Unigen Corp. Wireless Module Products

UGWDR82NUH50A

San Gabriel WiFi 802.11b/g/n Modules
Quick Start Guide

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REVISION HISTORY

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PRODUCT INTRODUCTION

The Unigen UGWDR82NUH50A USB dongle supports 802.11b/g/n radio technology. 802.11 Wireless Ethernet standards known as WLAN are currently the most popular, short range, unlicensed radio technology. With reliable transmissions, protocol stack with use of the OSI model, and over-the-air data throughput up to 300Mbps downstream and 150Mbps upstream with 1x2 MIMO antenna technology. WLAN is a radio technology for transferring large amounts of data within a short range and period of time reliably.

SYSTEM REQUIREMENTS

You need to verify that your computer meets the minimum system requirements and identify the wireless network settings of the WLAN where you will connect before you can set up your wireless USB adapter and connect.

Before installing the Unigen San Gabriel WiFi USB network adapter, please make sure that these minimum requirements have been met:

- You must have a PC with a Pentium 300 MHz or higher compatible processor with an available USB 2.0 or 1.1 port. Note: The maximum speed of a USB v2.0 port is 480 Mbps. If your computer has a USB v1.1 port, the WNDA3100v2 is limited to that port's maximum speed, which is 14 Mbps.
- Installation Software from Unigen
- 5 Mbytes of free hard disk space
- Supporting operating system.

OPERATING SYSTEMS

The San Gabriel WiFi module supports the following Windows operating systems.

OS	Version	Comments
Microsoft	Windows XP	XP Home (SP2), XP Professional (SP2), SP3. **Note:** Windows XP users must install SP2 or install the KB822603 hot fix (update), which fixes the USB 2.0 host controller driver.
Microsoft	Vista	Vista Home, Vista Business, Vista Ultimate

SOFTWARE

The software is a for use of the San Gabriel USB WiFi module will install the following

Realtek USB driver	This is the USB driver to control the module hardware of the physical USB bus and communicates and installs the USB dongles as a Windows network adapter.
Realtek Wireless WiFi Utility	The Realtek utility software allows the user to choose and configure the access point to associate with, create handles security, AP discovery and provide link quality information back to the user.

SOFTWARE & HARDWARE INSTALLATION

Windows XP Installation

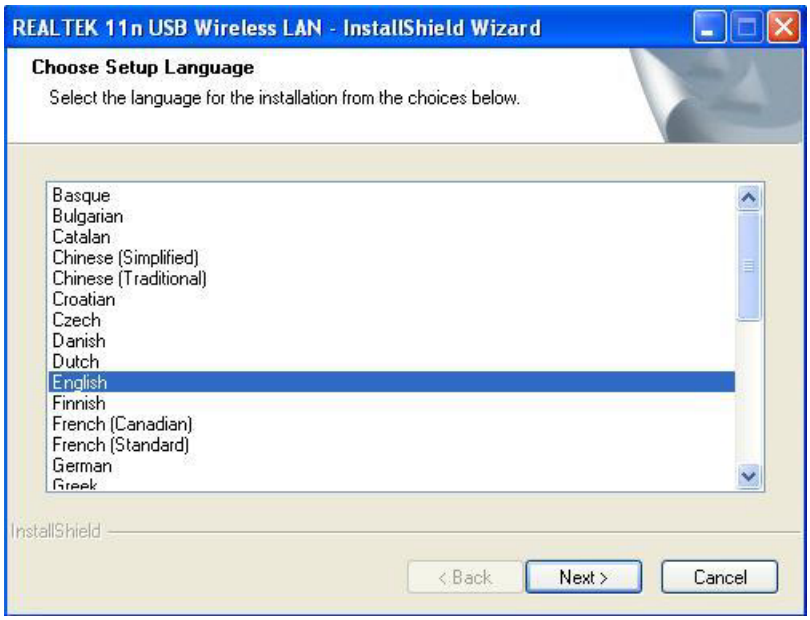
For Windows XP, an InstallSheild Wizard is used to install both the Realtek WiFi Utility and the USB driver. The following steps are for installation for Windows XP Home and Windows XP Professional.

1.) Obtain the installation files from Unigen through their field applications support or sales support. You can contact both groups at http://www.unigen.com/america_techsupportform.php

2.) Decompress the files to a directly on your local hard drive.

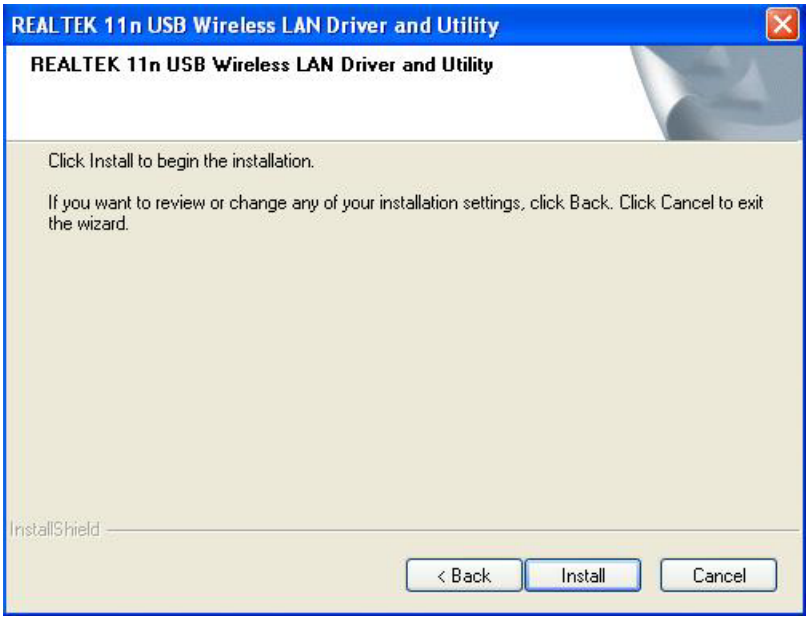
3.) Double-click on the “Setup.exe” Icon

4.) Select the your language preference and click “Next”



5.) Click “Next” when prompted to continue with the setup

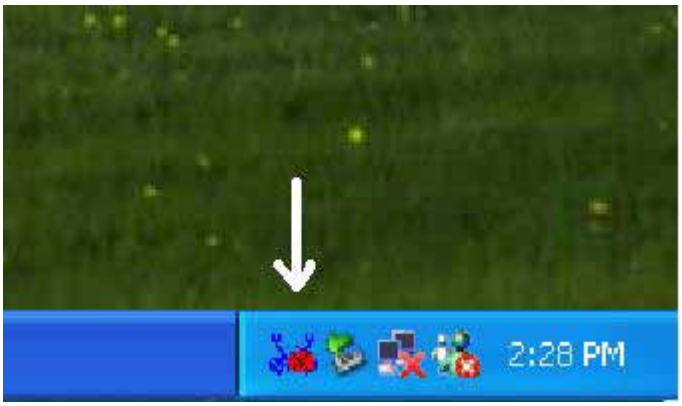
6.) Click “Install” to continue installation



7.) Click “Continue Anyway” during the warning pop up message

8.) Click “Finish” when the installation wizard has finished

9.) If the software installation was successful you will find the Realtek WiFi Utility icon in the system tray.



