

Ethernet PC Card

Models DE-660CT DE-660T DE-660LT

User's Guide

Rev. 07 (April, 1997)

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RECYCLABLE

Table Of Contents

CHECK PACKAGE CONTENTS

INTRODUCTION 1-1

What's New? 1-1

General Description..... 1-2

LED Indicators..... 1-3

Summary of Features..... 1-4

HARDWARE INSTALLATION 2-1

Step 1. Insert the Ethernet PC Card 2-1

Step 2. Attach the Media Coupler 2-2

Step 3. Connect to the Network Medium..... 2-3

3a. The Network Medium is

Thin Coaxial Cable..... 2-3

3b. The Network Medium is

Unshielded Twisted-Pair (UTP) Cable 2-5

Step 4. Confirm Connection (Tx/On Indicator)..... 2-7

REMOVE ETHERNET PC CARD 3-1

Step 1. Disconnect the PSL Plug from the DE-660 3-1

Step 2. Eject the DE-660 from the Computer 3-3

SOFTWARE INSTALLATION..... 4-1

Introduction

What's New?

D-Link DE-660 Ethernet PC Card equipped with Just-In-Time-Interrupt (JITI) on board remarkably boosts its performance and optimizes CPU Utilization.

JITI is the A.I. enabled network interface card in the industry and the best performance card in the market. With JITI, the improved DE-660 Ethernet PC Card's performance is sure to benefit most users.

General Description

The D-Link DE-660 Ethernet PC Card is a credit-card sized Ethernet adapter for connecting a notebook PC to an IEEE 802.3 Ethernet network and is designed to work with notebook or handheld computers that either comes with Socket Services and Card Services or have Intel PC Card controller or compatible controller. The notebook PC must be equipped with a PC Card slot. Inside its compact package, the D-Link DE-660 holds the Ethernet controller network processing interface, RAM for the data buffer, a 68-pin PC Card plug, and a 15-pin media adapter plug. It requires no pre-installation setup – simply insert its 68-pin end (its big-connector end) into the notebook PC's PC Card slot.

The D-Link DE-660 is supplied together with a media coupler suited to your network cable media. The media coupler has a 15-pin connector which plugs into the exposed end of the Ethernet PC card. The other end of the media coupler has one or more connectors suitable for connecting into to your network cable. The media coupler features LED indicators for connection, data activity, and collision.

Important Note:

For DE-660 Ethernet PC Card, the ODI DOS driver, NDIS DOS driver, and NDIS OS/2 driver are the only network operating system drivers that support an On-Line Hot-Swap function which allows the card to be removed and re-inserted without reloading the driver or restarting your computer.

LED Indicators

The DE-665, DE-663, and DE-667 media couplers feature three LED indicators:

1. On/Tx Indicator

- ◆ Steady green indicates that the DE-660's connections with the media coupler and the computer are good, and that the DE-660 has been initialized by the system software ("On" state).
- ◆ Flashing green indicates that the computer is transmitting onto the network ("Transmission" state).

2. Ln/Rx Indicator

- ◆ Steady green indicates that a good linkage to the network has been established. ("Linkage" state; this indication valid only for UTP network medium).
- ◆ Flashing green indicates that the computer is receiving data from the network ("Reception" state).

3. Col Indicator

- ◆ During transmission or reception, the Col indicator's intermittent flashing yellow (data "Collision" state) is normal; the network software automatically resolves data collisions.

Summary of Features

The D-Link DE-660 Ethernet PC Card provides the following features:

- ◆ Complies with IEEE 802.3 Ethernet standards 10Base2 and 10BaseT
- ◆ Complies with PC Card 2.x JEIDA 4.x, PC Card 95 Standards
- ◆ Built-in JITI function (Just-In-Time Interrupt)
- ◆ Built-in 32KB RAM data buffer
- ◆ Support Auto-detection of connected network media.
- ◆ Auto-Polarity for UTP cables.
- ◆ Capable of operation in either half duplex or full duplex mode. Uses Auto Negotiation to automatically adjust to network speed, and full-duplex operation. (**BNC media is capable of operation in half duplex mode only.**)
- ◆ No manual setup switches – automatically configured by software
- ◆ Low power consumption
- ◆ Laser welded stainless steel case
- ◆ Media couplers for thin coaxial, UTP cable media
- ◆ Standard 15-pin (PSL¹) connector for media coupler
- ◆ Supported software list

¹ Position Shielded Latching connector, per 16 bit PC Card standard, sometimes known as Honda connector.

