

# USER MANUAL

**DWA-123**

VERSION 1.0



**D-Link**<sup>®</sup>

Wireless N 150 USB Adapter

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# Product Overview

## Package Contents

- D-Link DWA-123 802.11n Wireless N USB Adapter.
- User Manual and Warranty on CD-ROM.
- Printed Quick Installation Guide.
- Software on CD-ROM.



If any of the above items are missing, please contact your reseller.

## System Requirements

For best results, the following system requirements are recommended:

- Computer with: 1GHz processor / 512 MB RAM / CD-ROM drive / USB 2.0 Port.
- Windows<sup>®</sup> 2000 (with Service Pack 4), Windows<sup>®</sup> XP (with Service Pack 2), Windows<sup>®</sup> Vista™ or Windows<sup>®</sup> 7.
- An 802.11n (Draft 2.0) Access Point or Wireless Router.

# Introduction

The DWA-123 802.11n Wireless N 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 DWA-123 can enable 802.11n wireless connectivity by simply utilizing your desktop or notebook PC's USB port.

Powered by RangeBooster N™ technology, the DWA-123 provides a faster wireless connection and superior reception than 802.11g\*. The DWA-123 is designed for use in bigger homes and for those that demand higher networking. Maximize wireless performance by connecting this USB Adapter to a RangeBooster N™ router and stay connected from virtually anywhere in the home. This USB Adapter supports WPA and WPA2 encryption to prevent outside intrusion and protect your personal information from being exposed.

Compact in size, robust in speed the DWA-123 Wireless N 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!

\* Maximum wireless signal rate derived from IEEE Standard 802.11g and Draft 802.11n specifications. Actual data throughput will vary. Network conditions and environmental factors, including volume of network traffic, building materials and construction, and network overhead, lower actual data throughput rate. Environmental conditions will adversely affect wireless signal range.

# Features

Here is a list of features that can be found on the D-Link DWA-123 802.11n Wireless N USB Adapter:

- Wireless 802.11n compliant and backwards compatible with 802.11b/g standards.
- High-Speed USB 2.0 Standard and requires no additional external power source.
- Convenient Plug & Play installation.
- Compact size for easy placement around the computer.
- Supports Wireless encryptions like Wired Equivalent Privacy (WEP) and Wi-Fi Protected Access (WPA/WPA2).
- Support Wireless authentication methods like 802.1X.
- Support Wireless Infrastructure and Ad-Hoc topologies.
- MIMO (1X1) technology for extended reception robustness and exceptional throughput.
- Support IEEE 802.11e Quality of Service (QoS) Wi-Fi Multimedia (WMM).
- MIMO Power Saving mechanism.
- Channel management and co-existence.
- Bandwidth transmissions in both 20 MHz and 40 MHz.
- Maximum data rate of 54 Mbps (802.11g) and 300 Mbps (802.11n).
- Support Fast Receiver Automatic Gain Control (AGC).

# Hardware Overview



**USB Port:**  
Used to connect the DWA-123 to your computer.

**WPS Button:**  
Press the WPS button to automatically connect to a WPS-enabled wireless router or access point and establish connectivity.

## Wireless Installation Considerations

The D-Link wireless 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 D-Link 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 is not in use.

# Basic 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 your D-Link adapter. Also, if you have previously installed another wireless adapter, please make sure any software is uninstalled.

## Installing the DWA-123 Adapter

Before installing the wireless adapter, please note that you have to install the software first BEFORE plugging the wireless adapter into the USB port of the computer. Not doing this might cause the wireless adapter not to function correctly.

**Step 1:** Turn on the computer and insert the CD (included in the package contents of this product) in the CD-ROM of the computer. Installed on the CD is an auto-run application that allows the user to quickly access the contents of the CD easily.

When the content application appears, click on the **'Install Drivers'** option to start the installation of the required software and drivers for this product.



**Step 2:** This is the welcome screen. To continue with the installation click on the **'Next'** button.

**Step 3:** The utility will install the drivers and the accompanying files in the D-Link > DWA-123 folder. To change the destination of the installed files click on the **'Browse'** button and navigate to the desired destination folder. To continue with the installation click on the **'Next'** button.



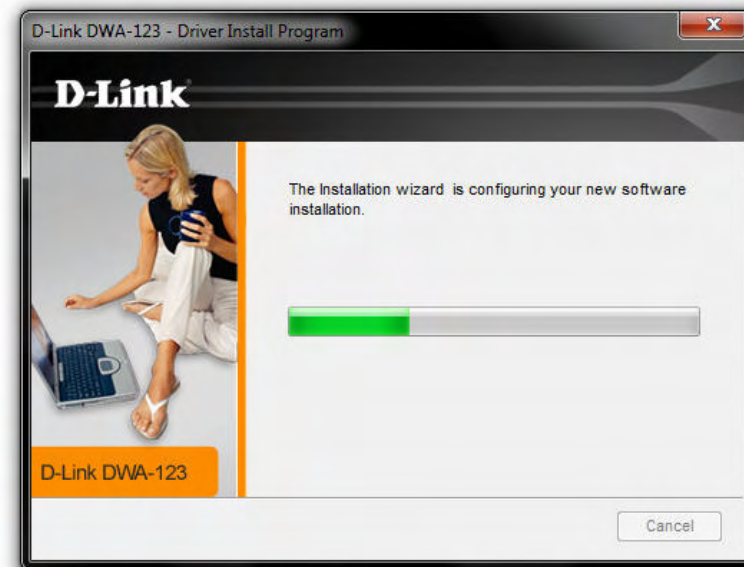
**Step 4:** At this point the user is prompt to insert the DWA-123 adapter into the computer for the first time.

