IEEE 802.11n Wireless PCI Express Adapter

WPE71RL

User's Manual

February 2010

FCC Warning

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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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.

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 a minimum distance of about eight inches (20cm) between the radiator and your body.

This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter.

Revision History

Revision V1. History 1st release

All brand and product names mentioned in this manual are trademarks and/or registered trademarks of their respective holders.

CE 0984 (!)

E=9.67977 V/m is the maximum E-Field strength when safety distance between the EUT and human body is maintained at least 20cm, which is below 61V/m as required in Annex III table 2 of EC Council Recommendation (1999/519/EC). This proves that the unit complies with the EN 62311 for RF exposure requirement.

Is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (2004/108/EC), Low-voltage Directive (2006/95/EC), the procedures given in European Council Directive 99/5/EC and 2004/104/EC.

The equipment was passed. The test was performed according to the following European standards:

- EN 300 328 V.1.7.1
- EN 301 489-1 V.1.8.1 / EN 301 489-17 V.2.1.1
- EN 62311
- EN 60950-1

Regulatory statement (R&TTE)

- European standards dictate maximum radiated transmit power of 100mW EIRP and frequency range 2.400-2.4835GHz;
- In France, the equipment must be restricted to the 2.4465-2.4835GHz frequency range and must be restricted to indoor use.

Operation of this device is subjected to the following National regulations and may be prohibited to use if certain restriction should be applied.

D=0.020m is the minimum safety distance between the EUT and human body when the E-Field strength is 61V/m.

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1. Introduction

This is a wireless PCI Express adapter that delivers unrivaled wireless performance for your Desktop PC. It complies with IEEE 802.11n draft standard and backward compatible with IEEE 802.11b/g. With this adapter, you can easily upgrade your Desktop PC wireless connectivity. Once connected, access the network with high-speed Internet connection while sharing photos, files, music, video, printers, and storage. Get a better Internet experience with a faster wireless connection so you can enjoy smooth digital phone calls, gaming, downloading, and video streaming. This wireless adapter also provides peer-to-peer communication among any compatible wireless users and no Access Point required.

This wireless PCI Express adapter provides maximum transfer rate up to 150Mbps and supports WEP, WPA, WPA2, WPS 802.1x high-level WLAN security features that guarantee the best security for users.

This product is made in ISO9001 approved factory and complies with FCC part 15 regulations and CE approval.

1.1 Features

- Complies with draft IEEE 802.11n standard
- Up to 150Mbps data transfer rates in 802.11n mode
- Backward compatible with IEEE 802.11b/g
- Legacy and High Throughput Modes
- Supports 64/128-bit WEP Data Encryption
- Supports WPA, WPA2 (802.11i), WPS, 802.1x advanced security
- Supports both Infrastructure and Ad-Hoc Networking Modes
- Supports Quality of Service (QoS) WMM, WMM-PS
- Supports Multiple BSSID
- Supports Windows 2000/XP/Vista/Windows 7
- Simple user setup and diagnostics utilities

1.2 LED Indicator

LED	Light Status	Description
ACT	Blinking	Data is being transmitted or received.

1.3 Package Contents

- One Wireless PCI Express Adapter
- Three External Antennas
- One CD-ROM (Drivers / Utility, User's Manual)
 If any of the above items is missing, contact your dealer immediately.

1.4 Before you start

You must have the requirements as follow,

- A computer with an available PCI Express slot
- At least a 300MHz processor and 32MB memory
- Windows 2000/XP/Vista/Windows 7 support
- A CD-ROM drive
- Wireless PCI Express Adapter properly installed

1.5 Hardware Installation

STEP1: Turn off your computer and remove its cover

STEP2: Insert the wireless PCI Express card to an available PCI Express slot firmly. Please refer to the illustration below:



STEP3: Secure this card to the rear of the computer chassis and put back the cover.

STEP4: Secure the antenna to antenna connector of the card. Please refer to the illustration below:



STEP5: Turn on the computer.

[Guidelines for the Hardware Installation]

Please observe the following guidelines when you are installing the wireless PCI Express adapter to the Desktop PC:

- Avoid placing the PC close to obstacles
 Obstructions such as concrete and thick walls limit radio signal penetration and reduce the throughput and the coverage range of the wireless PCI Express adapter.
- Place the PC as high as possible
 The higher the PC is placed, the better the performance.
- Adjust the antenna position

Please refer to the illustration below:



2. Installation Procedure

Note: If you have installed the Wireless Adapter driver & utility before, please uninstall the old version first.

STEP1: Found New Hardware Wizard is displayed after the adapter is installed and the computer is restarted. Please click **Cancel** to continue.



STEP2: Insert Installation CD into CD-ROM drive then windows below will appear. Click **Install Driver** to begin device driver installation.



STEP3: Please read the following license agreement. Use the scroll bar to view the rest of this agreement. Select I accept the terms of the license agreement and click Next to continue.

Ratink Wineless LAN - InstallSh License Agreement Please read the following lice	eld Wizard	
Ralink	ALUNK Wieless UNBy for Windows 2000/PArtia/Win7 Experience of the constraints of the constraints of the second of the constraints of the constrain	
1992[1993]	< Back. Newt > Can	oel

STEP4: Select the setup type that best suits your needs. Click **Next** to continue.

Ralink Wireless LAN - InstallShiel	d Wicard		X
Setup Type Select the setup type that best	suits your needs.		
	Choose to install		
	 Install driver and Ralink WLAN I Install driver only 	(B)	
Ralink			
Indultived	< <u>B</u> ack	Next >	 ancel

In Windows XP, there is a Windows Zero Configuration Tool for you to setup wireless adapter. You can choose to configure the adapter through the Microsoft Zero Configuration Tool or the Ralink Configuration Tool. It is recommended to choose the Ralink Configuration Tool for the adapter. Click Next to continue.

Ralink Wireless LAN Instal	IShleid Wizard		8
Setup Type Select the setup type that best	suts you needs		
	Select Configuration Tool		
	 Reint Cardguston Tool Microsolt Zero Cardigustion Tool 		
Ralink			
kental (11)	(gack	(jed)	Cancel

If you need the adapter to operate with better performance, please choose **Optimize for performance mode** to enable the **Tx Burst mode**. Or you can choose **Optimize for WiFi mode** to run in standard wireless network.

Ralink Wireless LAN - Insta	IShleid Wizard	8
Setup Type Select the retup type that bed	juda jusa needa	
	Change Cardigateten Tublast or WFs	
	Optimizer for Will incode Optimizer for performancer mode	
Ralink		
kestal/iri /	© Back [jet >	Carcol

STEP5: Click **Install** to begin the installation.



STEP6: Please wait for a while during the adapter is configuring your new software installation.

Ralink Wireless LAN - InstallShield	i Wizand	x
Setup Status		
0.000	The InstallShield Wizard is installing Ralink Wireless LAN	
	Installing	
Ralink		
Indultivials	Canoel	2

STEP7: After the setup wizard has successfully installed wireless LAN, click **Finish** to exit the wizard.

Ralink Wireless LAN - InstallShield	Woard
a and the second second	InstallShield Wizard Complete
	The InstallShield Wised has successfully installed Ralink Wiseless UAN. Click Finish to exit the visard.
Ralink	
Indulation	< Back Finish Cancel

To check if the adapter is properly installed, you can right-click Computer \rightarrow choose **Properties** \rightarrow click **Device Manager**.

E Device Manager
Elle Action View Help
A 🚔 PSKPL-PC
Generation Computer
Disk drives
Display adapters
DVD/CD-ROM drives
DE ATA/ATAPI controllers
Explored Sector Sect
b - A Mice and other pointing devices
Monitors
B02.11n Wireless LAN Card
Atheros LL Gigabit Ethernet 10/100/1000Base- I Controller
D-IB Other devices
P Ports (COM & LPT)
Processors Second video and some controllers
s - Sound, video and game concreters
Industrial Sector Dur controllar:
h. A concern consider on controlicity

The Configuration Utility appears as an icon on the system tray of Windows while the

adapter is running. You can open the utility by double-click on the icon.

11

Right-click the icon, there are some items for you to operate the configuration utility,

- Launch Config Utilities \rightarrow Select this option to open the Configuration Utility tool.
- Use Zero Configuration as Configuration utility → Select this option to use Windows XP built-in wireless configuration utility (Windows Zero Configuration) to configure to card.
- Switch to AP Mode \rightarrow Select this option to change to AP mode.
- Exit → Select Exit to close the Configuration Utility tool.



3. Wireless Network Configuration Utility

3.1 Wireless Utility (RaUI) & Windows Zero Configuration (WZC)

The Configuration Utility is a powerful application that helps you to configure the Wireless LAN adapter and monitor the link status and statistics during the communication process.

When the adapter is installed, the configuration utility will be displayed automatically. This adapter will auto connect to wireless device which has better signal strength and no wireless security setting.

In **Windows XP**, it provides wireless configuration utility named "Windows Zero configuration" which provides basic configuration function for Ralink Wireless NIC, Ralink's Utility (RaUI) provides WPA supplicant functionality. To make it easier for user to select the correct utility, RaUI will let user make the selection when it first runs after windows XP boots.

RaUI can co-exist with WZC (Windows Zero Configuration). When coexisting with WZC, RaUI only provides monitoring function, such as link status, network status, statistic counters, advance feature status, WMM status and WPS status. It won't interfere with WZC's configuration or profile functions. Please see below picture: To select WZC or RaUI



If "Use Zero Configurations as Configuration utility" is selected, please continue on the section. Below picture shows that the RaUI status when WZC is active as main control utility.

