



Professional ODM/OEM supplier

# **AWU511N**

**(AWU511N-W)**

**User's Manual**

**Part Name: 802.11b/g/n Wireless USB Adapter**

**Part No.: AWU511N(AWU511N-W)**

**Version: V1.0**

## Revision History

Release	Date	Revision	Initials
1.0	2009-10-22	Initial release	SH

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## **IMPORTANT NOTE**

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.

### **Important Information Required By the FCC**

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

### **RF Exposure Statement**

This device has been evaluate to meet general RF exposure requirement The device can be used in portable exposure condition without restriction.

## **AWU511N(AWU511N-W) User's Manual**

### **1. Product Overview**

AWU511N(AWU511N-W) is a 150Mbps USB Wireless Adapter that Compliant with IEEE 802.11b/g/n. It supports WEP, WPA, IEEE802.1x, CCK, and TKIP encryption and authentication mechanisms. Wireless transmission rates of up to 150Mbps. Built-in omnidirectional smart antenna can adapt to different working environment .So that the desktop, as well as other wireless networking equipment can access a wireless network expediently.



AWU511n

### **2. Features**

- Compliant with IEEE802.11b/g/n
- RoHS compliant
- USB 2.0 interface Compliant
- Supports 64/128/256 WEP encryption, supports WPA/WPA-PSK, WPA2/WPA2-PSK Security
- Transfer Rate: 54/48/36/24/18/12/9/6/11/5.5/2/1Mbps
- Supports Windows 98/ME/2000/XP/64bitXP/2003 OS

### **3. Specifications**

#### **3-1. Solution**

Item	Description
Product model	AWU511N(AWU511N-W)
MCU+SWITCH	RT3070

### 3-2. Technical Spec

Item	Description	
Standard	IEEE 802.11b/g/n	
Interface	USB2.0	
Power	11dBm ± 2dBm	
Operating Frequency	2.4~2.4835GHz	
Channel Number	11	
Modulation	OFDM/DBPSK/DQPSK/CCK	
RX sensitivity	150M: -60dBm@10%PER; 54M: -68dBm@10%PER; 11M: -85dBm@8% PER; 6M: -88dBm@10%PER; 1M: -90dBm@8% PER	
Transfer distance	Farthest 100 meters Indoor ,Farthest 300meters Outdoor (As a result of the environment varies )	
Bandwidth	802.11b/g: 20MHz 802.11n: 40MHz	
LED	Status	
Antenna	2dBi PCB antenna	
Supported OS	Win 98 / ME / 2000 / XP / 64-bitXP/2003 /Linux	
Dimension (L*W *H)	70mm x25mm x12mm	
Environment Specification	Temperature	Humidity
	Operating: 0~40℃	Operating: 10%-90%
	Storage:-10℃~70℃	Storage: 5%-90%

### 4. Install the driver

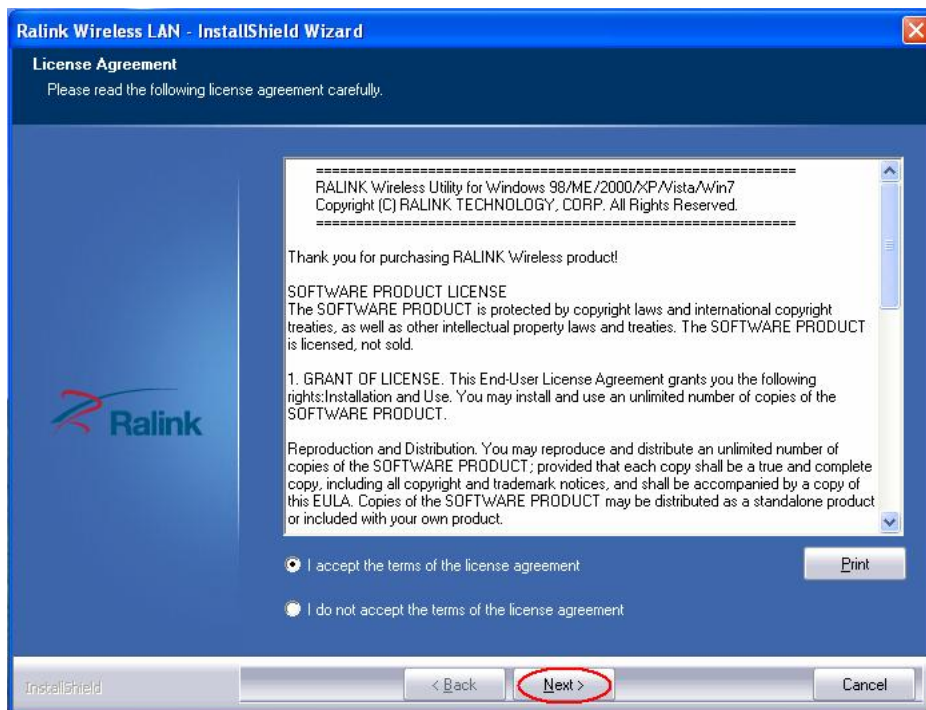
**Step1** Insert the installation CD into your CD-ROM driver, Double click the icon



