AMC645

NVMe HBA with RAID (0, 1, 5, 6, 10, 50 and 60)

AMC645

Key Features

- AMC NVMe Host Bus Adapter (HBA) with Full support for RAID
- Dual Core ARM A15 RAID On Chip (ROC)
- On board 8 GB of DDR4 Memory with ECC
- Hardware Engine for RAID 5 and RAID 6 acceleration
- AMC.1 PCIe Gen3 x8
- Single module, mid-size per AMC.0
- IPMI 2.0 compliant

Benefits

- Multi-Terabit storage capacity in a single module AMC form factor carrier
- NVMe performance with RAID support
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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AMC645

The AMC645 is full ROC HBA which supports RAID level 0, 1, 5, 6, 10, 50 and 60. The module supports End-to-End CRC (ECRC) and advanced Error Reporting (AER). The NVMe storage provides high speed and low latency read/write to the SSD devices.

The module has up to 16 NVMe storage devices and an additional 8 GB of DDR4 with ECC.

The AMC645 has PCIe Gen3 x8 or single x4 routed to the fabric ports 4-11.

The AMC645 is available in both air-cooled (MTCA.0 and MTCA.1) and rugged conduction-cooled versions (MTCA.2 or MTCA.3, contact sales for details).
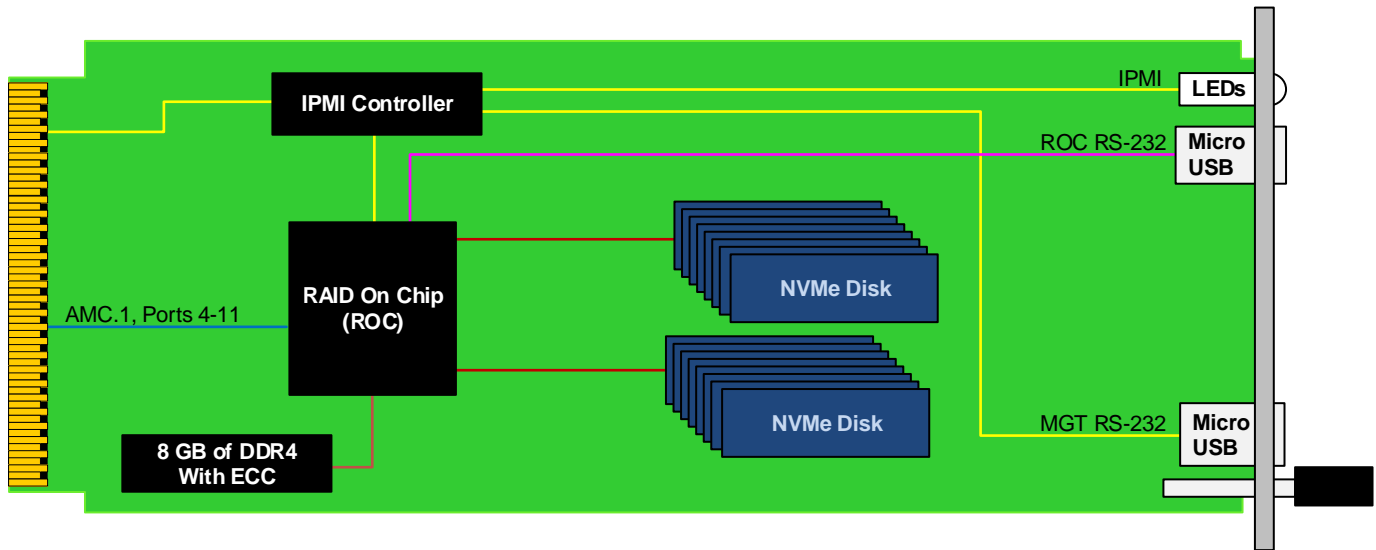

