

# **D-Link<sup>®</sup>** DGE-530T

**32-bit Gigabit Network Adapter**

Manual

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Version B2G (March 2010)

651GE530T0B5G  
Printed in China  
RECYCLABLE

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# Introduction

Thank you for choosing the D-Link DGE-530T, the value leader among Gigabit adapters for PCI Bus personal computers. This introduction gives a general description of the newer networking technologies found on the DGE-530T.

The DGE-530T provides the bandwidth capability to support high-end servers and workstations. With Auto-negotiation, this card can run on three different speeds: 10Mbps at half and full duplex, 100Mbps at half and full duplex, and 1000Mbps at full duplex. When running at 1000Mbps, it provides a network throughput of 2Gbps in full-duplex mode.

The DGE-530T provides IEEE 802.3x Flow Control Enhancements, which are needed for a network adapter to function with a switch. In full-duplex mode, the MAC implements the PAUSE control function. This means when a switch is connected in full-duplex mode and it senses that its buffer will overflow in the near future, the switch will transmit one standard Ethernet packet that causes the DGE-530T to pause for a period, thus avoiding internal buffer overflow and packet loss.

The NIC enables simple, scalable network migration, providing the benefits of Gigabit Ethernet networking with the familiarity of Ethernet.

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## System Requirements

Before installing the DGE-530T, check your system for the following minimum configuration requirements.

- An open PCI bus master slot, 32-bit, operating at 33MHz.
- 32 MB of System Memory
- 150 MHz processor, or faster
- The latest BIOS for your computer
- One of the following types of twisted-pair network cabling:
  - Category 5e or better for 1000Mbps
  - Category 5 or better for 100Mbps
  - Category 3, 5 or better for 10Mbps

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## Features

Designed for versatility and performance, the DGE-530T Network Adapter provides the following:

- Operability in 32-bit, 33 MHz slot servers and workstations
- Universal Bus support 3.3V
- Compliance with IEEE 802.3ab 1000BASE-T Gigabit Ethernet standards, IEEE 802.3u Fast Ethernet standards.
- Plug-and-Play installation
- Supports Wake-on-LAN
- Full-duplex Gigabit Ethernet interface that delivers 2Gbps aggregate bandwidth
- Supports half and full duplex at 10Mbps, half and full-duplex at 100Mbps, and full-duplex operation at 1000Mbps

- Supports for full-duplex double network throughput
- Supports TCP/IP checksum generation and verification
- Supports SNMP V1
- Supports 802.3x flow control
- Supports 802.1Q VLAN
- Supports 802.1p Priority Tags
- Supports Cable Diagnostic Feature
- Supports ACPI 2.0
- One built-in RJ-45 connector
- Auto-negotiation to the highest available speed
- Four LED indicators: Link/Activity, Full Duplex, 1000Mbps, and 100Mbps
- Low profile bracket included
- Supports Jumbo Frame up to 9K in size<sup>†</sup>
- Driver support for:
  - Microsoft Windows 98
  - Microsoft Windows ME
  - Microsoft Windows NT 4.0
  - Microsoft Windows 2000 x86 (Microsoft WHQL Passed)
  - Microsoft Windows Server 2003 x86 (Microsoft WHQL Passed)
  - Microsoft Windows Server 2003 x64 (Microsoft WHQL Passed)
  - Microsoft Windows XP x86 (Microsoft WHQL Passed)
  - Microsoft Windows XP x64 (Microsoft WHQL Passed)
  - Microsoft Windows Vista x86 (Microsoft WHQL Passed)
  - Microsoft Windows Vista x64 (Microsoft WHQL Passed)
  - Microsoft Windows Server 2008 x86 (Microsoft WHQL Passed)
  - Microsoft Windows Server 2008 x64 (Microsoft WHQL Passed)
  - Microsoft Windows 7 x86 (Microsoft WHQL Passed)
  - Microsoft Windows 7 x64 (Microsoft WHQL Passed)
  - Microsoft Windows Server 2008 R2 x64 (Microsoft WHQL Passed)
  - Linux : Fedora 11 & Ubuntu 9.04
  - Client 32
  - DOS.ODI
  - Netware 4.x, 5.x & 6.x
  - Mac OS 10.2 & 10.3
  - NDIS2
  - FreeBSD 5.3 & 6.0

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<sup>†</sup> Check <http://www.dlink.com> for newest release of drivers.



**NOTE:** The D-Link Network Control Program is supported by Microsoft Windows Server 2003 x86, Microsoft Windows Server 2003 x64, Microsoft Windows XP x86, Microsoft Windows XP x64, Microsoft Windows Vista x86, Microsoft Windows Vista x64, Microsoft Windows Server 2008 x86, Microsoft Windows Server 2008 x64, Microsoft Windows 7 x86, Microsoft Windows 7 x64, and Microsoft Windows Server 2008 R2 x64.

# 2

## Installation

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### Unpack and Inspect

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**CAUTION:** *Under ordinary circumstances, a DGE-530T card will not be affected by a static charge that may be received through your body during handling of the unit. In special circumstances, the user may carry an extraordinarily high static charge and it is good practice to reduce the charge by touching a ground before handling the adapter card.*

Open the shipping carton and carefully remove all items. Ensure that the following items are included:

- One DGE-530T Gigabit Ethernet Adapter Card
- DGE-530T Drivers and Manual on CD
- One Quick Installation Guide

If any of these items are missing or damaged, please contact your local reseller for replacement.

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### Installing the Adapter

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1. Shut down the computer, unplug its power cord, and remove the chassis cover.