The Operating System will automatically initiate a universal wireless adapter driver installation process. Cancel the automatic driver installation initiated by the Operating System and continue to the next step of this installation by clicking on the **'Next'** button.





**Step 5:** This utility will automatically install all the required files in the destination specified.



**Step 6:** When the installation has been completed, a window will appear thanking the user for purchasing the DWA-123.

There are two ways to connect to the wireless network using this adapter:

1. By using the Operating System's built-in wireless utility.
2. By using the Wi-Fi Protected Setup (WPS) button connection method.


Click on the **'Finish'** button to complete this setup.

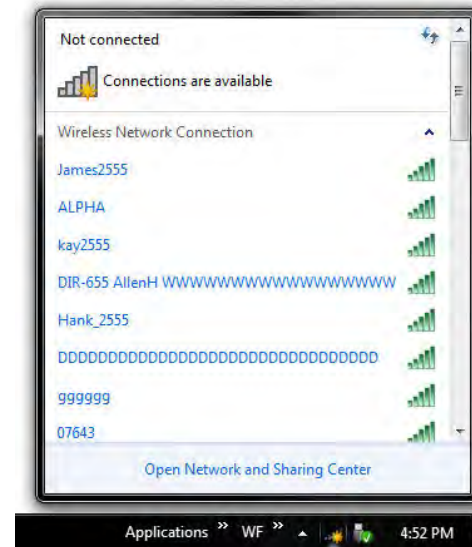


# Connect to the Wireless Network

This section will guide the user through the process of connecting to the wireless network using this wireless adapter. Remember that there is no additional wireless connection utility included with this product. This product makes use of the built-in wireless functionality of the Operating System.

## Connect using Windows 7

**Step 1:** Generally after the installation a wireless icon will appear in the startbar's system tray that look like this . Click on this icons and the list of available wireless networks will be displayed. Locate your network and click on it. Click on the **'Connect'** button to connect to your wireless network.



**Step 2:** If you have a wireless security enabled on your network, you'll be prompted to enter the **'Security Key'** and click on the **'OK'** button to connect to your wireless network.

**Note:** Windows 7 will automatically detect what type of security is used by the wireless network.



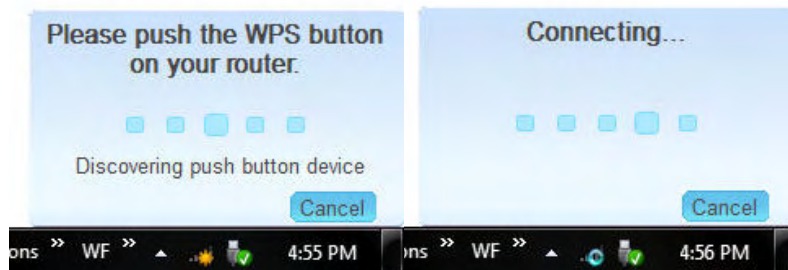
## Connect using Windows 7 and WPS

Wi-Fi Protected Setup (WPS) System is designed for easy setup of security-enabled Wi-Fi networks. It is recommended to have the access point or wireless router nearby during setup. For more information on WPS, visit the Wi-Fi Alliance website at [www.wi-fi.org](http://www.wi-fi.org).

“Push Button Configuration” (PBC) is a button on the adapter that after pressed connects you to other WPS-enabled devices. A connection can be established by pressing the button on the DWA-123 and then pressing the physical button on the access point or wireless router within 120 seconds. If the wireless access point or router does not have a physical button located on the device, it should have a ‘Virtual button’ on it’s configuration. For more information about the Virtual button of a Wireless access point or router refer to the unit’s manual of contact the Vendor.




1. To connect to your network, press the WPS button on the adapter and hold for 2 seconds until the wizard screen appears.



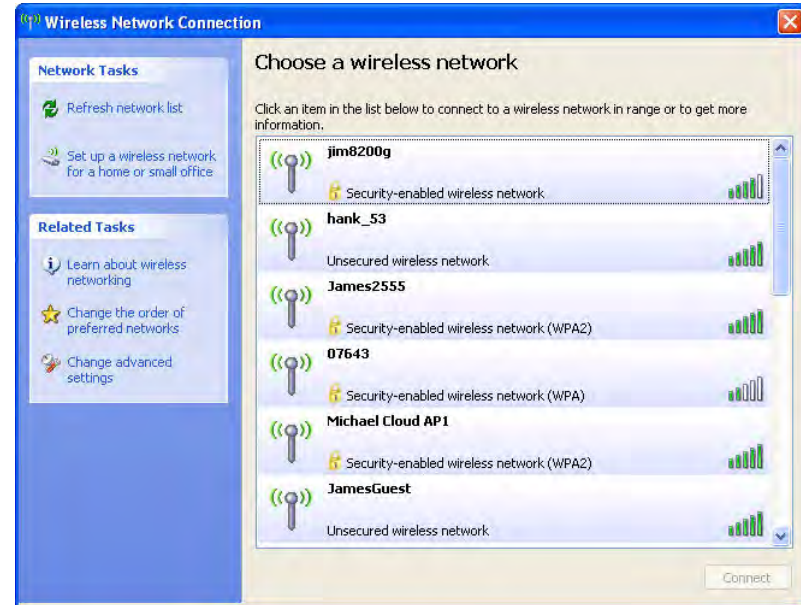
2. Press the WPS button located on your access point or router to continue.

