# **PC series-WLAN card**

# Model:2604777 FCC ID:2BDUR-2604777

Building AFRA, Ave. Samuel Lewis and street 54, Panama City, Panama 5, Republic of Panama

# User's Manual

# Version 1.0

## **Federal Communication Commission Interference Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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 the equipment.

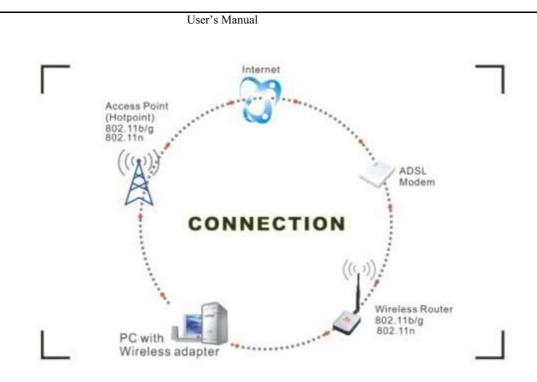
The device has been evaluated to meet general RF exposure requirement. The device can be used in

portable exposure condition without RF striction.

# 1. Introduction

Thank you for purchasing the IEEE 802.11b/g or 802.11n Wireless USB Adapter. This Wireless Adapter is easy to use and easy to setup. If you have been tired of dealing with all those messy wires to connect a laptop or PC to office or home network, this Wireless adapter is an ideal access solution for wireless Internet connection.

A typical Internet access application for the USB wireless adapter is shown as the following figure:



There are two different ways to access Internet:

1. With a wireless adaptor, receiving and transferring signal via a wireless router, then passed to an ADSL modem, then to local ISP (Internet service supplier) through a telephone line.

2. With a wireless adaptor, receiving and transferring signal via local AP (Access Point) or so called Hotpoint directly.

*Tips:*An802.11LANisbasedonacellulararchitecturewherethesystemissubdividedintocells,where eachcell(calledBasicServiceSetorBSS)iscontrolledbyaBaseStation(calledAccessPoint,orin shortAP).

# 2. Package Contents:

BC series-WLAN card. Installation disc. □ User's Manual.

#### Warranty

Thewarrantsfortheenduser("Customer")thatthishardwareproductwillbefreefromdefectsin workmanshipandmaterials, undernormaluse and service, fortwelve(12) monthsfrom the date of purchase from its authorized reseller. Information in this document is subjected to change without prior notice.

# 3. Installation

To install the driver of the USB adapter, please use administrator user account to login before the following steps:

**Tips:**thelatestoriginaldriverscanbedownloadedfromthewebsiteofRalinkchipsetmanufacturer. Thecurrentwebsiteis<u>http://www.mediatek.com/\_cn/07\_downloads/01\_windows.php</u>.Tofindacorrect driver,pleaseidentifythechipsettypeappliedintheadapteryouhave.

#### For WindowsXP :

The system will detect a new hardware has been added, and start the "Found New Hardware

#### Wizard".Click on "Cancle" .

- 1) Please insert the disc into your CD-ROM drive. The disc should auto start ,displaying the flowing window ,if it does not start ,open the browser window ,find the autorun .exe file in your CD-ROM folder, click to run it.
- 2) Ralink has integrated all the150Mbps 802.11n drive into one file . Click to run the "Drive

Installation ".

**Notes:** Because Ralink often updates software, the drivers contained in the disc might be changed without prior notice.

 Follow the instructions and prompts of the "InstallShield Wizaed" to finish the driver installation: a. Select the "I accept the terms of the license agreements", then click the "Next".