**(Important:** Opening the case of your computer may compromise the warranty of your computer. Consult the computer manufacturer before opening the case to ensure that you adhere to warranty guidelines. In some cases, you may need to have the DGE-530T installed by your computer manufacturer.)

2. Insert the contact edge of the DGE-530T card into the connector of any available PCI Bus Master expansion slot. Press the card firmly into the connector such that the card's contacts are fully seated in the connector.
3. Install the bracket screw that secures the card to the computer chassis.
4. Replace the computer's chassis cover.
5. Reconnect the computer's power cord, and switch computer power on. If the BIOS section of your computer's boot program is Plug-and-Play compliant, then at power-up the BIOS will automatically configure any newly installed DGE-530T adapter.



**NOTE:** Due to a fault in some Plug-and-Play BIOS programs, occasionally a newly installed adapter is assigned an Interrupt Number which has already been assigned to another device. In such a case, the conflict of the Interrupt Number will cause faults in the behavior of both devices. Therefore, the user must run the CMOS Setup utility, and manually assign a non-conflicting Interrupt Number.

### Connecting the Network Cable

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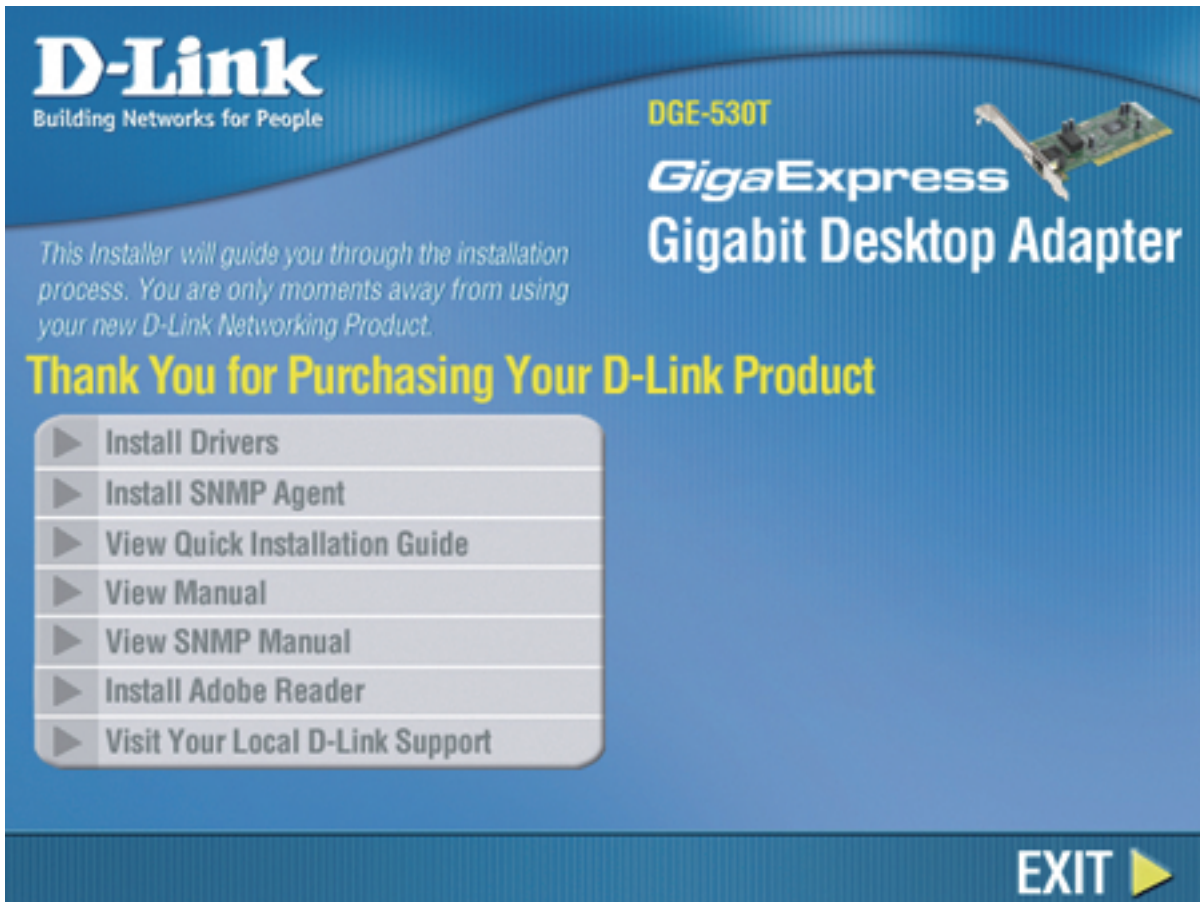
1000BASE-T Gigabit Ethernet enables operation over the extensive installed base of legacy Category 5 cabling systems and, by default, the Category 5 cabling systems currently being installed.

It provides optimal full-duplex 1000Mb/s Ethernet service over Category 5e links as defined by ANSI/TIA/EIA-568-A-5. Topology rules for 1000BASE-T are the same as those used for 100BASE-T. Category 5 and 5e link lengths are limited to 100 meters.

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## Software Installation

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The CD included with your DGE-530T is designed to make installation of necessary software a painless and trouble-free process. Simply click on the “Install Drivers” link and an Installation Wizard will guide you through the process, no matter which operating system you’re running. Your DGE-530T will be installed successfully in just a few moments, allowing you to enjoy the many advantages of joining an Ethernet LAN.