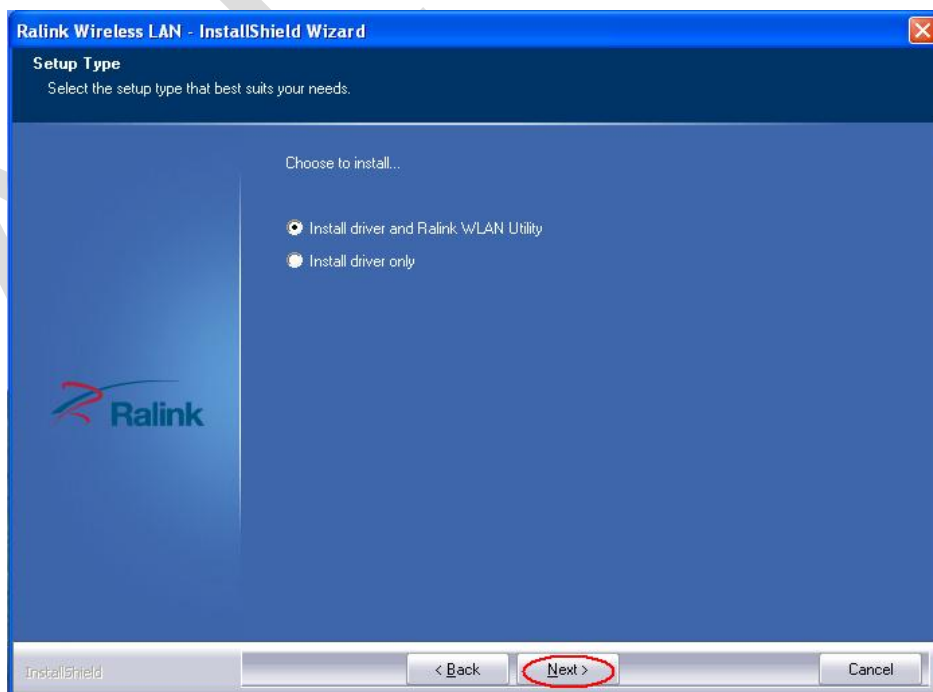
IS\_AP\_STA\_RT2870...  
Setup.exe  
Macrovision Corp...

to start setup.

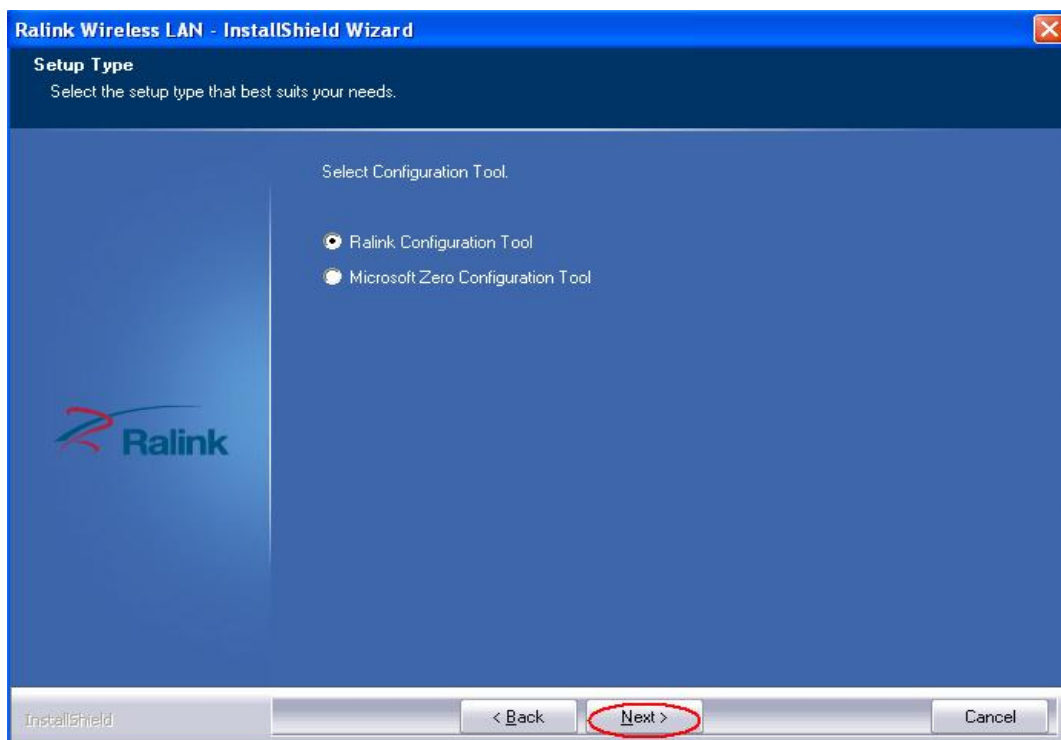
**Step2** Choose ***I accept the terms of the license agreement*** and click ***next*** to go on.



