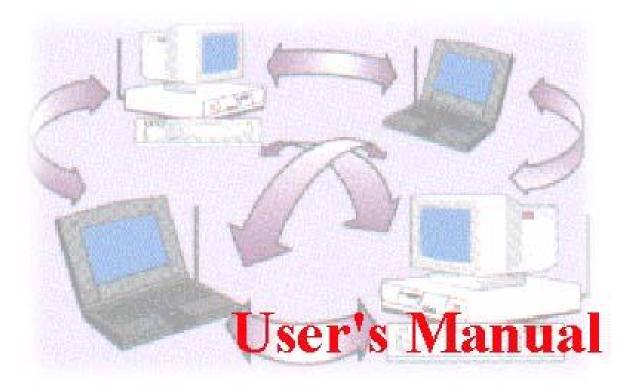
IEEE802.11g Cardbus Wireless LAN Card



Date of Issue: APR. 25th, 2003

Table of	Contents
----------	----------

Chapter 1 About IEEE802.11g Cardbus Wireless LAN Card3
1-1 Features and Benefits31-2 Applications31-3 Product Kit51-4 About IEEE802.11g Cardbus Wireless LAN Card LED Indicators5
Chapter 2 Getting Started6
2-1 Before Installation
Chapter 3 Install Driver for Windows7
 3-1 Set up IEEE802.11g Cardbus Wireless LAN Card for Windows XP
Chapter 4 Configure the IEEE802.11g Cardbus Wireless LAN Card
4-1 Install the WLAN Utility21
4-2 Use the WLAN Utility
Basic Setting
Advance Setting
Limited Warranty

Chapter 1 About IEEE802.11g Cardbus Wireless LAN Card

The IEEE802.11g Cardbus Wireless LAN Card is an enhanced high-performance, that supports high-speed wireless networking at home, or at office. IEEE802.11g Cardbus Wireless LAN Card is able to communicate with any 802.11b and 802.11g compliant products.

1-1 Features and Benefits

- 1. Supports 1, 2, 5.5, 11 Mbps and up to 54Mbps data rate.
- 2. Working range up to 800 ft. in an open environment.
- 3. Seamless connectivity to wired Ethernet and PC network LAN's augments existing networks quickly and easily.
- 4. Greater flexibility to locate or move networked PCs.
- 5. Wireless connection without the cost of cabling.
- 6. Easy to install and user friendly, just Plug and Play.
- 7. Low power consumption.
- 8. Supports a variety of operating systems (Win98SE/ME/2000/XP)
- 9. 64-bit and 128-bits WEP encryption capable.
- 10. Provides Window-based Diagnostic Tools, most notably, Site Survey, Link Quality Test and Access Point Browser.

1-2 Applications

IEEE802.11g Cardbus Wireless LAN Card offers a fast, reliable, cost-effective solution for wireless client access to the network in applications like these:

1. Remote access to corporate network information E-mail, file transfer and terminal emulation.

2. Difficult-to-wire environments

Historical or old buildings, asbestos installations, and open area where wiring is difficult to deploy.

3. Frequently changing environments

Retailers, manufacturers and those who frequently rearrange the workplace and change location.

4. Temporary LANs for special projects or peak time

- Trade shows, exhibitions and construction sites where a temporary network will be practical.
- Retailers, airline and shipping companies need additional workstations during peak period.
- Auditors requiring workgroups at customer sites.

5. Access to database for mobile workers

Doctors, nurses, retailers, accessing their database while being mobile in the hospital, retail store or office campus.

6. SOHO (Small Office and Home Office) users

SOHO users need easy and quick installation of a small computer network.

7. High security connection

The secure wireless network can be installed quickly and provide flexibility.

1-3 Product Kit

IEEE802.11g Cardbus Wireless LAN Card comes with the following items. Please go through each item below. If any of listed items appears to be damaged or missing, please contact your local dealer.

IEEE802.11g Cardbus Wireless LAN Card

- I IEEE802.11g Cardbus Wireless LAN Card..... x 1
- 802.11g PC Card Software and Documentation CD x 1
- I IEEE802.11g Cardbus Wireless LAN Card Quick Installation Guide..... x 1



1-4 About IEEE802.11g Cardbus Wireless LAN Card LED

Indicators

The 802.11g Wireless LAN PC Card has two LED indicators. The behavior of the indicators is described as below:

Power LED

n

n

OFF – No light PWR ______ ON – Solid Yellow LINK

Link LED

- n Solid Green Connect with the Access Point or Ad-Hoc wireless workstation.
- **n** Blinking Orange Indicate the device is active data through the Access Point or Ad-Hoc wireless workstation.

