AMC629 /AMC629C – AMC Integrated RAID w/HBA

AMC629

AMC629C

KEY FEATURES

- Host Bus Adapter (HBA) for external SATA III (6.0 Gbps) or SAS-3 (12 Gbps) drives
- Conduction cooled version available
- 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
- IPMI 2.0 compliant

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
- Strong mil/aero support
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

The AMC629 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 AMC629 routes its SAS/SATA ports to Ports 12-15 and 17-20. This allows expansion to the SAS Expanders or disks via the backplane routing (e.g. see VadaTech AMC635)

The AMC629 is available in both air-cooled (MTCA.0 and MTCA.1) and rugged conduction-cooled (MTCA.2 or MTCA.3) versions.
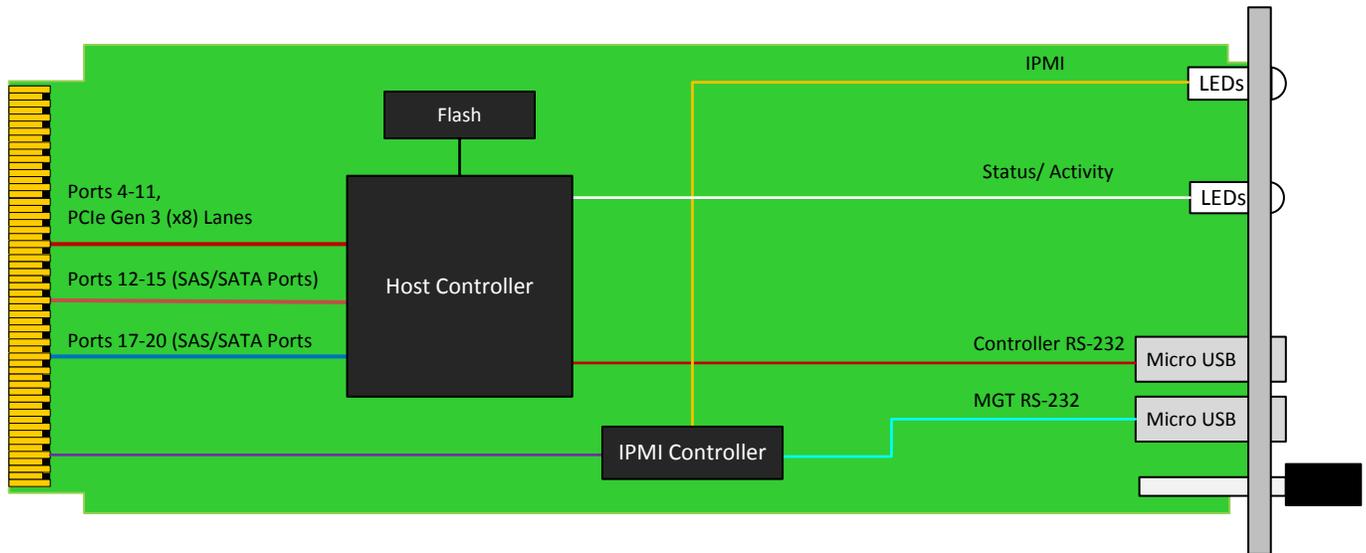
AMC629

BLOCK DIAGRAM

Flash

Ports 4-11,
PCIe Gen 3 (x8) Lanes

Ports 12-15 (SAS/SATA Ports)

