

ZX 374 (pictured)

ZX370 SERIES USER GUIDE

Fast Ethernet Adapter for PCI Systems (PCI)

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ZX370 Series User Guide
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WELCOME!

Thank you for choosing the ZX370 Series PCI Fast Ethernet Adapter. Each adapter is equipped with the following features:

- short form PCI card design
- 64 bit, 66 MHz PCI bus support
- two or four 10/100 Mbps port models available
- link and dual diagnostic LEDs
- optional boot ROM capability



ZX374

ZX370 Series Models

Model	Description	cPCI Slot
ZX372	Two channel 10/100 Mbps ports with separate IEEE Auto Negotiation	64 or 32 bit PCI slot
ZX374	Four channel version of above	64 or 32 bit PCI slot

Getting Started

You will find the ZX370 series are simple to install and configure. This document will help you complete the hardware installation process. Troubleshooting and diagnostic sections are also included. There are two basic steps required before you can begin using the adapter:

Step 1. Install the hardware (follow the instructions in this manual)

Step 2. Install the software driver (download from the ZNYX web site).

About this Manual

This manual includes the installation, troubleshooting, and reference data for the ZX370 Series Ethernet adapter. See the ZNYX Networks data sheet for product specifications.

All documentation for ZNYX Networks products, including data sheets, release notes and user guides are available for downloading from the ZNYX Networks web site (<http://www.znyx.com>). Documentation files are supplied in PDF format so your system requires Adobe Acrobat Reader to open and read the documentation.

For help configuring a driver, download the applicable driver user guide.

Driver Installation

After you have successfully secured your adapter to the system, you can begin installing and configuring the driver (*see separate documentation*). All Ethernet cables should be attached. *See the Hardware Installation section in this manual for further cable requirements.*

Download the specific driver and applicable release notes for your system from the ZNYX Networks web site (www.znyx.com).

Technical Support

If you have difficulty downloading the driver for your system, or need further assistance after reading this user manual, the ZNYX Networks professional technical support team is available to answer your questions. Contact us at:

Telephone:	(510) 249-0800 or (800) 724-0911
Fax:	(510) 656-2460
Email:	support@znyx.com
Web site:	www.znyx.com

HARDWARE INSTALLATION

You can easily install your ZX370 Series Adapter into an open PCI slot in your system. Refer to your system documentation if necessary.

Installing the ZX370 Series Ethernet Adapter

This procedure includes the steps required for installing the adapter.

Preparing for the Install

- **Power off** your system.
- **Discharge any static electricity** from your body by touching the metal chassis, or by using an anti-static wrist strap. If you do not have a ground strap, maintain physical contact with the case to maintain the same electrical potential with the system.
- **Remove your PC system cover** following the manufacturer's instructions.

Installing the Adapter

1. Insert the adapter into an available 64 or 32-bit PCI slot.
2. Secure the retention screw through the adapter faceplate and tighten.
3. Replace the system cover.

System-specific Requirements

The host computer system should automatically assign all system resources, such as I/O addresses and interrupt lines (IRQ).

LAN Cable Connection

The LAN cable must be properly attached to a functioning network for the adapter to operate. Each 100Base TX port requires a Category 5 cable.

Connecting to the Network

You can use one of two types of cable attachments. Each requires using a different type of cable (see table below).

Cable Type	Other End of Connection	Notes
Straight	Hub or switch with the MDI-X connection.	Do not plug into a port marked "uplink" or MDI. Some hubs and switches provide a few ports with selections to make them type MDI for uplinks and daisy-chaining.
Crossover (or Null)	Directly to another PC network adapter.	Direct PC to PC connections without an intervening hub or switch.

TROUBLESHOOTING

All ZNYX Networks adapters support Plug-and-Play functionality. If you have a Plug-and-Play system, your card will configure itself automatically. If your operating system does not discover the board, you can verify that your adapter is properly configured by running the ZNYX DOS-based diagnostics program.

Running DOS Diagnostics

DOS-based diagnostic programs are available from the ZNYX Networks web site (www.znyx.com) to troubleshoot hardware problems. If you believe you have a hardware problem, follow the testing procedure below.

Testing ZX370 Adapters in DOS

1. Download the diagnostic program (i.e., DIAG374 .exe) from the ZNYX web site.
2. Run the diagnostic program in DOS as follows:
 - Enter the following command:


```
>DIAG374 LIST
```
 - Verify that a list similar to the example for a ZX374 below is displayed.

DIAG374 Version 2.04 for ZNYX NetBlaster ZX374 4/100 Mbps adapter (c) Copyright 2000 ZNYX Corporation - All Rights Reserved. PCI BIOS Information: Version=2.10, Config Mechanism=1, Last Bus=2										
Bus	Dev	Fn	Vendor	Device	Rev	Type	Lat	IL	IRQ	Note
=====	=====	=====	=====	=====	=====	=====	=====	=====	=====	=====
0	0	0	8086	1250	03	Host Bridge	20	-	-	
0	7	0	8086	7000	01	PCI-ISA	00	-	-	
0	7	1	8086	7010	00	IDE	20	-	-	
1	0	0	8086	7800	21	VGA	0	A	5	
2	4	0	1011	0019	01	Ethernet	73	A	10	ZX374
2	5	0	1011	0019	41	Ethernet	73	A	10	ZX374
2	6	0	1011	0019	41	Ethernet	73	A	10	ZX374
2	7	0	1011	0019	41	Ethernet	73	A	10	ZX374

ZX374
lists four
(4) devices

ZX372
lists two
(2) devices

Your card is automatically configured if four (or two for the ZX372) Ethernet-type devices are listed.

