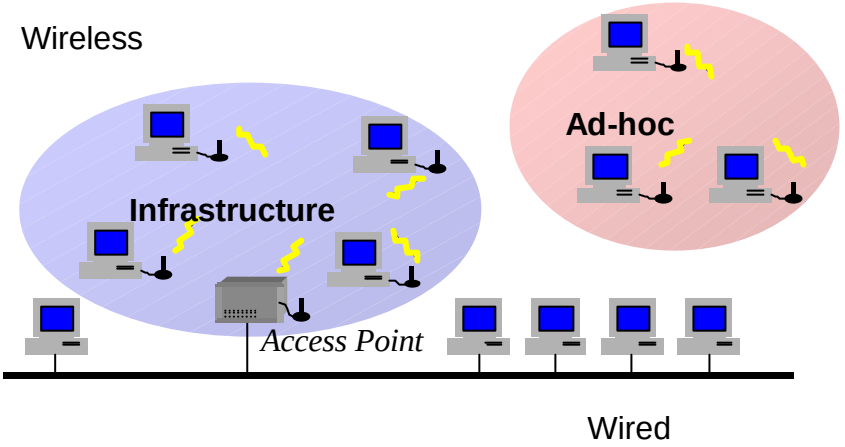
22Mbps Card BUS Wireless LAN PC Card

Quick Start Guide

I. Network Configuration

22Mbps Card BUS wireless LAN adapter is a 22Mbps Card BUS wireless LAN adapter. It fully supports Wireless networking under Windows 98/ME/NT/2000/XP.

- 22Mbps Card BUS wireless LAN adapter can be operated in Ad-Hoc or Infrastructure network configurations. *Ad-Hoc mode* allows 22Mbps Card BUS wireless LAN adapter. users to join a Basic Service Set (i.e., peer-to-peer mode, without access point). *Infrastructure mode* allows 22Mbps Card BUS wireless LAN adapter users to join an Extended Basic Service Set (i.e., connect to an Access Point)



II. Package Content

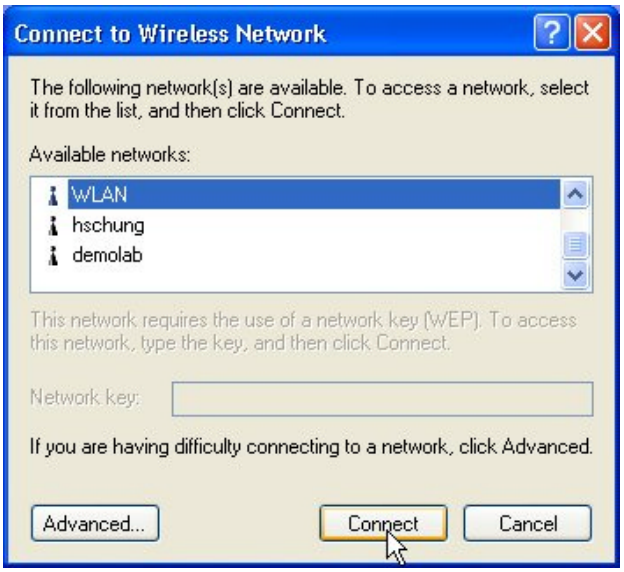
22Mbps Wireless PC Card. ..... x 1
Quick Installation Guide. ..... x 1
Product CD-ROM . ..... x 1

III. Installation of the 22Mbps Wireless LAN PCMCIA Card under Windows XP

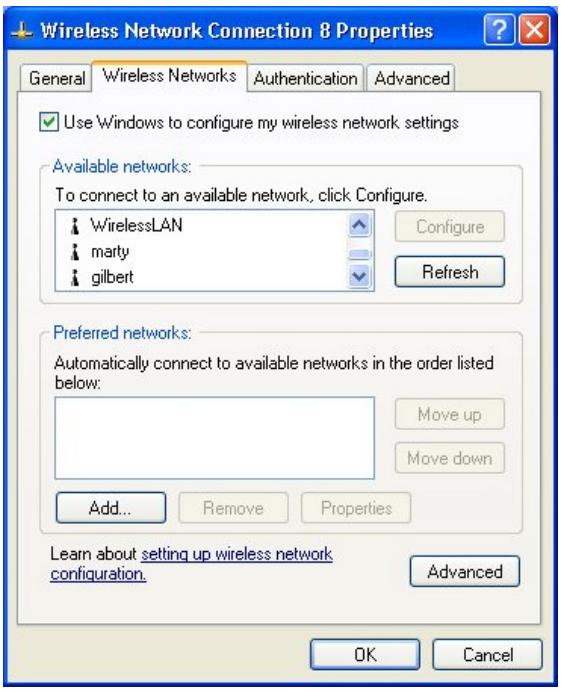
1. Insert the 22Mbps Card BUS wireless LAN adapter. into the PCMCIA slot on your notebook and start Windows. Windows will auto-detect the Wireless LAN PCMCIA Card and a "**Found New Hardware Wizard**" window will show up.
2. Select "**Install from a list or specific (Advanced)**" and insert the Product CD-ROM into the CD-ROM drive. Specify the location where the driver is placed. Click on **Next** to install the driver.
3. The windows will find "**22Mbps Wireless LAN PC Card**". Click on **Next** to continue.
4. Click **Finish** to complete the installation.

