

GN-WIAG02

IEEE 802.11b/g Mini-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. 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.

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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, Mini-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 WAP) 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.
- Two antenna connectors for supporting antenna diversity.
- 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: 59mm* 44mm* 4mm

1-4. System Requirements

1-4-1. Supported Platform:

IBM PC/AT compatible computer

1-4-2. Supported Operation System:

Windows 98SE/Me/2000/XP

Chapter 2 Installing the WLAN Card

2-1. Installing The Driver & Utility (Win98SE/ME)

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



Win 98 SE

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? Mutomatic search for a better driver (Recommended) Specify the location of the driver (Advanced)	
	< <u>B</u> ack Next > Cancel	

Win ME

Step 3: Click "Specify a location", Click "Browse", Click "CD-ROM Device:", Select the directory "\Inf\Win98(Win Me)", 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. Eloppy disk drives CD-ROM drive Microsoft Windows Update Specify a Jocation: E:\Inf\Win98		
	< <u>B</u> ack Next> Cancel		

Win 98 SE

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

Win 98 SE

Step 4: Click "Next".

Add New Hardware Wizard		
Add New Hardware Wiz	ard Windows driver file search for the device: Gigabyte GN-WIAG Wireless Network CardBus 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:VINF\WIN98\GNWMAG.INF	
	< <u>B</u> ack Next> Cancel	

Step 5: Click "Finish".

Add New Hardware Wizard		
	HH	Gigabyte GN-WIAGWireless Network CardBus Adapter
	Windov hardwa	vs has finished installing the software that your new re 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".

🎕 Gigabyte Technology	
GIGABYT	E GN-WIAG
Series N	etwork Adapter
Quick Installation Guide	3600025
Install Wireless LAN Utili	ity
Visit Gigabyte Web Site	
Acrobat 5.0	The second
Browse the CD	The all and
Exit	
	(c) 2003 Gigabyte Technology Co., Ltd. All rights reserved.

Step 8: Click "Next" (Win 98 SE only).



Step 9: Click "I accept this agreement", and Click "Next" (Win 98 SE only).

WMI Installation Wizard		X
WMI Installation Wizard	License Agreement Read the license agreement below. To continue the install you need to accept the agreement. SUPPLEMENTAL END USER LICENSE AGREEMENT FOR MICROSOFT SOFTWARE IMPORTANT: READ CAREFULLY - This Microsoft Corporation ("Microsoft") operating system component, including any "online" or electronic documentation ("OS	
Windows Management Instrumentation	Component") is subject to the terms and conditions of the agreement under which you have licensed Microsoft Windows 95, Microsoft Windows 98, Microsoft Windows NT Workstation 4.0, Microsoft Windows NT Server 4.0, Microsoft Windows NT Server, Enterprise Edition 4.0, or	

Step 10: Click "Next" (Win 98 SE only).

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.	
Windows Management Instrumentation		
, Images copyright © 1998 PhotoDise	; Inc.	
	< <u>B</u> ack Cancel	

Step 11: Click "Finish" (Win 98 SE only).

WMI Installation Wizard		X
	Completing the WMI Installation Wizard	
	You have successfully completed the WMI installation wizard.	
Windows Windows Management Instrumentation	To close this wizard, click Finish. Inc.	
	<u>Einish</u>	-

Step 12: Click "OK" (Win 98 SE only).



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

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

2-2. Installing The Driver & Utility (Win2000/XP)

Step 1: Click "Cancel"



Win 2K



Win XP

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

Step 3: Click "Install Wireless LAN Utility".

🎕 Gigabyte Technology	_ 🗆 ×
GIGABYTE GN-WIAG	
Series Network Adapter	
Quick Installation Guide	
Install Wireless LAN Utility	
Visit Gigabyte Web Site	
Acrobat 5.0	
Browse the CD	
Exit	
(c) 2003 Gigabyte Technology Co., Ltd. All rights	s reserved.

Step 4: Click "Finish".

Gigabyte GN-WIAG series Wireless Network Setup					
	InstallShield Wizard Complete				
	Setup has finished installing Wireless LAN for Windows on your computer.				
and the					
	< <u>Back</u> Finish Cancel				

Step 5: Click "Yes". (Win 2000 only)

Digital Signature Not Fo	und X
	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". (Win 2000 only)

	.,
Digital Signature Not Fo	und 🔀
	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-WIAG Wireless Network CardBus 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

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 [x-RSS] : 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*).

