

# D-Link

## Quick Installation Guide

This product works with the following operating system software: **Windows XP, Windows 2000, Windows Me, Windows 98se**



## DWL-650

D-Link Air™  
Wireless Cardbus Adapter

### Before You Begin

You must have at least the following:

- A laptop computer with an available 32-bit Cardbus slot
- At least a 300 MHz processor and 32 MB of memory
- Cardbus Controller properly installed and working in the laptop computer
- An 802.11b Access Point (for Infrastructure Mode) or another 802.11b wireless adapter (for Ad-Hoc; Peer-to-Peer networking mode.)

### Check Your Package Contents

These are the items included with your DWL-650 purchase:



**DWL-650 Wireless Cardbus Adapter**



**CD-ROM (containing Manual and Warranty)**

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

# 1

## Insert the D-Link CD-ROM Into Your Computer

**Turn on the computer** and **Insert** the **D-Link Air DWL-650 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.



Do **NOT** install the **DWL-650 Cardbus Adapter** into your computer before installing the driver software on the **D-Link CD!**

# 1

## Insert the D-Link CD (continued)

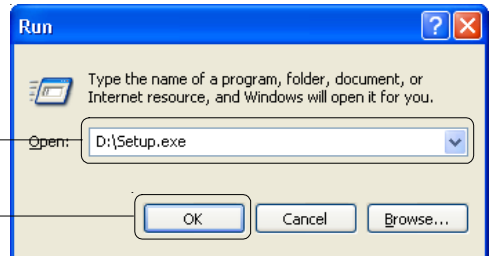
The Install Screen will appear.

Click **Install Driver/PC Utility**




If the CD does not automatically start, go to **Start > Run** and type "D:\Setup.exe." If it does start, proceed to the next screen.

Type **"D:\Setup.exe."**



Click **OK**

 The letter **"D"** represents the letter of the CD-ROM drive. Your CD-ROM drive may be a different drive letter.

Click **Next**



Click **Next**





Click **No, I will restart my computer later**

Click **Finish**

**Shut down** your laptop

## 2 Insert the DWL-650 Into the Cardbus Slot in Your Laptop

- A.** Make sure your laptop computer is turned off.
- B.** Locate the Cardbus slot on your laptop computer.



- C.** Gently insert the DWL-650 into the Cardbus slot in your laptop computer (as shown.)

# 2

## Continued...

**Built-in Antenna**  
Used to wirelessly connect to 802.11b) networks.

**32-bit connector**  
This is the connector that fits into the Cardbus slot of your laptop.

**Power LED**  
Lights to indicate that the DWL-650 is properly inserted.

**Link/Activity LED**  
Blinks when data is being transmitted through the wireless connection.



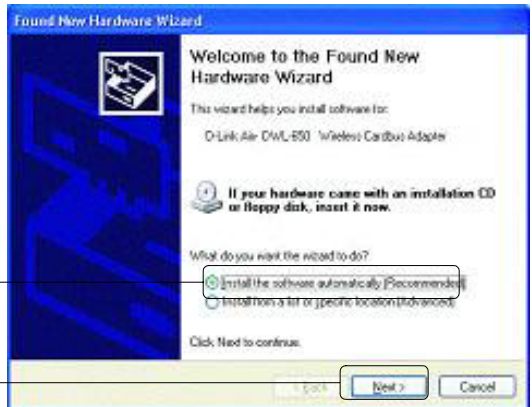
# 3

## Restart Your Laptop Computer

When you restart your computer this **Found New Hardware Wizard (Windows XP)** screen will appear:

Select **Install the software automatically (Recommended)**

Click **Next**



# 3 Restart Your Laptop Computer (cont.)



**For Windows XP:** this **Hardware Installation** alert screen may appear after the desktop computer restarts.

Click **Continue Anyway** to finalize the installation



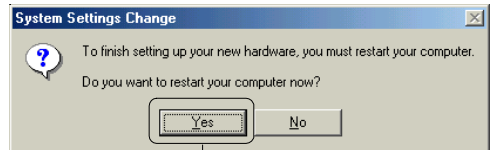
(The D-Link driver software for this device is undergoing Windows Logo testing. Microsoft certification is pending.) For Windows 2000, this **Digital Signature Not Found** screen may appear after your computer restarts

Click **Yes** to finalize the installation



For Windows Me and 98, after your computer restarts, this **Systems Settings Change** window may appear.

