vadatech
THE POWER OF VISION

1U µTCA Chassis, 12 AMC, PCIe Gen 3 – VT843

1U µTCA Chassis, 12 AMCs

KEY FEATURES

- Twelve mid-size single module AMC slots or six mid-size double module AMC slots
- 96 port switch for x8 PCIe Gen 3 routing to all slots (ports 4 to 11)
- Management can run as Shelf/MCMC (MicroTCA Carrier Management Controller) or MCMC
- AMC.1, AMC.2, and AMC.3 compliant
- GbE Managed Layer Two (ports 0 and 1)
- Telco Alarm and Carrier Locator
- JTAG Switch Module (JSM) with front port access
- Telecom/GPS Clock on TCLKA, TCLKB, TCLKC and TCLKD and Fabric Clock on FCLK
- Redundant 1+1 Power supply and Cooling Units (CUs)
- Removable Power supply, Air Filter, and Fan Trays
- ESD jack at the top front

Benefits of Choosing VadaTech

- Vast performance density with x8 PCIe Gen 3 signals across 12 slots in a 1U chassis
- Scorpionware Shelf Management Software included at no charge
- Redundant, swappable power and cooling
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company

The VT843 is a 1U µTCA chassis that provides twelve mid-size AMC slots that can accept any AMC.1 (ports 4 to 11), AMC.2 (ports 0 and 1) and AMC.3 (ports 2 and 3 are routed to adjacent slots). It provides FCLKA, TCLKA, TCLKB, TCLKC and TCLKD to each AMC.

The VT843 has redundant power supplies as well as redundant cooling units for high availability. The power supplies, air filter and fan trays are all hot swappable.

The chassis has a JTAG Switch Module (JSM) per µTCA specification. This provides transparent communication between the front JTAG port and the selected AMC device. It can operate up to 50MHz.

The VT843 runs VadaTech proven second generation management software. The shelf manager implements IPMI management, FRU management, and shelf environment management for power, thermal, E-keying, etc. It can run as the Shelf/MCMC or MCMC.

VadaTech can modify this product to meet special customer requirements. Contact us to discuss your application.

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COOLING AND TEMPERATURE SENSORS

The VT843 has dual intelligent cooling units. This redundancy allows fail-safe operation in case one of the cooling units becomes non-operational. The cooling airflow is from right to left. The removable air filter has a switch to detect its presence and can be monitored for when it needs to be replaced.

There are a total of 12 temperature sensors in the chassis that monitor the intake and the outtake air temperature throughout the chassis.

TELCOM, GPS AND FABRIC CLOCKS

The µTCA specification defines a set of clocks for Telecom and non-Telecom applications. The VadaTech VT843 has the most sophisticated clocking distribution in the market to meet the most stringent requirements such as wireless infrastructure, high speed A/D, etc. The VT843 has three types of clocks defined:

- Telecom clock
- GPS clock
- Fabric clock

TELCO ALARM

The VT843 provides Telco alarm functionality to alert about any anomaly within the chassis. The Telco Alarm is provided via a Micro DB-9 as well as LEDs in the front to show any anomaly. The Telco alarm module is built into the chassis, located next to the left fan tray.

FRU INFORMATION AND CARRIER LOCATOR

The VT843 has FRU information and a Carrier Locator. The Carrier Locator is assigned by mechanical dip switches which are easily accessible via the front panel. The MCH reads the Locator via its private I2C bus.

SCORPIONWARE™ SOFTWARE

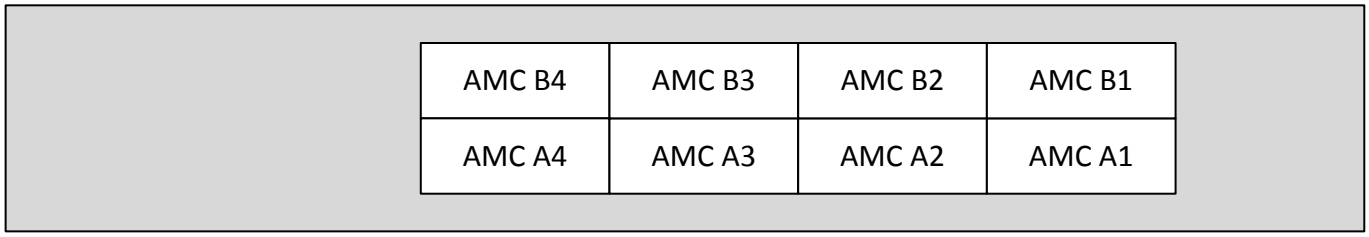
VadaTech's Scorpionware software can be used to access information about the current state of the Shelf or the Carrier, obtain information such as the FRU population, or monitor alarms, power management, current sensor values, and the overall health of the Shelf. The software GUI is very powerful, providing a Virtual Carrier and FRU construct for a simple, effective interface.

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.

