# USER MANUAL DPR-1260

**VERSION 1.2** 



D-Link®

**WIRELESS** 

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## **Chapter 1 - Product Overview**

This chapter provides a physical and functional overview of the DPR-1260.

## **Safety Precautions**

- Unplug this device from its power source before cleaning. Use only a slightly dampened cloth for cleaning. Do not use liquid or aerosol cleaners.
- Avoid using this device near water. Exposure to water may cause an electric-shock.
- Do not place the Wireless Print Server on an unstable surface. The device may fall causing serious damage to the device.
- This device should only be used with the power supply included with this product.
- Do not pinch, crimp or otherwise damage the power cord. If exposed to foot traffic, ensure that the cable is properly shielded and does not pose a tripping hazard.
- If using an extension cord, make sure the total current rating of the products using the cord does not exceed the extension cord's current rating.
- Do not attempt to service this device. Opening or removing the case may expose you to dangerous voltage points or other risks.

## **Package Contents**

- RangeBooster G<sup>™</sup> Multi-Function Print Server
- Detachable Antenna
- CAT5 Ethernet Cable
- Power Adapter
- CD-ROM with Manual and Warranty

**Note:** Using a power supply with a different voltage rating than the one included with the DPR-1260 will cause damage and void the warranty for this product.



## **System Requirements**

- 10/100 Fast Ethernet Wired or 802.11b/g Wireless Network
- Printer with USB Port\*
- Computer with:
  - Windows® XP (SP2) or Windows® 2000 (SP4)
  - Internet Explorer 6.0 or Mozilla Firefox 1.5 or higher
  - CD-ROM Drive
  - Network Interface Card

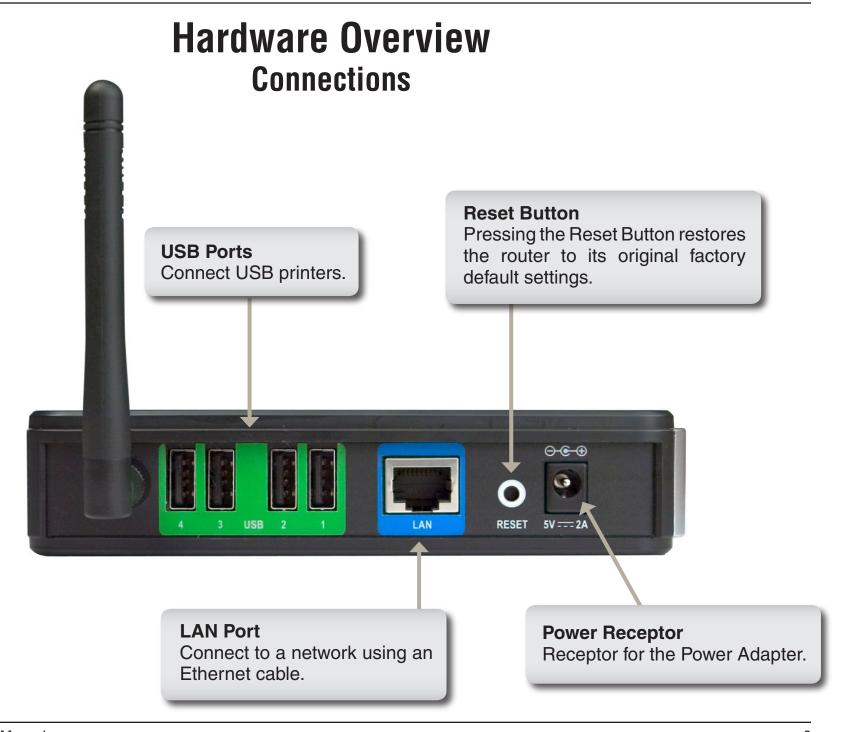
<sup>\*</sup> For a list of compatible printers, visit http://support.dlink.com.

## Introduction

D-Link's new Rangebooster G<sup>™</sup> Multi-Function Print Server (DPR-1260) allows you to wirelessly share up to 4 USB Multi-Function Printers (MFP) on your network. This innovative new print server allows multiple users to Print or Scan using one of the four connected MFP printers. By supporting multiple MFP Printers over a wireless connection, this new print server is the ideal solution for your home, the classroom, or office.

Simply plug your USB printer into one of the four ports, run the automatic configuration wizard, and you are ready to start printing and scanning over your wireless network. For extra network connectivity, you can also use the Ethernet port on the DPR-1260 to provide wireless connectivity to any Ethernet-enabled device, such as a computer or Network-Attached Storage (NAS)

<sup>\*</sup> Maximum wireless signal rate derived from IEEE Standard 802.11g 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.



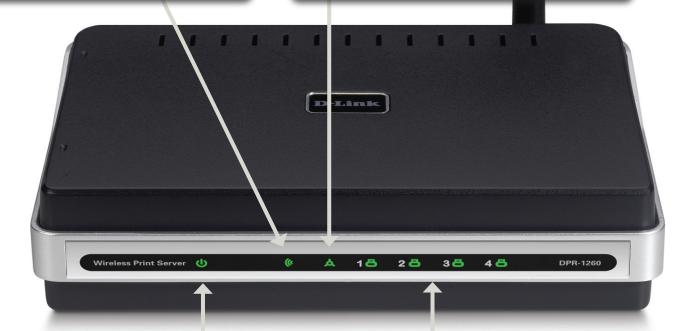
# Hardware Overview LEDs

### **WLAN LED**

A solid light indicates that the wireless segment is ready. This LED blinks during wireless data transmission.

