D-Link ®

DCM-100

DOCSIS 1.0

Ethernet Cable Modem

User's Manual

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Introduction

Thank you for choosing the D-Link DCM-100 digital, two-way DOCSIS 1.0-compliant Ethernet Cable Modem.

The DCM-100 provides customers with high-speed access to the Internet through your cable TV (CATV) network connection. It works on any cable system that complies with MCNS DOCSIS specifications and provides a high-bandwidth connection to the Internet. It downloads Web pages almost instantly, transfers files at exceptionally fast speeds, and delivers real-time video and music with unsurpassed quality.

The DCM-100 digitizes data and sends it over the cable at up to **10.2 Mbps** and can receive transmissions at up to **42.88 Mbps**. To give you an idea of just how fast this is, digitized television quality video and audio are transmitted together at about **3 Mbps**.

The DCM-100 uses a standard RJ-45 port for a 10BASE-T connection to a computer or computer network. When properly configured these connections allow simultaneous data transfers to the Internet via the cable company's network.

Features

Designed for versatility and performance, the Ethernet Cable Modem provides the following:

Product Features

♦   MCNS/DOCSIS 1.0 compliant

♦   DOCSIS 1.1 upgradeable from DOCSIS 1.0 by software

♦   Building MCNS MIB

♦   Frequency Agility

♦   DES Encryption and Decryption

♦   Automatic Signal Power Recognition/Adjustment

♦   Baseline Privacy Interface

♦   QPSK/16 QAM Upstream Modulation

♦   64/256 QAM Downstream Modulation

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Contents and Identification

Contents

Open the shipping carton and carefully remove all items. In addition to this User's Manual, ascertain that you have:

♦ DCM-100 Cable Modem

♦ External power adapter

♦ Category 5 Ethernet cable

♦ User's Manual

♦ Quick Install Guide

If any item is found missing or damaged, please contact your local reseller or D-Link directly at one of the offices listed at the rear of the manual for replacement.

Identifying External Components

This section identifies all the major external components of the device. Both the front and rear panels are shown below followed by a description of each panel feature. The indicator panel is described in detail in the next chapter.

Front Panel

The figure below shows the front panel of the device.
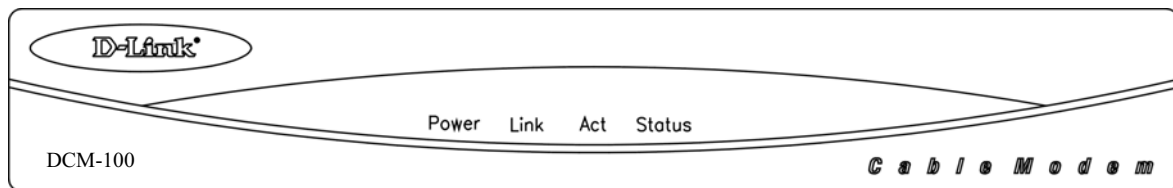
♦ **LED Indicator Panel -** Refer to the next chapter, "*Understanding Indicators,*" for detailed information about each of the DCM-100's LED indicators.

Rear Panel

The figure below shows the rear panel of the device.

♦ **AC Power Connector -** For the included power adapter, if you use a power adapter other than the one included with the product, please make sure it has a DC output of 12V/1A.

♦ **Ethernet 10BASE-T Port -** The 10BASE-T Ethernet port accepts Category 5 or better UTP cabling with an RJ-45 connector used to connect the DCM-100 to a LAN device (hub, switch, PC, etc.).

♦ **Cable In -** This jack is used to connect the DCM-100 to the splitter. This connection uses a standard coax cable which is the same cable used by your cable TV company.

Connection Architecture

In order for you to enjoy the benefits of your Cable Modem, your PC and TV must be properly connected to the cable TV wire. The following diagram illustrates a typical PC/TV installation.
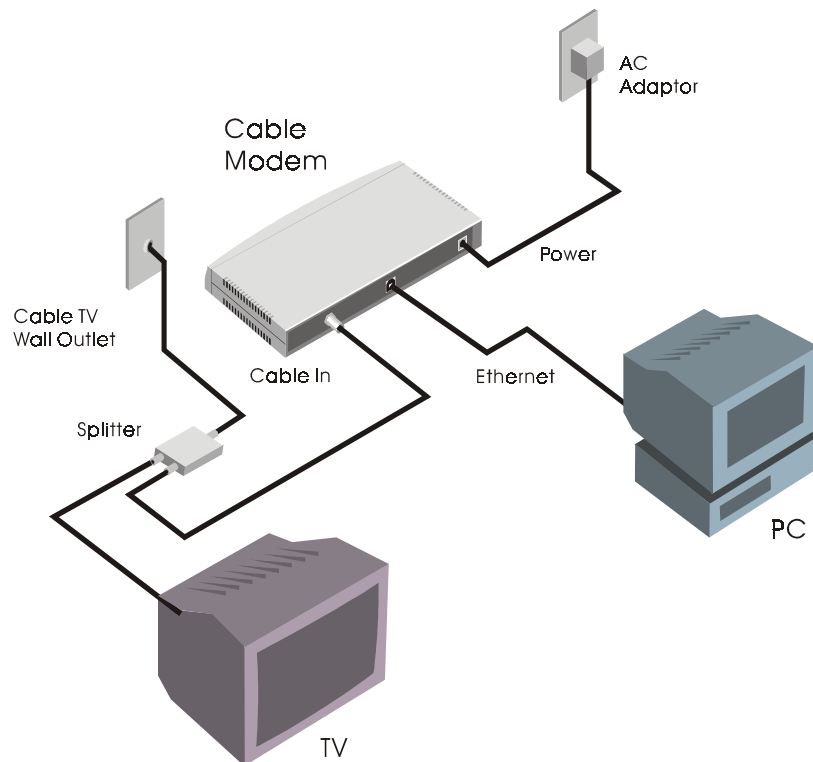

♦ **Cable TV Wall Outlet** - This is the normal cable TV wall outlet installed by your cable company. If you plan to connect both your TV and your computer to the cable TV wire, the cable TV wall outlet should be connected to a splitter.
♦ **Splitter -** This unit, usually provided by your cable TV company during installation, splits the signal onto a second wire. The two wires coming out of the splitter can be connected to your TV (or set-top box), and the cable modem.

NOTE: **1.** If your cable TV company does not provide a splitter or you chose to buy your own, make sure you get one with sufficient frequency range (the range should be printed on the splitter). A range of 5 to 1000 MHz should be adequate. The splitter should provide EMI isolation.
2. Only one splitter should be placed between the point where the cable TV line enters the house and the Cable Modem/PC (see figure above). If you have multiple TVs, split the line between the first splitter and the TV, not the line between the splitter and the Cable Modem.
3. WARNING: Do not use amplifiers in the line leading to your Cable Modem. Not only do most amplifiers only amplify incoming signals, while your Cable Modem receives and sends signals, but they are also likely to distort cable modem signals.

3

Understanding Your LED Indicators

Before setting up your Ethernet Cable Modem for the first time, take a few minutes to look over this section and familiarize yourself with the front panel LED indicators depicted below.
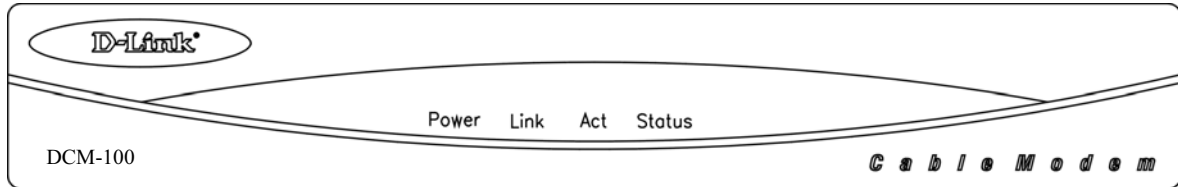
♦   **Power -** This LED is lit red when the device is receiving power; otherwise, it is unlit.

♦   **Link -** This LED is lit green to indicate that a valid connection exists between the Ethernet port on the Cable Modem and your PC. If it is unlit, there is no valid connection.

♦   **Act -** A blinking green LED indicates that traffic activity is passing through your cable modem port.

♦   **Status -** This LED is lit green when the Ethernet cable is properly connected to your PC and a traditional coaxial cable is connected to your Cable Modem tuner. This indicates a successful connection with CMTS. The LED will now start quickly blinking as the DCM-100 attempts to lock a downstream frequency. If this is successful, the LED will begin to blink slowly. This indicates the modem is waiting for authentication. When the blinking stops and the LED remains steady, the Cable Modem is ready to transmit data through the CATV network.

NOTE: If no lights come, check all of your connection to see if they are properly inserted.

Powering Up For the First Time

You must allow at least 1 to 3 minutes to power up the first time because the DCM-100 must find and secure a connection.

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Setting Up the Device

Before You Start

Local Cable Service

You will need to establish an account with your local cable operator in order to access the Internet with this modem. They will assist you in setting up the modem to operate on their network.

Then for your modem to communicate with the cable service, you will first need to be able to identify the cable modem. The Cable Media Access Control (CMAC) address is a unique number that is used for the purpose of identifying the modem on the network. The CMAC address is found on the rear panel of the modem. You may be required to provide this information to your cable service operator. For convenient reference you can write the CMAC address in the space provided below.

CMAC address _____

System Requirements

The capabilities and limitations of your computer equipment and configuration can affect the overall performance of your Internet connection.

The DCM-100 Ethernet Cable Modem is designed to work with the following operating systems:

- Windows 98/98 SE (Second Edition)

- Windows 2000

- Windows ME (Millennium Edition)

- Active Ethernet Port or Nic Installed

- TCP/IP installed on all devices

All computers interface that are connected to the modem must have either an active Ethernet interface or network interface card (NIC) installed. You will need to enable TCP/IP protocol on each computer. TCP/IP should already be installed in any computer with an active Ethernet interface. The instructions for installing TCP/IP vary depending on the type of system used. These instructions will be included with the NIC or discussed in the computer's manual if your PC comes equipped with an Ethernet port. Your cable operator may have additional instructions for TCP/IP configuration that must be followed.

Installation

The installation of the DCM-100 Ethernet Cable Modem can be completed in a matter of minutes. Be careful to insure the cables are properly locked into position. Follow these steps (see the figure of the rear panel in Chapter Two):

1. Connect the coaxial TV cable to the DCM-100 jack labeled "CABLE IN."

2. Connect the external power adapter into the connector labeled "POWER" and the other end to the electrical outlet.

3. Connect one end of the 10BASE-T Ethernet cable (Category 5 or better) to one of your PC's Ethernet ports and the other end into the DCM-200 connector labeled "ETHERNET."

Your setup should look something like this:
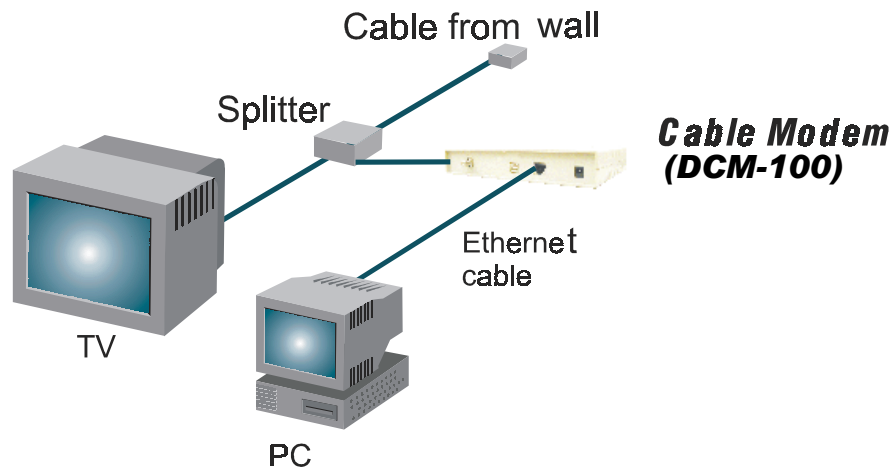
Important Notice:

♦   The DCM-100 Ethernet Cable Modem will work with the Ethernet port connected directly to a PC, hub, switch, or a Broadband Router (i.e. DI-704,DI-713P)

♦   If you shift the Ethernet cable from one PC to another PC, the second PC will not be able to link onto the Internet until you reboot the DCM-100 by unplugging the power cord and then reinserting it into the DCM-100.

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Troubleshooting

If the Ethernet Cable Modem has been properly set up it is unlikely that you should experience any problems with it under normal circumstances. However, we list here some possible solutions to problems that you might experience.

Problem	Possible Solution
Cannot access the Internet or e-mail service.	Check all connections. • Make sure the cable TV line and the Ethernet (RJ-45) cable is securely connected at all points. • Make sure the AC power adapter is plugged into the device and the power source. Check the LED indicators to see that the **Power**, **Link** and **Status** indicators are steadily lit for an Ethernet-connected device. Contact your cable service operator to verify that your account is up to date and that you have two-way service. There may be a problem with your NIC. Refer to the literature for the NIC to find a possible solution. The TCP/IP configuration for the computer may be incorrect. Double-check to see that these network settings comply with the instructions given by the cable service operator. Call your cable company to make sure they have given you the proper settings. Check your web browser configuration per ISP instruction.
Status LED indicator blinks continuously.	Check the cable line connection. If this is secure then there may be a weak signal coming from the central office. Report the problem to your cable operator if the cable connection appears to be OK.
LED indicators appear to be normal but Internet access cannot be established	Try to establish a new communication with your cable operator's central office. This can be accomplished by powering off the computer and turning it back on. The TCP/IP configuration for the computer may be incorrect.
The PC Link light is not green. The light is off.	The modem is not detecting the Network Interface Card. Make sure the cables are firmly attached to the network card in the back of your computer and the modem as well. Try replacing the Ethernet cable or the network card with known working components. Run diagnostic program that came with your network card. If this is a card that we support, troubleshoot the NIC. Otherwise, contact the organization that installed or manufacturers the card.
The power light is not on	Check to make sure the power cable is firmly plugged into the cable modem. Also, make sure that the power converter is plugged into a functional socket. Change outlets with one you know to have power. Replace Cable Modem.

Note: If your TV's picture quality is diminished when the Ethernet Cable Modem is in operation, you may need to contact your Cable TV operator to obtain a High Pass Filter. This should be placed between the splitter and the TV (or if you have a digital set-top box, between the splitter and the set-top box that precedes the TV).

Contacting Technical Support

D-Link provides free technical support for customers within the United States.

U.S. customers can contact D-Link technical support through our web site,

e-mail, or by phone.

United States technical support is available Monday through Friday from 6:00 a.m. to 6:00 p.m. (PST).

Web:

http://www.dlink.com

Email:

support@dlink.com

Phone:

949-788-0805 (option #4)

If you are a customer residing outside of the United States, please refer to the list of D-Link locations that is included in this manual.

Thank you for purchasing this product. We like to receive feedback from our customers concerning our products. Please take a moment to visit our web site. You can register your purchase on-line, learn more about the newest networking products, and let us know the things your new network has empowered you to do.

D-Link Offices

AUSTRALIA   **D-LINK AUSTRALIA**
Unit 16, 390 Eastern Valley Way, Roseville, NSW 2069, Australia
TEL: 61-2-9417-7100 FAX: 61-2-9417-1077
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CANADA   **D-LINK CANADA**
#2180 Winston Park Drive, Oakville, Ontario, L6H 5W1 Canada
TEL: 1-905-829-5033 FAX: 1-905-829-5095 BBS: 1-965-279-8732 FREE CALL: 1-800-354-6522
URL: www.dlink.ca E-MAIL: techsup@dlink.ca FTP: ftp.dlinknet.com

CHILE   **D-LINK SOUTH AMERICA**
Isidora Goyeechea 2934 of 702, Las Condes, Santiago – Chile S.A.
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URL: www.dlink.com.cn

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Naverland 2, DK-2600 Glostrup, Copenhagen, Denmark
TEL:45-43-969040 FAX:45-43-424347 URL: www.dlink.dk
E-MAIL: info@dlink.dk

EGYPT   **D-LINK MIDDLE EAST**
7 Assem Ebn Sabet Street, Heliopolis Cairo, Egypt
TEL: 202-2456176 FAX: 202-2456192 URL: www.dlink-me.com
E-MAIL: support@dlink-me.com, fateen@dlink-me.com

FRANCE   **D-LINK FRANCE**
Le Florilege #2, Allee de la Fresnerie
78330 Fontenay le Fleury France
TEL: 33-1-302-38688 FAX: 33-1-3023-8689 URL: www.dlink-france.fr
E-MAIL: info@dlink-france.fr

GERMANY   **D-LINK Central Europe/D-Link Deutschland GmbH**
Schwalbacher Strasse 74
D-65760 Eschborn, Germany
TEL: 49-6196-77990 FAX: 49-6196-7799300
URL: www.dlink.de BBS: 49-(0)6192-971199 (Analog) 49-(0)6192-971198 (ISDN)
INFO LINE: 00800-7250-0000 (toll free) HELP LINE: 00800-7250-4000 (toll free)
REPAIR LINE: 00800-7250-8000 E-MAIL: info@dlink.de

INDIA   **D-LINK INDIA**
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Off Cst Road, Santacruz (E), Bombay - 400 098 India
TEL: 91-22-652-6696 FAX: 91-22-652-8914 URL: www.dlink-india.com
E-MAIL: service@dlink.india.com

ITALY   **D-LINK ITALIA**
Via Nino Bonnet No. 6/b, 20154 Milano, Italy
TEL: 39-02-2900-0676 FAX: 39-02-2900-1723   URL: www.dlink.it
E-MAIL: info@dlink.it

JAPAN   **D-LINK JAPAN**
10F, 8-8-15 Nishi-Gotanda, Shinagawa-ku, Tokyo 141, Japan
TEL: 81-3-5434-9678 FAX: 81-3-5434-9868 URL: www.d-link.co.jp
E-MAIL: kida@d-link.co.jp

RUSSIA   **D-LINK RUSSIA**
Michurinski Prospekt 49, 117607 Moscow, Russia
TEL: 7-095-737-3389, 7-095-737-3492 FAX: 7-095-737-3390
URL: www.dlink.ru E-MAIL: vl@dlink.ru

SINGAPORE   **D-LINK INTERNATIONAL**
1 International Business Park, #03-12 The Synergy, Singapore 609917
TEL: 65-774-6233 FAX: 65-774-6322
URL: www.dlink-intl.com E-MAIL: info@dlink.com.sg

S. AFRICA   **D-LINK SOUTH AFRICA**
102-106 Witchhazel Avenue, Einetein Park 2, Block B,
Highveld Technopark Centurion, South Africa
TEL: 27(0)126652165 FAX: 27(0)126652186
URL: www.d-link.co.za E-MAIL: attie@d-link.co.za

SWEDEN   **D-LINK SWEDEN**
P.O. Box 15036, S-167 15 Bromma Sweden
TEL: 46-(0)8564-61900 FAX: 46-(0)8564-61901 E-MAIL: info@dlink.se
URL: www.dlink.se

TAIWAN   **D-LINK TAIWAN**
2F, No. 119 Pao-Chung Road, Hsin-Tien, Taipei, Taiwan,
TEL: 886-2-2910-2626 FAX: 886-2-2910-1515 URL: www.dlinktw.com.tw
E-MAIL: dssqa@tsc.dlinktw.com.tw

U.K.   **D-LINK EUROPE**
4th Floor, Merit House, Edgware Road, Colindale, London, NW9 5AB, U.K.
TEL: 44-20-8731-5555 FAX: 44-20-8731-5511
URL: www.dlink.co.uk E-MAIL: info@dlink.co.uk

U.S.A.   **D-LINK U.S.A.**
53 Discovery Drive, Irvine, CA 92618 USA
TEL: 1-949-788-0805 FAX: 1-949-753-7033 INFO LINE: 1-800-326-1688
BBS: 1-949-455-1779, 1-949-455-9616
URL: www.dlink.com E-MAIL: tech@dlink.com, support@dlink.com

A

Specifications

Cable Network Subsystem

RF MAC Protocol:

MCNS/DOCSIS 1.0 Compliant

Security

RSA and MCNS 40/56 bit DES data encryption security

Downstream – Receiver

Demodulation — 64 QAM/256 QAM

Data Speed — 30.342Mbps (64 QAM)/42.88Mbps (256 QAM)

Frequency Range — 91 MHz – 857 MHz

Channel Bandwidth — 6 MHz

Receive Level — -15dBmV to +15dBmV

Upstream – Transmitter

Modulation — QPSK/16 QAM

Data Speed — 320K, 640K, 1280K, 2560K, 5120Kbps (QPSK)

640K, 1280K, 2560K, 5120K, 10240Kbps (16 QAM)

Frequency Range — 5 MHz to 42 MHz

Channel Bandwidth — 200K, 400K, 800K, 1.6M, 3.2M (Hz)

Transmission Level — +8 to +55dBmV (16 QAM)

+8 to +58dBmV (QPSK)

Error Correction — Reed-Solomon

Interface

CPE Interface — 10BASE-T Ethernet (RJ45)

RF Interface — F-Type Female 75 ohm connector

LEDs

Power

Link

Activity

Status

Power Supply

AC-to-DC power adapter (provided)

DC Input: 12VDC/1.25A

Power Consumption

8W (maximum)

Operating Temperature

32°- 104°F (0°- 40°C)

Operating Humidity

10% - 90%

Storage Temperature

-4°- 140°F (-20°- 60°C)

Dimensions

22 (W) x 174 (D) x 35 (H) mm

Weight

578 grams (1.271b)

EMI Certification

FCC Class B

LIMITED WARRANTY

D-Link provides this limited warranty for its product only to the person or entity who originally purchased the product from D-Link or its authorized reseller or distributor.

Limited Hardware Warranty: D-Link warrants that the hardware portion of the D-Link products described below ("Hardware") will be free from material defects in workmanship and materials from the date of original retail purchase of the Hardware, for the period set forth below applicable to the product type ("Warranty Period") if the Hardware is used and serviced in accordance with applicable documentation; provided that a completed Registration Card is returned to an Authorized D-Link Service Office within ninety (90) days after the date of original retail purchase of the Hardware. If a completed Registration Card is not received by an authorized D-Link Service Office within such ninety (90) period, then the Warranty Period shall be ninety (90) days from the date of purchase.

Product Type	Warranty Period
Product (excluding power supplies and fans)	Five (5) Years
Power Supplies and Fans	Five (5) Years
Spare parts and spare kits	Ninety (90) days

D-Link's sole obligation shall be to repair or replace the defective Hardware at no charge to the original owner. 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 of an identical make, model or part; D-Link may in its discretion may 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. The Warranty Period shall extend for an additional ninety (90) days after any repaired or replaced Hardware is delivered. 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 delivery of the Software for a period of ninety (90) days ("Warranty Period"), if 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. 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. The Warranty Period shall extend for an additional ninety (90) days after any replacement Software is delivered. 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.

What You Must Do For Warranty Service:

Registration Card. The Registration Card provided at the back of this manual must be completed and returned to an Authorized D-Link Service Office for each D-Link product within ninety (90) days after the product is purchased and/or licensed. The addresses/telephone/fax list of the nearest Authorized D-Link Service Office is provided in the back of this manual. FAILURE TO PROPERLY COMPLETE AND TIMELY RETURN THE REGISTRATION CARD MAY AFFECT THE WARRANTY FOR THIS PRODUCT.

Submitting A Claim. Any claim under this limited warranty must be submitted in writing before the end of the Warranty Period to an Authorized D-Link Service Office. The claim must include 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. The packaged product shall be insured and shipped to D-Link, 53 Discovery Drive, Irvine CA 92618, with all shipping costs prepaid. 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 <u>does not cover</u>:

Products that 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; and

Any hardware, software, firmware or other products or services provided by anyone other than D-Link.

Disclaimer of Other Warranties: EXCEPT FOR THE LIMITED WARRANTY SPECIFIED HEREIN, THE PRODUCT IS PROVIDED "AS-IS" WITHOUT ANY WARRANTY OF ANY KIND 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, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, 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.

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.

Trademarks

Copyright Statement

CAUTION:
Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Warning

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.

VCCI Warning

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

Register by mail or online at http://www.dlink.com/sales/reg/

<div style="border:2px solid">

Registration Card

</div>

Print, type or use block letters.

Your name: Mr./Ms _____

Organization: _____Dept. _____

Your title at organization:_____

Telephone:_____ Fax:_____

Organization's full address: _____

_____

Country:_____

Date of purchase (Month/Day/Year):_____

Product Model	Product Serial No.	* Product installed in type of computer (e.g., Compaq 486)	* Product installed in computer serial No.

(* Applies to adapters only)

Product was purchased from:

Reseller's name:_____

Telephone:_____ Fax:_____

Reseller's full address:_____

_____

_____

Answers to the following questions help us to support your product:

1.Where and how will the product primarily be used?
  ☐Home ☐Office ☐Travel ☐Company Business ☐Home Business ☐Personal Use

2. How many employees work at installation site?
  ☐1 employee ☐2-9 ☐10-49 ☐50-99 ☐100-499 ☐500-999 ☐1000 or more

3. What network protocol(s) does your organization use?
  ☐XNS/IPX ☐TCP/IP ☐DECnet ☐Others_____

4. What network operating system(s) does your organization use?
  ☐D-Link LANsmart ☐Novell NetWare ☐NetWare Lite ☐SCO Unix/Xenix ☐PC NFS ☐3Com 3+Open
  ☐Banyan Vines ☐DECnet Pathwork ☐Windows NT ☐Windows NTAS ☐Windows '95
  ☐Others_____

5. What network management program does your organization use?
  ☐D-View ☐HP OpenView/Windows ☐HP OpenView/Unix ☐SunNet Manager ☐Novell NMS
  ☐NetView 6000 ☐Others_____

6. What network medium/media does your organization use ?
  ☐Fiber-optics ☐Thick coax Ethernet ☐Thin coax Ethernet ☐10BASE-T UTP/STP
  ☐100BASE-TX ☐100BASE-T4 ☐100VGAnyLAN ☐Others_____

7. What applications are used on your network?
  ☐Desktop publishing ☐Spreadsheet ☐Word processing ☐CAD/CAM
  ☐Database management ☐Accounting ☐Others_____

8. What category best describes your company?
  ☐Aerospace ☐Engineering ☐Education ☐Finance ☐Hospital ☐Legal ☐Insurance/Real Estate ☐Manufacturing
  ☐Retail/Chainstore/Wholesale ☐Government ☐Transportation/Utilities/Communication ☐VAR
  ☐System house/company ☐Other_____

9. Would you recommend your D-Link product to a friend?
  ☐Yes ☐No ☐Don't know yet

10.Your comments regarding this product?

_____

_____

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