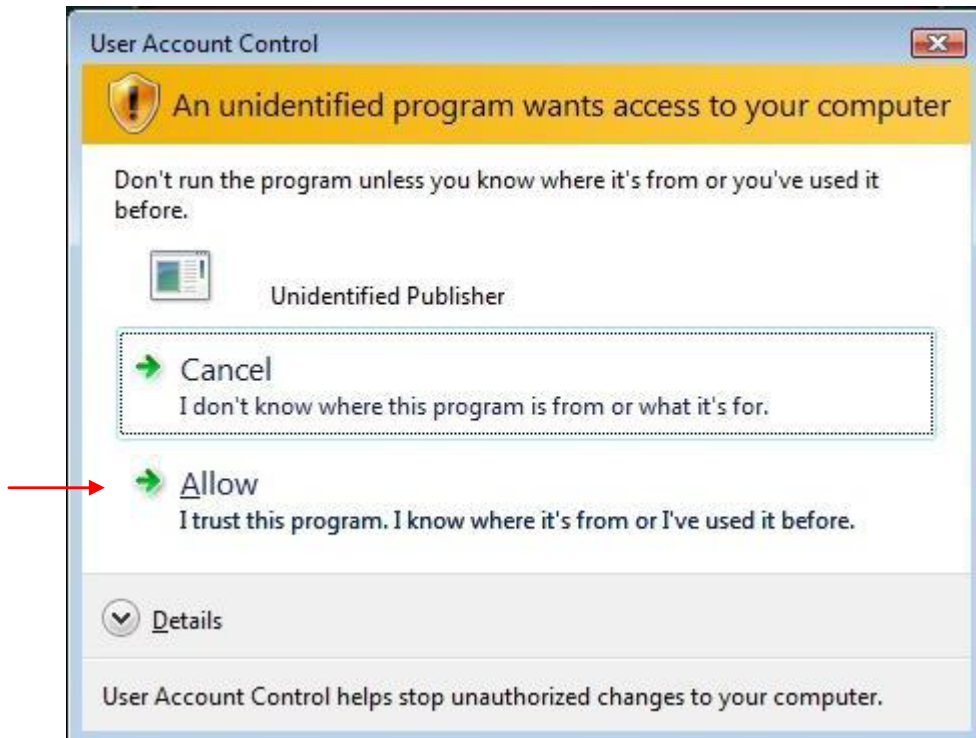
The included Adobe Acrobat Reader, which is needed to read or print out your user manual, is also useful for many other applications.

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## Uninstalling the Adapter

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When uninstalling the DGE-530T in Microsoft Windows Vista x86, Windows Vista x64, Windows7 x86, Windows7 x64, Windows Server 2008 R2 x64, Windows Server 2008 x86, and Windows Server 2008 x64, the following pop-up warning message will be displayed indicating an unidentified program wants to access your computer:



Click **Allow** to continue with the uninstall procedure. The DGE-530T drivers are WHQL-certified and should not cause any damage to your PC.



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## Advanced Features

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### Wake On LAN

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This Wake-on-LAN function can wake up the system from the sleeping mode to the fully powered mode over the network immediately and automatically. Once the system is awake, it can be directed to run management utilities. This function increases end-user productivity by avoiding disruptions during working hours.

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### QoS

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The **QoS** function allows the DGE-530T to transmit and receive tagged frames, such as 802.1p priority tagged frames and 802.1Q VLAN tagged frames. In order for the QoS to function on the DGE-530T, it must be connected to a switch that supports and is configured for QoS. These priority tagged frames will let real-time programs optimally utilize the network bandwidth. High priority packets will be processed before low priority packets.



**NOTE:** To implement QoS on the DGE-530T, it must be connected to a switch or other device that supports and is configured for 802.1p QoS.

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### Jumbo Frames

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Jumbo Frames are Ethernet frames that are larger than 1518 bytes. Jumbo frames may be used to reduce server CPU utilization and improve wire efficiency.

By implementing extra data in fewer packets, jumbo frames can increase throughput and decrease CPU utilization. However, additional latency may be introduced.

End-to-end network hardware must support this capability or these packets will be dropped.

Consult your network administrator or switch manual for more information concerning configuring and understanding Jumbo Frames.

- Supported protocols are limited to IP (TCP, UDP).
- Jumbo frames require compatible switch connections that forward jumbo frames. Contact your switch vendor or manual for additional information.
- There is no benefit to configure jumbo frames if standard size Ethernet frames (64 to 1518 bytes) are used.
- Jumbo frames may be simultaneously used with VLANs.



**NOTE:** Jumbo frames settings on a switch must be set to 8 bytes or larger than the adapter settings for Windows operating systems, and at least 22 bytes larger for all other operating systems.

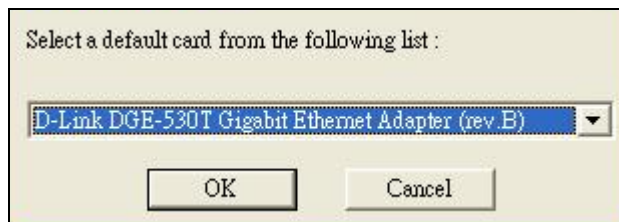
## D-Link SNMP Agent Utility

Included on the installation CD is a program for viewing and configuring the DGE-530T, known as the D-Link SNMP Agent Utility. This agent will allow the user to view error packets, set passwords, and choose NIC card options on your computer. Make sure that you have already clicked **Install Driver** on the introduction page and completed the Installation Wizard. Then, click **Install SNMP Agent Utility** (also on the introduction page), and follow the steps of the Installation Wizard.

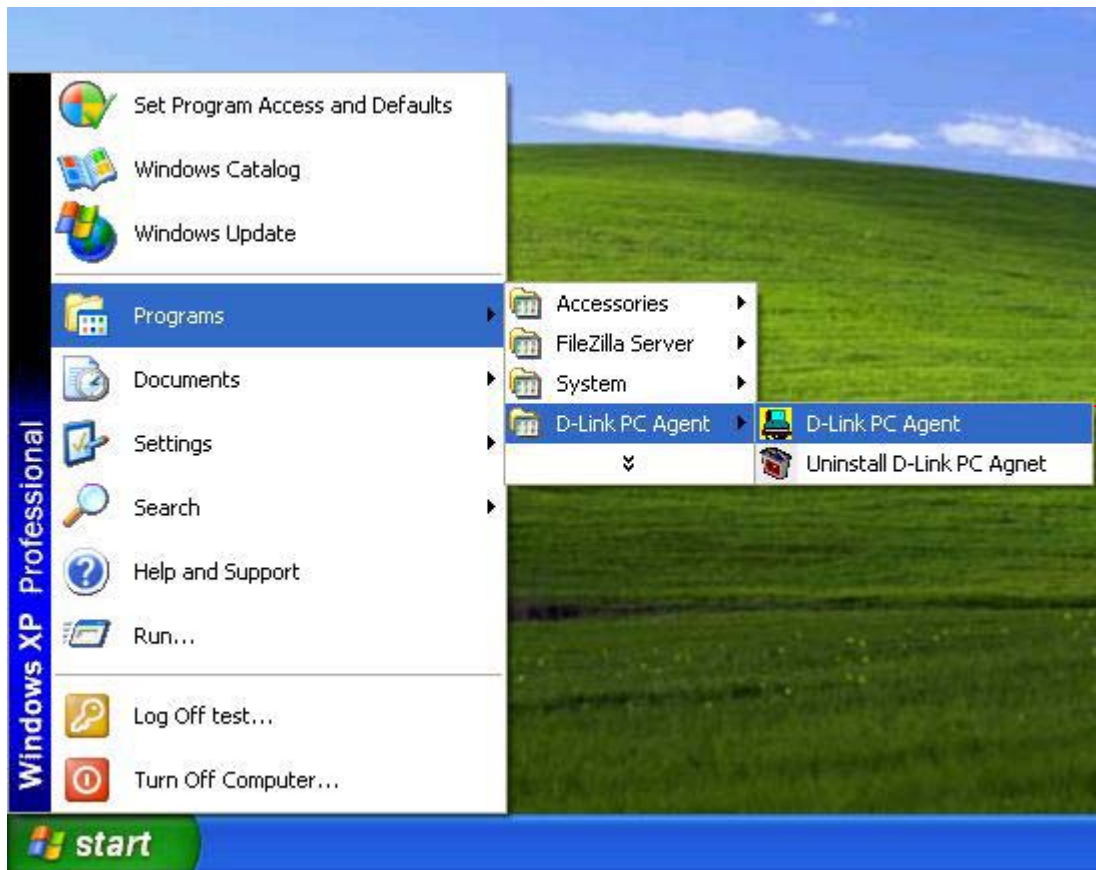
The D-Link SNMP Agent Utility supports the following Microsoft operating systems: Windows 2000 x86, Windows Server 2003 x86, Windows Server 2003 x64, Windows XP x86, and Windows XP x64.



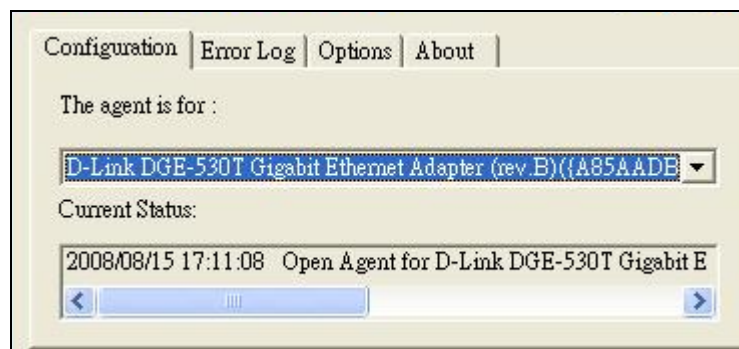
After successfully installing the D-Link Ethernet Adapter Agent and restarting your computer, the following pop-up window appears, prompting you to choose the default NIC card to be used with your system. If more than one NIC card appears in the list, please choose the **D-Link DGE-530T Gigabit Ethernet** adapter and then click **OK**.



To use the D-Link PC agent, click **Start > Programs > D-Link PC Agent > D-Link PC Agent**.



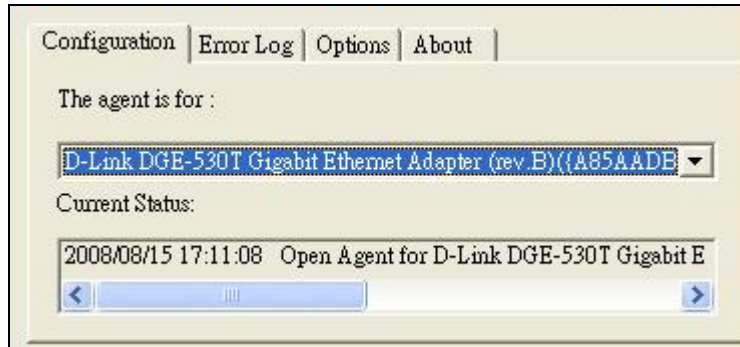
The following window will appear for the user to configure.



This window is used to input some personal information. You may input this information now or to set this information later, simply click **OK**. A brief explanation of this window may also be configured under the Option tab, which will be discussed later in this chapter. After clicking **OK**, the D-Link Ethernet Adapter icon, shown below, should appear in the bottom right hand tool bar of your computer screen.

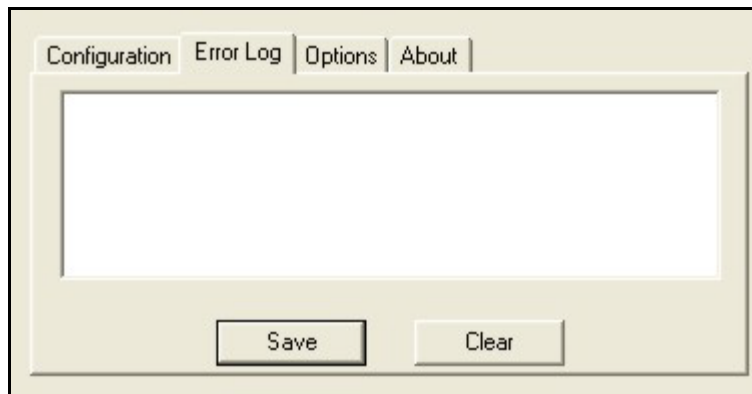


Double-clicking the icon will open the Agent window, as shown below.



The Configuration tab has two fields. The first field, “The agent is for:”, allows the user to choose an Ethernet card to configure, from a pull down menu. The “Current Status” is a read-only field which displays the most recent action made by the Ethernet card.

Clicking the Error Log tab will open the following window. The Error Log will display packets received by the DGE-530T, which were discarded due to an error. The user may choose to save these messages or clear them, using the appropriate buttons.



Clicking the Options tab will display the following window. Here the user may check the “Auto launch when Windows starts up.” box to ensure the D-Link Ethernet Adapter Agent will automatically start when the Windows operating system commences.



To adjust your personal settings, click the **Personal** button, which will open the following window.

**Name**  
An administratively-assigned name for this managed node.

**Location**  
The physical location of this node.  
(e.g., 'telephone closet, 3rd floor').

**Contact**  
Information on how to contact you.

OK  
Cancel

The user may set the following fields.

- **Name:** A name chosen to identify the user when configuring the DGE-530T.
- **Location:** The user may identify the physical location of the computer where the Ethernet card is installed.
- **Contact:** Information on how to contact the user, such as a telephone number or an e-mail address.

The user may also set a password to protect the configuration settings previously set. Click the **Password** button under the options tab to open the following window.

Please enter administratively-assigned password :

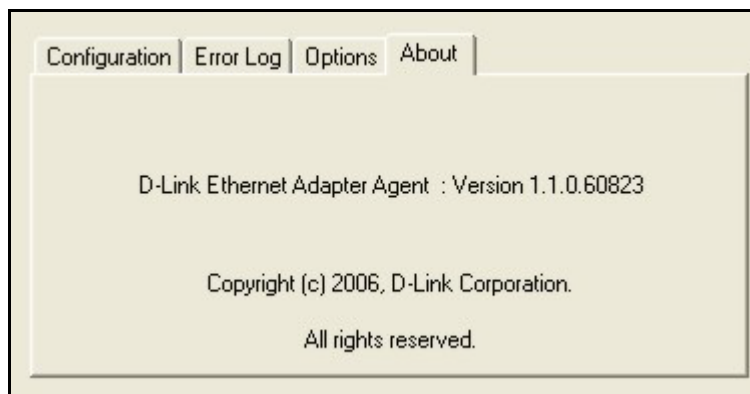
OK  
Cancel

Enter a password into the space provided and click **OK** to set your new password. If no password is set by the user, the default password of “private” is used and may need to be entered to configure the D-Link SNMP Agent.



**NOTE:** The default password for this utility is “private”.

Clicking the About tab will show the current version of the adapter and the copyright information.



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## SNMP

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SNMP is an acronym for Simple Network Management Protocol. This network protocol is used to manage TCP/IP networks by using “Traps” sent from devices compliant with SNMP and collected by one or more servers. Devices that comply with SNMP correspond with management applications by sending alerts and updates, as well as allowing configuration changes.

The DGE-530T’s SNMP agent will take event notices from the adapter, translate and then forward them to specified SNMP management stations.

Before installing the SNMP agent, you must install SNMP on your computer. Consult the operating system documentation of your computer for additional information.

To install SNMP on the DGE-530T, simply click **Install SNMP Agent** on the Introduction page and complete the steps of the Installation Wizard.

This utility should only be used by experienced network administrators. Additional software or services may need to be previously installed or configured prior to installation of the SNMP protocol.

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## D-Link Corporation Control Program

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Installed automatically with the driver is the D-Link Network Control program, which may be opened on the Control Panel of your computer. The configuration and settings information for this program may be found by clicking the **Help** button of the current screen. This should provide you with any information you should need.

The D-Link Network Control Program is supported by Microsoft Windows Server 2003 x86, Microsoft Windows Server 2003 x64, Microsoft Windows XP x86, Microsoft Windows XP x64, Microsoft Windows Vista x86, Microsoft Windows Vista x64, Microsoft Windows Server 2008 x86, Microsoft Windows Server 2008 x64, Microsoft Windows 7 x86, Microsoft Windows 7 x64, and Microsoft Windows Server 2008 R2 x64.

### ***IEEE802.1p Priority Tagging***

With the growing number of network applications, local area networks (LANs) must deliver data for a wide variety of applications. Email, file transfers, database queries, voice over IP (VoIP), video-conferencing and multimedia must all be delivered to the end-users. Some of the traffic, such as video-conferencing, is of a higher priority, with a slight delay of packets resulting in noticeable degeneration of video and audio quality, while other traffic, such as email will not be noticeably affected by tiny delays. The large number of programs that run over today’s networks serves to impede the ability to deliver time-critical data. Even if bandwidth is not usually a problem on your network, during peak hours bursts in network traffic can result in the delay of time-critical traffic.

IEEE802.1p defines seven levels of prioritization for Ethernet packets. High priority packets will be sent through a network using 802.1p-compliant switches first. Lower priority packets will be transferred whenever bandwidth is available. When properly setup, this ensures that time-critical data arrives on time and is not affected by other traffic.

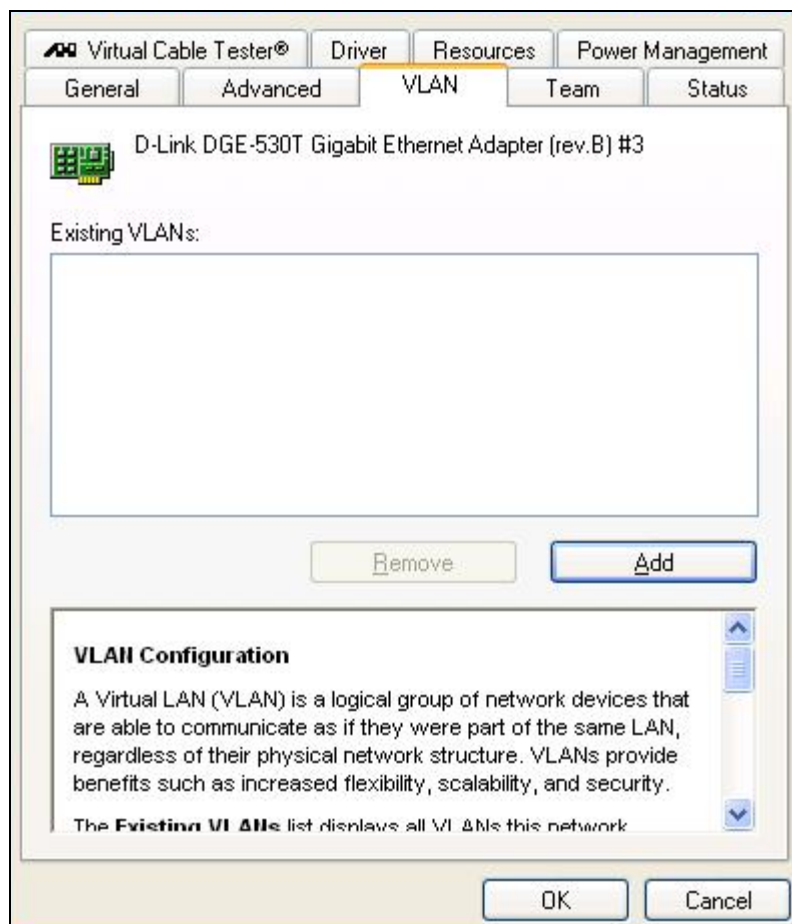
## IEEE802.1Q VLANs

The IEEE802.1Q VLAN can help improve network performance and security by segmenting the network into VLANs. IEEE802.1Q VLANs can limit broadcast and node-to-node (unicast) traffic to a single VLAN. This limits the effects of broadcast storms and provides additional security for your network.

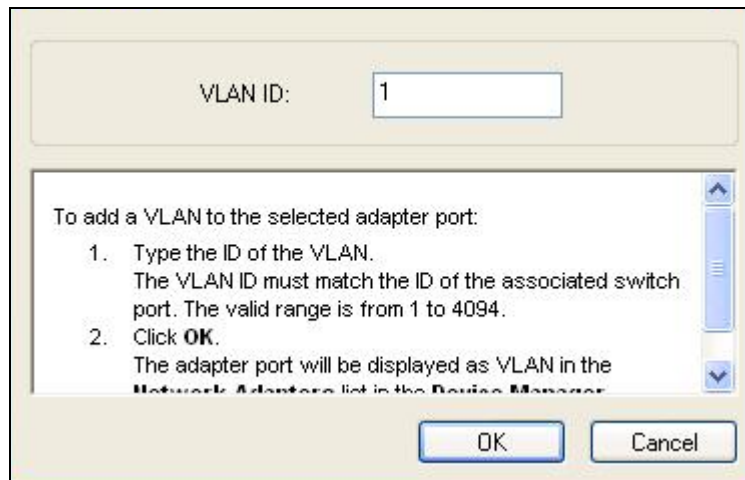
For VLANs to function, the computer in which this NIC is installed must be using Windows 2000, XP, 2003, or later as its operating system.

## Configuring the VLAN Settings

To configure the VLAN settings for your DGE-530T, first open the D-Link Network Control utility located in the control panel of your computer. Once opened, click the **VLAN** tab at the top of the window, which will display the following window. Click the **D-Link DGE-530T Gigabit Ethernet Adapter** link, which will display the settings in the bottom half of the window.

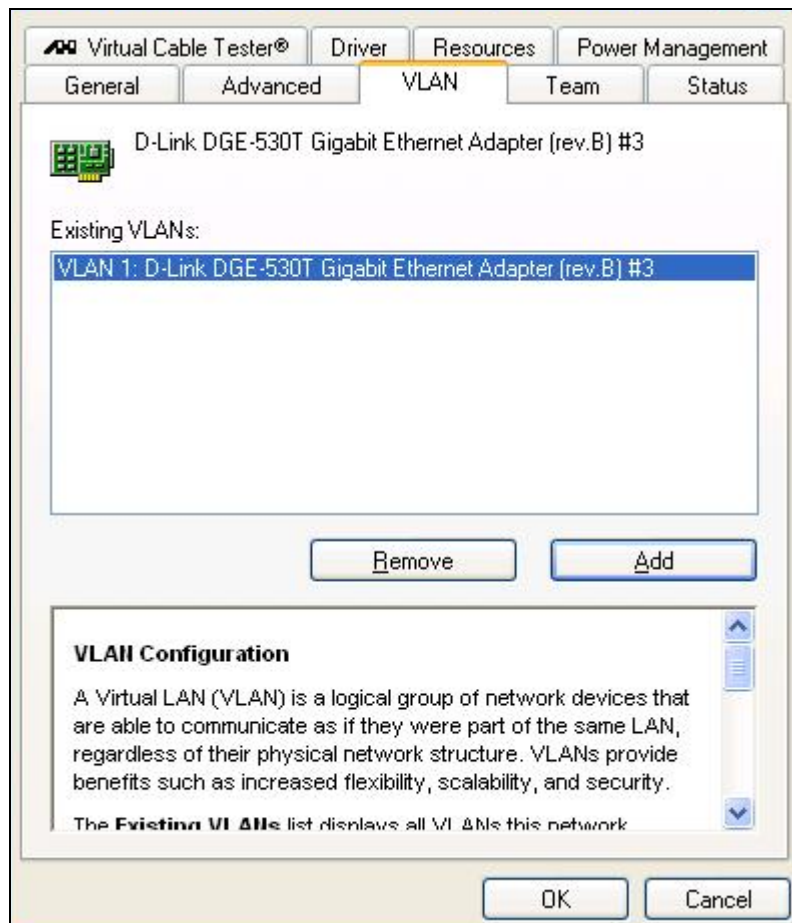


To add a VLAN setting to this window, click the **Add** button at the bottom of this window, which will open the following configuration window.



To set the VLAN, first enter a VLAN ID and then click **OK**. Available VLAN IDs are usually between 1 and 4094. The user can configure up to 64 VLAN settings for this device.

Once completed, the new settings will appear in the Virtual LAN window, marked by its VLAN, as shown in the following example.



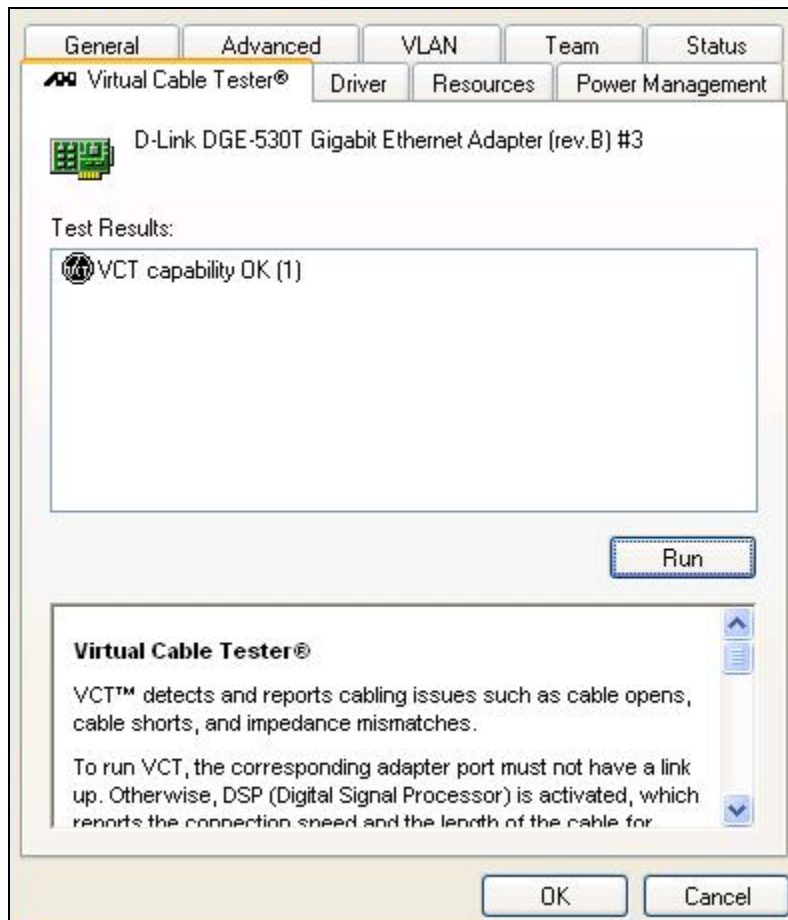
Click **OK** when your settings are complete.



## Cable Diagnostic Feature

The Virtual Cable Tester (VCT) is a feature for examining the quality and the characteristics of a network cable that has been connected to the DGE-530T. This feature will make it possible for the user to detect and report potential cabling issues such as cable opens, cable shorts and impedance mismatches. The distance of the fault can be reported to within one meter. To install this feature, go to the directory of the CD provided with this device, and click the Setup VCT execute file which will launch the installation program for the VCT.

To view the VCT settings for your DGE-530T, first open the D-Link Network Control utility located in the control panel of your computer. Once opened, click the Virtual Cable Tester tab, which will display the following window:



To start the diagnostic, first disconnect the cable from the remote end node so there is just an open cable connected to the DGE-530T. Click the appropriate adapter from the tree view above and then click the **Run** button. The results which will appear in the table adjacent to the corresponding cable pairs, displays the status of the corresponding cable and the distance to the fault. The status of the test will be presented upon completion of the diagnostic. If the selected adapter is connected and has an uplink, the Digital Signal Processor (DSP) will be activated and will report the speed of the connection (10, 100, 1000Mbps) and the length of the cable.

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## Troubleshooting

If you experience any problems with the adapter, check to see that:

- the appropriate driver is loaded;
- the proper grade of cable is employed for the network connection;
- the supporting hub is properly qualified for the application.

The DGE-530T Adapter features four LED indicators:

- **Link/Activity** – Steady green indicates good linkage between the DGE-530T and its supporting server or switch. Flashing green indicates activity (transmitting or receiving) within the adapter.
- **Full** – Steady green indicates the adapter is operating in full-duplex mode.
- **1000M** – The LED indicator lights green when a 1000 Mbps device is connected to the adapter.
- **100M** – The LED indicator lights green when a 100 Mbps device is connected to the adapter.

## Technical Specifications

Specifications	
<b>Network Media</b>	Category 5e/5 cable
<b>Connector</b>	RJ45
<b>Controller</b>	Marvell 88E8001
<b>Bus Architecture</b>	32 bit PCI Bus Interface
<b>Memory</b>	512 Kb
<b>Diagnostic LEDs</b>	Link/Activity, Full, 100M, and 1000M
<b>Network Data Transfer</b>	Gigabit Ethernet: 2000Mbps (Full-duplex)
<b>Dimensions</b>	120 mm (L) x 51 mm (H)
<b>Management</b>	VLAN support, D-Link Network Control Program, SNMP Agent

Specifications	
<b>Compliance</b>	<ul style="list-style-type: none"> <li>• IEEE 802.3ab, 802.3T, 802.3u, 802.3z</li> <li>• IEEE 802.1Q VLAN</li> <li>• IEEE 802.3x Flow-Control</li> <li>• IEEE 802.1p Quality of Service</li> <li>• WoL Power Management</li> <li>• ACPI 2.0</li> </ul>
<b>Protocol</b>	CSMA/CD

<b>Specifications</b>	
<b>Driver Support</b>	<ul style="list-style-type: none"> <li>• Microsoft Windows 98</li> <li>• Microsoft Windows ME</li> <li>• Microsoft Windows NT4.0</li> <li>• Microsoft Windows 2000 x86 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Server 2003 x86 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Server 2003 x64 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows XP x86 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows XP x64 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Vista x86 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Vista x64 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Server 2008 x86 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Server 2008 x64 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows 7 x86 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows 7 x64 (Microsoft WHQL Passed)</li> <li>• Microsoft Windows Server 2008 R2 x64 (Microsoft WHQL Passed)</li> <li>• Linux : Fedora 11 &amp; Ubuntu 9.04</li> <li>• Client 32</li> <li>• DOS.ODI</li> <li>• Netware 4.x, 5.x, 6.x</li> <li>• Mac OS 10.2, 10.3</li> <li>• NDIS2</li> <li>• FreeBSD 5.3</li> <li>• FreeBSD 6.0</li> </ul>
<b>Power Consumption</b>	3.5W
<b>Temperature</b>	<ul style="list-style-type: none"> <li>• Operating: 0~40°C (32~122°F)</li> <li>• Storage: -25~55°C (-4~158°F)</li> </ul>
<b>Humidity</b>	<ul style="list-style-type: none"> <li>• 5%~90% non-condensing</li> </ul>
<b>EMI Certification</b>	<ul style="list-style-type: none"> <li>• FCC Class B</li> <li>• CE Mark Class B</li> <li>• BSMI Class B</li> <li>• C-Tick</li> </ul>

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## FCC Certifications

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one 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.

Shielded interface cables must be used in order to comply with emission limits.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the 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.

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.

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

- Hardware (excluding power supplies and fans) One (1) Year
- Power Supplies and Fans One (1) Year
- Spare parts and spare kits 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 will be free of physical defects. D-Link's sole obligation shall be 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 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 of 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, 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 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.
- The original product owner must obtain a Return Material Authorization ("RMA") number from the Authorized D-Link Service Office and, if requested, provide written proof of purchase of the product (such as a copy of the dated purchase invoice for the product) before the warranty service is provided.
- After an RMA number is issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit, and the RMA number must be prominently marked on the outside of the package. Do not include any manuals or accessories in the shipping package. D-Link will only replace the defective portion of the Product and will not ship back any accessories.
- The customer is responsible for all in-bound shipping charges to D-Link. No Cash on Delivery ("COD") is allowed. Products sent COD will either be rejected by D-Link or become the property of D-Link. Products shall be fully insured by the customer and shipped to D-Link Systems, Inc., 17595 Mt. Herrmann, Fountain Valley, CA92708. 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, with shipping charges prepaid. Expedited shipping is available if shipping charges are prepaid by the customer and upon request.

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:** This limited warranty provided by D-Link does not cover: Products, if 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; 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. Repair by anyone other than D-Link or an Authorized D-Link Service Office will void this Warranty.

**Disclaimer of Other Warranties:** EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND WHATSOEVER INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT. IF ANY IMPLIED WARRANTY CANNOT BE DISCLAIMED IN ANY TERRITORY WHERE A PRODUCT IS SOLD, THE DURATION OF SUCH IMPLIED WARRANTY SHALL BE LIMITED TO NINETY (90) DAYS. 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 NON-CONFORMING 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 the product owner may also have other rights which vary from state to state.

**For detailed warranty outside the United States, please contact corresponding local D-Link office.**

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

**Information in this document is subject to change without notice.**