



# User Guide

## 300Mbps Wireless-N USB Adapter

Model No.: XM-WN3200 v2.0

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## Package Contents

The following items should be found in the package:

- XM-WN3200 v2.0
- One software CD Disk contains Drivers and User Guide

***Note: The above list is for reference only. The actual content may differ according to the product you purchased. Please save the original packaging material for future reference. If any of the listed items are damaged or missing, please contact with your seller.***

## Conventions

The “Adapter” mentioned in this User Guide stands for XM-WN3200 v2.0 without any explanations.

## **Chapter 1 Product Overview**

### **1.1 Introduction**

The Adapter is an 802.11n client device designed to deliver a high-speed and unrivaled wireless performance for your desktop or laptop. With a faster wireless connection, you can get a better Internet experience, such as downloading, gaming, video streaming.

With the 802.11n technology, higher throughput improvements using MIMO (multiple input, multiple output), the Adapter's auto-sensing capability allows high packet transfer rate for maximum throughput. It has good capability on anti-jamming, and it can also interoperate with other wireless (802.11b or 802.11g) products. The Adapter supports WEP, WPA and WPA2 encryption to prevent outside intrusion and protect your personal information from being exposed.

With unmatched wireless performance, reception, and security protection, the Adapter is the best choice for easily adding or upgrading wireless connectivity to your desktop or laptop.

### **1.2 Features**

- Complies with IEEE 802.11n, IEEE 802.11g and IEEE 802.11b standards
- Compliant with USB 2.0 Standard
- Provides up to 300Mbps transmission rate
- Auto-detects and changes the network transmission rate
- Provides two work modes: Ad-hoc and Infrastructure
- Supports Soft AP to establish your wireless LAN networking
- Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard
- Supports Wireless Roaming function
- Supports Windows 2000, Windows XP, Windows Vista, Windows 7, Windows 8/8.1

### **1.3 Before Installation**

1. Please read through the User Guide before you do installation.
2. Please close or uninstall the configuration programs of other manufacturer's wireless adapter before you install the configuration programs of the wireless network adapters to avoid possible UI (User Interface) conflict.

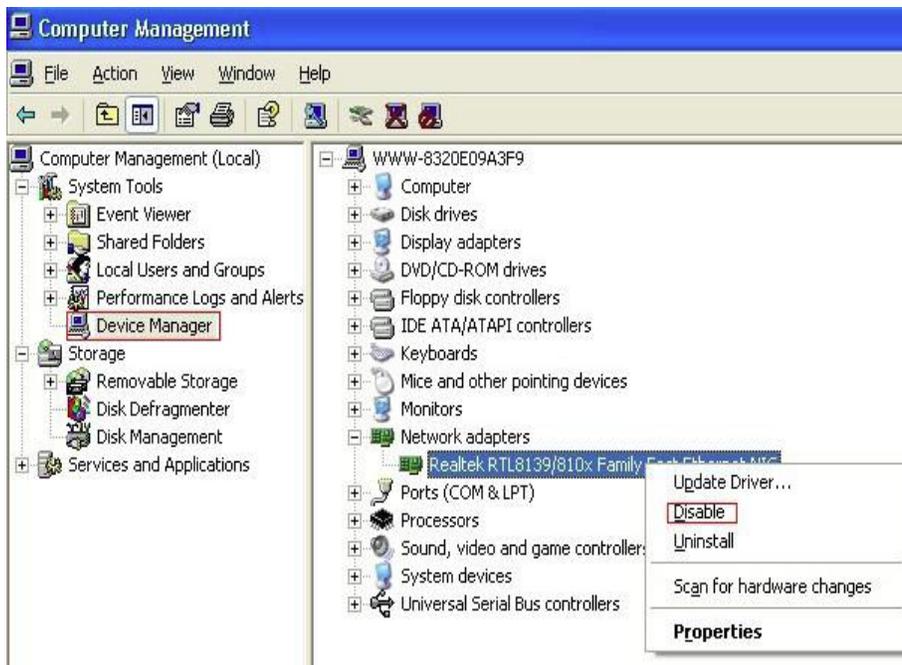
3. To avoid network conflicts between this wireless network adapter and other Wi-Fi adapter, you must disable other Wi-Fi network adapter before installing the driver.

### 1.4 Disable other manufacturer's wireless network adapter

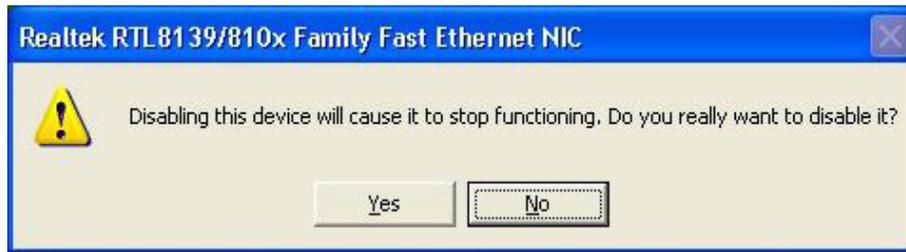
1. Right click "My Computer" and select "Manage"



2. On the Computer Management screen, select "Device Manager", select "Network adapter", and right click the network adapter you want to disable, and then click "Disable".



3. Click the “Yes” button on the dialogue box to disable the network adapter.



## 1.5 Product Maintenance

1. Please keep the product away from water and humid environment to protect its normal performance
2. Protect it against hazardous substances (such as acids, alkalis etc).
3. Please don't directly expose the Adapter to the sunlight or excessive heat.
4. Please contact our tech support if any problems occur.

## Chapter 2 Installation Guide

This chapter will guide you through the process of installing the wireless USB Adapter software. The CD disk integrates driver and configuration software. The software installation steps and operating guide in this User Guide is explained under Windows XP, Installation steps for other operating systems are similar.

### 2.1 Installing Wireless USB Adapter

1. Please insert the wireless USB Adapter into the USB port of your computer.



Or



2. Insert software CD to your CD-ROM drive. Browse CD and double-click Setup.exe in Driver folder to execute it. The wizard will run and install all necessary files to your computer automatically.

