WF-2113
300Mbps Wireless-N PCI-E Adapter
User Manual

V1.0
2011-05-25

Certification

FCC CE

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 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.

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

To comply with FCC RF exposure compliance requirements, this grant is applicable to only Mobile Configurations.

Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment

Package Contents

The following items should be found in your package:

- 300Mbps Wireless-N PCI-E Adapter
- CD-ROM
- Quick Installation Guides

Make sure that the package contains above items. If any of the listed items is damaged or missing, please contact with your distributor.

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1 Introduction

Thank you for choosing WF-2113

1.1 Product Overview

WF-2113 is a powerful PCI-E 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 11N PCI-E 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 Main Features

- Complies with IEEE 802.11b, 802.11g and 802.11n standard for 2.4GHz Wireless LAN
- Compliant with PCI-E Standard
- Capable of up to 128-Bit WEP, TKIP and AES
- Supports Windows2000/XP/2003/Vista
- Supports MIMO technology with 2 transmit and 2 receive.
- Lower power consumption
- Easy to install and configure
- Support WPS

1.3 Supporting Standard and Protocol

- 802.11b/g/n

1.4 Working Environment

Temperature

- 0° to 40° C (operating)
- -20° to 70° C (storage)

Humidity

- 10% to 85 % non-condensing (operating)
- 5% to 90% non-condensing (storage)

1.5 System Requirement

You must have the following at least

- A desktop computer with an available PCI-E slot.
- At least a 300 MHz processor and 32 MB of memory
- An 802.11b/g/n Access Point (for Infrastructure Mode) or another 802.11b/g/n wireless adapter (for Ad-Hoc, Peer-to-Peer networking mode.)

2 Driver and Hardware Installation

2.1 Driver installation of the WF-2113

Turn on the computer and Insert the Wireless 11N PCI-E Adapter Driver CD in the CD-ROM drive. The Install Screen will appear. If not, click the Start button and choose Run and enter D:\autorun.exe (if 'D' is the letter of your CD-ROM drive)

Select Drivers, choose the modem of your product and operate according to the instruction. The following is the step-by-step instructions in Windows XP. The steps and screens are similar for the other Windows operating systems

