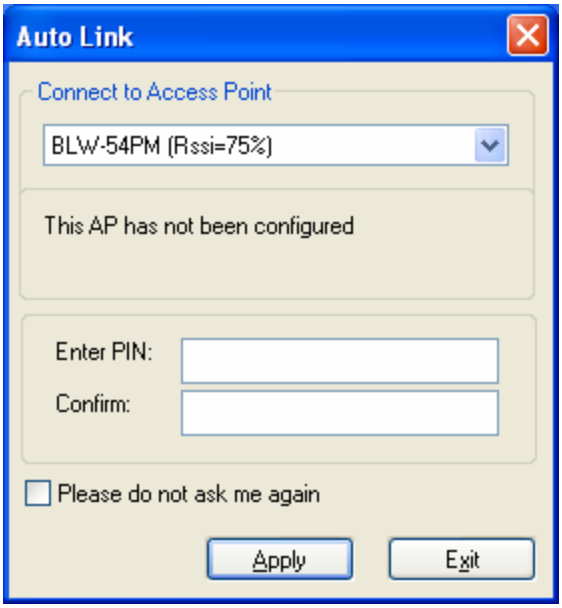
Clicking on the **About** tab displays the **About** dialog box, as shown in the following example.



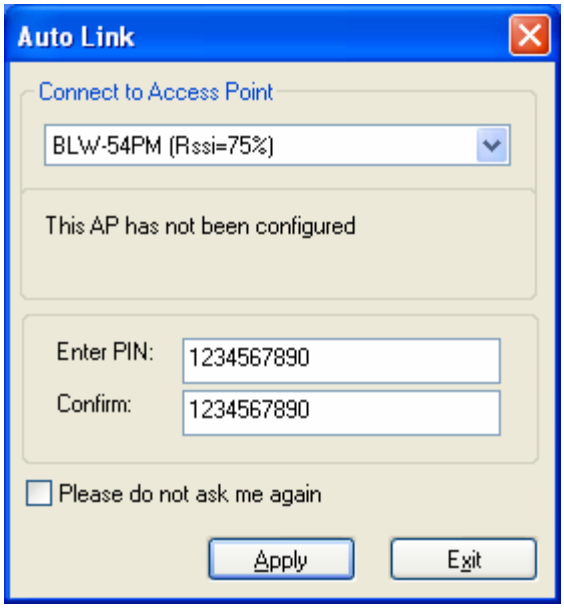
4.9 Auto Link

4.9.1 Using Auto Link to Configure a PLANEX BLW-54PM

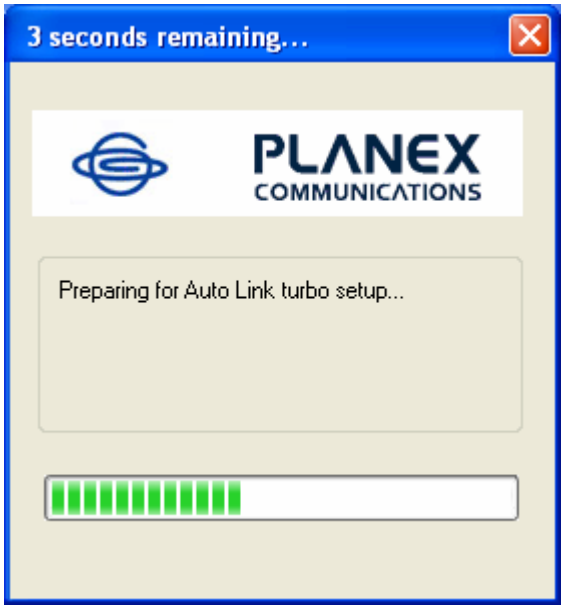
The following dialog pops up whenever all of the following conditions apply:
• There is a non-configured PLANEX BLW-54PM in the area
• The GW-NS54GMZ is not connected to any AP or Ad-Hoc network
Click on the drop down list for the PLANEX BLW-54PM(s) found in the area.



Check on the **Please do not ask me again** box to disable the Auto Link. The user can re-enable this feature by going to the **Advanced Tab** in the GW-NS54GMZ Utility and checking the **Enable Auto Link** box.
In the **Enter PIN:** field, enter the security PIN to be set for this AP. This PIN is used to connect to this AP.

