

# **User Manual**

ARGTEK GM5 WLAN 802.11b/g/n USB adapter

ARG-0812

contents	
Chapter 1 Getting Start	
Minimum System Requirements	3
Optimize Wireless Performance	3
Installation	5
Uninstall	8
Chapter 2 Management Guide	
Making a Basic Network Connection	10
Chapter 3 Introduction to the Wireless LAN Utility	
Utility Interfaces	
Network	15
Profile	
Advanced	
Statistics	
WMM	
WPS	
SSO	
CCX	23
Radio On/Off	
About	25
Chapter 4 AP mode management guide	
Control Menu	
Config Setting	
Access Control	
MAC Table	
Event Log	
Statistics	
About	

## **Contents**

## **Chapter 1 Getting Start**

## **Minimum System Requirements**

- Pentium<sup>®</sup> 300 MHz or higher compatible processor
- At least one available USB 2.0 or 1.1 port
- The installation CD
- 5Mbytes free hard disk space.
- Windows 2000, XP, XP professional, Vista, or Windows 7.



If you do not have a USB 2.0 port on your computer, the throughput of the USB adapter will be limited to the 14 Mbps of the USB 1.1 standard.

Windows XP users must install SP2 or above for the Hot fix which fixes the USB 2.0 Host controller driver.

Before you proceed with the installation, please notice the following descriptions.



If you have installed the WLAN USB driver & utility before, please uninstall the old version first.



The following installation was operated under Windows XP. (Procedures are similar for Windows 98SE/Me/2000.)

Note

The installation guide herein is operated under Windows system. For Linux or Mac driver installation guide, please refer to the instruction in README at directory the driver has stored in CD-Rom.

## **Optimize Wireless Performance**

The speed and wireless coverage range of your connection can vary significantly based on the location of AP/router. You should choose a location for your AP/router that will maximize the network performance.

You can refer to the following methods to maximize AP/router performance.

#### Choose placement carefully for your AP/Router.



Place your AP/router at the center among your computers.



Place your AP/router at an elevated location.

Note

#### Avoid obstacles to wireless signals.

Keep your wireless devices far away from metallic file cabinets, refrigerators, pipes, metal ceilings, reinforced concrete, and metal partitions.



Keep away from large amounts of water such as fish tanks and water coolers.

#### **Reduce interference**

Keep away from computers, cordless phones, cell phone, coping machine and fax machines.



Keep away from microwave oven.

Site survey nearby wireless devices to determine your operating channel.

#### 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.

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.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

#### **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.

## Installation

1. If you insert the Wireless LAN USB Adaptor into your computer USB port, the following hardware setup wizard will pop up. Click **Cancel** to install driver from installation CD.

Found New Hardware Wiz	ard
	Welcome to the Found New Hardware Wizard
	Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission). Read our privacy policy
	Can Windows connect to Windows Update to search for software?
	◯ Yes, this time only
	<ul> <li>Yes, now and every time I connect a device</li> </ul>
	No, not this time
	Click Next to continue.
	< Back Next > Cancel

2. Insert your installation CD into CD drive of your computer. An installation page will pop up for you to install. Click **Utility Driver**.

If the installation page does not appear, double click CD-ROM drive the installation CD was inserted to, or open the CD-ROM drive then click **Autorun.exe** 

3. Clink checkbox to accept the terms of license agreement, then click Next

Ralink Wireless LAN - Insta	IIShield Wizard	
License Agreement Please read the following licer	nse agreement carefully.	
Ralink	ALINK Wireless Utility for Windows 98/ME/2000/XP/Vista/Win7 Copyright (C) RALINK TECHNOLOGY, CORP. All Rights Reserved. Thank you for purchasing RALINK Wireless product! SOFTWARE PRODUCT LICENSE The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is is licensed, not sold. 1. GRANT OF LICENSE. This End-User License Agreement grants you the following rights:Installation and Use. You may install and use an unlimited number of copies of the SOFTWARE PRODUCT. Reproduction and Distribution. You may reproduce and distribute an unlimited number of copies of the SOFTWARE PRODUCT. Reproduction and Distribution. You may reproduce and distribute and complete copy, including all copyright and trademark notices, and shall be actue and complete copy including all copyright and trademark notices. And shall be actue and complete copy including all copyright and trademark notices. And shall be a standalone product or included with your own product.	
InstallShield	< <u>B</u> ack <u>N</u> ext> Canc	el

 Select setup type for installing both driver and WLAN utility or install driver only. Choose Install driver and WLAN utility, then click **Next**

Ralink Wireless LAN - Install	Shield Wizard		
Setup Type Select the setup type that best s	uits your needs.		
	Choose to install Install driver and Ralink WLAN I Install driver only	Jtility	
Ralink			

**Note** If you choose to install driver only, refer to the note on next step.

5. Select if you are going to configure your wireless network with WLAN utility or with Microsoft Zero Configuration tool. Choose WLAN Utility then click next.



Type of configuration tool can be changed after installing this software. If you choose to install driver only on step 4, the installation will skip this step. Windows Zero Configuration will be the default and only tool for managing your

wireless network.



6. Click **Install** to begin the installation.



#### 7. Click **Finish** to complete installation.

Ralink Wireless LAN - Install	ihield Wizard			
	InstallShield Wizard Complete			
	The InstallShield Wizard has succe wizard.	ssfully installed Ralink	Wireless LAN. Click Finish to	exit the
Balink				
InstallShield	< <u>B</u> ack	Finish		Cancel

## Uninstall

 A. Uninstall the WLAN USB Adaptor Driver from start menu, All Programs, Ralink Wireless, click Uninstall or Control Panel, Add or Remove Programs, Ralink RT2870 Wireless LAN Card, click Remove to remove Wireless LAN USB Adaptor driver.



