MIC-5332

AdvancedTCA® 10GbE Dual Socket CPU Blade with Intel® Xeon® E5-2600/E5-2600V2 Processors

NEW



Features

- Two Intel® Xeon® E5-2600/E5-2600V2 Processors
- Intel® C600 Series PCH server class chipset with integrated SAS controller
- Eight DDR3 VLP DIMMs up to 256 GB with ECC support
- Up to four XAUI ports on Fabric interface
- Two 1000BASE-T ports on Base interface
- Three 1000BASE-T front panel ports
- One Fabric Mezzanine Module support with front I/O support (type II)
- Two CFast / one 2.5" SSD storage Device
- Fully managed, hot swappable RTM

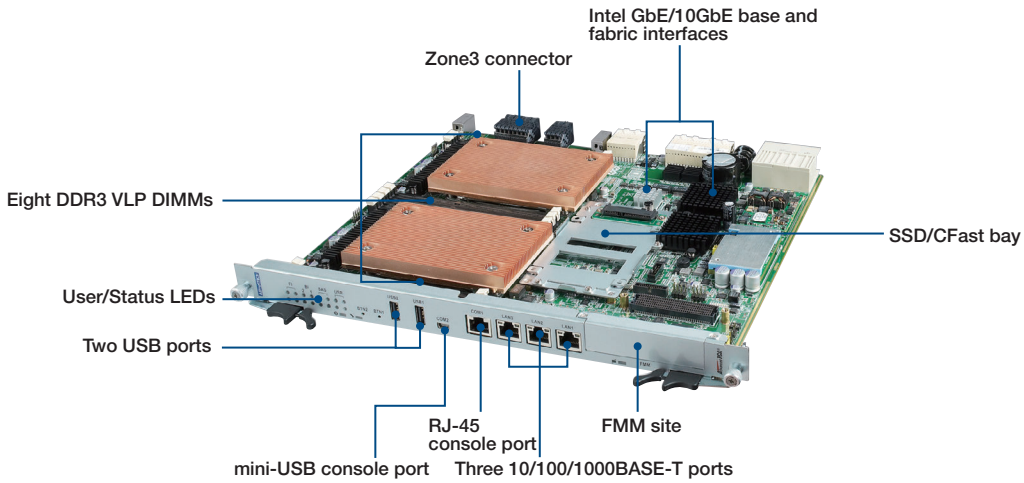
Introduction

Advantech's MIC-5332 is a dual processor ATCA blade based on the Intel next generation platform. It enables the highest performance available in ATCA form factor with up to 20 cores and 40 threads of processing power, fast PCI Express gen. 3 lanes running at up to 8Gbps, and best in class virtualization support. Two QPI interfaces between the CPUs improve memory and I/O access throughput and latencies when one processor needs to access resources hosted by the other socket. With four DDR3 DIMMs per socket in a quad channel design running up to 1866MT/s, the MIC-5332 not only offers superior memory bandwidth over 3-channel designs, but can also support memory densities up 256GB using latest LR DIMM technology. It outperforms previous generation dual socket designs while keeping similar thermal characteristics with balanced airflow resistance.

Using Intel's latest PCH with its integrated 4-port SAS controller, the need for an external storage controller is eliminated making the MIC-5332 an ideal choice for cost sensitive control plane applications. While supporting two XAUI interfaces in the base model, support for dual dual star fabric implementations can be added by installing the FMM-5001B Fabric Mezzanine Module (FMM). Beyond that, the Fabric Mezzanine Module type II socket with PCIe x16 connectivity provides extension possibilities for additional front port I/O, offload and acceleration controllers such as Intel QuickAssist™ accelerators, IPSec offload engines or customer specific logic. FMMs do not only have higher PCI Express bandwidth than AMCs, but also do integrate well in terms of thermal design and board real estate when compared to Advanced Mezzanine Cards. Moreover, FMMs can be reused on RTMs and across different blade designs. This unmatched flexibility combined with the highest performance Intel Xeons available make the MIC-5332 equally well suited for application and data plane workloads.

The onboard IPMI firmware was developed entirely by Advantech to offer greater modularity and flexibility for the customization of system management features especially when it comes to tailoring a system design to meet target cost points without sacrificing features and time to market. HPM.1 based updates are available for all programmable components (BIOS, IPMC firmware, FPGA) including rollback support. Advantech's IPMI solution, combined with an optimized AMI UEFI BIOS continues to offer advanced features used on previous generation MIC-532x blades, such as BIOS redundancy, Real Time Clock Synchronization, CMOS Backup, CMOS Override and MAC Mirroring. Advantech IPMI firmware has been tested for CP-TA compliance using the Polaris Networks ATCA Test Suite.

The MIC-5332 supports hot-swappable RTMs such as the RTM-5104 for High Availability (HA) needs, rear I/O and dual SAS storage with RAID as well as an optional FMM (Fabric Mezzanine Module). Please contact Advantech for more information on available RTMs. 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 DMS customization services.



All product specifications are subject to change without notice

Last updated : 7-Apr-2014

Specifications

Processor System	CPU	Two Intel Xeon E5-2600/E5-2600V2 processors*	
	Max. Speed	2.4 GHz	
	Chipset	Intel C600 Series PCH server class chipset	
	BIOS	Dual 64-Mbit BIOS firmware flashes with AMI UEFI based BIOS	
	QPI	8.0 GT/s	
Memory	Technology	Four channel DDR3 1066/1333/1600/1866MHz SDRAM (72-bit ECC Un-/ Registered), LR DIMM support	
	Max. Capacity	Configurable up to 256 GB	
	Socket	8 VLP DIMMs	
Zone 2	Fabric Interface	2 x Intel 82599 Dual 10GE MAC/PHY supporting four 10GBase ports (XAUI) (one by default and the second one is optional, through FMM-5001B)	
	Base Interface	i350 quad 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 mini-USB connector)	
	Ethernet	2 x 10/100/1000BASE-T through PCIe based i350 MAC/PHY, 1x 10/100/1000 Mbps Chipset LAN	
	USB 2.0	2 x Type A ports	
Operating System	Compatibility	WindRiver PNE/LE 4.2, RedHat Enterprise 6.1, CentOS 6.1, Windows Server 2008	
IPMC	BMC Controller	NXP LPC1768 (ARM7)	
	IPMI	Compliant with IPMI 1.5 using Advantech IPMI code base	
Watchdog Timer	Supervision	1 for x86 BIOS POST, OS Boot, Application	
	Interval	IPMI compliant	
FMM	Site	1 FMM type II socket	
	Interface	1 x PCIe x16 or 2 x PCIe x8	
Miscellaneous	Storage	2 x CFast / 1 x 2.5" SSD*, 4-port SAS controller integrated in in PCH to zone 3	
	Real Time Clock	Built-in	
Power Requirement	Configuration	2 x 70 W CPUs, 32 GB memory, no FMM, no RTM	
	Consumption	230 W (estimated)	
Zone 3 (RTM)	RTM	Advantech common RTM interface Type 2	
	Interface	4 x SAS/SATA, 1 x PCIex16, 4 x USB, 2 x UART	
Physical Characteristics	Dimensions (W x D)	6HP, 322.25 x 280.00 mm (12.69" x 11.02") (PCB size)	
	Weight	2.90 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 ~ 500 Hz)	0.5 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, HPM.1	
	Safety	CE mark (EN60950-2001), UL60950-1/CSAC22.2	
	EMC	FCC47 CFR Part15, Class A, CE Mark (EN55022/EN55024/EN300386) Designed to meet GR1089-CORE	

*Note: 1. MIC-5332 supports 2 x 95 W CPUs in non-NEBS environments. Special system airflow requirements apply.
2. CFast and 2.5" SSD are mutually exclusive.

Ordering Information

Part Number	Description
MIC-5332SA1-P1E	MIC-5332 RJ45 version with dual E5-2648L CPUs
MIC-5332SA1-P2E	MIC-5332 RJ45 version with dual E5-2658 CPUs

Contact Advantech for information on available and future RTMs and FMMs.

Related Products

Part Number	Description
RTM-5104	RTM Module for MIC-5332
FMM-5001B	Intel 82599 dual 10GE FMM for dual dual star configuration
FMM-5001F	Intel 82599 dual 10GE FMM with 2x SFP+ LAN IO
FMM-5002	VGA FMM module