After installing the Wireless LAN PC Card, the Windows XP will display a “Wireless Network Connection # ” message.

Click on the message and the “*Automatic Wireless Network Configuration*” will then appear automatically and allow users to connect to an available wireless infrastructure network (Access Point), shown as follows:



You may click the **Advanced** button to make advanced configuration for the 22Mbp Wireless LAN PC Card, shown as below.



For more information on using the Automatic Wireless Network Configuration please refer to Windows XP **Help** file.

However, the WLAN Utility, which came with the Wireless LAN PC Card, provides you more tools to configure the 22Mbps Wireless LAN PC Card and to monitor the wireless connection. For more information on installing and using the WLAN utility, please refer to the following sections "*Installation of the Wireless LAN Utility*" and "*Usage of the WLAN Utility*".

Note: To use the WLAN utility under Windows XP, you need to disable the ***Automatic Wireless Network Configuration*** first. Steps are described as follows:

- Right click the **Network Connections** icon. Select **Properties**.
- Go to the **Wireless Networks**.
- Uncheck the "**Use Windows to configure my wireless network settings**" check box and click the **OK** button (see the above picture).

Installation of the 22Mbps Wireless LAN PCMCIA Card under Windows 2000

1. Insert the 22Mbps Wireless LAN PCMCIA Card into the PCMCIA slot on your notebook and start Windows. Windows will auto-detect the Wireless LAN PCMCIA Card and a "**Found New Hardware Wizard**" window will show up. Click **Next** to proceed.
2. Select "**Search for a suitable driver for my device (recommended)**". Insert the Product CD-ROM into the CD-ROM drive. Specify the location where the driver is placed. Click on **Next** to install the driver.
3. The windows will find "**22Mbps Wireless LAN PCMCIA Card**". Click on **Next** to continue.
4. Click **Finish** to complete the installation.

Installation of the 22Mbps Wireless LAN PCMCIA Card under Windows NT

1. Insert the 22Mbps Wireless LAN PCMCIA Card into the PCMCIA slot on your notebook and start Windows.
2. From the desktop, select "**Control Panel**", double-click **Network**, go to the **Adapters** tab, and then click the **Add** button.
3. Windows NT will present a list of all its supported adapters. Click **Have Disk** to continue.
4. Windows NT will ask for the path containing the 22Mbps Wireless PC Card Windows NT drivers. Insert the Product CD-ROM into the CD-ROM drive, and then choose the location where it is placed. Click **OK** to continue.
5. The Windows will find "**22Mbps Wireless LAN PCMCIA Card**" and then copy the necessary files into the system. Click **OK** to finish the installation. Restart your PC.

Installaton of the 22Mbps Wireless LAN PCMCIA Card under Windows 98/ME

1. Insert the 22Mbps Wireless LAN PCMCIA Card into the PCMCIA slot on your notebook and start Windows. Windows will auto-detect new hardware and will display an "**Add New Hardware Wizard**" window.
2. Select "**Search for the best driver for your device (recommended)**". Insert the Product CD-ROM into the CD-ROM drive. Specify the location where the driver is placed. Click on **Next** to install the driver.
3. The Windows will find "**22Mbps Wireless LAN PCMCIA Card**". Click on **Next** to continue.
4. Once the [Please insert the disk labeled "Windows 98/ME CD-ROM", and then click OK] window appears, enter the path corresponding to the appropriate drives and click **OK**. Usually these files can be found at C:Windows or C:Windows\system.
5. Click **Finish** to complete the installation. Restart Windows.

