

**SMART COM PCMCIA**

**ENW-3501**

**Ethernet PC Card**

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## **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:

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

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

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# 1. Introduction

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## What's New?

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ENW-3501 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 ENW-3501 Ethernet PC Card's performance is sure to benefit most users.

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## Package Contents

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Open the shipping carton and carefully remove all items. In addition to this user's manual, a certain that you have:

- One ENW-3501 Ethernet Adapter
- One plastic storage bag for the PC card
- One media coupler
- Driver diskette
- One T-connector

In case of anything mismatch, damage, or missing, please contact with your local dealer as soon as possible.

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## General Description

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The ENW-3501 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 hand-held 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 ENW-3501 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 computer's PC Card slot.

The ENW-3501 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 your network cable. The media coupler features LED indicators for connection, data activity, and collision.

### **Important Note:**

**For ENW-3501 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.**

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## LED Indicators

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The media couplers for ENW-3501 feature three LED indicators:

1. On/Tx Indicator
  - ◆ Steady green indicates that the ENW-3501's connections with the media coupler and the computer are good, and that the ENW-3501 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.

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## Summary of Features

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The ENW-3501 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 con-figured by softwareat
- ◆ Low power consumption
- ◆ Laser welded stainless stell case
- ◆ Media couplers for thin coaxial, UTP cable media
- ◆ Standard 15-pin Honda Connector for media coupler

- ◆ **Supported software list**

  - 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/A1

  - 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**

- ◆ **ENW-3501 comply with CE radiation standards EMI EN50081-1, EN55022, EMS EN50082-1, IEC801-2(ESD), IEC 801-3(RS), and IEC 801-4 (EFT)**



## 2. Hardware Installation

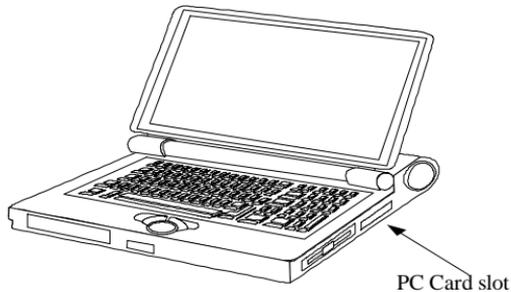
Follow these four steps to install the ENW-3501 Ethernet PC card:

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### Step 1. Insert the Ethernet PC Card

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Find/select an available Type II or Type III PC Card slot on your notebook computer's side or rear panel. Holding the ENW-3501 with the label facing up (the detail label with bar code facing down), insert its big-connector end into the PC Card slot. Slide the ENW-3501 all the way into the PC Card slot until it reaches a firm stop.

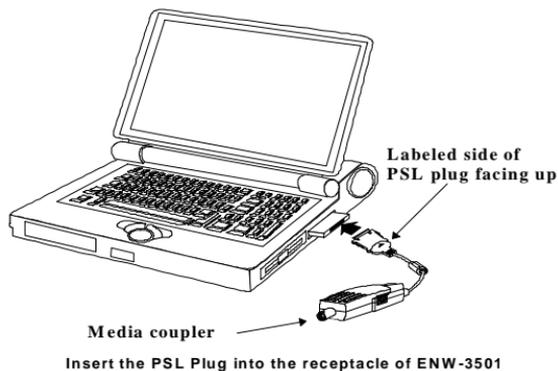


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## Step 2. Attach the Media Coupler

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The small-connector (Honda connector, PSL-plug receptacle) end of the ENW-3501 remains accessible (approximately flush with the case of the computer) when the ENW-3501 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 ENW-3501's receptacle until it is firmly seated.



**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 ENW-3501, it is necessary to depress the two small latch wings of the plug. See the following section, "Remove Ethernet PC Card."

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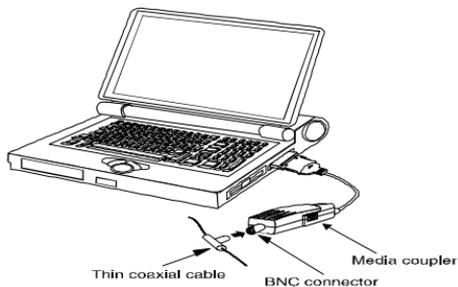
## Step 3. Connect to the Network Medium

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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 Coaxial<sup>1</sup> Cable***

Fasten the network 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).



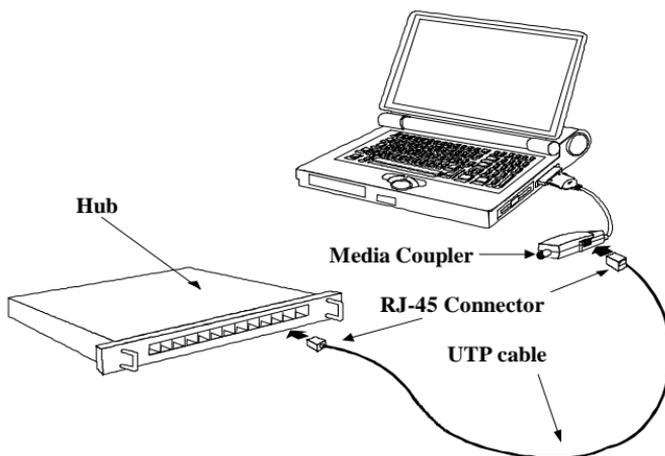
**Connecting Media Coupler to thin coaxial cable**

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<sup>1</sup> This medium is also known by a variety of other names, including BNC cable, 10Base2 cable, and RG-58 cable.

### ***3b. The Network Medium is Unshielded Twisted-Pair (UTP)<sup>2</sup> Cable***

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<sup>3</sup>.



**Using UTP cable to connect Media Coupler to hub**

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<sup>2</sup> This is data-grade UTP cable, also known as 10BaseT cable.

<sup>3</sup> ENW-3501 automatically detects a network cable connection to either connector.

### ***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 green<sup>4</sup>.

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.

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<sup>4</sup> 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.



## 3. Remove Ethernet PC Card

Follow these two steps to remove the Ethernet PC card:

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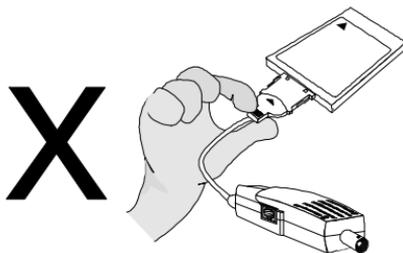
### **Step 1. Disconnect the PSL Plug from the ENW-3501**

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Unplug the media coupler from the ENW-3501 before ejecting the ENW-3501 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 ENW-3501, 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**



**Do not 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.*

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## **Step 2. Eject the ENW-3501 from the Computer**

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Use the computer's PC Card Eject mechanism to unseat the ENW-3501 from the computer's PC Card plug. The ENW-3501 will then protrude from the PC Card slot, and you can easily remove the ENW-3501 by gripping its protruding end and withdrawing it from the PC Card receptacle.



## 4. Software Installation

On account of the great variety of network environments in which the ENW-3501 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 ENW-3501 driver program diskettes supplied in your ENW-3501 package.

Required software is provided on a diskette labeled the ENW-3501 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 ENW-3501 Series Ethernet PC Card Driver Program diskette 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:  
    > 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 ENW-3501 driver.
4. When the INSTALL run is completed, restart the computer.

For further help, please contact the establishment from which you purchased your ENW-3501.



**EM3501**