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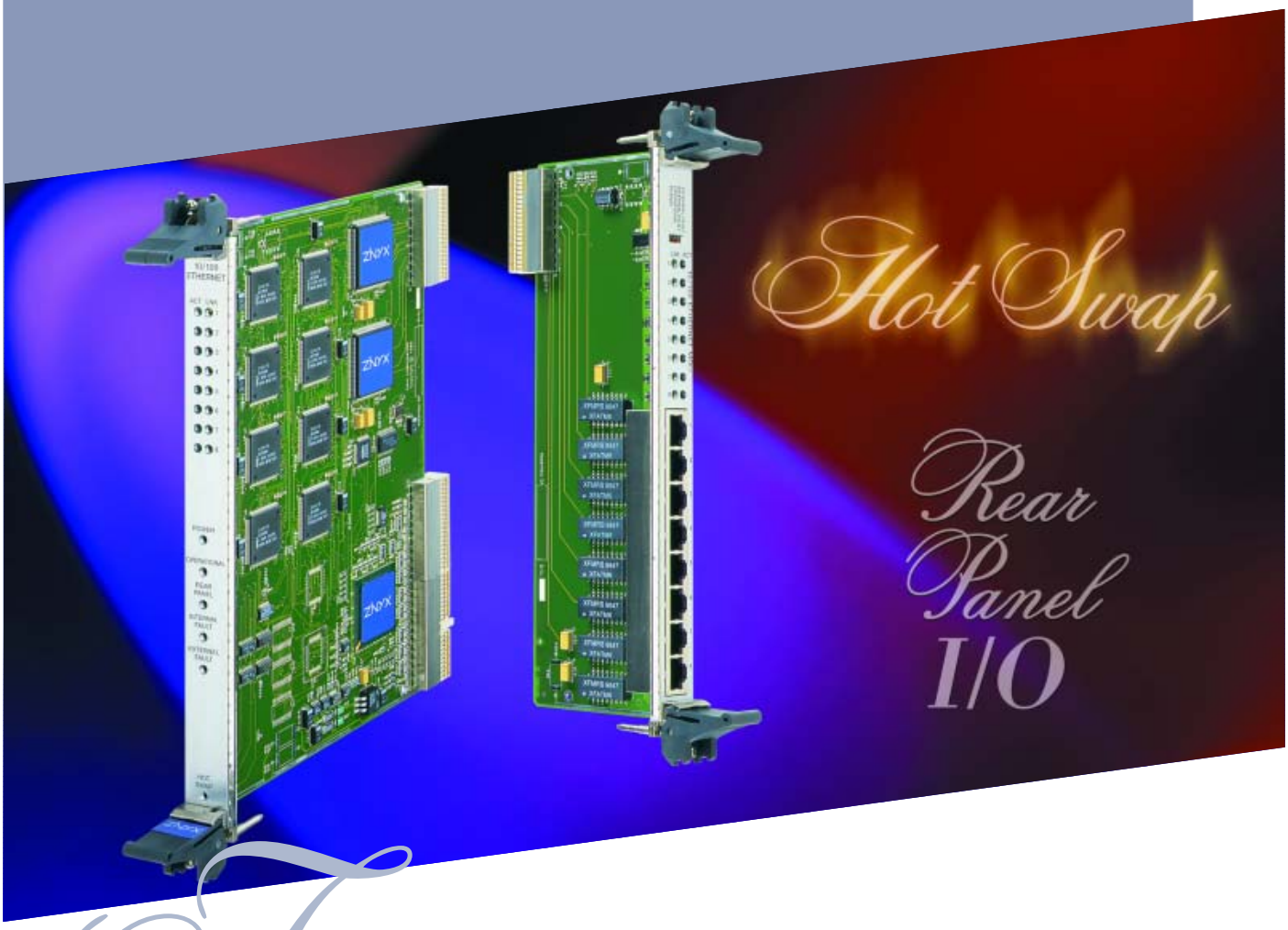
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Find the *ZNYX Networks ZX474* at our website: *Click HERE*

ZNYX Networks
CompactPCI®

ZX470 Series Carrier Class Fast Ethernet Adapters



The NetBlaster ZX470 Series is a family of Carrier Class CompactPCI Fast Ethernet adapters for high availability applications requiring state-of-the art LAN interfaces.