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Profile	Network	Advanced	St	atts	r tics			() Wes	550	CCX	
Sorted by >>	G SSID	() ch	anei			a Signa	e.		D Show dan		
				-	-	Litt >s			100 () () () () () () () () () (
		6 .			D	T	100%				
default		60	ь				SON E				
PCS-PC_AP		10 11			0		20%				
SURAP-58		101		8	-		65%				
WISSING FTP.	Server 1	20.2	18	ā.			1075			-	
Status	>> WRShewljet	, ==== 00-00-43-	29-90-0	00				1993	owners root		
Status Extra info	↔ WRShowLFT	==> 00-00-43-: Power >=:10090	29-00-(00					aanta oo caaki maala ah sadk		
Status Extra info Charcel	→ WRSteinLFT → Link to Lip (7x → 2 →→ 2417 W		29-90-(nutl:4	00				196. Tel: 1	anto - Tari Historia I I Nationalia		
Status Extra Info Charval Authentication	→ WRS1dWLET → Link II:Up (7x → 2 →→ 2417 W → WF42-P3K	>→ 00-0C-43- Pawer >=:1009Q Hz; central chan	29-80-(nati: 4	00				197.5	narra - Tank Handhi - Nark		
Status Extra Info Chareal Authenticotom Encryption	WR55494_FT Use to Up (7± 2 →→ 2417 w WR42+P3k AES	×→ 00-0C-43- Power ×=:1008Q Hz; central chain	29-80-6 nati: 4	00			mant				
Status Extra Info Channal Authenticotum Encryption Nietwork Type	WR55dWL_FT Lisk is Up (7x Lisk is Up (7x 2 → 2417 M WW2-15K WW2-15K AES Initiationature	., ==> 00-00-43- Paser >== 1009Q http://amf.nail.cham	28-80-(neti:4	00		11	enanit Irik Speed +	• 270.0 Albert	Harris Contractor		
Status Extra Info Charea Authorit Katsan Encryption Network Type IP Address	WR51dWL_FT Link is: Up (7) Link is: Up (7) Z	., ==== 00-00=43- Paser ==== 1009Q H2; central chan 8 9	28-80-(nati: 4	00		11	enanit tik Speed +	 270.0 Allignt 0.000 Milant 	Mac		
Status Extra Info Charea Authent Katun Encryption Network Type IP Address Sub Aust	WR51dWL_FT Link of Up (7) Link of Up (7) Z →→ 2417 M WH2245K WH2245K WH2245K Historiculu H22168.5.12 H22168.5.12 H22168.5.12	++ 00-0C-43- Power + 1000Q Ha, central chan 5 5	29-90-(00		Tr L	onanit trik Speed + rrougtput +	 270.0 Albert 0.000 Klaps 	Alax Iss.704		
Status Extra Info Charea Authent Katan Encryption Network Type IP Address Sub Nast Default Gateway	WR51dWL_FT Unix is: Up (s: 2 →→ 3417 w WW2+5% WW2+5% WW2+5% WW2+5% WW2+5% WW2+5% WY2-168,3,13 → 295,295,25%, WY2-168,3,13	>00-0C-43- Power >1008Q Http: central chan 8 5	29-90-(00		11 12 10	enanit tek Speed + rroughput + celive	* 270.0 Abps * 0.000 Kbps	Alax Iss.:704 Star		
Status Extra Info Charea Authent Kotun Encryption Network Type IP Address Sub Alas Detault Gateway	WR51dWL_FT Unix is: Up (s:		29-90-1 nati: 4	00		Tr L	anonit ris: Speed > roughput > celivit und Speed >	 270.0 Abps 0.000 Kbps 1.0 Abps 	Max Hax Iss.:704 Nax		
Status Extra Info Charea Authent Kotun Encryption Network Type IP Address Sub Nash Detault Gateway Det == 40	WR51dWL_FT Unix is: Up (s: Up) 2 →→ 3417 M WR42-15K WR51-15K WR42-15K WR51-15K WR51-15K		29-90-1 rett : 4	00		11 1 10 10	onanit nik Speed > noughput > celive .nik Speed > hroughput ?	 270.0 Abps 0.000 Kbps 1.0 Abps 1.0 Abps 2.6.504 Kbps 	Max 955.704 80pz M3x 9.171		

When activating WZC, there are couple different on RaUI status compare to the without WZC running:

- (1) **Profile** button will be gray, profile function is removed since the NIC is controlled by WZC.
- (2) The **connect** and **add profile** function will be gray. The reason is same as the first difference.

3.2 Use WZC to configure wireless adapter

STEP1: If connection is lost or not connected, the status prompt as below will pop up.



STEP2: Right-click the network connection icon in the task bar.



STEP3: Select "View Available Wireless Networks" will pop up the dialog shown as below.

11 Wireless Network Connec	ion T	E
Network Tasks	Choose a wireless network	
S Refresh network list	Click an item in the list below to connect to a wireless network in range or b information.	o get more
Set up a vitaless retwork	((Q)) RalinkInitialAP	^
	Unsecured wireless network	1000
Related Tasks	((Q)) AP1	
(j) Learn about wireless	Unsecured wireless network	liter
networking	((Q)) AlbertY-200	
Change the order of preferred networks	Security-enabled wireless network (WPA)	(BBre
Se Change advanced	((Q)) 99	
settings	Unsecured wireless network	1000
	((Q)) APPA	
	Unsecured wireless network	(BBse
	((Q)) ¹⁸¹	
	Security-enabled wireless network	util 🗸
		Connect

STEP4: Select intended AP and click "Connect" shown as below, then click "Connect Anyway".

etwork Tasks	Choose a wireless network	
B Refresh network list	Click an item in the list below to connect to a gireless network in range or information.	to get more
Set up a vereiess network for a home or small office	(()) RainkInitialAP Unsecured wireless network	(Bto,
Learn about we networking Change the ong preferred network	to are connecting to the unsecured network "AP1". Information sent or this network is not encrypted and might be visible to other people.	and over the his network,
Change advance settings	Cancel	
Change advance settings	Connect Anyway Cancel	(the
Change advance	Connect Anyway Cancel Connect Anyway Cancel Security-enabled wireless network (WPA) ((Q)) 99 Unsecured wireless network	atti atti

STEP5: AP1 is successful connected.





STEP6: If you want to modify information about AP, click "Change advanced settings"

STEP7: Choose "Wireless Networks" tab.

eneral	Wireless Networks	Advanced
✓ Use	: Windows to configure	e my wireless network settings
Avail	able networks:	
Toc	onnect to, disconnect	from, or find out more information
abou	it wireless networks in	range, click the button below.
		View Wireless Networks
Prefe	rred networks:	
Prefe Autor belov	rred networks: matically connect to a v:	vailable networks in the order listed
Prefe Autor belov	erred networks: matically connect to ar w: AP1 (Automatic)	vailable networks in the order listed
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Prefe Autor belov	AP1 (Automatic) AP1 (Automatic) Add About <u>setting up wirel</u> about <u>setting up wirel</u> aration.	vailable networks in the order listed Move up Move down ve Properties ess network Advanced

STEP8: Click "Properties" and then click "OK" button.

ssociation	Authentication	Connection	
Network na	ame (SSID):	AP1	
Wireless	network key —		
This netv	vork requires a k	ey for the following:	
Network	Authentication:	Open	~
<u>D</u> ata end	cryption:	Disabled	~
Network	<u>k</u> ey:		
C <u>o</u> nfirm r	ietwork key:		
Key inde	y (advanced):	1	
⊡ T <u>h</u> e k	ey is provided fo	r me automatically	
This is a access	a <u>c</u> omputer-to-co points are not us	mputer (ad hoc) network; wir ed	eless

STEP9: After filling appropriate value, click "**OK**" button. And the status will prompt up as below.



STEP10: Click the Ralink's icon will bring up RaUI main window. User can find the surrounding APs in the list. The current connected AP will also shown with the green icon indicated as below screen. User may user the available tab to configure more advanced features provided by Ralink's wireless NIC.

R Ral	JI										
4) Statistics	VANAN	NHS.	-				Radio un/of	About	😵 Help	
50	inted by >>	0122 📀		Channel		• •	ienal		Show dBr	0	
•	default Default_11N_alex Free Public WiPi Pentagram P 6381-3 SoftAP-58 WRS14VN_FTP_Serve Rescan	er Avteinute	00000000		0	9	100N 20N 100S 115N 20N 70N 102N	Ē			
	Status >> Extra Info >> Channel >> Authentication >> Encryption >> Retwork Type >> P Address >> Sub Alask >> Default Gateway >>	WP514VN_FT	> 00-0C- eer >>:10	40-29-90-00 24			Transmit Link Speed Throughpu Receive	0 ++ 1.0 Meps t ++ 0.000 Kbps t ++ 0.000 Kbps	Max 4,412 Kipc Max		Less

3.3 Wireless Utility - RaUI

When starting RaUI, system will connect to the AP with best signal strength without setting profile or matching profile setting. It will issue a scan command to wireless NIC. After two seconds, the AP list will updated with the result of BSS list scan. The AP list include most used fields, such as SSID, network type, channel used, wireless mode, security status and signal percentage. The arrow icon indicates the connected BSS or IBSS network.

