Loopcomm

High Power
802.11g Wireless USB Adapter

Model:LP-9387C

USER MANUAL 1.0.0

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1 USING THIS DOCUMENT

This document provides detailed user guidelines for Wireless LAN USB Adapter operation and setting-up. Though every effort has been made to ensure that this document is up-to-date and accurate, more information may have become available subsequent to the production of this guide.

2 INTRODUCTION

Thank you for purchasing Wireless LAN USB Adapter.Wireless LAN USB Adapter is a perfect combination of both performance and cost-effective product introduced. It is sincerely hoped that you can enjoy the wireless world through this solidly profiled wireless adapter.

It provides a full solution of all the IEEE 802.11 b/g protocols, that pass the WiFi tests and are compatible with all the wireless products with WiFi logo. If you have a Wireless LAN USB Adapter on hand, it means you can connect to the wireless world without any difficulty.

It also provides all the data rates in the IEEE 802.11 b/g standards, with both short and long preambles to ensure the compatibility of legacy wireless products and new ones, saving the panic works for end users to find compatible products.

Since the security issue has become one of the most important one in the wireless society, it provides you with the full security coverage from the 64/128bits WEP encryptions, second generation WPA-PSK encryption, to the most advanced WPA2-AES encryption. WPA2 is the latest security standard currently approved by WiFi standards.

Saving mode, Ad hoc wireless Lan, Wake on Lan (WOL) and other exciting features are also included in this Wireless LAN USB Adapter. This user manual will guide you through these exciting features in the following chapters and we is believed that you will be greatly satisfied with its performance and ease of use.

3 SYSTEM REQUIREMENTS

Windows System : Windows 98SE, Me, 2000, XP32, XP64, Vista32, Vista64.
PCs must have a device driver installed. It allows you to communicate with WLAN USB Adapter.

4 Driver Installation and Uninstallation

Warning! Do not cover or block the airflow to the adapter. The adapter will reach a high temperature during use.

4.1 Driver Installation

Before you proceed with the installation, please notice the following descriptions.

Notes1:

The following installation was operated under Windows XP.
(Procedures are similar for Windows 98SE/Me/2000/vista.)

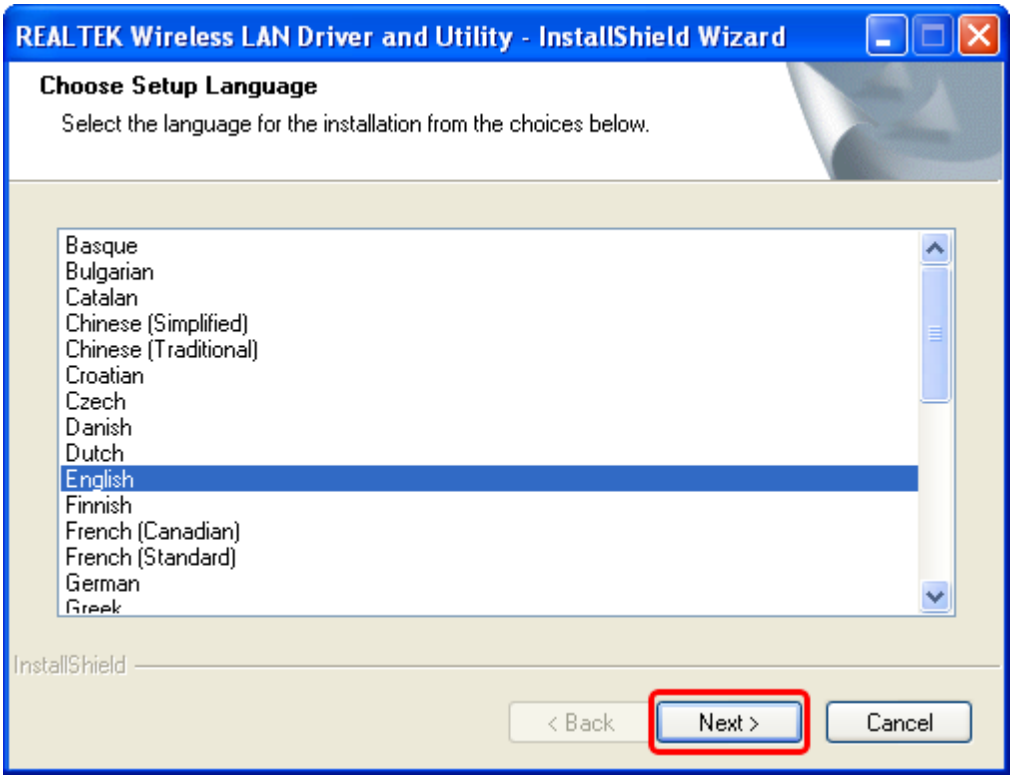
Notes2:
If you have installed the WLAN USB driver & utility before, please uninstall the old version first.

Do not plug the wireless LAN USB adapter into your computer USB port before installing the software program

Insert the software program CD , then auto installation window pops up on following:

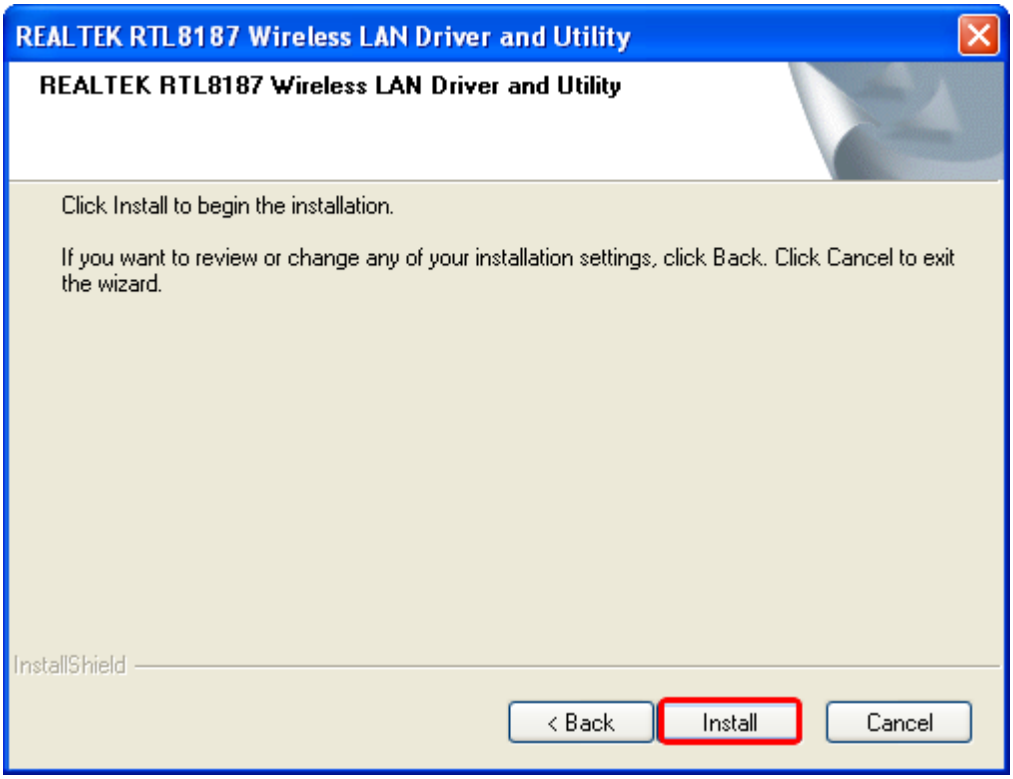
Step1:While the following screen pops out, click Driver Installation
Or browser the CD, click setup.exe
X:\Drivers\RTL8187L\Windows\8187_L1313\setup.exe (X mean CD-ROM)

Step2:Choose a setup language. Click Next to process the installation.



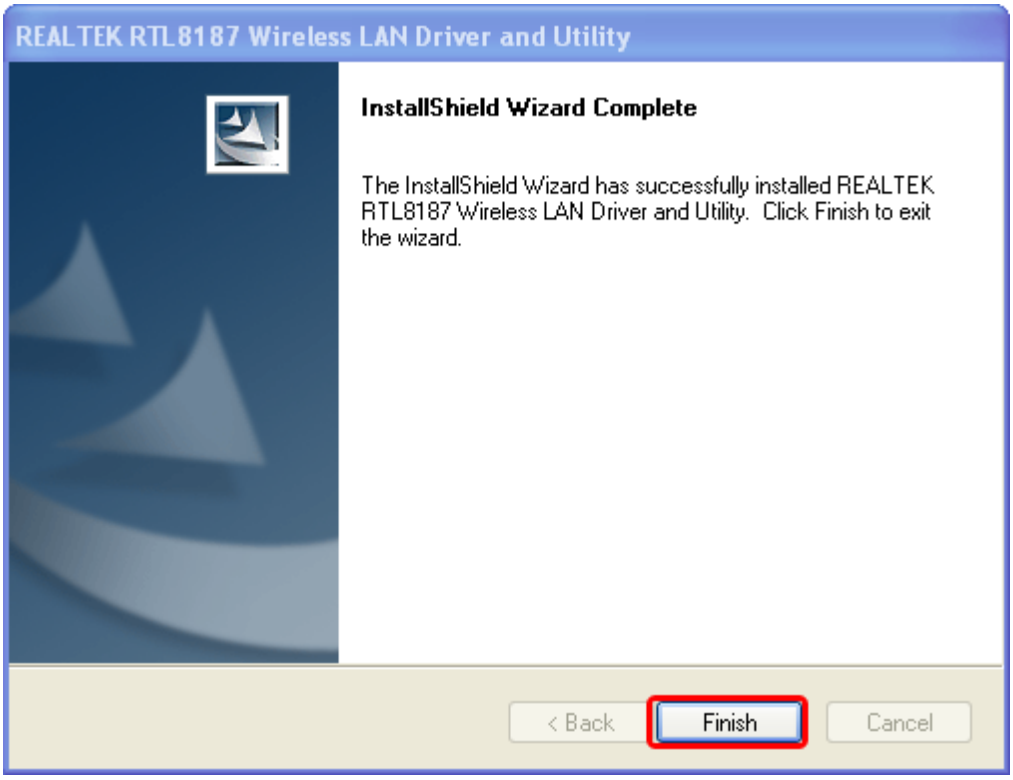
Step3:Click Next

Step4:Click Install

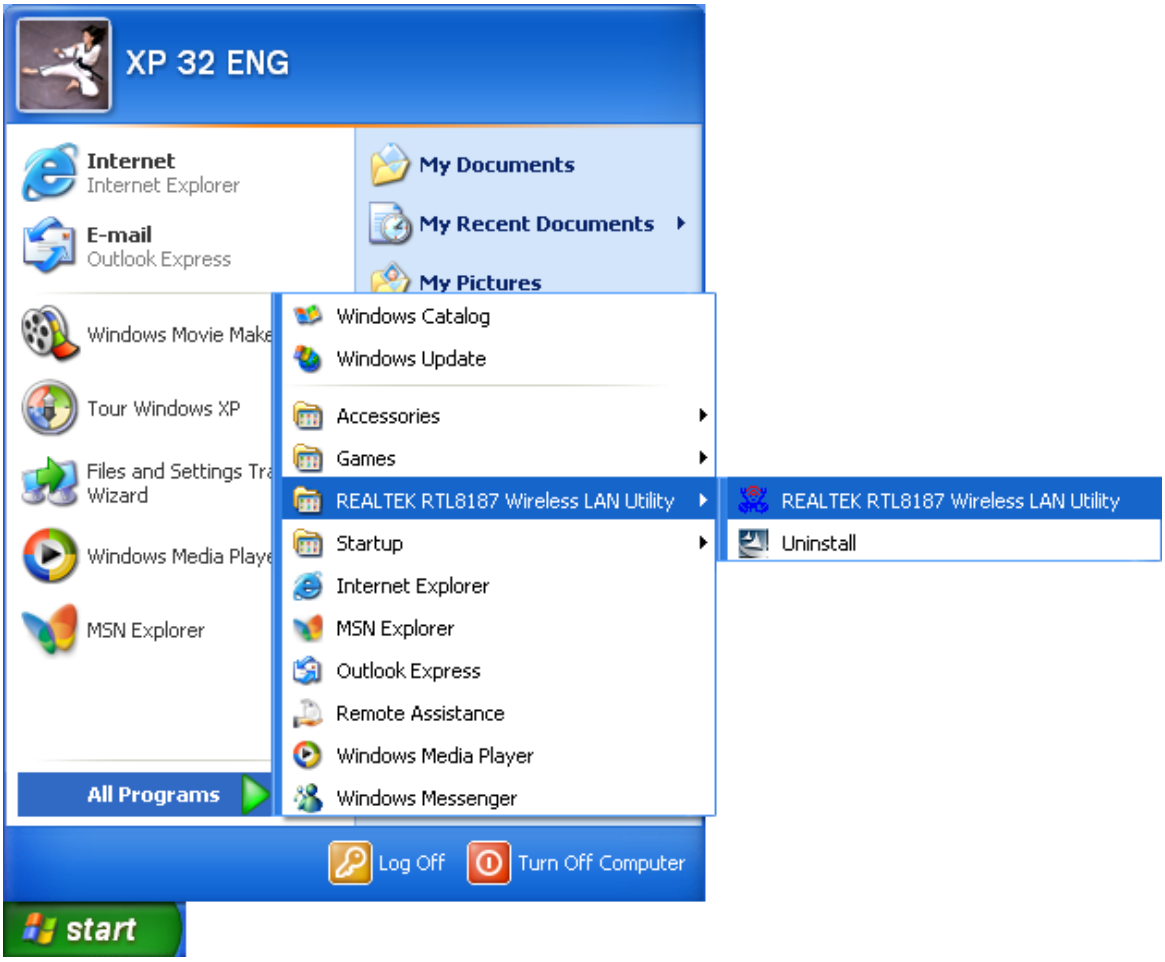


The system starts software installation of the WLAN USB adapter.

