VT869

6U Ruggedized MicroTCA Chassis,

12 AMCs

Key Features

- µTCA System Platform 19” x 6U x 13.62” deep (20.32” deep with handles and sliding rails)
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and dual Power Modules
- Up to 12 AMCs: six full-size and six mid-size or 10 full-size AMCs
- Dual star topology
- Meets MIL-STD-810G Ref. 12 Method 516
- Meets MIL-STD-416F Ref 18
- Front to back cooling

Benefits

- Dual (one for each power module) integrated EMC and transient filters for the system to comply with MIL-STD-1275D, DO-160E and/or MIL-STD-461F
- Dual replaceable fan trays are incorporated to provide front-to-back air cooling.
- Replaceable air dust filter
- Alarm and activity LED indicators in the front.
- Heavy duty sliding rails designed for 19” rack mount capability.

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The VT869 is a 6U µTCA chassis that provides six full-size and six mid-size AMC slots that can accept any AMC.1, AMC.2, AMC.3 and/or AMC.4. The chassis has two options for the backplane (for other backplane configurations please contact VadaTech Sales). With one configuration there are 12 slots (6 full-size and 6 mid-size) and a second configuration which is 10 slots (10 full-size). Each AMC slots receives 5 clocks (FCLKA, TCLKA, TCLKB, TCLKC and TCLKD).

The VT869 has full redundancy. It's capable of having redundant MCH, Power Modules, as well as redundant Cooling Units for high availability.

Figure 1: VT869 with Top Cover

Chassis Architecture

The VT869 is designed with all sides produced from machined aluminum with the joints designed to minimize EMI leakage. A cable guide is provided for the internal cables between the front panel connectors and the AMC module connectors. The cables are tied to this rail, which is detachable using thumb screws. In this way, the entire internal cable/connector harness can be loosened during replacement of the lower fan tray and/or module(s).

Heavy duty sliding rails, (MiSuMi p/n SSRRH3645), are used to fix the chassis to a 19" cabinet. The selected rails are made of stainless steel with dual lines of linear ball bearings. A pair of these rails can take a load of approximately 100 kg.

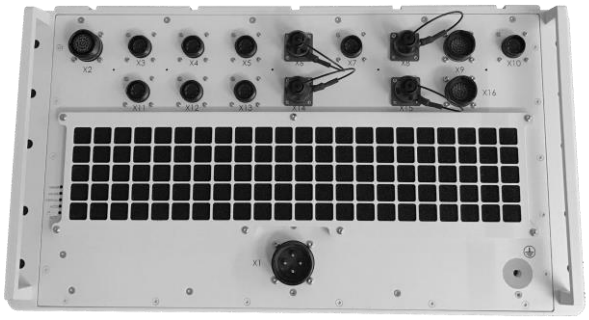


Figure 2: VT869 Front View (Example)

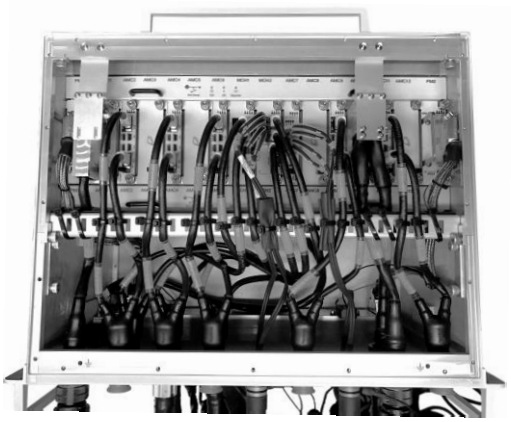


Figure 3: VT869 Chassis Top View without Cover

Cooling and Temperature Sensors

The VT869 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 front to back. 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.

