Linksys Wireless-B USB Network Adapter v3.0

User's Manual

Rev Draft

Regulatory compliance

FCC Warning

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.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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.

IMPORTANT NOTE:

Federal Communications Commission (FCC) Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

This transmitter must not be co-located or operation in conjunction with any other antenna or transmitter.

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.

About this manual

This User's Manual describes how to install and operate your USB Wireless Network Adapter. Please read this manual before you install the product.

This manual includes the following topics:

➢ Product description and features.

➢ Hardware installation procedure.

➢ Software installation procedure.

➢ FAQ

Table of Contents

Chapter 1 - Introduction

Thank you for purchasing the USB Wireless Network Adapter. This high-speed USB Wireless Network Adapter provides you with an innovative wireless networking solution. The Adapter is easy to set up and use. With this innovative wireless technology, you can share files and printers on the network—without inconvenient wires! Now you can carry the LAN in your pocket!

The Adapter is a network adapter with a rate of 1, 2, 5.5, and 11 Mbps operating in the ISM band using Direct Sequence Spread Spectrum (DSSS) transmission implementing the IEEE 802.11b standard. This adapter provides Device Drivers for Windows 98, Windows ME, Windows 2000 and Windows XP. It also provides tools for the configuration of the adapter. The tool, as well as the installation steps of the plug-and-play procedure for the Microsoft Windows 98, Windows ME, Windows 2000 and Windows XP operating systems, is described in this document.

Features

The USB Wireless Network Adapter offers compliance with the IEEE 802.11b specification. This feature allows them to communicate with other wireless devices that support the standard. Features of the adapter are:

- **Uses 2.4GHz frequency band, which complies with worldwide requirement**
- **Wireless interface following the IEEE 802.11b standard**
- **Using Universal Serial Bus (USB) interface**
- **Enciphering/deciphering of wireless data by the implementation of the WEP algorithm**
- **Wire-free access to networked resources from anywhere beyond the desktop**
- **Allows users move between Access Points without resetting their connection reconfiguration**
- **Delivers data rate up to 11 Mbps**
- **Supports 11, 5.5, 2, and 1 Mbps rates**
- **Provide USB Wireless Network Adapter Configuration utility**
- **Antenna is built in to the Adapter with LEDs indicating Power and Link**
- **Supports most popular operating systems: Windows 98/ME/2000 & Windows XP**

What is Wireless LAN?

Wireless Local Area Network (WLAN) systems offer a great number of advantages over traditional wired systems. WLAN is flexible and easy to setup and manage. They are also more economical than wired LAN systems.

Using radio frequency (RF) technology, WLAN transmit and receive data through the air. WLAN combine data connectivity with user mobility. For example, users can roam from a conference room to their office without being disconnected from the LAN.

Using WLAN, users can conveniently access-shared information, and network administrators can configure and augment networks without installing or moving network cables.

WLAN technology provides users with many convenient and cost saving features:

- **Mobility:** WLAN provide LAN users with access to real-time information anywhere in their organization, providing service opportunities that are impossible with wired networks.

- **Ease of Installation:** Installing is easy for novice and expert users alike, eliminating the need to install network cables in walls and ceilings.

- **Scalability**: WLAN can be configured in a variety of topologies to adapt to specific applications and installations. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to full infrastructure networks of thousands of users roaming over a broad area.

Wireless LAN Modes

Wireless LANs can be configured in one of two ways:

Ad-hoc Networking	Also known as a peer-to-peer network, an ad-hoc network is one that allows all workstations and computers in the network to act as servers to all other users on the network. Users on the network can share files, print to a shared printer, and access the Internet with a shared modem. However, with ad-hoc networking, users can only communicate with other wireless LAN computers that are in the wireless LAN workgroup, and are within range.
Infrastructure Networking	Infrastructure networking differs from ad-hoc networking in that it includes an access point. Unlike the ad-hoc structure where users on the LAN contend the shared bandwidth, on an infrastructure network the access point can manage the bandwidth to maximize

	bandwidth utilization.
	Additionally, the access point enables users on a wireless LAN to access an existing wired network, allowing wireless users to take advantage of the wired networks resources, such as Internet, email, file transfer, and printer sharing.
	Infrastructure networking has the following advantages over ad-hoc networking:
	• **Extended range:** each wireless LAN computer within the range of the access point can communicate with other wireless LAN computers within range of the access point.
	• **Roaming:** the access point enables a wireless LAN computer to move through a building and still be connected to the LAN.
	• **Wired to wireless LAN connectivity:** the access point bridges the gap between wireless LANs and their wired counterparts.

