IEEE 802.11 g 54Mbps Wireless LAN CardBus Adapter User's Manual

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Regulatory Compliance

FCC Warning

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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

1) 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."

2) This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This 802.11g wireless network adapter is a plug and play 32-bit CardBus PCMCIA adapter and offers high-speed wireless connection up to 54Mbps. It shares the same 2.4GHz radio band with 80.11b products so it can interoperate with existing 802.11b networking products. With the wireless network adapter installed, you can connect to wireless-B (802.11b) and Wireless-G (draft 802.11g) networks.

With this PCMCIA network adapter and appropriate drivers and utility installed, you can transform your wired device into wireless station easily and thus access your wireless and wired network quickly. Fully compliant to Wired Equivalent Privacy (WEP) with 64-bit and 128-bit encryption, so it can offer a reliable and secure wireless communication.

This wireless network adapter provides a fast and convenient way to connect your laptop or desktop to a wireless station or as an integral part of a wired local area network with a wireless network segment. You can configure this network card in Ad-Hoc mode (without an access point) or Infrastructure mode (with an access point).

Currently, we provide device drivers and configuration utility for Windows98SE, ME, 2000 and XP and as well as the installation procedures are described in the following sections.

1.1 Package Content

Open the box and remove all items, please make sure that you have received the following items:

Wireless LAN CardBus Adapter Package Content			
1	Wireless LAN CardBus Adapter		
2	Quick Installation Guide		
3	Utility CD		

If any item is found missing or damaged, please contact your local reseller for replacement.

1.2 System Requirement

To properly use your wireless LAN card, please make sure that your laptop or desktop meets the following minimum system requirements:

- The laptop or desktop must have one of the operating systems, i.e: MS Windows 98SE, ME, 2000 and WinXP
- CD-ROM drive
- Desktop PC: PCMCIA controller in case of desktop PC
- Laptop: PCMCIA Type II card slot.

1.3 Wireless LAN CardBus Adapter Features

This wireless CardBus adapter offers compliance with IEEE 802.11g standard so it allows

communicate with other manufacturers' wireless devices that support this standard. The followings are the main distinguishing features of this wireless adapter.

- Compatible with IEEE 802.11g high rate standard to provide wireless speeds of 54Mbps data rate with OFDM modulation.
- Backward compatible with IEEE 802.11b high rate standard to provide wireless speeds of 11Mbps data rate with CCK modulation
- Dynamic date rate scaling at 54, 48, 36, 24, 18, 12, 9 Mbps in OFDM mode
- Dynamic date rate scaling at 11, 5.5 Mbps in CCK mode; 2 and 1Mbps in DQPSK and DBPSK mode.
- 32-bit cardbus Interface
- Maximum reliability, throughput and connectivity with automatic fallback, auto-switch between OFDM and CCK.
- Supports wireless data encryption with 128-bit WEP and WPA standard for security
- On-board printed patch antenna
- Drivers support Windows 98SE, 2000, ME, XP
- Simple user setup & diagnostics utilities
- Type approval compliant with FCC Part 15.247 for US, EN 300-328 for Europe, and RCR STD-33A and ARIB STD-T66 for Japan

1.4 Wireless CardBus Adapter Specification

Specification			
RF Technology	Direct Sequence Spread Spectrum		
Operating Frequency	2400-2497MHz ISM band		
Modulation Schemes	DQPSK, DBPSK and CCK		
Channel Numbers	11 channels for United States		
	13 channels for Europe		
	14 channels for Japan		
Data Rate	11Mbps(CCK) with fall back rates of 5.5, 2, and 1Mbps		
	54Mbps with fall back rates of 48/36/24/18/12/9 Mbps		
	(OFDM)		
Media Access Protocol	CSMA/CA with ACK		
Transmitter Output Power	18 dBm typically		
Receiver Sensitivity	Typical -68dBm for 54Mbps @ 10% PER (Packet Error Rate)		
	Typical -86dBm for 2Mbps @ 8% PER (Packet Error Rate)		
Range Coverage	Indoor: 35 - 100 meters (depends on environment)		
	Outdoor: 100 - 300 meters (depends on environment)		
LED Indicator	Power & Link status		
Antenna Type	Printed-on-board antenna		
Operating Voltage	5V DC +- 10% (3.3V option)		
Current Consumption	250mA at transmit mode typically		
	200mA at receive mode typically		
	5mA at sleep mode typically		
Form Factor and Interface	PC Card Type II		
Temperature	0 ~ 55 in operating		
	-20~75 in storage		
Humidity	10% ~ 90% Non-condensing		
Dimension	115mm x 54mm x 5mm		

1.5 Wireless CardBus Adapter Hardware Description

The LED illuminates to indicate that the card is functioning. Please refer to the hardware diagram below. The upper solid red LED indicates this card is associated with an access point and power on. If the LED is off, it means that the network adapter doesn't associate an access point. If the LED is blinking, it means that the network adapter is connecting with access points or transmitting or receiving data.

Hardware Diagram



1.6 Ejecting the Wireless LAN CardBus Adapter

You are advised to always disable the WLAN CardBus adapter prior to removing the adapter from the PCMCIA slot. The wireless LAN adapter support hot-swappable feature so you don't have to power off the notebook to remove the adapter.

Steps:

• Double click the **Unplug or Eject Hardware Icon** resides on your system tray and click **Stop** from the Unplug or Eject Hardware dialog box.

萎 Unplu	ig or Eject Hardware	<u>? ×</u>
\$	Select the device you want to unplug or eject, and then o Windows notifies you that it is safe to do so unplug the de computer.	lick Stop. When vice from your
<u>H</u> ardwa	re devices:	
	eless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)	
- L		u Dudavian O
function	802. Frg CardBus/MiniPCI Adapter(31G1/41G2) at PCI bi 0	us 2, device U,
	<u>P</u> roperties	
□ <u>D</u> isp	lay device components	
🔽 Sho	w Unplug/Eject jcon on the taskbar	<u>C</u> lose

• Click **OK** to confirm that you are going to stop the adapter.



• The following screen prompts that you can remove the adapter. Click **OK** button to close the dialog box.

Safe To R	emove Hardware
٩	The 'Wireless 802.11g CardBus/MinIPCI Adapter(31G1/41G2)' device can now be safely removed from the system.
Ì	

• Push the lever of your notebook to eject the adapter now.

Note:

Don't eject the wireless LAN adapter when data transmission is taking place.

Chapter2 Installation and Configuration Procedures

2.1 Installation Procedures In Windows98

This wireless LAN CardBus adapter driver and utility are contained in the utility CD we provide. Insert the utility CD into your CD-ROM drive and the Autorun function will automatically guide you to start the installation process of configuration utility and drivers. If the Autorun function does not automatically start, please open this utility CD to find the **SETUP.exe** file and double click the **SETUP.exe** icon to start the installation procedure.

Important notice:

- Please do not attach or physically connect the wireless LAN CardBus adapter into PCMCIA slot prior to executing the setup program.
- ✓ In Windows98SE, you have to manually install the CardBus driver.

