

Wireless AC 433Mbps Dual Band USB 2.0 Adapter



DN-70560

User Manual DN-70560 • DN-70565

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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, and that's three times faster than 802.11g wireless network!

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 Soft AP to establish your wireless LAN networking
- 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 XP/VISTA/Win7/ Win8/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.

1.3 Indicator Description

There is a LED indicator blinking when data communication is going on.

CHAPTER 2: Quick Installation Guide

This chapter is to assist you how to use the included CD-ROM which comprises the Driver and the Client Utility Interface.

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 '<u>Cancel /</u> <u>Close</u>'.

Under Windows XP

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

Under Windows Vista and Windows 7/8

| Driver Software Installation | | × |
|------------------------------|------------------------|----------|
| Installing device driver so | oftware | |
| 802.11 n WLAN | Waiting for user input | |
| | | Close |

2.1.3

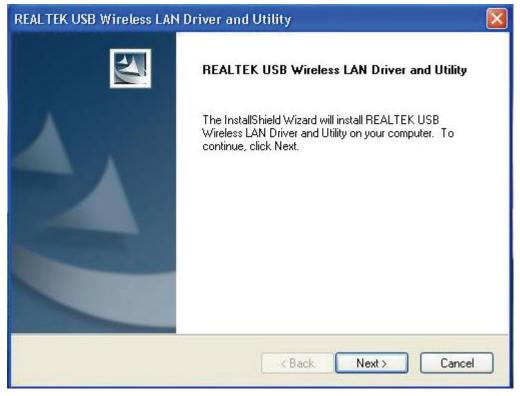
Insert the driver CD into your CD-ROM. You can see autorun screen below. if not, you can double click '<u>autorun.exe</u>' on CD.



Click 'Install Driver' to start the installation procedure

2.1.4

Installation descriptions shown. Click 'Next' to continue



2.1.5

Once the installation is finished the computer will be asked to reboot. you can click '**<u>Finish</u>**' and reboot the computer to finish the installation of driver files.



2.1.6

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:

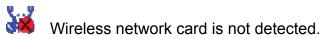
Wireless connection is established, good signal reception.



Wireless connection is established, weak signal reception.



Connection is not established yet.



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).

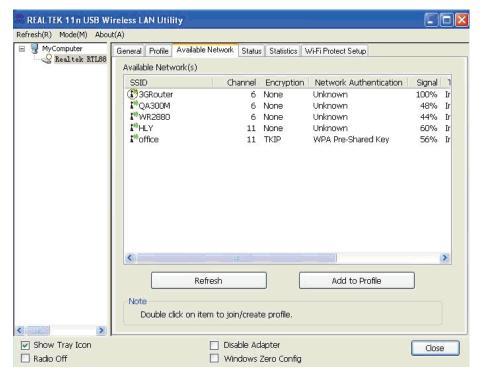
2.2.1 Using Client Utility

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

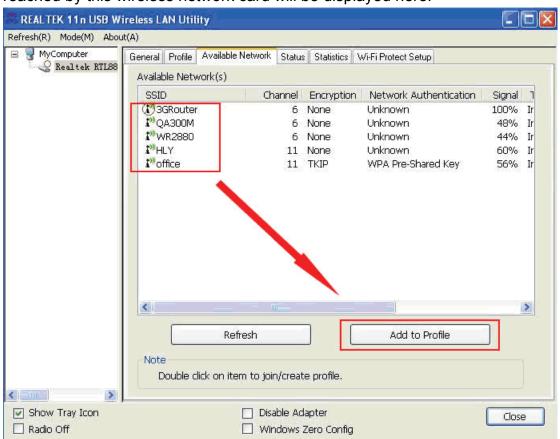
1. Left-click the Client configuration utility icon located at lower-right corner of computer desktop, and configuration menu will appear:



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



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



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**'.

If a password (a.k.a. '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.

NOTE: Network security type ('<u>Network Authentication</u>' and '<u>Data</u> <u>encryption</u>') will be selected automatically based on wireless access point's security setting. It's not required to change these settings by yourself.

| Profile Name: | office | 802.1x configure | |
|--|--|-------------------------|----|
| etwork Name(SSID): | office | EAP TYPE : | |
| | | GTC | v |
| | | Tunnel : Privision Mode | : |
| This is a computer-to access points are not | -computer(ad hoc) network; wireless ; used. | | 19 |
| | 11 (2462MHz) 👻 | Username : | |
| Wireless network secu | rity | | |
| This network requires | a key for the following: | Identity : | |
| Netw | ork Authentication: WPA-PSK 🛛 😪 | | |
| | Data encryption: TKIP | Domain : | |
| | PHRASE | Password : | |
| Key index (advanced) | 1 | Certificate : | |
| Network key: | | | 1 |
| | | PAC : Auto Select PAC | |
| Confirm network key: | | | 1 |

All options in this page will be filled automatically according to the access point you wish to add to profile. However, you can still modify any of them to meet your requirement.

