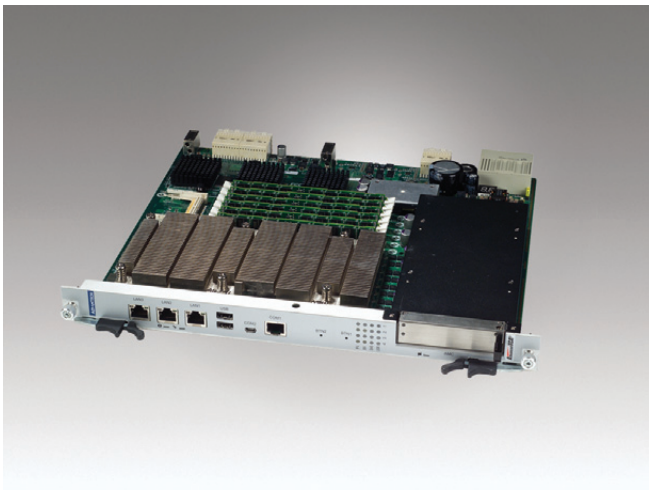
MIC-5320

AdvancedTCA® 10GbE CPU Blade with Intel® Xeon® 5500/5600 Series Processor



Features

- One 2, 4 or 6-Core Intel® Xeon® 5500 or 5600 processors
- Intel® 5520 IOH36D / ICH10R server class chipset
- Six DDR3 VLP DIMMs up to 48 GB with ECC support
- Two XAUI ports on Fabric interface
- Two 1000 Mbps ports on Base interface
- Three 1000 Mbps front panel ports
- One mid-size AMC slot with SAS/PCIe/RTM support
- Onboard serial attached SCSI (SAS) controller with failover support
- Fully managed, hot swappable RTM

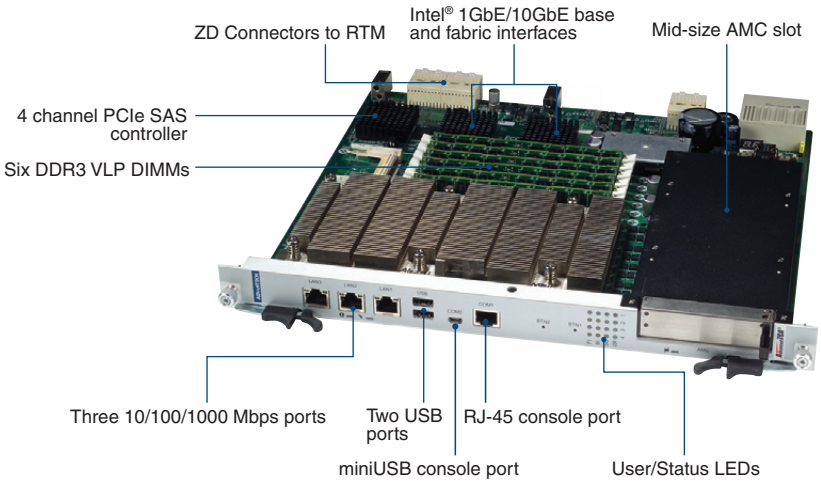
Introduction

Advantech's MIC-5320 single-slot AdvancedTCA® processor blade combines computing performance with I/O flexibility in a power efficient design. Supporting Intel's latest Xeon® processors using the new Intel® Xeon® 5500/5600 microarchitecture and latest DDR3 technology with a 3 channel memory controller integrated into the CPU, the MIC-5320 outperforms previous generation dual socket designs while providing better thermal characteristics. The flexibility of the Intel® Xeon® 5500 and 5600 Series allows tremendous upgradeability, scalability and cost efficiency options with two, four or six-Core processors fully supported.

Using Intel's latest GbE and 10GbE MAC solutions supporting enhanced offloading techniques and virtualization features, MIC-5320 allows users to deploy the full power of multi-Core technology. All in all, by combining the latest multi-Core technology, low latency / high speed DDR3 technology, and latest 10GbE technology, MIC-5320 is well suited for high speed data plane applications. Supporting up to 48 GB of memory it can run database in memory applications easily. It is backed up by a 4 channel SAS RAID controller that makes it equally suitable for control plane applications that require disk I/O with RAID and failover support.

The mid-size AMC bay supports more than just mass storage AMCs. With support for PCIe x4 gen 2 as well as base fabric channels, it opens up possibilities for high speed I/O interface integration and co-processing engines. In addition to utilizing the chipset's RASUM features, redundant BIOS flashes enhancements to BIOS and firmware to support CMOS backup, and override and HPM.1 upgradeability, make the MIC-5320 a true carrier grade solution.

