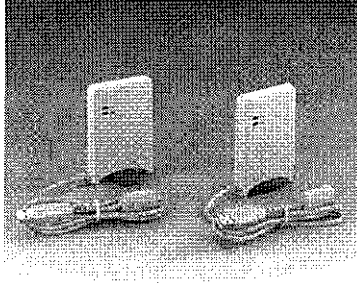


IEEE 802.11b
WLAN USB 1.1 Adapter



User Guide

Regulatory notes and statements

Wireless LAN, Health and Authorization for use

Radio frequency electromagnetic energy is emitted from Wireless LAN devices. The energy levels of these emissions however are far much less than the electromagnetic energy emissions from wireless devices like for example mobile phones. Wireless LAN devices are safe for use frequency safety standards and recommendations. The use of Wireless LAN devices may be restricted in some situations or environments for example:

- On board of airplanes, or
- In an explosive environment, or
- In case the interference risk to other devices or services is perceived or identified as harmful

In case the policy regarding the use of Wireless LAN devices in specific organizations or environments (e.g. airports, hospitals, chemical/oil/gas industrial plants, private buildings etc.) is not clear, please ask for authorization to use these devices prior to operating the equipment.

Regulatory Information/disclaimers

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The Manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, of the substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

USA-FCC (Federal Communications Commission) statement

This device complies with Part 15 of FCC Rules.

Operation is subject to the following two conditions:

1. This device may not cause interference, and

2. This device must accept any interference, including interference that may cause undesired operation of this device.

FCC Radio Frequency Exposure statement

This Wireless LAN radio device has been evaluated under FCC Bulletin OET 64C and found compliant to the requirements as set forth in CFR 47 Sections 2.1091, 2.1093, and 15.247 (b) (4) addressing RF Exposure from radio frequency devices. The radiated output power of this Wireless LAN device is far below the FCC radio frequency exposure limits. Nevertheless, this device shall be used in such a manner that the potential for human contact during normal operation is minimized.

When nearby persons has to be kept to ensure RF exposure compliance. In order to comply with RF exposure limits established in the ANSI C95.1 standards, the distance between the antennas and the user should not be less than 20 cm.

FCC 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. If not installed and used in accordance with the instructions, it 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 and correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the distance between the equipment and the receiver.
3. Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

4. Consult the dealer or an experienced radio/TV technician for help.

Export restrictions

This product or software contains encryption code which may not be exported or transferred from the US of Canada without an approved US Department of Commerce export license.

Safety Statements

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Safety Information

Your device contains a low power transmitter. When device is transmitted it sends out radio frequency (RF) signal.

CAUTION: To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna. Unauthorized antenna, modification, or attachments could damage the transmitter and may violate FCC regulations.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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INTRODUCTION

Congratulations on your purchase of this IEEE 802.11b WLAN USB Adapter. This manual helps to get familiar with the WLAN USB 1.1 Adapter. This manual contains detailed instructions in operation of this product. Please keep this manual for future reference.

With a WLAN (IEEE 802.11b) USB 1.1 Adapter, a desktop or laptop computer can communicate with another computer in a wireless way. Easy-to-use utilities are bundled with WLAN USB Adapter for configuration, monitoring, and diagnosis purposes.

WLAN USB Adapter can wirelessly transmit and receive data, minimizing the need for wired connections, at a speed of up to eleven megabit per second. With WLAN USB Adapter, you can locate your PC wherever you want without wires and cables.

WLAN USB 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 WLAN USB 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 WLAN USB 1.1 Adapter and its features.

Unpacking and Setup. Helps you get started with the basic installation of the WLAN USB Adapter.

Identifying External Components. Describes the LED indicators of the Adapter.

Connecting the WLAN. Tells how you can connect to the network.

Technical Specifications. Lists the technical (general, physical, environmental and performance) specifications of the WLAN USB 1.1 Adapter.

UNPACKING AND SETUP

This chapter provides unpacking and setup information for the WLAN USB Adapter.