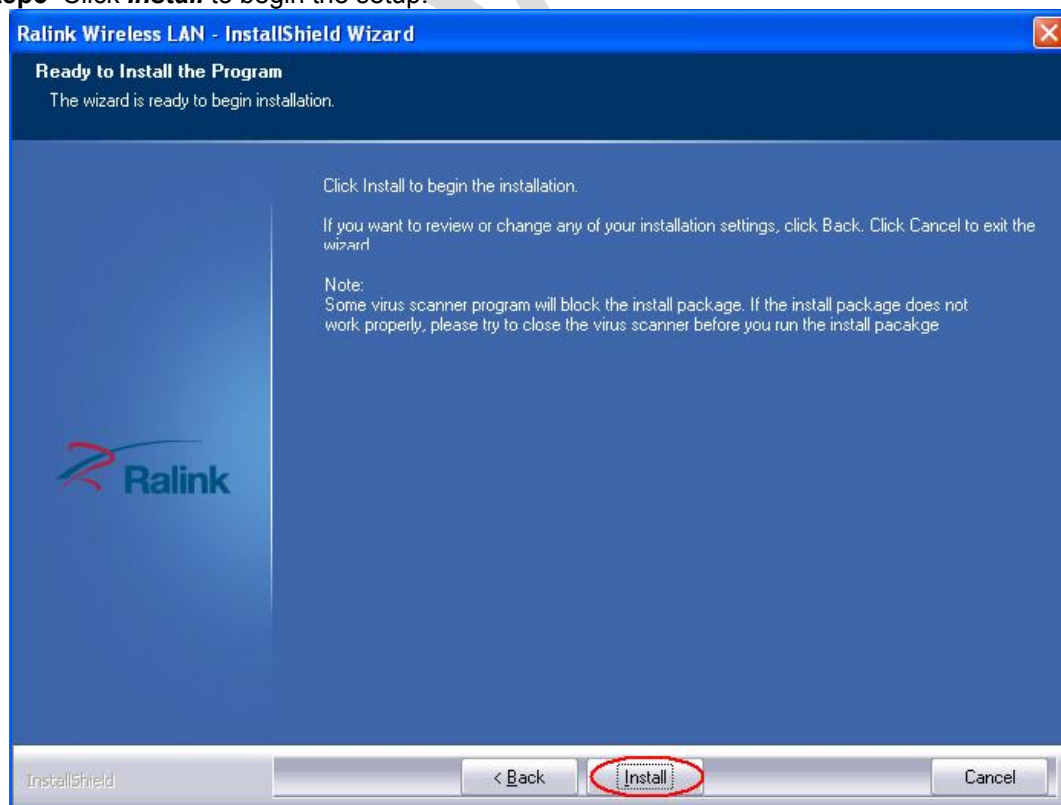
**Step3** Choose ***Install driver and Ralink WLAN Utility*** and click ***next*** to go on.



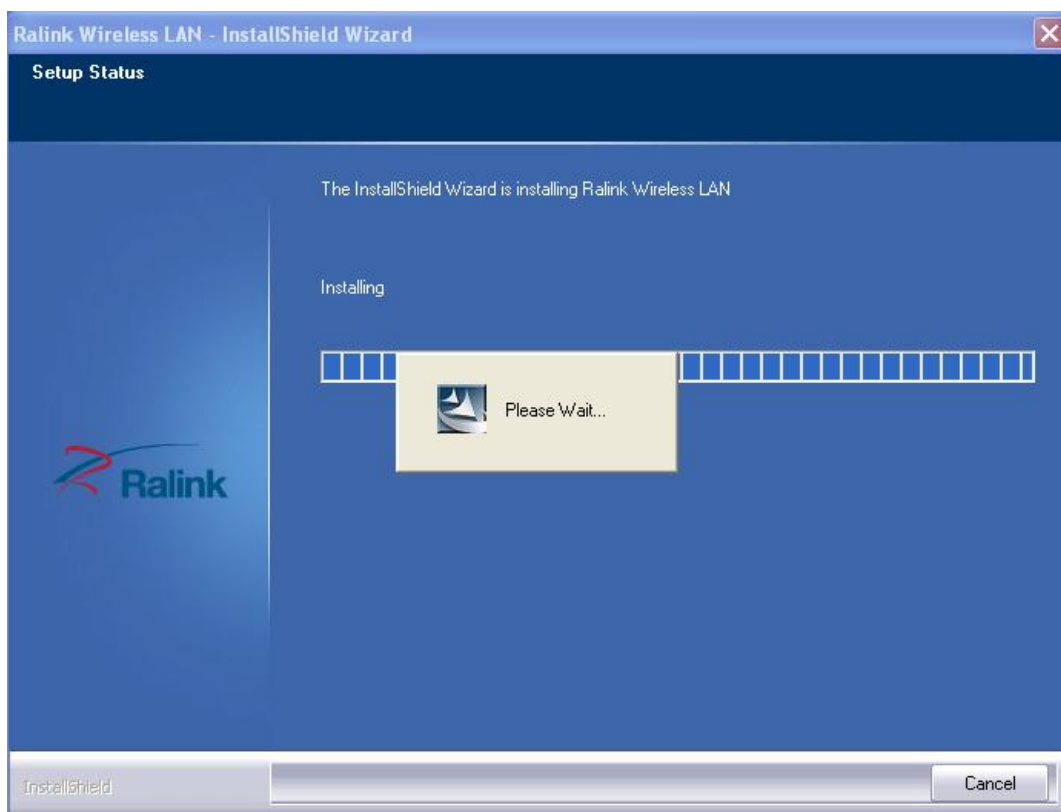
**Step4** Choose **Ralink Configuration Tool** and click **next** to go on.