alink Wireless LAN - Instal	IShield wizard	l
License Agreement Please read the following licen:	se agreement carefully.	
Ralink	End-User License Agreement RALINK Software for Windows XP/Vista/Win7/Win8 Copyright (C) RALINK TECHNOLOGY CORP. All Rights Reserved. Thank you for purchasing and/or using RALINK product. Please read this End-User License Agreement ("Agreement") carefully and agree to comply with the terms of this Agreement before downloading, installing, copying or using the software of Ralink ("Software"). By downloading, installing, copying or using this Software, in whole or in part, you agree to be bound by the terms of this Agreement. SOFTWARE LICENSE All the rights and interests of the Software belong to Ralink. The Software is protected by applicable copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The Software is licensed, not sold. 1. GRANT OF LICENSE. This Agreement grants you the following rights: (1) Installation and Use: You may install and use an unlimited number of copies of the Software. (2) Reproduction and Distribution: You may reproduce and distribute an unlimited number of copy is of the Software; provided that each copy shall be a true and complete copy, including	•
	<ul> <li>I accept the terms of the license agreement</li> <li>I do not accept the terms of the license agreement</li> </ul>	
ostalished.	< Back Next > Cance	el .

b. There shows a setup type window, you can select "Install driver only" or "Install driver andRalink WALN utility" and then click the "Next".

	User's Manual	
Ralink Wireless LAN - Instal	IShield Wizard	
Setup Type Select the setup type that best	suits your needs.	
	Choose to install	
	Install driver and Ralink WLAN Utility	
	🌀 Install driver only	
Ralink		
Install5freld	< <u>B</u> ack <u>N</u> ext >	Cancel

#### Tips:

1). The Windows XPutilizes a "Wireless Zero Configuration (WZC)" Service built into the operating system. Manywireless network adapter cards utilize this service.

2). Ralinkthechipsetmanufacturerhasdevelopedanutilityforsettingupwirelessconnection. If you select this item, you can switch between the Windows XP's WZCs ervice and the Ralink WLA Nutility service later.

c. Click the "Install" to confirm the installation, there shows the installation progress.

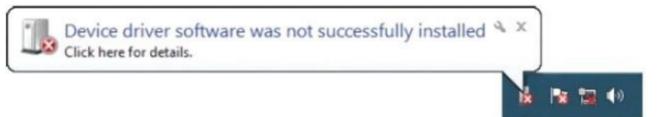
	User's Manual
Ralink Wireless LAN - Instal	IShield Wizard 🛛 🔀
Ready to Install the Program The wizard is ready to begin ins	
Ralink	Click Install to begin the installation. If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard Note: Some virus scanner program will block the install package. If the install package does not work properly, please try to close the virus scanner before you run the install package
Instal Brield	< Back [Install] Cancel
Ralink Wireless LAN - Install Setup Status	Shield Wizard  The InstaliShield Wizard is installing Ralink Wireless LAN  Installing  Please Wait
Installation	Cancel

#### d. Click "Finish" to finish the driver installation.

Ralink Wireless LAN - Install5hie	ld Wizard
	InstallShield Wizard Complete
	The InstallShield Wizard has successfully installed Ralink Wireless LAN. Click Finish to exit the wizard.
Ralink	
InstallShield	< Back Finish Cancel

#### For Windows 7:

Once the wireless USB adapter be plugged into an USB port, the flowing message will appear on screen .



The following installation procedures are similar to those of Windows XP .Please refer to the installation steps for Windows XP.

#### For Windows 8:

The installation procedures are similar to those of Windows XP .Please refer to the installation steps for Windows XP.

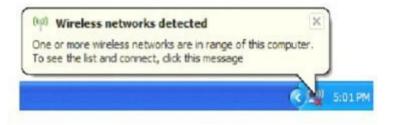
#### 4. Wireless Connection

#### For WindowsXP :

*1)* After finishing driver installation, insert the USB adapter to Notebook or PC that supports USB 2.0/1.1 interface.

**Remarks:** Makesure to connect the adapter to an USB portony our computer directly rather than an USB hub. Although it might work when connecting with an USB hub, the likelihood of configuration problems will be higher.

2) The system shows a wireless utility icon in the Windows system tray, which locates in the bottom-right corner of your computer screen, and pops up a message that indicates a new hardware is found and installed, something like this:



Should the service "Wireless Zero Configuration (WZC)" be applied.

3)

in the task bar in

Before you begin, ensure WZC is enabled, by right-clicking on the Ralink icon the bottom right corner of your screen.

