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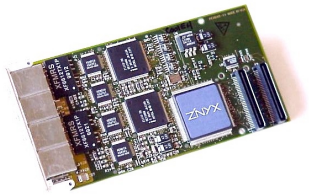
ZNYX



NetBlaster™ ZX210 Series User's Guide

Fast Ethernet Adapters with PCI Mezzanine Connector (PMC)

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Cover: ZNYX NetBlaster ZX214

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NetBlaster ZX210 Series User's Guide
Document # DC0108-03

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Welcome!

Thank you for choosing the ZNYX NetBlaster embedded PCI Mezzanine Card (PMC) Fast Ethernet Adapter. Your adapter is designed to provide a lifetime of superior service in your system with PMC slots.

NetBlaster PMC Fast Ethernet Adapter Models

- NetBlaster PMC ZX212 provides two 10/100 ports, each with separate IEEE Auto Negotiation. It is a single-wide PMC module.
- NetBlaster PMC ZX214 provides four 10/100 ports, each with separate IEEE Auto Negotiation. It is a single-wide PMC module.

Documentation and Software

Documentation and software for the NetBlaster PMC adapter is distributed electronically. You can retrieve documentation and drivers from the ZNYX web site in the driver download section. Please contact ZNYX Customer Support if you have trouble locating the appropriate driver or installation documentation.

Installation Procedure

There are two basic steps you need to follow before you can operate your NetBlaster adapter.

1. Install the NetBlaster adapter (hardware)
2. Install the driver.

The steps outlined here help you install and troubleshoot the hardware. Driver installation instructions are available along with the driver itself from the ZNYX web site. To get the most recent operating system specific driver, go to the ZNYX website or contact Technical Support at:

Telephone:	(510) 249-0800 or (800) 724-0911
Fax:	(510) 646-2460
Email:	support@znyx.com
FTP:	ftp.znyx.com
Website:	www.znyx.com/drivers

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Hardware Installation

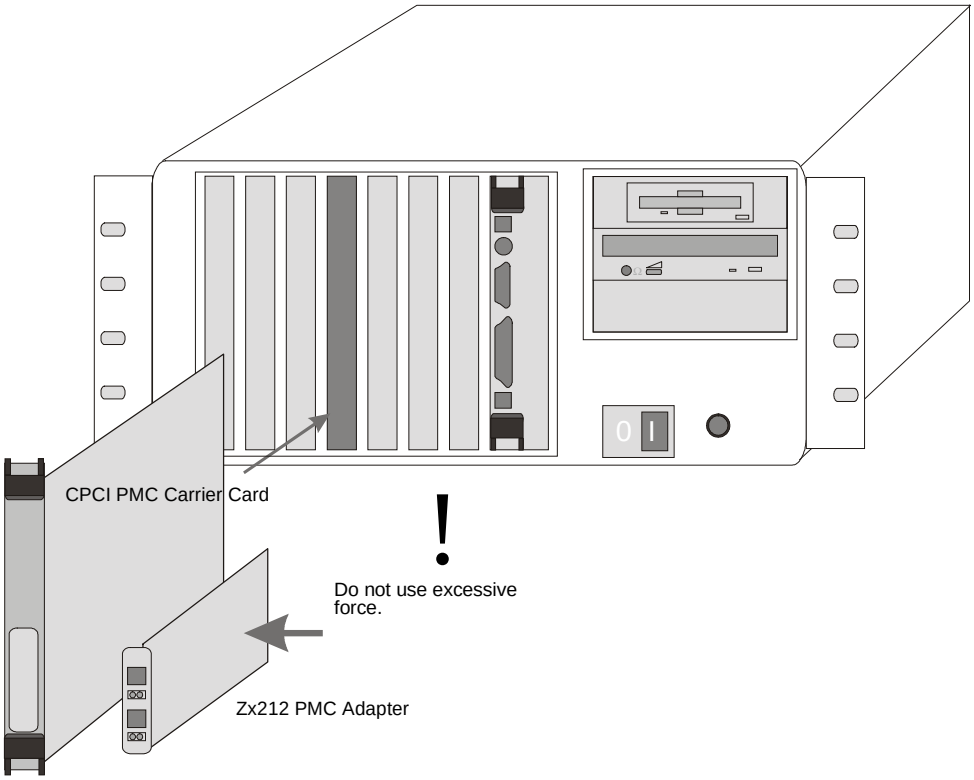
Below are the steps necessary to install a NetBlaster adapter into a standard, PMC compliant system. The following are detailed instructions for the hardware installation procedure.

Installing the Hardware

This installation procedure is for installing NetBlaster PMC adapter systems with an embedded PMC slot. Some steps in this procedure may vary depending on the specific system used. Refer to the system's documentation if necessary.

The figure on the following page shows the installation of an adapter in a typical system.