Full Hot Swap Support
The NetBlaster ZX470 Series is fully compliant with the PICMG 2.1 Hot Swap specification. This includes support for the Hot Swap Control Status Register, power ramp circuitry, and a standard blue LED insertion and extraction indicator.

Front and Rear Panel LEDs
The ZX470 features status indicator LEDs on both the front and rear panels to assist in installation and maintenance. These include: Link, Activity, Power, Operational, Internal and External fault indicators.

Comprehensive Driver Suite
ZNYX has a broad driver suite that covers popular operating systems including:

- Windows NT®
- Solaris®
- UnixWare®
- VxWorks®
- PSOS+®
- LynxOS®
- QNX®
- Linux®

Portable Driver Kit
ZNYX's Portable Driver Kit (PDK) is available to support proprietary and other operating systems across a number of microprocessors. The PDK is also available with embedded RAINlink™ technology.

High Availability Networks
RAINlink technology provides redundant active links; it automatically detects failures and switches connectivity to a backup link or backup adapter. RAINlink provides internal and external fault resolution during failovers. The NetBlaster ZX470 combined with RAINlink enables the construction of high availability networks in central office applications where downtime is unacceptable.

Link Aggregation
RAINlink also provides link aggregation (trunking) to combine multiple Ethernet channels into a single high performance connection. RAINlink supports both system-to-system and system-to-switch trunking. Multiple and redundant trunking configurations are also supported.

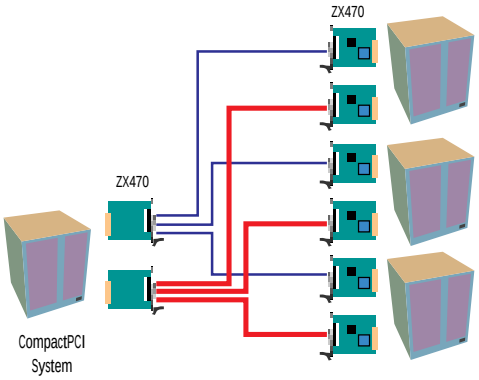
- Rear Panel I/O via passive 6U x 80mm transition card
- 64 bit data bus
- Available in four or eight channel configurations
- Designed for NEBS Level 3 Systems

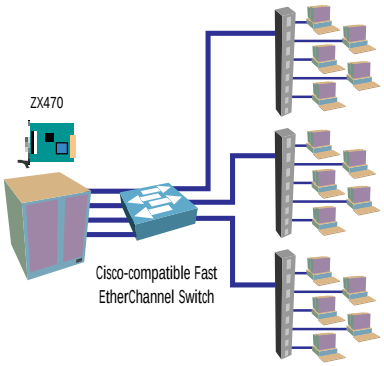
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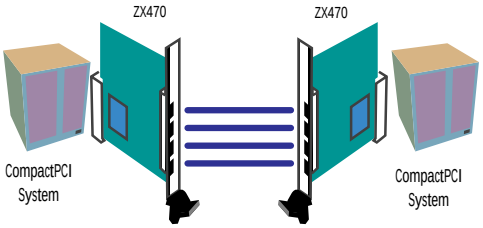
Solution:

High Availability LANs —

Addressing High Availability requirements for LAN intensive applications







High Availability Model

Redundant ZX470s with secondary interfaces in hot standby mode. Fast deterministic failover occurs when a failure is detected.

System-to-Switch Trunking

Cisco®-compatible Fast EtherChannel trunking to Fast Ethernet switch. Active redundancy is used to transfer data over redundant links inside the trunk.

System-to-System Trunking

Traffic is balanced across multiple channels to create an 800 Mbps full-duplex connection using standard CAT5 UTP cabling. Active redundancy is used to transfer data over redundant links inside the trunk.

The Problem

Your mission critical application is highly dependent upon a LAN for normal operation. The components of your solution use LAN interfaces for management, file transfer, database retrievals, remote procedure calls, real-time voice, video, and voice messaging file replay.

The application is expected to run 7x24 with less than 3 minutes downtime per year. You can't meet your requirements using Ethernet ports on the system CPU card. There are not enough ports, fault isolation isn't there (and never will be), and replacing a failed LAN interface on a CPU card is neither practical nor acceptable.

