

802.11 b/g/n

Wireless PCI Express Mini Card

Qcom Technology Inc.

Q802XKN

User's Manual

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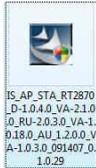
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	<p>◇ <i>This product standardized the Radio Frequency Module:  XXXyyyLPDzzzz-x</i> .</p> <p>◇ <i>The system manufacturer is required to attach this Module Approval Label to the system prior to delivery.</i></p>
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Windows Vista

Driver Installation

1. For installing the Wireless LAN Card driver, go to the directory where the Wireless Adapter Installation stored, then double-click the **Setup Program**

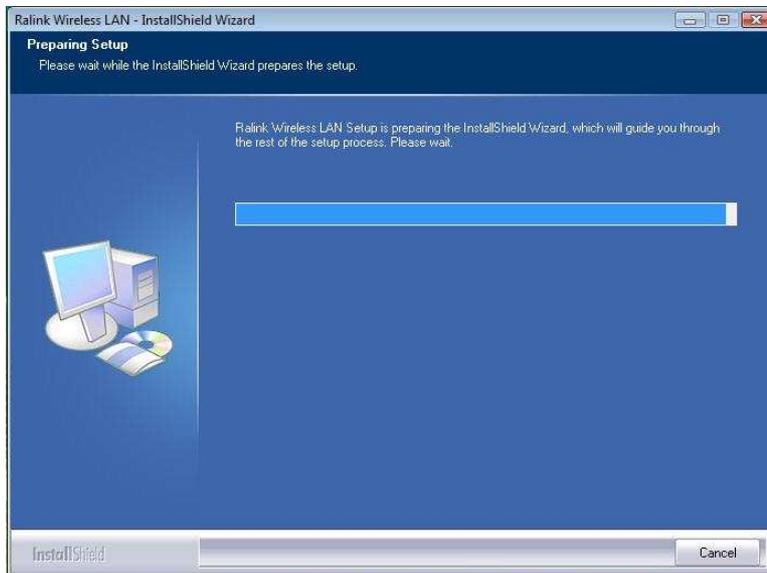


to begin the installation.

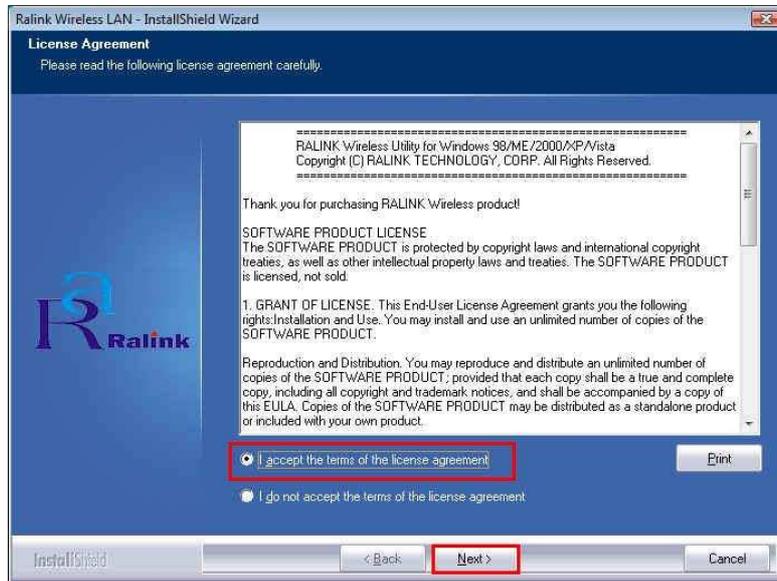
(Exsample:

IS_AP_STA_RT2860_D-1.1.0.0_VA-2.0.2.0_RU-2.0.7.0_VA-2.0.8.0_AU_1.2.2.0_VA-1.0.5.0_112607_0.1.0.37.exe)

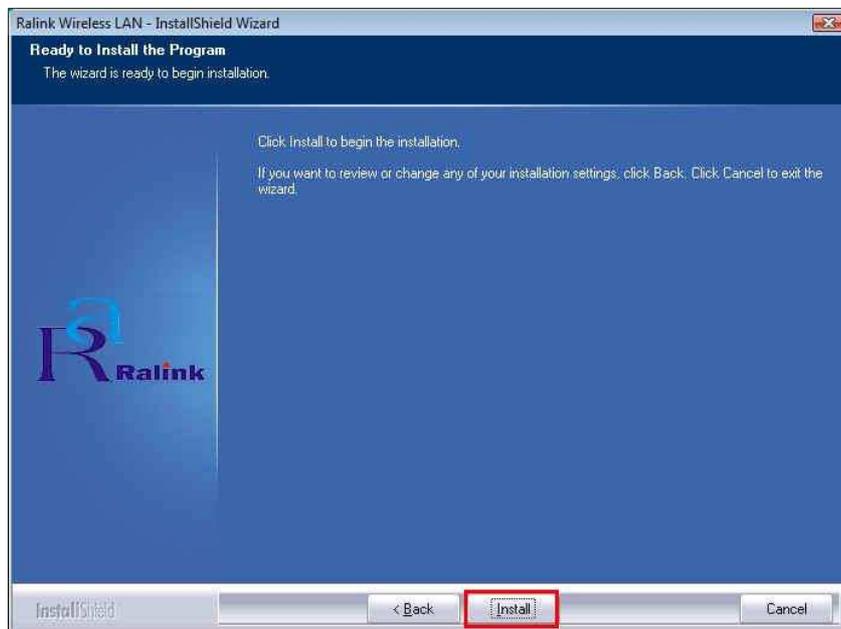
2. **Ralink Wireless LAN Setup Wizard** is preparing the setup. Please wait.



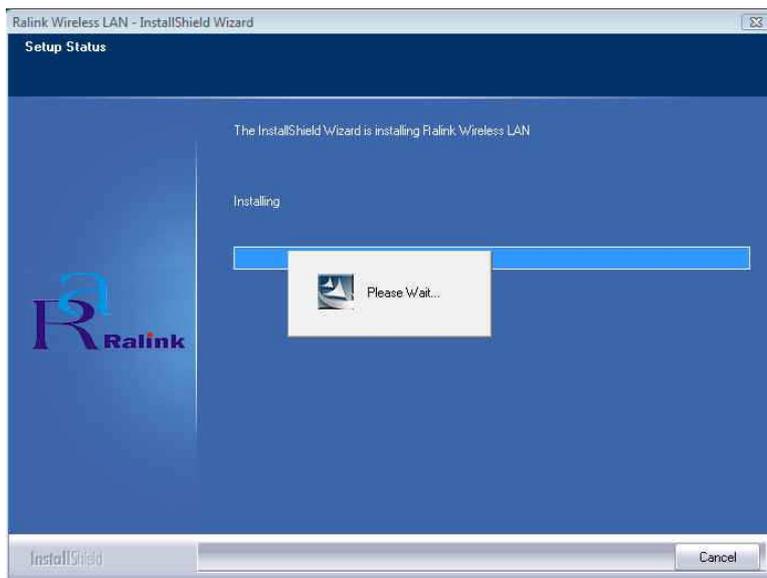
3. **Ralink Wireless Network Card Setup Wizard** will install the driver on your system. Select **"I accept the terms of the license agreement"** and then click **"Next"** to accept the License Agreement.



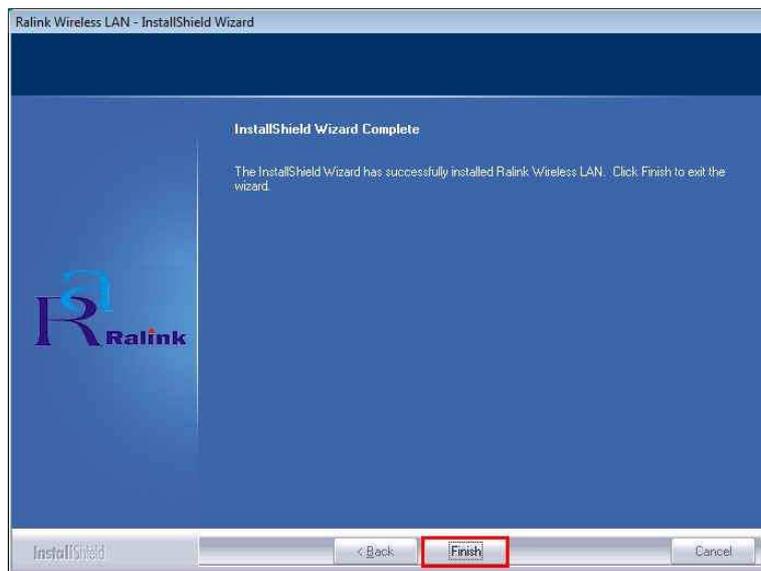
4. Click **"Install"** to begin the driver installation.



5. The Ralink Wireless LAN driver is installing. Please wait.



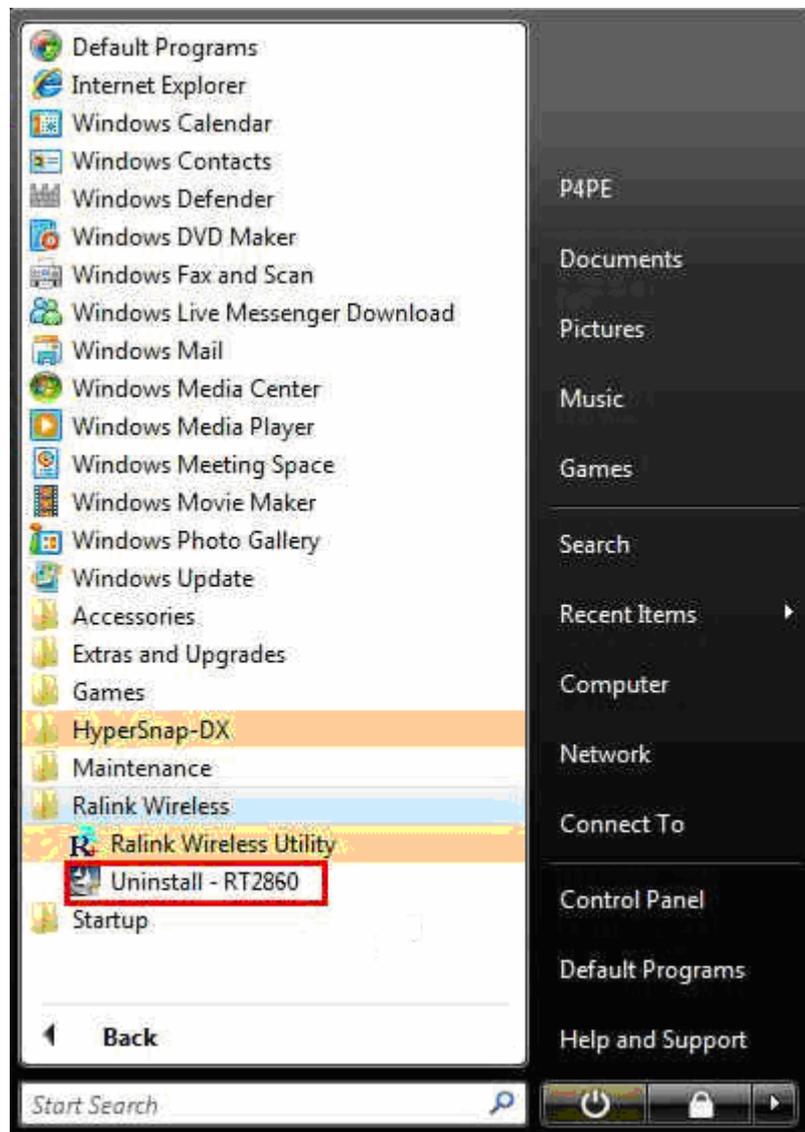
6. The installation is now complete. Please click **"Finish"**.



