

GN-WP01GT

IEEE 802.11b/g PCI Wireless LAN Card

User's Manual

http://www.gigabyte.com.tw

Rev. 1.0 First Edition

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE: FCC Radiation Exposure Statement:

This equipment 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 and your body. End users must follow the specific operating instructions for satisfying RF exposure compliance. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Contents

CHAPTER 1 PRODUCT OVERVIEW	1
1-1. INTRODUCTION	1
1-2. Features	1
1-3. Physical Dimensions/Packaging	1
1-4. LED INDICATING LIGHT	2
1-4. System Requirements	2
CHAPTER 2 INSTALLING THE WLAN CARD	3
2-1. INSTALLING THE WLAN CARD FOR PC	
2-2. INSTALLING THE DRIVER & UTILITY (WIN 98SE)	3
2-3. INSTALLING THE DRIVER & UTILITY (WIN ME)	
2-4. Installing The Driver & Utility (Win2000)	12
2-5. INSTALLING THE DRIVER & UTILITY (WIN XP)	
CHAPTER 3 USING THE UTILITY	17
3-1. LINK STATUS	
3-2. SITE SURVEY	21
3-3. CONFIGURATION	22
3-4. Statistics	28
3-5. Driver Info	29
CHAPTER 4 TROUBLESHOOTING	30
YOU ARE "802.1x", "WPA" AND "WPA-PSK" CAN NOT BE SELECTED	30
I CANNOT CONNECT TO AN AP	
I CAN CONNECT TO AN AP BUT I CANNOT CONNECT TO THE INTERNET	30
ALWAYS HAVE POOR LINK QUALITY AND LOW SIGNAL	31
CHAPTER 5 SPECIFICATION	32

Chapter 1 Product Overview

1-1. Introduction

This 802.11b/g Wireless Local Area Network (WLAN) card is composed of the MAC, Baseband, and radio components, PCI interface, and two built-in antennas. It operates in 2.4GHz frequency bands, providing fast (up to 108Mbps) and secure (support AES, 802.1x & WEP and WPA) connections to 802.11b and 802.11g networks from a single card.

1-2. Features

- Conforms to 802.11b/802.11g specification.
- Transmits data rate up to the maximum speed of 108Mbps.
- Dynamically scales the data rate.
- Automatic power management to reduce battery consumption.
- One external antenna.
- Seamless roaming between 802.11b and 802.11g networks.
- Supports AES (Advance Encryption System), enterprise-class 802.1x security and multiple levels of WEP encryption (64-bit /128-bit/152-bit), and WPA (Wi-Fi Protected Access)..
- Driver supports Windows 98SE/Me/2000/XP.

1-3. Physical Dimensions/Packaging

Dimensions: 133 mm * 121mm * 22mm

Before the installation procedures, please ensure the components are not damaged during the shipping. The shipment of the GN-WP01GT includes:

One GN-WP01GT Wireless LAN Card One Antenna One Installation CD (including User's Guide and Driver) One User Guide

Please contact your local distributor or authorized reseller immediately for any missing or damaged components. If you require returning the damaged product, you must pack it in the original packing material or the warranty will be voided.

1-4. LED Indicating Light

Power: The Power LED lights up when the WLAN card is powered on.

Link: The Link LED lights up when the WLAN card has an active connection. If the LED isn't on, the card isn't interfacing with the network.

1-5. System Requirements

1-5-1. Supported Platform:

IBM PC/AT compatible computer

1-5-2. Supported Operation System:

Windows 98SE/Me/2000/XP

Chapter 2 Installing the WLAN Card

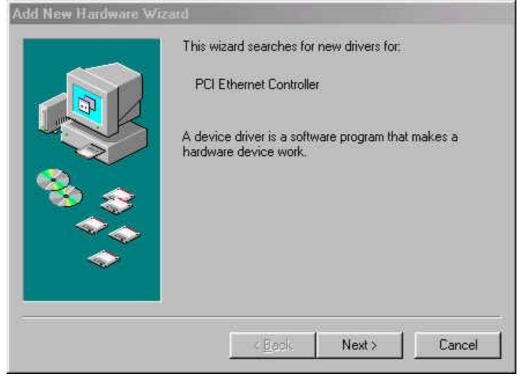
2-1. Installing The WLAN Card for PC

- Step 1: Power Off you PC
- Step 2: Plug the WLAN Card to the PCI Port on the slot rack.
- Step 3: Plug the Antenna to the WLAN Card.