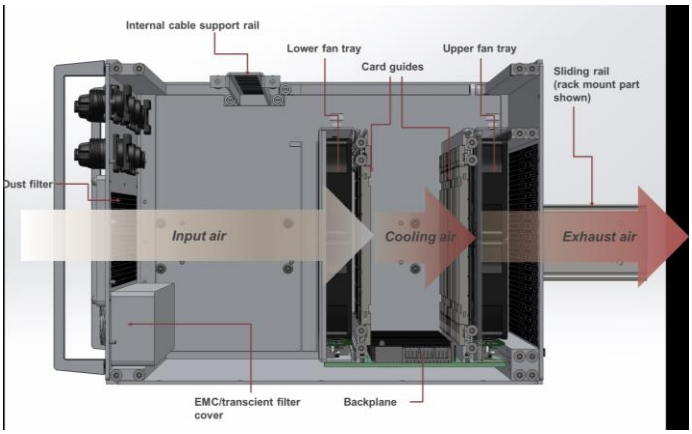


Figure 4: VT869 Airflow

Power Supplies

The VT869 has two Power Modules slots to accept standard MicroTCA power modules.

Telco Alarm

The VT869 provides Telco Alarm functionality to alert the user to any anomaly within the chassis, including status LEDs on the front panel.

FRU Information and Carrier Locator

The VT869 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.

No Active Components

Unlike other µTCA chassis in the market, the VT869 has no active components on its back plane. This allows ease of serviceability.

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.

Chassis Layout

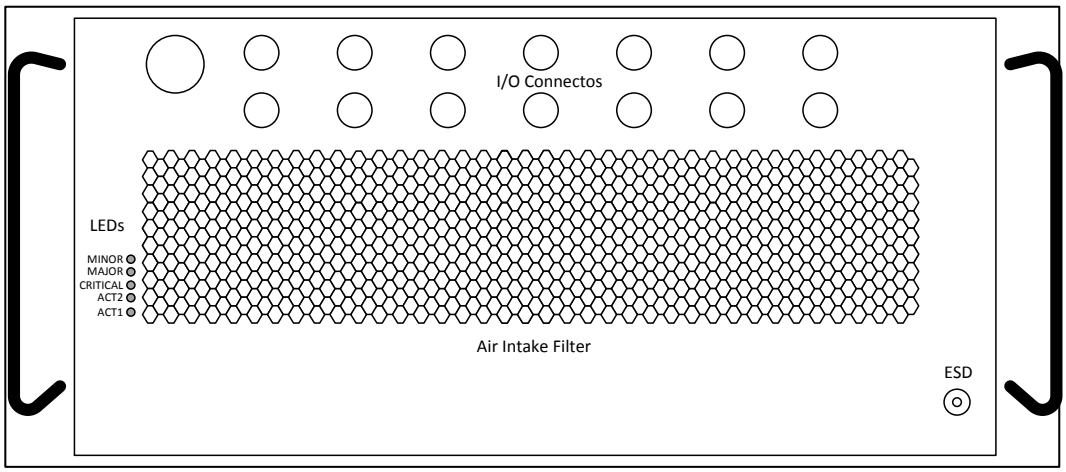


Figure 5: VT869 Front View (I/O Connectors shown as example, contact sales for more information)