Chapter 2 Getting Started

This chapter describes the instructions that guide you through the proper installation of your IEEE802.11g Cardbus Wireless LAN Card for the Windows XP/2000/ME/98SE operating systems.

The complete installation of the IEEE802.11g Cardbus Wireless LAN Card consists of the following steps:

STEP 1: Insert your IEEE802.11g Cardbus Wireless LAN Card into your notebook.

STEP 2: Install the corresponding driver and utility.

STEP 3: Set basic settings.

STEP 4: Finish Installation.

2-1 Before Installation

In addition to the items shipped with the client adapter, you will also need the following in order to install the adapter:

- 1. A computer equipped with a PCI slot.
- 2. Windows XP/2000/98SE/ME (with a Windows installation CD-ROM, diskettes for use during installation).
- 3. Minimum 5 Mbytes free disk space for installing driver and utility program.

2-2 Insert the 802.11g IEEE802.11g Cardbus Wireless LAN

Card

To install the IEEE802.11g Cardbus Wireless LAN Card, please do the following:

- 1. Find an available PCI slot on your computer.
- 2. Insert the PCI Adapter into the PCI slot.

Chapter 3 Install Driver for Windows

This section describes the installation of the IEEE802.11g Cardbus Wireless LAN Card driver for the Windows 98SE/ME/2000 and Windows XP operating systems. The installation procedures for Windows XP refer to 3-1 Set up IEEE802.11g Cardbus Wireless LAN Card for Windows XP; for Windows 2000 please see 3-2 Set up IEEE802.11g Cardbus Wireless LAN Card for Windows 2000; for Windows 98SE/ME refer to 3-3 Set up IEEE802.11g Cardbus Wireless LAN Card for Windows 98SE/ME.

▶ **Note:** Before you start the installation, you are advised to keep the Windows CD-ROM in case you might need certain system files.

3-1 Set up IEEE802.11g Cardbus Wireless LAN Card for Windows

XP

Step 1: After inserting the IEEE802.11g Cardbus Wireless LAN Card into the PCI slot on your notebook, the Windows will auto-detect the IEEE802.11g Cardbus Wireless LAN Card and a "Found New Hardware Wizard" window will show up. Select "Install from a list or specific (Advanced)" to install the driver.



Step 2: Insert the Product CD-ROM into the appropriate drive. Click on **Next** to install the driver.

Found New Hardware Wizard			
Please choose your search and installation options.			
 Search for the best driver in these locations. 			
Use the check boxes below to limit or expand the default search, which includes local paths and removable media. The best driver found will be installed.			
Search removable media (floppy, CD-ROM)			
Include this location in the search:			
Browse			
O Don't search. I will choose the driver to install.			
Choose this option to select the device driver from a list. Windows does not guarantee that the driver you choose will be the best match for your hardware.			
< Back Next > Cancel			

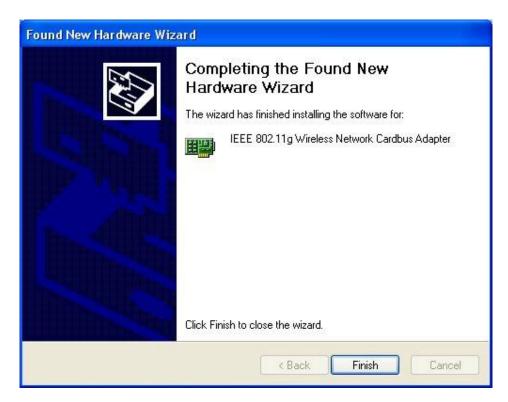
Step 3: The windows will appear the message about the IEEE802.11g Cardbus Wireless LAN Card has not passed Windows Logo testing to verify its compatibility with Windows XP. Click on **Continue Anyway** button to continue installing.



