

Attachment

User's Manual

Plug-n-Link

Auto 10/100 PCI Fast Ethernet Adapter

NFE100TA Installation Guide

P/N.:85-500100-50

Revision:A1

February 1998

NDC Communications, Inc.
265 Santa Ana Court, Sunnyvale
CA 94086, USA
Tel: +1 (408) 730-0888
Fax: +1 (408) 730-0889

Technical Support
E-mail: support@ndclan.com
NDC World Wide Web
www.ndclan.com

TRADEMARKS

NDC is a trademark of NDC Communications, Inc. All other names mentioned in this document are trademarks/registered trademarks of their respective owners.

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.

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

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference
2. This device must accept any interference received, including interference that may cause undesired operation.

Table of Contents

INTRODUCTION	4
<i>Hardware Description</i>	4
<i>Features</i>	4
INSTALLATION.....	5
<i>Hardware Installation</i>	5
<i>Driver Installation</i>	5
TROUBLESHOOTING	6
<i>LEDs</i>	6
TECHNICAL SPECIFICATIONS	7

Packing List

The package should contain the following items:

- One Auto 10/100 PCI Fast Ethernet Adapter
- One 3.5 inch Diskette containing:
Device drivers for popular network operating systems
 - Driver support files
 - A Diagnostic program
- This Installation Guide

Introduction

Hardware Description

The NDC NFE100TA Auto 10/100 PCI Fast Ethernet Adapter supports auto- detection/negotiation of 10/100Mbps data transmission speeds and offers a full-duplex function allowing 20/200Mbps.

When connected to a 10Base-T Hub the adapter functions as a 10Mbps Ethernet adapter. If connected to a 100Base-TX Fast Ethernet hub the adapter will function at 100Mbps. On a switching hub that supports full-duplex, the speed will be doubled to 20Mbps/200Mbps.

The adapter is a PCI (Peripheral Component Interconnect) Local Bus adapter. Just plug in the card and hardware setup is done automatically.

Four LED indicators provide convenient analysis of network and adapter functions.

The NFE100TA is supplied with drivers for all popular network operating systems including: ODI Driver for NetWare 3.1x, 4.x, NDIS driver for Microsoft LAN Manager and Windows 95, Windows NT, SCO UNIX, and a Packet Driver.

Features

- ✓ Complies with IEEE 802.3 CSMA/CD, 10Base-T and 100Base-TX standards
- ✓ 32-bit PCI Local Bus Master for high performance and low CPU utilization
- ✓ Full-duplex doubles performance to 20Mbps/200Mbps
- ✓ Single STP connector for 100Mbps and 10Mbps networks
- ✓ Auto-detects/negotiates network speed
- ✓ Four color-coded status LEDs indicate network link/activity and 10/100Mbps selection
- ✓ Supports smart remote boot ROM
- ✓ Diagnostic software, network driver installation utility, and network drivers on the diskette

Installation

Hardware Installation

Carry out the following steps to install the NFE100TA Auto 10/100 PCI Fast Ethernet Adapter:

1. Turn off the computer and all peripherals
2. Make a note of the cables and cords that are connected to the computer and disconnect them
3. Remove the computer's cover
4. Select any available PCI slot and remove the slot cover (the slot used should support bus mastering)
5. Carefully install the adapter into the expansion slot by firmly pressing the card into the slot until the adapter is snugly seated. Fasten the retaining bracket with the screw from the slot cover
6. Replace the computer's cover and reconnect the previously disconnected cables
7. Plug one end of the twisted-pair cable into the RJ-45 connector on the adapter and the other into a 10 or 100Mbps Ethernet hub or switch
8. Reconnect the power supply

Driver Installation

Before you can connect the NFE100TA Auto PCI Fast Ethernet Adapter to the network you have to install the network driver. You should use the network driver supplied on the software diskette that is compatible with your Network Operating System. A RELEASE.TXT file under the root directory lists information on all the available network drivers. The network driver for each Network Operating System is under a separate directory. Each directory includes a README.TXT file which describes the installation procedure. The same driver functions on both 10Mbps and 100Mbps networks.