Novell Netware 3.x, 4.x ODI Driver
Novell NetWare client32 for DOS, Windows 3.x, Windows 95
IBM LAN Server
IBM PC LAN Support Program
IBM DOS LAN Services
DEC PathWorks 4.0, 5.0
Packet Driver
Artisoft LANtastic/AI
SCO Unix
AT&T Unix
Windows for Workgroup 3.11
Windows 95
Windows NT
Windows NT Advanced Server
Microsoft LAN Manger
Microsoft Client for DOS
NSCA
WINSOCK for Internet
NDIS Driver
PC/TCP
Sun PC-NFS
Banyan Vines

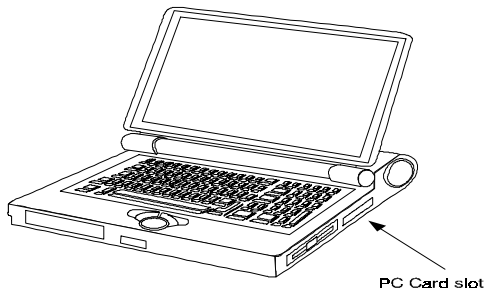
- ◆ Software support includes driver programs for NE-2000 adapter
- ◆ DE-660CT and DE-660T comply with CE radiation standards EMI EN50081-1, EN55022, EMS EN50082-1, IEC801-2(ESD), IEC 801-3(RS), and IEC 801-4 (EFT)
- ◆ DE-660CT and DE-660T are FCC Class B, VCCI B certified; DE-660LT is FCC Class A certified.

Hardware Installation

Follow these four steps to install the DE-660 Ethernet PC card:

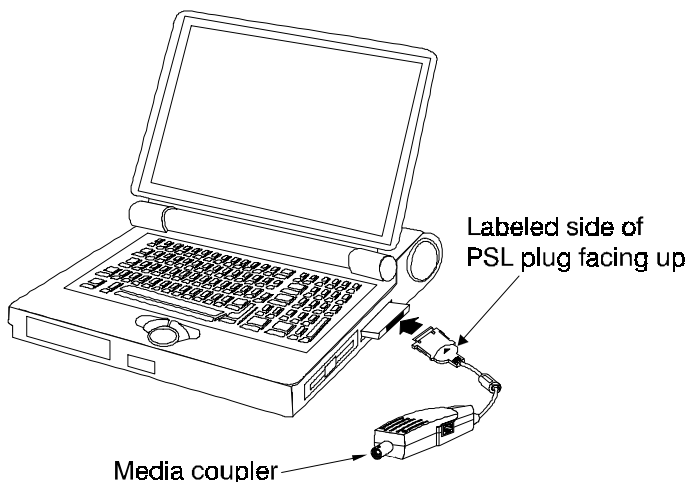
Step 1. Insert the Ethernet PC Card

Find/select an available Type II or Type III PC Card slot on your notebook computer's side or rear panel. Holding the DE-660 with the D-Link label facing up (the detail label with bar code facing down), insert its big-connector end into the PC Card slot. Slide the DE-660 all the way into the PC Card slot until it reaches a firm stop.



Step 2. Attach the Media Coupler

The small-connector (PSL-plug receptacle) end of the DE-660 remains accessible (approximately flush with the case of the computer) when the DE-660 is properly seated in its PC Card slot. The top side of the media coupler's PSL plug is labeled with a small triangle molded into the plastic. Keeping the top side of the PSL plug up, insert the plug into the DE-660's receptacle until it is firmly seated.



Insert the PSL Plug into the DE-660's receptacle

NOTE: When the PSL plug is firmly seated, it is held in place by small latching hooks at either end of the plug. To avoid damage when removing the PSL plug from the DE-660, it is necessary to depress the two small latch wings of the plug. See the following section, "Remove Ethernet PC Card."

Step 3. Connect to the Network Medium

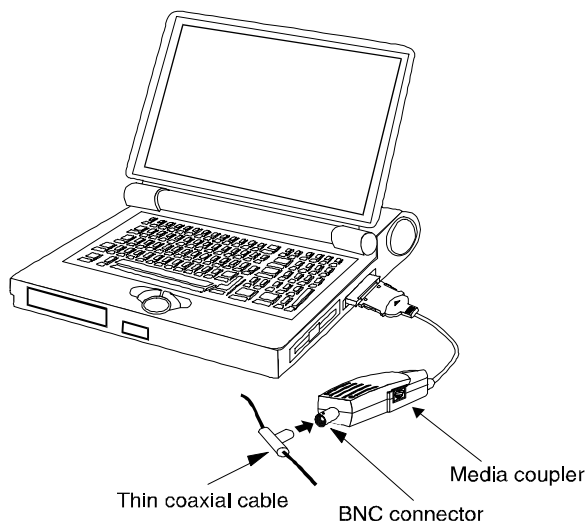
Connect the media coupler onto your network medium according to subsection 3a or 3b depending on your network cable medium:

3a. The Network Medium is Thin Coaxial² Cable

If your network medium is thin coaxial cable, you should have the D-Link Model DE-660CT³ package. Fasten the network

² This medium is also known by a variety of other names, including BNC cable, 10Base2 cable, and RG-58 cable.