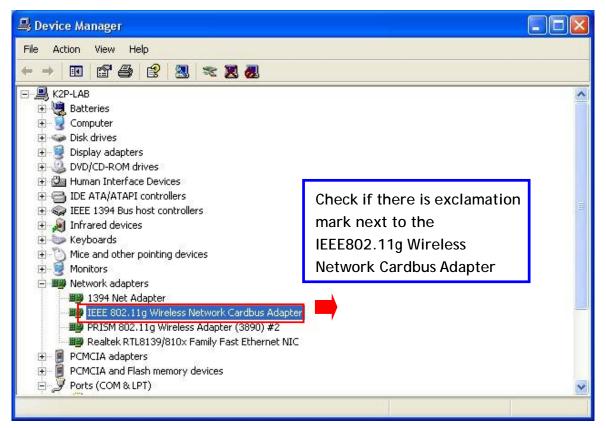
Step 4: The windows will find "**IEEE802.11g Cardbus Wireless LAN Card**" and start copying corresponding files into the system. Click on **Next** to continue.

Found New I	Hardware Wiz	ard			
Please wa	iit while the wiz	ard installs th	ne software		
H	IEEE 802.11g V	√ireless Network	< Cardbus Adapter		
	Ò	J		D	
			< Back (Next >	Cancel

Step 5: Click **Finish** to complete the installation.



Step 6: Right click "**My Computer**" from **Start**, select **Properties**, go to the **Hardware** tab and click the **Device Manager** button to see if any exclamation mark appears next to the **Network Adapter/IEEE 802.11g Wireless Network Cardbus Adapter**. If no, your IEEE802.11g Cardbus Wireless LAN Card is working well.



After installing the IEEE802.11g Cardbus Wireless LAN 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. You may click on **Connect** button to allow users to connect to an available wireless infrastructure network (Access Point). You may also click the **Advanced** button to make advanced configuration for the IEEE802.11g Cardbus Wireless LAN Card, shown as below.

Connect to Wireless Network 🛛 😨 🔀
The following network(s) are available. To access a network, select it from the list, and then click Connect. Available networks:
WEAN Aschung
i demolab
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.
Network key:
If you are having difficulty connecting to a network, click Advanced.
Advanced Connect Cancel

For more information on using the automatic wireless network configuration please refer to Windows XP **Help** file.

Warping, You must shoose	🕹 Wireless Network Connection 8 Properties 💦 🔀		
Warning: You must choose	General Wireless Networks Authentication Advanced		
one way to configure Wireless LAN PCI Card either of using our WLAN Utility by un-checking this check box or using Windows XP Automatic Wireless Network Configuration first by	Use Windows to configure my wireless network settings Available networks: To connect to an available network, click Configure. WirelessLAN marty gilbert Preferred networks: Automatically connect to available networks in the order listed		
checking this check box.	below: Move up		
	Move down.		
	Add Remove Properties		
	Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced		

ΟK

Cancel

However, the WLAN Utility, which comes with the IEEE802.11g Cardbus Wireless LAN Card, provides you more tools to configure the IEEE802.11g Cardbus Wireless LAN Card and monitor the wireless connection. For more information on installing and using the WLAN Utility, please refer to the following sections "*Installation of the WLAN 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:

n Right click the Network Connections icon. Select Properties.

n Go to the Wireless Networks tab.

n Uncheck the "**Use Windows to configure my wireless network settings**" check box and click the **OK** button (see the above picture).

3-2 Set up IEEE802.11g Cardbus Wireless LAN Card for

Windows 2000

Step 1: After inserting the IEEE802.11g Cardbus Wireless LAN Card into the PCI slot on your notebook, Windows will auto-detect the IEEE802.11g Cardbus Wireless LAN Card.



Step 2: A "Found New Hardware Wizard" window shows up. Click Next to proceed.



Step 3: Select "Search for a suitable driver for my device (recommended)".

Found New Hardware Wizard	
Install Hardware Device Drivers A device driver is a software program that er an operating system.	nables a hardware device to work with
This wizard will complete the installation for th	nis device:
A device driver is a software program that ma needs driver files for your new device. To loc installation click Next.	
What do you want the wizard to do?	
Search for a suitable driver for my dev	vice (recommended)
C Display a list of the known drivers for driver	this device so that I can choose a specific
	<back next=""> Cancel</back>

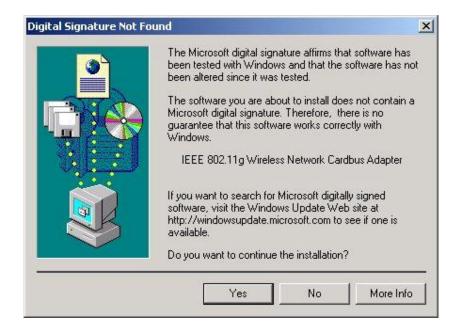
Step 4: Insert the Product CD-ROM into the appropriate drive. Click on **Next** to install the driver.