| Profile name | You can give a name to this profile, so you can remember its purpose easily. It can be any phrase to help you remember. |
|---|---|
| Network Name (SSID) | The SSID (Service Set IDentifier, i.e. access point's name). This field will be filled as the access point you selected when SSID is not hidden and grayed out. If SSID is hidden, you have to input correct SSID you yourself. |
| This is a computer-to-computer (ad hoc) network | Check this box if you wish to connect to another computer / network device by ad hoc method. When not accessing to wireless access point, you have to check this box. |
| Channel | Select wireless channel for ad hoc connection. This option only appears when you're using ad hoc connection. |
| Network Authentication | Select the network authentication type from drop-down menu. This setting must be identical with the setting of wireless access point you with to connect. |

| Data encryption | Select the data encryption type from drop-down | |
|-----------------------|---|--|
| | menu. This setting must be identical with the setting | |
| | of wireless access point you with to connect. | |
| ASCII / PASSPHRASE | When the encryption type is 'WEP', it's required to | |
| | input a set of 'passphrase' to connect to wireless | |
| | access point. Check 'ASCII' or 'PASSPHRASE' | |
| | depends on the security setting of access point, | |
| | and input it in the box; if you select 'PASSPHRASE' | |
| | you also need to select the length of the key. | |
| | The passphrase must be identical with the setting | |
| | of wireless access point you with to connect. | |
| Key index | Select WEP key index. For most of access points | |
| | you can select '1', but please refer to the setting of | |
| | the access point. | |
| Network key / Confirm | When the encryption type is 'WPA' or 'WPA2-PSK', | |
| network key | it's required to input a set of 'passphrase' to connect | |
| - | to wireless access point. Please input the same | |
| | passphrase in two boxes for confirmation. | |
| EAP TYPE / Tunnel / | When authentication type is any of 802.1X, you | |
| Provision Mode | have to select EAP type, tunnel, and provision | |
| | mode from dropdown menu. This setting must be | |
| | identical with your 802.1x authentication server. | |
| Username / Identity / | Please input 802.1x related authentication | |
| Domain / Password | information here. | |
| Certificate | If certification is required to authenticate with | |
| | 802.1x authentication server, please select a local | |
| | certificate from dropdown list. | |
| | | |
| PAC | Check this box and PAC (Privilege Access | |
| | Certificate) will be automatically selected. | |
| | | |

Please click '<u>**OK**</u>' when ready.

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 11n USB W | ireless LAN Utility |
|-------------------------|---|
| Refresh(R) Mode(M) Abou | it(A) |
| 🖃 🦉 MyComputer | General Profile Available Network Status Statistics Wi-Fi Protect Setup |
| Realtek RTL88 | |
| | Status: Associated |
| | Speed: Tx:150 Mbps Rx:150 Mbps |
| | Type: Infrastructure |
| | Encryption: None |
| | SSID: 3GRouter |
| | Signal Strength: 100% |
| | Liek Quality |
| | Link Quality, 100% |
| | |
| | |
| | Network Address: |
| | MAC Address: 00:E0:4C:00:00:13 |
| | IP Address: 0.0.0.0 |
| | Subnet Mask: 0.0.0.0 |
| | Gateway: |
| | ReNew IP |
| | |
| < 1 m | |
| Show Tray Icon | Disable Adapter |
| Radio Off | Windows Zero Config |

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 Windows Zero Configuration

Windows XP and Vista has a built-in wireless network configuration utility, called as '**Windows Zero Configuration**' (WZC). You can also use WZC to configure your wireless network parameter:

1. Right-click Client configuration utility icon, and click 'Open Config Utility'.



2. Check 'Windows Zero Config' box.

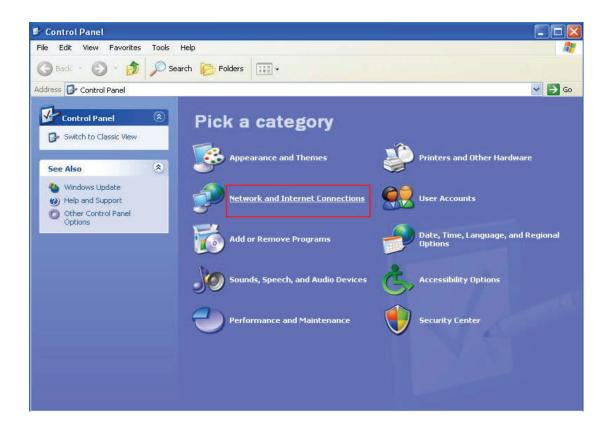
| REALTEK 11n USB W | ireless LAN Utility | |
|--------------------------|---|----------|
| Refresh(R) Mode(M) Abo | ut(A) | |
| 🖃 😼 MyComputer | General Profile Available Network Status Statistics Wi-Fi Protect Setup | |
| 🗌 😪 Realtek RTL88 | Available Network(s) | 7 |
| | SSID Channel Encryption Network Authentication | Signal 1 |
| | 🕐 3GRouter 6 None Unknown | 100% Ir |
| | 🔽 🖓 QA300M 6 None Unknown | 48% Ir |
| | 🚺 🖓 WR2880 6 None Unknown | 44% Ir |
| | 🚺 🖍 HLY 11 None Unknown | 60% Ir |
| | 🚺 🖓 office 11 TKIP WPA Pre-Shared Key | 56% Ir |
| | | |
| | | > |
| | Refresh Add to Profile | ļ |
| | Note | |
| | Double click on item to join/create profile. | |
| | | |
| Show Tray Icon Radio Off | Disable Adapter | Close |

3. A message indicating that you've been switched to Windows Zero.

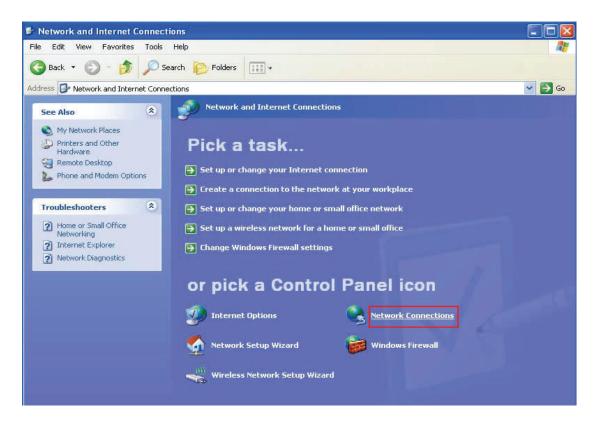


NOTE: To return to use Client utility, uncheck 'Windows Zero Config' box.