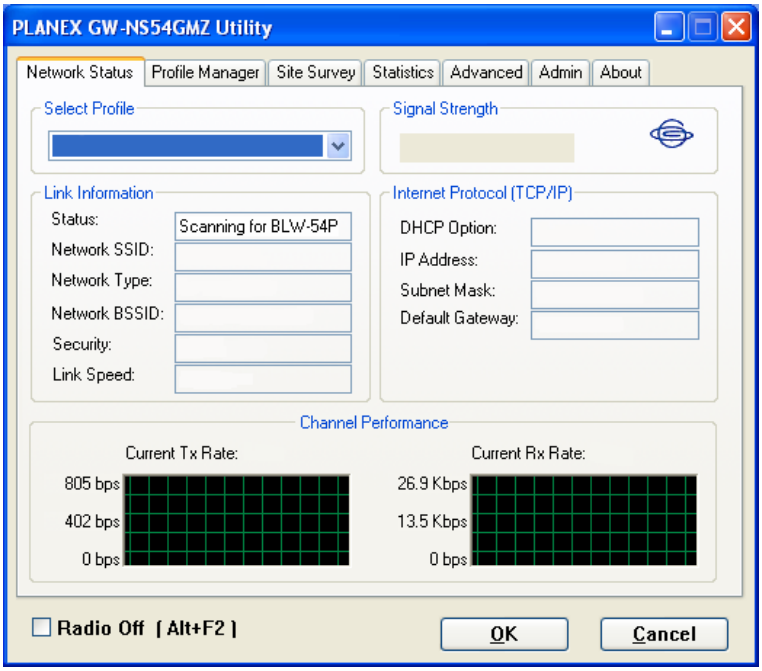


It takes a few seconds for the GW-NS54GMZ Utility to prepare before starting **Auto Link** to set up the AP.

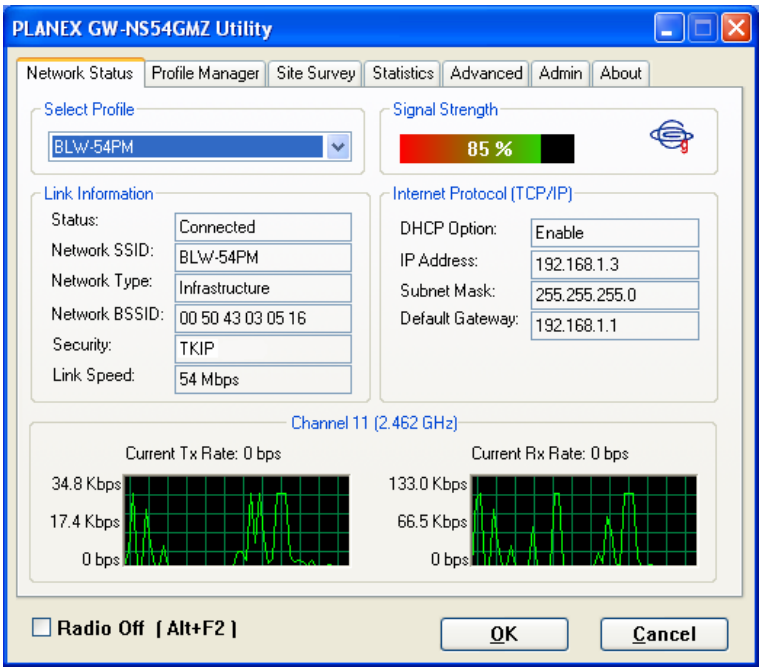


The AP takes about 10-15 seconds to restart after successful configuration using Auto Link.

