WiFi Network card

Quick Installiaton Guide

Version 1.0

WPER-116GN

PRODUCT SPECIFICATION

Model Name	WPER-116GN	
Bus Interface	PCI Express	
Form Factor	Mini PCIe	
Frequency Band	2.4GHz~2.484GHz	
Chipset Solution	Ralink RT3090	
RF Chain	1 Transmitter and 1 Receiver	
Antenna Port	1 Main: TX0 ; RX0	
Dimension	30.00mm x 26.80mm x 3.3mm (+/- 0.15 mm)	
Channel Number	802.11b mode	US : Ch 1 ~ Ch 11 EU : Ch 1 ~ Ch 13 Japan : Ch 1 ~ Ch 14
	802.11g mode	US : Ch 1 ~ Ch 11 EU : Ch 1 ~ Ch 13 Japan : Ch 1 ~ Ch 13
	EWC 20MHz Bandwidth	US : Ch 1 ~ Ch 11 EU : Ch 1 ~ Ch 13 Japan : Ch 1 ~ Ch 13
	EWC 40MHz Bandwidth	US : Ch 3 ~ Ch 9 EU : Ch 3 ~ Ch 11
Data Rate	11b mode	1, 2, 5.5, 11Mbps
	11g mode	6, 9, 12, 18, 24, 36, 48,54Mbps
	EWC mode	Refer Table1.1
Modulation	11b mode	DSSS(PSK/CCK, DBPSK, DQPSK)
	11g mode	OFDM(BPSK, QPSK, 16-QAM, 64QAM)
	EWC mode	OFDM(BPSK, QPSK, 16-QAM, 64QAM)
RF output power	11b mode	17 dBm ±1.5 dBm
	11g mode	14 dBm ±1.5 dBm
	EWC 20MHz	14 dBm ±1.5 dBm
	EWC 40MHz	14 dBm ±1.5 dBm
Receive Sensitivity	11b mode	-85dBm@1Mbps, ±2dB
	11g mode	-65dBm@54Mbps, ±2dB
	EWC 20MHz	-65dBm@MCS7, ±2dB
	EWC 40MHz	-60dBm@MCS7, ±2dB
Power requirements	DC3.3V ± 10%	
Power consumption	Continue TX : Max 450mA Continue RX : Max 300mA Idle mode : Max 150mA	
Security	WEP / WPA / WPA2	
Cisco CCX	CCX5 Compliance	
Software support	Windows XP/Vista/Win7/Linux/WinCE driver	
Operating Range	The transmission speed varies in the surrounding environment.	
Temperature	0 ~ 55°C (Operating), -20~85°C (Storing)	

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April 2012

1. Package Contents

Before you starting to use this WiFi network card, please check if there's anything missing in the package, and contact your dealer of purchase to claim for missing items:

Package Contents

Please make sure you have the following in the box:

