802.11g Wireless

USB 2.0 Adapter

User's Guide

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INTRODUCTION

Congratulations on your purchase of this 802.11g Wireless USB 2.0 Adapter.

This manual helps to get familiar with the 802.11g Wireless USB 2.0 Adapter. This manual contains detailed instructions in operation of this product. Please keep this manual for future reference.

With a Wireless LAN (IEEE 802.11g) USB 2.0 Adapter, a desktop or laptop computer can communicate with another computer in a wireless way. Easy-to-use utilities are bundled with Wireless USB Adapter for configuration, monitoring, and diagnosis purposes.

The 802.11g Wireless USB 2.0 Adapter can wirelessly transmit and receive data, minimizing the need for wired connections, at a speed of up to fifty-four megabit per second.

The 802.11g Wireless USB 2.0 Adapter provides users with an access to real-time information anywhere in their organization. The mobility provides productivity and service, which are not available under wired networks. The 802.11g Wireless USB 2.0 Adapter configuration is easy to change from peer-to-peer networks, suitable for a small number of users, to full infrastructure networks of thousands of users that allow roaming around a broad area.

Overview of this User's Guide

Introduction.   Describes the 802.11g Wireless USB 2.0 Adapter and its features.

Unpacking and Setup.   Helps you get started with the basic installation of the 802.11g Wireless USB 2.0 Adapter.

Hardware Installation.   Describes the LED indicators of the Adapter.

Software Installation.   Tells how to setup the driver and the utility setting.

Technical Specifications. Lists the technical specifications of the 802.11g Wireless USB 2.0 Adapter.

UNPACKING AND SETUP

This chapter provides unpacking and setup information for the 802.11g Wireless USB 2.0 Adapter.

Unpacking

Open the box of the 802.11g Wireless USB 2.0 Adapter and carefully unpack it. The box should contain the following items:

- One 802.11g Wireless USB 2.0 Adapter

- One Driver & Utility CD-ROM

If any item is found missing or damaged, please contact your local reseller for replacement.

Setup

The setup of the 802.11g Wireless USB 2.0 Adapter can be performed using the following steps:

- Visually inspect the USB connector and make sure that it is fully plugged in to the system's USB port.

- Make sure that there is a well environment that there is no much intrusion to have a better connection.

HARDWARE INSTALLATION

LED Indicator

LINK

The LINK LED lights green when the 802.11g Wireless USB 2.0 Adapter is connected to a network successfully. Otherwise the LINK indicator blinks green while the 802.11g Wireless USB 2.0 Adapter is access the wireless network.

Check the installation

The LED of the 802.11g Wireless USB 2.0 Adapter is clearly visible and the status of the network link can be seen instantly:

1. When connected to the USB port and the driver were installed, the LNK LED will start blinking, and it means that the device is starting to scan an 802.11g wireless device near the 802.11g Wireless USB 2.0 Adapter.

2. While the 802.11g Wireless USB 2.0 Adapter linked up to the Access Point or to other Wireless LAN station, the LINK LED will always light up.

SOFTWARE INSTALLATION

This section will lead you to install the driver and utility of the 802.11g Wireless USB 2.0 Adapter.

Before insert the USB Dongle into USB port of your computer, please install the Utility Program first. Make sure that the 802.11g Wireless USB 2.0 Adapter is NOT inserted into the USB slot.

Utility and Driver Installation

Insert the 802.11g Wireless LAN USB 2.0 Adapter Driver & Utility CD-ROM into computer's CD-ROM Drive and it will automatically run a setup menu and install the driver and the utility. In some specific setting on Windows system, you may need to proceed the software manually, go to your Windows Start menu and choose *Run*, type "D:\Setup\Setup.exe" in the dialog box (D:\ will depend on where your CD-ROM drive is located).

Note: (D:\ will depends on where the CD-ROM drive is located and <Windows OS> will depend on the Windows Operating System you are using).

