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Find the *Ribbon / Performance Technologies PT-CPC4406* at our website: *Click HERE*

PERFORMANCE TECHNOLOGIES

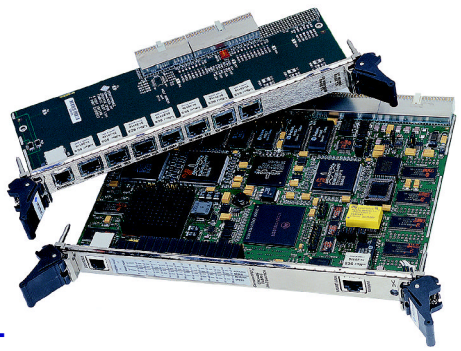
Unity in Systems Design

IPnexus™

CPC440X

24+2 Gb-Port PICMG® 2.16 Ethernet Switch

IPnexus™ Embedded Packet Products



EMBEDDED ETHERNET

Our award-winning CPC4400s are fast, flexible and feature-rich 10/100/1000 Ethernet switching platforms. Part of the IPnexus™ product family, they offer 24 10/100 auto negotiating Ethernet ports plus two Gigabit ports in a rugged, hot-swap CompactPCI® 6U form factor. The result is a powerful switching solution for OEMs & integrators looking to quickly launch high availability, carrier-grade IP products.

The CPC4400s are the first CompactPCI switches compliant with the PICMG® 2.16 standard, which offers the option of sending all Ethernet signals through the midplane - enabling designers to vastly increase the inter-board communication capabilities of subsystems located in a CompactPCI chassis. By moving the system traffic from the shared bus architecture of CompactPCI to a fault-tolerant, yet industry standard, switched-backplane approach, overall system throughput can be doubled while retaining the inherent robustness, reliability and hot-swap capabilities of CompactPCI.

The CPC4400s come from the leader in fault tolerant Ethernet switching. They are the first 10/100/1000 Ethernet switches in the cPCI form factor to offer sophisticated high availability switching features including 802.3AD Link Aggregation, VRRP, 802.1q VLANs and 802.1p CoS. They can be configured as fully redundant, non-blocking switching fabrics to help ensure that no single point of failure halts network traffic.

The CPC4400s have been specifically designed to make embedded system integration tasks easier. Each comes with a potent scripting language, called Lua, that can be used to easily change switch configuration/behavior, attached client setups, fail-over rules, etc., based on SNMP traps, network events or system configuration changes.

- **24-Port 10/100 + 2 Port Gb Switching Fabric**
  Interfaces with other devices via the CompactPCI® Packet Switching Backplane, rear panel I/O connector board or front panel
- **PICMG® 2.16-Compliant**
  Compliant with new PICMG 2.16 CompactPCI Packet Switching Backplane Standard
- **Wire Speed Layer2/Layer3 (IP) Switching**
  9 Gbps switching speed ensures packets get switched, not dropped
- **Layer 4-7 Filtering**
  For increased security and improved packet classification
- **Link Aggregation & VRRP**
  Increases network speed & availability
- **Support for Multiple Switching Architectures**
  Units can be coupled to build a switching engine of up to 720 10/100 ports or to operate as two fully redundant switching nodes
- **Support for IEEE 802.1p Class of Service**
  Ensures delay sensitive traffic receives the priority it requires
- **Easy to Use 802.1q VLANs**
  Lets you create virtual channels that span your entire network
- **Prevents Broadcast, Multicast and Unicast Storms**
  Threshold detection and suppression keeps network bandwidth available
- **No Configuration Required**
  Simply install additional blades in chassis to increase switching capacity & network performance.

The CPC4400s maximize network performance and flexibility by supporting multiple switching architectures. They can be used as stand-alone switching solutions, coupled to other switches for greater port capacity, or used in a fully redundant, fault-tolerant fashion. When attached to two CPC4400s, devices with dual Ethernet ports can be connected to one or both switches. If a link, PHY or switching node fails, data can be re-routed to an alternate path, maintaining network connections.

Designed with the utmost regard for reliability, each CPC4400 maximizes network uptime by continuously checking its health. If a problem is detected, the switch will de-assert all links, signaling the attached devices to use another route. The replacement unit can obtain all of its operational and configuration information from the other CPC4400 or an external manager, making change-out of failed modules a simple matter of sliding one blade out and replacing it with a new one. The new unit "clones" its setup from the configuration stored on the survivor. The CPC4400s have no active components on their rear panel I/O cards, ensuring failed units can easily be replaced without disturbing cables or other blades in the chassis.

CPC4400s are ideal for demanding network applications. Each blade "learns" and caches up to 8k MAC addresses in its filtering database and sustains full wire speed data rates on all ports with its 9 Gbps switching fabric, eliminating congestion in even the busiest environments.

With the CPC4400s, networks can be configured into 63 VLANs, dramatically increasing total available network bandwidth. If more ports are required, units can be easily stacked or cascaded using the full-duplex Gigabit Ethernet ports.

The CPC4400s protect 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). Upgrades can be performed in-band or via the out-of-band management ports, greatly simplifying or eliminating the need for dedicated on-site network administration.

The CPC4400s continue Performance Technologies' long tradition of offering high-availability, fault-tolerant solutions for the communications, industrial, military and medical markets.

Contact Performance Technologies for other configurations

Ordering Information

PT-CPC4401-11402:	24-port 10/100 TX midplane + 2-port Gb MM SC via front panel with 5 port 10/100 LIM
PT-CPC4406F-11346:	24-port 10/100 TX midplane + 2-port Gb TX via rear panel with 5 port 10/100 + 2 Gb TX LIM
PT-CPC4406N-11355:	24-port 10/100 TX + 2-port Gb TX via rear panel with 24 port 10/100 single slot LIM, cable & connector panel

205 Indigo Creek Drive ♦ Rochester, New York 14626
Tel: 585-256-0200 ♦ Fax: 585-256-0791 ♦ **www.pt.com**

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#079AXXXX50

Specifications

Internal Switching Capacity: 9 Gbps, non-blocking full wire speed switching fabric

Latency: <4µ sec

Base Configurations: 24 10/100 TX ports w/2 Gb ports (front or rear)

Breakout Options: Rear panel RJ-45 connections or 10/100 links over CompactPCI Packet Switching Backplane, plus 1000 TX via the rear panel

CompactPCI Hot Swap Support: More robust with Performance Technologies' exclusive auto configuration replication

Frame Processing: Store and forward, Layer 4-7 filtering

MAC Addresses: 8k

VLANs: Up to 63 concurrent IEEE 802.1q VLANs

Spanning Tree Extensions: Fast Port and Fast Uplink ensure rapid reconvergence

CoS: via IEEE 802.1p, 4 priority queues

GVRP/GMRP: Auto VLAN and Multicast registration preserve bandwidth

Virtual Redundant Router Protocol (VRRP): Increases network availability

Port Mirroring: Attach a network probe on any segment

Product Updates: via FTP/TFTP

DHCP/BootP Client Support: Automatic IP address assignment

DHCP Server, FTP/TFTP Server with 2MB Flash File System: Enables other subsystems in the chassis to load specific configuration information on a slot-by-slot basis

LED Indicators: Link, Activity, Speed, System Status, Fault and Hot Swap

Power-up Diagnostics and Continuous Integrity Checks: Selectable by SNMP or CLI

Standards: IEEE 802.3, 10BaseT, 100BaseT, 1000BaseFX, 1000BaseTX
IEEE 802.3x, Flow Control
IEEE 802.1q, VLAN Tagging
IEEE 802.1d Spanning Tree
IEEE 802.1d-1998 Bridge Extensions (802.1p)
IEEE 802.3AD Link Aggregation

Management: RFC 1157 SNMP
RFC 1213 MIBII
RFC 1757 RMON groups 1, 2, 3, 9
RFC 1493 Bridge MIB
RFC 1643 Ether-like MIB
RFC 2674 Bridge Extensions MIB
IEEE 802.3ad Link Aggregation MIB
PTI Enterprise MIB
CLI via out-of-band RS-232 and out-of-band Ethernet management port, Telnet

Power Requirements: 36 Watts maximum, 27 Watts typical

Environment: Operating Temp: 32-135°F (0-55°C)
Relative Humidity: 10-90%, non condensing

Agency Certifications: UL 1950, CSA-C22.2 No. 950 93, FCC Class A (Part 15, Subpart J), CE, ETSI EN 300 386, NEBS Level 3 friendly

MTBF: 103,530 hrs per Bellcore TR-NWT-000332 Issue 5 @30°C

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