Found New Hardware Wizard	
Locate Driver Files Where do you want Windows to search	n for driver files?
Search for driver files for the following h	ardware device:
Network Controller	
The wizard searches for suitable drivers any of the following optional search loca	s in its driver database on your computer and in ations that you specify.
To start the search, click Next. If you ar insert the floppy disk or CD before clicki	re searching on a floppy disk or CD-ROM drive, ing Next.
Optional search locations:	
🔲 Floppy disk drives	
CD-ROM drives	
🔲 Specify a location	
Microsoft Windows Update	
	< Back Next > Cancel

Step 5: The windows will find "**IEEE802.11g Cardbus Wireless LAN Card**". Click on **Next** to continue.

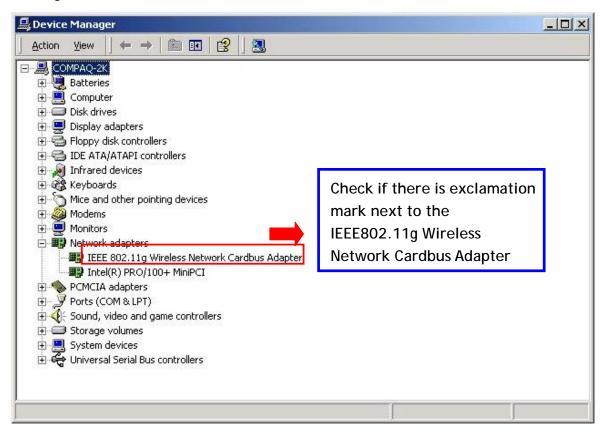
und New Ha	rdware Wizard
	s Search Results card has finished searching for driver files for your hardware device.
The wiz	ard found a driver for the following device:
2	Network Controller
Windov	is found a driver for this device. To install the driver Windows found, click Next.
	g:\nobrand xg-350 d4.0.40.2f1.0.11u1.0.0.7_20030822\drivers\win2000\xg350ti1.inf
	< Back Next > Cancel

Step 6: The windows will appear the message about the Microsoft digital signature affirms that software has not been tested with Windows and that the software has not been altered since it was tested. Click on **Yes** button to continue installing.



Step 7: Click **Finish** to complete the installation.

Step 8: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any exclamation mark appears. If no, your IEEE802.11g Cardbus Wireless LAN Card is working well.



3-3 Set up IEEE802.11g Cardbus Wireless LAN Card for

Windows 98SE/ ME

Step 1: After inserting the IEEE802.11g Cardbus Wireless LAN Card into the PCI slot on your notebook, Windows will auto-detect new hardware and will display an "Add New Hardware Wizard" window. Click Next to continue.



Step 2: Select "Search for the best driver for your device (Recommended)" and click Next.



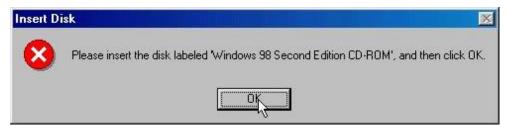
Step 3: Insert the Product CD-ROM into the appropriate drive. Click on **Next** to install the driver.

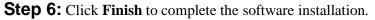
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search. Eloppy disk drives CD-ROM drive Microsoft Windows Update Specify a location:
Browse
< <u>Back</u> Next> Cancel

Step 4: The Windows will find "**IEEE802.11g Cardbus Wireless LAN Card**". Click **Next** to continue.

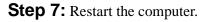


Step 5: Once the [Please insert the disk labeled 'Windows 98 Second Edition CD-ROM/ME CD-ROM', and then click OK] window appears, insert and enter the path corresponding to the appropriate drives and click **OK**. Usually these files can be found at C:Windows or C:Windows\system.









System 9	Gettings Change 🛛 🔀
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?