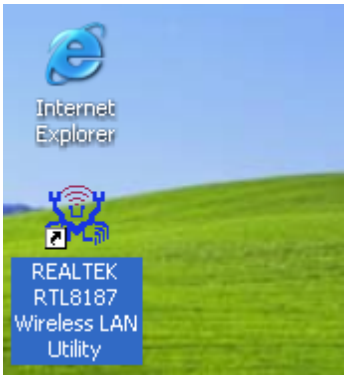
Step5:Click Finish to complete the installation.



After click Finish to complete the installation , under Windows XP <ALL Programs> menu , REALTEK USB wireless LAN Utility program installed.



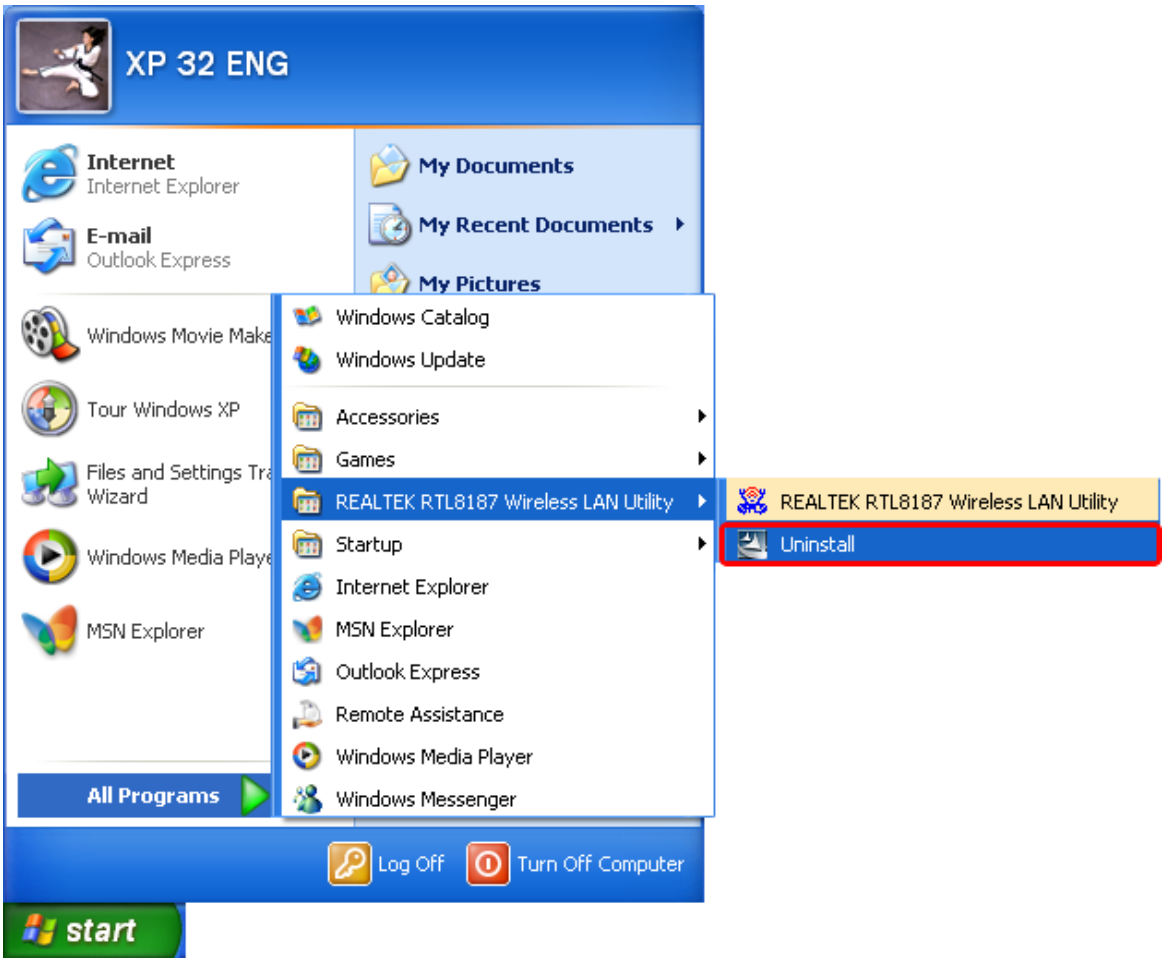
Realtek Utility shortcut on the desktop.



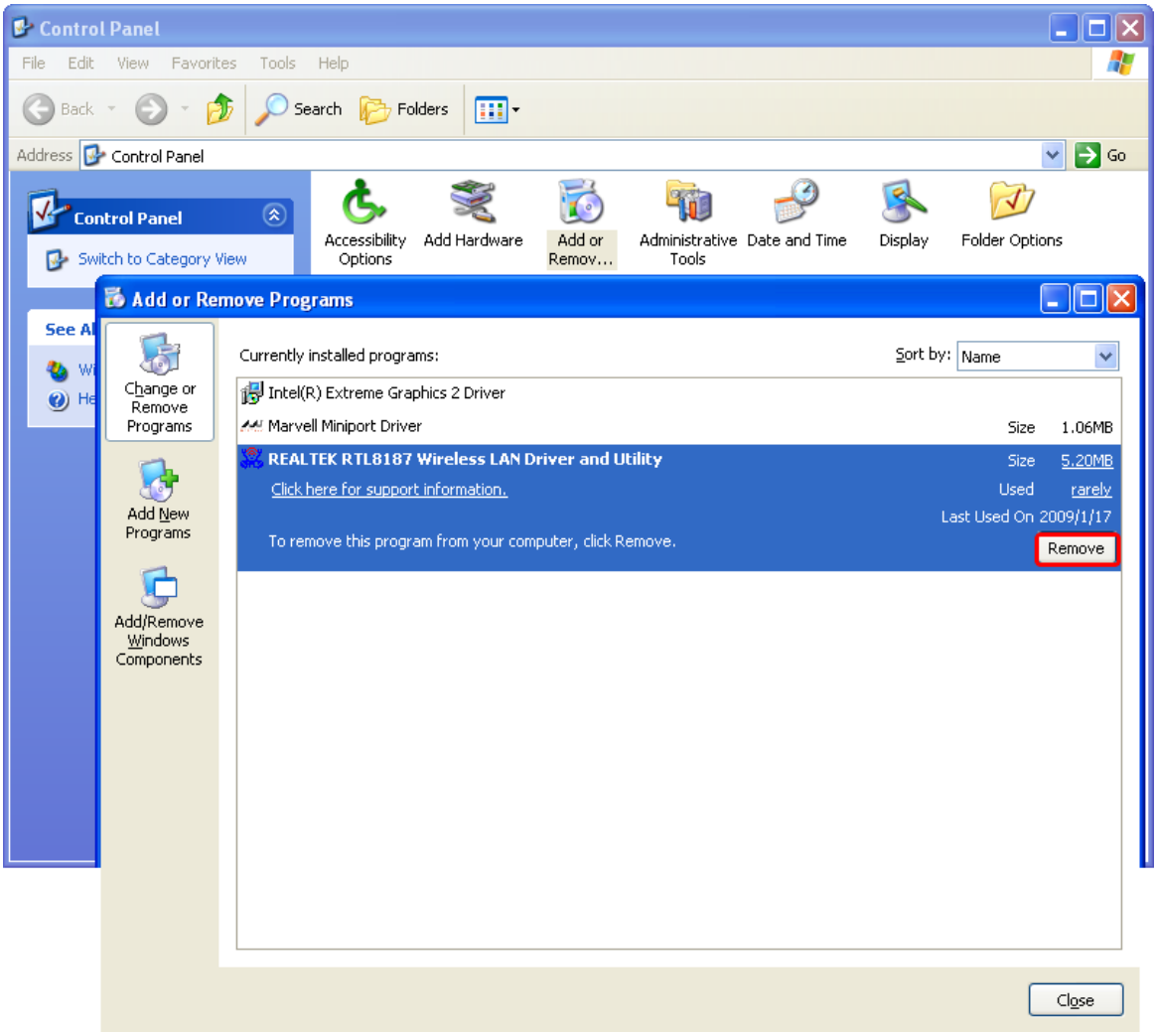
Insert the wireless LAN USB adapter into your computer USB port , the computer detected and active the wireless LAN USB adapter automatically.

4.2 Driver Uninstallation

Step1:
Uninstall the WLAN USB Adapter Driver from "Start">"All Programs" >"REALTEK RTL8187 Wireless LAN Utility">Click "Uninstall" to remove Wireless LAN USB Adapter driver.

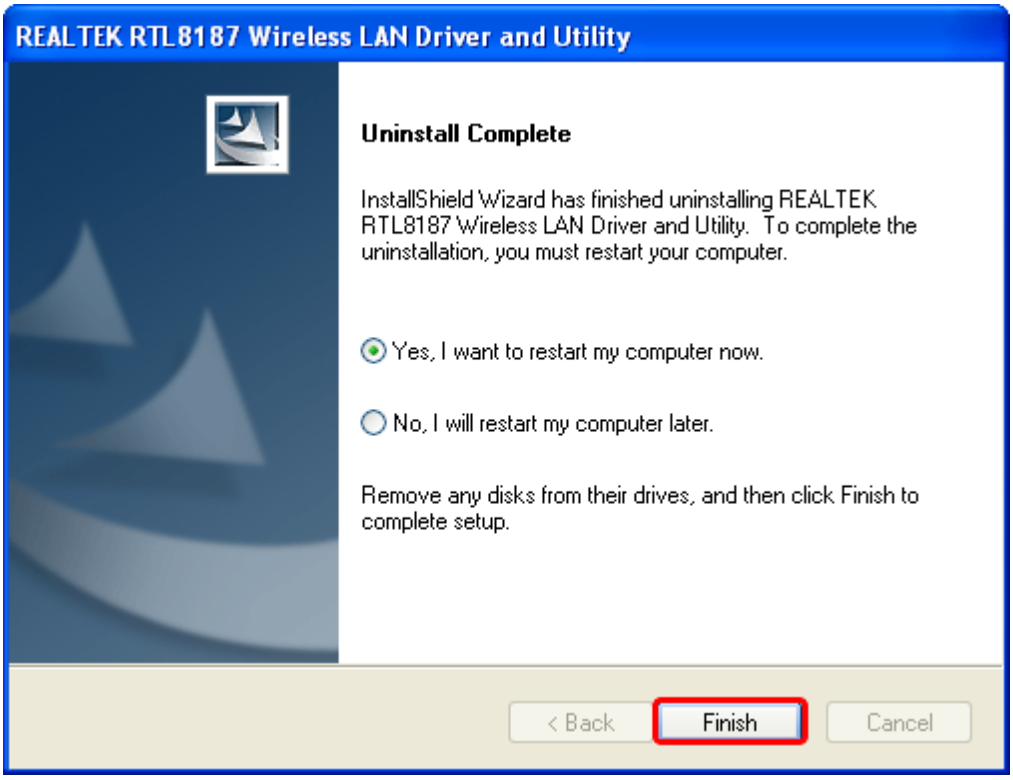


Open Control Panel and click Add or Remove Programs.
Select REALTEK RTL8187 Wireless LAN Driver and Utility
Click Remove