Select **Yes** to finalize the installation



# 4 Your Installation is Complete!

After you've continued in Windows XP (or after the computer restarts in the other Windows operating systems), the D-Link Air DWL-650 **Configuration Utility** will automatically start and the utility icon will appear in the bottom right hand corner of the desktop screen (systray). **If this icon appears GREEN, then you have successfully installed the DWL-650, are connected to a wireless network and are ready to communicate!**

Double-click the **utility icon** to use the **configuration utility**.



4:43 PM



If the utility icon does not appear, double-click the **shortcut icon** that has appeared on your desktop.



# APPENDIX

## Using the Configuration Utility

The **D-Link Air Configuration Utility** window will appear. By default, it will take you to the **Link Info** section.

**A. Status:** Displays the MAC Address of the Access Point that is associated with the DWL-650.

**B. SSID:** The Service Set Identifier is the name assigned to the wireless network. The factory SSID setting is set to **default**.

**C. TxRate:** The default setting is 11 Mbps; however, TxRate settings are automatically determined by the DWL-650 depending on the distance from the access point.

**D** D-Link Air DWL-650 2.4GHz Wireless Cardbus Adapter

**A** Status: Associated BSSID=00-40-05-DF-09-51

**B** SSID: testlab

**C** Tx Rate: 11 Mbps

**D** Channel: 6

**E** Link Quality/Signal Strength

Link Quality: 100%      Signal Strength: 100%

**F** Data Rate

Transmit: 0 Kbps      Receive: 465 Kbps

**D. Channel:** Displays the channel information. By default, the channel is set to 6 and selection is automatically determined by the DWL-650.

**E. Link Quality / Signal Strength:** Displays the Link Quality for the DWL-650 wireless connection to the access point. The Signal Strength represents the wireless signal between the access point and the DWL-650. The percentage coincides with the graphical bar.

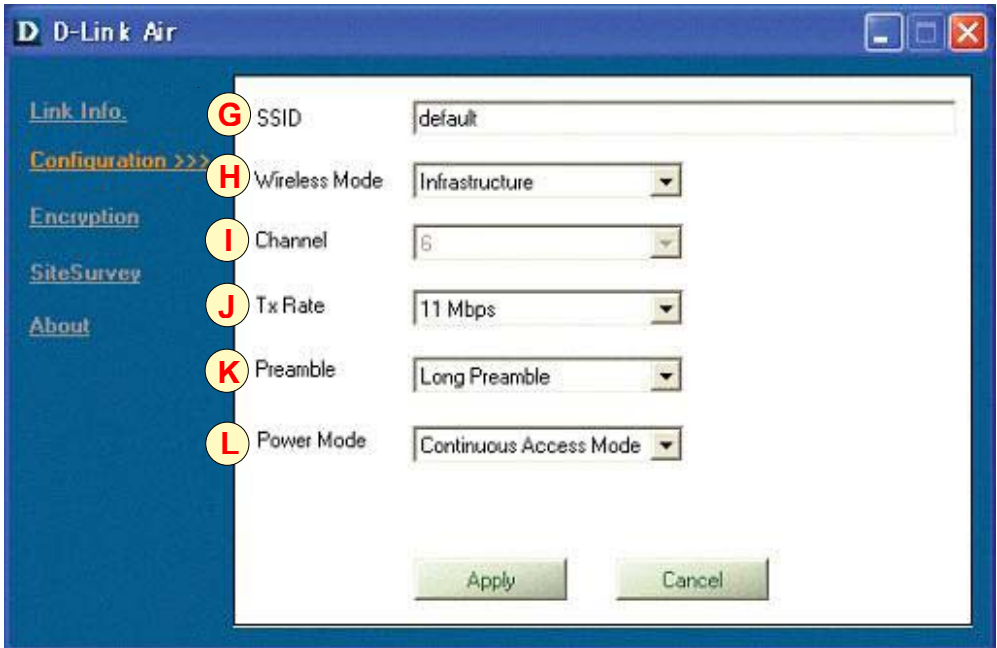
**F. Data Rate:** Graphically displays the statistics of data transmitted and received.