B. Click Yes if you want to remove Wireless LAN USB Adaptor driver.



C. Click **Finish** to complete uninstall.

Ralink Wireless LAN - InstallShield Wizard							
	Uninstall Complete	installing Ralink W	ireless LAN.				
Ralink							
InstallShield	< <u>B</u> ack	Finish		Cancel			

## **Chapter 2 Management Guide**

### Making a Basic Network Connection

#### Select a configuration tool

In the following instruction for making a network connection, we use WLAN utility to configure your wireless network settings that was installed as the steps in previous chapter.

#### To connect with 802.11 bgn Wireless LAN Utility

As default, the WLAN Utility is started automatically upon starting your computer and connects to the first available network. It is typically a network with the best signal strength among unsecured network. To change the connection to your own network, right click the **I** icon on system tray and select **Launch Config Utility**. The pop up WLAN configuration utility allows you to quickly connect the network you intend to.



To join your target network, in Network tab, click on target network then **Connect**. Choose the security type of your network and type your security key, click on **OK** to complete a basic network connection.

RaUI								
Profile	↓ <b>⊥⊥</b> Network	Advanced	) Statistics	www.	<b>Ø</b> WPS	SSO SSO	CCX	
Sorted by >>	SSID	🙆 Chi	annel 🦉	) Signal		Show dBm		
JohnTu59		101		<b>P</b> 47% <b>E</b>				^
TYL		\$ 7	<b>b g</b>	31%				
KUPO		11	<b>b g</b> •	37%				
MyPlace_Wesly		10 1	6 9 4	7 100% 📕				• ;
portman1		11	6 9 4	7 37% 📕				
RD_Buffalo_B/G.	'N Connected	1 2 Z	🖪 🧐 🕅 4	👌 100% 📕				
		1.6		A				
RD_dlink855 Rescan	Add to Profile	> 11 Co	nnect	J 99%				
RD_dlink855 Rescan Auth. \ Encry.	Add to Profile	2 11 2 Co	nnect	<i>y</i> 99% <mark>-</mark>			_	
RD_dlink855 Rescan Auth. \Encry. Auth	Add to Profile 802,1x entication >>	Col	nnect	Encryption >>	WEP	▼ □ Use 8	302.1X	<b>•</b>
RD_dlink855 Rescan Auth. \Encry. Auth WPA Pre	Add to Profile 802,4x entication >> :hared Key >>	Cou Open	nnect	Encryption >>	WEP	▼ □ Use t	302.1X	
RD_dlink855 Rescan Auth. \Encry, Auth WPA Pre Wer	Add to Profile 802.1x entication >> :hared Key >> Key	Open	nnect	Encryption >>	WEP	▼ □ Use 8	302.1X	
RD_dlink855 Rescan Auth. \Encry. Auth WPA Pre Wep	Add to Profile 802.1x entication >> shared Key >> Key	Copen	The second secon	Encryption >>	WEP	▼ □ Use 8	302.1X	
RD_dlink855 Rescan Auth. \Encry. Auth WPA Pre Wep	Add to Profile 802/1x entication >> shared Key >> Key#1	Open Hex	▼	Encryption >>	WEP :	▼ □ Use 8	302.1X	
RD_dlink855 Rescan Auth. \Encry. Auth WPA Pre Wep	Add to Profile 802/1x entication >> shared Key >> Key Key#1 Key#2	open Hex		Encryption >>	WEP :	▼ □ Use 8	302.1X	
RD_dlink855 Rescan Auth. \Encry. Auth WPA Pre Wep	Add to Profile 802,1x entication >> shared Key >> Key Key#1 Key#2 Key#3	Open Hex Hex	• • • • • • • • • • • • • • • • •	Encryption >>	WEP	▼ □ use 8	302.1X	<b>•</b>
RD_dlink855 Rescan Auth. \Encry. Auth WPA Pre Wep	Add to Profile add2,4x entication >> shared Key >> key	Open Hex Hex Hex Hex	▼   ▼   ▼   ▼	Encryption >>	WEP	▼ □ Use 8	302.1X	

#### To connect with Microsoft Zero Configuration

To switch between the configuration tools, please right click on the icon R on system tray. Select **Use Zero Configuration as Configuration Utility** 

Launch Config Utility		
Use Zero Configuration as Configuration Utility		
Switch to AP Mode		
Open Diagnostic Testing Mode		
Exit		
₩ - ( <u>)</u> =" <b>V % %</b> "	<b>&amp;</b> 🔁	11:31 AM

, double click on 述 icon on system tray. The Zero Configuration pop up and show

available wireless networks. Select your demanding network and click Connect



A pop up dialog allow you to setup your security key, then click **Connect** to join a network by Zero configuration.



## **Chapter 3 Introduction to the Wireless LAN Utility**

## **Utility Interfaces**

This Utility is basically consisted of three parts:

- 1. Button Section: on top of the window. Include buttons for selecting the Profile page, Network page, Advanced page, Statistics page, WMM page, WPS page, the About button, Radio On/Off button and Help.
- 2. Function Section: center of the Utility window. Appears to present information and options related to the button.
- 3. Status Section: bottom of the utility window. This section includes information about the link status, authentication status, AP's information and configuration, and retrying the connection when authentication is failed.