Unpacking

Open the box of the WLAN USB Adapter and carefully unpack it. The box should contain the following items:

- ◆ One 802.11b WLAN USB 1.1 Adapter
- ◆ One CD-Rom
- ◆ Quick Installation Guide

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

Setup

The setup of the WLAN USB 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

POWER (PWR)

The power indicator lights green when the WLAN USB Adapter is receiving power, otherwise, it is off.

LINK (LNK)

The indicator lights green when the WLAN is connected to a network successfully.

The indicator blinks green while the WLAN is scanning the wireless device.

Check the installation

The control LEDs of the WLAN USB Adapter are clearly visible and the status of the network link can be seen instantly:

1. Once the device is connected to the USB port, the Power LEDs of the WLAN USB Adapter will light up indicating a normal status.
2. When connected to the USB port and the driver was installed, the Link LEDs will start blinking, it means that the device is starting to scanning a 802.11b wireless device near the WLAN USB Adapter.
3. While the WLAN USB Adapter linked up to the Access Point or it was set to Ad-hoc mode, the Link LED will light up.

SOFTWARE INSTALLATION

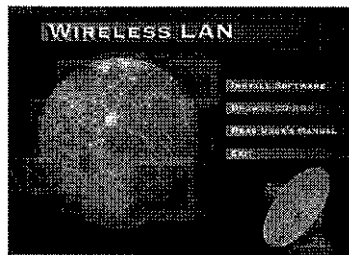
This section will lead you through the driver and utility installation of WLAN USB Adapter.

Windows 98/ME/2000/XP Driver Installation

1. Once you plug in the WLAN USB Adapter to your computer system, the Windows OS will detect a device and need to find the driver.
 2. Place you CD-Rom to your CD-Rom Drive, as the Windows operating system is detecting the driver, refer to the "D:\USB\Drivers\Netvusbr.inf " in the box (D:\ will depends on where the CD-ROM drive is located) and click **OK**.
-

Windows 98/ME/2000/XP WLAN Utility Installation

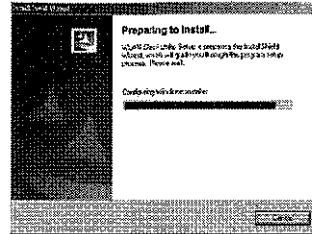
1. When plugging in the WLAN USB Adapter into the computer's USB port Insert the WLAN USB Adapter CD ROM into computer and the CD will automatically runs a setup menu. Then select ***Install Software*** from the menu. Or proceed manually using the Windows Start → Run → type " D:\USB\Setup.exe " in the box (D:\ will depends on where the CD-ROM drive is located) and click **OK**.



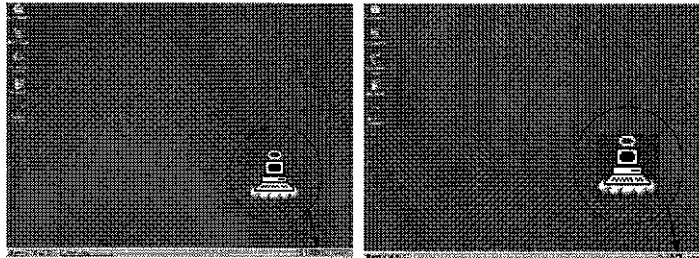
Note: When install the software before plugging in the WLAN USB Adapter, it will install the driver automatically to the computer system.

The Install Shield tool will help you to setup the WLAN USB utility.

Be noted that the Windows XP have it's own Wireless Utility, you can either use the utility of Windows XP or the provided utility.



2. This process asks you to install the 802.11 Wireless LAN into the right folder.
3. The **Select Program Folder** dialog box allows you to accept the default application program folder name or to assign a name of your preference.
4. Restart your computer, then the WLAN USB Adapter Client Utility is ready to use.
5. After the restart, you may see the right side bottom of the computer screen, there was an utility icon in blue color, it can be sure that the WLAN USB Adapter is ready, otherwise, it is in red color, that means the USB adapter is not linking to an Access Point.



WLAN Utility Setting

WLAN USB Adapter has its own management utility software. Users can control all functions provided by the application named Wireless LAN Monitor Utility. The Utility icon will appear in the taskbar by clicking the Wireless LAN Monitor Utility shortcut on your desktop. The monitor Utility includes seven tabs: Monitor, Statistics, Site Survey, Encryption, Advanced, Profiles and Info.