- Select language and then click Next

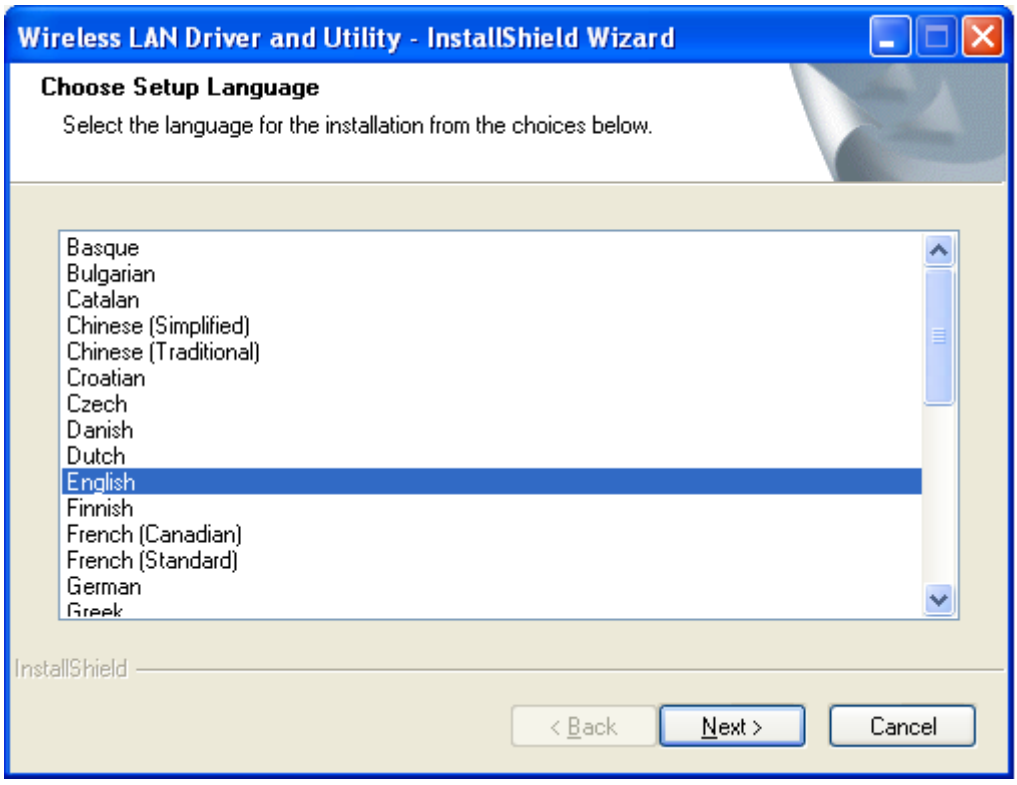

Figure 2-1

- Click Next

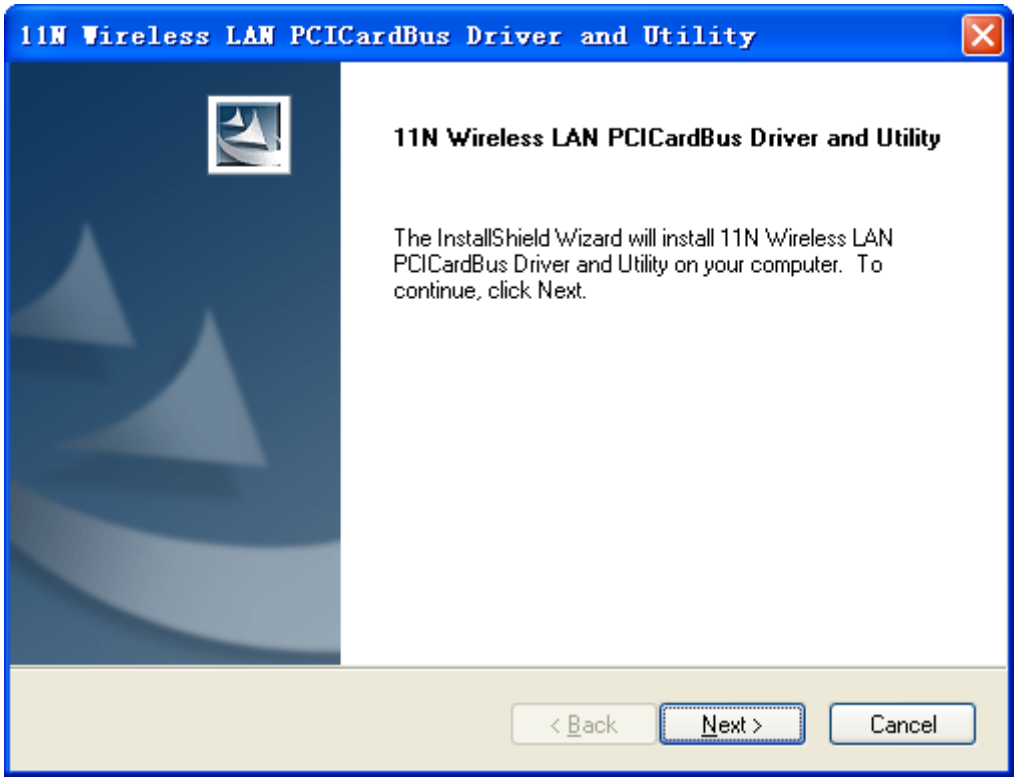

Figure 2-2

- Click Install

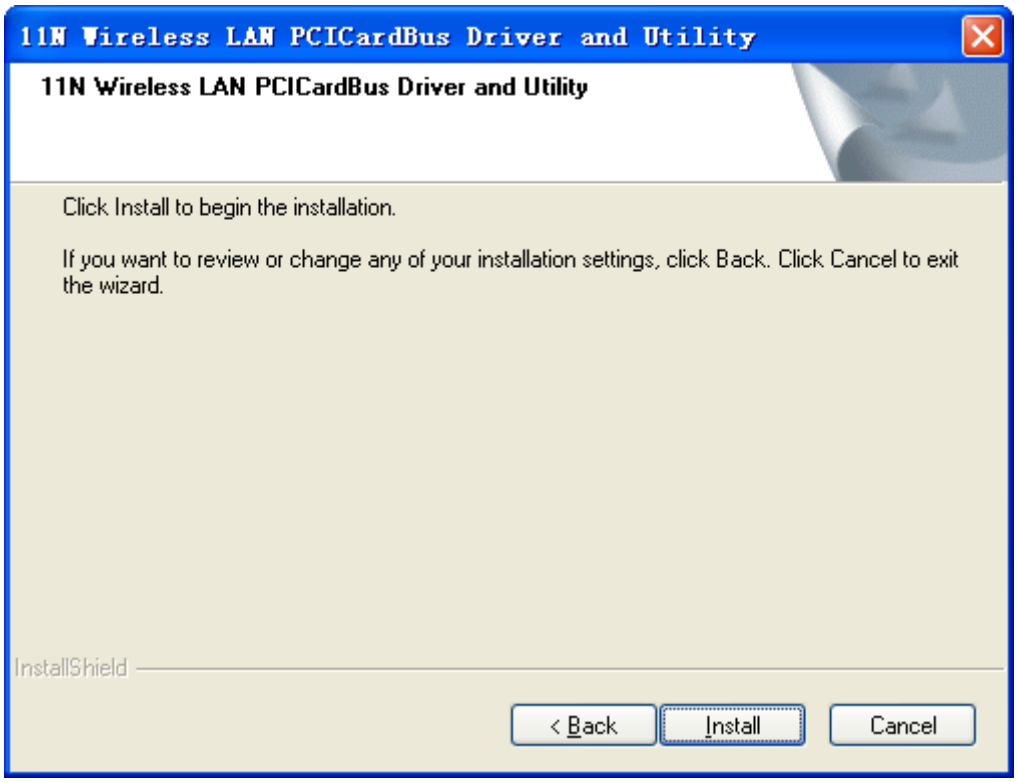

Figure 2-3

- Click Finish to finish the driver installation

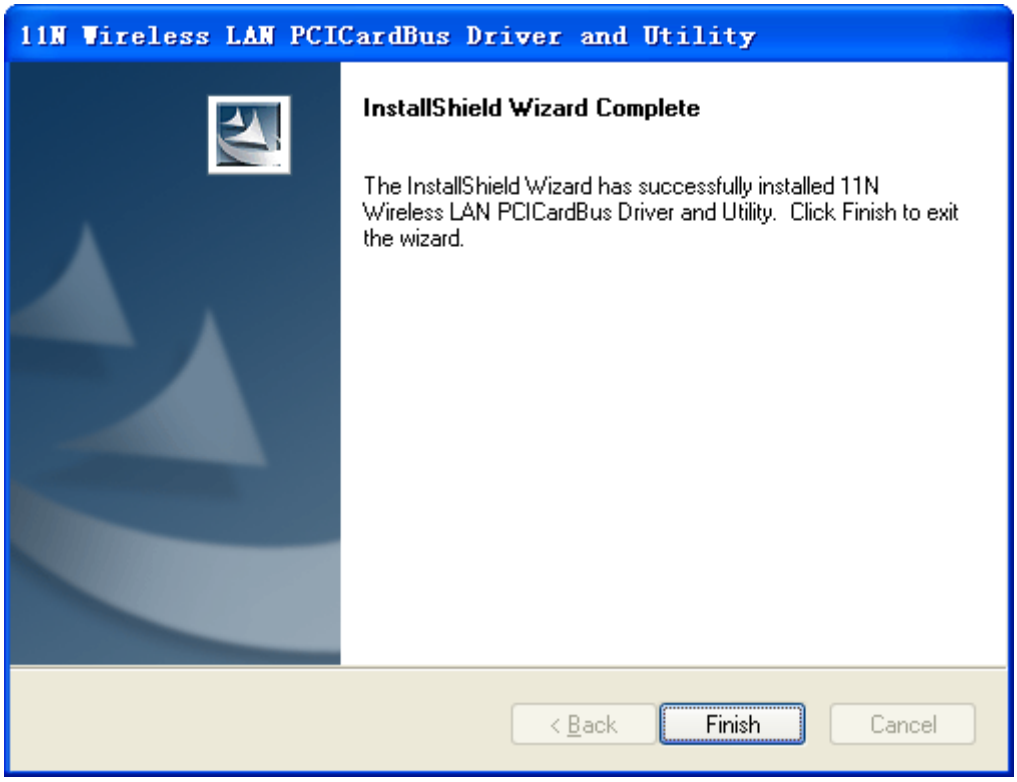

Figure 2-4

2.2 Hardware installation of WF-2113

2.2.1 Install the Wireless 11N PCI-E adapter into your computer

- Make sure to turn off your computer and unplug the power cord. Remove the back cover of the computer.
- Install the wireless 11N PCI-E Adapter carefully and firmly seat it into an available PCI-E slot (to avoid damage caused by static electricity, make sure to properly ground yourself by first touching a metal part of your computer to discharge any static electricity before working with the wireless 11N PCI-E Adapter).
- Secure the wireless 11N PCI-E Adapter back panel shield with a screw.
- Replace the computer's cover.
- Place the computer back in its normal position.
- Attach the wireless 11N PCI-E Adapter's antenna to the socket on the back panel shield.

2.2.2 Restart your computer

Turn on the computer, the Found New Hardware Wizard (windows XP) screen will appear:

- Select Install the software automatically (Recommended) and then click Next

Figure 2-5

- Click Finish to finish the hardware installation

Figure 2-6

The installation is completed

3 System configuration

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 on your desktop to run it. Another way to start the Configuration Utility is to click Start> Programs> 11N Wireless LAN Utility> 11N Wireless LAN Utility.

3.1 General

The General tab displays current Wireless statistics.