2.1.1 Installing the Wireless LAN CardBus Adapter

- 1. Turn on your desktop or notebook.
- 2. Close any open programs and insert the utility CD into your CD-ROM Drive. The Autorun function will automatically start and the following main screen will be pop-up. Double-click on the Install Driver and Utility item to start the software installation. Click the "View User's Manual" to view the user's manual and click "Install Acrobat Reader" to install this software to view the user's manual. If you don't want to install right now you can click "Browse This CD" to view the CD files and click Exit to close the main screen.



• The InstallShield Wizard is preparing to install the configuration utility and drivers. Click **Next**.



 In the Destination Folder screen you are asked to confirm the Destination Folder for the application software. If you would like, you may change the destination folder to another location as the directory. Click Next.

InstallShield Wizard	×
Choose Destination Location Select folder where Setup will install files.	
Setup will install Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) in folder.	the following
To install to this folder, click Next. To install to a different folder, click Brows another folder.	e and select
Destination Folder	
C:\\Wireless 802.11g Adapter(31G1_41G2)\	Browse
InstallShield	
< <u>B</u> ack (<u>N</u> ext>	Cancel

• Select a program folder and click **Next**.

InstallShield Wizard		×
Select Program Folder Please select a program folder.		2
Setup will add program icons to the Program Fo name, or select one from the existing folders lis	older listed below. You may type a new st. Click Next to continue.	folder
Program Folders:		
Wireless 802.11g Adapter(31G1_41G2)		
E <u>x</u> isting Folders:		
Accessories		
Startup		
Less Methods		
Instalioniela	< Back Next >	Cancel

• The InstallShield Wizard is installing utility.

InstallShield Wizard	1
Setup Status	
Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) Setup is performing the requested operations.	
Registering class servers	
InstallShield Cancel	-

• Click **Yes** if you want to create the shortcut icon on your Windows desktop.

Question	×
?	Would you like to add "Wireless 802.11g Adapter Configuration Utility(31G1_41G2)" shortcut to Desktop?
	Yes No

• Click **OK** to reboot your computer and insert the adapter.

Informatio	Information		
•	Setup Wizard will reboot computer now. Please insert "Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)" after system reboot.		

2.1.2 Completing to Install the Wireless LAN CardBus Adapter in Windows98SE

After your computer reboot,

 Plug in the wireless CardBus adapter into the PCMCIA slot and the New Hardware Found Wizard will appear. During driver installation, you will be asked to specify the directory of Windows 98 source files path during installation. Please enter the location of the Windows98 setup files and follow the on-screen description.

Inser	t Dis	isk	×
8)	Please insert the disk labeled "Windows 98 Second Edition CD-ROM", and then cli	ck OK.
		<u>(0K</u>	
_			
N	ew I	Hardware Found	
		Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)	
	-	Copying Files	
1	Win	Source:	
-		C:\WINDOWS\WINIPCFG.EXE	
		Destination:	
		C:\WINDOWS\WINIPCFG.EXE	
		81%	
		Cancel	

 After all the necessary drivers are installed, you can open the Utility. On the system tray, you can find that a PCMCIA adapter icon and the utility icon and the Power LED on the adapter is flashing. Now, you have completely finished the whole installation procedure.



2.2 Installation Procedures In WindowsME

The Wireless LAN CardBus Adapter Windows driver ships with the Wireless CardBus Configuration Utility. If you have connected the Wireless CardBus Adapter to your computer, please remove it, cancel any hardware wizard that may show up, and start here.

Before you start:

- ✓ Obtain this Utility CD.
- Please do not attach or physically connect the wireless LAN CardBus adapter into PCMCIA slot prior to executing the setup program.

2.2.1 Installing the Wireless LAN Card Driver and Configuration Utility

Close any open programs and insert the utility CD into your CD-ROM Drive. The Autorun function will automatically start and the following main screen will be pop-up. Double-click on the **Install Driver and Utility** item to start the software installation. (If the Autorun function does not automatically start, please open the Installation CD to find the Setup.exe file and double click the Setup.exe icon to continue.) Click the "**View User's Manual**" to view the user's manual and click "**Install Acrobat Reader**" to install software to view the user's manual. If you



don't want to install right now you can click "Browse This CD" to view the CD files and click

 The InstallShield Wizard is preparing to install the configuration utility and drivers. Click Next.

InstallShield Wizard		×
	Welcome to the InstallShield Wizard for Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) The InstallShieldR Wizard will install Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) on your computer. To continue, click Next.	
	< Back Next > Cancel	

 In the Destination Folder screen you are asked to confirm the Destination Folder for the application software. If you would like, you may change the destination folder to another

location as the directory. Click Next.

InstallShield Wizard	×
Choose Destination Location Select folder where Setup will install files.	
Setup will install Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) in folder.	the following
To install to this folder, click Next. To install to a different folder, click Brows another folder.	e and select
Destination Folder	
C:\\Wireless 802.11g Adapter(31G1_41G2)\	Browse
InstallShield <u>Kext</u> × <u>Back</u>	Cancel

• Select a program folder and click **Next**.

InstallShield Wizard	×
Select Program Folder Please select a program folder.	
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.	
Program Folders:	
Wireless 802.11g Adapter(31G1_41G2)	
Existing Folders:	
Accessories Startup	
InstallShield <u>Rext > Cancel</u>]

• The InstallShield Wizard is installing utility.

InstallShield Wizard	×
Setup Status	
Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) Setup is performing the requested operations.	
Registering class servers	
InstallShield	

Click Yes if you want to create the shortcut icon on your Windows desktop. • Question 9 Would you like to add "Wireless 802.11g Adapter Configuration Utility(31G1_41G2)" shortcut to Desktop?

<u>N</u>o

Yes

×



Click OK to reboot your computer and insert the adapter.						
Informatio	Information 🔀					
•	Setup Wizard will reboot computer now. Please insert "Wireless 902.11g CardBus /MiniPCLAdapter(21G1/41G2)" after sustem reboot					

CAUTION:

Forcing a misaligned card into the slot can damage the computer or the adapter.

After reboot, the system automatically installs the hardware drivers.

New I	tardware Found						
田温	Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)						
	Copying Files						
Win	Win Source:						
	Windows Millennium Edition						
	Destination:						
	Scanning						
	0%						

• Click Yes to reboot your computer.

System Settings Change 🔀						
?	To finish setting up your new hardware, you must restart your computer.					
A.	Do you want to restart your computer now?					
	Yes <u>N</u> o					

 After reboot your computer, you can find the Unplug or Eject Hardware icon and the Utility icon reside on the system tray.

1:18 PM

2.2.2 Verifying the Wireless LAN Adapter Driver In Windows98SE & ME

Verifying a Wireless LAN Driver in Windows 98/ME

To check if user has installed the driver successfully, please follow the following steps.

1. Right-click mouse button on the **My Computer** icon on your windows desktop and select **Properties** from the pop-up menu.



Wireless LAN CardBus Adapter

2. From the **Device Manager** tab, click the + in front of Network adapters to extend all network adapters. Right-click mouse button on **Wireless 802.11g CardBus/MiniPCI** Adapter(31G1/42G2), and select **Properties**.



3. Click the **General** tab, if the Device Status field reports that **"This device is working properly"**, it means that the driver has been installed successfully.

Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41 🙎 🗙				
General Driver Resources Power Management				
Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)				
Device type: Network adapters Manufacturer: Intersil Americas Inc. Hardware version: 001				
-Device status This device is working properly.				
Device usage Disable in this hardware profile Exists in all hardware profiles				
OK Cancel				

2.2.3 TCP/IP Configuration Procedure In Windows98/ME

Configuring the TCP/IP setup allows the desktop or laptop equipped with a wireless LAN card to operate in infrastructure mode and to have the Internet access. So after the configuration utility and WLAN adapter driver are installed, the TCP/IP address for the wireless LAN card must be configured.

1. Right-click mouse button on the **My Neighborhood** icon on your windows desktop and select **Properties**.



2. From the **Configuration** tab, scroll to **TCP/IP Wireless 802.11g CardBus/MiniPCI Adapter(31G1_41G2)** and click **Properties**.

Network ? X
Configuration Identification Access Control
The following network components are installed:
 TCP/IP -> Dial-Up Adapter TCP/IP -> Realtek RTL8139(A) PCI Fast Ethernet Adapte TCP/IP -> Wireless 802.11b CardbBus Adapter(3481) TCP/IP -> Wireless 802.11g CardBus/MiniPCI Adapter(31 File and printer sharing for Microsoft Networks
Add Remove Properties Primary Network Logon:
<u>File and Print Sharing</u> Description TCP/IP is the protocol you use to connect to the Internet and wide-area networks
OK Cancel

3. From "**TCP/IP Properties**", choose "**IP Address**" and select "**Specify an IP address**". Input an IP address and subnet mask. Click **OK** to complete the TCP/IP configuration, and restart the system for the changes to take effect.

TCP/IP Properties			? ×
Bindings Ad	dvanced	NetB	IOS
An IP address can be autom If your network does not auty your network administrator for the space below.	 WINS Contignatically assigned omatically assign or an address, an utomatically 	d to this com IP address Ind then type	puter. es, ask it in
P Address:	2.16.1	.221	
S <u>u</u> bnet Mask: 25	5.255.255	. 0	
	ОК		Cancel

4. Choose **Start > Programs > MS-DOS Prompt** to open the DOS command prompt window. Type "ipconfig/all" to determine if the TCP/IP configuration has taken effect.



2.2.4 Removing the Wireless LAN Adapter Utility And Driver In Windows98/ME

From Windows Start menu -> Programs -> Wireless 802.11g Adapter(31G1_41G2)-> Uninstall Wireless 80211g Adapter Configuration Utility to remove the configuration utility from the OS.

Γ	*	Windows Update					
	0	WinZip					
	8	My Bluetooth Places					
ion	l	<u>P</u> rograms		Accessories Internet Explorer	۲		
Edit	0	Documents •	õ	Outlook Expense			
nium	55	Settings +		Windows Media Player WinZip	,		
llenr		Seargh 🕨	ē	Wireless 802.11b CardBus Adapter(34B1)	۲		
×	۲	Help	ĕ	My Bluetooth Places Wireless 802.11g Adepter(3161_4162)	•	19	Uninstal Wireless 802 11g Adapter Configuration Utility
ŝ	2	<u>B</u> un	_	ş			Windless 802.11g Adapter Configuration Utility(31G1_41G2)
ndow	&	Log Off Wiston					
ž	ŋ	Shut Down					
1	Start	🖸 🎜 😂 🚬 🗍	_				

• Click **OK** to confirm that you are going to uninstall the utility.

Confirm Uninstall	X
Do you want to completely remove the selected applicatio	n and all of its features?
OK Cancel	

 Click the radio button of Yes, I want to restart my computer now and click OK to make your configuration take effect.

Restarting Windows
Setup has finished copying files to your computer. Before you can use the program, you must restart your computer.
Choose one of the following options and click OK to finish setup.
• Yes, I want to restart my computer now.
O No, I will restart my computer later.
ОК

2.6 Installation Procedures In Windows2000

The Wireless LAN CardBus Adapter Windows driver ships with the Wireless CardBus Configuration Utility. If you have connected the Wireless CardBus Adapter to your computer, please remove it, cancel any hardware wizard that may show up, and start here.

Before you start:

- ✓ Obtain this Utility CD.
- Please do not attach or physically connect the wireless LAN CardBus adapter into PCMCIA slot prior to executing the setup program.

2.6.1 Installing the Wireless LAN Card Driver and Configuration Utility

Close any open programs and insert the utility CD into your CD-ROM Drive. The Autorun function will automatically start and the following main screen will be pop-up. Double-click on the **Install Driver and Utility** item to start the software installation. (If the Autorun function does not automatically start, please open the Installation CD to find the Setup.exe file and double click the Setup.exe icon to continue.) Click the "**View User's Manual**" to view the user's manual and click "**Install Acrobat Reader**" to install software to view the user's manual. If you don't want to install right now you can click "**Browse This CD**" to view the CD files and click **Exit** to close the main screen.



1. The InstallShield Wizard is preparing to install the configuration utility and drivers. Click **Next**.

InstallShield Wizard		×
	Welcome to the InstallShield Wizard for Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) The InstallShieldR Wizard will install Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) on your computer. To continue, click Next.	1
	< <u>B</u> ack	

2. In the *Destination Folder* screen you are asked to confirm the *Destination Folder* for the application software. If you would like, you may change the destination folder to another location as the directory. Click **Next**.

InstallShield Wizard	×
Choose Destination Location Select folder where Setup will install files.	
Setup will install Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) in folder.	the following
To install to this folder, click Next. To install to a different folder, click Browse another folder.	and select
Destination Folder C:\\Wireless 802.11g Adapter(31G1_41G2)\	Browse
InstallShield	Cancel

3. Select a program folder and click **Next**.

InstallShield Wizard	×
Select Program Folder Please select a program folder.	
Setup will add program icons to the Program Fo name, or select one from the existing folders list	lder listed below. You may type a new folder . Click Next to continue.
Program Folders:	
Wireless 802.11g Adapter(31G1_41G2)	
Existing Folders:	
Accessories Startup	
InstallShield	< Back Next > Cancel

4. The InstallShield Wizard is installing utility.

InstallShield Wizard	X
Setup Status	
Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) Setup is performing the requested operations.	
Registering class servers	
InstallShield	
Cancel]

5. Click **YES** button, if you want to create a shortcut icon on your Windows desktop.



6. Click **Yes** from the **Digital Signature** dialog box. A Microsoft digital signature is not required at this moment.



7. Click **Finish** to finish the Utility installation.



Continue to complete the whole installation:

1. Insert the wireless network adapter now and click **OK**. You system will start to install the drivers.



CAUTION:

Forcing a misaligned card into the slot can damage the computer or the adapter.

2. The Microsoft Digital Signature Not Found dialog box could appear at this point in the installation. A Microsoft digital signature is not required for the driver installation. Click "**Yes**" to continue.



3. After the drivers have been installed successfully, you can find that the LED on the wireless adapter lights up. The whole installation is completed. You can find the **Unplug**

or Eject Hardware icon²² resides on the system tray. Open the utility and the utility icon will reside on the system tray.