Step 8: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any exclamation mark appears next to the IEEE802.11g Cardbus Wireless LAN Card. If no, your IEEE802.11g Cardbus Wireless LAN Card is working well.

ystem Properties General Device Ma	inager Hardware	Profiles Performance	? ×
✓ View devices b Computer	s	iew devices by <u>c</u> onnectio	on
 Hard disk Hard disk Infrared disk Keyboard Modem Monitors Mouse 	controllers evices		Check if there is exclamati mark next to the IEEE802.11g Wireless Network Cardbus Adapter
IEEE	p Adapter 802.11g Wireless N ed PnP Serial Port 8) PR0/100+ MiniF eocket	Network Cardbus Adapter	
Properties	Refresh	Remove OK	Print Cancel

Chapter 4 Configure the IEEE802.11g Cardbus Wireless LAN Card

This chapter gives you assistance with detailed configuration for the IEEE802.11g Cardbus Wireless LAN Card under Windows XP/2000/98SE/ME.

4-1 Install the WLAN Utility

To install the WLAN Utility, follow these steps:

Step 1: Insert the Product CD-ROM.

Step 2: Go to the utility folder and run setup.exe.

Step 3: The InstallShield Wizard will show up and guide you through the rest of the setup process.

Run the Setup Utility	InstallShield Wizard IEEE 802.11g Wireless LAN Utility Setup is preparing the InstallShield® Wizard, which will guide you through the rest of the setup process. Please wait.
Choose Destination Location and click Next to continue	IEEE 802.11g Wireless LAN Utility
	Setup will install IEEE 802.11g Wireless LAN Utility in the following folder. To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
	Destination Folder C:\\IEEE 802.11g Wireless LAN Utility Browse
	Kack Next> Cancel

Select a program folder and	IEEE 802.11g Wireless LAN Utility
click Next	IEEE 802.11g Wireless LAN Utility
	Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.
	Program Folders:
	IEEE 802.11g Wireless LAN Utility
	Existing Folders: Accessories
	Administrative Tools Games
	Intel(R) Frequency Display NETGEAR MA111 Adapter Net/Q Chariot
	Orange Micro BOT2 Paint Shop Pro 6
	Realtek Sound Manager 💌
	InstallShield
	<pre></pre>
Add shortcut of this utility to	IEEE 802.11g Wireless LAN Utility
and click Next	IEEE 802.11g Wireless LAN Utility
	Do you want to add shortcut of this utility to
	🔽 Startup Menu
	I Desktop
	InstallShield
	<u> </u>
Click on Finish to complete	IEEE 802.11g Wireless LAN Utility
the installation	InstallShield Wizard Complete
	Setup has finished installing IEEE 802.11g Wireless LAN Utility
	on your computer.
	< Back Finish Cancel

Upon completion, go to **Program Files** and run the WLAN Utility and its icon will appear in the **System Tray** in the bottom right corner of your task bar. Clicking on the icon will open the configuration window. When you minimize the window, the system tray icon will be loaded in the System Tray again.



The color behind the system tray icon indicates the link status:

- Blue indicates a good or excellent link.
 - Yellow indicates a usable but weak link.
- Red indicates no or very poor link quality. When you minimize the window, the system tray icon will be loaded in the System Tray again.
- Exclamation mark indicates no wireless connection.
- Radio icon indicates no detected card.

4-2 Use the WLAN Utility

The WLAN Utility enables you to make configuration changes and perform user-level diagnostics on your IEEE802.11g Cardbus Wireless LAN Card in the Windows XP/2000/98SE/ME operating system environments. The WLAN Utility consists of window with 3 items for you to monitor and configure the IEEE802.11g Cardbus Wireless LAN Card: **Configuration, Site Survey** and **About**.

Basic Setting

Configuration:

The **Configuration** item allows you to modify the configuration parameters for the IEEE802.11g Cardbus Wireless LAN Card such as **Profile**, **SSID**, **Network Type**, **AdHoc Channel**, **Transmit Rate**, **WEP**, **RTS**, **Fragment Threshold**, and **Power Save** mode. Furthermore, you may monitor the current status of the IEEE802.11g Cardbus Wireless LAN Card such as **State**, **Current Channel**, **Current Tx Rate**, **Throughput**, **Link Quality** and **Signal Strength**.