### **LAN LED**

A solid light indicates connection on the LAN port. This LED blinks during data transmission.



### **Power LED**

A solid light indicates a proper connection to the power supply.

### **USB LEDs (1-4)**

A solid light indicates connectivity to an USB printer or scanner.

## **Chapter 2 - Installation**

This section will walk you through the installation process. Placement of the print server is very important. Do not place the print server in an enclosed area such as a closet or cabinet.

## **Setting up the DPR-1260**

**WARNING:** Configuration problems may result if the Print Server is powered up without first establishing its network connection. Follow this procedure to avoid complications at the configuration stage.

- 1. Confirm proper operation of your printer before connecting the DPR-1260.
- 2. When you have confirmed proper operation of your USB printer, turn your printer power OFF.
- 3. Confirm that your network is operating normally.
- 4. Connect the DPR-1260 to your network, using a straight-through CAT5 cable. It is required that an Ethernet cable is used during initial setup. Once your wireless configuration is set, you may disconnect the Ethernet cable and begin communicating wirelessly with your DPR-1260.
- 5. While the printer is powered OFF, use the USB printer cable to connect the DPR-1260 to your USB printer.
- 6. Switch ON your USB printer.
- 7. Plug the DC power adapter into the DC 5V power socket on the rear panel of the Print Server.
- 8. Plug the power adapter into a power outlet. This will supply power to the DPR-1260, as it has no external power switch. The green Power LED on the Print Server's front panel should illuminate steadily, and the Print Server's Self-Test will proceed.

## **Wireless Installation Considerations**

The D-Link wireless print server 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 print server 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.

## **UPnP Setup**

UPnP (Universal Plug and Play) is only available on Windows® Me and XP. To enable UPnP or to check if you do have UPnP enabled, follow the steps below:

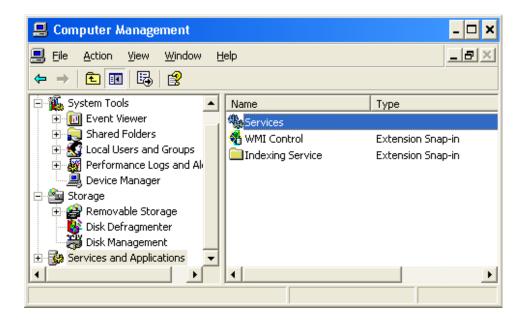
1. Click on **Start**, right-click on **My Computer**, and then click **Manage**.



2. Double-click on Services and Applications.



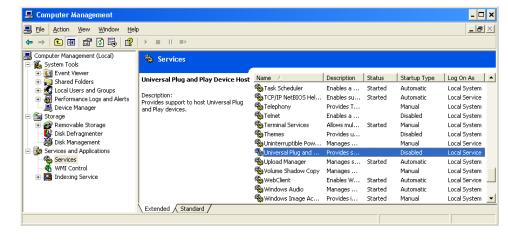
3. Double-click on Services.



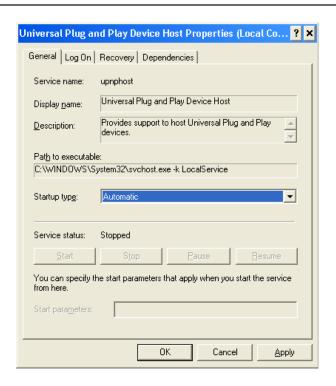
4. In the right pane, locate the service named **Universal Plug and Play Device Host**. Right-click the service and select **Properties**.

If the status is set to Started, UPnP is already installed and is running.

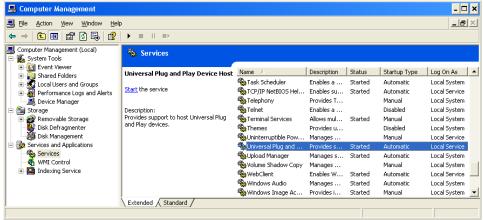
If the Universal Plug and Play service is not listed, skip to page 13 to install.



5. Make sure that the Startup type is set to **Automatic**.



6. Click **Start** and then click on **OK** once the service has finished starting.



- 7. Locate the service named **SSDP Discovery Service**, right-click the service, and select **Properties**.
- 8. Repeat Steps 5 and 6 for the SSDP Discovery Service.

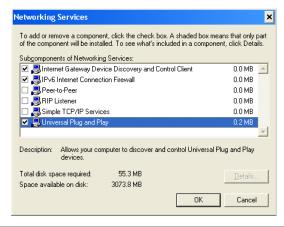
### **UPnP** Installation

Follow the steps below to install UPnP on your Windows® XP machine. You may need your original Windows XP installation CD.

- 1. Click Start and then click Control Panel. Double-click Add/Remove Programs.
- 2. Click **Add/Remove Windows Components** on the left side. Please wait while the list of Windows Components loads.
- 3. Scroll down to **Networking Services**. Select **Network Services** and then click **Details**.



4. Check Universal Plug and Play and then click OK.



## **Chapter 3 - Configuration**

This section will show you how to configure your new D-Link wireless print server using the web-based configuration utility.