Step 4: Power On you PC

2-2. Installing The Driver & Utility (Win 98SE)

Step 1: Click "Next", and Insert our setup CD into your CDROM drive.



Step 2: Click "Search for the best driver for your device", and Click "Next". Add New Hardware Wizard



Step 3: Click "Specify a location", Click "Browse", Click "CD-ROM Device:", Select the directory "\Inf\Win98", and Click "Next".

Add New Hardware Wizard	
	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>B</u> ack Next> Cancel

Step 4: Click "Next".

Add New Hardware Wiz	ard
Add New Hardware Wiz	Windows driver file search for the device: Gigabyte GN-WPEAG Wireless Network PCI Adapter Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue. Location of driver: Image: E:\INF\WIN98\GNWPEAG.INF
	< <u>B</u> ack <u>Next</u> Cancel

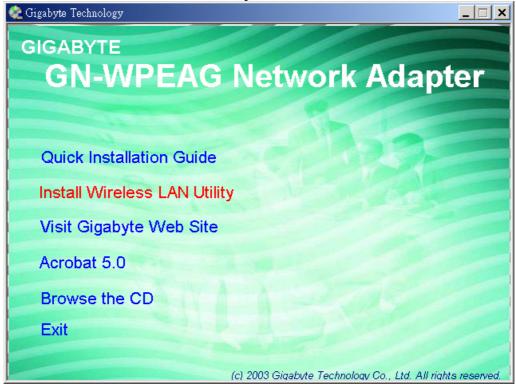
Step 5: Click "Finish".

Add New Hardware Wiz	Add New Hardware Wizard	
	Gigabyte GN-WPEAG Wireless Network PCI Adapter	
	Windows has finished installing the software that your new hardware device requires.	
-	< Back Finish Cancel	

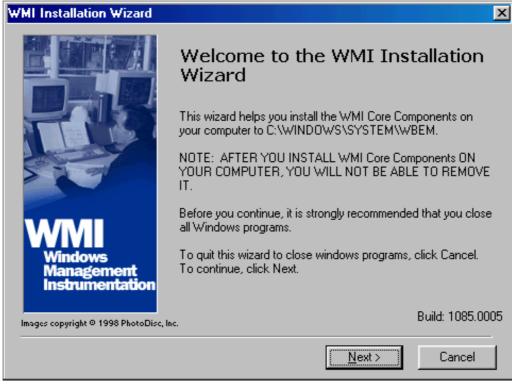
Step 6: Click "No".

System S	Settings Change 🛛 🔀
?	To finish setting up your new hardware, you must restart your computer. Do you want to restart your computer now?
	Yes No

Step 7: Click "Install Wireless LAN Utility".



Step 8: Click "Next".



Step 9: Click "I accept this agreement", and Click "Next".



Step 10: Click "Next".

WMI Installation Wizard		×
	Installation	
	You are now ready to install Windows Management Instrumentation.	
	To change the installation information, click Back. To start the installation, click Next.	
WMI		
Windows Management Instrumentation		
lmages copyright © 1998 PhotoDis	c, Inc.	
	< <u>B</u> ack Next> Cancel	

Step 11: Click "Finish".



Step 12: Click "OK".

Install	×
This system must be restarted to complete the installation. Press the OK button to restart this computer. Press Cancel to return to Windows without restarting.	
Cancel	

Step 13: Click "Finish" and Reboot you computer.

Gigabyte GN-WPEAG series Wireless	Network Setup
	InstallShield Wizard Complete
1 de la	Setup has finished installing Wireless LAN for Windows on your computer.
The second	
	< <u>B</u> ack Finish Carcel

2-3. Installing The Driver & Utility (Win ME)

Step 1: Click "Specify the location of the device", Click "Next", and Insert our setup CD into your CDROM drive.

Add New Hardware Wizard	
	 Windows has found the following new hardware: PCI Ethernet Controller Windows can automatically search for and install software that supports your hardware. If your hardware came with installation media, insert it now and click Next. What would you like to do? Automatic search for a better driver (Recommended) Specify the location of the driver (Advanced)
	< <u>B</u> ack. Next > Cancel

Step 2: Click "**Specify a location**", Click "**Browse**", Click "**CD-ROM Device:**", Select the directory "**\Inf\WinMe**", and Click "**Next**".