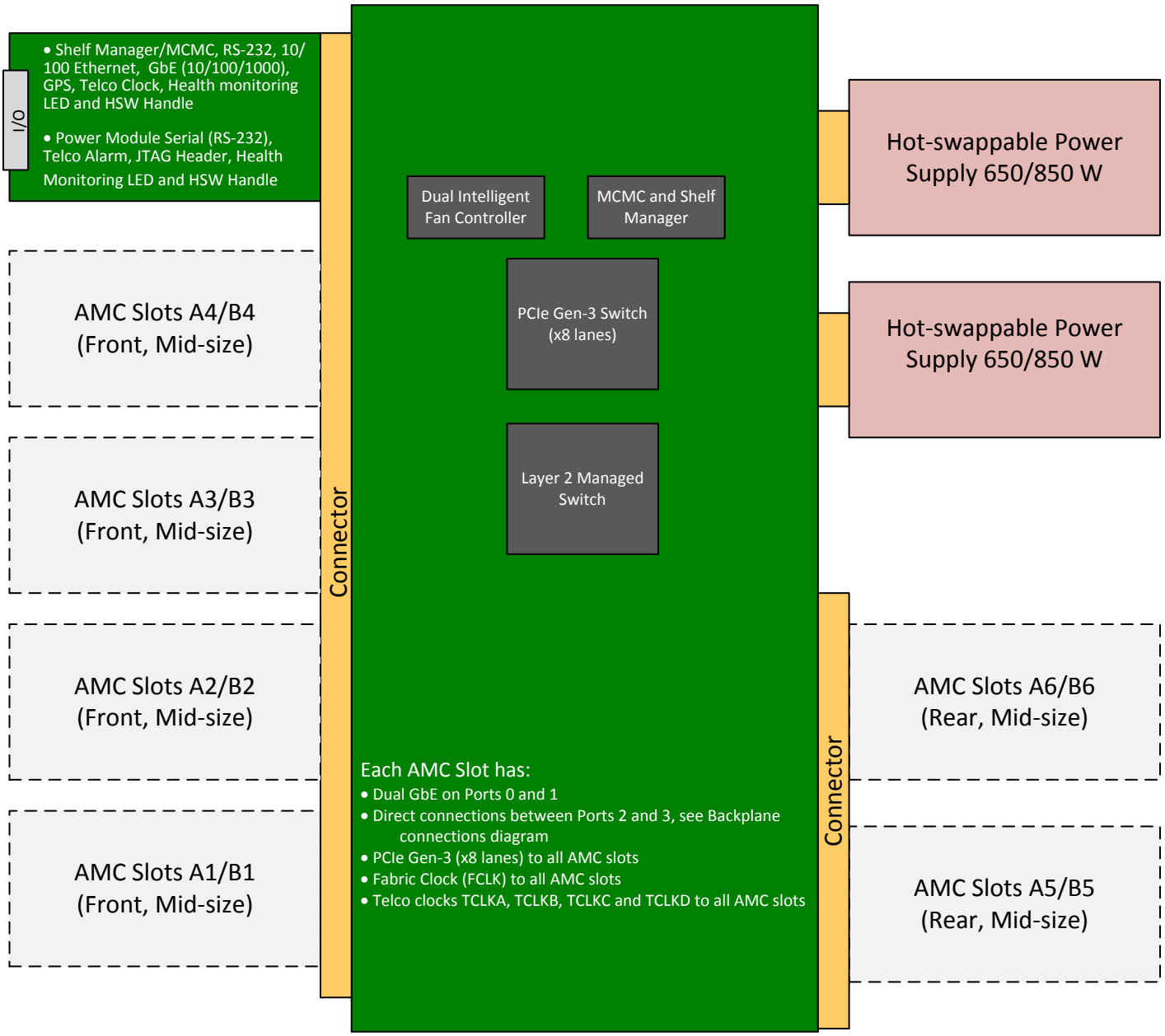
CHASSIS CONFIGURATION

Front View

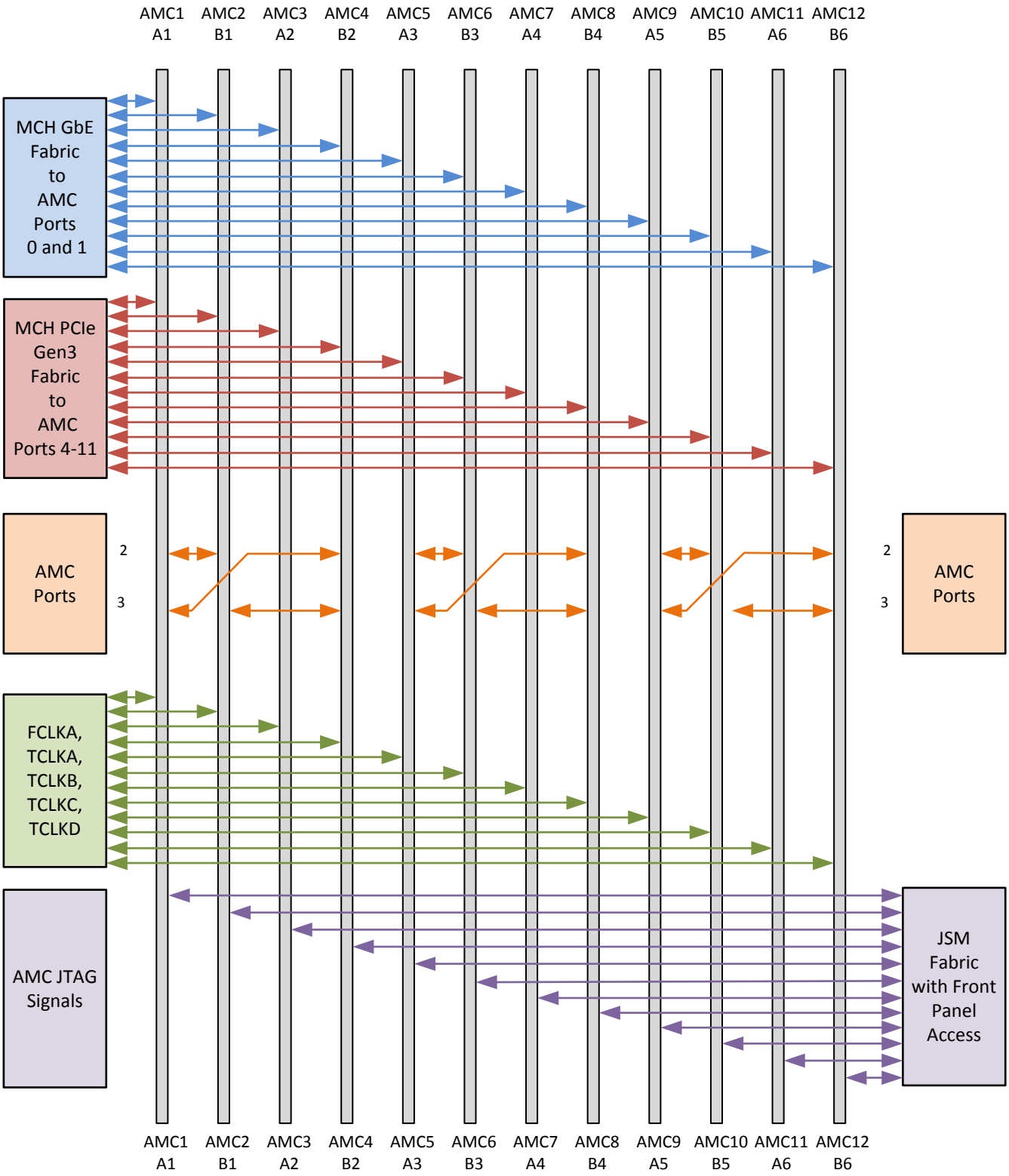


Rear View

BLOCK DIAGRAM



BACKPLANE CONNECTIONS



SPECIFICATIONS

Architecture		
Physical	Dimensions	Height 1U
		Width 19”
		Depth 23.6”(600 mm)
Type	µTCA Chassis	12 AMC.0 mid-size slots
Standards		
AMC	Type	AMC.0, AMC.1, AMC.2, AMC.3
µTCA	Type	PICMG 3.0 Rev 3.0
Module Management	IPMI	V2.0
Configuration		
PCIe	Lanes	x8
GbE	1000-BX	Two GbE SerDes per AMC
Telco Clock	MLVDS	Per AMC.0 specifications for TCLKA, TCLKB, TCLKC and TCLKD
Fabric Clock	HCSL	Per AMC.1 100 MHz HCSL
Power	VT843	650/850W per supply AC or DC 396/796W
		110-240VAC with frequency from 47-63Hz or DC -36V to -75V
Environmental	Temperature	Operating Temperature: 0° to 55° C
		Storage Temperature: –40° to +90° C
	Vibration	0.5G RMS, 20-20,000 Hz random (Operating): 6G RMS (non-operating)
	Shock	30G on each axis
	Relative Humidity	5 to 95 percent, non-condensing
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
Other		
MTFB	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	
Compliance	RoHS and NEBS	
Warranty	Two (2) years	
