



Highlights

- >> High-Density 6U x 2-Slot CompactPCI® Form Factor

- >> 800 GB or 2 TB Capacity

- >> Supports RAID 0/1/0+1/4/5/6

- >> Board-Level & Disk-Level Hot-Swap

- >> Headless Operation for Drive Removal and Insertion

- >> Block Disk I/O over iSCSI

- >> File I/O over NFS and SAMBA

- >> PICMG® 2.16 Compatible

- >> Dual 10/100/1000 Ethernet Ports Routed to the Mid-Plane

- >> AMCC High Performance PowerPC® Processor

- >> Dual Enterprise-Class 3.5-in. SATA Hard Disk Drives

- >> Supports NexusWare® CGL OS and Development Environment

The CPC5900 is a high-performance, high-availability NAS or SAN storage blade solution for PICMG® 2.16 systems. It supports either 800 GB or 2 TB of storage on each blade. The CPC5900 comes with two 3.5-in. enterprise-class SATA hard drives that support both board-level and drive-level hot-swap for complete flexibility and high reliability.

The CPC5900 is designed for embedded storage applications. With its onboard, high-performance PowerPC® processor, the CPC5900 can also be used as an application server where disk-intensive services are required, thereby allowing payload blades in the platform to operate without a locally attached hard drive, which increases system reliability and capabilities. Network connectivity is provided by dual, redundant gigabit network ports connected to the PICMG 2.16 Ethernet port on the backplane.

This storage blade is available with Performance Technologies' NexusWare® CGL Registered, POSIX-compliant Linux® operating system and development environment. Block Disk I/O is supported over iSCSI for SAN applications, and File I/O is supported by NFS and SAMBA for NAS applications.

With flexibility to configure the hard drives as needed inside the platform, the CPC5900 lowers the overhead and training costs associated with dedicated storage platforms and simplifies the networking interface and infrastructure configuration issues that stand-alone products can have.

Storage Capacity

The CPC5900 storage blade features two enterprise class 3.5-in. SATA hard drives. As storage manufacturers increase hard drive capacity, Performance Technologies will scale to accommodate these new drives. Currently, the CPC5900 includes two 400 GB or two 1 TB 3.5-in. enterprise class SATA hard drives. The hard drives can be configured as a RAID 0 or RAID 1 array, or as stand-alone drives. The CPC5900 provides up to 2 TB of storage when configured as a RAID 0 array. When used with a companion CPC5900, storage capacity increases to a maximum of 4 terabytes. RAID 0/1/0+ 1/4/5/6 configurations are also supported.

Design Elements

The CPC5900 performs at its best with Performance Technologies' NexusWare 2.6 Linux kernel running from onboard Flash. General processing is performed by an AMCC PPC440GX 800 MHz PowerPC processor. The AMCC PPC440GX, 800 MHz PowerPC processor supports 512 MB ECC DDR memory, a PCI-X™ SATA controller, and dual gigabit Ethernet ports. The CPC5900 is managed locally by a serial port on the front panel or remotely by an SSH or telnet session.



CPC5900

High-Performance IP Storage Blade

The CPC5900 supports all the key services normally expected in a NAS or SAN storage server, including:

- RAID 0/1/0+1/4/5/6
- NFS/SAMBA
- iSCSI Target/Initiator
- PXE Server
- TFTP/FTP Server
- Logical Volume Management
- IPv6
- SSH/Telnet
- 9 KB packet sizes (jumbo frames)

As part of Performance Technologies' Advanced Managed Platforms™, the CPC5900 supports PICMG 2.9 shelf management services common to all of Performance Technologies' Advanced Managed Platforms products.

Headless Operation

While some storage solutions require console access to remove or add a hard drive, the CPC5900 features "Automated Drive Management," which allows safe extraction and replacement of drives without requiring a user to log into the system. Automated Drive Management works by deactivating drives prior to drive removal. An LED on the front panel indicates when the drive is ready for removal. Automated Drive Management automatically detects, configures, and remounts a newly inserted drive into the RAID array or file system. There are multiple LED indicators for each drive to communicate drive status to the user. The system is completely user configurable to customize the actions performed on drive extraction, insertion events, and the behavior of the LED indicators on the front panel.

Extensible

The CPC5900 is designed for extensibility and expandability:

- Running NexusWare Linux from Flash allows for field configuration and upgrade without replacing hardware or modifying the hard drive.
- 16 MB of expansion space is available in flash for additional services.
- Separately ordered drive modules allow field drive replacements and upgrades.
- Custom configuration services are available.
- Adding another CPC5900 allows for a seamless doubling of storage capacity and additional RAID capabilities for a modest cost.

CPC5900

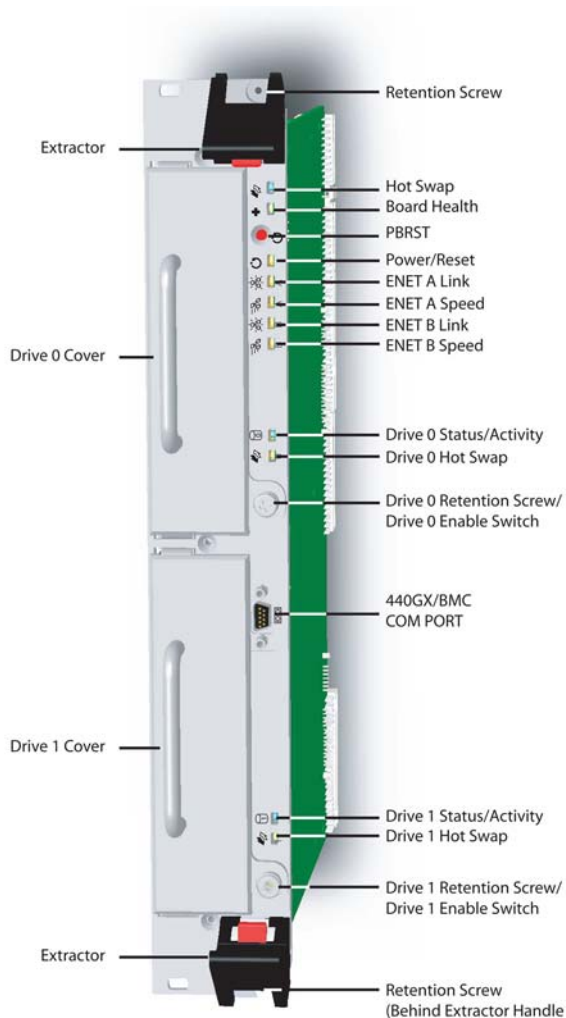
High-Performance IP Storage Blade



Cost Control

Connecting to external network attached storage can be expensive. It requires separate chassis, sparring, cabling, power delivery, training, and management tools. With the CPC5900, reliable, integrated storage can be easily added to any existing PICMG 2.16 architecture. Discrete hard drives in the system and external storage devices can be consolidated inside a single chassis. Sparring, hot-swapping, and configuration of infrastructure are simplified, and mean time to repair is reduced.

In short, the total cost of ownership for storage is reduced.





CPC5900

Technical Specifications

Ordering Information

- >> **PT-CPC5900-12156**
800 GB Storage Blade
- >> **PT-CPC5900-12277**
2 TB Storage Blade
- >> **PT-ACC5970-12160**
400 GB Drive Module/FRU
- >> **PT-ACC5970-12279**
1 TB SATA Drive Module/FRU
- >> **PT-ACC324-11977**
Console Port Cable
- >> **PT-RTM4810-12152**
SATA Rear Transition
Interface Module/No HDD

Software Options

- >> **PT-NXWRTU-11748**
NexusWare RTU License and
Software
- >> **PT-NXSWARE-11359**
NexusWare Development Kit



Corporate Headquarters:
Performance Technologies
205 Indigo Creek Drive
Rochester, NY 14626 USA

Tel: 585.256.0200
Fax: 585.256.0791
E-mail: sales@pt.com

European Headquarters:
Performance Technologies UK Ltd.
Challenge House
Sherwood Drive, Bletchley
Milton Keynes, MK3 6DP UK

Tel: +44 (0) 1908 646000
Fax: +44 (0) 1908 646001
E-mail: sales@pt.com

www.pt.com

The CPC5900 is compliant with the following specifications:

- PICMG 2.0 R3.0 (CompactPCI®) and PICMG 2.1 R2.0 (Hot-Swap) Specifications
- PICMG 2.16 (Packet Switched Backplane) and 2.9 (CompactPCI System Management)
- Designed for NEBS level-3 and ETSI installations
- IPMI v2 specification
- IP v.4/v.6
- SCSI architectural model (SAM-2) and SCSI-3 command sets
- RFC 3720 IETF-IPS-iSCSI specification

Environmental

- Required airflow: 250 linear feet per minute (LFM)
- Operating temperature: 5 to 50°C (41 to 122°F)
- Storage temperature: -40 to 85°C (-40 to 185°F)
- Non-condensing relative humidity: less than 95% at 40°C (104°F)

Networking Functions

- Fully compliant with 10BASE-T, 100BASE-TX, and 1000BASE-T (802.3u, 802.3ab)
- IEEE802.3x Full duplex flow
- Supports Auto-MDIX at 10, 100, and 1000 Mb/s
- 9KB jumbo frame support

Processor

- 800 MHz PowerPC processor
- 32-bit data and 32-bit address bus
- Built-in TAH capability

Memory

- 512 MB dedicated DDR ECC SDRAM/processor
- 32 KB instruction/data L1 cache
- 256 KB L2 cache and/or high-speed packet/code store
- 8 MB dedicated boot PROM/processor

Dimensions

- Dual width CompactPCI form factor, 6U x 4HP, 233 mm x 160 mm (9.17 in. x 6.3 in.)

Weight

- 0.52 kg (1 lb, 2.3 oz) without hard drives

Management

- CLI via RS-232 and in-band Ethernet ports
- Telnet
- SNMP v1, v2c, v3 - RFC 1157

Agency Certifications

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

MBTF

- 176,565 per Bellcore SR-332

Power

- With hard disk: 29.5 W typical, 38.7 W maximum