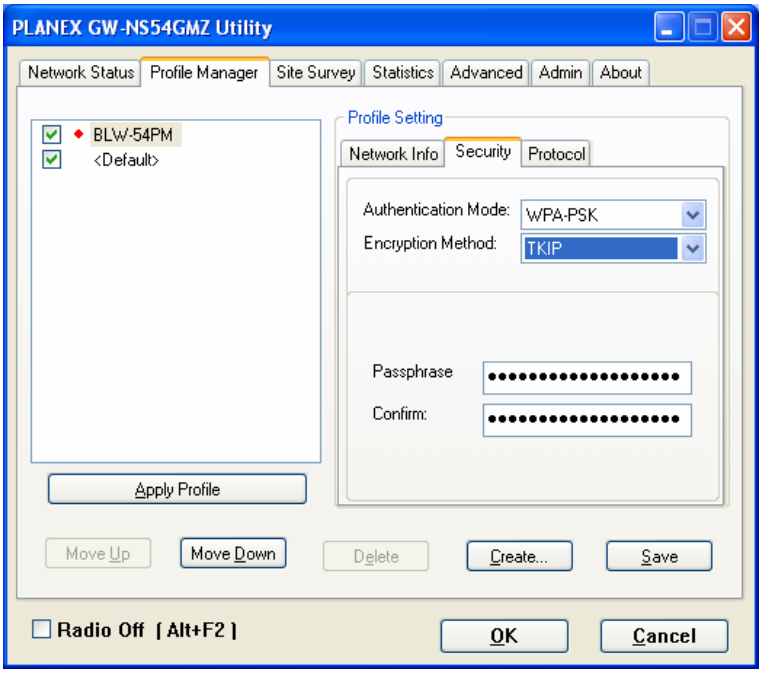
The Auto Link process is complete after the configured AP is restarted.



The GW-NS54GMZ Configuration Utility then attempts to reconnect to the newly configured AP.

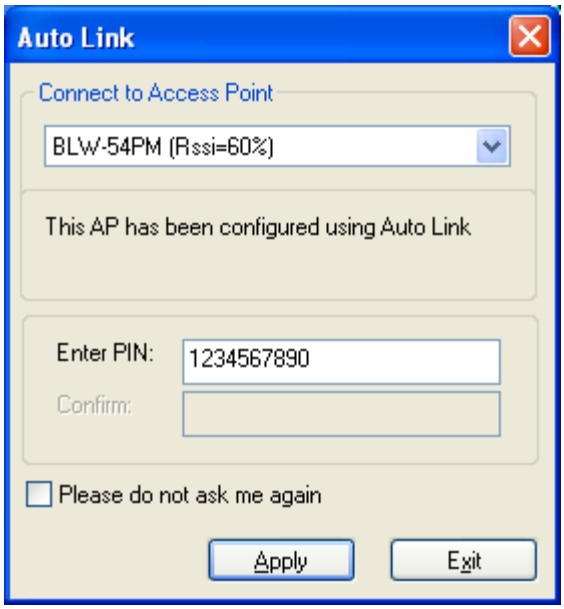


The Profile Manager creates a new profile for this AP. The security setting is WPA-PSK, and the PIN entered in Auto Link becomes the passphrase.

