

**IEEE 802.11g Wireless PCI Adapter**

# **User's Guide**

## **FCC Certifications**



### **Federal Communication Commission Interference Statement**

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

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

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.

**FCC Caution:** Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

### **IMPORTANT NOTE:**

#### **FCC Radiation Exposure Statement:**

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is  
firmware-limited to channels 1 through 11.

## **CE Mark Warning**



This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class B for ITE, the essential protection requirement of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

Company has an on-going policy of upgrading its products and it may be possible that information in this document is not up-to-date. Please check with your local distributors for the latest information. No part of this document can be copied or reproduced in any form without written consent from the company.

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# Overview

**Thank you for purchasing this product. Read this chapter to know about your IEEE 802.11g Wireless PCI Adapter.**

## Unpacking informationx

Before getting started, please verify that your package includes the following items:

1. IEEE 802.11g Wireless PCI Adapter]
2. One Quick Installation Guide
3. One Utility/ Manual CD

## Introduction to the IEEE 802.11g Wireless PCI Adapter

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The IEEE 802.11g Wireless PCI adapter provides users to launch IEEE 802.11g wireless network at 54 Mbps in the 2.4GHz frequency, which is also compatible with IEEE 802.11b wireless devices at 11Mbps. You can configure this adapter with ad-hoc mode to connect to other 2.4GHz wireless computers or with Infrastructure mode to connect to a wireless AP or router for accessing to Internet. This adapter includes a convenient Utility for scanning available networks and saving preferred networks that users usually connected with. Security encryption can also be configured by this utility.



### Key Features

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- Complies with IEEE 802.11b/g wireless standard
  - Complies with PCI revision 2.2 and PCI power management revision 2.1
  - High Speed transfer data rate up to 54 Mbps
  - Support turbo mode for 72 Mbps data rate
  - Support wireless data encryption with 64/128-bit WEP, WPA (TKIP with IEEE 802.1x) and AES functions.
  - Support Wake-on-LAN(WOL) function and remote wake-up
  - Equips one external detachable dipole antenna
  - Support driver for Windows 98se, Me, 2000 and XP.
  - Supports auto-installation and diagnostic utilities.
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# Installation Guide

## Hardware Installation

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1. Turn off your computer.
2. Unplug the power cord of your computer from outlet.
3. Remove the cover of your computer.
4. Install the adapter into a PCI socket.
5. Secure this adapter to the back panel of your computer with the included screw.
6. Replace the cover.
7. Plug the power cord to the outlet and turn your computer on.

## Software Installation

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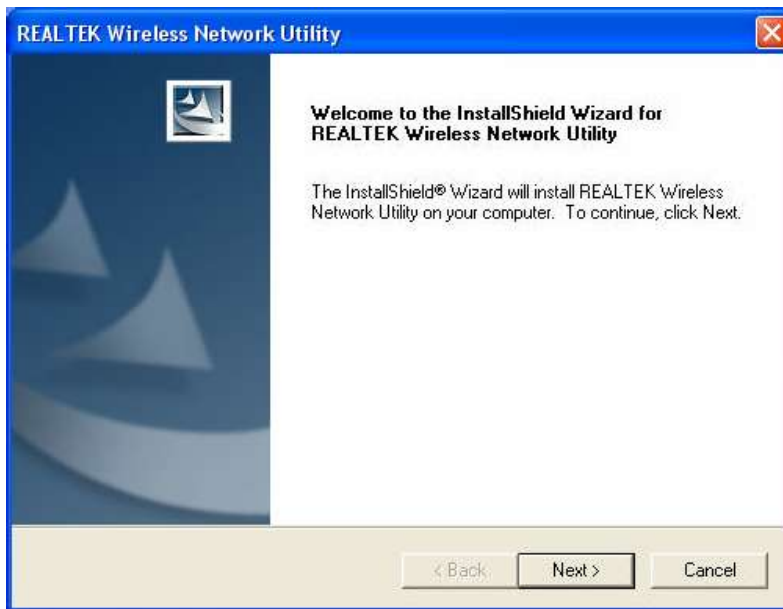
### Driver and Utility Installation

**Note:** The following driver installation guide uses Windows XP as the presumed operation system. The procedures and screens in Windows 98se, 2000 are familiar with Windows XP.

