Wireless Network Adapter

User Manual

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1. Introduction

1.1 Welcome

The Wireless Network Adapter is a powerful 32-bit Cardbus/PCI Adapter that installs quickly and easily into PCs. The Adapter can be used in Ad-Hoc mode to connect directly with other cards for peer-to-peer file sharing or in Infrastructure mode to connect with a wireless access point or router for access to the Internet in your office or home network.
The Wireless Cardbus/PCI/USB Adapter connects with 802.11n networks at up to an incredible 300Mbps! And for added versatility, it can also interoperate with all the up to 54Mbps 802.11g or 11Mbps 802.11b products found in homes, businesses, and public wireless hotspots around the country. And in every mode, your wireless communications are protected, so your data stays secure.

1.2 About This Guide

This User Manual contains the information of how to install and configure Wireless Adapter to connect to the wireless network. You could follow the correct configuration steps to accomplish configuring.
Note and Caution in this manual are highlighted with graphics as below to indicate important information.

Contains related information corresponds to a topic.

Necessary steps, actions or messages should not be ignored.

1.3 Copyright statement

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, whether electronic, mechanical, photocopying, recording, or otherwise without the prior writing of the publisher.

1.4 Contents of Package

- Wireless network Cardbus/PCI/USB adapter
- Manual, Drivers and Utility on CD
- Quick Installation Guide

If any of the above items are missing, please contact your reseller.

1.5 Before you begin

You must have at least the following:

- A laptop computer/desktop PC with an available 32-bit Cardbus/PCI slot or USB
- At least a 300MHz processor and 32MB of memory
- Windows 98SE, ME, 2000, XP, Vista
- A CD-ROM Drive
- Cardbus/PCI/USB controller properly installed and working in the computer
- A 802.11n 、802.11g or 802.11b Access Point (for infrastructure Mode) or another 802.11n、802.11g or 802.11b wireless adapter (for Ad-Hoc; Peer-to-Peer networking mode.)

2. Install Driver and Utility

- Insert the Driver and Utility CD-ROM into the CD-ROM driver.
- The Wizard should run automatically, and Figure 1 should appear. If not, click the **Start** button and choose **Run**. In the field that appears, enter D:\autorun.exe (if ‘’D’’ is the letter of your CD-ROM drive).

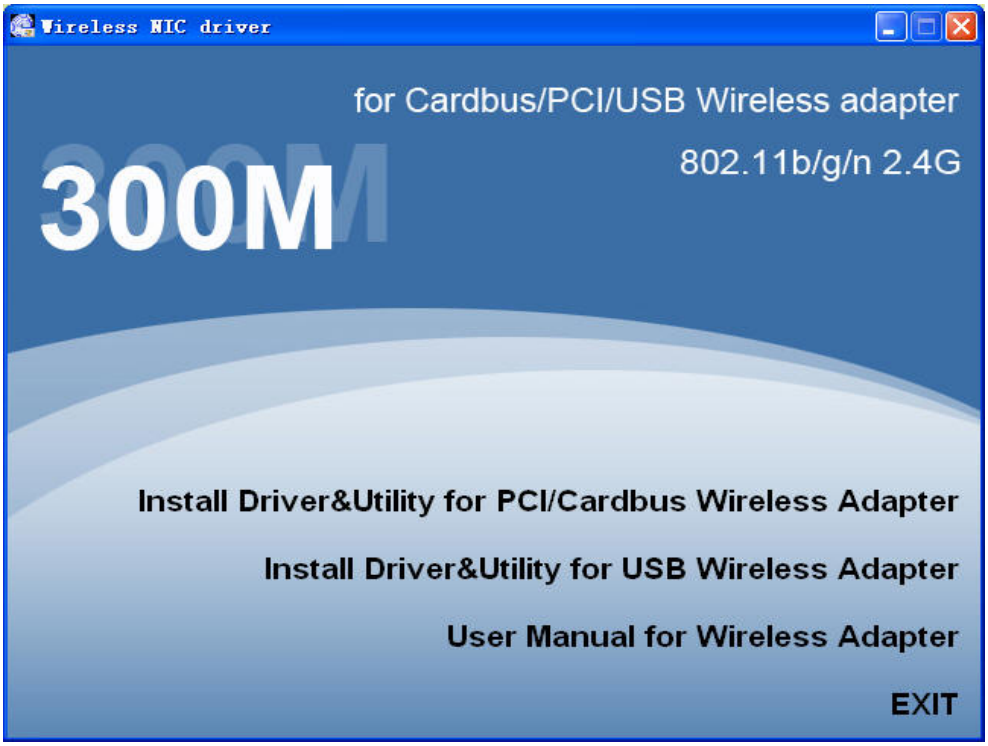

Figure 1

Next we use the Cardbus/PCI wireless adapter installation steps as example. According to the Cardbus/PCI wireless adapter installation steps, you can commplete USB wireless adapter installing easily.

- Click **Install Driver & Utility for Cardbus/PCI Wireless Adapter** on the Wireless Client Configuration Utility dialogue box, and then select the installing language from the next screen (Figure 2) and click **Next** button.