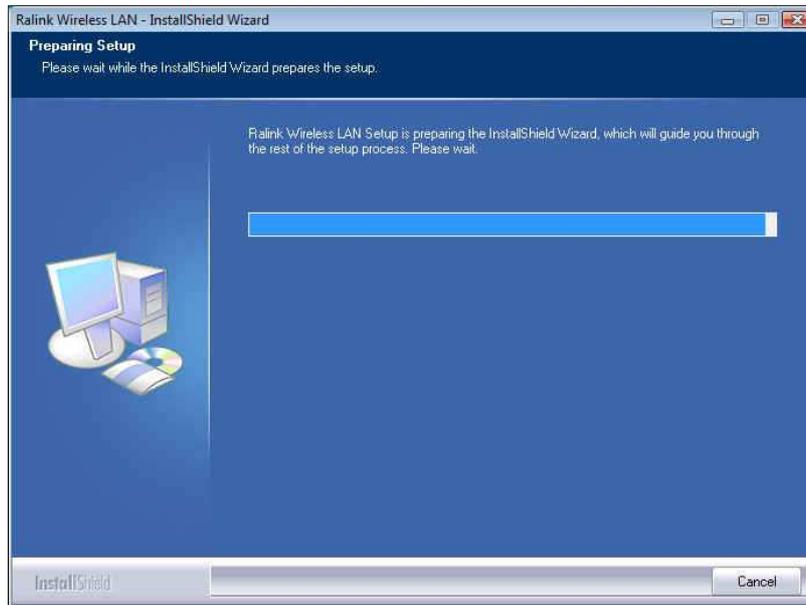
7. When you complete the installation, the utility icon will appear on the system tray (). You could double-click it to configure wireless network settings.

Uninstalling the Wireless LAN Card

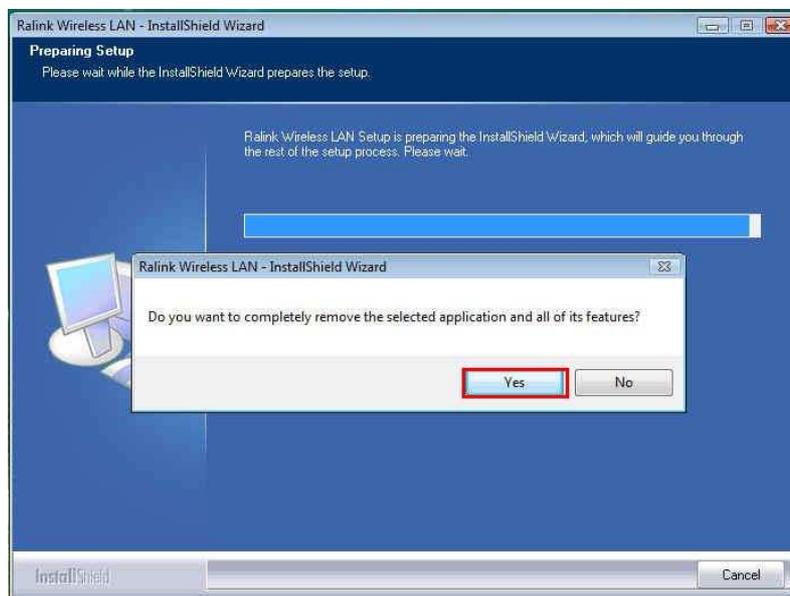
1. For uninstalling the Wireless LAN Card, please go to: **Start → All Programs → Ralink Wireless** under Windows environment. Then click "**Uninstall – RT2860**".



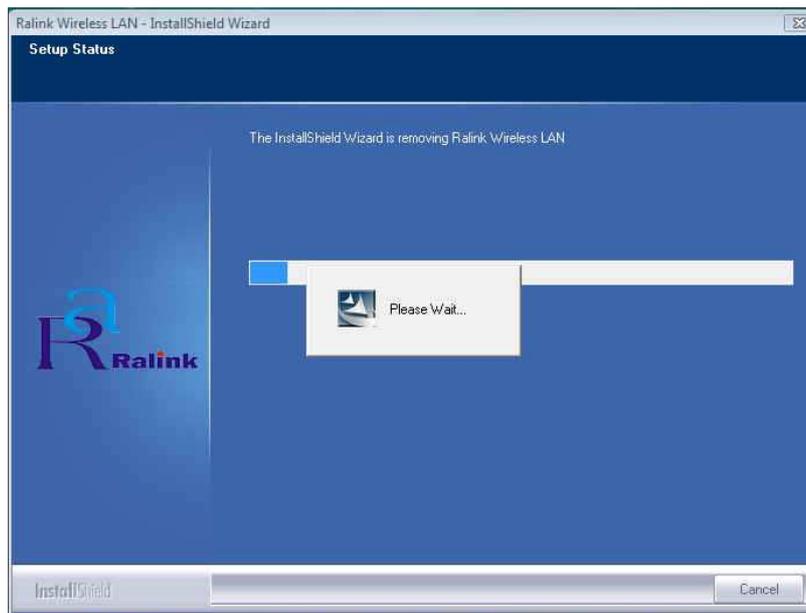
2. **Ralink Wireless LAN Setup Wizard** prepares to uninstall the driver on your system. Please wait.



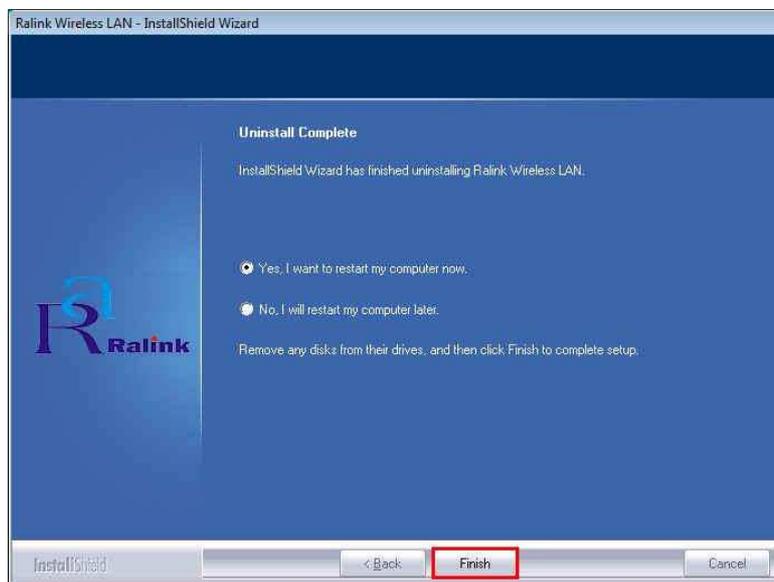
3. Click "Yes" to uninstall the Wireless LAN Card driver and utility.



4. Wait for removing the driver and utility.



5. After completing the un-installation, click "**Finish**" to restart your computer.

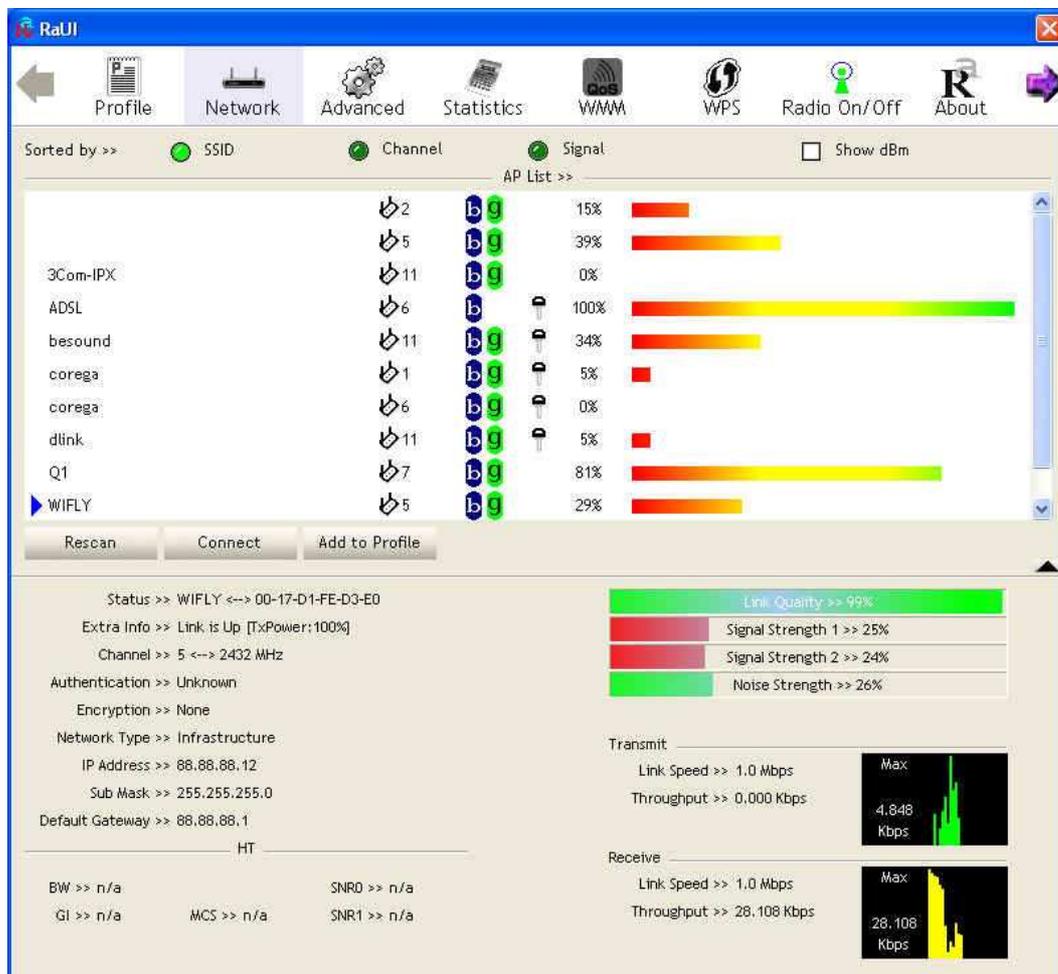


Configuring the Wireless LAN Card

Double-click the utility icon  in your system tray to begin the utility configuration.