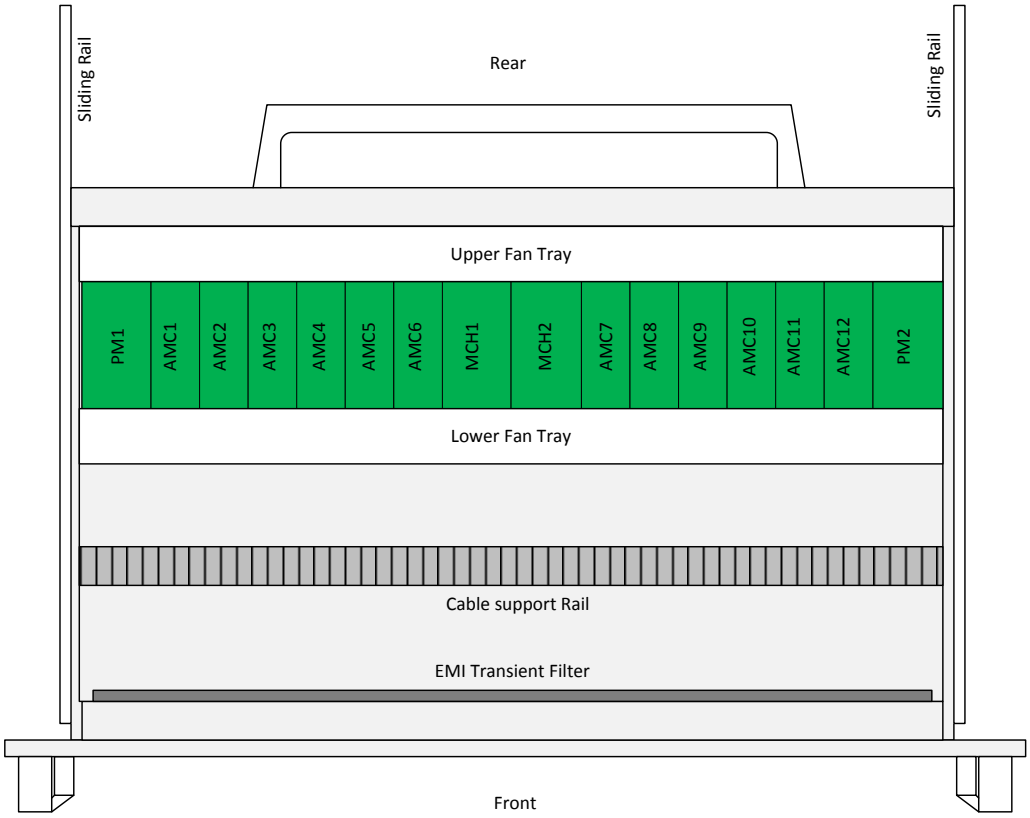
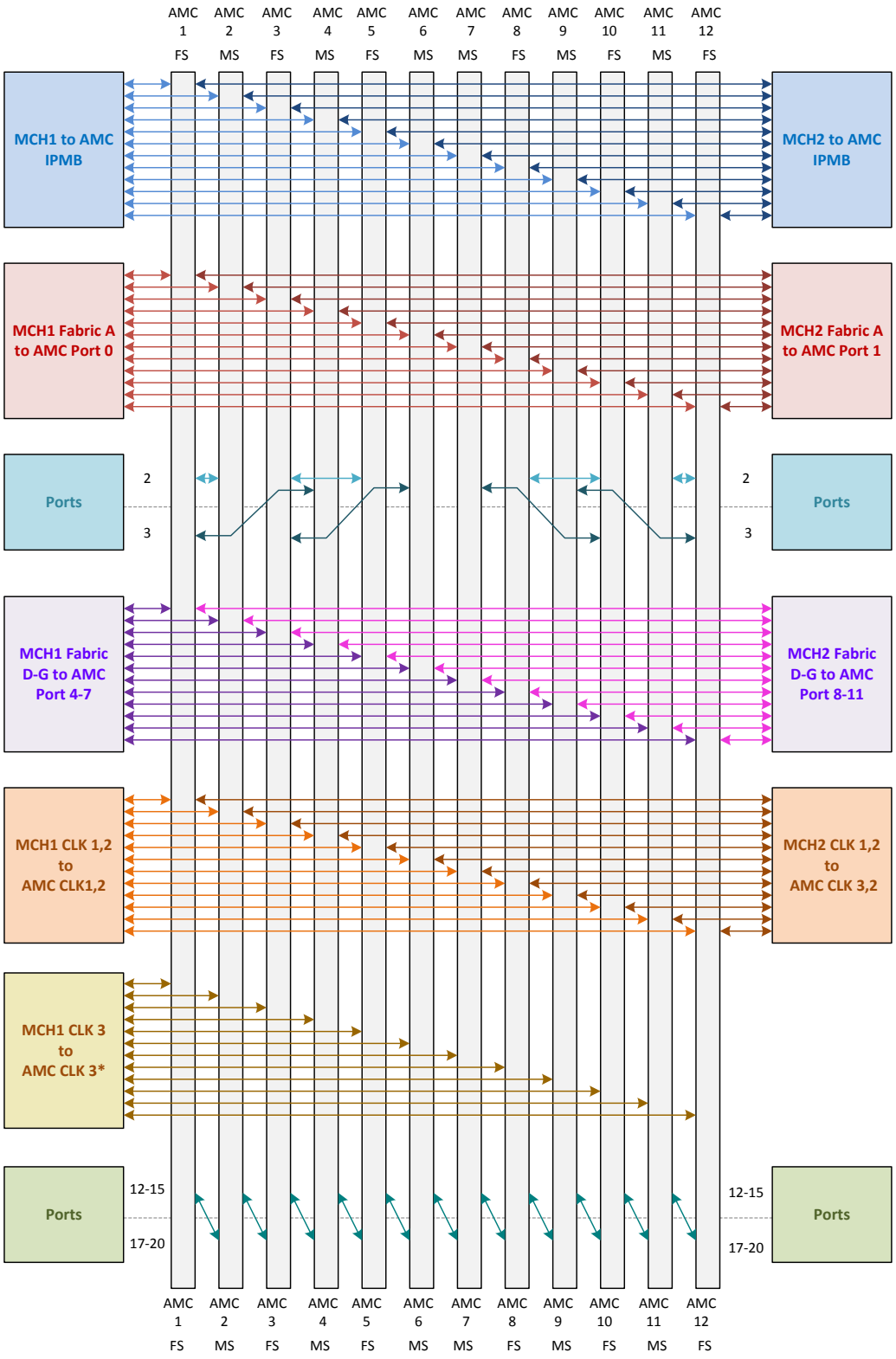