1. Click **Install** to start the Utility and driver installation.

2. The Install Shield Wizard screen will appear. Click "**Next"** to continue.
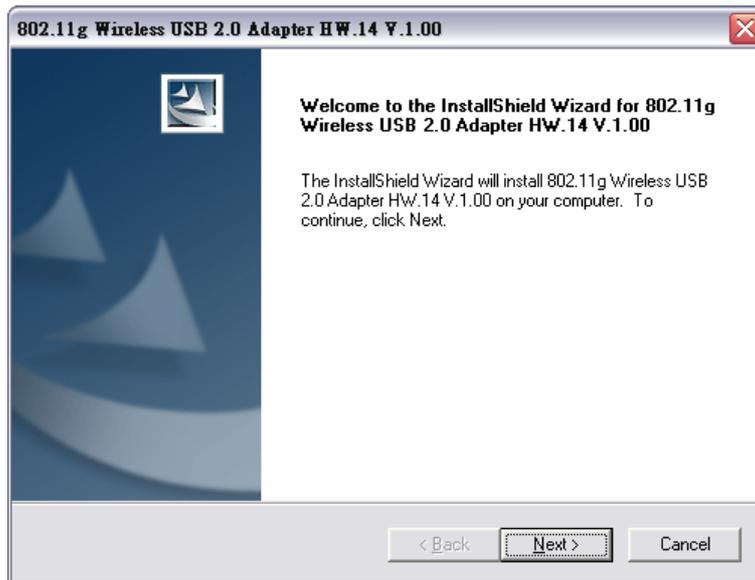
3. Click **"Finish"** to finish the installation.
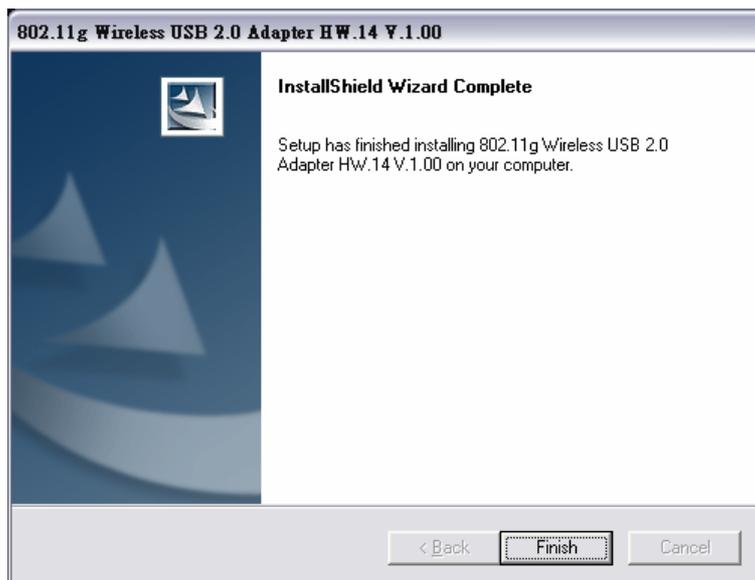
4. Plug-in your 802.11g Wireless USB 2.0 Adapter into your computer's USB port.

5. When start the utility first time, you will see the Wireless Configuration Utility Country Selector, select the country domain where you are using this Wireless device, users are responsible for ensuring that the region domain configuration is in compliance with the regulatory standards of these countries.
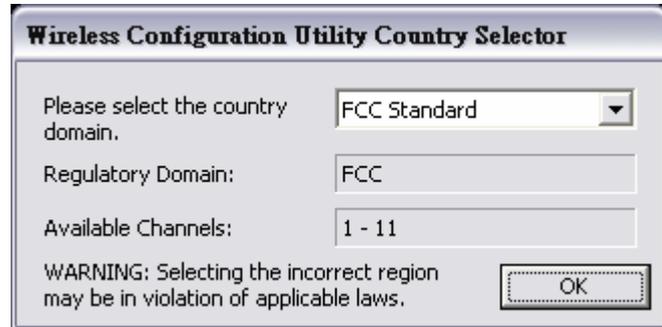
Warning: ***Be noted that selecting the incorrect region may result in a violation of applicable law; you will need to select the correct domain.***

6. You will see the icon on the Windows task bar when you finish the utility installation and plugged the 802.11g Wireless USB 2.0 Adapter.

When the icon in the toolbar represents in green color, it is properly connected to the network and shown the linking quality.