IV. Installation of the WLAN Utility

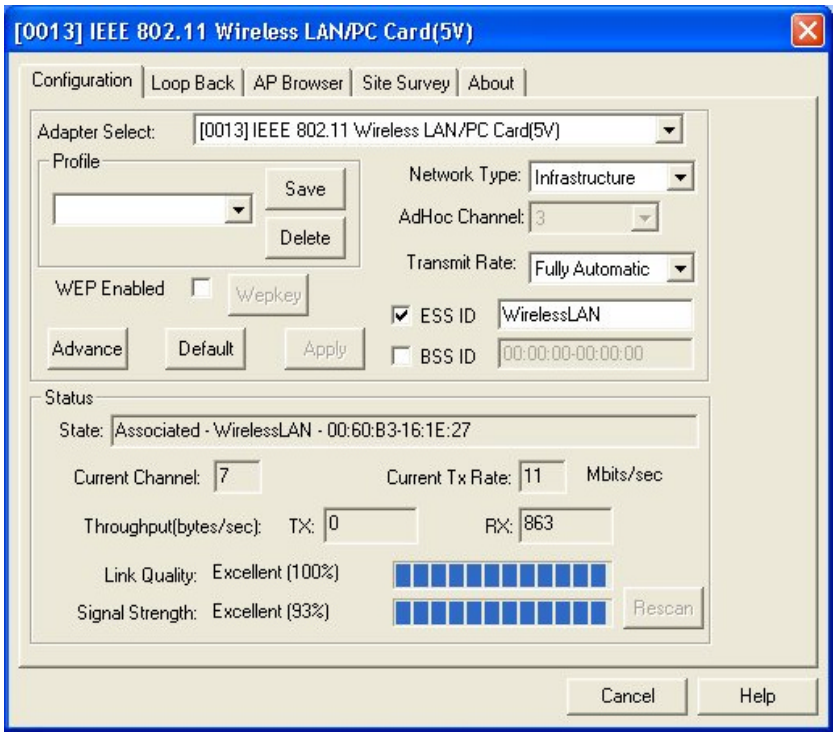
1. Insert the Product CD-ROM again.
2. Go to the **utility** folder and run **setup.exe**.
3. Follow the on-screen instructions to install the WLAN Utility.
4. Upon completion, go to **Program Files** and run the WLAN Utility. The utility interface will then appear and at the same time its icon appears in the **System Tray** in the bottom right corner of your task bar.

V. Usage of the WLAN Utility

The WLAN Utility consists of window with 5 items for you to monitor and configure the 22Mbps Wireless LAN PC Card: **Configuration**, **Loop Back**, **AP Browser**, **Site Survey** and **About**.

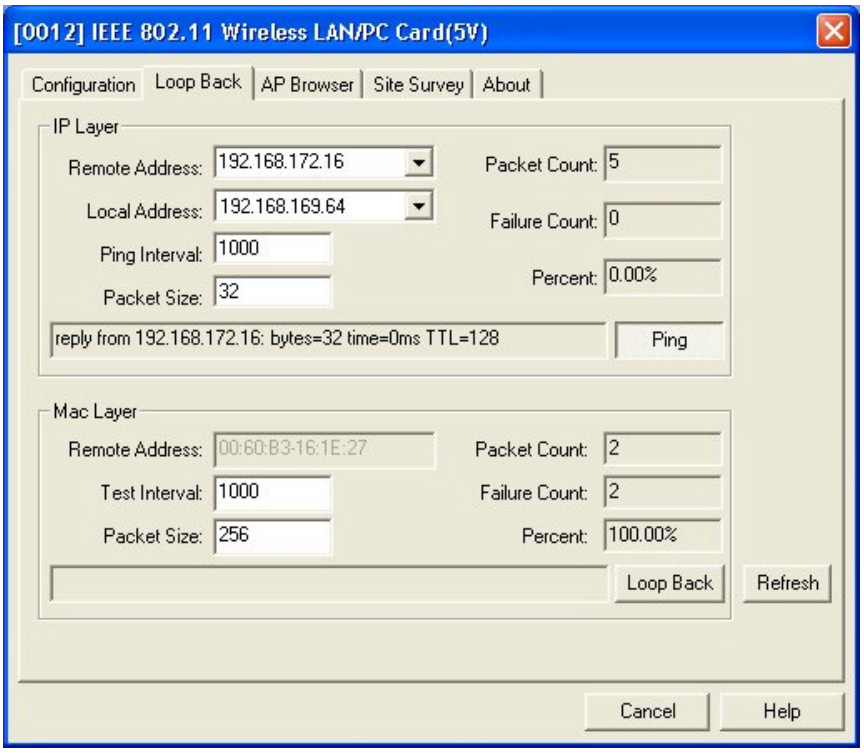
Configuration:

The **Configuration** item allows you to modify the configuration parameters for the 22Mbps Wireless LAN PC Card such as **Profile**, **Network Type**, **Channel**, **Transmit Rate**, **ESSID**, **WEP**, **RTS/CTS**, **Fragment Threshold**, and **Power Save** mode. Furthermore, you may monitor the current status of the Wireless LAN PC Card such as **State**, **Current Channel**, **Current Tx Rate**, **Throughput**, **Link Quality** and **Signal Strength**.