# Make changes to the DWL-650's factory settings by clicking on the **Configuration** menu.

**G. SSID:** The Service Set Identifier is the name assigned to the wireless network. The factory SSID setting is set to **default**. Make changes here to match the SSID on existing Wireless Router or Access Point.

**H. Wireless Mode:** The factory setting is set to **Infrastructure**. Ad-Hoc mode is used for peer-to-peer networking.

**I. Channel:** By default, the channel is set to **6**. Channel selection is automatically determined by the DWL-650 depending on the channel setting of the access point selected for association. To change the channel settings, the **Wireless Mode** must be set to **Ad-hoc**.



**J. TxRate:** You can adjust the transmission rate to get the best signal possible depending on your usage and your environment.



The **preamble setting** of the DWL-650 must match the preamble setting of the Wireless Router or Access Point in order to communicate on the network.

**K. Preamble:** By default, D-Link *Air* Products are set to **Long Preamble**. The Preamble defines the length of the CRC block (Cyclic Redundancy Check is a common technique for detecting data transmission errors) for communication between the Access Point and wireless network adapters. High network traffic areas should use the shorter preamble type.

**L. Power Mode:** By default, Power Mode is set to Continuous Access Mode. **Continuous Access Mode** — this default setting consumes the most power. **Maximum Power Save** — this setting consumes the least power. **Power Save** — this setting consumes a moderate amount of power.

# IP Address Configuration

To connect to a network, **make sure the proper network settings are configured for DWL-650.**

## For Microsoft Windows XP:

Go to **Start > right click on My Network Places > select Properties > Double-click on the Network Connection** associated with the DWL-650.

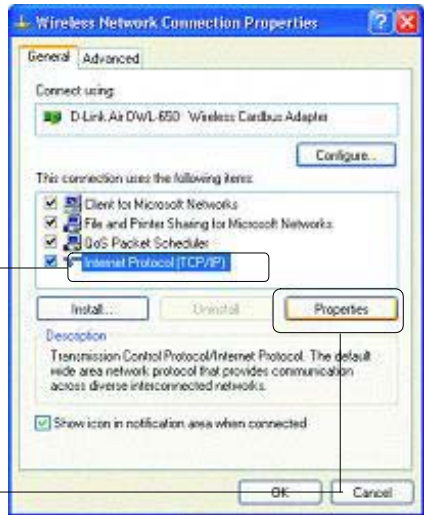
**Click Internet Protocol (TCP/IP)**

**Click Properties**

**Select Obtain an IP address automatically** (if the Wireless Router or Access Point has DHCP server enabled)

**Select Obtain DNS server address automatically**

**Click OK**



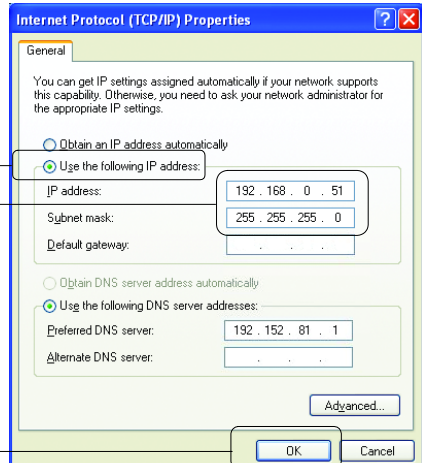
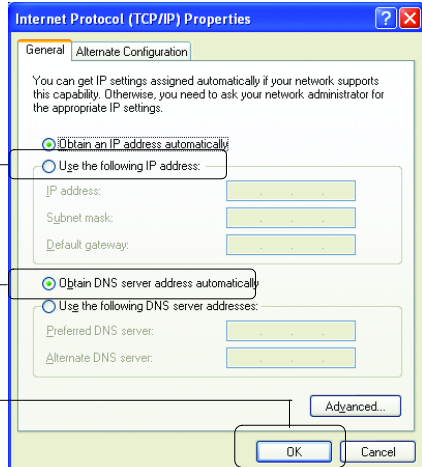
## Static IP address setup