! Observe proper Electro-Static Discharge prevention procedures at all times. Failure to do so may result in damage to the PCI Adapter or to the system.



1. **Turn off** your system.

2. **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.

3. Remove the motherboard or carrier card containing at least one available single-wide PMC slot. Select a slot to install the ZNYX NetBlaster adapter. Remove the cover from the PMC slot.

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4. **Insert the ZNYX adapter** into the PMC slot. Insert the bezel of the ZNYX adapter into the PMC cutout on the front panel of the motherboard or carrier card. Guide the adapter down over the alignment pin. Fully seat the adapter into the two connectors.

5. **Secure** the four retention screws through the ZNYX adapter standoffs and tighten.

6. **Replace** the motherboard or carrier card into the system.

LAN Cable Connection

The LAN cable must be properly attached to a functioning network for the adapter to operate. 100 Mbps connections require Category 5 cabling.

Connecting to the Network

There are two ways to connect the system using twisted pair: (1) system to system; (2) direct system to hub or switch. You can connect your adapter directly to another system with a null cable. A null cable, or crossover cable, “crosses over” the transmit and receive pairs.

You can connect your adapter directly to a hub or switch with an unshielded twisted-pair (UTP) cable. Make certain that the cable length is within the minimum and maximum length restrictions for Ethernet, or you could experience signal or data loss.

Driver Installation

This section covers driver installation for the NetBlaster adapter. At this stage the adapter should be secure in the system and all Ethernet cables should be attached. If this is not the case, return to the “Hardware Installation” procedure in the previous section.

Download the specific driver for your system from the ZNYX web site (www.znyx.com). Included on the web site with the driver is a release note with installation and configuration instructions. Follow the directions on line to configure the driver.

Running DOS Diagnostics

DOS-based diagnostics are also available from the ZNYX web site (www.znyx.com) to help troubleshoot hardware problems. If you believe you have a hardware problem, and have the capability to run DOS-based diagnostics, the steps below outline the use of the diagnostics. PMC-to-PCI adapters are available from Catalyst Enterprises (http://www.catalyst-ent.com).

Testing ZX212/ZX214 Adapters in DOS

1. Run the diagnostic program that came with your adapter to see if your adapter has been properly configured. Run DIAG21x.EXE off your diskette by entering:

```
>DIAG21x LIST
```

2. You will see a list below. (This example is for the ZX212.)

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```
DIAG212 Version 1.xx for ZNYX NetBlaster ZX212 2/100 Mbps adapter
(c) Copyright 1994-1999 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   5   0   1011   0019   30   Ethernet      40  A  3    ZX212
1   6   0   1011   0019   30   Ethernet      40  A  10   ZX212
```

3. You should see two Ethernet-type devices, and the "Note" column should indicate the devices to be ZX212's. Each should have an **IRQ** (interrupt line), **bus** value, and a unique **device** number. If so, your card has been automatically configured. Make a note of the *bus* and *device* numbers and go on to the software installation section.

4. To test all channels of your adapter, run DIAG212 for each bus number and device number. For example, if you have a ZX212 the bus number is 1 and the device numbers are 4 and 5, run:

```
>DIAG212  1  4
>DIAG212  1  5
```

5. If the DIAG212 program says:

```
Diagnostics successfully completed.
```

each time, proceed with the software installation.

6. If the DIAG212 program does not indicate a successful completion, refer to the next section on Troubleshooting.

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Troubleshooting

All NetBlaster adapters support plug-and-play. If you have a plug-and-play system, your card will configure itself automatically.

If the operating system does not discover the board, try running the DOS-based diagnostic program (see previous section).

System-Specific Configuration Requirements

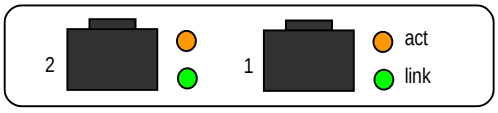
The host computer program should automatically assign all system resources, such as I/O addresses and interrupt lines (IRQ).

Basic Troubleshooting

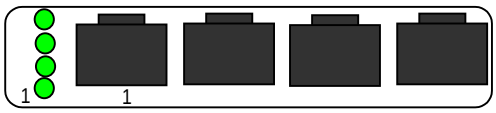
For all operating systems, we recommend that you try the following if you are having difficulty.

1. Make sure the board is securely seated in the slot.

2. Observe the LED's. Each port on the ZX212 has a LINK (green) LED and an ACTIVITY (amber) LED. The green LED illuminates upon successfully establishing a link. The amber LED illuminates during activity. Each port on the ZX214 has one dual-color LED. The LED illuminates green upon successful link establishment, and changes to amber during activity. Note: In most cases, the driver must be properly loaded and configured to bring up the link. It is off if there is no link established.



ZX212



ZX214

3. Refer to operating system specific documentation to evaluate any error messages or logs when the driver is loaded.

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Technical Support

If you need further assistance after referring to this User's Guide, ZNYX has a professional technical support team available to answer your questions. Contact us at:

Telephone:	(510) 249-0800 or (800) 724-0911
Fax:	(510) 646-2460
Email:	support@znyx.com
FTP:	ftp.znyx.com
Website:	www.znyx.com

You can reach us during normal business hours, Pacific Standard Time.

Appendix A: Known Deficiencies in the ZX212–X1 Hardware

There are a number of items that will be addressed/changed in the next revision of the board. The user of the ZX212-X1 prototypes needs to be aware of these in case he/she is writing manuals, test procedures, etc. Any additional feedback from early evaluators is welcome.

Expected ZX212-X2 changes:

- Next revision will swap the position of port 1 and port 2.
- Next revision will have silkscreen on the bracket.

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Appendix B: Legal Notices and Certification

FCC Class A Notice: NETBLASTER ZX212 AND ZX214

Modification to this product not authorized by ZNYX Corporation 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: NETBLASTER ZX212 AND ZX214

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

CE Conformity: NETBLASTER ZX212
CE Conformity: NETBLASTER ZX214 (Pending)

The NetBlaster ZX212 and ZX214 are in compliance to CE testing according to the following standards with respect to the stated level and given criteria:

```
EN 55022
EN 50082-1
EN 55022(1998)    Class A
EN 61000-4-2 (1995)    4kV (Contact Discharge) and 8kV (Air Discharge)
EN 61000-4-3 (1995)    3V/m
ENV 50204 (1995)
EN 61000-4-4 (1995)    1kV (power Supply) and 0.5 kV (I/O Cables)
EN 61000-4-5 (1995)    1kV (Line to Line) and 2kV (Line to Ground)
EN 61000-4-6 (1996)    3Vrms
EN 61000-4-11 (1994)    0%, 40%, 70% of U_T, voltage dips +/-10% voltage variations
```

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

Manufacturer Name: ZNYX Corporation
Manufacturer Address: 48501 Warm Springs Boulevard, Suite 107
Fremont, CA 94539

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Warranty

ZNYX Corporation warrants to the original purchaser of any ZNYX NetBlaster PMC Fast Ethernet adapter product that is to be free from defects in workmanship and materials, under normal use and service, for the lifetime of the personal computer in which it is installed from the date of purchase from ZNYX or its authorized dealer. In order for this warranty to be valid, this hardware product must remain in its original personal computer and be registered with ZNYX within one year of purchase. Otherwise, ZNYX warrants to the original purchaser of this hardware product that it is to be in good working order for a period of thirty-six (36) months from the date of purchase from ZNYX or an authorized dealer.

Should this product, in ZNYX's opinion, malfunction during the applicable warranty period, ZNYX 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. All returned products will become the property of ZNYX. At ZNYX'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.

This limited lifetime warranty applies to the following ZNYX products only ZX212 and ZX214. ZNYX warrants all other product(s) for a period of thirty-six (36) months from the date of purchase from ZNYX, under the same limited warranty terms and conditions.

Certification

Current product certification can be obtained at ZNYX's web site at www.znyx.com.

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ZNYX NetBlaster ZX210 Series Warranty Registration Card

Please complete and return to ZNYX Corporation:

By Mail
ZNYX Corporation
48501 Warm Springs Blvd. Suite 107
Fremont, CA 94539 USA

By Fax
Attn: Warranty Registration
(510) 656-2460

By Worldwide Web
http://www.znyx.com/registration/nbcpci_regform.htm

ZNYX Model Number	Date of Purchase	Serial Number(s)
Where did you purchase your ZNYX product?		

How did you learn about ZNYX products? ☐ Magazine Ad ☐ News Article ☐ Trade Show ☐ Direct Mail ☐ Web Surfing ☐ Word of Mouth ☐ Other (specify)

You are a(n) : ☐ Distributor ☐ Reseller ☐ End User ☐ VAR ☐ Manufacturer ☐ Other (specify)

First Name	Last Name
Title	Division
Company	
Address	
Address (cont'd)	

City	State	Country	Postal Code/Zip Code
Telephone Number (include area code)		Fax Number	
Email Address		URL	

Please complete the following system configuration information.

System Manufacturer	Motherboard Manufacturer
BIOS Manufacturer	BIOS Version
Other boards in the system	
Ethernet type: ☐ 10BaseT ☐ 100BaseTX	

Please indicate which software is in use with this product (check all that apply)

☐ DOS ☐ Solaris ☐ VxWorks ☐ pSOS
☐ Windows NT/2000 ☐ LynxOS ☐ QNX ☐ Other (specify)
☐ SCO Unix

Please indicate your processor: ☐ Intel ☐ PowerPC ☐ SPARC ☐ Alpha ☐ MIPS ☐ StrongARM ☐ Other

Would you like additional information on ZNYX products? ☐ Yes ☐ No

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