3. After pressing both buttons a window will appear stating to **‘Please push the WPS button on your router’, ‘Discovering push button device’** and lastly **‘Connecting...’** After 120 seconds the DWA-123 should be connected to your wireless network.

# Connect using Windows XP

**Step 1:** Generally after the installation a wireless icon will appear in the taskbar's notification area that look like this . Right click on this icon and select the '**View Available Wireless Networks**' option.

A list of available wireless networks will be displayed. Locate your network and click on it. Click on the '**Connect**' button to connect to your wireless network.



**Step 2:** If you have a wireless security enabled on your network, you'll be prompted to enter and confirm the '**Network Key**' and click on the '**Connect**' button to connect to your wireless network.

**Note:** Windows XP will automatically detect what type of security is used by the wireless network.



# Knowledge Base

In this section we'll discuss the theory behind Wireless Basics, Wireless Modes, Networking Basics and Wireless Security.

## Wireless Basics

D-Link wireless products are based on industry standards to provide easy-to-use and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the D-Link wireless family of products will allow you to securely access the data you want, when and where you want it. You will be able to enjoy the freedom that wireless networking delivers.

A wireless local area network (WLAN) is a cellular computer network that transmits and receives data with radio signals instead of wires. Wireless LANs are used increasingly in both home and office environments, and public areas such as airports, coffee shops and universities. Innovative ways to utilize WLAN technology are helping people to work and communicate more efficiently. Increased mobility and the absence of cabling and other fixed infrastructure have proven to be beneficial for many users.

Wireless users can use the same applications they use on a wired network. Wireless adapter cards used on laptop and desktop systems support the same protocols as Ethernet adapter cards.

Under many circumstances, it may be desirable for mobile network devices to link to a conventional Ethernet LAN in order to use servers, printers or an Internet connection supplied through the wired LAN. A Wireless Router is a device used to provide this link.

### **What is Wireless?**

Wireless or Wi-Fi technology is another way of connecting your computer to the network without using wires. Wi-Fi uses radio frequency to connect wirelessly, so you have the freedom to connect computers anywhere in your home or office network.

### **Why D-Link Wireless?**

D-Link is the worldwide leader and award winning designer, developer, and manufacturer of networking products. D-Link delivers the performance you need at a price you can afford. D-Link has all the products you need to build your network.

### **How does wireless work?**

Wireless works similar to how cordless phone work, through radio signals to transmit data from one point A to point B. But wireless technology has restrictions as to how you can access the network. You must be within the wireless network range area to be able to connect your computer. There are two different types of wireless networks Wireless Local Area Network (WLAN), and Wireless Personal Area Network (WPAN).

### **Wireless Local Area Network (WLAN)**

In a wireless local area network, a device called an Access Point (AP) connects computers to the network. The access point has a small antenna attached to it, which allows it to transmit data back and forth over radio signals. With an indoor access point as seen in the picture, the signal can travel up to 300 feet. With an outdoor access point the signal can reach out up to 30 miles to serve places like manufacturing plants, industrial locations, college and high school campuses, airports, golf courses, and many other outdoor venues.

### **Wireless Personal Area Network (WPAN)**

Bluetooth is the industry standard wireless technology used for WPAN. Bluetooth devices in WPAN operate in a range up to 30 feet away.

Compared to WLAN the speed and wireless operation range are both less than WLAN, but in return it doesn't use nearly as much power which makes it ideal for personal devices, such as mobile phones, PDAs, headphones, laptops, speakers, and other devices that operate on batteries.

### **Who uses wireless?**

Wireless technology has become so popular in recent years that almost everyone is using it, whether it's for home, office, business, D-Link has a wireless solution for it.

#### **Home**

- Gives everyone at home broadband access
- Surf the web, check email, instant message, and etc
- Gets rid of the cables around the house
- Simple and easy to use

#### **Small Office and Home Office**

- Stay on top of everything at home as you would at office
- Remotely access your office network from home
- Share Internet connection and printer with multiple computers
- No need to dedicate office space

### **Where is wireless used?**

Wireless technology is expanding everywhere not just at home or office. People like the freedom of mobility and it's becoming so popular that more and more public facilities now provide wireless access to attract people. The wireless connection in public places is usually called "hotspots".

Using a D-Link USB Adapter with your laptop, you can access the hotspot to connect to Internet from remote locations like: Airports, Hotels, Coffee Shops, Libraries, Restaurants, and Convention Centers.

Wireless network is easy to setup, but if you're installing it for the first time it could be quite a task not knowing where to start. That's why we've put together a few setup steps and tips to help you through the process of setting up a wireless network.

## Tips

Here are a few things to keep in mind, when you install a wireless network.