4: EN 👂 🎯 🖾 🖾 🖧 🏍 🕕 1:18 PM

2.6.2 Verifying Your Installation In Windows2000

Verify the driver has installed successful

If you want to check if the driver's installation is successful or not, follow the next steps.

1. Right-click mouse button on the **My Computer** icon on your Windows desktop, and highlight **Properties** from the pop-up menu.



2. The System Properties screen will be pop-up. Under Hardware tab, click Device Manager....



 After clicking Device Manager..., the following screen will be shown. Click on the + symbol in front of "Network adapters" and see if an item labeled Wireless 802.11g CardBus/MiniPCI Adapter (34G1/41G2) is visible. If you don't see the item below the network adapter icon but a"?" or "!" symbol is displayed, it means that the driver installation was unsuccessful. Highlight "Wireless 802.11g CardBus/MiniPCI Adapter (34G1/41G2)", right-click mouse button and select "Properties".



4. Click the **General** tab, if the Device Status field reports that **"This device is working properly**", it means that the driver has been installed successfully.

Wireless 8	802.11g CardBus/	/MiniPCI Adapter(31G1/41G2	:) Prop <mark>? X</mark>
	Wireless 802.11g Adapter(31G1/41	™ I CardBus/MiniPCI G2)	
	Device type: Manufacturer: Location:	Network adapters Intersil Americas Inc. PCI bus 2, device 0, function 0	
← Devic This If yo start	ce status device is working pr u are having problen the troubleshooter.	roperly. ns with this device, click Troublesh	nooter to
			ooter
Device Use th	usage: is device (enable) 		•
		0K	Cancel

2.6.3 TCP/IP Setup In Windows 2000

Configuring the TCP/IP setup allows the desktop or laptop equipped with a wireless LAN adapter to operate in infrastructure mode and to have the Internet access. So after the configuration utility and WLAN adapter driver are installed, the TCP/IP address for the wireless LAN card must be configured.

1. Right-click mouse button on the **My Network Places** and highlight **Properties** from the pop-up menu.



2. Find the "Local Area Connection" that is associated with the wireless LAN CardBus adapter. Right-click mouse button on the connection and click **Properties**.



3. Select "Internet Protocol (TCP/IP)" and click Properties.

Local Area Connection 3 Properties	×
General Sharing	
Connect using:	
Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)	
Configure	
Components checked are used by this connection:	
Client for Microsoft Networks Image: State of the	
Install Uninstall Properties	
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	
Sho <u>w</u> icon in taskbar when connected	
OK Cancel	

4. Click "**Use the following IP address**" and input an IP address and subnet mask. Assigning an IP address and Subnet mask allows stations to operate in infrastructure mode and to have Internet access. "Default gateway" and "DNS server" information is also required. IP configuration information (DHCP or assigned IP address, Gateway and DNS server IP addresses) is usually obtained from the corporate IT staff.

Internet Protocol (TCP/IP) Propertie	es ? X
General	
You can get IP settings assigned autorr this capability. Otherwise, you need to a the appropriate IP settings.	natically if your network supports ask your network administrator for
Obtain an IP address automatical	y I
🛛 🕞 🖉 se the following IP address: —	
IP address:	10 . 35 . 1 . 80
Subnet mask:	255.255.255.0
Default gateway:	10.35.1.2
C Obtain DNS server address auton	natically
☐ Use the following DNS server add	dresses:
Preferred DNS server:	10 . 35 . 1 . 6
Alternate DNS server:	· · ·
	Advanced
	OK Cancel

Note:

The IP Address you assign for all computers must be in the same IP Address range, and the Subnet Mask must be the same for all computers on your network. For example: If the first computer is assigned an IP Address of 10.35.1.3 with a Subnet Mask of 255.255.255.0, then the second computer can be assigned an IP Address of 10.35.1.4 with a Subnet Mask of 255.255.255.0,... etc.

- 5. After obtaining IP configuration information from the appropriate IT staff, click **OK** in both "Internet Protocol (TCP/IP) Properties" and "Local Area Connection Properties" to complete the IP configuration.
- 6. Choose **Start > Programs > Accessories > Command Prompt** to open the DOS command prompt window.



 Type "ipconfig" at the F:\> prompt to determine if the TCP/IP configuration has taken effect. To test IP connectivity in ad hoc or infrastructure mode, use the "ping <ipaddress>" command.

2.6.4 Uninstalling the Wireless LAN CardBus Adapter Utility And Driver In Windows 2000

• From Windows Start menu -> Programs -> Wireless 802.11g Adapter(31G1_41G2) -> Uninstall Wireless 802.11g Adapter Configuration Utility to remove the configuration utility from the OS.

	-	Windows Update						
	Ĩ	WinZip						
	4	Open Office Document						
		Add Office Document						
	8	My Bluetooth Places						
ца	æ	Programs	٦	ģ	Accessories	1		
sio	3	Documents	٠j		Adobe Illustrator 9.0	1		
ofes	4	Settings	•		Microsoft Outlook			
P.	Q)	Search	•	0	Ny Bluetooth Places			
S 20	۲	Help	•	6	Wireless 802.11g Adapter(31GL_41G2) 8	•	Uninstal Wireless 802.11g Adapter Configurati Wireless 802.11g Adapter Configuration Utility	an Utility (3161_4162)
ð	<u>7</u> 1	Run	1					
M	ŋ	Shut Down						
	Start) 🚮 🏉 😂) 🔔 Dri	ina I	nuð	A31G1\pkture	_	USERMANUAL_CARDBUS	

• Click **OK** to confirm that you are going to uninstall the application.

Confirm Uninstall
Do you want to completely remove the selected application and all of its features?
OK Cancel

• Click **Finish** to complete the un-installation.

InstallShield Wizard					
	Maintenance Complete InstallShield Wizard has finished performing maintenance operations on Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2).				
	< <u>B</u> ack Finish Cancel				

2.7 Installation Procedures In Windows XP

The Windows XP provides a built-in wireless LAN configuration application. No matter you want to use the Windows Zero Configuration utility or the utility we provide, you still have to click the **Install Driver and Utility** icon below to install the necessary drivers and the utility.

Before you start:

- ✓ Obtain this Utility CD.
- Please do not attach or physically connect the wireless LAN CardBus adapter into PCMCIA slot prior to executing the setup program.

2. 7.1 Installing the Wireless LAN Adapter Driver and Utility

Close any open programs and insert the utility CD into your CD-ROM Drive. The Autorun function will automatically start and the following main screen will be pop-up. Double-click on the **Install Driver and Utility** item to start the software installation. (If the Autorun function does not automatically start, please open the Installation CD to find the Setup.exe file and double click the Setup.exe icon to continue.)



• The InstallShield Wizard is preparing to install the configuration utility and driver.



 In the Destination Folder screen you are asked to confirm the Destination Folder for the application software. If you would like, you may change the destination folder to another location as the directory. Click Next.

InstallShield Wizard	3
Choose Destination Location Select folder where Setup will install files.	
Setup will install Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
Destination Folder	
E:\\Wireless 802.11g Adapter(31G1_41G2)\	
< <u>B</u> ack <u>Next</u> Cancel	

• Select a program folder and click **Next**.