10.) Plug the San Gabriel USB dongle into a free USB port on the machine. Windows will automatically detect the USB dongle and may ask you if want to connect to Windows update to search for software. Select “NO” and click “Next”.

11.) Plug the San Gabriel USB dongle into a free USB port on the machine. Windows will automatically detect the USB dongle and start to install the USB driver via the Hardware Wizard

12.) Click “Continue Anyway” during the hardware USB driver installation

13.) Click “Finish” when the Hardware Wizard has finished installing the driver

Windows Vista Installation

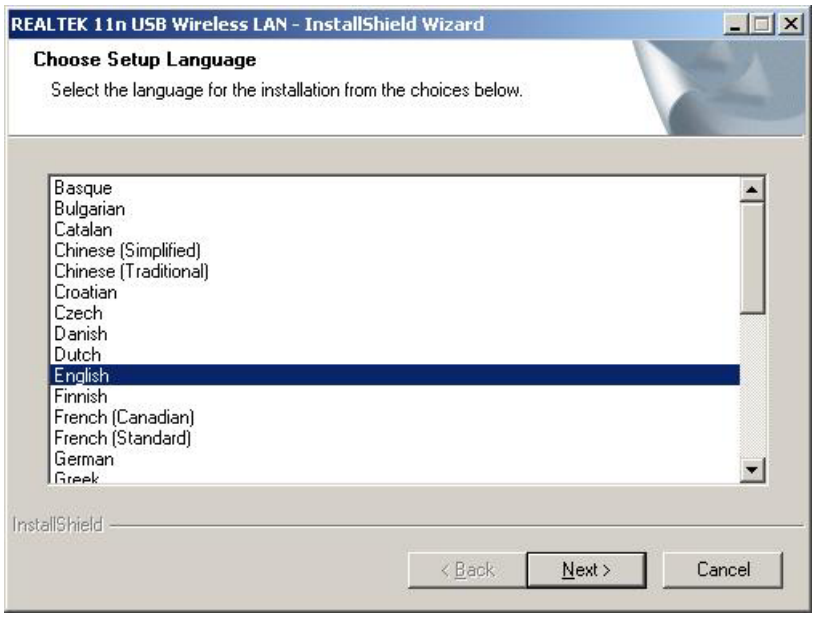
For Windows Vista, an InstallSheild Wizard is used to install both the Realtek WiFi Utility and the USB driver. The following steps are for installation for Windows Vista Home, Vista Business, Vista Ultimate.

1.) Obtain the installation files from Unigen through their field applications support or sales support. You can contact both groups at http://www.unigen.com/america_techsupportform.php

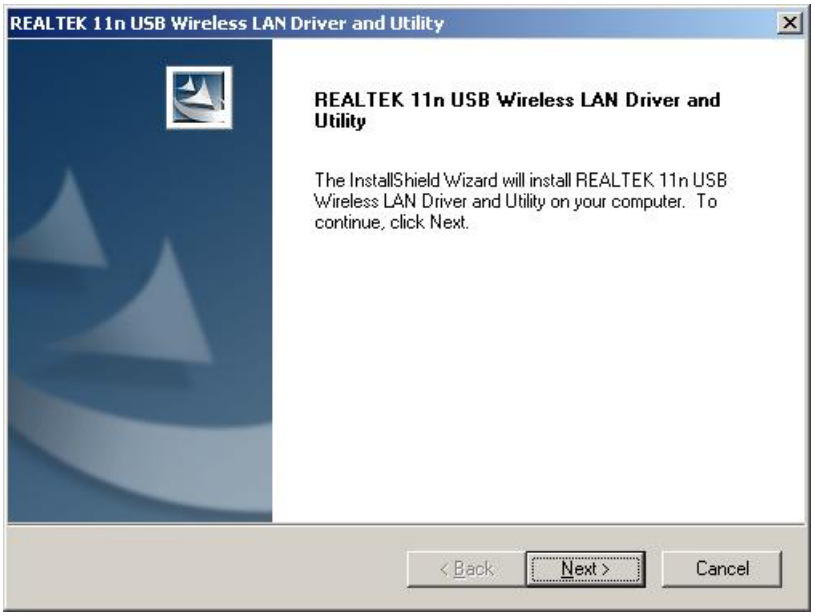
2.) Decompress the files to a directly on your local hard drive.

3.) Double-click on the “Setup.exe” Icon

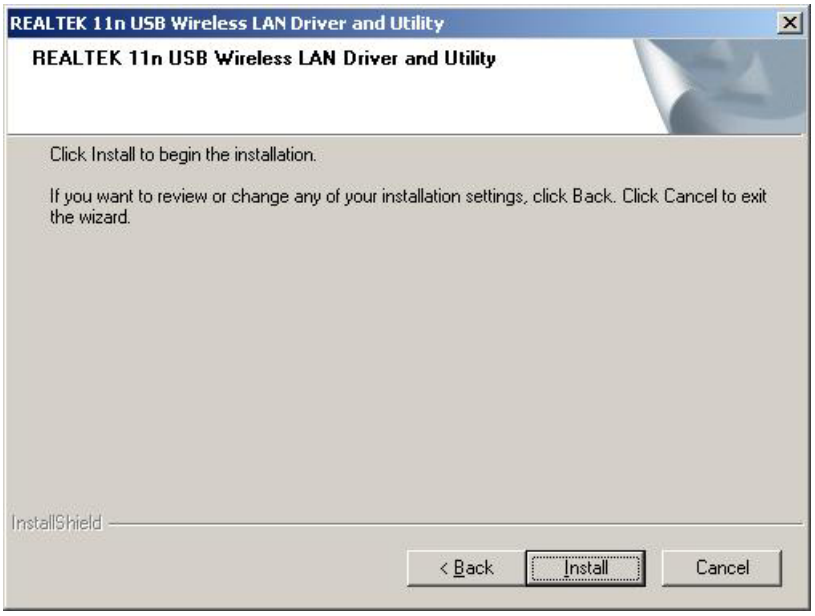
4.) Select the your language preference and click “Next”