 Click '<u>Start</u>' button (should be located at the bottom-left corner of windows desktop), click '<u>Control Panel</u>', then click '<u>Network and Internet</u> <u>Connections</u>' in Control Panel.



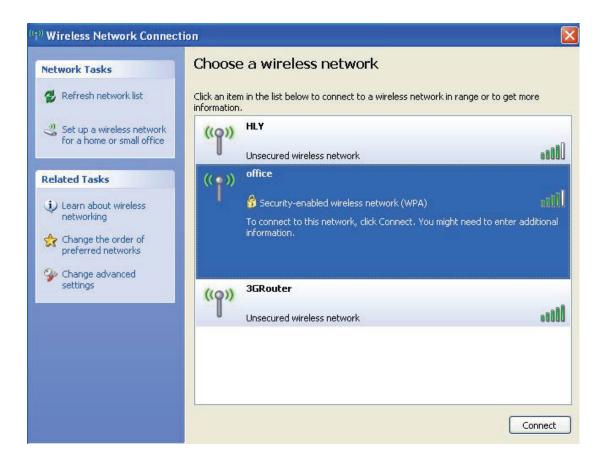
5. Double click 'Network Connections'.



 Right-click '<u>Wireless Network Connection</u>' (it may have a number as suffix if you have more than one wireless network card, please make sure you right-click the Wireless LAN 802.11ac USB Network Adapter), then select '<u>View Available Wireless Networks</u>'.

| Local Area Connection 2 | (c) Dicable View Available Wireless Networks |
|-------------------------|---|
| Local Area Connection | Repair Bridge Connections |
| | Create Shortcut Delete |
| | Properties |

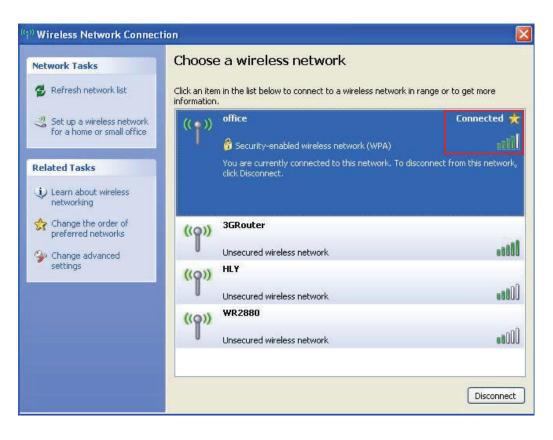
7. All wireless access points in proximity will be displayed here. If the access point you want to use is not displayed here, please try to move your computer closer to the access point, or you can click 'Refresh network list' to rescan access points. Click the access point you want to use if it's shown, then click 'Connect'.



8. If the access point is protected by encryption, you have to input its security key or passphrase here. It must match the encryption setting on the access point. If the access point you selected does not use encryption, you'll not be prompted for security key or passphrase.

| Wireless Network Co | nnection 🔀 |
|-------------------------|--|
| key helps prevent unkno | iires a network key (also called a WEP key or WPA key). A network wn intruders from connecting to this network. |
| Type the key, and then | :lick Connect. |
| Network key: | |
| Confirm network key: | |
| | Connect Cancel |
| | |

9. If you can see '<u>Connected</u>' message, the connection between your computer and wireless access point is successfully established.



CHAPTER 3: Client Utility

3.1 Connection Profile Management

If you need to connect to different wireless access points at different time, like of access point of your home, office, cybercafe, or public wireless service, you can store the connection parameters (encryption, passphrase, security etc, etc.) as a profile for every access point, so you don't have to input these parameters every time when you want to connect to a specific wireless access point.

To manage profiles, right-click the Client configuration utility icon located at lower-right corner of computer desktop, then click '**Open Config Utility**'.



Click the 'Profile' menu.

| 💐 REALTEK 11n USB W | ireless LAN Utility | | |
|------------------------------|---|--|---------------------|
| Refresh(R) Mode(M) Abou | ıt(A) | | |
| Bealtek RTL88 | General Profile Available M Available Profile(s) | Network 🛛 Status 🗍 Statistics 🖷 | Wi-Fi Protect Setup |
| | Profile Name | SSID 3GRouter | Add |
| | | | Remove |
| | | | Edit |
| | | | Duplicate |
| | | | Set Default |
| < | | nn:] | X |
| ✓ Show Tray Icon ☐ Radio Off | | Disable Adapter Windows Zero Config | Close |

3.1.1 Add a new profile

By this function you can setup the connection parameters for a specific wireless access point in advance, without contacting it first. If you want to create a new profile, click '**Profile**' menu, then click '**Add**' button.