Connecting to an existing network

Select **Network** Tab, all available Access Points would be listed.
Click on the desired Access Point, and click "**Connect**" to connect.



The screenshot shows the RaUI Network configuration window. The 'Network' tab is selected, displaying a list of Access Points (APs) with their SSIDs, channels, and signal strengths. The 'WIFLY' AP is selected, and its connection details are shown below the list.

SSID	Channel	Signal
3Com-IPX	2	15%
ADSL	5	39%
besound	11	0%
corega	6	100%
corega	11	34%
dlink	1	5%
dlink	6	0%
Q1	11	5%
Q1	7	81%
WIFLY	5	29%

Selected AP: WIFLY

Status >> WIFLY <-> 00-17-D1-FE-D3-E0

Extra Info >> Link is Up [TxPower:100%]

Channel >> 5 <-> 2432 MHz

Authentication >> Unknown

Encryption >> None

Network Type >> Infrastructure

IP Address >> 88.88.88.12

Sub Mask >> 255.255.255.0

Default Gateway >> 88.88.88.1

HT

BW >> n/a SNR0 >> n/a

GI >> n/a MCS >> n/a SNR1 >> n/a

Link Quality >> 99%

Signal Strength 1 >> 25%

Signal Strength 2 >> 24%

Noise Strength >> 26%

Transmit

Link Speed >> 1.0 Mbps

Throughput >> 0.000 Kbps

Receive

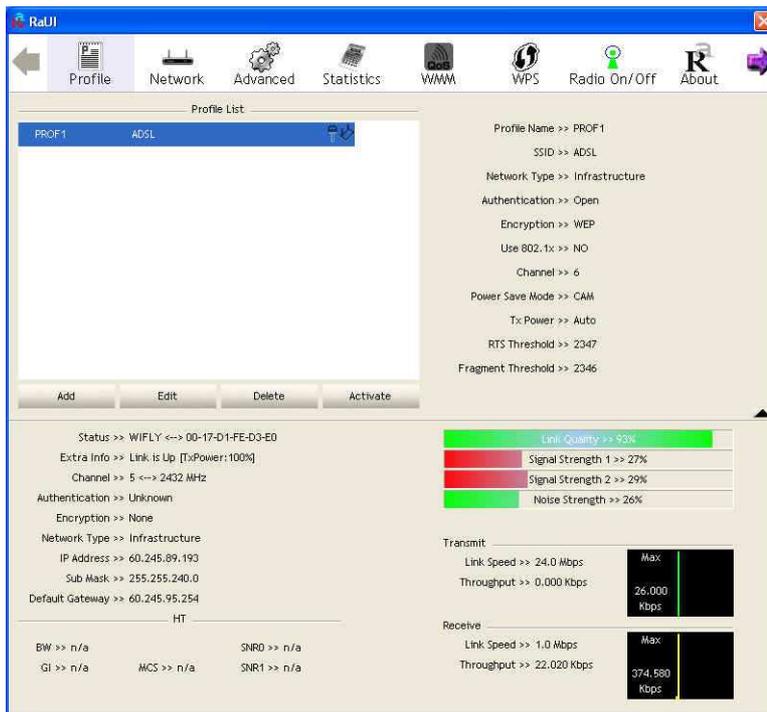
Link Speed >> 1.0 Mbps

Throughput >> 28.108 Kbps

Configuration

- Profile

The **Profile Tab** allows you to set values for all parameters by selecting a previously defined profile. To create a profile, click **Add**, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. You can click **Edit** to change the existing profile. After changing parameters, click the **Activate** button to take effect. You can have multiple profiles and modify the profile at any time.

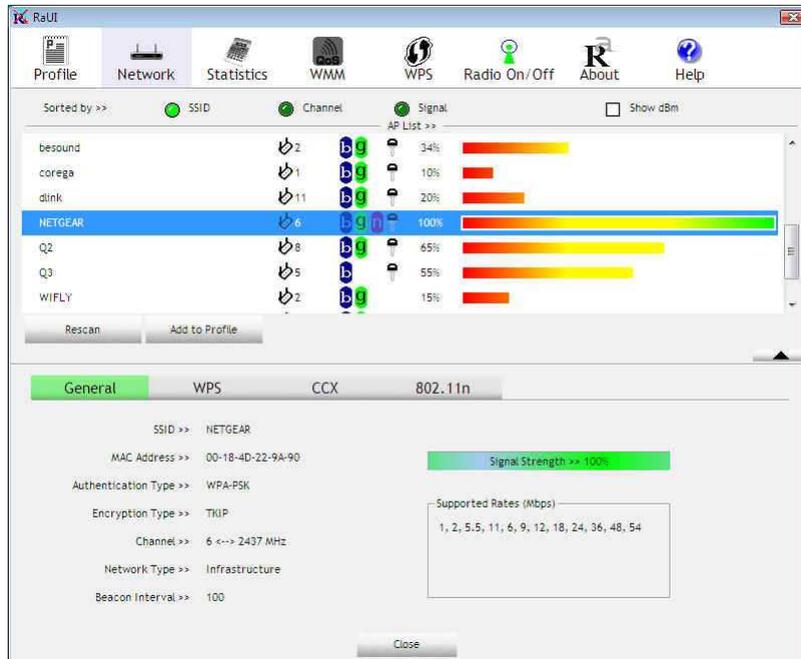


- Network

Network Tab lists the features of the available Access Points within range of the Wireless Adapter's signal.

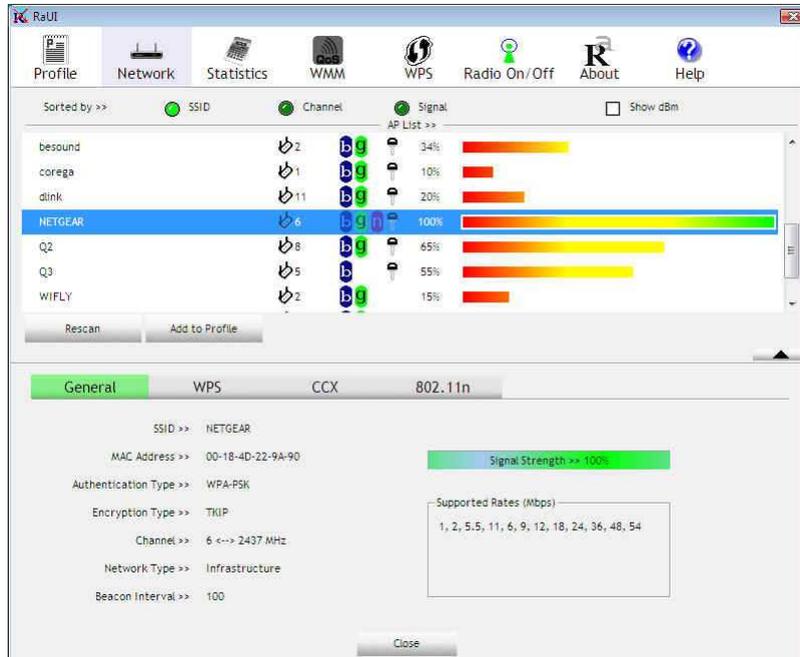
Click on the desired Access Point, and click **Connect** to connect.

You may click **Rescan** to refresh the list.



Add to Profile

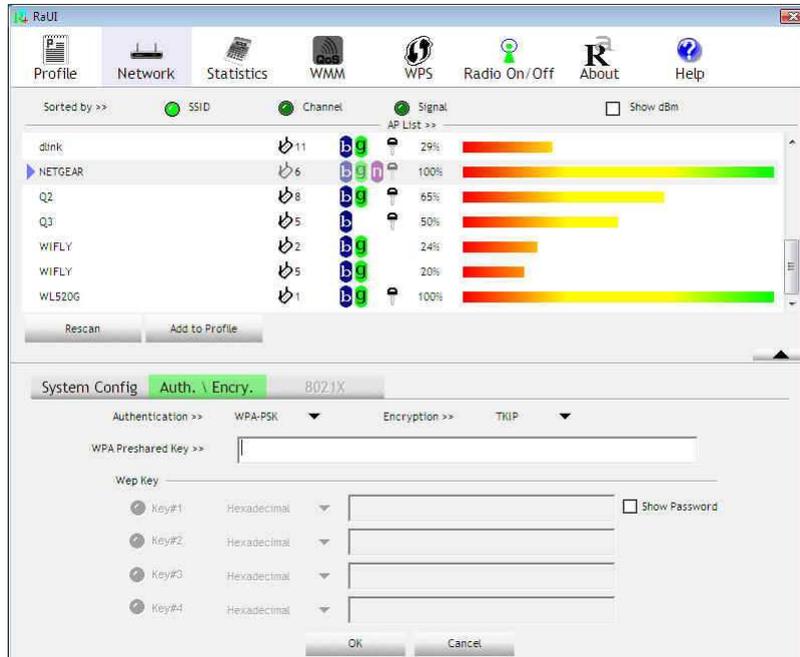
You may select an Access Point, and click **Add to Profile** to include it to Profile List. Under **System Config** Tab, you may set **Power Saving Mode**, **Network Type**, **RTS Threshold**, and **Fragment Threshold**.



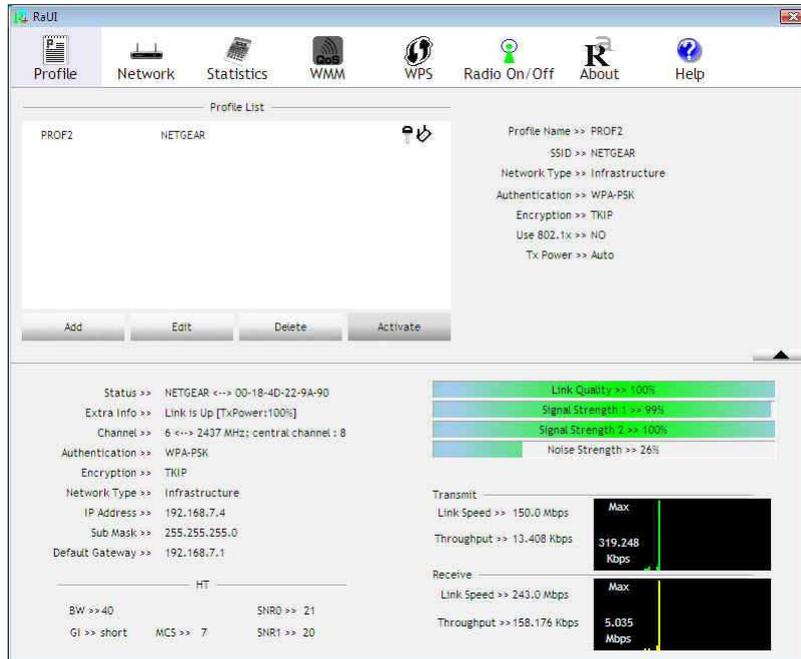
Under **Auth. \ Encry.** Tab, you may set **Authentication Type**, **Encryption Type**, **WPA Pre-Shared Key**, and **Wep Key**.