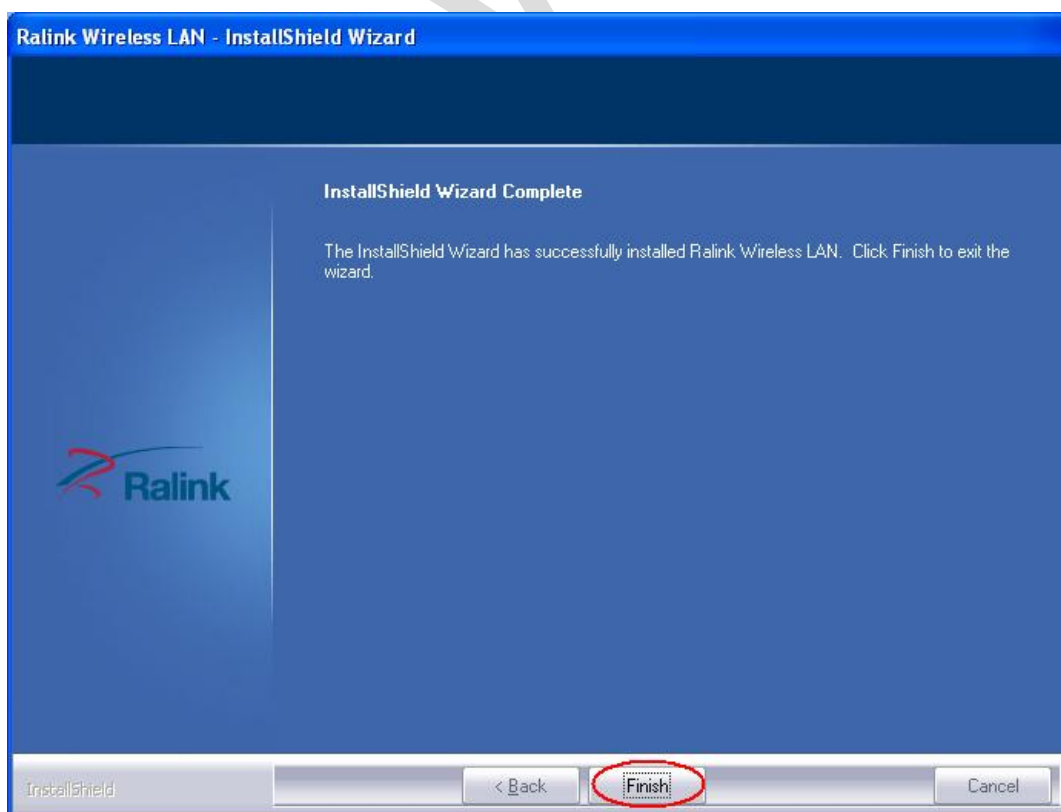
**Step5** Click **Install** to begin the setup.





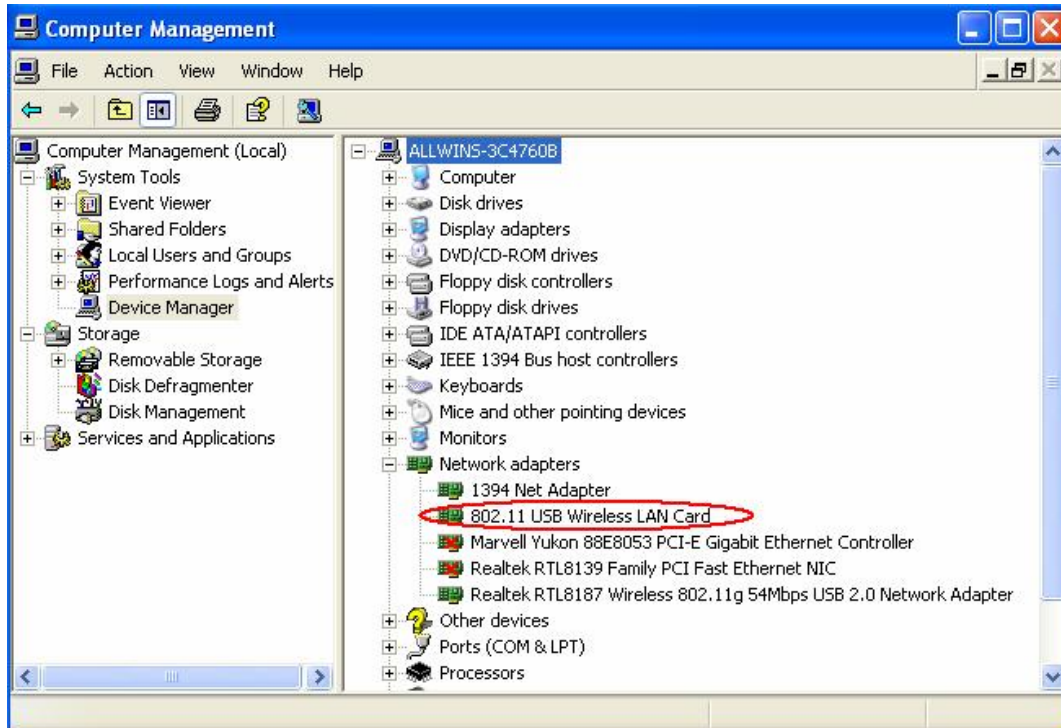


**Step6** Click **Finish** to end the setup.



## 5. connect

Plug in your usb wireless LAN adapter, it will be recognized and auto installed. Just confirmed it like below:

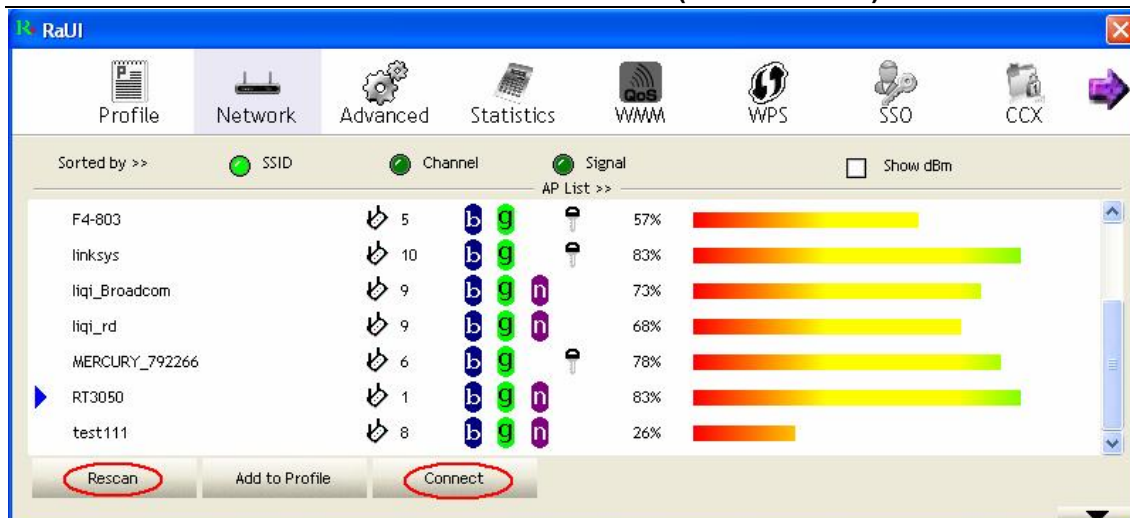


## 6. Make infrastructure connection

Double click the icon in red circle

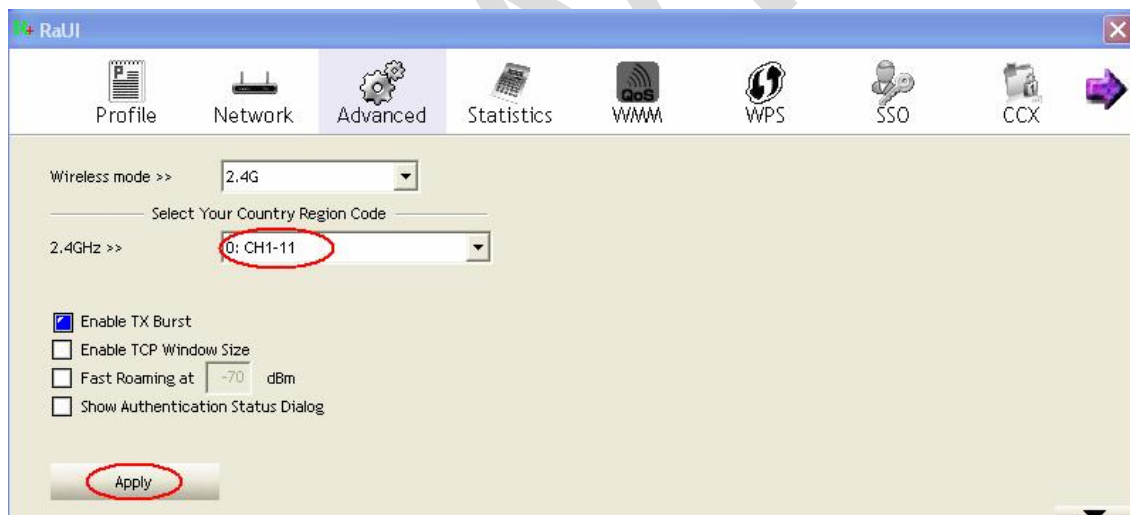


You will see:



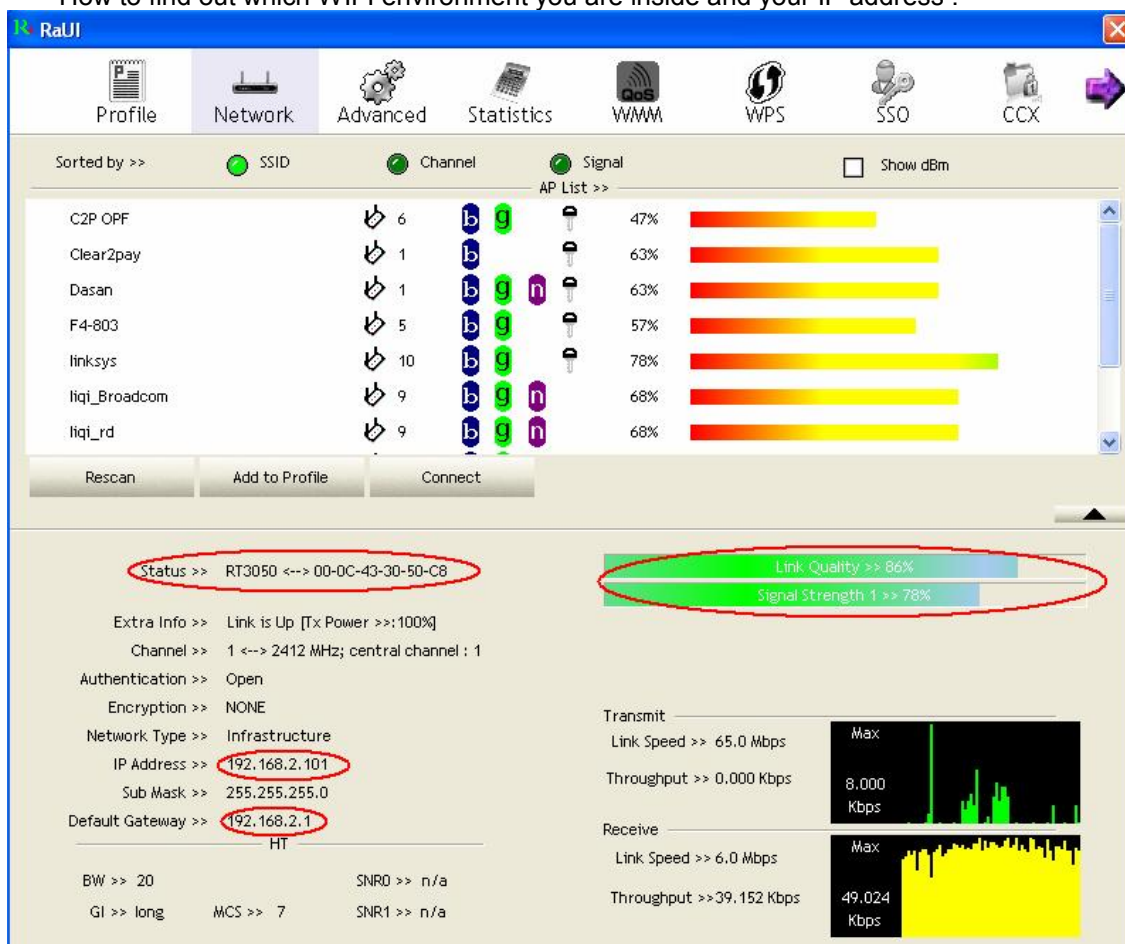
You can click the button **Rescan** to find which AP is in range, they will show on the window. Choice one you want to connect, and click the button **connect** to finish the connection. An infrastructure connection is completed.