- WiFi network card
- CDROM

Note: if anything is missing, please contact your vendor

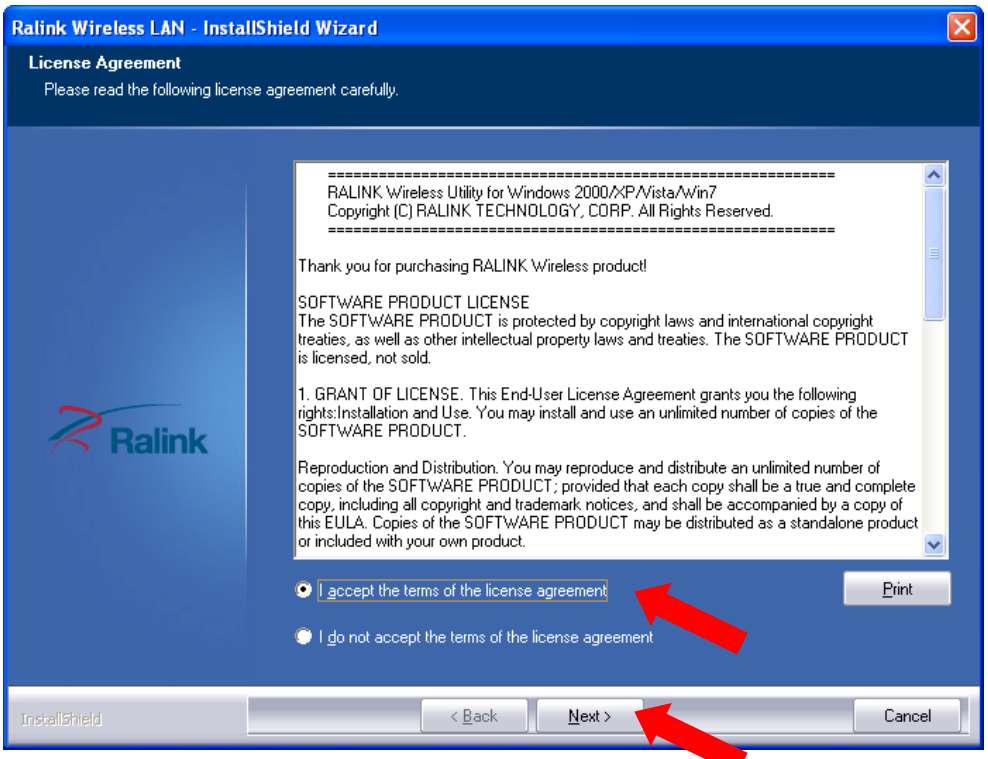
2. WiFi Network Card Installation

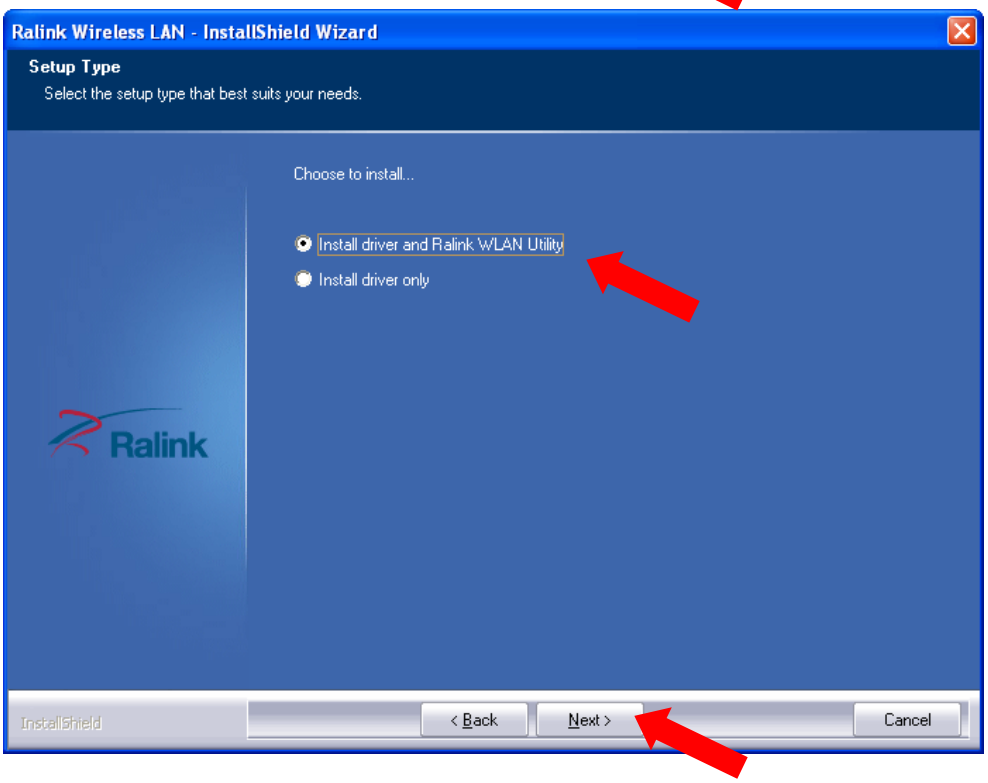
1. Put wifi module onto the expansion Adapter of the platform.

