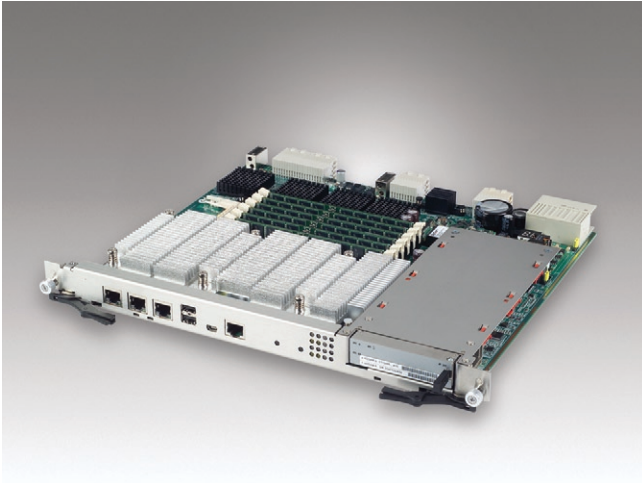


MIC-5320

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



Features

- One Dual-Core or Quad-Core Intel® Xeon 5500 processor (Nehalem-EP)
- Intel® 5520 IOH36D / ICH10R server class chipset
- 6 DDR3 VLP DIMMs up to 48 GB with ECC support
- Two XAUI ports on Fabric interface
- Two 1000BASE-T ports on Base interface
- Three 1000BASE-T front panel ports
- One mid size AMC slot with SAS/PCIe/RTM/CLK support
- Onboard Serial Attached SCSI (SAS) controller with failover support
- Fully managed, hot swappable RTM



AdvancedTCA®

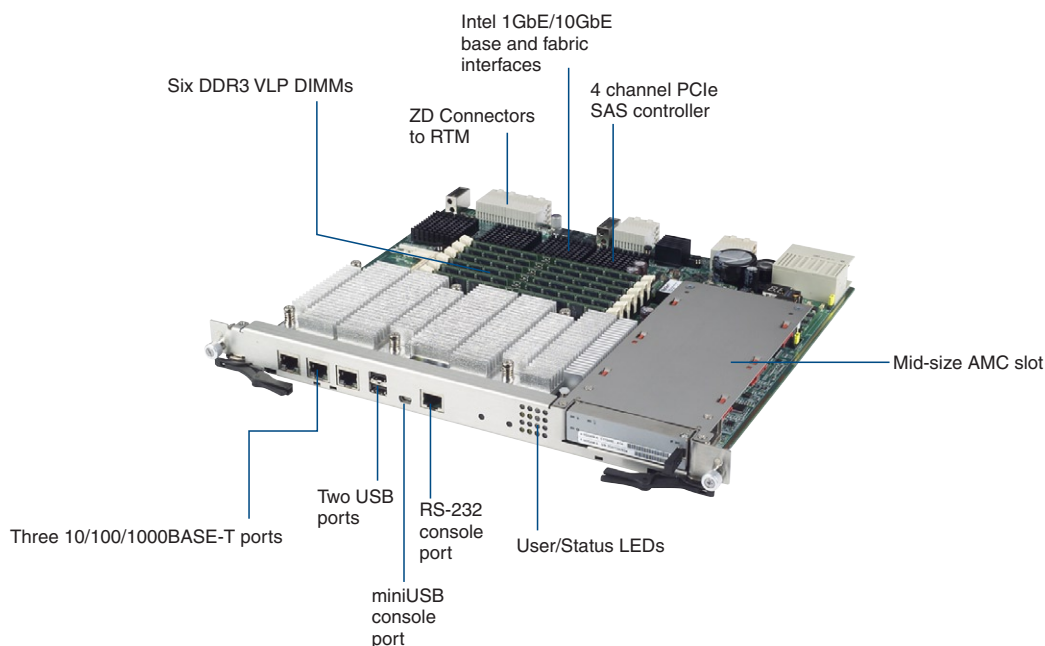
Introduction

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 Nehalem 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. With built-in next generation processor readiness, there is a smooth upgrade path to future processors supporting more than 4 cores.

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 10GE 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 and telco clock interfaces, it opens up possibilities for high speed I/O interface integration, telco backhaul interface modules and co-processing engines. In addition to utilizing the chipset's RASUM features, redundant BIOS flashes and onboard USB disks, 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	L5518 (4C/8T) or L5508 (2C/4T) Intel Nehalem processor	
	Max. Speed	2.13 GHz	
	Chipset	Intel IOH36D / ICH10R	
	BIOS	Dual 16-Mbit BIOS firmware flashes with AMI embedded BIOS	
Bus	QPI	5.86 GT/s	
Memory	Technology	Triple channel DDR3 1066 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 10Base KX4 ports (XAUI)	
	Base interface	i82576 PCIe dual GbE MAC/PHY supporting two 10/100/1000 Mbps ports	
Front I/O Interface	Serial (COM)	1 RS-232, RJ-45 connector Serial Port (x86), 1 USB Slave, miniUSB connector Serial port (BMC)	
	Ethernet	2 10/100/1000BASE-T through PCIe based i82576 MAC/PHY, 1 10/100/1000 Mbps Chipset LAN	
	USB 2.0	2 Type A ports	
Operating System	Compatibility	WindRiver PNELE2.0, Linux, PNELE3.0 in preparation	
IPMC	BMC Controller	Renesas H8S/2166	
	IPMI	Compliant with IPMI 1.5 using Pigeon Point System® (PPS) Solution	
	Hardware Monitor	NuvoTon W83795ADG	
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, Clock	
	Power budget	30 watts	
Miscellaneous	Solid State Disk	Two 1GB USB flash disks onboard	
	LED Indicators	20	
	Storage	LSI 1064E onboard SAS controller with four ports up to 3 Gb/s	
	Real Time Clock	Built-in	
Zone 3 (RTM)	RTM	Fully managed and hot swappable	
	Interface	4x SAS, 2x PCIe x1, PCIe x4, 2x SGMII, 3x USB, 2x UART, 2x SATA, SGPIO, AMC ports 14, 17..20	
Physical Characteristics	Dimensions (W x D)	6HP, 294.56 x 322.25 mm (11.60" x 12.69")	
	Weight	2.675kg	
Environment	Temperature	Operating	Non-operating
		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	5 G each axis	20 G each axis
Vibration (5 ~ 500 Hz)	1.5 Grms	2 G	
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	
	Safety & EMC	CB report (IEC60950-1), CE mark (EN60950-2001), UL60950-1/CSAC22.2 FCC47 CFR Part15, Class B, CE Mark (EN55022/EN55024/EN300386) Designed to meet GR1089-CORE	

Ordering Information

Model number	Configuration
MIC-5320-P1	10GbE Ethernet fabric interface, 2C/4T CPU
MIC-5320-P2	10GbE Ethernet fabric interface, 4C/8T CPU

Related Products

Model number	Configuration
MIC-5401	SAS HDD Carrier AMC
MIC-5321	RTM Module for MIC-5320