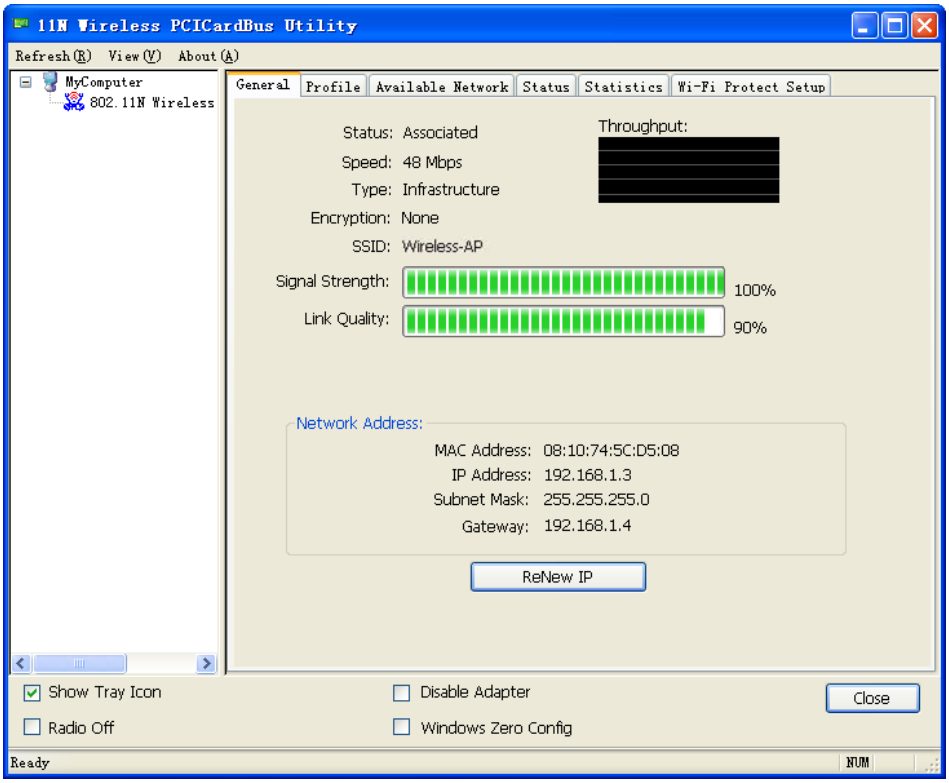

Figure 3-1

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 , Infrastructure or ad hoc
- Encryption: Current encryption.
- SSID: The unique name of the wireless network.
- Signal Strength: The data transfer rate of the current connection.

- Link Quality: The quality of the current wireless connection.

Network address

- MAC: 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.
- Show Tray Icon: Show PCI-E Wireless LAN Utility icon in the windows toolbar.
- Disable Adapter: Disable the wireless adapter
- Radio off: Turn off the radio of the wireless adapter

3.2 Profile

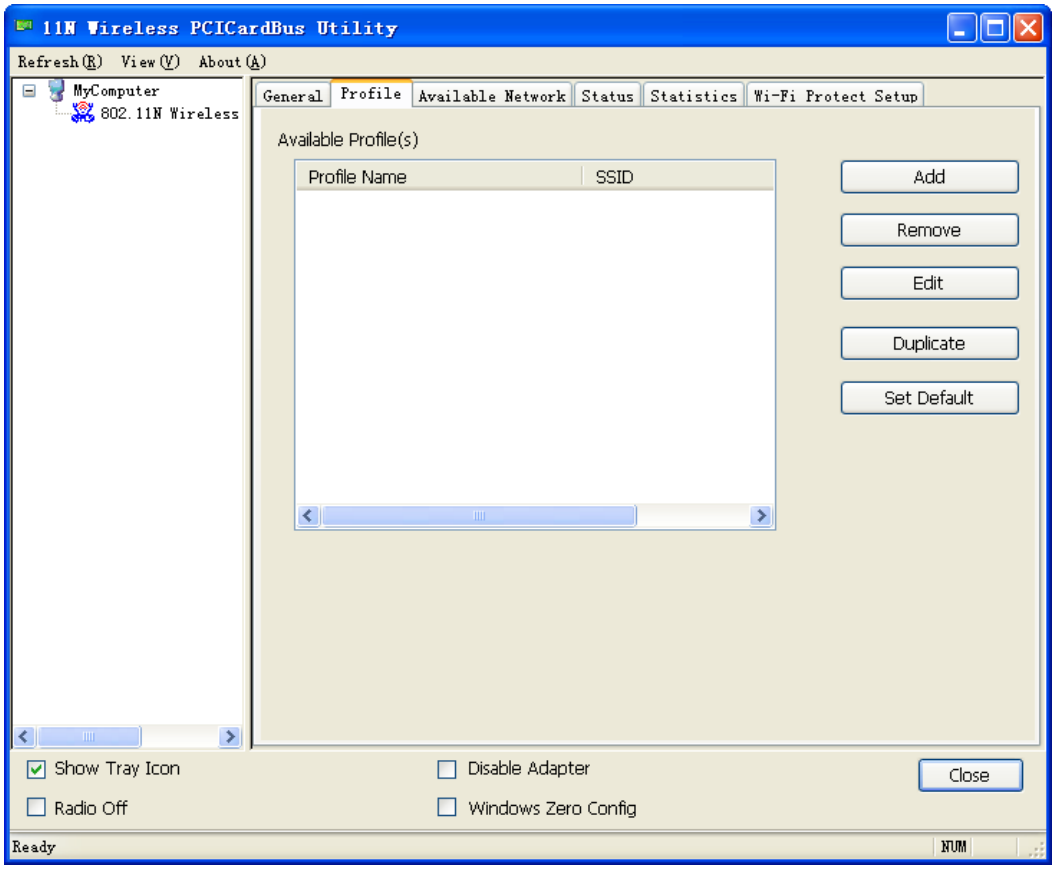

Figure 3-2

3.2.1 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.