## **Web-based Configuration Utility**

The IP address of your print server will be automatically assigned by your router.

To access the print server's web-based configuration interface:

### Windows® XP users:

Double-click on the **My Network Places** icon on your desktop. Your print server will be displayed as "DPR-1260: dlinkps-xxxxxx" (where xxxxxx is the last 6 characters of your print server's MAC address). If you do not see the print server or have UPnP enabled, please refer to page 13.

### Windows® 2000 users:

You will need to write down the MAC address located on the bottom of the print server (E.G. 00-54-23-45-f5-b6). Open a web browser and enter the following:

### http://dlinkps-XXXXXX

**XXXXXX** = the last six characters of your MAC address.

**Note:** Some printer software features may not work while connected to the print server such as ink level display.



### **Status**

The Status section displays helpful at-a-glance information about the print server and how it is currently configured. It also displays the printers attached to the print server. You may need to refresh the page to update the information.

### **Device Information**

**Identification:** The print server name, IP address, MAC address, and firmware version are displayed here.

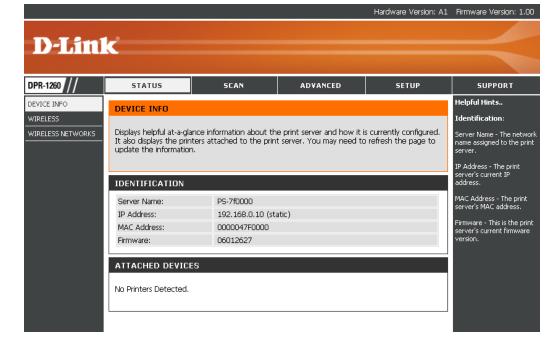
**Server Name:** The network name assigned to the print server.

**IP Address:** The print server's current IP address.

**MAC Address:** The print server's MAC address.

**Firmware:** The print server's current firmware version.

**Attached Devices:** Any attached printers and scanners will be displayed here.



### **Wireless Status**

Wireless Status: Radio Status: Displays the status of the print server being associated or disconnected from an access point.

**SSID:** Displays the wireless network the print server is associated with.

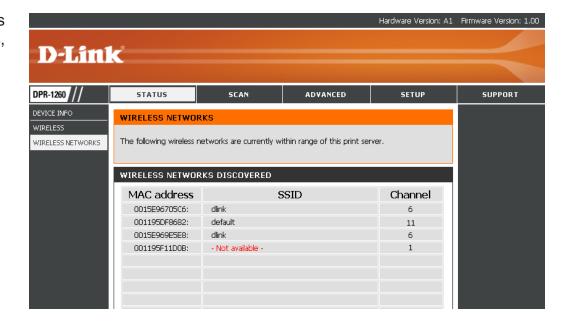
**Channel:** Displays the channel that the print server and access point are currently using.

**Transmit Rate:** Displays the current connection rate that the print server is currently connected at.



### **Wireless Networks**

Wireless Networks
Discovered: that the DPR-1260 detects. The MAC address,
SSID, and channel will be displayed.



Scan Device: Select Scanner Bed (most common) or

**Automatic Document Feeder** (ADF). If you select ADF, select the document size from the

drop-down menu.

Size: Select Full Bed, Letter, Executive, A4, or enter

a custom size.

Offset: Enter an offset in inches or millimeters.

**Resolution:** Select the resolution from Low to Highest.

Color Copy: Select color or black & white.

File Format: Select JPEG or PDF format.

Scan Button: Click the Scan button to scan the document.

For more information regarding your scanner, please refer to the scanner's documentation.

Unfortunately not all scanners will operate or be detected when connected to the D-Link print server.

Please visit http://support.dlink.com for an updated compatibility list.

### Scan



# Advanced Settings Printer

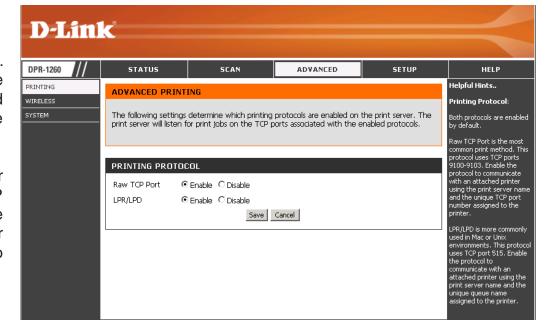
The following settings determine which printing protocols are enabled on the print server. The print server will listen for print jobs on the TCP ports associated with the enabled protocols.

To access this page, you will be prompted to enter your administrator password. If you have not set up a password, leave the password blank. Please refer to page 28 for setting up an administrator password.

Printing Protocols: Both protocols are enabled by default.

Raw TCP Port: Raw TCP Port is the most common print method. This protocol uses TCP ports 9100-9103. Enable the protocol to communicate with an attached printer using the print server name and the unique TCP port number assigned to the printer.

LPR/LPD: LPR/LPD is more commonly used in Mac or Unix environments. This protocol uses TCP port 515. Enable the protocol to communicate with an attached printer using the print server name and the unique queue name assigned to the printer.