+ RaUE								x
Profile	Network	Advanced	Statistics		() WPS	Radio on/off	About	-
	Profil	e List						
Add Edit	WR514VN_FTP_	Server	Export Activ	rate Fr	Profile Name - SSID - Network Type - Authentication - Encryption - Use 802.1x - Tx Power Channel Power Save Mode - RTS Threshold - agnent Threshold -	 PROF1 WRS14VN_FTP_S Infrastructure WPA2-PSK AE5 NO Auto Auto Auto PSM n/a n/a 		•
Status >>	WR514VN_FT.	. «> 00-06-4F-13	-34-59		Link C Stanual St	publity ++ 72%		_
Extra Info >> Channel >> Authentication >>	Link is Up [Tx1 1 ↔ 2412 MF WPA2-PSK	Power >>:100%] tz; central chann	el : 3		Signa St	100 pr 1 - 2 2 2		
Encryption >> Network Type >> IP Address >> Sub Mask >>	AES Infrastructure 192.168.3.18 255.255.255.0			Transmit - Link Speed Throughpu	1 >> 108.0 Mbps t >> 1.072 Kbps	Max 18.048		
Default Gateway >> BW >> 40 Gl >> long M0	HT	SNR0≫ n/a SNR1≫ n/a		Receive — Link Spee Throughpo	d >> 54.0 Mbps Æ >> 57.184 Kbps	Kbpn 1.4 Max 614.368		

There are three sections in RaUI. These sections are briefly described as below.

- Button Section: include Profile page, Network page, Advanced page, Statistics page,
 WMM page, WPS page, About button, Radio On/Off button and Help button.
- Button Section
 Profile Advanced Statistics WWWW WPS Convert Convert



→	W	٨N	ΛN	1 F	'age
_	-				

WINN >>	Enabled Power	Save >> Disabled		Direct Link >> D	Isabled
	ww.Exable] WHM - Power Save Exable Act, St Act, St Ac		i ec./r0 result Visite of	66 JPE	Just Dreft,
→	WPS Page				
	10000000000	WPS AP List		0	Rescan
		WPS Profile List			S9125327 Ren Config Mode Envolue
PIN PBC			Progress >> 0%		Discorrect
Enable CCX (D Enable Ra Non-Se	CCX Page Isco Compatible eXtensions) do Aecourements sinch Channel Aecourements in	CAC >> vit Dilegnostic >>	ADDTS(Directly send 1 Select Profile PRO	5) •	Set Diagnose
250	ms(0-1023)	- Information of	selected profile		
Rosening	with RF Parameters	Prof	le Nate >> PROF1		
Votes Dra	is the Roaming		SSID >> WRS14WI	PTP_Server	
		Diagnosis	Capable >> NO		
Apply	About Page				
	(c) Copyright 2	009, Ralink Technology, Inc.	Al rights reserved.		
	RaConfig Version +	3.1.4.0	Date ++	11-25-2009	
	Driver Version +	2.3.11.0	Date ++	11-26-2009	
	DLL Version +	1.0.4.0	Date >>	11-26-2009	
	EEPROM Version +	1.3 0	Firmware Version >>	0.25	
	Phy_Address >>	00-06-4F-6F-8F-54			

Status Section: Include Link Status, Authentication Status, AP's information, Configuration and retrying the connection when authentication is failed.

→ Link Status

Status >>	WR514VN	FT., <> 00-06-4F-12-34-59	Link Quality >> 82% Signal Strength 1 >> 47%
Extra info >>	Link is Up	[Tx Power >>:100%]	
Channel >=	1 241	2 WHz; central channel 1 3	
Authentication >1	WPA2-PSK		
Encryption >	AES		Transmit
Network Type >>	Infrastruc	ture	Link Speed >> 108.0 Mbps
IP Address >>	192.168.3	.58	The share of the line of the l
Sub Mask +	255.255.2	55.0	Throughput ## 0.504 Kops 6,592
Default Gateway >>	192,168.3 HT	.1	Receive
8W >> 40		SHRD++ 15	
GL ++ long M	5 ** 5	SVR1 >> #/a	Throughput >> 41.628 Kbps 57.420

→ Authentication Status

ourd many manned		
16:37:25.062	Starting network connection	
16:07:25.171	Network is connecting	
16:37:25.281	PEAP Authenticating	
16:37:28.375	Wireless client is authenticated.	

→ AP's Information

551D ×	pronets_textiab	
MAC Address >	00-06-4F-12-34-56	Signal Strength 31 42%
Authentication Type >-	WPA2-PSK	
Encryption Type >>	AES	Legacy Supported Rates (Mbps): 1, 2, 5, 5, 5, 9, 11, 12, 18, 24, 36, 48, 54
Channel >	t e> 2412 MHz	802.11n Max, Supported Rates (Mbps): 72.2
Network Type >	Infrastructure	
Seaton Interval -	100	

→ Retry the Connection

Card N	ame >> Ralinii. 802.11n Wireless LAN Card	identity >>	
Profile N	ame >> PROF1	Pacsword >>	
Hess	age >> invalid identity or password	<i>k</i>	
	1.40	at distances	
	- 0	K Cancel	
	0	K Cancel	
	0	K Cancel	
→ C	onfiguration	K Cancel	
→ C System Config	onfiguration	K Cancel	
→ C System Config Authentication	onfiguration Auth. \ Encry. 8021X	cryption >> TKP	
→ C System Config Authentication WPA Preshare	onfiguration Auth. \ Encry. 8021X WFA Encry. Encry.	cryption >> TKIP ¥	
→ C System Config Authentication WPA Preshare Wep Key	onfiguration Auth. \ Encry. 8021X ** WF4 Enc	cryption >> TKIP ¥	
→ C System Config Authentication WPA Preshare Wep Key () (c)(F)	onfiguration Auth. \ Encry. 8021X ** WFA Enc d Key **	cryption >> THOP ¥	
→ C System Config Authentication WPA Prechane Wep Key () Key#1 () Key#2	onfiguration Auth. \ Encry. 8021X WFA Encry Hexadected	cryption >> TKIP V	
→ C System Config Authentication WPA Preshare Wep Key ③ Key#1 ④ Key#2 ④ Key#2 ④ Key#2	onfiguration Auth. \ Encry. 8021X ** WFA * Enc #Key **	cryption >> TKOP ¥	

At the mean time of starting RaUI, there is also a small Ralink icon appears within windows taskbar as below. You may double click it to bring up the main menu if you selected to close RaUI menu earlier. You may also use mouse;s right button to close RaUI utility.

Cancel



- Besides, the small icon will change color to reflect current wireless network connection status. The status indicates as follow:
 - \rightarrow \mathbb{R}_{+} -- indicate Connected and Signal Strength is Good.

OK

- → P→ -- indicate Connected and Signal Strength is Normal
- → 🔀 -- indicate Wireless NIC is not connected yet
- → 🕅 -- indicate Wireless NIC is not detected
- ightarrow -- indicate Connected and Signal Strength is Weak

3.3.1 Profile

Profile can book keeping your favorite wireless setting among your home, office, and other public hot-spot. You may save multiple profiles, and activate the correct one at your preference.

	Profile	Network	Advanced) Statistics	WMM	() WPS	COX	Radio on/off
_	- Secondaria Pa	Pro	nie List	001000000				
•	HIOFT	WB514VN_FT	P_Server	1	b	Profile Name >> SSID >> Network Type >> Authentication >> Encryption >> Use 802, 1x >> Tx Power >> Channel >> Power Save Mode >>	PROF1 WIS14VN_FTP_ Infrastructure WPA2-PSE AES HO Auto Auto PSM	S.,
	dd Edil	Deete	Import.	Export Act	vate #	Fragment Threshold >>	e/a	

[Definition of each field]

Profile Name: Name of profile, preset to PROF* (* indicate 1,2,3,...)

SSID: AP or Ad-Hoc name

Network Type: Network's type, including infrastructure and Ad-Hoc.

Authentication: Authentication mode

Encryption: Encryption Type

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 Power Saving Mode.

Tx Power: Transmit power, the amount of power used by a radio transceiver to send the signal out.

RTS Threshold: User can adjust the RTS threshold number by sliding the bar or key in the value directly.

Fragment Threshold: User can adjust the Fragment threshold number by sliding the bar or key in the value directly.

[Icons and buttons]

- ► → indicate connection is successful on currently activated profile
- ▶ → indicate connection is failed on currently activate profile
- $\checkmark \rightarrow$ indicate network type is infrastructure mode

✓ → indicate network type is Ad-Hoc

→ indicate security-enabled wireless network



3.3.1.1 Add/Edit Profile

There are 3 methods to open Profile Editor form:

- → You can open it from "Add to Profile" button in Site Survey function
- → You can open it form "Add" button in Profile function
- → You can open it from "Edit" button in Profile function

Profile Name >> F	ROFT				Network Type >>	Infrastructure	-
miD >>	P1			-	Tx Power >>	Auto	-
Power Save Wode >> () CAM (PSM			Prestation	4.61	*
RIS Threshold					1 200	2247	-
Fragment Threshold		78			- j 204	204e	
ystem Config Auth.	Encry.	1892	OK	Cancel		ano 1V.	
ystem Config Auth. Authentication ** Op	\Encry. m ▼	892	OK Encryption ++	Cencel None 🔻	0	902-1X	
ystern Config Auth. Authentication >> Op WPA Preshared Key >> [NEncry. m ▼	1892	OK Encryption ++	Cancel None 🔻		802-1X	
ystem Config Auth. Authenticotion ** Op WPA Preshared Key ** ep Kiey	\Encry. m ▼	.892	OK Encryption ++	Cancel None 💌	0	902.1X	
ystern Config Auth, Authenticetion >> Op WPA Preshared Key >> ep Key Key#1 Heo	N Encry. 20 👻		OK Encryption ++	Cancel None 🗢		902-1X	
ystem Config Auth, Authenticotion >> Op WPA Preshared Key >> ep Key Key#1 Heo Key#2 Heo	N Encry. on • adactmal •		OK Encryption ++	Cancel None 💌		802. 1X	
ystern Config Auth, Authenticotion >> Op WPA Preshared Key >> ep Key Key#1 Heo Key#2 Heo Key#2 Heo	A Encry. 20 -		OK Encryption ++	Cancel None 🗢		902-1X	

Profile Name: User can chose name for this profile, or use default name defined by system. **SSID:** User can key in the intended SSID name or use pull down menu to select from

available APs.