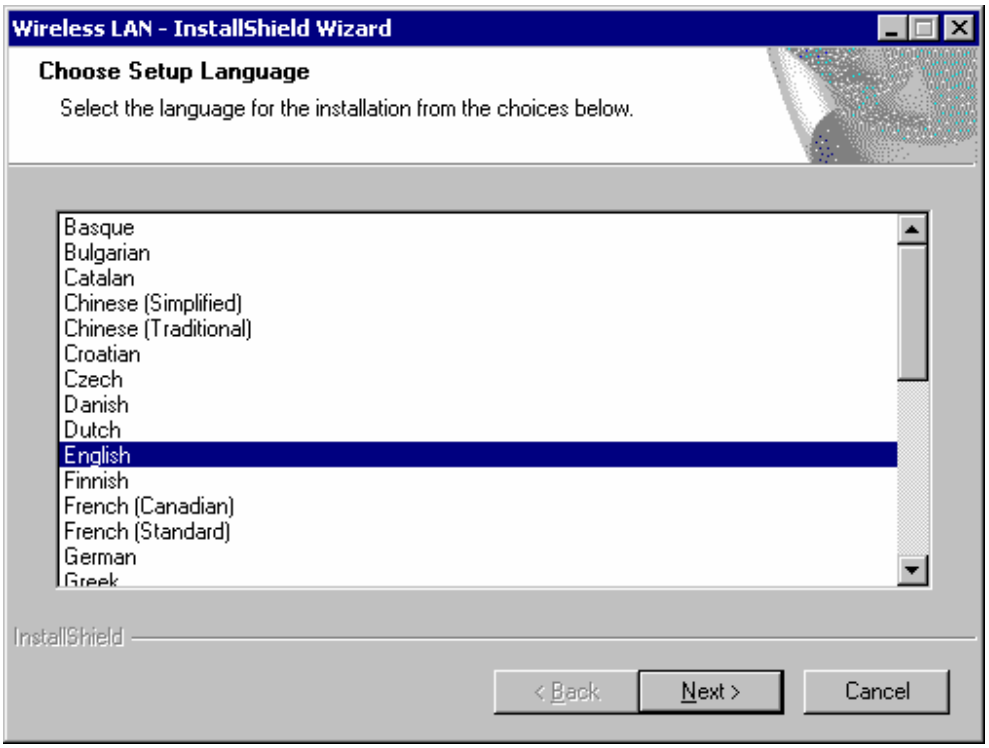

Figure 2

- Click **Next**

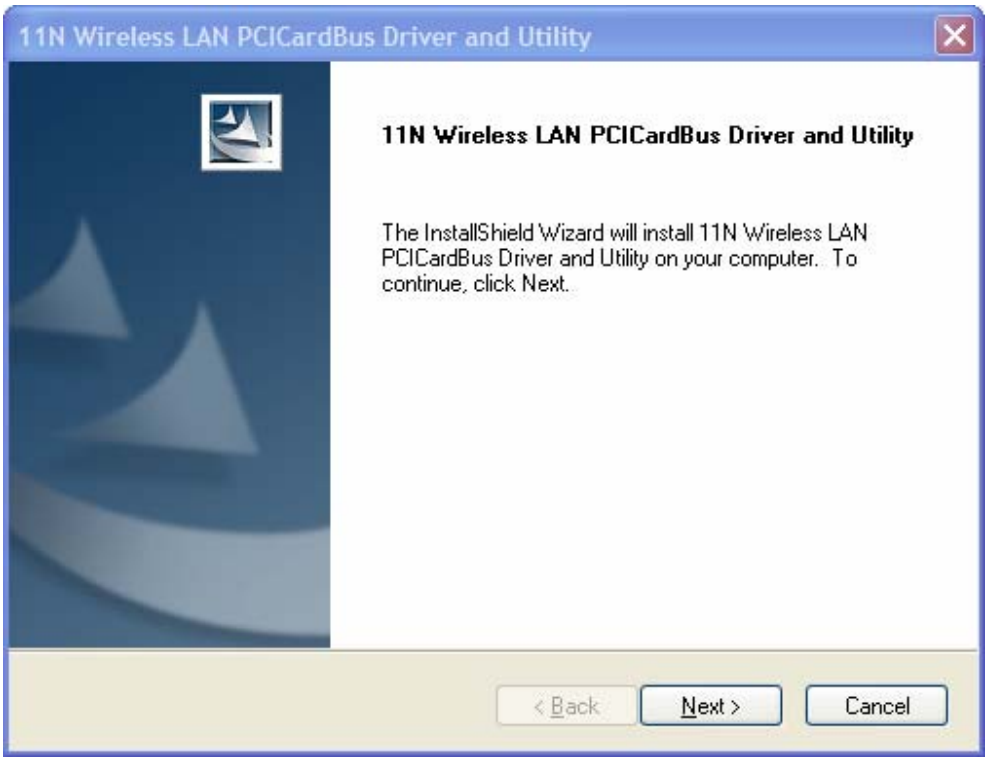

Figure 3

- Click **Install** to start installing

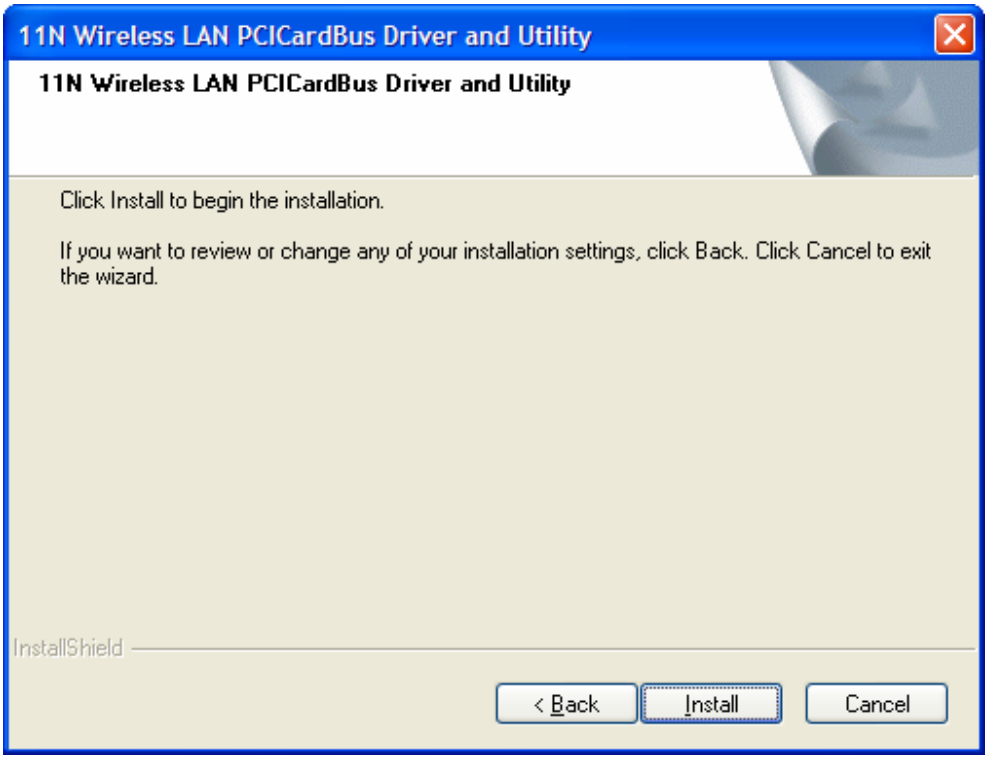

Figure 4

- Follow the InstallShield Wizard steps, and click **Finish** when done.

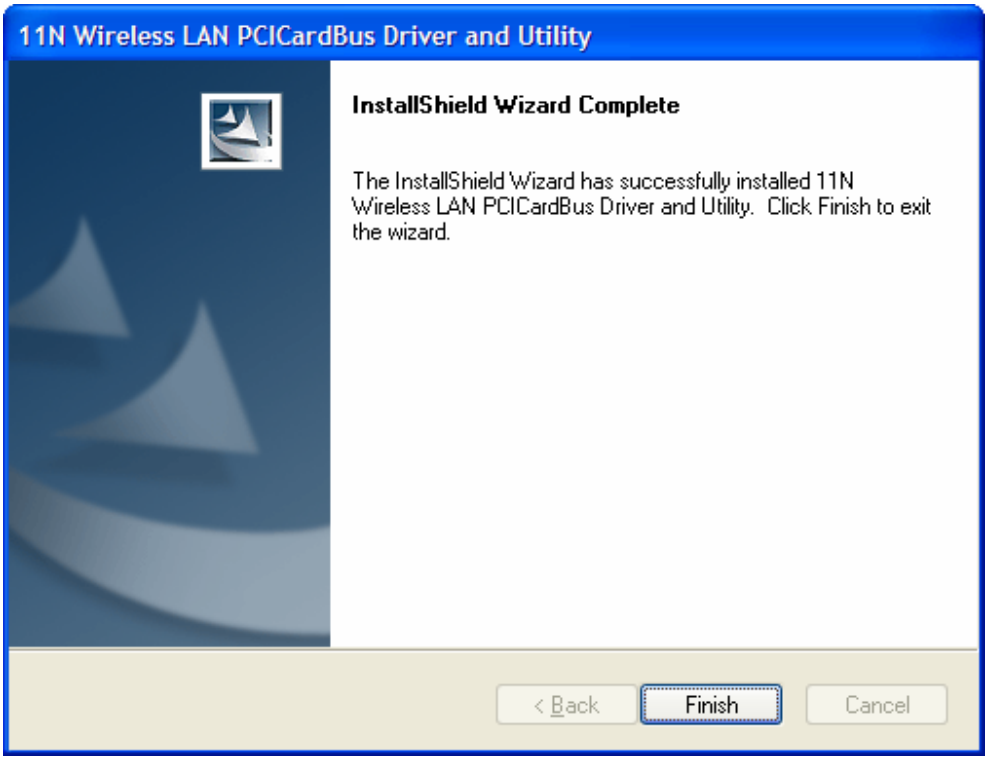

Figure 5

- Now turn off your PC or notebook

3. Install Wireless Adapter

The wireless Cardbus/PCI/USB Adapter supports up to 300 Mbps connections. This card is fully compliant with the specifications defined in IEEE802.11n standard. It is designed to complement PCI Local Bus computers and supports Windows98SE/Me/2000/XP/Vista

3.1 Cardbus adapter

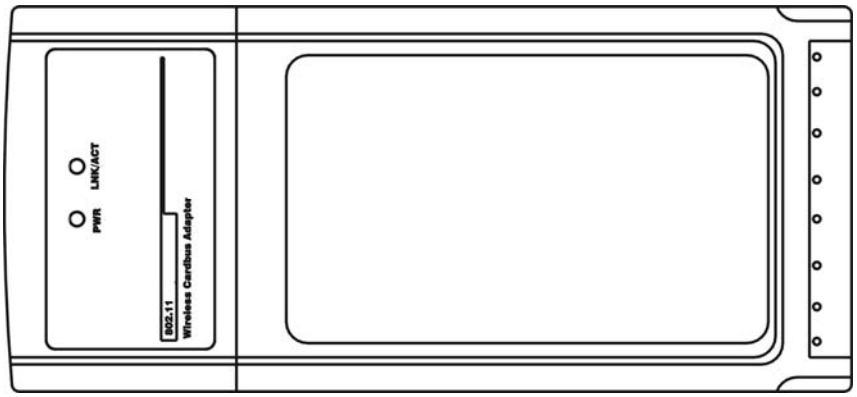

Figure 6

The two status LED indicators of the Cardbus wireless adapter are described in the following.

- PWR ON (Green): Indicates the Adapter is ready
- Lnk/Act ON (Green): Indicates a valid connection
- Lnk/Act Flashing: Indicates the adapter is transmitting or receiving data.

Install cardbus adapter

- Power on your notebook, let the operating system boot up completely, and log in as needed.
- Hold the adapter with the LOGO facing up and insert it into a Cardbus slot.

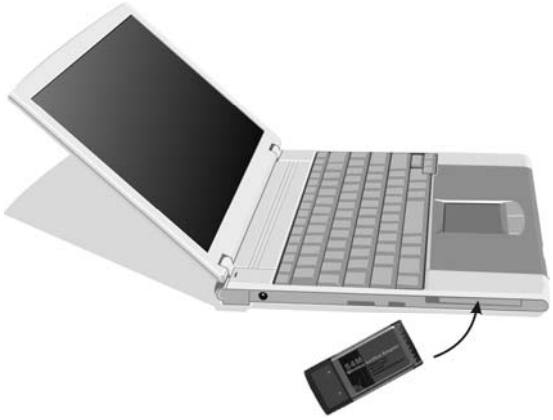

Figure 7

- If the Welcome to the Found New Hardware Wizard dialog box displays (Figure 8), choose I**nstall the software automatically (Recommended)**, and click **Next** button. The driver will be installed automatically.

Figure 8

3.2 PCI adapter

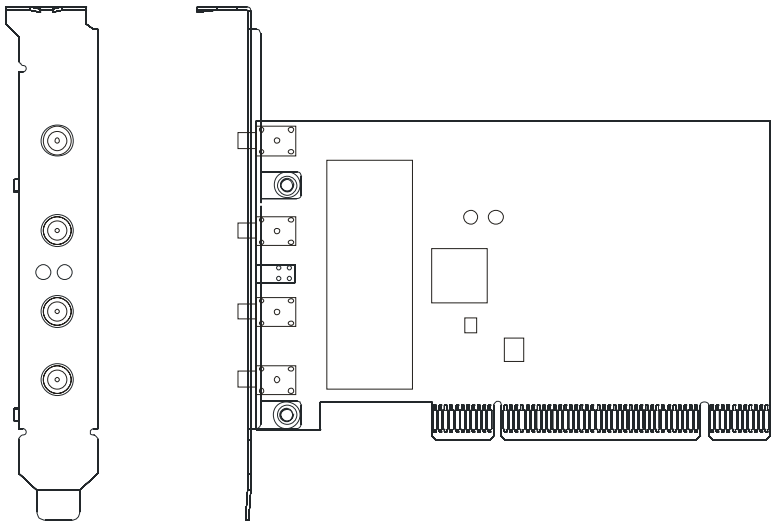

Figure 9

The status LED indicators of the PCI wireless adapter are described in the following.