Notes on Wireless LAN Configuration

When configuring a wireless LAN (WLAN), be sure to note the following points:

- Optimize the performance of the WLAN by ensuring that the distance between access points is not too far. In most buildings, WLAN cards operate within a range of 100 ~ 300 feet, depending on the thickness and structure of the walls.

- Radio waves can pass through walls and glass but not metal. If there is interference in transmitting through a wall, it may be that the wall has reinforcing metal in its structure. Install another access point to circumvent this problem.

- Floors usually have metal girders and metal reinforcing struts that interfere with WLAN transmission.

This concludes the first chapter. The next chapter deals with the hardware installation of the Adapter.

Chapter 2 - Hardware Installation

This chapter covers connecting your USB Wireless Network Adapter to USB port of desktop / notebook PC.

Package Contents

Please make sure that items below are included on package.
- ✓ One USB Wireless Network Adapter
- ✓ One USB cable
- ✓ One CD containing drivers and documentation
- ✓ One Quick Installation Guide

System Requirements for the Adapter

- ➢ Operating System: MS Windows 98/ME/2000 & Windows XP
- ➢ Desktop PC or notebook PC with CD-ROM drive
- ➢ One free USB port
- ➢ Pentium-Class 90MHz or higher

Connecting the USB Adapter

NOTE: These instructions apply to most desktop/notebook computers. For detailed information on inserting USB adapters into your desktop/notebook PC, consult the desktop/notebook PC User' s Manual.

The Adapter's USB port is located on the back of the Adapter.

And your Adapter comes with an USB cable that has two different types of connectors – type A & type B. Type A connector of the USB cable plugs into your notebook/desktop PC's USB port. And type B connector of the USB cable connects to the USB port of your USB Wireless Network Adapter.

USB Type A   **USB Type B**

The following table describes the meaning of LED indicators:

LED	MEANING
POWER	Indicates that the Adapter is powered on when the LED lights up.
LINK	Indicates link status. The LED lights up while the wireless connection is linked. If the light is blinking, it is disconnected, and is scanning the wireless network.

Disconnecting the USB Adapter

In Windows 98/ME/2000/XP operating systems, you do not have to power down your notebook/desktop PC to remove the Adapter. The Adapter is hot swappable—you can remove the Adapter when your notebook/desktop PC is powered on.

WARNING:	*Do not remove the USB Wireless Network Adapter when a data transmission is taking place. Exit your communications program normally, stop the Adapter if necessary, and then remove the adapter.*

Chapter 3 – Driver Installation for Windows

The following sections cover the USB Wireless Network Adapter driver installation in the Windows 98/ME/2000/XP operating systems.

Note!	You have to install your hardware first before you begin to install the drivers.

Driver installation for Windows 98

Follow the steps below to install the USB Wireless Network Adapter drivers for Windows 98.

1. Connecting the USB Wireless Network Adapter to the USB port of a notebook or desktop PC. (Refer to Chapter 2 – Hardware installation.)

2. After Windows 98 detects the USB Wireless Network Adapter, the *Add New Hardware Wizard* window appears. Clicks **Nex**t to continue the installation.

3. A screen appears prompting you to select an installation method. Select **Search for the best driver for your device. (Recommended)** and click **Next** to continue.


4. Ensure that the **CD-ROM drive** is selected. Inserts the driver CD-ROM into your CD-ROM drive and clicks **Next** to continue.