**Note:** please choose correct channel setting up to your law, otherwise you will never find the AP.



## 7. Help information in RaUI

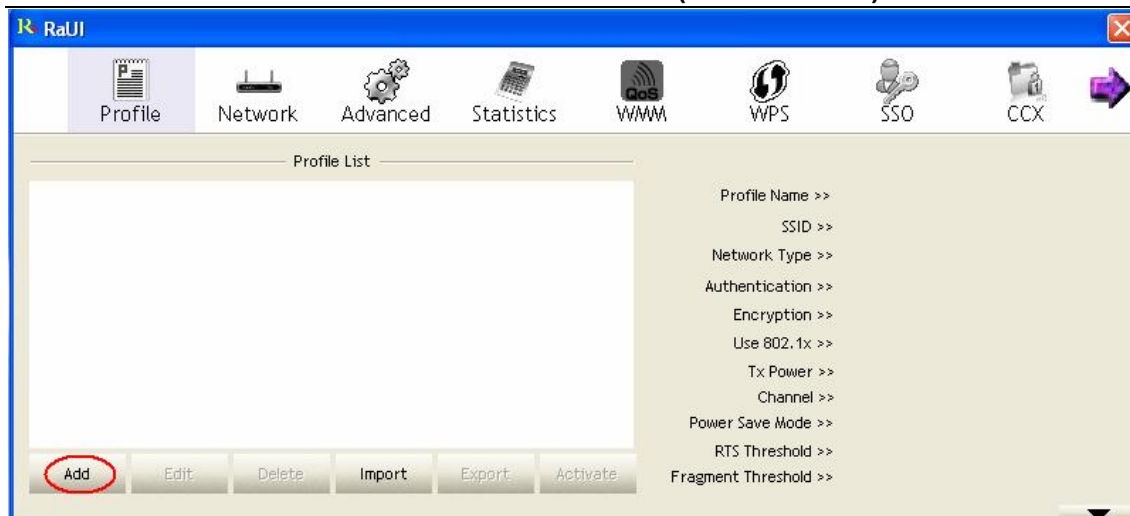
How to find out which WIFI environment you are inside and your IP address :



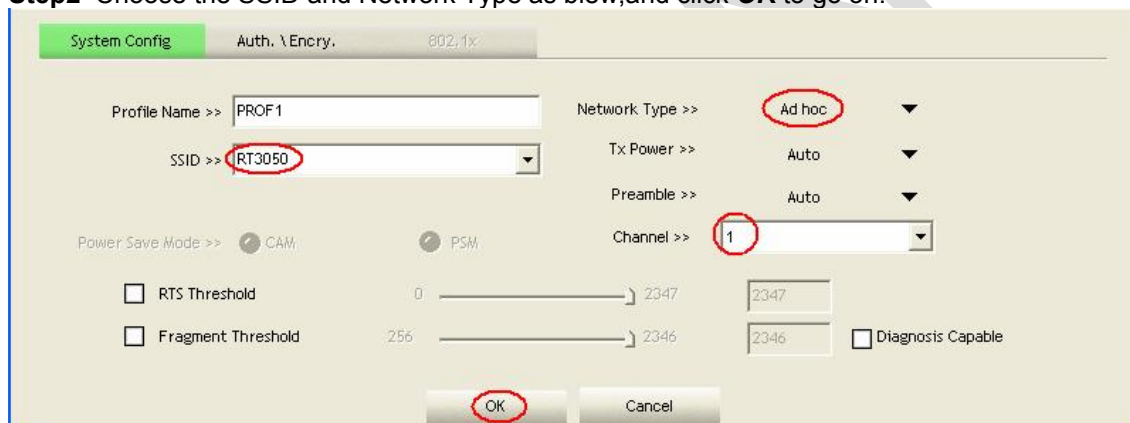
## 8. Make Ad-Hoc mode connection

### 8.1 Make an Ad-Hoc SSID

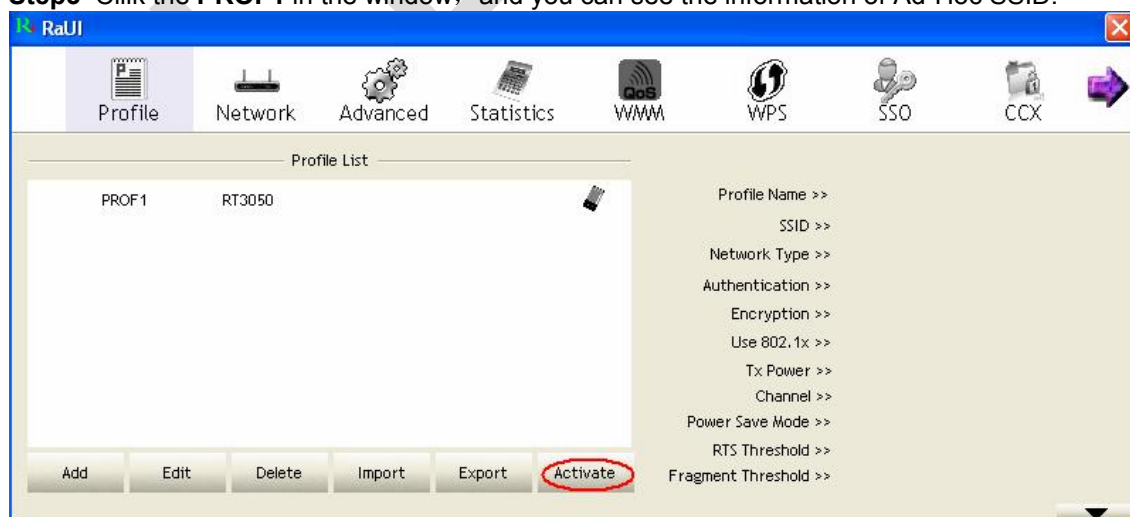
**Step1** Click the button **Add** to make the Ad-Hoc SSID:



**Step2** Choose the SSID and Network Type as blew,and click **OK** to go on.

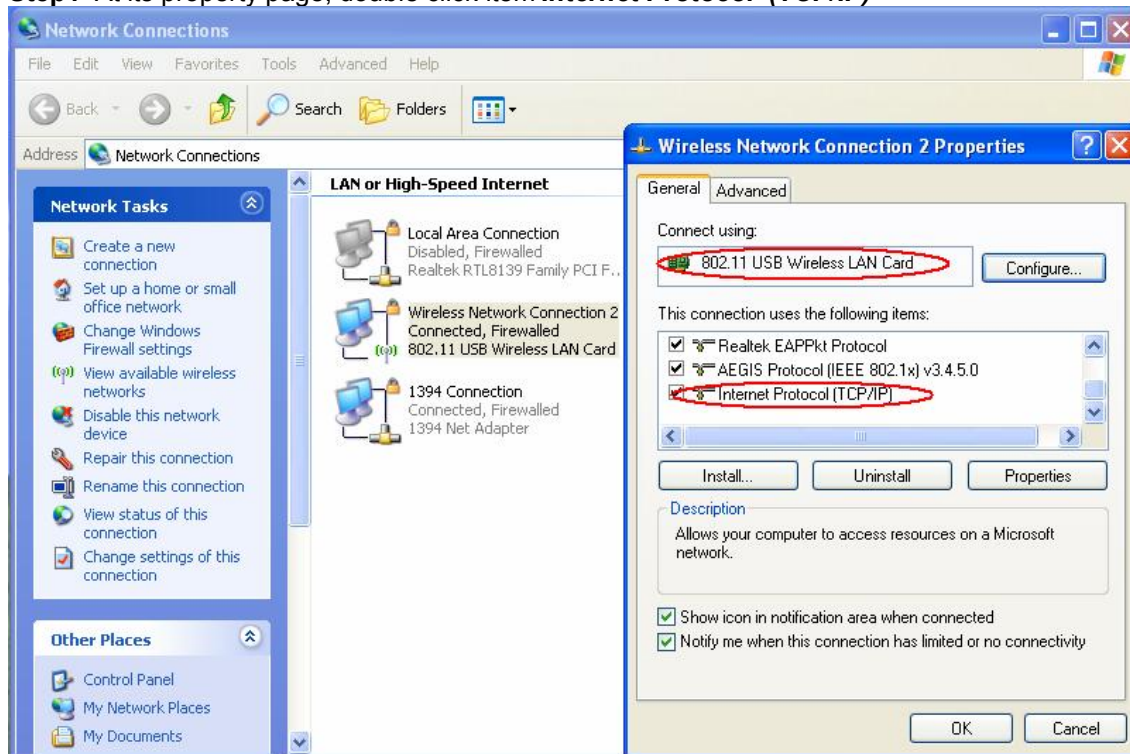


**Step3** Click the **PROF1** in the window, and you can see the information of Ad-Hoc SSID.



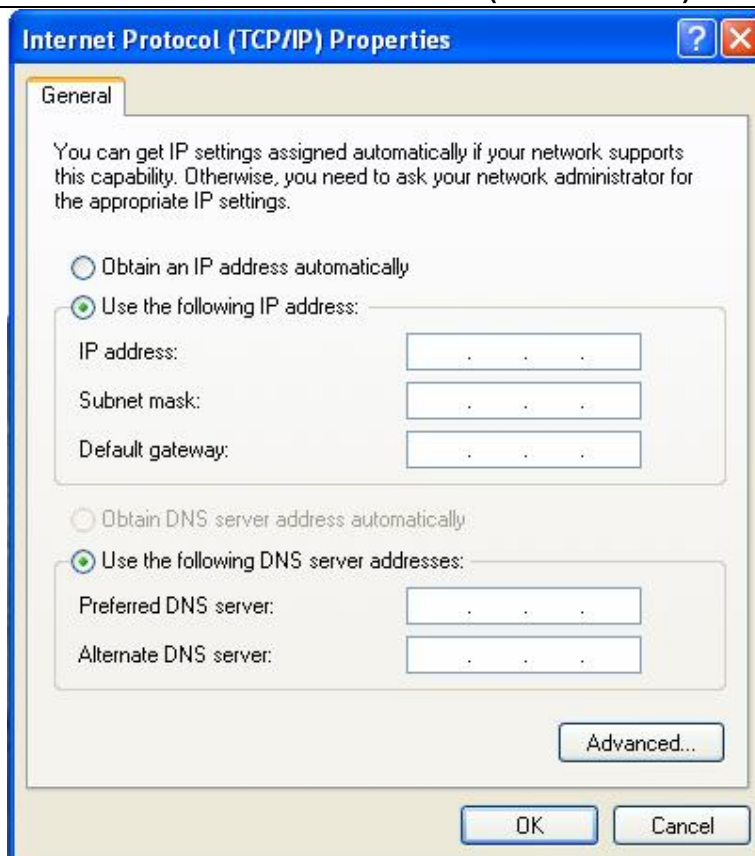
## 8.2 Setup static IP address for the Ad-Hoc link