4) In the menu that appears, select "Use Zero Configure as Configuration Utility" to use Windowns wireless management feature, Windows Zero Configure(WZC) helps to manage your Wireless Network Connection.

Launch Config Utility Use Zero Configuration	n as Configu	ration Utility
Switch to AP Mode		
Exit		
	EN	- 10 V - 10

5) Right click the icon and then select "View Available Wireless Networks" to launch the utility, the Wireless Network Connection window appears and displays your wireless network listed with the SSID you choose.



**Notes:**BeforeconfiguringyourWiFiaccess, youneedtohaveyournetwork'sSSID(serviceset identifier), securitykeyandauthenticationtypehandy. Checkthedocumentationcomingwithyourrouter, askyournetworkadministratortogettheinformation.

6) If you don't check your network, click "Refresh network list" in the upper left corner. If you are locating within the valid range of hotspots or wireless routers, all available networks will be recognized and listed automatically. Click your preferred network, and then click "Connect" in the lower right corner.

ietwork Tasks	Choose	a wireless network	
💋 Refresh network list	Click an item information.	in the list below to connect to a $\underline{w}$ reless network in	range or to get more
Set up a wireless network for a home or small office	((9))	232ballihoo	all
Related Tasks		This network requires a network key. If you want t dick Connect.	to connect to this network,
Learn about wireless networking			
Change the order of preferred networks	((g))	PhillipstonHouse	
Change advanced settings		Unsecured wireless network	

7) If the network security key hasn't been inputted before, Windows XP prompts you to enter the network's security key to access the wanted SSID. Type the encryption key that you wrote down earlier in both the Network key and Confirm network key boxes, and then click "Connect".

Wireless Network Co	nnection
	' requires a network key (also called a WEP key or WPA key). nt unknown intruders from connecting to this network. click Connect.
Nahuade kaus	
Network key:	••••••

**Tips:**If there are free hotspots, simply select the networky ouw ant from the list displayed, then click "Connect". It tries to launchy our Internet browser—you should be connected to the Internet.

If there is a payhot spot, signing in orup will require either to entery our login information-ify ou'rean existing customer, or to entery our credit card information for payment, it is just decided by you. Then clicking the Connecting, your default Internet browser will a unchand take you to the service provider's login page. Most providers have very simple and step-by-step instructions for you to sign up and then to be connected. Another way to access the service provider's login page is to simply a unch your Internet browser, if there's a paynet work available, you'll be taken directly to the login page.

Should the service of Ralink wireless connection utility be applied.

1) After the installation of Ralink utility, the system shows a special wireless utility icon in the Windows system tray, *which*locates in the bottom-right corner of your computer screen:



2) when an USB wireless adapter is inserted into an USB 2.0/1.1 port of Notebook or PC, the icon changes colors according to the wireless signal quality.

3) Double-click the icon or right click the icon and then select "Launch Config Utility" to launch the utility, the RaUI window appears like:



TheRalinkwirelessutilitystartsincompactmodeasshownabove, provides profilemanagement, the available networks listing, astatistical counterdisplay, Wi-Fimultimedia (WMM), protected Wi-Fi setup, Ciscocompatible extensions (CCX), callad mission control (CAC), radiocontrols, Ralink

*driver/utilityinformation,andhelpfunctions.*Clicking the expanding icon mode as shown below:

can change to the full

Ralink		<b>1</b>		Site Su	rvey				,
(*)         > SSED         AP t           >         > Rate         300.0 Mbps           >         Channel         7 (2442 MHz)	> 1P Address 192.168-2.101 > Mask 255.255.255.0	118 SoftAP-33333 dink-111 001601031484_G witx	0000000	2 2 2 3 5 6		0 00 0	C+C+ C+2	65% 10% 70% 81% 50% 39%	
Link Inform	ation X	ExRegNW3135D8 Baron_Test baldwin wen	りりり	6 6 6		9999	69 12	76% 96% 55% 39%	
Status AP1 <-> 00-0E-2 Extra Info Link is Up (Tx Pow Authentication WPA2-PSK Encryption AES	10210-1	RT305x_AP Stitch 1STAP _SMS-192	00000	6 6 6		99999	7.	94% 94% 55% 0%	
Network Type Infrastructure Central Channel 5		Cheetah AP Information SSID 118 MAC Address 00-21-91	U 1-F7-A9		uthenticatio cryption	n WP		44%	

Inthisutility, there are two applications can be selected: the Station mode and AP mode.