5.) Click “Next” when prompted to continue with the setup

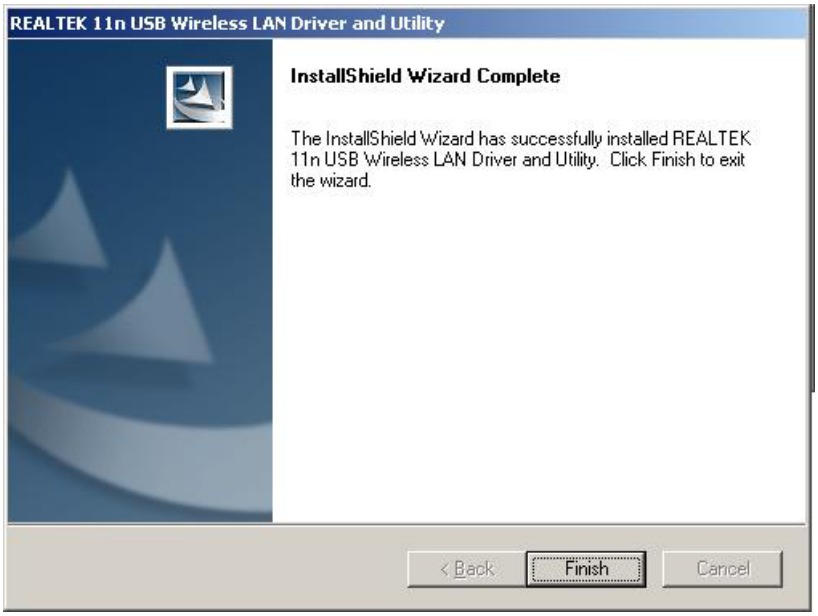


6.) Click “Install” to continue installation

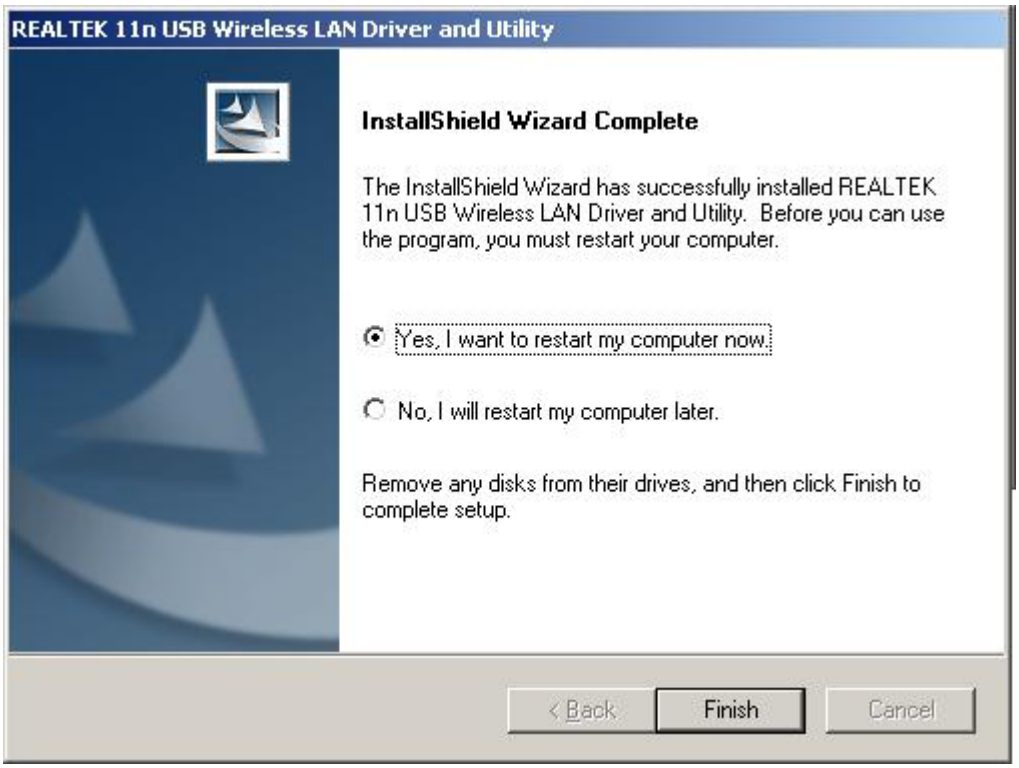


7.) Click “Install this driver software anyways” when Vista cannot verify the publisher of the driver software

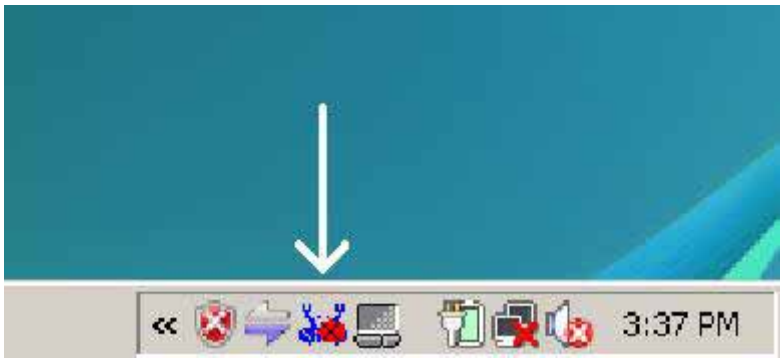
8.) Click “Finish” when the installation wizard has finished



9.) Depending on your Vista versions, you maybe asked to restart your computer. Select to restart your computer and click “Finish”



10.) If the software installation was successful you will find the Realtek WiFi Utility icon in the system tray.