**Step1** At its property page, double click item **Internet Protocol (TCP/IP)**

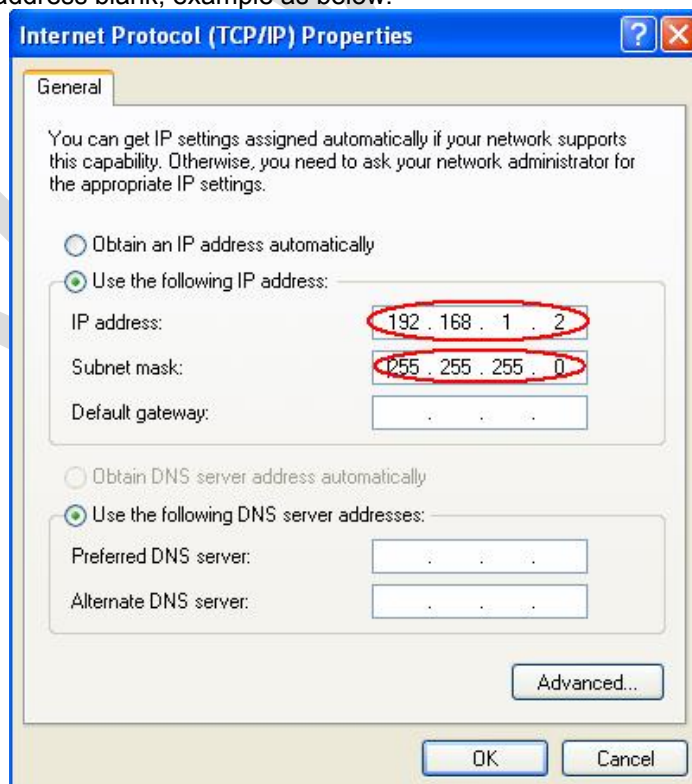


**Step2** You will get:

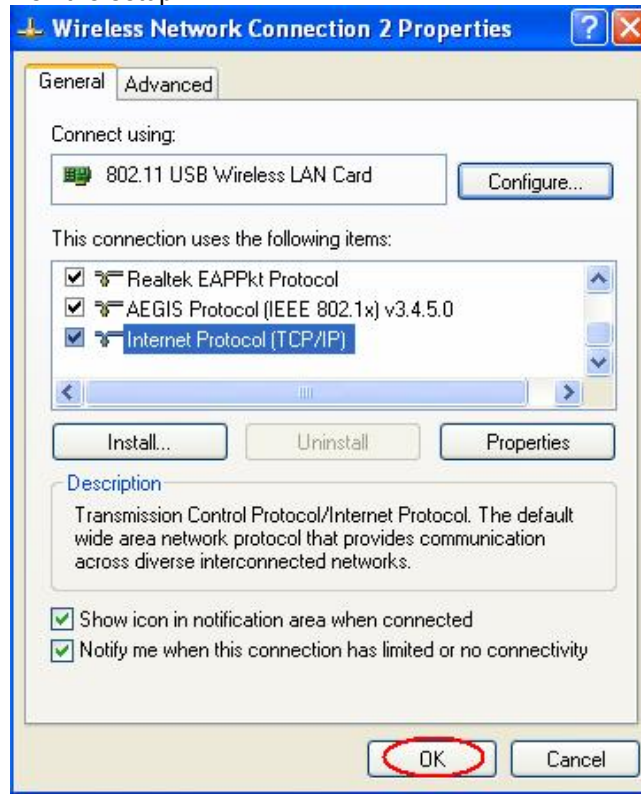




**Step3** Fill the IP address blank, example as below:



**Step4** Click **OK** to finish the setup.



**8.3 Ad-Hoc setup for one point completed.**

**8.4 Setup another Ad-Hoc point as step a,b,c,d.**

**8.5 Ad-Hoc mode link accomplished. And you can visit each other.**

**Note:** To make an Ad-Hoc mode link, we should choice the same channel. Its static IP address should be in the same subnet, and the SSID should be the same too.



## Appendix A: Terminology

- **ad hoc network** A network composed solely of stations within mutual communication range of each other via the wireless medium (WM).
- **access point (AP)** Any entity that has station functionality and provides access to the distribution services, via the wireless medium (WM) for associated stations.
- **Station (STA)** Any device that contains an IEEE 802.11 conformant medium access control (MAC) and physical layer (PHY) interface to the wireless medium (WM).
- **RTS (Request To Send)** The frame type used to deign the RTS-CTS clearing exchange. RTS frames are used when the frame that will be transmitted is larger than the RTS threshold.
- **CTS (Clear To Send)** The frame type used to acknowledge receipt of a Request to Send and the second component used in the RTS-CTS clearing exchange used to prevent interference from hidden nodes.
- **WEP (Wired Equivalent Privacy)** The optional cryptographic confidentiality algorithm specified by IEEE 802.11 used to provide data confidentiality that is subjectively equivalent to the confidentiality of a wired local area network (LAN) medium that does not employ cryptographic techniques to enhance privacy.
- **authentication** The service used to establish the identity of one station as a member of the set of stations authorized to associate with another station.
- **WPA (Wi-Fi Protected Access)** A specification of standards-based, interoperable security enhancements that strongly increase the level of data protection and access control for existing and future wireless LAN systems.

## **Appendix B: Important Notices**

### **Federal Communications 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 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.