### Centralize your router or Access Point

Make sure you place the router/access point in a centralized location within your network for the best performance. Try to place the router/access point as high as possible in the room, so the signal gets dispersed throughout your home. If you have a two-story home, you may need a repeater to boost the signal to extend the range.

### Eliminate Interference

Place home appliances such as cordless telephones, microwaves, and televisions as far away as possible from the router/access point. This would significantly reduce any interference that the appliances might cause since they operate on same frequency.

### Security

Don't let you next-door neighbors or intruders connect to your wireless network. Secure your wireless network by turning on the WPA or WEP security feature on the router. Refer to product manual for detail information on how to set it up.

# Wireless Modes

There are basically two modes of networking:

- **Infrastructure** – All wireless clients will connect to an access point or wireless router.
- **Ad-Hoc** – Directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer. Unfortunately 802.11g/n products such as the DWA-123 do not support ad-hoc mode.

An Infrastructure network contains an Access Point or wireless router. All the wireless devices, or clients, will connect to the wireless router or access point.

An Ad-Hoc\* network contains only clients, such as laptops with wireless USB Adapters. All the adapters must be in Ad-Hoc mode to communicate.

\* Not supported with the DWA-123.

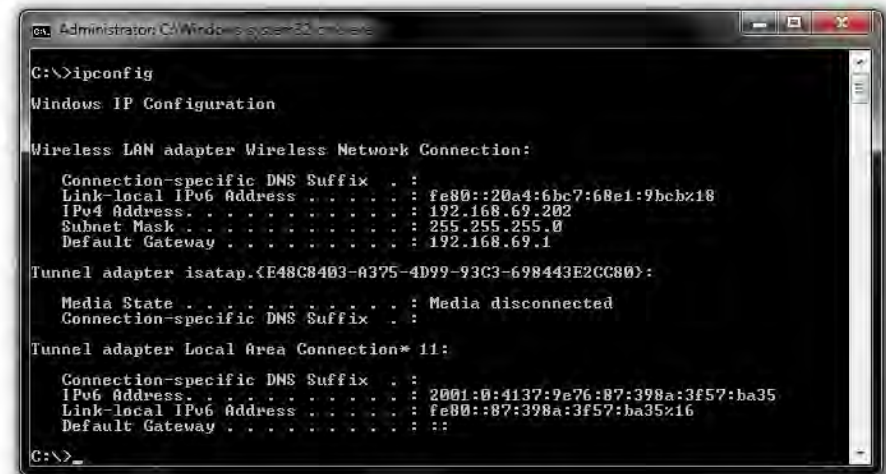
# Networking Basics

## Check your IP address

After you install your new D-Link wireless adapter and have established a wireless connection, by default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. router) automatically. To verify your IP address, please follow the steps below.

### Microsoft Windows 7:

- Click **Start > All Programs > Accessories > Command Prompt**. You may need administrative access to run this application.
- At the prompt, type '**ipconfig**' and press Enter.
- This will display the IP address, subnet mask, and default gateway of your adapter.



```
Administrator: C:\Windows\system32\cmd.exe
C:\>ipconfig

Windows IP Configuration

Wireless LAN adapter Wireless Network Connection:

    Connection-specific DNS Suffix . . . : 
    Link-local IPv6 Address . . . . . : fe80::20a4:6bc7:60e1:9bcb%18
    IPv4 Address. . . . . : 192.168.69.202
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.69.1

Tunnel adapter isatap.<E48C8403-A375-4D99-93C3-698443E2CG80>:

    Media State . . . . . : Media disconnected
    Connection-specific DNS Suffix . . . : 

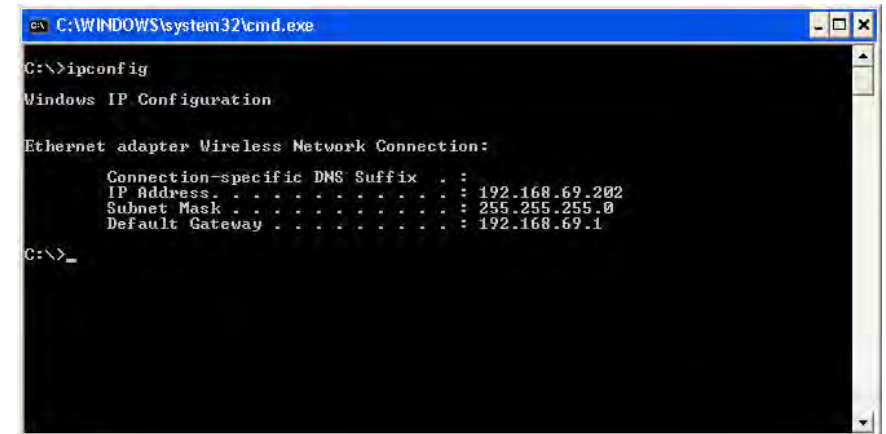
Tunnel adapter Local Area Connection* 11:

    Connection-specific DNS Suffix . . . : 
    IPv6 Address. . . . . : 2001:0:4137:9e76:87:398a:3f57:ba35
    Link-local IPv6 Address . . . . . : fe80::87:398a:3f57:ba35%16
    Default Gateway . . . . . : ::

C:\>_
```

### Microsoft Windows XP/2000:

- Click on **Start > Run**. In the run box type '**cmd**' and click '**OK**'.
- At the prompt, type '**ipconfig**' and press Enter.
- This will display the IP address, subnet mask, and the default gateway of your adapter.



```
C:\WINDOWS\system32\cmd.exe
C:\>ipconfig

Windows IP Configuration

Ethernet adapter Wireless Network Connection:

    Connection-specific DNS Suffix . . . : 
    IP Address. . . . . : 192.168.69.202
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.69.1

C:\>_
```

If the address is 0.0.0.0, check your adapter installation, security settings, and the settings on your router. Some firewall software programs may block a DHCP request on newly installed adapters.