InstallShield Wizard	ĸ
Select Program Folder Please select a program folder.	
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue.	
Wireless 802.11g Adapter(31G1_41G2)	
E <u>x</u> isting Folders:	
Startup	
InstallShield	
< <u>B</u> ack <u>N</u> ext> Cancel	

• The InstallShield Wizard is installing utility.

InstallShield Wizard	\mathbf{X}
Setup Status	
Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) Setup is performing the requested operations.	
Generating script operations for action:	
InstallShield Cancel]
Click Yes if you want to create the shortcut on your Windows deskton	

Click Yes if you want to create the shortcut on your Windows desktop.

Jestion	
Would you like to add "Wireless 802.11g Adapter Configuration Utility(31G1_41G2)" shortcut to Desktop)?
Click Continue Anyway to continue the installation.	

Hardwa	re Installation
1	The software you are installing for this hardware: Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2) has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) 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.
	Continue Anyway STOP Installation



 Please insert the wireless LAN CardBus adapter firmly without forcing until it seats snugly.



CAUTION:

Forcing a misaligned card into the slot can damage the computer or the adapter.

 Click the radio button of Install the software automatically (Recommended) and click Next.



 The Microsoft Digital Signature Not Found dialog box could appear at this point in the installation. A Microsoft digital signature is not required for the driver installation. Click "Continue Anyway" to continue.

The software you are installing for this hardware: Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41) has not passed Windows Logo testing to verify its com with Windows XP. (Tell me why this testing is importan Continuing your installation of this software m or destabilize the correct operation of your sy either immediately or in the future. Microsoft recommends that you stop this installation no contact the hardware vendor for software that passed Windows Logo testing.	G2) npatibility <u>t.</u>) nay impair ystem strongly ww and at has
Continue Anyway STOP	Installation

• Click **Finish** to complete the hardware installation.

Found New Hardware Wizard						
		Completin Hardware	g the Fo Wizard	und New		
	N.	The wizard has f	inished installin	ig the software for:		
		Wirele Adapte	ss 802.11g Ca er(31G1/41G2)	rdBus/MiniPCI)		
		Click Finish to cl	ose the wizard.	\frown		
			< <u>B</u> ack	Finish	Cancel	
 The bulk Use You 	bble message o	n the system tr	ay indicates	that the netwo	rk adapter is re	ady to
<u>use.</u> 10			bage and sta			apter.
🚺 🔱 Wire	less Network Cor	nnection 🗵				
One or mo	re wireless network	s are available.				
To see a lis	st of available netw	orks, click here.				
			3:31 PM			
		<u> </u>	Friday			
			9/5/2003			

2.7.2 Verifying Your Installation In Windows XP

To check if you have installed the driver successfully, please follow the following steps.

• Right-click mouse button on the **My computer** icon on your windows desktop and select **Properties** from the pop-up menu.



• Under Hardware tab, click Device Manager.

System Properties ? 🔀		
System Restore Automatic Undates Remote		
General Computer Name Hardware Advanced		
Add Hardware Wizard		
The Add Hardware Wizard helps you install hardware.		
Add Hardware Wizard		
Device Manager		
The Device Manager lists all the hardware devices installed on your computer. Use the Device Manager to change the properties of any device.		
Driver Signing Device Manager		
Hardware Profiles		
Hardware profiles provide a way for you to set up and store different hardware configurations.		
Hardware Profiles		
OK Cancel Apply		

 Double-click Network adapters. Right-click mouse button on "Wireless 802.11g CardBus/MiniPCI Adapter (31G1/41G2)" and select "Properties".

B Device Manager	
File Action View Help	
←→ 🔟 🖾 😂 😢 💐 ≈ 🗙 😹	
ATE-TEST2 Computer Disk drives Display adapters Display adapters Poppy disk controllers Popy disk drives Display d	Update Driver Update Driver Disable Uninstall Scan for hardware changes Properties
Opens property sheet for the current selection.	

• Click the **General** tab, if the Device Status field reports that "**This device is working properly**", it means that the driver has been installed successfully.

Wireless	Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41 🕐 🔀			
General	General Driver Resources			
HH	Wireless 802.11g CardBus/MiniPCI Adapter(31G1/41G2)			
	Device type:	Network adapters		
	Manufacturer:	Intersil Americas Inc.		
	Location:	CardBus Slot 1 (PCI bus 2, device 0, function I		
This If you start	This device is working properly. If you are having problems with this device, click Troubleshoot to start the troubleshooter.			
		<u>I</u> roubleshoot		
Device usage:				
Use th	is device (enable)	✓		
		OK Cancel		

2.7.3 Uninstalling the Wireless LAN CardBus Adapter Utility And Driver In Windows XP

From the Windows Start menu -> Programs -> Wireless 802.11g Adapter(31G1_41G2) -> Uninstall Wireless 802.11g Adapter Configuration Utility to remove the configuration utility.



Click **OK** to confirm that you are going to uninstall the utility.



Click **Finish** to complete the un-installation.



3.1 Wireless LAN Adapter Utility

The user-friendly wireless LAN CardBus Adapter Utility helps you to configure this WLAN adapter and monitor its connection status. You can change configuration parameters while the adapter is active. You can open the utility for the utility from the **Windows Start menu -> Programs -> Wireless 802.11g Adapter (31G1_41G2) -> Wireless 802.11g Adapter**

Configuration Utility (31G1_41G2) or double-click the utility icon

on the utility icon and you can select option from the pop-up menu.

Open Utility – Open the utility main window.

tray.

Windows desktop and there will be a WLAN icon resides on the system tray. This WLAN utility icon will reside on the system tray when you reboot your PC. Double-click on this icon and the wireless LAN adapter utility window will be pop-up on screen. Right-click mouse button

3.2	Wireless	LAN Car	d Utility	– Link	c Info T	ab
Click WL	AN Utility icon	once and the wi	- reless LAN Car	dBus adapte	er Utility wind	dow will
be show	n on screen display	ing the related info	ormation of Link	< Info tab. Fr	om the Link	Info Tab

Exit - Close the Wireless CardBus Adapter utility and the icon will exit from the system

be shown on screen displaying the related information of Link Info tab. From the **Link Info Tab**, you can know the adapter's name, get the adapter's configuration and connection information. This page is intended to provide the adapter's information only so you can view the information listed here but can't change any item. You may change several parameters from the **Configuration** Tab.