5. The following screen appears showing the driver search result. Click **Next** to continue the installation.

6. Windows 98 copies files to your hard disk. The following screen will appear to inform you when the software installation has finished. Click **Finish** to finish the installation.
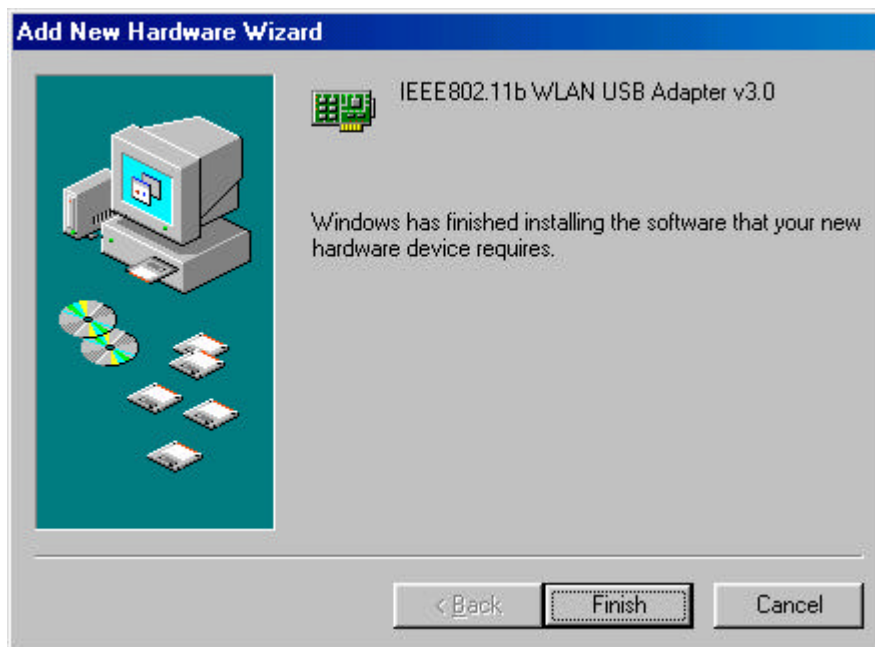
7. The following screen will ask you to restart your computer to finish the installation. Click **Yes** to restart your computer to make the hardware setting up available.
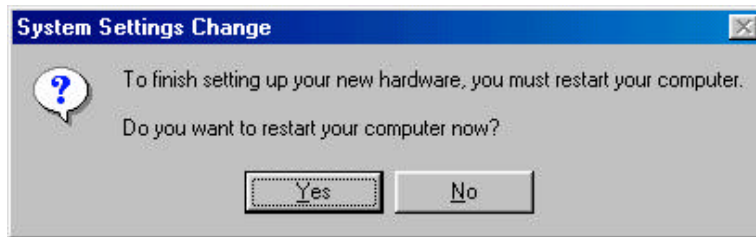
Note!	*In most cases, Windows will automatically copy all of the files needed for networking. If Windows asks you for the files and prompts you to input the path to the files. Follow the instructions on your screen, and then click **OK** to continue.*

After you have rebooted the computer, system will start to install Wireless utility automatically, please refer to procedures at Chapter 4.