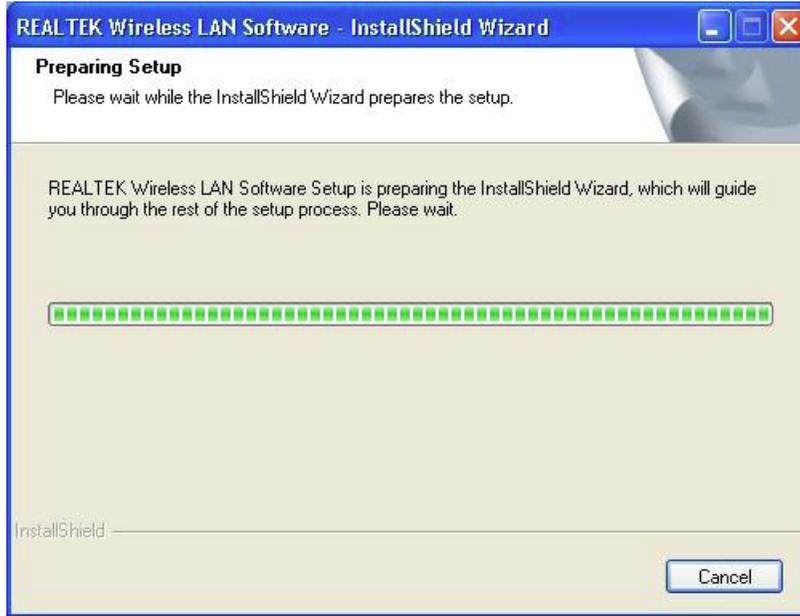
3. Ignore the following dialog and click "Cancel".



4. Click "Next" to begin the driver installation.



5. The following window will show up.



6. Installation in process.



7. Click "Finish" to complete the installation.



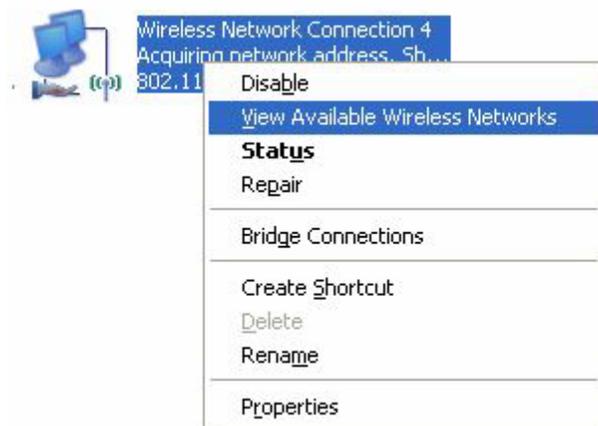
## **Chapter 3 How to use the Windows Built-in Utility**

### **3.1 Connecting in Windows XP**

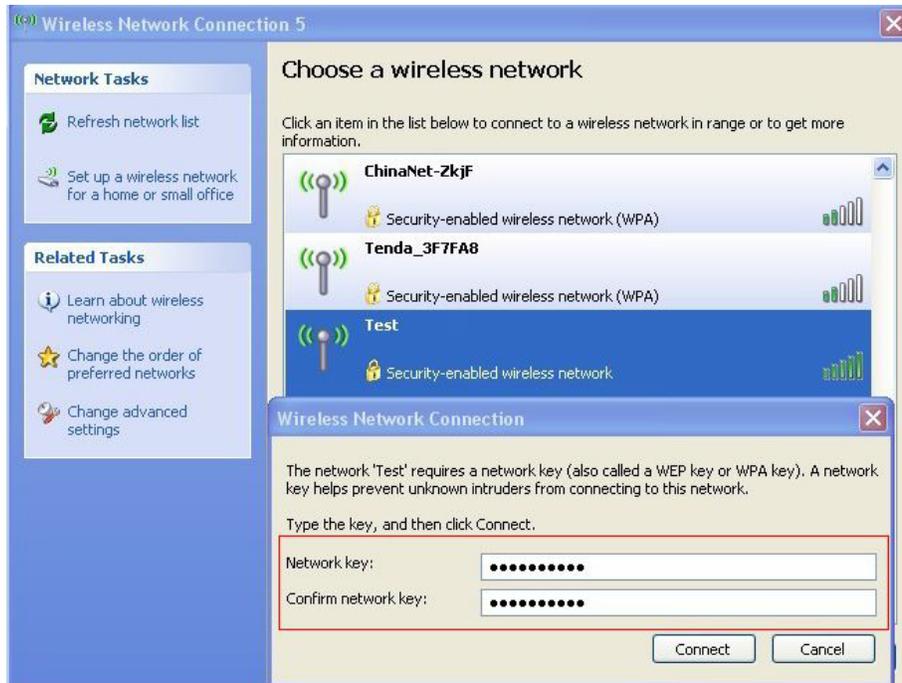
1. Right click "My Network Places" on the desktop and select "Properties".



2. Open the network connection, Right click "Wireless Network Connection" and select "View Available Wireless Networks" as shown below.