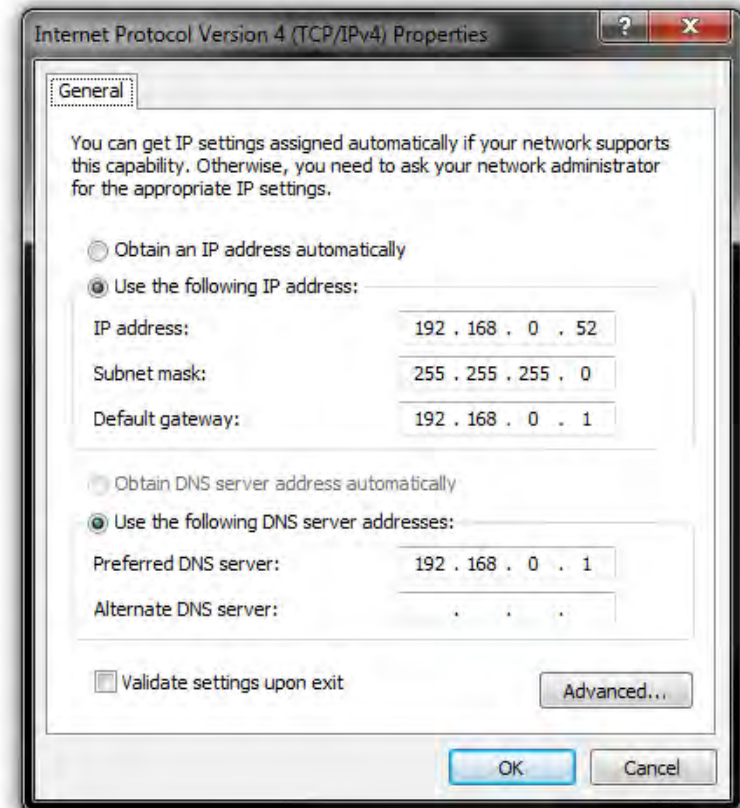


## Statically Assign an IP address

If you are not using a DHCP capable gateway/router, or you need to assign a static IP address, please follow the steps below:

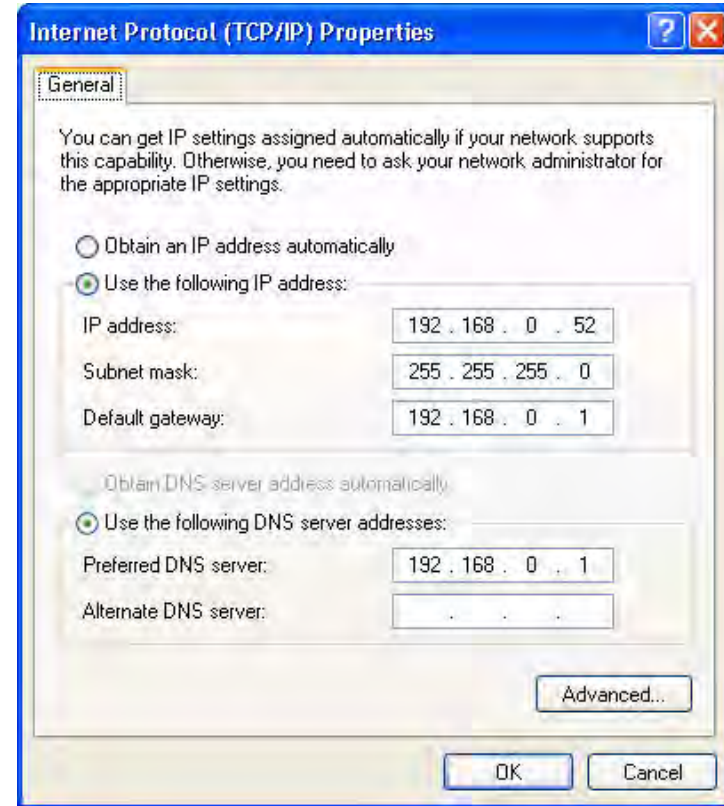
### Microsoft Windows 7:

- Click on **Start > Control Panel**. Click on the '**Network and Sharing Center**' icon. Along the left panel in the window, click on '**Change adapter settings**'.
- Right-click on the **Wireless Network Connection** which represents your D-Link wireless network adapter which will be connected to your network and click **Properties**.
- Highlight '**Internet Protocol Version 4 (TCP/IPv4)**' and click **Properties**.
- Click '**Use the following IP address**' and enter an **IP address** that is on the same subnet as your network or LAN IP address on your router or network. Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.
- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