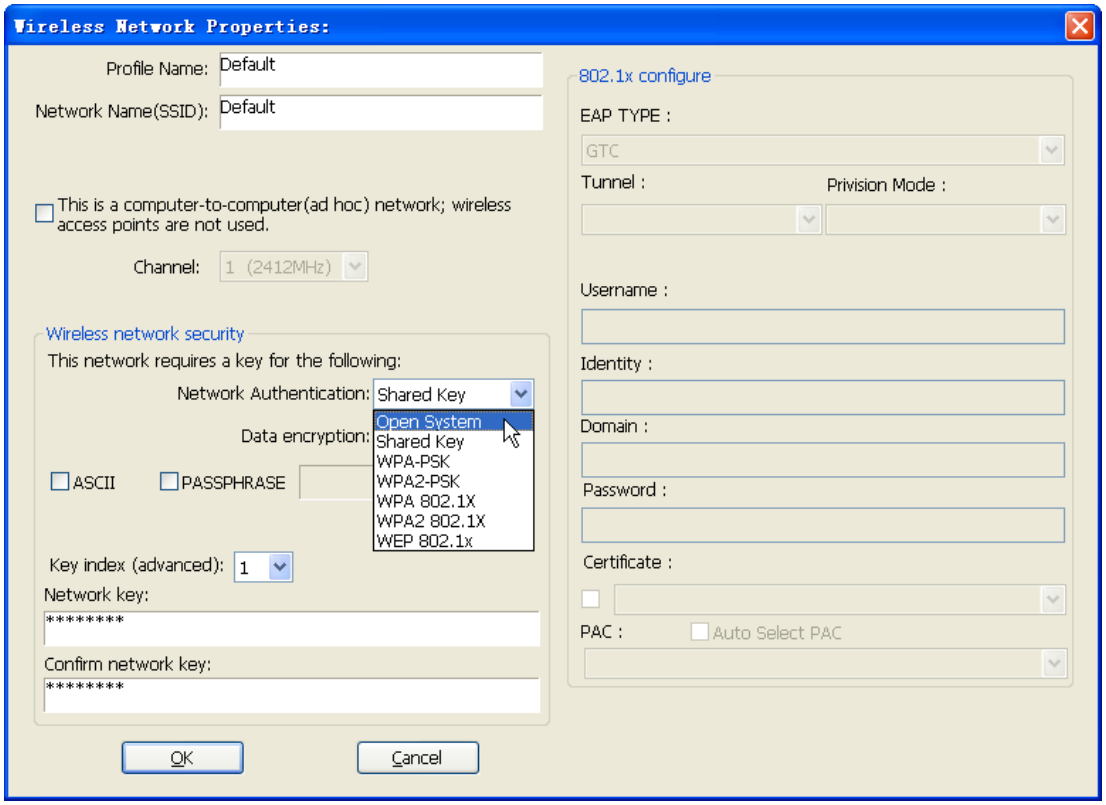

Figure 3-3

When the Network Info dialog box appears (the former picture), 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

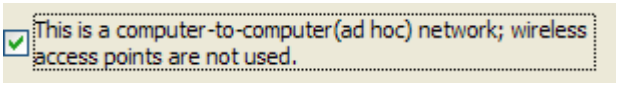

Figure 3-4

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

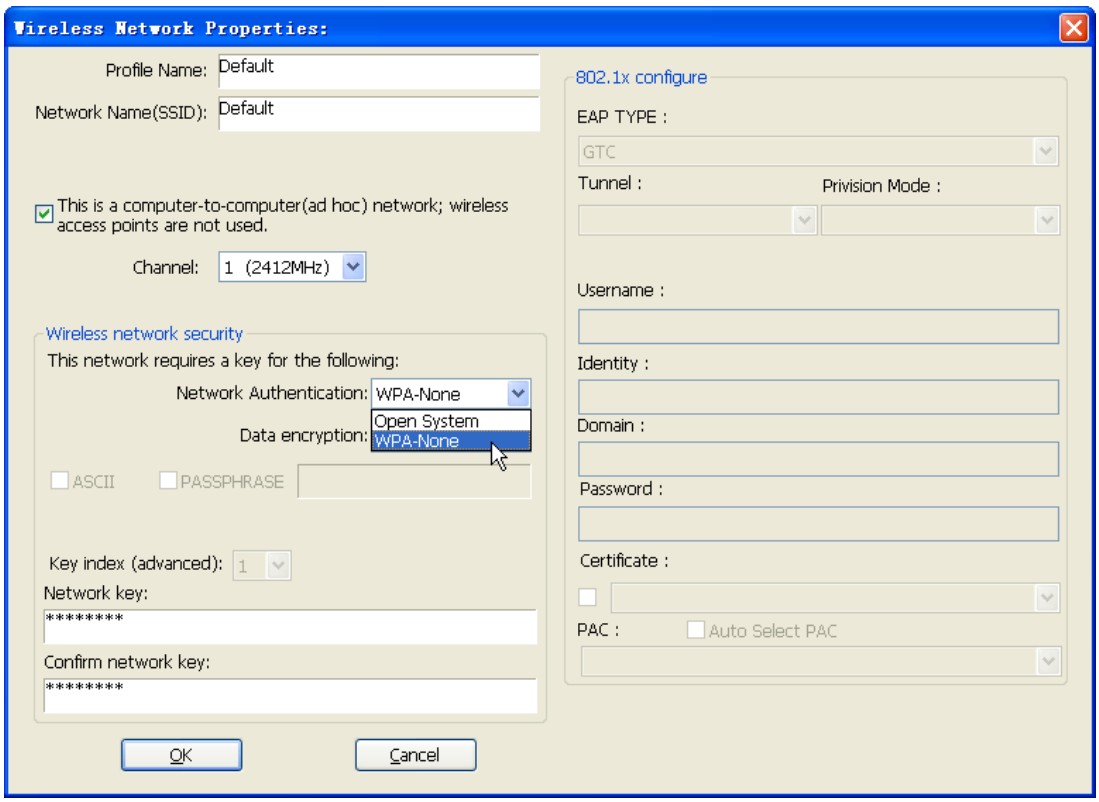

Figure 3-5

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.

3.2.2 Remove

Select a profile and click Remove button to delete this profile (the following picture).

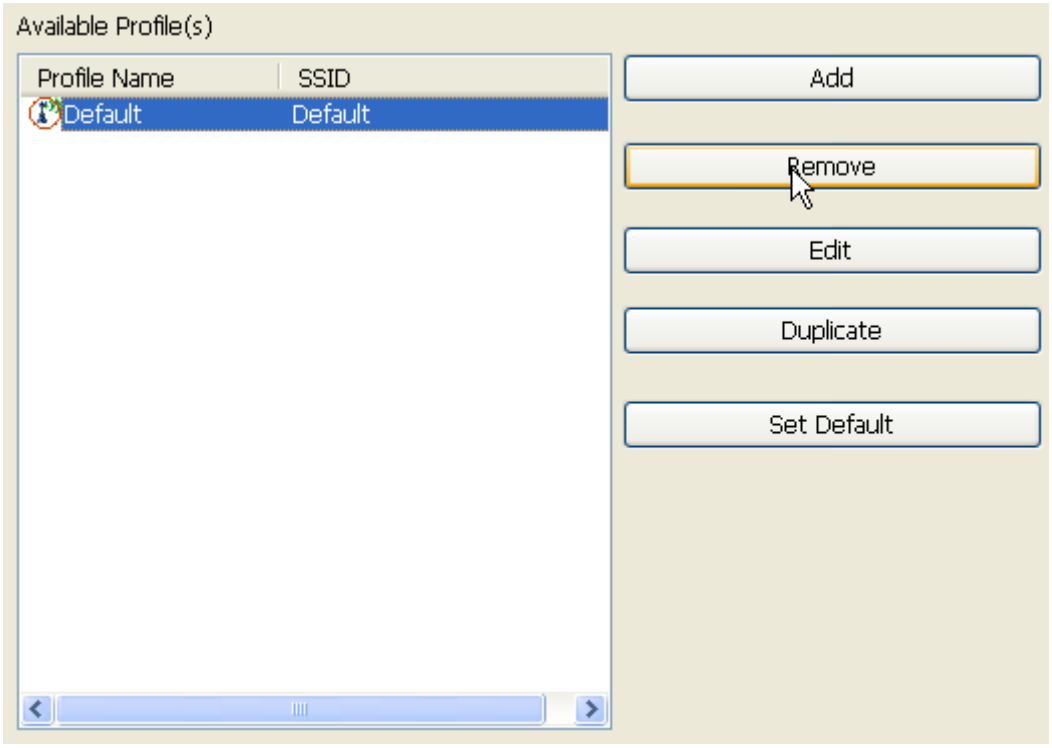

Figure 3-6

3.2.3 Edit

Select a profile and click Edit button to edit this profile (the following picture).