Trademarks and Disclaimer	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice	

Rear View

ORDERING OPTIONS

VT843 – AB0 – 0E0 – GHJ

A = Management Software
1 = MCMC
2 = MCMC and Shelf Manager

B = JSM
0 = None
1 = Included

E = Telco/GPS Clock
0 = None
1 = Telco TCXO*
2 = GPS TCVCXO* 30.72 MHz**
3 = GPS TCVCXO* 10.0 MHz**
4 = Clock Distribution Only
5 = Reserved

G = Power Supply***
0 = 650W
1 = 1300W (2x 650W)
2 = 850W
3 = 1700 (2x 850W)
4 = DC –36V to –75V (398W)
5 = DC –36V to –75V (2x398W)
6 = DC –36V to –75V (796W)
7 = DC –36V to –75V (2x796W)
8 = Reserved
9 = Reserved

H = Operating Temp
1 = Commercial
2 = Industrial

J = Conformal Coating
0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

* The Crystal Oscillator is Stratum-3; for lower cost solutions contact VadaTech Sales
** Frequencies from 8MHz to 52MHz are available
*** When installing two power supplies they will run as redundant when the total power demand is less than a single supply.

RELATED PRODUCTS

AMC720 Core i Processor

AMC626 HBA Storage Module

AMC515 Virtex-7 FPGA

CONTACT US

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