EWC
Wireless USB Adapter

User’s 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 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:

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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. 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.

This device and its antenna(s) must not be co-located or operating 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.

Protection requirements for health and safety – Article 3.1a

Testing for electric safety according to EN 60950 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility – Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1, EN 301 489-17 and EN 55024 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum – Article 3.2

Testing for radio test suites according to EN 300 328v1.6.1 has been conducted.

These are considered relevant and sufficient.

CE in which Countries where the product may be used freely:

Germany, UK, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway and Iceland.

France: except the channel 10 through 13, law prohibits the use of other channels.

TABLE OF CONTENT

INTRODUCTION

The EWC Wireless USB Adapter is a convenient wireless connectivity solution for desktop or notebook PCs. Instead of stringing Ethernet cables to your PC or dismantling your desktop computer case, the EWC WIRELESS USB ADAPTER can enable Draft 802.11n wireless connectivity by simply utilizing your desktop or notebook PC's USB port.

The EWC WIRELESS USB ADAPTER provides a faster wireless connection and superior reception than 802.11g*. The EWC WIRELESS USB ADAPTER is designed for use in bigger homes and for those that demand higher networking. Maximize wireless performance by connecting this USB Adapter to a EWC Router and stay connected from virtually anywhere in the home. This USB Adapter supports WEP, WPA and WPA2 encryption to prevent outside intrusion and protect your personal information from being exposed.

Quick Setup Wizard guides you step-by-step through the installation process. You'll be able to configure this USB Adapter without having to call the teenager from down the street to help you. The Wireless Manager is included with this product to keep track of all your most frequently accessed networks.

Compact in size, robust in speed the EWC Wireless USB Adapter is great for travel and a convenient solution for providing high performance wireless connectivity to your desktop or notebook PC. Enjoy the many benefits of wireless connectivity today!

FEATURES

- Compact size for placement anywhere.
- Convenience of Plug & Play installation.
- Fully 802.11b/802.11g compatible.
- Draft 802.11n compliant.
- Powered by the USB port; no external power source required.
- USB 2.0 standard*.
- Better Security with 802.1x and WPA - In addition to 64-bit and 128-bit WEP encryption, you can also securely connect to a wireless network using 802.1x for wireless authentication, as well as WPA (Wi-Fi Protected Access) providing you a much higher level of security for your data and communication than has previously been available.
- Supports Infrastructure networks via an access point and Peer-to-Peer communication in Ad-Hoc mode.
- User-friendly configuration and diagnostic utilities.

* Using a USB 1.1 port will adversely affect throughput.

HARTDWARE OVERVIEW

USB Port
Used to connect the EWC Wireless USB Adapter to your computer.

INSTALLATION

This section will walk you through the installation process. If you have a built-in wireless adapter, please disable it in device manager before installing the EWC Wireless USB Adapter. Also, if you have previously installed another wireless adapter, please make sure any software is uninstalled.

Getting Started

Before installing your new D-Link wireless adapter, please verify the following:

- Remove any previous installations of wireless adapters
- Disable any built-in wireless adapters
- Verify the settings such as the SSID and security settings of the network(s) you want to connect to

Wireless Installation Considerations

The EWC Wireless USB Adapter lets you access your network using a wireless connection from virtually anywhere within the operating range of your wireless network. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range. Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the EWC Wireless USB Adapter and other network devices to a minimum - each wall or ceiling can reduce your adapter's range from 3-90 feet (1-30 meters.) Position your devices so that the number of walls or ceilings is minimized.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick (.5 meters), at a 45-degree angle appears to be almost 3 feet (1 meter) thick. At a 2-degree angle it looks over 42 feet (14 meters) thick! Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building Materials make a difference. A solid metal door or aluminum studs may have a negative effect on range. Try to position access points, wireless routers, and computers so that the signal passes through drywall or open doorways. Materials and objects such as glass, steel, metal, walls with insulation, water (fish tanks), mirrors, file cabinets, brick, and concrete will degrade your wireless signal.
4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices

or appliances that generate RF noise.

