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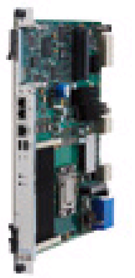
DATASHEET



Promentum ATCA-4500

ATCA-4500 10-Gigabit Compute Processing Module based on Intel® Xeon® 5500 Processor

The ATCA-4500 is the 7th generation single board computer from Radisys. It is a high performance, single slot AdvancedTCA computer module based on the single socket L5518 Intel® Xeon® processor. It is ideal for control plane and server functions for LTE wireless infrastructure, Deep Packet Inspection, IPTV, IP multimedia subsystems and defense application. The ATCA-4500 provides 10-Gigabit fabric connectivity, 8 DDR3 DIMM sockets, an AMC slot and an optional RTM offering additional storage and network interface options.

FEATURE SUMMARY

High Performance/Low Cost

The single quad-core L5518 processor provides higher performance at a lower cost then the previous generation of dual socket quad-core ATCA boards. Support for Hyper-threading allows the four cores to process up to two threads simultaneously, so to the OS the processor appears as eight separate cores. The integrated memory controller significant reduces memory latency. Support for 8 DIMM of VLP DDR3 allows memory density of up to 64G, while providing a cost effective solution for applications that have lower density memory requirements.

Storage Options:

The ATCA-4500 supports multiple storage options. Optional dual user flash can support up to 16GB each, providing a total of 32GB of storage. This storage can function as a boot device, so it can be used to store an operating systems and application image, eliminating the need for a hard drive. The ATCA-4500 supports a storage AMC and also supports a configurable SAS/SATA multiplexer. The optional RTM has a SAS controller that supports RAID (0/1), two external SAS connectors and an additional hard drive, allowing a RAID to be setup between the AMC, RTM or remote storage. The board also supports iSCSI storage over both the base and fabric, allowing the use of an ATCA or external iSCSI storage device.

EFI – Industry standard replacement for BIOS

The ATCA-4500 is based on EFI which is a significantly improvement over the old legacy BIOS firmware. The EFI provides a pre-operating system shell where customers can build and execute EFI applications, such as setup, OS install, diagnostic or configuration utilities.

Virtualization:

Support for extended VT-x and VT-d on the board decreases the overhead associated with virtualization. The ATCA-4500 has been validated with leading hypervisors, making it the ideal platform where virtualization is required.

Upgrade path:

The ATCA-4500 has been designed to accept the next generation of Intel processors with minimum changes to firmware and BIOS, providing an upgrade path that that will minimize customer development and validation.

System management, reliability and high availability

The ATCA-4500 is designed for High Availability (HA) applications providing 99.999% up time. An Intelligent Platform Management Controller (IPMC) provides system management functionality compliant with the IPMI specification, and includes features such as standard e-keying, remote upgrade capability, IPMI-over-LAN, Serial-over-LAN, and message bridging and messaging support.

Platform level solutions

The ATCA-4500 will be available as a building block or fully validated and integrated into the RadiSys family of platforms which include 2, 5, 14 and 16 slot platforms. The board will be fully interoperable with RadiSys Promentum DSP, Packet Processing and Switch products, and the board also has been validated with 3rd party AMC and storage components.

Promentum ATCA-4500 Specifications

FEARTURE	FUNCTION	DESCRIPTION
PHYSICAL	Dimensions	8Ux6HPx280mm ATCA, single slot
	Compliance	PICMG 3.0, PICMG 3.1 Option 9 Revision 2.0
PROCESSOR SYSTEM	CPU	Intel Xeon L5518 (Quad Core with Hyper-threading)
	Cache	8 MB
	Chipset	Intel® 5520
	QPI Speed	5.86 GT/s
MEMORY	Technology	Registered ECC DDR3 1066MHz or 800 MHz
	Capacity	64GB maximum
	Sockets	Eight 240-pin VLP DIMM
ETHERNET FABRIC	Fabric PICMG(3.1)	Option 1, 2 or 9
	Controller	Intel 82598EB
BASIC FABRIC	Interface	Dual 10/100/1000BaseTx
	Controller	Intel 82576EB
AMC SITE		Single Mid-Size AMC.0, AMC.1 (PCI Express) AMC.2 (Ethernet) and AMC.3 (Storage)
STORAGE	Flash	Optional Dual eUSB User Flash (Maximum 32GB support)
	HDD	SATA Support via ICH to AMC (See RTM for Additional Options)
	iSCSI	Support for Base & Fabric
FRONT PANEL	I/O	2 USB 2.0 connectors, 2 1000Base-T Ethernet connectors (RJ-45), 1 RS-232 Serial port connection (RJ-45)
	LEDs	Hot Swap (Blue), Red or Amber Out Of Service (ATCA "LED 1"), Green/Amber Power Good (ATCA "LED 2"), Amber Application defined, Activity and status indicators for dual Ethernet (RJ-45)
	Mechanical	Hot Swap extraction ejector, Reset Button
OPTIONAL ATCA-5400-RTM	Storage	Supports an Optional 1 SAS/SATA SFF HDD
	Controller	Intergrated with HW RAID (0/1)
	I/O	1 USB 2.0 Connector, 2 SFP Ports (Not Included SFP modules), 2 SAS Ports, 1 RS 232 Serial port connection (RJ45)
	LED	Hot Swap (Blue), Red or Amber Out of Service, Green/Amber Power Good, Amber HDD Activity, Activity & Link status for SFPs
SOFTWARE	Operating System (standard)	Wind River PNE LE 2.0 (64bit), Red Hat Enterprise Linux 5.3 (64bit), Monta Vista CGE 4.1 (32bit), Monta Vista CGE 5.0 (64bit)
POWER	ATCA-4500	200W Max
ENVIRONMENTAL	Temperature (operating)	Continuous: +5°C to +40°C, Short Term: -5°C to +55°C
	Temperature (storage)	-40°C to +70°C
	Vibration (operating)	0.1g, 5 to 100 Hz and back, 0.1 octave/min sine sweep 3
	Relative Humidity (operating)	Continuous: 5% to 85% RH non-condensing, Short Term: 5% to 90% RH non-condensing at +30°C
	Relative Humidity (storage)	Continuous: 5% to 90% RH non-condensing at +40°C, Short Term: 5% to 95% RH non-condensing at +40°C
REGULATORY	Safety	UL/EN/IEC 60950-1, CSA 22.2
	EMC	FCC Part 15, Class A, EN 550022: 1998, Class A 60950
WARRANTY	-	Two years, parts only

Ordering Information

Toll-Free: 800-950-0044 **Phone:** 503-615-1100 **Support:** 866-385-6167

- A4500-Base-CPU
- A4500-CPU-OEM
- A4500-MEM-12GB
- A4500-MEM-32GB
- A5400-CPU-RTM
- A5400-CPU-RTM-OEM