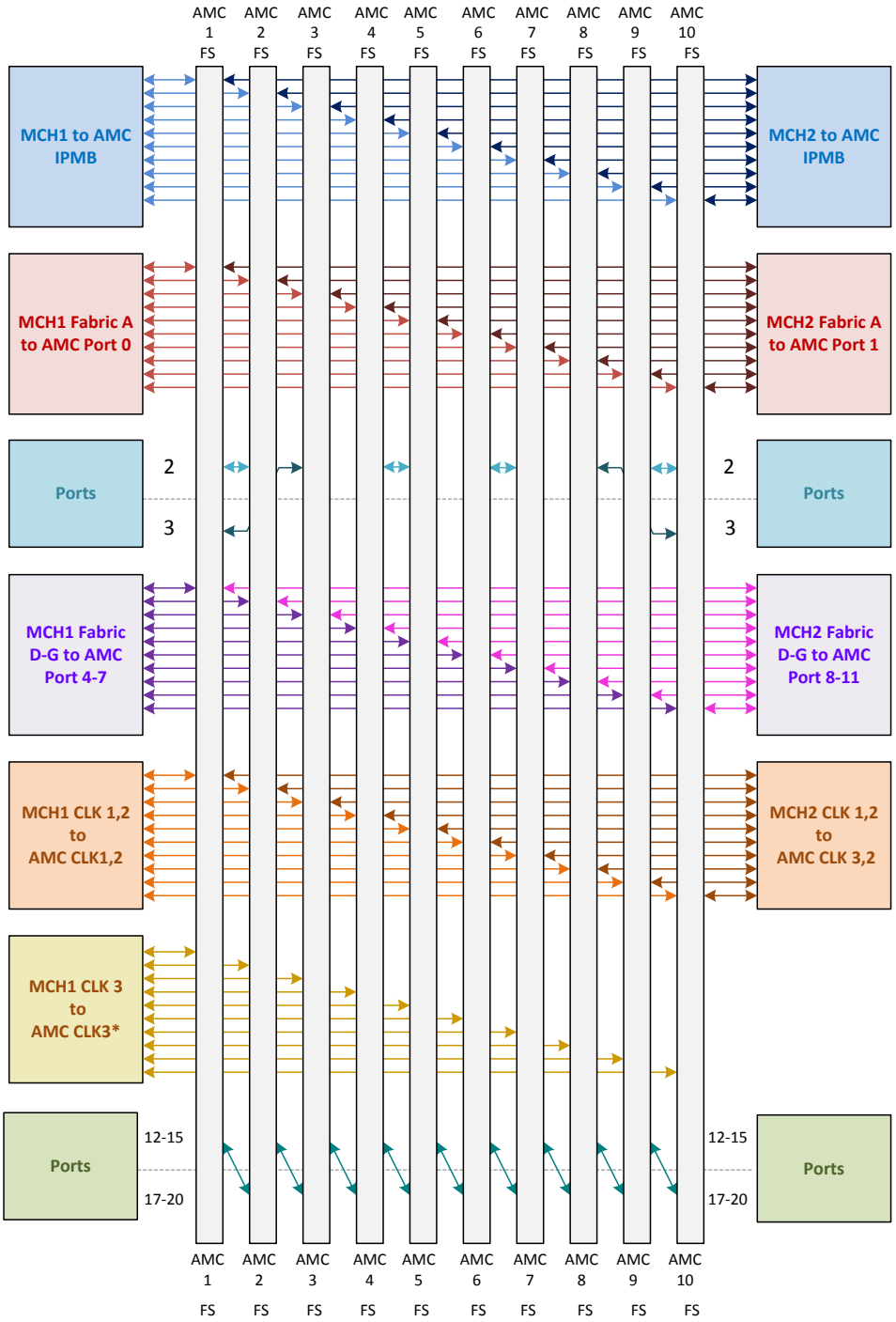
Figure 6: VT869 Top View (without top cover)

Backplane Connections



*MCH CLK3 can run as Fabric Clock (i.e. PCIe clock).
**FS=Full-size, MS= Mid-size

Figure 7: VT869 Backplane Routing for 12-slot Option



*CLK3 can run as Fabric Clock (i.e. PCIe clock)
**FS=Full-size

Figure 8: VT869 Backplane Routing for 10-slot Option

Specifications

Architecture		
Physical	**Dimensions**	Height: 6U
		Width: 19”
		Depth 13.62” deep (20.32” deep with handles and sliding rails)
Type	**MTCA Chassis**	12 AMC.0: 6 Mid-size and 6 Full-size slots or 10 Full-size
Standards		
AMC	**Type**	AMC.0, AMC.1, AMC.2, AMC.3 and AMC.4
MTCA	**Type**	PICMG 3.0 Revision 2.0
Module Management	**IPMI**	Version 2.0
Configuration		
Power	**VT869**	Power Module dependent
		DC Input from 18-36V, 10-36V or -36 to -75V (Power Module dependent)
Environmental	**Temperature**	Operating temperature: -5° to 45° C (55°C for limited time, performance restrictions may apply), industrial and extended versions also available (See environmental spec sheet)
		Storage Temperature: –40° to +85°C
	Altitude	10,000 ft operating
		40,000 ft non-operating
	Vibration	MIL-STD-810G Ref. 12 Method 516
	Shock	MIL-STD 810G Ref. 12 Method 516
	Relative Humidity	5 to 95 per cent, non-condensing
Front Panel	**Interface Connectors**	Contact Sales
	LEDs	IPMI and Telco Alarms
Software Support	**Operating System**	Agnostic
Conformal Coating		Humiseal 1A33 Polyurethane (Optional)
		Humiseal 1B31 Acrylic (Optional)
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 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.

Trademarks and Disclaimer

Ordering Options

VT869 – A00-000-00J

A = Backplane*		
0 = 12 slots (Figure 7) 1 = 10 slots (Figure 8) 2 = Reserved 3 = Reserved		
		J = Conformal Coating
		0 = None 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

*For other backplane configuration please contact VadaTech Sales

Related Products

AMC597

- Xilinx UltraScale™ XCKU115 FPGA
- Octo complete transceiver signal chain solution
- Based on quad Analog Devices AD9371

UTC004

- Unified 1GHz quad-core CPU for MCMC (MicroTCA Carrier Management Controller), Shelf Manager, Clocking, and Fabric management
- Automatic fail-over with redundant UTC004s
- 1GbE base switch with dual 100/1000/10G uplink

UTC014

- 10 to 36 VDC input for 241W option and 18 to 36 VDC input for 460W option
- Support for power module redundancy
- 32-bit RISC processor

Contact

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