**Select Use the following IP address** (if the Wireless Router or Access Point does not have DHCP server enabled)

Input a static IP address in the same range as the Wireless Router or Access Point.

**IP address: 192.168.0.51**  
**Subnet mask: 255.255.255.0**

**Click OK**

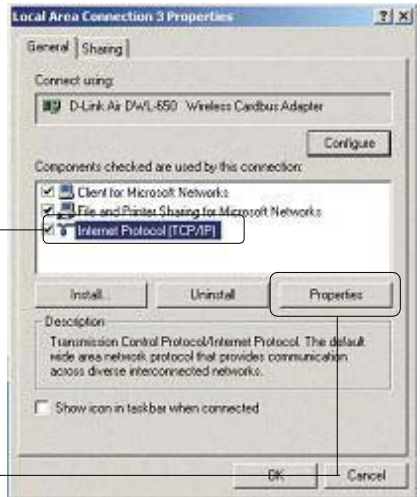


Your Internet service provider provides preferred DNS server information.



## For Windows 2000 users:

Go to **Start > Settings > Network and Dial-up Connections** > Double-click on the **Local Area Connection** associated with the DWL-650 > select **Properties**



Click **Internet Protocol (TCP/IP)**

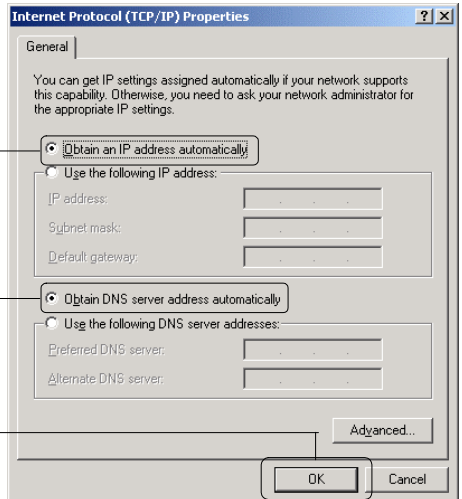
Click **Properties**

Setup for wireless router or Access Point using **DHCP server**.

Select **Obtain an IP address automatically** (if the Wireless Router or Access Point has DHCP server enabled)

Select **Obtain DNS server address automatically**

Click **OK**

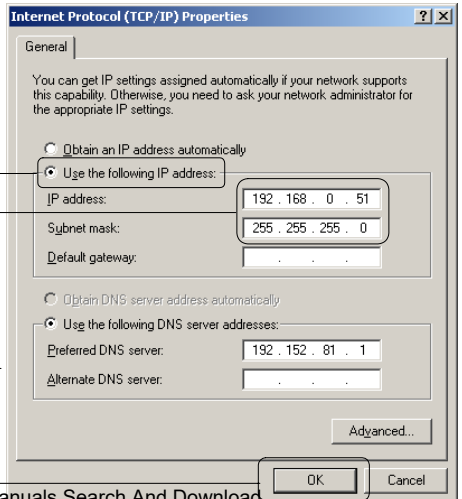


## Static IP address setup

Select **Use the following IP address** (if the Wireless Router or Access Point does not have DHCP server enabled)

Input a static IP address in the same range as the Wireless Router or Access Point.

**IP address: 192.168.0.51**  
**Subnet mask: 255.255.255.0**



Your Internet service provider provides preferred DNS server information.