Add New Hardware Wizard	
	 Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected Search for the best driver for your device. (Recommended). Removable Media (Floppy, CD-ROM) ✓ Specify a location: E:\Inf\WinMe Browse Display a list of all the drivers in a specific location, so you can select the driver you want.
	< <u>B</u> ack Next > Cancel

Step 3: Click "Next".

Add New Hardware Wizard	
Add New Hardware Wiz	Windows driver file search for the device: Gigabyte GN-WPEAG Wireless Network PCI Adapter Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue. Location of driver: E:\INF\WINME\GNWPEAG.INF
	< <u>Back</u> Cancel

Step 4: Click "Finish".

ard
Gigabyte GN-WPEAG Wireless Network PCI Adapter Windows has finished installing the new hardware device.
< <u>B</u> ack Finish Cancel

Step 5: Click "No".

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

Step 6: Click "Install Wireless LAN Utility".

🎕 Gigabyte Technology	
GIGABYTE	
GN-WPFAG	Network Adapter
	net reaptor
Quick Installation Guide	300000
Install Wireless LAN Utilit	y
Visit Gigabyte Web Site	
Acrobat 5.0	
Browse the CD	A seals
Exit	
	(c) 2003 Gigabyte Technology Co., Ltd. All rights reserved.

Step 7: Click "Finish" and Reboot you computer.

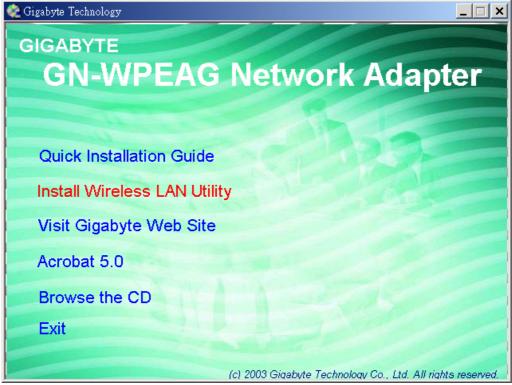
Gigabyte GN-WPEAG series Wireless Network Setup			
	InstallShield Wizard Complete Setup has finished installing Wireless LAN for Windows on your computer.		
	< Back Finish Cancel		

2-4. Installing The Driver & Utility (Win2000)

Step 1:	Click " Cancel "				
	Found New Hardware Wizard				
	Welcome to the Found New Hardware Wizard This wizard helps you install a device driver for a hardware device. To continue, click Next.				
	< Back. Next > Cancel				

Step 2: Insert our setup CD into your CDROM drive, the following window will pop up.

Step 3: Click "Install Wireless LAN Utility".



Step 4: Click "Finish".

Gigabyte GN-WPEAG series Wireless Network Setup				
	InstallShield Wizard Complete			
1 del	Setup has finished installing Wireless LAN for Windows on your computer.			
	< Back Finish Cancel			

Step 5: Click "Yes" and Reboot you computer.

Digital Signature Not Found					
	The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested. The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows. Unknown software package If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available. Do you want to continue the installation?				
	Yes No More Info				

Step 6: Click "Yes".

Digital Signature Not Found					
	The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested. The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows.				
	Gigabyte GN-WPEAG Wireless Network PCI Adapter If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available. Do you want to continue the installation?				
	Yes No More Info				

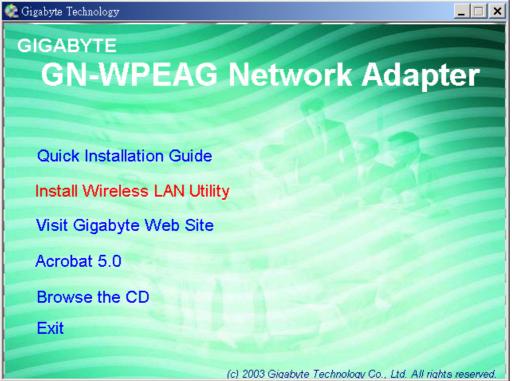
2-5. Installing The Driver & Utility (Win XP)

Step 1: Click "Cancel"



Step 2: Insert our setup CD into your CDROM drive, the following window will pop up.

Step 3: Click "Install Wireless LAN Utility".