### Wireless

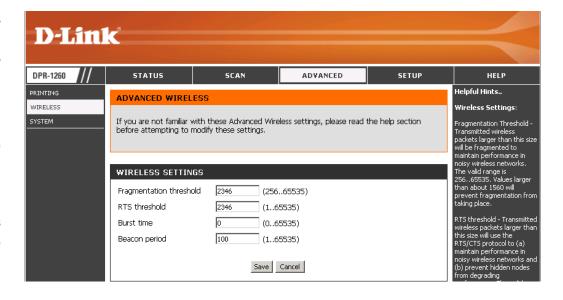
If you are not familiar with these Advanced Wireless settings, please read the help section before attempting to modify these settings. To access this page, you will be prompted to enter your administrator password. If you have not set up a password, leave the password blank. Please refer to page 28 for setting up an administrator password.

Fragmentation Transmitted wireless packets larger than this Threshold: size will be fragmented to maintain performance in noisy wireless networks. The valid range is 256-65535. Values larger than about 1560 will prevent fragmentation from taking place.

RTS Threshold: Transmitted wireless packets larger than this size will use the RTS/CTS protocol to (a) maintain performance in noisy wireless networks and (b) prevent hidden nodes from degrading performance. The valid range is 1-65535. Values larger than about 1560 will prevent RTS/CTS from taking place.

**Burst Time:** Set the time duration here for transmission burst mode, in microseconds. The valid range is 0-65535 with 0 to disable bursting. Burst mode can increase data throughput by occupying the channel for an extended duration. Typical values are in the range of several milliseconds (ie. 3000).

**Beacon Period:** In adhoc mode beacons are sent out periodically. This is the number of milliseconds between each beacon. The valid range is 1 - 65535.

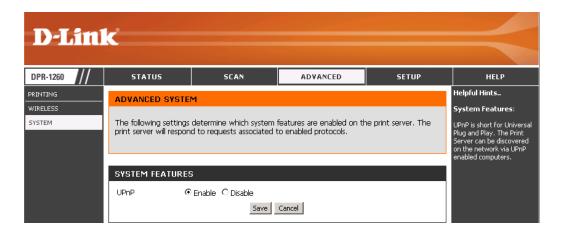


### **System**

The Systems page will allow you to enable or disable UPnP™ (Universal Plug n Play). To access this page, you will be prompted to enter your administrator password. If you have not set up a password, leave the password blank. Please refer to page 28 for setting up an administrator password.

**UPnP:** (Universal Plug and Play) When enabled, the print server can be discovered on the network from UPnP-enabled computers.

Windows® 2000 does not support UPnP. If you are using all Windows® 2000 computers on your network, disable this feature.

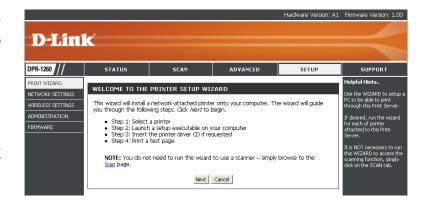


## Setup Setup Wizard

**Note:** If you are installing the print server for the first time, please follow the steps in the installation guide. If you do not have the installation guide, please configure the wireless settings before running this wizard. Skip to pages 25-26 and then come back and run the wizard.

You may run the setup wizard to quickly setup your print server. Click **Next** to launch the wizard.

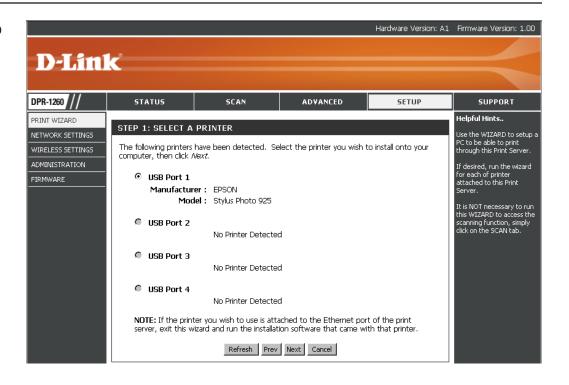
You will need to run this wizard from each computer that wishes to use the printer.



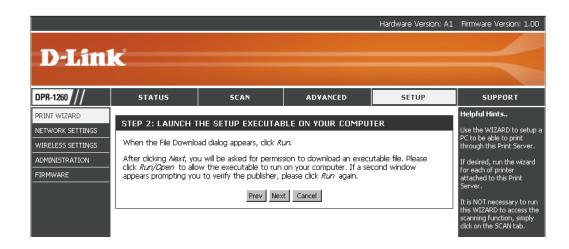
If you receive the following error, make sure your printer is properly connected to the print server and that the printer is powered on.



Click the radio button next to the printer you want to configure. Click **Next** to continue.



Click **Next** to continue.



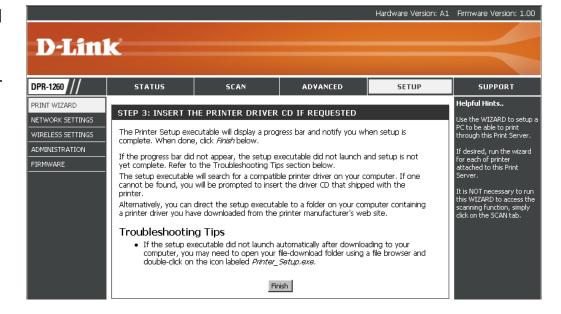
Click **Open** (or Run) to load the printer drivers to your computer.