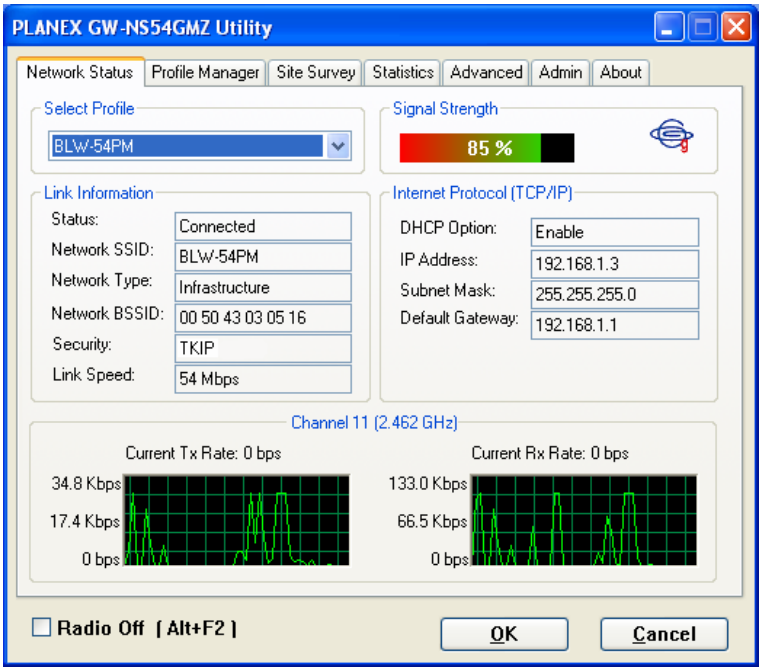


4.9.2 Connect to an Auto Link Configured PLANEX BLW-54PM

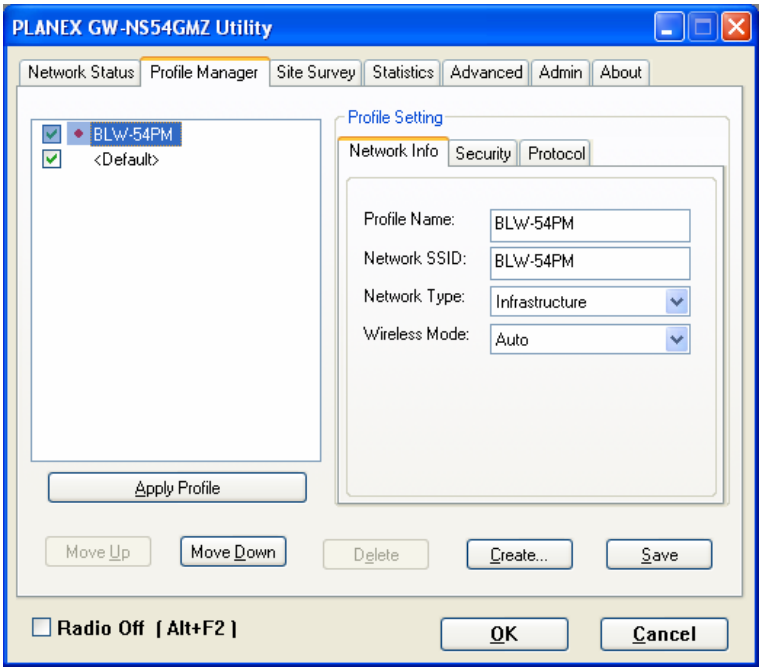
The following dialog pops up whenever all of the following conditions apply:
• There is an Auto Link configured PLANEX BLW-54PM in the area.
• The client card is not connected to any AP or Ad-Hoc network.
• There is no profile of this AP in the Profile Manager.
In the **Enter PIN:** field, enter the PIN that was used for this AP in the Auto Link configuration.



The GW-NS54GMZ Configuration Utility re-engages after Auto Link successfully connects the client to the selected AP.



A profile for this AP is created in the Profile Manager.



Chapter 5. Specifications

Chipset:	Marvell 88W8335
RF Chip:	Marvell 88W8010
Bus Type:	CardBus
Data Rates :	54, 48, 36, 24, 18, 12, 9, and 6 Mbps (802.11g)
	11, 5.5, 2, 1 Mbps (802.11b)
Frequency Band :	2.4GHz to 2.462GHz
Wireless Medium :	DSSS and OFDM
Media Access Protocol:	CSMA/CA
Operating Channels:	1-14(FCC:1-11、ETSI:1-13、Japan:1-13)
Operating Range:	• Indoors: Up to 328 ft (100 meters) • Outdoors: Up to 1312 ft (400 meters)
Receive Sensitivity :	
802.11g	54 Mbps: -70 dBm
	48 Mbps: -72 dBm
	36 Mbps: -77 dBm
	24 Mbps: -80 dBm
	18 Mbps: -82 dBm
	12 Mbps: -85 dBm
	9 Mbps: -86 dBm
	6 Mbps: -88 dBm
802.11b	11 Mbps: -86 dBm
	5.5 Mbps: -89 dBm
	2 Mbps: -91 dBm
	1 Mbps: -91 dBm
Wireless Medium:	DSSS (Direct Sequence Spread Spectrum)
Media Access Protocol:	CSMA/CA
Transmit Power:	
802.11g:	14±2 dBm
802.11b:	16±2 dBm
Security :	64/128-bit WEP WPA—Wi-Fi Protected Access
Standards Conformance:	WPA certified, IEEE 802.11g, IEEE 802.11b
EMI:	FCC, CE, DGT,TELEC, VCCI, WiFi
Environmental Range:	
Operating temperature:	0° to 40°C (32° to 104°F)
Operating humidity:	0 to 90% non-condensing
System Requirements	Notebook PC must be operating Windows 98SE/ME/XP/ 2000