Step 4: Click "Finish".

Gigabyte GN-WPEAG series Wireless Network Setup				
	InstallShield Wizard Complete			
1	Setup has finished installing Wireless LAN for Windows on your computer.			
E				
	< <u>B</u> ack Finish Cancel			

Chapter 3 Using The Utility

The Configuration & Monitor Utility is a powerful application that helps you to configure the card and monitor the statistics of the communication link. Unlike the standard method of configuring the card via the operating system utilities (e.g. Control Panel), this application permits the dynamic modification of the configuration parameters while the card is operating. It also offers some more configuration options. It appears as an icon on the Windows system tray whenever the card is running (see **Figure 3-1**). The icon can tell you the received signal strength by four small green lights. You can open it by double-clicking on this icon.





You can hide or show Tray-board by clicking mouse right key on this icon (see *Figure 3-2*).

Launch G-EzLinkUtility G-EzLink Help Disable Radio Country Select Configuration Profile Hide Tray-Board	i-EzLink Utility > ID : GN-AP15a Rate : 54 Mbps -Rate : 6 Mbps eq : 52 / 5.260 GHz pe : Access Point noryption : 0ff Tx-RSSI : 35	Launch G-EzLinkUtility G-EzLink Help Disable Radio Country Select Configuration Profile
Exit	Rx-RSSI: 34	Exit

Figure 3-2. The icon of the Function Utility

3-1. Link Status

The "Link Status" tab shows you the current association information about the card's connection with a wireless network. In the middle of the screen, you can see transmit and received signal strength for this card (see *Figure 3-3*).

			G. G.EzLink Utility				
Action Options Help							
Configuration Statistics Dri	ver Info						
Associated	Profile :	Default					
00-20-ED-49-BF-BB	SSID :	ap15ag_11g_Viki	in				
11 / 2.462 GHz	BSSID :	00-0D-61-41-A4-	35				
Off	Type :	Access Point					
10.8.10.126	Country :	United States					
	57%						
Packets Av	g 📕	P/s	kB/s				
	70%						
Av Packets	g 📕	P/s	kB/s				
	— Tx — F	₹x					
(/se	6)	15	3 Sec				
	1		×				
	Associated 00-20-ED-49-BF-BB 11 / 2.462 GHz Off 10.8.10.126 Packets Av Packets Av	00-20-ED-49-BF-BB SSID : 11 / 2.462 GHz BSSID : Off Type : 10.8.10.126 Country : Packets Avg . Packets Avg . Tx Tr	Associated Profile : Default 00-20-ED-49-BF-BB SSID : ap15ag_11g_Viki 11 / 2.462 GHz BSSID : 00-0D-61-41-A4- Off Type : Access Point 10.8.10.126 Country : United States Packets Avg P/s Packets Avg P/s Value Nag P/s 10 (sec) 15				

Figure 3-3. Current link status of the wireless LAN card

If you want to turn off the card's radio, click the radio icon at the bottom of the screen, (see **Fig 3-4**) shows the result Click "**Yes**" (see **Figure 3-5**). Just click it again to turn on the radio. Click "**Yes**" (see **Figure 3-6**). In order to exit, click the "**X**" button at the bottom of the screen (see **Figure 3-4**).

😽 G-EzLink Utility				_ 🗆 ×
Action Options Help				
Link Status Site Survey Configuration Statistics Driver Info				
⊌×�				
Association State :	Associated	Profile :	Default	
MAC Address :	00-20-ED-49-BA-67	SSID :	ap15ag_11g_V	'ikin
Channel[Freq] :	1 / 2.412 GHz	BSSID :	00-0D-61-41-A	.4-35
Security :	Off	Type :	Access Poin	ıt
IP address:	0.0.0.0	Country :		
802.11 Packets				
Tx Sign	al en la companya	17%		
Tx: Total	- I deketo	rg 🚹	P/s	kB/s
Rx Sign		20%		
Rx : Total	Packets	rg 📕	P/s	kB/s
□ StepMeter			-	
10.0 (Mbps)		— Tx —	Rx	
E 0				
5.0				
0.0	(/se	c)		17 Sec
	*	ħ		×

Figure 3-4. Turn off the card's radio

Figure 3-5 Disabled WLAN Card.

