



Highlights

- >> 24 10/100 + 2 10/100/1000 TX Ethernet Ports
- >> FlexLink™ Site (PICMG 2.15 PTMC Type 5-Compliant)
- >> Wire Speed Layer2/Layer3 Routing
- >> 9 Gbps Switching Speed
- >> Support for Both 2.16 and Non-2.16 Modes
- >> Real-Time Continuous Integrity Checks
- >> Rapid Spanning Tree, Link Aggregation, VRRP and Jumbo Frame Support
- >> Advanced Fast Filter Processor for Wire Speed Layer 2-7 Packet Classification and Filtering
- >> Prevents Broadcast and Multicast Storms, Packet Flooding
- >> LUA Scripting Language

The IPnexus™ CPC4416 is an embedded Ethernet switch compatible with both standard CompactPCI® and PICMG® 2.16 backplanes. It is designed to be used as a high-speed interconnect within server blade chassis or as a core switch in fault-tolerant clusters of embedded systems.

The CPC4416 offers increased bandwidth, performance and reliability in high availability applications such as defense, IP telephony and broadband. Used within a PICMG 2.16 environment, users can realize performance gains of up to nine times that of current PCI-based architectures. The PICMG 2.16 standard extends the existing CompactPCI 2.x specifications by adding a packet-switched backplane architecture to the chassis midplane, based on dual redundant Ethernet.

The CPC4416 has been designed to make system integration easier, while maximizing network performance and flexibility. Its potent scripting language simplifies and automates installation and maintenance. Its support of multiple switching architectures allows devices with dual Ethernet ports alternate data paths in the event of node failure. And by continuously checking its own health, data can be rerouted to an alternate path if a problem is detected.

With dual switches in place, the alternate unit can obtain all of its operational and configuration information from the other switch or an external manager, making change-out of failed modules as simple as a hot-swap. The new unit "clones" its setup from the configuration stored on the surviving switch. With no active components on its rear panel I/O cards, failed units can easily be replaced without disturbing cables or other blades in the chassis.

The CPC4416 protects investments for the long term with easy FTP/TFTP updates to platform flash memory. System software is available through downloads from our Web site (www.pt.com), greatly simplifying or eliminating the need for dedicated on-site network administration.

The CPC4416 is part of our IPnexus family of embedded packet products.



IPnexus™

CPC4416

24-Port 10/100 + 2-Port Gb TX Ethernet Switch

Ordering Information

- >> **PT-CPC4416F-11671**
CPC4416 24-port 10/100 + 2 Gb TX PICMG 2.16 Fabric Slot Switch
- >> **PT-CPC4416N-11624**
CPC4416 24-port 10/100 + 2 Gb TX PICMG 2.16 Node Slot Switch
- >> **PT-RTM4416-11635**
5-port 10/100 TX + 2 Gb Rear Transition Module
- >> **PT-RTM4416-11637**
24-port 10/100 TX Single Slot Rear Transition Module
- >> **PT-RTM4416-11638**
26-port 10/100 TX Single Slot Rear Transition Module
- >> **PT-RTM4416-11639**
24-port 10/100 TX Rear Transition Module
- >> **PT-RTM4416-11640**
24-port 10/100 TX + 2 Gb Rear Transition Module

Contact Information

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Specifications

- 24 10/100 + 2 Gb TX uplinks
- Wire speed Layer2/Layer3 routing
- 9 Gbps switching fabric
- Store and forward frame processing
- Support for 2.16 and non-2.16 modes
- Front panel uplinks
- Advanced fast filter processor for wire speed Layer 2-7 packet classification and filtering
- CompactPCI® CORE spec (PICMG 2.0 R3.0)-compliant, 6U x 4HP
- Hot-swap support (PICMG 2.1 Hardware Connection Layer) - made more robust with our exclusive Auto Configuration Replication
- System management bus (PICMG 2.9/IPMI, v 1.5)-compliant
- PICMG 2.16 hot-swap-compliant
- Full duplex 802.3x flow control
- 8K MAC addresses
- 2K Layer 3 IP addresses
- Managed learning of attached devices on a per port basis
- Jumbo packet (9KB) Layer 2 switching for iSCSI applications
- Tagged packet (802.3ac) and Jumbo packet (9kB) support
- Support for IEEE 802.1p class of service with eight priority queues for traffic class management
- IEEE 802.1Q VLAN support (16 VLANs)
- 802.3-2000 link aggregation, up to 12 link groups, eight ports per group
- Broadcast storm detection and suppression
- Multi-port mirroring
- Front panel, non-switched 10/100 Ethernet port for out-of-band management
- Front or rear panel console port (RS-232)
- Switched PICMG 2.16 fabric-to-fabric interconnect, auto-negotiating
- TFTP/FTP-based firmware upgrade and configuration upload/download
- TFTP/FTP client/server
- BootP/DHCP client/server with support for port-based leasing
- Flash file system enables other systems to load specific configuration information on a slot-by-slot basis
- DHCP/BootP relay

- Partner switch configuration replication, cloning, version matching
- Power-on or manager (CLI or SNMP) invoked diagnostics
- Online, real-time integrity tests for Non-Stop Networking™
- ASCII extraction of current configuration
- LED indicators of link, activity, speed, system status, system fault and hot-swap
- Multiple configuration, RTM options

Protocols Supported

- GARP, GMRP, GVRP
- RIP versions 1 and 2
- OSPF, VRRP
- 802.1D Spanning Tree Protocol w/fast port & fast uplink enhancements
- 802.1W Rapid Spanning Tree

Management

- CLI via RS-232 and out-of-band Ethernet management port
- Scripting language for value-added applications
- Embedded HTTP server for management
- Telnet
- SNMP v1, v2c, v3 - RFC 1157
- MIBs
 - MIBII - RFC 1213, MIBII bridge - RFC 1493
 - RMON MIB - RFC 1757 groups 1, 2, 3 & 9
 - EtherLike MIB - RFC 1643
 - IEEE 802.1q MIB - RFC 2674
 - IEEE 802.3AD link aggregation MIB
 - Performance Technologies enterprise MIB

Certifications

- Designed to the requirements of UL/EN 60950, CE, FCC Class A and ETSI EN 300 386
- Designed to the requirements of NEBS Level 3
- MTBF of 128,779 hours per Telcordia TR-NWT-000332, issue 5

Power Requirements

- 26 watts maximum; 19 watts typical

Environmental

- Operating Temperature: 32-131° F (0-55° C)
- Relative Humidity: 10-90%, non-condensing