🛉 Open Utility

Exit

<u>// _н _в з</u>

on your

ber Co

Stream

🕕 Wireless Adapter Con	🕽 Wireless Adapter Configuration Utility 🔀 🔀			
Link Info	on Site Survey Statistics Device Info			
Adapter : State : ESSID : Type : WEP : Channel : Tx Rate :	Wireless 802.11g Adapter (31G1/41G2) Connect to BSSID 12:32:25:24:26:25 TPTEST-Bryan Infrastructure Disable 9 11 Mbps			
Signal Stregth: Link Quality:	87 % 91 %			

Link Info Tab

Item	Description	Figure
Adapter	Displaying the name of the adapter.	Adapter : Wireless 802.11b CardBus Adapter (34B1)
State	Displaying the working status of the adapter. Scanning: Indicating the adapter is searching other wireless devices in service range. Not Associated: Indicating that the adapter is not connected with any wireless device yet. Connect to BSSID: xx:xx:xx:xx:xx Indicating the adapter is connected with an access point or other wireless LAN adapter and the associated device's MAC address is displayed in the form of hex digits.	State : Connect to BSSID 00:05:5D:AA:D1:EE
ESSID	Indicating the ESSID of the connected wireless device.	ESSID : WING
Туре	Indicating the current network type the adapter uses. It could be Ad hoc or Infrastructure .	Type : Infrastructure
WEP	Indicating whether the connected device enable WEP function or not. Disable : It means that the connected device doesn't enable	WEP : Disable

	WEP function. Enable: It means that the connected device uses WEP function.	
Channel	In infrastructure mode, it indicates the channel number the associated access point uses. In Ad hoc mode, it indicates the channel number the adapter uses.	Channel : 1
Signal Strength	The blue bar indicates the signal is weak or strong. The longer the blue bar is, the stronger the signal is.	Signal Stregth:
Link Quality	The blue bar indicates the link quality is good or bad. The longer the blue bar is, the better link quality is.	Signal Stregth:
Re-Scan	Click this button and then the card will start to re-scan other wireless devices in service range.	Re-Scan

3.3 Wireless LAN Adapter Utility – Configuration Tab

Click the **Configuration Tab** and the following information will be displayed. The top pane of this page is to remove or save configuration settings. You can configure the wireless network adapter through the bottom pane of this page. The bottom pane includes three sub-tabs locating on the right side. Click each sub-tab, and the corresponding items will be displayed on the bottom pane of Configuration tab. Remember to click **Apply** button after your configuration; otherwise, the changes you make won't take effect.

nk Info <u>Contigu</u> ration Profile WING	Site Survey Sta	itistics Device Re <u>m</u> ove	⊧ <u>I</u> nfo Sa⊻	e	
Network Type ESSID TxRate Channel Radio	Infrastructure WING Auto 1 On		•	Connection Encryption Advanced	Configure your adapte
			Apply		

Profile: Creating a profile will save your time to re-configure network links you have established.

Remove – Click the **Remove** button, and then the selected profile will be deleted.

Save – Click the Save button, and then the profile will be saved for further use. Click the drop-down menu, select one profile you have created and click Save,

then the profile you select will be applied to the current connection.

3.3.1 Configuration Tab – Connection

From the **Configuration tab**, click the **Connection tab** on the right side of the bottom pane and the following screen will be displayed.

Network Type ESSID TxRate Channel Radio	Infrastructure VING Auto 1 On Off	Connection Encryption Advanced
	On	
	Apply	

Connection Tab

ltem	Description		Figure
Network	This wireless LAN adapter	Network Tupe	la fa al malanza
Туре	supports two network types –	Network Type	
	Infrastructure and Ad hoc. You	ESSID	Ad hoc Infrastructure
	can click the down-arrow	20012	minastracture
	button to select one network		
	type.		
	Intrastructure – This type of		
	network connection needs an		
	access point in range. All		
	through this access point		
	Ad hoc – A neer-to-neer mode		
	of operation. This type of link is		
	established from client to client		
	without any access point.		
ESSID	You can type a specific ESSID	FOOID	
	in this field in order to establish	ESSID	WING
	the link with an access point or		
	other computer equipped with		
	a wireless LAN adapter. If you		
	leave this field blank, and then		
	the wireless LAN adapter will		
	try to build the link with an		
	access point or other computer		
	equipped with a wireless LAN		
	adapter that has the better		
	signal and link quality.		
TxRate	I his field provides options for	TxRate	Auto
	of the wireless I AN edenter		Auto
	There are five options – Auto	Channel	11 Mbps
	1 Mbps 2 Mbps 5 5 Mbps and		5.5Mbps
	11 Mbps. You can click the		2 Mbps
	down-arrow button to select		
	one option. By default, the data		
	rate is set to Auto allowing the		
	wireless LAN adapter to		
	adaptively set the Tx rate to		

	the highest possible rate for the WLAN condition. It's recommended that you select the Auto option. If there is an 802.11g access point in the radio range, the Tx Rate will be changed to 54, 48, 36, 24, 18, 12, 9 and Auto.	
Channel	This field shows the channel number the current link uses. In infrastructure mode, this field shows the channel that the connected access point uses. So you can't modify this field in infrastructure mode. In Ad hoc mode, this function is available and you can click the pull-down menu to select one channel. There are 14 channels available for communication with a Wireless Access Point, but there may be restrictions on which channel can be used in some countries. • 11 channels for United States • 13 channels for Europe countries • 14 channels for Japan	Channel 2 1 2 3 4 5 6 7 8 V
Radio	Click the drop-down menu to enable or disable the wireless LAN adapter. When you select the Off option and the utility icon resides on the system tray	Radio On 🖵 Off On
Apply	Click Apply button to make your parameters take effect.	

3.3.2 Configuration Tab – Encryption

From the **Configuration tab**, click the **Encryption tab** on the right side of the bottom pane and the following screen will be displayed. The Encryption tab provides WEP (Wired Equivalent Privacy) function to ensure a more secure networking communication and prevent unauthorized access to your wireless network. The WEP keys configured for your wireless device must be the same as the WEP keys configured for the access point or wireless LAN adapter it associates.

Wireless Adapter C Link Info Configur	Configuration Utility ation Site Survey Statistics Device Info	×
[Specify profile	name here] 💌 Remove Saye	
E Data En key Length	cryption (WEP) 64 bits 💌 Key Format Hexdecimal 💌	Connection
PassPhrase		Encryp
C Keyl	**************************************	ă.
C Key2	*****	Adva
C Key3	****	nced
C Key4	*****	\square

Encryption tab

Item	Description	Figure
Data Encryption (WEP)	Click the box in front of Data Encryption (WEP) to enable the WEP function. You can set four different WEP keys in WEP Key Entry and specify one of them to use. If the box is not checked, then you can't change WEP related parameters.	▼ Data Encryption (WEP)
Key Length	Click the drop-down menu to select 64 bits or 128 bits. The 128 bits gives a higher level of security. The selection must be the same between these two connected devices. You can see that as the key length option is changed, the number of available characters in the WEP Key Entry field is changed automatically.	key Length 64 bits
	Wire	eless LAN CardBus Adapter

Key Format	This utility supports both Hexadecimal and ASCII key formats. Click the drop-down menu to choose one format. Only digits 0-9 and letters A-F are valid entries if you select hexadecimal format.	Key Format Hexdecimal 💌
PassPhrase	PassPhrase function is used as a seed to randomly generate the WEP encryption keys. If you use a key generated from a PassPhrase, you must use the same PassPhrase and keys on each station.	PassPhrase
WEP Key Entry	These four fields allow you to set four different 64-bit or 128-bit alphanumeric keys for encryption. This item is a very convenient and useful function when you want to match the WEP keys with different vendor's products. After you have set the WEP keys for specific AP or wireless LAN card, instead of entering the WEP key every time, you just click the radio button in front of the WEP key of the associated device.	WEP Key Entry Key1 Key2 Key3 ************************************

3.3.3 Configuration Tab – Advanced

From the **Configuration tab**, click the **Advanced tab** on the right side of the bottom pane and the following screen will be displayed. In this page, this utility gives you more flexibility to manage the wireless LAN adapter. You can change advanced configurations, such as fragmentation threshold, RTS/CTS threshold, Preamble type, Power Save mode and Authentication Type.

ltem	Description		Figure
Threshold	This field is to define		
Fragmentation	the maximum data	Threshold Fragmentation	0 (256-2432)
	frame size this		
	wireless LAN adapter		
	will transmit and to		
	improve the		
	efficiency of data		
	transmitting.		
Threshold	This field is to define	Threehold PTS/CTS	(0.2432)
RTS/CTS	when will the wireless	The short reports	0 (0-2-52)
	LAN adapter send		
	out RTS/CTS frames		
	to reserve bandwidth		
	for transmission.		
	Type the value in this		
	field and the effective		
	range is from 0 to		
	3000.		
Preamble	There are two	Preamable Long	T
	options in this field.	Loug	
	The Short Preamble	Long	
	option improves	Power Save Short	
	throughput		
	performance. The		
	default setting is		
	Long.		
Power Save	This field provides	D	
	three options for the	Power Save	CAM 🗾
	configuration of		CAM
	There are three	Admeniacation Type	MAX
	nower saving modes		FAST
	Click the pull-down		
	menu to select the		
	mode vou desire.		
	• CAM – It		
	represents		
	C ontinuous		
	Access Mode.		
	Select this		
	option and the		
	wireless LAN		
	adapter is		
	always on.		
	 MAX – It 		
	represents the		
	maximum		
	(MAX) power		
	saving mode.		
	Select this		
	option to save		
	the maximum		
	power of the		
	wireless LAN		
	adapter.		
	► FASI – It		

Advanced tab

	represents the		
	fact now or		
	asi puwel		
	saving mode.		
	ins power		
	mode provides		
	the best		
	combination of		
	network		
	performance		
	and power		
	usage.		
Authentication	Click the pull-down	A setta sectionationer Trans	
Туре	menu to select Auto,	Authentication Type	Open 💌
	Shared or Open type.		Open
	The authentication		Shared
	function is invoked		Auto
	when associated to		
	access point. The		
	authentication type		
	vou select should be		
	the same between		
	these connected		
	devices If you select		
	Auto mode the driver		
	will auto detect the		
	authentication type of		
	the access point you		
	are going to		
	Open: With this		
	• Open. With this		
	setting any		
	WIFEIESS LAIN		
	devices can		
	associate with		
	an Access Point		
	to receive and		
	to transmit data.		
	 Shared: With 		
	this setting only		
	stations using a		
	shared key		
	encryption		
	identified by the		
	Access Point		
	are allowed to		
	associate with		
	it.		
	• Auto: With this		
	setting stations		
	can		
	communicate		
	with or without		
	data encryption		

3.4 Wireless LAN Adapter Utility – Site Survey Tab

🕕 Wireless Adapter Configu	ration Utility					×
Link Info Configuration This list contains ava update the list, click Access Point from th the specified Access	Site Survey S San' button, Y Iscan' button, Y e list, and click '	tatistics Devic oints and their f 'ou can select a 'Connect' buttor	ce <u>I</u> r eatu a des a to a	ifo res. To sired connect	t to	
ESSID	Signal	Туре	Ch	WEP	BSSII	
WING	74%	Infrastructure	1	OFF	00:05	
Winson	72%	Infrastructure	6	ON	00:90	
Wireless	77%	Infrastructure	6	ON	00:02	
T					Þ	
		Sea	[ch		<u>C</u> onnect	

Click the Site Survey tab and the following screen will be displayed.

From the Site Survey page, you can search all access points and wireless LAN adapters that are within the service range of the wireless LAN adapter. The service range the wireless LAN card supports is up to 100 meters indoor or 300 meters outdoors. Click **Search** button, and the wireless LAN card will start to search access points and WLAN adapters and show the result in the list. The list includes information about the ESSID and BSSID of the access point and WALN adapter, the signal strength, the channel where the access point and WLAN adapter operates, and whether or not WEP encryption is used. You can highlight the access point or WLAN adapter you want to associate and click **Connect** or double click on your choice, and the system will take you back to the **Link Info** tab showing you the parameters of the connection newly established. If the wireless device you attempt to connect uses WEP function, then the system will take you to the Configuration tab/Encryption page. In the above figure, you can see there are three access points within the service range of the wireless LAN card. You may click the **Search** button to update this list and click the scroll bar to right to see more information the list provides.

3.5 Wireless LAN Card Utility – Statistics Tab

Click the Statistics tab and the following screen will be displayed.

Wireless Adapter Configuration Utility		×
Link Info Configuration Site Survey Statistics D	evice <u>I</u> nfo	
Transmitted OK	704	
Transmitted W/Error	0	
Received OK	0	
Received W/Error	0	
Received No Buffer	0	

From the Statistics tab page, you can view the instantaneous wireless receive and transmit data information.

3.6 Wireless LAN Adapter Utility – Device Info Tab

Click the **Device Info** tab and the following screen will be displayed.

🕕 Wireless Adapter Configurati	Wireless Adapter Configuration Utility						
Link Info Configuration Site Survey Statistics Device Info							
Wireless 802.11 g A dapter (31G1/41G2)							
Copyright (C) 2003 Wire All rights reserved.	Copyright (C) 2003 Wireless Communications Inc All rights reserved.						
	Version						
Wireless	Driver :	1.0.20.83					
Networking 8161/4161	Firmware :	1.0.4.3					
TIEEE 802.11b	Utility :	1.0.0.0902					
MAC ID	00:00:55:00:30:	ED					
Regulatory Domain FCC							
Internet Support http://www.weca.net							

From the **Device Info (information)** page, you can view the copyright and the product version including the diver version and utility version. The MAC address of the wireless LAN adapter and the regulatory domain are also shown on this page.

Chapter4 Using WinXP Built-in Wireless Network Configuration Utility

There are two ways to configure the wireless LAN adapter under Windows XP operating system. One is wireless LAN utility we provide and the other one is the Windows wireless network configuration utility Windows XP provides. If you want to use the configuration utility we provide, please refer to Chapter 3. The following section guides you how to use the wireless network configuration utility Windows XP provides.

4.1 Open the Local Area connection dialog box

• Right-click mouse button on the network connection icon resides on the system tray, and click "View Available Wireless Networks".



• The following **Connect to Wireless Network** dialog box will be displayed. You can click **Connect** to start the wireless connection or click **Advanced** button to do further configuration.

Connect to Wireless Network			
The following network(s) are available. To access a network, select it from the list, and then click Connect.			
Available networks:			
1 Winson			
A WING			
· · ·			
This network requires the use of a network key (WEP). To access this network, type the key, and then click Connect.			
Network key:			
If you are having difficulty connecting to a network, click Advanced.			
Advanced Connect Cancel			

 Click the Advanced button and the Local Area Connection Properties dialog box will be displayed. Click the Wireless Networks tab from the Wireless Network Connection

Properties dialog box. Select the box of "Use Windows to configure my wireless network settings" to enable automatic wireless network configuration.