RaUI		100		94-1-1-48A		1000		L
Profile		Advanced	Statistics		<b>Ø</b>		CCX.	
Sorted by >>		Cha	nnel	Signal	WI 5	Show dBm	UCK	
				stion				
JohnTu59		10 I	B g 🕈	47%				-
JYT		67	6 9 🕈	31%				
KUPO		11	6 9 🕈	37%				
MyPlace_Wesly		61	6 9 📍	100%				•
portman1		11	6 9 📍	37%				
RD_Buffalo_B/G/N	í.	1 2	1 9 1 47	100% 📕				
RD_dlink855		11	1 9 1 4	99% 📕				
Rescan	Add to Profile	Con	nect					

			Signal Str	ength 1 >> 100%
Extra Info >>	Link is Up [Tx Po	wer >>:100%]		
Channel >>	2 <> 2417 MHz;	; central channel : 2		
Authentication >>	Open			
Encryption >>	NONE		Transmit	
Network Type >>	Infrastructure		Link Speed >> 65.0 Mbps	Max
IP Address >>	192.168.1.4		Thursday in a cost there	
Sub Mask >>	255.255.255.0		Throughput >> 0.000 Kbps	0.192
Default Gateway >>	192.168.1.113 —— HT		Receive	Max
BW >> 20		SNRO >> n/a	Enny Speed 22 110 mops	and the second second
GI >> long	MCS >> 7	SNR1 >> n/a	Throughput >>41.544 Kbps	41.544 1 Kbps

Status Section

When starting utility, a small utility icon appears in the system tray of the taskbar. You can double click it to maximize the dialog box if you selected to close it earlier. You may also use the mouse's right button to close utility.

Additionally, the small icon will change color to reflect current wireless network connection status. The status is shown as follows:



- : Indicates the connected and signal strength is normal.
- X

: Indicates that it is not yet connected.



: Indicates that a wireless NIC can not be detected.

R. : Indicates that the connection and signal strength is weak.

## Network

Ra	iUI							
	Profile	Lei Network	کی Advanced	Statistic	s WAWA	<b>Ø</b> WPS	Sso Sso	CCX C
\$	Sorted by >>	O SSID	🏈 Cha	annel	Signal P List >>		Show dBm	
	JohnTu59		10 1	<b>B G</b>	<b>9</b> 47% <b>1</b>			
	JYT		107	B G	9 31%			
	KLIPO		12 11	n ä				
	NuDiana Warlu		15 1					
	wyriace_wesiy		<u>к</u>		<b>A</b> 07%			
	portmani		10 II 11 II		37%			
2	RD_Buffalo_B/G/N		Ø 2		<b>47</b> 100%			
	RD dlink855		Ø 11	b g 🔟	👆 99% 📕			
	Rescan	Add to Profile	e Cor	nnect				
	Rescan	Add to Profile	e Cor	nnect	2 3			
	Rescan Status >>	Add to Profile	• Cor	F1-00		Link Qu	ality >> 100%	_
	Rescan Status >> Extra Info >>	Add to Profile RD_Buffalo < Link is Up (Tx	<ul> <li>Cor</li> <li>&gt; 00-1D-73-C7-</li> <li>Power &gt;&gt;:100%]</li> </ul>	F1-00		Link Qu Signal Stre	ality >> 100% ngth 1 >> 100%	_
	Rescan Status >> Extra Info >> Channel >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 Mł	<ul> <li>Cor</li> <li>&gt; 00-1D-73-C7-I</li> <li>Power &gt;&gt;:100%]</li> <li>tz; central channel</li> </ul>	F1-00 rel : 2		Link Qu Signal Stre	ality >> 100% ngth 1 >> 100%	_
	Rescan Status >> Extra Info >> Channel >> Authentication >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open	> 00-1D-73-C7- Power >>:100%] Hz; central chann	F1-00 rel : 2		Link Qu Signal Stre	ality >> 100% ngth 1 >> 100%	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE	> 00-1D-73-C7- Power >>:100%] Hz; central chann	F1-00 rel : 2	Transmit	Link Qu Signal Stre	aity >> 100% ngth 1 >> 100%	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >> Network Type >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE Infrastructure	> 00-1D-73-C7- Power >>:100%] Hz; central chann	nnect F1-00 nel : 2	Transmit — Link Speed >>	Link Qu Signal Stre	aity >> 100% ngth 1 >> 100%	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >> Network Type >> IP Address >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE Infrastructure 192.168.1.4	> 00-1D-73-C7- Power >>:100%] Hz; central chann	nnect F1-00 nel : 2	Transmit Link Speed >>	Link Qu Signal Stre	aitty >> 100% ngth 1 >> 100%	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >> Network Type >> IP Address >> Sub Mask >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE Infrastructure 192.168.1.4 255.255.255.255.0	<ul> <li>Cor</li> <li>&gt; 00-1D-73-C7-</li> <li>Power &gt;&gt;:100%]</li> <li>Hz; central channel</li> <li>)</li> </ul>	nnect F1-00 nel : 2	Transmit — Link Speed >> Throughput >>	Link Qu Signal Stre 65.0 Mbps 0.000 Kbps	aitty >> 100% ngth 1 >> 100% Max 0.192	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >> Network Type >> IP Address >> Sub Mask >> Default Gateway >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE Infrastructure 192.168.1.4 255.255.255.255.0 192.168.1.113	<ul> <li>Cor</li> <li>&gt; 00-1D-73-C7-</li> <li>Power &gt;&gt;:100%]</li> <li>Hz; central channel</li> <li>)</li> <li>)</li> </ul>	F1-00 rel : 2	Transmit Link Speed >> Throughput >: Receive	Link Qu Signal Stre 65.0 Mbps 0.000 Kbps	ality >> 100% ngth 1 >> 100% Max 0,192 Kbps	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >> Network Type >> IP Address >> Sub Mask >> Default Gateway >>	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE Infrastructure 192.168.1.4 255.255.255.0 192.168.1.110 HT	<ul> <li>Cor</li> <li>&gt; 00-1D-73-C7-</li> <li>Power &gt;&gt;:100%]</li> <li>tz; central channel</li> <li>a</li> <li>b</li> <li>b</li> </ul>	nect F1-00 nel : 2	Transmit — Link Speed >> Throughput >> Receive — Link Speed >>	Link Qu Signal Stre 65.0 Mbps 0.000 Kbps > 1.0 Mbps	ality >> 100% ngth 1 >> 100% Max 0,192 Kbps Max	
	Rescan Status >> Extra Info >> Channel >> Authentication >> Encryption >> Network Type >> IP Address >> Sub Mask >> Default Gateway >> BW >> 20	Add to Profile RD_Buffalo < Link is Up [Tx 2 <> 2417 MH Open NONE Infrastructure 192.168.1.4 255.255.255.0 192.168.1.110 HT	<ul> <li>Cor</li> <li>&gt; 00-1D-73-C7-</li> <li>Power &gt;&gt;:100%]</li> <li>tz; central channel</li> <li>s</li> <li>SNR0 &gt;&gt; n/a</li> </ul>	nect F1-00 nel : 2	Transmit — Link Speed >> Throughput >> Receive — Link Speed >> Throughput >>	Link Qu Signal Stre 65.0 Mbps 0.000 Kbps > 1.0 Mbps > 41.544 Kbps	ality >> 100% ngth 1 >> 100% Max 0.192 Kbps Max 41 544	

