

ZX4920P with OpenArchitect Switch Management

**Gigabit Ethernet
Switch Fabric
for PICMG 2.16
Chassis**



The recent growth in voice and data services has led to a convergence of data and voice networks, requiring multiple communications services from a single, tightly integrated platform. The ZNYX Networks ZX4920P Gigabit Ethernet switch is an integral building block to any PICMG 2.16 design, delivering Gigabit Ethernet service for up to 19 payload cards in a 6U CompactPCI form factor.

Designed for PICMG 2.16

The ZX4920P was designed to provide advanced functionality to standard PICMG 2.16 platforms. The ZX4920P is PICMG 2.1 HotSwap compliant, allowing for the safe insertion/extraction of live boards. In addition, the ZX4920P is PICMG 2.9 IPMI compliant, providing important switch health information to the host IPMI controller for seamless integration into existing chassis management frameworks. A rear transition module (ZXRSG04) is available to route an additional four egress channels to the rear of the chassis.

Extensibility

OpenArchitect® switch management provides a complete Linux Networking Environment that helps facilitate application development. An embedded Linux kernel enables the “re-use” of custom networking applications written for OpenArchitect across multiple switching/routing devices for a cost-effective return on investment. Another benefit of the OpenArchitect Linux Networking environment is the vast amount of open source applications and utilities available.

OpenArchitect® HA Suite

Two ZX4920 switches can be used in a standard PICMG 2.16 chassis to implement a fully redundant dual-star network architecture. Each payload slot has two fabric connections, one to each switch. With the OpenArchitect High Availability (HA) software suite, the chassis can respond automatically and recover within 50 ms., while remaining transparent to applications running on payload boards.

Features

- ▶ 6U PICMG 2.16 Fabric slot compliant
- ▶ 4 port Rear Transition Module Available
- ▶ 10/100/1000 Mbps Ethernet
- ▶ OpenArchitect® Switch Management
- ▶ Full Suite of Layer 2 / Layer 3 protocols for providing advanced packet transport services
- ▶ HA Failover ≤ 50 ms

ZX4920P

Gigabit Ethernet Fabric for PICMG 2.16 Chassis



PRODUCT SPECIFICATIONS

Interfaces

- 19 10/100/1000 Ethernet to backplane ports
- 4 10/100/1000 Ethernet to Rear Transition Module (ZRXG04)¹¹
- 1 10/100/1000 Ethernet to backplane inter-switch fabric link
- 1 10/100 Ethernet to front-panel for out-of-band management port
- 1 RS-232 port (RJ-45) to front panel for out-of-band management port

Hardware

- Dual Broadcom BCM5695 Switch Fabric
- Motorola MPC8245 PowerPC Processor, 266 MHz
- 64MB SDRAM
- 32 MB Flash ROM
- PICMG 2.16 Extended Mode Support
- IPMI Controller (PICMG 2.9)
- HotSwap Power Management Controller
- Temperature Sensor
- One Bi-color LED per Port: Green = 1000 Mbps
Amber = 10/100 Mbps

Layer 2 Switching Features

- 48 Gbps switching fabric
- Double 802.1q VLAN Tagging
- IEEE 802.1D Spanning Tree Protocol (STP)
- IEEE 802.1s Multiple Spanning Tree*
- Fast Forward Port
- IEEE 802.3ad Link Aggregation
- Link Aggregation Control Protocol (LACP)*
- IEEE 802.3x Flow Control
- Jumbo Frames support (up to 9KB)
- On-chip Layer 2 switching table
- Port Mirroring
- Internet Group Management Protocol (IGMP)
- IGMP Snooping
- GARP Multicast Registration Protocol (GMRP)*
- GARP VLAN Registration Protocol (GVRP)*

Layer 3 Routing Features

- Wire Speed Layer 3 IP Forwarding
- IP Multicast
- IGMPv2
- DVMRPv2
- RIPv1 & RIPv2
- OSPFv2
- VRRP
- Network Address Translation (NAT)

QoS and Priority Queues

- IEEE 802.1p Class of Service
- up to 8 priority queues
- Type of Service (TOS)
- Architecture for Differentiated Services

Network Services

- FTP Server
- HTTP Server
- TFTP
- DHCP Server/Client/Relay
- NFS Client
- Network Time Protocol
- Telnet
- Secure Shell (SSH)

Management

- Command Line Interface
- Web-based management interface
- IPMI v1.5 client
- SNMP v1, v2, v3
- Common Open Policy Service (COPS)
- Extensive MIB Support
- Password enabled

High Availability Features (OA/HA)

- Power-On Diagnostics
- Switch-to-Switch Failover
- Automatic Reconfiguration after a hotswap
- Redundant run-time OpenArchitect® image in flash
- Full PICMG 2.1 HotSwap Support
- OA/Node for transparent failovers on client

Specifications

- PICMG 2.0 CompactPCI Specification
- PICMG 2.1 CompactPCI HotSwap Specification
- PICMG 2.9 CompactPCI System Management Specification
- PICMG 2.16 Compact Packet Switching Backplane Specification
- EIZ/TIA RS-232
- IEEE 802.3u Fast Ethernet Specification
- IEEE 802.3z Gigabit Ethernet Specification

Mechanical

Dimensions: 233.35 mm x 160 mm

Environmental:

Operating Temperature: 0° C to +55° C
Humidity: 90% Non Condensing
Designed for NEBS Level 3
MTBF: >225,000 Hours

Power Requirements

Maximum Power Draw: 50 Watts

Emissions Certifications (EMI)

FCC, CE Mark, VCCI, ICES, EN55022,

Environmental:

UL Certification, CAN/CSA, EN 60950

Manufactured in the U.S.A.

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¹¹ The ZX4920P supports Extended Mode PICMG 2.16 PSB Backplanes. When used in this configuration, the ZRXG04 Rear Transition Module cannot be used.
*Will be available in a future software release.

Specifications Subject to Change

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