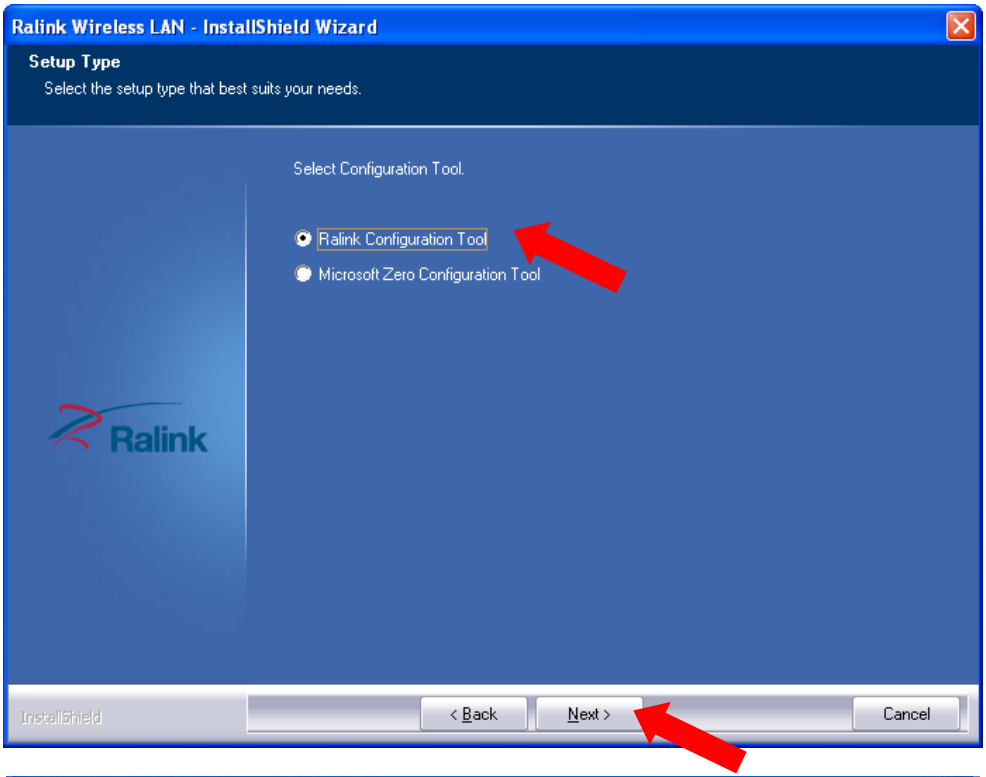
2. If he following message appear on your computer, click ***'Cancel'.***

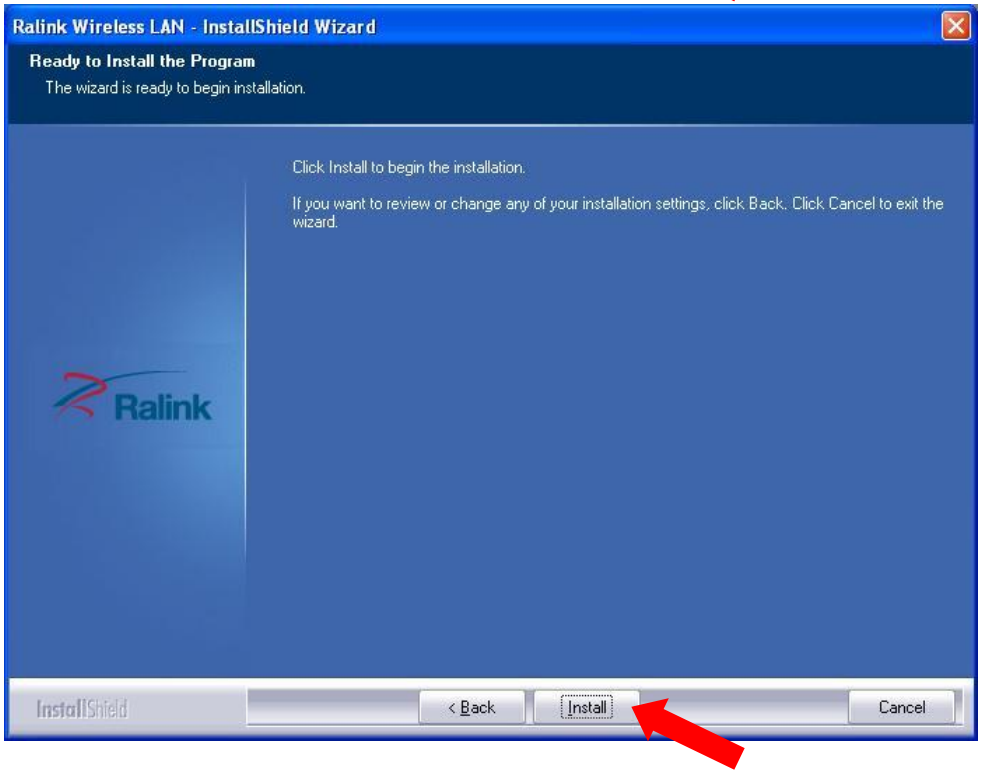
3. Insert the Driver CD then wait for the Autorun prompt**.**

4. If Autorun does not work, please browse the CD content and double click the "***Setup.exe***".
5. Click "Next" and then follow the instructions on the screen to continue the installation.