- PWR ON (Green): Indicates power on
- Lnk/Act ON (Green): Indicates a valid connection
- Lnk/Act Flashing: Indicates the adapter is transmitting or receiving data.

Install PCI adapter

- Open your PC case and locate an available PCI on the motherboard.
- Slide the PCI Adapter into the PCI slot. Make sure that all of its pins are touching the slot's contacts. You may have to apply a bit of pressure to slide the adapter all the way in. after the adapter is firmly in place, secure its fastening tab to your PC's chassis with a mounting screw. Then close your PC.
- Attach the external antenna to the adapter's antenna port.
- Power on the PC.

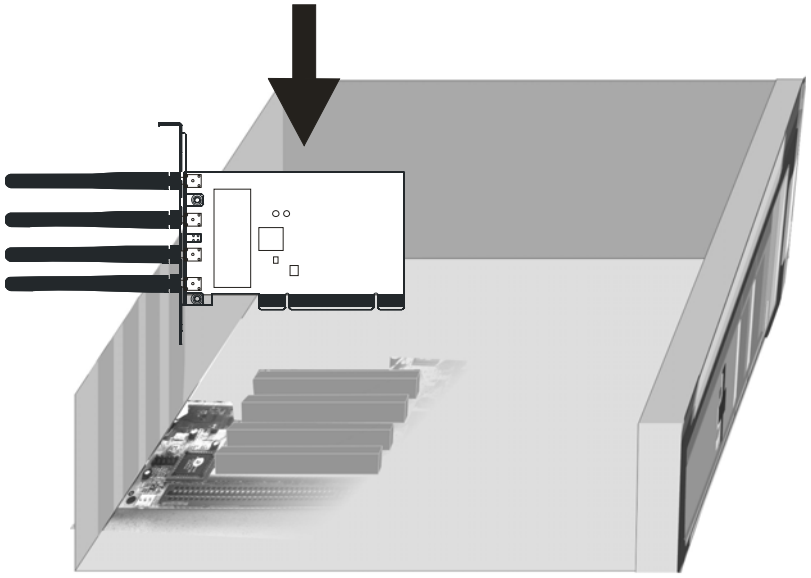

Figure 10

- If the Welcome to the Found New Hardware Wizard displays, choose i**nstall the software automatically (Recommended)**, and click **Next** button. The driver will be installed automatically.

Figure 11

3.3 USB adapter

The status LED indicators of the USB wireless adapter are described in the following.

- Lnk/Act ON (Green): Indicates a valid connection
- Lnk/Act Flashing: Indicates the adapter is transmitting or receiving data.

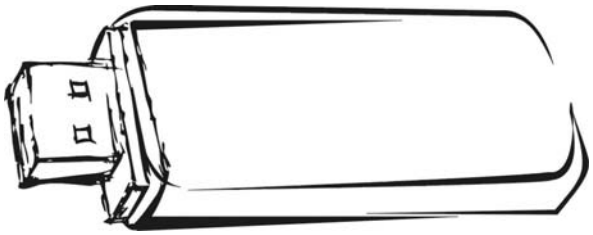

Figure 12

Install USB adapter

- Power on your PC, let the operating system boot up completely, and log in as eeded.
- Hold the adapter and insert it into a USB slot.

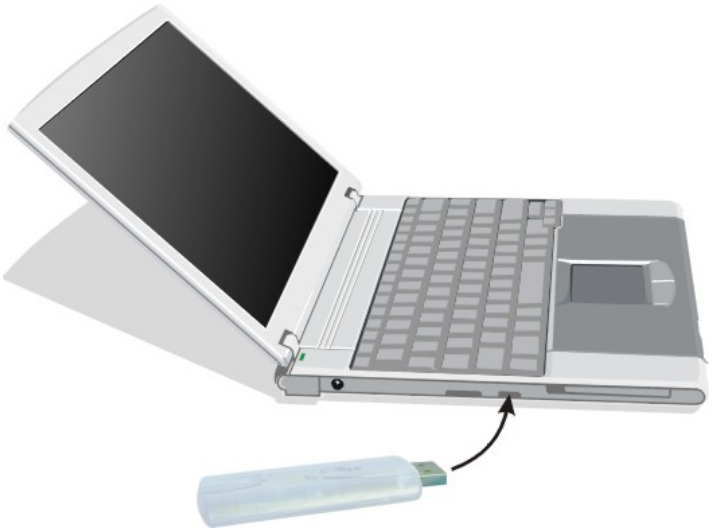

Figure 13

- If the **Welcome to Found New Hardware Wizard** displays, choose i**nstall the software automatically (Recommended)**, and click **Next** button. The driver will be installed automatically.

Figure 14

Now you have completed the driver and hardware installation for the adapter.

4. Using the Wireless LAN Utility

Use the Wireless LAN Utility to check the link information, search for available wireless networks, or create profiles that hold different configuration settings. You can double-click the icon (Figure 15) on your desktop to run it. Another way to start the Configuration Utility is to click Start>Programs> 11N Wireless LAN PCICardBus Utility> 11N Wireless LAN PCICardBus Utility.
If you are using Windows XP, you can use either the Zero Configuration Utility or the Wireless Client Configuration.

Figure 15

4.1 General

The General tab (Figure 16) displays current basic wireless connection information.

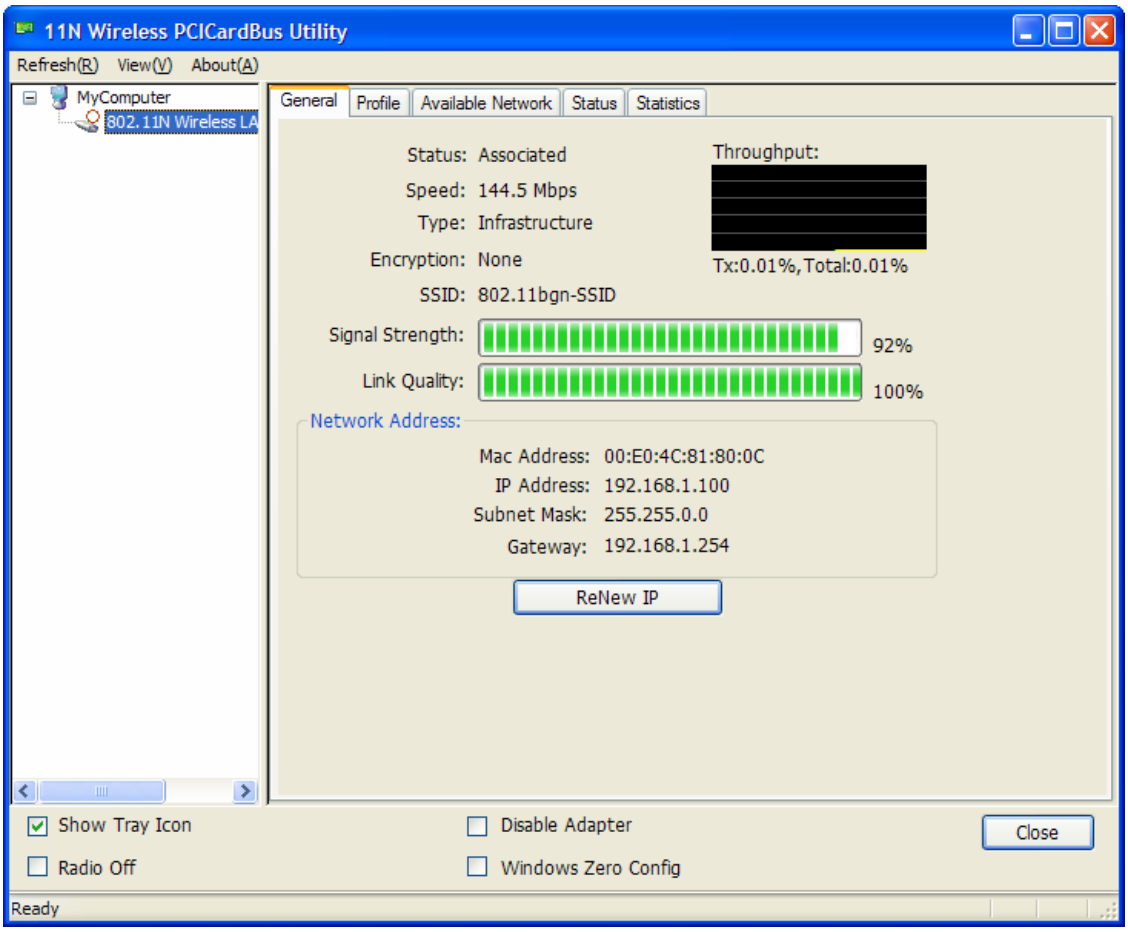

Figure 16

General Information

- Status: Wireless network Associated, Ad-hoc Mode or Not Associated.
- Speed: The data transfer rate of the current connection.
- Type: The type of the current wireless connection , Infrastructures or ad hoc
- Encryption: Current encryption.
- SSID: The unique name of the wireless network.
- Signal Strength: The signal quality of the current connection.
- Link Quality: The link quality of the current wireless connection.