MIC-5320's overall design and built-in flexibility using FPGA technology, and RTM customization further enlarge the application fields of this product and reduce time-to-market. Advantech's world class customization services are ready to tune the MIC-5320 to meet customer-specific requirements.



Specifications

Processor System	CPU	L5508 (2C/4T), L5518 (4C/8T) or L5638 (6C/12T) Intel Xeon processor*	
	Max. Speed	2.13 GHz	
	Chipset	Intel 5520 IOH36D / ICH10R	
	BIOS	Dual 16-Mbit BIOS firmware flashes with AMI embedded BIOS	
	QPI	5.86 GT/s	
Memory	Technology	Triple channel DDR3 1066/1333 MHz SDRAM (72-bit ECC Un-/ Registered)	
	Max. Capacity	Configurable up to 48 GB	
	Socket	6 VLP DIMMs	
Zone 2	Fabric Interface	i82599 Dual 10GE MAC/PHY supporting two 10 Gbps ports (XAUI)	
	Base Interface	i82576 PCIe dual GbE MAC/PHY supporting two 10/100/1000 Mbps ports	
Front I/O Interface	Serial (COM)	2 x 16C550 compatible Serial Ports (1 RJ-45 connector, 1 miniUSB connector)	
	Ethernet	2 x 10/100/1000 Mbps through PCIe based i82576 MAC/PHY, 1x 10/100/1000 Mbps Chipset LAN	
	USB 2.0	2 x Type A ports	
Operating System	Compatibility	WindRiver PNELE3.0, RedHat Enterprise 5.3, Microsoft Windows Server 2003, Windows Server 2008	
IPMC	Controller	Renesas H8S/2166	
	IPMI	Compliant with IPMI 1.5 using Pigeon Point System® (PPS) Solution	
Watchdog Timer	Supervision	1 BMC, 1 x86 BIOS POST, OS Boot, Application	
	Interval	IPMI compliant	
AMC	Site	1 mid-size AMC bay	
	Interface	SAS/SATA, PCI Express x4, RTM	
Miscellaneous	Storage	CF onboard, 4-port SAS controller LSI1064E (1 to AMC, 3 to zone 3)	
	Real Time Clock	Built-in	
Zone 3 (RTM)	RTM	Advantech common RTM interface Type 1	
	Interface	4x SAS, 2x PCIex4, 2x SGMII, 4x USB, 2x UART, 2x SATA, SGPIO, AMC ports 14, 17..20	
Power Requirement	Configuration	Xeon L5518 + 12GB DDR3 SDRAM, no AMC, no RTM	
	Consumption	128 W	
Physical Characteristics	PCB Dimensions (W x D)	6HP, 322.25 x 280.00 mm (12.69" x 11.02")	
	Weight	2.675 kg	
Environment		Operating	Non-operating
	Temperature	0 ~ 55° C (32 ~ 131° F)	-40 ~ 70° C (-40 ~ 158° F)
	Humidity	5 to 93% @ 40° C (non condensing)	95% @ 40° C (non-condensing)
	Shock	4 G each axis	-
	Vibration (5 ~ 500 Hz)	1.5 Grms	2.16 Grms, 30 mins each axis
Compliance	Environment	ETSI EN300019-2-1 Class1.2, EN300019-2-2 Class 2.3, ETSI EN300019-2-3 Class 3.1E Designed to meet GR63-Core	
	PICMG	3.0 R3.0, 3.1 R1.0, AMC.0 R2.0, AMC.1 R2.0, AMC.2, AMC.3, HPM.1	
	EMC	FCC47 CFR Part15, Class A, CE Mark (EN55022/EN55024/EN300386) Designed to meet GR1089-Core	

*Note: The MIC-5320 also supports non-NEBS compliant CPU SKU E5540 and E5645 but depends on the system airflow.

Ordering Information

Part Number	Description
MIC-5320-S1E	MIC-5320 bare board
MIC-5320A0-S1E	MIC-5320 with 2C/4T CPU L5508
MIC-5320A1-S1E	MIC-5320 with 4C/8T CPU L5518
MIC-5320B1-S1E	MIC-5320 with 6C/12T CPU L5638

Related Products

Part Number	Description
MIC-5401	SAS HDD Carrier AMC
MIC-5212	Dual 10 Gigabit Ethernet AMC
MIC-5203-AE	Quad SFP Gigabit Ethernet AMC
MIC-5203-BE	Quad RJ-45 Gigabit Ethernet AMC
RTM-5101	RTM Module for MIC-5320
9680013405	AMC mid-size filler with baffle