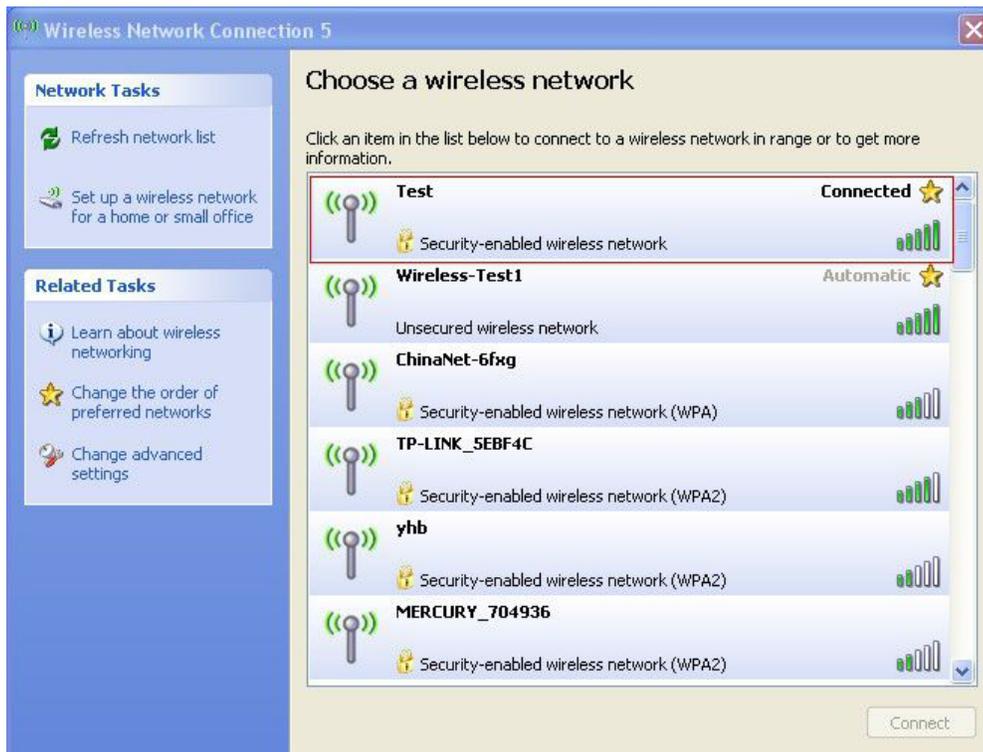


3. On the right of the screen displayed are the currently scanned wireless networks. If the one you want to connect has not been scanned, click "Refresh Network List" to update the network list. Select the wireless network you want to connect, and click "Connect" or double click this wireless network. Input the key in the key dialogue box (the key input is case-sensitive) then click "Connect".

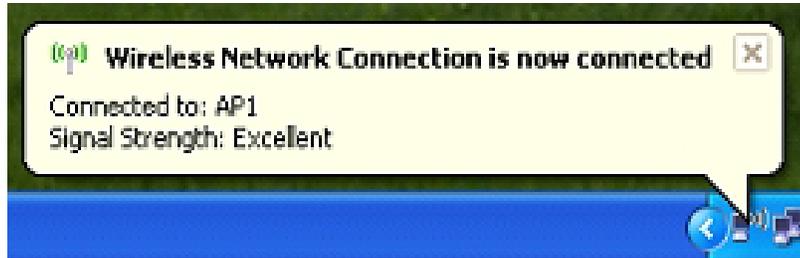


**NOTE: If the wireless device you are connecting to is not encrypted, the key dialogue box will not pop up.**

4. When it shows "Connected" as the picture below, then you can enjoy wireless access to Internet now.



5. You should see the pop-up window on your lower right hand corner indicate the connected status.



### 3.2 Connecting in Windows 7

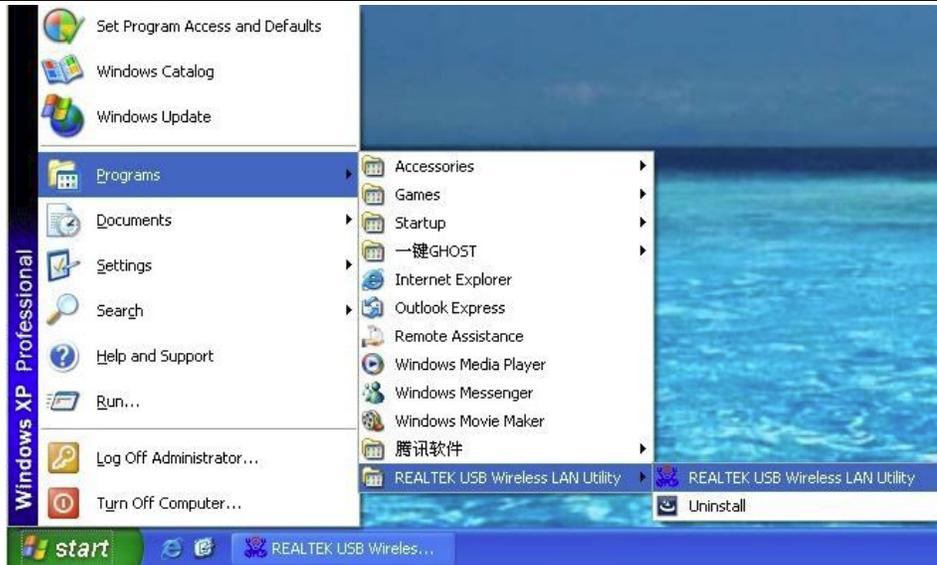
1. Click the wireless connection in the lower right corner of the computer's desktop to view the available wireless networks. Select the wireless network you wish to connect and click "Connect" or double click the wireless network to connect. If you don't find the specified one, please click the refresh icon in the upper right corner to update the list.
2. If the wireless network you are connecting is encrypted, you'll be prompted to enter the key. Click "Ok" after you entered the correct key.
3. It shows "Connected" after successfully connected. You can disconnect it, view its status or modify the wireless network properties by right click the wireless network.



Please make sure that your settings for Authentication & Security are the same as your Wireless Router's setting

## Chapter 4 Wireless LAN Utility

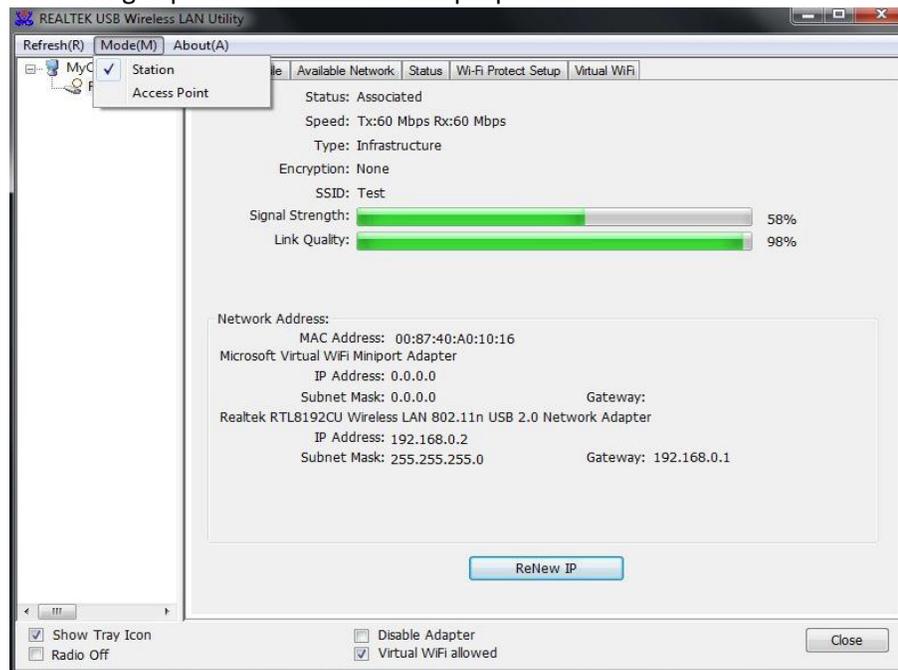
Select "Start", "Programs", "REALTEK USB Wireless LAN Utility".



or click the “REALTEK USB Wireless LAN Utility” shortcut on your PC’s desktop to start the UI.