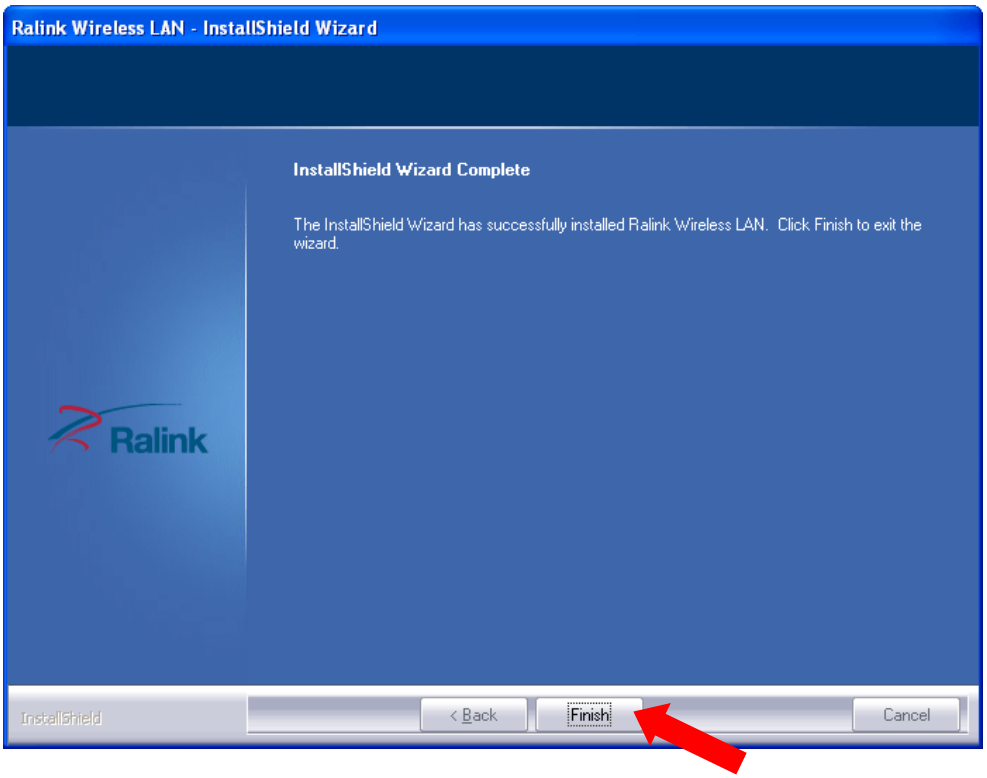





Ralink Wireless LAN - InstallShield Wizard
Setup Type
Select the setup type that best suits your needs.
Select Configuration Tool.
Ralink Configuration Tool
Microsoft Zero Configuration Tool
Ralink
InstallShield
< Back
Next >
Cancel


Ralink Wireless LAN - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
Ralink
InstallShield
< Back
Install
Cancel

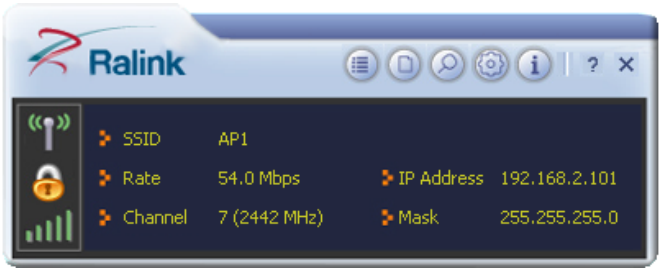
6. When you see this message, please click “Finish” to complete the driver installation process.