Click **OK** when you have finished the settings.

Or click **Cancel** to abort your new settings for Add to Profile.

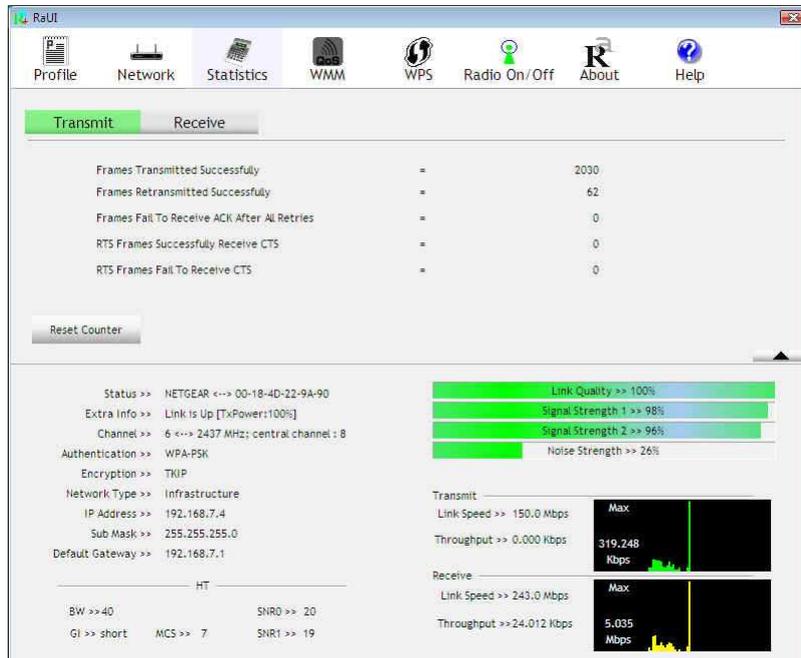


After fishing the Add Profile, Check **Profile** Tab, you may find the new added profile in Profile List.



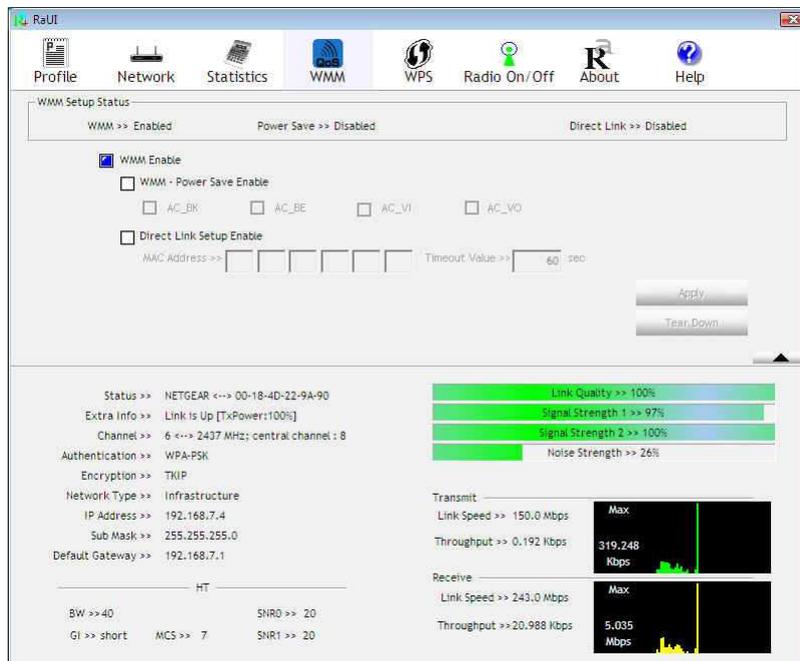
Statistics

The **Statistics** Tab provides information about the Transmit and Receive frames.



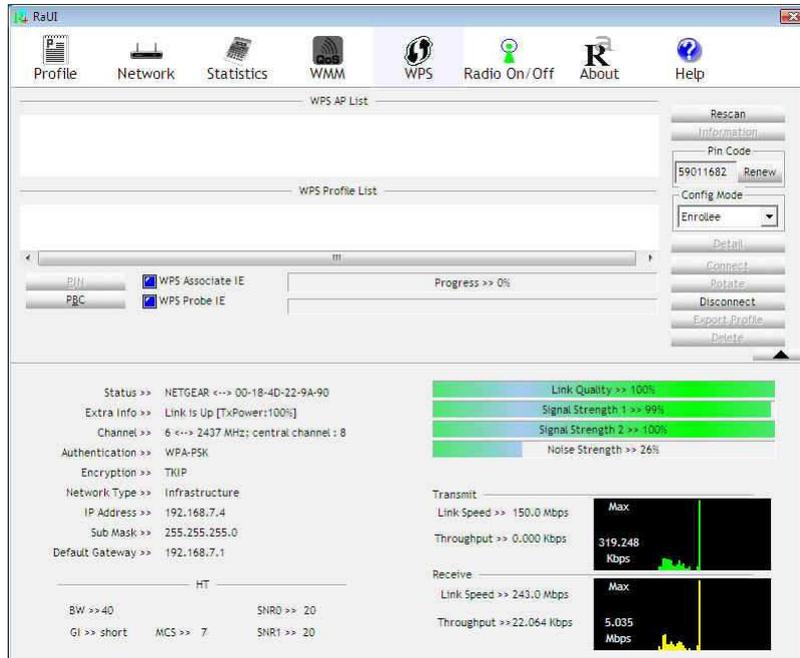
- WMM

WMM shows WMM function includes “WMM Enable”, “WMM-Power Save Enable” and “Direct Link Setup Enable”.



- WPS

WPS Tab shows the information including authentication type, encryption type, config mode, device password id, selected registrar, state, version, AP setup locked, UUID-E and RF bands.

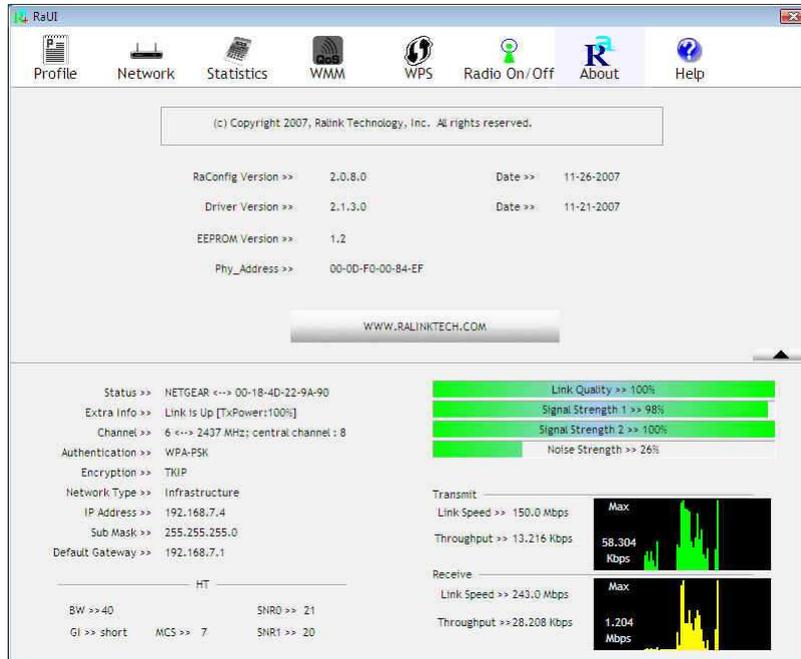


- Radio On / Off

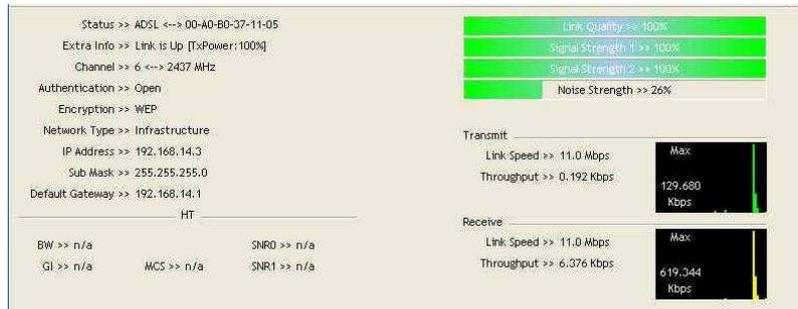
Click the icon  **Radio On/Off** to switch the radio on or off.

- About

About Tab shows the product version including the detail of Configuration Utility Version, Driver Version, EEPROM Version, and NIC MAC Address.



- **Link Status**



Status

The field shows the association status to available Access Point with SSID of the Access Point.

Extra Info

Display link status in use.

Channel

Shows the channel on which the connection is made.

Link Speed

Show current transmit rate and receive rate.

Link Quality / Signal Strength

The Link Quality and Signal Strength bar graph is only active when the node is in Infrastructure Mode. The bar graph displays the quality and strength of the link between the node and its Access Point.

Windows XP SP2

Driver Installation

1. For installing the Wireless LAN Card driver, go to the directory where the Wireless Adapter Installation stored, then double-click the **Setup Program**



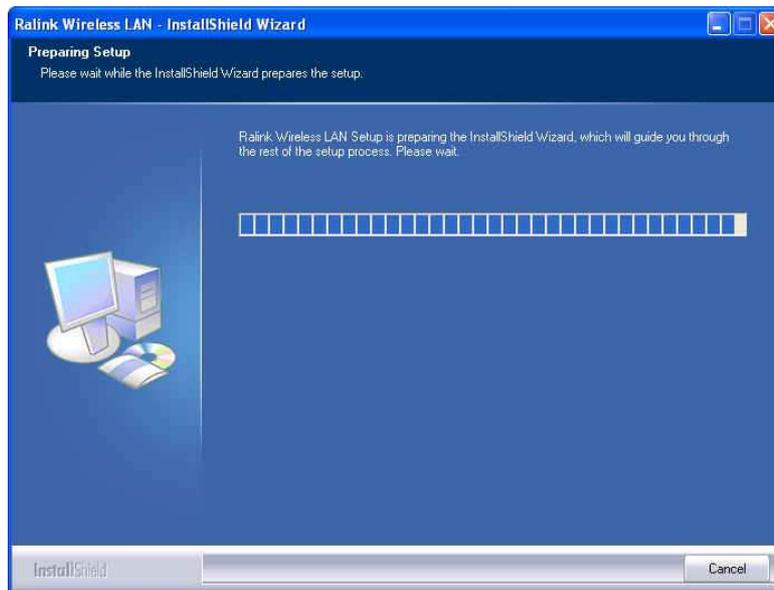
IS_AP_STA_RT2870_D-1
1.0.4.0_VA-2.1.0.0_FU-2
0.3.0_VA-1.0.10.0_AU-1
1.2.0.0_VA-1.0.3.0_091
407_0.1.0.29

to begin the installation.