Internet Protocol (TCP/IP)

- MAC Address: The MAC Address of the Adapter.
- IP Address: The IP Address of the Adapter.
- Subnet Mask: The Subnet Mask of the Adapter.
- Default Gateway: The Default Gateway address of the Adapter.

Others

- Show Tray Icon: Show PCI/Cardbus Wireless LAN Utility icon in the windows taskbar notification area.

- Disable Adapter: Disable the wireless adapter.
- Radio off: Turn off the radio of the wireless adapter.
- Windows Zero Config: Enable this function if you want to configure wireless adapter by windows wireless adapter configuration program.

4.2 Profile

Using the Profile tab (Figure 17), you can add, remove, edit, duplicate, and set default a profile,

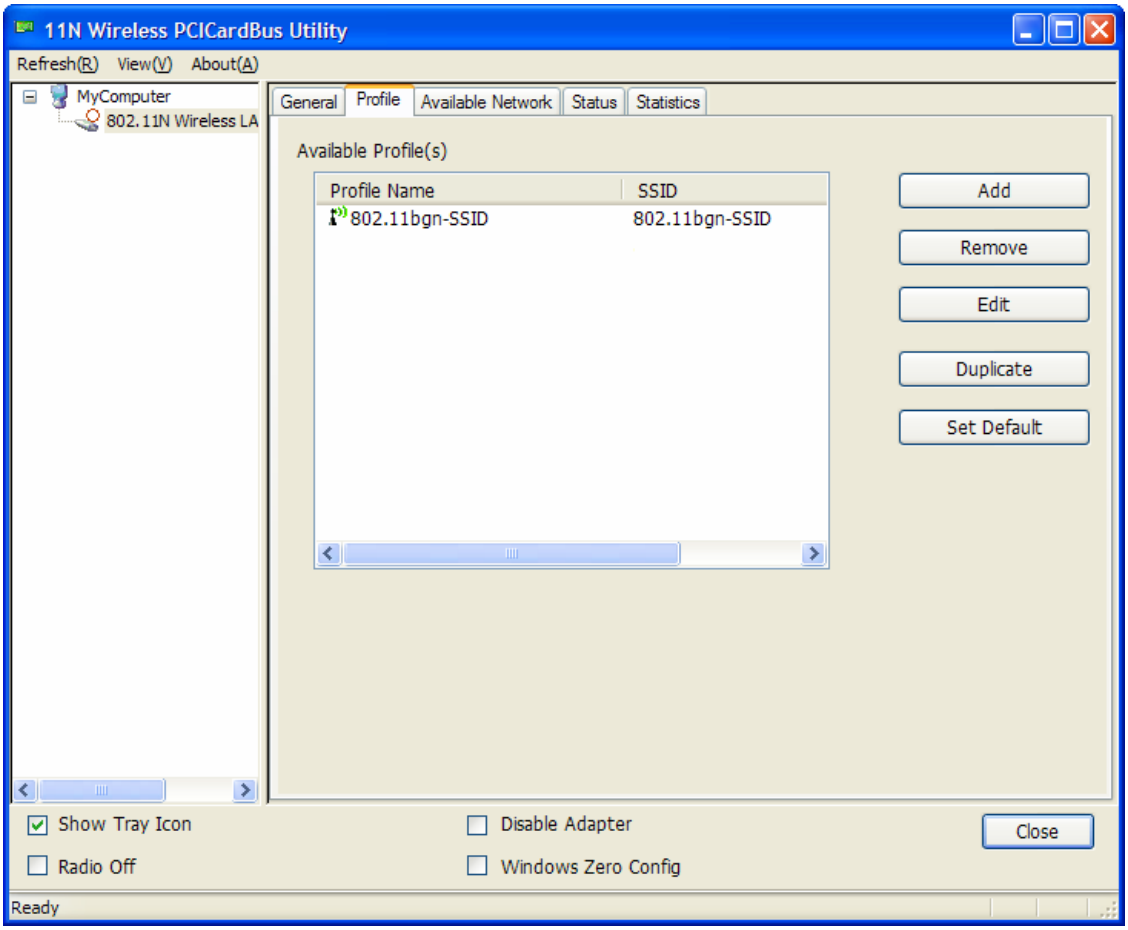

Figure 17

4.2.1 Add

- **Create a new Infrastructure mode profile**

If you want your wireless computers to communicate with other computers on your wired network via a wireless access point. Click the **Add** button to create a new infrastructure profile.

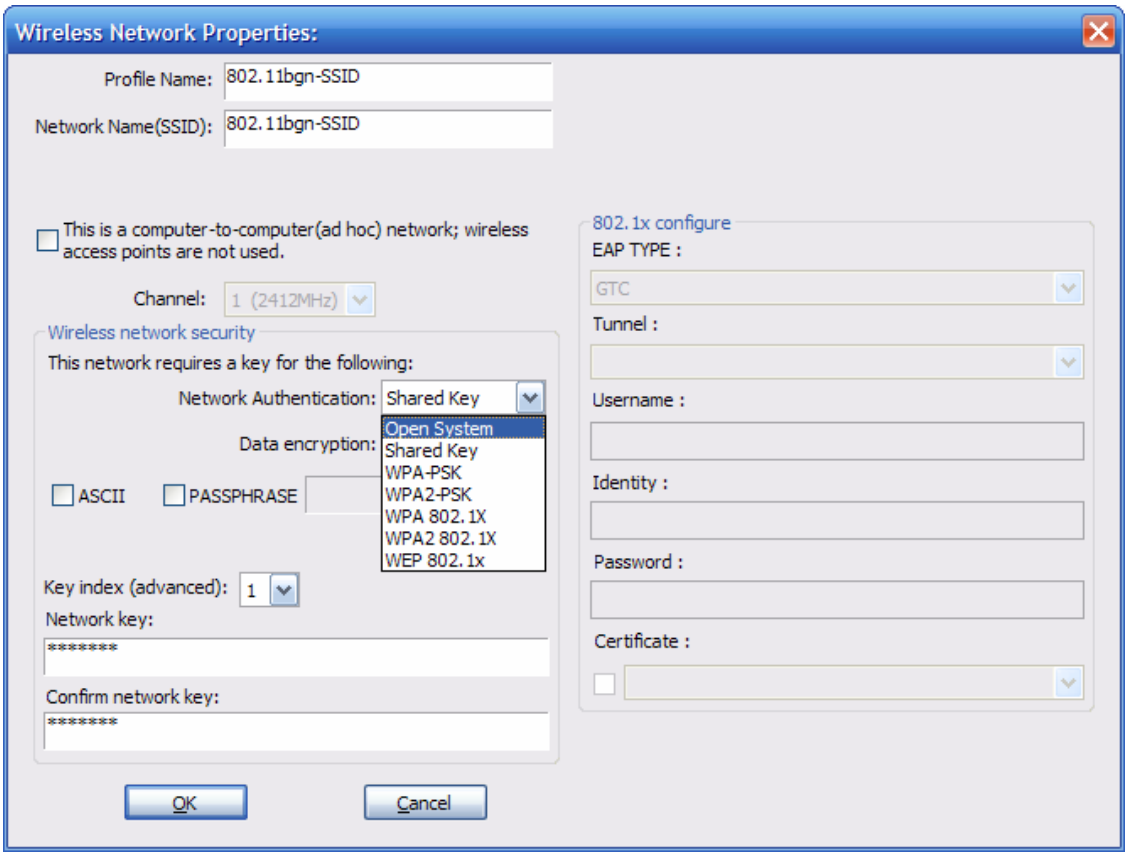

Figure 18

When the Network Info dialog box appears (Figure 18), enter a name for the new profile. Enter the Network SSID. Choose the Network Authentication Mode and Data encryption from the drop-down menu and import the network key. Then click OK button.

- **Create a new ad-hoc mode profile**

If you want your wireless computers communicate with each other directly, click the **Add** button to create a new ad-hoc profile. Then, mark

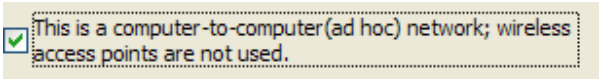

Figure 19

and select the correct operating channel for your network from the Channel drop-down menu.