³ The included D-Link DE-665 media coupler (with BNC and RJ-45 connectors) automatically detects a network cable connection to either connector. Only one network cable should be connected to the DE-665 at any time.



Connecting Media Coupler to thin coaxial cable

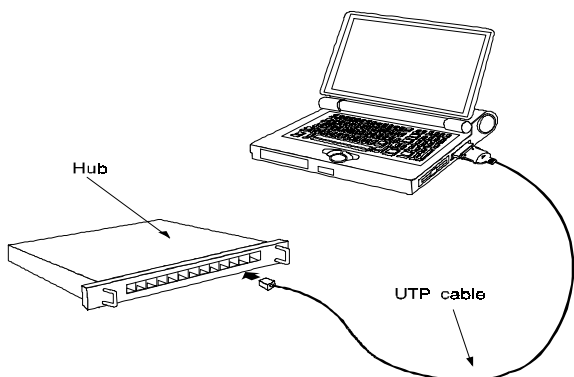
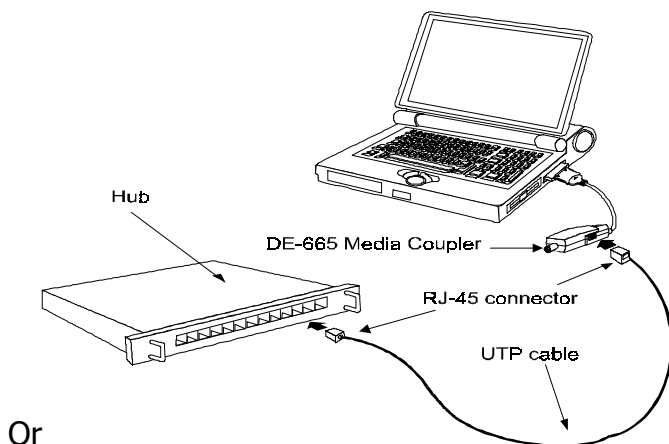
cable connector directly onto the BNC receptacle of the media coupler. If it is necessary to use a T-connector (one is supplied), then any open BNC receptacle must be capped with a 50-ohm terminator (not supplied).

3b. The Network Medium is Unshielded Twisted-Pair (UTP)⁴ Cable

If your network medium is unshielded twisted-pair (UTP) cable, you should have the D-Link Model DE-660CT⁵, DE-660T, or DE-660LT package. Make your network connection by running a UTP cable from the 10BASE-T hub to your media coupler. Simply plug one end of the cable (RJ-45 connector) into an available hub port, and plug the other end (RJ-45 connector) into the RJ-45 socket of your media connector.

⁴ This is data-grade UTP cable, also known as 10BaseT cable.

⁵ The included D-Link DE-665 media coupler (with BNC and RJ-45 connectors) automatically detects a network cable connection to either connector. Only one network cable should be connected to the DE-665 at any time.



Using UTP cable to connect Media Coupler to hub

Step 4. Confirm Connection (Tx/On Indicator)

When the notebook computer's power is ON, and the Ethernet PC card is recognized and enabled by the computer's system software, the media coupler's Tx/On indicator glows steady green⁶.

If the Tx/On indicator remains dark, the most likely fault is poor engagement of the 68-pin PC Card plug. Review the following section titled "Remove the Ethernet PC Card," then remove the PC Card from the notebook. Repeat the procedures of Step 1, "Insert the Ethernet PC Card," taking care to ensure that the PC Card is right side up and that it seats firmly in the correct socket of your notebook. Repeat procedures of Steps 2 and 3 as necessary get the steady green Tx/On confirmation.

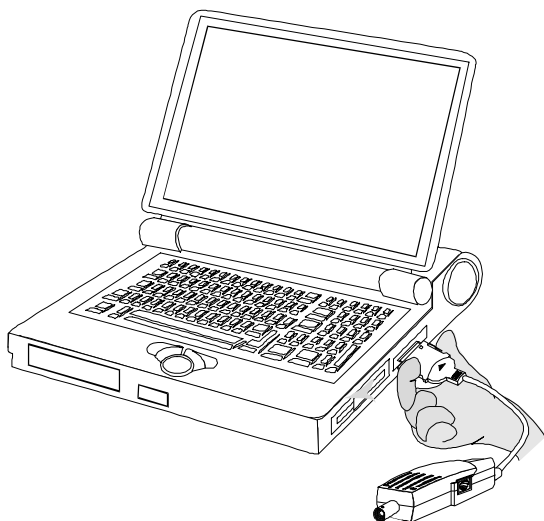
⁶ You might need to wait a few seconds following notebook powerup, or following insertion of a PC Card, for the software processing to be completed. The Tx/On indicator will remain dark until the software processing is completed. See additional description in the "LED Indicators" section.