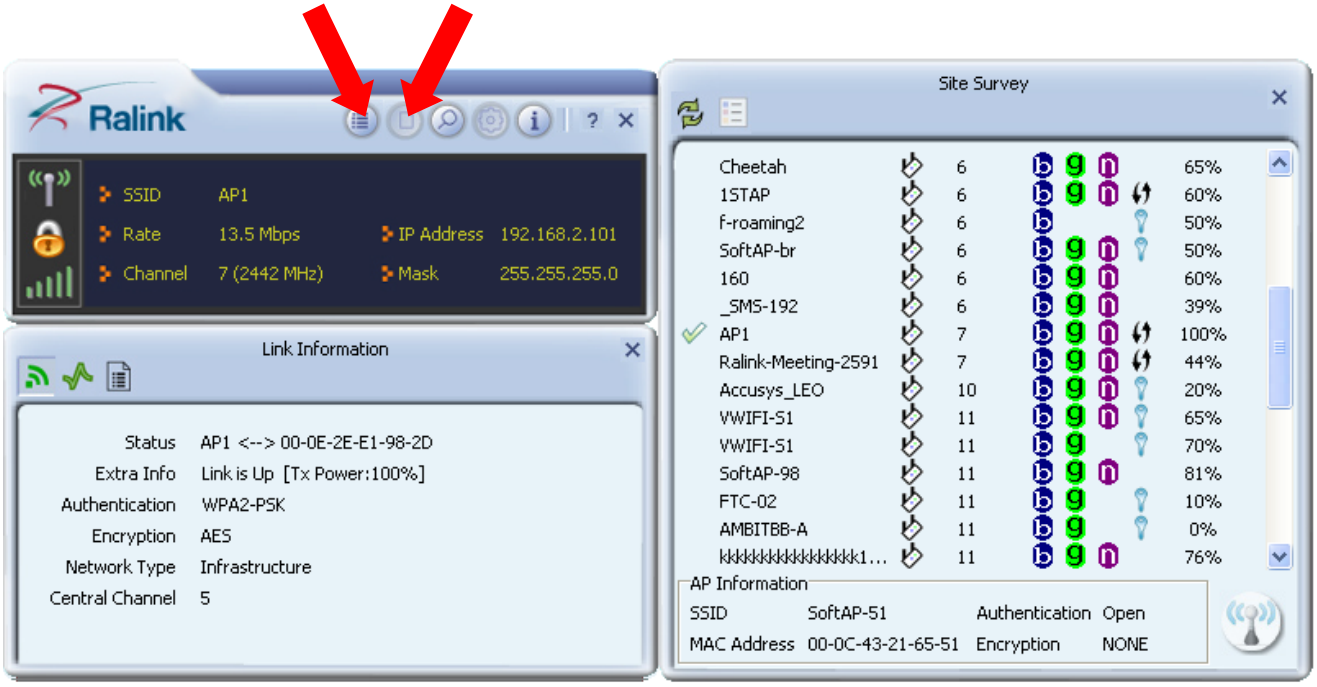
3. Connect to Wireless Access Point

1. After installation is complete, a small Ralink icon appears in the notifications area of the taskbar. You can double click it to maximize the RaUI dialog box.

2. When starting RaUI, the system will connect to the AP with best signal strength without setting a profile or matching a profile setting. When starting RaUI, it will issue a scan command to a WiFi network card. After two seconds, the AP list will be updated with the results of a BSS list scan. The AP list includes most used fields, such as SSID, network type, channel used, wireless mode, security status and the signal percentage. The arrow icon indicates the connected BSS or IBSS network. The dialog box is shown below.

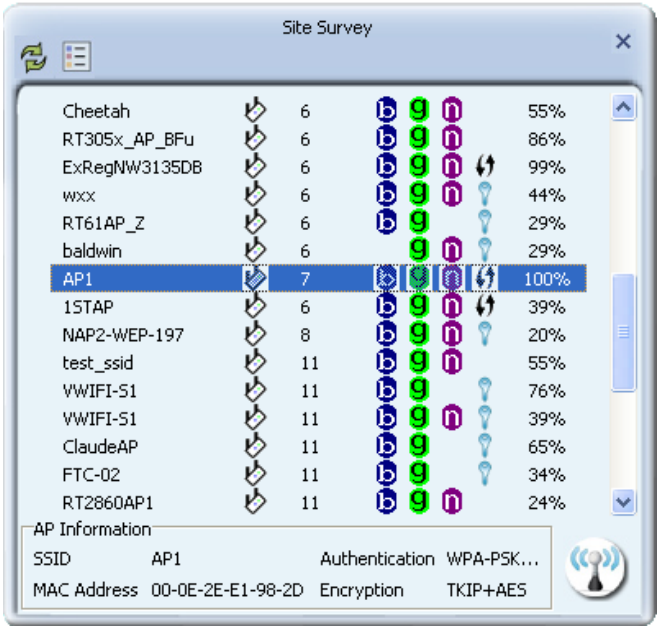


You could click the two buttons which red arrow pointed to open the “Site Survey” and “Link Information” page to show detail information.