G-EzLink	Utility
i	The RF signals for the following network card(s) have been successfully disabled:
ب د	[0005]Gigabyte GN-WPEAG Wireless Network PCI Adapter
	確定

Figure 3-6 Enabled WLAN Card.



Other items reports the following information:

Association State: The field shows you if WLAN card is communicating with an access point or peer-to peer group. When the card's network mode is set to Ad Hoc, you can

select a channel from the AD Hoc channel drop-down menu for your Ad Hoc group to use.

MAC Address: This card's physical address.

Channel [Freq]: The current channel and center frequency used by the WLAN card.

Security: The current security setting.

IP Address: WLAN Card IP Address.

Profile: various wireless settings for different environments.

SSID: Wireless network name. This is the wireless network name expressed as text string that all members within the same network share. Devices that don't share the same network name cannot communicate with each other.

BSSID: Basic service set identification.

Type: The current network type.

3-2. Site Survey

The "**Site Survey**" tab shows you the list of reachable access points and/or peer-to-peer stations. In **Fig 3-7**, the card one 802.11b and three 802.11g wireless devices.

-		00000 p				
🚰 G-EzLink Utility						? ×
<u>Action Options H</u>	elp					
T to b Charles Site S	www.loweinnen	en en el	Dation Info			
Link Status Site S	urvey Configuration	STATISTICS	Driver Into			- 1
🗌 🦶 j 🧇						
	Link Sta	atus —	Associa	ted		
			11350114			
Network Na	Address (BSSID)		nal Strength	Channel		
🛃 ap15ag_1	00-20-ED-49-BC-70	2 0]	40 dB	1	2.4 GHz 11 Mbps	
Network Na	Address (BSSID)		nal Strength		Wireless Mode	- 1
ap15ag_1		֛֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬֬	40 dB	1	2.4 GHz 54 Mbps	
	00-20-ED-1F-F9-82				2.4 GHz 54 Mbps	
iii ap11g	00-20-ED-49-BF-65	🥶 🗓	14 dB	11	2.4 GHz 54 Mbps	
					4	
)	
				Active	Refresh	
		N ¹⁰				

Figure 3-7. Reachable access points and/or peer-to-peer stations

Other items reports the following information:

SSID: Wireless network name.

BSSID: Basic service set identification.

(Security): 🔜 (Encrypt data) or not

Signal Strength: It shows the received signal strength from the detected wireless device.

Channel: The current channel number used by the WLAN card.

Wireless Mode: 2.4GHz11Mbps(802.11b) or 2.4GHz54Mbps (802.11g) network.

Refresh: Rescan the available network and then refresh the result.

3-3. Configuration

The "**Configuration**" Tab contains several fields where operating parameters of the driver can be viewed or changed. Just click "**APPLY**" button, changes to any of the parameters in this panel can be applied to the driver without the need to reset the WLAN card. (*see Figure 3-8*)

3-3-1. Basic setting:

Profile Name: You can save various wireless settings for different environments. **1**: Use Profile, **1**: Available Profile.

Network Type: This field allows you to select the mode from a list of supported network mode. The modes displayed have two values: "Ad Hoc" and "Access Point".

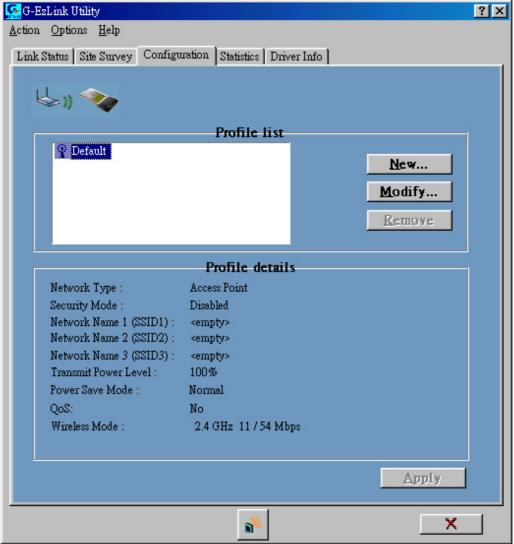


Figure 3-8. Configuration

3-3-2. Advance setting:

Click "Modify" button (see Figure 3-9)

Figure 3-9

Profile Management	_	? ×
General Security Advanced		
Profil	e Name:	e: Default
Netwo	ork Name	mes
:	SSID1:	
:	SSID2:	
\$	SSID3:	
		確定 取消