Driver installation for Windows 2000

Follow the steps below to install the USB Wireless Network Adapter drivers for Windows 2000.
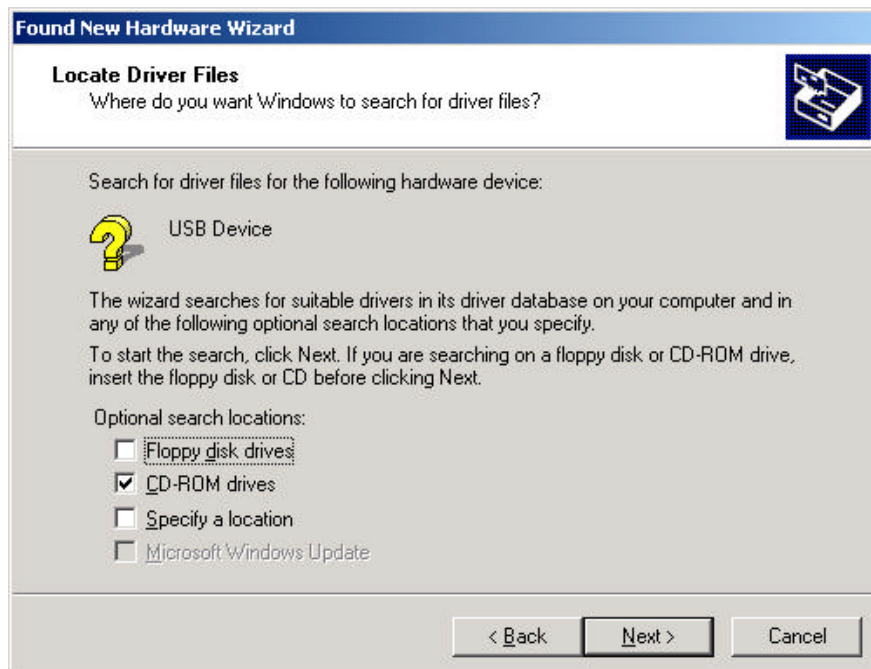
1. Connecting the USB Wireless Network Adapter to the USB port of a notebook or desktop PC. (Refer to Chapter 2 – Hardware installation.)

2. After Windows 2000 detects the USB Wireless Network Adapter, the *Found New Hardware Wizard* window appears. Click **Next** to start the installation.

3. A screen appears prompting you to select an installation method. Select **Search for a suitable driver for my device (recommended)** and click **Next** to continue.
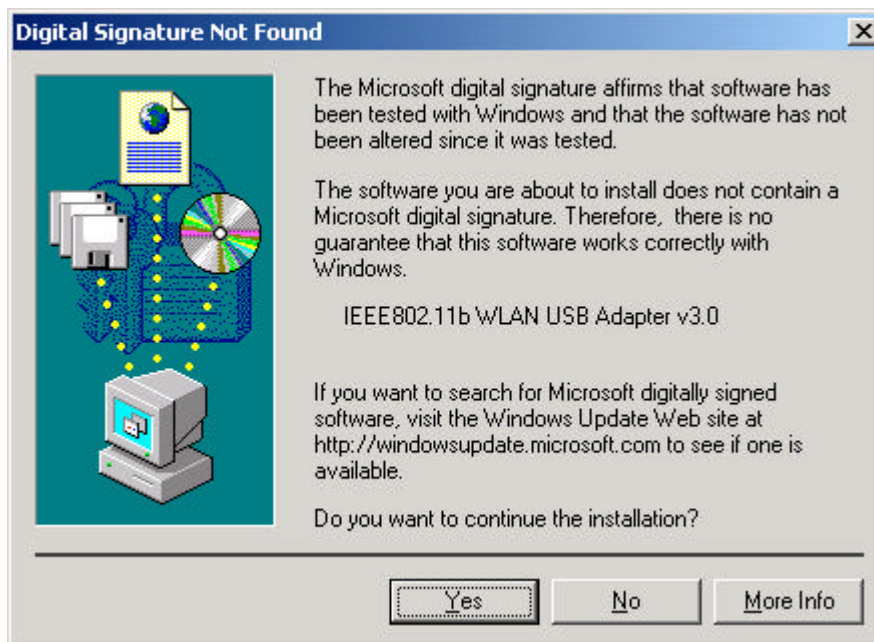

4. Ensure that the **CD-ROM driver** is selected and insert the driver CD-ROM into your CD-ROM drive and click **Next** to continue.
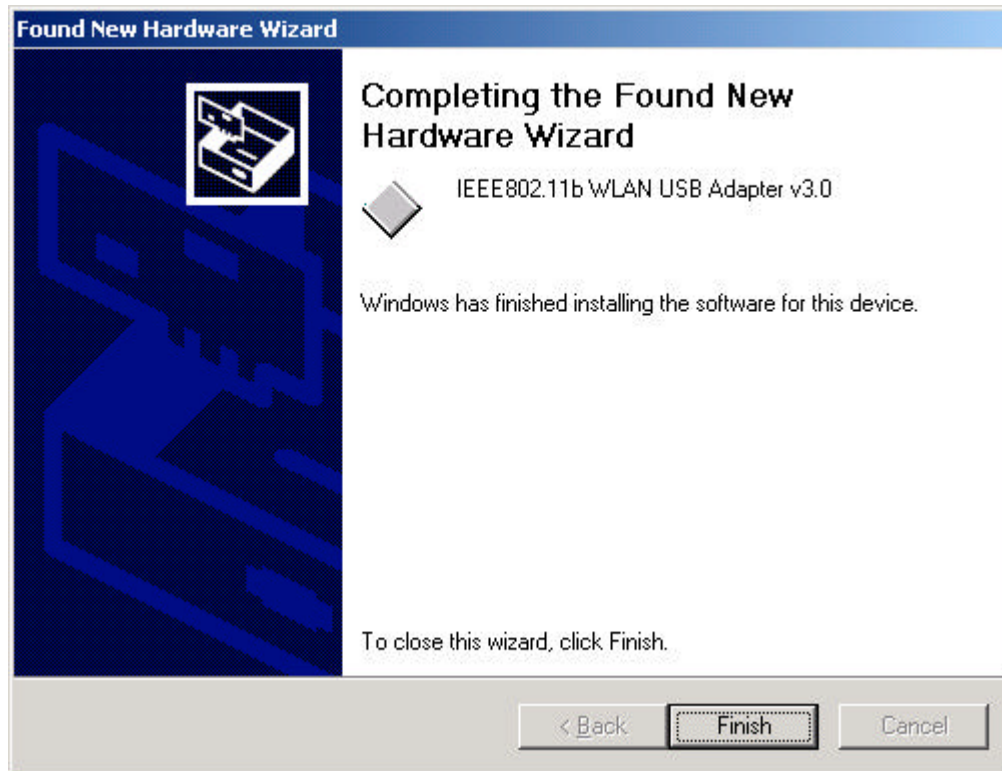
5. The following screen appears showing the driver search result. Click **Next** to continue the installation.
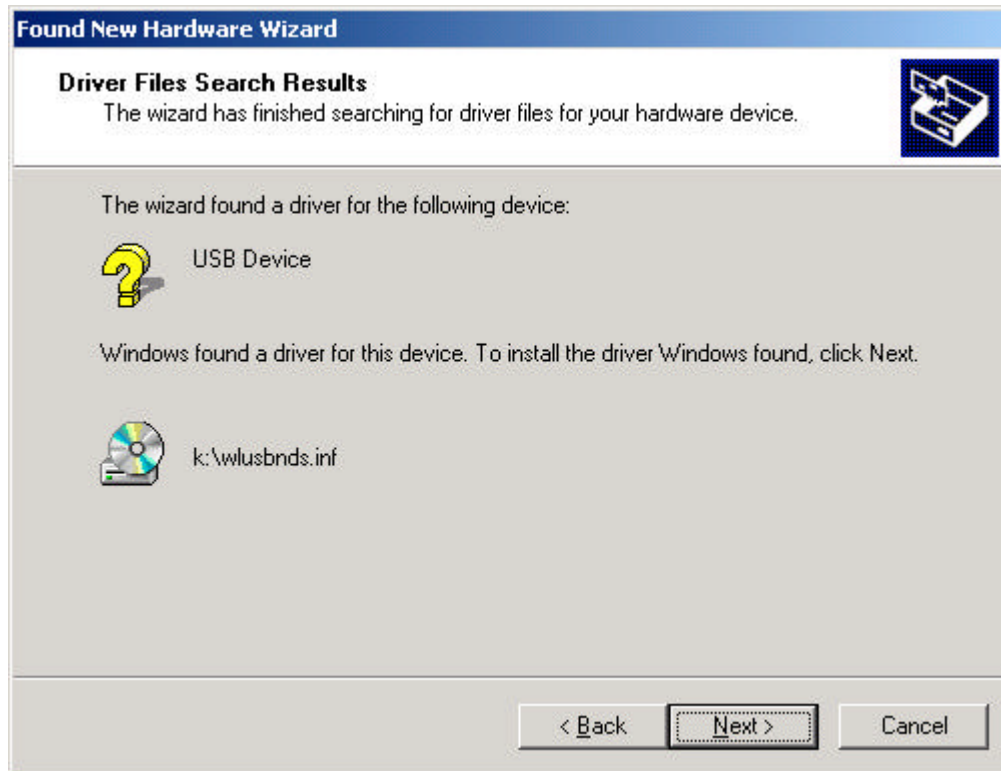
6. The following screen appears. Click **Yes** to continue

