

AMC631C – Integrated RAID HBA with SAS Expander AMC

Integrated RAID, HBA



KEY FEATURES

- Host Bus Adapter (HBA) for off board SATA and SAS-3 (12 Gbps) drives
- Conduction cooled
- Single module, mid-size per AMC.0
- Integrated RAID 0, 1, 1E, and 10
- PCIe Gen3 x8 or x4 on ports 4-11, AMC.1 compliant
- SAS-3/SATA III x4 lanes on ports 12-15 and ports 17-20
- Additional x24 lanes on tongue 2
- IPMI 2.0 compliant

AdvancedMC™

Benefits of Choosing VadaTech

- PCIe Gen3 provides very high speed host communication
- Basis for flexible high-performance storage sub-system configurations
- Fault tolerant data storage
- Conduction cooled solution
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

The AMC631C is an integrated RAID with a Host Bus Adapter for SATA III or SAS-3 drives located in other slots and routed across the backplane, supporting integrated RAID 0 (striping), 1 (mirroring), 1E, and 10 (mirroring and block-level striping).

This makes it suitable for use with high-performance SSD modules to form a compact fault-tolerant storage sub-systems. The high bandwidth host interconnect, and the platform management capability inherent in MicroTCA, mean the module is ideal for high-energy research, high end instrumentation, and mil/aero signal acquisition systems.

The AMC631C routes its SAS/SATA ports to Ports 12-15 and 17-20. This allows expansion to other SAS Expanders or disks via the backplane routing (e.g. see VadaTech AMC632C). There are additional x24 ports on tongue 2 connector routed from the on-board SAS expander, which can be used to support external drives or other AMCs (depending on backplane routing).

The AMC631C is available in rugged conduction-cooled (MTCA.2 or MTCA.3) versions.

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BLOCK DIAGRAM

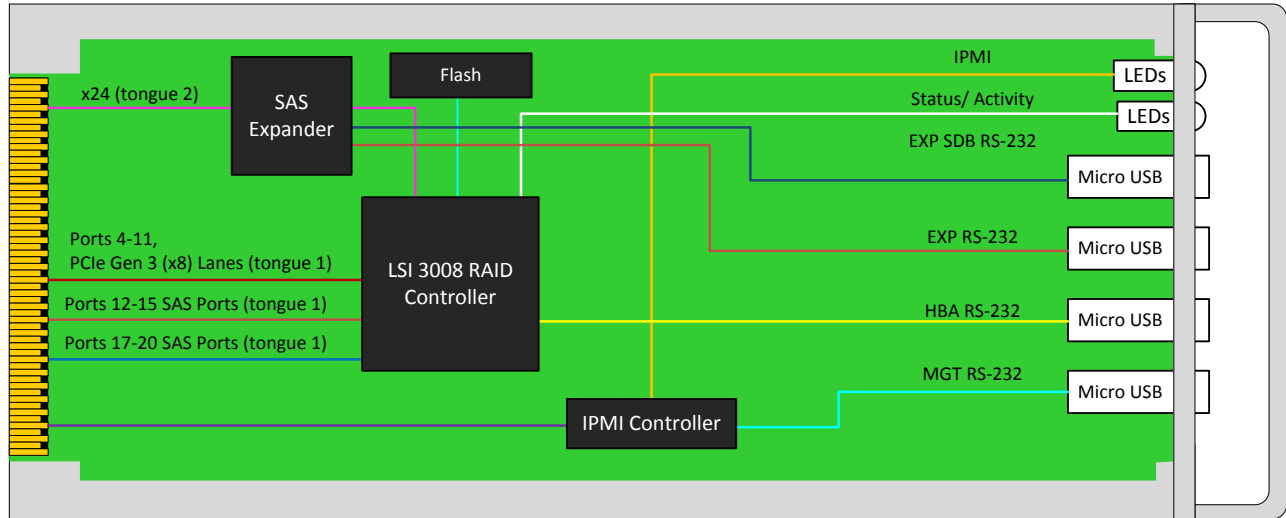


Figure 1: AMC631C Block Diagram

FRONT PANEL

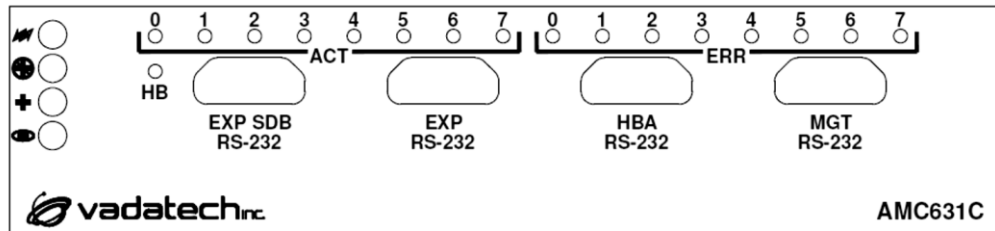


Figure 2: AMC631C Front Panel

SPECIFICATIONS

Architecture			
Physical	Dimensions	Single module, mid-size	
		Width: 2.89" (73.5 mm)	
		Depth: 7.11" (180.6 mm)	
Type	AMC Storage	Integrated RAID (0, 1, 1E, and 10)	
		Host Controller with SAS Expander	
Standards			
AMC	Type	AMC.0 and AMC.1	
Module Management	IPMI	IPMI Version 2.0	
PCIe	Lanes	PCIe Gen 3, x8 (or x4) on tongue 1	
SAS	Lanes	Ports 12-15 and 17-20 on tongue 1	
		x24 on tongue 2	
Configuration			
Power	AMC631C	10 W	
Environmental	Temperature	Operating temperature: -5° to 45° C (55°C for limited time, performance restrictions may apply), industrial and military versions also available (See environmental spec sheet)	
		Storage temperature: -40° to +85° C with the disk	
		Vibration	Operating 9.8 m/s ² (1G), 5 to 500 Hz
		Shock	Operating 325G/2 ms, 160G/1 ms
	Relative Humidity	5 to 95 percent, non-condensing	
Front Panel	Connectors	4x RS-232 (MGT, HBA, EXP and EXP SDB)	
	LEDs	IPMI management control	
		Activity, Fault and Heartbeat	
	Mechanical	Wedgelocks (AMC631CC)	
Software Support	Operating System	Linux, Windows, Solaris and VxWorks	
Other			
MTBF		MIL Handbook 217-F@TBD Hrs	
Certifications		Designed to meet FCC, CE and UL certifications where applicable	
Compliance		RoHS and NEBS.	
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 ATCA and µTCA products including chassis platforms, shelf managers, AMC modules, Switch and Payload Boards, Rear Transition Modules (RTM), 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.

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ORDERING OPTIONS

AMC631C – A0C – 000 – 00J

A = PCIe

- 1 = PCIe x4
- 2 = PCIe x8

C = Ruggedization Level*

- 0 = None
- 1 = Contact Vadatech
- 2 = Contact Vadatech
- 3 = Contact Vadatech

J = Temperature Range and Coating

- 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
- 6 = Extended (–40° to +85° C), Humiseal 1A33 Polyurethane**
- 7 = Extended (–40° to +85° C), Humiseal 1B31 Acrylic**

* Ruggedization level is per the uTCA.2 and uTCA.3 specification

** Edge of module

RELATED PRODUCTS



VT872 1/2 ATR Short
6 AMC, Conduction Cooled



AMC529C Dual DAC
14-bit @ 5.7 GSPS Module



AMC720 Xeon E3-1125
Processor AMC

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