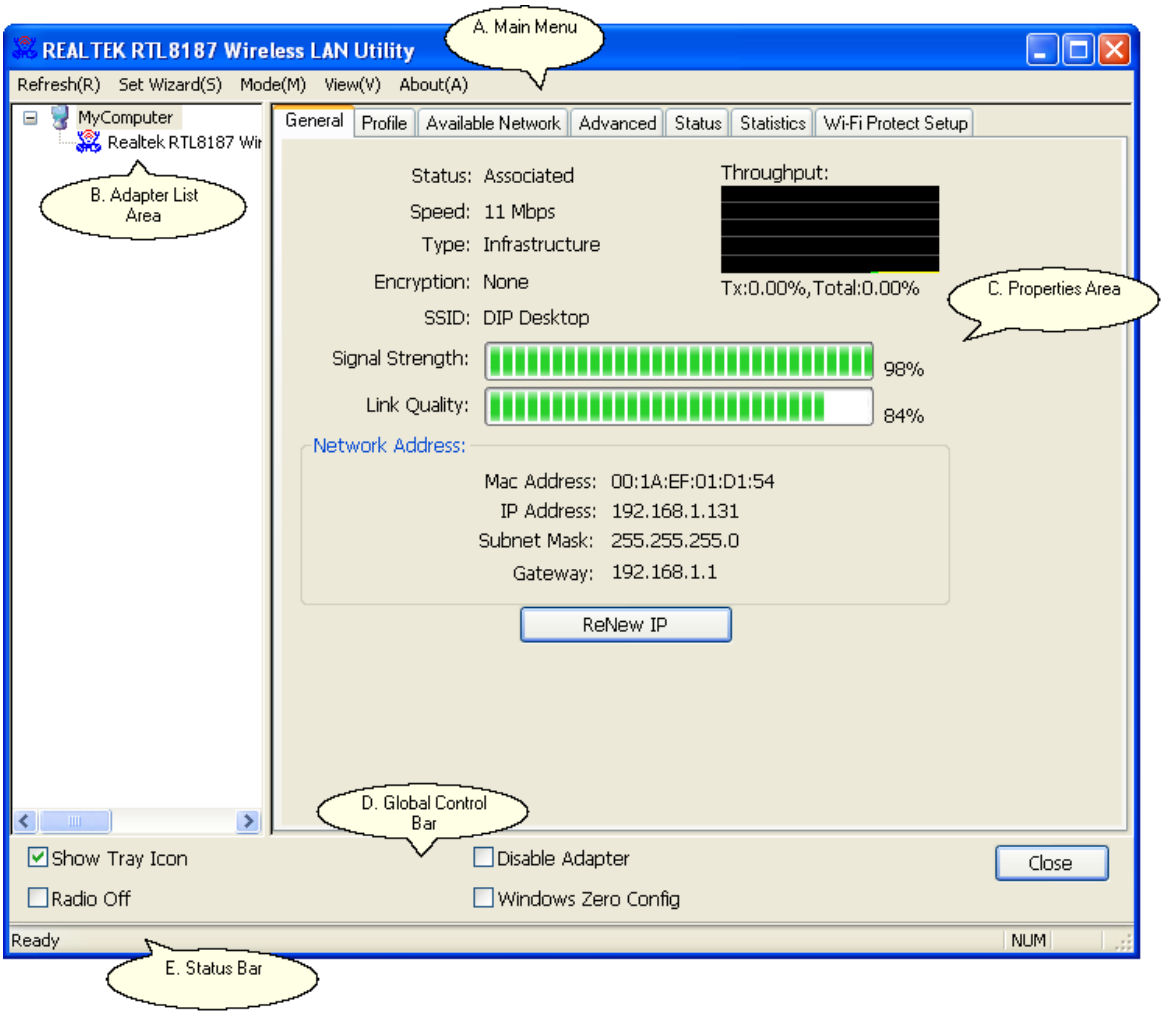
Step2:
Click Yes.

Step3:
Click Finish to complete the uninstallation.And restart computer.


REALTEK RTL8187 Wireless LAN Driver and Utility
Uninstall Complete
InstallShield Wizard has finished uninstalling REALTEK RTL8187 Wireless LAN Driver and Utility. To complete the uninstallation, you must restart your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish
Cancel

5 Wireless LAN Management GUI

Introduction of Main Window



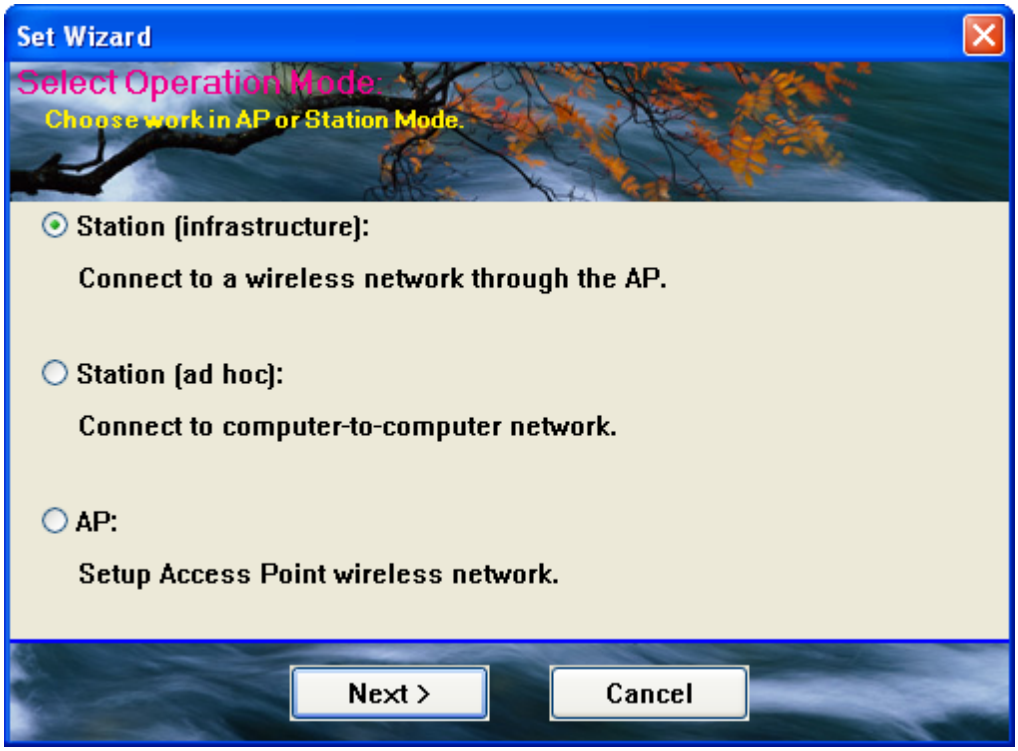
A. Main Menu

1. Refresh(R)
When clicking the refresh menu, you can update and re-enumerate the contents of adapter list area.

2. Set Wizard(S)

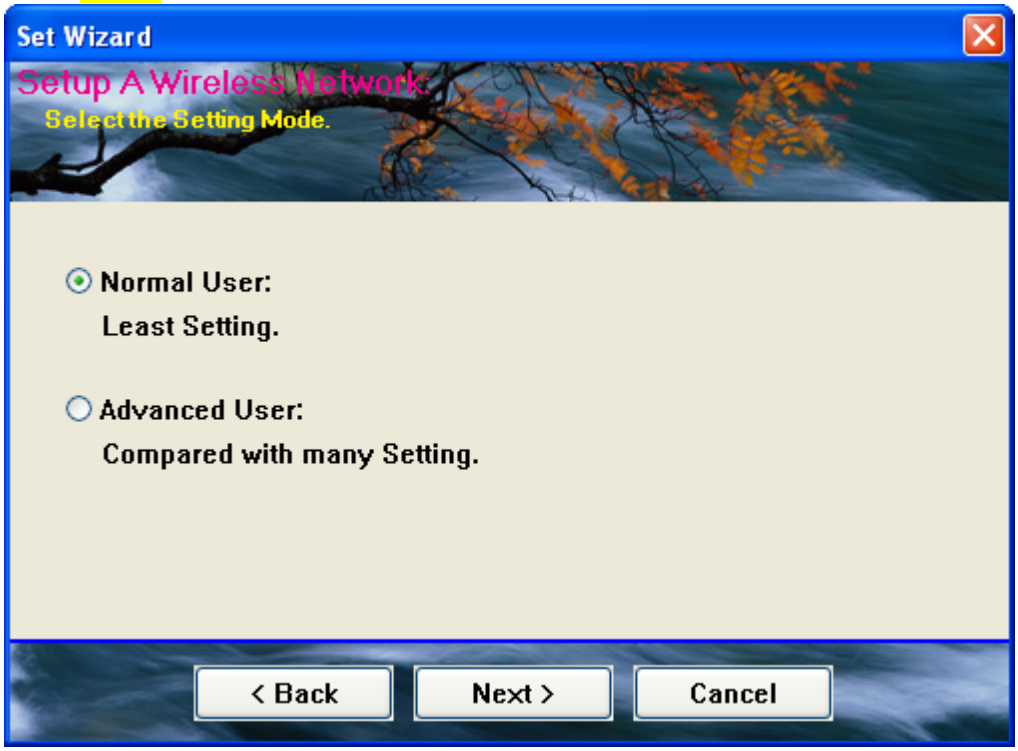
2.1 Wizard-1

Click Set Wizard(S) menu to enter operation wizard. Click AP: Setup a wireless network. To configure Access Point parameters. Next to continue. Cancel to leave wizard



2.2 Wizard-2

Clcik Next>

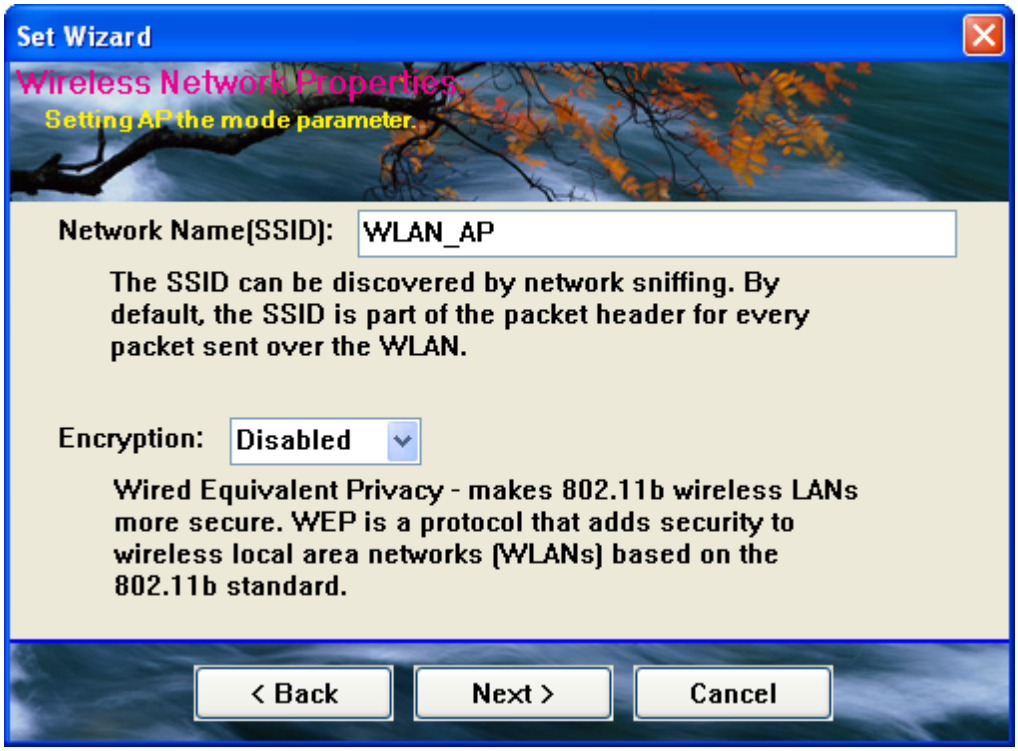


2.3 Wizard-3

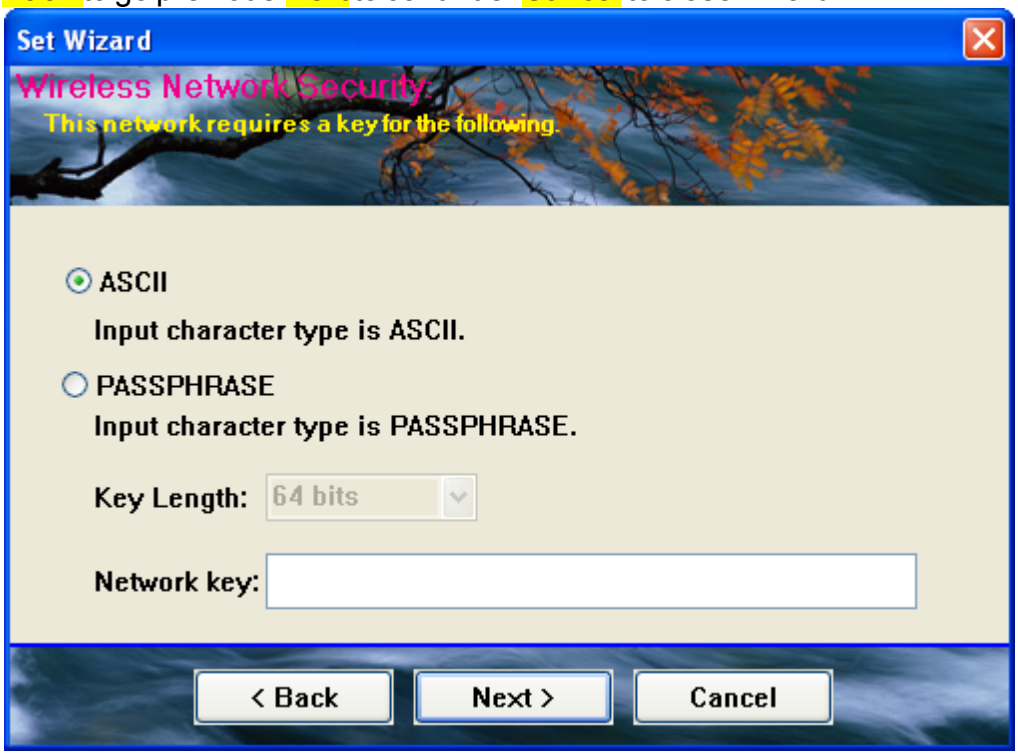
User defines wireless network Name [SSID](less than 32 characters). User may skip wireless security.