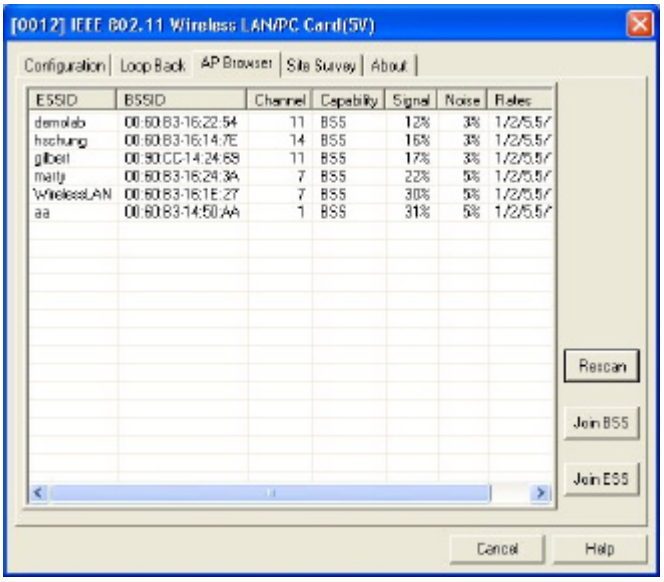
Loop Back:

The **Loop Back** tool helps you examine data transmission quality between your 22Mbps Wireless LAN PC Card and any workstation on the network. By entering IP address of 2 remote station, setting ping interval and packet size, you may know whether communication has been made successfully or not. Additionally, you may run the loopback test by clicking the **Loop back** button to verify the communication quality between your wireless station and Access Point. The **Refresh** button is used for setting the counters back to 0.



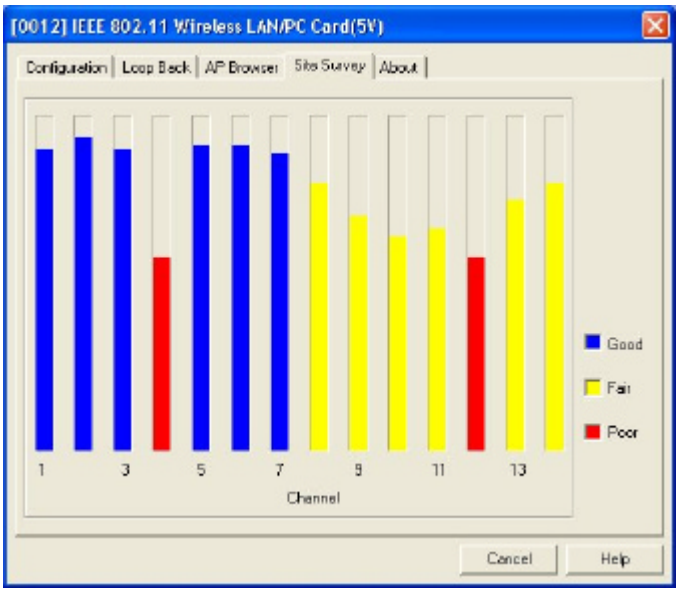
AP Browser:

By clicking the **Rescan** button, the AP Browser can display Access Points around the working environment. Besides showing the ESSID of each Access Point, it also displays BSSID, Channel, Signal, Quality and Supported Rates. To join any of the displayed Access Points, highlight the Access Point you desire to connect and then click the **Join BSS** (when there are more than 2 Access Points with the same ESSID), or **Join ESS** button to join the group.