Ports 17-20 (SAS/SATA Ports

Host Controller

IPMI Controller

IPMI

Status/ Activity

LEDs

LEDs

Controller RS-232

MGT RS-232

Micro USB

Micro USB

Figure 1: Block Diagram

FRONT PANEL

FLT

0 1 2 3 4 5 6 7

ACT

HB

CTR
RS-232
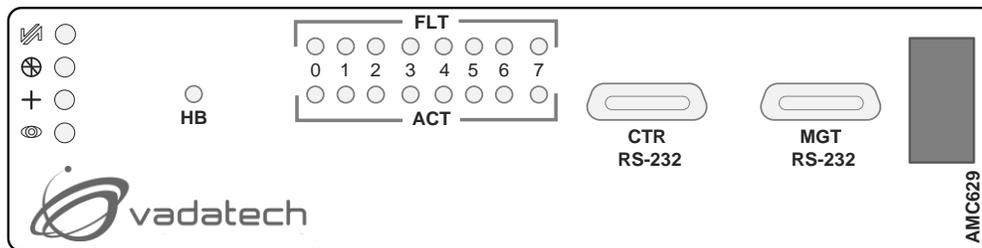
MGT
RS-232

vadatech

AMC629

Figure 2: AMC629 Front Panel

AMC629C

BLOCK DIAGRAM
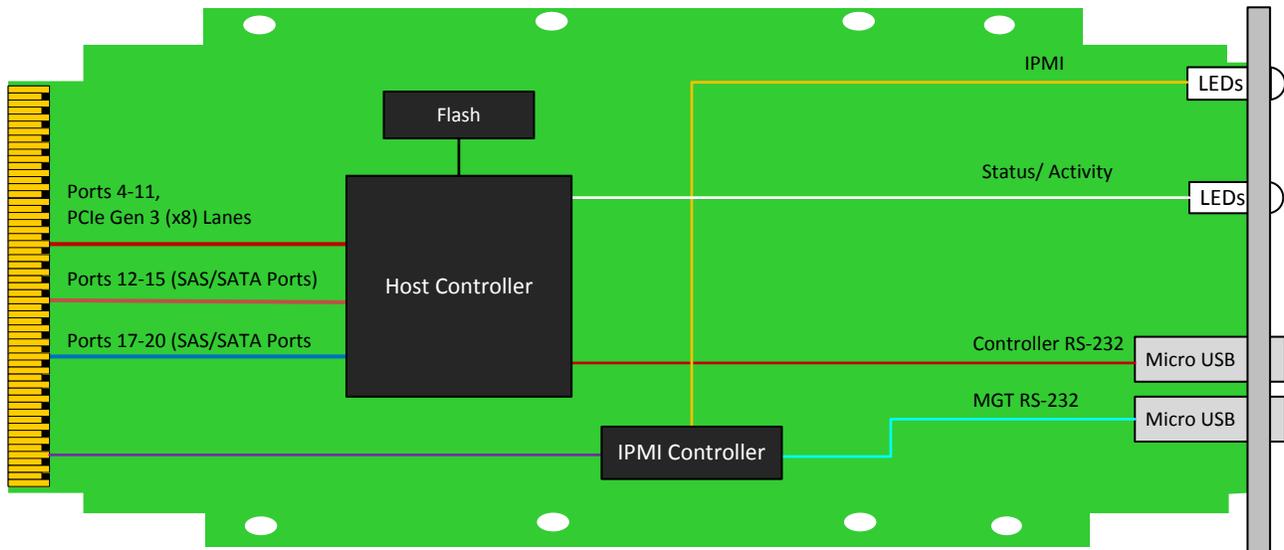
Figure 3: AMC629C Block Diagram

FRONT PANEL
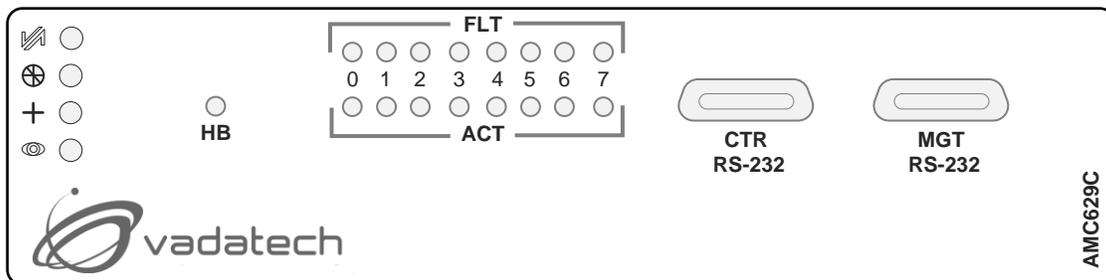
Figure 4: AMC629C Front Panel

SPECIFICATIONS

Architecture		
Physical	Dimensions	Single module, mid-size (full-size option available)
		Width: 2.89" (73.5 mm)
		Depth: 7.11" (180.6 mm)
Type	AMC Storage	Integrated RAID (0, 1, 1E, and 10)
		Host Controller
Standards		
AMC	Type	AMC.1
Module Management	IPMI	IPMI Version 2.0
PCIe	Lanes	PCIe Gen 3, x8 (or x4)
Configuration		
Power	AMC629	~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	Dual RS-232 (CRT, MGT)
	LEDs	IPMI management control
		Activity, Fault and Heartbeat
	Mechanical	Hot swap ejector handle (AMC629); Wedgelocks (AMC629C)
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

AMC629 – A0C – 000 – 00J

A = PCIe
1 = PCIe x4
2 = PCIe x8

C = Front Panel Size
1 = Reserved
2 = Mid-size
3 = Full-size
4 = Reserved
5 = Mid-size, MTCA.1 (captive screw)
6 = Full-size, MTCA.1 (captive screw)

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 = Military (–40° to +85° C), Humiseal 1A33 Polyurethane
7 = Military (–40° to +85° C), Humiseal 1B31 Acryli

AMC629C – 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 = Military (–40° to +85° C), Humiseal 1A33 Polyurethane
7 = Military (–40° to +85° C), Humiseal 1B31 Acrylic

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

RELATED PRODUCTS

VT872 ½ ATR Short, 6 AMC Conduction Cooled Chassis

UTC004 MCH for µTCA Chassis (3rd generation)

AMC635 AMC Carrier for JBOD 8 mSATA Disks

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