Items	Information
Status	Shows the connecting status. Also shows the SSID while connecting to a valid
	network.
Extra Info	Display link status in use.
Channel	Display current channel in use.
Authentication	Authentication mode in use.
Encryption	Encryption type in use.
Network Type	Network type in use.
IP Address	IP address of current connection.
Sub Mask	Subnet mask of current connection.
Default Gateway	Default gateway of current connection.
Link Speed	Show current transmit rate and receive rate.
Throughput	Display transmit and receive throughput in Mbps.
Link Quality	Display connection quality based on signal strength and TX/RX packet error rate.
Signal Strength 1	Receive signal strength 1, user can choose to display as percentage or dBm format.
Signal Strength 2	Receive signal strength 2, user can choose to display as percentage or dBm format.
Signal Strength 3	Receive signal strength 3, user can choose to display as percentage or dBm format.
Noise Strength	Display noise signal strength.
НТ	Display current HT status in use, containing BW, GI, MCS, SNR0, and SNR1 value.

## Profile

This profile page allows users to save different wireless settings, which helps users to get access to wireless networks at home, office or other wireless network environments quickly.

R4 R	aUI								
	Profile	<b>LLL</b> Network	رچی Advanced	Statistics	www.	WPS	Sso Sso	ccx	٩
—		Prot	file List ———						
	TP-LINK	TP-LINK		9	6	Profile Name >>	TP-LINK		
						<pre>SSID &gt;&gt;</pre>	TP-LINK		
						Network Type >>	Infrastructure		
						Authentication >>	Open		
						Encryption >>	WEP		
						Use 802.1x >>	NO		
						Tx Power >>	Auto		
						Channel >>	Auto		
						Power Save Mode >>	CAM		
						RTS Threshold >>	n/a		
1000	Add Edit	Delete	Import	Export Acti	ivate	Fragment Threshold >>	n/a		
									-

Items	Information
Profile Name	Choose a name for this profile, or use default name defined by system.
SSID	Fill in the intended SSID name or use the drop list to select from available Aps.
Network Type	There are two types, infrastructure and 802.11 Ad-hoc modes. Under Ad-hoc mode, you could also choose the preamble type; the available preamble type includes auto and long. In addition to that, the channel field will be available for setup in Ad-hoc mode.
Authentication	Authentication mode.
Encryption	Encryption mode.
Use 802.1x	Whether or not use 802.1x feature.
Channel	Channel in use for Ad-Hoc mode.
Power Save Mode	Choose from CAM (Constantly Awake Mode) or PSM (Power Saving Mode).
Tx Power	Transmit power, the amount of power used by a radio transceiver to send the signal out.
RTS Threshold	For adjusting the RTS threshold number by sliding the bar or key in the value directly. The default value is 2347.
Fragment Threshold	Adjust the Fragment threshold number by sliding the bar or key in the value directly. The default value is 2346.

#### To add a new profile:

Click the **Add** button. The add profile dialog pops up.

Note you could also add a new profile quickly by selecting an available network in the

Network function then click the Add to Profile button.