### 4.1 Station Mode

The following explanations focus on the properties area.

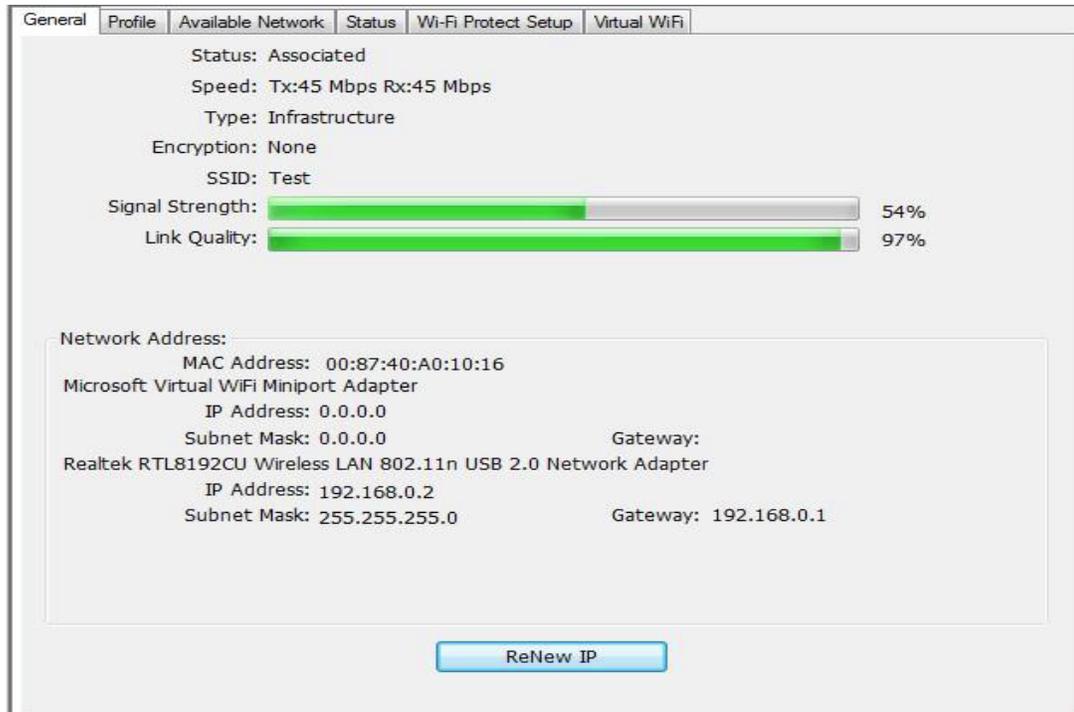


### Infrastructure and Ad-Hoc

With both Infrastructure and Ad-Hoc types, the properties should look like the picture above. Six property pages present different information of current wireless network status. Please read the following explanations before you reviewing these pages, it could help you to well understand the wireless environment around the system. It is easy to use to switch property pages just by

clicking left button of mouse on the title of each page. The following six sections describe detailed information of each page.

#### 4.1.1 General Page



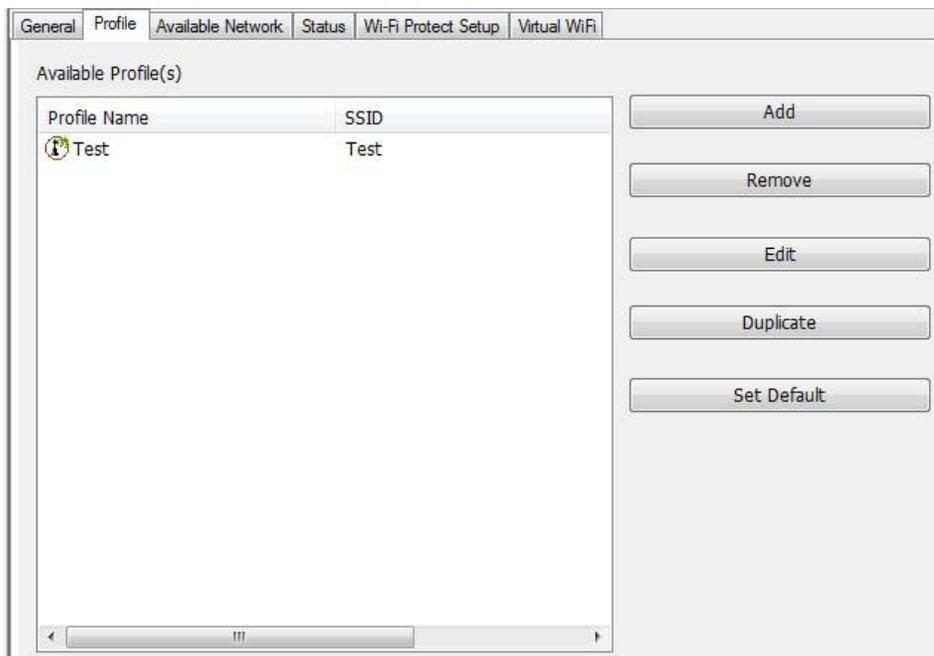
- 1. Status** - The status of station connection to AP.
- 2. Speed** - Current transition speed in Mbps (Mega-Bits-Per-Second).
- 3. Type** - Current wireless LAN configuration type.
- 4. Encryption** - Current encryption mode used.
- 5. SSID** - Name of wireless network.
- 6. Signal Strength** - The average signal quality of packets received from wireless network. We recommend connecting AP with over 70% signal strength.
- 7. Throughput Diagram** - Current throughput, including transmission (Tx) and total traffic (Total).
- 8. Network Address** - Mac Address: six two-digital number of this Wireless LAN USB adapter  
IP Address: assigned network address by DHCP server or self-definition in four three-digital number format.
  - Subnet Mask: the only valid value is 255.255.0.0
  - Gateway: It comes from connected AP. Your system can not connect internet with this field empty

### 4.1.2 Profile Page

This page provides profiles management such as add, remove, edit and duplicate just by pressing the respected button.