You may need to insert your printer driver CD to load the drivers to your computer.

If the autorun screen appears when inserting your printer driver CD, click cancel or close.

Click **Finish** to complete the setup wizard.



### **Network Settings**

These are the network settings of your print server. By default, the print server is set to **DHCP**. The IP address of your print server will be automatically assigned by your router or DHCP server. If you are using Windows® 2000 or not using UPnP on your computers, you must set a Static IP address.

Network Settings: Select DHCP to get the IP settings

automatically from a router or DHCP server on your network. Select **Static** to assign an

IP address to the print server.

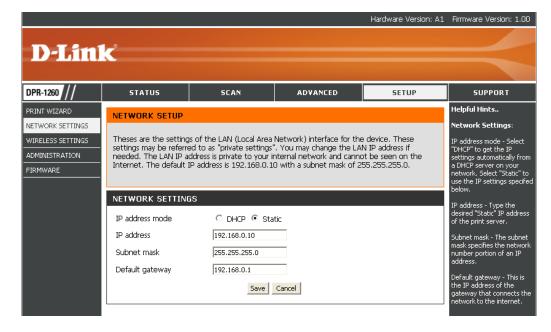
IP Address: Type the desired IP address of the print

server.

**Subnet Mask:** Enter the subnet mask of your network.

Default Gateway: Enter the default gateway. This is usually the

IP address of your router or gateway.



### Wireless Settings

Wireless on/off: Check the Yes box to enable the wireless function. If you do not want to use wireless, check the No box to disable all the wireless

functions.

Wireless Network Service Set Identifier (SSID) is the name of your

Name: wireless network. Select your network from the drop-down menu or select Enter Manually and

type in your SSID.

Wireless Mode: Select Infrastructure if you want your print server

to connect to an access point or wireless router. Select Ad-Hoc if you are connecting directly to a wireless client such as a computer with a

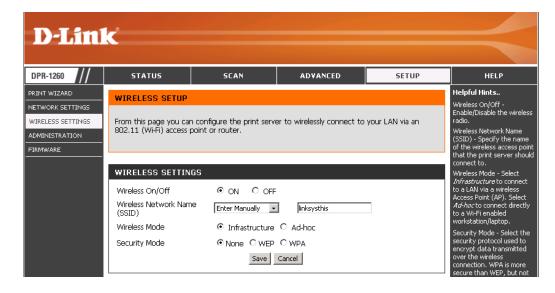
wireless adapter.

Security Mode: Select None to use connect to an unsecure

network, WEP, or WPA.

Please refer to Chapter 4 for more information regarding wireless security and setup

instructions.



### **Ad-Hoc Settings**

**Transmission** Select the transfer rate based on the speed of your **Rate:** wireless network. It is strongly recommended to keep this setting to **Auto**.

Super G Mode: Super G is a group of performance enhancement features that increase end user application throughput in an 802.11g network. Super G is backwards compatible to standard 802.11g devices. For top performance, all wireless devices on the network should be Super G capable. Select either Disabled, Super G without Turbo, Super G with Dynamic Turbo.

- Disabled Standard 802.11g support, no enhanced capabilities.
- Super G without Turbo Capable of Packet Bursting, FastFrames, Compression, but no Turbo mode.
- Super G with Dynamic Turbo Capable of Packet Bursting, FastFrames, Compression, and Dynamic Turbo. This setting is backwards compatible with non-Turbo (legacy) devices. Dynamic Turbo mode is only enabled when all devices on the wireless network are Super G with Dynamic Turbo enabled.

Hardware Version: A1 Firmware Version: 1.00 **D-Link** DPR-1260 ADVANCED SUPPORT Helpful Hints.. PRINT WIZARD WIRELESS SETUP NETWORK SETTINGS Wireless Settinas From this page you can configure the print server to wirelessly connect to your LAN via an WIRELESS SETTINGS Wireless On/Off -Enable/Disable the wireles 802.11 (Wi-Fi) access point or router ADMINISTRATION FIRMWARE SSID) - Specify the name WIRELESS SETTINGS that the print server should Wireless On/Off ON ○ OFF Wireless Network Name *Infrastructure* to connect to a LAN via a wireless Access Point (AP), Select Wireless Mode ○ Infrastructure Ad-hoc *Ad-hoc* to connect directly Transmission rate (Mbits/s) Best (automatic) Mixed 802.11g and 802.11b 802.11 Mode ransmission rate (Mbits/s Super A/G with Dynamic Turbo Super mode 2.412 GHz - CH 1 🔻 Channel ata. Normally you should Security Mode None ○ WEP ○ WPA Save Cancel ou may wish to use a hat the actual TX rate is doubled for turbo mode values in brackets).

**Wireless Channel:** Indicates the channel setting for the DPR-1260. By default the channel is set to 6. The Channel can be changed to fit the channel setting for an existing wireless network or to customize the wireless network. The **Auto Channel Scan** setting can be selected to allow the DPR-1260 to choose the channel with the least amount of interference.

**802.11g Only** Enable this mode if your network is made up of purely 802.11g devices. If you have both 802.11b and 802.11g wireless **Mode:** clients, uncheck the box.