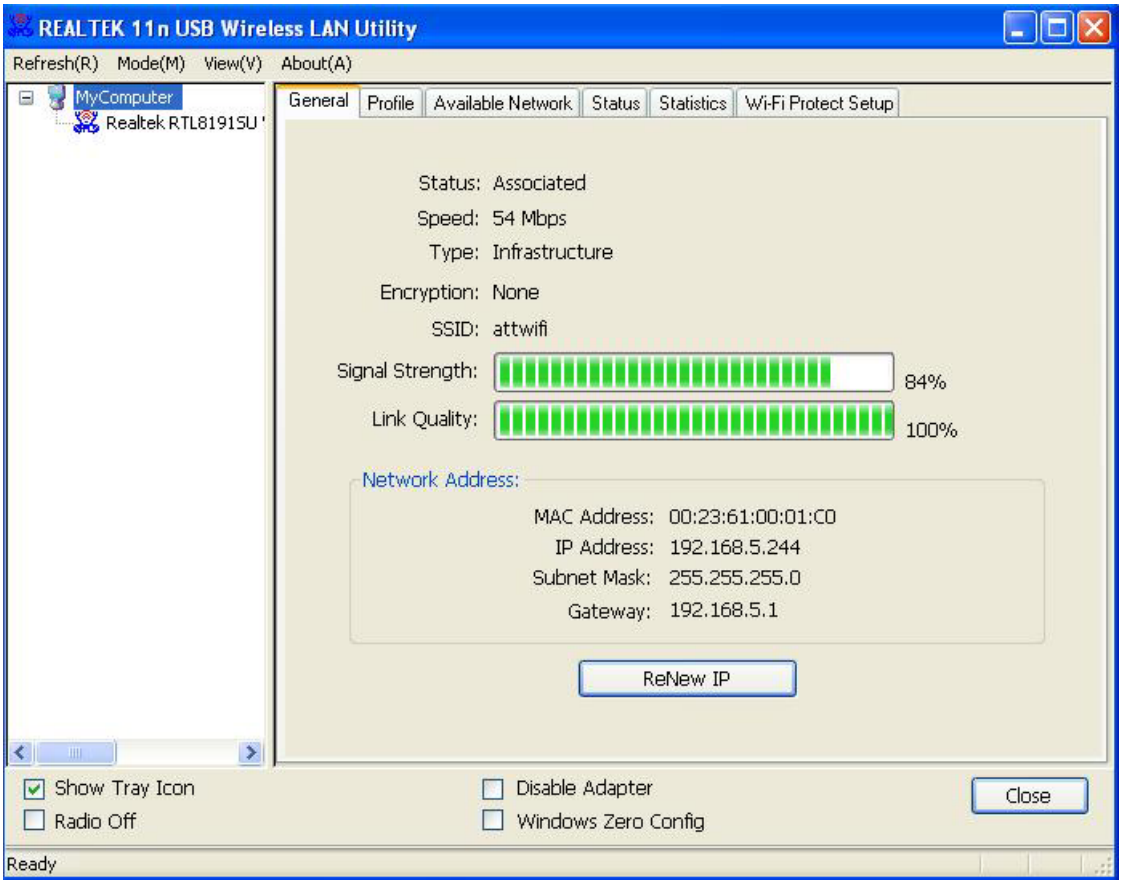
11.) Plug the San Gabriel USB dongle into a free USB port on the machine. Windows will automatically detect the USB dongle and install the driver automatically. You will get balloon pop up with a successful driver install and load.

REALTEK WLAN UTILITY

The Realtek WLAN Utility can be used to configure or operate the adapter to perform functions. These functions are search for Access Points, associate with access points, create peer connections, handle security, and provide network adapter statistics. Windows Zero Config software can also use the network adapter if selected within the utility. After installation of the software and driver the default is set to use the Realtek WLAN Utility to control and manage the network adapter.

To access the Realtek WLAN Utility, double click the desktop shortcut created during the installation.

The Realtek WLAN Utility window should pop up and show the current status and network the network adapter is currently connected to.



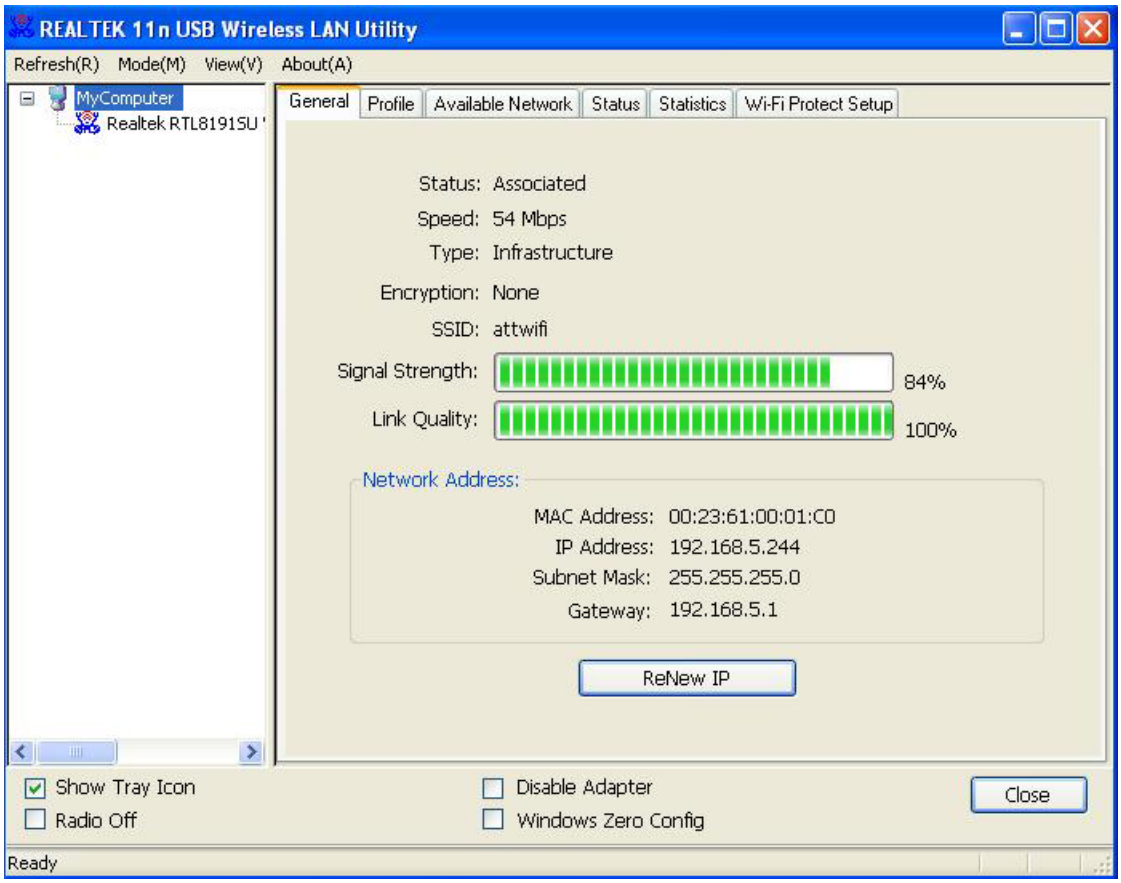
Show Tray Icon – Enabling this displays the Realtek WLAN Utility in the Windows system tray normally on the bottom right hand side.