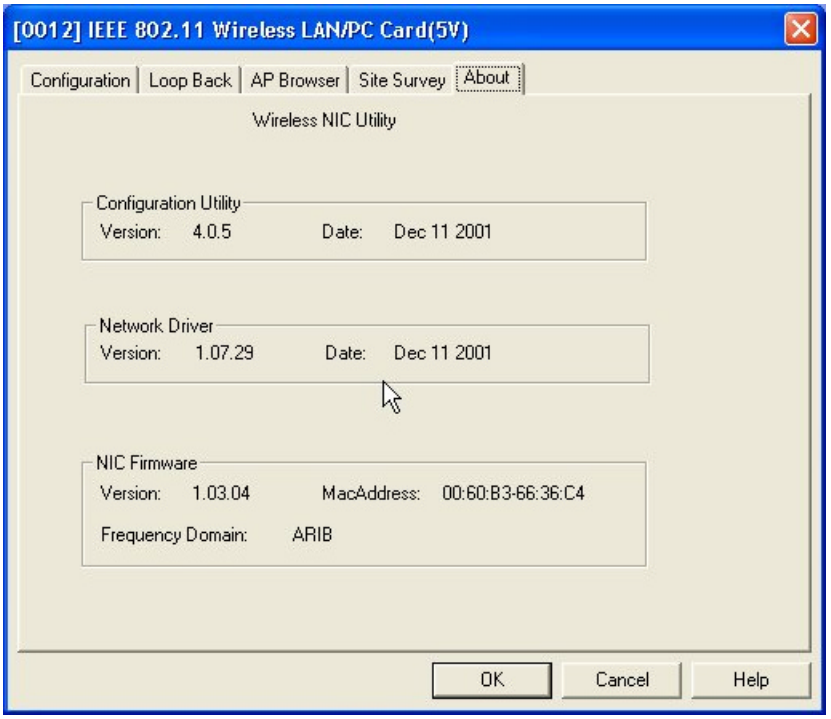
Site Survey:

When the **Site Survey** screen is displayed, the channel quality of all 14 radio channels will be displayed. These channel quality measurements are shown on each gauge for the 14 radio channels. The blue bar indicated the channel quality is clear and good. The **higher** the blue bar is, the **better** quality you have (i.e., less interference). The yellow bar indicates the channel quality is fair and the red bar indicates the channel is busy or having severe interference.



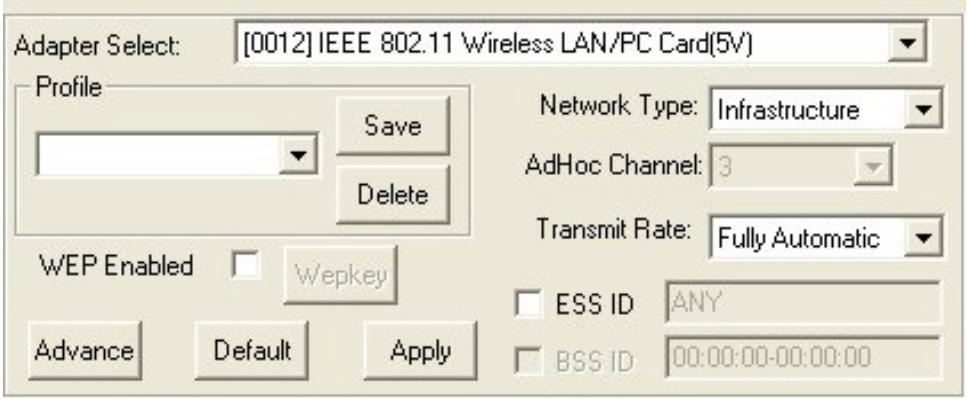
About:

The **About** item shows the versions of the WLAN Utility, driver, firmware of the 22Mbps Wireless LAN PC Card. Also, the MAC address and frequency domain are displayed.



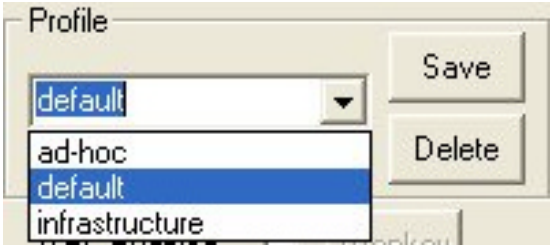
VI. Quick Tips to Configure the Wireless LAN PCMCIA Card

This Quick Start Guide covers the basic features needed to use the 22Mbps Wireless LAN PC Card. Follow these steps to configure network settings.



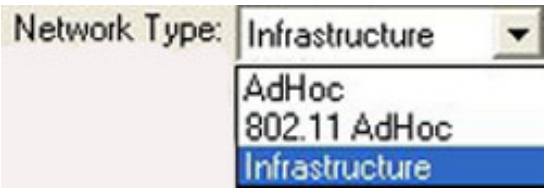
Set the Profile (Optional)

The **Profile** field allows you to set values for all parameters by selecting a previously defined profile. To create the profile, go to the **Profile** field, type a profile name and set the corresponding parameters. After changing parameters, save the profile and click the **Apply** button to take effect. You can have multiple profiles and modify the profile at any time.