- Stationmode(Clientmode): it is the default access way, the USB wireless adapter services as a client to access Internet through other router or AP.
- APmode:itsetstheUSBwirelessadapterasanAP,whichallowstheotheruserscanconnectto Internetthroughyourcomputer.Beforeusingthemode,itmustbeavailablethatanexistedInternet connectionviawireEthernetconnectionorby3Gwirelessconnection.

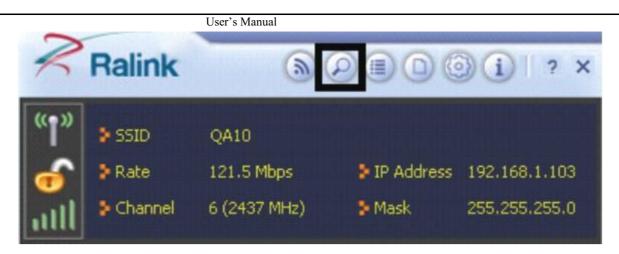
**Tips:**PointthecursortotheRalinkiconlocationonbottom-rightcornerofyourcomputerscreen,right clickthemouse,fromthepopuplist,youcanselectthestationmodeorAPmode.

4) BelowarethestepstoconnecttoawirelessnetworkusingtheRalinkUtility.

- a. OpentheRalinkUtilitybydouble-clickingontheRalinkUtilityiconinthetaskbar.
- **b.** TheRalinkUtilityappears,bydefaultconnectedtoanavailableopenwirelessnetwork.Checkthe nameofthenetworktowhichyouareconnected.Ifthisisthecorrectnetwork,nofatherstepsare required.

2	Ralink	6		)()   ? ×
" <b>1</b> "	> SSID	QA10		in the second second
6	🕻 Rate	121.5 Mbps	IP Address	192.168.1.103
attl	Channel	6 (2437 MHz)	Mask	255.255.255.0

c. Toconnecttoanalternativenetwork, click the Available Network sbutton.



d. In the Available Networks window that appears, select the name of the network to which you are

*connecting.Thenclicktheconnecticon* and wait several seconds while the Utility sets up a connection .

ogemray	2012	V	4	615	104	100%
QA10		0000	6	6	0 ()	100%
QA5		6	9	0	0 ()	52%
QA8		Ø	12	10	<b>0</b> 47	99%
AD Technum abia	0					
AP Informatio	ogemray	2012	Auch	makinghing	n WPA-P	ev le

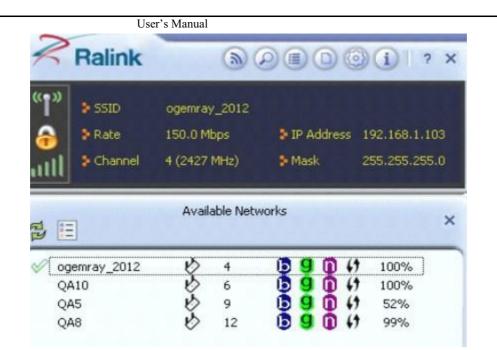
**e.** The Ralink Utility automatically detects and displays the security settings of the network to which you are connecting in the Profile Setting screens. If the Utility shows that WPA-PSK or WPA2-PSK security is detected as shown Below , click the right arrow to save your settings.

Authentication	WPA2-P5K	•
Encryption	AES	•
		11

*f.* In the screen that displays, in the 'WPA Preshared Key' field ,type a security key, the same as that used by the AP or wireless router to which you are connecting. Click the right arrow to save your settings and connect to the network.

++	Profile Settings	
WPA Preshared Key	****	
	I	

*g.* Once you are connected the Avaliable Networks shows the status of your connection.