Click "Advance" button to enter the advance configuration screen (see Figure 3-10).

i igure 5-10		Juralion screen
Profile Management		? ×
General Security Advanced		
	Power Save Mode:	Normal
	Network Type:	Access Point
	802.11b Preamble:	💿 Short & Long 🕥 Long Only
	Transmit Power Level:	100%
Wireless Mode	Wireless Mode When S	iariing Ad Hoc Neiwork
I♥ 2.4 GHz 11 Mbps I♥ 2.4 GHz 54 Mbps I♥ Turbo G	● 2.40H2 54/11	Mbgo Channel: Auto 💌
		確定 取消

Figure 3-10. Advance configuration screen

Power Saving: The card supports advanced power management to extend battery life.

- a. When set to "off ": the card does not use the power saving mechanism.
- b. When set to "*Normal* ": the card enters into sleep status when it is inactive and only wakes up periodically to receive some messages from the access point.
- c. When set to "*Maximum* ": This case is similar to "*Normal* ", but it draws less battery power as a result of less wake up frequently. This also leads to slower response to network request.

Wireless Mode: Specifies "2.4GHz 11Mbps"(802.11b) or "2.4GHz 54Mbps" (802.11g) operation. The WLAN card will automatically select the optimal mode from these selected wireless modes.

Wireless mode When Starting Ad Hoc Network: Specifies a band to establish an ad hoc network if no matching SSID is found after scanning all available modes. Here, you can select three different wireless modes (802.11b, 802.11g) for the communication link.

802.11b Preamble: Specifies "*Short & Long*", or "*Long Only*" preamble. Allows ad hoc compatibility with other 2.4GHz devices.

Transmit Power Level: Select 100%, 50%, 25%, 12.5%, or lowest transmit power.

3-3-3. Security setting:

Click "Modify" and "Security" button (see Figure 3-11)

Figure 3-11

This card provides five security options: No security, WEP encryption, WPA-PSK, WPA security and 802.1x security architecture.

3-3-3-1. No security (None):

Allows the communication between the WLAN card and access point without data encryption.

3-3-3-2. Use WEP for authentication and encryption(Pre-Shared Keys):

To prevent unauthorized user to access the data on wireless stations, the WLAN Card offers a secure data encryption, known as WEP (Wired Equivalent Privacy). When you select this item, the target 802.11 device must has the same encryption keys and be configured to use encryption in order to communicate with each other. To configure your WEP encryption, please click "*Pre-Shared Keys* "then the following window will pop up (see *Figure 3-12*).

Define Pre-Shared Keys	? ×
	Key Entry Method
Encryption Keys (Select The Default)	 Hexadecimal (0-9, A-F) ASCII Text (all keyboard characters)
🗢 Per-User Key	64 bit (enter 10 digits)
🗢 Shared Kay I	64 bit (enter 10 digits)
Shured Key 2	64 bit (enter 10 digits)
🕼 Shared Key 3	64 bit (enter 10 digits)
Shared Key 4	64 bit (enter 10 digits)
	OK Cancel

Figure 3-12. Configure WEP Key

To configure your encryption key, please follow these steps:

- 1. Select a Key Entry Method (Hex or ASCII).
- 2. Enter one *unique* encryption key and its key length.
- 3. Enter one to four different *shared* keys and their individual key length.
- For 64-bit encryption, enter 10 digitals by Hex or 5 characters by ASCII.
- For 128-bit encryption, enter 26 digitals by Hex or 13 characters by ASCII.
- For 152-bit encryption, enter 32 digitals by Hex or 16 characters by ASCII.
- 4. Select only a key to encrypt your transmission data.
- 5. Click "**OK**" to save these settings.

3-3-3-3. Use WPA-PSK Security (WPA Pre-Shared Keys):

When you select this item, the target 802.11 device must has the same encryption keys and be configured to use encryption in order to communicate with each other. To configure your **WPA-***PSK* encryption, please click "**WPA-***PSK* "then the following window will pop up (see *Figure 3-13*).

rofile Management			? ×
Define WPA PSK			<u>?</u> ×
		· · · · · · · ·	
	Enter your WPA Passphrase. The mi	nimum length is 8 cha	racters.
		OK	Cancel
		確定	取消

Figure 3-13. Configure WPA-PSK Key

3-3-3-4. Use Dynamic Security (WPA, 802.1X etc.):

WPA & 802.1X is an IEEE security standard for network security access control. It is

used to control access to wired and wireless networks and dynamically provide keys for encryption. To use this function, an access point with its WPE or 802.1X function is required to act as an intermediary between WLAN card and the network's RADIUS (Remote Authentication Dial-In User Service) server. The access point blocks all traffic from the card until the server has authenticated it. please follow these steps:

Step 1: Download Certificate.

