# **D-Link WMP-G04**

2.4GHz up to 54Mbps Wireless Mini PCI Card

# Manual

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## Introduction

The Alpha Networks WMP-G04 Wireless Mini PCI Card is an enhanced 802.11g high-performance, wireless adapter that supports high-speed wireless networking at home, at work or in public places.

Unlike most network cards, the WMP-G04 provides speeds of up to 54 Mbps (compared to the standard 11 Mbps) This means that you do not need to change your entire network to maintain connectivity. You may sacrifice some of 802.11g's speed when you mix 802.11b and 802.11g devices, but you will not lose the ability to communicate when you incorporate the 802.11g standard into your 802.11b network. You may choose to slowly change your network by replacing the 802.11b devices with 802.11g devices gradually.

In addition to offering faster data transfer speeds when used with other 802.11g products, the WMP-G04 has the newest, strongest, most advanced security features available today.

For home users that will not incorporate a radius server in their network, the security for the WMP-G04, used in conjunction with other 802.11g products, will be much stronger than ever before. No longer will you have to manually input a new WEP key frequently to ensure security, with the WMP-G04, you will automatically receive a new key every time you connect, vastly increasing the safety of your communications.

The WMP-G04 is compatible with existing 802.11b devices such as the *AirPlus, AirPlusXtremeG and Air*Premier family of products including the DWL-520, DWL-520+ and the DWL-AG530 Wireless PCI Adapter, the DI-624 Wireless Router/Access Point and the DWL-120 Wireless USB Adapter. (When used with 802.11b devices, the WMP-G04 will reach speeds at up to 11Mbps.)

It is an ideal way to connect one laptop computer to a Wireless Local Area Network (WLAN.) After completing the steps outlined in the *Quick Installation Guide* (included in the package) you will have the ability to share information and resources, such as files and printers, and take full advantage of a "connected" environment for work or play!

The WMP-G04 includes software drivers for the most popular Microsoft Windows operating systems (Windows XP, Windows 2000, Windows Me, Windows 98(SE)) and can be integrated into a larger network, running, in either Access Point mode (without an Access Point) or Peer-to-Peer mode (with an Access Point.) *Please take a look at our Getting Started section in this manual to see examples of typical network setups using the WMP-G04 in both* Access Point and Peer-to-Peer modes.

This manual provides a quick introduction to wireless technology and its application as it relates to networking. Take a moment to read through this manual and get acquainted with wireless technology.

## **Wireless Basics**

Alpha wireless products are based on industry standards to provide easy-touse and compatible high-speed wireless connectivity within your home, business or public access wireless networks. Strictly adhering to the IEEE standard, the Alpha 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.

#### Wireless Basics (continued)

People use wireless LAN technology for many different purposes:

**Mobility** - Productivity increases when people have access to data in any location within the operating range of the WLAN. Management decisions based on real-time information can significantly improve worker efficiency.

Low Implementation Costs – WLANs (Wireless Local Area Networks) are easy to set up, manage, change and relocate. Networks that frequently change, both physically and logically, can benefit from WLANs ease of implementation. WLANs can operate in locations where installation of wiring may be impractical.

**Installation Speed and Simplicity** - Installing a wireless LAN system can be fast and easy and can eliminate the need to pull cable through walls and ceilings.

**Network Expansion** - Wireless technology allows the network to go where wires cannot.

**Scalability** – Wireless Local Area Networks (WLANs) can be configured in a variety of topologies to meet the needs of specific applications or existing infrastructures. Configurations are easily changed and range from peer-to-peer networks suitable for a small number of users to larger infrastructure networks to accommodate hundreds or thousands of users, depending on the number of wireless devices deployed.

### Wireless Basics (continued)

#### Standards-Based Technology

The WMPL-G04 Wireless Mini PCI Card increases the data rate up to 54 Mbps within the 2.4GHz band, utilizing **OFDM technology.** 

This means that in most environments, within the specified range of this device, you will be able to transfer large files quickly or even watch a movie in MPEG format over your network without noticeable delays. This technology works by transmitting high-speed digital data over a radio wave utilizing **OFDM** (**O**rthogonal **F**requency **D**ivision **M**ultiplexing) technology. **OFDM** works by splitting the radio signal into multiple smaller sub-signals that are then transmitted simultaneously at different frequencies to the receiver. **OFDM** reduces the amount of **crosstalk** (interference) in signal transmissions. The D-Link *WMP-G01* will automatically sense the best possible connection speed to ensure the greatest speed and range possible.