Power Save Mode: Choose from CAM [Constantly Awake Mode] or Power Saving Mode. **Network Type:** There are two types, infrastructure and 802.11 Ad-Hoc mode. Under Ad-Hoc mode, user can 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.

RTS Threshold: User can adjust the RTS threshold number by sliding the bar or key in the value directly. The default value is 2347.

Fragment Threshold: User can adjust the Fragment threshold number by sliding the bar or key in the value directly. The default value is 2346.

Channel: Only available for setting under Ad-Hoc mode. User can choose the channel frequency to start their Ad-Hoc network.

Authentication Type: There are 7 type of authentication modes supported by RaUI. They are Open, Shared, LEAP, WPA, WPA-PSK, WPA2, WPA2-PSK.

Encryption Type: For open and shared authentication mode, the selection of encryption type are None and WEP. For WPA, WPA2, WPA-PSK and WPA2-PSK authentication mode, the encryption type supports both TKIP and AES.

802.1x Setting: It is an authentication for WPA and WPA2 certificate to server.

WPA Pre-Shared Key: This is the shared secret between AP and STA. For WPA-PSK and WPA2-PSK authentication mode, this field must be filled with character longer than 8 and less than 32 lengths.

WEP Key: Only valid when using WEP encryption algorithm. The key must matched AP's key. There are several formats to enter the keys:

- → Hexadecimal 40bits: 10 Hex characters
- → Hexadecimal 128bits: 26 Hex characters.
- → ASCII 40bits: 5 ASCII characters
- → ASCII 128bits: 13 ASCII characters

3.3.1.2 Example to Add Profile in Profile

Step 1: Click Add in Profile function

· Rol	Ú.								8
	Profile	Network	Advanced	a Statistics		() WPS	100	ta ccx	•
		Pro	rie Lizi						
						Profile Name ++			
						THE PARTY IN			
						advertisition			
						Dicryption ++			
						Ube 802.5x ++			
						Ti: Power ++			
						Power Save Mode >>			
	-					RPS Three should are			
_	10	And in case of	Inport	the subscription of the	1210 P	agnent Threinold >>			
_	_		-	and the second second		23			

Step 2: Add Profile page will pop up.

Profile	Network	Advanced	Statistics		() WPS	300	ccx.
	Pro	rie List					
					Profile Name >>		
					44 GB22		
				1	letioner Type ++		
					Institution so		
					Like 002.1x to		
					To Power 1+		
				-	Chantel >>		
					ET 3011 BOOD		
					FT1 Threshold ++		
ead + + +	ing a Determine	Import	post at	tinger	ent Threshold ++		
edd	ing a literature	Import	Fred all	Traps	ert Threshold ++		_
lightern Config	Auth 10ro	Import	Freid an	rage	ent Threathold ++		
Nychen Canfig	Auth. 1.Drc	Import	nanti jan	frage	ert Threatodd ++		_
kåd Tyrdeen Camfig Profile Har	Auth. 10re	inport		Network Type ==	In the sound of th		-
add Synthese Counting Profiles Har	eutta Libre et ++ (RiOF1	ny.		Network Type ++ To Power >+	In threaded ++ and Threadedd ++ hylyactracture Auto		
kad Bystven Canfig Froffie Har 33	euth: 15he ee ++ (Riof 1 ab ++ (ry.		Network Type ++ To Power ++	kningstructure Auto		
kal 1	sum Abre m = FROF1	Inport		Network Type ++ To Power ++ The manufacture ++	kninastructure Auto Viria		
kal	Aufti 1.5cc Be == FROF1 ID == CAM	ny.		Network Type ++ TyPower ++ Presenter ++	Introduction Introduction Introduction Arts Color	•	_
Add Froffer Canfig Froffer Har S Power Save Ho I HS	Auth: 1,5re Be ++ (RicF1 ID ++ (CAM D++ (CAM Threshold	ny.	Pia	Network Type ++ DePower >+ Provertien ++	http://www.initialiana.com	•	
Add Frontier Config Frontier Mar Power Save Ho E HS Frontier Frontier	Auft: 1.Dro Auft: 1.Dro ID => D => D => D (AM) Threshold generit Threshold	Import	Pia	Network Type ++ DePower ++ Demotion ++ Demotion ++	Hand Therearted an and Therearted an Auto Auto Table	• • •	-
kal Tychen Carfg Frofie Har S Power Save Ho 115 7 ra	Auft: 1.Dro Auft: 1.Dro ID => De => CAM Threshold genet Threshold	ny.	Pia	Network Type ++ To Power ++ To	Ante Contractor	o ↓ ↓ □Duagnost: Ca	-

Step 3: Change profile name to what you want to connect. Pull down the SSID and select one intended AP. The AP list is the result of last Network.

1.0	1.1	-30	10	100	4	2.	63
Profile	Network	Advanced	Statistics	WMM	WPS	sso	CCX.
	Pro	Ge List					
					Profile Name >>		
					558D xx		
					Network Type >>		
					Encryption >>		
					Like 000.1x >>		
					To Power to		
					Channel >> wer Save Mode =>		
					RT1 Threshold ++		
ed to	ing a Determine	Import	trett at	tine	MTS Threshold ++		
edd (1)	- 200 m	Import	restile at	ring	RTS Threshold ++ nerit Threshold ++		
edd 1	Auth. 1Dec	import		Trag	RT3 Threshold ++ ment Threshold ++		
edd 1	Auth. 1Dec	inport ny.	reet, et	rag	FF3 Threahold ++		
odd 11	Ruth 10re	ny.		Network Type ++	FF3 Threshold ++ nert Threshold ++		
ndd farfig Tyrden Cunfig Frofie Ha	Ruthi, Libre Re ++ PROF 1	ny.		Network Type ++ To Power ++	FEI Threshold ++ mert Threshold ++ Mrtactructur Auto		
edd System Canfig Froffie Har 25	setti. 15re setti: 15re set ++ (FROF1 st) +> (Inport		Network Type ++ To Power ++	FE3 Threshold ++ ment Threshold ++ hehadt ruchu Auto	: :	
edd 1	erthi 10te er + PROF1 ID +> N Artis Schol defuilt	Import ny.		Network Type ++ Tx Power ++ Tx Power ++ Tx 245602045	FEI Threshold ++ ment Threshold ++ hvhod ruchu Auto		
edd 11	euth 10x euth 10x et == PROF1 D == Artistanti de == Pertaguan	Import ny.		Network Type or To Power co- to described to described to described to described	FE3 Threshold ++ nerri Threshold ++ hvhot ruchu Auto 0 0 0	•	
edd 1	eum 10m en == FROF1 ID == Artistoti de == Artistoti Pertagium ThrtD	Inport		Network Type To Power To Power To 24500046 1024500046 1024500046 1024500046 1024500046 1024500046 1024500046 1024500046 1024500046 1024500046 1024500046 102450004 102450004 102450004 102450004 102450004 102450004 1024500000000000000000000000000000000000	Fr3 Threshold ++ nerrt Threshold ++ kninostructur Auto 0 0 0 0	•	
edd 1	Auth 10be Auth 10be	Import ny. PACIE-2 Mysies WP1		Network Type To Power To Power To 24560045 0006-812045 0006-812045 0006-812045 0006-812045 0006-812045 0006-812045 0006-812045	Fr3 Threshold ++ nert Threshold ++ knin adtractur Auto 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	e • •	
edd 1	Ruth 10be Ruth 10be	Import ny. PAOIN-D Nylees WP1		Prep Serbech Type To Power To Power To 4000045 0006-07400045 0006-07400045 0006-0740004 0006-0740005 0006-0740005 0006-0740005 0006-0740000000000000000	HT3 Threshold ++ mert Threshold ++ Mrketractur Auto 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	e v v Dianoss Ca	path

Step 4: Then, you can see the profile which you set appear in the profile list. Click "**Activate**" to activate the profile setting.