There are three sub-tabs for fill in information:

1. **System Config**: to fill in wireless information of the network

System Config Auth. \Encry.	802.1x			
Profile Name >> TP-LINK		Network Type >> Tx Power >>	Infrastructure	•
SSID >>	<u> </u>	Preamble >>	Auto	• •
Power Save Mode >> 🥝 CAM	PSM			
RTS Threshold	0	2347	2347	
Fragment Threshold	256	2346	2346	Diagnosis Capable
	ок	Cancel		

Auth./Encry.: to fill in wireless encryption or authentication information.
 Note Click Use 802.1X checkbox will enable 802.1x tab

ystem Config Auth. \ En	cry.	802,1x			
Authentication >>	Open	•	Encryption >>	WEP	Use 802.1X
WPA Preshared Key >>					
Wep Кеу					
🕜 Key#1	Hex	-			
🖉 Key#2	Hex	-			
🖉 Key#3	Hex	-			
🖉 Key#4	Hex	•			
		ок	Cancel		

3. **802.1x**: to configure the authentication information for **802.1x** 

ID \ PASSWORD	Client	Certificate	Server Certific	ate		
Authentication ID	/ Password					
Identity >>			Password >>		Domain Name >>	

## Advanced

This page provides advanced configurations to this adapter. Please refer to the following chart for definitions of each item.

🔀 RaU	I.								×
	Profile	Land Handler Network	ر Advanced	Statistics	www.	<b>Ø</b> WPS	SSO SSO	CCX	•
Wir	eless mode >>	2.4G	•						
-	Select	Your Country Re	gion Code						
2.4	GHz >>	0: CH1-11		▼ Wireless	Protection >>	Auto	•		
					Tx Rate >>	Auto	•		
	Enable TX Burst								
	Enable TCP Wind	ow Size							
	Fast Roaming at	-70 dBm							
	Show Authentica	tion Status Dialo	g						
	Apply								-

Items	Information					
Wireless mode	Click the drop list to select a wireless mode.					
Enable TX Burst	Select to enable connecting to a TX Burst supported device.					
Enable TCP Window Size	Mark the checkbox to enable TCP window size, which help enhance throughput.					
Fast Roaming at <u></u> dBm	Mark the checkbox to enable fast roaming. Specify the transmit power for fast roaming.					
Show Authentication Status Dialog	Mark the checkbox to show "Authentication Status Dialog" while connecting to an AP with authentication. Authentication Status Dialog displays the process about 802.1 x authentications.					
TX Rate	Manually select the transfer rate. The default setting is auto. (802.11n wireless cards do not allow the user to select the TX Rate.)					
Select Your Country Region Code	Eight countries to choose. Channel list:					
	Classification 0: FCC (Canada) 1: ETSI 2: SPAIN 3: FRANCE 4: MKK 5: MKKI (TELEC) 6: ISRAEL 7: ISRAEL	Range CH1 ~ CH11 CH1 ~ CH13 CH10 ~ CH11 CH10 ~ CH13 CH14 ~ CH14 CH1 ~ CH14 CH3 ~ CH9 CH5 ~ CH13				

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

## Statistics

Statistics page displays the detail counter information based on 802.11 MIB counters. This page translates the MIB counters into a format easier for user to understand.

R4 RaU	Í								
	Profile	Land Hetwork	Advanced	Statistics	<b>NAM</b>	<b>Ø</b> WPS	SSO SSO	CCX	-
Т	ransmit	Receive							
	Frames T	ransmitted Succe	ssfully		-	6901			
	Frames R	etransmitted Suc	cessfully	=		6575			
	Frames F	ail To Receive ACI	( After All Retries		-	226			
Res	et Counter								
									-

Items	Information
Frames Transmitted Successfully	Frames successfully sent.
Frames Retransmitted Successfully	Successfully retransmitted frames numbers.
Frames Fail To Receive ACK After All Retries	Frames failed transmit after hitting retry limit.
Reset Counter	Reset counters to zero.



Items	Information
Frames Received Successfully	Frames received successfully.
Frames Received With CRC Error	Frames received with CRC error.
Frames Dropped Due To Out-of-Resource	Frames dropped due to resource issue.
Duplicate Frames Received	Duplicate received frames.
Reset Counter	Reset counters to zero.

## WMM

This page allows users to activate the WMM function for this device. Please note that this function only works while connecting to a WMM compatible device.

Profile	Lange State	Advanced	Statistics		<b>Ø</b> WPS	<b>S</b> SSO	CCX	ļ
WMM Setup Status -								
WMM >> 6	Enabled	Power Save :	>> Disabled		Direct	t Link >> Enabled		
<b>—</b> w <i>w</i>	M Enable							
	WMM - Power Sav	e Enable						
	AC_BK	AC_BE	AC_VI	AC_V	0			
	Direct Link Setup	Enable						
	MAC Address >>			Timeout Value >>	60 sec			
						A	pply	
						1000		

Items	Information
WMM Enable	Enable Wi-Fi Multi-Media.
WMM - Power Save Enable	Enable WMM Power Save. Please enable WMM before configuring
	this function.
Direct Link Setup Enable	Enable DLS (Direct Link Setup). Please enable WMM before
	configuring this function.
MAC Address	Fill in the blanks of Direct Link with MAC Address of STA.
Timeout Value	Time of automatically disconnect after some seconds. The value is
	integer. The integer must be between 0~65535. It represents that
	it always connects if the value is zero. Default value of Timeout
	Value is 60 seconds.
Apply / Tear Down	After fill in the "MAC Address" and "Timeout Value", click "Apply"
	button to save your configuration. The result will appear in the
	blanks. To remove the configuration, please select the
	configuration in the blanks and then click "Tear Down" button.

## WPS

WPS Configuration: The primary goal of WiFi Protected Setup (WiFi Simple Configuration) is to simplify the security setup and management of WiFi networks. This adapter supports the configuration setup using PIN configuration method or PBC configuration method through an internal or external Registrar.

