# Wireless 802.11b/g/n/a/ac USB Adapter

# **User Manual**

## **Chapter 1. Introduction**

Thank you for purchasing the wireless 802.11b/g/n/a/ac USB adapter! This adapter is mini size design and you are able to plug it into the USB port. Excepting common wireless standards 802.11b/g/n, this wireless adapter is also 802.11ac compatible - data transfer rate is 150/433Mbps.

## **1.1 Product Features**

- Complies with IEEE 802.11ac , IEEE 802.11a, IEEE 802.11n, IEEE 802.11g and IEEE 802.11b standards
- Provides USB2.0 port
- Provides 150/433Mbps receiving rate and 150/433Mbps sending rate
- Supports 20MHz/40MHz/80MHz frequency width
- Auto-detects and changes the network transmission rate
- Provides two work modes: Infrastructure and Ad-Hoc
- Supports 64/128-bit WEP, WPA, WPA2 encryption methods and 802.1x security authentication standard
- Supports WPS (Wi-Fi Protected Setup) encryption method to free you from remembering long passwords
- Easy-to-install, plug and play
- Supports Windows VISTA/Win7/

Win8/Win8.1/Win10/Linux/Macintosh

## **1.2 Package contents**

The following contents should be found in your box:

- ◆ One Wireless 802.11b/g/n/a/ac USB adapter
- One CD (include driver/utility/user manual)

**Note**: If any of the listed contents are damaged or missing, please contact the retailer from whom you purchased the product for assistance.

## **CHAPTER 2: Quick Installation Guide**

## 2.1 Driver Installation

Please follow the following instructions to install your new

wireless USB Adapter:

#### 2.1.1

Insert the USB wireless network card into an empty USB 2.0 port of your computer when computer is switched on. Never use force to insert the card, if you feel it's stuck, flip the card over and try again.

#### 2.1.2

The following message will appear on your computer, click `Cancel / Close'.

•		
U Driver Software Installation		×
Installing device driver sof	tware	
802.11 n WLAN	Waiting for user input	
		1.000
		Close

#### **Under Windows Vista and Windows 7**

#### 2.1.3

Insert the driver CD into your CD-ROM. You can see autorun screen below. if not, you can double click `**autorun.exe**' on CD.



Click 'Install Driver' to start the installation procedure

#### 2.1.4

Once the installation is finished the computer will be asked to

reboot. you can click 'Finish' and reboot the computer to finish the installation of driver files.

REALTEK USB Wireless LAN Software		
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed REALTEK USB Wireless LAN Software. Click Finish to exit the wizard.	
	< Back Finish Cancel	

#### 2.1.5

A new icon will appear near the clock of system tray:



Left-click the icon will launch wireless network configuration utility, and you can right-click the icon to show the quick menu of configuration utility. This icon also uses different color to show the status of wireless connection:

att Wireless connection is established, good signal reception.

Wireless connection is established, weak signal reception.



Connection is not established yet.



Wireless network card is not detected.

For detailed instructions of wireless network configuration utility, please see next chapter.

## 2.2 Connect to Wireless Access Point

To use wireless network, you have to connect to a wireless access point first. You can either use Client utility (comes with network card driver), or Windows Zero Config utility (comes with Windows operating system).

#### 2.2.1 Using Client Utility

Please follow the following instructions to use Client configuration utility to connect to wireless access point.

**1.** Left-click the Client configuration utility icon located at lower-right corner of computer desktop, and configuration menu will appear:



 Wireless utility will appear. Click '<u>Available Network</u>' menu to search for wireless access points nearby.

🦝 REALTEK USB Wireless LAN Utility					
Refresh(R) Mode(M) About(A)					
	General Profile Available Network Status Statistics Wi-Fi Protect Setup				
Realtek 8812/	Available Network(s)				
	SSID Channel Encryption Network Authentication Signal Type				
	149 AES WPA2 Pre-Shared Key 68% Infrastruc				
	i <sup>3</sup> WIRELESS_56_000047     149     None     Unknown     94%     Infrastruc       i <sup>3</sup> D-Link_5GHz     161     TKIP/AES     WPA Pre-Shared Key/     70%     Infrastruc				
	Image:				
	Refresh Add to Profile				
	Note Double click on item to join/create profile.				
Show Tray Icon     Radio Off	Disable Adapter Close Virtual WiFi allowed				

**3.** Please wait for a while, and all wireless access points which can be reached by this wireless network card will be displayed here.

