



802.11g

Wireless USB Adapter

MODEL: AWU354



User Manual

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All the photos and product specifications mentioned in this manual are for reference only. As upgrade of software and hardware progresses, there will be changes. And if there are changes, AZiO is not responsible for informing in advance. If you would like to know more about our product information, please visit our website at www.aziocorp.com.

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Chapter 1 Introduction

1.1 Welcome

Thank you for purchasing the AZiO AWU354 802.11g wireless USB adapter. The AWU354 adapter connects you with 802.11g networks at up to an incredible 54Mbps. For added versatility, it can also interoperate with all the 11Mbps 802.11b products found in homes, businesses, and public wireless hotspots around the country.

The Soft AP supported by AWU354 can help you establish wireless LAN networking at the lowest cost. WPS (Wi-Fi Protected Setup) simplify security setup and management of Wi-Fi networks. This adapter supports WMM for Multimedia Applications with Quality of Service in Wi-Fi® Networks.

1.2 Product Feature

- Complies with IEEE 802.11g and IEEE 802.11b standards
- Supports USB 2.0 and 1.1 standards
- Provides up to 54Mbps transmission rate and up to 300 feet transmission distance
- Auto-detects and changes the network transmission rate
- Provides two work modes: Infrastructure and Ad-Hoc
- Supports Soft AP to establish your wireless LAN networking
- Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard
- Supports Wireless Roaming function
- WPS (Wi-Fi Protected Setup) simplifies security setup and management of Wi-Fi networks.
- Supports WMM for Multimedia Applications with Quality of Service in Wi-Fi® Networks
- Supports Windows 2000/XP*/Vista*/7* (*32 or 64 bits)

1.3 Contents of Package

- One AWU354 Adapter
- One Installation CD with User Manual
- One Quick Installation Guide

Chapter 2 Installation

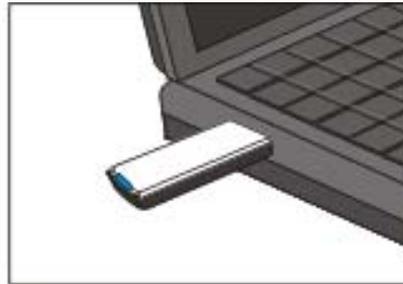
NOTE:

1. For future driver upgrades, please visit our website at www.aziocorp.com
2. Snap-shot screens of the following installation procedure are based on Windows XP. Installation procedures will be similar for other windows operating systems.