La LA								
Profile	Network	Advanced	Statistics	NINITA	() WPS	022	C A	
	Profi	e List						
AM 23R	Deale	forner Inport	Expert Actor	yate Fre	Protectante - Silito - Nactuoris Type - Authentostoni - Dia edizi tra- ture edizi tra- ture edizi tra- Channel - Channel - Ris Threehold - grent Threshold -	HOP1 WESHNALFTP_S. WESHNALFTP_S. Infractures WFA2-MSE NO No		
Status and so Characteristics	Pertogram	e a colos de 12. Rouer so marag	3456	-	Lenk d Signal St	was sangth 1 to 180		-
Adhentication III Biorgation 22 Notwork, Type 22 IP Address 22	Open NONE Infrastructure INC. Nat. 1, 101			Tresurit Link Speed : Throughput	>> 18.5 Mage	Max ACE CIN		

3.3.2 Network

Under the Network function, system will display the information of surrounding APs from last scan result. List information includes SSID, BSSID, Signal, Channel, Encryption algorithm, Authentication and Network type as below:

2+ R.	Profile	LLL Network	Advanced	Statistics	WAAA	Ø	ta cox	Radio on/off
3	Sorted by >+	🙆 SUD	O ch	vrnit 🙀	Signal List 22	201007	Show d	in .
•	pronets_testiab WR\$14VH_PTP_3	Server	5		9 638 69 788 9 528			
-	Fescas	Add to Profi	e Co	mect				

[Definition of each field]

SSID: Name of BSS or IBSS network

Network Type: Network type in use, infrastructure for BBS, Ad-Hoc for IBSS network

Channel: Channel in use.

Wireless Mode: AP support wireless mode. IT may support 802.11b, 802.11g or 802.11n wireless mode.

Security-Enable: Whether AP provides security-enabled wireless network Signal: Receive signal strength of specified network

[Icons & Buttons]

- ► Indicate connection is successful.
- \checkmark \rightarrow Indicate network type is infrastructure mode.
 - Indicate network type is Ad-Hoc mode.
- Indicate security-enabled wireless network.
- → Indicate 802.11b wireless mode.
- Indicate 802.11g wireless mode.

Indicate 802.11n wireless mode.



 \rightarrow Command to connect to the selected network.

Rescan → Issue a rescan command to wireless NIC to update information on surrounding wireless network.

Add to Profile

Add the selected AP to Profile setting. It will bring up profile page and

save user's setting to a new profile.

[Connected Network]

Connect

- (1) When RaUI first ran, it will select the best AP to connect automatically.
- (2) If user wants to connect to other AP, He can click "Connect: button for the intended AP to make connection.
- (3) If the intended network has encryption other than "Not Use", RaUI will bring up the security page appropriate information to make the connection.
- (4) When you double-click on the intended AP, you can see AP's detail information.

3.3.3 Advanced

Rull							
Profile	Network	Advanced) Statistics	WMM	() WPS	tă cox	Radio on/off
Wireless mode >>	2.46	•					
Select	Your Country Re	gion Code	_				
1.40Hz xx	Qi CH1-11		-				
Enable TX Burst	Now Size t 70 dbm						
Apply							

Wireless Mode: Here support 2.4G wireless mode

Enable Tx Burst: Check to enable this function. This function enables the adapter to deliver better throughput during a period of time, it only takes effect when connecting with the AP that

supports this function...

Enable TCP Windows Size: Check to increase the transmission quality. The large TCP Window size the better performance

Fast Roaming at: Fast to roaming, setup by transmit power.

Select your Country Region Code: The available channel differs from different countries. For example: USA (FCC) is channel 1-11, Europe (ETSI) is channel 1-13. The operating frequency channel will be restricted to the country user located before importing. If you are in different country, you have to adjust the channel setting to comply the regulation of the country. Supporting region code for this section has CH1-11, CH1-13, CH10-11, CH10-13, CH14, CH1-14, CH3-9, and CH5-13. Please refer to below Channel Classification and range, Country Channel list to select your Country Region Code:

Classification	Range
0:GFCC	CH1 ~ CH11
1:GIC (Canada)	CH1 ~ CH11
2:GETSI	CH1 ~ CH13
3:GSPAIN	CH10~CH11
4:GFRANCE	CH10~CH13
5:GMKK	CH14 ~ CH14
6:GMKKI (TELEC)	CH1 ~ CH14
7:GISRAEL	CH3 ~ CH9

Figure 1: Channel Classification and range

Country Name	Classification	Harge	Country Name	Classification	Range
Argentina	0	CH1-11	Lobanon	1	CH1-13
Australia	1	CH1-13	Liechterstein	1	CH1-13
Austria	1	CH1-13	Littuaria	1	CH1-13
Bahrain	1	CH1-13	Luxembourg	1	CH1-13
Belanzi	1	CH1-13	Macedonia	1	CH1-13
Belgium	1	CH1-13	Malaysia	-1	CH1-13
Bolvia	1	CH1-13	Meeco	0	CH1-11
Brazil	0	CH1-11	Maracca	1	CH1-13
Bulgaria	1	CH1-13	Netherlands	1	CH1-13
Canada	0	CH1-11	New Zealand	1	CH1-13
Chile	1	CH1-13	Nigoria	/1	CH1-13
China	1	CH1-13	Norway		CH1-13
Colombia	0	CH1-11	Panama	31	CH1-13
Costa Rica.	1	CH1-13	Paraduay	1	CH1-13
Croatia	1	CH1-13	Peru	1	CH1-13
Cyprus	1.	CH1-13	Philippines	1	CH1-13
Czech Republic	1	CH1-13	Poland	1	CH1-13
Denmark	1	CH1-13	Portugal	1	CH1-13
Ecuador	1	CH1-13	Puerto Rico	1	CH1-13
Egypt	1	CH1-13	Romania	1	CH1-13
Estonia	1	CH1-13	Russia	1	CH1-13
Finland	1	CH1-13	Saudi Arabia	1	CH1-13
France	3	CH10-13	Singapore	1	CH1-13
France2	1	CH1-13	Skovakia	1	CH1-13
Germany	1	CH1-13	Slovenia	1	CH1-13
Greece	1	CH1-13	South Africa	1	CH1-13
Hong Kong	1	CH1-13	South Koren	1	CH1-13
Hungary	1	CH1-13	Spain	2	CH10-11
looland	1	CH1-13	Sweden	1	CH1-13
india	1	CH1-13	Sextzerland	1	CH1-13
Indonesia	1	CH1~13	Taiwan	0	CH1-11
ireland	1	CH1-13	Thailand	1	CH1-13
Israel	8	CH3-9	Turkey	1	CH1-13
1kMy	1	CH1-13	United Acab Emirales	1	CH1-13
Japan	5	CH1-14	United Kingdom	81	CH1-13
Japan2	4	CH14-14	United States of America	0	CH1-11
Japan3	1	CH1-13	Utucuay	1	CH1-13
Joidan	3	CH10-13	Venezuela	1	CH1-13
Kuwat	1	CH1-13	Yucoslavia	D	CH1-11
Latvia	1	CH1-13			and the second fills

Figure 2: Country Channel list

3.3.4 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.

[Transmit Statistics]

Profile	Network	Advanced) Statistics	WMM	() WPS	cox	Radio on/of
Transmit	Receive						
Franco	Transmitted Succes	unday.			1899		
Frames	Retransmitted Succ	enstudy			1898		
Frames	Fat To Receive ACA	After Al Retries			٥		
eset. Counter							

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 [Receive Statistics]



Frames Received Successfully: Frames received successfully.

Frames Received With CRC Error: Frames receive 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

3.3.5 WMM

WMM function involves "WMM Enable", "WMM-Power Save Enable" and "DSL Setup".

+ Railt							
Profile	Network.	Advanced) Statistics	WMM	() WPS	COX	Radio on/off
WOM Setup Status HOM >>	Enabled	Power Save	> Disabled		Direc	t Link >> Dha	Died
2 ×	WM. Enable						
0	WMM - Power Sav	e Enable					
		日本用	1 × 1				
	Direct Link Setup	Enable		Treast late of	40 111		
				10000000000000000000000000000000000000			
						-	Acete
							Teat Direct
						-	-

WMM Enable: Enabe Wi-Fi Multi-Media.

WMM-Power Save Enable: Enable WMM Power Save.

Direct Link Setup Enable: Enable DLS (direct Link Setup).

[WMM Enable – Enable Wi-Fi Multi-Media]

If you want to use "WMM-Power Save" or "Direct Link Setup" you must enable WMM. The setting methods of enabling WMM indicating as follow:

Step 1: Click "WMM Enable"

999	N >> Enabled	Power Save >> Dtsa	bled		Direct Link >> Ditabled
www.	Enable				
	WIAN - Power Save Er	utie			
		日本馬	$\Box < \mathbb{P}$		
	Ovect Link Sebup Dra	ble			
	0.005-0.011122-10		Trent Vie	10 cm 11	ALC: NOT
					Tate Date:

Step 2: Change to "**Network**" function. And add an AP that supports WMM features to a **Profile**. The result will look like the below figure in **Profile** page.

	Profil	List			
PROF1	AP1	ť	>	Profile Name >> PROF1	
				SSID >> AP1	
				Network Type >> Infrastr	ucture
				Authentication >> Open	
				Encryption >> None	
				Use 802. tx >> NO	
				Channel >> 1	
				Power Save Mode >> CAM	
				Tx Power >> Auto	
				RTS Threshold >> 2347	
				Fragment Threshold >> 2346	
Add E	dt Delete	Import Export	Activate		-
Status	>> AP1 <> 00-03-7F-	00-D7-44		Link Quality >>	100%
Extra Info	>> Link is Up (TxPowe	n 100%		Signal Strength 1	>> 100%
Channel	>> 6> 2437000 WH	τ			
Authentication	>> Open				
Encryption	>> NONE				
Network Type	>> Infrastructure			Transmit	
IP Address	>> 192.168.5.60			Link Speed >> 54.0 Wbps	Max
Sub Wask	>> 255.255.255.0			Throughput >> 0.000 Hbps	0.000
Default Gateway	>> 192.168.5.254				Mbpis:
	HT			Receive	
8₩' >> n/a		SNRD ⇒> n/a		Ltnik Speed >> 54.0 Wbpz	Max

[WMM-Power Save Enable – Enable WMM Power Save]

Step 1: Click "WMM-Power Save Enable"

WAM Setup Status WAMA >> Enabled	Power Save >> Disabled			Direct Link >> Disabled
WAM Enable				
WMM - Power Save Enable				
AC_BK	AC_BE	AC_VI	AC_V0	
Direct Link Setup Enable				
MAC Address >>		Timeout Value >>	60 pec	Acoly
				Tear Down

Step 2: Please select which ACs you want to enable. The setting of enabling WMM-Power Save is successfully.