Set the Network Type

From the Main Menu, click the **Configuration** tab, go to **Network Type** and click the down arrow at the right of the **Network Type** field. You will then see 3 network types for the 22Mbps Wireless LAN PC Card to operate. If you need to access company network or Internet via Access Point, select "**Infrastructure**". To set up a group of wireless stations for file and printer sharing, select "**AdHoc**" or "**802.11 AdHoc**" (without Access Point). If **Ad-Hoc (without access point)** is selected, you need to set wireless stations with the *same channel*. For **802.11 AdHoc**, the *same channel and ESS ID* are required to the wireless stations.



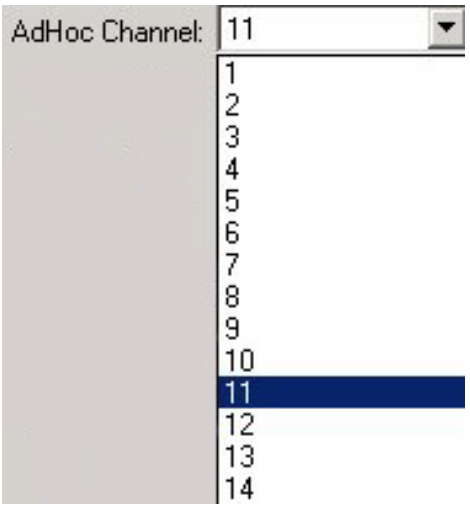
Set the ESS ID

The ESS ID is the unique ID used by Access Points and stations to identify a wireless LAN. Wireless clients associating to any Access Point must have the same ESS ID. The default setting is ANY, which allows your Wireless LAN PC Card to automatically associate to any Access Point (Infrastructure mode) in the vicinity of your wireless adapter. Alternatively, you may check the **ESS ID** check box to specify the ESS ID. It will then attempt to associate with Access Points or stations with the same ESS ID. The ESS ID can be set up to *32 characters* and is case sensitive.

Check here before entering the ESS ID

Set the Channel (for Ad-Hoc network)

To form an AdHoc network, the same channel is required. Before choosing a channel, it is advised to use the **Site Survey** tool to check the quality of each channel. Afterwards, go to the **AdHoc Channel** field and choose a clear channel for your wireless LAN stations. Click the **Apply** button to make the change take effect.



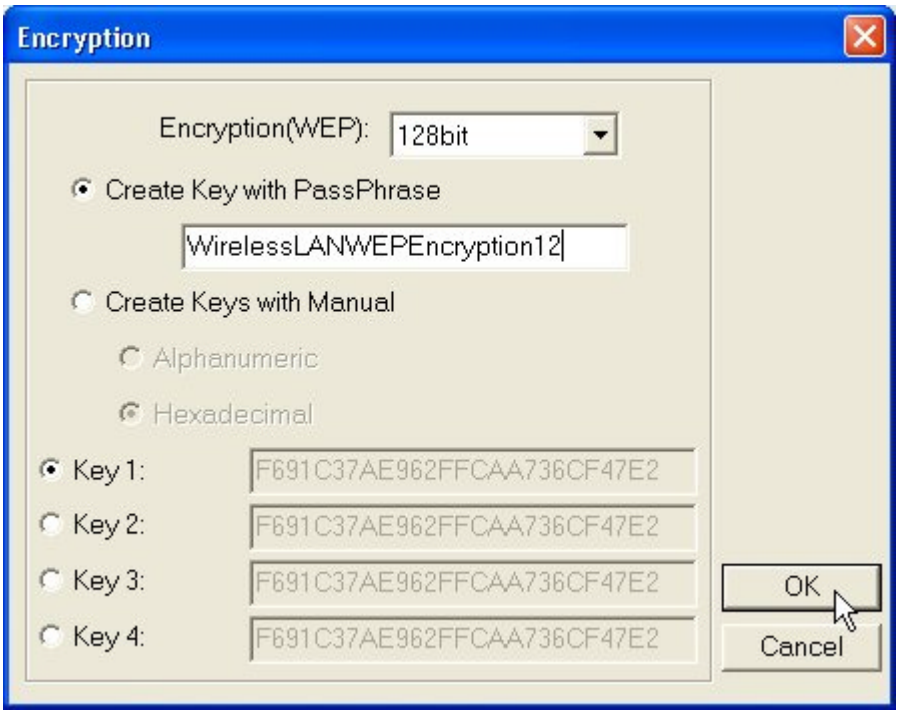
Set the Encryption (Optional)