The WMP-G04 is backwards compatible with 802.11b devices. This means that if you have an existing 802.11b network, the devices in that network will be compatible with 802.11g devices at speeds up to 11Mbps in the 2.4GHz range. Also based on the IEEE **802.11b** standard, the WMP-G04 is interoperable with existing compatible 2.4GHz wireless technology with data transfer speeds of up to 11Mbps.

### Wireless Basics (continued)

#### Installation Considerations

The D-Link WMP-G04 lets you access your network, using a wireless connection, from virtually anywhere. 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:

- Keep the number of walls and ceilings between the WMP-G04 and other network devices to a minimum - each wall or ceiling can reduce your Alpha Wireless product'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! Try to make sure that devices are positioned so that the signal will travel straight through a wall or ceiling 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 wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.
- 4. Keep your product away (at least 3-6 feet or 1-2 meters) from electrical devices or appliances that generate RF noise.

## **Getting Started**

There are basically two modes of networking:

- Access Point using an Access Point, such as the DWL-900AP.
- Peer-to-Peer directly connecting to another computer, for peer-to-peer communication, using wireless network adapters on each computer, such as two or more WMP-G04 wireless network Mini PCI card.

On the following pages we will show you an example of an **Infrastructure Network** and an **Ad Hoc Network**.

An **Infrastructure** network contains an Access Point or Router. To utilize the full features of the WMP-G04 you will need to include a radius server in your network. The **Infrastructure Network** example shown on the following page contains the following D-Link network devices (your existing network may be comprised of other devices):

- A wireless Access Point D-Link AirPlus 900AP
- A laptop computer with a wireless adapter -D-Link AirPlusXtreme G DWL-G650
- A desktop computer with a wireless adapter -D-Link AirPlus DWL-520 (802.11b devices have speeds up to 11Mbps)
- A Cable modem **D-Link DCM-200**

#### Getting Started Setting up a Wireless Infrastructure Network



Please remember that D-Link wireless devices are pre-configured to connect together, right out of the box, with their default settings.

#### For a typical wireless setup at home (as shown above), please do the following:



You will need broadband Internet access (a Cable or DSL-subscriber line into your home or office)



Consult with your Cable or DSL provider for proper installation of the modern



Connect the Cable or DSL modern to your broadband router (see the Quick Installation Guide included with your router.)



If you are connecting a desktop computer to your network, install the D-Link Air DWL-520 wireless PCI adapter into an available PCI slot on your desktop computer. You may also install the DWL-520+. (See the Quick Installation Guide included with the network adapter.)



Install the drivers for the D-Link WMP-G01 wireless Mini PCI Card into a laptop computer.

(See the Quick Installation Guide included with the WMP-G01.)

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Getting Started Setting up a Wireless Ad Hoc Network





Install the D-Link DWL-G520 Wireless Network adapter into one laptop computer. See the Quick Installation Guide included with the product for installation instructions.



Install another WMP-G01 into a laptop computer. See the Quick Installation Guide included with the product.



Set the wireless configuration for the adapters to Ad-Hoc mode, set the adapters to the same channel, and assign an IP Address to each computer on the Ad-Hoc network. (See Box below)

#### IP Address

When assigning IP Addresses to the computers on the network, please remember that the IP Address for each computer must be in the same IP Address range as all the computers in the network, and the subnet mask must be exactly the same for all the computers in the network.

For example: If the first computer is assigned an IP Address of 192.168.0.2 with a Subnet Mask of 255.255.255.0, then the second computer can be assigned an IP Address of 192.168.0.3 with a Subnet Mask of 255.255.255.0, etc.

IMPORTANT: If computers or other devices are assigned the same IP Address, one or more of the devices may not be visible on the network.

## **Using the Configuration Utility**

If you wish to change the default settings or optimize the performance of the WMP-G04, D-Link has included a configuration utility for this purpose. However, in Windows XP, you will instead use zero configuration utility.

Before you use the configuration utility for the WMP-G04, you must install the drivers and the configuration utility from the CD-ROM that came with the WMP-G04. (Please see the *Quick Installation Guide* that came with the product.) After you have completed this installation and restarted your computer, you can access the Configuration Utility at any time by clicking on the icon in your taskbar at the bottom right corner, on the desktop.

