PERFORMANCE TECHNOLOGIES

CPC6600

24-Port 10/100/1000 TX Ethernet Switch

Highlights

- >> 24 10/100/1000 Base-T Ethernet Ports
- >> Wire-Speed Layer 2/Layer 3 Routing
- >> 44 Gbps Switching Speed
- >> Support for Both 2.16 and Non-2.16 Modes
- >> Front or Rear Panel Uplinks
- >> 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
- >> LUA Script Language

The CPC6600 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 CPC6600, part of the Advanced Managed Platform™ offering, provides increased bandwidth, performance, and reliability in high-availability applications, such as aerospace and defense, IP telephony, and broadband. Within a PICMG 2.16 environment, users can realize performance gains of up to 40 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 CPC6600 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 to have alternate data paths in the event of node failure. By continuously checking its own health, the CPC6600 can route data 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 from 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 CPC6600 protects investments for the long term with easy FTP/TFTP updates to platform flash memory. System software is available through downloads from the web site (www.pt.com), which greatly simplifies or eliminates the need for dedicated on-site network administration.

CPC6600

Technical Specifications

Ordering Information

>> **PT-CPC6600-11914**
CPC6600 24-port 10/100/1000 TX switch all ports to the 2.16 midplane or optional rear transition module

>> **PT-RTM6600-11899**
5-port 10/100/1000 TX rear transition module

>> **PT-RTM6600-11898**
24-port 10/100/1000 TX rear transition module

>> **PT-RTM6600-11900**
10-port 10/100/1000 TX rear transition module

>> **PT-CPC6601-11897**
CPC6600 24-port 10/100/1000 TX switch with 4 Gb TX ports on the front panel and 20-ports directed to the 2.16 midplane

RoHS • WEEE COMPLIANT

Contact Information

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- 24 10/100/1000 Base-T ports
- Wire-speed Layer 2 switching/Layer 3 routing
- Managed learning of attached devices on a per-port basis for advanced security
- Dual 44 Gbps switching fabrics
- Store and forward frame processing
- Support for 2.16 and non-2.16 modes
- Front or rear panel uplinks
- 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 Performance Technologies's exclusive Auto Configuration Replication
- System management bus (PICMG® 2.9/IPMI, v 1.5) compliant
- Full duplex 802.3x flow control
- 16K MAC addresses
- 4K Layer 3 IP addresses
- 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
- 2 MB user flash file system enables other blades to load specific configuration information on a slot-by-slot basis
- DHCP/BootP relay
- Partner switch configuration replication, cloning, version matching
- Multiple configuration, RTM, and build options
- ASCII extraction of current configuration
- Power-on or manager (CLI or SNMP) invoked diagnostics
- LED indicators of link, activity, speed, system status, system fault, and hot-swap

Protocols Supported

- GARP, GMRP, GVRP
- RIP versions 1 and 2
- OSPF, VRRP
- 802.1D Spanning Tree Protocol with fast-port and fast-uplink enhancements
- 802.1D-2004 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
- SSH v.2
- SNMP v1, v2c, v3 - RFC 1157
- MIBs
  - MIBII – RFC 1213, MIBII bridge – RFC 1493
  - MON 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
  - Performance Technologies enterprise MIB

Certifications

- FCC Class A
- UL/EN 60950
- CE
- ETSI EN 300 386
- Designed to meet the requirements of NEBS Level 3

MTBF

- 186,914 per Bellcore SR-332, Issue 2

Power Requirements

- 42 W typical, 56 W maximum

Environmental

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