Click **OK**

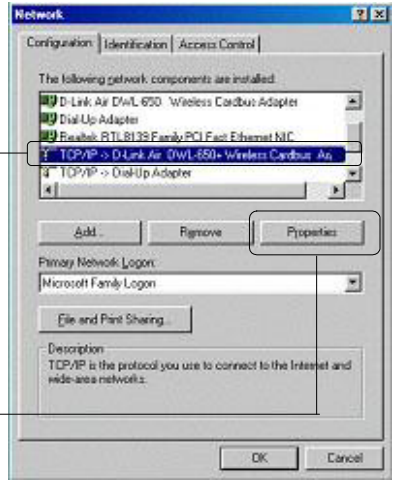
# For Windows Me and 98 users:

Click **Internet Protocol (TCP/IP)**

Go to **Start > Settings > Control Panel > Double-click on the Local Area Connection** associated with the DWL-650 > select **Properties**

Click **Internet Protocol (TCP/IP)**

Click **Properties**

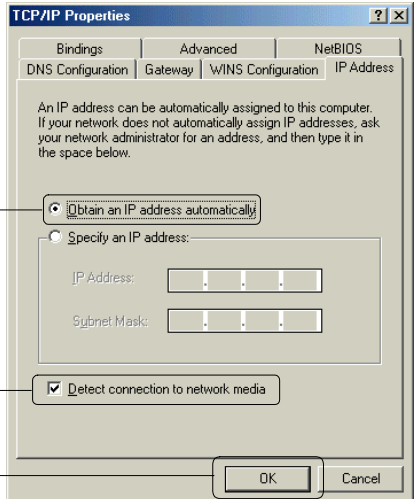


Setup for wireless router or Access Point using **DHCP server**.

Select **Obtain an IP address automatically** (if the Wireless Router or Access Point has DHCP server enabled)

Select **Detect connection to network media**

Click **OK**



## Static IP address setup

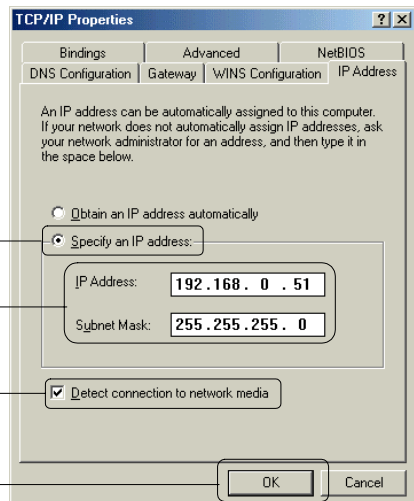
Select **Use the following IP address** (if the Wireless Router or Access Point does not have DHCP server enabled)

Input a static IP address in the same range as the Wireless Router or Access Point.

**IP address: 192.168.0.51**  
**Subnet mask: 255.255.255.0**

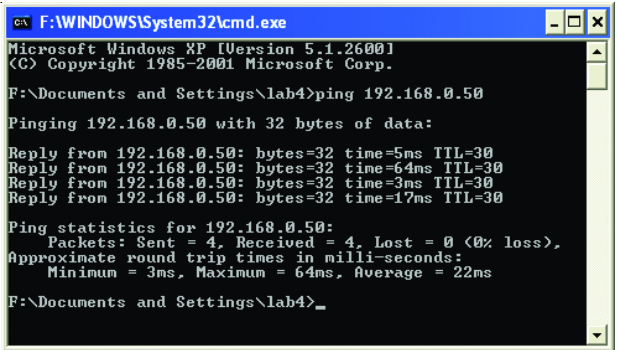
Select **Detect connection to network media**