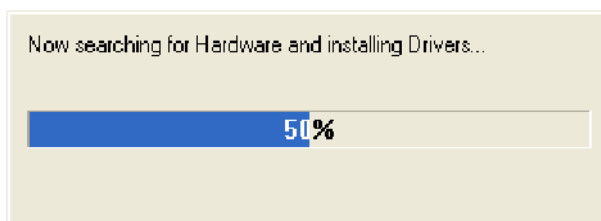
1. Insert the CD-Rom that came with this product to your CD-Rom drive. Double click your CD-ROM drive icon to access this CD.
2. Double click the  **CI Driver Utility**  folder and then select the  TL8185   
 folder. Double click the  icon to start driver installation.
3. The language-selecting window pops up. Please select the language you use and click **OK**.



4. The welcome window pops up. Click the **“Next”** button to proceed.



5. Please wait while installation.



6. Click the **“Finish”** button to complete driver and utility installation. (**Note:** Windows 98 users please skip to **step 9**)
7. If you are using Windows 98se, the system may ask for the driver CD. Please click the Browse button. Select your CD-ROM Drive then select PCI Driver Utility→rtl8185→Win98 to browse the driver. After installing the driver, restart your computer to activate the driver.




## Making a Basic Network Connection

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### Before You Start

In the following instruction for making a network connection, we use the Utility we provided to configure your wireless network settings.

**Note:** For Windows XP users to configure your wireless network using this Utility, please perform the following procedures to disable your native Windows XP wireless support (Wireless Zero Configuration Service)

1. Double click the  icon on your system tray, which located at the lower-right corner of your desktop.
2. Click the **“Advanced”** Button

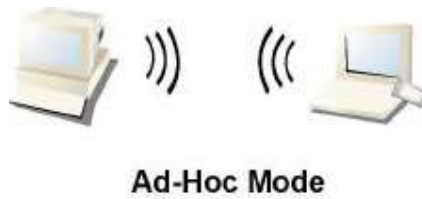


3. Uncheck the **"Use Windows to configure my wireless network settings"** Checkbox and click **"OK"**




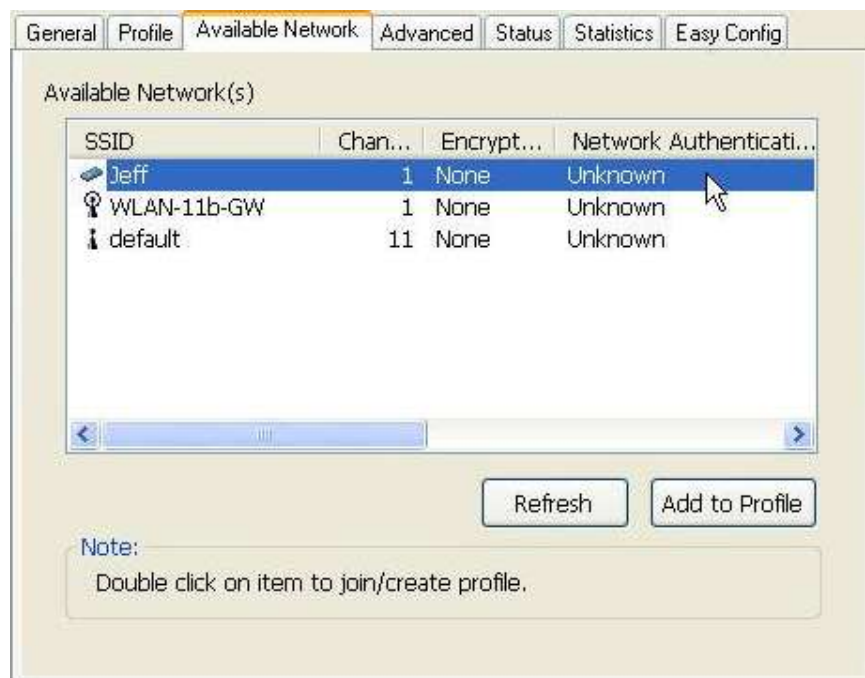
## Ad-Hoc Mode

An Ad-Hoc mode wireless network connects two computers directly without the use of a router or AP. It is also known as a peer-to-peer network. For example, we can install this wireless adapter to two computers respectively. The communication between the two computers is an Ad-Hoc mode network.