1. Insert the AWU354 Adapter into a USB slot of your computer.



Or

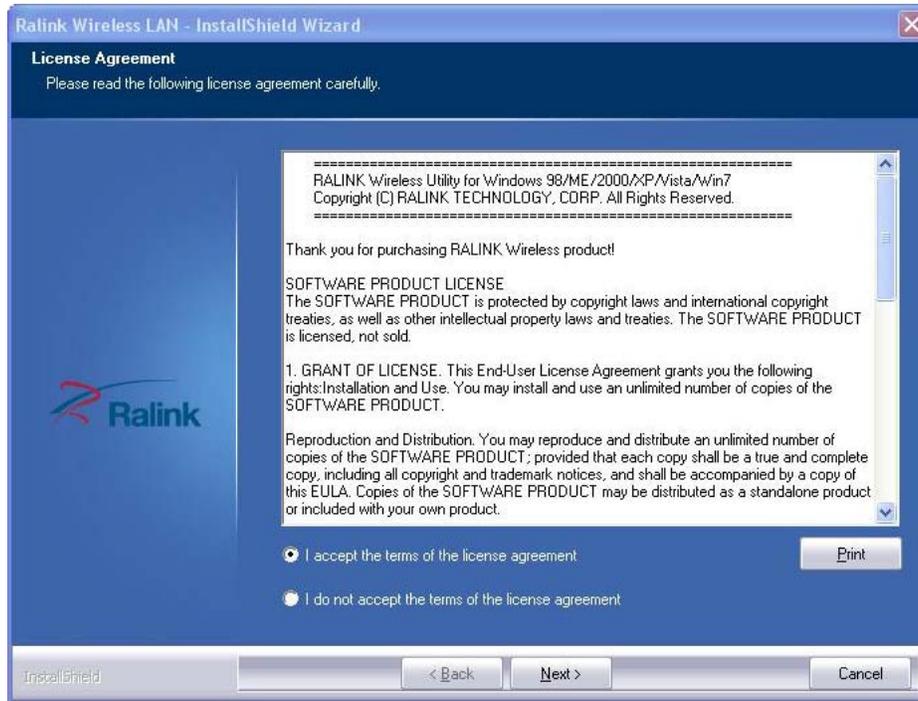


2. Select **Cancel** when "Found New Hardware" window appears.

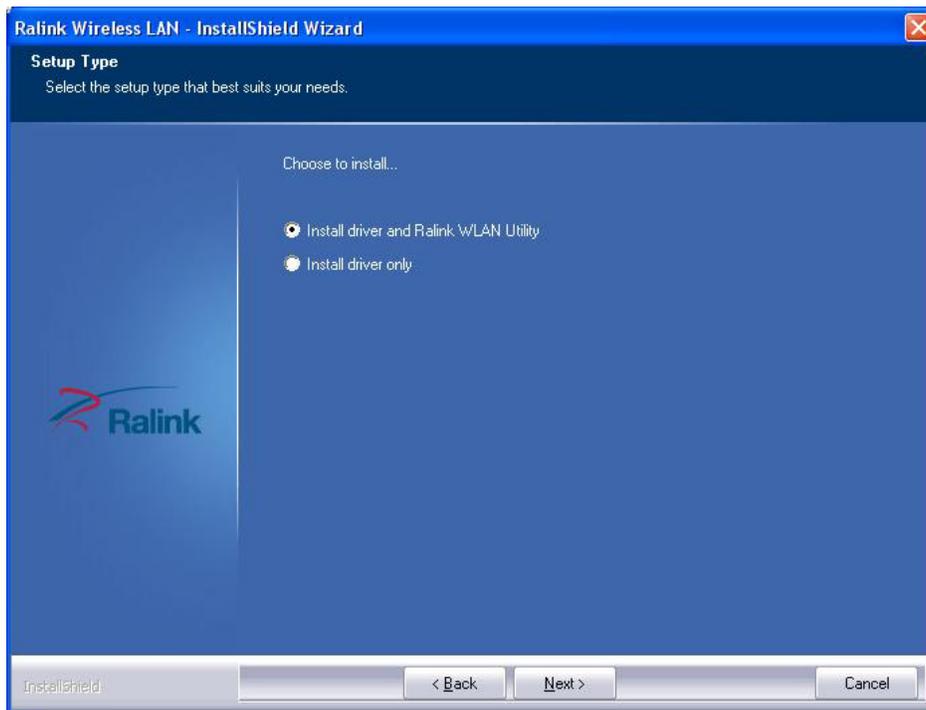


3. Insert Installation CD to your CD-ROM drive. Browse CD and double-click **setup.exe** in Driver folder to execute it. The installation wizard will run and install all necessary files to your computer automatically.

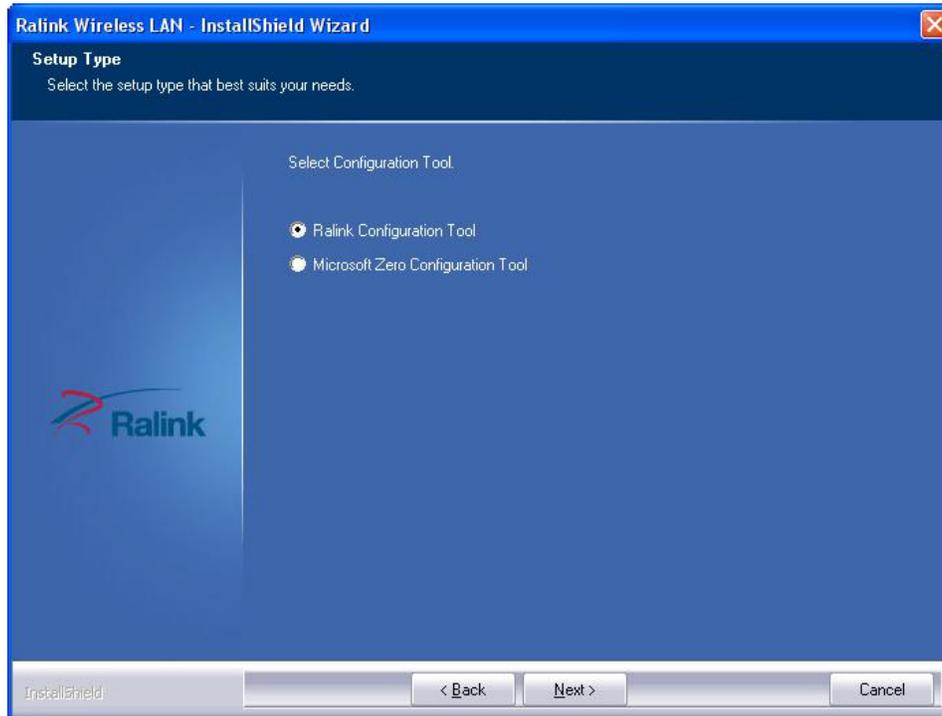
- Accept the license agreement and click **Next** to start installation.



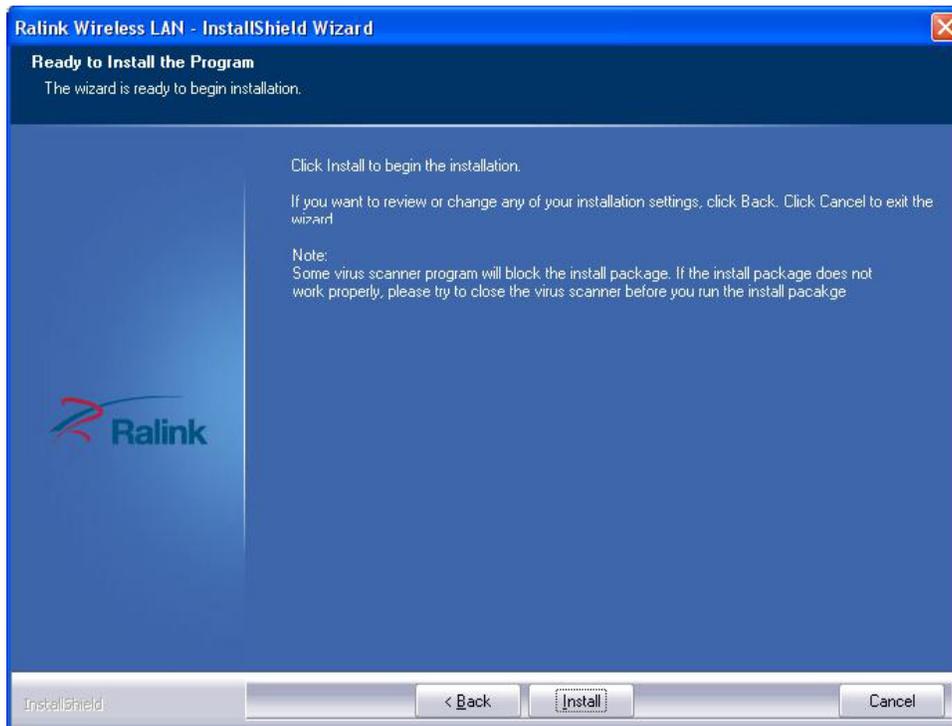
- Choose 'Install driver only' if you prefer not to use the Ralink configuration utility. We recommend choosing 'Install driver and Ralink WLAN Utility'. Click **Next** to continue.



