Advanced Managed Platforms

Built on the intelligent AMP™ Architecture

Highlights

>> **Intelligent and Comprehensive Shelf Management**
 • Throughout all active components in the platform
 • Manages nodes, switches, power supplies and cooling

>> **High Availability/Fault Tolerance**
 • Redundancy and fault tolerance built into active components and power architecture

>> **World-Class Switching**
 • Layer2/3, load-sharing, secure

>> **Performance/Density**
 • Power & cooling for next-gen high performance computing components and switches

>> **Compatibility throughout the comprehensive IPnexus™ product line**

With the advent of packet-switched backplanes and intelligent shelf management, the basic definition of a standards-based platform begins to change. As platforms evolve to include these new and critical functions, they include not only the chassis, midplane, power and cooling architecture, but also the PICMG® 2.16 packet-switched backplane and PICMG 2.9 intelligent platform management interface (IPMI) standards.

The Advanced Managed Platform offering is comprised of Performance Technologies' embedded packet products and offers the most complete set of high availability, system management, switching, power and cooling features on the market. This enhanced platform line gains its strength from being based on the PICMG 2.16 and 2.9 standards.

The platform architecture, equipped with a new PICMG 2.9-compliant intelligent shelf manager (ISM), offers the ability to manage all the IPnexus™ chassis elements as well as third-party, PICMG 2.16-based components. Bundled with the industry's broadest line of 10/100 and Gigabit Ethernet switches and high density power supplies, the Advanced Managed Platform offering provides equipment manufacturers and system integrators the basis to go beyond five-nines availability while handling the high performance computing requirements of next-generation, packet-based systems.

The complete Advanced Managed Platform offering is designed with flexibility and scalability to support a wide range of communications or embedded applications by offering a management architecture, that delivers reliable, intelligent and comprehensive management throughout all active platform components. In conjunction with the complete IPnexus product family, including switches, single board computers, I/O cards and enabling software, Performance Technologies delivers a complete, compatible and configurable set of components for developing next-generation systems.

The Advanced Managed Platform offering is designed specifically for high availability solutions. Examples include wireless applications (3G Mobile Switching Center, GGSN or Radio Network Controller), IP telephony (gateways, switches or server clusters), Wi-Fi gateway/switches, business critical server clusters (transaction processors) and medical controls.

Advanced Managed Platforms

Sample Configurations

12U General Purpose PICMG 2.16 Packet-Switched Platform
- NEBS-designed chassis
- 21 slots, with 18 payload slots
- Three midplane options;
  - CPC5086 (no CompactPCI bus)
  - ZT 5088e (four CompactPCI bus segments)
  - ZT 5085e (two CompactPCI bus segments)
- Dual Gigabit or 10/100 Ethernet switches (CPC4416/CPC6600)
- Dual CPC7301 ISM modules
- Redundancy and hot-swap throughout all active components
- Hot-swap power supplies (CPC6314/ZT 6303)

7U PICMG 2.16 Packet-Switched Platform
- CPC5095 7U NEBS-designed chassis
- 11 slots, eight payload slots
- Dual Gigabit or 10/100 Ethernet switches (CPC4416/CPC6600)
- Dual CPC7301 ISM modules
- Redundancy and hot-swap throughout all active components
- N+1 AC or DC power supplies
- Up to 80W per slot power and cooling

4U General Purpose PICMG 2.16 Packet-Switched Platform
- IPnexus ZT 5091e 4U NEBS-designed chassis
- Eight slots
- Single Gigabit or 10/100 Ethernet switch (CPC4416/CPC4411/CPC6600)
- Dual CPC7301 ISM modules
- Hot-swap of all active components
- Hot-swap power supplies (CPC6314/CPC6304)

All platform components can be purchased individually. Datasheets containing full details are available at www.pt.com.

Contact Information

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Advanced Managed Platforms

Requirements	AMP Features
High Availability - No single point of failure - Five-nines, six-nines, approaching 100% *Benefits:* - Reduces loss of revenue or service - Reduces cost of ownership	**Comprehensive Redundancy** - Power input (4U, 7U, 12U) - Power supplies (4U, 7U, 12U) - Cooling architecture (7U, 12U) - Shelf management (7U, 12U) - Dual star packed switched backplane (7U, 12U) - Isolated power domains on ZT 5088*e* midplane **Fault Tolerance - Intelligent Failover** - Ethernet switches - Intelligent shelf managers - Line access cards - Single board computers - Power supplies with IPMI **Intelligent Management with Predictive Analysis**

Comprehensive Management
- Standards-based, 3rd party compatibility
- Fault-tolerant
- Reliable management to all active
  components
- Comprehensive
- Predictive analysis
 	
Benefits:
- Increases high availability
- Reduces cost of ownership
	Intelligent Shelf Manager (CPC7301)
	- IPMI-based; PICMG 2.9 compatible
	- Redundant, fault-tolerant active/standby mode
	  - Synchronization, watchdog, fail-safe and remote updating
	- Star topology - ultimate reliability
	  - Isolated links to each managed component
	- Comprehensive management:
	  - Power management
	  - Asset management - FRU info
	  - Sensor management - fault prediction and detection
	- Comprehensive software interfaces
	  - SNMP, CLI, RMCP, Web, Telnet, SSH

Comprehensive Switching
- Standards-based, 3rd party
compatibility
- Fault-tolerant
- Manageable
- Reliable
- Comprehensive
- Load-sharing
- Network security
 	
Benefits:
- Increases performance
- Reduces cost of ownership
	Ethernet Switches
	- PICMG 2.16-compliant
	  - Supports non PICMG 2.16 mode
	- Fault-tolerant/reliable
	  - Continuous health checking
	  - Seamless failover (maintaining network connections)
	- Full wire speed Layer2/Layer3 switching
	- Comprehensive features
	  - 802.3AD link aggregation
	  - 802.1q VLANs
	  - 802.1p QoS/CoS
	  - Advanced fast filter processor for wire speed Layer 2-7 packet
	    classification and filtering
	- Fully managed via HTTP, CLI and SNMP
	- Jumbo frames for iSCSI applications
	
	CPC6600: 24-port 10/100/1000 TX switch
	- Fully featured Layer2/3+ switch
	
	CPC4416: 24-port 10/100 + 2 Gigabit uplinks switch
	- NAT/load-sharing and IP tunneling options

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Advanced Managed Platforms

Ordering Information

Available platforms include:

>> **7U PICMG 2.16 Platform**

>> **12U General Purpose PICMG 2.16 Platform**

>> **12U General Purpose PICMG 2.16 Packet-Switched Platform**

>> **12U Redundant Host PICMG 2.16 Packet-Switched Platform**

>> **4U General Purpose PICMG 2.16 Packet-Switched Platform**

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High Performance Power and Cooling	CPC6314 325W DC Power Supply

- Support for next-gen single board computers (up to 50W/slot)
  - Intel® Pentium® M/ Pentium 4 SBCs
  - More memory (1-4GB)
- Support for fast networks (up to 70W/fabric slot)
  - Gigabit Ethernet switches
- Redundant - no single point of failure
- Manageable
 	
Benefits:
- Higher performance
- High availability
	- Full set of power supplies deliver up to 1300W power to 12U chassis
	  - This equates to max of 50W/slot and 70W/ fabric slot
	- IPMI management provides intelligent monitoring
	  - Can predict power supply failures before they happen
	  - Asset management
	
	12U Platforms
	- Designed to power and cool 1300W
	  - This equates to max of 50W/slot and 70W/fabric slot
	- Redundant N+N power supply architecture
	- Redundant N+1 cooling architecture
	  - No single point of failure
	
	7U Platforms
	- Designed to power and cool 975W
	  - This equates to max of 80W/slot and 70W/fabric slot
	- Redundant N+1 power supply architecture
	- Redundant N+1 push and pull cooling architecture
	  - No single point of failure
	
	4U Platforms
	- Designed to power and cool 500W
	  - This equates to max of 50W/slot, and 60W/fabric slot
	- Redundant N+1 power supply architecture
	- Redundant N+1 cooling architecture
	- Redundant N+1 cooling architecture

Platform Flexibility - Midplane flexibility - Shelf management flexibility	**Flexible and Scalable Midplanes** - Supports CompactPCI and packet-switched applications - Supports multiple configurations - Ample number of slots to insert additional computing or I/O devices as application grows **Flexible ISM** - Complete single board computer with CPU, memory, operating system and peripherals - User-defined capabilities - 128MB DDR SDRAM scalable to 1GB
Serviceability - Hot-swap components - Front serviceable components - Health/status LEDs Remote Management	**12U & 7U Platforms** - All active components are hot-swappable - All active components are front serviceable - All active components support Health/Status LEDs - ISM enables remote management of all active components
Compatibility - Standards-based - Designed for compatibility - Tested for compatibility - One vendor to support compatibility issues	**Extensive IPnexus Product Line** - Platforms and shelf management - Ethernet switches - Single board computers - I/O and communication products - SS7 signaling products - Enabling software **Single Tech Support Group** - Configured to order
NEBS Compatibility	**Platforms Meet GR-1089-CORE Specs** - Electrical discharge - Emissions **Platforms Meets GR-63-CORE Specs** - Shock and vibration, earthquake - Operating temperature and humidity **Acoustic Noise** - Redundant N+1 cooling architecture