| resh(R) Mode(M) Abo | ut(A) | | |
|---------------------|-----------------------|---------------------------------------|---------------|
| MyComputer | General Profile Avail | able Network Status Statistics Wi-Fil | Protect Setup |
| Realtek RTL88 | Available Profile(s) | - | |
| | Profile Name | SSID | Add |
| | (1) 3GRouter | 3GRouter L | Remove |
| | | | Edit |
| | | | Duplicate |
| | | | Set Default |
| | | | |
| | | | |
| | ĸ | | |
| | | | |
| 1007 > | | | |
| Show Tray Icon | | 🔲 Disable Adapter | Close |

You'll be prompted to input connection parameters for the wireless access point you wish to connect:

| Profile Name: | 3GRouter | 802.1x configure | |
|---|---|-------------------------|-----|
| Network Name(SSID): | 3GRouter | EAP TYPE : | |
| | | GTC | ~ |
| | | Tunnel : Privision Mode | e : |
| This is a computer-to access points are no | o-computer(ad hoc) network; wireless t used. | | 4 |
| Channel: | 6 (2437MHz) | Username : | |
| Wireless network secu | rity | | |
| This network requires | a key for the following: | Identity : | |
| Netw | vork Authentication: Open System 🛛 💌 | | |
| | Data encryption: Disabled | Domain : | |
| | SPHRASE | Password : | |
| Key index (advanced) | 1. | Certificate : | |
| Network key: | | | ~ |
| | | PAC : Auto Select PAC | |
| Confirm network key: | | | ~ |

Required parameters are:

| Required parameters are | • |
|-------------------------|---|
| Profile name | You can give a name to this profile, so you can |
| | remember its purpose easily. It can be any phrase |
| | to help you remember. |
| Network Name (SSID) | The SSID (Service Set IDentifier, i.e. access point's |
| | name). This must be identical with the SSID of the |
| | access point you wish to connect. |
| This is a | Check this box if you wish to connect to another |
| computer-to-computer | computer / network device by ad hoc method. |
| (ad hoc) network | When not accessing to wireless access point, you |
| | have to check this box. |
| Channel | Select wireless channel for ad hoc connection. This |
| Channel | |
| | option only appears when you're using ad hoc |
| | connection. |
| Network Authentication | Select the network authentication type from |
| | drop-down menu. This setting must be identical |
| | with the setting of wireless access point you with to |
| | connect. |
| Data encryption | Select the data encryption type from drop-down |
| | menu. This setting must be identical with the setting |
| | of wireless access point you with to connect. |
| ASCII / PASSPHRASE | When the encryption type is 'WEP', it's required to |
| | input a set of 'passphrase' to connect to wireless |
| | access point. Check 'ASCII' or 'PASSPHRASE' |
| | depends on the security setting of access point, |
| | and input it in the box; if you select 'PASSPHRASE' |
| | you also need to select the length of the key. |
| | |
| | The passphrase must be identical with the setting |
| | of wireless access point you with to connect. |
| Key index | Select WEP key index. For most of access points |
| | you can select '1', but please refer to the setting of |
| | the access point. |
| Network key / Confirm | When the encryption type is 'WPA' or 'WPA2-PSK', |
| network key | it's required to input a set of 'passphrase' to connect |
| | to wireless access point. Please input the same |
| | passphrase in two boxes for confirmation. |
| EAP TYPE / Tunnel / | When authentication type is any of 802.1X, you |
| Provision Mode | have to select EAP type, tunnel, and provision |
| | mode from dropdown menu. This setting must be |
| | identical with your 802.1x authentication server. |
| Username / Identity / | Please input 802.1x related authentication |
| Domain / Password | information here. |
| | |

| Certificate | If certification is required to authenticate with 802.1x authentication server, please select a local certificate from dropdown list. |
|-------------|---|
| PAC | Check this box and PAC (Privilege Access |
| | Certificate) will be automatically selected. |

When all required parameters are set, click '**OK**' to create and save a new profile.

3.1.2 Remove an existing profile

When you no longer need an existing profile, you can remove it.

If you want to remove a profile, click '**<u>Profile</u>**' menu, then select an existing profile which you wish to remove, and then click '**<u>Remove</u>**' button.

| REALTEK 11n USB W Refresh(R) Mode(M) Abou | | _ | |
|--|--------------|----------------------------------|--------------------|
| 🖃 y MyComputer 😪 Realtek RTL88 | | able Network Status Statistics W | i-Fi Protect Setup |
| | Profile Name | SSID 3GRouter | Add |
| | 1952 | | Remove |
| | | | Edit |
| | | | Duplicate |
| | | | Set Default |
| | | | |
| | | | |
| | | | |
| | < | | |
| Show Tray Icon | | Disable Adapter | Close |
| | | Windows Zero Config | |

3.1.3 Edit an existing profile

If you have added a profile before, and you wish to change the content of the profile, you can use this function. Please select a profile from the list first, then click '<u>Edit</u>' button. You'll be provided with the contents of selected profile, and you can edit them. Click '<u>OK</u>' to save changes, or click '<u>Cancel</u>' to discard changes.

| Profile Name: | 3GRouter | 802.1x configure | |
|--|---|-------------------------|-----|
| letwork Name(SSID): | 3GRouter | EAP TYPE : | |
| | | GTC | ~ |
| | | Tunnel : Privision Mode | ə : |
| This is a computer-to access points are not | p-computer(ad hoc) network; wireless t used. | | |
| Channel: | 6 (2437MHz) | Username : | |
| Wireless network secu | rity - | | |
| This network requires | a key for the following: | Identity : | |
| Netw | ork Authentication: Open System 🛛 👻 | | |
| | Data encryption: Disabled | Domain : | |
| | SPHRASE | Password : | |
| Key index (advanced) | | Certificate : | |
| Network key: | | | ~ |
| | | PAC : Auto Select PAC | |
| Confirm network key: | | | ~ |
| | | | |

3.1.4 Make a copy of existing profile

If you need to make a copy of a specific profile, you can use this function. This function is very convenient when you need to build a new profile which parameters are similar to any existing profile.