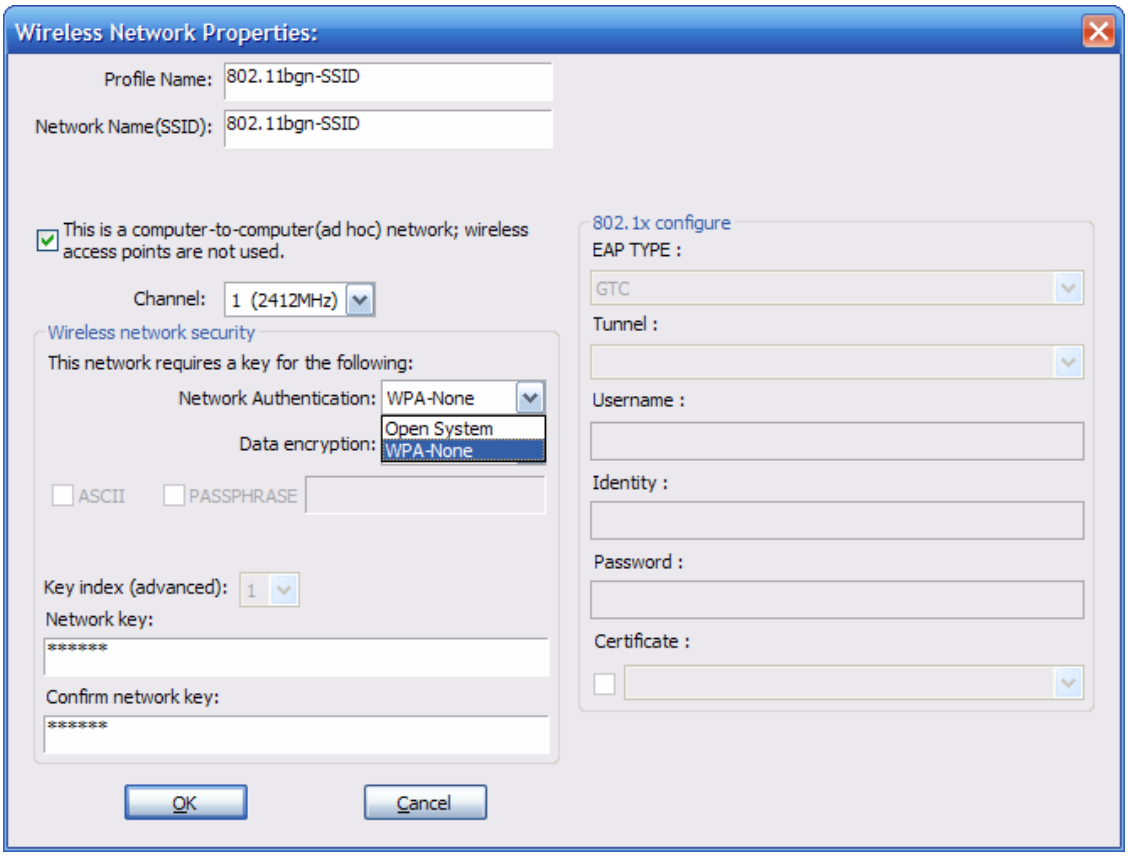

Figure 20

Choose the Network Authentication Mode and Data encryption from the drop-down menu. And import the network key. Then click OK button.

You have successfully created a profile.

4.2.2 Remove

Select a profile and click **Remove** button to delete this profile (Figure 21).

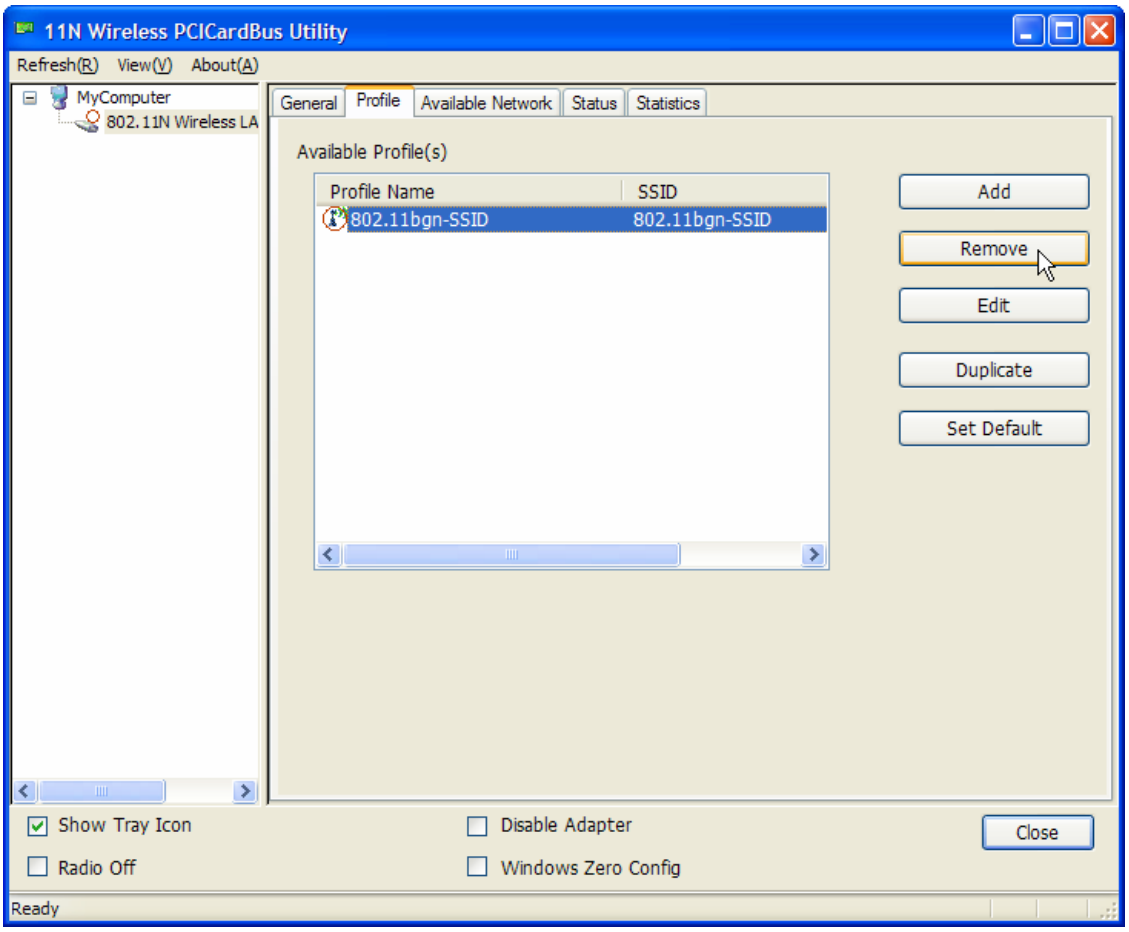

Figure 21

4.2.3 Edit

Select a profile and click **Edit** button to edit this profile (Figure 22).

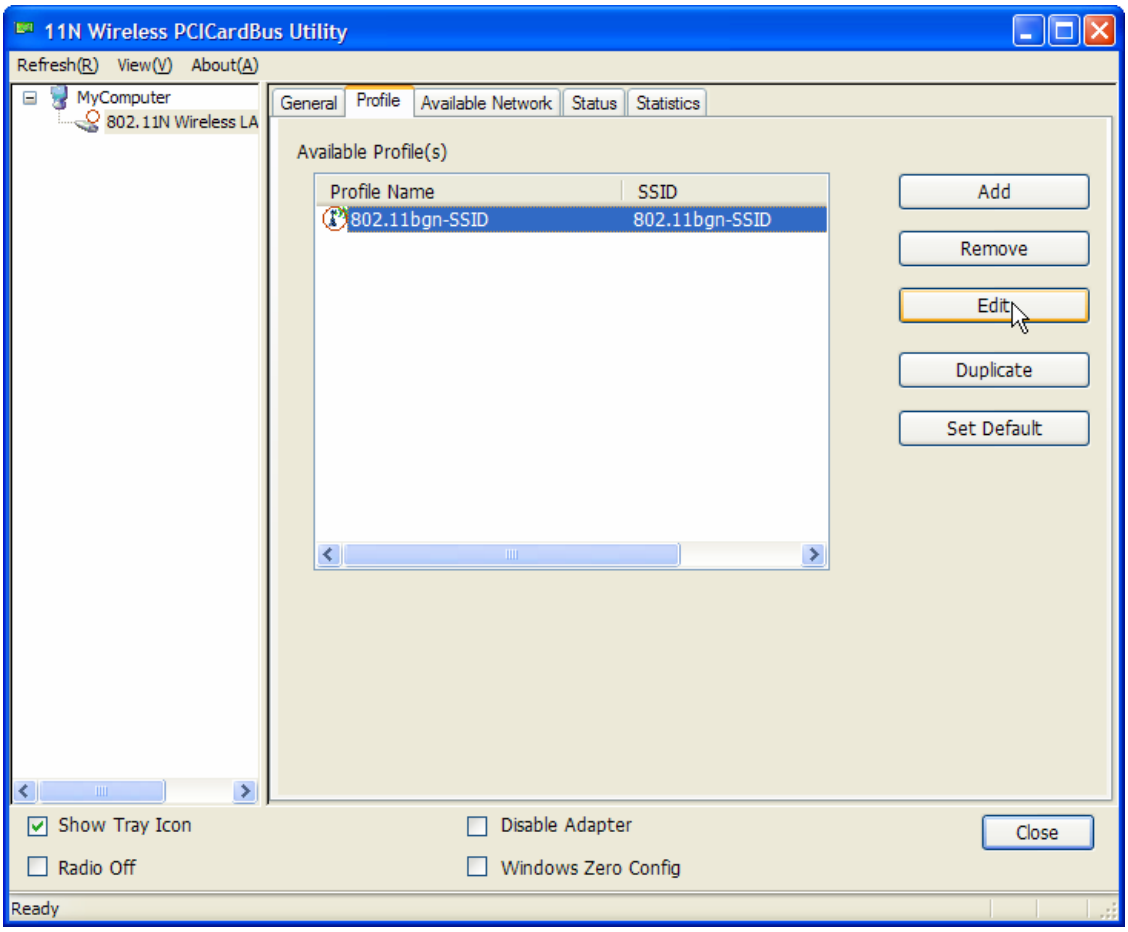
11N Wireless PCICardBus Utility
Refresh(R) View(V) About(A)
MyComputer
802.11N Wireless LA
General
Profile
Available Network
Status
Statistics
Available Profile(s)
Profile Name
SSID
802.11bgn-SSID
802.11bgn-SSID
Add
Remove
Edit
Duplicate
Set Default
Show Tray Icon
Disable Adapter
Close
Radio Off
Windows Zero Config
Ready