6. Choose how you would like to configure your network. We recommend choosing 'Ralink Configuration Tool'. Click **Next** to continue.



7. Click **Install** to start installing and click **Finish** when completed.



You will see a tray icon  appear in your system tray at the bottom of the screen after the software and hardware has successfully installed.

Chapter 3 Configuration

3.1 Station Mode

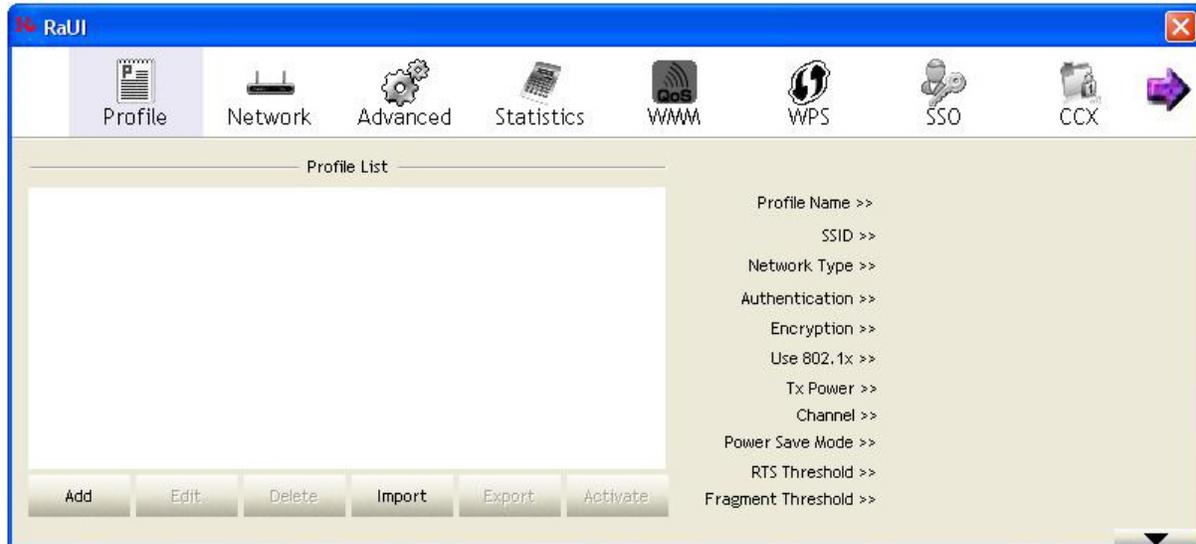
Station Mode is the default access mode. In this mode, the AWU354 serves as a client to receive wireless signals to access the Internet.



Double-click the tray icon  to launch the configuration utility. Or right click the tray icon and select **Launch Config Utility**.

3.1.1 Profile

Creating a Profile helps keep your favorite wireless setting among your home, office, and other public hotspot. You may create multiple profiles and activate the one you prefer.



- **Add:** to create a new profile
- **Edit:** to edit/modify/change parameter of an existing profile
- **Delete:** to delete an existing profile
- **Import:** to import a previously saved profile
- **Export:** to export a profile for future reference
- **Activate:** to activate an existing profile and connect

3.1.1.1 Add/Edit Profile

a. System Config: Enter a name for the Profile and select a Network (SSID) to associate it with.

The screenshot shows the 'System Config' dialog box with the 'Auth. \ Encry.' tab selected. The '802.11g' radio button is active. The 'Profile Name' field contains 'PROF1'. The 'Network Type' is set to 'Infrastructure'. The 'SSID' field is empty. The 'Tx Power' is set to 'Auto' and the 'Preamble' is also set to 'Auto'. Under 'Power Save Mode', both 'CAM' and 'PSM' radio buttons are selected. There are two sliders: 'RTS Threshold' with a value of 0 and 'Fragment Threshold' with a value of 256. To the right of the sliders are input fields for '2347' and '2346', and a 'Diagnosis Capable' checkbox which is unchecked. 'OK' and 'Cancel' buttons are at the bottom.