WMi >> Enabled	Power Save >> Enal	sied		Direct Link >> Disabled
WMM Enable				
WMM - Power Save Er	vable			
AC_BK	AC_BE	AC_M	AC_VO	
Direct Link Setup End	sbie			
MAC Address >>		Timeout Val	ue → 60 sec	A020:
				Tear Down

[Direct Link Setup Enable – Enable DLS (Direct Link Setup)]

Step 1: Click "Direct Link Setup Enable"

WHAT >> ENGORO	POWER Save >> Disa	acu .		Direct Link 35 Endoled
WHW Enable				
WINA - Power Save E	nable			
AC,BK	AC.BE	AC_VI	AC_VO	
📔 Direct Link Setup En	abie			
HAVC Address >>		Tineout Valu	e >> 60 sec	Apply
				Tear Down

Step 2: Change to "**Network**" function. And add an AP that supports DLS features to a **Profile**. The result will look like the below figure in **Profile** page.

	Profil	e List	-
PROFI	API	U	Profile Name >> PROF1
			351D so #P1
			Network Type >> Infrastructure
			Authentication >> Open
			Encryption ++ None
			Use 602. tx ++ NO
			Channel ++ 1
			Power Save Hode ++ CAN
			T:: Power ++ Auto
			RTS Threshold >> 2347
			Fragment Threshold >> 2346
Statu	a >> AP1 +-> 00-00-77-	00-07-44	The California and
Extra int	lo >> Link is Up (TxPowe	r:1005g	Vand in resident A section
Chenn	el => 6 <-> 2437000 AV4	2	
Authenticatio	n >> Open		
Encryptio	n >> NONE		
Network Typ	e >> infrastructure		Transmit
IF Addres	st >> 192.160.5.60		Link Speed >> 54.0 Hbps
SUD Mas	* ** 255.255.255.0		Throughput >> 0.000 Albps 0.000
Default satewa	UT		Alber
			Receive
BW >> m/a		SMPD >> n/a	Link Speed x+ 54.0 Abpt
G >> m/a	AICS >> n/a	[NR1 >> n/a	Throughput >> 0.033 Mope 1.449
			Made

The Setting of DLS indicates as follow:

- (1) Fill in the blanks of Direct Link with MAC address of STA. The STA must conform to 2 conditions as follow:
 - \rightarrow Connect with the same AP that support DLS features.
 - → Have to enable DLS

					Direct Link >> Enabled
W16W Enabl	e				
- www	- Power Save Enable	l.			
	AC_BK	AC_BE	AC_M	D AC_VO	
Direc	ct Link Setup Enable				
	NAC Address >> 00	0c 43 28 60 00	Timeout Value >>	600 sec	Apply
	_				Tear Down

(2) Timeout Value represent that it disconnect automatically 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.

1100	>> Enabled	Power Save >> Disabled			Direct Link >> Enabled
W16	Enable				
	WMA - Power Save Enable				
	AC_BK	AC_BE	AC_M	AC_VO	
	Direct Link Setup Enable				
	HAC Address >> 00	Dc 43 28 60 00	Timeout Value >+	600 sec	Apply
					Tear Down

(3) Click "Apply" button. The result will look like the below figure.

 Enable				
WAM - Power Save Er	neble			
AC_BK	39_04 🔲	L()	LC_V0	
Direct Link Setup Env	able			
MAC Address >>	00 Dc 43 28 60	0 00 Timeout Valu	e >> 600 sec	Apply
	00-00-43-28-60-00	E	600	Tear Down

Describe "DLS Status" as follow:

- (1) As the up figure, after configuring DLS successfully, show MAC address of the opposite side and Timeout Value of setting in "DLS Status". In "DLS Status" of the opposite side, it shows MAC address of itself and Timeout Value of setting.
- (2) Display the values of "DLS Status" to "Direct Link Setup" as follow: Step 1: In "DLS Status", select a direct link STA what you want to show its values in "Direct Link Setup".

WWW Enable WWW Enable AC_SE AC_VI AC_SE AC_VI Direct Link Setup Enable MAC Address >> Timeout Value >> 00-000-41-32-40-00 600 Tear Down	With	A >> Enabled	Power Save >> Disabled			Direct Link >> Enabled
WMM - Power Save Enable AC_PK AC_PK AC_PK AC_PK Direct Link Setup Enable MAC Address >> Timeout Value >> 00-000-43-35-40-00 600 Text Down		Enable				
AC_SK AC_SE AC_VI AC_VO Direct Link Setup Enable MAC Address >> Timeout Value >> 60 pec Apply Toroc-43-35-40-00 600 Test Down		WMM - Power Save Ena	bie			
Direct Link Setup Enable MAC Address >> 60 sec Apply CO-0C-43-35-60-00 600 Teat Down		AC_BK	AC_BE	AC_VI	AC_90	
MAC Address >> C Tineout Value >> 60 pec Apply		Direct Link Setup Enab	łe			
00-00-43-28-60-00 600 Teat Down		MAC Address >>		Timeout Value >>	60 pec	Apply
100.000			00-00-43-28-60-00		600	Tear Down

Step 2: Double-Click and the result will look like the below figure.

minin Cristing	Power Save >> Disabled			Direct Link >> Enabled
WMM Enable				
WMM - Power Save	Enable			
AC_5K	AC_BE	AC_91	AC,VO	
📔 Direct Link Sebup B	nable			
MAC Address >	> 00 0c 43 28 60 00	Timeout Value >>	600 pec	Apply
	00-00-40-28-60-00		600	Tear Down

(3) Disconnect Direct Link Setup as follow:

Step 1: Select a direct link STA.

_					Direct Link >> Enabled
Man	Enable				
	WWW - Power Save Enable	,			
	AC_BK	AC_SE	□ AC_VI	0V_24	
	Direct Link Setup Enable				
	MAC Address >> 00	Dc 43 28 60 00	Timeout Value >>	600 580	Apply
		00-00-43-28-60-00		600	Tear Down

Step 2: Click "Tear Down" button. The result will look like the below figure.

	122 Elizard	Fundi Jane // Engaged			PRESS DE LA COMPANY
WMA	Enable				
	WMM - Power Save Enab	łe			
	□ AC,BK	AC_BE	N.S.M	AC_YO	
	Direct Link Setup Enable	,			
	HAC Address >> 00	0 0c 43 28 60 00	Timeout Value >>	600 980	Apply
					Tear Down

3.3.6 WPS

Profile	Network.	Advanced) Statistics	WMM	() WPS		tă cox	Radio on/off
ID i	prorets	_testab	PS AF List 00-06-4	IF-12-34-56	1	•		Rescan Information Pin Code
		WPS	Profile List				-	59125327 Renew Claning Mode Enrolee
BIN				Program to 0	rs		_	Detat Correct Aster
MC		5					1	Disconnect Disconnect Disconnect Disconnect

WPS Configuration: The primary goal of Wi-Fi Protected Setup (Wi-Fi Simple Configuration) is to simply the security setup and management of Wi-Fi networks. Ralink STA as an Enrollee or external Registrar supports the configuration setup using PIN configuration method or PBC configuration setup using PIN configuration method or PBC configuration setup using PIN configuration method through an internal or external Registrar.

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), Security-Enabled. **Rescan:** Issue a rescan command to wireless NIC to update information on surrounding

wireless network.

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 NIC Wireless has only one PIN Code of Enrollee.

Config Mode: Our station role-playing 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, RaUI creates a new credential with WPA2-PSK/AES/64Hex-Key and doesn't change until next switching to STA Registrar.

Control items on WPS Profile List:

→ Detail: Information about Security and Key in the credential

→ Connect: Command to connect to the selected network inside credentials. The active selected credential is as like as the active selected Profile.

→ Rotate: Command to rotate to connect to the next inside credentials

→ Disconnect: Stop WPS action and disconnect this active link. And then select the last

profile at the Profile Page of RaUI if exist. 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 you Enrollee before starting PIN.

PBC: Start to add to AP using PBC configuration 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 press Disconnect to stop WPS connection.

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.

[WPS Information on AP]

WPS information contain authentication type, encryption type, config methods, device password ID, selected registrar, state, version, AP setup locked, UUID-E and RF bands.

Authentication Type: There are three types of authentication modes supported by RaConfig. There are Open, Shared, WPA-PSK, and WPA system.

Encryption Type: For Open and shared authentication mode, the selection of encryption are None and WEP. For WPA, WPA2, WPA-PSK, and WPA2-PSK authentication mode, the encryption type supports both TKIP and AES.