Figure 22

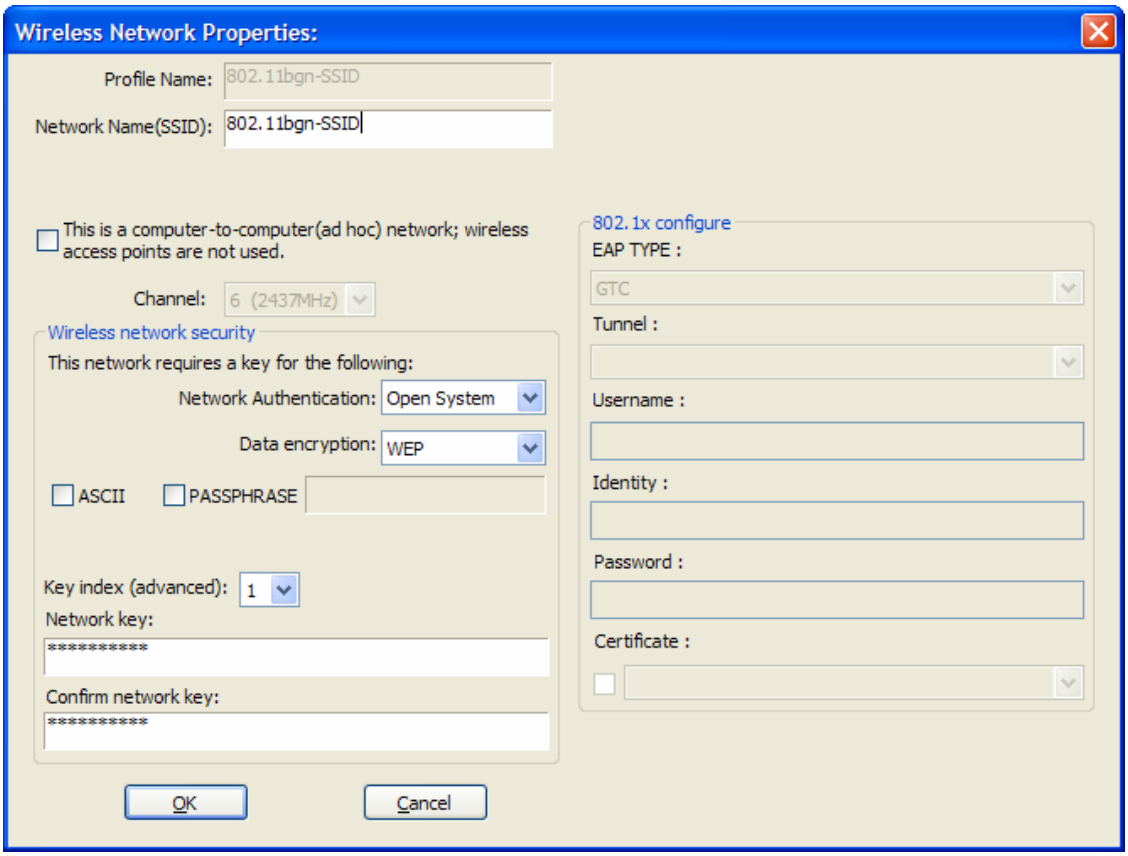

Figure 23

Modify the profile information according to your demand.

4.2.4 Duplicate

Select a profile which you want to copy and then click **Duplicate**（Figure 24）

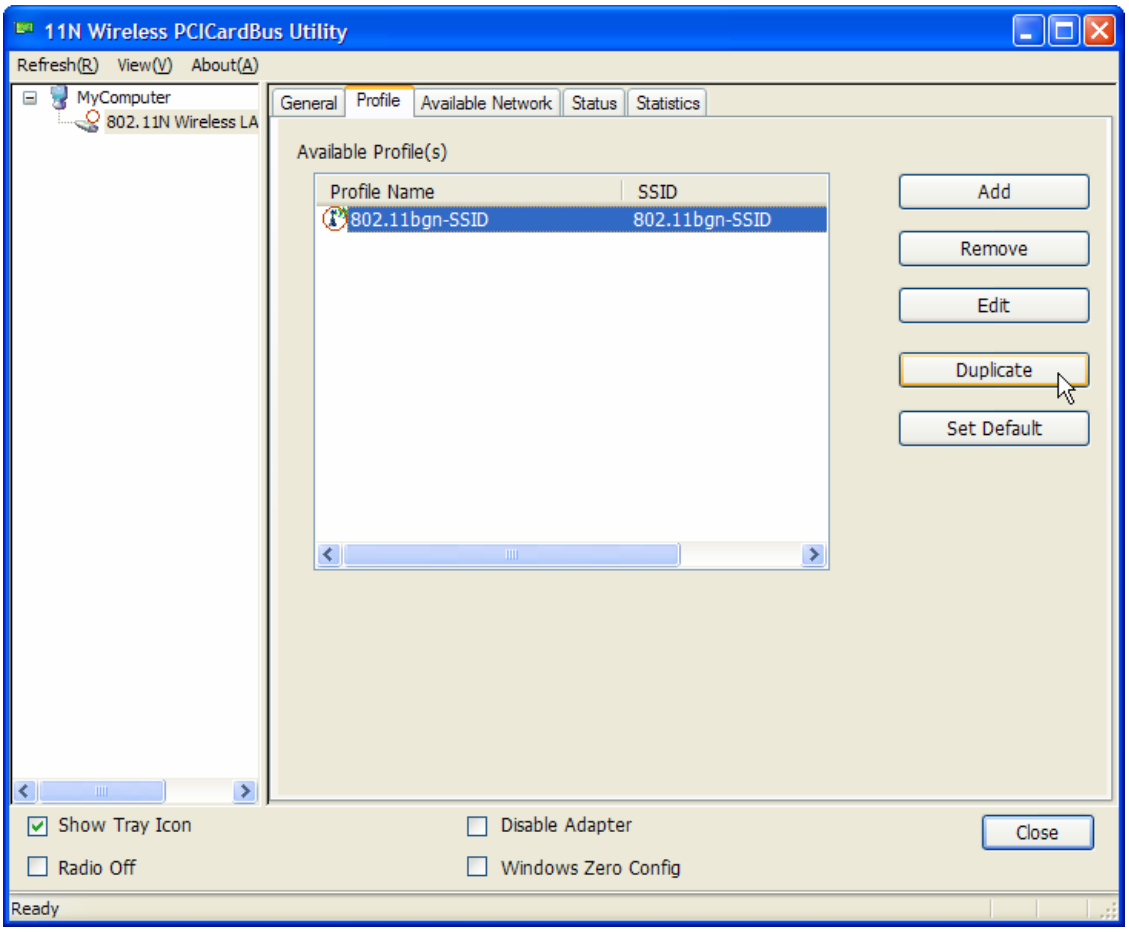

Figure 24

Import the new profile name in the popup window blank (Figure 25)

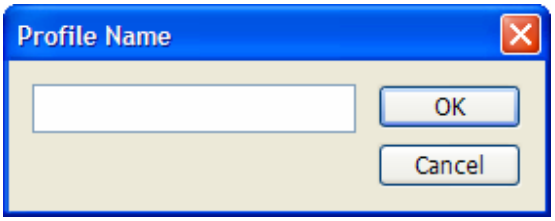

Figure 25

4.2.5 Set default

When you want to make one profile as a default wireless connection, you should select the profile and click **Set default** button. The wireless adapter will use this profile to connect to wireless network automatically when the utility running next time.