### To use this adapter in Ad-Hoc Mode

1. Double click the  icon on your desktop.
2. Click the  button to scan available wireless network adapters. Double click on the network adapter that you are going to connect to.

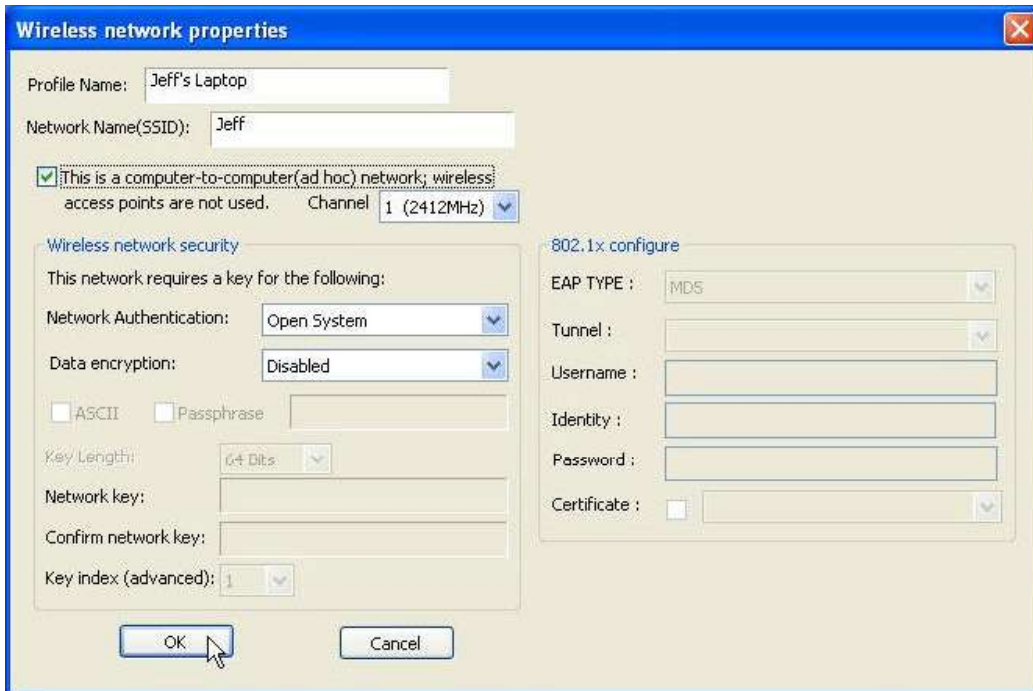


3. Click the OK button to confirm that you are connecting to an open wireless network.



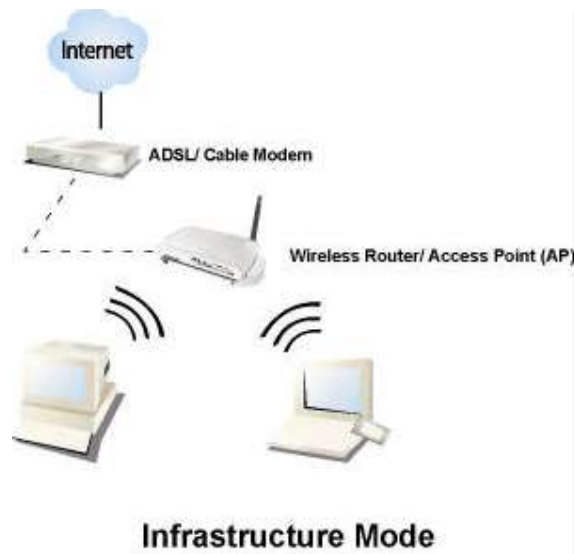
4. Click OK to add this network into the profile list.

**Note:** This example is an open wireless network. If you are going to connect to a Wireless adapter with security protection, you will have to configure the encryption settings in this profile to be corresponding to the other wireless adapter.