WIRELESS UTILITY SETTING

Windows® XP users may use the built-in wireless utility as default. The following instructions are for Service Pack 2 users. If you are using Windows® 2000/98/ME, you must use the Wireless Utility.

With the Wireless utility, users can configure all the functions provided by the Wireless LAN Adapter Utility. Double-click the utility icon that appears in the system tray.
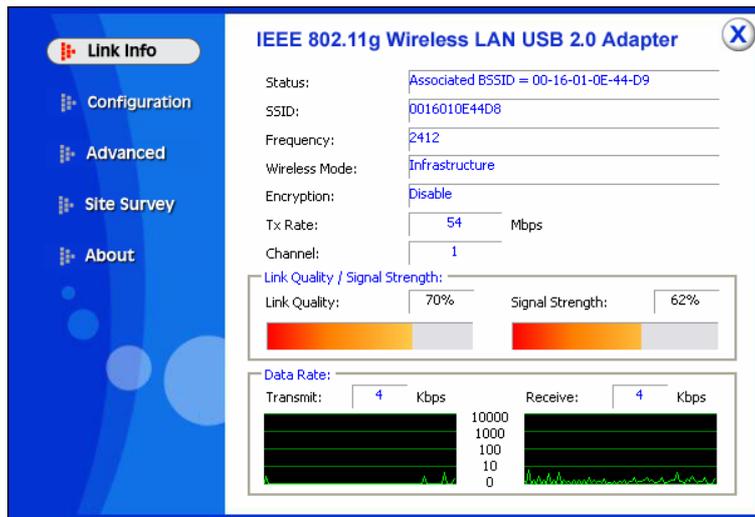
The Wireless LAN Adapter Utility includes six tabs: Link Info, Configuration, Advanced, Site Survey and About.

Link Info

The Link Info screen shows you the status of the Wireless Adapter, it shows that where the device is connected to, the connect Status, the connecting Speed, the network Type, the Encryption type, the SSID and the Signal Strength.
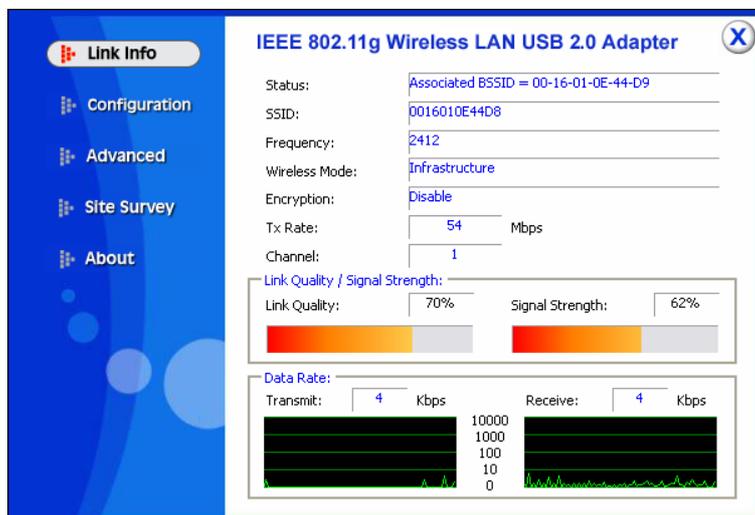
Configuration

This is the page where you can change the basic settings of the 802.11g Wireless USB 2.0 Adapter with the minimum amount of effort to implement a secure wireless network environment.
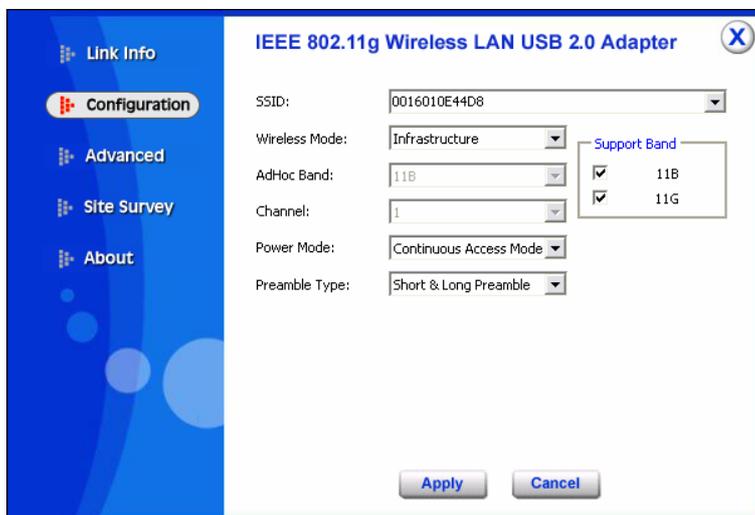
SSID: The SSID differentiates one Wireless LAN group name from another; so all access points and all devices attempting to connect to a specific Wireless LAN group name must use the same SSID. A device will not be permitted to join the BSS unless it can provide the unique SSID.