Figure 1: AMC645

Block Diagram
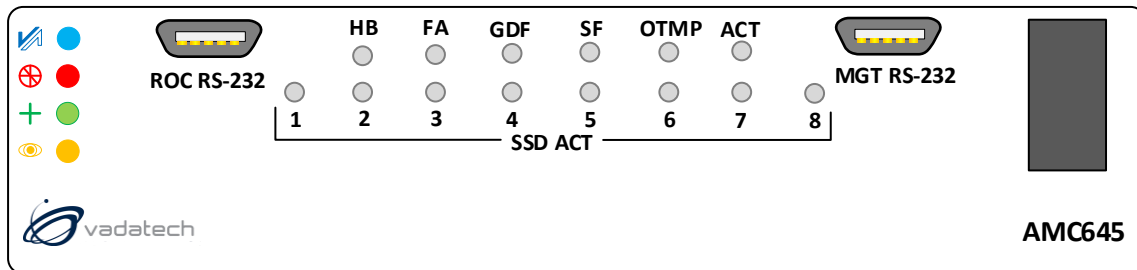

Figure 2: AMC645 Functional Block Diagram

Front Panel

Figure 3: AMC645 Front Panel

Specifications

Architecture		
Physical	**Dimensions**	Single module, mid-size (full-size optional)
		Width: 2.89" (73.5 mm)
		Depth 7.11" (180.6 mm)
Type	**AMC Storage**	NVMe SSD
Standards		
AMC	**Type**	AMC.1
Module Management	**IPMI**	IPMI v2.0
PCIe	**Lanes**	Single x8 or single x4
Storage	**SSD**	Up to 16 NVMe SSD
Configuration		
Power	**AMC645**	40 W with 8 TB of Storage
Environmental	**Temperature**	See ordering options and [environmental spec sheet](#)
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s^2 (1 G), 5 to 500 Hz on each axis
	Shock	Operating 325 G/2 ms, 160 G/1 ms
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	Micro USB connector for MGT RS-232
		Micro USB connector for CPU/ROC RS-232
	LEDs	IPMI Management Control
		Activity
	Mechanical	Hot swap ejector handle
Software Support	**Operating System**	Linux, Windows, Solaris and VxWorks
Other		
MTBF		MIL Hand book 217-F@ TBD hrs
Certifications		Designed to meet FCC, CE and UL certifications, where applicable
Standards		VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards
Warranty		Two (2) years

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of OpenVPX, ATCA and MTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTMs), Power Modules, and more. The company also offers integration services as well as pre-configured Application-Ready Platforms. Please contact VadaTech Sales for more information.

Ordering Options

AMC645 – ABC-000-00J

A = NVMe Storage capacity		
0 = 4TB 1 = 8TB (Full-size panel only) 2 = 16TB (Full-size panel only) 3 = Reserved 4 = Reserved		

B = PCIe Interface		
0 = x4 to ports 4-7 1 = x8 to ports 4-11		

C = Front Panel		J = Temperature Range and Coating
1 = Reserved 2 = Mid-size 3 = Full-size 4 = Reserved 5 = Mid-size, MTCA.1 (captive screw) 6 = Full-size, MTCA.1 (captive screw)		0 = Commercial (–5° to +45° C), No coating 1 = Commercial (–5° to +45° C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +45° C), Humiseal 1B31 Acrylic 3 = Reserved 4 = Industrial (–20° to +70° C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70° C), Humiseal 1B31 Acrylic

Related Products

VT950

- MicroTCA rugged 1U 19" rackmount chassis platform
- Meets MIL-STD-810F, MIL-STD-901D for shock/vibration
- Meets MIL-STD-461E for EMI

AMC626

- HBA for external SATA 3 (6.0 Gbps) or SAS-3 (12 Gbps) drives
- AMC.1 compliant, PCIe Gen3 x8 or x4
- Support for 8 SAS/SATA ports

AMC629

- HBA for external SATA 3 (6.0 Gbps) or SAS-3 (12 Gbps) drives
- Conduction cooled version available
- Integrated RAID 0, 1, 1E, and 10

Contact

VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014

Phone: +1 702 896-3337 | Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhu Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

info@vadatech.com | www.vadatech.com

Europe: EMCOMO Solutions AG

Industriestr. 10, 89231 Neu-Ulm, Germany
Phone: +49 731 8803510 | Fax: +49 731 88035129

vadatech@emcomo.de | www.emcomo.de

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