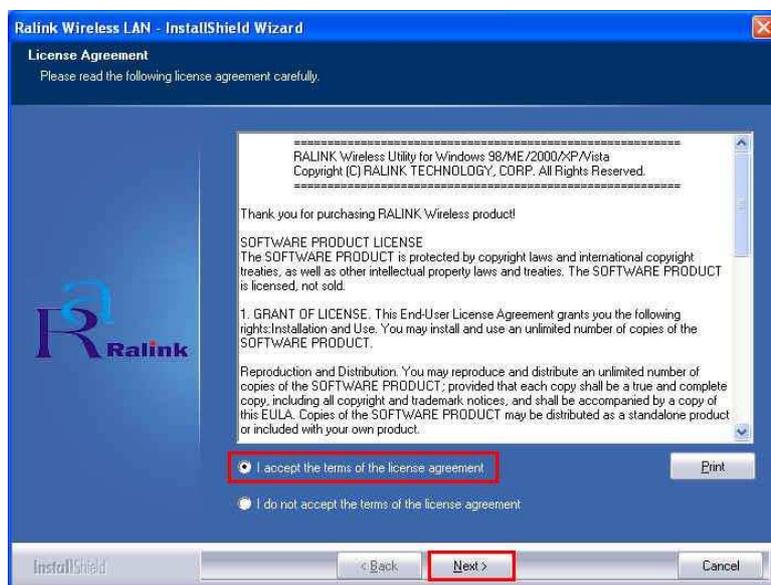
(Exsample:

IS_AP_STA_RT2860_D-1.1.0.0_VA-2.0.2.0_RU-2.0.7.0_VA-2.0.8.0_AU_1.2.2.
0_VA-1.0.5.0_112607_0.1.0.37.exe)

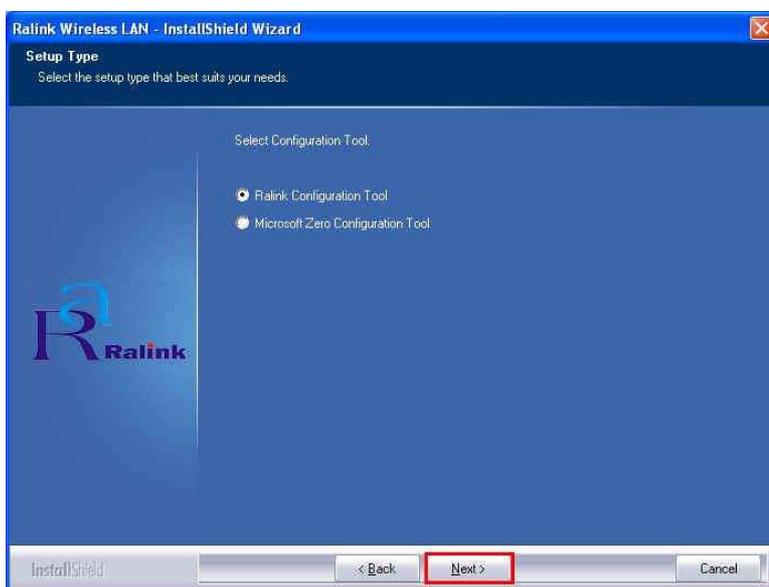
2. **Ralink Wireless LAN Setup Wizard** is preparing the setup. Please wait.



3. **Ralink Wireless Network Card Setup Wizard** will install the driver on your system. Select "**I accept the terms of the license agreement**" and then click "**Next**" to accept the License Agreement.

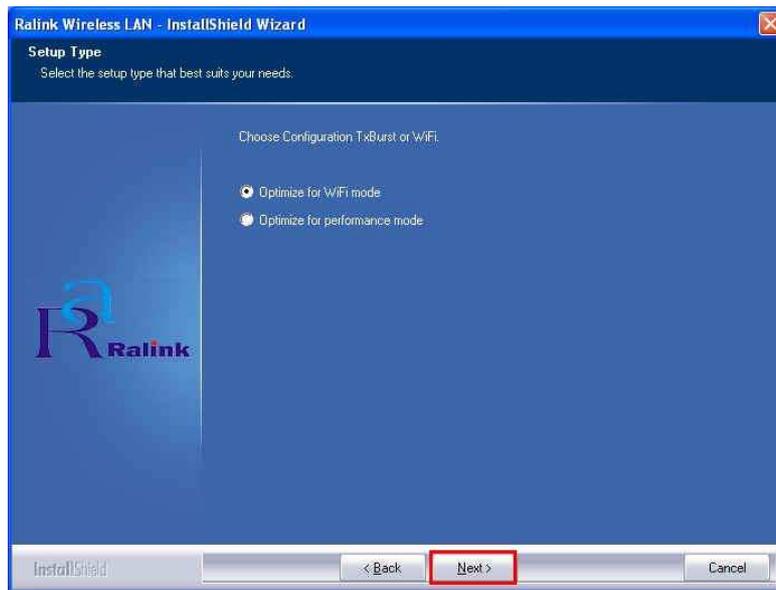


4. Click "**Next**" to continue.

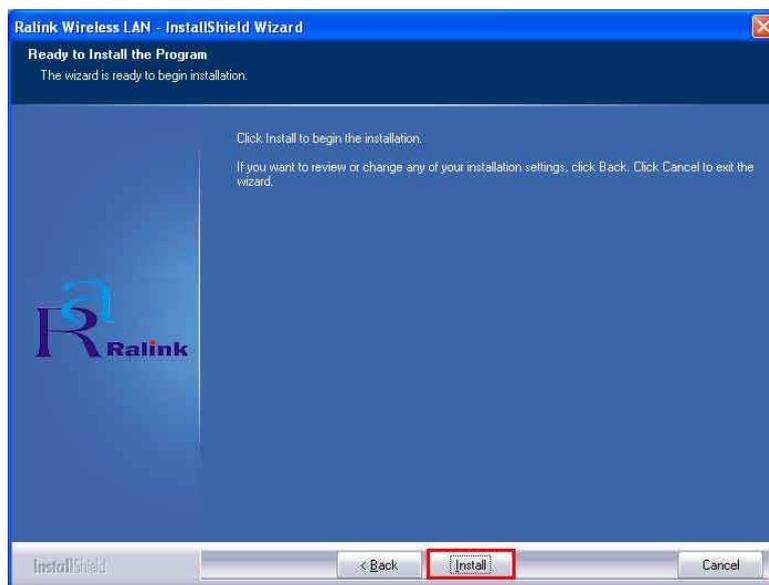


If you have installed the **Windows XP Service Pack 2**. You can use the **Note:** **Windows Zero Configuration Tool** for Wireless Configuring. Please refer the *Windows XP User's Guide*.

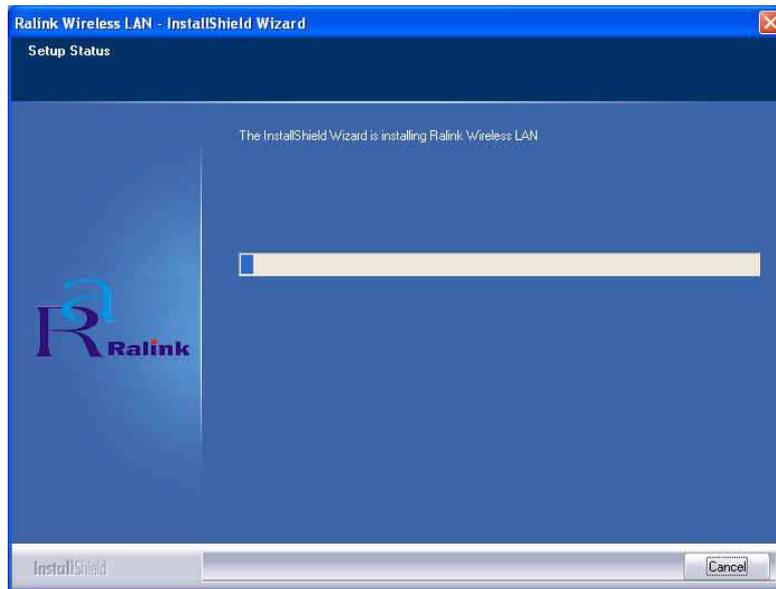
5. Click "Next" to continue.



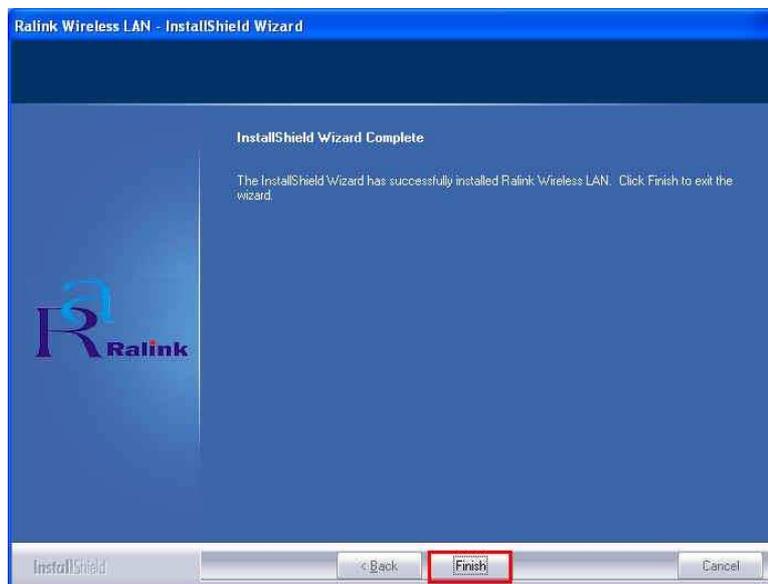
6. Click "Install" to begin the driver installation.



7. The Ralink Wireless LAN driver is installing. Please wait.



8. The installation is now complete. Please click **"Finish"**.



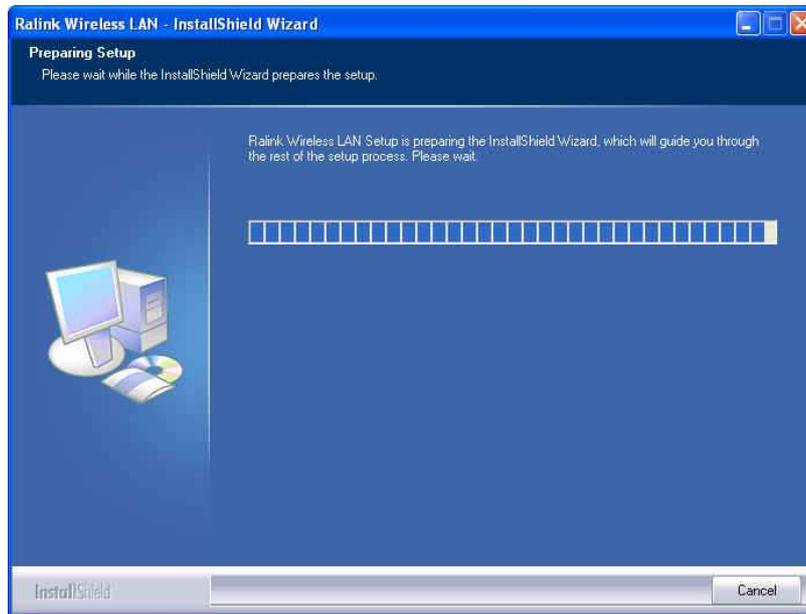
9. When you complete the installation, the utility icon will appear on the system tray (). You could double-click it to configure wireless network settings.