		WPS AP LEP					Bassian
ID:	3021250700	ALTINI	00-06-47-49-66	.77			information
10.	Mine Methodson		00.00.75.71.77				Pin Code
101	WOCKDRIDS		0000-0-11/1	1.00	3		20264207 Bernes
		WPS Profile L	ut				Config Hode
							faulte a
							learnes -
						1.0	Brist
(and)	and the second second second						instruct
Pint .	WPS Associate IE		Progress >>	0%			
Plic	WPS Probe IE						Disconnect
	Auto						Earnet Fourths
General	WPS	CCX	802.11n				
	Authentication Type >>	WPA-PIK		State >>	Configur	ed	
	Encryption Type >>	AES		Version ++	1.0		
	Config Hethods >>	Unknown	AP Setu	p Locked >>			
	Device Partmont ID as			HIDE IN	266(1286)	02550135504	8000064E494677
	Selected Registrar >>	Unknown	3	F Bands >>	0.01 (2.4	4912)	

Config Methods: Correspond to the methods the AP supports as an Enrollee for adding external Registrars. (A bitwise OR of values)

Value	Hardware Interface
0x0001	USBA (Flash Drive)
0x0002	Ethernet
0x0004	Label
0x0008	Display
0x0010	External NFC Token
0x0020	Integrated NFC Token
0x0040	NFC Interface
0x0080	Push Button
0x0100	Kevpad

Device Password ID: Indicate the method or identifies the specific password that the selected Registrar intends to use. AP in PBC mode must indicate 0x0004 within two-minute Walk time.

Value	Description
0x0000	Default (PIN)
0x0001	User-specified
0x0002	Rekey
0x0003	Display
0x0004	PushButton (PBC)
0x0005	Registrar-specified
0x0006-0x000F	Reserved

Selected Registrar: Indicate if the user has recently activated a Registrar to add an Enrollee. The values are "TRUE" and "FALSE"

State: The current configuration state on AP. The value are "Unconfigured" and "Configured".

Version: WPS specified version.

AP Setup Locked: Indicate if AP has entered a setup locked state.

UUID-E: The universally unique identifier (UUID) element generated by the Enrollee. There is a value. It is 16 bytes.

RF-Bands: Indicate All RF bands available on the AP. A dual-band AP must provide it. The values are "2.4GHz" and "5GHz"

3.3.7 SSO

The SSO configuration page as shown in blow diagram:

(SSO funciton doesn't support Vista & Win 7 OS)



[Field Definitions]

Enable SSO Feature: Choose which SSO methods to log on.

Use ID and Password in Winlogon: Use the ID and password in Windows logon.

Use ID and Password in Profile: Use the ID and password in Raul profile settings.

Use ID and Password in Dialog: Use the ID and password in pop-in authentication dialog

Enable Persistent Connection: Use ID and Password in the previous activate Profile and not show any authentication dialog

Profile List (Only support LEAP or EAP-FAST authentication):

Select Profile: Select a profile containing LEAP or EAP-FAST authentication

Information of selected profile: Profile information, such as profile name, SSID, and Authentication.

3.3.8 CCX

The CCX (Cisco Compatible eXtensions) configuration page as shown in blow diagram: (CCX function doesn't support Windows 7 OS)

Profile	Network	Advanced	Statistics	WMM	WPS	CCX	Radio on/o
Cristie CCX (CX	co Compatible «IIIb	encional	CAC **	ADDTS.Direct	ty send TS)	•	Set.
250	sing Conversions and NUCL	100000000000000000000000000000000000000	Disputition	Salast Pro	na Imper	2	Diagnose
C Norviga	m Af Aussian An Tuaing		e trioration Pa	of united upper office degree in a PR (2010) and W	ni KSC1 MC14445_PDP_3444	91.	
			CAUTE .	Carlos en la			

[Field Definitions]

Enable CCX (Cisco Compatible eXtensions): Click here to enable CCX function.

Enable Radio Measurements: Check to enable the Radio measurement function.

Non-Serving Channel Measurements Limit: User can set channel measurement every 0~1023 milliseconds. Default is set to 250 milliseconds.

Roaming with RF Parameters: Roaming by a set of RF parameters from AP.

Voice Drastic Roaming: Diagnose roaming function by voice traffic test.

CAC(Tolerance): Enable the call admission control.

Diagnostic: Select a profile which the user want to diagnose, then hit the Diagnose button to perform the diagnostic test.

Information of selected profile: Profile information, such as profile name, SSID, and Diagnosis Capable information.

3.3.9 About

About function display the wireless card and driver version information.

4	Network	Advanced) Statistics	Winn	O WP5	ccx	Radio on/off	About	٩
		(c)	Copyright 2009,	Failes Technology, Inc	u. Al rights reserved	k :			
		RaCoot	ig Version >>	3.1.4.0	Date -	• •	28-2009		
		Deter	er Version ++	2.3.11.0	Date -	- 13	25-2009		
		DL	L Verstan ++	1.0.4.0	Date >	+ 11	28-2009		
		ED/RO	M Vention >>	1.3	Firmware Version a	+ 0.3	8.		
		Ph	440/ess >>	00-04-4F-4F-8F-54					
				WINW-RALE	INTECK.COM				

- (1) Connect to Ralink's Website: <u>WWW.RALINKTECH.COM</u>
- (2) Display Configuration Utility, Driver, and EEPROM version information
- (3) Display Wireless NIC MAC Address.

3.3.10 Link Status

Link Status displays the detail information current connection

Status ++ Extra info ++	WR514VM_FT++ +-> 00-06-4F-12-34-59	Link Quality ++ 885 Signal Strength 1 ++ 47%
Channel ++ Authentication ++	1 + 2412 MHz); central channel : 3 WPA2-P5K	
Encryption >> Network Type >> IP Address >> Sub Neck >> Default Gateway >>	AES Infrastructure 192.168.3.18 255.255.255.0 192.168.3.1	Transmit Link Speed >> 108.0 Mbps Throughput >> 0.584 Hbps Receive
8₩ >> 40 Gl +> lung MC	SNRD >> 15 5>> 5 SNR1 >> n/a	Link Speed >> 54.0 Https Throughput >> 41.628 Https Https

Status: Current connection status. If no connection, it will show Disconnected. Otherwise, the SSID and BSSID will show here.

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 about current connection.

Sub Mask: Sub Mast about current connection.

Default Gateway: Default gateway about current connection.

Link Speed: Show current transmit rate and receive rate.

Throughout: Display transmits and receive throughput in unit of 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.

HT: Display current HT Status in use, containing BW, GI, MCS, SNR0, and SNR1 value. (Show the information only for 802.11n wireless card)

3.3.11 Enable AP Mode Feature in Windows 2000 OS

In Windows 2000 Operation System, the local network won't be automatically established while using Wireless PCI adapter's AP mode. Please follow the below steps to enable Internet Connection Sharing feature first before you switch Wireless PCI adapter's AP mode.

Step 1: After the Wireless PCI Adapter is installed properly in Windows 2000 Operation System, go to Start \rightarrow Settings \rightarrow Control Panel \rightarrow Choose "Network and Dial-up Connections" option. Right-Click your local area connection (such as another LAN Card in the same computer), and choose "Properties".

😰 Network and Dial-up Connection	\$			J.	. <u> </u>			
File Edit View Favorites Tools	Advanced	Help			1			
🕁 Back 🔹 🤿 🖌 🔂 🔞 Search	ψBack • ⇒ · 🔄 @Search PaFolders 🧭 🕾 😳 🗶 ∞0 🔟•							
Address 😰 Network and Dial-up Conne	ections			۳	i co କ			
Network and Dial-up Connections	Make New Connection	Local Area Disable Status	Local Area					
Local Area Connection Type: LAN Connection Status: Network cable unplugged SIS 900-Based PCI Fast Ethernet Adapter	(Create <u>S</u> Defete Rename Propert	hortcut)				
📃 Displays the properties of the selecte	d connection.				1			

Step 2: In Sharing tab, enable Internet Connection Sharing for this connection and click "OK"

Local Area Connection Properties	<u> 위</u> ×
General Sharing	
Late connection Sharing allows other computers of the connection sharing allows other computers of the connection.	on your his
Internet Connection Sharing]
Local network operation may be momentarily disrupted.	
Enable Internet Connection Sharing for this connection	
Settin	gs
	annel
	anca

Step 3: Back to Network and Dial-up Connection screen, right-click "**Local Area Connection 2**" (for 802.11n Wireless LAN card) and choose "**Properties**".

File Edit View Favorites Tools Advanced Help Image: Back Image: Ba	Network and Dial-up Connections							
Hack Hack Address Network and Dial-up Connections Network and Dial-up Connections Network and Dial-up Connection Make New Connection Local Area Connection 2 Type: LAN Connection Status: Enabled 802.11n Wireless LAN Card Displays the secondation of the calculated eccentrice	File Edit View Favorites Tools Advanced Help							
Address Network and Dial-up Connections Network and Dial-up Make New Connection Network and Dial-up Connection Local Area Connection Network and Dial-up Connection Local Area Connection Local Area Connection 2 Disable Type: LAN Connection Create Shortcut Status: Enabled Properties 802.11n Wireless LAN Card Disable connection	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							
Network and Dial-up Connections Make New Connection Local Area Connection Local Area Connection Local Area Connection 2 Disable Status Type: LAN Connection Create Shortcut Delete Status: Enabled Properties Properties Box 2.11n Wireless LAN Card Disable Properties	Address 🖻 Network and Dial-up Conne	ections			▼ @Go			
802.11n Wireless LAN Card	Network and Dial-up Connections Local Area Connection 2 Type: LAN Connection Status: Enabled	Make New Connection	Local Area Connection	Local Area Connection 2 Disable Status Create St Delete Rename	ortcut			
	802.11n Wireless LAN Card	d connection		P <u>r</u> opertie:				

Step 4: Select "**Internet Protocol (TCP/IP)**" and click "**Properties**". You will see 802.11n Wireless PCI adapter will be automatically assigned an IP address as Access Point.

eneral Sharing	Internet Protocol (TCP/IP) Properties	21
Connect using:	General	_
802.11n Wieless LAN Card Configure Components checked are used by this connection:	You can get IP settings assigned automatically if your retwork supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.	
Client for Microsoft Networks	C Obtain an IP address automatically	
E Brie and Printer Sharing for Microsoft Networks	Uge the following IP address	1
AFGIS Patroni (FFE 802.1) v35.3.0	JP address: 192.168.0.1	
C T Internet Photocol (TCP/IP)	Sybret nask: 255 . 255 . 0	
jnstall. Uninstal Properties	Default gateway:	I
Description		2
Transmission Control Photocol/Internet Photocol. The default	 Ug/am UNS server address automatically 	
actocs divesse interconnected networks.	Use the following DNS server addresses:	
	Preferred DNS server:	
Show icon in taskbar when connected	Alternate DNS serve:	
OK Cancel	Adjunced.	
	OK Carr	- el

Step 5: In the System tray, now you can switch 802.11n Wireless PCI Adapter to AP Mode.