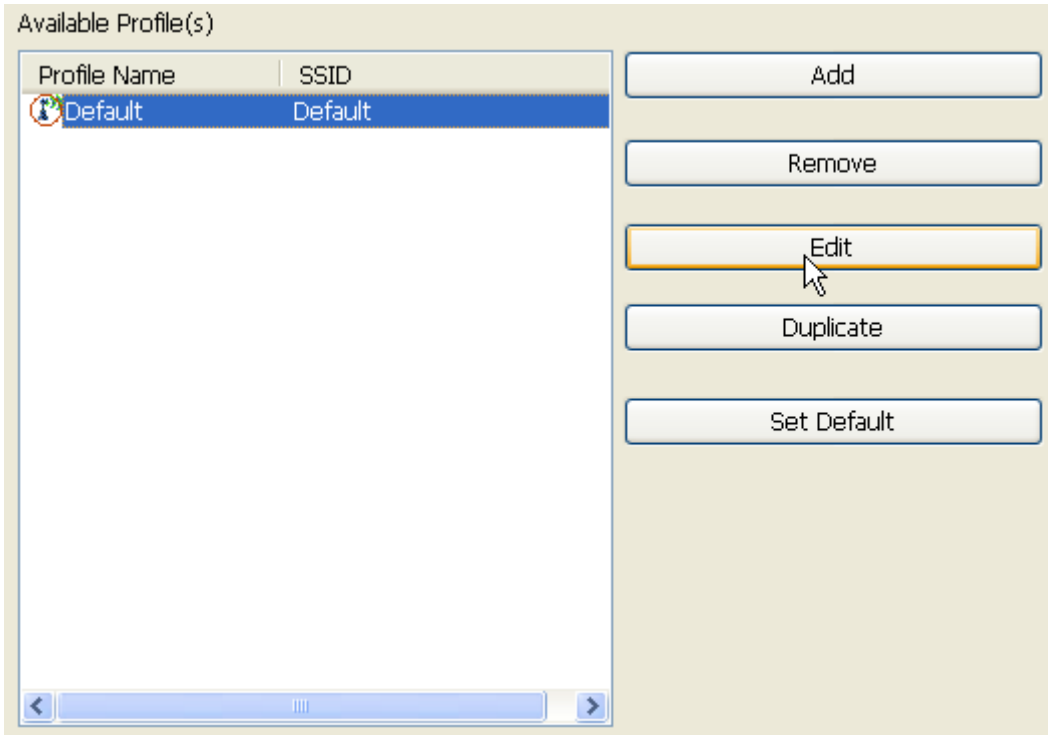

Figure 3-7

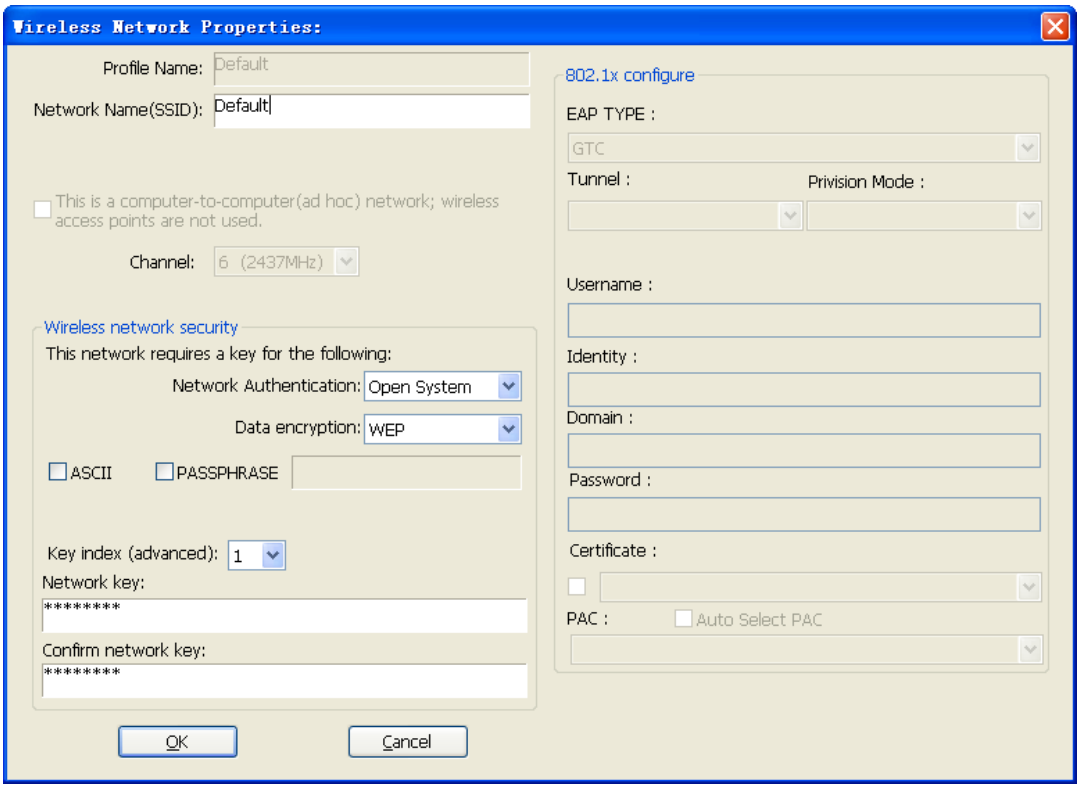

Figure 3-8

Modify the profile information according to your demand.

3.2.4 Duplicate

Select a profile which you want to copy and then click Duplicate（the following picture）

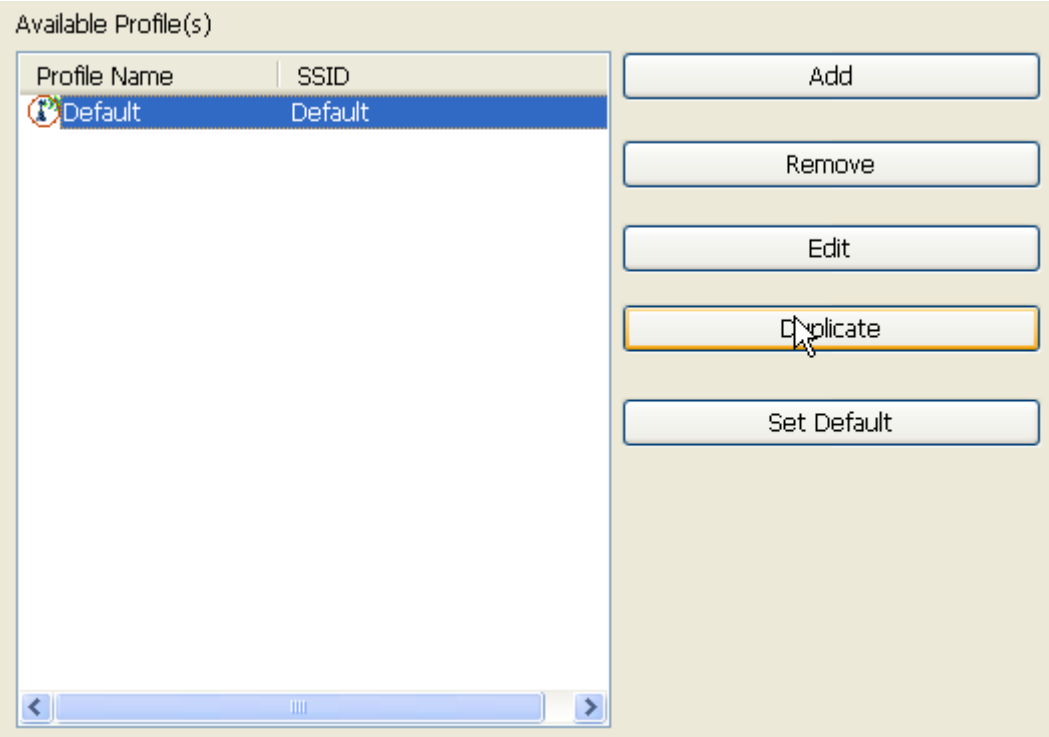

Figure 3-9

Import the new profile name in the popup window blank (the following picture)

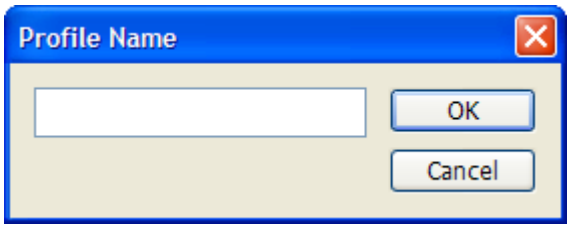

Figure 3-10

3.2.5 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.

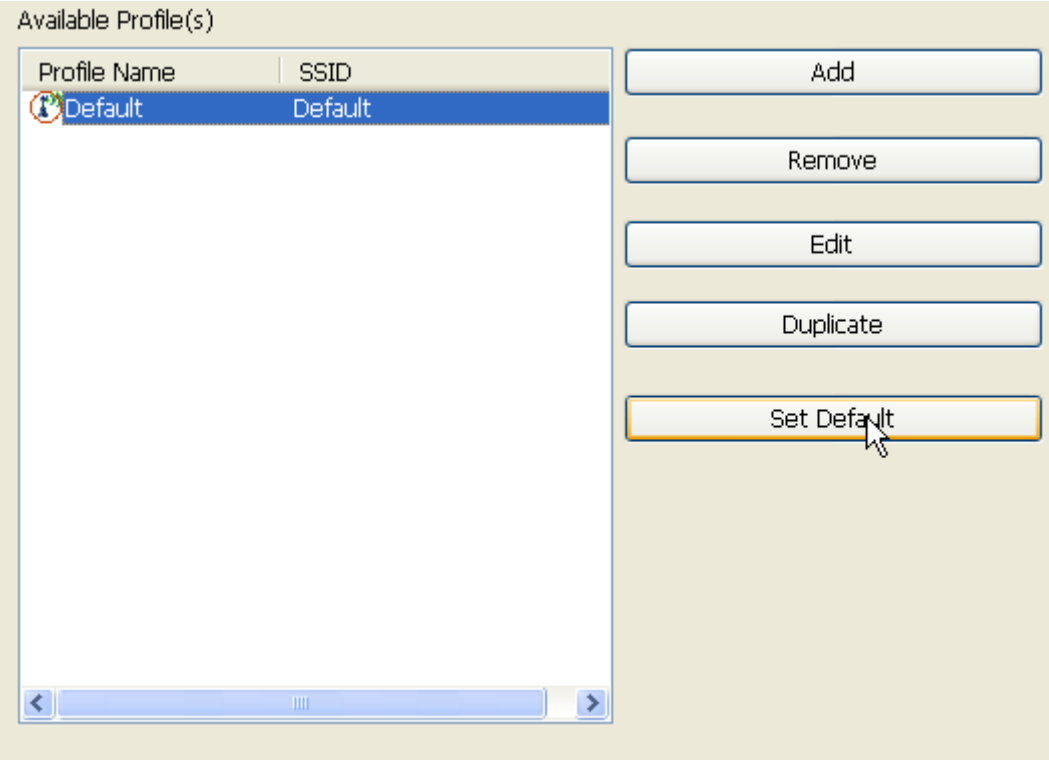

Figure 3-11

3.3 Available Network

The Available Network tab, displays a list of infrastructure and ad-hoc networks available for connection.

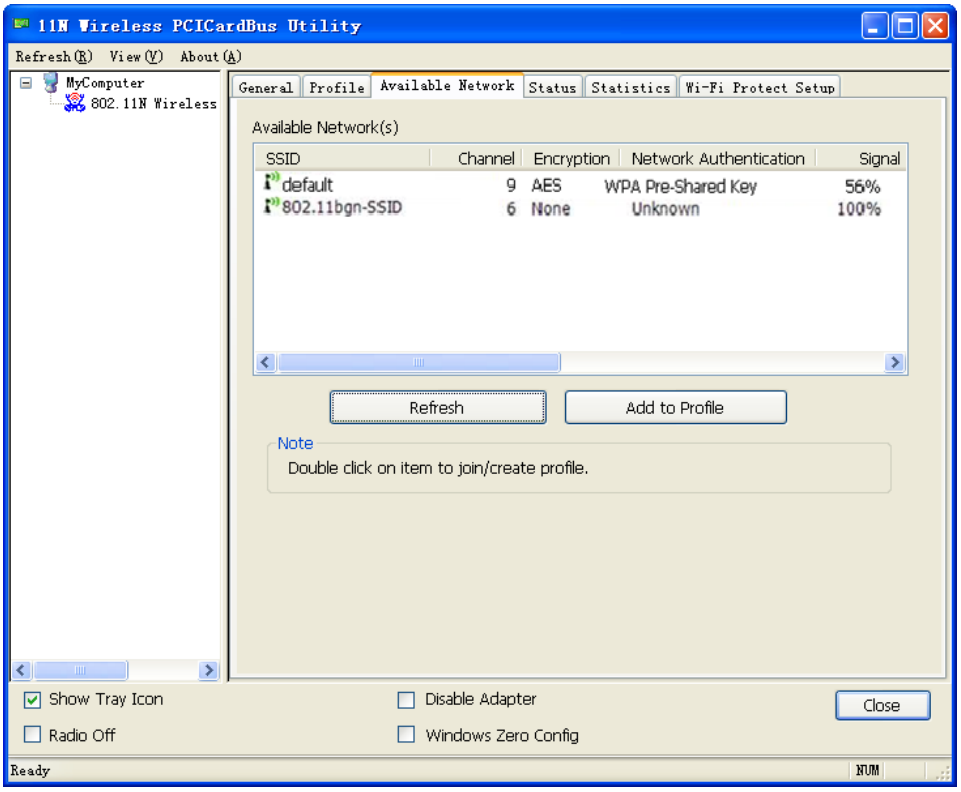

Figure 3-12

The section of the window displays the Available Networks. Double-click the network to which you wish to connect.

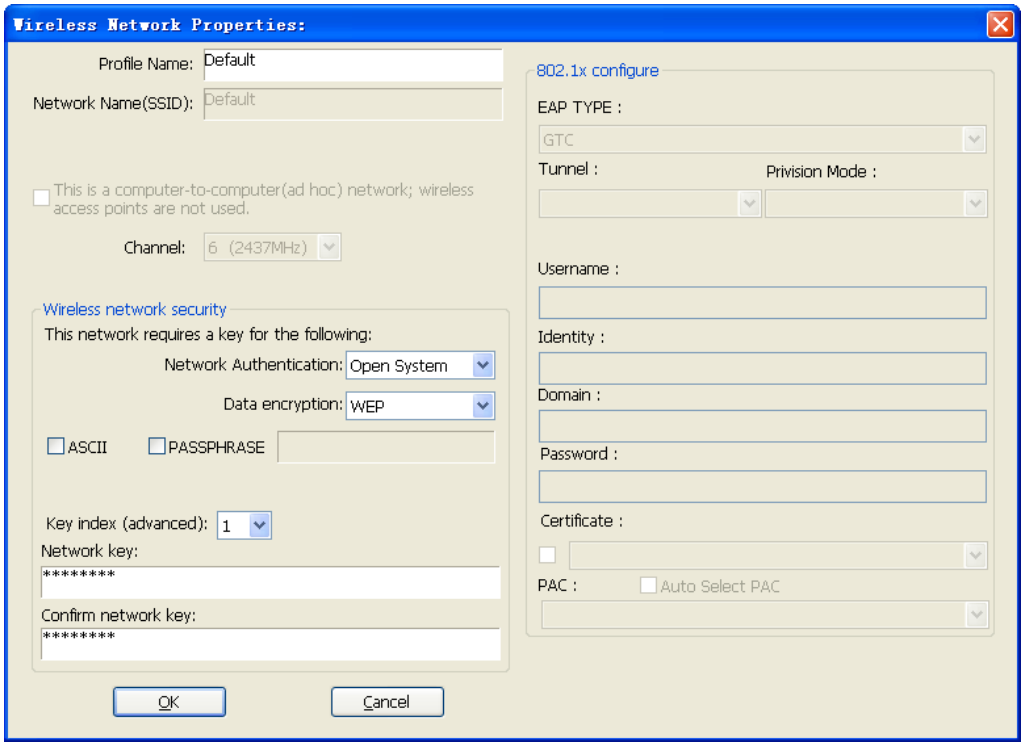

Figure 3-13

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.

3.4 Status

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

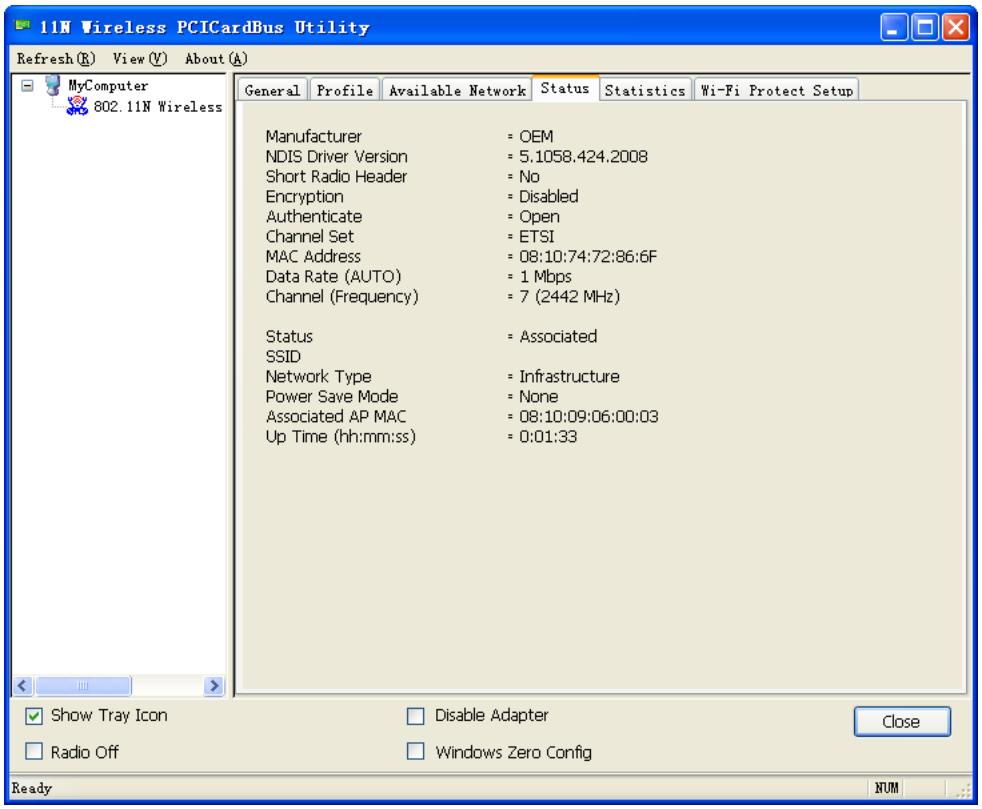

Figure 3-14

3.5 Statistics

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

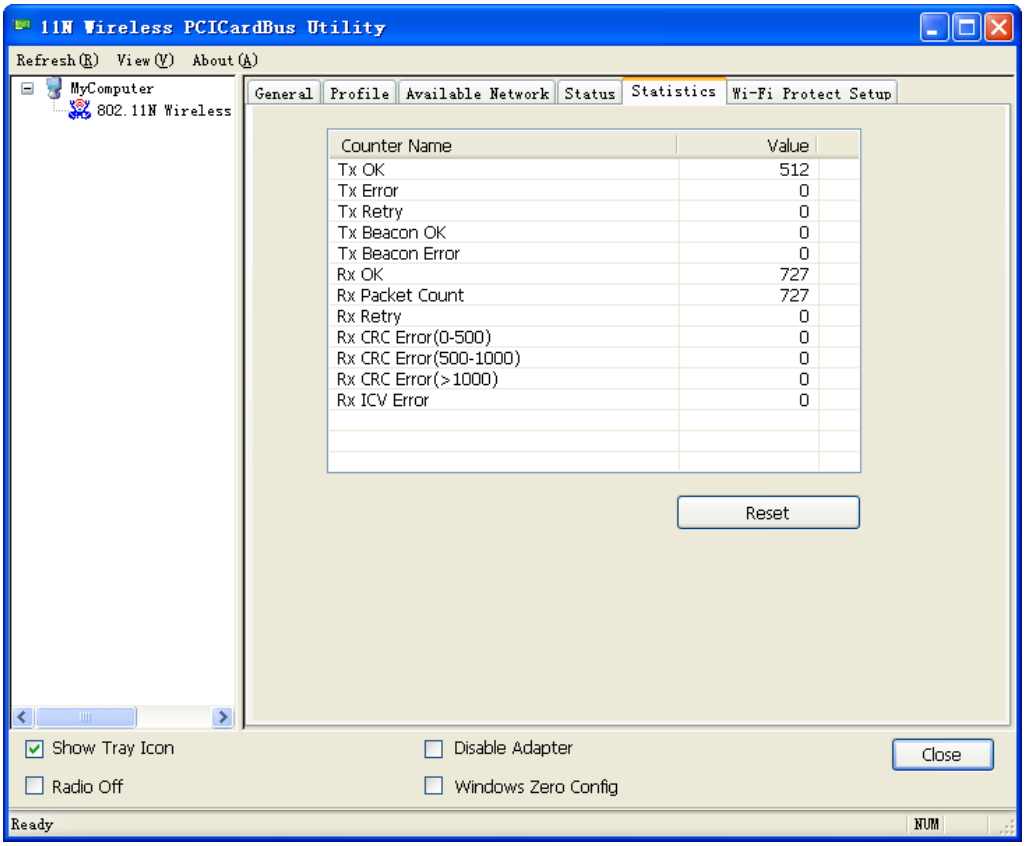

Figure 3-15

3.6 Wi-Fi protect setup

Wi-Fi Protect Setup (WPS) function can let you create a safety network easily. You can through 'PIN Input Config (PIN)' or 'Push Button (PBC)'to encrypt your network. You only need to push the WPS button in the router which support WPS function and click the functions in this adapter, then the router will be encrypted to WPA2-AES mode automatically

Note:

- The status of WPS in the router must be enabled
- If you have configured encryption mode in your router, then when you use this WPS function, please configure encryption mode to NONE, then it will be encrypted to WPA2-AES mode automatically. If you don't want to change your encryption mode, then when you use this function, the router will be encrypted to the mode that you have configured.

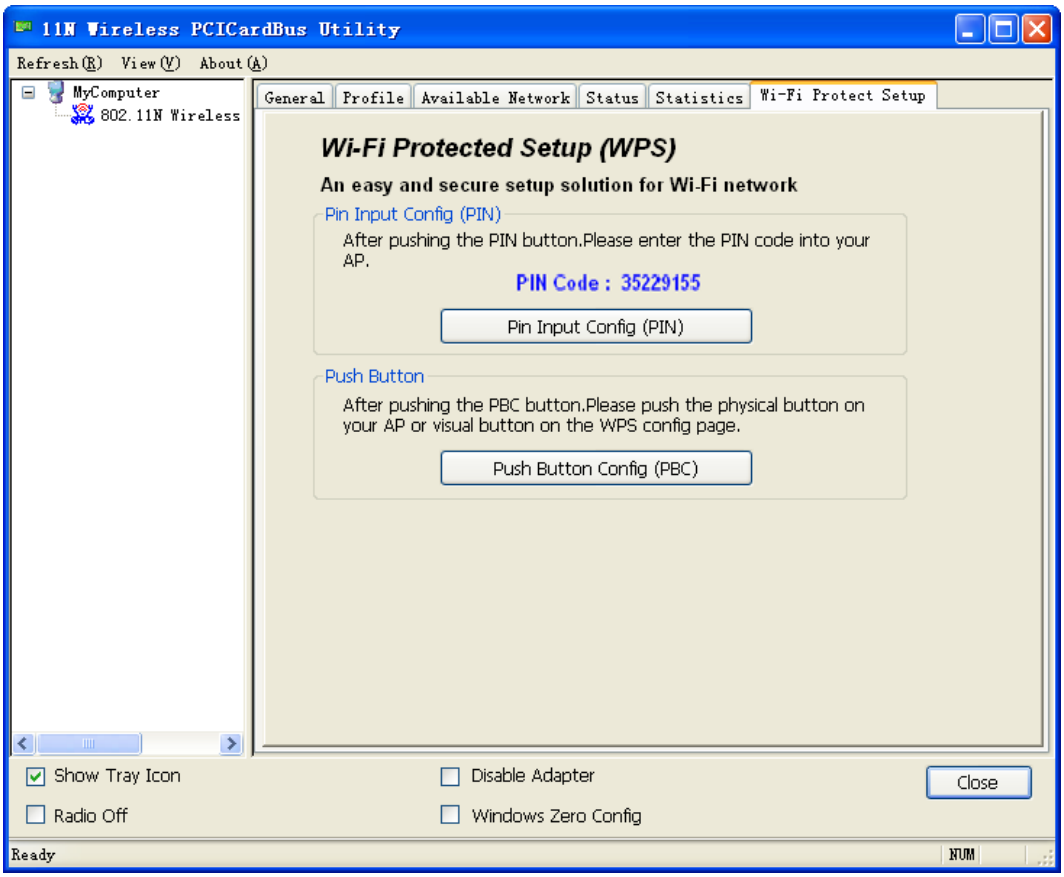

Figure 3-16

WPS can connect the wireless adapter and the router in a safe way. If you have a router which has WPS button, you may set up a safe network via the following methods

Method 1:

- Input the PIN code of the adapter's WPS page into the router's WPS configure page, then click 'connect'

Figure 3-17

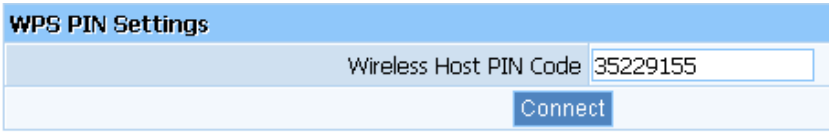

Figure 3-18

- Click the 'PIN Input Config (PIN)' in the Wi-Fi protect setup of the adapter

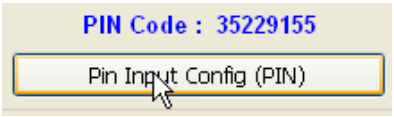

Figure 3-19

- Select the AP that you want to connect in the pop-up window, and then click 'Select'

Figure 3-20

- Please wait until the following window appears, the connection between the adapter and the router will be established automatically.

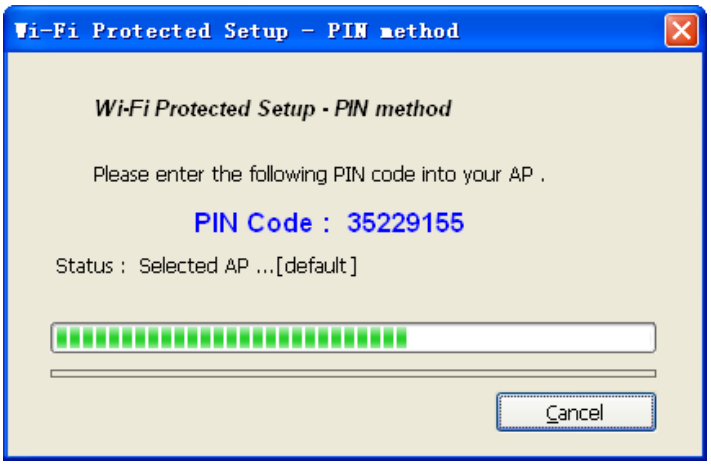

Figure 3-21

Method 2:

- Press the WPS hardware button of the wireless router until the WPS LED flashes
- Click the 'Push button Config (PBC)' in the Wi-Fi protect setup of the adapter
- The safe connection will be established automatically, please wait

Note: If there is more than one AP on the PBC mode when you use the method 2, there will

be session overlap. Please using method 1 or wait for a while push the button again.

4 FAQ

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

1. 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.

2. 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.