Remove Ethernet PC Card

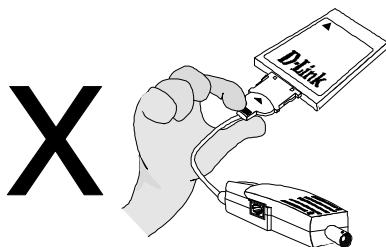
Follow these two steps to remove the Ethernet PC card:

Step 1. Disconnect the PSL Plug from the DE-660

Unplug the media coupler from the DE-660 before ejecting the DE-660 from the PC Card slot. The PSL plug is held in place by small latching hooks at either end of the plug. To remove the PSL plug from the DE-660, it is necessary to unlatch the hooks by depressing the two small latch wings of the plug. Use thumb and forefinger to squeeze the latch wings into the plug body and gently pull the plug out of its receptacle.



Depress clip wings while unplugging the PSL Plug



Don't pull the PSL plug without depressing clip wings

NOTE: *Pulling the coupler plug out of its receptacle without depressing the clip wings will cause damage to the plug.*

Step 2. Eject the DE-660 from the Computer

Use the computer's PC Card Eject mechanism to unseat the DE-660 from the computer's PC Card plug. The DE-660 will then protrude from the PC Card slot, and you can easily remove the DE-660 by gripping its protruding end and withdrawing it from the PC Card receptacle.

Software Installation

On account of the great variety of network environments in which the DE-660 may be installed and used, and the frequency of revisions in these network systems, the instructions for software installation are given as README/text files on two DE-660 driver program diskettes supplied in your DE-660 package.

Required software is provided on a diskette labeled the DE-660 Series Ethernet PC Card Driver Program. The diskette contains drivers for various NOSs (Network Operating Systems), and README /text files which provide instructions for installing the driver specific to your NOS. Please note it is strongly recommended to run INSTALL.EXE in the DOS environment.

For normal software installation follow these steps:

1. Insert the DE-660 Series Ethernet PC Card Driver Program diskette 1 into the computer's diskette drive.
2. Issue the `INSTALL` command at the DOS command prompt. If the diskette is drive A, for example, type:

A:> INSTALL and press Enter key.

Then main menu appears.

3. Highlight Release Notes then press Enter to view Release Notes. It's optional to print out Release Notes. Find related README/text file(s), then follow its instructions to install DE-660 driver.
4. When the INSTALL run is completed, restart the computer.

For further help, please contact the establishment from which you purchased your DE-660.

Check Package Contents

NOTE: *Under ordinary circumstances, the DE-660 Ethernet PC Card will not be affected by static charge as may be received through your body during handling of the unit. In special circumstances where you may carry an extraordinarily high static charge, it is good practice to reduce the charge by touching a ground before handling the DE-660.*

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

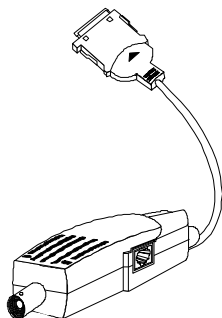
- ◆ One DE-660 Ethernet PC Card
- ◆ One plastic storage bag for the DE-660
- ◆ One media coupler
- ◆ One 3.5" software diskettes
- ◆ One BNC T-connector (model DE-660CT only)
- ◆ One RJ-45 connector (model DE-660T and DE-660LT)

Check the included media coupler against the following table and diagrams to ascertain that the coupler is correct for your product model.

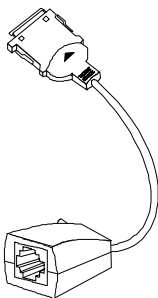
Model	Media Coupler
DE-660CT	DE-665 (BNC and RJ-45 connectors)
DE-660T	DE-663 (RJ-45 connector)
DE-667LT	DE-667 (RJ-45 connector) with 6 foot cable



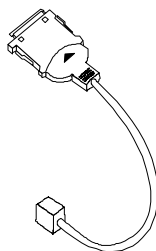
DE-660 Ethernet PC card



DE-665 media coupler



DE-663 media coupler



**DE-667 6 foot cable
with RJ-45 plug**

In the event that you find any mismatch, damage or missing item,
promptly contact your dealer for correction

