MIC-5322

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

NEW

Features

- Two 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
- Two 1000BASE-T front panel ports
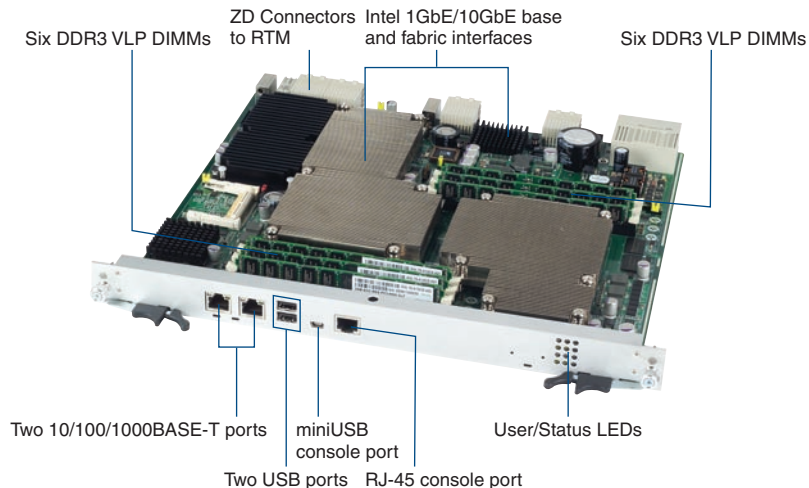- Two USB2.0 front panel ports
- Fully managed, hot swappable RTM

Introduction

The MIC-5322 is a dual processor Intel® Xeon® 5500-based ATCA blade complementing the single processor MIC-5320 for systems able to cool over 200W per-slot. The underlying architecture and drivers remain identical to the MIC-5320 thereby enhancing performance scalability and streamlining software re-use between blades. The MIC-5322 enables the highest performance available in ATCA form factor with 8-cores and 16-threads of processing power, low DDR3 memory latency, fast PCI Express 2.0 and accelerated virtualization,. The Intel 82599 10 GbE controller plays a key role in end-to-end network performance and throughput, including a 5 Gbps PCI Express 2.0 interface to improve the entire data path as well as multi-core optimized queue support. For fast and secure database applications, the blade supports up to 48 GB of triple channel DDR3 with ECC. Next generation processor readiness offers a smooth upgrade path to future processors supporting more than 4 cores.

The MIC-5322 adheres to Advantech's Common rear transition modules (RTM) definition developed to maximize interoperability and re-use between RTM's and ATCA blades. This defines the management interface and RTM port mapping for interconnects such as USB, PCIe, XAUI and SAS and allow RTM re-use among blades to simplify system integration as well as life cycle and upgrade management. The MIC-5322 provides hot-swappable RTM support for High Availability(HA) needs as well as rear I/O and SAS storage support with RAID via the RTM-5101.

Dual bootable USB industrial flash drives add capabilities for emergency and parameters storage, diagnostic routines and minimum kernel needs, whilst a CompactFlash socket is available for True IDE mode flash usage. Serial over LAN (SoL) support is provided on the base fabric and external GbE. HPM.1 based updates are available for all programmable components including rollback support and IPMI controlled BIOS write protect through a single update procedure. CMOS Override capabilities allow CMOS RAM to be altered over IPMI and settings can be changed from multiple sources. MAC address mirroring allows the MAC address to be read over IPMI even if the processor is powered down and helps to relate MAC address and physical/logical board location. Additional support is provided for Intel PECI, application driven event logging and FRU EEPROM space is reserved for ODM use.

On-board FPGA design facilitates customer-specific modifications and the core board design can be modified or adapted to other form factors through Advantech's D&MS customization services

Six DDR3 VLP DIMMs   ZD Connectors to RTM   Intel 1GbE/10GbE base and fabric interfaces   Six DDR3 VLP DIMMs

Two 10/100/1000BASE-T ports   miniUSB console port   User/Status LEDs

Two USB ports   RJ-45 console port

Specifications

Processor System	CPU	L5518 (4C/8T) or E5540 (4C/8T) Intel Nehalem processor	
	Max. Speed	2.53 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 10GBase KX4 ports (XAUI)	
	Base interface	i82576 PCIe dual GbE MAC/PHY supporting two 10/100/1000 Mbps ports	
Front I/O Interface	Serial (COM)	2 x86 Serial Ports (1 RJ-45, 1 USB slave)	
	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, Windows Server 2003	
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 x 86 BIOS POST, OS Boot, Application	
	Interval	IPMI compliant	
Miscellaneous	Solid State Disk	Two 1 GB USB flash disks onboard	
	LED Indicators	12	
	Storage	Onboard CF Disk, 2 x internal and external SAS drives through RTM module	
	Real Time Clock	Built-in	
Zone 3 (RTM)	RTM	Advantech common RTM interface Type 1	
	Interface	3PCIe x 4, 2 x SATA, 2 x SGMII, 2 x USB, 2 x UART, SGPIO	
Physical Characteristics	Dimensions (W x D)	6HP, 294.56 x 322.25 mm (11.60" x 12.69")	
	Weight	2.545 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	20 G each axis
	Vibration (5 ~ 100 Hz)	0.1 Grms	2 G
Compliance	Environment	ETSI EN300019-2-1 Class1.2, EN300019-2-2 Class 2.3, ETSI EN300019-2-3 Class 3.1E	
	PICMG	3.0 R3.0, 3.1 R1.0, 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	

Notes:
Maximum power consumption information:
1. MIC-5322-P1 with 12 GB memory: 180W
2. MIC-5322-P2 with 12 GB memory: 220W

Ordering Information

Model number	Configuration
MIC-5322-P1	10GbE Ethernet fabric interface, Dual Intel Xeon L5518 CPUs, no memory, no CF disk
MIC-5322-P2	10GbE Ethernet fabric interface, Dual Intel Xeon E5540 CPUs, no memory, no CF disk

Related Products

Model number	Configuration
RTM-5101	RTM Module (hosts LSi1064e SAS controller and two hotswappable SAS HDD and rear panel IO connectors)