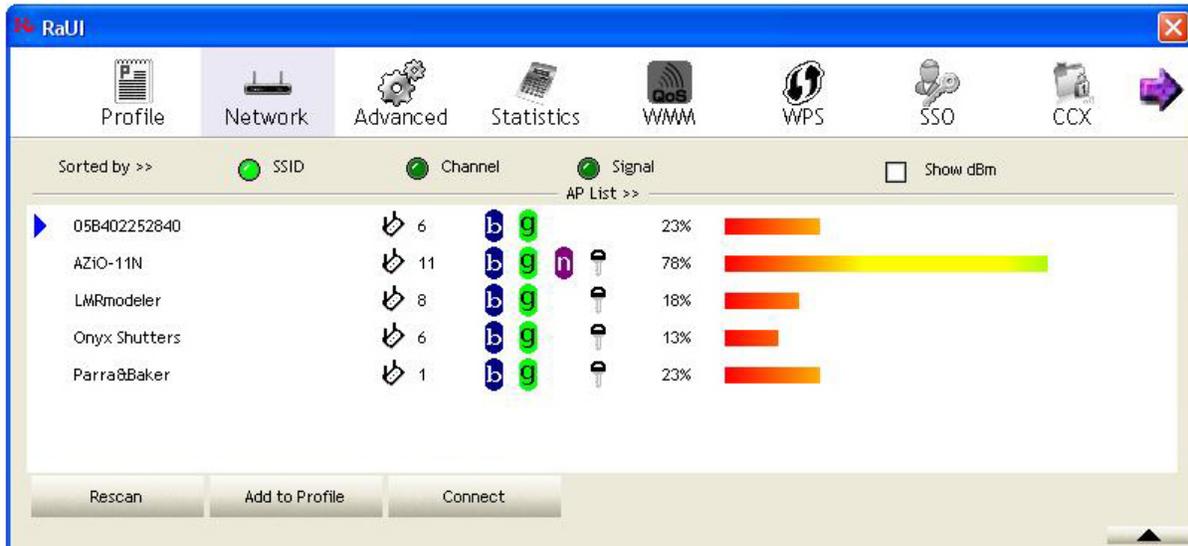
b. Authentication \ Encryption

The screenshot shows the 'Auth. \ Encry.' tab selected in the dialog box. The 'Authentication' dropdown menu is open, showing options: 'Open', 'Shared', 'WPA(CCKM capable)', 'WPA-PSK', 'WPA2(CCKM capable)', 'WPA2-PSK', and 'WPA-NONE'. The 'Encryption' dropdown is set to 'None'. There are four 'Wep Key' fields labeled 'Key#1' through 'Key#4', each with a radio button. A 'Hex' dropdown is also visible. 'OK' and 'Cancel' buttons are at the bottom.

- **Authentication:** Please select the Authentication type of your preference
- **Encryption:** Algorithm used in WEP, TKIP, AES, and None

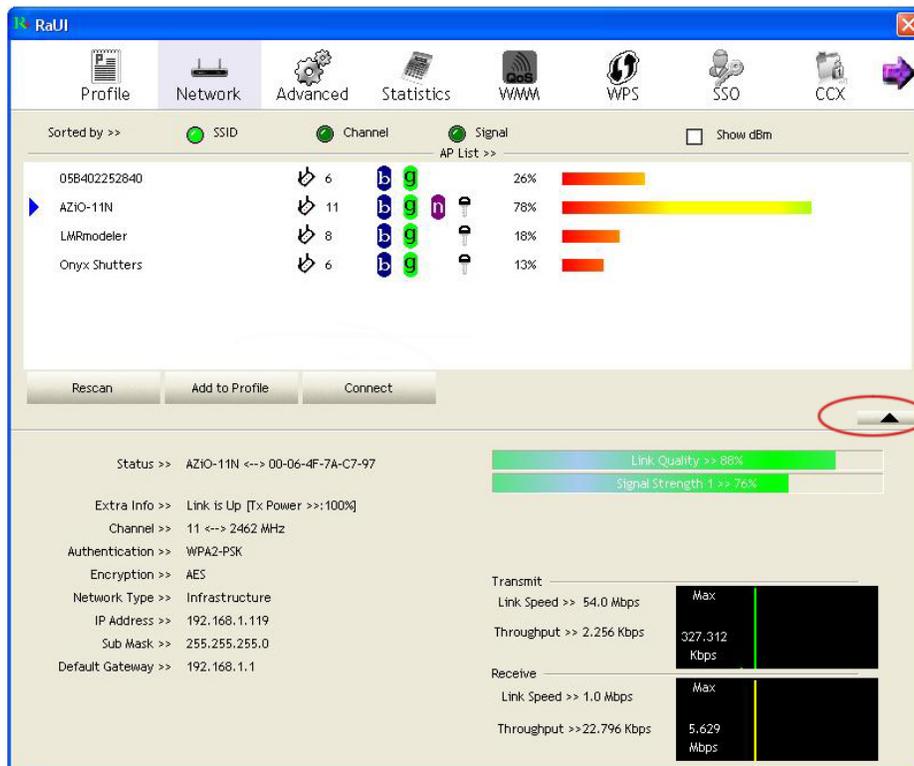
3.1.2 Site Survey

Click on the “Network” tab for Site Survey. You will see a list of all the surrounding wireless networks from the last scan. Select the Network of your choice and click on “Connect” to establish connection. Click **Rescan** to update and refresh.