Click **OK**



# Checking the Wireless Connection

**For Windows XP and 2000** Go to **Start > Run > type cmd.** A window similar to this will appear.



```
F:\WINDOWS\System32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

F:\Documents and Settings\lab4>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

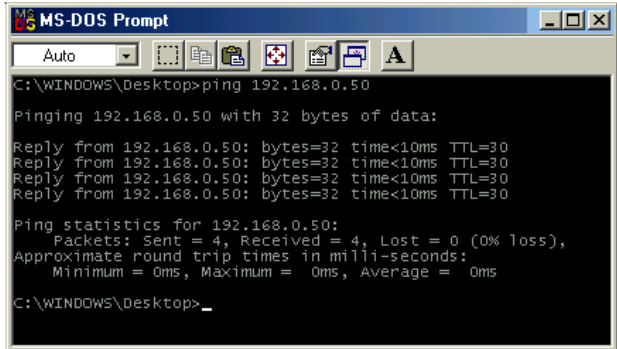
Reply from 192.168.0.50: bytes=32 time=5ms TTL=30
Reply from 192.168.0.50: bytes=32 time=64ms TTL=30
Reply from 192.168.0.50: bytes=32 time=3ms TTL=30
Reply from 192.168.0.50: bytes=32 time=17ms TTL=30

Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 3ms, Maximum = 64ms, Average = 22ms

F:\Documents and Settings\lab4>
```

**Type ping xxx.xxx.xxx.xxx,** where xxx is the IP address of the wireless router or Access Point. A good wireless connection will show the reply from the wireless router or access point.

**For Windows Me and 98, Go to Start > Run > type command.** A window similar to this will appear.



```
MS-DOS Prompt
Auto
C:\WINDOWS\Desktop>ping 192.168.0.50

Pinging 192.168.0.50 with 32 bytes of data:

Reply from 192.168.0.50: bytes=32 time<10ms TTL=30
Reply from 192.168.0.50: bytes=32 time<10ms TTL=30
Reply from 192.168.0.50: bytes=32 time<10ms TTL=30
Reply from 192.168.0.50: bytes=32 time<10ms TTL=30

Ping statistics for 192.168.0.50:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\WINDOWS\Desktop>
```

**Type ping xxx.xxx.xxx.xxx,** where xxx is the IP address of the Wireless Router or Access Point. A good wireless connection will show the reply from the wireless router or access point.

## Troubleshooting

**Q1: I cannot connect to the access point or wireless router.**

**A:** Make sure that the SSID on the DWL-650 Cardbus Adapter is exactly the same as the SSID on the Access Point or wireless router.

**Q2: The DWL-650 Power and Link lights are not on.**

**A:** Check to see if the DWL-650 Cardbus Adapter is firmly inserted in the Cardbus slot of your laptop computer.

**Q3: I am unable to access the Internet using the DWL-650.**

**A1:** Check that the LED indicators for the broadband modem are indicating normal activity. If not, there may be a problem with the broadband connection.

**A2:** 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.

**A3:** Check that the IP address, subnet mask, gateway, and DNS settings are correctly entered for the wireless adapter in that specific wireless network.

**Q4: I forgot my Encryption key.**

**A:** Reset the Access Point to its factory default settings and restore the DWL-650 Wireless Cardbus Adapter to the factory default settings.

Once properly installed the **DWL-650 Wireless Cardbus Adapter** will be able to connect to other 802.11b wireless adapters, routers and access points. The DWL-650 using its default wireless settings also connects to other **D-Link Air™** Wireless adapters, access points and routers (with the default settings) as soon as it is properly installed and active

When you have completed the steps in this **Quick Installation Guide**, your connected network should look similar to this:

For detailed explanations on **Ad-Hoc, Infrastructure mode, Basics of Networking, file-sharing and troubleshooting**, please refer to the **DWL-650 Manual** on the CD included with the product.



## Technical Support

Software updates and documentation are available on the **D-Link** website.

**D-Link** provides free technical support for customers within the United States for the duration of the warranty period on this product.

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

### **D-Link Technical Support over the Telephone:**

(877) 453-5465

24 hours a day, seven days a week

### **D-Link Technical Support over the Internet:**

<http://support.dlink.com>

email: [support@dlink.com](mailto:support@dlink.com)

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