After double-clicking on the icon in the taskbar (shown at right), the Link Info window shown on the next page will appear:

4:43 PM

#### Configuration Utility Link Info

Default - D-Link AirPlus Xtreme G Settings 🛛 🛛 🔀
Status Configuration Encryption IBSS About
State: Associated - 00:40:96:59:D6:B5
Current Tx Rate: 2 Mbits/sec
Current Channel: 6 Disable Radio Rescan
Throughput (bytes/sec): Tx: 0 Rx: 0
Link Quality: Excellent (86%)
Signal Strength: Excellent (86%)
OK Cancel Apply

**State:** Displays the MAC Address of the Access Point that is associated with the WMP-G04.

**CurrentTxRate:** The factory setting is set to 11 Mbps; however,Current TxRate: The default setting is 2. meaning displays the current transmit rate of the current association.

**Current Channel:** Displays the channel information. Shows the channel on which the connection is made . In Access Point mode, this number changes as the radio scans the available channels.

Throughput: Displays the statistics of data transmitted and received.

**Link Quality / Signal Strength:** Displays the Link Quality for the WMP-G04 wireless connection to the access point. The Signal Strength represents the wireless signal between the access point and the WMP-G04. The percentage coincides with the graphical bar.

## **Configuration Utility**

## Configuration

This configuration screen displays the default settings for the WMP-G04

Default - D-Link	AirPlus Xtreme C	i Settings	
Status Configura	tion Encryption   IBS	S About	
Profile Name:	Default	-	
Network Name:	cisco350	•	
Network Type:	Access Point	•	
			Defaults
		_	
	OK	Cancel	Apply

To communicate on the network all devices must have the same settings for the following properties:

#### **Profiles Name**

You can manage the profiles that you have created for the wireless network at home, at the office and in public places. Scroll up and down and highlight the profile that you wish to configure. You can add a profile.

**Network Name – Network Name** is a name that identifies a wireless network. Access Points and wireless clients attempting to connect to a specific WLAN (Wireless Local Area Network) must use the same Network Name. The default setting is Clefault.

**Network Type –** Click on the pull-down menu; select from the following options: **Access Point** - connecting the WLAN using an Access Point. (The **default** setting.)

**Peer-to-Peer –** wireless mode used when connecting directly to a computer equipped with a wireless adapter in a peer-to-peer environment.

## **Configuration Utility**

Default - D-Link AirPlus Xtreme G Settings	
Status       Configuration       Encryption       IBSS       About         Encryption (WEP security):       128 bit       •         • Create Keys Manually:       •       •         • Alphanumeric:       13 characters	
Key 1:       xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	
Passphrase:	

 $\ensuremath{\text{Encryption}}$  – enable Encryption by pulling down the field . Encryption is disabled as the default setting.

**Create Keys Manually** – enter a key in either ASCII (e.g., a word) or hexadecimal format

**Key Format** – ASCII or Hexadecimal **Key type** – select the key length, either 64, or 128 bits, or 256 bits **WEP Key** – You can create up to 4 different security keys Click **Apply** to save the changes.

**Hexadecimal** digits consist of the numbers 0-9 and the letters A-F **ASCII** (American Standard Code for Information Interchange) is a code for representing English letters as numbers from 0-127

#### **Configuration Utility**

#### IBSS



**IBSS Channel Selection** However, the WMP-G04 will automatically select the channel to match the channel setting for the selected Access Point. In Ad Hoc mode, the channel must be manually set to the same channel for each wireless adapter.

## Configuration Utility About

Default - D-Link AirPlus Xtreme G	i Setting	s 🔀
Status Configuration Encryption IBS	S Abou	it
D-Link Corp.		î
D-Link AirPlus Xtreme G		
Copyright © 2002 D-Link Corp.		
⊢ Network Driver		_
Version: 1.00.04.0000	Date:	Dec 19 2002
- Configuration Utility		
Version: 1.00.04	Date:	Dec 19 2002
NIC Firmware		
Version: 0.06.00.00	Address:	00.30.B4.01.17.E5
OK		Cancel Apply

The **ABOUT** screen gives you information about the Firmware and **Utility Versions** of the WMP-G04.