🔀 IEEE 802.11g Wi	reless LAN Util	ity		
Configuration Site Su	rvey About			
Profile: <a href="https://www.engliship-profile-complete-scale-complet</td><td>" showroom"<="" td=""><td></td><td>▼ Sav</td><td>e Delete</td>		▼ Sav	e Delete	
Configuration				
SSID:	showroom			Advance
Network Type:	Infrastructure	•	WEP Enabled 🗔	WEP key
Ad-Hoc Channel:	6	~		
Transmit Rate:	Auto	•	Default	Apply
- Status				
State: <infrastruc< td=""><td>ture> - Atheros Wir</td><td>eless Ne</td><td>twork - 00:60:83:20:2</td><td>2:02</td></infrastruc<>	ture> - Atheros Wir	eless Ne	twork - 00:60:83:20:2	2:02
Current Channel:	5	Curr	ent Tx Rate: 54	Mbps
Throughput(Pack	ets/sec): TX: 0	1	RX: 0	
Link Quality:	Good(82%)			
Signal Strength:	Good(78%)			Rescan
L				

Profile

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. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. 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.

Profile:	<infra> "goo"</infra>	Save	Delete
	<infra> "goo" <infra> "micronet" <infra> "Wireless" <infra> "showroom"</infra></infra></infra></infra>		-

Network Type

There are 2 network types for the IEEE802.11g Cardbus Wireless LAN Card to operate. If you need to access company network or Internet via Access Point, select "**Infrastructure**". If standard "**802.11 Ad-Hoc**" is selected, you need to set wireless stations with the <u>same ESS ID</u>.

Network Type:	Infrastructure	-
	Ad-Hoc	
	Infrastructure	

SSID

The SSID 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 SSID. The default setting is ANY, which allows your IEEE802.11g Cardbus Wireless LAN Card to automatically associate to any Access Point (Infrastructure mode) in the vicinity of your wireless adapter. The SSID can be set up to **32** *characters* and is case sensitive.

SSID:	Wireless	
-------	----------	--

Transmit Rate

The IEEE802.11g Cardbus Wireless LAN Card provides various data rate options for you to select. Data rates options include **1Mbps**, **2 Mbps**, **5.5 Mbps**, **11Mbps**, **6Mbps**, **9Mbps**, **12 Mbps**, **18Mbps**, **24Mbps**, **36Mbps**, **48Mbps**, **54Mbps** and, **Fully Auto**. In most networking scenarios, you will see that the factory-set default "**Fully Automatic**" will prove the most efficient. This setting will allow your IEEE802.11g Cardbus Wireless LAN Card to operate at the maximum data rate. When the communications quality drops below a certain level, the PCI Card will automatically switch to a lower data rate. Transmission at lower data speeds are usually more reliable. However, when the communications quality improves again, the IEEE802.11g Cardbus Wireless LAN Card will gradually increase the data rate again, until it has reached the highest available transmit rate.

WEP

To prevent unauthorized wireless stations from accessing data transmitted over the network, the WLAN Utility offers highly secure data encryption, known as WEP, making your data transmission over air more secure. To activate the WEP Encryption, check the **WEP Enabled** check box. An Encryption window will then appear. The instructions are as follows:

- Ø Pull down the Encryption (WEP) menu and select either 64bit or 128bit encryption method.
- Ø 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.

Warning: When **Create Key with Passphrase** is enabled, the wireless device's Key with PassPhrase must match the Key with PassPharse used by the access point with which wireless device is planning to communicate.



Create Encryption Keys Using a Passphrase (128bit)

Create Encryption Keys Manually

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

For 64bit encryption you may choose:

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

For 128bit encryption you may choose:

- **n** Alphanumeric: *13 characters* (case sensitive) ranging from "a-z", "A-Z" and "0-9" (e.g. MyKey12345678)
- **n** 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 on the **Configuration** tab to make the setting take effect.

	Encry	yption(WEP): 64bit	
C Alphanumeric:5 characters C Hexdecimal:10 characters(0-9,A-F) C Key 1: [1122334455] C Key 2: [C Create	Key with PassPhrase	
C Alphanumeric:5 characters C Hexdecimal:10 characters(0-9,A-F) C Key 1: [1122334455] C Key 2: [Γ		
Hexdecimal:10 characters(0-9,A-F) Key 1: 1122334455 Key 2:	Create	Keys Manually	
C Key 1: 1122334455	C Alph	hanumeric:5 characters	
C Key 2:			
С Кеу 3: ОК		kdecimal:10 characters(0-9,A-F)	
	He	kdecimal:10 characters(0-9,A-F)	_

Create Encryption Keys Manually (64bit)

Warning: The WEP key must be set up exactly the same on the Wireless LAN stations as they are on the wireless Access Points. If you set "MyKey" for the IEEE802.11g Cardbus Wireless LAN Card, the same WEP Key "MyKey" must be assigned to the Access Point or other stations.