Step 2: please click "*WPA* " or "802.1x "then the following window will pop up (see *Figure 3-14*).

ofile Management		?
orne managament		1
Define Certificate	CARL STREET, ST	<u>?</u> ×
	Select a Certificate	
	ck [Issued: 2003/11/14]	
	💿 Use Any Certificate Authority 💦 Choose a Cer	lificate Authority
	WIANCA	
	Server/Domain Name	
	sdi.giga-byte.com.tw	
	Login Name	
	ck@sdi.giga-byte.com.tw	
	01/	Count
	OK	Cancel
	確定	取消

Figure 3-14. Configure WPA or 802.1X

Please follow these steps:

- **Step 1**: Select a Certificate.
- Step 2: Key-in Server(RADIUS).
- Step 3: Key-in Login name.
- Step 4: Click "OK" to save these settings.

Microsoft Windows XP operation system, please follow these steps: **Step 1: Control Panel**, run **Network Connections** (see *Figure 3-15*).



Figure 3-15. Control Panel

Step 3: Setup Wireless LAN card(*see Figure 3-16*), Click "Use Windows to configure" to cancel the schedule and Click 「**OK**」.

ieneral	Wireless Networks	Advanced		
🔲 Use	Windows to configur	e my wireles	s networl	< settings
Availa	able networks:			
Toco	onnect to an available	e network, cl	ck Confi	gure.
1.1	lucent		~	Configure
	Atheros Wireless Netv	mode		
Prefer	0007408CBACA rred networks: natically connect to a		vorks in t	Refresh he order listed
Prefer	0007408CBACA rred networks: natically connect to a		vorks in t	
Prefer	0007408CBACA rred networks: natically connect to a		vorks in t	Ne order listed
- Prefer Autor below	0007408CBACA rred networks: natically connect to a	vailabie netv	vorks in t	he order listed Move up
Prefer	0007408CBACA rred networks: natically connect to a v	vailabie netw	roperties	he order listed Move up

Figure 3-16. Wireless Networks

3-4. Statistics

The "**Statistics**" tab shows you the number of packets sent and received by the card(*see Figure 3-17*).

Figure 3-17.	The statistic number of packets sent and received by the carc
--------------	---

k Status Site Survey	Configuration Sta	tistics Driver Info	
Transmit		Receiv	e
(mit Rate :	54 Mbps		54 Mbps
Jnicast Frames :		Unicast Frames :	2
Aulticast Frames :	0	Multicast Frames :	0
Broadcast Frames :	8	Broadcast Frames :	182
Fotal Bytes :	5862	Total Bytes :	35454
Frames Xmit OK :	93	Frames Reveived OK :	291
rames Retried :	8	Beacons Received :	3583
rames Dropped :	0	Frames Received With E	
			<u>401</u>
ncryption Errors :		Duplicate Frames :	8
TS Frames :	0	Authentication Rejects :	0
ssociation Rejects :	8		

3-5. Driver Info

The "Driver Info" tab shows you the information of the card's driver(see Figure 3-18).

두 G-EzLink Utility		. 🗆 🔀
Action Options Help		
Link Status Site Survey	Configuration Statistics Driver Info	1
	Driver Information	
Card Name:	[0005]Gigabyte GN-WPEAG Wireless Network PCI Adapter	
MAC Address:	00-20-ED-49-BA-51	
Driver:	C:\WINNT\System32\DRIVERS\GNWLIA.sys	
Driver Version:	3.0.0.43	
Driver Date:	15 Dec 2003 18:16:06	
		×

Figure 3-18. Driver's information

Chapter 4 Troubleshooting

This troubleshooting guide provides answers to some common problems which you may encounter while installing or using GIGABYTE WLAN card products.

These problems requires simple troubleshooting that you can perform by yourself.

Contact the WLAN Technical Support if you encounter problems not mentioned in this section.