## Using the Network Setup Wizard in Windows XP

In this section you will learn how to establish a network at home or work, using **Microsoft Windows XP.** 

Note: Please refer to websites such as <u>http://www.homenethelp.com</u> and <u>http://www.microsoft.com/windows2000</u> for information about networking computers using Windows 2000, ME or 98SE.

Go to Start>Control Panel>Network Connections Select Set up a home or small office network



When this screen appears, click Next.

Please follow all the instructions in this window:



#### Click Next

In the following window, select the best description of your computer. If your computer connects to the internet through a gateway/router, select the second option as shown.

etwork Setup Wizard	
Select a connection method	<b>\$</b>
Select the statement that best devote Online computer connects practities to the income through the computer View or even plet	s the computer the Internet. The other computers on my retwork connect r
This computer connects to the inter- a residential gateway <u>View an example.</u>	nethiough another computerion my network or llivicug)
Oğim-s	
Learn to a above for relationed of cen	nerwork suni qu aliuns.

Click Next



Enter a **Computer description** and a **Computer name** (optional.)

#### Click Next

Enter a **Workgroup** name. All computers on your network should have the same **Workgroup** name.

Name your network	<b>k</b>
Name your helicoik by whould have the same	npectiving a wurkgroup name below. All computers on , our netwo work on in preme
<u>W</u> oftgious name	Accounting Examples: HUME or UF HUE
	Examples the site of project

Click Next

Please wait while the Network Setup Wizard applies the changes.



When the changes are complete, click Next.

Please wait while the **Network Setup Wizard** configures the computer. This may take a few minutes.



In the window below, select the option that fits your needs. In this example, **Create a Network Setup Disk** has been selected. You will run this disk on each of the computers on your network. Click **Next**.

Network Setup Wizord	
You're almost dona	
You need to run the Network Balup Wisard once on each of the computers on your nativolik. To full the wiza dion purpoters that are not running Windows XP, you can use the Windows XP CD on a Network SecuritOptic.	,
O Drear a Network Early Disk	
O Uce Je Netwuk Setup Dat LareaJvheve	
OUje ny WindowsXP CD	
Outline in the without continues to the the without on other estimations	
2 Rath Neal S	

Insert a disk into the Floppy Disk Drive, in this case drive A.

Network Setup Wizard	
frivert line dryk, you want to uve.	Ś
Insert a cast the nuclifier following disk direct, and them dick Newl. Dis Dappy (A:) If you want to format the risk, exist Format Disk Issuel Cick	
Evek	Capital

Click Next



Please read the information under **Here's how** in the screen below. After you complete the **Network Setup Wizard** you will use the **Network Setup Disk** to run the **Network Setup Wizard** once on each of the computers on your network. To continue click **Next**.

Network Setup Wizard
To run the wizard with the Network Setup Disk
<ul> <li>Implete the wizer: and restait this compute: Then, use the Network Selun Disk to run the Network Setup Wizard once an each of the other computers on your network.</li> <li>Here's how:</li> <li>Insert the Network Setup Disk into the next computer you want to network.</li> <li>Open My Computer and then open the Network Setup Disk.</li> <li>Double-click "netsetup."</li> </ul>
K Back Next > Cancel

Please read the information on this screen, then click **Finish** to complete the **Network Setup Wizard**.



The new settings will take effect when you restart the computer. Click **Yes** to restart the computer.

System 9	Settings Change 🛛 🕅
2	You must restart your computer before the new settings will take effect. Do you want to restart your computer now?
	Yes No

You have completed configuring this computer. Next, you will need to run the **Network Setup Disk** on all the other computers on your network. After running the **Network Setup Disk** on all your computers, your new wireless network will be ready to use.

#### Networking Basics Naming your Computer

To name your computer, please follow these directions: In Windows XP:

- Click **Start** (in the lower left corner of the screen)
- **Right-click** on **My Computer**
- Select **Properties** and click



- Select the Computer Name Tab in the System Properties window.
- You may enter a Computer Description if you wish; this field is optional.
- To rename the computer and join a domain, Click Change.