In Ad Hoc mode, the Channel and SSID must be the same among stations so that the computers can communicate within the local LAN properly. Moreover, all connected computers should have the same net ID and subnet ID, you can follow the procedure below to check whether you have the same net ID and subnet ID among stations:

1. Right-click on the Network Neighborhood on your desktop and then click on "Properties".
2. In Configuration, click on "TCP/IP -> Wireless USB Adapter" and then click on "Properties".
3. Click on "IP Address".
4. Click on "Specify an IP Address" and make sure having the same net ID and subnet ID of all the connected computers.

Monitor Setting

➤ Operating Mode:

If you want to connect with Access Point, please set the operating mode as "Infrastructure" mode. If you have more stations and just

want to set them as a local network, set the operating mode as " Ad-Hoc" mode.

➤ Channel:

It shows radio channel numbers that used for networking. The Channel number must be the same among the stations, so that computers can communicate within the local LAN. It can be changed only under the Ad-Hoc mode. If the Mode was set to Infrastructure mode, this parameter will not be active.

➤ SSID:

SSID is the group name that will be shared by every member of your wireless network .You will only be able to connect with an Access Point (AP), which has the same SSID. Be noted that when you are in the Ad-hoc mode, the SSID must be the same among the stations, so that computers can communicate within the local LAN properly.

➤ Tx Rate:

You can choose one of the transmission rates as follows, 1Mbps, 2Mbps, 5.5Mbps, 11Mbps, and Fully Auto.

➤ Int. Roaming:

When enable the International Roaming function, it allows users of WLAN USB Adapter to travel to a foreign country to use their channels..

➤ Radio:

This function is to turn on or off the WLAN USB Adapter.

➤ Other information:

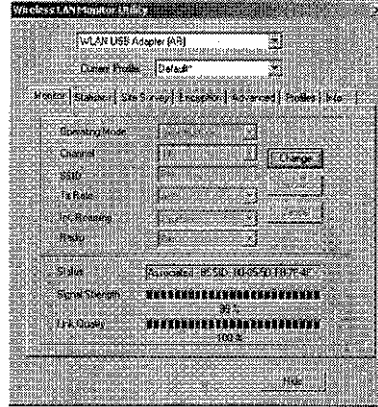
The Signal Strength and Link Quality will be shown in the screen below under the Status of your USB adapter,

➤ Status:

The Status will show the “OK” if you select “Ad Hoc mode” in the Operating Mode. Besides, the Status will show BSSID of AP that you associated if you select the “Infrastructure “ in the “Operating Mode”.

There are three processes once you want to change the parameter in the “Setting”:

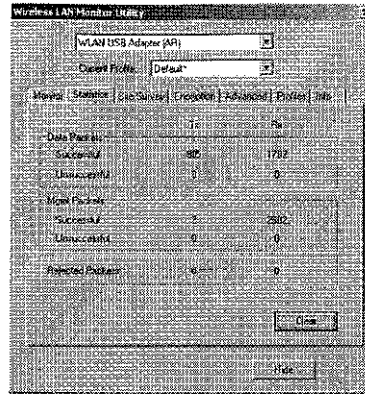
1. Click the “Change” button first if you want to change any of the parameter.
2. Choose the parameter you wish to change.
3. After changing the parameter, please click on the “Submit” button to finish.



Statistics

The following screen shows various statistics including the Data Packets, Management Packets and Rejected Packets in transmitting and receiving status.

You can click the Clear button to reset Statistics Tab.

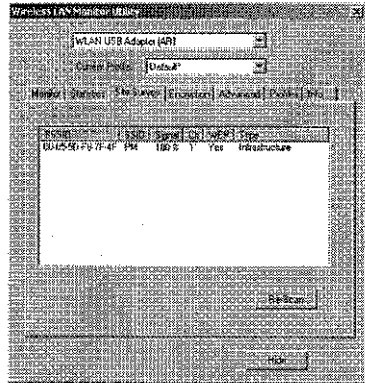


Site Survey

The screen shows all the messages of Access Point around your Wireless USB Adapter device. The messages of Access Point include BSSID, SSID, Signal, the Channel used by AP, and enabled the Encryption AP or not.