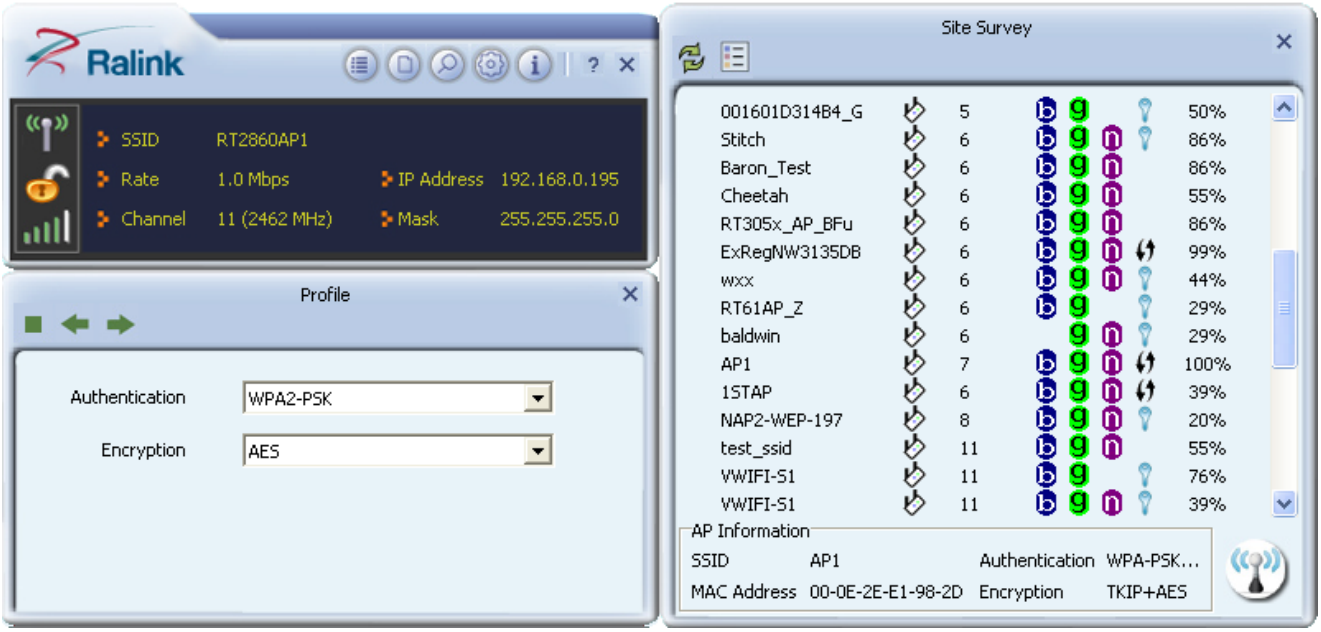


3. You could follow the steps to connect to the AP which you want to connect (Example to Configure Connection with WPA2-PSK).

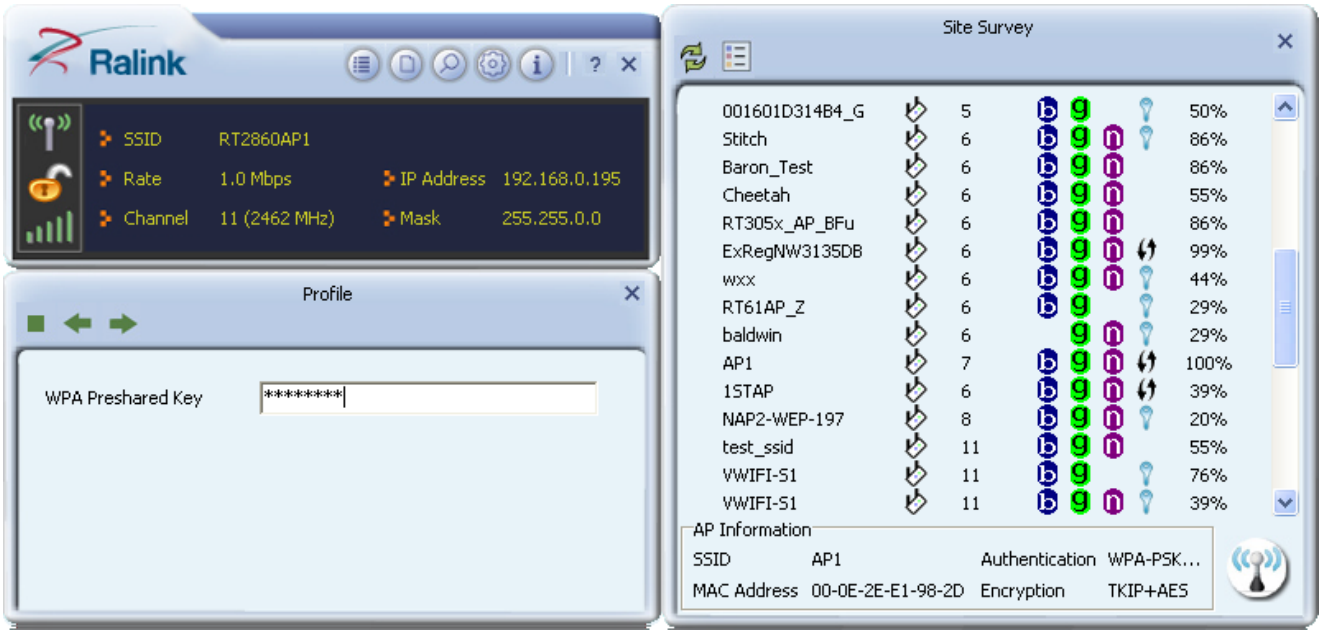
a. Select the AP and click “Connect” icon .