Uninstalling the Wireless LAN Card

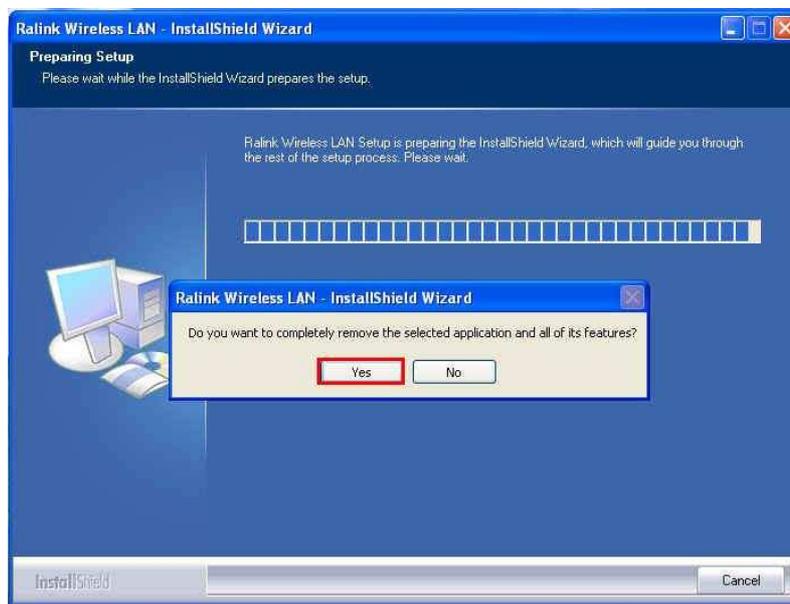
1. For uninstalling the Wireless LAN Card, please go to: **Start → All Programs → Ralink Wireless** under Windows environment. Then click "**Uninstall – RT2870**".



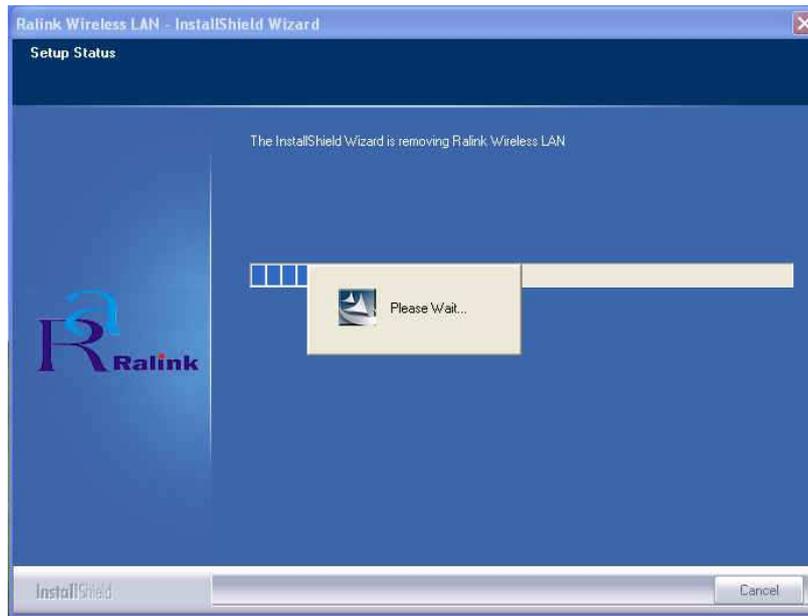
2. **Ralink Wireless LAN Setup Wizard** prepares to uninstall the driver on your system. Please wait.



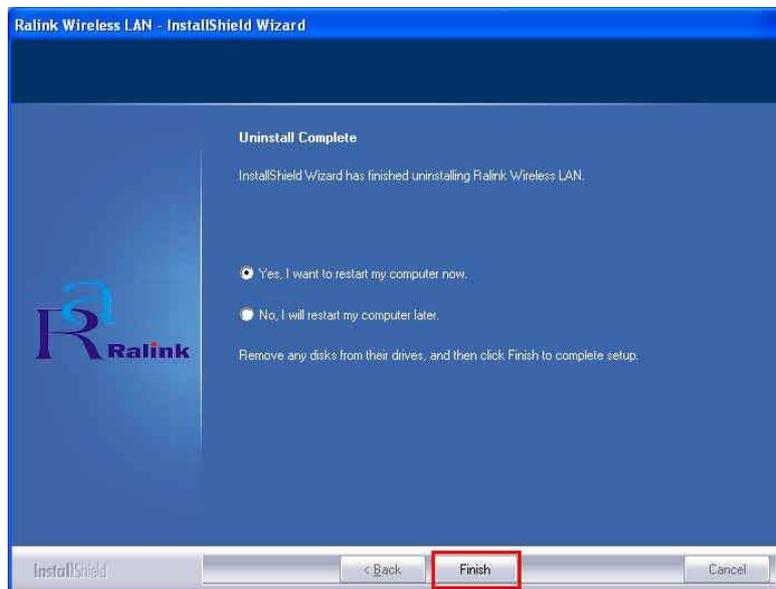
3. Click "Yes" to uninstall the Wireless LAN Card driver and utility.



4. Wait for removing the driver and utility.



5. After completing the un-installation, click "**Finish**" to restart your computer.



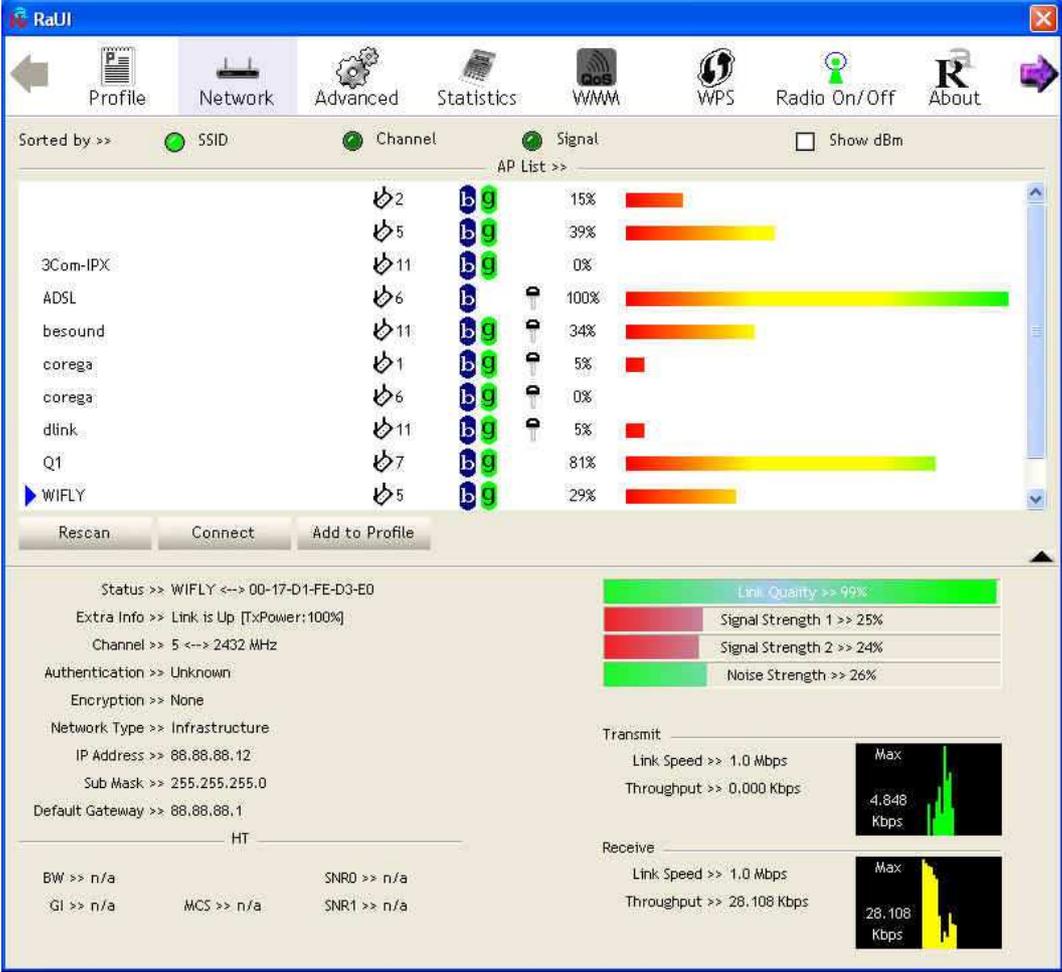
Configuring the Wireless LAN Card

Double-click the utility icon  in your system tray to begin the utility configuration.

Connecting to an existing network

Select **Network** Tab, all available Access Points would be listed.

Click on the desired Access Point, and click "**Connect**" to connect.



The screenshot displays the RaUI Wireless LAN utility interface. The top navigation bar includes tabs for Profile, Network (selected), Advanced, Statistics, WMM, WPS, Radio On/Off, and About. Below the navigation bar, there are sorting options (Sorted by >>) for SSID, Channel, and Signal, and a checkbox for Show dBm. The main area shows an AP List with columns for SSID, Channel, Signal strength, and a bar chart. The WIFLY network is selected. Below the AP list, there are buttons for Rescan, Connect, and Add to Profile. The bottom section displays connection details for the WIFLY network, including status, extra info, channel, authentication, encryption, network type, IP address, sub mask, default gateway, and HT mode. It also shows link quality, signal strength, noise strength, transmit and receive link speeds, and throughput.