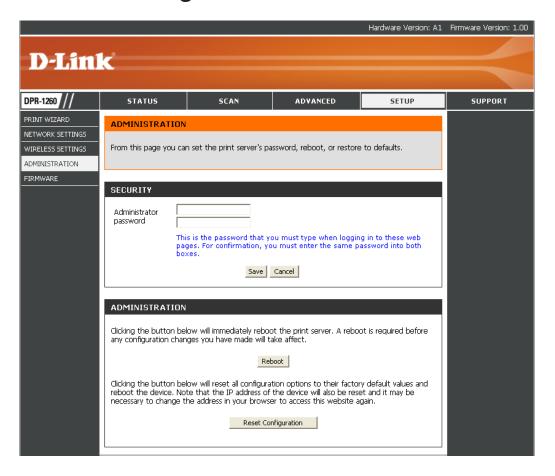
Security Mode: See Chapter 4 for security settings.

### **Administration Settings**

Administrator Enter a new admin password and click **Save** to **Password**: apply the settings.

**Reboot:** Click **Reboot** to restart the print server.

**Reset** Click the **Reset Configuration** button to reset **Configuration**: the print server back to the default settings.



### **Update Firmware**

You can upgrade the firmware of the print server here. Make sure the firmware you want to use is on the local hard drive of the computer. Click on **Browse** to locate the firmware file to be used for the update. Please check the D-Link support site for firmware updates at http://support.dlink.com. You can download firmware upgrades to your hard drive from the D-Link support site.

**Upgrade** Visit http://support.dlink.com to download the **Firmware**: latest firmware for the DPR-1260.

**Browse:** After you have downloaded the new firmware, click **Browse** in this window to locate the firmware update on your hard drive.

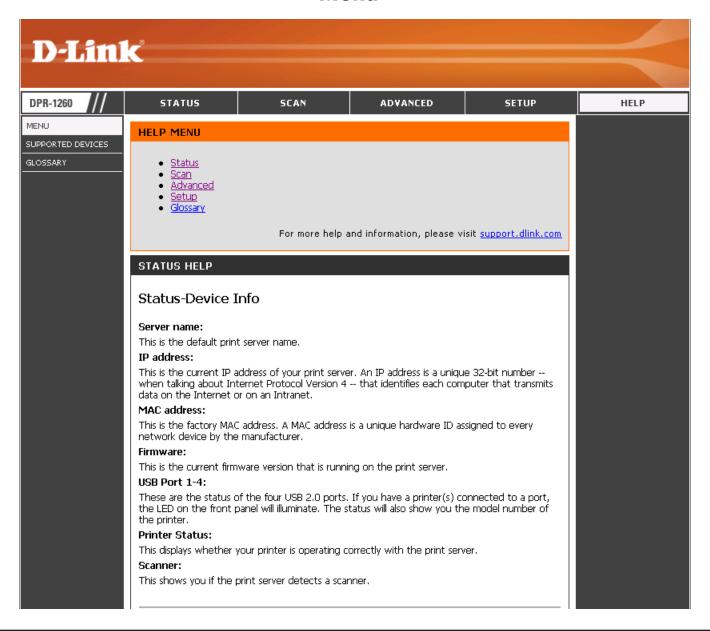
**Upgrade:** Click Upgrade to start the upgrade process. Allow up to 1 minute for the upgrade process.

**Caution:** Do not turn off the power to the print server during this process.



### Support

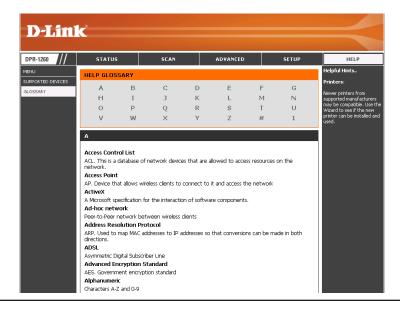
### Menu



### **Supported Devices**



### **Glossary**



## **Chapter 4 - Wireless Security**

This section will show you the different levels of security you can use to protect your data from intruders. The DPR-1260 offers the following types of security:

- WPA-PSK (Wi-Fi Protected Access Pre-Shared Key)
- WEP (Wired Equivalent Privacy)

### 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 (AES) 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**

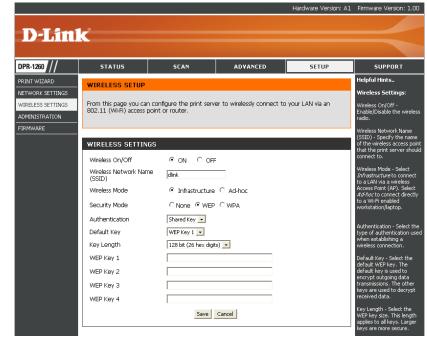
It is recommended to enable encryption on your wireless router before your wireless print server. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead.

1. Log into the web-based configuration by opening a web browser and entering the IP address of the print server

(192.168.0.10). Click on **Setup** and then **Wireless Settings** on the left side.

the left side.

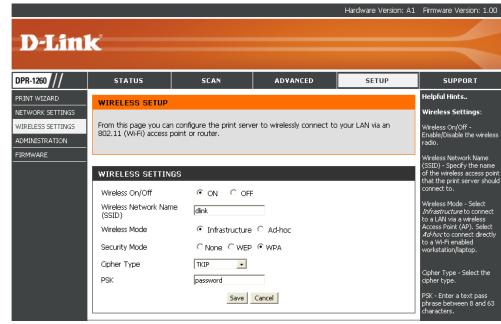
- 2. Next to Security Mode, select WEP.
- 3. Next to *Authentication*, select **Shared Key**.
- 4. Select either **64-bit** or **128-bit** encryption from the drop-down menu next to *WEP Encryption*.
- 5. Next to *Key 1*, enter a WEP key that you create. Make sure you enter this key exactly on all your wireless devices. You may enter up to 4 different keys.
- 6. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WEP on your adapter and enter the same WEP key as you did on the router.



## **Configure WPA-PSK**

It is recommended to enable encryption on your wireless router before your wireless print server. Please establish wireless connectivity before enabling encryption. Your wireless signal may degrade when enabling encryption due to the added overhead

- 1. Log into the web-based configuration by opening a web browser and entering the IP address of the router (192.168.0.1). Click on Wireless Settings on the left side.
- 2. Next to Security Mode, select Enable WPA-Personal Security or Enable WPA2-Personal Security.
- 3. Next to *Cipher Mode*, select **TKIP**, **AES**, or **Auto**.
- 4. Next to *PSK/EAP*, select **PSK**.
- 5. Next to *Passphrase*, enter a key (passphrase). The key is an alpha-numeric password between 8 and 63 characters long. The password can include symbols (!?\*&\_) and
  - spaces. Make sure you enter this key exactly the same on all other wireless clients.
- 6. Enter the passphrase again next to *Confirmed Passphrase*.
- 7. Click **Save Settings** to save your settings. If you are configuring the router with a wireless adapter, you will lose connectivity until you enable WPA-PSK (or WPA2-PSK) on your adapter and enter the same passphrase as you did on the router.



## **Chapter 5 - Troubleshooting**

This chapter provides solutions to problems that can occur during the installation and operation of the DPR-1260. Read the following descriptions if you are having problems. (The examples below are illustrated in Windows® XP. If you have a different operating system, the screenshots on your computer will look similar to the following examples.)

### 1. Why can't I access the web-based configuration utility?

When entering the IP address of the D-Link print server (192.168.0.10 for example), you are not connecting to a website on the Internet or have to be connected to the Internet. The device has the utility built-in to a ROM chip in the device itself. Your computer must be on the same IP subnet to connect to the web-based utility.

- Make sure you have an updated Java-enabled web browser. We recommend the following:
  - Internet Explorer 6.0 or higher
  - Netscape 8 or higher
  - Mozilla 1.7.12 (5.0) or higher
  - Firefox 1.5 or higher
- Verify physical connectivity by checking for solid link lights on the device. If you do not get a solid link light, try using a different cable or connect to a different port on the device if possible. If the computer is turned off, the link light may not be on.
- Disable any internet security software running on the computer. Software firewalls such as Zone Alarm, Black Ice, Sygate, Norton Personal Firewall, and Windows® XP firewall may block access to the configuration pages. Check the help files included with your firewall software for more information on disabling or configuring it.

- Configure your Internet settings:
  - Go to **Start** > **Settings** > **Control Panel**. Double-click the **Internet Options** Icon. From the **Security** tab, click the button to restore the settings to their defaults.
  - Click the **Connection** tab and set the dial-up option to Never Dial a Connection. Click the LAN Settings button. Make sure nothing is checked. Click **OK**.
  - Go to the Advanced tab and click the button to restore these settings to their defaults. Click OK three times.
  - Close your web browser (if open) and open it.
- Access the web management. Open your web browser and enter the IP address of your D-Link router in the address bar. This should open the login page for your the web management.
- If you still cannot access the configuration, unplug the power to the router for 10 seconds and plug back in. Wait about 30 seconds and try accessing the configuration. If you have multiple computers, try connecting using a different computer.

# 2. What can I do if I forgot my password?

If you forgot your password, you must reset your print server. Unfortunately this process will change all your settings back to the factory defaults.

To reset the print server, locate the reset button (hole) on the rear panel of the unit. With the print server powered on, use a paperclip to hold the button down for 10 seconds. Release the button and the print server will go through its reboot process. Wait about 30 seconds to access the print server. The default IP address is 192.168.0.10. When logging in to the print server, leave the password blank (default setting).

# 3. I have Windows® 2000 and do not know the IP address of the print server. How can I access the web-based configuration utility?

Unfortunately Windows® 2000 does not support UPnP and the print server does not have a default IP address. You must connect the print server to a network with a DHCP server or a router/gateway that has DHCP enabled. You can obtain the IP address of the print server by accessing the DHCP log in your router or server.

Most D-Link routers will have a similar DHCP log page.

- 1. With the power off, connect the print server to your network using an Ethernet cable. Connect the power adapter to the print server. On the bottom of the print server, write down the 12-character MAC address (E.G. 00-34-A5-6B-FF-23).
- 2. From a computer, open a web browser such as Internet Explorer and enter the IP address of your router (E.G. 192.168.0.1). Enter your username and password.
- 3. For most D-Link routers, click on the **Home** tab and then click **DHCP** on the left. The DHCP table will be listed at the bottom. If you have a DIR-series router, go to **Setup** > **Network Settings** and scroll to the bottom.
- 4. Find the MAC address in the list that matches the MAC address of the print server. The IP address will be listed.