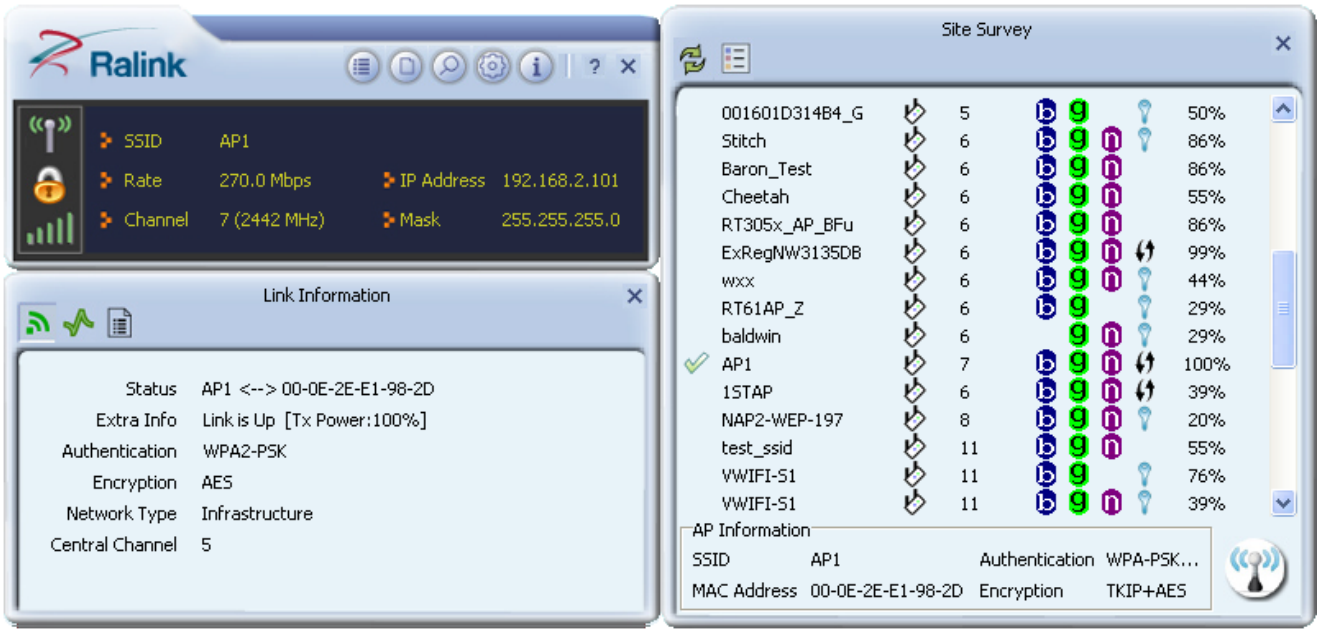
b. Authentication/Encryption function appears.



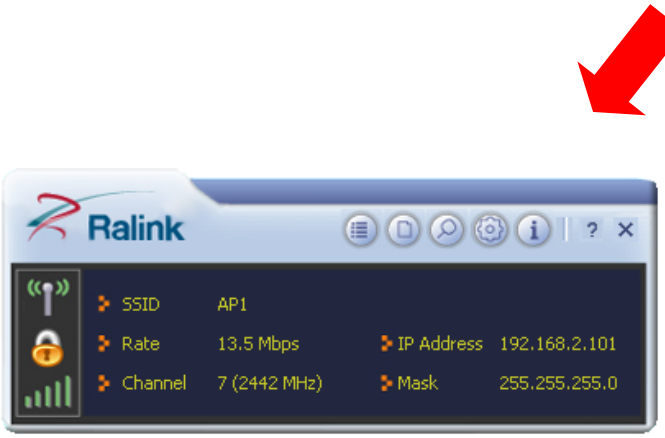
c. Select WPA2-PSK as the Authentication Type. Select TKIP or AES encryption. Enter the WPA Pre-Shared Key.