5. If you are using 2.4GHz cordless phones or X-10 (wireless products such as ceiling fans, lights, and home security systems), your wireless connection may degrade dramatically or drop completely. Make sure your 2.4GHz phone base is as far away from your wireless devices as possible. The base transmits a signal even if the phone in not in use.

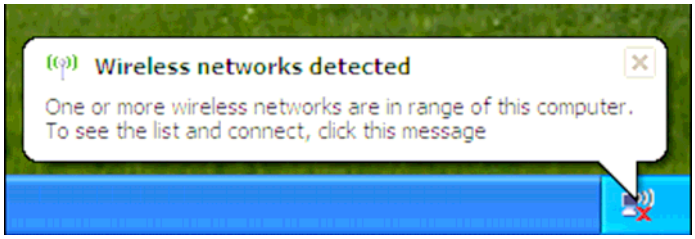
Adapter Installation

Warning: Do NOT install the EWC Wireless USB Adapter into your computer before installing the driver software from the CD.

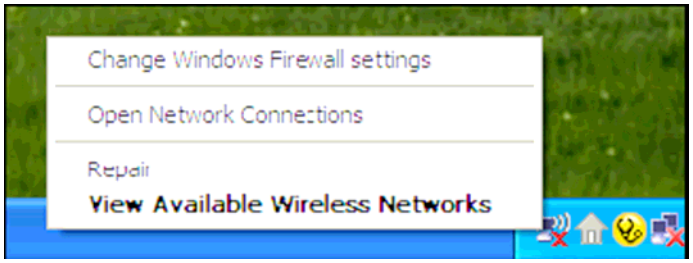
Turn on the computer and Insert the Driver CD in the CD-ROM drive. The step-by-step instructions that follow are shown in Windows XP. The steps and screens are similar for the other Windows operating systems.

Windows® XP Configuration Utility

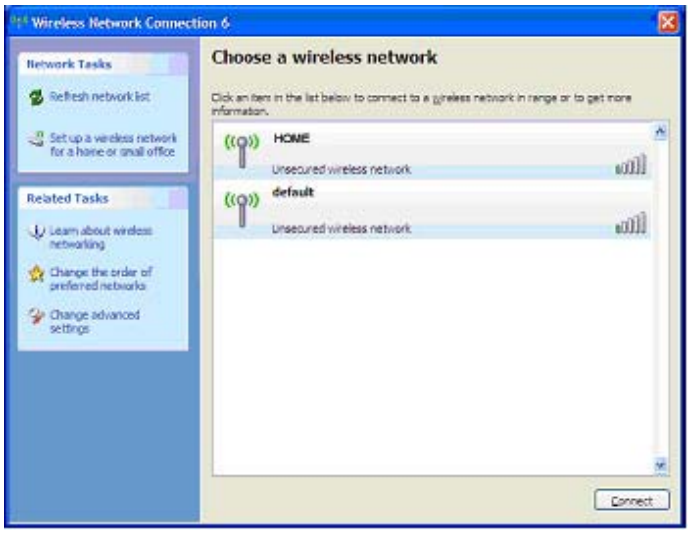
Windows® XP users may use the built-in wireless utility. The following instructions are for Service Pack 2 users.



If you receive the **Wireless Networks Detected** bubble, click on the center of the bubble to access the utility.



Right-click on the wireless computer icon in your system tray (lower-right corner next to the time). Select **View Available Wireless Networks**.



The utility will display any available wireless networks in your area. Click on a network and click the **Connect** button.

Refer to the **Wireless Security** section for information on connecting to a secure network.