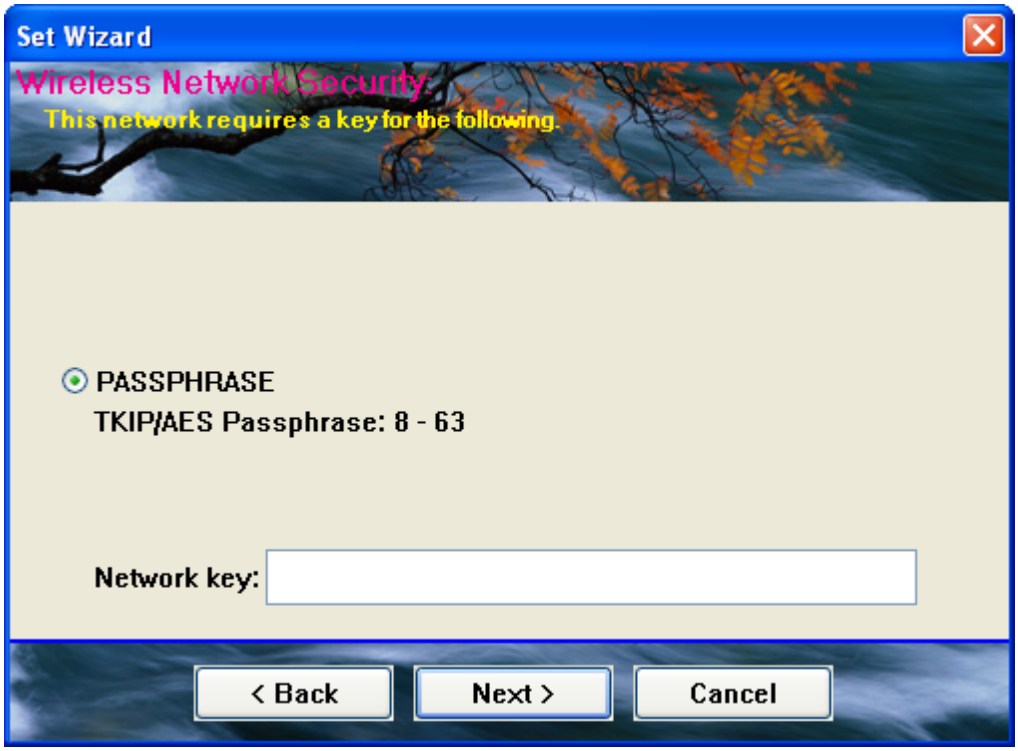
Strongly recommend user to setup wireless security to avoid invalid users.

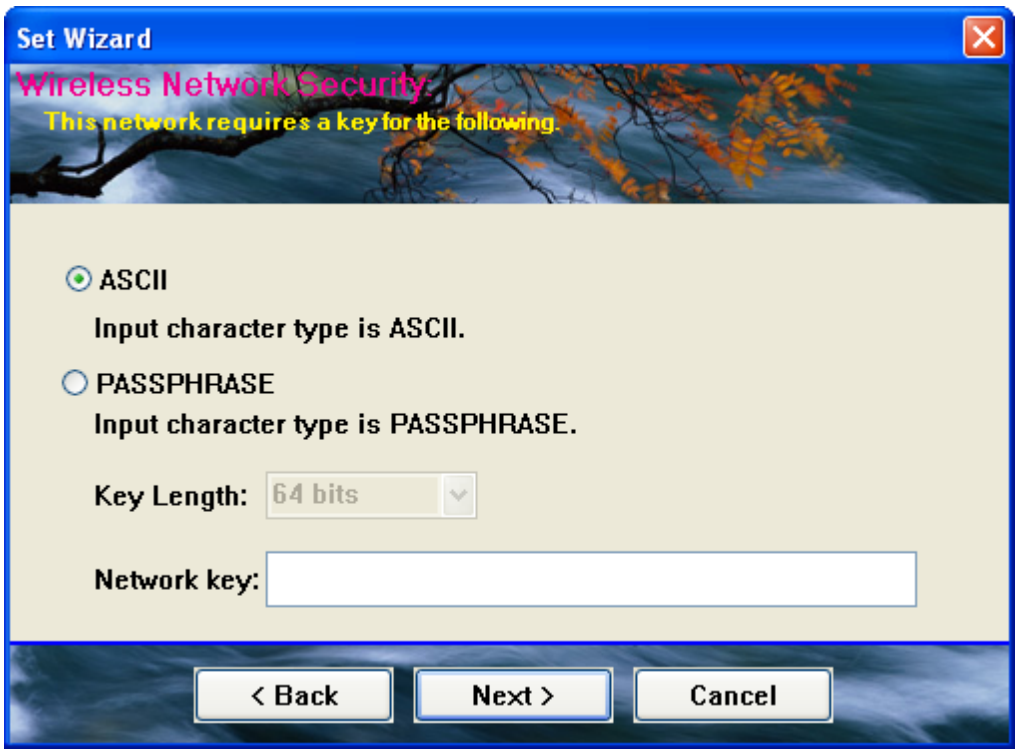
Back to go previous. Next to continue. Cancel to close wizard.



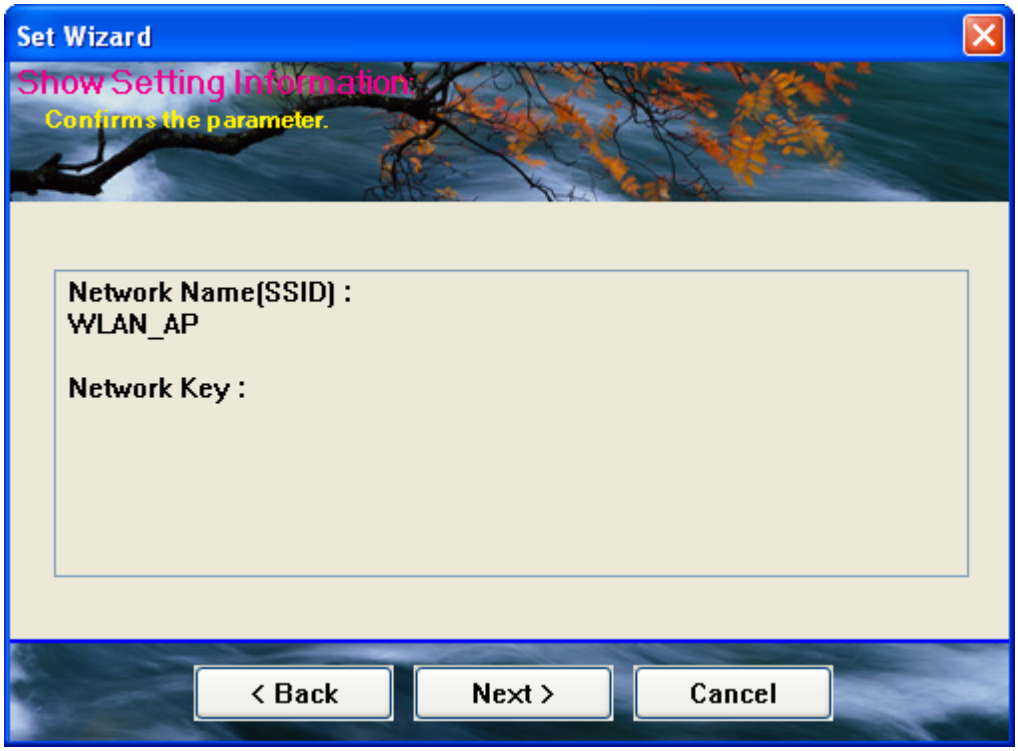
2.4 Wizard-4 (Encryption:Enable)
Back to go previous. Next to continue. Cancel to close wizard.





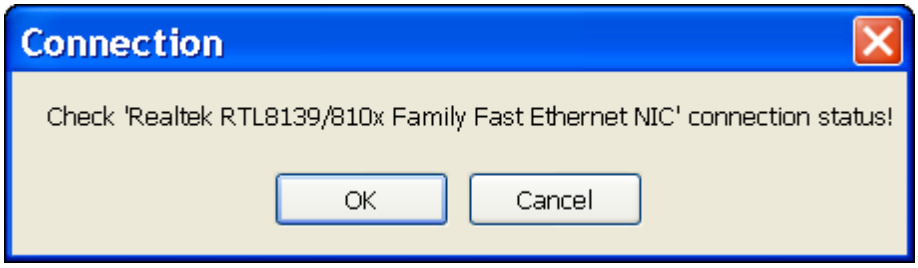


2.5 Wizard-5
This page shows SSID & Security settings
Back to go previous. Next to continue. Cancel to close wizard.



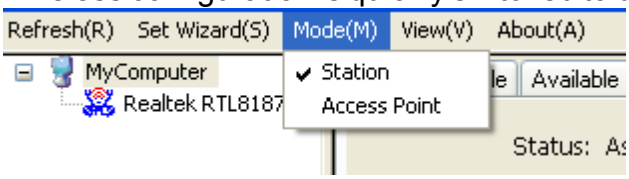
2.6 Wizard-6
Select device that connects with internet.
Back to go previous. Next to continue. Cancel to close wizard.

Click OK



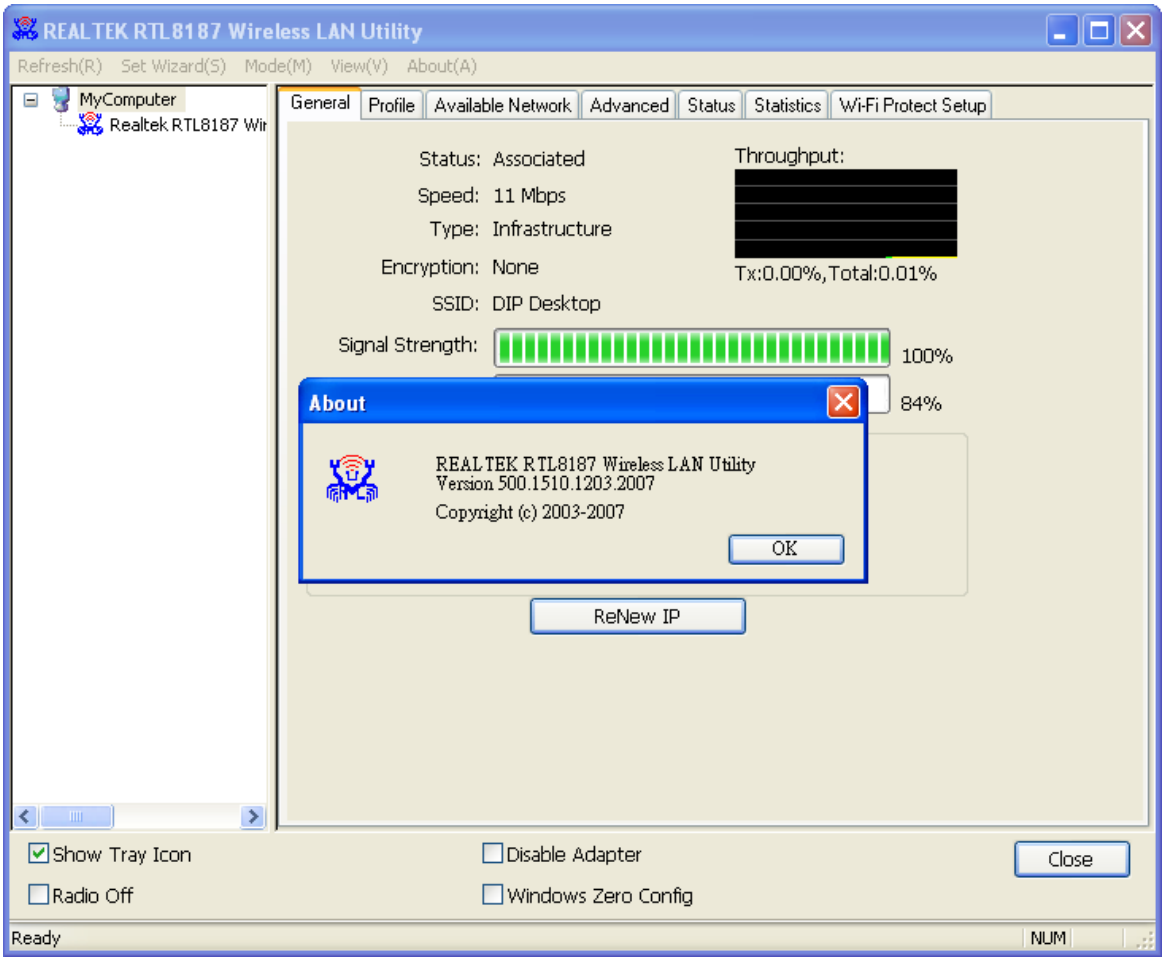
2.7 Wizard-7
Show all settings under AP mode. Click Finish to complete wizard setup.

3. Mode(M)
Wireless configuration is quickly switched to be either [Station] or [Access Point].



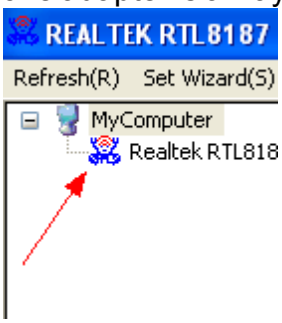
4. View (V)
Enable/disable the presence of E. Status Bar. Without the check mark (v) the E. Status Bar will be hidden.

5. About (A)
Click the "About" to show the about dialog. The application version and license information are shown in the about dialog.