Note: Different factories would have some different WEP setting. Therefore, before setting access point or PCC WEP, please refer to manual respectively.

Status:

The Status field on the **Configuration** menu provides the following information.

State: <infrastructure> - goo - 00:6</infrastructure>	0:B3:16:92:ED
Current Channel: 9	Current Tx Rate: 2 Mbps
Throughput(bytes/sec): TX:	0 RX: 7298
Link Quality: Fair(40%)	
Signal Strength: Fair(40%)	Rescar

State: When operating in Infrastructure mode, this field shows the MAC address of the Access Point with which the IEEE802.11g Cardbus Wireless LAN Card is communicating. When operating in Ad-Hoc mode, it shows the virtual MAC address used by computers participating in the Ad-Hoc network.

Current Channel: Shows the channel on which the connection is made.

Current Tx Rate: Shows the highest transmit rate of the current association.

Throughput: Shows the short term transmit and receive throughput in bytes/second, and is continuously updated.

Link Quality: Based on the quality of the received signal of the Access Point beacon. There are 5 states of link quality:

100%~80%: Excellent link.
80%~60%: Good link quality.
60%~40%: Fair link quality.
Under 40%: Poor or no connection.

Signal Strength: Based on the received signal strength measurement of the baseband processor of the Beacon signal. Same as link quality, there are 5 states of signal strength:

100%~80%: Excellent signal strength.

80%~60%: Good signal strength.

60%~40%: Fair signal strength.

Under 40%: Poor or no signal strength.

You can click the **Rescan** button to force the radio to rescan all available channels. If your link quality or signal strength is poor, rescanning can be used to push the radio off a weak Access Point and search for a better link with another Access Point.

Site Survey:

By clicking the **Rescan** button, the Site Survey can display Access Points around the working environment. Besides showing the ESSID of each Access Point, it also displays ESSID, BSSID, Channel, Network Type, Encryption, Signal, and Rates. To join any of the displayed Access Points, highlight the Access Point you desire to connect and then click the **Join**.

ESSID	BSSID	Channel	Network Type	Encryption	
Atheros Wireless Network	00:60:B3:20:22:02	5	Infrastructure		Sea and
cisco350	00:40:96:59:D6:B5	1	Infrastructure		
april	00:09:5B:2F:55:35	3	Infrastructure		ß
Sitecom	00:60:B3:10:13:01	6	Infrastructure	WEP	
showroom	00:60:B3:14:50:AA	6	Infrastructure		
default	00:60:B3:00:E5:16	11	Infrastructure		ß
Laneed	00:60:B3:00:1A:2C	3	Infrastructure	WEP	
<		ì		_	>

About:

The **About** item shows the versions of the Wireless LAN Utility, driver, firmware of the IEEE802.11g Cardbus Wireless LAN Card. Also, the MAC address and frequency domain are displayed.

02.11g Wireless LAN Utility		
ation Site Survey About		
IEEE 802.11g Win	eless LAN Utility	
Configuration Utility		
Version: 1.0.0.7 Date:	Aug 18 2003	
	Aug 22 2003	
	Idress: AA:AA:AA:AA:AA:AA	
Frequency Domain: FCC		
= (ation Site Survey About IEEE 802.11g Wir Configuration Utility Version: 1.0.0.7 Date: Network Driver Version: 4.0.40.2 Date: NIC Firmware Version: 1.0.11 MAC Ad	ation Site Survey About IEEE 802.11g Wireless LAN Utility Configuration Utility Version: 1.0.0.7 Date: Aug 18 2003 Network Driver Version: 4.0.40.2 Date: Aug 22 2003 NIC Firmware Version: 1.0.11 MAC Address: AA:AA:AA:AA:AA:AA

Advance Setting

Advance Options

The Advance configuration provides advance function about network environment if you want to know more detail of the Advanced configuration. Please consults administrator. The WLAN Utility also offers the advanced configuration for user to set the IEEE802.11g Cardbus Wireless LAN Card under certain network environment. These advanced options include Power Management, RTS and Fragmentation Threshold. To enable the advanced configuration, go to the Configuration tab and click the **Advance** button.