The Encryption tab lets you enable encryption and set the encryption keys, making your data transmission over the air more secure. To activate the WEP Encryption, go to the **Configuration** tab and check the **WEP Enabled** check box. An Encryption window will then appear. The instructions are as follows:

- Pull down the **Encryption (WEP)** menu and select either **64bit** or **128bit** encryption method.
- Specify the encryption keys. There are two methods to set the WEP keys, as described below:

  Create Encryption Keys by Using a Passphrase

  To create encryption keys by using a passphrase, click the **Create Key with Passphrase** check box and type a character string in the **Passphrase** field. As you type, the utility uses an algorithm to generate 4 keys automatically. Select either the **64bit** or **128bit** encryption first and type a string in the **Create Key with Passphrase** field. Select one key from the 4 WEP keys and click **OK**. Then click the **Apply** button on the **Configuration** tab to make the setting take effect.



Create Encryption Keys Using a Passphrase (128bit)

Create Encryption Keys Manually

You can also create up to 4 encryption keys manually by clicking the **Create Keys Manually** check box.

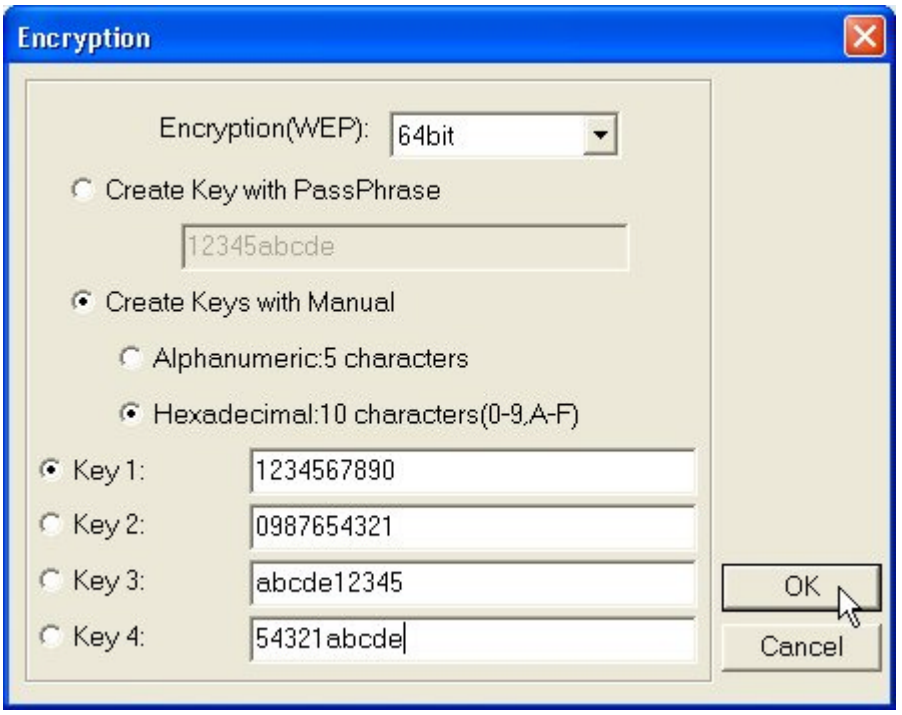
For 64bit encryption you may choose:

- **Alphanumeric*: 5 characters*** (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey)
- **Hexadecimal**: ***10 hexadecimal digits*** in the range of "A-F", "a-f" and "0-9" (e.g. 11AA22BB33)

For 128bit encryption you may choose:

- **Alphanumeric*: 13 characters*** (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey12345678)
- **Hexadecimal**: 26 ***hexadecimal digits*** in the range of "A-F", "a-f" and "0-9" (e.g. 00112233445566778899AABBCC)**.**

After entering the WEP keys in the key field, select one key as active key, click the **OK** button and then click the Apply button to make setting take effect.



Create Encryption Keys Manually – Hexadecimal (64bit)

Technical Support

You can find the most recent software and updated user documentation will be updated periodically on the supplier Web site. If you have difficulty resolving the problem while installing or using the 22Mbps Wireless LAN PC Card, please contact the supplier for support.

FCC Information

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.

Federal Communications Commission (FCC) 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 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.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment.