The Solution

Using the NetBlaster ZX470 Series, you get all the Fast Ethernet ports you need on a dedicated hot swap adapter with rear panel I/O that meets or exceeds all the requirements for Central Office applications.

Lots of Ports

The NetBlaster ZX470 Series supports four and eight channel models. You can use multiple cards in a system for additional channels or redundancy.

Fault Isolation

In the unlikely event of a adapter failure, the RAINlink-enabled driver will conduct internal diagnostics testing the bus interface, Ethernet controller and physical transceiver.

Fast Deterministic Failover

The ZX470 RAINlink-enabled driver supports fast failover to redundant links. When a backup link is specified, the driver will place the backup link in a hot standby state – already initialized with the MAC address of the primary interface and auto-negotiation complete. The failover transition occurs within milliseconds.

A Powerful Combination

With Hot Swap and Rear Panel I/O, the NetBlaster ZX470 Series provides the hardware foundation for the construction of high availability LANs. ZNYX's RAINlink-enabled drivers complete the solution by providing failover and trunking services to support mission critical and data intensive applications.

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Comprehensive Status Indicators

POWER – Illuminated on the front panel when board is powered. Illuminated on rear panel when board is powered and rear panel is in the correct slot.

OPERATIONAL – Illuminated when driver is loaded and no fault is detected.

INTERNAL FAULT – Illuminated when driver detects a fault internal to the ZX470.

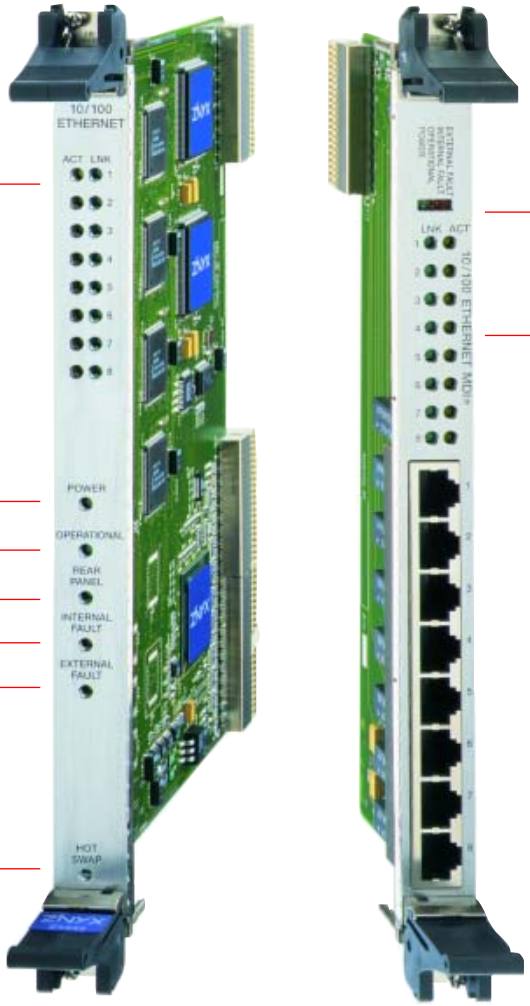
EXTERNAL FAULT – Illuminated when driver detects a LAN fault and internal diagnostics pass.

REAR PANEL – Illuminated when the rear transition module is installed in the correct slot.

HOT SWAP – Industry standard PICMG 2.1 Compliant hot swap LED.

ACTIVITY – Illuminated when data is transmitted or received.

LINK – Illuminated when port is attached to an active NIC, hub, router, or switch.



High Availability Management

ZNYX's RAINlink-enabled drivers are designed to work with high availability management applications. These drivers use published APIs that support:

Fast Deterministic Failover – Using the driver APIs, management applications can initiate failover sequences that are both fast and deterministic.

The driver pre-initializes backup links with the MAC address of the primary interface and completes auto-negotiation. This provides a failover transition that can complete within milliseconds. Neighborhood Address Resolution Protocol (ARP) caches and Internet Protocol-based connections are preserved.

Reporting of Internal and External Faults – In the event of a link failure, the driver will conduct board-level diagnostics and report internal failures so that a malfunctioning board can be replaced.

Customizable Solution

ZNYX customers and business partners have the option of licensing driver source code to support customization, porting to proprietary or unsupported operating systems, or porting across microprocessors.