😹 Advanced Con	figuration 🛛 🔯
- Advanced Config-	
Power Save Ena	bled
RTS Threshold	1
Oisable	
C Enable	2432 🛨
Frag Threshold	
 Disable 	
C Enable	2432 🛨
ОК	Cancel

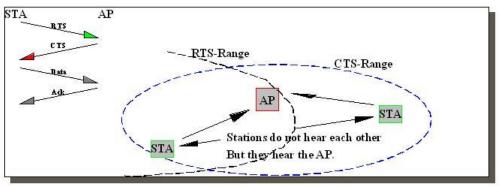
Power Management

The Power Save option is designed to conserve battery life of you computer. When Power Save is enabled, your IEEE802.11g Cardbus Wireless LAN Card will go into sleep mode to minimize power consumption.

Warning: When power saving mode is enabled, the Access Points you use need to support power saving as well so that the communication can be established.

RTS Threshold

RTS Threshold is a mechanism implemented to prevent the "Hidden Node" problem. "Hidden Node" is a situation in which two stations are within range of the same Access Point, but are not within range of each other. The following figure illustrates an example of the "Hidden Node" problem. Both stations (STA) are within range of the Access Point, however, they cannot hear each other. Therefore, they are hidden nodes for each other. When a station starts data transmission with the Access Point, it might not notice that the other station is already using the wireless medium. When these two stations send data at the same time, they might collide when arriving simultaneously at the Access Point. The collision will most certainly result in a loss of messages for both stations.



Thus, the RTS Threshold mechanism provides a solution to prevent data collisions. When you enable RTS Threshold on a suspect "hidden station", this station and its Access Point will use a Request to Send (RTS). The station will send an RTS to the Access Point, informing that it is going to transmit the data. Upon receipt, the Access Point will respond with a CTS message to all station within its range to notify all other stations to defer transmission. It will also confirm the requestor station that the Access Point has reserved it for the time-frame of the requested transmission.

If the "Hidden Node" problem is an issue, please specify the packet size. <u>*The RTS mechanism*</u> will be activated if the data size exceeds the value you set. It is highly recommended that you set the value ranging from 0 to 1500. The default value is **Disable**.

Warning: Enabling RTS Threshold would cause redundant network overhead that could negatively affect the throughput performance instead of providing a remedy.

Frag. Threshold

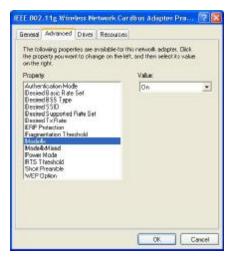
Fragmentation mechanism is used for improving the efficiency when high traffic flows along in the wireless network. If your IEEE802.11g Cardbus Wireless LAN Card often transmit large files in wireless network, you can enable the Fragmentation Threshold by clicking the **Enable** button and the mechanism will split the packet. The value can be set from 256 to 1500. The default value is **Disable**.

IRQ NO/IO Address

To avoid device conflict, you may modify the IRQ No. IO Address for your device (Only available under Windows NT).

Remarks:

The IEEE802.11g Cardbus Wireless LAN Card has been implemented a TI's proprietary 4x technology. The 4x technology provides increased throughput in 802.11 wireless networks. In order to use 4x technology, both ends of a wireless transmit stream must support and enable 4x operational modes. This mode can be turned off in the Network properties as below.



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:

- n The Warranty Repair Card
- **n** A copy of the invoice/proof of purchase, and
- **n** 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.

FCC Information

This device, 56Mbps WLAN Card bus (model no.: XG-350), 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.

Tested to Comply with FCC Standards. FOR HOME OR OFFICE USE

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.



FCC RF Radiation Exposure Statement:

- 1. The equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment, under 47 CFR 2.1093 paragraph (d)(2).
- 2. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter

The 56Mbps WLAN Card Bus has been tested to the FCC exposure requirements (Specific Absorbtion Rate).

Service Centre: COMPANY NAME: ZCOMAX TECHNOLOGIES, INC. ADDRESS: 13850 CERRITOS CORPORATE DR., SUITE C CERRITOS, CA 90703 TEL: (562) 926-4588 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.