Limited Warranty

This Warranty constitutes the sole and exclusive remedy of any buyer or reseller's equipment and the sole and exclusive liability of the supplier in connection with the products and is in lieu of all other warranties, express, implied or statutory, including, but not limited to, any implied warranty of merchantability of fitness for a particular use and all other obligations or liabilities of the supplier.

In no even will the supplier or any other party or person be liable to your or anyone else for any damages, including lost profits, lost savings or other incidental or consequential damages, or inability to use the software provided on the software media even if the supplier or the other party person has been advised of the possibility of such damages.

The following are special terms applicable to your hardware warranty as well as services you may use during part of the warranty period. Your formal Warranty Statement, including the warranty applicable to our Wireless LAN products, appears in the Quick Installation Guide which accompanies your products.

Duration of Hardware Warranty: One Year

Replacement, Repair or Refund Procedure for Hardware:

If your unit needs a repair or replacement, return it to your dealer/distributor in its original packaging. When returning a defective product for Warranty, always include the following documents:

- The Warranty Repair Card
- A copy of the invoice/proof of purchase, and
- The RMA Report Form (To receive a Return Materials Authorization form (RMA), please contact the party from whom you purchased the product).

Upon proof-of-purchase we shall, at its option, repair or replace the defective item at no cost to the buyer.

This warranty is contingent upon proper use in the application for which the products are intended and does not cover products which have been modified without the reseller's approval or which have been subjected to unusual physical or electrical demands or damaged in any way.

Please complete the information below and include it along with your products.

Name:	
Title:	
Company:	
Telephone:	
Fax:	
Email:	
City/State/Zipcode:	
Country:	
Product Name:	
Serial Number:	
MAC Address:	
Invoice Date:	
Product Description:	

If you have any further questions, please contact your local authorized reseller for support.

Notice:

The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with the FCC RF exposure compliance requirements, no change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate this device.

Z-Com, Inc.

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Science-Based Industrial Park, Hsinchu, Taiwan
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Website: http:// www.zcom.com.tw
Email: info@ zcom.com.tw

The Standard for Wireless Fidelity.

LANEscape™XI-350 Wireless PC-card Specification

Description:	2.4 GHz Direct Sequence Spread Spectrum (DSSS) Wireless LAN PC_Card Compliant.
Chip Set:	TI+RFMD
Interoperability:	Certified by Wi-Fi (WECA), interoperable with Wi-Fi certified Access Points
Antenna connector:	MM8430 connectors and One embedded Inverted-F Metal Type Antenna
Range Coverage:	22M 200 feet= 50m(In open Environment)
	11M 460 feet = 140m (In Open Environment)
	5.5 M 656 feet = 200m
	2 M 885 feet = 270m
	1 M 1311feet = 400m
Data Rate:	22,11, 5.5, 2 and 1 Mbps per channel, Auto Fall-Back
Power Consumption:	TX power consumption: <650mA
	RX power consumption <350mA
	Sleep Mode power consumption <100mA
Output Power:	17 dBm (Max.18dBm)
Voltage:	3.3 VDC± 5%
Network Architecture Types:	
	Supports ad-hoc (peer-to-peer) and infrastructure (communications to wired networks via Access Points), roaming (standard IEEE 802.11 compliant)
Operating Channels:	11 for N. America, 14 Japan, 13 Europe (ETSI), 2 Spain, 4 France
Sensitivity:	@ PER<0.08
	22Mbps Max –75dBm
	11Mbps Max. -80dBm
	5.5Mbps Max. -82dBm
	2 Mbps Max. -83dBm
	1 Mbps Max. -85dBm
Warranty:	One Year Limited Warranty
Support OS:	Windows CE 2.12 / 3.0
LED:	One Link LED (Green)

7F-2, 9, Prosperity 1st Rd.,
Science-Based Industrial Park, Hsinchu, Taiwan
Tel: +886-3-577-7364 Fax: +886-3-577-3359
Website: http:// www.zcom.com.tw
Email: info@ zcom.com.tw

Operating Frequency: 2.412-2.462 GHz(N. America)
2.412-2.484 GHz(Japan)
2.412-2.472 GHz(Europe ETSI)
2.457-2.462 GHz(Spain)
2.457-2.472 GHz(France)

Modulation: PBCC(22Mbps), CCK (11Mbps, 5.5Mbps), DQPSK (2Mbps), DBPSK (1Mbps)

Environmental Info

Guarantee Temperature: 0 ~ 55 ℃
Working Temperature: 0 ~ 55 ℃
Storage Temperature: -20 ~ 80 ℃
Humidity (non-condensing): 5~90%
Dimension: TBD