#### Available Profile(s)

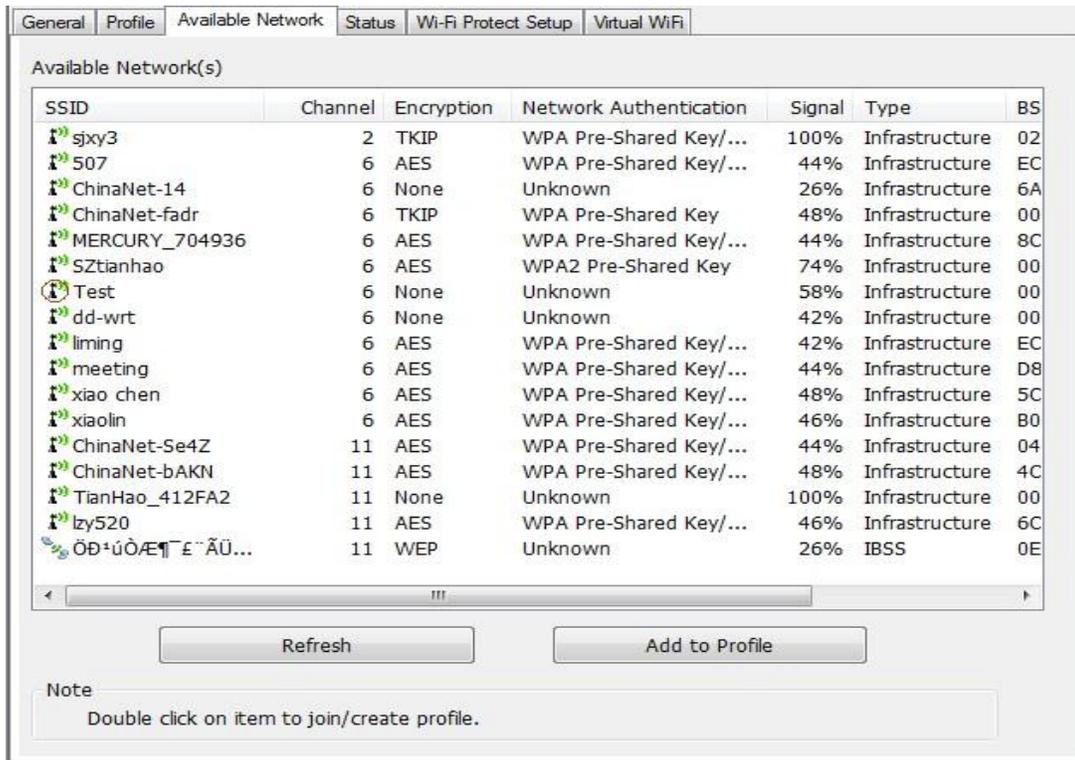
The list box shows all the created profiles.



1. **Add** - Add a new profile for AP or IBSS (Ad-Hoc mode).
2. **Remove** - Remove the selected profile.
3. **Edit** - Edit contents of selected profile.
4. **Duplicate** - Make copy of selected profile.
5. **Set Default** - Set the selected profile as default selection.
6. **Available Network Page** - This page presents all BSS, including AP and IBSS, around this system. You can pick any one of these network connections.

### 4.1.3 Available Networks

Show network connection around this system.