Troubleshooting

If you experience any problems with the adapter, first make sure the correct driver is loaded, the proper cable is connected to the adapter port, and the hub complies with the adapter specification (10Base-T or 100Base-TX). Then check the LEDs.

LEDs

The LEDs provide "at-a-glance" network monitoring and are useful for diagnostic and installation purposes. The functions of the LEDs are:

● **LINK LED**

The LINK LED (green) indicates whether or not the adapter has made a link to the network. When the light is OFF the adapter is not connected to the network or the link is not OK. When the light is ON it indicates correct link integrity.

● **10/100Mbps LED**

The 10/100 LED (yellow) indicates whether the adapter is working under a 10Mbps or 100Mbps environment. When the light is OFF the line speed is 10Mbps. When the light is ON the line speed is 100Mbps.

● **RECEIVE LED**

The RK LED (green) indicates network data reception. When the light is OFF the adapter is not receiving data from the network. When the light is BLINKING data is being received.

● **TRANSMIT LED**

The TK LED (yellow) indicates network data transmission. When the light is OFF the adapter is not transmitting data to the network. When the light is BLINKING data is being transmitted.

Technical Specifications

Standards Compliance	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX PCI Local Bus Specification.
Electromagnetic Standards Compliance	FCC Class B CE-Mark EN55022 Class B (CISPR 22 Class B)
Transmission Rate	10Mbps or 20Mbps 100Mbps or 200Mbps
Bus Supported	32-bit PCI Bus Mastering
Connection Interface	Single RJ-45 connector for both 10Base-T and 100Base-TX
LED Indicators	Four LEDs indicate Link, 10Mbps or 100Mbps operation, Data Transmission, and Data Reception
I/O address	Assigned by system
IRQ Line	Assigned by system
Cable	For 10Base-T: Category 3,4,5, UTP cable: 100m (328ft.) per segment maximum. For 100Base-TX: Category 5, UTP cable: 100m (328ft.) per segment maximum.
Software Support	ODI driver for NetWare 3.1x, 4.x, NDIS driver for Microsoft LAN manager and Windows 95, Windows NT, SCO UNIX, and a Packet driver
Power Consumption	5V/ 540Ma
Dimensions	120mm x 80mm(4.72 in x 3.14 in.)
Operating Temperature	0 to 55° C (32 to 131° F)
Humidity	10% to 90%, (non-condensing)
Warranty	Lifetime limited Warranty

EC DECLARATION OF CONFORMITY

For the following equipment:

Product Name : Auto 10/100 PCI Fast Ethernet Adapter

Model Number : NFE100TA

Produced by:

Manufacturer's Name : NATIONAL DATACOMM
CORPORATION

Manufacturer's Address : 2F, NO. 28, INDUSTRY EAST 9TH
ROAD
SCIENCE PARK, HSIN-CHU
TAIWAN, R.O.C.

is hereby confirmed to comply with the requirements set out in the Council Directive on the Approximation of the Laws of the Member States relating to Electromagnetic Compatibility (89/ 336/ EEC). The NFE100TA meets or exceeds the following EMC standards:

EN-50081-1 standard : EN 55022 Class B
(CISPR 22 Class B)

EN-50082-1 standard : IEC-1000-4-2
IEC-1000-4-3
IEC-1000-4-4
IEC-1000-4-5

The manufacturer/importer is responsible for this declaration:

Company Name : NDC (EUROPE) CO., LTD

Company Address : 1, EARLSFORT CENTRE, HATCH
STREET, DUBLIN 2, IRELAND

Person authorized to make this declaration:

Name : CHIN-TU WU

Position/Title : MANAGING DIRECTOR

February 12, 1998

Date

C. J. Wu

Legal Signature