Panda Wireless®

802.11n Wireless USB Adapter

User's Manual
Version 2.5

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 restriction.

1. Introduction

Thank you for purchasing the Panda Wireless® 802.11n Wireless USB Adapter. The Panda 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 diagram:

There are two different ways to access Internet:

1.   With a wireless adapter, 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 adapter, receiving and transferring signal via local AP (Access Point) or so called WiFi Hotspot directly.

2. Package Contents:

●   One Panda Wireless 802.11n Wireless USB Adapter

●   An installation CD

●   User's Manual

Product Warranty

Panda Wireless warrants to the end user ("Customer") that this adapter will be free from defects in workmanship and materials, under normal use and service, for twelve (12) months from the date of purchase from its authorized reseller. Information in this document is subject to change without prior notice.

3. Installation

To install the driver of the USB adapter, please log into a user account with the administrator's privilege before you follow the installation instructions below:

Tips: Please upgrade your Windows computer to the latest Service Pack from Microsoft. For example: the latest Service Pack for Windows XP is Service Pack 3. Please send an email to support@pandawireless.com if you don't know how to upgrade your Windows computer to the latest Service Pack.
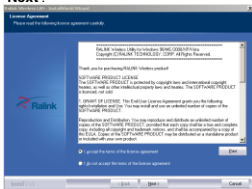
For Windows XP :

The system will detect a new hardware has been added, and start the "**Found New Hardware Wizard**".Then click on "**Cancel**".

1) Please insert the CD into your CD-ROM drive. Go to the Windows folder on the CD and double click on WinInstallerPandaUSBAdapterV1.x application.

Notes: The contents in the CD are out of date when you receive it. You can get the latest drivers and manuals on the Panda Wireless web site: www.pandawireless.com.

1) Follow the instructions and prompts of the "**Installshield Wizard**" to finish the driver installation:

a. Select the "**I accept the terms of the license agreements**", then click the "**Next**".

b. Select "**Install driver only**" if you want to connect to your own router or "**Install driver and Ralink WALN utility**" if you want to setup the adapter as the WiFi Hotspot on your computer and then click the "**Next**".
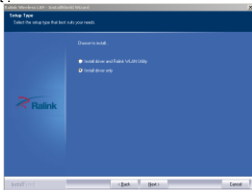

Tips:

1).The Windows XP utilizes a "**Wireless Zero Configuration(WZC)**" Service built into the operating system. Many wireless network adapter cards utilize this service.

2). Ralink- the chipset manufacturer has developed an utility for setting up wireless connection. If you select this item, you can switch between the Windows XP's WZC service and the Ralink WLAN utility service later.

c. Click the "**Install**" to confirm the installation, there shows the installation progress.
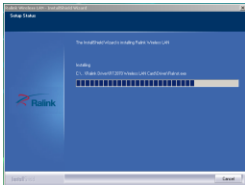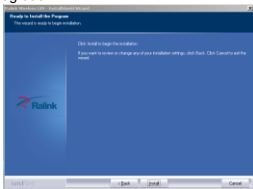
d. Click "**finish**" to finish the driver installation.
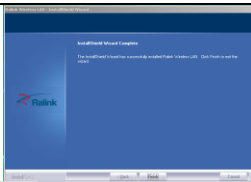
For Windows7:

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 Windows8:

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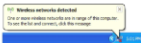
4. Wireless Connection

For WindowsXP :

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

Remarks: Make sure to connect the adapter to an USB port on your 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

Page 6

hardware is found and installed, something like this:

3) Before you begin, ensure WZC is enabled, by right-clicking on

the Ralink icon [R] in the task bar in the bottom right corner of your screen.

In the menu that appears, select "Use Zero Configure as Configuration Utility" to use Windows wireless management feature, Windows Zero Configuration (WZC) helps to manage your Wireless Network Connection.
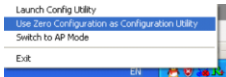
4) Right click the icon and then select "View Available Wireless Networks" to launch the utility, the Wireless Network Connection window appears and displays your wireless network listed with the SSID you chose.
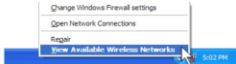
Notes: Before configuring your WiFi access, you need to have your network's SSID (service set identifier), security key and authentication type handy. Check the documentation coming with your router, ask your network administrator to get the information.

5) If you don't see your network, click "Refresh network list" in the upper left corner. If you are locating within the valid range of WiFi Hotspots or wireless routers, all available networks will be recognized and listed automatically. Click your preferred network,

Page 7

and then click "Connect" in the lower right corner.
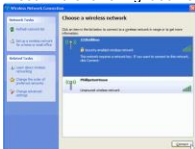
6) If the network security key hasn't been inputted before,

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".

Tips: If there are free WiFi Hotspots, simply select the network you want from the list displayed, then click Connecting. It tries to launch your Internet browser —you should be connected to the Internet.

If there is a paid WiFi Hotspot, signing in or up will require either to enter your login information-if you're an existing customer, or to enter your credit card information for payment, it is just decided by you. Then clicking the Connecting, your default Internet browser will launch and 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 launch your Internet browser, if there's a pay network 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

The Ralink wireless utility starts in compact mode as shown above, provides profile management, the available networks listing, a statistical counter display, Wi-Fi multimedia (WMM), protected Wi-Fi setup, Cisco compatible extensions (CCX), call admission control (CAC), radio controls, Ralink driver/utility information, and help functions. Clicking the expanding icon

can change to the full mode as shown below:

In this utility, there are two applications can be selected : the

Station mode and AP mode .

✧ **Station mode (Client mode) :** it is the default access way , the USB wireless adapter services as a client to access Internet through other router or AP.

✧ **AP mode :** it sets the USB wireless adapter as an AP, which allows the other users can connect to Internet through your computer. Before using the mode, it must be available that an existed Internet connection via wire Ethernet connection or by 3G wireless connection.

Tips: Point the cursor to the Ralink icon location on bottom-right corner of your compute r screen, right click the mouse, from the pop up list, you can select the station mode or AP mode.

4) Below are the steps to connect to a wireless network using the Ralink Utility.

a. Open the Ralink Utility by double-clicking on the Ralink Utility icon in the taskbar.

b. The Ralink Utility appears ,by default connected to an available open wireless network. Check the name of the network to which you are connected. If this is the correct network, no f ather steps are required.
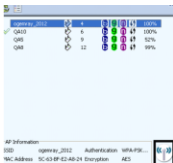

c. To connect to an alternative network ,click the Available Networks button.

Page 10

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

icon and wait several seconds while the Utility sets up a connection.

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.

f.   In the screen that displays, in the 'WPA Pre shared 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.
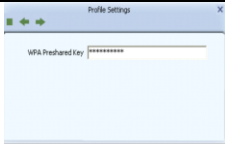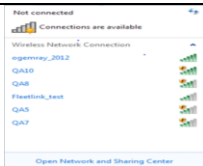
g. Once you are connected the avaliable Networks shows the status of your connection.


For Windows7:

Notes ：Windows Zero Configuration (WZC) is not necessary in Windows Vista, Windows 7 or higher version 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 display the available wireless networks.

2) Click the "Connect"button to connect to the select network .
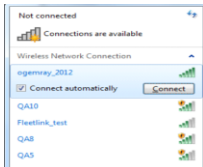
3) If your network has wireless security Configured, enter the required setting. The following is an example only, your network setting may differ


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

Page 13

network icon.

Notes : The steps of using the Ralink Utility to connect to a wireless network is the same as those described in Windows XP . In addition to station and AP mode, there is the Client + AP Mode to be selected in windows 7 as well.
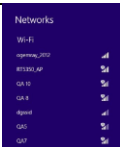**Which means:** other wireless devices connect to -> Soft-AP of the adapter -> the adapter (Client mode with Internal ICS sharing)-> connect to other AP or router -> Internet.
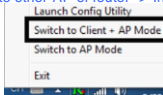
This mode lets you use the adapter both as a Soft-AP and client at the same time. Switch to this mode, you can let a wireless adapter be connect to a wireless (Soft-AP) with Internet connected, and let others adapter be indirectly connect to Internet via the Soft-AP wireless network.

For Windows8:

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

Page 14

2) Click the "Connect" button to connect to the selected network.
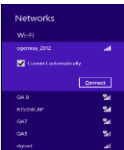
3) If your network has wireless security configured, enter the required setting. The following is an example only, your network settings may differ.

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

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

Notes : The steps of using the Ralink Utility to connect a wireless network is the same as those described in Windows 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.
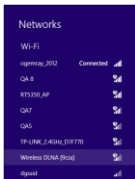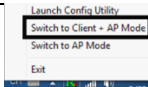
This mode lets you use the adapter both as a Soft-AP and client at the same time. Switch to this mode, you can let a wireless adapter be connect to a wireless (Soft-AP) with Internet connected, and let others adapter be indirectly connect to Internet via the Soft-AP wireless network.

For more details about the RaUI utility, please read the help information of the utility by clicking the ⬛ tab

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

Page 17

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 of WiFi 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 paid WiFi Hotspots administered by service providers offer have some level of security, however, when using a WiFi Hotspot, it's always a good idea to be proactive and to employ security measures of your own.

8. Terminology

Wi-Fi: Short for "wireless fidelity," a generic label that refers to wireless networks or networking.

WiFi 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).

Tx Power: The transmit power measured at the terminal without antenna be considered. Should the antenna gain be considered ,the EIRP value is mentioned.

Dual Band: Normally means 802.11b/g/n works in 2.4GHz frequency band or 802.11a/n works in 5GHz frequency band.

9. Specifications (Typical):

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	Note: The actual data rate is affected by a lot of factors in your environment. Please send an email to support@pandaiwreless.com if you have any question.
	For 802.11n – 150Mbps: Peak rate: 150Mbps For 802.11n – 300Mbps: Peak rate: 300Mbps
Transmit Power	802.11n: 14dBm.
Data Security	WEP 64/128, WPA, WPA2, 802.1X
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 environments).

Environment	Operating Temperature: 0℃~50℃ Storage Temperature: -20~70℃ Operating Humidity: 10%~90% non-condensing. Storage Humidity: 5%~95% non-condensing.
Operating System	It supports Windows XP/Vista/7/8; Mac OS X 10.4-10.9; Ubuntu/Mint/Fedora Linux. (Please send an email to support@pandawireless.com for more detail).