**Microsoft Windows XP/2000:**

- **Windows XP** - Click on **Start > Control Panel**. Make sure you are in Classic View. Double-click on the **Network Connections** icon.
- **Windows 2000** – From the desktop, right-click **My Network Places > Properties**.
- Right-click on the **Wireless Network Connection** which represents your D-Link wireless network adapter (or other adapter) which will be connected to your router and click **Properties**.
- Highlight '**Internet Protocol (TCP/IP)**' and click **Properties**.
- Click '**Use the following IP address**' and enter an **IP address** that is on the same subnet as your network or LAN IP address on your router. Example: If the router's LAN IP address is 192.168.0.1, make your IP address 192.168.0.X where X is a number between 2 and 99. Make sure that the number you choose is not in use on the network.
- Set **Default Gateway** the same as the LAN IP address of your router or gateway.
- Set **Primary DNS** the same as the LAN IP address of your router or gateway.
- The **Secondary DNS** is optional (you may enter a DNS server from your ISP).
- Click **OK** to save your settings.



# Wireless Security

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.

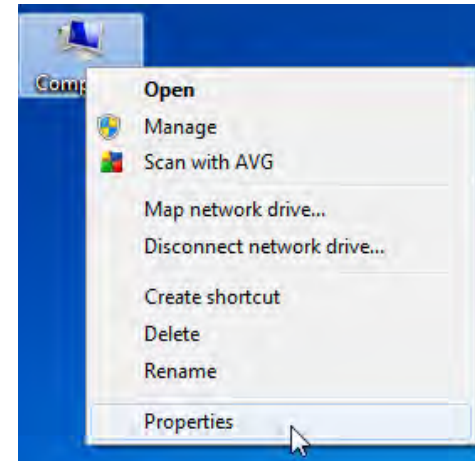
# Troubleshooting

This chapter provides solutions to problems that can occur during the installation and operation of the DWA-123. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows 7. If you have a different Windows Operating System, the screenshots on your computer should look similar to the following examples.)

## Is the adapter installed correctly?

**Step 1:** For a user to verify whether the wireless adapter is working correctly we need to navigate to the **Device Manager** found in Windows.

The easiest way to find the Device Manager is to Right-Click on the **Computer** icon, found on the Desktop and to click on '**Properties**'.



**Step 2:** The **System** windows, found in the **Control Panel**, will be opened. Here the user must click on the '**Device Manager**' option found on the left.



**Step 3:** In the Device Manager window, all the hardware devices installed in the computer will be displayed. Navigate to '**Network Adapters**' and Right-Click on the '**D-Link DWA-123 Wireless N USB Adapter**' option.

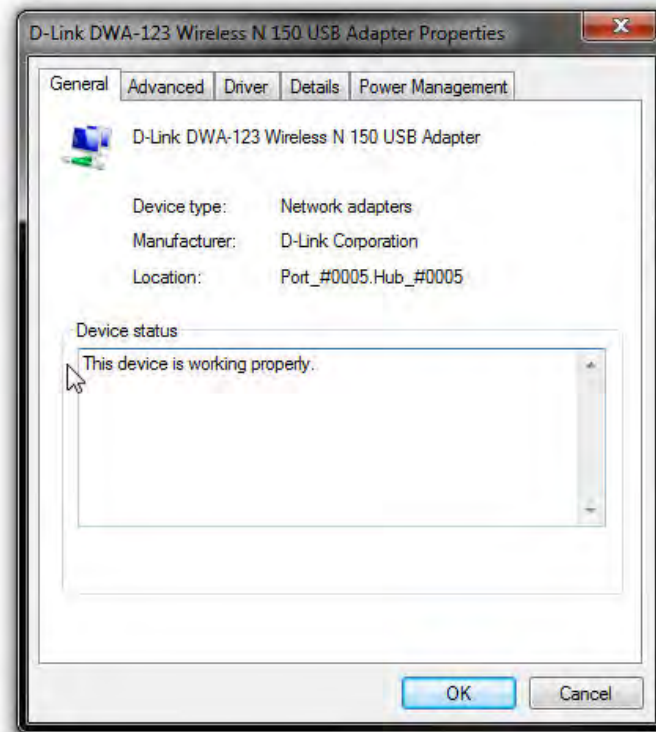
Click on '**Properties**'.



**Step 4:** The Properties window of the adapter will open.

In the '**Device Status**' space, the following message will be displayed when the DWA-123 adapter is working correctly: '**This device is working properly.**'

Click '**OK**' to close this window.



## **Adapter is not recognized by the Computer.**

In the event when the DWA-123 Wireless N USB Adapter is not correctly recognized by the computer, make sure that the DWA-123 is properly seated in the computer's USB port. If Windows still does not detect the hardware upon re-insertion of the adapter, try to uninstall and re-install the drivers for this adapter. Also try to use a different USB port.

## **Not connecting to the Wireless Network/Internet.**

When the correctly installed wireless adapter is not connecting to the wireless network and in turn not connecting to the Internet the following things can be checked:

- Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.
- Check that the LED indicators on the wireless router are functioning properly. If not, check that the AC power and Ethernet cables are firmly connected.
- Check that the IP Address, subnet mask, gateway, and DNS settings are correctly entered for the network
- In Infrastructure mode, make sure the same Service Set Identifier (SSID) is specified on the settings for the wireless clients and access points. (Double-click on the WLAN icon in the taskbar. The Link Info screen will display the SSID setting.)
- Check that the Network Connection for the wireless client is configured properly. Navigate to the Control Panel, Network and Sharing Center and click on the Manage Wireless Networks Option. Double-click on your configured wireless network and make sure that the settings are correct.
- If Security is enabled, make sure that the correct encryption keys are entered on both the DWA-123 and the access point.