SSID	Channel	Signal
3Com-IPX	2	15%
ADSL	5	39%
besound	11	0%
corega	6	100%
corega	11	34%
dlink	1	5%
dlink	6	0%
Q1	11	5%
WIFLY	7	81%
WIFLY	5	29%

Selected Network: WIFLY <-> 00-17-D1-FE-D3-E0

Link Quality >> 99%

Signal Strength 1 >> 25%

Signal Strength 2 >> 24%

Noise Strength >> 26%

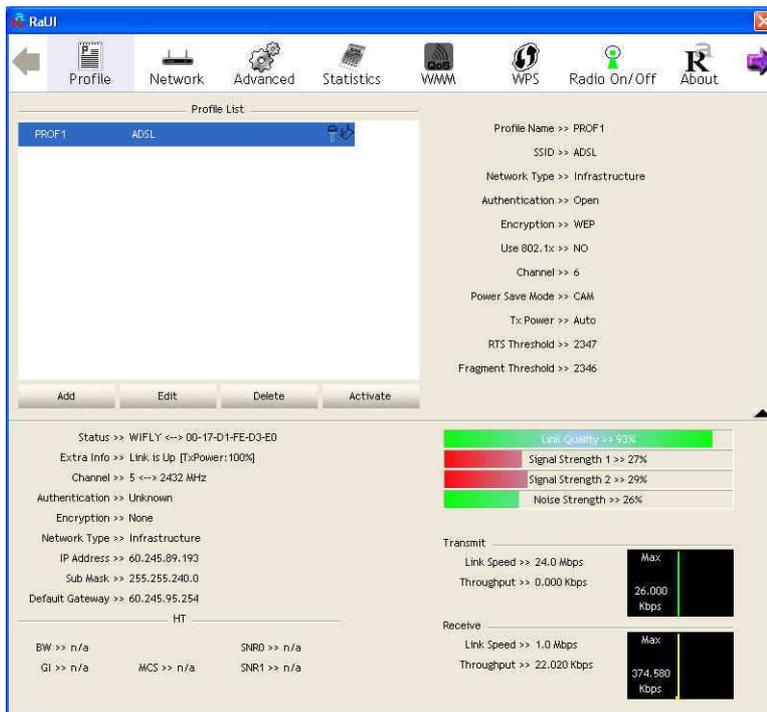
Transmit: Link Speed >> 1.0 Mbps, Throughput >> 0.000 Kbps

Receive: Link Speed >> 1.0 Mbps, Throughput >> 28.108 Kbps

Configuration

- Profile

The **Profile Tab** allows you to set values for all parameters by selecting a previously defined profile. To create a profile, click **Add**, type a profile name and set the corresponding parameters. If one of the profiles is no longer used, you may remove it by clicking the **Delete** button. You can click **Edit** to change the exiting profile. After changing parameters, click the **Activate** button to take effect. You can have multiple profiles and modify the profile at any time.

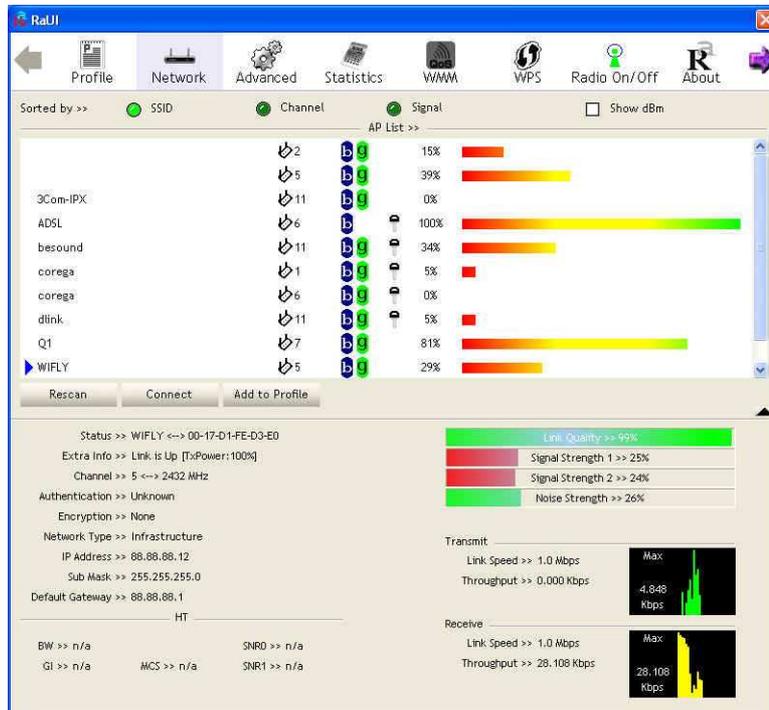


- Network

Network Tab lists the features of the available Access Points within range of the Wireless Adapter's signal.

Click on the desired Access Point, and click **Connect** to connect.

You may click **Rescan** to refresh the list.



Add to Profile

You may select an Access Point, and click **Add to Profile** to include it to Profile List. Under **System Config** Tab, you may set **Power Saving Mode**, **Network Type**, **RTS Threshold**, and **Fragment Threshold**.

The screenshot displays the RaUI interface with the following components:

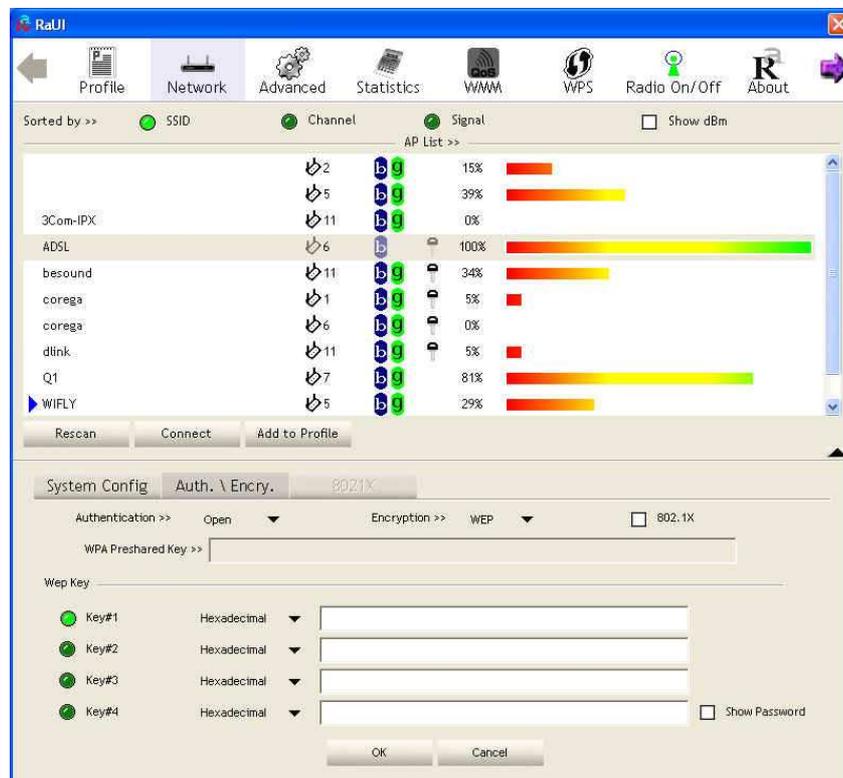
- Navigation Bar:** Profile, Network, Advanced, Statistics, WMM, WPS, Radio On/Off, About.
- Sort Options:** Sorted by >> SSID, Channel, Signal. A checkbox for Show dBm is present.
- AP List Table:**

SSID	Channel	Signal
	2	15%
	5	39%
3Com-IPX	11	0%
ADSL	6	100%
besound	11	34%
corega	1	5%
corega	6	0%
dlink	11	5%
Q1	7	81%
WIFLY	5	29%
- Buttons:** Rescan, Connect, Add to Profile.
- Status Section:**
 - Status >> WIFLY <-> 00-17-D1-FE-D3-E0
 - Extra Info >> Link: Is Up [TxPower:100%]
 - Channel >> 5 <-> 2432 MHz
 - Authentication >> Unknown
 - Encryption >> None
 - Network Type >> Infrastructure
 - IP Address >> 88.88.88.12
 - Sub Mask >> 255.255.255.0
 - Default Gateway >> 88.88.88.1
 - HT
 - EW >> n/a
 - GI >> n/a
 - MCS >> n/a
 - SNR0 >> n/a
 - SNR1 >> n/a
- Link Quality Metrics:**
 - Link Quality >> 99%
 - Signal Strength 1 >> 27%
 - Signal Strength 2 >> 29%
 - Noise Strength >> 26%
- Transmit Section:**
 - Link Speed >> 1.0 Mbps
 - Throughput >> 0.000 Kbps
 - Max 4,848 Kbps
- Receive Section:**
 - Link Speed >> 1.0 Mbps
 - Throughput >> 20.632 Kbps
 - Max 28,108 Kbps

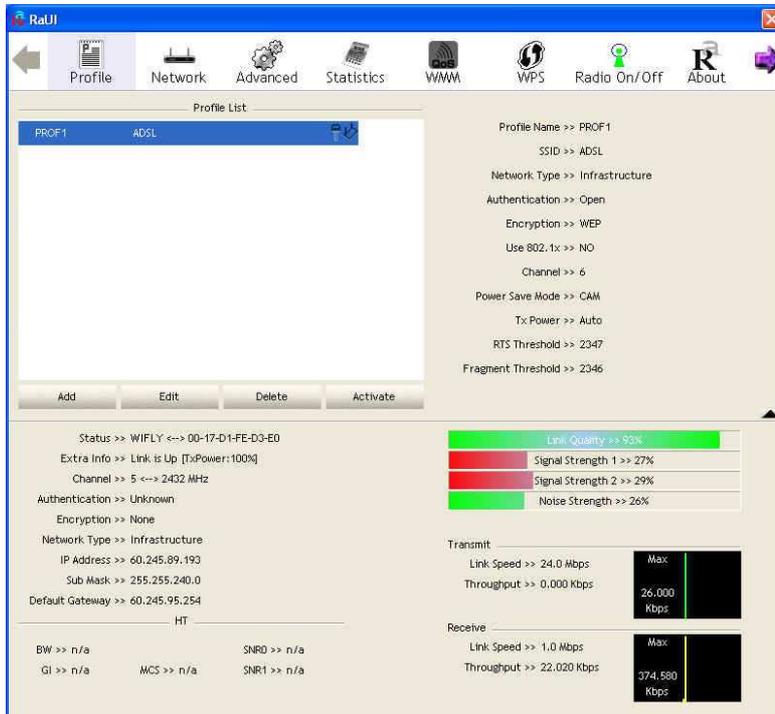
Under **Auth. \ Encry.** Tab, you may set **Authentication Type**, **Encryption Type**, **WPA Pre-Shared Key**, and **Wep Key**.

Click **OK** when you have finished the settings.

Or click **Cancel** to abort your new settings for Add to Profile.

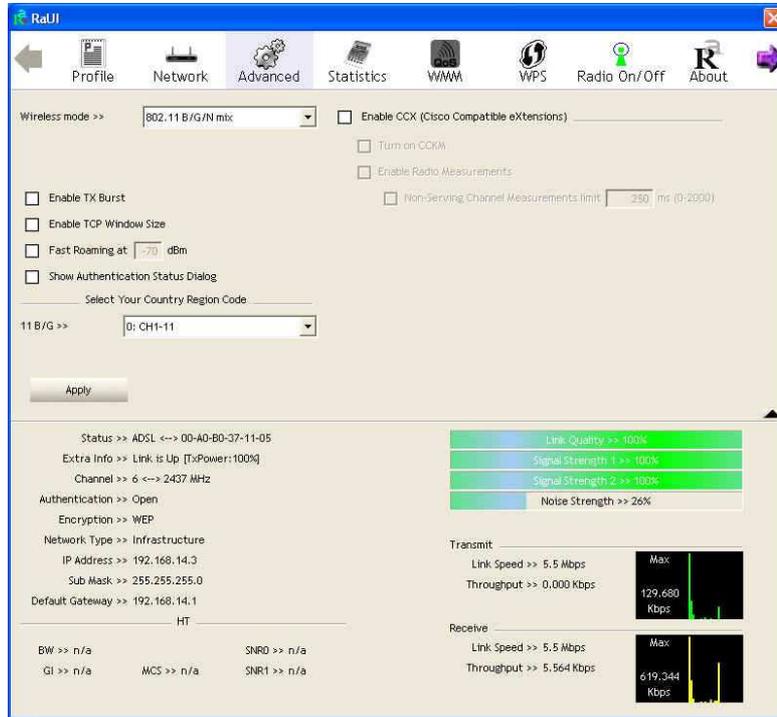


After fishing the Add Profile, Check **Profile** Tab, you may find the new added profile in Profile List.