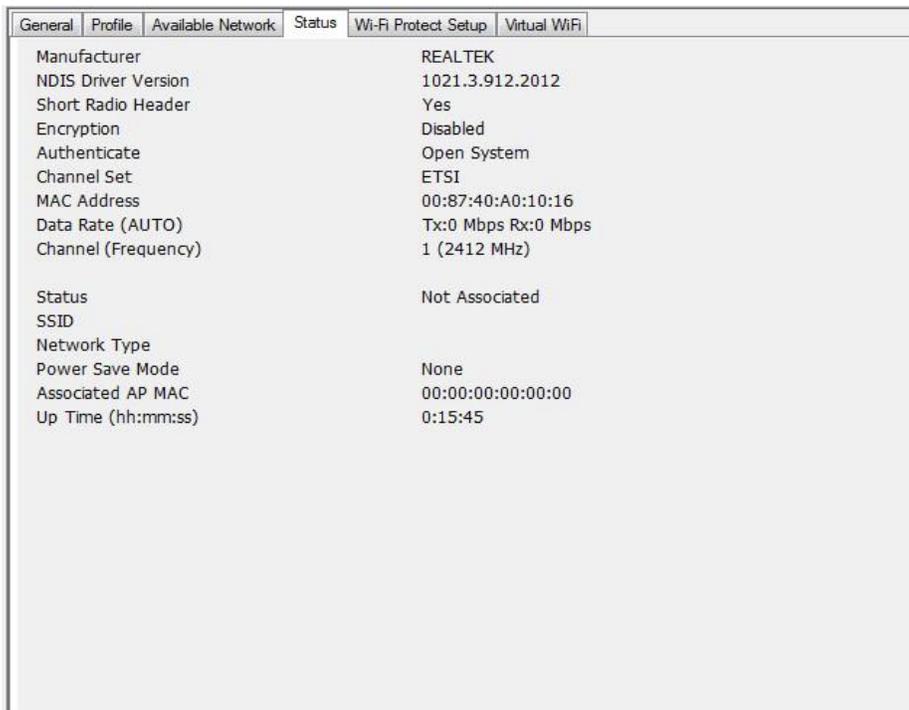


SSID	Channel	Encryption	Network Authentication	Signal	Type	BSS
sjxy3	2	TKIP	WPA Pre-Shared Key/...	100%	Infrastructure	02
507	6	AES	WPA Pre-Shared Key/...	44%	Infrastructure	EC
ChinaNet-14	6	None	Unknown	26%	Infrastructure	6A
ChinaNet-fadr	6	TKIP	WPA Pre-Shared Key	48%	Infrastructure	00
MERCURY_704936	6	AES	WPA Pre-Shared Key/...	44%	Infrastructure	8C
SZtianhao	6	AES	WPA2 Pre-Shared Key	74%	Infrastructure	00
Test	6	None	Unknown	58%	Infrastructure	00
dd-wrt	6	None	Unknown	42%	Infrastructure	00
liming	6	AES	WPA Pre-Shared Key/...	42%	Infrastructure	EC
meeting	6	AES	WPA Pre-Shared Key/...	44%	Infrastructure	D8
xiao chen	6	AES	WPA Pre-Shared Key/...	48%	Infrastructure	5C
xiaolin	6	AES	WPA Pre-Shared Key/...	46%	Infrastructure	80
ChinaNet-Se4Z	11	AES	WPA Pre-Shared Key/...	44%	Infrastructure	04
ChinaNet-bAKN	11	AES	WPA Pre-Shared Key/...	48%	Infrastructure	4C
TianHao_412FA2	11	None	Unknown	100%	Infrastructure	00
lzy520	11	AES	WPA Pre-Shared Key/...	46%	Infrastructure	6C
ÖÐ±úÒÆ¶µ£¬ÃÜ...	11	WEP	Unknown	26%	IBSS	0E

Note: Double click on item to join/create profile.

- 1. Refresh** - Rescan network connection around this system.
- 2. Add to Profile** - Create profile for selected network connection and add it to profile list.

### 4.1.4 Status Page



Manufacturer	REALTEK
NDIS Driver Version	1021.3.912.2012
Short Radio Header	Yes
Encryption	Disabled
Authenticate	Open System
Channel Set	ETSI
MAC Address	00:87:40:A0:10:16
Data Rate (AUTO)	Tx:0 Mbps Rx:0 Mbps
Channel (Frequency)	1 (2412 MHz)
Status	Not Associated
SSID	
Network Type	
Power Save Mode	None
Associated AP MAC	00:00:00:00:00:00
Up Time (hh:mm:ss)	0:15:45

**NDIS Driver Version:** Driver version

**Short Radio Header:** No

**Encryption:** Current encryption mode.

**Authenticate:** Authentication state

**Channel Set:** Selected channel plan currently.

**MAC Address:** MAC address of this adapter.

**Data Rate:** Wireless LAN transition speed

**Channel (Frequency):** Current channel number

**Status:** Wireless network status

**SSID:** Name of connecting AP

**Network Type:** Indicate current network configuration type

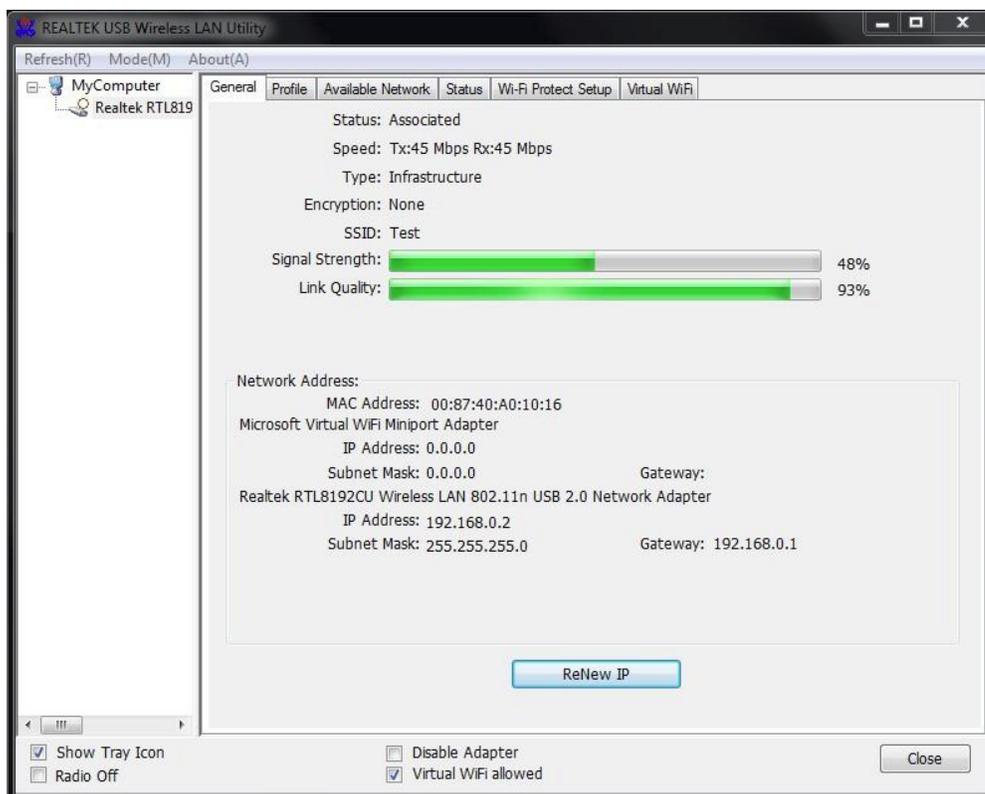
**Power Save Mode:** Current setting power save mode

**Associated AP MAC:** MAC address of connecting AP

**Associated AP IP:** IP address of connecting AP

**Up Time:** Total connection time

## 4.2 Introduction of Main Windows



#### 4.2.1 Main Menu

The main menu includes five submenus.

- 1. Refresh(R)** - When clicking the refresh menu, you can update and re-enumerate the contents of adapter list area.
- 2. Mode(M)** - Wireless configuration is quickly switched to be either [Station] or [Access Point].
- 3. About(A)** - Click the "About" to show the about dialog. The application version and license information are shown in the about dialog.



