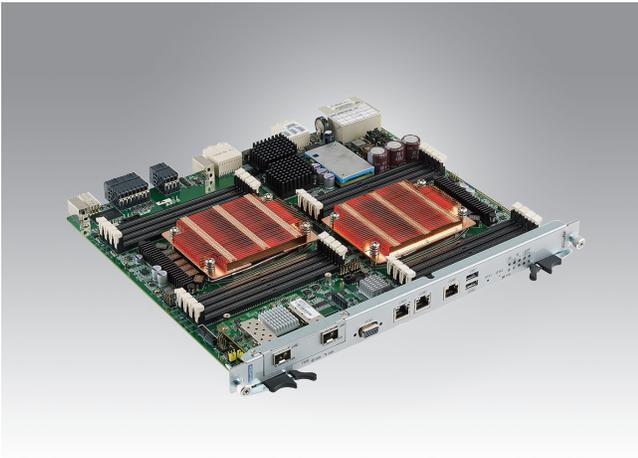


MIC-5345

AdvancedTCA, Dual/Single Socket CPU Blade with Intel® Xeon® E5-2600 v3/v4 Series Processors for Server and NFV Applications



Features



- Two SKUs available with one or two Intel® Xeon® E5-2600 v3/v4 Series processors
- Intel® C610 series PCH server class chipset
- Sixteen or eight DDR4 VLP DIMMs with ECC support
- Support 40G/10G ports on Fabric interface
- Two 10/100/1000Base-T BI ports
- Two 10/100/1000BASE-T front panel ports
- One Fabric Mezzanine Module (type II) for optional front I/O
- Support on-board VGA port
- Extended Storage options (2xSSD / MO-297)



Introduction

Advantech's MIC-5345 is a 40G dual processor ATCA blade based on the Intel® server platform formerly codenamed "Grantley". MIC-5345 is offered in two main configurations: As a dual processor blade supporting 16 DDR4 VLP DIMM slots it offers best in class memory support at lowest cost making it an ideal choice for typical server workloads and virtualized application scenarios such as NFV. Up to 512GB memory capacity allow users to harness the full capabilities of Intel®'s E5-2600v3 series processors with up to 24 cores and 48 threads for virtualization by providing a high amount of physical memory per virtual machine.

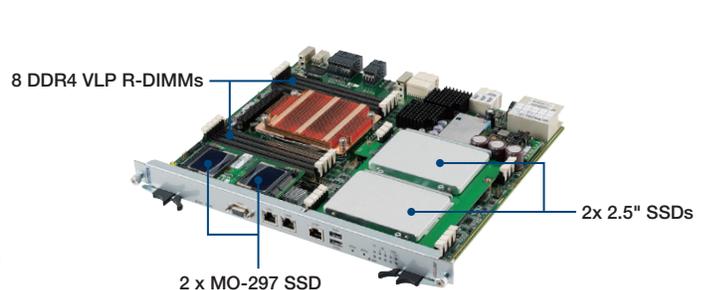
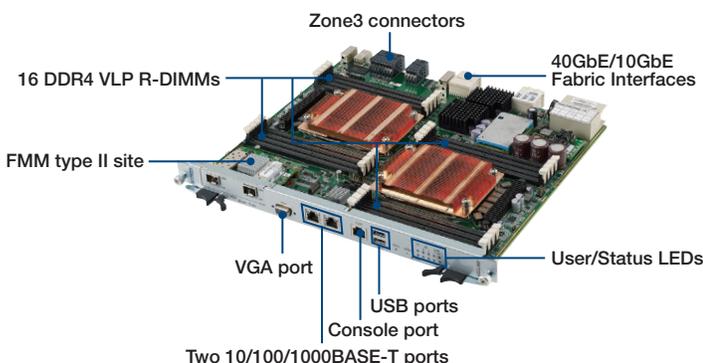
In a single processor configuration, the MIC-5345 offers a very attractive price point for applications which require lower processing power such as control plane and orchestration. With support for 8 DIMM sockets, two 2.5" SSDs and the processing performance offered by a 12 core Intel® E5-2600v3 processor, the MIC-5345 comes with an optimized feature set and outperforms 1st and 2nd generation dual socket ATCA blades resulting in a major cost reduction.

Both blade configurations feature two 10/40GbE fabric ports based on XL710-BM2 Ethernet controller with fast PCI Express gen. 3 technology running at up to 8Gbps per lane 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 eight DDR4 DIMMs per socket in a quad channel design running at up to 2133MT/s (1866MT/s with two DIMMs per channel populated) and RAM density up to 512GB, the MIC-5345 offers the latest memory technology with higher performance and lower power compared to DDR3 technology. It outperforms previous generation dual socket designs while keeping similar thermal characteristics. The dual socket SKU of MIC-5345 supports a Fabric Mezzanine Module type II socket with PCIe x8 connectivity providing extension possibilities for additional front port I/O, offload and acceleration controllers such as the Intel® Communications Chipset 89xx Series, IPSec offload engines or customer specific logic. The single socket MIC-5345 SKU features two additional MO-297 sockets instead of an FMM site.