R4 RaUI									×
	Profile	Land Network	Advanced	Statistics	www.	<b>Ø</b> WPS	SSO	ccx	<b>&gt;</b>
-			Wi	PS AP List				Danaa	
ID :		RD-D-LINK	628	00-24-0	1-34-E1-02	3		Informatio	on
								Pin Code	,
								70594201 R	lenew
			WPS	Profile List				Config Mode	
								Enrollee	-
								Detail	
								Connect	in the second
and the second second	PIN	WPS Associate II	E		Progress >>	0%		Rotate	Concernance
and the second second	PBC	WPS Probe IE						Disconnec	t
		Auto						Export Pro	file
								Delete	and the second s

Items	Information
WPS AP List	Display the information of surrounding APs with WPS IE from last scan result. List
	information includes SSID, BSSID, Channel, ID (Device Password ID), and
	Security-Enabled.
Rescan	Click to rescan the wireless networks.
Information	Display the information about WPS IE on the selected network. List information
	includes Authentication Type, Encryption Type, Config Methods, Device Password ID,
	Selected Registrar, State, Version, AP Setup Locked, UUID-E and RF Bands.
Pin Code	8-digit numbers. It is required to enter PIN Code into Registrar using PIN method. Each
	Network card has only one PIN Code of Enrollee. Click on the Renew button to renew
	the PIN code.
Config Mode	The station serving as an Enrollee or an external Registrar.
WPS Profile List	Display all of credentials got from the Registrar. List information includes SSID, MAC
	Address, Authentication and Encryption Type. If STA Enrollee, credentials are created
	as soon as each WPS success. If STA Registrar, Utility creates a new credential with
	WPA2-PSK/AES/64Hex-Key and doesn't change until next switching to STA Registrar.
Detail	Information about Security and Key in the credential.
Connect	Command to connect to the selected network inside credentials.
Rotate	Command to connect to the next network inside credentials.
Disconnect	Stop WPS action and disconnect this active link. And then select the last profile at the
	Profile Page of Utility if exists. If there is an empty profile page, the driver will select any
	non-security AP.
Delete	Delete an existing credential. And then select the next credential if exist. If there is an
	empty credential, the driver will select any non-security AP.
PIN	Start to add to Registrar using PIN configuration method. If STA Registrar, remember
	that enter PIN Code read from your Enrollee before starting PIN.
PBC	Start to add to AP using PBC configuration method.
WPS associate IE	Send the association request with WPS IE during WPS setup. It is optional for STA.
WPS probe IE	Send the probe request with WPS IE during WPS setup. It is optional for STA.
Progress Bar	Display rate of progress from Start to Connected status.
Status Bar	Display currently WPS Status.
Auto	Starts to add to AP by using to select the AP automatically in PIN method.



When you click PIN or PBC, please don't do any rescan within two-minute connection. If you want to abort this setup within the interval, restart PIN/PBC or click Disconnect to stop WPS action.

## SSO

									×
<b>(</b>	Advanced	Statistics	<b>N</b> WWW	<b>Ø</b> WPS	Sso	CCX	Radio on/off	<b>R</b> About	<b>&gt;</b>
E	inable SSO Featu	ure	Enable Persiste	ent Connection	7	-			
0	Use ID and Pass	word in Winlogon							
	Use ID and Pass Prompt ID and F	word in Profile Password Dialog							
Pro	ofile List (only su	upport LEAP or EAP	-FAST authentica	ation)					_
		Se	lect Profile >>		-		Apply	and a second	
	[Information	of selected profile	<b>_</b>	<u>.</u>					
		Pro	file Name >>						
			SSID >>						
		Authe	ntication >>						

Items	Information
Enable SSO feature	Choose which SSO methods to log on
Use ID and Password in	Use the ID and password in Windows logon
Winlogon:	
Use ID and Password in	Use the ID and password in RaUI profile settings
Profile	
Use ID and Password in	Use the ID and password in pop-up authentication dialog
Dialog	
Enable Persistent	Use ID and Password in the previous activated Profile and not show any
Connection	authentication dialog
Profile List	<b>Select Profile:</b> Select a profile containing LEAP or EAP-Fast authentication
	Information of selected profile: Profile information, such as profile
	name, SSID.
Apply	Hit the Apply button to make the settings effective

ССХ

🔀 RaUI									
	Profile	Network	Advanced	Statistics	<b>ANN</b>	<b>Ø</b> WPS	SSO	CCX	>
🔼 E	nable CCX (Cisc	o Compatible eXte	ensions)						_
[	🔼 Enable Radi	o Measurements							
	🔼 Non-Serv	ving Channel Meas	urements limit						
	250	ms(0-1023)							
	Apply								_

Items	Information
Enable CCX (Cisco	Choose whether Cisco Compatible eXtensions are supported or not.
Compatible eXtensions)	
<b>Enable Radio Measurement</b>	Enable the radio measurement; the non-serving channel measurement limit
	is between 0 and 1023 milliseconds.
Apply	Hit the Apply button to make the settings effective

## Radio On/Off

Click on the button to enable/disable wireless connection status.