🞇 REALTEK USB Wireless	
Refresh(R) Mode(M)	About(A)
	General Profile Available Network Status Statistics Wi-Fi Protect Setup
Realtek 8812/	Available Network(s)
	SSID Channel Encryption Network Authentication Signal Type
	149 AES WPA2 Pre-Shared Key 68% Infrastruc
	WIRELESS_5G_000047 49 None Unknown 94% Infrastruc
	PD-Link_5GHz 161 TKIP/AES WPA Pre-Shared Key/ 70% Infrastruc
	Refresh Add to Profile
	Note
	Double click on item to join/create profile.
< <u> </u>	
Show Tray Icon Radio Off	Disable Adapter     Virtual WiFi allowed

If the wireless access point you wish to connect does not appear here, you can click '**<u>Refresh</u>**' button to scan for wireless access points again; if the wireless access point you're looking for still not appear, try to move the computer closer.

When the access point you're looking for is on the list, left-click it and then double click it or click `**Add to Profile**'.

4. If a password (Network Key) is required to access the wireless access point, please input it in <u>Network key</u>' (and input it again in <u>Confirm network key</u>' for confirmation). Click <u>OK</u>' when password is properly inputted.

Wireless Network Properties:			
This is a computer-to-computer(ad hoc) network; wireless access points are not used.			
Profile Name: WIRELESS_5G_000047			
Network Name(SSID): WIRELESS_5G_000047			
Channel: 149 (5745MH; 👻			
Wireless network security			
This network requires a key for the following:			
Network Authentication: WPA-PSK			
Data encryption: AES			
ASCII PASSPHRASE			
Key index (advanced):			
Network key:			
******			
Confirm network key:			
*****			
OK Cancel			

5. Network card will attempt to connect to access point now, this may require few seconds to minutes, please be patient. When the `<u>Status</u>' become `<u>Associated</u>', your computer is connected to access point you selected. Click `<u>Close</u>' to close configuration menu.

😹 REALTEK USB Wireless LAN Utility				
Refresh(R) Mode(M)	About(A)			
B - 🚼 MyComputer	General Profile Available Network Status Statistics Wi-Fi Protect Setup			
	Status: Associated			
	Speed: Tx:867 Mbps Rx:867 Mbps			
	Type: Infrastructure			
	Encryption: AES			
	SSID: WIRELESS_5G_000047			
	Signal Strength: 100%			
	Link Quality: 86%			
	Network Address:			
	MAC Address: 00:E0:4C:0D:F5:83 Realtek 8812AU Wireless LAN 802.11ac USB NIC #2			
	IP Address: 192.168.1.3			
	Subnet Mask: 255.255.255.0 Gateway: 0.0.0.0			
	ReNew IP			
<				
Show Tray Icon	Disable Adapter Close			
Radio Off	Virtual WiFi allowed			
L				

**NOTE**: If you connected to an access point but the connection has been dropped soon, please check security settings and re-check password spelling.

### 2.2.2 Using WPS Connect

Wi-Fi Protected Setup (WPS) is the latest wireless network technology which makes wireless network setup become very simple. If you have WPS-enabled wireless access point, and you want to establish a secure connection to it, you don't have to configure the wireless access point and setup data encryption by yourself. All you have to do is to go to the WPS setup page of this wireless card, click a button, and then press a specific button or enter a set of 8-digit code on the wireless access point you wish to establish a secure connection - just three simple steps!

For older wireless access points, it's possible to perform a firmware upgrade to become a WPS-enabled access point. Since they may not have a hardware button to press for WPS setup, you can use an alternative WPS setup method - input the pin code. Every WPS-compatible wireless network card support pin code configuration method; you can just input the code to wireless access point, and the wireless access point and wireless network card will do the rest for you.

This wireless network card is compatible with WPS. To use this function, the wireless access point you wish to connect to must support WPS function too. Now, please follow the following instructions to establish secure connection between WPS-enabled wireless access point and your wireless network card.

This wireless network card supports 2 kinds of WPS: PIN code and Push-Button.

Please follow the following instructions to setup WPS:

 Right-click Client configuration utility icon, and click <u>Open</u> <u>Config Utility</u>'.



- 2. Click '<u>Wi-Fi Protect Setup</u>' menu.
- **3.** You can use PIN code or Push-Button configuration, and WPS-compatible wireless access point must use the same type of WPS. For instructions on setup each type of WPS, see next 2 chapters for detailed instructions.

🞇 REALTEK USB Wireless	; LAN Utility			
Refresh(R) Mode(M) About(A)				
	General Profile Available Network Status Statistics       Wi-Fi Protect Setup         Wi-Fi Protected Setup (WPS)         An easy and secure setup solution for Wi-Fi network         Role Selection         Image: Average of the secure setup solution for Wi-Fi network			
4 111 >>	Pin Input Config (PIN) After pushing the PIN button.Please enter the PIN code PIN Code : 75175504 Pin Input Config (PIN) Push Button After pushing the PBC button.Please push the physical button on your AP or visual button on the WPS config page. Push Button Config (PBC)			
Show Tray Icon	Disable Adapter     Virtual WiFi allowed     Close			

#### **PIN Code**

To use PIN Code, please click 'Pin Input Config (PIN)' button:

ſ	🧱 REALTEK USB Wireles	LAN Utility	
	Refresh(R) Mode(M)	About(A)	
I		General Profile Available Network Status Statistics Wi-Fi Protect Setup	
	Realtek 8812/	Wi-Fi Protected Setup (WPS)	
		An easy and secure setup solution for Wi-Fi network	
		Role Selection	
		As WPS Device	
		Pin Input Config (PIN) After pushing the PIN	
		button.Please enter the PIN code	
		PIN Code: 75175504	
		Pin Input Config (PIN)	
		Push Button After pushing the PBC	
		button.Please push the physical	
		button on your AP or visual button on the WPS config page.	
		Push Button Config (PBC)	
	< III → F		
	Show Tray Icon Radio Off	<ul> <li>Disable Adapter</li> <li>Virtual WiFi allowed</li> </ul>	Close

You'll be prompted to select an access point you wish to connect. If you know its SSID, click  $\underline{Yes}'$ , otherwise click  $\underline{No}'$ .

Wi-Fi P	rotected Se	tup (WPS)	
2	Do you wan	t to select a spec	ific AP ?
(	Yes	No	

If you select '**Yes**', a list of all WPS-compatible AP nearby will be displayed; you can click '**<u>Refresh</u>**' to rescan, then select an AP and click '<u>**Select**</u>' button.

VPS AP Name	WPS AP MAC
GRouter LY	00:0C:43:30:52:E8 00:E0:4C:81:96:C1
	Refresh

If you select '**No**', wireless network card will prompt you to enter 8-digit PIN code into your AP, without selecting an AP in advance.

After you select '**Yes**' or '**No**' in previous step, network card will attempt to connect to WPS-compatible AP, and an 8-digit number will appear. Please input this number to AP's configuration menu within 2 minutes, and network card will establish secure connection with AP automatically.

To stop this procedure before connection is established, click `Cancel'.

-Fi Protect	ed Setup - PIN method
Wi-Fi Protec	ted Setup - PIN method
Please enter '	the following PIN code into your AP .
	PIN Code: 35229414
Status : I	nitial WPS
	Cancel

#### **Push Button**

To use Push-Button WPS configuration, please click '<u>Push</u> <u>Button Config (PBC)</u>' button. This is the easiest way to establish secure connection by WPS, but if there're more than one WPS-compatible AP using Push-Button config, please use PIN Code instead.



Click "Push Button Config(PBC)", a message box will appear:



Please activate Push-Button function on wireless access point now, and wireless network card will establish secure connection with access point within one minute.

## **CHAPTER 3: Troubleshooting**

If you encounter any problem when you're using this wireless network card, don't panic! Before you call your dealer of purchase for help, please check this troubleshooting table, the solution of your problem could be very simple, and you can solve the problem by yourself !

Scenario Solution		
I can't find any wireless access point / wireless device in ` <u>Site</u> <u>Survey</u> ' function.	<ol> <li>Click 'Refresh' for few more times and see if you can find any wireless access point or wireless device.</li> <li>Please move closer to any known wireless access point.</li> <li>Ad hoc' function must be enabled for the wireless device you wish to establish a direct wireless link.</li> <li>Please adjust the position of network card (you may have to move your computer if you're using a notebook computer) and click 'Refresh' button for few more times. If you can find the wireless access point or wireless device you want to connect by doing this, try to move closer to the place where the wireless access point or wireless device is located.</li> </ol>	
Nothing happens when I click ` <b>Open Config</b>	<ol> <li>Please make sure the wireless network card is inserted into your computer's USB port.</li> <li>Reboot the computer and try again.</li> </ol>	

I	
<u>Utility</u> '	<ol> <li>Remove the card and insert it into another USB port.</li> </ol>
	<b>4.</b> Remove the driver and re-install.
	<b>5.</b> Contact the dealer of purchase for help.
I can not establish	1. Click 'Add to Profile' for few more times.
connection with a	<b>2.</b> If the SSID of access point you wish to
certain wireless	connect is hidden (nothing displayed in `SSID'
access point	field in ` <b>Site Survey</b> ' function), you have to
	input correct SSID of the access point you
	wish to connect. Please contact the owner of
	access point to ask for correct SSID.
	3. You have to input correct passphrase /
	security key to connect an access point with
	encryption. Please contact the owner of
	access point to ask for correct passphrase /
	security key.
	<b>4.</b> The access point you wish to connect only
	allows network cards with specific MAC
	address to establish connection. Please go to
	` <u>Status</u> ' menu and write the value of `MAC Address' down, then present this value to
	the owner of access point so he / she can add
	the MAC address of your network card to his /
	her access point's list.
The network is	<b>1.</b> Move closer to the place where access point is
slow / having	located.
problem when	<b>2.</b> There could be too much people using the
transferring large	same radio channel. Ask the owner of the
files	access point to change the channel number.
	Please try one or more solutions listed above.