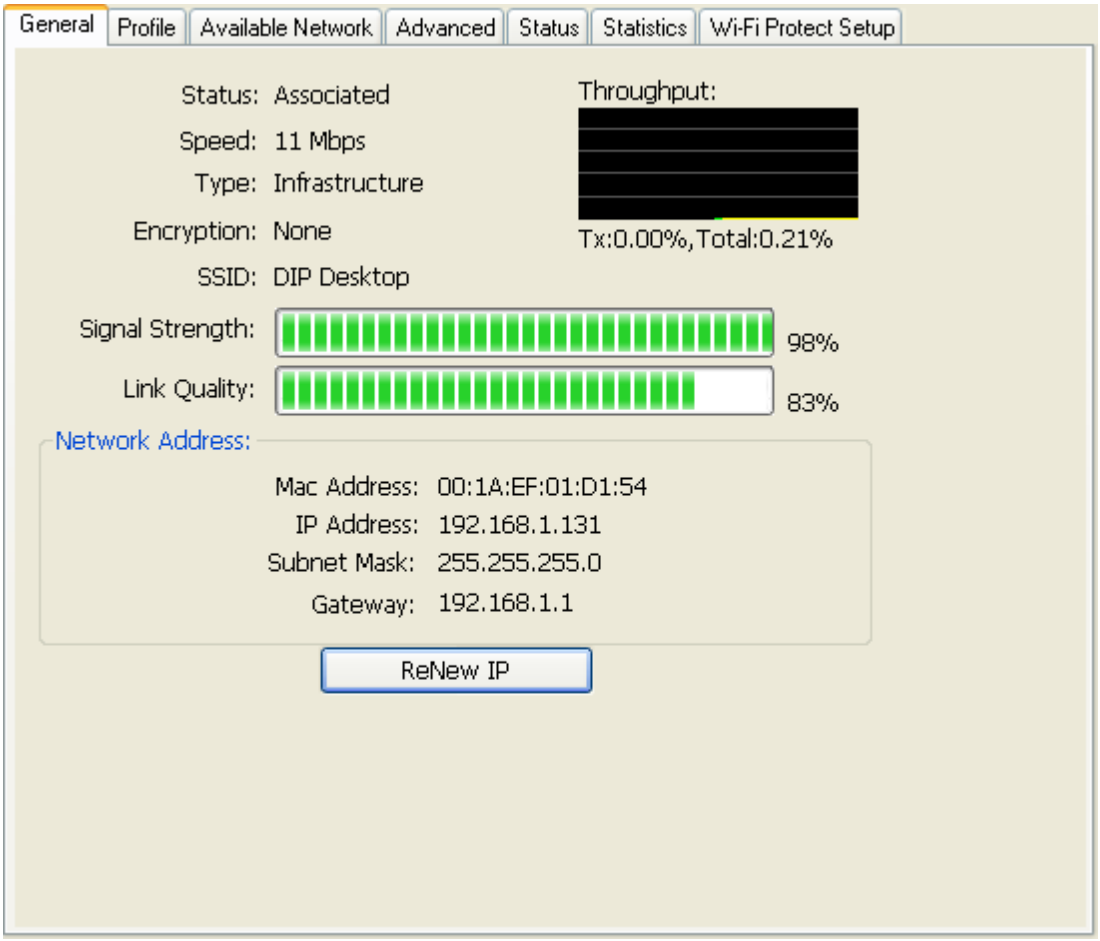
B. Adapter List Area

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 dependant 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.



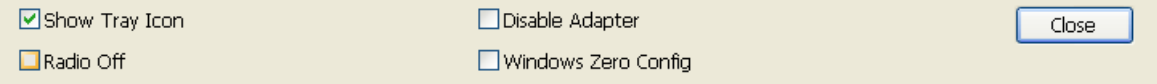
C. Properties Area

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.



D. 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.

❑Client mode utility running but no WLAN Adapter plugged.

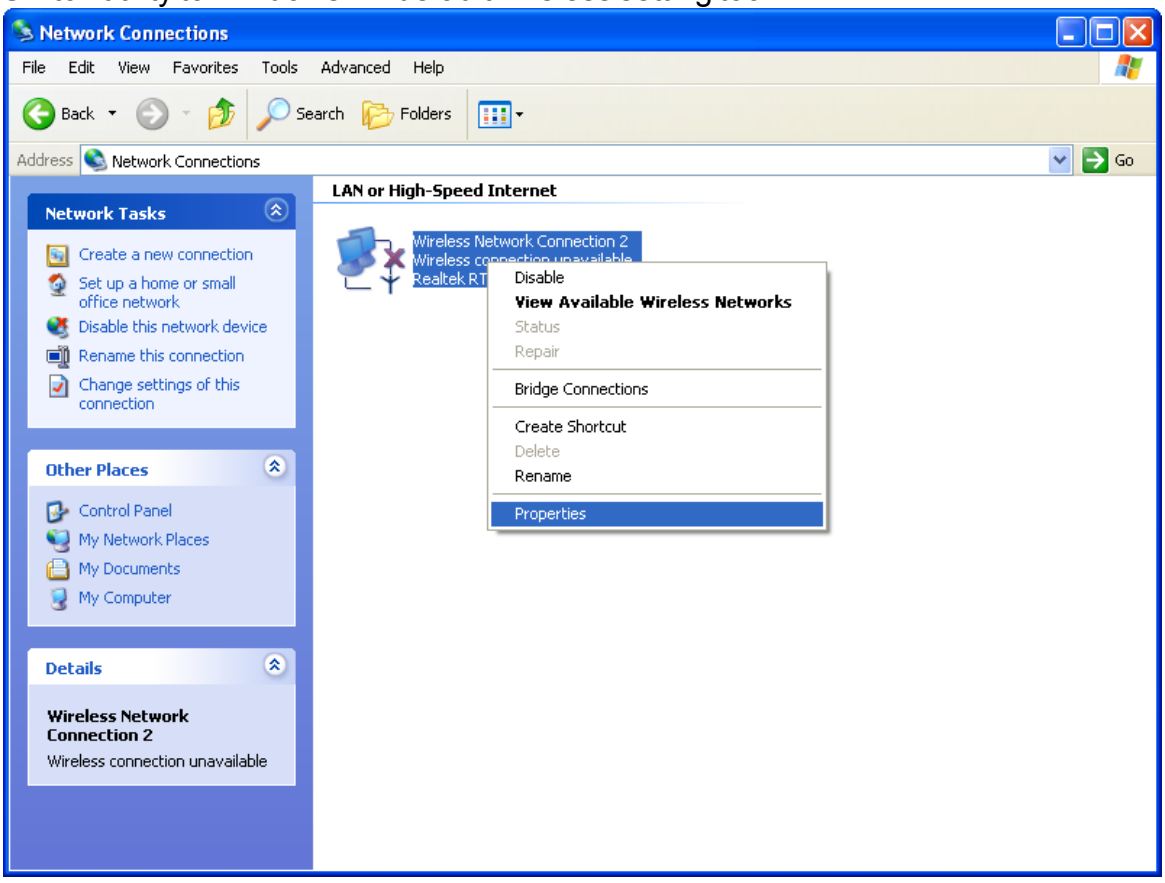
❑Client mode utility running and WLAN Adapter scan available network.

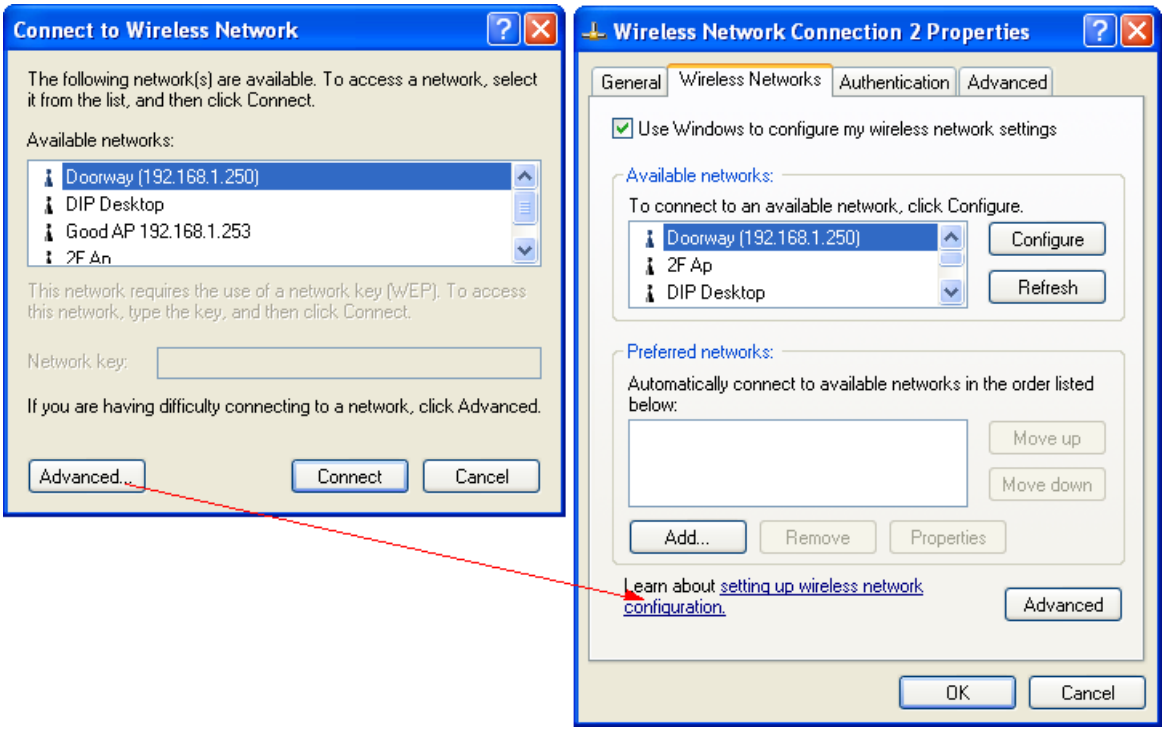
❑Client mode utility running and WLAN Adapter can not scan any AP.

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.

Windows Zero Config
Switch utility to Windows XP default wireless setting tool.



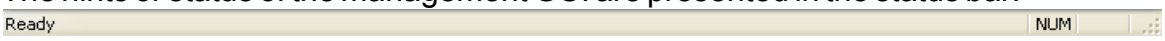


Close

Whether to check or uncheck "Show Tray Icon" is to shutdown or hide the management GUI.

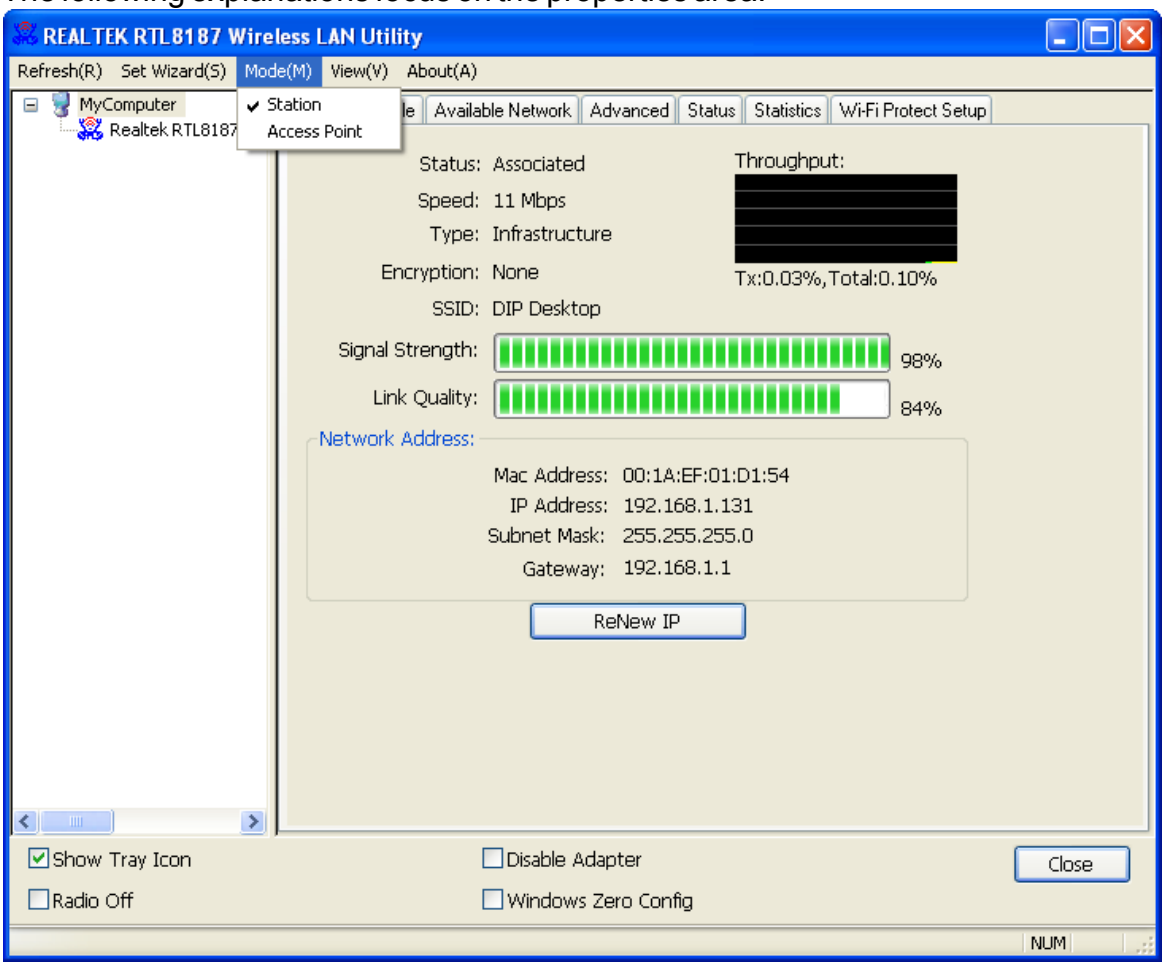
E. Status Bar

The hints or status of the management GUI are presented in the status bar.