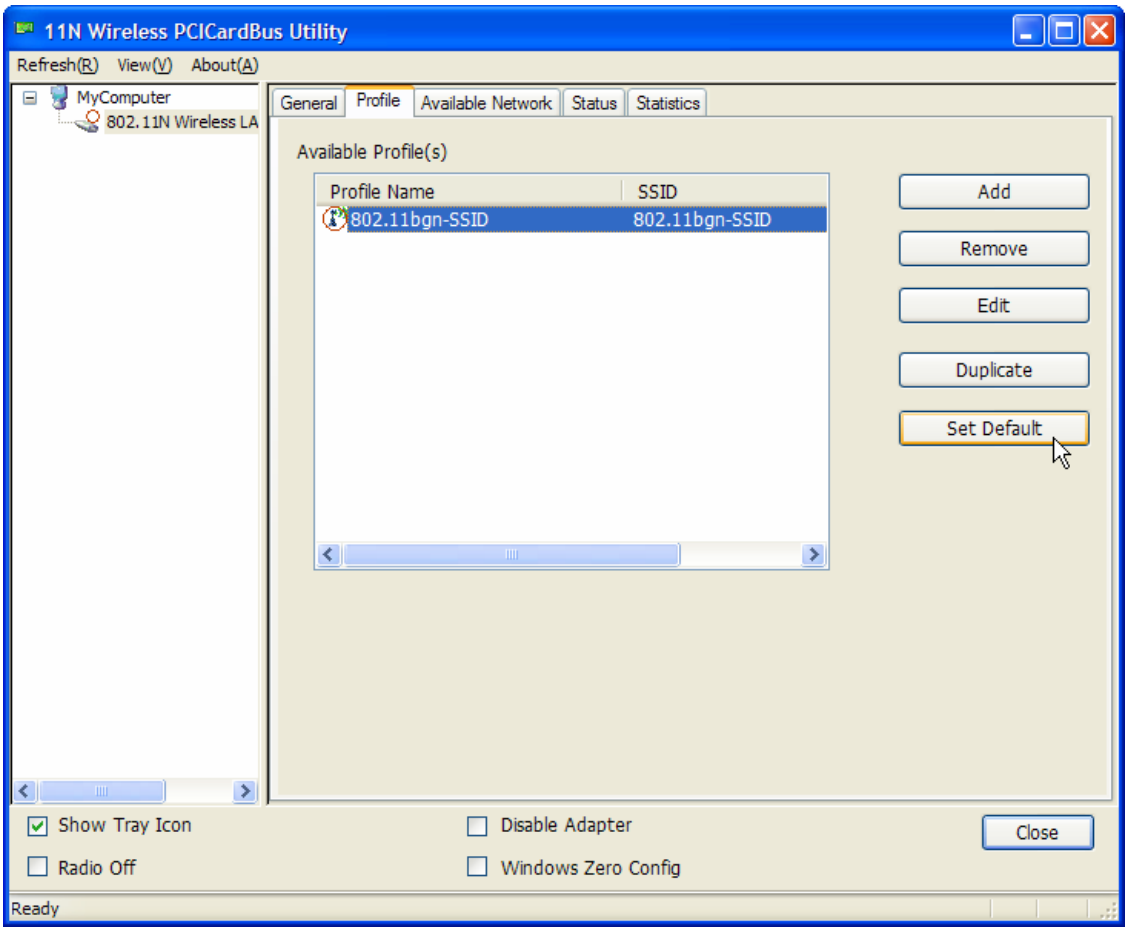

Figure 26

4.3 Available Network

The Available Network tab displays a list of infrastructure and ad-hoc networks for available wireless connection (Figure 27)

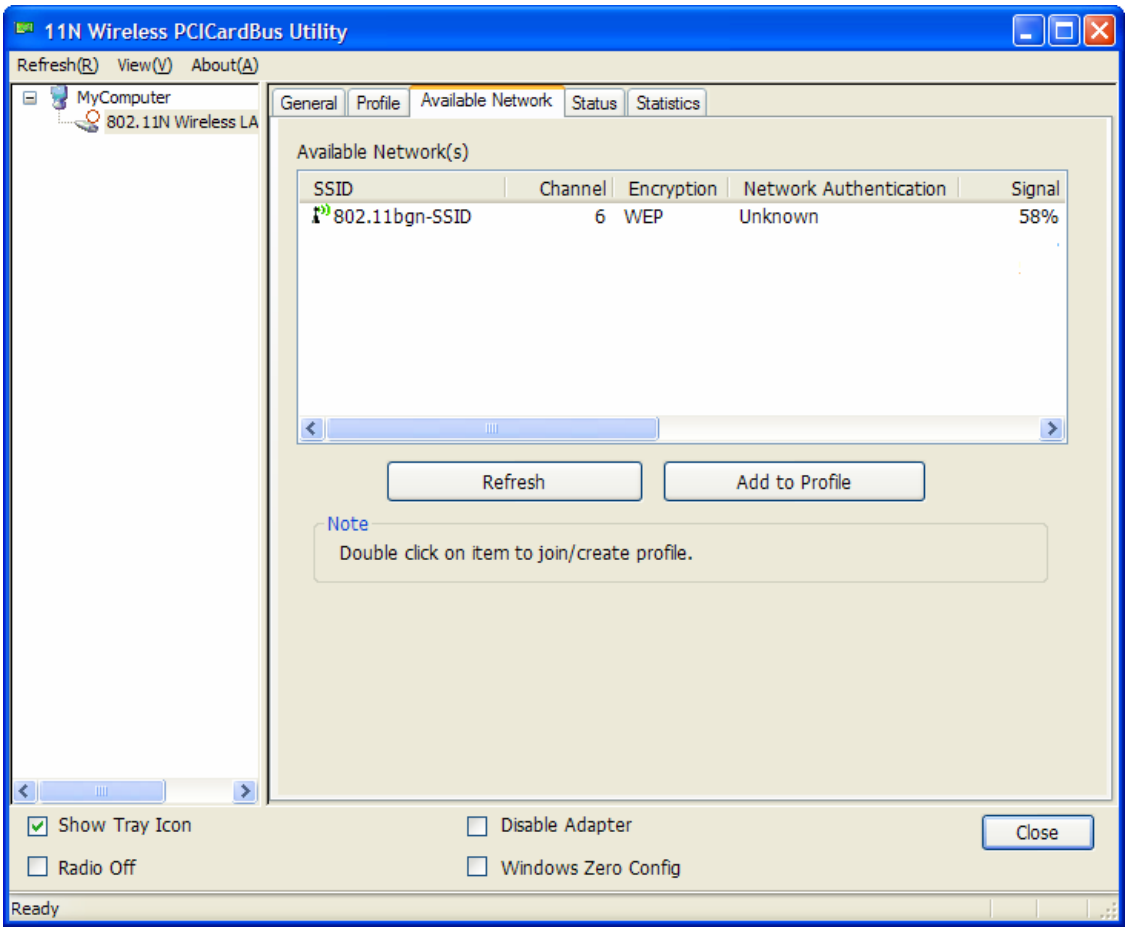

Figure 27

Double-click the network to which you wish to connect.

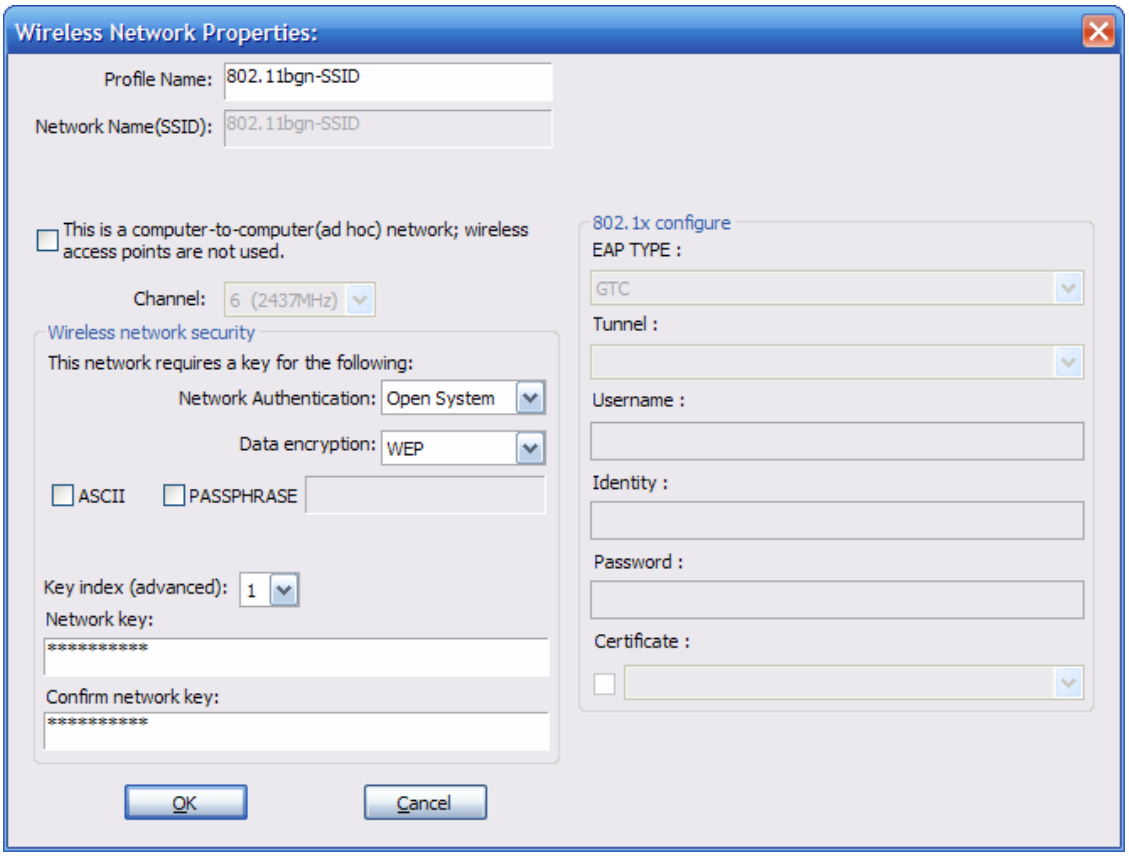

Figure 28

Refer to Figure 28 choose the Authorization modes and Encryption modes in the drop-down box. If the wireless network uses a Passphrase, enter the Passphrase in the Passphrase field. If the wireless network uses a WEP key, enter the WEP key in the Key field. Click the **OK** button to complete the network connection.

4.4 Status

The Status tab displays the detailed information of current device and wireless connection.