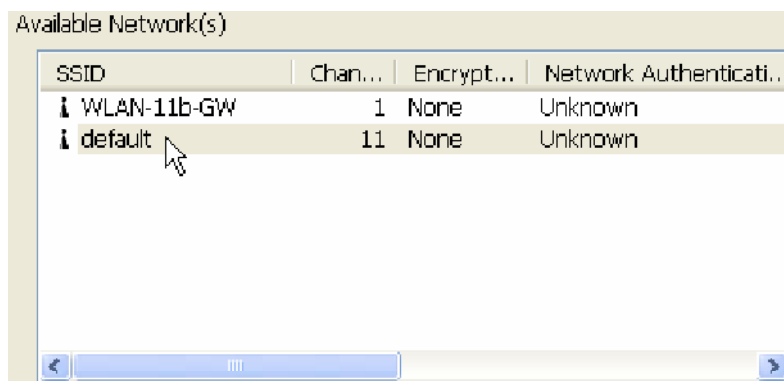
## Infrastructure mode

An Infrastructure Mode network contains at least one wireless client and one wireless AP or router. This client connects to Internet or intranet by communicating with this wireless AP.



### To use this adapter in Infrastructure Mode:

1. Double click the  icon on your desktop.
2. Click the  button to scan available Access points. Double click on the AP that you are going to connect to.

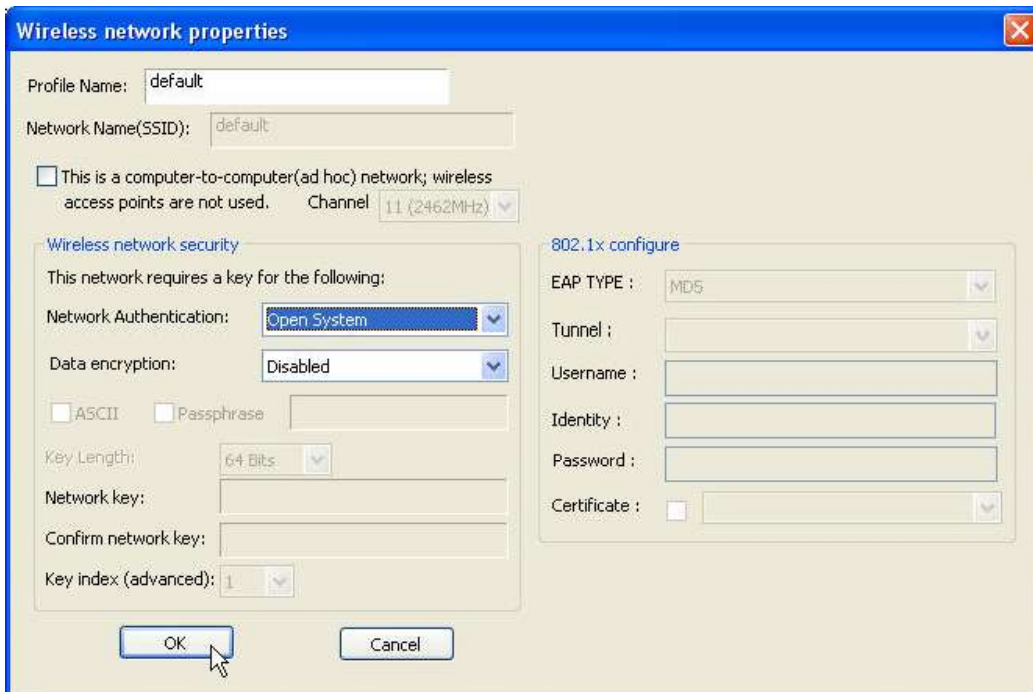


3. Click the OK button to confirm that you are connecting to an open wireless network.



4. Click **OK** to add this network into the profile list.

**Note:** This example is an open wireless network. If you are going to connect to an AP with security protection, you will have to configure the encryption settings in this profile to be corresponding to your AP.




# Management Guide

Read this chapter to understand the management interface of the device and how to manage the device.

## Introduction to the Wireless LAN Utility

### Starting the Wireless LAN Utility

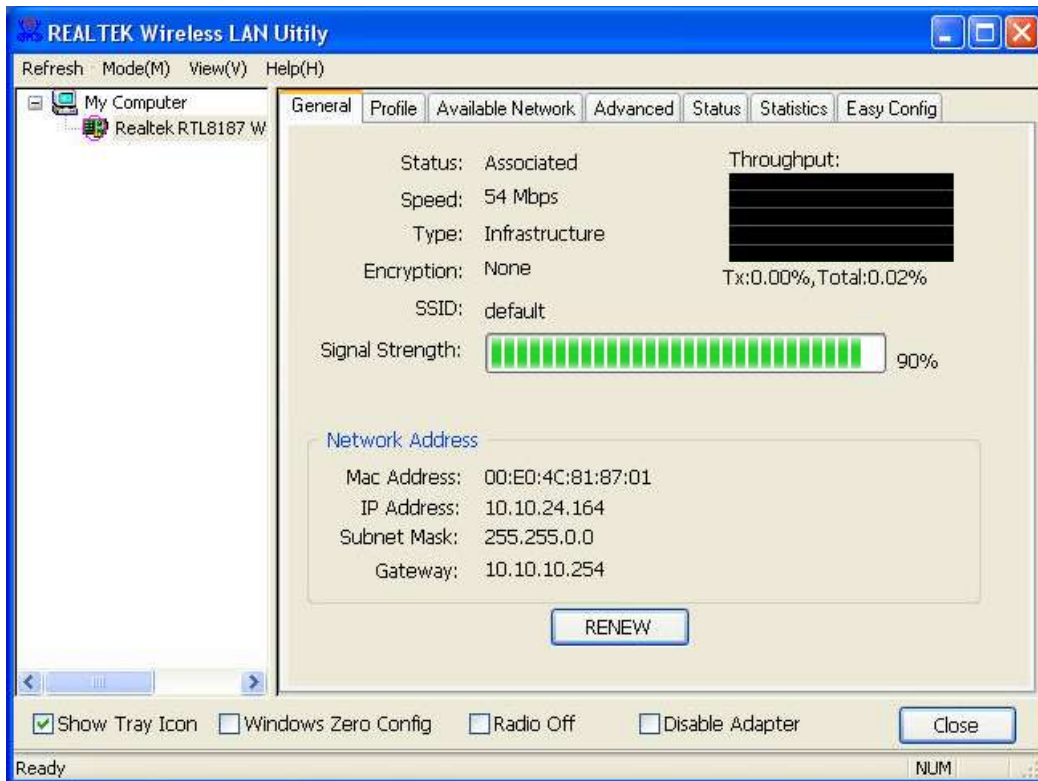


Double click the  shortcut on your desktop. The Wireless LAN Utility pops up. You may click on the tabs above to configure this adapter. The checkboxes below provide the following functions:

<b>Show Tray Icon</b>	Check this checkbox to show the utility icon on your system tray, which is in the notification area at the lower-right corner of the windows desktop. You may also uncheck it to remove the utility icon from system tray.
<b>Windows Zero Config</b>	Uncheck this checkbox to use native Windows XP wireless support (Wireless Zero Configuration Service) instead of using this utility to configure your wireless network.
<b>Radio Off</b>	Check this checkbox to prevent this adapter from transmitting or receiving signals. Uncheck it to communicate.
<b>Disable Adapter</b>	Check this checkbox to disable this wireless adapter. Uncheck it to enable this adapter again.

## General

After starting the utility, the general page pops up This **General** tab provides the information of your current wireless network connection. You may click the **Renew** button to refresh those listed information.

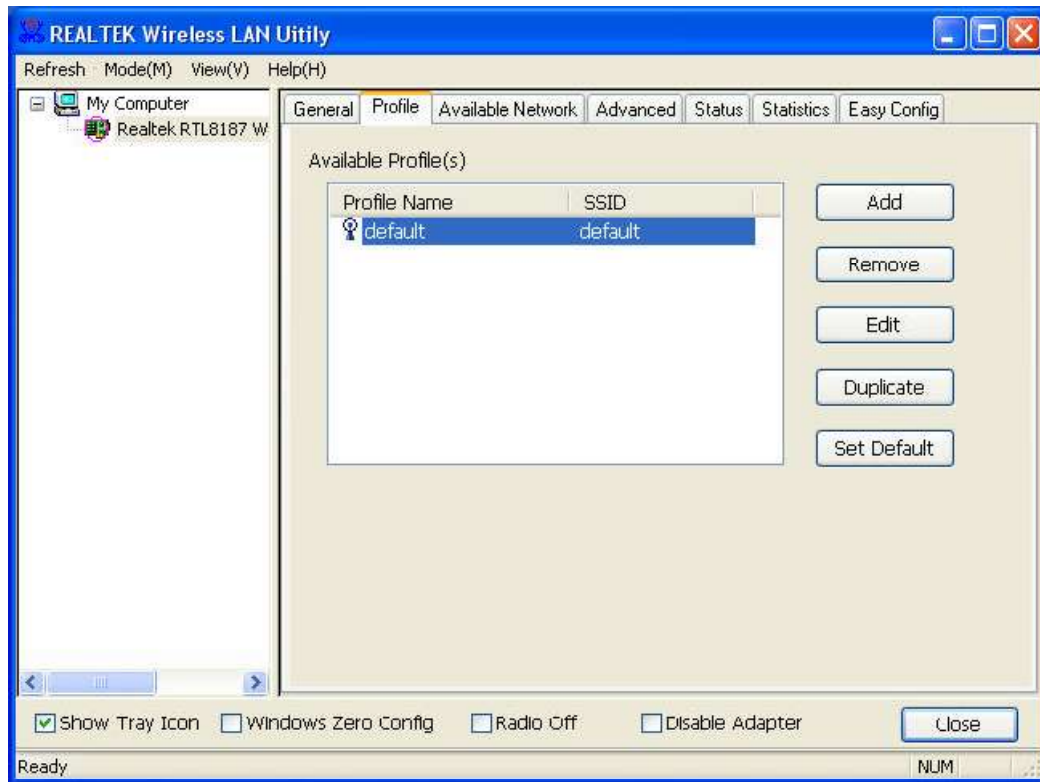


- Status:** Check if the device associated to target network.
- Speed:** The current connection speed
- Type:** Infrastructure mode or Ad-Hoc mode.
- Encryption:** The performing encryption mode for connecting to current network profile.
- SSID:** The SSID (network name) of the connected wireless network.
- Signal Strength:** Indicated the signal strength detected by this adapter.
- Network Address:** Shows the current IP addresses settings for this adapter.



## Profile

The **Profile** tab lists the preferred connections. You can click the buttons beside the list to do configurations to each connection.



**Add** Click this button to add a connection profile for this adapter.

**Remove** To remove a connection profile, click this profile on the profile list and click this button to delete it.

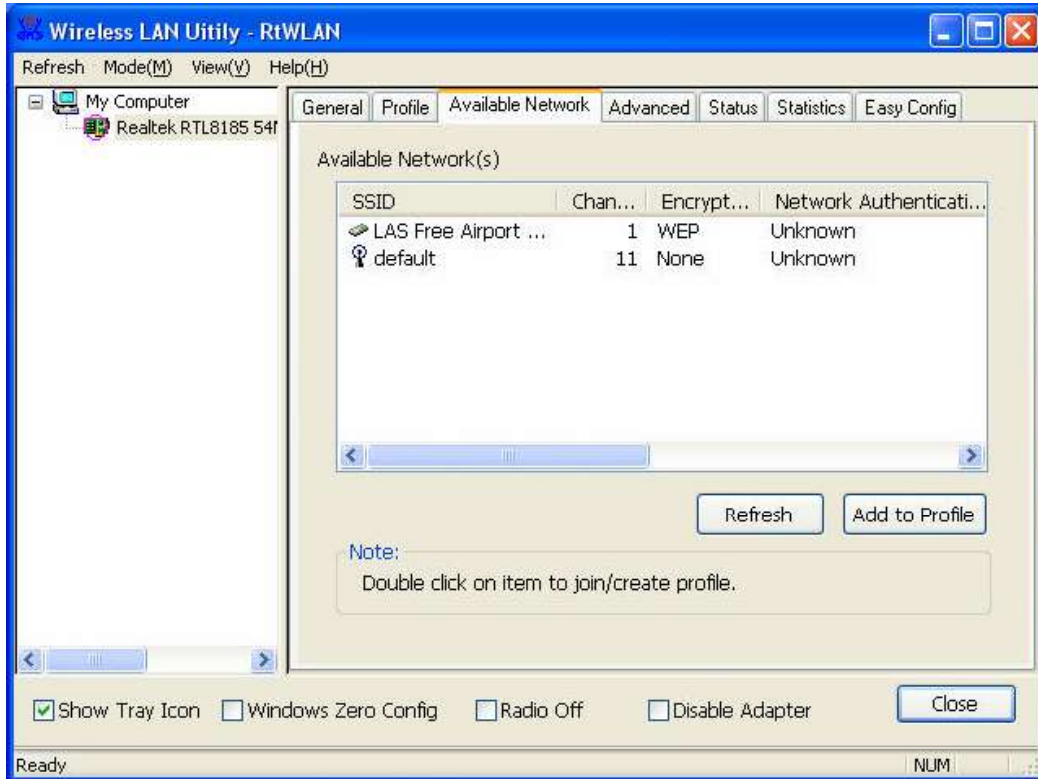
**Edit** To modify the configurations for a profile, click this profile on the profile list and click this button to edit.

**Duplicate** To make a copy of a profile, click the profile that going to be copied, and click this button to copy it.

**Set Default** To select a profile as your default wireless connection, click this profile on the list and click this button. You may also double click on each profile to select it as your default wireless connection.

## Available Network

This available tab lists the reachable wireless network of this adapter.



### Refresh

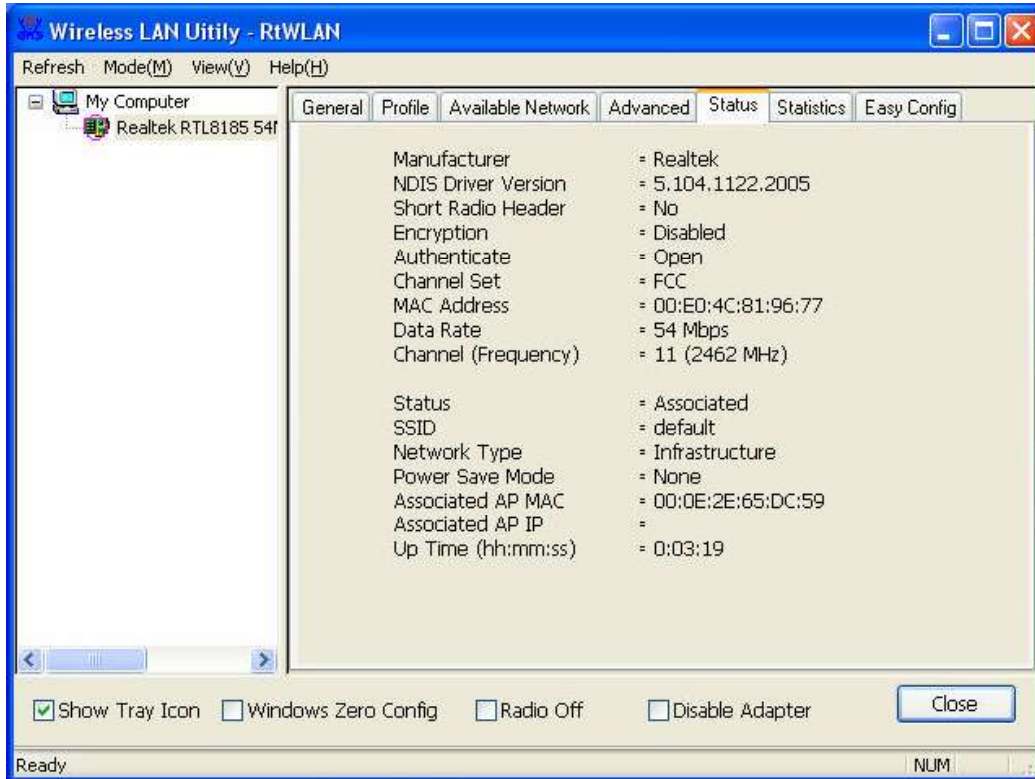
Click this button to rescan available networks around the adapter.

### Add to Profile

To add an available to your profile list, select a available network and click this button to add.

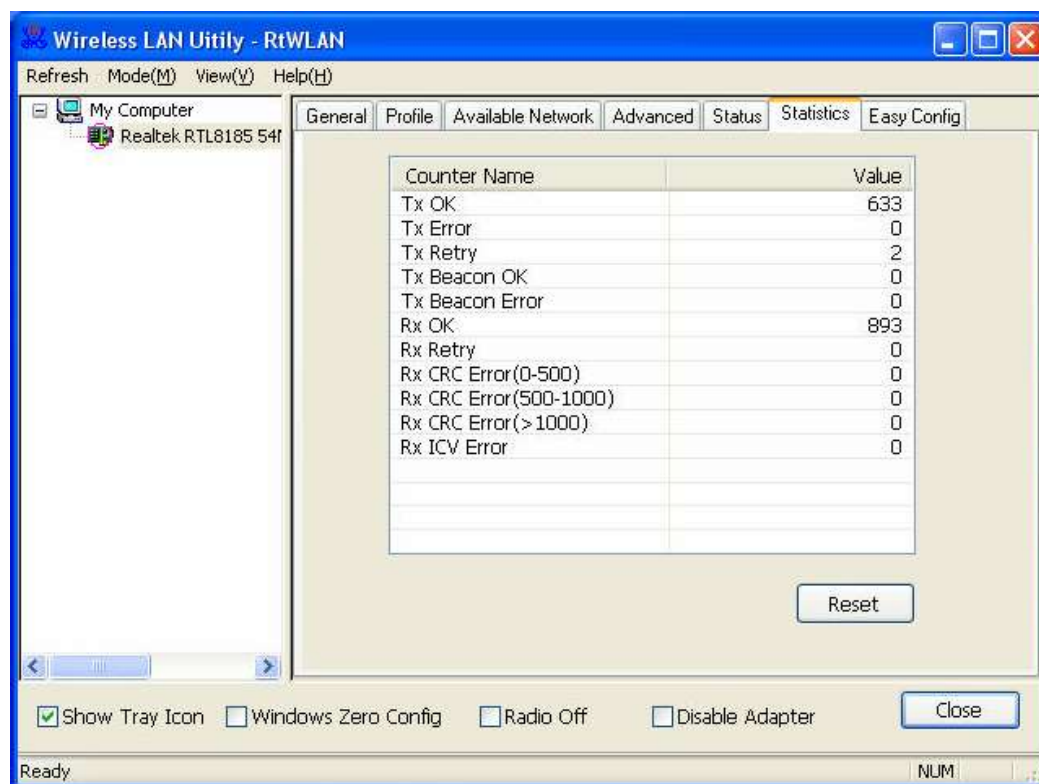
## Status

This tab shows the current connection status of this adapter.



## Statistics

See this tab to show the transmission activity record.



# Product Specification

## Standard

IEEE 802.11g, IEEE 802.11b

## Interface

PCI Interface

## Security

64/128-bit WEP, WPA (TKIP with IEEE 802.1x), AES

## Receiver Sensitivity

54Mbps OFDM, 10%PER, -68dBm

11Mbps CCK, 8%PER, -86dBm

1Mbps BPSK, 8%PER, -92dBm

## Cannel

USA 11, Europe 13, Japan 14

## Data Rate

802.11b: 1, 2, 5.5 and 11Mbps

802.11g: 6, 9, 12, 18, 24, 36, 48, and 54Mbps

## Transmit Power

16dBm~18dBm

## Range Coverage

Indoor 35~100 meters

Outdoor 100~300meters

## LED indicator

Link(Green)

## Operating Temperature

0- 40 °C (32 - 104 °C)

## Operating Humidity

10% ~ 90% (non-condensing)

## Dimension

152 x 122x 22 mm

## Emission

FCC Part 15.247 for US, ETS 300 328 for Europe