#### For Windows 7:

Notes : Windows Zero Configuration (WZC) is not necessary in Windows Vista, Windowns 7 or higherversion OS, you can use WZC and the Ralink Utility to manage the adapter simultaneously.

1) Click on the wireless networks icon in the task bar in the bottom right hard corner of your screen to diaplay the available wireless networks.

Wireless Network Conne	ection	^
ogemray_2012	-	Ite.
QA10		<b>2</b> at
QAB		<b>5</b> 1
Fleetlink_test		-11
QA5		<b>S</b> all
QA7		<b>*</b> el

2) Click the "Connect" button to connect to the select network .



3) If your network has wireless security Configured, enter the required setting. The following is an example only, your network setting may differ.

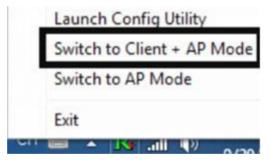
Connect to a Netw		
Type the networ	k security key	
Security key:		
	Hide characters	
9	You can also connect by pushing the button on the router.	
	ОК	Cancel

4) The success of your connection is indicated by the wireless network icon.

Currently conn ogemra Internet	y_2012
Wireless Netwo	rk Connection
ogemray_2012	Connected
Fleetlink_test QA10 QA8	Name: ogemray_2012 Signal Strength: Excellent Security Type: WPA2-PSK Radio Type: 802.11n SSID: ogemray_2012
QA5 QA7	Series Se
Orace Net	work and Sharing Center

Notes The steps of using the Ralink Utility to connect a wireless network is the same as those described in Windowns Xp.

In addition to station and AP mode, there is the Client + AP Mode to be selected in windows 7 as well. Which means: other wireless devices connect to -> Soft-AP of the adapter -> the adapter (Client mode with Internal ICS sharing )-> connect to other AP or Router -> Internet.



This mode lets you use the adapter both as a Soft-AP and client at the same time. Switch to this mode, you can let a wireless adapter be connect to a wireless (Soft-AP) with Internet connected, and let other adapter be indirectly connect to Internet via the Soft-AP wireless network.

#### For Windows 8:

1) Click on the networks icon in the task bar in the bottom right hard corner of your screen to diaplay the avaliable wireless networks.

User's Manual	
Networks	
Wi-Fi	
ogemray_2012	at
RT5350_AP	24
QA 10	Sat
QA 8	24
dgssid	al
QA5	24
QA7	24

2) Click the "Connect" button to connect to the select network .

Networks	
Wi-Fi	
ogemray_2012	, all
🗸 Connect automati	cally
	Connect
QA 8	<b>%</b> d
RT5350_AP	24
QA7	<b>%</b> d
QA5	24
dgssid	atl

3) If your network has wireless security Configured, enter the required setting. The following is an example only, your network setting may differ.



4) You can select turn on sharing or connect to device or not.

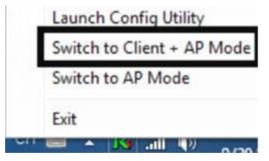
ogemray_2012	4
Do you want to turn o	
between PCs and con on this network?	

5) The success of your connection is indicated by the wireless network icon.

User's Manual	
Networks	
Wi-Fi	
ogemray_2012	Connected ,
QA 8	2.0
RT5350_AP	20
QA7	2.0
QA5	20
TP-LINK_2.4GHz_D7F	770 骗
Wireless DLNA [9csa	1 <b>9.1</b>
dgssid	all

Notes The steps of using the Ralink Utility to connect a wireless network is the same as those described in Windowns Xp.

In addition to station and AP mode, there is the Client + AP Mode to be selected in windows 8 as well. Which means: other wireless devices connect to -> Soft-AP of the adapter -> the adapter (Client mode with Internal ICS sharing )-> connect to other AP or router -> Internet.



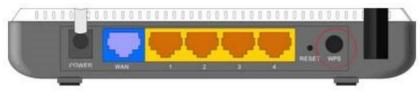
This mode lets you use the adapter both as a Soft-AP and client at the same time. Switch to this mode, you can let a wireless adapter be connect to a wireless (Soft-AP) with Internet connected, and let others adapter be indirectly connect to Internet via the Soft-AP wireless network.

