IEEE 802.11g Wireless LAN PCI Card



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Chapter 1 About Wireless LAN PCI Card

The 802.11g Wireless LAN PCI Card is a standard PCI adapter that fits into any standard PCI slot in a desktop computer. The 802.11g Wireless LAN PCI Card is an enhanced high-performance, that supports high-speed wireless networking at home, at office or in public places. 802.11g Wireless LAN PCI 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.
- 11. Compliant with protocol 802.11g v.8.2.
- 12. Protection mechanism, which can avoid 11g packet and 11b packet colliding with each other.
- 13. Supports Nitro mode (packet bursting), which can highly increase 11g efficiency.

1-2 Applications

802.11g Wireless LAN PCI 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

802.11g Wireless LAN PCI 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.

802.11g Wireless LAN PCI Card

- 802.11g Wireless LAN PCI Card..... x 1
- 802.11g PCI Card Software and Documentation CD x 1
- 802.11g Wireless LAN PCI Card Quick Installation Guide...... x 1



1-4 About Wireless LAN PCI Card LED Indicators

The 802.11g Wireless LAN PCI Card has one LED indicator. The behavior of the indicators is described as below:



Link LED

- Solid Green Connect with the Access Point or Ad-Hoc wireless workstation.
- 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 802.11g Wireless LAN PCI Card for the Windows XP/2000/ME/98SE operating systems.

The complete installation of the 802.11g Wireless LAN PCI Card consists of the following steps:

STEP 1: Insert your Wireless LAN PCI Card into the connector of any free PCI Bus Master expansion slot on your desktop computer.

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 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 Wireless LAN PCI Card

To install the 802.11b Wireless LAN PCI Card, please do the following:

- 1. Open the case of your desktop computer
- 2. Find an available PCI slot on your computer.
- 3. Insert the PCI adapter into the PCI slot.
- 4. Close the case of the computer and start Windows.



CAUTION: Do not force the client adapter into the slot. Forcing it will damage both the client adapter and the slot. If the client adapter does not go in easily, remove the card and reinsert it.

Chapter 3 Install Driver for Windows

This section describes the installation of the 802.11g Wireless LAN PCI 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 Wireless LAN PCI Card for Windows XP; for Windows 2000 please see 3-2 Set up Wireless LAN PCI Card for Windows 2000; for Windows 98SE/ME refer to 3-3 Set up Wireless LAN PCI 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 Wireless LAN PCI Card for Windows XP

Step 1: After inserting the 802.11g Wireless LAN PCI Card into the PCI slot on your desktop computer, the Windows will auto-detect the Wireless LAN PCI 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.

Step 3: The windows will appear the message about the Network Control has not passed Windows Logo testing to verify its compatibility with Windows XP. Click on **Continue Anyway** button to continue installing

Found Ne	w Hardware Wizard
Please	choose your search and installation options.
09	Search for the best driver in these locations.
L F	Use the check boxes below to limit or expand the default search, which includes local saths and removable media. The best driver found will be installed.
	Search removable media (floppy, CD-ROM)
	Include this location in the search:
	F-\D-Link XG-300 1.0.17beta1\D-Link XG300 D1.0. 👻 Browse
0	Don't search. I will choose the driver to install.
0	Choose this option to select the device driver from a list. Windows does not guarantee that he driver you choose will be the best match for your hardware.
	<back next=""> Cancel</back>
Hardwa	re Installation
	The software you are installing for this hardware:
	IEEE 802.11g Wireless LAN PCI Card
	has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why this testing is important.</u>)
	Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
-	

Step 4: The windows will find "**IEEE 802.11g Wireless LAN PCI Card**" and start copying corresponding files into the system. Click on **Next** to continue.

Found New Hardware Wizard			
Please wait while the wizard i	nstalls the software		
IEEE 802.11g Wireless	LAN PCI Card		
WLANDOM.ini To C:\WINDOW	s		
	Bac	sk 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 LAN PCI Card**. If no, your 802.11g Wireless LAN PCI Card is working well.



After installing the Wireless LAN PCI 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 Wireless LAN PCI Card, shown as below.

Wireless Network Connection 20
The following wireless network(s) are available. To access a wireless network, select it from the list, and then click Connect. Available wireless networks:
Vireless
👗 showroom 🥮
123 💌
This wireless network is not secure. Because a network key (WEP) is not used for authentication or for data encryption, data sent over this network might be subject to unauthorized access.
Allow me to connect to the selected wireless network, even though it is not secure
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.

	🕂 Wireless Network Connection 20 Properties 🛛 🕐 🔀
Warning: You must choose one way to configure Wireless LAN PCI Card either of using our WLAN Utility by un-checking this check box or using Windows XP <i>Automatic Wireless Network</i> <i>Configuration</i> first by checking this check box.	General Wireless Networks Advanced Use Windows to configure my wireless network settings Available networks: To connect to an available network, click Configure. Wireless Configure showroom Refresh Preferred networks: Automatically connect to available networks in the order listed below: Move up Move down Add Remove Properties Learn about setting up wireless network OK Cancel

However, the WLAN Utility, which comes with the Wireless LAN PCI Card, provides you more tools to configure the Wireless LAN PCI 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:

- Right click the **Network Connections** icon. Select **Properties**.
- Go to the **Wireless Networks** tab.
- 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 Wireless LAN PCI Card for Windows 2000

Step 1: After inserting the 802.11g Wireless LAN PCI Card into the PCI slot on your desktop computer, Windows will auto-detect the 802.11g Wireless LAN PCI 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 H	lardware Wizard
Install H a A dev an op	ardware Device Drivers rice driver is a software program that enables a hardware device to work with erating system.
This v	vizard will complete the installation for this device:
2	Network Controller
A dev needs installa	ice driver is a software program that makes a hardware device work. Windows a driver files for your new device. To locate driver files and complete the ation click Next.
What	do you want the wizard to do?
c	Search for a suitable driver for my device (recommended)
C	Display a list of the known drivers for this device so that I can choose a specific driver
	< Back Next > Cancel

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 for driver files?
Search for driver files for the following hardware device:
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
insert the floppy disk or CD before clicking 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 "**IEEE 802.11g Wireless LAN PCI Card**". Click on **Next** to continue.

Found New Ha	rdware Wizard
Driver File The wiz	s Search Results ard has finished searching for driver files for your hardware device.
The wiz	ard found a driver for the following device:
2	Network Controller
Window	is found a driver for this device. To install the driver Windows found, click Next.
=	f:\karena\no brand xgseres d1.0.17u1.1.0f1.0.3_20030709\driver\win2000\wlannic.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 installat	tion.
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Step 8: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any exclamation mark appears. If no, your 802.11g Wireless LAN PCI Card is working well.



3-3 Set up Wireless LAN PCI Card for Windows 98SE/ ME

Step 1: After inserting the 802.11g Wireless LAN PCI Card into the PCI slot on your desktop computer, 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. <u>Floppy disk drives <u>CD-ROM drive</u> <u>Microsoft Windows Update <u>Specify a location: </u> </u></u>
Browse Kack Next Cancel

Step 4: The Windows will find "IEEE 802.11g Wireless LAN PCI 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.



Step 6: Click **Finish** to complete the software installation.





System 9	Settings Change
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?
	<u>Yes</u> <u>No</u>

Step 8: Open **Control Panel/System/Device Manager**, and check **Network Adapters** to see if any exclamation mark appears next to the IEEE 802.11 Wireless LAN PCI Card. If no, your 802.11g Wireless LAN PCI Card is working well.

 View devices by type View devices by connection Computer Disk drives Display adapters Floppy disk controllers Floppy disk controllers Hard disk controllers Infrared devices Keyboard Modem Monitors Modem Monitors Mouse Network adapters Dial-Up Adapter Infrared PnP Serial Port Intel(R) PRO/100+ MiniPCI AN PCI Card 	Seneral Device Manager Hardware Profiles Performar	nce
Network adapters Dial-Up Adapter Dial-Up Adapter	 View devices by type View devices by conr Computer Disk drives Display adapters Floppy disk controllers Hard disk controllers Infrared devices Keyboard Modem Monitors Mouse 	Check if there is
	Dial-Up Adapters Dial-Up Adapter IEEE 802.11g Wireless LAN PCI Card Infrared PnP Serial Port Intel(R) PR0/100+ MiniPCI PCMCIA socket Detty (COMM + LET)	exclamation mark next to the IEEE 802.11g Wireless LAN PCI Card

Chapter 4 Configure the Wireless LAN PCI Card

This chapter gives you assistance with detailed configuration for the 802.11g Wireless LAN PCI 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.



Select a program folder and	IEEE 202 Ada Minuteer LANDININg
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
	Program Folders:
	IEEE 802 11g Window LAN Unity
	Advisition
	Funk Software Games
	New Winupdate Paint Shop Pro 6 PBIS Text Initian
	Statup WIRELESS_LAN_UTILITY
	InstalShield
	< Back Next > Cancel
Select Next if adding shortcut	IEEE 802.11g Wireless LAN Utility
of utility to Startup Menu	IEEE 802.11g Wireless LAN Utility
and Desktop	
	Do you want to add shortcut of this utility to
	🔽 Startup Menu
	P Desktop
	InstalShield
	< Back Next> Cancel
Click on Finish to complete	IEEE 802.11g Wireless LAN Utility
ine installation	InstallShield Wizard Complete
	Setup has finished installing IEEE 802.11g Wireless LAN Utility
	on your computer.

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.

4-2 Use the WLAN Utility

The WLAN Utility enables you to make configuration changes and perform user-level diagnostics on your 802.11g Wireless LAN PCI 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 802.11g Wireless LAN PCI Card: **Configuration**, **Site Survey** and **About**.

Basic Setting

Configuration:

The **Configuration** item allows you to modify the configuration parameters for the 802.11g Wireless LAN PCI 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 Wireless LAN PCI Card such as **State**, **Current Channel**, **Current Tx Rate**, **Throughput**, **Link Quality** and **Signal Strength**.

😹 IEEE 802.11g W	/ireless LAN Utility	
Configuration Site St	urvey About	v
Profile: kingingingingingingingingingingingingingi	> "ANY" Save Dele	te
Configuration		
SSID:	ANY Advance	
Network Type:	Infrastructure 💌 WEP Enabled 🗖 WEP key	
AdHoc Channel:		
Transmit Rate:	Auto	
Status		
State: <infrastru< td=""><td>icture> - 123 - 00:02:29:02:02:9D</td><td></td></infrastru<>	icture> - 123 - 00:02:29:02:02:9D	
Current Channel:	: 9 Current Tx Rate: 11 Mbps	
Throughput(byt	tes/sec): TX: 341 RX: 0	
Link Quality:	Good(73%)	
Signal Strength:	Good(77%)	an

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	
linfrastructure	Save
ad-hoc	Delete
default infrastructure	

You may also see the profile from WLAN Utility icon that appears in the **System Tray** in the bottom right corner of your task bar by using right click the WLAN Utility icon or may choose the profile by right clicking the system tray icon on the task bar, making the configuration more friendly and efficient.

Network Type

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



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 Wireless LAN PCI 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:	WLAN	
-------	------	--

Transmit Rate

The 802.11g Wireless LAN PCI 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 802.11g Wireless LAN PCI 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 802.11g Wireless LAN PCI 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:

- 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.

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:

- 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 on the **Configuration** tab to make the setting take effect.

Encr	yption(WEP): 64bit 💌	
C Create	Key with PassPhrase	
Г		
· Create	Keys Manually	
C Alp	hanumeric:5 characters	
C Alp	hanumeric:5 characters xdecimal:10 characters(0-9,A-F)	
C Alp He: Key 1:	hanumeric:5 characters xdecimal:10 characters(0-9,A-F)	-
⊂ Alp	hanumeric:5 characters xdecimal:10 characters(0-9,A-F) xxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxx	-
C Alp	hanumeric:5 characters xdecimal:10 characters(0-9,A-F) xxxxxxxxxx xxxxxxxxxx xxxxxxxxxxx xxxxx	-

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 Wireless LAN PCI 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:	n - 00:60:B3:14:50:AA
Current Channel: 6 Throughput(bytes/sec): TX:	Current Tx Rate: 11 Mbps
Link Quality: Fair(53%)	

State: When operating in Infrastructure mode, this field shows the MAC address of the Access Point with which the Wireless LAN PCI 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 BSSID, Channel, Capability, Signal, Noise 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	Signal	Rates
Wireless	00:DE:AD:00:CA:FE	6	Infrastructure		70%	1/2/5.
showroom	00:60:B3:14:50:AA	6	Infrastructure		68%	1/2/5.
123	00:02:29:02:02:9D	9	Infrastructure		72%	1/2/5.
1234	00:60:B3:15:00:01	9	Infrastructure		70%	1/2/5.
WLAN	00:30:F1:10:1F:73	11	Infrastructure		72%	1/2/5.
tsunami	00:40:96:48:C6:1C	7	Infrastructure		69%	1/2/5.
1						>

About:

The **About** item shows the versions of the Wireless LAN Utility, driver, firmware of the IEEE 802.11g Wireless LAN PCI Card. Also, the MAC address and frequency domain are displayed.

😹 IEEE 802.11g Wireless LAN Utility	
Configuration Site Survey About	
IEEE 802.11g Wireless LAN Utility	
Configuration Utility	
Version: 1.1.0 Date: Jul 9 2003	
⊢ Network Driver	
Version: 1.0.17 Date: Jul 8 2003	
	-
NIC Firmware	
Version: 1.0.3.0 MacAddress: 00:60:B3:1B:02:CE	
Frequency Domain: ARIB	

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 802.11g Wireless LAN PCI 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 Conf	iguration 🛛 🔀
Advanced Config	1
🔲 Power Save Ena	bled
RTS Threshold	
Oisable	
C Enable	2432 🚔
 Frag Threshold Oisable C Enable 	2346 -
	2040
ОК	Cancel

Power Management

The Power Save option is designed to conserve battery life of you computer. When Power Save is enabled, your 802.11g Wireless LAN PCI 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.

<u>RTS Threshold</u>

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.</u> 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 802.11g Wireless LAN PCI 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).

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.

FCC Information

This device, IEEE 802.11G Wireless LAN PCI Card, Model No.: XG-950, 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.

NOTE: 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:

- **D** 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 needed.
- □ Consult the dealer or an experienced radio/TV technician for help.
- **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.

Tested to comply with FCC standard. FOR HOME OR OFFICE USE.



CAUTION:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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

or transmitter

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.

Nama	
Iname:	
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.