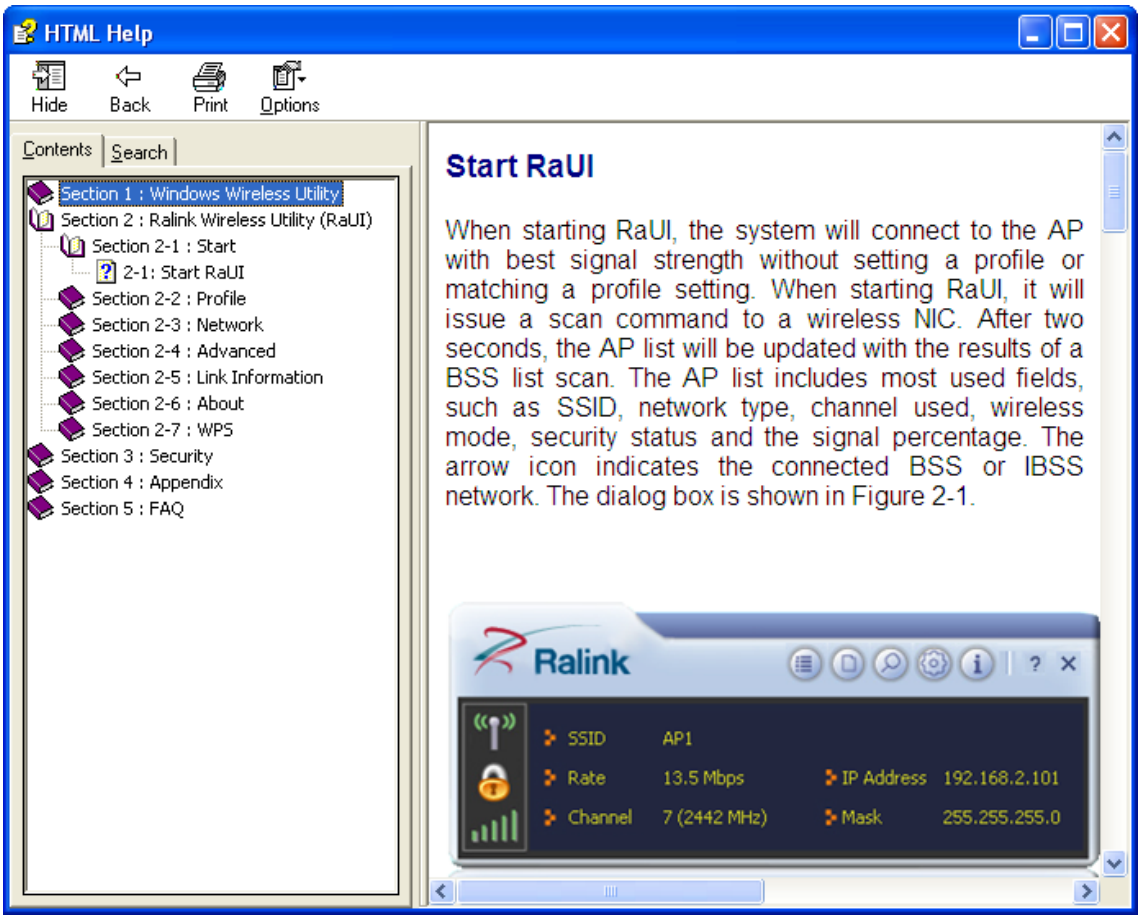


d. Click "OK". Be careful, if the WPA Pre-Shared Key entered is not correct, you won't be able to exchange any data frames, even though the AP can be connected.



4. At last, if you want to know more using method of RaUI, you could refer to the help file by click the question mark ? at the top right corner of RaUI to open it.





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 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.

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.

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.

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

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.

IMPORTANT NOTE:

This module is intended for OEM integrator. The OEM integrator is still responsible for the FCC compliance

requirement of the end product, which integrates this module.

20cm minimum distance has to be able to be maintained between the antenna and the users for the host this module is integrated into. Under such configuration, the FCC radiation exposure limits set forth for an population/uncontrolled environment can be satisfied.

Any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

USERS MANUAL OF THE END PRODUCT:

In the users manual of the end product, the end user has to be informed to keep at least 20cm separation with the antenna while this end product is installed and operated. The end user has to be informed that the FCC radio-frequency exposure guidelines for an uncontrolled environment can be satisfied. The end user has to also be informed that any changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment. If the size of the end product is smaller than 8x10cm, then additional FCC part 15.19 statement is required to be available in the users manual: This device complies with Part 15 of 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.

LABEL OF THE END PRODUCT:

The final end product must be labeled in a visible area with the following " Contains TX FCC ID: E2K-WPER-116GN". If the size of the end product is larger than 8x10cm, then the following FCC part 15.19 statement has to also be available on the label: This device complies with Part 15 of 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

Appendix

RF Antenna Assembly

Specification

1. Electrical Properties :

1.1 Frequency Range	2.4GHz ~ 2.5GHz
1.2 Impedance	50Ω Nominal
1.3 VSWR	1.92 :1Max.
1.4 Return Loss	-10 dB Max.
1.5 Radiation	Omni-directional
1.6 Gain(peak)	2dBi
1.7 Polarization	Linear; Vertical
1.8 Admitted Power	1W
1.9 Cable	RG-178 Coaxial Cable
1.10 Connector	SMA Plug Reverse

2. Physical Properties :

2.1 Antenna Body	TPE
2.2 Antenna Base	PC
2.3 Antenna Base	PBT
2.4 Operating Temp.	-10℃ ~ +60℃
2.5 Storage Temp.	-10℃ ~ +70℃
2.6 Color	Black