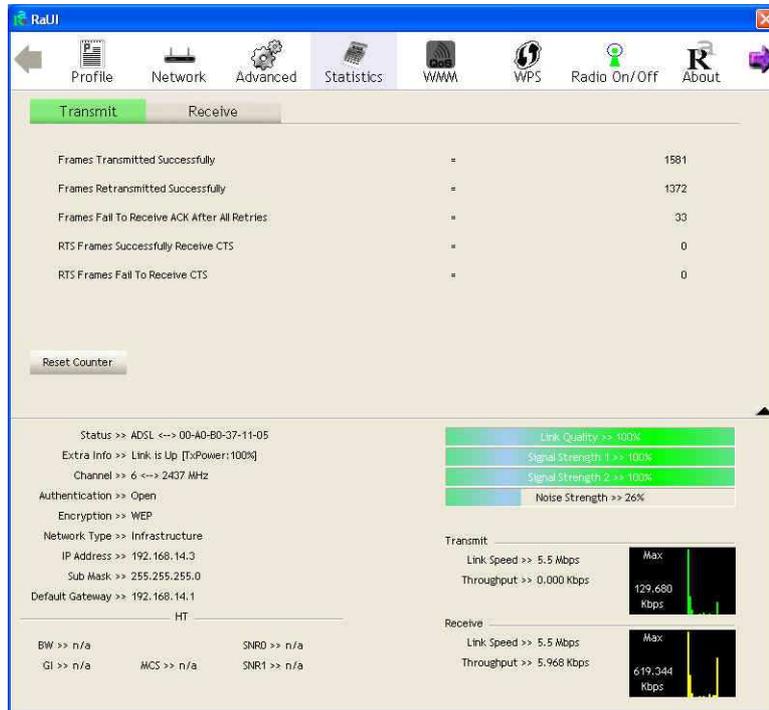
- Advanced

The Configuration Utility also offers the advanced configuration for user to set the Wireless Adapter under certain network environment. These advanced options include Wireless mode, B/G Protection, Tx Rate.



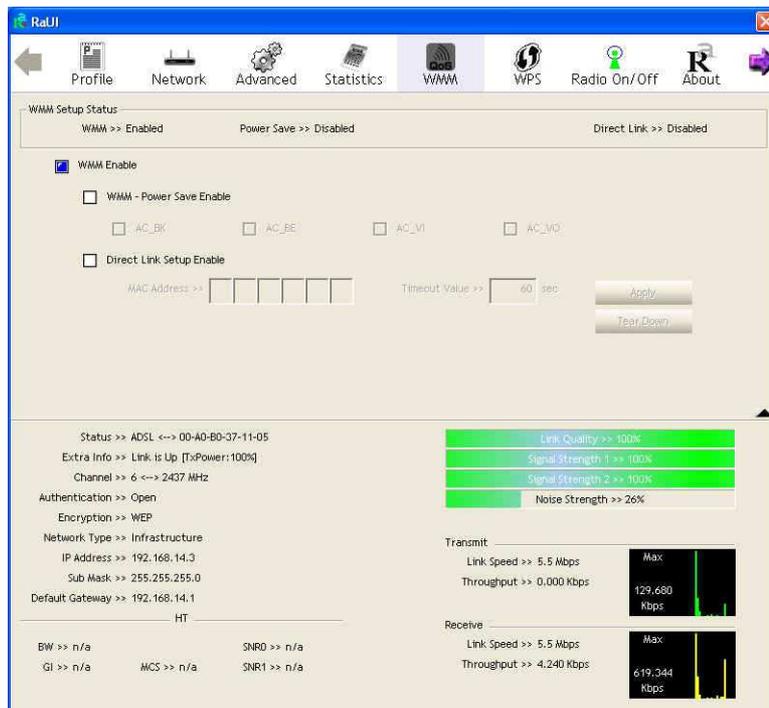
- Statistics

The **Statistics** Tab provides information about the Transmit and Receive frames.



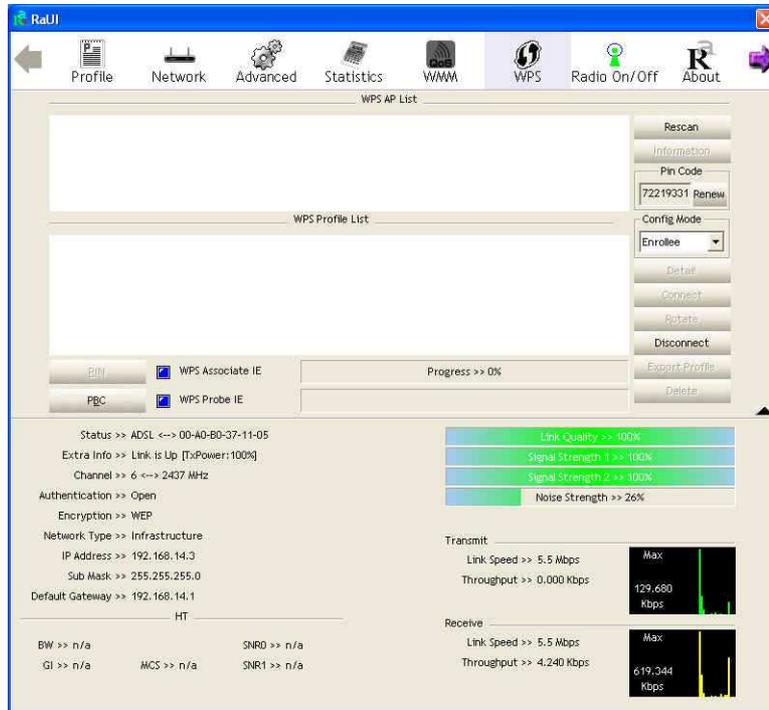
- WMM

WMM shows WMM function includes “WMM Enable”, “WMM-Power Save Enable” and “Direct Link Setup Enable”.



- WPS

WPS Tab shows the information including authentication type, encryption type, config mode, device password id, selected registrar, state, version, AP setup locked, UUID-E and RF bands.

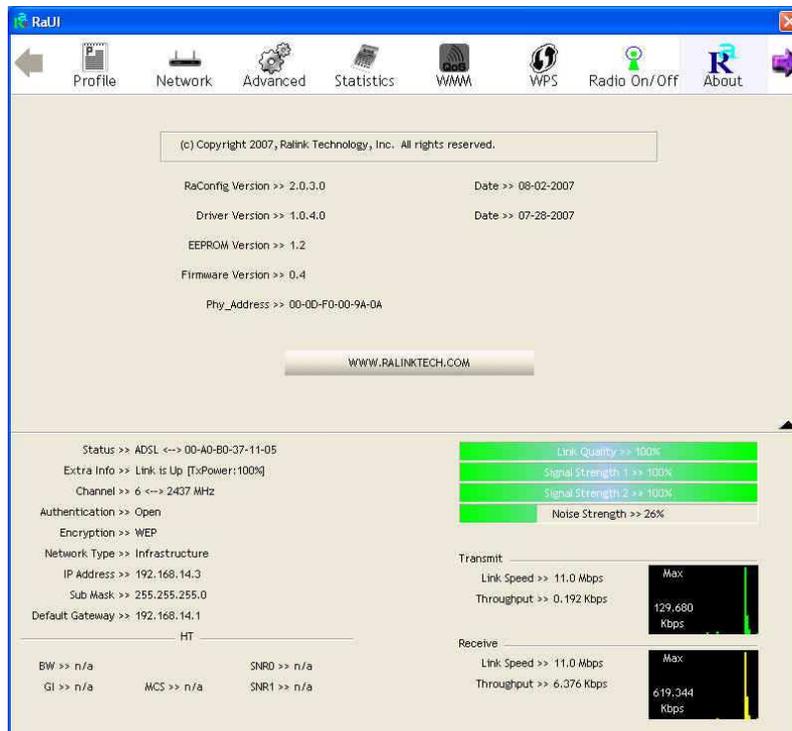


- Radio On / Off

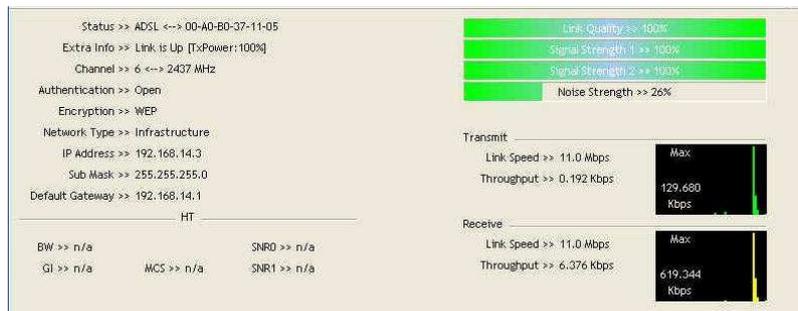
Click the icon  to switch the radio on or off.

- About

About Tab shows the product version including the detail of Configuration Utility Version, Driver Version, EEPROM Version, and NIC MAC Address.



- **Link Status**



Status

The field shows the association status to available Access Point with SSID of the Access Point.

Extra Info

Display link status in use.

Channel

Shows the channel on which the connection is made.

Link Speed

Show current transmit rate and receive rate.

Link Quality / Signal Strength

The Link Quality and Signal Strength bar graph is only active when the node is in Infrastructure Mode. The bar graph displays the quality and strength of the link between the node and its Access Point.

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.

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.

This device is intended only for OEM integrators under the following conditions:

- 1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and
- 2) The transmitter module may not be co-located with any other transmitter or antenna,
- 3) For all products market in US, OEM has to limit the operation channels in CH1 to CH11 for 2.4G band by supplied firmware programming tool. OEM shall not supply any tool or info to the end-user regarding to Regulatory Domain change.

As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emissions, PC peripheral requirements, etc.).

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.

End Product Labeling

This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users. The final end product must be labeled in a visible area with the following: "Contains FCC ID:RUJ-Q802XKN".

Manual Information To the End User

The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.

The end user manual shall include all required regulatory information/warning as show in this manual.

For NCC 警語

- ✘ 經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
- ✘ 低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Note:

1. 本模組於取得認證後將依規定於模組本體標示審驗合格標籤
2. 系統廠商應於平台上標示「本產品內含射頻模組：XXXyyyLPDzzzz-x」字樣