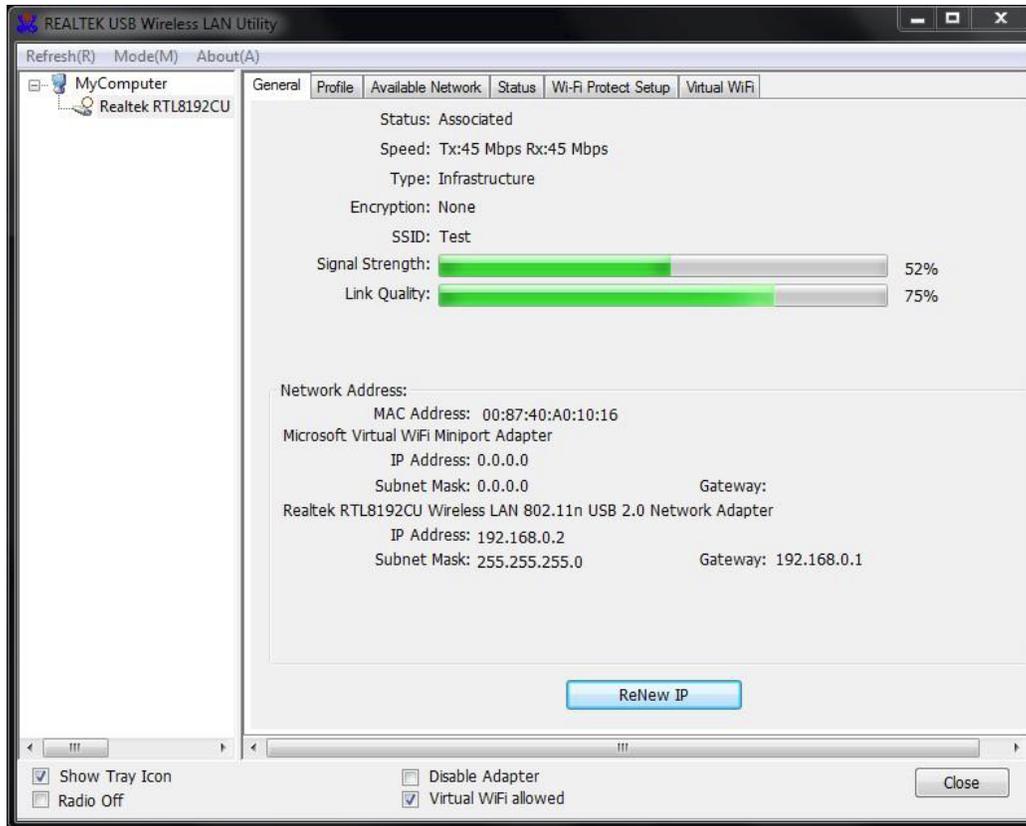
#### 4.2.2 Adapter List Area

All connected adapters on this system with multiple adapter installations are displayed in this area. It is easy for users to change the selected adapter by one click. The contents of properties area are dependent on wireless configuration that the selected adapter is set up. If only single adapter is installed on the system, only one adapter is always selected.

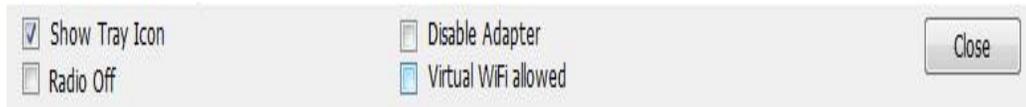


#### 4.2.3 Properties Area

The contents of this area are dependent on current wireless configuration. The current configuration is determined on previous explanation of submenu "Mode". The more detailed contents are described in the following wireless configuration sections for both Station and AP mode.



### 4.2.4 Global Control Bar



Each control item on this bar affects the adapter or management GUI directly.

#### Show Tray Icon

Checking "Show Tray Icon" and clicking "Close" button, the management GUI will be minimized and stay on the tray icon located at the right bottom corner of Windows. If not, management GUI will shut down while clicking "Close" button with unchecked condition.



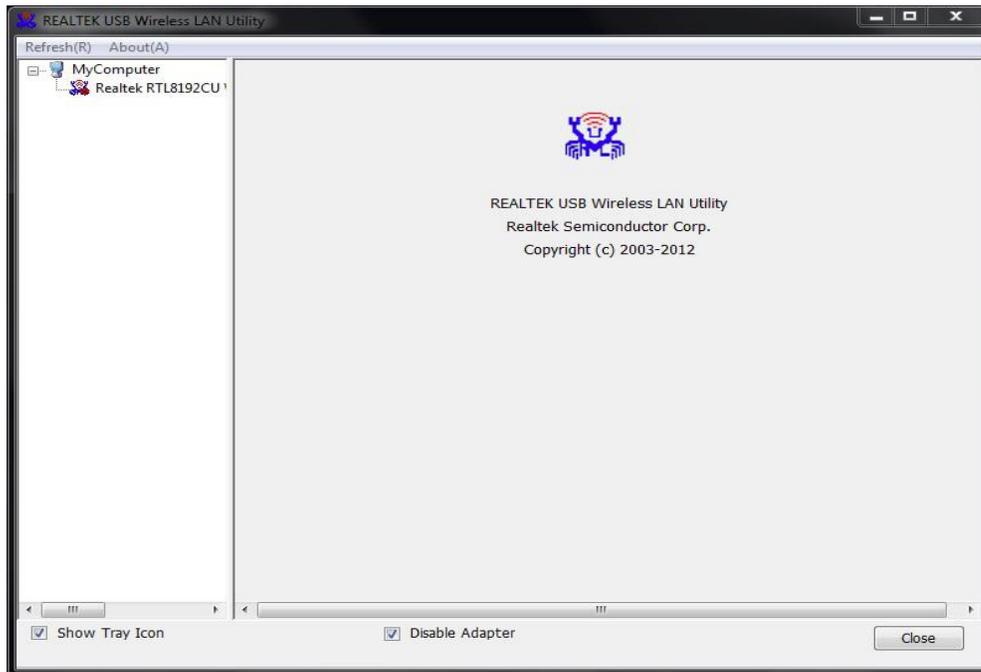
#### Radio Off

Turn off the radio to save power. While the radio is off, the links with other wireless network nodes are disconnected. User should be aware that while the wireless configuration is in AP

mode. The radio off will cause the sub network belonging to the AP to be disconnected with internet/intranet.

### Disable Adapter

Stop wireless USB device.

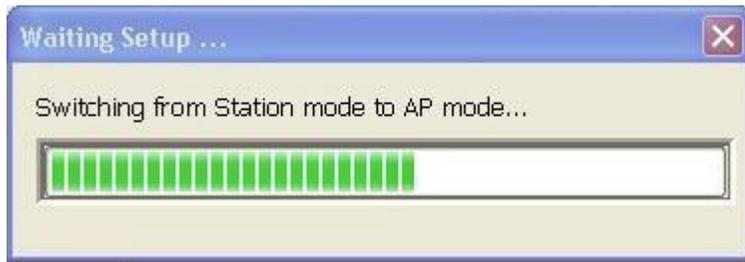


### 4.3 AP Mode

Click main menu **Mode (M)** and choose **“Access Point”** to switch AP mode.

