

Wireless-G USB Network Adapter



Use this Guide to install: **WUSB54G**

User Guide

 **LINKSYS**[®]

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Linksys P.O. Box 18558, Irvine, CA 92623.

SAFETY AND REGULATORY NOTICES

FCC STATEMENT

The Wireless-G USB Network Adapter has been tested and found to comply with the specifications for a Class B digital device, pursuant to 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.

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 according to 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 is found 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 or devices
- Connect the equipment to an outlet other than the receiver's
- Consult a dealer or an experienced radio/TV technician for assistance

FCC Caution: Any change or modification to the product not expressly approved by Linksys could void the user's authority to operate the device.

FCC RF Radiation Exposure Statement

To comply with the FCC and ANSI C95.1 RF exposure limits, the antenna(s) for this device must comply with the following:

- Access points with 2.4 GHz or 5 GHz integrated antenna must operate with a separation distance of at least 20 cm from all persons using the cable provided and must not be co-located or operating in conjunction with any other antenna or transmitter.

End-users must be provided with specific operations for satisfying RF exposure compliance.

Note: Dual antennas used for diversity operation are not considered co-located.

Canadian Department of Communications Industry Canada (IC) Notice

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 et CNR-210 du Canada.

"To prevent radio interference to the licensed service, this device is intended to be operated indoors and away from windows to provide maximum shielding. Equipment (or its transmit antenna) that is installed outdoors is subject to licensing."

" Pour empêcher que cet appareil cause du brouillage au service faisant l'objet d'une licence, il doit être utilisé à l'intérieur et devrait être placé loin des fenêtres afin de fournir un écran de blindage maximal. Si le matériel (ou son antenne d'émission) est installé à l'extérieur, il doit faire l'objet d'une licence. "

EC DECLARATION OF CONFORMITY (EUROPE)

Linksys Group declares that the Instant Wireless® Series products included in the Instant Wireless® Series conform to the specifications listed below, following the provisions of the European R&TTE directive 1999/5/EC, EMC directive 89/336/EEC, and Low Voltage directive 73/23/EEC:

For 2.4 GHz devices with 100 mW radios, the following standards were applied:

- ETS 300-826, 301 489-1 General EMC requirements for Radio equipment.
- EN 609 50 Safety
- ETS 300-328-2 Technical requirements for Radio equipment.

Caution: This equipment is intended to be used in all EU and EFTA countries. Outdoor use may be restricted to certain frequencies and/or may require a license for operation. Contact local Authority for procedure to follow.

Note: Combinations of power levels and antennas resulting in a radiated power level of above 100 mW equivalent isotropic radiated power (EIRP) are considered as not compliant with the above mentioned directive and are not allowed for use within the European community and countries that have adopted the European R&TTE directive 1999/5/EC and/or the CEPT recommendation Rec 70.03.

For more details on legal combinations of power levels and antennas, contact Linksys Corporate Compliance.

- Linksys Group vakuuttaa täten että Wireless-G USB Network Adapter tyyppinen laite on direktiivin 1999/5/EY, direktiivin 89/336/EEC ja direktiivin 73/23/EEC oleellisten vaatimusten ja sitä koskevien näiden direktiivien muiden ehtojen mukainen.
- Linksys Group déclare que la Wireless-G USB Network Adapter est conforme aux conditions essentielles et aux dispositions relatives à la directive 1999/5/EC, la directive 89/336/EEC, et à la directive 73/23/EEC.
- Belgique B L'utilisation en extérieur est autorisé sur le canal 11 (2462 MHz), 12 (2467 MHz), et 13 (2472 MHz). Dans le cas d'une utilisation privée, à l'extérieur d'un bâtiment, au-dessus d'un espace public, aucun enregistrement n'est nécessaire pour une distance de moins de 300m. Pour une distance supérieure à 300m un enregistrement auprès de l'IBPT est requise. Pour une utilisation publique à l'extérieur de bâtiments, une licence de l'IBPT est requise. Pour les enregistrements et licences, veuillez contacter l'IBPT.
- France F:
2.4 GHz Bande : les canaux 10, 11, 12, 13 (2457, 2462, 2467, et 2472 MHz respectivement) sont complètement libres d'utilisation en France (en utilisation intérieur). Pour ce qui est des autres canaux, ils peuvent être soumis à autorisation selon le département. L'utilisation en extérieur est soumis à autorisation préalable et très restreint.