🕹 Local Area Connection 4 Properties 🛛 🔹 💽	K		
General Wireless Networks Authentication Advanced			
Use Windows to configure my wireless network settings			
Available networks:			
To connect to an available network, click Lonrigure.			
Winson Configure			
A MarvellAP2135			
Preferred networks:			
Automatically connect to available networks in the order listed below:			
Doris Move up			
Move down			
Add Remove Properties			
Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced			
OK Cancel	5		

Note:

If you want to use the configuration utility we provide, you have to clear the check of "Use Windows to configure my wireless network settings" item.

4.2 Infrastructure Mode Setup Procedure

- From the **Wireless Network tab**, click **Refresh** button to update all the available network devices in range.
- Click the network name under the "Available networks" and click Configure. The Wireless Network Properties dialog box will be displayed.

Wireless Network Properties			
Network name (SSID):	Winson		
Wireless network key (WE	P)		
This network requires a key for the following:			
Data encryption (WEP enabled)			
Network Authentication (Shared mode)			
Network key:			
Key format:	ASCII characters		
Key length:	104 bits (13 characters) 💌		
Key index (advanced):	0		
The key is provided for me automatically			
This is a computer-to-computer (ad hoc) network; wireless access points are not used			
(OK Cancel		

- If the network you select requires WEP key, then the "Data encryption (WEP enabled)" check box is selected by default. Select the "The key is provided for me automatically" check box if the WEP key is automatically provided for you. The driver will then use the Default Encryption key. If not, you have to clear the check and manually enter the network key. In this example, you have to type the WEP keys. After you enter the WEP keys, you can click OK to close the Wireless Network Properties dialog box and the system will take you back to Wireless Network Connection Properties dialog box.
- Click OK to save your configuration and the Wireless Network Connection Properties will be closed.
- When the network connection you have configured is available, the following bubble message will be shown on the system tray.



Right-click mouse button on the network icon and select "View Available Wireless Network". Click Advanced button from the Connect to Wireless Network dialog box and you can find that there is a blue circle on the ESSID: Winson you have configured in Wireless Network Connection Properties dialog box. It means that you have successfully built the connection. You may refer to how to do TCP/IP setup in Windows 2000 section to configure you wireless LAN adapter in Windows XP. After the TCP/CP configuration is done, you can access the Internet through the wireless connection you have built.

🚣 Wireless Network Connection Properties 🛛 🔹 💽			
General Wireless Networks Authentication Advanced			
✓ Use Windows to configure my wireless network settings			
Available networks:			
To connect to an available network, click Configure.			
WING Configure			
Refresh			
Desferred a shured as			
Automatically connect to available networks in the order listed			
below:			
Move up			
Move down			
Add Remove Properties			
Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced			
OK Cancel			

• Furthermore, you can highlight a network connection and click **Move up** or **Move down** to change the order of the wireless networks in the **Preferred networks**. For Windows XP, it will always choose the first one in the **Preferred networks** to connect. To remove a wireless network from the list of preferred networks, select the wireless network that you want to remove, and then click **Remove**.

4.3 Ad-hoc Mode Setup Procedure

- Click **Refresh** button to update all available devices in range from Wireless Network Connection.
- Select the ad hoc network name under "Available networks" in the Wireless Networks tab, and click Configure.

🕹 Local Area Connection 4 Properties 🛛 🔹 💽			
General Wireless Networks Authentication Advanced			
Use Windows to configure my wireless network settings			
Available networks:			
To connect to an available network, click Configure.			
👔 MarvellAP21JS 🛛 🔼 🚺			
Manual V Hetresh			
Preferred networks:			
Automatically connect to available networks in the order listed below:			
Move up			
Move down			
Add Remove Properties			
Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced			

- In the Wireless Network Properties dialog box, the "This is a computer-to-computer (ad hoc) network; wireless access points are not used" check box is selected by default.
- If the network adapter you want to connect has enabled the WEP function and then the "Data encryption (WEP enabled)" check box is checked. You can select the "The key is provided for me automatically" check box if the WEP key is automatically provided for you. The driver will then use the Default Encryption key. If not, you have to clear the check and manually enter the network key. In this example, you have to type the WEP keys. After you enter the WEP keys, you can click OK to close the Wireless Network Properties dialog box and will go back to Wireless Network Connection Properties dialog box.

Wireless Network Properties 🛛 🛛 🛛 🤇				
Network name (SSID):	Manual			
Wireless network key (WE	P)			
This network requires a key for the following:				
Data encryption (WEP enabled)				
Network Authenticat	ion (Shared mode)			
Network key:				
Key format:	ASCII characters			
Key length:	104 bits (13 characters) 💌			
Key index (advanced):	0			
The key is provided for	me automatically			
This is a computer-to-con access points are not use	iputer (ad hoc) network; wireless ad OK Cancel			

• Click **OK** to save your configuration and close the Local Area Connection Properties dialog box. Right-click mouse button on the network icon on the system tray and open the Connect to Wireless Network dialog box again. Click **Advanced** button, and you can see that there is a blue circle on the wireless network adapter icon.

🕹 Local Area Connection 4 Properties 🛛 🔹 💽			
General Wireless Networks Authentication Advanced			
Use Windows to configure my wireless network settings			
Available networks:			
To connect to an available network, click Configure.			
👗 MarvellAP21JS 🔷 Configure			
Manual 🖌 Ketresh			
Preferred networks:			
Automatically connect to available networks in the order listed below:			
Move up			
Move down			
Add Remove Properties			
Learn about <u>setting up wireless network</u> <u>configuration.</u> Advanced			
OK Cancel			

- You may refer to how to do TCP/IP setup in Windows 2000 section to configure you wireless LAN adapter in Windows XP. After the TCP/CP configuration is done, you can share data between these wireless devices.
- Open Windows Explorer and type the connected wireless network adapter IP address in the Address field. The folder that remote WLAN adapter share will be displayed. Now , you can share data between these two desktop or laptop equipped with a wireless network adapter.



4.4 Network Operating Mode Selection

Click "**Advanced**" button from the Local Area Connection dialog box, and you can select network operating mode you want to use.

🕹 Local Area Connection 4 Properties 🛛 🔹 🛛 🔀				
General Wireless Networks Authentication Advanced				
Use Windows to configure my wireless network settings				
Available networks:				
To connect to an available network, click Configure.				
👔 MarvellAP21JS 🔷 Configure				
👗 Wireless				
Manual Refresh				
Preferred networks: Automatically connect to available networks in the order listed below:				
Move down				
Add Remove Properties				
Learn about <u>setting up wireless network</u> <u>configuration.</u>				
OK Cancel				

If you want to connect to an ad hoc network only, you can click the radio button of "Computer-to-computer (ad hoc) networks only". Click the radio button of "Access point (infrastructure) networks only", and only the available access points in range will be displayed in the available networks box. You can click the radio button of "Any available network (access point preferred)", and then both access points and wireless network adapters will be displayed in the available networks box.

Advanced 🛛 🛛 🔀
Networks to access
O Any available <u>n</u> etwork (access point preferred)
○ Access point (infrastructure) networks only
Ocomputer-to-computer (ad hoc) networks only
Automatically connect to non-preferred networks
Close