#### WPS SETTING

The WPS is equipped with PBC and PIN two kinds of connection mode. Make sure your router support WPS function,

1) PBC Mode

Enables the router's PBC mode. Press the WPS button on the router about 2 seconds , When the router's WPS status indicator led starts to flash that router WPS is already enabled.You can also visit the router 's Web settings page to enable the PBC mode.



## ① Use Ralink Utility to connect.

a. Start-up Ralink Utility ,click the "Profile setting" icon and then select "add WPS Profile" button.

2	Ralink		? X
" <mark>1</mark> "	SSID	Profile	
6	🕽 Rate	> IP Address	
M	Channel	> Mask	
+ ×	22	Profile List	×
		add WPS Profile	
Profile	Information		
Profile	Name	Authentication	2
SSID		Encryption	-

b. Select "Push-Button" WPS Method.and then press it to next.

VPS Method	Push-Button	
	C PIN	WPS Version
		2.0

c. When the router's WPS status indicator led starts to flash and then click "Start PBC"button in two minutes.

		0%	
WPS status is	not used		
	Start PB	c	
	-	5.7	
		40 %	
PBC -Sending N	11		_
PBC -senaing r	41		

d. After a successful connection it creates a Profile.

	V PROF1	ExRegNW4134	4D8	2	1
Profile Information					
	Profile Inform Profile Name	ation PROF1	Authentication	WPA2-PSK	

② Use the WPS button on the wireless network adapter to connect.

a. When the router's WPS status LED indicator starts to blink and then press the WPS button on the wireless network adapter for about 3 seconds until the LED indicator of the adapter blinks.

b. After about 30 seconds, the connection will be successful ,then please view the connection information on the Ralink Utility. After a successful connection, it will be randomly assigned to aAP name and password for AP.

#### 2). PIN Mode

a. Start-up Ralink Utility ,click the "Profile setting" icon and then select "add WPS button.

Use	er's Manual	
Ralink		)(i)   ? ×
SSID		
S Rate	IP Address	
Channel	🐓 Mask	
F 🛪 📝 😭 🗋	add WPS Profile	
Profile Information		
Profile Information Profile Name	Authentication	2

b. Select "PIN" WPS Method.and then press router's SSID in the

to next.And select the

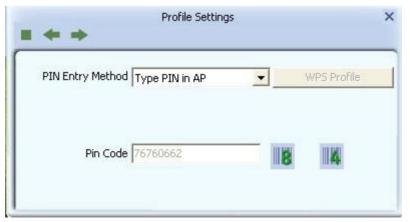
WPS AP List.

WPS Method	🗧 🦳 Push-Button	
	PIN	WPS Version
		2.0

-

① Type PIN in AP mode

a. Select "Type PIN in AP mode " in the PIN Entry Method.And then write the Pin Code to the router 's WPS Web settings page and save it.



•	o next then press "Start PIN". Profile Settings	
-	🔶 🔶	-
	0 %	
	WPS status is not used	2
	Start PIN	

- b. Press
- c. After a successful connection it creates a Profile.

V PROF1	ExRegNW4134	1D8	1	\$
Profile Inform	ation			
Profile Inform Profile Name	ation PROF1	Authentication	WPA2-P5K	

## ② Type PIN below mode

a. Select "Type below mode " in the PIN Entry Method.And write router 's PIN Code in the "Pin Code".You can view router 's PIN Code in the instructions of the router or the label on the back of the router.