# Contacting Technical Support

U.S. and Canadian customers can contact D-Link technical support through our web site or by phone.

Before you contact technical support, please have the following ready:

- Model number of the product (e.g. DWA-123)
- Hardware Revision (located on the label on the bottom of the switch (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the device).

You can find software updates and user documentation on the D-Link website as well as frequently asked questions and answers to technical issues.

For customers within the United States:

Phone Support:  
(877) 453-5465

Internet Support:  
<http://support.dlink.com>

For customers within Canada:

Phone Support:  
(800) 361-5265

Internet Support:  
<http://support.dlink.com>

# Warranty

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. (“D-Link”) provides this Limited Warranty:

- Only to the person or entity that originally purchased the product from D-Link or its authorized reseller or distributor.
- Only for products purchased and delivered within the fifty states of the United States, the District of Columbia, U.S. Possessions or Protectorates, U.S. Military Installations, or addresses with an APO or FPO.

## **Limited Warranty:**

D-Link warrants that the hardware portion of the D-Link product described below (“Hardware”) will be free from material defects in workmanship and materials under normal use from the date of original retail purchase of the product, for the period set forth below (“Warranty Period”), except as otherwise stated herein.

- Hardware (excluding power supplies): One (1) year
- Free Technical Support - Basic Installation: Ninety (90) days

The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund the actual purchase price paid. Any repair or replacement will be rendered by D-Link at an Authorized D-Link Service Office. The replacement hardware need not be new or have an identical make, model or part. D-Link may, at its option, replace the defective Hardware or any part thereof with any reconditioned product that D-Link reasonably determines is substantially equivalent (or superior) in all material respects to the defective Hardware. Repaired or replacement hardware will be warranted for the remainder of the original Warranty Period or ninety (90) days, whichever is longer, and is subject to the same limitations and exclusions. If a material defect is incapable of correction, or if D-Link determines that it is not practical to repair or replace the defective Hardware, the actual price paid by the original purchaser for the defective Hardware will be refunded by D-Link upon return to D-Link of the defective Hardware. All Hardware or part thereof that is replaced by D-Link, or for which the purchase price is refunded, shall become the property of D-Link upon replacement or refund.

## **Limited Software Warranty:**

D-Link warrants that the software portion of the product (“Software”) will substantially conform to D-Link’s then current functional specifications for the Software, as set forth in the applicable documentation, from the date of original retail purchase of the Software for a period of ninety (90) days (“Software Warranty Period”), provided that the Software is properly installed on approved hardware and operated as contemplated in its documentation. D-Link further warrants that, during the Software Warranty Period, the magnetic media on which D-Link delivers the Software will be free of physical defects. The customer’s sole and exclusive remedy and the entire liability of D-Link and its suppliers under this Limited Warranty will be, at D-Link’s option, to replace the non-conforming Software (or defective media) with software that substantially conforms to D-Link’s functional specifications for the Software or to refund the portion of the actual purchase price paid that is attributable to the Software. Except as otherwise agreed by D-Link in writing, the replacement Software is provided only to the original licensee, and is subject to the terms and conditions of the license granted by D-Link for the Software. Replacement Software will be warranted for the remainder of the original Warranty Period and is subject to the same limitations and exclusions. If a material non-conformance is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to replace the non-conforming Software, the price paid by the



original licensee for the non-conforming Software will be refunded by D-Link; provided that the non-conforming Software (and all copies thereof) is first returned to D-Link. The license granted respecting any Software for which a refund is given automatically terminates.

**Non-Applicability of Warranty:**

The Limited Warranty provided hereunder for Hardware and Software portions of D-Link's products will not be applied to and does not cover any refurbished product and any product purchased through the inventory clearance or liquidation sale or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product and in that case, the product is being sold "As-Is" without any warranty whatsoever including, without limitation, the Limited Warranty as described herein, notwithstanding anything stated herein to the contrary.

**Submitting A Claim:**

The customer shall return the product to the original purchase point based on its return policy. In case the return policy period has expired and the product is within warranty, the customer shall submit a claim to D-Link as outlined below:

- The customer must submit with the product as part of the claim a written description of the Hardware defect or Software nonconformance in sufficient detail to allow D-Link to confirm the same, along with proof of purchase of the product (such as a copy of the dated purchase invoice for the product) if the product is not registered.
- The customer must obtain a Case ID Number from D-Link Technical Support at 1-877-453-5465, who will attempt to assist the customer in resolving any suspected defects with the product. If the product is considered defective, the customer must obtain a Return Material Authorization ("RMA") number by completing the RMA form and entering the assigned Case ID Number at <https://rma.dlink.com/>.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the product and will not ship back any accessories. • The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA 92708. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link. Return shipping charges shall be prepaid by D-Link if you use an address in the United States, otherwise we will ship the product to you freight collect. Expedited shipping is available upon request and provided shipping charges are prepaid by the customer. D-Link may reject or return any product that is not packaged and shipped in strict compliance with the foregoing requirements, or for which an RMA number is not visible from the outside of the package. The product owner agrees to pay D-Link's reasonable handling and return shipping charges for any product that is not packaged and shipped in accordance with the foregoing requirements, or that is determined by D-Link not to be defective or non-conforming.