2.4 GHz Band: only channels 10, 11, 12, 13 (2457, 2462, 2467, and 2472 MHz respectively) may be used freely in France for indoor use. License required for outdoor installations.

- Deutschland D: Anmeldung im Outdoor-Bereich notwendig, aber nicht genehmigungspflichtig. Bitte mit Händler die Vorgehensweise abstimmen.
- Germany D: License required for outdoor installations. Check with reseller for procedure to follow.
- Italia I: E' necessaria la concessione ministeriale anche per l'uso interno. Verificare con i rivenditori la procedura da seguire. L'uso per installazione in esterni non e' permessa.
- Italy I: License required for indoor use. Use with outdoor installations not allowed.
- The Netherlands NL License required for outdoor installations. Check with reseller for procedure to follow.
- Nederlands NL Licentie verplicht voor gebruik met buitenantennes. Neem contact op met verkoper voor juiste procedure.

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Chapter 1: Introduction

The Wireless-G USB Network Adapter

Connect your USB-equipped desktop or notebook computer to a wireless network at incredible speeds with the Linksys Wireless-G USB Network Adapter. By incorporating two new, blazing fast technologies -- USB 2.0 and Wireless-G -- the Adapter delivers data rates up to 54Mbps (5 times as fast as 802.11b), without the trouble of opening up the case of your desktop computer.

To install, simply plug the Adapter into any available USB port. (It's compatible with both USB 1.1 and 2.0 ports, but 2.0 will yield the fastest speeds.) It gets its power through the USB connection, so no power cord is necessary. The included Setup Wizard walks you through configuring the Adapter to your wireless network settings, step by step. The Wireless-G USB Network Adapter is also compatible with the Wireless-B (802.11b) network standard, with data rates up to 11Mbps. And your wireless communications can be protected by 128-bit encryption, so your data stays secure.

The Wireless-G USB Network Adapter's high-gain antenna lets you put your computer almost anywhere in the building, without the cost and hassle of running cables. Now you don't have to drill holes in your walls and climb through the attic or cellar to get connected to the network. Once you're connected, you can keep in touch with your e-mail, access the Internet, use instant messaging to chat with friends, and share files and other resources such as printers and hard disk storage space with other computers on the network.

So don't hassle with running cables through your house -- get connected the easy way with the Wireless-G USB Network Adapter.

Features

- Compatible with 802.11g and 802.11b (2.4GHz) Standards
- Support USB 2.0 with up to 54Mbps, High-Speed Data Transfer Rate with Automatic Fallback
- Plug-and-Play Operation Provides Easy Setup
- Supports up to 128-bit WEP Encryption Security
- Compatible with Microsoft Windows 2000 and XP

Chapter 2: Planning Your Wireless Network

Network Topology

A wireless local area network (WLAN) is exactly like a regular local area network (LAN), except that each computer in the WLAN uses a wireless device to connect to the network. Computers in a WLAN share the same frequency channel and SSID, which is an identification name for wireless devices.

Ad-Hoc versus Infrastructure Mode

Unlike wired networks, wireless networks have two different modes in which they may be set up: **infrastructure** and **ad-hoc**. An infrastructure configuration is a WLAN and wired LAN communicating to each other through an access point. An ad-hoc configuration is wireless-equipped computers communicating directly with each other. Choosing between these two modes depends on whether or not the wireless network needs to share data or peripherals with a wired network or not.