#### Networking Basics Naming your Computer

	Computer Name Changes ? X
In this window, enter the Computer name	Compute name Office Full computer name: Office
Select Workgroup and enter the name of the Workgroup	Member ol ○ Domain ○ Workgro-p:
<ul> <li>All computers on your network must have the same Workgroup name.</li> </ul>	
Click OK	

### Checking the IP Address in Windows XP

The wireless adapter-equipped computers in your network must be in the same IP Address range (see Getting Started in this manual for a definition of IP Address Range.) To check on the IP Address of the adapter, please do the following:



### Networking Basics Checking the IP Address in <u>Windows XP</u>

This window will appear.	🝸 Wireless Network Conn	ection 7 Status 🛛 🛜 🔀
Click the Support tab	General Support nternet Pictoco (TCP/IP) AJdress Type.	Assiuned by DHCP
	IP Address:	52 163.0 114
	Subnet Mask: Deraut Galeway:	255 255 255 1 142 168 II 1 Details
	Неран	
Click Close		

## Assigning a Static IP Address in Windows XP/2000

Note: Residential Gateways/Broadband Routers will automatically assign IP Addresses to the computers on the network, using DHCP (Dynamic Host Configuration Protocol) technology. If you are using a DHCP-capable Gateway/Router you will not need to assign Static IP Addresses.

If you are not using a DHCP capable Gateway/Router, or you need to assign a Static IP Address, please follow these instructions:



Assigning a Static IP Address in Windows XP/2000



#### Networking Basics Assigning a Static IP Address in <u>Windows XP/2000</u>

- Click on Internet Protocol (TCP/IP)
- Click Properties

& Wireless Network Connection 13 Properties 2 🗙 General Wireless Networks Authentication Advanced Connect using: B D-Link AirPlus Xtreme G DWL-G650 Т Configure... This connection uses the following items: 🗹 🔜 Client for Microsoft Networks 🗹 🜉 File and Printer Sharing for Microsoft Networks Ros Packet Scheduler M 🐨 Internet Protocol (TCP/IP) Install... Uninstall Properties Description Transmission Control Protocol/Internet Protocol, The default wide area network protocol that provides communication across diverse interconnected networks. Show icon in notification area when connected ΟK Cancel

In the window below, select **Use the following IP address**. Input your **IP address and subnet mask.** (The IP Addresses on your network must be within the same range. For example, if one computer has an IP Address of 192.168.0.2, the other computers should have IP Addresses that are sequential, like 192.168.0.3 and 192.168.0.4. The subnet mask must be the same for all the computers on the network.)

IP Address: e.g., 192.168.0.2

Subnet Mask: 255.255.255.0

**Default Gateway:** Enter the LAN IP address of the wireless router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)

Select Use the following DNS server address. Enter the LAN IP address of the Wireless Router. (D-Link wireless routers have a LAN IP address of 192.168.0.1)



Click OK

You have completed the assignment of a Static IP Address. (You do not need to assign a Static IP Address if you have a DHCP-capable Gateway/Router.) 29

#### Checking the Wireless Connection by <u>Pinging in Windows XP and</u> 2000

Go to Start > Run > type cmd. A window similar to this one will appear. 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 four replies from the Wireless Router or access point, as shown.

NS-DES Prompt	
A 四 11 12 12 12 12 12 12 12 12 12 12 12 12	
C:\VINDOW&\DESKTOP>ed	
a••WINDON0).a	
G:~>ping 192.168.0.1	
Finging 172.100.8.1 with 02 bytes of data:	
Reply from 192.168.0.1: bytes-32 cime(10ns TTL=64 Reply from 192.168.0.1: bytes-32 time(10ns TTL=64 Reply from 192.168.0.1: bytes-32 time(10ns TTL=64 Reply From 192.168.0.1: bytes-32 time(10ns TTL=64	
Ping consistics for 192,160,0.1: Products: Sent 4. Received 4. Lost 0 (0% lo Approximate round sets times in utili seconds: Hinimum Ons. Maximum Ons. Nocraje Day	vv).
Ge%>_	

### Checking the Wireless Connection by <u>Pinging in Windows ME and</u> <u>98SE</u>

Go to Start > Run > type **command**. A window similar to this will appear. 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 four replies from the wireless router or access point, as shown.