Wireless Mode: If you want to connect with an Access Point/WLAN Router, please set to "Infrastructure" mode. If you have more stations and just want to set them as local network, please set the mode to "Ad-hoc" mode.

Channel: It shows **auto** that used for Infrastructure Wireless LAN network. The channel number can be set only under the Ad-Hoc operation mode. In Ad-Hoc mode stations, each station must have the same channel number and SSID.

In Infrastructure mode, the Wireless USB Adapter will automatically detect the channel number of the Access Point.

Power Mode: There are 3 modes to choose:

Continuous Access Mode (default): The USB Dongle is constantly operating with full power and it consumes the most power.

Maximum Power Save: The USB Dongle consumes the least power and only operates when there is wireless network activity.

Power Save: The USB Dongle consumes the moderate level of power.

Preamble: Select Long or Short/Long (auto) Preamble type. Preamble is a sequence of bits transmitted at 1Mbps that allows the PHY circuitry to reach steady-state demodulation and synchronization of bit clock and frame start. Two different preambles and headers are defined: the mandatory supported Long Preamble and header, which interoperates with the 1 Mbit/s and 2 Mbit/s DSSS specification (as described in IEEE Std. 802.11), and an optional Short Preamble and header (as described in IEEE Std. 802.11b). At the receiver, the Preamble and header are processed to aid in demodulation and delivery of the PSDU. The Short Preamble and header may be used to minimize overhead and, thus, maximize the network data throughput. However, the Short Preamble is supported only from the IEEE 802.11b (High-Rate) standard and not from the original IEEE 802.11. That means that stations using Short-Preamble cannot communicate with stations implementing the original version of the protocol.

Support Band: There are two bands available for selection; 11B and 11G.

Advanced

The Advanced settings help you to control the Wireless Adapter to adjust with wireless devices in certain environment.
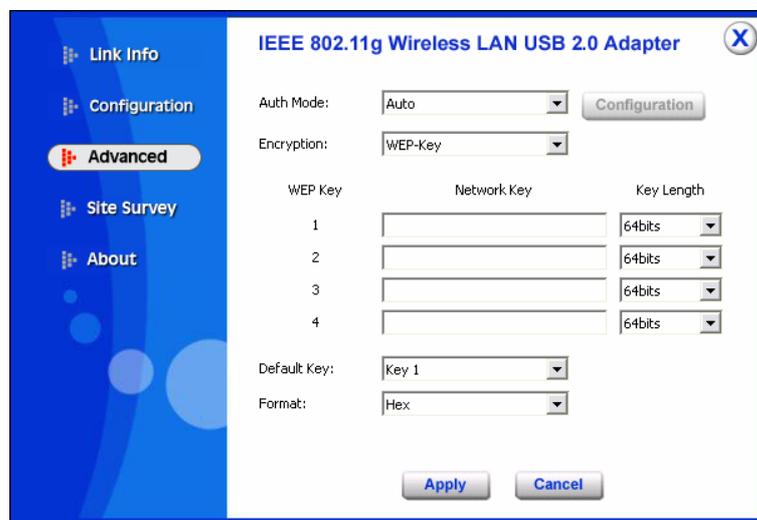
Auth. Mode: Eight options are available: Disable, Auto, Open System, Shared Key, WPA/WPA2, and WPA-PSK/WPA2-PSK. Select Auto, Disable for other authentication feature. If one of the two options is selected, it is required to select the **Encryption** mode from the next dropping list.

Shared Key/Open System

Network Key: Choose the encryption way, either in HEX or ASCII formats, and enter the password in the blank space.

Key Length, Key Format and WEP Key: If you select 64bit in Hex format, you must type 10 values in the following range (0~F, hexadecimal), or 64bit in ASCII format, you must type 5 values in the following range (0~9, A~Z and a~z Alphanumeric).

If you select 128bit in Hex format, you must type 26 values (0~F, hexadecimal), or 128bit in ASCII format, you must type 13 values in the following range (0~9, A~Z and a~z Alphanumeric).

WPA-PSK / WPA2-PSK

Click the **Configuration** button than enter a Passphrase in the Define WPA PSK dialog box. This Passphrase must be the same on each computer that is connected to the wireless network.

WPA / WPA2
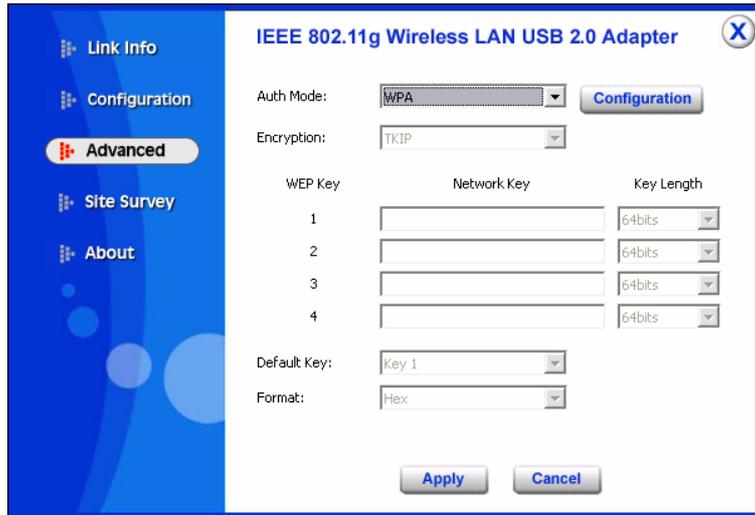
WPA2 (Wi-Fi Protected Access 2) is the second generation of WPA; providing enterprise and consumer Wi-Fi user with a high level of assurance that only authorized user can access their wireless networks. WPA2 is based on the final IEEE802.11i amendment to the 802.11 standard and is eligible for FIPS 140-2 compliant. WPA2 is select, configuration is enabled. Please click the "**Certificate**" button. The below window is pop up. Then, please select the certificate that user wants to use and enter the server name and login name.
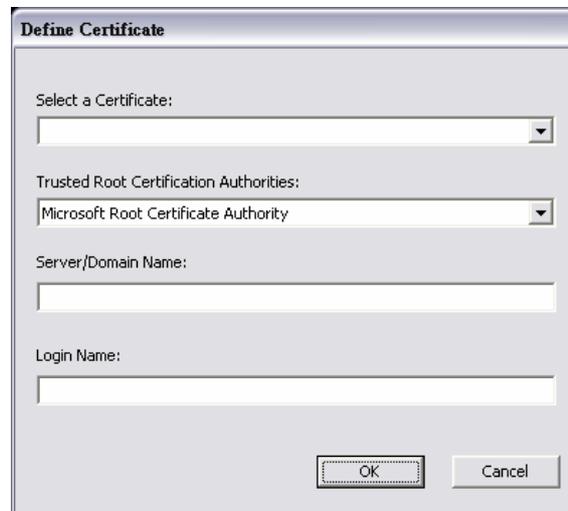
Site Survey

Available Network

The screen shows all the Wireless LAN devices around your Wireless LAN USB Adapter. The information of the wireless devices includes the SSID, MAC Address, Channels, Signal, the Security type and the Network mode.

You can click the "**Refresh**" button to find the new wireless LAN devices, and double-click the device to choose the wireless station that you want to connect with.
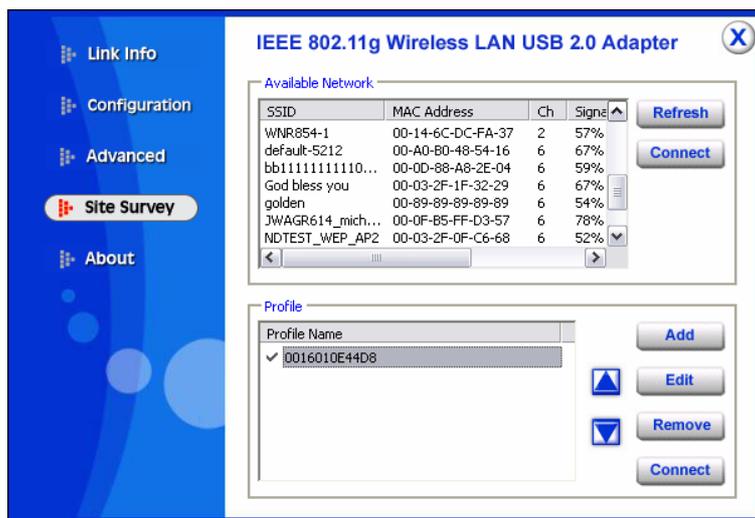
Profile

Add: Click "**Add**" to create a new profile, set the related values such as Profile name, SSID, Wireless Mode and Security settings than click "Apply" to save the profile.

Edit: Click "Edit" to modify existing profile, modify the settings than click "**Apply**" to save the profile.

Remove: Choose a profile name in the "Available Profiles" and click "Remove" to remove the existing profile.

Connect: Choose a profile name in the "Available Profiles" and click "Connect" to activate the existing profile.

About

The About section shows you the 802.11g Wireless USB 2.0 Adapter information, it shows MAC address, Utility Version, Driver Version, Regulatory Domain.
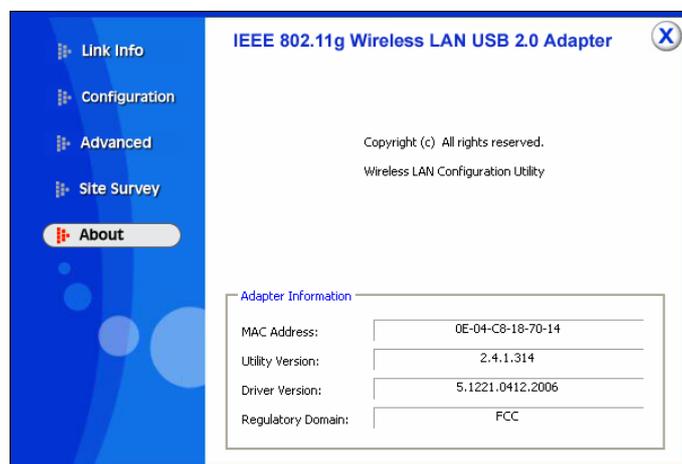
TECHNICAL SPECIFICATIONS

General	
Standards	IEEE 802.11g, USB 2.0, 1.1, 1.0
Radio Technology	IEEE 802.11b -- DSSS IEEE 802.11g -- OFDM
Data Transfer Rate	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54Mbps (auto sense)
Receiver Sensitivity	54Mbps: Typical -68dBm @ 10% PER (Packet Error Rate) 11Mbps: Typical -83dBm @ 8% PER (Packet Error Rate)
Frequency Range	2412 MHz – 2462 MHz (FCC) 2412 MHz – 2472 MHz (ETSI) 2400 MHz – 2497 MHz (Japan)
Modulation Schemes	BPSK/QPSK/CCK/OFDM
Channels	1 ~ 11 channels (FCC) 1 ~ 13 channels (ETSI) 1 ~ 14 channels (Japan)
Media Access Protocol	CSMA/CA with ACK
Security	64/128bits WEP, WPA, WPA2, WPA-PSK, WPA2-PSK
Diagnostic LED	LNK (Link status)
Antenna	Internal printed antenna
Physical and Environmental	
Driver Support	Windows 98se, Windows 2000, Windows ME, Windows XP
Continuous Current Consumption	280mA typ. for receive mode, 410mA typ. for transmit mode
Temperature	Operating: 0° C ~ 40° C, Storage: -10° C ~ 70° C
Humidity	10% ~ 95% RH, no condensation
Dimensions	77 x 26 x 12 mm (W x H x D)
Certifications	FCC Part 15.247 for US, ETS 300 328 for Europe,