Launch Config Utilities	
Switch to AP Mode	
Exit	
V: 🛪 🜌 🌫 🛽	🙀 2:13 PM

Step 6: After switch to AP mode, Ralink Wireless Utility will automatically pup-up. The Wireless Default SSID is assigned as "**SoftAP-56**".

Ralink Wireless Utility	2
Config Access Control Mac Table Event I	log Statistics About
SSID SonAP-58	Channel 1
Wireless Mode 802.11 B/G/N mix	Co Use Mac Address Security Setting
County Region Code 11 8/G 0: CH1-11	No forwarding among wireless clients Hide SSID Allow 8'W 40 MHz
Beacon (ms) 1 TX Power 100 % Idle time(60 - 3600)(s) 3	00
	DefaultApplyHelp

Step 7: To make sure your Soft AP is working properly, you need to use another computer which with Wireless LAN feature to access SoftAP-56 AP. In the below example, use another PC with Wireless feature in Vista Operation System. Go to Start \rightarrow Control Panel \rightarrow Choose "Network and Sharing Center" option \rightarrow Click "Connect to a network" to search the available networks.



Show All	*	
🐓 WLAN, SW	Security-enabled network	at lite
SoftAP-56	Unsecured network	lir.
🐓 Belkin_NI	Security-enabled network	lte.

Step 8: Select the network "**SoftAP-56**" and click "**Connect**" to establish the connection.

Step 9: After the computer is successful connected to SoftAP-56, Network and Sharing Center screen will be shown as below. Click "**View Status**" to see the detail.

🕞 🌍 🛛 🖳 🕯 Control Panel 🔹	Network and Sharing Center	• +9 depet	1
Tasks View computers and devices Connect to a redwork Manage windkos individio Sat up a connection or redwork Manage network connections Diagnose and repair	Network and Sharing C	enter	Vew full map
	Access	ag Local celu	Customate
	Connection	Wireless Network Connection (SoftAP-SE)	View status
		ad Signal strength: Excellent	Disconnect
1	B Sharing and Discovery		
-16.0	Network discovery	@ Custom	۲
-112 A	File sharing	e On	
11 1	Public folder sharing	e on	۲
	Printer sharing	Off (no printers installed)	۲
1	Password protected sharing	e Dn	۲
	Media sharing	e orr	8
See alia Inferret Options Windows Firmuli	Show me all the files and folds Show me all the shared netwo	en Lam staring A folders on this computer	

Step 10: In General tab, click "**Detail**...", and then you can see the current Network connection details. If this computer is successful connect to SoftAP-56 Access Point, the DHCP server will be assigned to same IP address.

Connection			
IPv4 Connectivity:	Local	Network Connection Dete	ils ils
IPv6 Connectivity:	Limited		
Media State:	Enabled	Network Connection Detail	s:
SSED:	SoftAP-56	Property	Value
Duration:	00:10:46	Constanting of the Div	1940
Speed:	270.0 Mbps	Connection-specific UN.	PO2 15- UCD Medan L MI Cord
ional Quality:	100	Desception Designal Address	SU2.1 IN USB WIRESS LAW Card
	93303	Physical Address	00-06-4F-00-88-77
Details Wireless Prop	erties	DHCP Enabled	102 102 0 100
		Provide Accession	152.156.0.166 365 365 365 0
tà.		Prv4 Subnet Head	Wadaraday October 12 2005 9-00-17
Sent	hereined .	Lease Octaned	Wednesday, October 12, 2005 3:00 17
oon (End Date & Category	102 168.0 1
tesi 742	126	Evil DUCP Catur	102.100.0.1
		Bud DNS Secur	102.100.0.1
		Pre Dies Server	152.100.0.1
iperties 🕐 Qisable	Diagnose	Nat BIOS over Tonin Fr.	Van
		Link local Put Address	6a80 w/Ke ha5dh17a 6a7a215
		End Date & Catalogue	1000.0000000000000000000000000000000000
	Gose	Put DNS Server	
		1 10 0110 001101	

3.3.12 SoftAP (Only Windows 7 Support)

Windows 7 allows wireless device to be in both Station (STA) and AP Mode. According to following steps, you can open or close AP function.

Step 1: Click "Switch to STA+AP mode" item in RaUI system tray menu.

Launch Config Utilities
Switch to STA+AP Mode
Open Diagnostic Testing Mode
Exit

Step 2: Set SoftAP SSID and key

RaUI								×
Profile	Network	Advanced) Statistics	WMM.	Ø WPS	Radio on/off	About	4
Sorted by >>	SSID	🥥 Chani	nel 🥥	Signal		Show dBm		
001073111111 140 15TAP 242	Cont	ひ 2 ひ 11 ひ 11		55% 57% 76%		×	-	4 III
3562 ;) wen	Please o	inter 5510 and Pre-Sha	red key.	~ 1			-	
Rescan	>> Dis	SSI Key Materi	8 >> 12345678				_	•
Extra Info Channei Authentication	»	L. 0K		Cancel				
Encryption Network Type IP Address Sub Mask	22 22 23 23			Transmit Link Speed > Throughput >	, ,	Max 0.000		
Default Gateway BW >> n/a GI >> n/a	MCS>> n/a	SNRD >> n/a SNRT >> n/a		Receive Link Speed > Throughput >	o 0	Max 0.000 Filos		

Step 3: Select WAN adapter

Profile	(((*))) AP	لنظر Network	Advanced) Statistics	WMM	Ø WPS	Radio on/off
Sorted by >>	SSID	O Cha	nnel 🥥	Signal		Show dBit	
		10 B	B 9 0 1	44% 8 9%			_
001D73111111		10 2 10		65%	-		
12 128_OVERNEIGHT		5		20%			
				, .,			
Rescan	Add to Profile	Co	nnect				
1	ICS Select WA	N Adatpter				X	/
	WAN Ada	pter Name:	Realtek RTL	8168C(P)/8111(C(P) Family P		
	LAN Adaj	oter Name:	Microsoft Vir	tual WiFi Minip	ort Adapter		

Profile	(((H))) AP	Network	Advanced	Statistics	WWW.	() WPS	Radio on/off
Sorted by 10	O \$50	@ Ch	nnik	G Signal AP List >>		Show dân	
		\$ 1	8 9 8	P 295	-		
		di 10	8 9	91%			
001073111111		\$ 2	8 9 8	43 ASI			
116angel		\$ 10	8 9 8	P 105	-		
119		8 :	8 9 8	P 245			
12		4 1	8	P 70%			
12		4.1	8 9	P 20%	-		
				11			

Step 4: Select SoftAP page to set SoftAP parameter

Step 5: Set SoftAP parameter in SoftAP page

Profile AP 1 SUD == [laftA Max Number of Peers == [20] Authentication == [10742]	Hetwork A	dvanced 9	atistics	unna i	O NPS R	adio an/off
SSID >> [kefta Max Humber of Peers => [20 Authentication => [WP4]	P-10		1			
Max Humber of Poers 20 Autoentication 19942	24%					
Authentication WT42	2.4%					
		10079	ption ++ AES			
Ray Maberbal >>	*					
IF ADDRES -> 192.	168.123.1				her	4
mup (00-00-43-00-13-40						
- man part and a second		MAC Table				

1								
Profile	(0m0). AP	Hetwork	Abacced	tantities.	No. of Concession, Name	0 WP5	Radio on/off	
	(82.1-	305.47-90		-				
-	Number of Peers	19	-					
	Addression	within the	-	Deceryothise in 1923				
	They Address as					_		
	17 Aug 814 11	192.168.122.1					-	
						-		
8140 jū	0.00, 40.00 10.00	_	-					
			945	Talle				
				_				
						<	Launch Con	Fig Littliffes

Step 6: Click "Switch to STA mode" to close SoftAP function

Step 7: SoftAP function is closed

Sorted by ++ O SSD O Channel O Speak	
新日本 日本 1000 - 10000 - 10000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000 - 1000	
11 P 1 P 105	
129 87 1 8 9 8 47 565 140 87 1 8 9 8 1	

If you have any troubles to configure or setup this WLAN adapter, please feel free to contact us. Before contacting us, make sure collect following information. Submit complete detailed information of your problem will help us to provide you accurate answers.

> Model Name: Serial Number: PC Settings: Other: