

D-Link™ DFE-855

**100BASE-TX to 100BASE-FX
Fast Ethernet Converter**

Manual

D-Link®
Building Networks for People



RECYCLABLE
(November, 2004)
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FCC Warning

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with this user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

CE Mark Warning

This is a Class A product. In a domestic environment, this product may cause radio interference in which case the user may be required to take adequate measures.

Warnung!

Dies ist ein Produkt der Klasse A. Im Wohnbereich kann dieses Produkt Funkstörungen verursachen. In diesem Fall kann vom Benutzer verlangt werden, angemessene Massnahmen zu ergreifen.

Precaución!

Este es un producto de Clase A. En un entorno doméstico, puede causar interferencias de radio, en cuyo caso, puede requerirse al usuario para que adopte las medidas adecuadas.

Attention!

Ceci est un produit de classe A. Dans un environnement domestique, ce produit pourrait causer des interférences radio, auquel cas l'utilisateur devrait prendre les mesures adéquates.

Attenzione!

Il presente prodotto appartiene alla classe A. Se utilizzato in ambiente domestico il prodotto può causare interferenze radio, nel cui caso è possibile che l'utente debba assumere provvedimenti adeguati.

VCCI Warning

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

BSMI Warning

警告使用者

這是甲類的資訊產品,在居住的環境中使用時,可能會造成射頻干擾,在這種情況下使用者會被要求採取某些適當的對策

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Preface

The **DFE-855 Manual** is divided into two sections that describe the system installation and operating instructions.

Section 1 (Introduction) - A description of the of the Converter including network cabling, features, and LED indicators.

Section 2 (Installation) - A description of the physical installation of the Converter including connecting the Converter to the network and communication mode.

Appendix A, Technical Specifications - The technical specifications of the DFE-855.

Appendix B, RJ-45 Pin Specifications - The RJ-45 pin specifications of the DFE-855

Intended Readers

The DFE-855 manual contains information for setup and management of the DFE-855 Converter. This manual is intended for network managers familiar with network management concepts and terminology.

Notes, Notices, and Cautions



NOTE: A NOTE indicates important information that helps you make better use of your device.




NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



CAUTION: A CAUTION indicates the potential for property damage, personal injury, or death.

Safety Instructions

Use the following safety guidelines to ensure your own personal safety and to help protect your system from potential damage. Throughout this safety section, the caution icon  is used to indicate cautions and precautions that you need to review and follow.



Safety Cautions

To reduce the risk of bodily injury, electrical shock, fire, and damage to the equipment, observe the following precautions:

- Observe and follow service markings.
- Do not service any product except as explained in your system documentation.
- Opening or removing covers that are marked with the triangular symbol with a lightning bolt may expose you to an electrical shock.
- Only a trained service technician should service components inside these compartments.

Unplug the product from the electrical outlet and replace the part or contact your trained service provider if any of the following conditions occur:

- The power cable, extension cable, or plug is damaged.
- An object has fallen into the product.
- The product has been exposed to water.
- The product has been dropped or damaged.

- The product does not operate correctly when you follow the operating instructions.

Keep your system away from radiators and heat sources. Also, do not block cooling vents.

Do not spill food or liquids on your system components, and never operate the product in a wet environment. If the system gets wet, see the appropriate section in your troubleshooting guide or contact your trained service provider.

Do not push any objects into the openings of your system. Doing so can cause a fire or an electric shock by shorting out interior components.

Use the product only with approved equipment.

Allow the product to cool before removing covers or touching internal components.

Operate the product only from the type of external power source indicated on the electrical ratings label. If you are not sure of the type of power source required, consult your service provider or local power company.

To help avoid damaging your system, be sure the voltage selection Switch (if provided) on the power supply is set to match the power available at your location:

- 115 volts (V)/60 hertz (Hz) in most of North and South America and some Far Eastern countries such as South Korea and Taiwan
- 100 V/50 Hz in eastern Japan and 100 V/60 Hz in western Japan.
- 230 V/50 Hz in most of Europe, the Middle East, and the Far East.

Also be sure that attached devices are electrically rated to operate with the power available in your location.

Safety Instructions (continued)

Use only approved power cable(s). If you have not been provided with a power cable for your system or for any AC-powered option intended for your system, purchase a power cable that is approved for use in your country. The power cable must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cable should be greater than the ratings marked on the product.

To help prevent an electric shock, plug the system and peripheral power cables into properly grounded electrical outlets. These cables are equipped with three-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, use a 3-wire cable with properly grounded plugs.

Observe extension cable and power strip ratings. Make sure that the total ampere rating of all products plugged into the extension cable or power strip does not exceed 80 percent of the ampere ratings limit for the extension cable or power strip.

To help protect your system from sudden increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).

Position system cables and power cables carefully; route cables so that they cannot be stepped on or tripped over. Be sure that nothing rests on any cables.

Do not modify power cables or plugs. Consult a licensed electrician or your power company for site modifications. Always follow your local/national wiring rules.

When connecting or disconnecting power to hot-pluggable power supplies, if offered with your system, observe the following guidelines:

- Install the power supply before connecting the power cable to the power supply.
- Unplug the power cable before removing the power supply.
- If the system has multiple sources of power, disconnect power from the system by unplugging *all* power cables from the power supplies.

Move products with care; ensure that all casters and/or stabilizers are firmly connected to the system. Avoid sudden stops and uneven surfaces.



General Precautions for Rack-Mountable Products

Observe the following precautions for rack stability and safety. Also refer to the rack installation documentation accompanying the system for specific caution statements and procedures.

Systems are considered to be components in a rack. Thus, "component" refers to any system as well as to various peripherals or supporting hardware.



CAUTION: Installing systems in a rack without the front and side stabilizers installed could cause the rack to tip over, potentially resulting in bodily injury under certain circumstances. Therefore, always install the stabilizers before installing components in the rack.

After installing system/components in a rack, never pull more than one component out of the rack on its slide assemblies at one time. The weight of more than one extended component could cause the rack to tip over and may result in serious injury.

Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.

Always load the rack from the bottom up, and load the heaviest item in the rack first.

Make sure that the rack is level and stable before extending a component from the rack.

Use caution when pressing the component rail release latches and sliding a component into or out of a rack; the slide rails can pinch your fingers.

After a component is inserted into the rack, carefully extend the rail into a locking position, and then slide the component into the rack.

Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.

Ensure that proper airflow is provided to components in the rack.

Do not step on or stand on any component when servicing other components in a rack.



NOTE: A qualified electrician must perform all connections to DC power and to safety grounds. All electrical wiring must comply with applicable local or national codes and practices.



CAUTION: Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available.



CAUTION: The system chassis must be positively grounded to the rack cabinet frame. Do not attempt to connect power to the system until grounding cables are connected. Completed power and safety ground wiring must be inspected by a qualified electrical inspector. An energy hazard will exist if the safety ground cable is omitted or disconnected.

Protecting Against Electrostatic Discharge

Static electricity can harm delicate components inside your system. To prevent static damage, discharge static electricity from your body before you touch any of the electronic components, such as the microprocessor. You can do so by periodically touching an unpainted metal surface on the chassis.

You can also take the following steps to prevent damage from ESD (Electrostatic Discharge):

- When unpacking a static-sensitive component from its shipping carton, do not remove the component from the antistatic packing material until you are ready to install the component in your system. Just before unwrapping the antistatic packaging, be sure to discharge static electricity from your body.
- When transporting a sensitive component, first place it in an

antistatic container or packaging.

- Handle all sensitive components in a static-safe area. If possible, use antistatic floor pads, workbench pads, and an antistatic grounding strap.

SECTION 1

Introduction

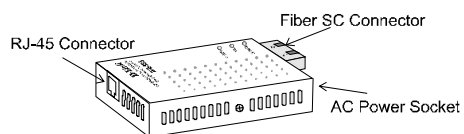
Introduction

Network Cables Supported

Features

LED Indicators

The D-Link DFE-855 100BASE-TX to Fiber Optic 100BASE-FX Converter represents the best value on the market. The converter is IEEE 802.3u 100BASE-TX and 100BASE-FX compliant, mediates between a 100BASE-TX segment and a 100BASE-FX segment, and supports both full-duplex and half-duplex operation. The DFE-855 converter supports transmission distances of up to 2 kilometers in full-duplex mode (please refer to the section entitled Connections and Communication Mode). Diagnostic LEDs on the DFE-855 provide indication of power, linkage and data reception.



DFE-855 100BASE-TX to Fiber Optic 100BASE-FX Converter

Figure 1- 1



NOTICE: The **DFE-855** 100Base-TX to 100 Base-FX Fast Ethernet Converter does not support 10 Mbps mode.

Network Cables Supported

The connectors and network cables supported by the converter are listed in the following table:

Connector	Type of Network	Network Cable Supported
RJ-45	100BASE-TX	Cat 5 Twisted-Pair
Fiber SC	100BASE-FX	1300nm 62.5/125,50/125 μm Multimode fiber

Table 1- 1

Features

The DFE-855 100BASE-TX to 100BASE-FX Fast Ethernet Converter includes the following features:

- Conforms to the IEEE 802.3u 100BASE-TX and 100BASE-FX standards.
- 100 Mbps data transfer rate.
- Auto detection, half / full duplex mode.
- Supports transmission distances of up to 2 km (full-duplex).
- One fiber optic SC connector and one RJ-45 connector. (Refer to Appendix B: RJ-45 Pin Specifications.)
- LED indicators allow for visual verification of power, linkage and data received.
- Operating temperature of 0 to 40 degrees Celsius.
- Storage Temperature of 25 to 55 degrees Celsius
- Humidity of 5 - 90% (non-condensing)
- EMI Certification including CE, FCCA, VCCIA and C-Tick.

LED Indicators

The LED indicators of the DFE-855 include Power, and Link/Receive.

- PWR Indicator (green): Lights when power is on.
- TX Link/Rx Indicator (green): Steady green indicates that a valid link exists. Flashing green indicates that the converter is receiving data from the RJ-45 connector.
- FX Link/Rx Indicator (green): Steady green indicates that a valid link exists. Flashing green indicates that the converter is receiving data from the Fiber Optic connector.

SECTION 2

Installation

Package Contents

Connections and Communication Mode

Transmission Distance

Package Contents

Open the shipping carton of the DFE-855 and carefully unpack its contents. The carton should contain the following items:

- One DFE-855 Fast Ethernet Converter
- One DC Power Adapter
- This manual

If any item is found missing or damaged, please contact your local D-Link reseller for replacement.

Connections and Transmission Distance

The figure below shows the basic connection scheme for the DFE-855.

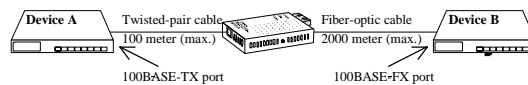


Figure 2- 1

A network device (a server, workstation, router, switch) with a 100BASE-TX port is connected to the DFE-855's RJ-45 jack through a twisted-pair

cable; a device with a 100BASE-FX port is connected to the DFE-855's SC jack through a fiber-optic cable; and the supplied AC power adapter is connected to the DFE-855's DC power jack. The figure shows the maximum possible distance between the two devices: 2,100 meters. Note that the network ports on both devices must be explicitly set to full-duplex mode to allow the use of a cable of up to 2,000 meters long on the 100BASE-FX side.

In the following figure, device B has a fiber optic port.



Figure 2-2

Mode	Device A	Device B	X	Y
Full-duplex	DTE(*)	DTE	100m	2000m
Half-duplex	DTE	DTE	$X \leq 100, X + Y \approx 300$	
Half-duplex	Class I Hub(+)	DTE	$X \leq 100, X + Y \approx 75$	
Half-duplex	Class II Hub(+)	DTE	$X \leq 100, X + Y \approx 118$	

Table 2-1

In the following figure, device B does not have a fiber optic port.

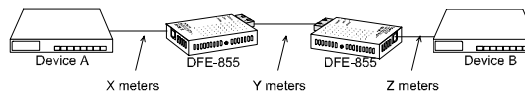


Figure 2-3

Mode	Device A	Device B	X	Y	Z
Full-duplex	DTE(*)	DTE	100m	2000m	100m
Half-duplex	DTE	DTE	$X \leq 100, X + Y + Z \approx 230, Z \leq 100$		

Table 2-2

Note:

* DTE (Data Terminal Equipment): Workstation, switch, router, or terminal device.

Appendix A

Technical Specifications

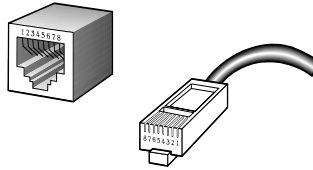
General	
Standards:	IEEE 802.3u 100BASE-TX IEEE 802.3u 100BASE-FX
Data Transfer Rate:	Fast Ethernet: 100Mbps (Half-duplex) 200Mbps (Full-duplex)
Network Cables:	Fast Ethernet: 2-pair UTP Cat. 5, Unshield Twisted Pair (UTP)Cable Fast Ethernet: 1300nm 62.5/125,50/125 µm Multimode fiber cable
Number of Ports:	One (1) 100BASE-TX Fast Ethernet port One (1) 100BASE-FX Fast Ethernet port

Physical and Environmental	
DC Inputs:	DC 5V 1A (Power Adapter)
Power Consumption:	3.5 watts maximum
Operating Temperature:	32°F ~ 104°F (0 °C ~ 40 °C)
Storage Temperature:	14°F ~ 158°F (-10°C ~ 70°C)
Humidity:	5% ~ 95% RH, non-condensing
Dimensions:	4.53 in. x 2.44 in. x 0.89 in. (115 mm x 62 mm x 22.5 mm)
Weight	0.16 Kg.
EMI	FCC Class A, CE Class A, C-Tick, VCCI Class A
Safety:	CSA International

Appendix B

RJ-45 Pin Specifications

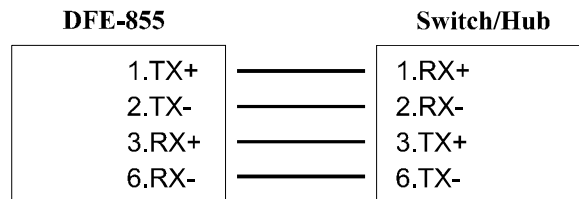
The following diagram and table show the standard RJ-45 connector and their pin assignments.



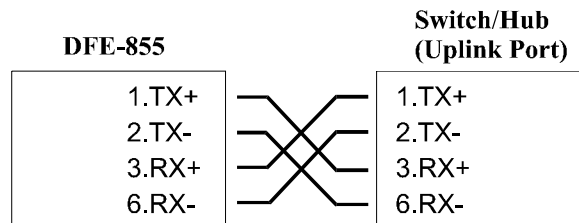
The standard RJ-45 connector

RJ-45 Connector pin assignment	
Contact	Media Direct Interface Signal
1	TX + (transmit)
2	TX - (transmit)
3	RX + (receive)
4	Not used
5	Not used
6	RX - (receive)
7	Not used
8	Not used

Pinout descriptions for straight-through and crossover cables are shown in the following figures.



Straight-Through Cable Pinouts



Crossover Cable Pinouts

Warranty and Registration Information (All countries and regions excluding USA)

Wichtige Sicherheitshinweise

1. Bitte lesen Sie sich diese Hinweise sorgfältig durch.
2. Heben Sie diese Anleitung für den spätern Gebrauch auf.
3. Vor jedem Reinigen ist das Gerät vom Stromnetz zu trennen. Verwenden Sie keine Flüssig- oder Aerosolreiniger. Am besten dient ein angefeuchtetes Tuch zur Reinigung.
4. Um eine Beschädigung des Gerätes zu vermeiden sollten Sie nur Zubehörteile verwenden, die vom Hersteller zugelassen sind.
5. Das Gerät ist vor Feuchtigkeit zu schützen.
6. Bei der Aufstellung des Gerätes ist auf sichern Stand zu achten. Ein Kippen oder Fallen könnte Verletzungen hervorrufen. Verwenden Sie nur sichere Standorte und beachten Sie die Aufstellhinweise des Herstellers.
7. Die Belüftungsöffnungen dienen zur Luftzirkulation die das Gerät vor Überhitzung schützt. Sorgen Sie dafür, daß diese Öffnungen nicht abgedeckt werden.
8. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
9. Die Netzanschlußsteckdose muß aus Gründen der elektrischen Sicherheit einen Schutzleiterkontakt haben.
10. Verlegen Sie die Netzanschlußleitung so, daß niemand darüber fallen kann. Es sollte auch nichts auf der Leitung abgestellt werden.
11. Alle Hinweise und Warnungen die sich am Geräten befinden sind zu beachten.
12. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
13. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. Elektrischen Schlag auslösen.
14. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
15. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu überprüfen:
 - a. Netzkabel oder Netzstecker sind beschädigt.
 - b. Flüssigkeit ist in das Gerät eingedrungen.

- c. Das Gerät war Feuchtigkeit ausgesetzt.
 - d. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
 - e. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
 - f. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
16. Bei Reparaturen dürfen nur Originalersatzteile bzw. den Originalteilen entsprechende Teile verwendet werden. Der Einsatz von ungeeigneten Ersatzteilen kann eine weitere Beschädigung hervorrufen.
17. Wenden Sie sich mit allen Fragen die Service und Reparatur betreffen an Ihren Servicepartner. Somit stellen Sie die Betriebssicherheit des Gerätes sicher.
18. Zum Netzanschluß dieses Gerätes ist eine geprüfte Leitung zu verwenden, Für einen Nennstrom bis 6A und einem Gerätegewicht größer 3kg ist eine Leitung nicht leichter als H05VV-F, 3G, 0.75mm² einzusetzen.

WARRANTIES EXCLUSIVE

IF THE D-LINK PRODUCT DOES NOT OPERATE AS WARRANTED ABOVE, THE CUSTOMER'S SOLE REMEDY SHALL BE, AT D-LINK'S OPTION, REPAIR OR REPLACEMENT. THE FOREGOING WARRANTIES AND REMEDIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. D-LINK NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION MAINTENANCE OR USE OF D-LINK'S PRODUCTS.

D-LINK SHALL NOT BE LIABLE UNDER THIS WARRANTY IF ITS TESTING AND EXAMINATION DISCLOSE THAT THE ALLEGED DEFECT IN THE PRODUCT DOES NOT EXIST OR WAS CAUSED BY THE CUSTOMER'S OR ANY THIRD PERSON'S MISUSE, NEGLIGENCE, IMPROPER INSTALLATION OR TESTING, UNAUTHORIZED ATTEMPTS TO REPAIR, OR ANY OTHER CAUSE BEYOND THE RANGE OF THE INTENDED USE, OR BY ACCIDENT, FIRE, LIGHTNING OR OTHER HAZARD.

LIMITATION OF LIABILITY

IN NO EVENT WILL D-LINK BE LIABLE FOR ANY DAMAGES, INCLUDING LOSS OF DATA, LOSS OF PROFITS, COST OF COVER OR OTHER INCIDENTAL, CONSEQUENTIAL OR INDIRECT DAMAGES ARISING OUT THE INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE OR INTERRUPTION OF A D- LINK PRODUCT, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY. THIS LIMITATION WILL APPLY EVEN IF D-LINK HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

IF YOU PURCHASED A D-LINK PRODUCT IN THE UNITED STATES, SOME STATES DO NOT ALLOW THE LIMITATION OR EXCLUSION OF LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

Limited Warranty

Hardware:

D-Link warrants each of its hardware products to be free from defects in workmanship and materials under normal use and service for a period commencing on the date of purchase from D-Link or its Authorized Reseller and extending for the length of time stipulated by the Authorized Reseller or D-Link Branch Office nearest to the place of purchase.

This Warranty applies on the condition that the product Registration Card is filled out and returned to a D-Link office within ninety (90) days of purchase. A list of D-Link offices is provided at the back of this manual, together with a copy of the Registration Card.

If the product proves defective within the applicable warranty period, D-Link will provide repair or replacement of the product. D-Link shall have the sole discretion whether to repair or replace, and replacement product may be new or reconditioned. Replacement product shall be of equivalent or better specifications, relative to the defective product, but need not be identical. Any product or part repaired by D-Link pursuant to this warranty shall have a warranty period of not less than 90 days, from date of such repair, irrespective of any earlier expiration of original warranty period. When D-Link provides replacement, then the defective product becomes the property of D-Link.

Warranty service may be obtained by contacting a D-Link office within the applicable warranty period, and requesting a Return Material Authorization (RMA) number. If a Registration Card for the product in question has not been returned to D-Link, then a proof of purchase (such as a copy of the dated purchase invoice) must be provided. If Purchaser's circumstances require special handling of warranty correction, then at the time of requesting RMA number, Purchaser may also propose special procedure as may be suitable to the case.

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 package must be mailed or otherwise shipped to D-Link with all costs of mailing/shipping/insurance prepaid. D-Link shall never be responsible for any software, firmware, information, or memory data of Purchaser contained in, stored on, or integrated with any product returned to D-Link pursuant to this warranty.

Any package returned to D-Link without an RMA number will be rejected and shipped back to Purchaser at Purchaser's expense, and D-Link reserves the right in such a case to levy a reasonable handling charge in addition

mailing or shipping costs.

Software:

Warranty service for software products may be obtained by contacting a D-Link office within the applicable warranty period. A list of D-Link offices is provided at the back of this manual, together with a copy of the Registration Card. If a Registration Card for the product in question has not been returned to a D-Link office, then a proof of purchase (such as a copy of the dated purchase invoice) must be provided when requesting warranty service. The term "purchase" in this software warranty refers to the purchase transaction and resulting license to use such software.

D-Link warrants that its software products will perform in substantial conformance with the applicable product documentation provided by D-Link with such software product, for a period of ninety (90) days from the date of purchase from D-Link or its Authorized Reseller. D-Link warrants the magnetic media, on which D-Link provides its software product, against failure during the same warranty period. This warranty applies to purchased software, and to replacement software provided by D-Link pursuant to this warranty, but shall not apply to any update or replacement which may be provided for download via the Internet, or to any update which may otherwise be provided free of charge.

D-Link's sole obligation under this software warranty shall be to replace any defective software product with product which substantially conforms to D-Link's applicable product documentation. Purchaser assumes responsibility for the selection of appropriate application and system/platform software and associated reference materials. D-Link makes no warranty that its software products will work in combination with any hardware, or any application or system/platform software product provided by any third party, excepting only such products as are expressly represented, in D-Link's applicable product documentation as being compatible. D-Link's obligation under this warranty shall be a reasonable effort to provide compatibility, but D-Link shall have no obligation to provide compatibility when there is fault in the third-party hardware or software. D-Link makes no warranty that operation of its software products will be uninterrupted or absolutely error-free, and no warranty that all defects in the software product, within or without the scope of D-Link's applicable product documentation, will be corrected.

Warranty and Registration Information (USA Only)



Limited Warranty
(USA Only)

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.

Limited Lifetime Warranty for the Product(s) is defined as follows:

- Hardware for as long as the original customer/end user owns the product, or five years after product discontinuance, whichever occurs first (excluding power supplies and fans)
- Power Supplies and Fans Three (3) 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 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, 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, 17595 Mt. Herrman Street, Fountain Valley, CA. 92708**. D-Link will not be held responsible for any packages that are lost in transit to D-Link. The repaired or replaced packages will be shipped to the customer via UPS Ground or any common carrier selected by D-Link, 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.

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CE Mark Warning: This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

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

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

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

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

International Offices

<p>U.S.A 17595 Mt. Hermann Street Fountain Valley, CA. 92708 TEL: 714-885-6000 FAX: 866-743-4905 URL: www.dlink.com</p> <p>Canada 2180 Winston Park Drive Oakville, Ontario, L6H 5W1 Canada TEL: 1-905-8295033 FAX: 1-905-8295223 URL: www.dlink.ca</p> <p>Europe (U. K.) 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</p> <p>Germany Schwalbacher Strasse 74 D-65760 Eschborn Germany TEL: 49-6196-77990 FAX: 49-6196-7799300 URL: www.dlink.de</p> <p>France Le Florilege #2, Allee de la Fresnerie 78330 Fontenay le Fleury France TEL: 33-1-30238688 FAX: 33-1-30238689 URL: www.dlink-france.fr</p> <p>Netherlands Weena 290 3012 NJ Rotterdam Netherlands TEL: +31-10-282-1445 FAX: +31-10-282-1331 URL: www.dlink-benelux.com</p> <p>Belgium Rue des Colonies 11 B-1000 Brussels Belgium Tel: +32(0)2 517 7111 Fax: +32(0)2 517 6500 URL: www.dlink-benelux.com</p> <p>Italy Via Nino Bonnet n. 6b 20154 - Milano, Italy TEL: 39-02-2900-0676 FAX: 39-02-2900-1723 URL: www.dlink.it</p> <p>Sweden P.O. Box 15036, S-167 15 Bromma Sweden TEL: 46-(0)8564-61900 FAX: 46-(0)8564-61901 URL: www.dlink.se</p> <p>Denmark Naverland 2, DK-2600 Glostrup, Copenhagen, TEL: 45-43-969040 FAX: 45-43-424347 URL: www.dlink.dk</p>	<p>Norway Karlbugveien 89 1086 Oslo Norway TEL: 47-23-897189 FAX: 47-22-309085 URL: www.dlink.no</p> <p>Finland Pakkalankuja 7A 01510 Vantaa, Finland TEL: +358-9-2707 5080 FAX: + 358-9-2707 5081 URL: www.dlink.fi</p> <p>Iberia C/Sabino De Arana, 56 Bajos 08028 Barcelona TEL: 34 93 4090770 FAX: 34 93 4910795 URL: www.dlinkiberia.es</p> <p>Singapore 1 International Business Park #03-12 The Synergy Singapore 609917 TEL: 65-6774-6233 FAX: 65-6774-6322 URL: www.dlink-intl.com</p> <p>Australia 1 Giffnock Avenue, North Ryde, NSW 2113 Australia TEL: 61-2-8899-1800 FAX: 61-2-8899-1868 URL: www.dlink.com.au</p> <p>India D-Link House, Kurla Bandra Complex Road, Off CST Road, Santacruz (East), Mumbai - 400098. India TEL: 91-022-26526096/56902210 FAX: 91-022-265238914 URL: www.dlink.co.in</p> <p>Middle East (Dubai) P.O.Box: 500376 Office No. 103, Building 3 Dubai Internet City Dubai, United Arab Emirates TEL: +971-4-3916480 FAX: +971-4-3908881 URL: www.dlink-me.com</p> <p>Turkey Regus Offices Beybi Giz Plaza, Ayazaga Mah. Meydan Sok. No.28 Maslak 34396, Istanbul-Turkiye TEL: +90 212 335 2553 FAX: +90 212 335 2500 URL: www.dlink.com.tr</p> <p>Egypt 19 El-Shahed Helmy, El Masri Al-Maza, Heliopolis Cairo, Egypt TEL: +202 414 4295 FAX: +202 415 6704 URL: www.dlink-me.com</p>	<p>Israel 11 Hamanofim Street Ackerstein Towers, Regus Business Center P.O.B 2148, Herzlia-Pituach 46120 Israel TEL: +972-9-9715700 FAX: +972-9-9715601 URL: www.dlink.co.il</p> <p>Latin America Isidora Goyechea 2934 of 702, Las Condes Santiago, Chile S.A. TEL: 56-2-232-3185 FAX: 56-2-232-0923 URL: www.dlink.cl</p> <p>Brasil AvdasNacoes/Unidas, 11857 - 14 - andar - cj 141/142 Brooklin Novo Sao Paulo - SP - Brazil CEP 04578-000 TEL: +55 11 55039320 FAX: +55 11 55039322 URL: www.dlinkbrasil.com.br</p> <p>South Africa Einstein Park II Block B 102-106 Witch-Hazel Avenue Highveld Technopark Centurion Gauteng Republic of South Africa TEL: 27-12-665-2165 FAX: 27-12-665-2186 URL: www.dlink.co.za</p> <p>Russia Grafsky per., 14, floor 6 Moscow 129626 Russia TEL: 7-095-744-0099 FAX: 7-495-744-0099 #350 URL: www.dlink.ru</p> <p>China No.202, C1 Building, Huitong Office Park, No.71, Jiangan Road, Chaoyang District, Beijing, 100025, China TEL: +86-10-58635800 FAX: +86-10-58635799 URL: www.dlink.com.cn</p> <p>Taiwan 2F, No. 119, Pao-Chung Rd. Hsin-Tien, Taipei Taiwan TEL: 886-2-2910-2626 FAX: 886-2-2910-1515 URL: www.dlinktw.com.tw</p> <p>Headquarters 2F, No. 233-2, Pao-Chiao Rd. Hsin-Tien, Taipei Taiwan TEL: 886-2-2916-1600 FAX: 886-2-2914-6299 URL: www.dlink.com</p>
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Registration Card (Excluding USA)