If the computers on the wireless network need to be accessed by a wired network or need to share a peripheral, such as a printer, with the wired network computers, the wireless network should be set up in **infrastructure** mode. (See Figure 2-1.) The basis of infrastructure mode centers around an *access point*, which serves

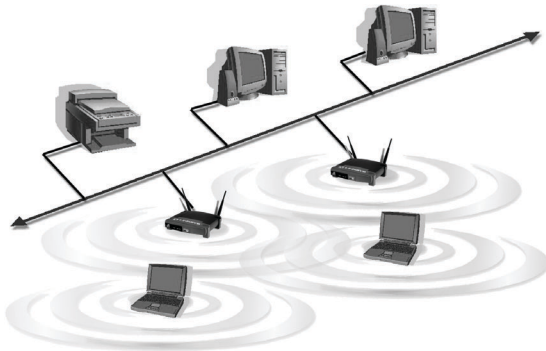


Figure 2-1

as the main point of communications in a wireless network. Access points transmit data to PCs equipped with wireless network cards, which can *roam* within a certain radial range of the access point. Multiple access points can be arranged to work in succession to extend the roaming range, and can be set up to communicate with your Ethernet (wired) hardware as well.

If the wireless network is relatively small and needs to share resources only with the other computers on the wireless network, then the **ad-hoc** mode can be used. (See Figure 2-2.) Ad-hoc mode allows computers equipped with wireless transmitters and receivers to communicate directly with each other, eliminating the need for an access point. The drawback of this mode is that, in Ad-Hoc mode, wireless-equipped computers are not able to communicate with computers on a wired network. And, of course, communication between the wireless-equipped computers is limited by the distance and interference directly between them.



Figure 2-2

Chapter 3: Getting to Know the Wireless-G USB Network Adapter

The USB Port

The Network Adapter is connected to your PC through its USB port. All power is provided through the USB connection, making a power adapter unnecessary.

The Adapter's LEDs

The Network Adapter's LEDs show you how the Adapter is functioning.

Power *Green.* This LED will light up to let you know that the Adapter is adequately powered over the USB connection.

Link *Green.* The Link LED will be lit steadily when the Network Adapter is connected to your wireless network. The LED will blink when there is wireless network traffic.

Chapter 4: Software Installation and Configuration for Windows 2000

The Wireless-G USB Network Adapter Setup Wizard will guide you through the installation procedure. The Setup Wizard will install the WLAN Monitor and driver, as well as configure the Adapter.



Important: You must run the Setup Wizard to install the software before connecting the Adapter.

1. Insert the **Setup Wizard CD-ROM** into your CD-ROM drive. The Setup Wizard should run automatically, and Figure 4-1 should appear. If it does not, click the **Start** button and choose **Run**. In the field that appears, enter **D:\setup.exe** (if "D" is the letter of your CD-ROM drive).



Figure 4-1

To install the Adapter, click the **Install** button on the *Welcome* screen. Click **User Guide** to view this User Guide or click **Exit** to exit the Setup Wizard.

2. Read the License Agreement and click the **Next** button to continue the installation. If you click the **Cancel** button, you will end the installation.

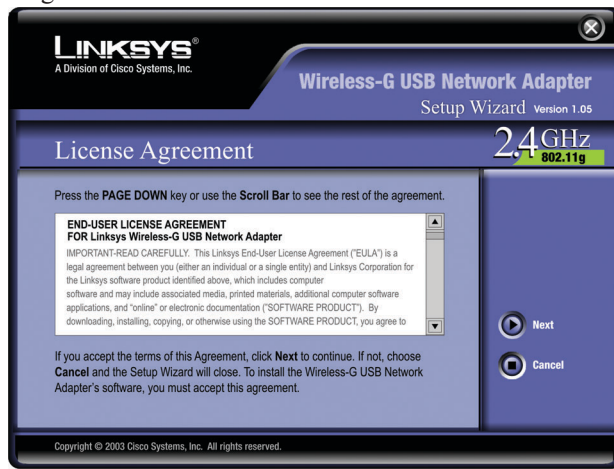


Figure 4-2

3. The following screen, shown in Figure 4-3, will ask for some information about your wireless network. In the **SSID** field, enter your network's **SSID** (Service Set Identifier). The SSID is your network name and must be identical for all devices in the network. The default setting is **linksys** (all lowercase).

Next, choose a wireless mode. Click the **Infrastructure Mode** radio button if you want your wireless computers to network with computers on your wired network using a wireless access point. Click the **Ad-Hoc Mode** radio button if you want multiple wireless computers to network directly with each other.

Click the **Next** button to continue, or click the **Back** button to return to the previous page.

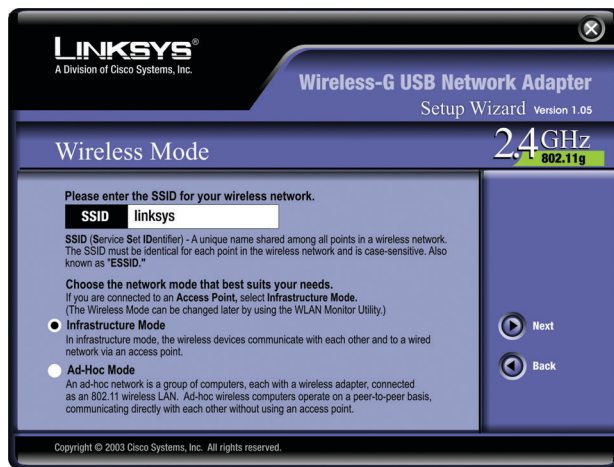


Figure 4-3

4. If you chose **Infrastructure Mode**, go to **Step 5** now. If you chose **Ad-Hoc Mode**, select the correct operating channel for your network from the **Channel** drop-down menu. Then, select the **Network Mode** from the drop-down menu. Click the **Next** button, and go to **Step 5**. Click the **Back** button to change any settings.

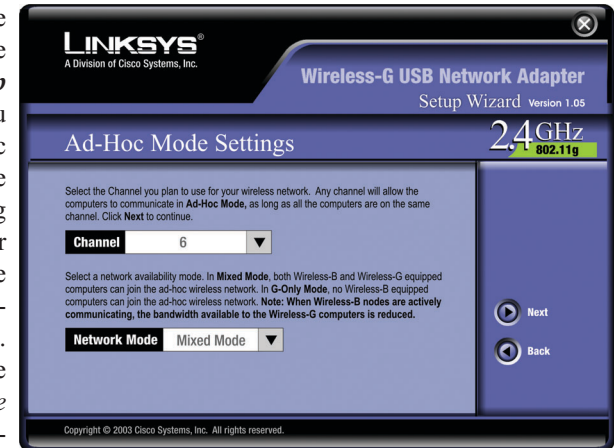


Figure 4-4

Channel - The channel you choose should match the channel set on the other devices in your wireless network. If you are unsure about which channel to use, select the default channel (Channel 6).

Network Mode - Keep the default setting, **Mixed**, if you have Wireless-G and Wireless-B devices in your network. Select **G-Only** if you have only Wireless-G devices in your network.

5. The Setup Wizard will ask you to review your settings before it starts to copy files. Click the **Next** button to save these settings, or click the **Back** button to change any settings.

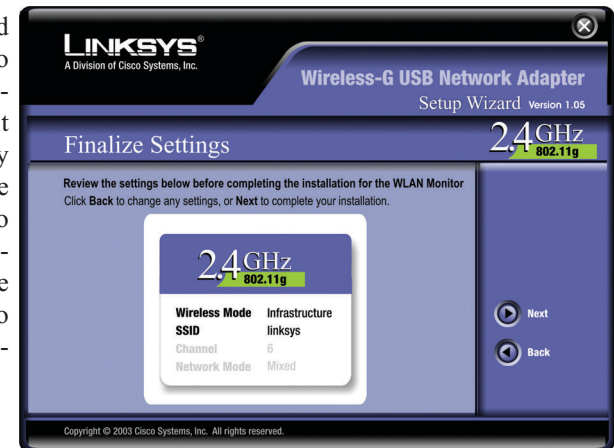


Figure 4-5

- At this point, you may see a warning screen, such as that shown in Figure 4-6, asking if you'd like to cease installation. You can click the Yes button to continue; the Adapter will function properly.



Figure 4-6

- After the files have been successfully copied, the screen in Figure 4-7 will appear. Click the **Exit** button.

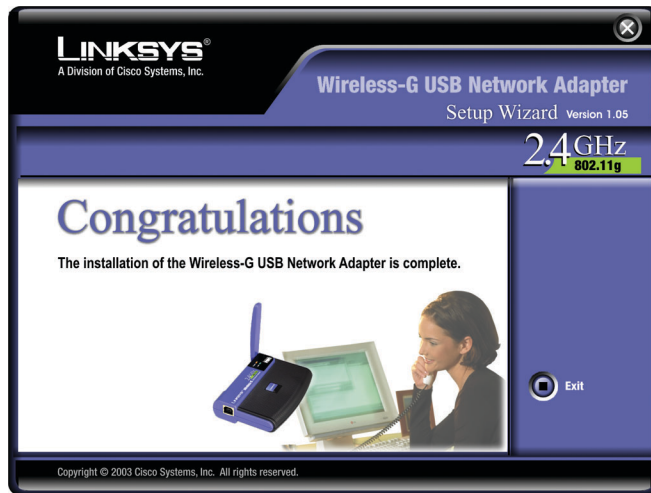


Figure 4-7

Proceed to “Chapter 5: Hardware Installation.”

Chapter 5: Hardware Installation



Important for Windows 2000 users: You must run the Setup Wizard to install the software before installing the hardware.



Important for Windows XP users: You must install the Adapter's hardware before installing the software.

Connecting the Adapter

- The Adapter comes with the USB cable you will use to connect the Adapter to your PC. (See Figure 5-1.)

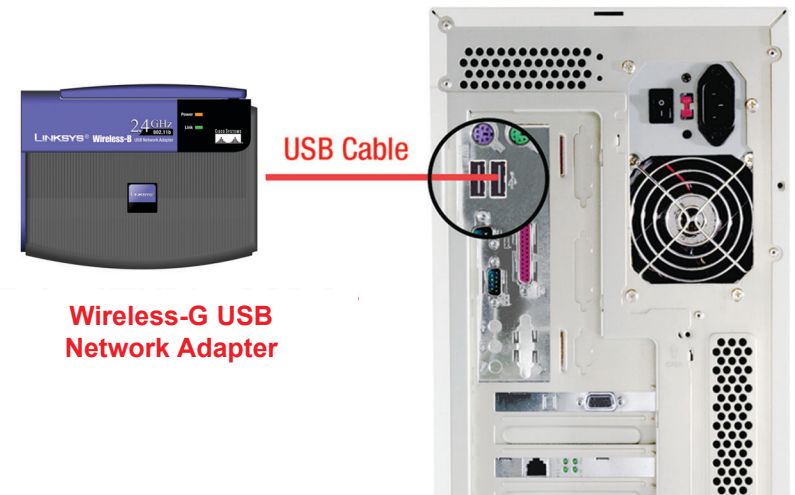


Figure 5-1

- Connect one end of the USB cable to the USB port of the Adapter.

- Connect the other end of the USB cable to one of the USB ports on your computer (see Figure 5-2).

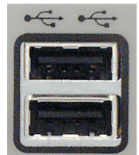


Figure 5-2