The onboard IPMI firmware based on Advantech's IPMI core offers greater modularity and flexibility for the customization of system management features, and provides the framework for added value features enhancing Reliability, Availability, Serviceability, Usability and Manageability (RASUM) of the product. HPM.1 based updates are available for all programmable components (BIOS, BIOS Settings, IPMC firmware, FPGA) including rollback support. Advantech's IPMI solution, combined with an optimized UEFI BIOS, continues to offer advanced features used on previous generation MIC-533x blades, such as HPM.2 support, Dynamic Power Budgeting, BIOS redundancy, Real Time Clock Synchronization and MAC Mirroring. Advantech IPMI firmware has been tested for CP-TA compliance using the Polaris Networks ATCA Test Suite and against a variety of AdvancedTCA shelf management solutions. The MIC-5345 can be easily customized based on Advantech's unique Customized COTS framework with custom FMMs, modifications of the on-board system FPGA, IPMI and/or BIOS firmware.

Dual CPU SKU with 16 DIMM Support

Single CPU SKU with Extended Storage Support



Specifications

Processor System	CPU	Single or Dual Intel® Xeon® E5-2600 v3/v4 Series processors up to 105W TDP (chassis airflow dependent)	
	Max. Speed	2.2GHz (SKU dependent)	
	Chipset	Intel® C610 series PCH server class chipset	
	BIOS	Redundant AMI UEFI based BIOS	
	QPI	9.6 GT/s	
Memory	Technology	DDR4 up to four channel / 2400MHz SDRAM (72-bit ECC Un-/ Registered), LR DIMM support	
	Max. Capacity	Configurable up to 256 GB	
	Socket	16 VLP RDIMMs(Dual CPU SKU) / 8VLP RDIMMs (Single CPU SKU)	
Zone 2	Fabric Interface	1 Intel® XL710 controller with 2 x 40GBaseKR4 ports(Dual CPU SKU) 1 X710-BM2 with 2x 10GBase-KR ports (Single CPU SKU)	
	Base Interface	i350 supporting two 10/100/1000Base-T ports	
Front I/O Interface	Serial (COM)	1 x Serial Port (RJ-45)	
	VGA	1 x VGA Port	
	Ethernet	2 x 10/100/1000BASE-T through Intel® i350	
	USB 3.0	2 x Type A ports	
Operating System	Compatibility	CentOS7.0, RedHat Enterprise 7.0	
IPMC	BMC Controller	Aspeed	
	IPMI	Compliant with IPMI 2.0 using Advantech advanced IPMI core	
FMM	Site	1 FMM type II socket	
	Interface	FMM type II: one PCIe x8 from CPU socket 0	
Miscellaneous	Storage	2 x MO-297 (Single and Dual CPU SKU) / 2 x SATAIII 2.5" SSD HD (Single CPU SKU only)	
	Real Time Clock	Built-in	
Power Requirement	Configuration	2 x E5-2648 v3 (TDP 75W), 16 x DDR4 2133 (1866) 8GB VLP Memory	
	Consumption	Input Voltage: -48V / 288W Input Voltage: -60V / 289W	
Zone 3 (RTM)	RTM	Advantech common RTM interface Type 2	
	Interface	2 x PCIe x8 (J34), 2 x USB2.0 (J31), 4 x SATA3.0 (J32) 12V, 3.3V power for RTM (P30)	
Physical Characteristics	Dimensions (W x D)	6HP, 322.25 x 302.00 mm (PCB size)	
	Weight	2.8 kg	
Environment	Temperature	Operating 0 ~ 55° C (32 ~ 131° F) (selected SKUs, only)	Non-operating -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	
Compliance	PICMG	3.0 R3.0, 3.1 R2.0, HPM.1	
	EMC	FCC47 CFR Part15, Class A, CE Mark (EN55022/EN55024/EN300386) Designed to meet GR1089-CORE	

Ordering Information

Part Number	Description
MIC-5345SS1-P1E	MIC-5345 single cpu sku, two 10GBASE-KR4 FI ports with single eight-cores E5-2608Lv3 CPUs, no memory, no MO-297/SSD
MIC-5345SD2-P2E	MIC-5345 dual cpu sku, fur 40GBASE-KR4 FI ports with two twelve-cores E5-2648Lv4 CPUs, no memory, no MO-297/SSD

Related Products

Part Number	Description
RTM-5108	Rear Transition Module with dual 25G port, dual SAS 3.0 HDD supported (Available in 2017 Q2)
FMM-5001F	Niantic 10Gb LAN I/O Extended FMM (2x SFP+)