7. The Windows has finished installing software for the device. Click **Finish** to finish the installation.

Then system will start to install Wireless utility automatically. Please refer to procedures at Chapter 4.
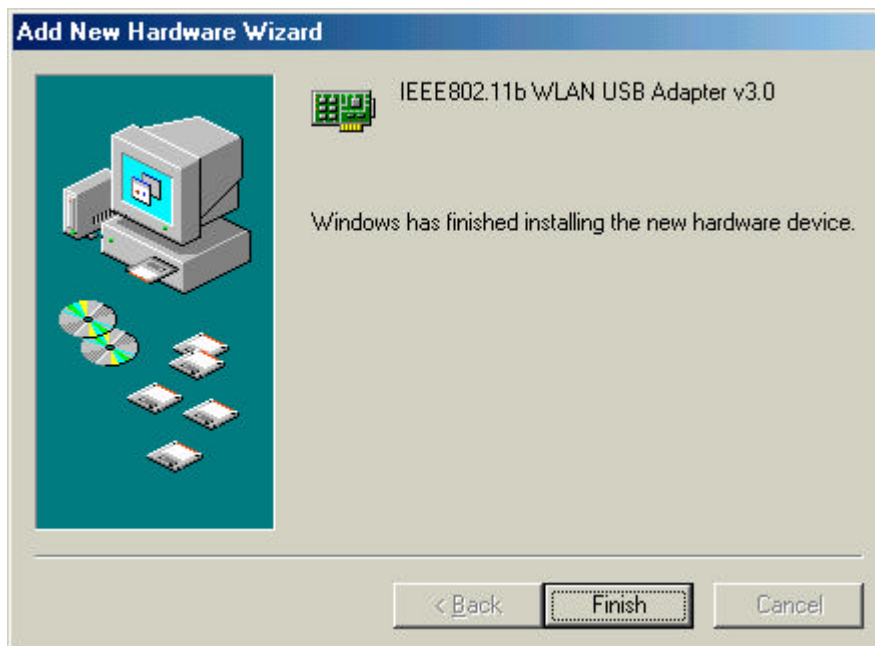
Driver installation for Windows ME

Follow the steps below to install the USB Wireless Network Adapter drivers for Windows ME.
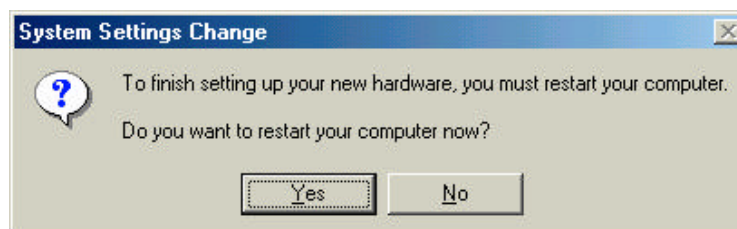
1. Connecting the USB Wireless Network Adapter to the USB port of a notebook or desktop PC. (Refer to Chapter 2 – Hardware installation.)

2. After Windows ME detects the USB Wireless Network Adapter, the *Add New Hardware Wizard* window appears. Select **Automatic search for a better driver (Recommended)** and insert the driver CD-ROM into CD-ROM drive and click **Next** to continue.

3. The system will find the setup files and follow the instruction to copy files to your hard disk. The following screen will appear when the software installation has finished. Click **Finish** to finish the installation.

