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Promentum ATCA-6000

12U Carrier Grade Shelf

FEATURE SUMMARY

- Enables common platform architecture for blade server and network element applications
- 19", 535mm and 23" allows customers to address both ANSI and ETSI requirements with the same architecture and development
- Long life for the shelf in the field – upgrading higher bandwidth modules does not require a back plane change

With the emergence and acceptance of open standards like AdvancedTCA, OEMs now have the option of leveraging Common-off-the-shelf (COTS) equipment to accelerate their time-to-market. However, to meet solution requirements, OEMs need the same level of sophistication and re-use that they are accustomed to in their own designs. They must confront the challenge of choosing a shelf that not only meets the carrier grade needs, but also is flexible for their common platform requirements.

Product Description

The Promentum ATCA-6000 is an ATCA shelf that provides the reliability, availability, serviceability and manageability (RASM) required for building diverse ATCA systems. Its true 12U height enables 3 shelves to fit comfortably into a standard frame while allowing room for other equipment as needed to realize a complete system. The shelf provides the platform infrastructure to host a multitude of AdvancedTCA modules – switch, CPU, line cards and storage modules, supporting applications ranging from Network Elements to Data Servers to High Performance Computing Platforms.

Common Carrier Grade Platform

The ATCA-6000 is designed and built for a central office environment. Redundancy is inherent in all design aspects, including power, cooling, control, and connectivity. Dual redundant –48V DC power is provided as required by the PICMG 3.0 specification.

Unique, RiCool-2 Function Provides 200W Cooling

The ATCA-6000 provides a sophisticated thermal solution to meet the diverse requirements of the OEM common platforms. The ATCA-6000 implements powerful blowers to execute “evacuation” based cooling functionality. The shelf manager also incorporates the heuristics based RiCool-2 function to control fan speed and handle various thermal faults. The system designer has control over configuring this software through the shelf manager.

Cooling is provided in an N+1 architecture, allowing continued operation with uniform airflow, regardless of any single fan failure. The shelf supports cooling for 200W per front slot with up to 30W of rear-transition-module cooling. All control subsystems are available in dual redundant configurations.

The ATCA-6000 provides standard telecom alarm I/O interfaces to be used in conjunction with other central office systems. The shelf is qualified for the central office environment via appropriate NEBS and ETSI certifications.

Flexibility

The ATCA-6000 shelf provides ample flexibility to allow initial system deployment with current technologies and in-field upgrades in the future. The backplane supports the full ATCA base and fabric interfaces in a dual-star configuration, with signal speeds up to 3.125 Gb/s. Thus, an initial deployment may utilize only the base interface and a subsequent upgrade may add modules supporting the fabric interface without the need to change the shelf or backplane. The shelf architecture enables OEMs to address multiple rack configurations – 19", 23" and 535mm.

The backplane includes inter-slot update channels, synchronization clock buses, and metallic test & ringing signals.

Manageability

The ATCA-6000 implements a dual redundant IPMB bus for its out-of-band management functions. It supports both integrated (i.e., on a blade) and non-integrated (i.e., distinct module) shelf management, allowing the architectural choice to suit the application. Management of shelf peripherals (temperature sensors, etc.) is provided via a compact "shelf peripherals module" and exposed to shelf management via IPMI.

The ATCA-6000 also supports a display panel that facilitates local craft management via an LCD display and shelf-level LEDs.

The ATCA-6000 offers many more carrier grade friendly capabilities such as front and rear cable trays, air filters and minimum moving parts to provide mechanically sound design.

Overall, the ATCA-6000 is the perfect choice as a common shelf for products such as: IP Multimedia Systems (IMS), Media Gateway Controllers, HLR/VLR, SGSN/GGSN, RNC, BRAS and CMTS/DSLAM.

Promentum ATCA-6000 Specifications

FEATURE	FUNCTION	DESCRIPTION
PHYSICAL	Dimensions	12U (H) x 482mm (W) x 476mm (D)
	Weight	25 Kg (55 lb.) empty, 34 Kg (75 lb.) ready to receive blades
	Material	Stainless steel
	Compliance	PICMG 3.0
BACKPLANE	Signal bandwidth rating (differential pairs)	3.125 Gb/s
	Node slots	12
	Hub slots	2 (slots 7 & 8)
	Fabric interconnect	Base interface (1 port) plus fabric interface (4 ports) dual star interconnection to all slots
	Update channels	Between fabric slots (7-8) and node slot pairs (1-2, 3-5, 4-6, 9-11, 10-12, 13-14)
	IPMB support	Dual redundant IPMB buses to all slots and also to shelf peripherals via distribution boards
	Misc. signals	Synchronization clock, metallic test, and ringing signals per PICMG 3.0
POWER	DC Input (Nominal)	-48 VDC/-60 VDC
	Protection	Independent, user-resettable input power protection provided on each PEM
	Redundancy	Dual redundant PEM modules, either capable of supplying 100% of shelf power
ACCESSIBILITY	Front	Fan Modules, Blades, Air Filter, Front Cable Management Tray
	Rear	PEMs, RTMs, Shelf Peripherals Modules, Shelf FRU, Rear Cable Management Tray
COOLING	Num. of fans/blowers	4
	Redundancy	N+1 (i.e., any one fan can fail with no service degradation)
	Fan speed	Temperature-based variable speed control
	Cooling capacity	200W per slot, 2800W per shelf
ALARM I/O AND SHELF PERIPHERALS	Mechanism	Provided on Shelf Peripherals Module, dual redundant configuration optional
	Alarm I/O interfaces	15-pin DA-15P connector. Supports 4 outputs (Major, Minor, Critical, Power) and 2 inputs (Major & Minor Reset). 8-pin Phoenix 'Micro Combicon' header for general purpose inputs

		(user defined)	
	Managed IPMI Peripherals	Air filter sensors (2), shelf temperature sensors (inlet, outlet), shelf FRU EPROM, shelf display panel	
DISPLAY	LCD	80 character, 4-line LCD display (20 characters per line)	
	LEDs	Critical (Red), Major (Red/Yel), Minor (Yel), Power Good (Grn)	
	Audible alarm	Silenced via alarm acknowledge button	
REGULATORY	Safety	UL and cUL to UL 60950, CB Report to EN60950	
	EMC	FCC Part 15 & CISPR 22, Class B	
	Environment		GR-63-CORE criteria 69-71, 72, 73, 107-109, 110-112, 114, 115, 117, 119, 122, 123, 124, 128
			ETSI ETS 300 019-1-1: storage class 1.2 for non-temp-controlled locations
		ETSI ETS 300 019-1-2: transp. class 2.3 except for rain requirement	
		ETSI ETS 300 019-1-3: prA1 earthquake response spectrum, /A1 operating class 3.1 for temp-controlled locations	
		ETSI ETS 300 753: acoustic noise for env. class 3.1 non-office environments	
WARRANTY	-	Two years, parts only	

Ordering Information

Call for pricing and availability. Refer to the order codes below.

Description:

ATCA-6000 AdvancedTCA 12U 14 Slot Shelf with dual Power Entry Modules, Shelf Alarm Display, Fan Trays, Air Filter, and Vertical Mounting Brackets.
ORDER CODE: A6K-SHLF-1214-01

Shelf Peripheral Module - Rear Transition Module with IPMI management for Shelf Peripherals such as Fans, Air Filters, PEMs, includes Alarm I/O functions.
Order Code: A5K-SPM-01

Rear Cable Management Tray.
Order Code: A6K-R-CTRAY-1214

Front Cable Management Tray.
Order Code: A6K-F-CTRAY-1214

Filter Replacement.
Order Code: A6K-FILTER-1214

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