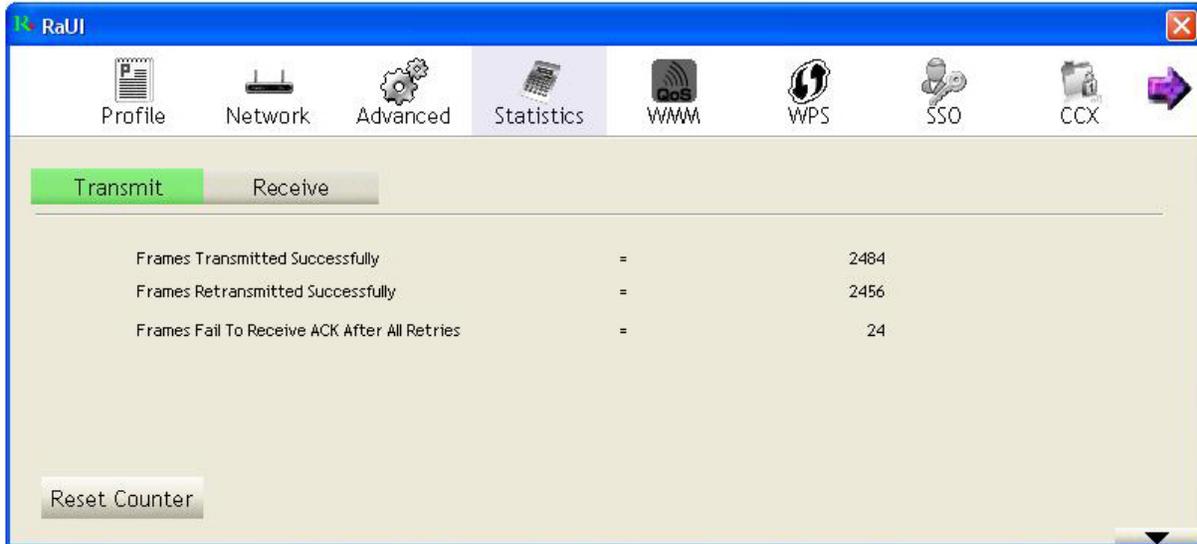
3.1.3 Status

Click on the triangle button (circled in red) to expand the status tab.



3.1.4 Statistics

The Statistics tab displays the detail counter information based on 802.11 MIB counters. This page translates that MIB counters into a format easier for user to understand. Click on 'Receive' to see its respected statistics.



The screenshot shows the RaUI application window with the Statistics tab selected. The window has a blue title bar with the RaUI logo and a close button. The main menu includes Profile, Network, Advanced, Statistics, WMM, WPS, SSO, and CCX. Below the menu, there are two tabs: Transmit (highlighted in green) and Receive. The Receive tab is active, displaying the following statistics:

Frames Transmitted Successfully	=	2484
Frames Retransmitted Successfully	=	2456
Frames Fail To Receive ACK After All Retries	=	24

A 'Reset Counter' button is located at the bottom left of the window.

3.1.5 WPS

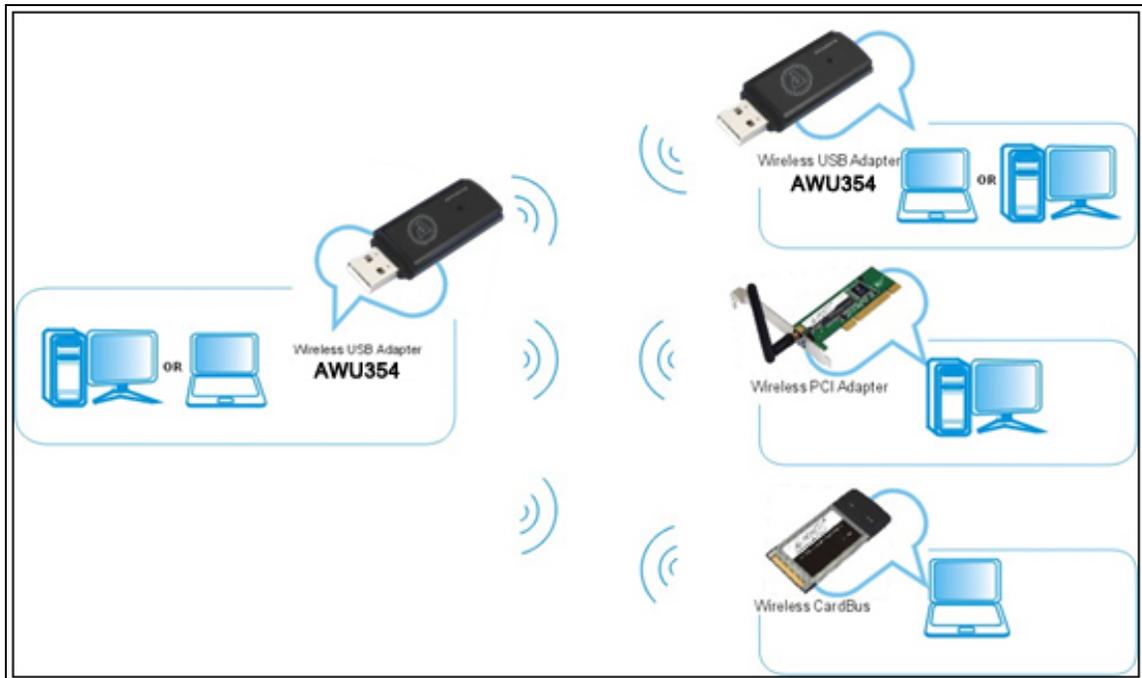
The WPS tab supports the configuration setup using PIN configuration method or PBC configuration method. WPS (Wi-Fi Protected Setup) simplifies the security setup and management of Wi-Fi networks.



- **PIN:** Enter the Pin code into the WPS setup page of your wireless router/AP. Click rescan to make sure your router/AP is displayed on the “WPS AP List”. Select it and click **PIN** to automatically connect.
- **PBC:** Push Button Configuration: Please make sure your wireless router/AP is properly configured for WPS PBC. After PBC is initiated on the router/AP side, click **PBC** to complete auto-check and establish connection.
- **Renew:** Click to update the Pin code.
- **Rescan:** Update information on surrounding WPS supported networks.
- **Connect:** click to connect the WPS wireless network.
- **Disconnect:** to disconnect the connected wireless network.