4. The following screen will ask you to restart your computer to finish the hardware setting up. Click **Yes** to restart your computer to make the hardware setting up available.

Note!	*In most cases, Windows will automatically copy all of the files needed for networking. If Windows asks you for the files and prompts you to input the path to the files. Follow the instructions on your screen, and then click **OK** to continue.*

After you have rebooted the computer, system will start to install Wireless utility automatically, please refer to procedures at Chapter 4.

Driver installation for Windows XP

Follow the steps below to install the USB Wireless Network Adapter drivers for Windows XP.
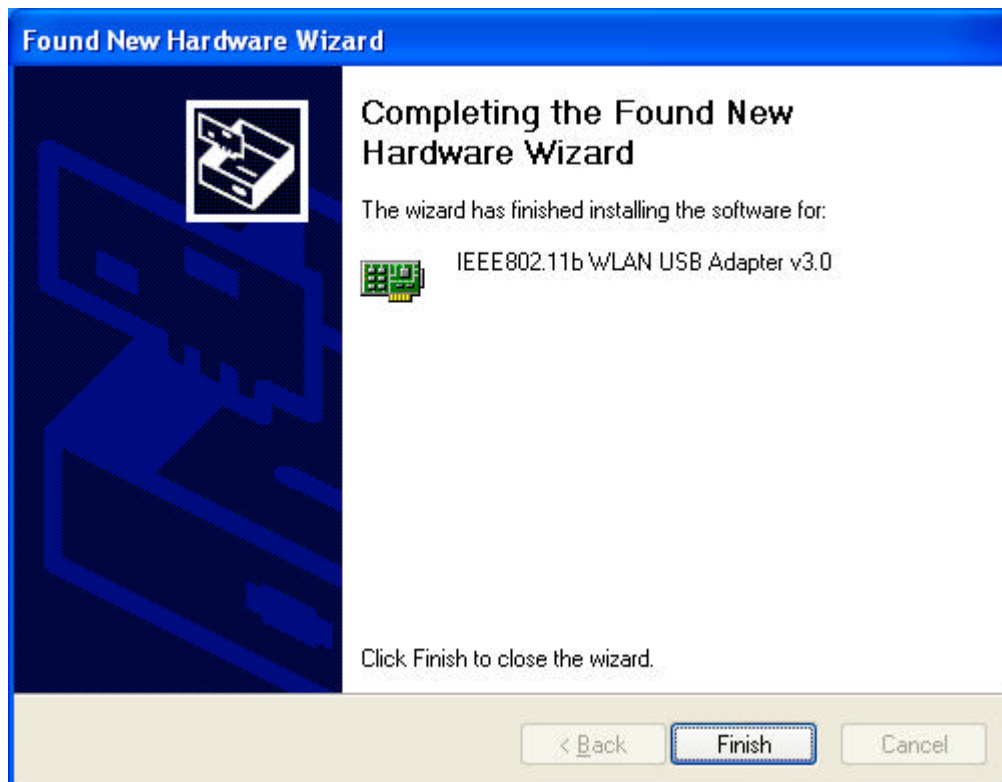
1. Connecting the USB Wireless Network Adapter to the USB port of a notebook or desktop PC. (Refer to Chapter 2 – Hardware installation.)

2. After Windows XP detects the USB Wireless Network Adapter, the *Found New Hardware Wizard* window appears. Select **Install the software automatically (Recommended)** and insert the driver CD-ROM into CD-ROM drive and click **Next** to continue.

3. Click **Continue Anyway** to continue the installation.

4. The Windows has finished installing software for the device. Click **Finish** to finish the installation

Then system will start to install Wireless utility automatically. Please refer to procedures at Chapter 4.

Chapter 4 – Installing and Using the

Wireless Utility

The following sections cover the USB Wireless Network Adapter utility installation and configuration.

Installation in Windows

After you have installed the USB Wireless Network Adapter driver and have rebooted the computer, system will start to install Wireless utility automatically. Please follow the steps below to install the wireless utility.

1. Once you see the following screen, click **Next** to continue.