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 2000 Windows XP
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 _____

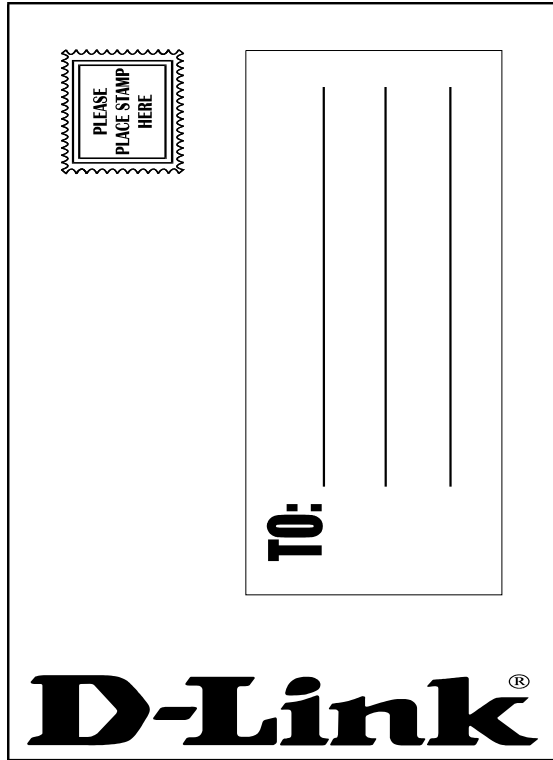
8. What category best describes your company?

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 on this product?



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