**What Is Not Covered:**

The Limited Warranty provided herein by D-Link does not cover:

Products that, in D-Link's judgment, have been subjected to abuse, accident, alteration, modification, tampering, negligence, misuse, faulty installation, lack of reasonable care, repair or service in any way that is not contemplated in the documentation for the product, or if the model or serial number has been altered, tampered with, defaced or

removed; Initial installation, installation and removal of the product for repair, and shipping costs; Operational adjustments covered in the operating manual for the product, and normal maintenance; Damage that occurs in shipment, due to act of God, failures due to power surge, and cosmetic damage; Any hardware, software, firmware or other products or services provided by anyone other than D-Link; and Products that have been purchased from inventory clearance or liquidation sales or other sales in which D-Link, the sellers, or the liquidators expressly disclaim their warranty obligation pertaining to the product.

While necessary maintenance or repairs on your Product can be performed by any company, we recommend that you use only an Authorized D-Link Service Office. Improper or incorrectly performed maintenance or repair voids this Limited Warranty.

**Disclaimer of Other Warranties:**

EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED “AS-IS” WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT.

IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO THE DURATION OF THE APPLICABLE WARRANTY PERIOD SET FORTH ABOVE. EXCEPT AS EXPRESSLY COVERED UNDER THE LIMITED WARRANTY PROVIDED HEREIN, THE ENTIRE RISK AS TO THE QUALITY, SELECTION AND PERFORMANCE OF THE PRODUCT IS WITH THE PURCHASER OF THE PRODUCT.

**Limitation of Liability:**

TO THE MAXIMUM EXTENT PERMITTED BY LAW, D-LINK IS NOT LIABLE UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER LEGAL OR EQUITABLE THEORY FOR ANY LOSS OF USE OF THE PRODUCT, INCONVENIENCE OR DAMAGES OF ANY CHARACTER, WHETHER DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL (INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF GOODWILL, LOSS OF REVENUE OR PROFIT, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, FAILURE OF OTHER EQUIPMENT OR COMPUTER PROGRAMS TO WHICH D-LINK’S PRODUCT IS CONNECTED WITH, LOSS OF INFORMATION OR DATA CONTAINED IN, STORED ON, OR INTEGRATED WITH ANY PRODUCT RETURNED TO D-LINK FOR WARRANTY SERVICE) RESULTING FROM THE USE OF THE PRODUCT, RELATING TO WARRANTY SERVICE, OR ARISING OUT OF ANY BREACH OF THIS LIMITED WARRANTY, EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. THE SOLE REMEDY FOR A BREACH OF THE FOREGOING LIMITED WARRANTY IS REPAIR, REPLACEMENT OR REFUND OF THE DEFECTIVE OR NONCONFORMING PRODUCT. THE MAXIMUM LIABILITY OF D-LINK UNDER THIS WARRANTY IS LIMITED TO THE PURCHASE PRICE OF THE PRODUCT COVERED BY THE WARRANTY. THE FOREGOING EXPRESS WRITTEN WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ANY OTHER WARRANTIES OR REMEDIES, EXPRESS, IMPLIED OR STATUTORY.

**Governing Law:**

This Limited Warranty shall be governed by the laws of the State of California. Some states do not allow exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the foregoing limitations and exclusions may not apply. This Limited Warranty provides specific legal rights and you may also have other rights which vary from state to state.

**Trademarks:**

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**Copyright Statement:**

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**CE Mark Warning:**

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

**Federal Communication Commission (FCC) 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 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 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.

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.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user authority to operate the equipment.

# Registration



Product registration is entirely voluntary and failure to complete or return this form will not diminish your warranty rights.

## 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 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 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.

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.

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.

IEEE 802.11b or 802.11g operation of this product in the U.S.A. is firmware-limited to channels 1 through 11.

### IMPORTANT NOTE:

#### FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

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

SAR compliance has been established in typical laptop computer(s) with USB slot, and product could be used in typical laptop computer with USB slot. Other application like handheld PC or similar device has not been verified and may not compliance with related RF exposure rule and such use shall be prohibited.

## Industry Canada Statement

This device complies with RSS-210 of the Industry Canada 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 the device

### IMPORTANT NOTE:

#### IC Radiation Exposure Statement:

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with IC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

#### NOTE IMPORTANTE: (Pour l'utilisation des appareils portables)

##### Déclaration d'exposition aux radiations:

Le produit est conforme aux limites d'exposition pour les appareils portables RF pour les Etats-Unis et le Canada établies pour un environnement non contrôlé.

Le produit est sûr pour un fonctionnement tel que décrit dans ce manuel. La réduction aux expositions RF peut être augmentée si l'appareil peut être conservé aussi loin que possible du corps de l'utilisateur ou que le dispositif est réglé sur la puissance de sortie la plus faible si une telle fonction est disponible.

### 以下警語適用台灣地區

經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。前項合法通信，指依電信法規定作業之無線電通信。低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。