P Address	MAC Address	
Dynamic DHCF	Client List	
Host Name	IP Address	MAC Address
unknow	192.168.0.100	00:50:BA:58:55:1E

5. Now you may access the web-based configuration utility of the print server. Just enter the IP address into your web browser.

# **Appendix A - 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 as 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 Cardbus 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, such as two or more DPR-1260 wireless network Cardbus adapters.

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 cardbus adapters. All the adapters must be in Ad-Hoc mode to communicate.

# **Appendix B - Networking Basics**

# **Check your IP address**

By default, the TCP/IP settings should be set to obtain an IP address from a DHCP server (i.e. wireless router) automatically. To verify your IP address, please follow the steps below.

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.

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.

If you are connecting to a wireless network at a hotspot (e.g. hotel, coffee shop, airport), please contact an employee or administrator to verify their wireless network settings.

# 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.

## Step 1

Windows® XP - Click on Start > Control Panel > Network Connections. Windows® 2000 - From the desktop, right-click My Network Places > Properties.

# Step 2

Right-click on the Local Area Connection which represents your D-Link network adapter and select Properties.

# Step 3

Highlight Internet Protocol (TCP/IP) and click Properties.

# Step 4

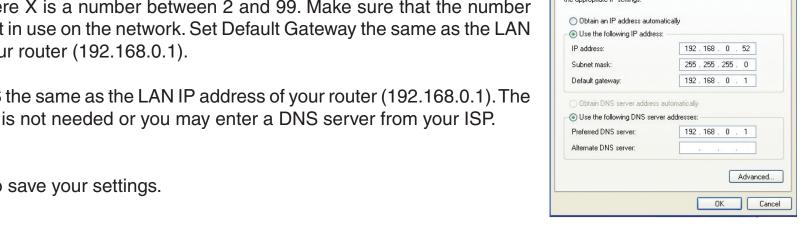
Click **Use the following IP address** and enter an IP address that is on the same subnet as your network or the LAN IP address on your router. ? × Internet Protocol (TCP/IP) Properties

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 (192.168.0.1).

Set Primary DNS the same as the LAN IP address of your router (192.168.0.1). The Secondary DNS is not needed or you may enter a DNS server from your ISP.

# Step 5

Click OK twice to save your settings.



You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for

# **Appendix C - Technical Specifications**

#### **Standards**

- IEEE 802.11g
- IEEE 802.11b
- IEEE 802.3
- IEEE 1284
- USB 2.0

#### **Ports**

- Power
- 4 x USB 2.0 Ports
- 10/100 LAN Port

# **Wireless Signal Rates\* with Automatic Fallback**

• 108, 54, 48, 36, 24, 18, 12, 11, 9, 6, 5.5, 2, & 1Mbps

# **Frequency Range**

• 2.4GHz to 2.462GHz

# **Transmitter Output Power**

• 15dBm ± 2dB

# **External Antenna Type**

• 2.0 dBi external dipole antenna

# **Modulation Technology**

- Orthogonal Frequency Division Multiplexing (OFDM)
- Complementary Code Keying (CCK)

## Security

- 64/128-bit WEP
- Wi-Fi Protected Access (WPA-PSK)

#### **Transport Protocols**

- TCP/IP
- NetBEUI

## Management

Web-based

<sup>\*</sup> Maximum wireless signal rate derived from IEEE Standard 802.11g 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 factors will adversely affect wireless signal range.

# **Diagnostic LEDs**

- Power
- Link/Activity
- WLAN
- USB x 4

#### **Power**

- External Power Supply
- DC 5V, 2.5A

#### **Certifications**

• FCC Part 15b

# **Operating Temperature**

• 32°F to 149°F (0°C to 55°C)

# **Operating Humidity**

• 95% Maximum (Non-condensing)

#### **Dimensions**

• Item (WxHxD): 7.60" x 4.65" x 1.22"

# Weight

• 0.71 lbs

# Warranty

 1-Year (1-Year Warranty available only in the U.S.A and Canada)

# **Appendix D - Contact Technical Support**

D-Link provides free technical support for customers within the United States and within Canada for the duration of the warranty period on this product. 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. DPR-1260)
- Hardware Revision (located on the label on the bottom of the print server (e.g. rev A1))
- Serial Number (s/n number located on the label on the bottom of the print server).

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 24 hours a day, seven days a week.

### **Internet Support:**

http://support.dlink.com

#### For customers within Canada:

# **Phone Support:**

(800) 361-5265 Monday to Friday 7:30am to 9:00pm EST

### **Internet Support:**

http://support.dlink.ca

# **Appendix E - 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, and
- 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 and fans): One (1) year
- Power supplies and fans: One (1) year
- Spare parts and spare kits: 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 DLink 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 DLink 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. DLink 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 NONINFRINGEMENT.

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.

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# **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.

#### **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 communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

For detailed warranty information applicable to products purchased outside the United States, please contact the corresponding local D-Link office.

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.

#### **IC Statement:**

The Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulation.

#### **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.

For operation within 5.15 ~ 5.25GHz frequency range, it is restricted to indoor environment, and the antenna of this device must be integral.

# 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.

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

# **Appendix F - Registration**



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

Version 1.2 June 14, 2006

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