

## 24-Port 10/100 + Two-Port Gb TX Ethernet Switch

### FEATURES

24 10/100 + Two 10/100/1000  
TX Ethernet Ports

FlexLink™ Site (PICMG® 2.15  
PTMC Type 5-Compliant)

Wire-Speed Layer 2  
Switching/Layer 3 Routing

9 Gbps Switching Speed

Support for Both 2.16 and  
Non-2.16 Modes

Real-Time Continuous Integrity  
Checks for Non-Stop Networking

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 and Packet Flooding

LUA Scripting Language



The CPC4416 is a robust, flexible, full wire-speed Layer 2/3 10/100/1000 Ethernet switch compatible with both standard CompactPCI® and PICMG® 2.16 backplanes. Featuring 24 10/100 + 2 Gb TX ports, it is designed to be used as a high-speed interconnect between devices in a PICMG 2.16 chassis or as a core switch in a fault-tolerant cluster of embedded systems. This fourth-generation switch is the market leader in the most complete, capable, and award-winning line of embedded Ethernet switching products in the industry.

The CPC4416 has been specifically designed to make embedded system integration tasks easier, so projects can get to market sooner. It comes with a potent scripting language that can be used to easily change switch configuration and behavior, attached client setups, fail-over rules, etc., based on SNMP traps, network events, or system configuration/topology changes.

This switch can be deployed in a fully redundant, non-blocking network that prevents single points of failure from halting network traffic. Devices with dual Ethernet

ports can be connected to one or both switches. If a link, PHY, or the continuous, real-time integrity test fails on the switch, data can be re-routed to an alternate path, thereby maintaining network connections.

This switch as a very low mean-time-to-repair (MTTR). The replacement unit can obtain all of its operational and configuration information from the other CPC4416 or from an external manager, making change-out of failed modules as easy as sliding one blade out and replacing it with a new one. The CPC4416 has no active components on its rear panel I/O cards, which ensures that failed units can be easily replaced without disturbing cables or other blades in the chassis.

The CPC4416 is intended for use in high availability, fault-tolerant solutions for embedded data communications, wireless, IP telephony, broadband access, defense, aerospace, and high availability systems.



# CPC4416 PRODUCT SHEET

## ORDERING INFORMATION

### PT-CPC4416-11946

24-port 10/100 + 2 Gb TX PICMG 2.16 node slot switch

### PT-CPC4416-11947

24-port 10/100 + 2 Gb TX PICMG 2.16 fabric slot switch

### PT-RTM4416-11948

5-port 10/100 TX + 2 Gb RTM

### PT-RTM4416-11951

8-port 10/100 + 2 Gb TX RTM

### PT-RTM4411-11952

24-port 10/100 TX single-slot rear transition module with breakout box and cables

### PT-RTM4416-11953

24 10/100 + 2 10/100/1000 TX single-slot rear transition module with breakout box and cables

### PT-RTM4416-11954

24-port 10/100 TX RTM

### PT-RTM4416-11955

24 10/100 + 2 10/100/1000 TX dual-slot rear transition module

### PT-FlexConnect-11956

PTMC option board that brings two 10/100 and two 10/100/1000 TX ports to the front panel

For more information visit [www.pt.com](http://www.pt.com) or call your local representative.

## CONTACT US

205 Indigo Creek Drive  
Rochester, NY 14626

tel: +1.585.256.0200  
fax: +1.585.256.0791  
E-mail: [sales@pt.com](mailto:sales@pt.com)



### CPC4416 supports the following specifications:

- 24 10/100 + 2 Gb TX uplinks
- Wire-speed Layer 2 switching/Layer 3 routing
- 9 Gbps switching fabric
- Store and forward frame processing
- Support for 2.16 and non-2.16 modes
- Front panel uplink options
- Advanced fast filter processor for wire-speed Layer 2-7 packet classification and filtering
- CompactPCI® CORE specification (PICMG® 2.0 R3.0) compliant, 6U x 4HP
- Hot-swap support (PICMG 2.1 Hardware Connection Layer)
  - made more robust with PT's 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 (9 KB) Layer 2 switching for iSCSI applications
- Tagged packet (802.3ac) and Jumbo packet (9 KB) 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
- DHCP/BootP relay
- Flash file system enables other blades to load specific configuration information on a slot-by-slot basis
- Partner switch configuration replication
- Power-on or manager (CLI or SNMP) invoked diagnostics

## Technical Specifications

- 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/Rapid Spanning Tree Protocol with fast port and fast uplink enhancements

### 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 and 9
  - EtherLike MIB – RFC 1643
  - IEEE 802.1q MIB – RFC 2674
  - IEEE 802.3AD link aggregation MIB
  - PT enterprise MIB

### Certifications

- UL/EN 60950
- CE
- FCC Class A
- ETSI EN 300 386
- Designed to the requirements of NEBS Level 3
- Fully compliant with RoHS and WEE requirements

### MTBF

- 184,146 hours per Bellcore SR-332, Issue 1

### Power Requirements

- 19 W typical, 26 W maximum

### Environmental

- Operating: 0° to 55°C (32° to 131°F)
- Non-operating: -40° to 80°C (-40° to 176°F)
- Relative Humidity: 10 to 90%, non-condensing