Rear Transition Modules

The ZX400 family of rear transition modules provide a completely passive 6U x 80mm 10/100 Ethernet I/O solution. The ZX400 provides complete cabling flexibility with choices of 4 or 8 port models in either Medium Dependent Interface (MDI) (adapter) or MDI-X (hub) wiring configurations eliminating the need for crossover cables when NIC-to-NIC connections are used.

The ZX400 mirrors all relevant front panel LEDs to assist in installation and fault isolation procedures.

The ZX400 rear panel contains circuitry that allows the ZX470 to detect its presence, illuminate an LED, and report via software.

For high availability environments, stocking spares of active components is essential. The ZX400 can be ordered separately allowing you to stock spares of the ZX470 adapters.

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ZNYX Networks
CompactPCI®

Carrier Class

64 Bit
High Performance
Data Interface



DESIGNED FOR NEBS SYSTEMS

ZX470 Series Carrier Class Fast Ethernet Adapters

Model Numbers	
NetBlaster ZX474 four-channel Fast Ethernet	
NetBlaster ZX478 eight-channel Fast Ethernet	
NetBlaster ZX4004A four-channel rear panel transition card – A Connector	
NetBlaster ZX4008A eight-channel rear panel transition card – A Connector	
NetBlaster ZX4004AB four-channel rear panel transition card – AB Connector	
NetBlaster ZX4008AB eight-channel rear panel transition card – AB Connector	
Connectors	One RJ-45 per channel
Media	10BaseT: Category 3, 4 or 5 UTP; 100BaseTX: Category 5 UTP
Bus Interface	PICMG 2.0 R2.1 CompactPCI compliant PICMG 2.1 R1.0 Full HotSwap compliant
Bus Connectors	J1, J2 and J5
Data Transfer	32 or 64 bit data PCI bus master with burst mode DMA capability
Host Channel Speed	32 or 64 bit data, 32 bit address at 33MHz PCI
Channel Speeds	Ethernet/Fast Ethernet: 10/100 or 20/200 per channel in full-duplex mode (IEEE Auto Negotiation)
Maximum Channels	Limited to CompactPCI slot availability
Hardware Interrupts	PCI INTA# (supports shared interrupts)
Reliability	ZX474 Calculated MTBF > 80,000 hours (MIL HDBK 217) ZX478 Calculated MTBF > 70,000 hours (MIL HDBK 217)
Controllers	Intel 21143 with Intel 21554 Bridge
Power	ZX474 with RTM - 2.1A @ 5V, 38mA @ +12V, 8mA @ - 12V ZX478 with RTM - 3.5A @ 5V, 38mA @ +12V, 8mA @ - 12V
Temperature	Operating: 0° to 50°C Storage: -40 to 125°C
Humidity	Maximum of 90%, non-condensing
Certifications	UL. cUL, CE
EMC/EMI	FCC Part 15; EN55022 and EN50082-1 (EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN50204, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN1000-4-11) - Class A
Safety	UL1950, 3rd Edition; CAN/CSA C22.2 No. 950-95; IEC950 2nd Edition with Amdts. No. 1, 2, 3, & 4; EN60950 with Amdts. 1, 2, 3, 4, & 11; EN45001
Dimensions	160mm x 233.5mm (6U Formfactor)
LEDs	Link and activity (one per channel), Power, Operational, Rear Panel, Internal Fault, External Fault, Blue Hot Swap Insertion/Deinsertion
Driver Support	Windows NT, Solaris, UnixWare, VxWorks, pSOS+, LynxOS, QNX, Linux, PDK. See www.znyx.com for latest driver information.
Manufacture	Designed and manufactured in the USA
Warranty	1 (one) Year Warranty
Technical Support	Telephone, fax, email, Worldwide Web

Your Partner in Networking

ZNYX is a leading worldwide supplier of scalable, reliable network solutions for servers, workstations and desktop systems. First in the industry to ship single and multi-channel PCI Ethernet and Fast Ethernet adapters, ZNYX offers a full line of products for PC, UNIX and Macintosh computers, including:

- Network Link Services Software
- Single and Multi-Channel Fast Ethernet Adapters
- Configuration and Network Management Software

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Printed in the USA

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Document # DU0132-03

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