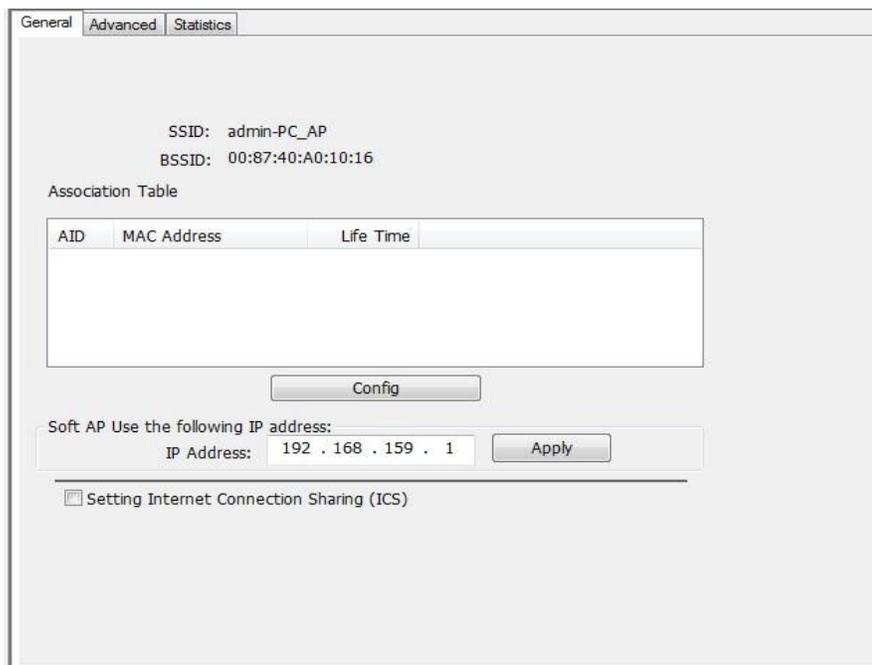


You will see the following window.



### 4.3.1 General Page

This page provides general information of this AP, including name, MAC address and list of joined stations.



1. **SSID** - The name of this AP.
2. **BSSID** - Six two-digit numbers of the MAC address of this AP.
3. **Association Table** - It is the list of joined stations to this AP.
4. **AID (Association ID)** - The AID field is a value assigned by an AP during association that represents 16-bit ID of a station. It is a unique value assigned by AP.
5. **MAC Address** - It is the six two-digit numbers that assemble the MAC address of respected joined station.
6. **Life Time** - It is the timer that counts down from 10 minutes whenever the AP connects the station successfully. If an STA associated to SW AP does not have any interaction with the AP in 10 minutes, it will be disassociated from the Infra-structure BSS.

**7. Config** - A dialog of this AP is shown for configuration modification

The screenshot shows a Windows-style dialog box titled "Wireless Network Properties:". The "Profile Name" field contains "Access Point Mode". The "Network Name(SSID)" field also contains "Access Point Mode". There is an unchecked checkbox for "This is a computer-to-computer(ad hoc) network; wireless access points are not used.". The "Channel" dropdown is set to "1 (2412MHz)", with an unchecked "AUTO Channel" checkbox. Under the "Wireless network security" section, a message states "This network requires a key for the following:". "Network Authentication" is set to "Open System" and "Data encryption" is set to "Disabled". There are checkboxes for "ASCII" and "PASSPHRASE" with an empty text field. The "Key index (advanced)" dropdown is set to "1". There are empty text fields for "Network key:" and "Confirm network key:". "OK" and "Cancel" buttons are at the bottom.

**7.1 Network Name (SSID)** - Name of the AP is searchable by other wireless Modes. The length of SSID should be shorter than 32 characters.

**7.2 Channel** - Select the wireless channel within current channel plan.

**7.3 Network Authentication & Data Encryption** - There are three types of authentication:

■ **Open System**

It is combined with data encryption type to be WEP or to be disabled.

Encryption ~ disabled: you decide to open this AP to every one without network authentication.

Encryption ~ WEP: you decide to setup the basic data encryption with a defined network key.

■ **Shared Key + WEP** You decide to apply both authentication and data encryption to

prevent unauthorized login.

■ **WPA-PSK + TKIP & WPA2-PSK + TKIP**

The most advanced authentication and data encryption that provide the best security protection.

**7.4 ASCII/ PASSPHRASE** - The most advanced authentication and data encryption that provide the best security protection.

■ **ASCII** - You should provide either 15 or 13 ASCII characters of network key edit box

■ **PASSPHRASE** – You could input words or Network key edit box

64 bits: The generated pass key is 64-bit to be complied with data packets.

128 bits: The generated pass key is 128-bit to be complied with data packets

■ **Hexadecimal** - While both ASCII and PASSPHRASE are not checked, you should input hexadecimal number in the network key box. For example, 10 digits hex number for 64-bit WEP or 26 digits hex number for 128-bit WEP.

**7.5 Key index (1 ~4)** - At most four key index to represent the opposite network key.

#### 4.3.2 Advanced Page

Users could setup the advanced characteristics of network packet for transmission on this page.

The screenshot shows a configuration window with three tabs: "General", "Advanced", and "Statistics". The "General" tab is active. Under the "General" heading, there are three settings:

- Beacon Interval:** A text input field containing the value "100".
- DTIM Period:** A text input field containing the value "3".
- Preamble Mode:** A dropdown menu with "Long" selected.

At the bottom of the window, there are two buttons: "Set Defaults" and "Apply".

**1. Beacon Interval**

This field indicates the interval between each beacon that this AP sends out in unit of TU (1024 micro-seconds).

**2. DTIM Period**

The DTIM Period field is the number of Beacon intervals between successive DTIMs.

**3. Preamble Mode**

- Long: higher quality but with lower performance than preamble short mode.
- Short: Normal quality but with higher performance than preamble long mode.
- Auto: select the proper preamble mode by current signal frame information.

**4.3.3 Statistics Page**

The Tx/Rx status of current wireless connection is shown. A statistics analysis of packet transition is listed.

Counter Name	Value
Tx OK	16
Tx Error	0
Rx OK	28
Rx Packet Count	28
Rx Retry	17
Rx ICV Error	0

For questions, please visit our website at [www.x-mediausa.com](http://www.x-mediausa.com)