5.1 Station Mode

The following explanations focus on the properties area.

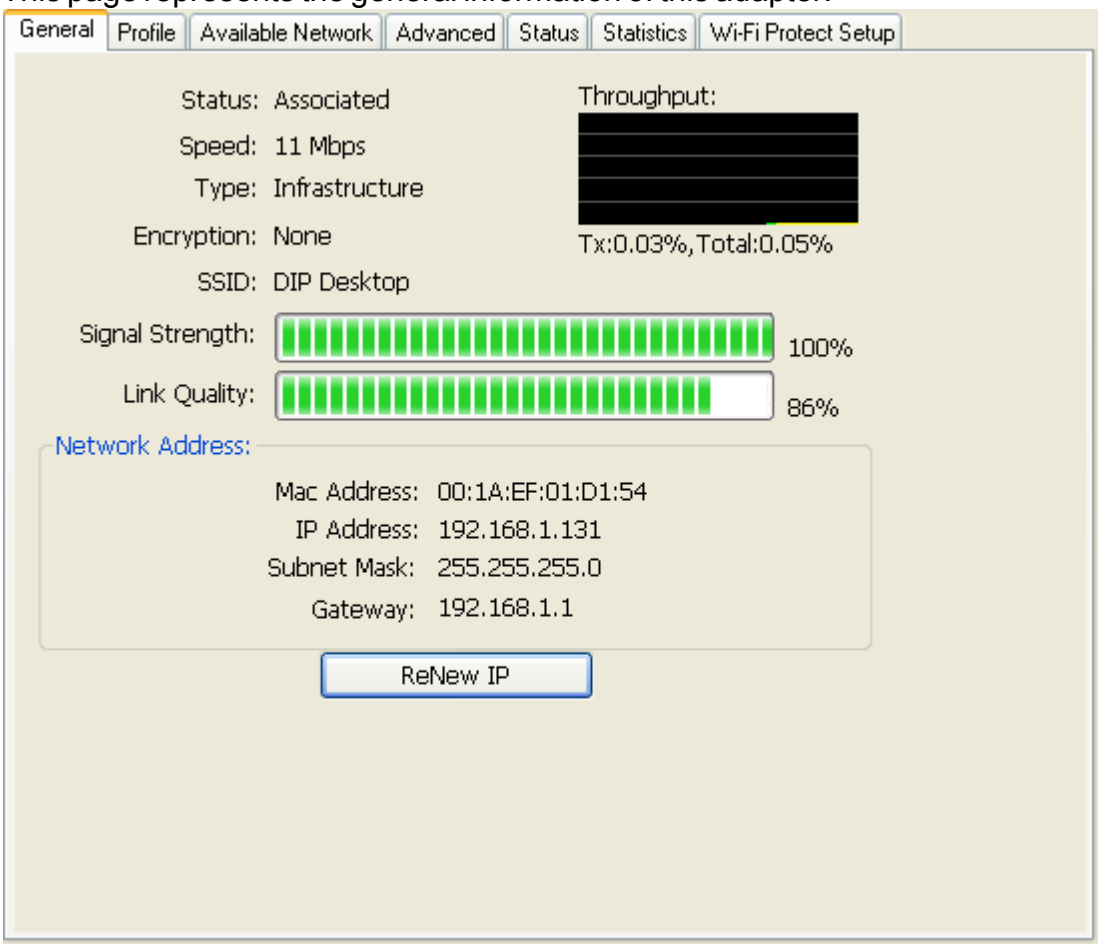


Infrastructure and Ad-Hoc

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.

5.2 General Page

This page represents the general information of this adapter.



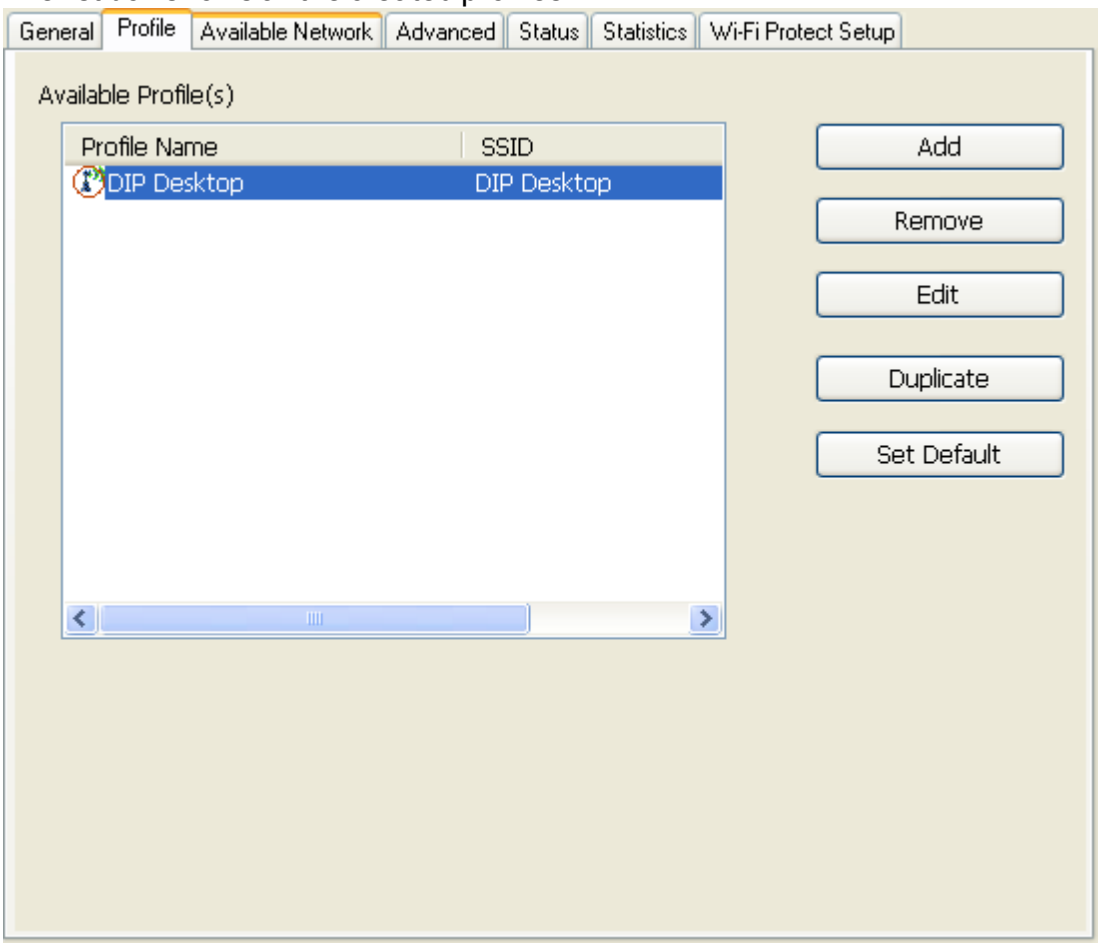
1. Status
The status of station connection to AP.
2. Speed
Current transition speed in Mbps (Mega-Bits-Per-Second).
3. Type
Current wireless LAN configuration type.
4. Encryption
Current encryption mode used.
5. SSID
Name of wireless network.
6. Signal Strength
The average signal quality of packets received 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 2555.255.255.0
¦ Gateway: It comes from connected AP. Your system can not

connect internet with this field empty.

5.3 Profile Page

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

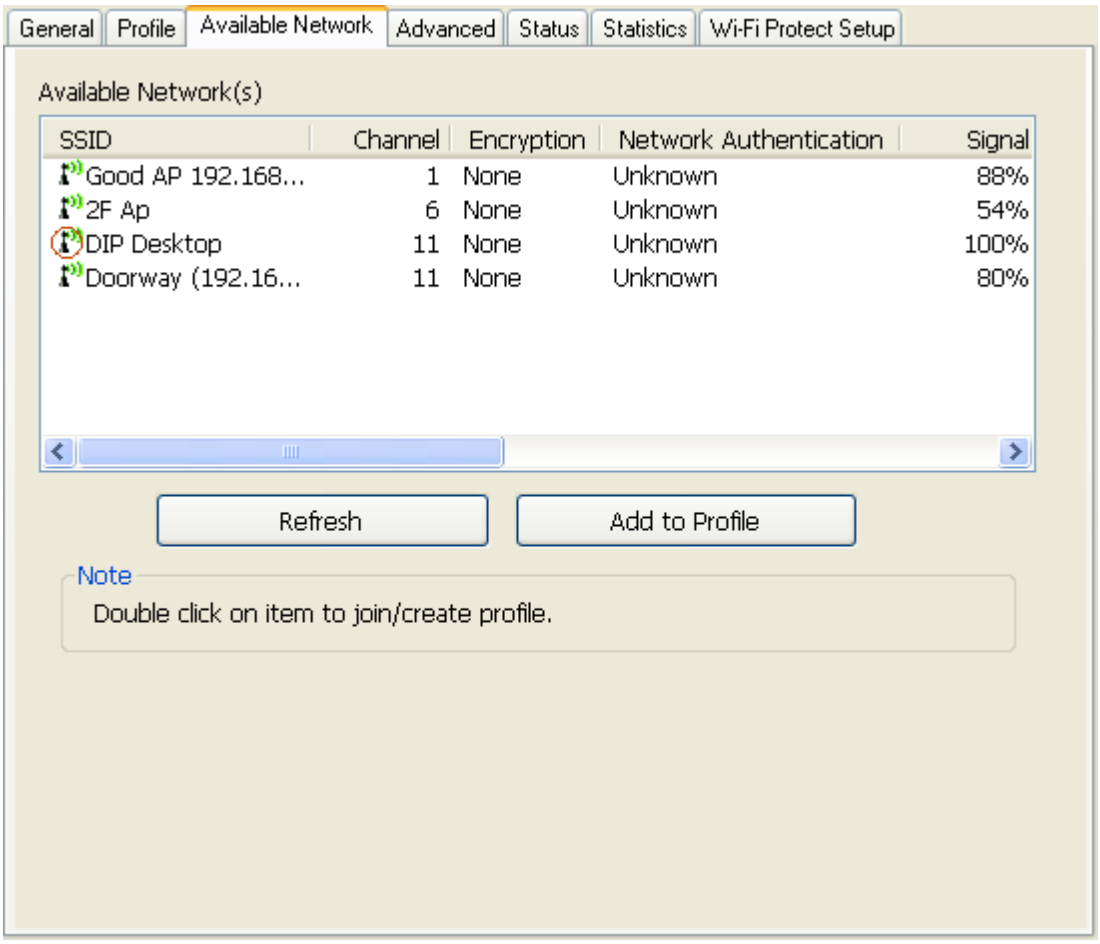
Available Profile(s)
The list box shows all the created profiles.



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.