▶ You are "802.1x", "WPA" and "WPA-PSK" can not be selected

• If the utility shows the following window and the security option "802.1x", "WPA" and "WPA-PSK" can not be selected.

G-EzLink Utility			X
The supplicant support has not been installed correctly. 802.1x and WPA will be disabled.	You need to run se	etup again to fix this prob	olem. If instead you continue,
	OK]		

- Windows XP and Windows 2000:
- 1. Insert the CD.
- 2. Launch the program at \WPA\Win2kXP\AegisI5.exe
- 3. Click Install
- Windows 98SE:
- 1. Insert the CD.
- 2. Launch the program at \WPA\win9x\AegisI2.exe
- 3. Click Install
- Windows ME:
- 1. Right click on "Network Place"
- 2. Click "Add"
- 3. Select "Protocol" and click "Add"
- 4. Click "Have Disk"
- 5. Select the directory \WPA\WPA_FIX_ME
- 6. Reboot

I cannot connect to an AP

- Check if the WLAN has the some Service Set Identifier (SSID) as that of The AP.
- Check if the WLAN card and the AP have the same Encryption. if WEP or WPA encryption is enabled, set the same WEP or WPA keys for the WLAN and AP.
- Check if the MAC address of the WLAN card is added in the AP Authorization Table. Inquire this with your LAN administrator.

• I can connect to an AP but I cannot connect to the internet

• Check if the WLAN card and the AP have the same Encryption. if WEP or WPA

encryption is enabled, set the same WEP or WPA keys for the WLAN and AP.

- Make sure the network protocol parameters (IP address, subnet mask, gateway, and DNS) of your computer are correctly set.
- Check the proxy settings of the WEB browser.

• I always have poor link quality and low signal

- Keep the WLAN card away from microwave ovens and large metal objects to avoid radio interference.
- Shorten the distance between the WLAN card and the AP or station.

Chapter 5 Specification

1. System	
Host Interface	PCI 2.3
Operating Voltage	3.3VDC ± 5%
2. RF Performance	
802.11B	
Frequency Band	2412 ~ 2462 MHz (subject to local regulation)
Modulation Technology	DSSS (Direct Sequence Spread Spectrum)
Modulation Techniques	CCK, DQPSK, DBPSK
Date Rates	11, 5.5, 2, 1Mbps, auto fallback
Typical Power Consumption	Doze: 25mA Receive: 250mA Transmit: 560mA
Peak Output Power	21dBm @ Nominal Temp Range
Minimum Receive Sensitivity	-85dBm @ 11 Mbps, Nominal Temp Range
Antenna	External antenna with the gain of 2dBi, L type
802.11G(BACKWARD COMPATIBLE	E TO 802.11B)
Frequency Bands	2412-2462 MHz (subject to local regulations)
Modulation Technology	OFDM and DSSS
Modulation Techniques	64QAM, 16QAM, QPSK, BPSK, CCK, DQPSK, DBPSK
Date Rates Typical Power Consumption	Base mode: 54, 48, 36, 24, 18,12, 9, 11, 6, 5.5, 2, and 1 Mbps, auto fallback Turbo mode: 108, 96, 72, 48, 36, 24, 18 and 12 Mbps auto fallback Doze: 25mA Receive: 250 mA
	Transmit: 530 mA
Peak Output Power	20dBm @ Nominal Temp Range
Receive sensitivity	Minimum -72dBm; typical -74dBm @54Mbps, Nominal Temp Range
Antenna	External antenna with the gain of 2dBi, L type
3.Safety Regulation and Operating En	vironment
	FCC Part 15 (USA) DGT (Taiwan)
EMC certification	CE (Europe)
Temperature Range	Operating: 0 ~ 55 deg C, Storing: -20 ~ 65 deg C
Humidity	Max. 90% Non-condensing
4. Software Support	· · · · · · · · · · · · · · · · · · ·
Driver	Windows 2000/XP
Security	WPA; AES; 802.1X client for Windows XP; 64/128/152 bit WEP
Roaming	Seamless roaming among 802.11b/g access points.
Management Utility	Monitors the network situation.
5. Mechanical	
Dimensions	120mm*121mm*20mm (120mm*81mm*20mm)
Weight	52.5(48.5)± 1 g

Packaging	Packaging specially used by Gigabyte.

 * Subject to Change without Notices