Radio Off – Enabling this turns the RF off within the network adapter.
disable the USB network adapter at the USB driver level.

Windows Zero Config – Enabling this will allow you to use the Windows configuration software for managing the network adapter instead of the Realtek WLAN Utility.
Disable Adapter – Enabling this will

General Tab

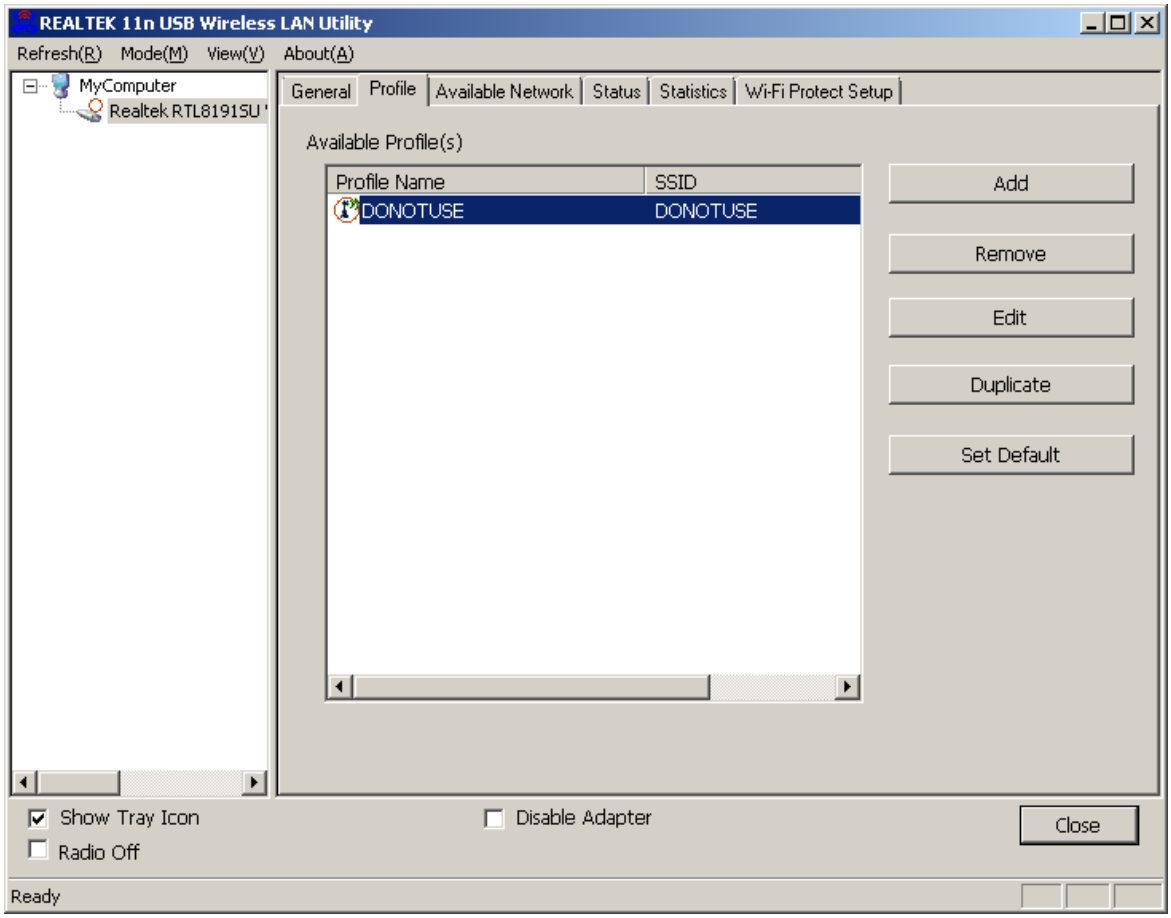
The General tab gives the basic information and the status if the WLAN network adapter.



Status – This indicates if the network adapter is connected/associated with an Access Point or with a peer device.
Speed – This indicates the over the air datarate used to transmit data. This is usually a good indicator if 802.11b, 802.11g or 802.11n is being used to transmit data.
Type – Indicates whether the connection is with an Access Point (Infrastructure) or peer-to-peer connection.
Encryption – This indicate the type or security and encryption used for the connection.
SSID – The name of the network or the Service Set Identifier (SSID) of the device currently connected to.

