

MIC-5301

AdvancedTCA® Dual-Core Low Voltage Intel® Xeon® Processor Board with Two AMC Slots



Features

- Two Dual-Core Intel® Xeon® processors LV 2.0 GHz
- Intel E7520® chipset supports 667 MHz FSB
- Dual channel DDR2 400 MHz ECC Registered SDRAM, configurable up to 16 GB
- Four 1000Base-BX ports on Fabric interface
- Two 1000Base-Tx ports on Base interface
- Two PCI Express x4 (PCIe) AMC slots with style B/B+ connector
- Supports optional Serial Attached SCSI (SAS) module
- SAS ports module to Rear-Transition Module (RTM)
- One serial port for IPMI on front panel
- Two USB 2.0 ports in front and in RTM; One 2.5" SATA/SAS HDD on RTM

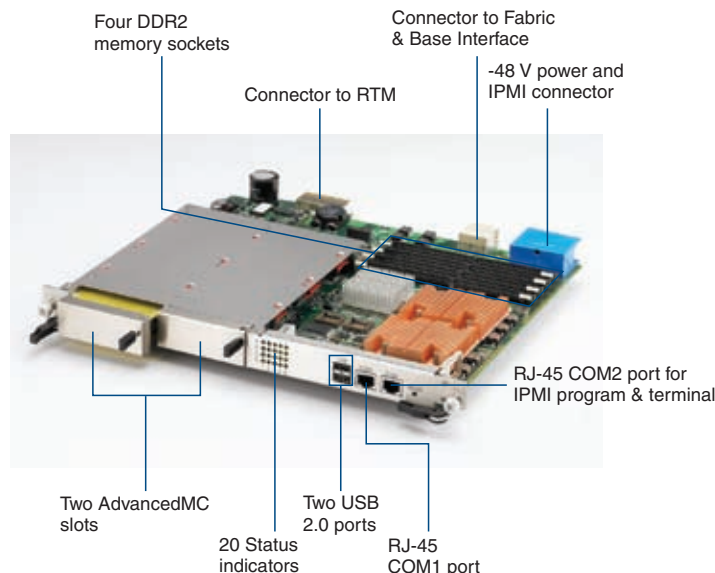
Introduction

Advantech's MIC-5301 single-slot AdvancedTCA® processor blade combines computing performance with I/O flexibility in a power efficient quad core, dual AMC design. Featuring two high performance Dual-Core Intel® Xeon® LV processors, the MIC-5301 facilitates the consolidation of multiple single core designs and frees up valuable system slots for increased processing power or I/O connectivity.

The MIC-5301's overall design flexibility positions it for use as a common processing blade for multiple applications. As architecture re-use means gains in economies of scale, the MIC-5301 is ideally suited for a wide range of application processing needs. Two single full-size AMC sites support the use of a variety of AMC modules such as coprocessors, TCP/IP offload engines, physical disks, LAN or WAN adapters. Packet throughput is increased by enhanced fabric connectivity with four Gigabit Ethernet ports to the fabric interface in addition to the two Gigabit Ethernet ports to the base interface.

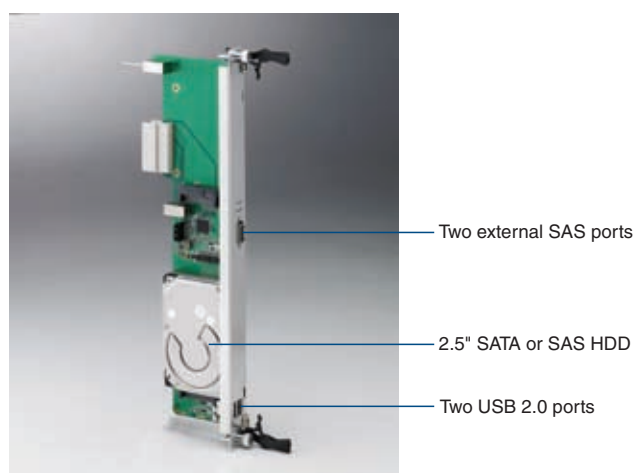
An Intel E7520 Memory Controller Hub MCH and Intel 6300ESB I/O Controller Hub provide high-end server class support for the two dual-core processors. The E7520 addresses up to 16 GB of dual channel DDR2 ECC Registered SDRAM in 4 DIMM sockets. Further connectivity is supported via an optional Serial Attached SCSI (SAS) module with SAS ports connected to a Rear Transition Module mounted SAS drive. IPMI 1.5 support is assured by a PigeonPoint System® (PPS) Solution on a Renesas H8S/2167.

Advantech offers a range of innovative ATCA customization services specifically targeted at Telecommunications Equipment Manufacturers (TEMs). Advantech's Design To Order Services (DTOS) team partners with TEMs to evaluate project requirements and develop TEM-specific solutions in order to improve overall operating costs. The MIC-5301 is an example where proven core engineering IP can be re-used as a base for a TEM specific design.



Specifications

Processor System	CPU	Two Dual-Core Intel Xeon LV processors	
	Max. Speed	2.0 GHz	
	Chipset	Intel E7520 MCH	
	BIOS	Dual 4Mbit FWBs with AMI embedded BIOS	
Bus	Front Size Bus	667 MHz	
Memory	Technology	Dual channel DDR2 400 MHz SDRAM (72-bit ECC Registered)	
	Max. Capacity	Configurable up to 16 GB	
	Socket	4	
Ethernet	Interface	Two 10/100/1000Base-TX ports for base interface; Four 1000Base-BX ports for fabric interface (compliant with PICMG 3.1 option 2)	
	Controller	BCM5715S (PCIe x4) and BCM5715C (PCIe x4)	
Front I/O Interface	Serial (COM)	1 (RS-232, RJ-45 connector)	
	Serial (BMC)	1 (RS-232, RJ-45 connector)	
	USB 2.0	2	
Operating System	Compatibility	Windows 2000; Windows 2003; Linux	
IPMC	BMC Controller	Renesas H8S/2167	
	IPMI	Compliant with IPMI 1.5 using Pigeon Point System® (PPS) Solution	
	Hardware Monitor	LM93	
Watchdog Timer	Output	System reset; system power down	
	Interval	Set in BIOS menu for 10 sec, 30 sec, 1 min and 5 min	
AMC	Site	2	
	Interface	PCI Express x4	
	Power limit	30 watts	
Miscellaneous	Solid State Disk	One CompactFlash socket	
	LED Indicator	20	
	Storage module	SAS daughter module with four ports up to 3 Gb/s for each	
	Real Time Clock	Built-in	
RTM	Real I/O interface	Two external SAS ports Two USB 2.0 port	
	Storage Site	One 2.5" SATA/SAS HDD (HDD not included)	
Physical Characteristics	Dimensions (W x D)	Node blade: 294.56 x 322.25 mm (11.60" x 12.69") RTM: 94 x 322.25 mm (3.7" x 12.69")	
	Weight	Node blade: 2 kg (4.41 lb) RTM: 0.275 kg (0.61 lb)	
Environment	Temperature	Operating 0 ~ 65° C (32 ~ 149° F)	Non-operating - 40 ~ 70° C (-40 ~ 158° F)
	Humidity	NA	95% @ 60° C (non-condensing)
	Shock	20 G	50 G
	Vibration (5 ~ 500 Hz)	1.5 Grms	2 G
Compliance	PICMG 3.0 R2.0 AdvancedTCA Base Specification PICMG 3.1 R1.0 Ethernet/Fibre Channel for ATCA Systems PICMG AMC.0 R1.0 Advanced Mezzanine Card Base Specification PICMG AMC.1 R1.0 PCI Express and Advanced Switching		



MIC-5301 Rear Transition Module (RTM)