

ZX4500 with OpenArchitect Switch Management

Features and implementations of IEEE & RFC specifications available in
OpenArchitect 2.2 on the ZX4500

specifications at-a-glance

General

6U PICMG 2.0 CompactPCI
Twenty-four 10/100 Mbps Fast Ethernet ports
Two 1000 Mbps Gigabit Ethernet ports
Layer 2 Switching
Layer 3 IP Routing
Layer 2-7 Packet Classification/Filtering
6.6 Million Packets/sec (line-rate)
Stackable to 720 Fast Ethernet and 30 Gigabit ports
Open PMC/PrMC site
Motorola MPC8240 PowerPC processor w/603e
PCI-PCI bridge to host
HotSwap
Geographical Location Reporting
Default initialization scripts for L2/L3 operation

Memory

Host Memory	64MB SDRAM
Packet Buffer	64MB SDRAM
Storage	32MB Flash ROM
Boot	512KB Flash ROM

Protocols and Standards

General

TCP (RFC 793)
IP (RFC 791)
UDP (RFC 768)
ARP (RFC 826)
RARP (RFC 903)
ICMP (RFC 792)
ICMP Router Discovery (RFC1256)
Router Requirements (RFC1812)

Network Services

FTP (RFC 959)
TFTP (RFC 783)
DHCP Server
DHCP Client
DHCP Relay
NFS Client
Network Time Protocol-NTP
Network Address Translation-NAT (RFC1631)*
Additional protocols on request

VRRP (Virtual Router Redundancy Protocol)

VRRP (RFC 2338)

RIP (Routing Information Protocol)

RIPv1 (RFC1058)
RIPv2 (RFC1388)

* Implemented on the CPU

OSPF(Open Shortest Path First):

OSPF v2 (RFC1583)
OSPF-BGP Interaction - (RFC1403)

BGP (Border Gateway Protocol):

EGP (RFC 904)
BGP-3 (RFC1267)
Default Route Advertisement (RFC1397)
BGP Route Reflection (RFC1966)
BGP-OSPF Interaction (RFC1403)

IP Multicast

IGMP Snooping
IGMPv2 (RFC2236)*
DVMRP (IETF draft)*

Class of Service

IEEE 802.1p Class of Service (COS)
-4 service queues on switch fabric
-scheduling options
TOS - Type of Service (RFC1349)
Architecture for Differentiated Services (RFC2475)
DS Field (RFC2475)

Filtering

Packet Header Filtering
Powerful Rules Tool - iptables

IEEE Compliance

IEEE 802.1d Spanning Tree
IEEE 802.1p Traffic Class/Multicast
IEEE 802.1Q VLAN
IEEE 802.1x Flow Control
IEEE 802.3z Gigabit Ethernet
IEEE 802.3u MIIM Interface
IEEE Std 1386 [1] PMC Physical and Environment

PICMG Compliance

PICMG 2.0 CompactPCI
PICMG 2.1 Full HotSwap support

Management

SNMP (Simple Network Management Protocol)
SNMPv1 (RFC 1157)
SNMPv2 (RFC 1907)
SNMPv3 (RFC 2271)
MIB II (RFC1213)
MIB II Interface updates (RFC2863)
Defining Traps for SNMP (RFC1215)
RIPv2 MIB (RFC1724)
OSPFv2 MIB (RFC1850)

Management (continued)

BGPv3 MIB (RFC1269)
SMUX MIB (RFC1227)
VLAN Extensions MIB (RFC2674)
Bridge MIB (RFC1493)
VRRP MIB (RFC2787)
Remote Network Monitoring MIB (RFC2819)
IPv4 Multicast Routing MIB (RFC2932)
IP Forwarding Table MIB (RFC2096)
Textual Conventions for SMIv2 (RFC2579)
Ethernet-Like MIB (RFC2665)
Differentiated Service MIB (IETF Draft)
COPS (Common Open Policy Service)
COPS (RFC 2748)
COPS Policy Provisioning COPS-PR (RFC3084)
WEB
Web Server: HTTP/1.1 (RFC2616)
Management Interface (HTML and CGI source)
Command Line Interface
Telnet

Physical and Environmental

ZX4500 Dimensions: 160mm x 233.5mm (6U)
Power Consumption: 41.55W maximum
Humidity: maximum 90% non-condensing

The ZX4500 has not yet completed Regulatory and Safety testing. ZX4500 was engineered to pass the following Regulatory and Safety specifications

Regulatory

EMC/EMI
AS/NZS 3548 1997, Class A
CNS 13438 1997 (EN55022/CISPR22), Class A
EN55022: 1998, Class AEN55024: 1998
FCC CFR 47, Part 15 Subpart B - 1998, Class A
ICES-003 Issue 3, Class A
VCCI (ANSI C63.4-1992/CISPR22-1997), Class A

Safety

CAN/CSA 22.2 No. 950-95
IEC 950 (1991) Second Edition with Amdts. No. 1 (1992), No. 2 (1993), No. 3 (1995) and No. 4 (1996)
IEC 60950 (1991) Second Edition with Amdts. No.1 (1992), No. 2 (1993), No. 3 (1995) and No. 4 (1996)
EN60950 (1992) with Amdts. 1, 2, 3, 4 and 11 including National Differences EN45001
UL1950, 3rd Edition (1995)

Ordering information

SKU Description

ZX4500 6U CarrierClass CompactPCI 10/100/1000 Ethernet Switch with OpenArchitect Switch Manager -2 Front Panel Fiber SC connectors for Gigabit Ethernet

ZX4012 12 Port, Single Wide, Rear Transition Module - 12 RJ-45 connectors with Link/Activity, Power, Operational and Internal/External Fault LEDs

ZX4024 24 Port, Double Wide, Rear Transition Module - 24 RJ-45 connectors with Link/Activity, Power, Operational and Internal/External Fault LEDs

ZX4024R 24 Port, Single Wide, Rear Transition Module - 2 RJ-21 connectors attach to RJ-45 Patch Panel with Power, Operational, and Internal/External Fault LEDs



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