The **Note** column must indicate four (or two) devices are for the ZX370. Each device should have an **IRQ** (interrupt line), **bus** value, and a unique **device** number.

3. Write down the **bus** and **device** numbers for testing each adapter channel (*see the Testing Each Adapter Channel section*).

Testing Each Adapter Channel

Test the connection for each adapter channel by running the ZNYX program, DIAG374.exe (download from the ZNYX web site) for each bus and device number.

1. Enter the following command, in DOS, for each device number:

```
>DIAG374 (bus number) (device number)
```

Example: You have a ZX374 adapter with a bus number of 2 and the device numbers are 4, 5, 6 and 7. You can test each channel connection by entering the following:

```
>DIAG374 2 4
```

```
>DIAG374 2 5
```

```
>DIAG374 2 6
```

```
>DIAG374 2 7
```

2. If the DIAG374 program displays the following successful message for each device, you are ready to download and install the driver (see separate documentation).

```
Diagnostics successfully completed.
```

Troubleshooting Tips

For all operating systems, if you experience installation difficulties, check the following:

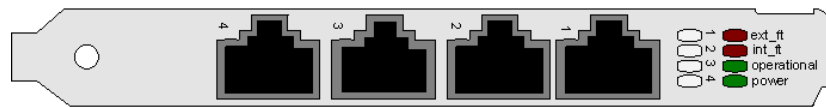
- Check that the board is securely seated in the slot.
- Refer to the operating system-specific documentation to evaluate any error messages or logs after the driver is loaded.
- Note the LED light activity (*see the LED Reference Key section*).

LED Reference Key

The table below references the LED activity of the ZX370 Series.

Each port on the ZX374 is linked to an LED so you know immediately if the port has an established link (green) and it is transmitting or receiving data (amber).

NOTE In most cases, the driver must be properly loaded and configured to bring up the link.



Label	Color	Function
Ext_ft	Red	ON indicates a failure external to the adapter-inability to establish link on a configured port, or another connectivity problem external to the adapter.
Int_ft	Red	ON indicates a failure of the internal tests.
Operational	Green	ON indicates driver loaded and board has passed internal tests.
Power	Green	ON indicates the power source is active.
1,2,3,4 Tri-color Port LEDs	Green	Indicates a link is established for the corresponding port.
	Amber	Indicates the corresponding port is active and either receiving or transmitting.
	White	Indicates the corresponding port is not linked or active.

APPENDIX A: LEGAL NOTICES AND CERTIFICATION

FCC Class A Notice (Pending): ZX370 SERIES

Modification to this product not authorized by ZNYX Networks could void the FCC approval and negate your authority to operate the product.

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 commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if it is not installed and used in accordance with the instruction manual, 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.

Canada Compliance (Pending):

This Class A digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

CE Conformity (Pending):

The ZX370 Series is in compliance to CE testing according to the following standards with respect to the stated level and given criteria:

EN55022	
EN50082-1	
EN55022(1998)	Class A
EN61000-4-2 (1995)	4kV (Contact Discharge) and 8kV (Air Discharge)
EN61000-4-3 (1995)	3V/m
ENV 0204 (1995)	
EN61000-4-4 (1995)	1kV (power Supply) and 0.5 kV (I/O Cables)
EN61000-4-5 (1995)	1kV (Line to Line) and 2kV (Line to Ground)
EN61000-4-6 (1996)	3Vrms
EN61000-4-11 (1994)	0%, 40%, 70% of U_T , voltage dips +/-10% voltage variations

THIS ADAPTER CARD IS FOR USE ONLY WITH PCI BUS COMPATIBLE SYSTEMS THAT HAVE ENCLOSED POWER SUPPLIES WITH SELV OUTPUTS AND INSTALLATION INSTRUCTIONS DETAILING USER INSTALLATION OF CARD CAGE ACCESSORIES.

Manufacturer Name: ZNYX Networks
Manufacturer Address: 48421 Milmont Drive,
Fremont, CA 94538

Warranty

ZNYX Networks warrants to the original purchaser of any ZNYX Networks product that it is to be free from defects in workmanship and materials, under normal use and service, for a period of one year from the date of purchase from ZNYX Networks or its authorized dealer. In order for this warranty to be valid, this hardware product must remain in its original system and be registered with ZNYX Networks within one year of purchase. ZNYX Networks warrants to the original purchaser of this hardware product that it is to be in good working order for a period of twelve (12) months from the date of purchase from ZNYX Networks or an authorized dealer.

Should this product, in ZNYX Network's opinion, malfunction during the applicable warranty period, ZNYX Networks will, at its expense, repair the defective product or part or, at its option, deliver to the Customer an equivalent product or part to replace the defective item. To prevent damage in transport, the Customer must return the product in its original packaging or, if this is not available, other protective packaging approved in advance by ZNYX Networks. All returned products will become the property of ZNYX Networks. At ZNYX Network's option, replacement parts may be new or reconditioned. Any replaced product or part has a ninety (90) day warranty or the remainder of the initial warranty period, whichever is longer.