To do this, select an existing profile, then click 'Duplicate' button.

| REALTEK 11n USB Wi | |
|--------------------------|---|
| Refresh(R) Mode(M) Abou | t(A) General Profile Available Network Status Statistics Wi-Fi Protect Setup Available Profile(s) |
| | Profile Name SSID Add |
| | Remove |
| | Edit |
| | Duplicate |
| | Set Default |
| | |
| < | |
| Show Tray Icon Radio Off | Disable Adapter Close Windows Zero Config |

You'll be prompted to input a profile name, please use an identical name that does not exist in profile list.

3.1.5 Set as default profile

If you wish to use a specific profile as default connection, you can select a profile in the list, and click '<u>Set Default</u>'. Selected profile will become default selection and Client configuration utility will attempt to connect to selected access point.

| REALTEK 11n USB Wi | ireless LAN Utility | |
|-------------------------|--|-----|
| Refresh(R) Mode(M) Abou | | |
| 🖃 👹 MyComputer | General Profile Available Network Status Statistics Wi-Fi Protect Setup Available Profile(s) | |
| | Profile Name SSID Add Add | |
| | Remove | |
| | Edit | |
| | Duplicate | |
| | Set Default | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Show Tray Icon | Disable Adapter Clo Windows Zero Config | ose |

3.2 View Network Statistics, General Information, and Status

The configuration utility provides information about network statistics and link status. If you want to know how your wireless network card works, you can use these functions to get detailed information about the wireless connection you're using.

3.2.1 General Information

If you want to know the general information of the access point you're connecting to, click '<u>General</u>' menu:

| REALTEK 11n USB W | ireless LAN Utility 🔹 🗖 🗖 🔀 |
|--------------------------|--|
| Refresh(R) Mode(M) Abou | t(A) |
| 🖃 😼 MyComputer | General Profile Available Network Status Statistics WirFi Protect Setup |
| | Status: Associated Speed: Tx:150 Mbps Rx:150 Mbps Type: Infrastructure Encryption: None SSID: 3GRouter Signal Strength: |
| | Link Quality: |
| | Network Address: |
| | MAC Address: 00:E0:4C:00:00:13 IP Address: 192.168.1.120 |
| | Subnet Mask: 255.255.0 |
| | Gateway: 192.168.1.1 |
| | ReNew IP |
| | |
| Show Tray Icon Radio Off | Disable Adapter Close Windows Zero Config |

All general information like signal strength and link quality will be displayed here. These information are very useful when you encounter some problem on connecting to access point.

If you wish to get a new IP address from DHCP server, you can click '**<u>ReNew IP</u>**' button.

3.2.2 Status

If you want to know the status of your wireless network card, click '<u>Status</u>' menu:

| REALTEK 11n USB W | ireless LAN Utility | |
|------------------------------|---|-------|
| Refresh(R) Mode(M) Abou | ıt(A) | |
| MyComputer Realtek RTI28 | General Profile Available Network Status Statistics W/Fi Protect Setup Manufacturer REAL TEK NDIS Driver Version 1024.4.910.2013 Short Radio Header No Encryption Disabled Authenticate Open System Channel Set 11 MAC Address 00:E0:4C:00:00:13 Data Rate (AUTO) Tx:150 Mbps Rx:150 Mbps Channel (Frequency) 6 (2437 MHz) Status Associated SSID 3GRouter Nework Type Infrastructure Power Save Mode None Associated AP MAC 00:0C:43:30:52:E8 Up Time (hh:mm:ss) 0:26:36 | |
| ✓ Show Tray Icon ■ Radio Off | Disable AdapterWindows Zero Config | Close |

3.2.3 View Network Statistics

To view the statistical data of wireless network card, click '<u>Statistics</u>' menu, and the statistics of wireless connection will be displayed:

| REALTEK 11n USB V | /ireless LAN Utility | |
|------------------------|--|---------------------------------------|
| Refresh(R) Mode(M) Abo | ut(A) | |
| 🖃 😼 MyComputer | General Profile Available Network Status Statistics Wi-F | i Protect Setup |
| Tage Realtek RTL88 | | |
| | | |
| | Counter Name | Value |
| | Tx OK | 80 |
| | Tx Error | 0 |
| | Rx OK | 912 |
| | Rx Packet Count Rx Retry | 912 |
| | Rx ICV Error | Ó |
| | | |
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| | | |
| | Reset | |
| | | _ |
| | | |
| < > | | |
| Show Tray Icon | , Disable Adapter | |
| Radio Off | | Close |
| | | |

All connection-related statistics is displayed here. You can click '**<u>Reset</u>**' button, to reset the statistics of all items back to 0.