You can click the Rescan button to find the new AP.

You can double-click the BSSID to choose the AP that you want to connect with.



Encryption

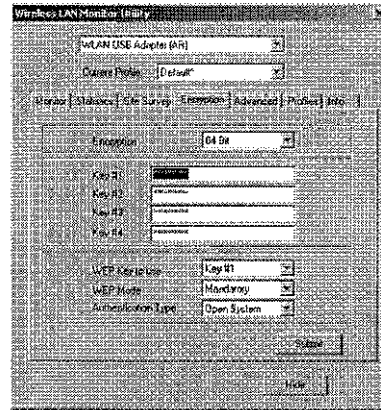
You may desire an additional measure of security in your wireless network, which can be achieved by using the Encryption function.

➤ WEP Key to use:

You can choose one of the four Keys you typed (Key1~Key4) as the WEP Key.

➤ WEP Mode:

If you set the Mode to Optional, your device can communicate with the stations with disabled WEP. Otherwise, if you set Mode to Mandatory, then your device cannot communicate with the stations with disabled WEP.



➤ Authentication Type:

Open System Authentication algorithm is mostly used. In Shared Key Authentication algorithm, you must have WEP on, the algorithm should be different, and some steps use packets with encryption by transferring a challenge text. In order to choose which authentication algorithm will be used, you must know which one the AP supports first. Most AP only supports Open System.

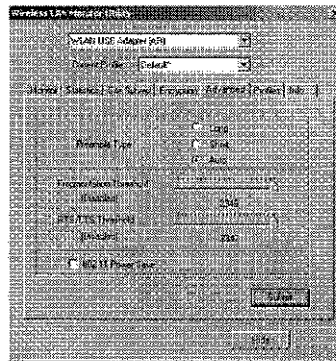
Caution: WEP Key needs to be the same for the stations which you want to join.

Follow the steps below to set your WEP:

1. Select the Encryption type: 64bit or 128bit.
2. Type WEP Key: If you select 64bit, you must type 10 values in the following range (0~F) from Key1 to Key 4 space. Besides, if you select 128 bit, you must type 26 values (0~F) in each WEP Key from Key 1 to Key 4. Please note that all the WEP Keys (key1~key4) have to be filled.
3. Select WEP Key: Select one of WEP Key from Key1 to Key4 for using.
4. Choose the WEP Mode: Mandatory for communicating with all stations having WEP enabled or Optional for WEP disabled.
5. Select the Authentication Type: Open System or Shared Key.
6. After all the settings are completed, click on Submit button to save the setting.

Advanced

The screen shows the advanced setting of the Wireless LAN Monitor Utility, and it includes Preamble Type, Fragmentation Threshold, and RTS / CTS Threshold. We suggest to use the default settings: Preamble Type: Long.



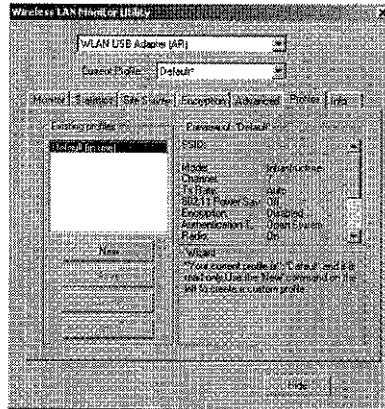
Click on Submit button to save all the settings.

➤ 802.11 Power Save

You can enable this mode as 802.11 Power Save to set your WLAN USB Adapter as power saving mode.

Profile

The screen shows the existing profile, showing the WLAN USB Adapter's SSID, Operating Mode, Channel, Tx Rate, 802.11 Power Save, Encryption, Authentication Type, Radio, Int. Roaming, Preamble type, Fragmentation Threshold, RTS/RTC Threshold, WEP Mode and WEP Key status.



You can create your profile name, just click the "New" button and type the profile that you want to use, then save the profile name you want to use, otherwise, it will be set to default.

Use Delete button for deleting the profile name and Rename button for renaming the profile name.

Info.

The screen shows the version of Driver, Firmware, MAC address and Application for WLAN USB Adapter Utility / Driver.