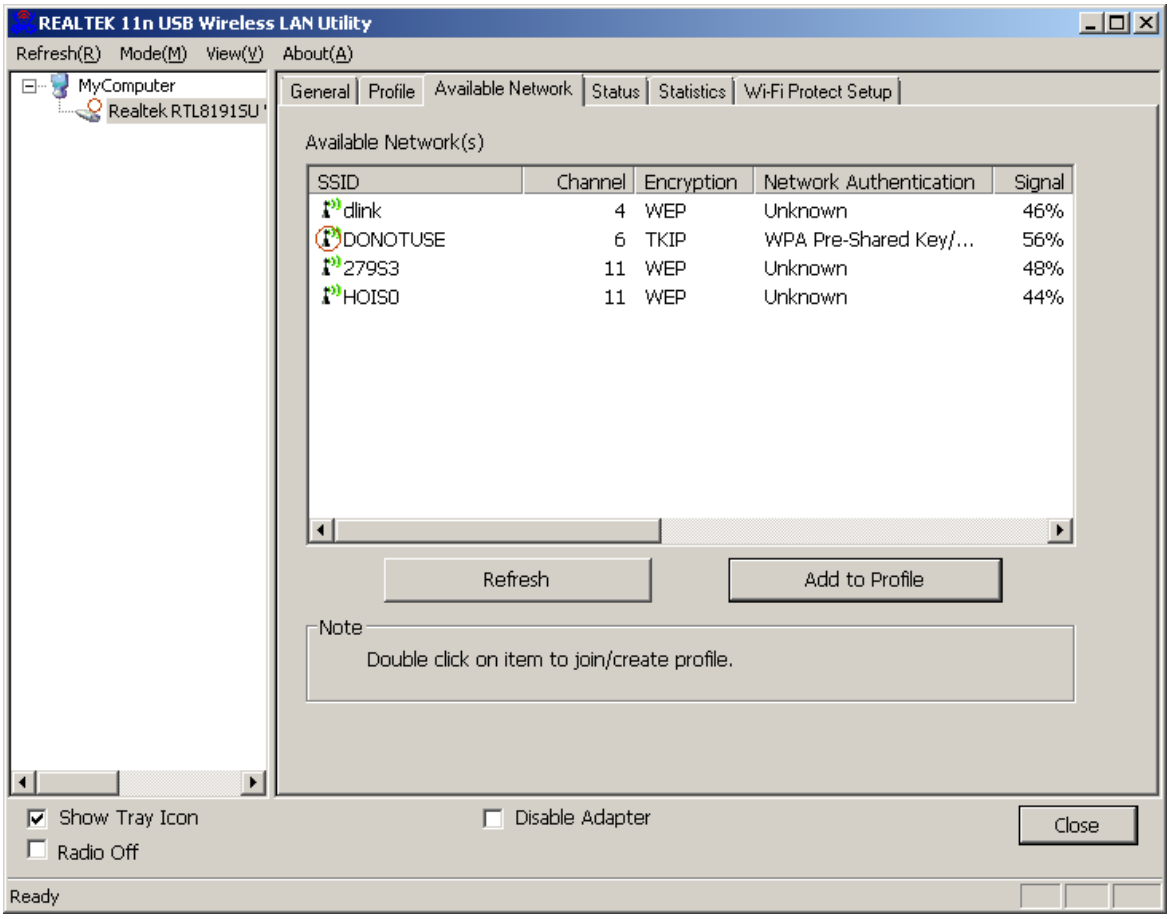
Profile Tab

The profile tab lists and defined profiles the user may have saved. Profiles can save SSID and encryption keys or passphrases for networks the user has previously connected to. Profiles are automatically created that require security.



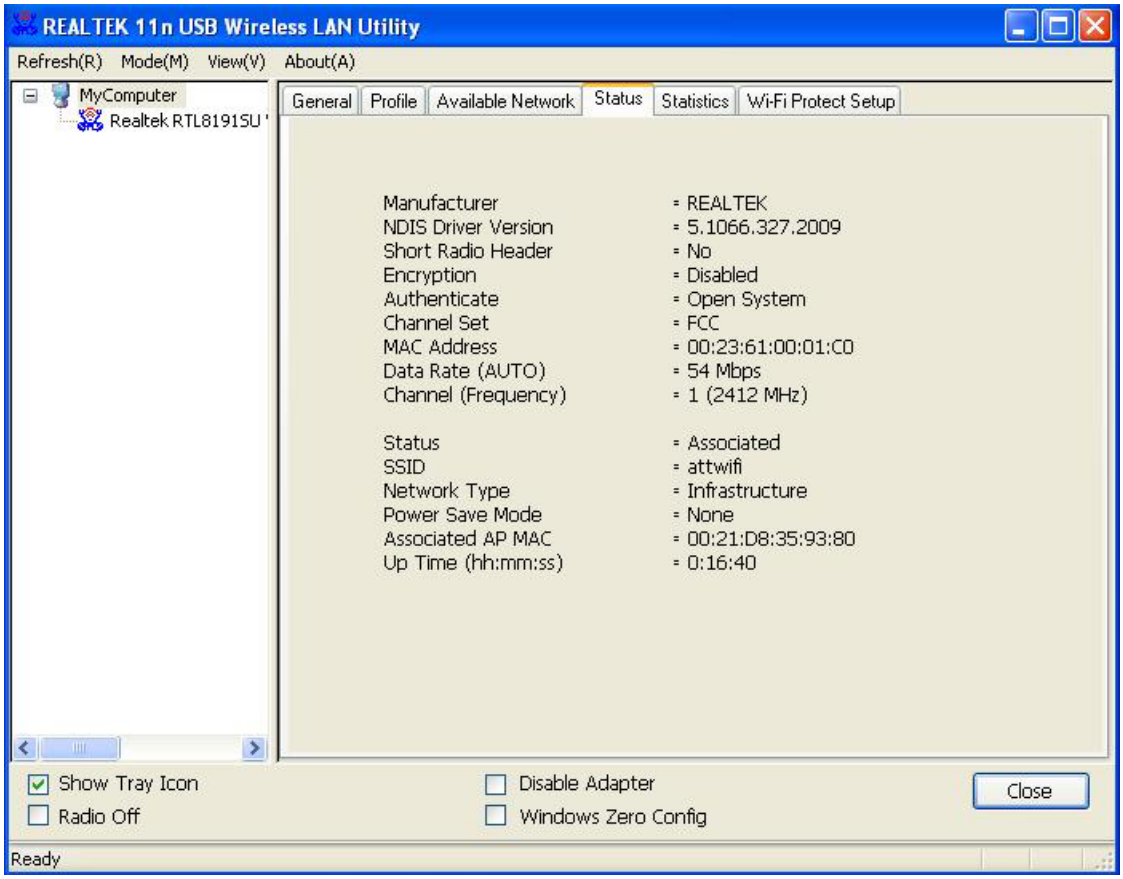
Available Networks Tab

This tab shows the available networks that are within range for the network adapter to connect to. The SSID, signal strength, channel and type of security is displayed.