3.3 Miscellaneous Settings

There are few functions provided by Client configuration utility, you can access these functions from the bottom of configuration menu:

| ter General | Profile | Augilable Network | Chatua | Chatiation | Wi-Fi Protect Setup | |
|-------------------------|---------|---------------------------------|----------------------------------|----------------------------|-----------------------------------|-----|
| ter General ek RTL88 | TIONE | Available Network | Jialus | JIGUSUCS | whith folect setup | |
| | | Status: Ass | ociated | | | |
| | | Speed: Tx: | 150 Mbp | s Rx:150 | Mbps | |
| | | Type: Infr | astructur | re | | |
| | | Encryption: Nor | ie | | | |
| | | SSID: 3GF | louter | | | |
| | Sian | al Strength: 🚺 | | | | |
| | | | | | 10 | 00% |
| | | | | | | |
| | | Link Quality: 📗 | | | 10 | 0% |
| | | k Address: MAC | | | 40:00:00:13 |)0% |
| | | k Address: MAC IP | Address | 192.16 | IC:00:00:13 8.1.120 |)0% |
| | | k Address: MAC IP Subn | Address et Mask: | 192.16 255.25 | IC:00:00:13 8.1.120 5.255.0 |)0% |
| | | k Address: MAC IP Subn | Address et Mask: | 192.16 | IC:00:00:13 8.1.120 5.255.0 |)0% |
| | | k Address: MAC IP Subn | Address: et Mask: iateway: | 192.16 255.25 192.16 | IC:00:00:13 8.1.120 5.255.0 | 0% |
| | | k Address: MAC IP Subn | Address: et Mask: iateway: | 192.16 255.25 | IC:00:00:13 8.1.120 5.255.0 | 0% |

| Show Tray Icon | Check this box to show an icon on system tray. |
|-----------------|---|
| | 9:36 AM HERE! |
| | Uncheck this box to hide it. |
| Radio Off | Switch wireless radio off. Wireless network functionalities |
| | are disabled. |
| Disable Adapter | Disable wireless network adapter. All functionalities of |
| | configration menu will disappear. To resume, unckeck |
| | 'Disable Adapter'. |
| Windows Zero | Use Windows Zero Configuration to manage wireless |
| Config | connections. See section 2.2.2. |

The descriptions of these function are listed as follow:

3.4 Establish secure connection with AP by WPS

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:

1. Right-click Client configuration utility icon, and click 'Open Config Utility'.



2. Click '<u>Wi-Fi Protect Setup</u>' menu.

| REALTEK 11n USB Wi | ireless LAN Utility | | | | | |
|-------------------------|--|----|--|--|--|--|
| Refresh(R) Mode(M) Abou | .t(A) | | | | | |
| 🖃 🚽 MyComputer | General Profile Available Network Status Statistics Wi-Fi Protect Setup | į | | | | |
| Realtek RTL88 | a transformation of the second s | | | | | |
| | Status: Associated | | | | | |
| | Speed: Tx:150 Mbps Rx:150 Mbps | | | | | |
| | Type: Infrastructure | | | | | |
| | Encryption: None | | | | | |
| | SSID: 3GRouter | | | | | |
| | Signal Strength: 100% | | | | | |
| | | | | | | |
| | LIFIK Quality: 100% | | | | | |
| | | | | | | |
| | | | | | | |
| | Network Address: | | | | | |
| | MAC Address: 00:E0:4C:00:00:13 | | | | | |
| | IP Address: 192,168,1,120 | | | | | |
| | Subnet Mask: 255.255.0 | | | | | |
| | Gateway: 192.168.1.1 | | | | | |
| | ReNew IP | | | | | |
| | | | | | | |
| < > | | | | | | |
| Show Tray Icon | , Disable Adapter Clo | se | | | | |
| 🗌 Radio Off | Windows Zero Config | | | | | |

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 11n USB W Refresh(R) Mode(M) Abou | | |
|--|--------------------------|-------|
| Refresh(R) Mode(M) Abou | | |
| | Push Button Config (PBC) | |
| Show Tray Icon Radio Off | Disable Adapter | Close |

3.4.1 PIN Code

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

| REALTEK 11n USB W | ireless LAN Utility | |
|-------------------------|---|-------|
| Refresh(R) Mode(M) Abou | ıt(A) | |
| 🖃 🦻 MyComputer | General Profile Available Network Status Statistics Wi-Fi Protect Setup | |
| Realtek RTL88 | Wi-Fi Protected Setup (WPS) | |
| | An easy and secure setup solution for Wi-Fi network | |
| | Pin Input Config (PIN) | |
| | After pushing the PIN button. Please enter the PIN code into your AP. | |
| | PIN Code : 35229414 | |
| | | |
| | 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) | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| < 100 V | | |
| Show Tray Icon | Disable Adapter | Close |
| 🗌 Radio Off | Windows Zero Config | |

You'll be prompted to select an access point you wish to connect. If you know its SSID, click '<u>Yes</u>', otherwise click '<u>No</u>'.

| Wi-Fi P | rotected Se | tup (WPS) | X |
|---------|-------------|-------------------|------------|
| ? | Do you wan | t to select a spe | cific AP ? |
| ĺ | Yes | No |) |

If you select '<u>Yes</u>', 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.

| WPS AP Name | WPS AP MAC |
|-----------------|--|
| iGRouter ILY | 00:0C:43:30:52:E8 00:E0:4C:81:96:C1 |
| | Refresh |

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

After you select '<u>Yes</u>' or '<u>No</u>' 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'.