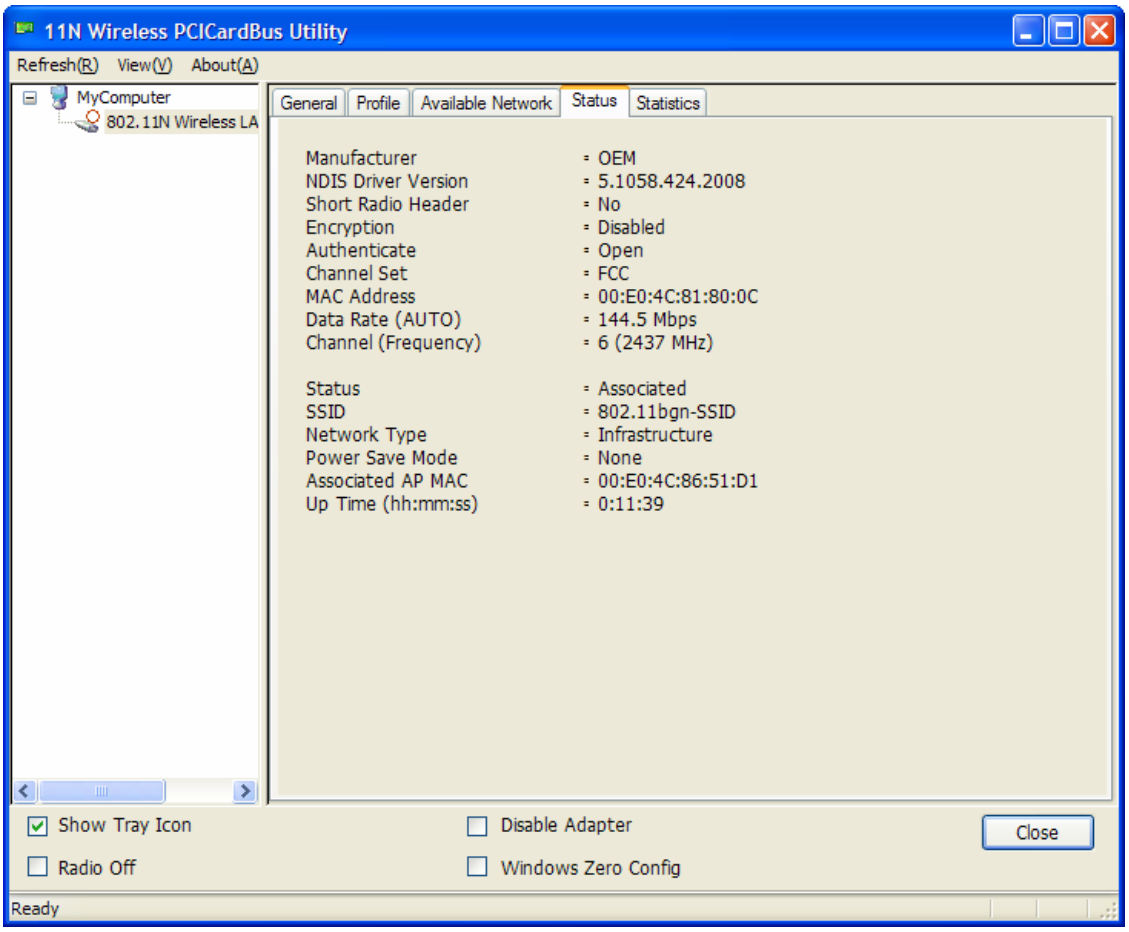

Figure 29

4.5 Statistics

The Statistics tab display the stat. value of current wireless connection Tx and Rx, you can click **Reset** button to reset value and renew to count.

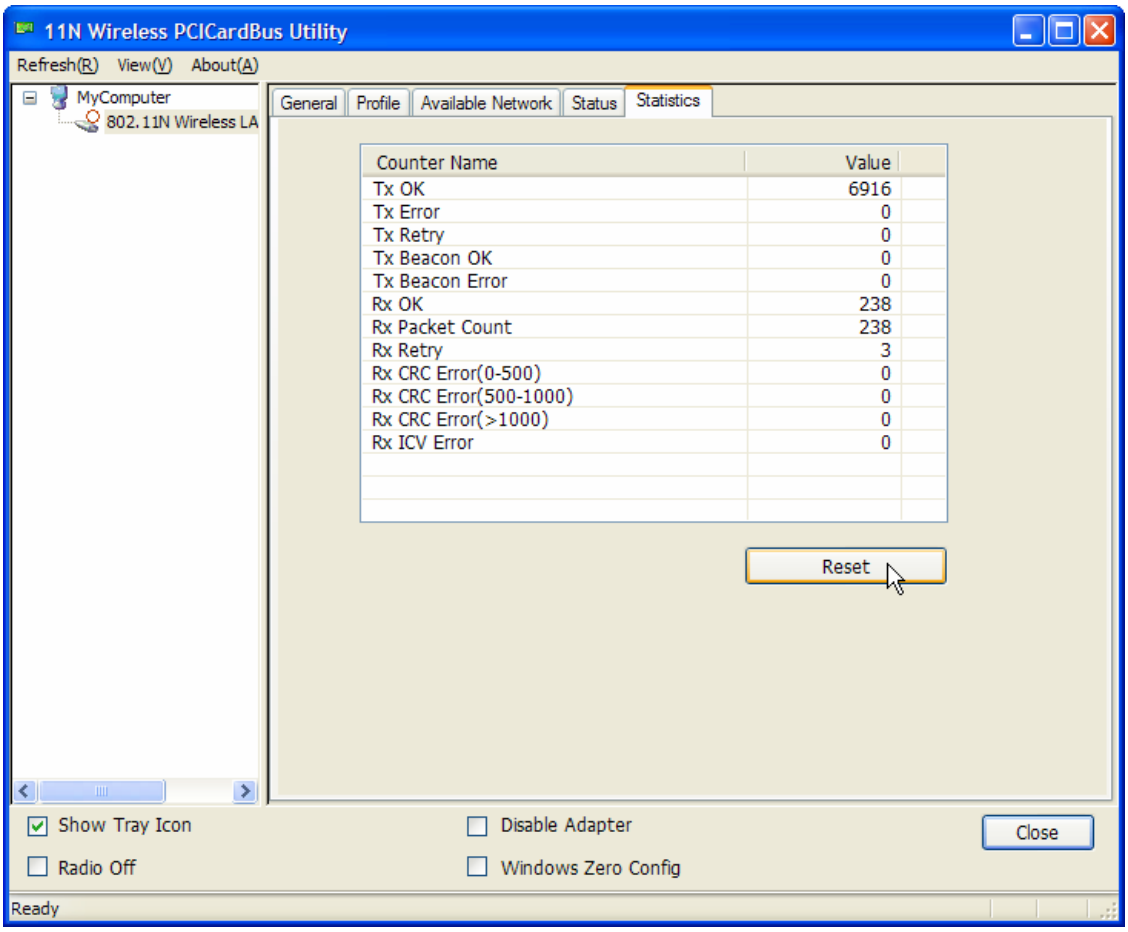
11N Wireless PCICardBus Utility
Refresh(R) View(V) About(A)
MyComputer
802.11N Wireless LA
General Profile Available Network Status Statistics
Counter Name Value
Tx OK 6916
Tx Error 0
Tx Retry 0
Tx Beacon OK 0
Tx Beacon Error 0
Rx OK 238
Rx Packet Count 238
Rx Retry 3
Rx CRC Error(0-500) 0
Rx CRC Error(500-1000) 0
Rx CRC Error(>1000) 0
Rx ICV Error 0
Reset
Show Tray Icon
Disable Adapter
Close
Radio Off
Windows Zero Config
Ready

Figure 30

5. Troubleshooting

This chapter provides solutions to problems that may occur during the installation and operation of the Wireless Cardbus/PCI/USB Adapter. Read the descriptions below to solve your problems.

1. The Wireless Cardbus/PCI/USB Adapter does not work properly.

Reinsert the Wireless Cardbus/PCI/USB Adapter into your PC's PCI slot/Cardbus slot/USB slot.Right click My Computer and select Properties. Select the device manager and click on the Network Adapter. You will find the Adapter if it is installed successfully. If you see the yellow exclamation mark, the resources are conflicting. You will see the status of the Adapter. If there is a yellow question mark, please check the following:
Make sure that your PC has a free IRQ (Interrupt ReQuest, a hardware interrupt on a PC.)
Make sure that you have inserted the right adapter and installed the proper driver. If the Adapter does not function after attempting the above steps, remove the adapter and do the following:
Uninstall the driver software from your PC.
Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

Make sure that the PC to which the Adapter is associated is powered on.
Make sure that your Adapter is configured on the same channel and with the same security options as with the other computers in the Infrastructure configuration.

3. What should I do when the computer with the Adapter installed is unable to connect to the wireless network and/or the Internet?

Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.
Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.
Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.
In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.
In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to

establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it.
Check that the Network Connection for the wireless client is configured properly.
If Security is enabled, make sure that the correct encryption keys are entered on both the Adapter and the access point.

APPENDIX A Specifications

Standards: IEEE 802.11n,IEEE 802.11g, IEEE 802.11b
Modulation:802.11b: CCK (11 Mbps), DQPSK (2 Mbps), DBPSK (1 Mbps); 802.11g: OFDM
Channels:11 Channels (USA) 13 Channels (Europe) 14 Channels (Japan)
Network Protocol:TCP/IP, IPX, NDIS 4, NDIS 5, NDIS 5.1, NetBEUI
Interface:Cardbus/PCI/USB
Transmit Power:15 dBm
Sensitivity: -80 dBm
LED:PWR, LNK/ACT
WEP Key Bits:64-Bit and 128-Bit
Dimensions: Cardbus:118.3×5×54.5mm
PCI:120×76mm (Non-Bracket)
USB:84×27×10mm
Unit Weight:Cardbus:55g
PCI:50g
USB:15g
Power: Cardbus:3.3V
PCI:3.3V
USB:5V
Certifications:FCC CE
Operating Temp.:0ºC to 40ºC
Storage Temp.: -20ºC to 70º C
Operating Humidity: 10% to 85%, Non-Condensing
Storage Humidity:5% to 90%, Non-Condensing

FCC statement

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

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. (Example- use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This equipment 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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.