WIRELESS SECURITY

This section will show you the different levels of security you can use to protect your data from intruders. The EWC Wireless USB Adapter offers the following types of security:

- WPA2 (Wi-Fi Protected Access 2)
- WPA2-PSK (Pre-Shared Key)
- WPA (Wi-Fi Protected Access) • WPA-PSK (Pre-Shared Key)
- WEP (Wired Equivalent Privacy) • 802.1x (RADIUS)

What is WEP?

WEP stands for Wired Equivalent Privacy. It is based on the IEEE 802.11 standard and uses the RC4 encryption algorithm. WEP provides security by encrypting data over your wireless network so that it is protected as it is transmitted from one wireless device to another.

To gain access to a WEP network, you must know the key. The key is a string of characters that you create. When using WEP, you must determine the level of encryption. The type of encryption determines the key length. 128-bit encryption requires a longer key than 64-bit encryption. Keys are defined by entering in a string in HEX (hexadecimal - using characters 0-9, A-F) or ASCII (American Standard Code for Information Interchange – alphanumeric characters) format. ASCII format is provided so you can enter a string that is easier to remember. The ASCII string is converted to HEX for use over the network. Four keys can be defined so that you can change keys easily.

What is WPA?

WPA, or Wi-Fi Protected Access, is a Wi-Fi standard that was designed to improve the security features of WEP (Wired Equivalent Privacy).

The 2 major improvements over WEP:

- Improved data encryption through the Temporal Key Integrity Protocol (TKIP). TKIP scrambles the keys using a hashing algorithm and, by adding an integrity-checking feature, ensures that the keys haven’t been tampered with. WPA2 is based on 802.11i and uses Advanced Encryption Standard instead of TKIP.
- User authentication, which is generally missing in WEP, through the extensible authentication protocol (EAP). WEP regulates access to a wireless network based on a computer’s hardware-specific MAC address, which is relatively simple to be sniffed out and stolen. EAP is built on a

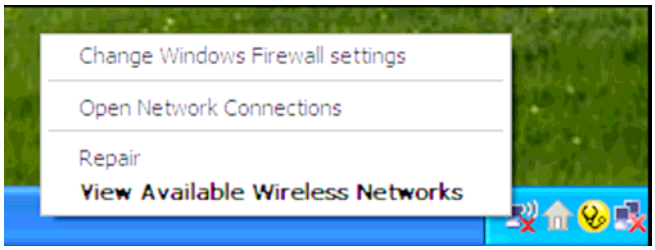
more secure public-key encryption system to ensure that only authorized network users can access the network.

WPA-PSK/WPA2-PSK uses a passphrase or key to authenticate your wireless connection. The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?*&_) and spaces. This key must be the exact same key entered on your wireless router or access point.

WPA/WPA2 incorporates user authentication through the Extensible Authentication Protocol (EAP). EAP is built on a more secure public key encryption system to ensure that only authorized network users can access the network.

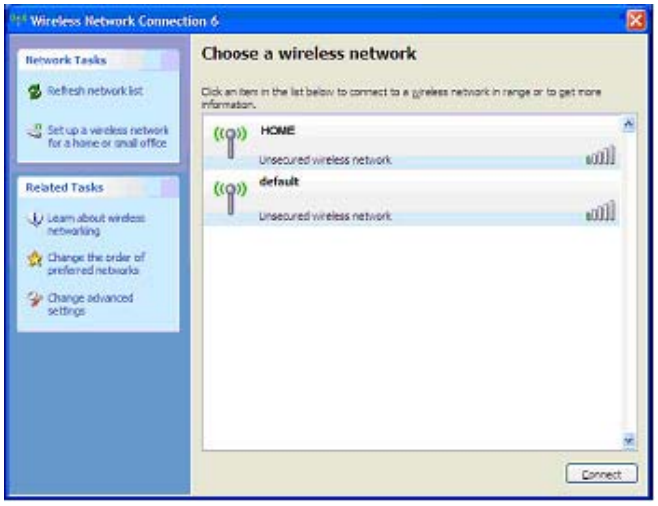
Configure WEP

It is recommended to enable WEP on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WEP key being used.

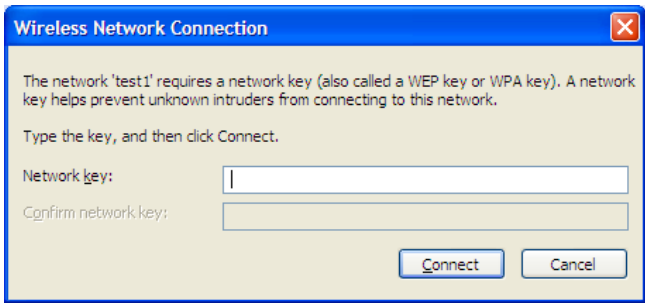


1. Open the Windows® XP Wireless Utility by right-clicking on the wireless computer icon in your system tray

(lower-right corner of screen). Select **View Available Wireless Networks**.



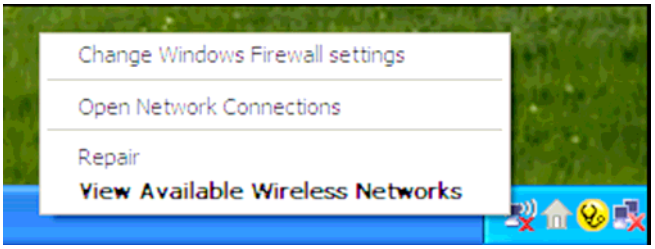
2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The Wireless Network Connection box will appear. Enter the WEP key and click **Connect**.

Configure WPA/WPA2 Passphrase

It is recommended to enable WPA-PSK on your wireless router or access point before configuring your wireless adapter. If you are joining an existing network, you will need to know the WPA-PSK key being used.



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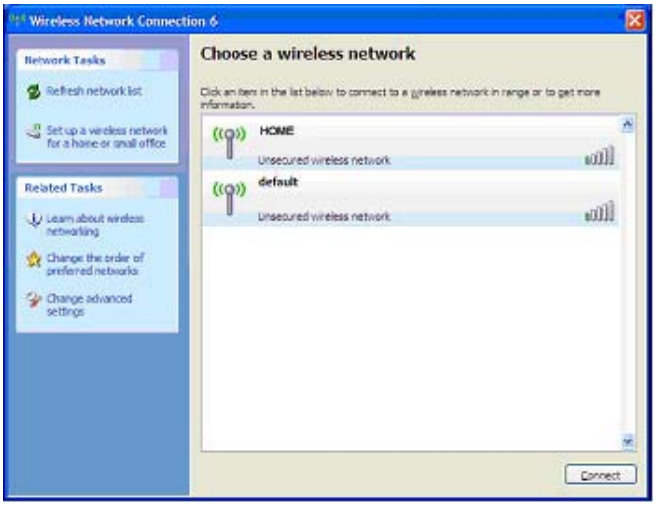
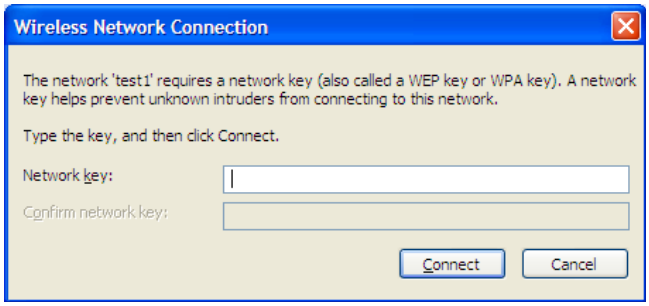


2. Highlight the wireless network (SSID) you would like to connect to and click **Connect**.



3. The Wireless Network Connection box will appear. Enter the WPA-PSK passphrase and click **Connect**.

It may take 20-30 seconds to connect to the wireless network. If the connection fails, please verify that the WPA-PSK settings are correct. The WPA-PSK pass phrase must be exactly the same as on the wireless router or access point.