| Wi-Fi Protect | ed Setup - PIN method 🛛 🛛 🔀 |
|----------------|---------------------------------------|
| Wi-Fi Proteo | ted Setup - PIN method |
| Please enter 1 | the following PIN code into your AP . |
| | PIN Code : 35229414 |
| Status : I | hitial WPS |
| | |
| | Cancel |

3.4.2 Push Button

To use Push-Button WPS configuration, please click '**Push Button Config** (**PBC**)' 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.

| 🕷 REALTEK 11n USB W | ireless LAN Utility 🔲 🗖 🔀 |
|----------------------------|---|
| Refresh(R) Mode(M) Abou | rt(A) |
| 🖃 🦻 MyComputer | 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 Pin Input Config (PIN) After pushing the PIN button.Please enter the PIN code into your AP. |
| | PIN Code : 35229414 |
| | 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 Radio Off | Disable Adapter Close |

After you click "Push Button Config(PBC)", a message box will appear:

| Wi-Fi Protected Setup - PBC method 🛛 🔀 |
|--|
| Wi-Fi Protected Setup - PBC method |
| If there is more than one AP on the PBC mode, there will be [Session Overlap].Please use PIN method or wait for a while and use PBC method again. |
| Status : AP Sitesurvey |
| Complete : |
| Push Button Config (PBC) Cancel |

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 4 Soft-AP Function

Excepting become a wireless client of other wireless access points, this wireless adapter can act as a wireless service provider also! You can switch this wireless adapter's operating mode to 'AP' mode to simulate the function of a real wireless access point by software, and all other computers and wireless devices can connect to your computer wirelessly, even share the internet connection you have.

Please follow the instructions in following chapters to use the AP function of your wireless card.

4.1 Switch to AP Mode and Station Mode

The operating mode of the wireless card is 'Station Mode' (becoming a client of other wireless access points) by default.

Please follow the following instructions to switch to AP mode:

1. Right-click Client configuration utility icon, and click 'Open Config Utility'.

| Open Config Utility | A STREET |
|---------------------|----------|
| About | 12115 |
| Hide | MINORER |
| Quit | - |

2. Select 'Mode', and then select 'Access Point'.



It requires few seconds to switch to AP mode, please be patient.

| REALTEK 11n USB W Refresh(R) Mode(M) Abou | | |
|--|---------------------------------|-------|
| B MyComputer | General Advanced Statistics ICS | |
| | SSID: microsof-35426b_AP | |
| | BSSID: 00:E0:4C:00:00:13 | |
| | Association Table | |
| | AID MAC Address Life Time | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | Config | |
| | | |
| | | |
| | | |
| Show Tray Icon | Disable Adapter | Close |
| Radio Off | | |

After mode switch is complete, you'll see general information of software AP, which shows AP's SSID and connected wireless clients.

| REALTEK 11n USB W | ireless LAN Utility | |
|-----------------------------------|---|-------|
| Refresh(R) Mode(M) Abou | t(A) | |
| 🖃 🚽 MyComputer 😪 Realtek RTL88 | General Advanced Statistics ICS | |
| | SSID: microsof-35426b_AP | |
| | BSSID: 00:E0:4C:00:00:13 | |
| | Association Table AID MAC Address Life Time | 7 |
| | Config | |
| | | |
| Show Tray Icon | 🔲 Disable Adapter | Close |
| Client mode i | con : 9:10 AM | |
| Software AP | icon: | |

4.1.1 Configure SSID and Channel

To configure software AP, click '<u>**Config**</u>' button:

| REALTEK 11n USB Wi | ireless LAN Utility | |
|-------------------------|---------------------|-------|
| Refresh(R) Mode(M) Abou | ıt(A) | |
| | | |
| Show Tray Icon | Disable Adapter | Close |
| Radio Off | L | Close |

The 'Wireless Network Properties' is displayed.

| Wireless Network Properties: | |
|--|------------|
| Profile Name: Access Point Mode | |
| Network Name(SSID): microsof-35426b_AP | |
| | |
| This is a computer-to-computer(ad hoc) network access points are not used. | ; wireless |
| Channel: 1 (2412MHz) 🗸 | |
| Wireless network security This network requires a key for the following: Network Authentication: Open Sy | /stem 💌 |
| Data encryption: Disabled | ~ |
| | |
| Key index (advanced): 1 | |
| Confirm network key: | |
| OK Cancel | |

Please note that Ad-Hoc mode is not available when network card is in AP mode. The description of major setup items are listed below:

| Network Name (SSID) | Please input the SSID (the name used to identify this wireless access point) here. Up to 32 numerical characters can be accepted here, excepting space. |
|------------------------|---|
| Channel | Please select the wireless channel you wish to use, from 1 to 13. |

To save changes, click '<u>OK</u>'; otherwise click '<u>Cancel</u>' to leave this menu and keep settings untouched.