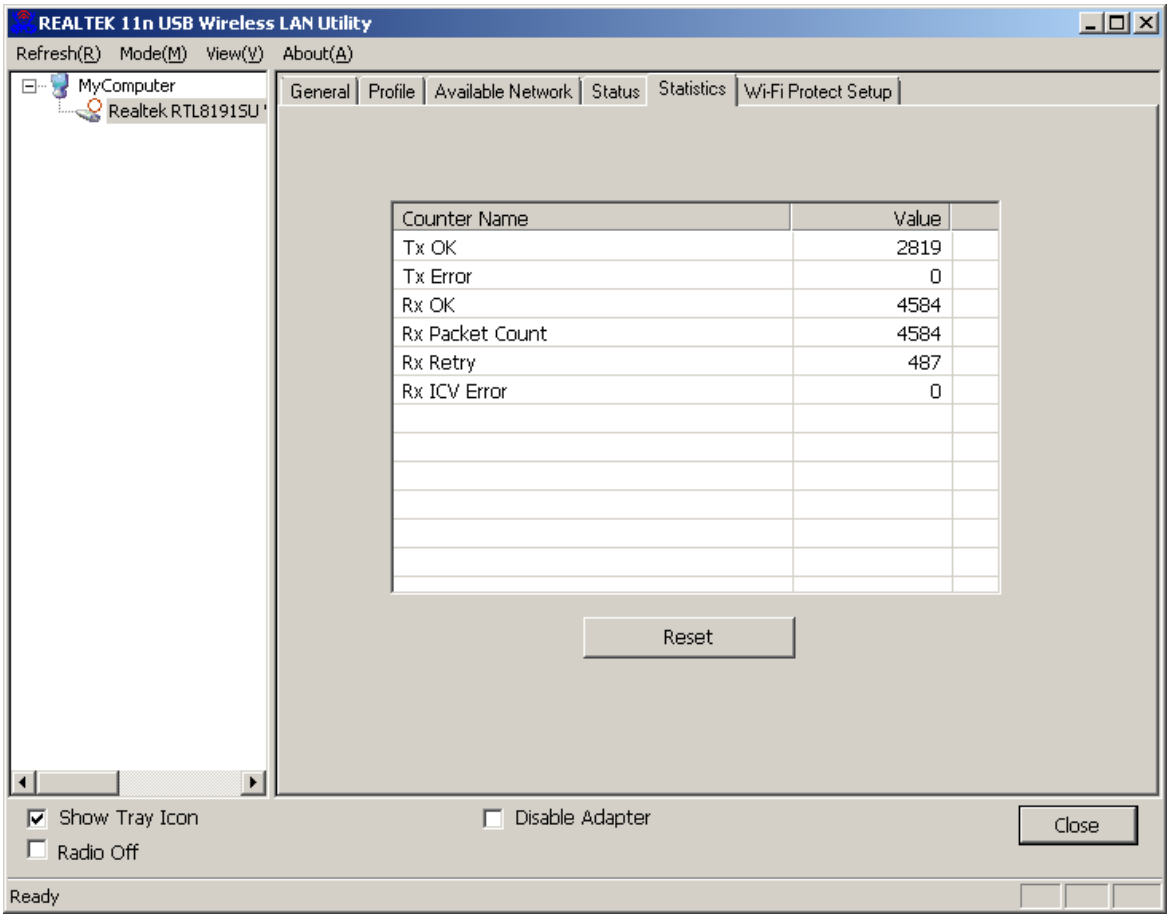
Status Tab

The status tabs is an extension of the General Tab giving more details about the network adapter and the current wireless connection of the system.



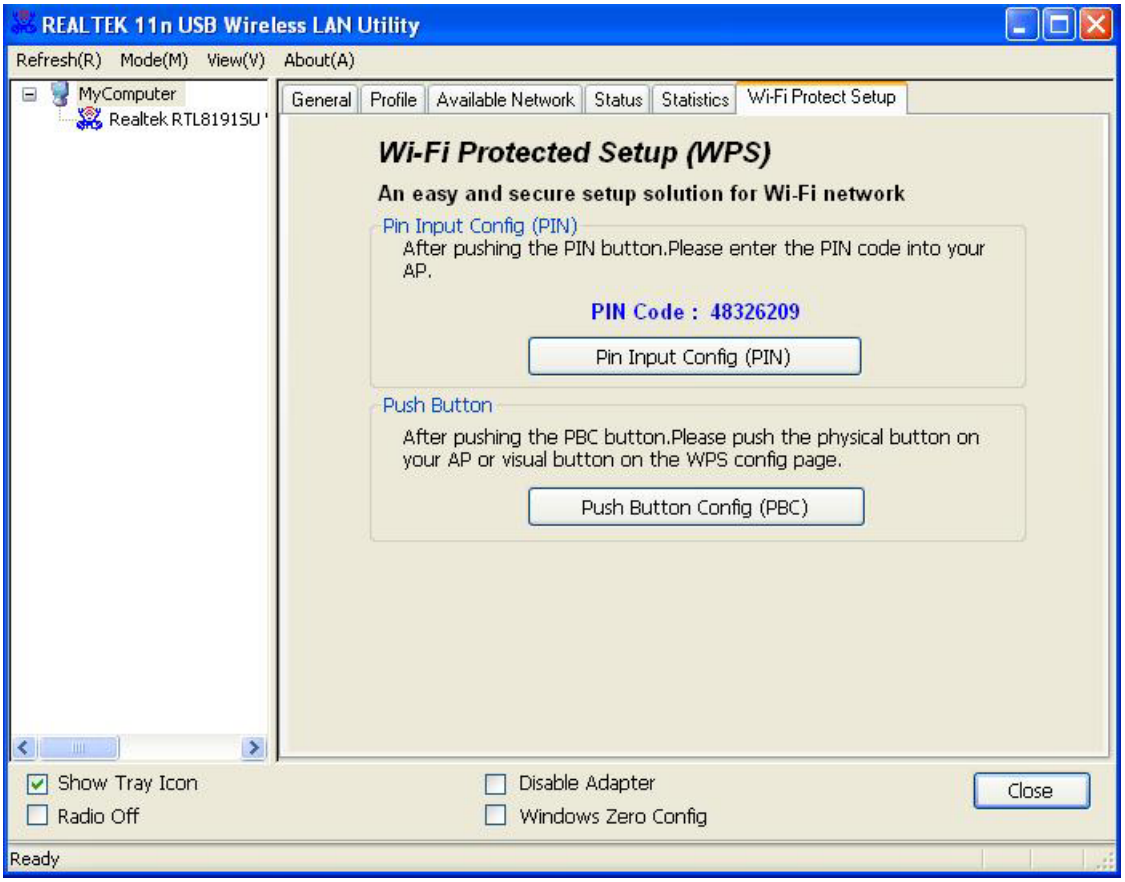
Statistics Tab

The statistics tab displays the data and packet performance of the air. The counter stored the information during each new session or connection.



WiFi Protect Setup Tab

The WiFi Protect Setup (WPS) Tab is used for establishing connections using WPS. WPS is is a standard for easy and secure establishment of a wireless home network, created by the Wi-Fi Alliance. The San Gabriel USB network adapter supports the PIN Method and Push Button Config (PBC) Method for WPS.



