AMC631C

Integrated RAID HBA with SAS Expander, AMC

AMC631C

Key Features

- Host Bus Adapter (HBA) for off board SATA and SAS-3 (12 Gbps) drives
- 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

Benefits

- 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

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AMC631C

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-system. 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 connecter 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.

Figure 1: AMC631C

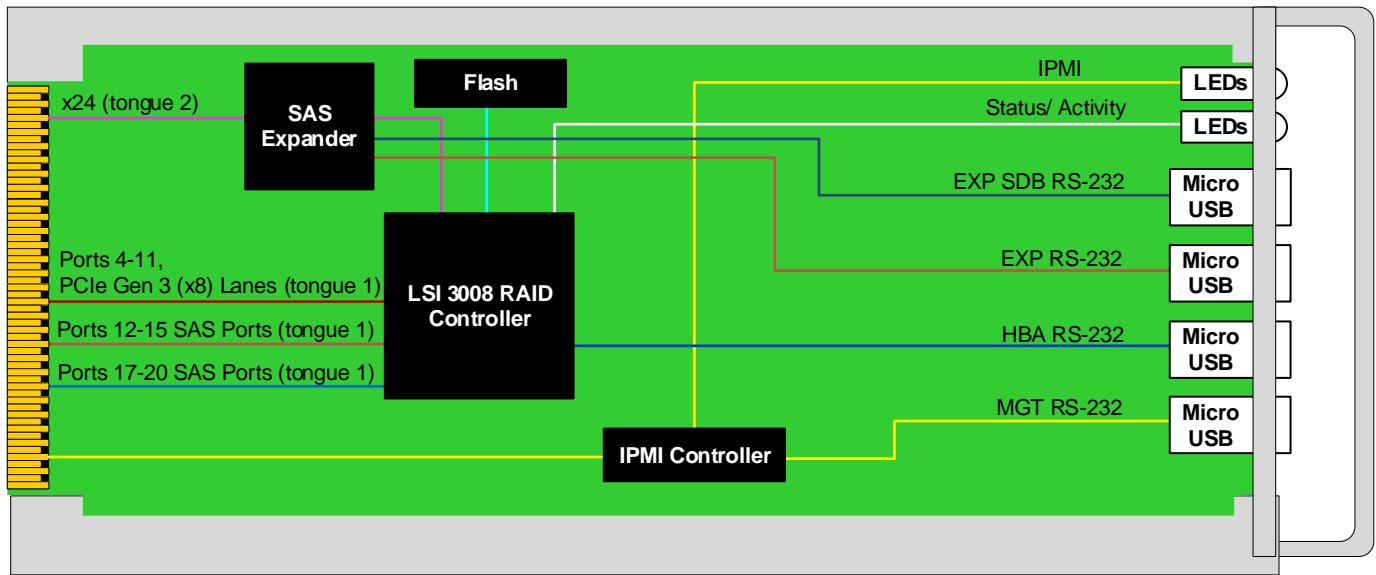AMC631C – Integrated RAID HBA with SAS Expander, AMC

Block Diagram

Figure 2: AMC631C Functional Block Diagram

Front Panel
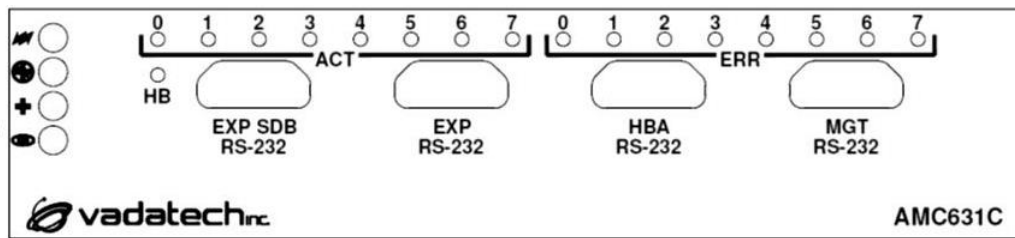
Figure 3: AMC631C Front Panel

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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**	Integrated RAID (0, 1, 1E and 10)
		Host Controller with SAS Expander
Standards		
AMC	**Type**	AMC.0 and AMC.1
Module Management	**IPMI**	IPMI v2.0
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**	See ordering options and 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 325 G/2 ms, 160 G/1 ms
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface 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 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

AMC631C – A0C-000-00J

A = PCIe		
1 = PCIe x4 2 = PCIe x8		
C = Ruggedization Level*		**J = Temperature Range and Coating**
0 = No ruggedization 1 = Contact VadaTech 2 = Contact VadaTech 3 = Contact VadaTech		0 = Commercial (–5° to +55°C), No coating 1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic 3 = Industrial (–20° to +70°C), No coating 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**

Notes: * Ruggedization level is per the MTCA.2 and MTCA.3 specification.
   ** At the edge of the module for conduction cooled.

Related Products

VT872

- MTCA.3 Conduction Cooled System Platform
- 1/2 Short Air Transport Rack (ATR) per ARNIC404A, with no internal fan (12.62" deep without handle)
- Customized Front Input/Output (I/O) Panel Connector layout per customer requirement (option per MIL-DTL-M38999)

AMC529C

- Conduction cooled
- Dual AD9129 DAC, 14-bit at 5.7 GSPS (2.85 GSPS direct RF synthesis)
- Single module, mid-size per AMC.0

AMC720C

- Conduction cooled
- Intel® Xeon™ E3 processor
- Single module, mid-size per AMC.0

Contact

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