\$\$				
Association State :	Associated	Profile :	Default	
MAC Address :	00-20-ED-49-BF-BB	SSID :	ap15ag_11g_Vi	
Channel[Freq] :	11/2.462 GHz	BSSID :	00-0D-61-41-A4	-35
Security :	Off	Type :	Access Point	
IP address:	10.8,10,126	Country :	United States	
802.11 Packets		ER W		
Tx Signal Tx : Total		57% .vg	P/c	10/
Rx Signal	Packets A	70%	P/s	kB/s
Rx : Total	Packets	vg 📕	P/s	kB/s
30.0 (Mbps)		— _{Tx} — _F	₹x	
				ninini.
15.0				

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**).

🖕 x 🍫 🔚			D.C.I.	
ssociation State :	Associated	Profile :	Default	
IAC Address :	00-20-ED-49-BA-67	SSID :	ap15ag_11g_Vi	
hannel[Freq]:	1 / 2.412 GHz	BSSID :	00-0D-61-41-A4	
ecurity :	Off	Type :	Access Point	
P address:	0.0.00	Country :		
302.11 Packets				
Tx Signal		17%		
Tx: Total 🚟	Packets	Avg	P/s	kB/s
Rx Signal		20%		
Rx : Total	Packets	Avg	P/s	kB/s
☐ StepMeter			45/47	
10.0 (Mbps)		— _{Tx} — F	×	
5.0				
0.0		/sec)		17 Sec

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

Figure 3-5 Disabled WLAN Card.

G-EzLink	Utility
٩	The RF signals for the following network card(s) have been successfully disabled: [0005]Gigabyte GN-WIAG Wireless Network CardBus Adapter
	確定

Figure 3-6 Enabled WLAN Card.

G-EzLink	Utility 🔣
٩	The RF signals for the following network card(s) have been successfully enabled: [0005]Gigabyte GN-WIAG Wireless Network CardBus Adapter
	確定

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.

Country: Domain .

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.

			caona		0000	22 1		lu/or pe	er-io-pee		
🕵 G-EzLink 🛛	Utility									?	×
<u>A</u> ction <u>Op</u> ti	ons <u>H</u> e	lp									
Link Status	Site Su	rvev	Config	unstion I	Statio	Nes I	Driver Info	a			
L'HIK STATUS	010 00	1109	CONTIGO		Statis	ues l	Driver mit	' I			
1.1	~										
5	- 💎	>									
			Li	nk Sta	atu s	_	Associ	ated			
Network	No	0.4	dress (BS	(CID)	@ >	ei.	mal Strengt	1 Channel	Wireless M	odo	
wetwork			0-ED-49-		1959		40 dB	1	2.4 GHz 11		
ap15	ag_1	00-2	J-ED-49-	BC-70		נוננ	40 a.B	1	2.4 GH2 1.	mops	
Network	Na	Ad	dress (BS	SID)	(C)	Sig	nal Strength	Channel	Wireless M	ode	
🛃 ap15	ag_1	00-20	J-ED-49-	BC-70				1	2.4 GHz 54	Mbps	
di GIGA	BYTE	00-2	0-ED-49- 0-ED-1F-	F9-82	w 0		13 dB	6	2.4 GHz 54	Mbps	
			0-ED-49-				14 dB	11	2.4 GHz 54	Mbps	
										_	
								1	1		
								Active	Refi	resh	
					_		1				
						1				×	
						-					

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. **?**: Use Profile, **!**: Available Profile.

Network Mode: 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			
Pro	ofile Name:	e: Default	
Ne	twork Name	mes	
	SSID1:		
	SSID2:		
	SSID3:		
		確定 取消	

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

riguie 5-10.	Auvance conni	guiation scieen
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 Meiwork
 ✓ 2.4 GHz 11 Mbps ✓ 2.4 GHz 54 Mbps ✓ Turbo G 	O 2.40H2 54/11	Migo 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)

Profile Management				? ×
Profile Management General Security Advanced	Set Security Metho WPA WPA-PSK 802.1x Pre-Shared Key None	od WPA EAP Type 802.1x EAP Type	TLS	? ×
	Configure]	 確定	取消

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		7 ×
		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 1		64 bit (enter 10 digits)
🗢 Shared Kay 2		64 bit (enter 10 digits)
Shared Key 3		64 bit (enter 10 digits) 💌
Shured Key 4		64 bit (enter 10 digits)

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*).

ofile Management				?
Define WPA PSK				<u>?</u> >
	Enter your WPA Pass	phrase. The minimum l	ength is 8 cher	acters.
			_	
		OK		Cancel

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*).

	rigure 3-14. Configure WFA OF 602.1A	Contraction of the local distance
rofile Management		? ×
Define Certificate		? X
Double Contained		-
	Select a Certificate	
	ck [Issued: 2003/11/14]	
	💿 Use Any Certificate Authority 🛛 🕤 Choose a Certificate Authorit	Ŋ
	WLANCA	
	Server/Domain Name	
	sdi.giga-byte.com.tw	
	Login Name	
	ck@sdi.giga-byte.com.tw	
	OK Cance	
	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** J run **Network Connections (see Figure 3-15)**.