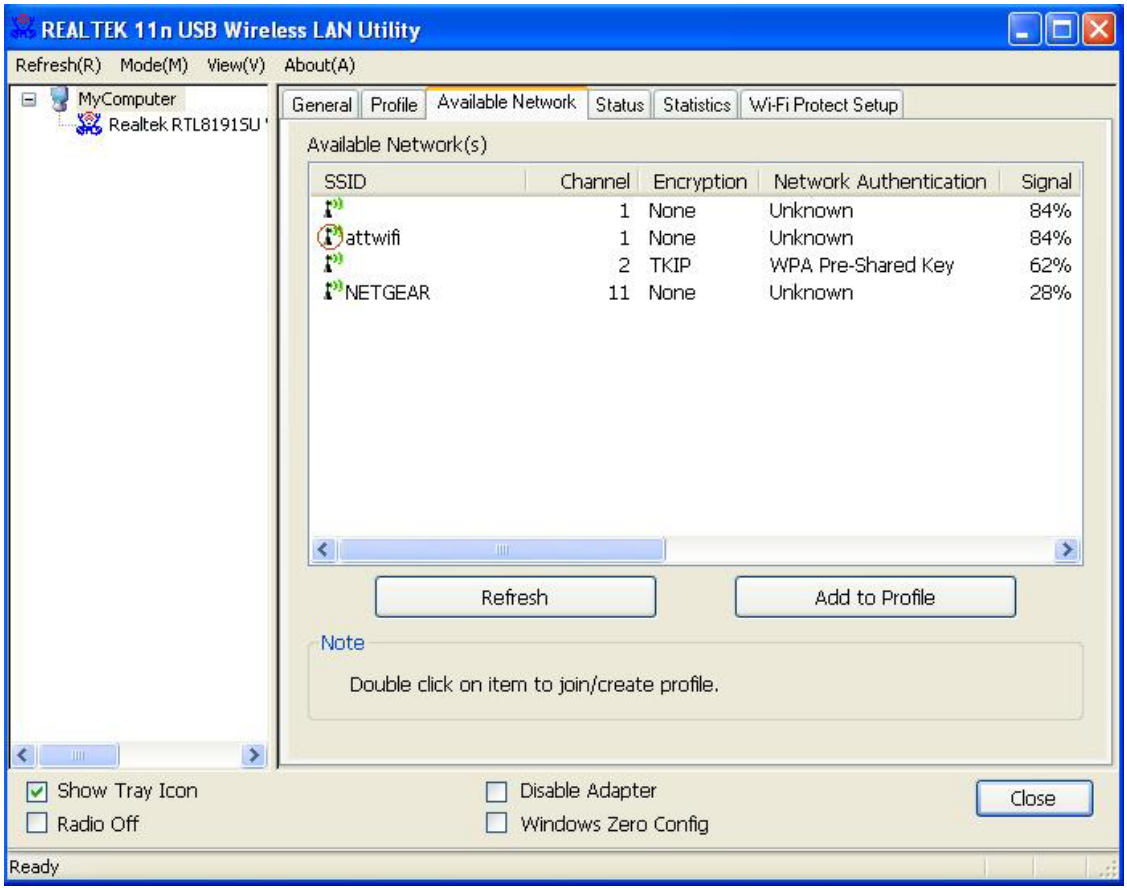
CONNECTING TO A NETWORK

The Realtek WLAN Utility can be used to connect to a WLAN network. By default, the Realtek WLAN Utility will connect the USB San Gabriel network adapter to the highest signal strength, open, infrastructure network found first.

Searching for Networks

To search for available networks launch the Realtek WLAN Utility and select the “Available Networks” tab. The Realtek WLAN Utility will automatically compile a list of available networks displaying the network SSID, channel, signal strength and security.

Note: Only available networks that broadcast the SSID will display a name in the SSID field. Networks that do not broadcast the SSID will have the field blank but will still display the security options and signal strength.



Connecting to an OPEN Network (Unsecure)

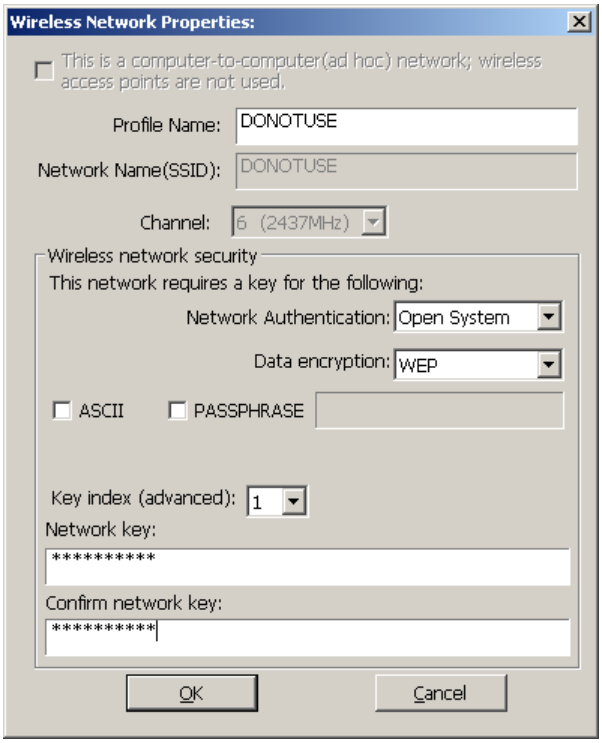
To connect to a network, double click on one of the available networks in the available networks tab if the adapter has not already connected to the network already. If connecting to a network that is not broadcasting the SSID and the SSID is blank, please refer to the section on “Creating Profiles” of this manual.

Connecting to a SECURE Network (Security Enabled)

To connect to a secure network, you will need to know the network encryption key, password or passphrase of the network to successfully connect to the network.

WEP/WPA/WPA-2 Security

To connect to WEP/WPA/WPA-2 enabled secure network, double click the network in the “Available Networks” tab. This will launch a “Wireless Network Properties” box. Enter in the network key, password or passphrase in the Network Key blank fields. The Realtek WLAN Utility will automatically choose the Network Authentication and Data Encryption. Click “OK”.



CREATING PROFILES

Profiles can be created to save network settings and previous connections to networks. The network key is also saved within the profile to expedite the connection to a previous network connected to. Every successful network connection created by the previous processes are automatically created and saved.

To manually create a profile without previously connecting to the network select the “Profiles” tab and click “Add”. This will open a generic Wireless Network Properties box. The user can name the profile anything the user wants (i.e. HOME). You will need to provide and know the following information of the network:

- SSID
- Channel
- Network Authentication
- Data Encryption
- Passphrase (WEP option only)
- Network Key

Note: Passphrase is only used if the WEP encryption supports a passphrase to generate the network key.