3.2 AP Mode

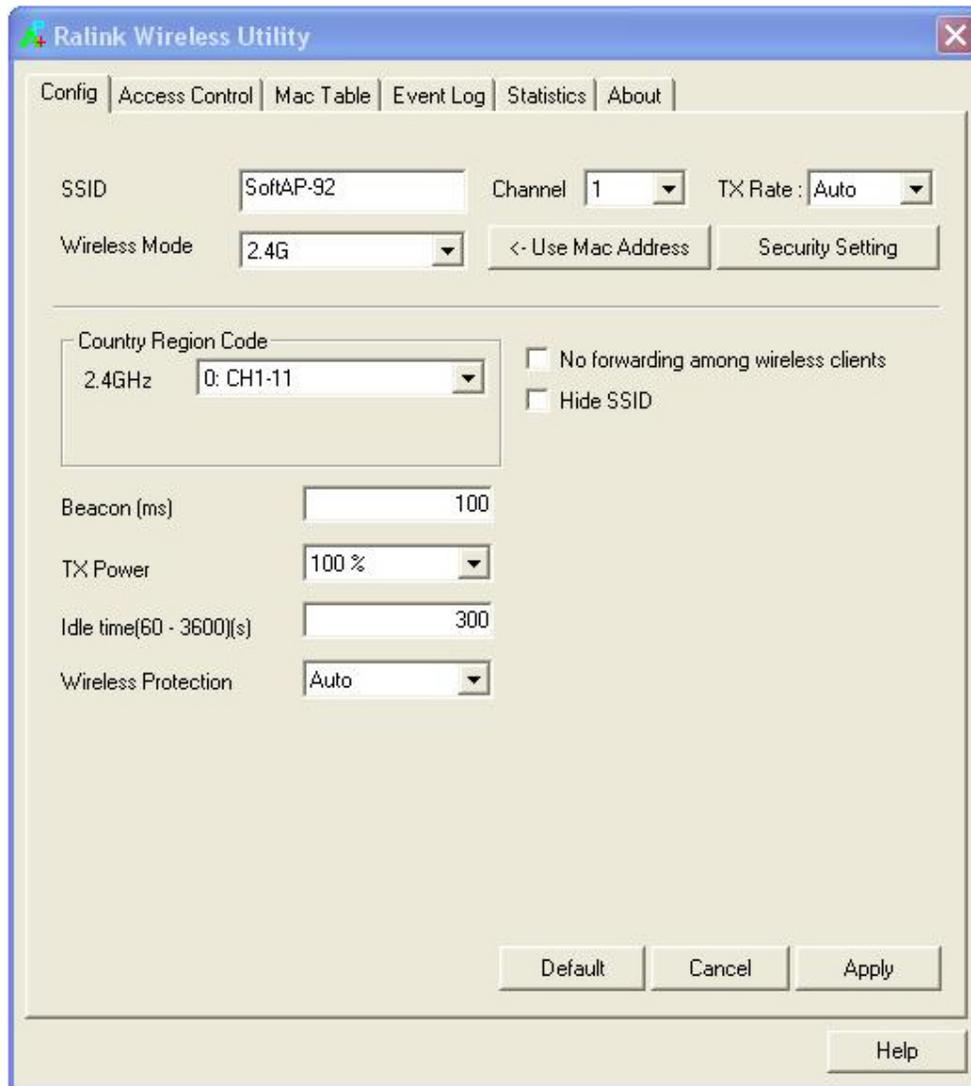
The AWU354 can also serve as an access point to transmit wireless signals and create a wireless network allowing other wireless clients to access the network.



To switch to **AP Mode**, right-click on  icon and select "Switch to AP Mode".

3.2.1 Basic Setting (Config)

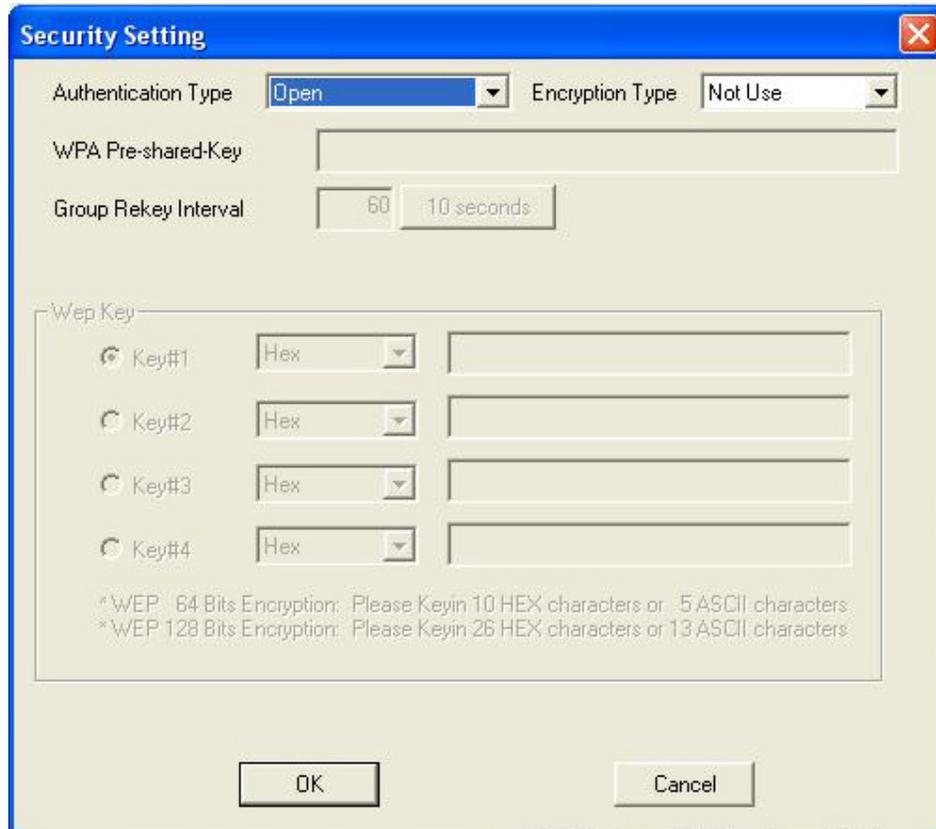
Under 'Config' tab, you can make set the basic settings, such as SSID, wireless mode and channel.