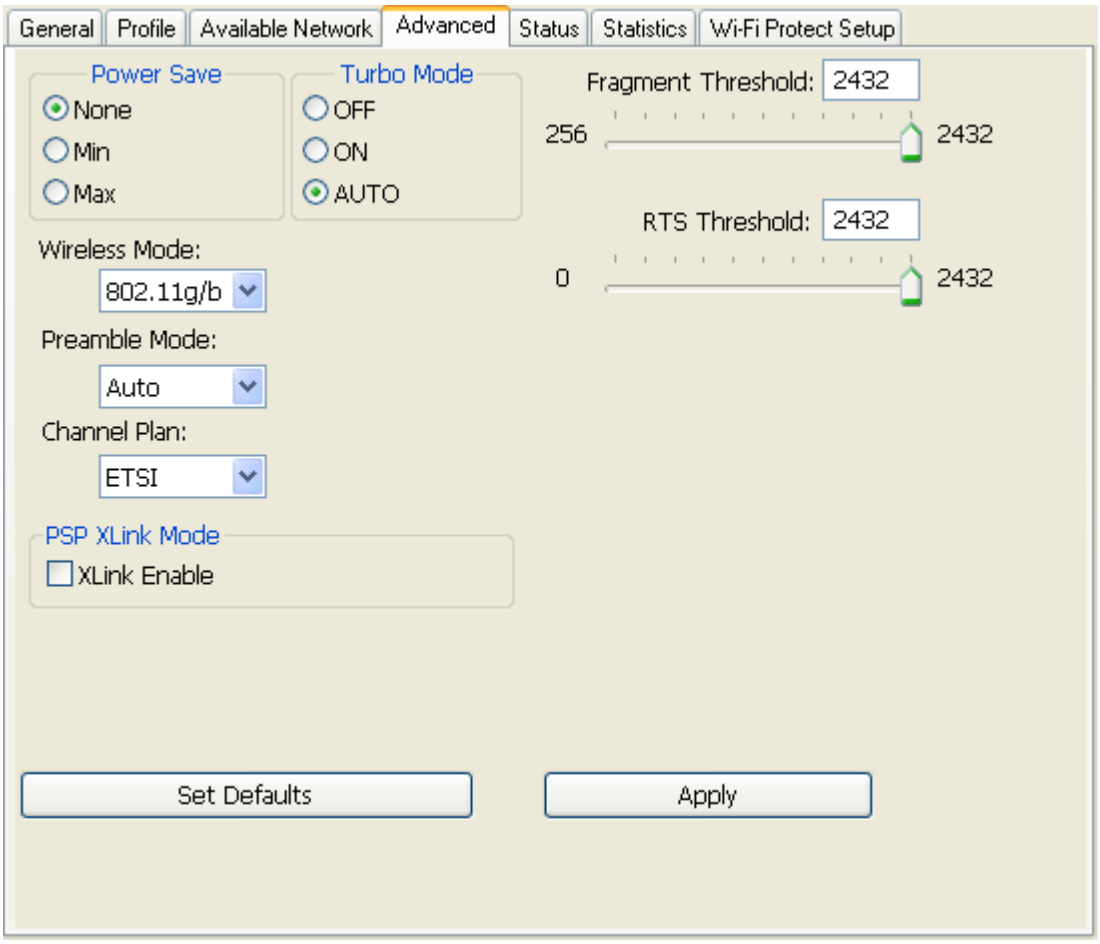
5.4 Available Network

Show network connection around this system



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

5.5 Advanced Page



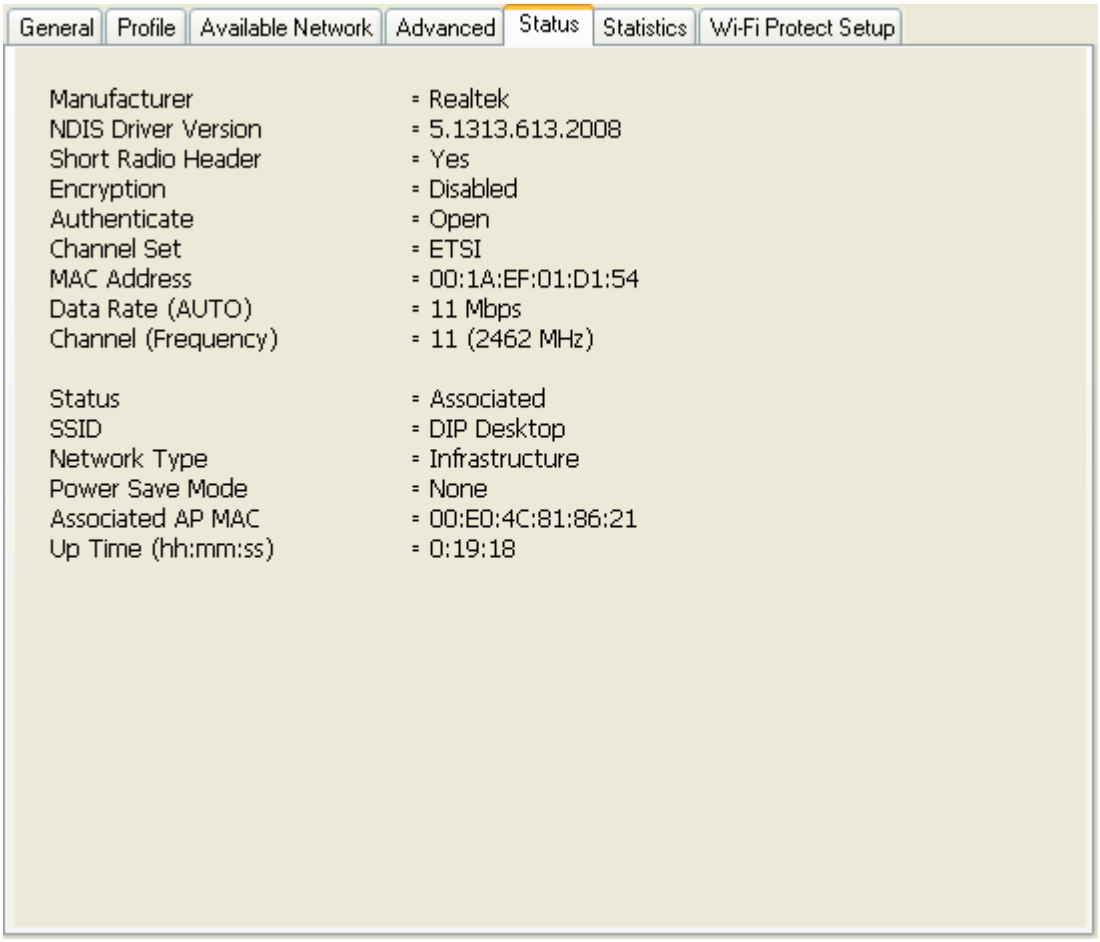
1. Power Save
   None: without power save function.
   Min: wake up more frequently to receive packets.
   Max: wake up less frequently to receive packets.
2. Wireless Mode
   802.11b
   802.11g/b
3. 802.11b Preamble Mode
   Long: higher quality but with lower performance than preamble short mode.
   Short: Normal quality but with higher performance than preamble long mode.
   Auto: use the preamble mode of current.
4. Fragment Threshold
   The threshold of fragment length. Higher threshold increase data transition performance with good signal quality. However, in a poor signal quality environment, data throughput might be worse on high fragment threshold than low fragment threshold. 5. RTS Threshold
   Threshold of Request To Send mechanism. The RTS frame will not send out until the packet size over threshold.
6. Set Defaults
   Restore the default value to be current settings.

Warring: Country Code selection feature to be disabled for products marketed to the US/CANADA

7. Apply

Apply the current settings to GUI.

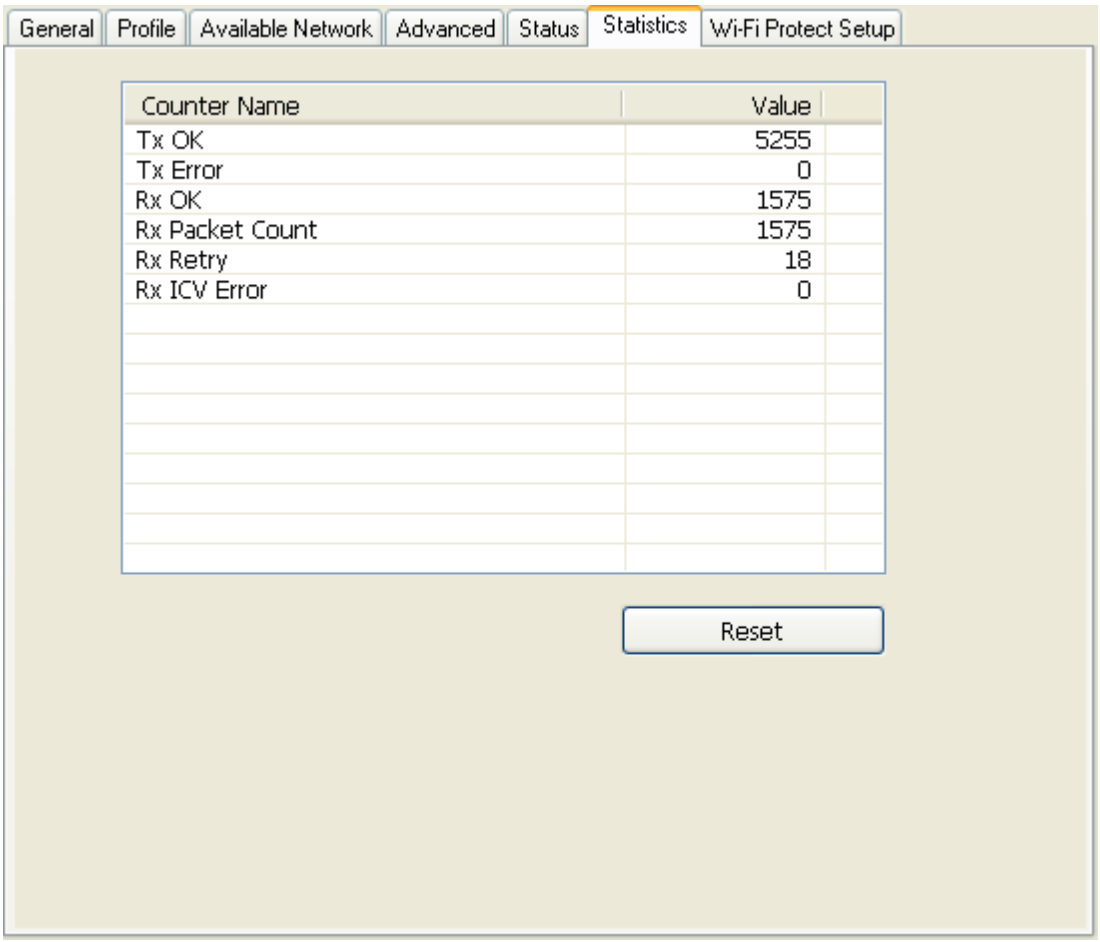
5.6 Status Page



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

5.7 Statistics Page

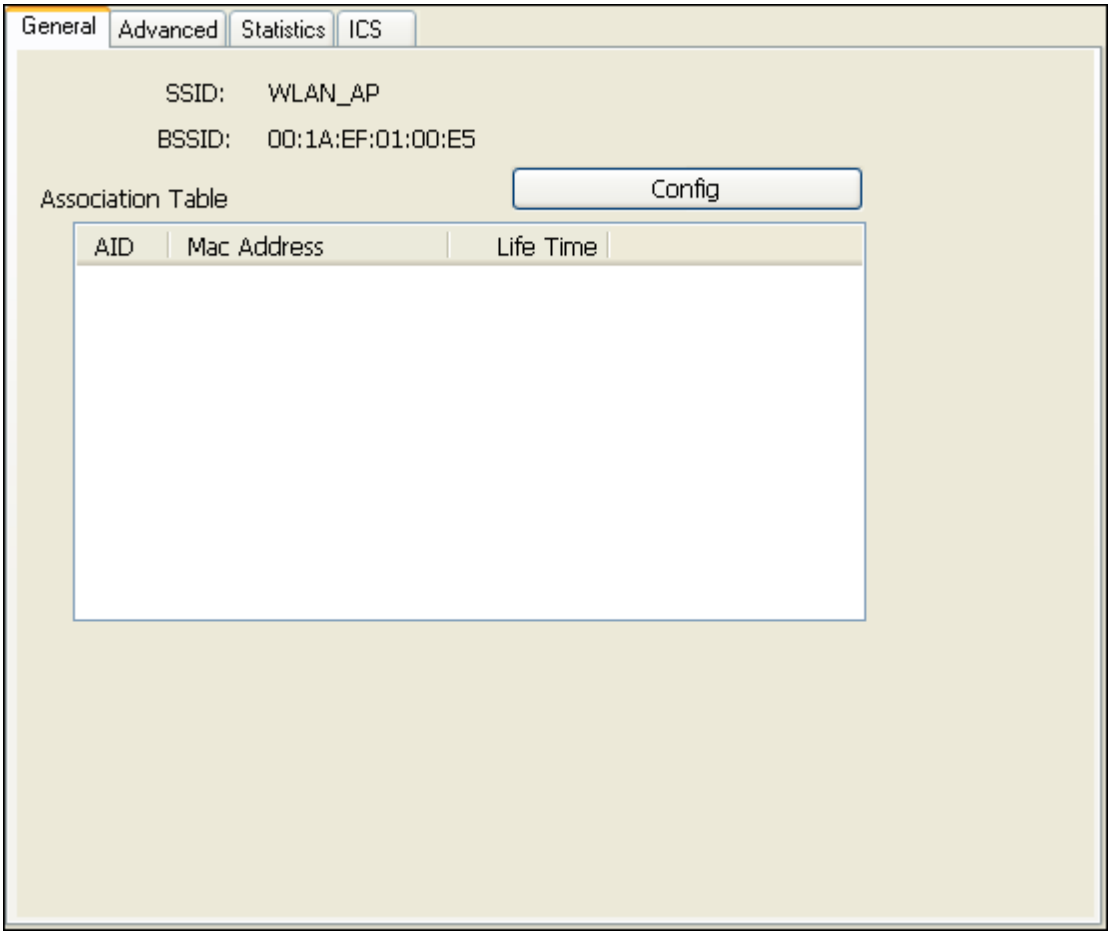
You could watch the Tx/Rx status of current wireless connection. This page shows a statistic analysis of packet transition.