4.1.2 Setup Soft-AP Security

To setup security options for Soft-AP, configure 'Wireless Network Security' section as follow:

| ireless Network Prope | erties: | × |
|--|--|---|
| Profile Name: | Access Point Mode | |
| Network Name(SSID): | microsof-35426b_AP | |
| This is a computer-to access points are not Channel: | o-computer(ad hoc) network; wireless t used. 1 (2412MHz) 💽 | |
| | rity a key for the following: rork Authentication: Open System | ~ |
| | Data encryption: Disabled | - |
| | SPHRASE | 7 |
| Key index (advanced) Network key: | 1 | |
| Confirm network key: | | |
| ОК | Cancel | |

The description of setup items about wireless security are listed below:

| Network | Select network authentication mode from dropdown |
|-----------------|---|
| Authentication | menu. |
| Data Encryption | Select data encryption method from dropdown menu. |
| ASCII / | If the encryption method is WEP, check either 'ASCII' |
| PASSPHRASE | or 'PASSPHRASE' box and input it in the box as WEP |
| | passphrase. |
| Key Index | Select WEP key index (1-4). If you don't know which |
| | one you should use, select 1. |
| Network key / | IF network authentication mode is WPA, please input |
| Confirm network | WPA passphrase in both box. |
| key | |

To save changes, click '<u>OK</u>'; otherwise click '<u>Cancel</u>' to leave this menu and keep settings untouched.

4.2 Advanced Settings

If you want to setup advanced settings of software access point, select '<u>Advanced</u>' menu. If you don't know the meaning and affects of these settings, keep them untouched.

| Refresh(R) Mode(M) About(A) Image: MyComputer General General Beacon Interval Image: DTIM Period: 3 Image: Preamble Mode Long Long Set Defaults Apply | 🏶 REALTEK 11n USB W | ireless LAN Utility | |
|---|-------------------------|--|-------|
| General Beacon Interval DTIM Period: 3 Preamble Mode Long | Refresh(R) Mode(M) Abou | ıt(A) | |
| General Beacon Interval DTIM Period: 3 Preamble Mode Long | 🖃 😼 MyComputer | General Advanced Statistics ICS | |
| | Realtek RTL88 | General Beacon Interval IIII DTIM Period; 3 Preamble Mode | |
| Show Tray Icon Disable Adapter Close Cose | Show Tray Icon | | Close |

The description of all setup items are listed below:

| Beacon Interval | Please input wireless beacon time interval here. |
|-----------------|---|
| DTIM Period | Please input DTIM (Delivery Traffic Indication |
| | Message) here. |
| Preamble Mode | Select wireless frame preamble mode (long or short) |
| | from dropdown menu. |
| Set Defaults | Reset all settings back to factory default value. |
| Apply | Save changes. |

If you changed any setting here and cause problem on communicating with wireless clients, click '<u>Set Defaults</u>' to reset all settings back to default setting.

4.3 Wireless Statistics

Select '<u>Statistics</u>' menu and the data statistics about software access point will be displayed.

| REALTEK 11 n USB W Refresh(R) Mode(M) Abo | | | |
|--|---------------------------------|-------|-------|
| 🖃 🚽 MyComputer | General Advanced Statistics ICS | | |
| | Counter Name | Value | |
| | Tx OK | 172 | |
| | Tx Error | 0 | |
| | Rx OK | 1960 | |
| | Rx Packet Count | 1960 | |
| | Rx Retry Rx ICV Error | 9 | |
| | KX ICV Error | | |
| | | | |
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| | Reset | | |
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| < []] | | | |
| | | | |
| Show Tray Icon | Disable Adapter | | Close |

Click 'Reset' to reset the value of every item back to '0'.

4.4 Internet Connection Sharing (ICS)

In this page, you can assign a network card on your computer as the path for all wireless clients to get connected to Internet.

If you have only one network card (except this software access point), you don't have to select network card here; if you have more than one network card, select the one you wish to be used as Internet gateway.

| 🗏 REALTEK 11n USB W | ireless LAN Utility | |
|--|---------------------|-------|
| Refresh(R) Mode(M) Abou | ıt(A) | |
| in the second seco | | |
| < | Apply | |
| Show Tray Icon | Disable Adapter | Close |

Click '<u>Apply</u>' to save changes

('Apply' is grayed out when no changes are made in this page).

CHAPTER 5: 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 | Click 'Rescan' for few more times and see if you can find any wireless access point or wireless device. |
| device in ' <u>Site</u> <u>Survey</u> ' function. | 2. Please move closer to any known wireless access point. |
| | 3. Ad hoc' function must be enabled for the wireless device you wish to establish a direct wireless link. |

| | A | Diagon adjust the position of notwork and (you may |
|----------------------|----|--|
| | 4. | Please adjust the position of network card (you may have to move your computer if you're using a |
| | | notebook computer) and click ' Rescan ' button for |
| | | few more times. If you can find 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. |
| Nothing happens | 1 | Please make sure the wireless network card is |
| when I click 'Open | •• | inserted into your computer's USB port. |
| Config Utility' | 2 | Reboot the computer and try again. |
| <u>ooning otinty</u> | | Remove the card and insert it into another USB |
| | 5. | port. |
| | 4 | Remove the driver and re-install. |
| | | Contact the dealer of purchase for help. |
| I can not establish | | Click 'Add to Profile' for few more times. |
| connection with a | | If the SSID of access point you wish to connect is |
| certain wireless | | hidden (nothing displayed in 'SSID' field in 'Site |
| access point | | Survey' 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. |
| | 4. | The access point you wish to connect only allows |
| | | network cards with specific MAC address to |
| | | establish connection. Please go to 'Status' 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 slow | 1. | Move closer to the place where access point is |
| / having problem | | located. |
| when transferring | 2. | There could be too much people using the same |
| large files | | radio channel. Ask the owner of the access point to |
| | | change the channel number. |
| | | |
| | | Please try one or more solutions listed above. |