- **Default:** to restore the set parameters to factory default settings.
- **Apply:** to apply changes made.

3.2.2 Security Setting

Click **Security Setting** button from the 'Config' page to make different security configurations of wireless communication by choosing the authentication type or encryption type.



The image shows a 'Security Setting' dialog box with the following fields and options:

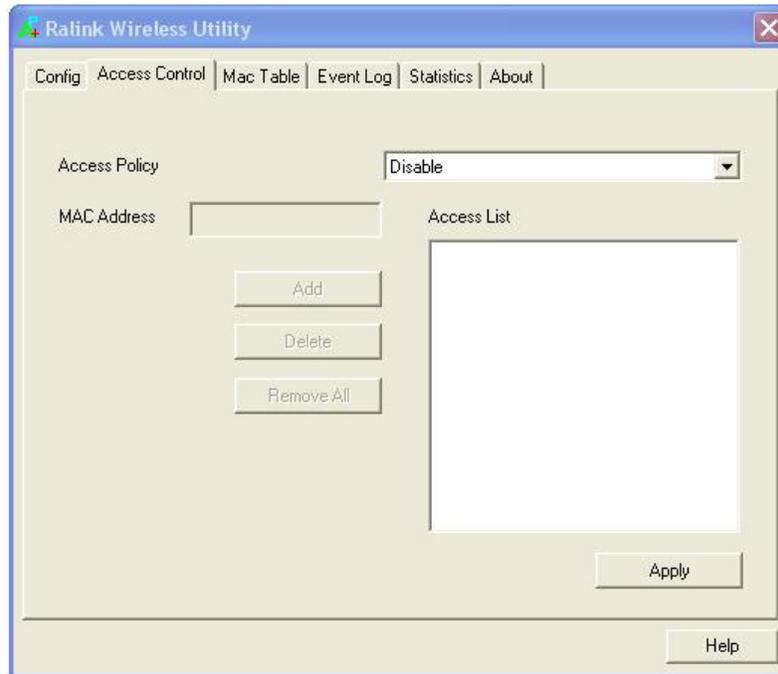
- Authentication Type:** A dropdown menu set to 'Open'.
- Encryption Type:** A dropdown menu set to 'Not Use'.
- WPA Pre-shared-Key:** An empty text input field.
- Group Rekey Interval:** A numeric input field containing '60' and a unit dropdown set to '10 seconds'.
- Wep Key:** A section containing four rows, each with a radio button, a label (Key#1 to Key#4), a dropdown menu set to 'Hex', and an empty text input field.
- Footnote:** Two lines of small text: '* WEP 64 Bits Encryption: Please Key in 10 HEX characters or 5 ASCII characters.' and '* WEP 128 Bits Encryption: Please Key in 26 HEX characters or 13 ASCII characters.'
- Buttons:** 'OK' and 'Cancel' buttons at the bottom.

Note:

1. The Hex characters include 0~9 numbers and a~f letters.
2. ASCII characters include any numbers/letters and characters.

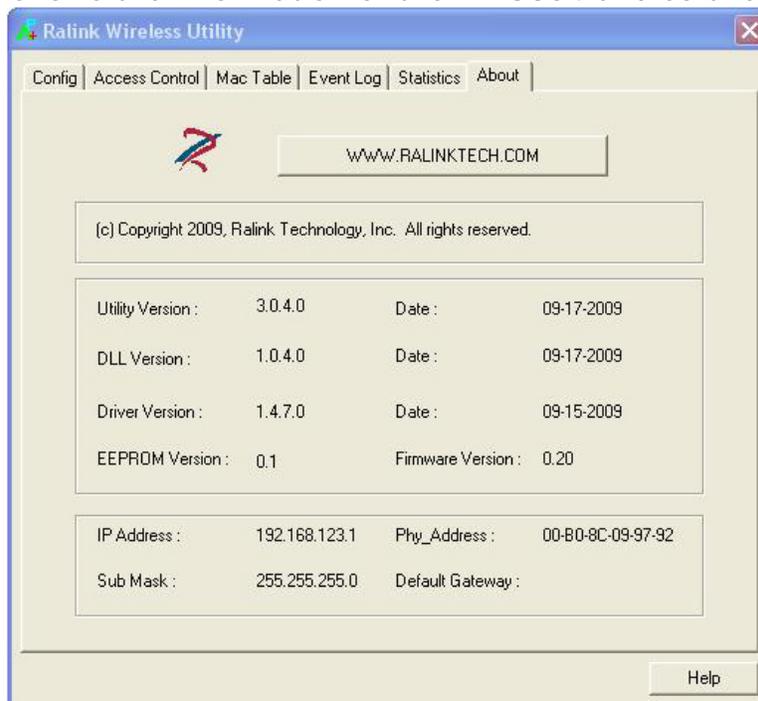
3.2.3 Access Control

Choose **Access Control** tab to start MAC control. Access control includes **All Permitted** and **All Blocked**. After editing the MAC address access list, only the MAC in the Allow All list could access the Soft AP.



3.2.4 About

The About tab shows the information of the AWU354 and software version.