	Figure	5-15.	Contr	UFan	ei	
Control Panel						
File Edit View Favorites Tools						- 3
debrase UP Control Panel	Accessibility Accessibility Fonts Fonts Controllers Phone and Modern . Speech Phone Option Modern . Speech	Remov GrowLMR101 LERRy	Advances of aver Tools Jitemet Options Regional and Language User Accounts	Date and Time Keyboard Scameras and Cameras	Nouse Nouse Scheduled Tasks	Folder Options Folder Options Sectored Sounds and Audio Devices

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 networ	k settings
Availa	able networks:			
Toco	onnect to an available	e network, cli	ck Confi	gure.
i	lucent		~	Configure
Prefer	Atheros Wireless Nets 0007408CBACA rred networks: natically connect to a		vorks in I	Refresh Ne order listed
Prefer Autor	0007408CBACA rred networks: natically connect to a		vorks in I	
Prefer Autor	0007408CBACA rred networks: natically connect to a		vorks in I	he order listed
Autor	0007408CBACA rred networks: natically connect to a	vailabie netv	vorks in l	he order listed Move up Move down
Prefer	0007408CBACA rred networks: natically connect to a	vailabie netv	roperties	he order listed Move up Move down

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 car

les 🝫			
Transmit		Receiv	e
(mit Rate :	54 Mbps	Rcv Rate :	54 Mbps
Jnicast Frames :	8	Unicast Frames :	2
Aulticast Frames :	8	Multicast Frames :	8
Broadcast Frames :		Broadcast Frames :	182
otal Bytes :	686C	Total Bytes :	35454
rames Xmit OK :	83	Frames Reveived OK :	291
Frames Retried :	8	Beacons Received :	8583
rames Dropped :		Frames Received With E	rrors :
ncryption Errors :	0	Duplicate Frames :	
TS Frames :		Authentication Rejects :	8
ssociation Rejects :	8	- 4).	

3-5. Driver Info

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

G-EzLink Utility	
Action Options Help	
Link Status Site Survey Configuration Statistics Driver Info	
GIGABYTE TECHNOLOGY	
Driver Information	
Card Name: Gigabyte GN-WIAG Wireless Network miniPCI 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 setup again to fix this problem.	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	Mini-PCI Type III B				
Operating Voltage	3.3VDC ± 5%				
2. RF Performance					
802.11B					
Frequency Band	2412 ~ 2484 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	25dBm @ Nominal Temp Range				
Minimum Receive Sensitivity	-85dBm @ 11 Mbps, Nominal Temp Range				
Antenna	external antennas supporting diversity				
802.11G(BACKWARD COMPATIBLE T	O 802.11B)				
Frequency Bands	2412-2484 MHz (subject to local regulations)				
Modulation Technology	OFDM and DSSS				
Modulation Techniques	64QAM, 16QAM, QPSK, BPSK, CCK, DQPSK, DBPSK				
Date Rates	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				
Typical Power Consumption	Doze: 25mA Receive: 250 mA Transmit: 530 mA				
Peak Output Power	27dBm @ Nominal Temp Range				
Receive sensitivity	Minimum -73dBm; typical -75dBm @54Mbps, Nominal Temp Range				
Antenna	external antennae supporting diversity				
3.Safety Regulation and Operating Enviro	onment				
EMC certification	FCC Part 15 (USA) DGT (Taiwan)				
	CE (Europe)				
Temperature Range	Operating: 0 ~ 55 deg C, Storing: -20 ~ 65 deg C				
Humidity	Max. 90% Non-condensing				
4. Software Support					
Driver	Windows 98SE/Me/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	59.6mm*44.45mm*3.50mm ± 0.15mm				
Weight	12 ± 0.5 g				

Packaging

Packaging specially used by Gigabyte.

* Subject to Change without Notices

FCC Statements:

- 1. 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.
- 2. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.
- 3. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.
- 4. This device is for OEM installation only, the End User manual shall not contain informationabout how to install the module.
- 5. This compliance to FCC radiation exposure limits for an uncontrolled environment, and minimum of 20 cm separation between antenna and body.
- 6. Only the type of antenna tested may be used.
- 7. The end product must carry a label stating "Contains TX FCC ID: JCK-GN-WIAG02 ".