## Radio power on

🔀 Ral	I								×
4	Statistics	www.	<b>Ø</b> WPS	Sso Sso	CCX	Radio on/off	About	🕜 Help	
	Enable CCX (Cisco	Compatible eXte	nsions)						
	Enable Radio	Measurements		CAC >	ADDTS(Direc	tly send TS)	-	Set	
	Non-Servir	ng Channel Measu ns(0-1023)	urements limit	Diagnostic >	> Select Pro	ofile	Y	Diagnose	
				[ Information	of selected pro	file			
	Roaming with	RF Parameters		Pr	rofile Name >>				
	Voice Drastic	: Roaming			ssid >>				
				Diagno:	sis Capable >>				
	éssiu								
	Арріу								-

## Radio power off

🔀 Ral	Л								×
4	Statistics	www.	<b>Ø</b> WPS	C S S O	ccx	Radio on/off	About	🕜 Help	
	Enable CCX (Cisco	Compatible eXte	ensions)						
	Enable Radio	Measurements		CAC >>	ADDTS(Direc	tly send TS)	-	Set	
	Non-Servi	ng Channel Measu ns(0-1023)	urements limit	Diagnostic >>	Select Pro	ofile	<b>Y</b>	Diagnose	
	,			[Information c	f selected pro	file			
	Roaming with	n RF Parameters		Pro	file Name >>				
	Voice Drasti	c Roaming			SSID >>				
				Diagnosis	Capable >>				
	Annal a								
	Арріу								-

## About

Display Configuration Utility, Driver, and EEPROM version information. Display Wireless NIC MAC address.

🔀 Ral	JI									
<b></b>	Statistics	www.	<b>Ø</b> WPS	SSO	CCX	Radio d	) on/off	About	😯 Help	
		(c) (	Copyright 2009,	Ralink Technology, Ind	c. All rights r	eserved.				
		RaConfig	g Version >>	3.1.2.0		Date >>	08-20-2	009		
		Drive	r Version >>	1.4.6.0		Date >>	08-03-2	009		
		DLI	L Version >>	1.0.2.0		Date >>	08-20-2	009		
		EEPROA	Version >>	1.1	Firmware V	ersion >>	0.19			
		Phy	_Address >>	00-0C-43-30-71-00						
				WWW.RALIN	IKTECH.COM					_

## Chapter 4 AP mode management guide

Clicking R+ will bring up the selection window and let the user make a selection. It can switch to AP mode as shown figure.

Launch Config Utility
Use Zero Configuration as Configuration Utility
Switch to AP Mode
Open Diagnostic Testing Mode
Exit
S71

If "Switch to AP mode" is selected, the system will display default information when switching to AP mode. The dialog box is shown in figure

🗚 Ralink Wireless Utility 🛛 🔀							
Config Access Control	fac Table   Event Log	Statistics About					
SSID Soft Wireless Mode 2.40	AP-0D	Channel 1	TX Rate : Auto 💌				
Country Region Code 2.4GHz 0: CH1-1	1 💌	<ul> <li>☐ No forwarding a</li> <li>☐ Hide SSID</li> <li>☑ Allow BW 40 Mł</li> </ul>	mong wireless clients Hz				
Beacon (ms)	100	l I					
TX Power	100 %	]					
Idle time(60 - 3600)(s)	300	i i					
Wireless Protection	Auto	]					
		Default Ca	ancel Apply				
			Help				

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

There are six tabs to configure the settings.

- **Config Settings**: This tab is used to configure Soft AP.
- Access Control: This tab is used to edit the access control list.
- **Mac Table**: This tab displays the stations which are currently connected to Soft AP.
- **Event Log**: This tab displays the Soft AP events.
- **Statistics**: This tab displays the packet counters.
- **About**: This tab displays the Ralink driver and utility information.

## **Control Menu**

When starting Soft AP utility, a small icon appears within the system tray in winows taskbar. Double click it to bring up the main menu if the Soft AP utility menu was closed earlier. The user can also right-click the icon to bring up the control menu. There are three actions available.

- Launch Config Utilities: Restore Ralink Soft AP utility window
- Switch to Station Mode: Switch to Station mode
- Exit: End Soft AP utility

The icon changes color to reflect the current wireless network connection status. The status is indicated as follows:



: Indicate connected and signal strength is good.



: Indicate connected and signal strength is normal.



: Indicate connected and signal strength is weak.



: Indicate wireless NIC not detected.



: Indicate not connected yet.

## **Config Setting**

User can set and display detailed Soft AP information in this dialog box.

🗚 Ralink Wireless Uti	lity				
Config Access Control	Mac Table Event I	Log Stat	istics About		
SSID Sof Wireless Mode 2.4	tAP-0D G	Chanr <- U	nel 1	TX Rate	e: Auto 💌 curity Setting
Country Region Code 2.4GHz 0: CH1-	11		No forwardi Hide SSID Allow BW 4	ng among wire 0 MHz	eless clients
Beacon (ms)		100			
TX Power	100 %	•			
Idle time(60 - 3600)(s)		300			
Wireless Protection	Auto	•			
		I	Default	Cancel	Apply
					Help

Items	Information				
SSID	AP name of user type. The user also can select [Use Mac Address] to display				
	it. System default is SoftAP-XX (XX is last two numbers of MAC address).				
Wireless Mode	Select wireless mode. 2.4G and 5G are supported. System default is 2.4G.				
	(802.11 B/G/N mix selection item only exists for B/G/N adapter)				
Country Region Code	The Country Region Code allows the user to specify the available channel list				
	based on their country's regulations.				
Beacon (ms)	The time span between two successive4 beacons. System default is 100 ms.				
TX Power	The transmitting power of Soft AP. System default is 100%.				
Idle Time	The allowed idle time before proceeding with the authentication. The default				
	is 300.				
Wireless Protection	The user can chose from Auto, on, and off. System default is auto. (802.11n				
	wireless cards don't support wireless protection.)				
	a. Auto: STA will dynamically change according to the AP.				
	b. On: Always send frames with protection.				
	c. Off: Always send frames without protection.				
Channel	Select the AP's operating channel manually. System default is channel 1.				
TX Rate	The transmitting rate. The default is auto. (802.11n wireless cards don't				
	support TxRate.)				