Chapter 5 Product Specifications

Standard	IEEE 802.11b, IEEE 802.11g
Frequency Band	2.4GHz ~ 2.4835GHz
Spread Spectrum	DSSS
Modulation Method	BPSK, QPSK, CCK and OFDM
Data Rate	11g: 54/48/36/24/18/12/9/6Mbps 11b: 11/5.5/2/1Mbps
Transmit Output Power	54Mbps : -72dBm 11Mbps : -88dBm
Channels	11 Channels (USA, Canada) 13 Channels (Europe) 14 Channels (Japan)
Transmit distance	Indoors : up to 100 feet Outdoors : up to 300 feet
Roaming	Support multipoint auto roaming and configuration Support wireless network environments auto detect
Antenna	Microstrip antenna
Antenna Gain	2 dBi
Media Access Protocol	WMM
Security	WPA/WPA2; 64/128-bit WEP; TKIP/AES
I/O Interface	USB 2.0
LED Indicators	Status / Activity
Operating System	Windows 2000 / XP / 2003 / Vista
Operating Temp.	0°C ~ 40°C
Storage Temp.	-20°C ~ 70°C
Humidity	10% ~ 90% (non-condensing)
Dimension(L x W x H)	62.6mm x 20.6mm x 10mm
Weight	9.2g
Cable Length	1m (ZEW2508A only)

Chapter 6. Troubleshooting

This chapter provides solutions to problems that may occur during installation and operation of the AWU354 adapter. For more troubleshooting tips, please visit our website at www.aziocorp.com.

1. The AWU354 does not work properly.

- Disconnect and reinsert the AWU354 into your PC's USB slot. Do not use a hub.
- Right click on 'My Computer' and select 'Properties'. Select device manager and click on Network Adapter. You will find the AWU354 adapter if it is installed successfully. If you see a yellow exclamation mark, the resources are conflicting.
- To resolve a resource conflict, please check the following: Make sure that your PC has a free IRQ (Interrupt Request, a hardware interrupt on a PC.)
- Make sure that you have inserted the right adapter and installed the proper driver.
- If the AWU354 does not function after attempting the above steps, remove it and do the following: Uninstall the driver software from your PC. Restart your PC and repeat the hardware and software installation as specified in this User Guide.

2. I cannot communicate with the other computers linked via Ethernet in the Infrastructure configuration.

- Make sure that the PC to which AWU354 is associated with is powered on.
- Make sure that AWU354 is configured on the same channel and with the same security options as the other computers in the Infrastructure configuration.

3. What should I do when the computer with AWU354 installed is unable to connect to the wireless network and/or the Internet?

- Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.
- Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.
- Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the network.
- In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points.
- In Ad-Hoc mode, both wireless clients will need to have the same SSID. Please note that it might be necessary to set up one client to establish a BSS (Basic Service Set) and wait briefly before setting up other clients. This prevents several clients from trying to establish a BSS at the same time, which can result in multiple singular BSSs being established, rather than a single BSS with multiple clients associated to it.

- Check that the Network Connection for the wireless client is configured properly.
- If Security is enabled, make sure that the correct encryption keys are entered on both the AWU354 and the access point.

4. I can't find any wireless access point / wireless device in *Network* tab.

- Click *Rescan* for few more times and see if you can find any wireless access point or wireless device.
- Try moving closer to any known wireless access points.
- *Ad-hoc* function must be enabled for the wireless device you wish to establish a direct wireless link.
- Please adjust the position of the AWU354 (you may have to move your computer if you're using a notebook computer) and click *Rescan* button for few more times. If you can find other wireless access point or wireless devices but not yours, please contact the manufacturer of your wireless router/AP for support.

5. Nothing happens when I click *Launch config utilities*

- Please make sure the AWU354 is inserted into your computer's USB port. If the Ralink configuration utility's icon has an "X", the AWU354 is not detected by your computer.
- Reboot the computer and try again.
- Remove the AWU354 and insert it into another USB port.
- Remove the driver and re-install.

6. I can not establish connection with a certain wireless access point

- Try clicking *Connect* a few more times.
- If the SSID of the access point you wish to connect is hidden (nothing displayed in *SSID* field in *Network* tab), you will have to input the correct SSID of the access point you wish to connect manually.
- Please double check the passphrase / security key of the access point with security encryption.
- The access point you wish to connect might only allow network cards with specific MAC addresses to establish connection. Please go to *About* tab and write the value of *Phy_Address* down, then present this value to the owner of access point to add the MAC address of your AWU354 to owner's access point's list.

7. The network is slow or having problem transferring large files

- Try moving closer to the place where access point is located.
- Try a lower TX Rate in *Advanced* tab.
- Disable *Tx Burst* in *Advanced* tab.
- Enable *WMM* in *WMM* tab if you need to use multimedia / telephony related applications.
- Disable *WMM – Power Save Enable* in *WMM* tab.
- There could be too much people using the same radio channel. Try changing the channel of the access point.

Service & Warranty

Service

If you need assistance with the product, please visit our website at www.aziocorp.com for frequently asked questions and troubleshooting tips. Otherwise, please contact our dedicated customer care team.

There are several ways to reach us:

By Phone: (866) 468-1198

By eMail: support@aziocorp.com

On Live Help: <http://www.aziocorp.com/support/helpdesk.htm>

Warranty

Limited 1 Year Warranty

AZiO Corporation warrants this product against defect in material or workmanship for 1 year from the date of purchase. If this product proves to be defective, contact AZiO Corporation's customer care for repair or replacement of your unit. Return requests cannot be process without the proof of original date of purchase. This warranty applies only to the original purchase of the product and is not transferable. This warranty does not cover any incompatibilities due to the user's computer, hardware, software or related system configuration in which the product interfaces. The warranty does not cover any damage caused by negligence, abuse, or non-authorized modifications. To the maximum extent permitted by applicable law, in no event shall AZiO Corporation, its affiliates, or its dealers be liable for any special, incidental, indirect or consequential damages whatsoever regardless of cause or form of action.