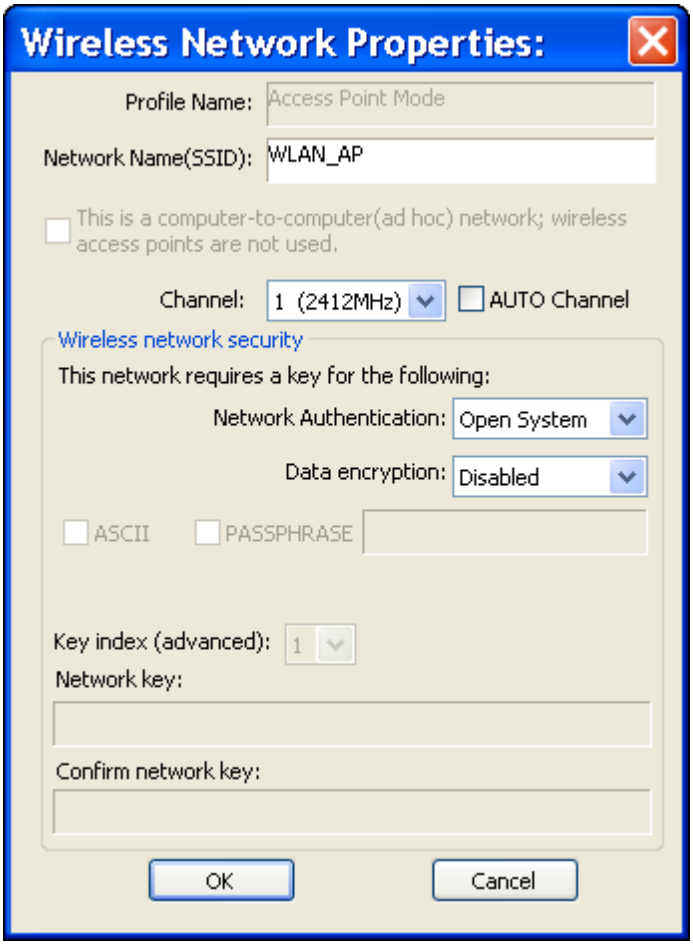
6 Access Point Mode

6.1 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-digital 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.



a. Network Name (SSID)
Name of the AP searchable by other wireless nodes. The length of SSID should be shorter than 32 characters.
b. Channel
Select the wireless channel within current channel plan.
c. Network Authentication & Data Encryption
- 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 unauthouized login.
- WPA-PSK + TKIP & WPA2-PSK + TKIP

The most advanced authentication and data encryption that provide the best security protection.
d. ASCII/ PASSPHRASE
- ASCII: You should provide either 5 or 13 ASCII characters on Network key edit box.
- PASSPHRASE: You could input words on Network
- Key edit box.

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

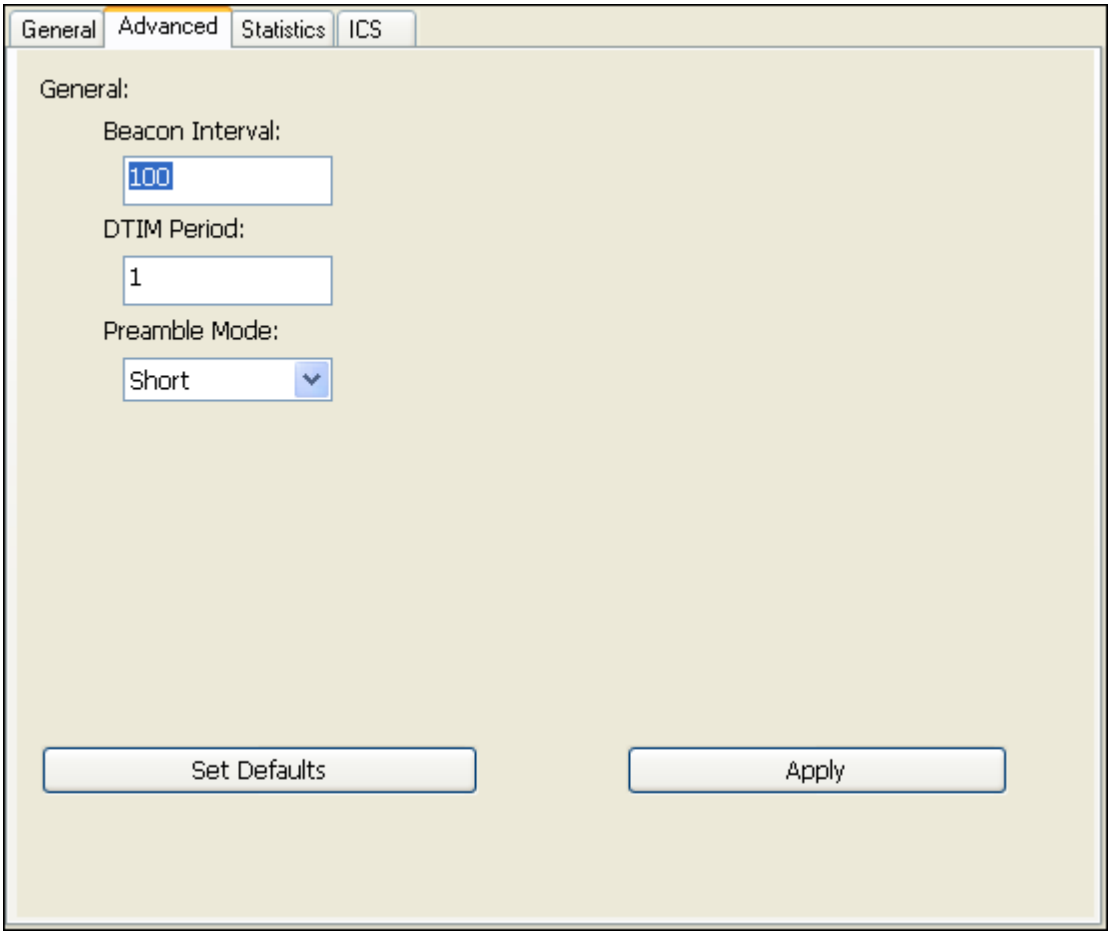
128 bits: The generated pass key is 128-bit to be complied with data packets.

- 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.

e. Key index (advanced) (1 ~4)
At most four key index to represent the opposite network key.

6.2 Advanced Page

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

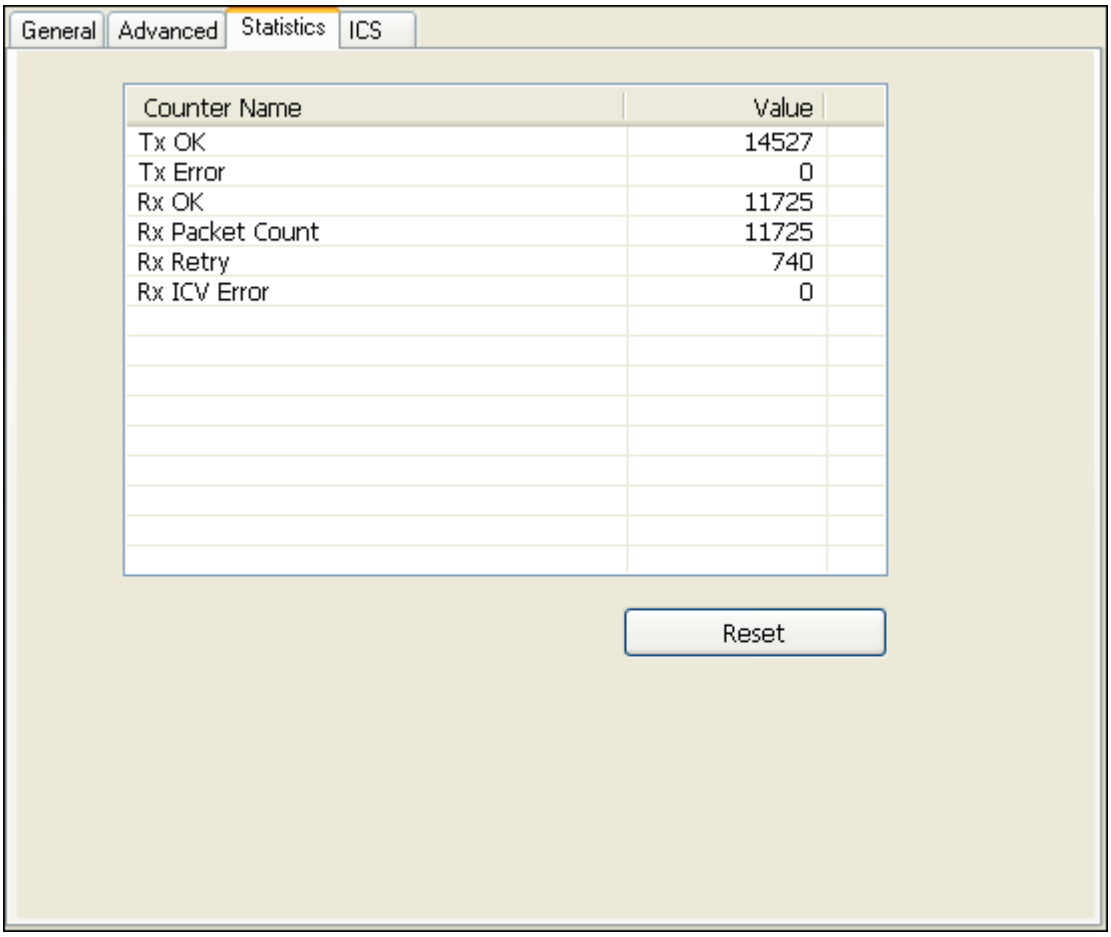


1. Beacon Interval
This filed indicates the interval between each beacon that this AP sends out in unit of TU (1024 micro-seconds).
2. DTIM Period
The DTIM Period field is the number of Beacon intervals between successive DTIMs.
3. Preamble Mode

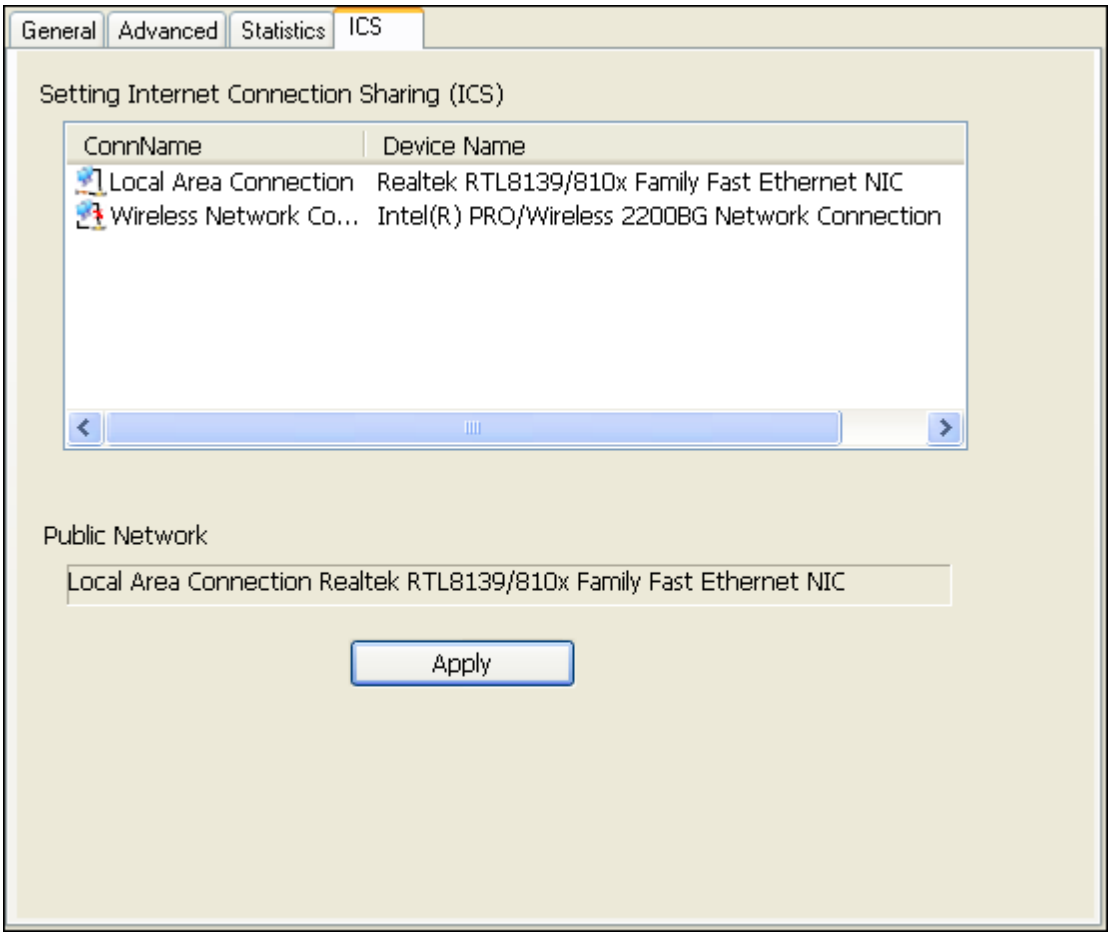
- Long: higher quality but with lower performance than preamble short mode.
- Short: Normal quality but with higher performance then preamble long mode.
- Auto: select the proper preamble mode by current signal frame information.

6.3 Statistics Page

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



6.4 ICS Page



1. ConnName
List all network connections to this system. You can pick up one from the listed item (s) whose network domain you would want to connect to.
2. Select
Make the desired network connection to public network.
3. ICS
Internet Connection Sharing. It enables this AP to create the domain to share this internet/intranet network connection.
4. Firewall
Any of a number of security schemes that prevents unauthorized users from gaining access to a computer network, or that monitors transfers of information to and from the network.
5. Apply
Execute the current settings.

FCC Warning 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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

FCC RF Radiation Exposure Statement:
1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
2. 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.