<b>_</b> V	VPS Profile
	<b>  </b>    <b> </b>
	V

b. You can press "WPS Profile" to view WPS Profile.No change is recommend

SSID	ExRegNW4134D8		
BSSID	00-3A-35-43-15-68		
Authentication	WPA2-PSK	•	

		Profile Settings	×
		WPA Preshared Key	
		to next then press "Start PIN".	
		Profile Settings	×
		• •	
		0 % WPS status is not used	
		Start PIN	
	c. Pres d. Afte	r a successful connection it creates a <b>Profile</b> .	
+ 🗶 🎽	Prof		
PROF1	ExRegNW4134	D8	
Profile Informa			
Profile Name SSID	PROF1 ExRegNW4134D8	Authentication WPA2-PSK Encryption AES	

#### Note:

1. If there are multiple routers simultaneously open WPS function, it may cause the connection to fail.

2. When the router using WPS to connect ,you can only connect a client one time. When the router using WPS connection multiple clients, you need to repeat the WPS operation.

# FormoredetailsabouttheRaUlutility,pleasereadthehelpinformationoftheutility



# 5. Tips for Wi-Fi users

With a Wi-Fi connection, you can roam about 150 m around the access point (depends on different environment), so find a spot where you can work without any interruption. Then see how much work you can do, such as:

- Easily and quickly receive and transmit files within your local network no problem for big files.
- Access your email and surf the web with the same speed as that connected with network cables.
- □ Synchronize data between devices.
- □ Take advantage of wireless printing send files directly from your laptop PC to a wireless printer over Wi-Fi connection.

#### 6. Warning

Wi-Fi offers greater speed and range than Bluetooth, but it drains your portable device batteries a lot faster than Bluetooth does. In fact, if you use a Wi-Fi connection regularly on your laptop PC, you'll undoubtedly notice that you need to recharge more often. If you need to conserve battery life — on a long trip for example — turn off your Wi-Fi connection when you don't actually need it.

#### 7. Security

Because wireless networks rely on radio signals to transmit data, they are not as secure as wire network. Wireless networks are susceptible to viruses and breaches like eavesdropping and need to be protected in order to be secure.

There are many security measures to safeguard wireless networks, protect the data, and keep unauthorized users out. Hotspots, on the other hand, are often free of standard security practices in an effort to make it easy for anyone to connect. It may be found that some pay hotspots administered by service providers offer have some level of security, however, when using a hotspot, it's always a good idea to be proactive and to employ security measures of your own.

#### 8. Key terms

**Wi-Fi:** Short for "wireless fidelity," a generic label that refers to wireless networks or networking. **Hotspot:** A specific geographic location in which an access point provides public wireless broadband network services to mobile visitors through a WLAN.

Throughput: The amount of data transmitted in a set amount of time.

**Bandwidth:** the amount of data that can be carried from one point to another in a given time period (usually a second).

**Chipset**: A group of microchips that execute various functions (like memory) to support the CPU. **Tx power**: The transmit power measured at the terminal without antenna be considered. Should the antenna gain be considered ,the EIRP value is mentioned.

1T1R: the stream channel. 1T1R means one transmitter and one receiver.

Single Band : Normally means 802.11b/g/n ,which one works in 2.4 GHz

Protocol and Standards	IEEE 802.11b/g or 802.11n
Interface	USB1.1, USB2.0
Frequency Band	2.412~2.4835GHz (Depends on different countries' regulation)
Data Rate	For 802.11b/g: Peak rate 54Mbps, Peak throughput: 27Mbps. For 802.11n 1T1R. Peak rate: 150Mbps, Peak throughput: 90Mbps
Transmit Power	802.11b: 13.565dBm; 802.11g:21.104dBm ; 802.11n: 21.137dBm.

#### 9. Specifications (Typical):

User's Manual	
Data Security	WEP 64/128 , WPA, WPA2, 802.1X,WPS
Power Consumption	It depends on different adapter models, there are two typical values: 330mA and 110mA in full Transmit (TX), 290mA and 95mA in full Receive (RX).
Transmission Distance	Indoor up to 100m, outdoor up to 300m (Standard transmission distance, it is affected depending on different environment).
Environment	Operating Temperature: 0°C~50°C Storage Temperature: -20~70°C Operating Humidity: 10%~90% non-condensing. Storage Humidity: 5%~95% non-condensing.
Operating System	It supports Windows CE/2000/XP/Vista/7; Linux; Mac OS X. The drivers might be supplied basing on one or two system.