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.

Use Mac Address	Use the MAC address of wireless card as the AP's name. System default is					
	APX. (X is last number of Mac Address.)					
Security Setting	Authentication mode and encryption algorithm used by the AP. The system					
	default is no authentication and encryption.					
No forwarding among	If there is no beacon among the wireless clients, they can't share information					
wireless clients	vith each other. The system default is no forwarding.					
Hide SSID	Don't display the AP name. The system default is to not hide the SSID.					
Allow BW40 MHz	Allow BW40 MHz capability.					
Default	Use system default values.					
Cancel	Cancel the any changes without saving.					
Apply:	Apply the any changes made. If using default values, it will be shown as in					
	below figure					

## **Access Control**

AP connected or can't connect with Mac address that user setting.

🖧 Ralink Wireless Uti	lity		
Config Access Control	Mac Table Event L	og Statistics About	
	I		
Access Policy		Disable	<b>_</b>
MAC Address		Access List	
, , , , , , , , , , , , , , , , , , ,			
	Add		
	Delete		
	Remove All		
			Apply
			Help

Items	Information
Access Policy	There are three policies available in the drop-down list. They are Disable, Allow All, and Reject All. System default is disabled.
Mac Address	In order to add an entry into the access control list, the user should input the MAC address without "-" in the text box and then click the "Add" button.
Access List	Display all Mac Addresses that the user has set.
Delete	Delete the Mac address set by user.
Remove All	Remove all Mac addresses in [Access List].
Apply	Apply the above changes.

## **MAC Table**

Shows link status. It displays detailed station information of current connection.

Jtility			×
Mac T	able Evi	ent Log Statistics About	
AID	Powe	Status	_
1	No	Rate = 54.00	-
			- 1
			-
			2
		Help	,
	tility Mac 1 AID 1	Itility       Ev.         AID       Powe         1       No         1       No         2       2         2       2         3       2         4       2         5       2         6       2         7       2         7       3         8       2         9       2         9       2         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1         1       1	Itility         Mac Table       Event Log       Statistics       About         AID       Powe       Status         1       No       Rate = 54.00         1       No       Rate

Items	Information			
MAC Address	The station's Mac address of the current connection.			
AID	he association identifier of the client.			
Power Saving Mode	Support Power Saving Mode on the currently connected station.			
Status	The link status of the current connection. (Only 802.11n wireless cards			
	support)			

## **Event Log**

A record of all events, times and messages.

🗚 Ralink Wireless Utility 📃 🛛 🛛 🔀			
Config Access Control Mac Table E	vent Log Statistics About		
Event Time (yy/mm/dd-hh:mm:ss)	Message		
2008 / 04 / 02 - 18 : 09 : 08 2008 / 04 / 02 - 18 : 09 : 52	Restart Access Point 00-1B-FC-09-82-20 associated		
	Clear		
	Help		

Items	Information
Event Time (yy/mm/dd-hh:mm:ss)	Specifies when the event occurred.
Message	All event messages.

## Statistics

The statistics page displays detailed counter information based on the 802.11 MIB counters. The information is translated into a format easier for the user to understand.

🗚 Ralink Wireless Utility	×
Config Access Control Mac Table Event Loc Statistics About	
- Transmit Statistics	
Frames Transmitted Successfully = 7	
Frames Fail To Receive ACK After All Retries = 0	
Frames Transmitted Successfully After Retry = 0	
Receive Statistics	
Frames Received Successfully = 1	
Frames Received With CRC Error = 101	
Frames Dropped Due To Out-of-Resource = 0	
Duplicate Frames Received = 0	
RESET COUNT	ERS
F	lelp

#### **Transmit Statistics**

Items	Information
Frames Transmitted Successfully	The number of frames sent successfully.
Frames Fail To Receive ACK After	The number of frames failed to transmit after hitting the retry limit
All Retries	
Frames Retransmitted Successfully	The number of successfully retransmitted frames.

#### **Receive Statistics**

Items	Information
Frames Received Successfully	The number of frames received successfully.
Frames Received With CRC Error	The number of frames received with a CRC error.
Frames Dropped Due To	The number of frames stopped due to insufficient resources
Out-of-Resource	
Duplicate Frames Received	The number of duplicate frames received.
Reset counters	Reset counters to zero.

## About

The About page displays the wireless card and driver version information, displays Configuration Utility, driver and EEPROM version information, displays Wireless NIC MAC address.

🐴 Rali	nk Wireless Utility	i.			×		
Config	Config Access Control Mac Table Event Log Statistic: About						
	R	w	W.RALINKTECH.CO	M			
	(c) Copyright 2009, R	alink Technology, I	nc. All rights reserved				
	Utility Version :	3.0.0.0	Date :	05-06-2009			
	DLL Version :	1.0.0.0	Date :	05-07-2009			
	Driver Version :	1.4.4.0	Date :	04-28-2009			
	EEPROM Version :	1.1	Firmware Version :	0.16			
	IP Address :	0.0.0.0	Phy_Address :	00-1C-10-01-FE-1A			
	Sub Mask :	0.0.0.0	Default Gateway :				
				Help			