MS-DOS Piumut	
👾 🖃 i.i 🗠 🛍 📓 🖆 🖓 🗛	
COSMENDOMSSIDERATOP Scale.	
C: SWENDOWS Sed	
C:>>ping 192.160.0.1	
Pinging 192.168.0.1 with 32 lytes of data:	
Reyly from 192.100.0.1: bytes=J2 time(10ms IIL=64 Reyly from 192.100.0.1: bytes 32 time(10ms IIL 64 Reyly from 192.100.0.1: bytes 32 time(10ms IIL 64 Reyly from 192.100.0.1: bytes=J2 time(10ms IIL=64	
Ping statistics for 172.168.0.1; Parkets: Scat. 4, Rescional 4, Last. 9 (Br. ). Approximate round trip times in willi seconds: Ministen Werz, Marianon Berz, Decrape Bas	),
C:V_	
ar materia	

## Warranty and Registration

Subject to the terms and conditions set forth herein, D-Link Systems, Inc. ("D-Link") provides this Limited warranty for its product only to the person or entity that originally purchased the product from:

- D-Link or its authorized reseller or distributor and
- 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, addresses with an APO or FPO.

**Limited Warranty:** D-Link warrants that the hardware portion of the D-Link products described below will be free from material defects in workmanship and materials from the date of original retail purchase of the product, for the period set forth below applicable to the product type ("Warranty Period"), except as otherwise stated herein.

3-Year Limited Warranty for the Product(s) is defined as follows:

- Hardware (excluding power supplies and fans) Three (3) Years
- Power Supplies and Fans One (1) Year
- Spareparts and sparekits Ninety (90) days

D-Link's sole obligation shall be to repair or replace the defective Hardware during the Warranty Period at no charge to the original owner or to refund at D-Link's sole discretion. Such 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 in its sole discretion 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 from the date of original retail purchase. If a material defect is incapable of correction, or if D-Link determines in its sole discretion that it is not practical to repair or replace the defective Hardware, the 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 ("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 Warranty Period, the magnetic media on which D-Link delivers the Software (or defective media) with software that substantially conforms to D-Link's functional specifications for the Software or to refund at D-Link's sole discretion. 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. Software will be warranted for the remainder of the original Warranty Period from the date or original retail purchase. 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 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 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.

*Governing Law:* This Limited Warranty shall be governed by 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 the product owner may also have other rights which vary from state to state.

**Trademarks:** D-Link is a registered trademark of D-Link Systems, Inc. Other trademarks or registered trademarks are the Property of their respective manufacturers or owners.

**Copyright Statement:** No part of this publication or documentation accompanying this product may be reproduced in any form or by any means or used to make any derivative such as translation, transformation, or adaptation without permission from D-Link Corporation/D-Link Systems, Inc., as stipulated by the United States Copyright Act of 1976. Contents are subject to change without prior notice. Copyright 2002 by D-Link Corporation/D-Link Systems, Inc. All rights reserved.

#### 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 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.

**FCC Caution:** To assure continued compliance, (example – use only shielded interface cables when connecting to computer or peripheral devices) any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

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.

#### Statement Needed to be Shown on End Product:

Since this module is installed inside the end product, the end product should be affixed a label on visible area showing that this product contain a RF module, and also its FCC ID.

#### **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 a minimum distance of about eight inches (20cm) between the radiator and your body.

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

"Alpha Networks Inc. declare that WMP-G04 (High-Speed 2.4GHz WLAN Mini PCI Card) is limited in CH1~CH11 by specified firmware controlled in USA."

Register your D-Link product online at http://support.dlink.com/register/

This device is intended only for OEM integrators under the following conditions:

- (1) The antenna must be installed such that 20cm is maintained between the antenna and users, and
- (2) The transmitter module may not be co-located with any other transmitter or antenna.

As long as the 2 conditions above are met, further transmitter testing will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed (for example, digital device emission, PC peripheral requirements, etc.).

#### **IMPORTANT NOTE:**

In the event that these conditions can not be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID can not be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and Obtaining a separate FCC authorization.

#### **End Product Labelling:**

This transmitter module is authorized only for use in devices where the antenna may be installed such that 20cm may be maintained between the antenna and users (for example access points, routers, wireless ADSL modems, and similar equipment). The final end product must be labeled in a visible area with the following: "Contains TX FCC ID: RRK20031200281 ".

#### Manual Information That Must be Included:

The users manual for end users must include the following information in a prominent location " IMPORTANT NOTE: To comply with FCC RF exposure compliance requirements, the antenna used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter."