VT968

6U Ruggedized MicroTCA Chassis, Based on uTCA.2 with 10 AMCs

VT968

Key Features

- MTCA System Platform 19” x 6U x 13.64” deep (excluding panel connectors and handles)
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and dual Power Modules
- Up to 10 slots backplane with uTCA.2
- Dual MCH / dual-star topology
- Front to back cooling

Benefits

- Maintainability with dual replaceable fan trays incorporated to provide front-to-back air cooling and replaceable air dust filter
- System health monitoring status with alarm and activity LED indicators in the front.
- Ease of integration with option for heavy duty sliding rails designed for 19” rack mount capability and rear cabling.
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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The VT968 is a 6U MTCA chassis that provides up to six mid-size and four full-size AMC slots that can accept AMC.1, AMC.2, AMC.3 and/or AMC.4. All connectors are located on the rear panel to make room for internal cabling and ease the integration of the19" rack cabinet.

The front panel incorporates a removable maintenance panel for system de-bugging via dual RJ-45 connectors allowing network or serial access to the health management or data processing modules.

Dual JTAG switch module allows to access in parallel two FPGA modules installed in the chassis simultaneously.

The VT968 has full redundancy and is capable of having redundant MCH, Power Modules and Cooling Units for high availability.

The rear panel accommodates MIL-STD-38999 I/O connectors and may be customized to meet each customer's unique requirements

Figure 1: VT968 with Sliding Rails

Figure 2: VT968 Front View

Figure 3: VT968 Open View

Figure 4: VT968 Rear View

Rugged Architecture for Dual Use

The VT968 is designed for use in both commercial or industrial environment. The outer casing is produced from machined aluminum and incorporates best design practices to minimize EMI leakage.

All Front Panel/AMC Module attachment cables can be secured by ties to a central cable guide rail. During lower fan tray and/or module(s) replacement, remove the cable guide rail (thumb screws) to loosen the internal cable/connector harness.

Heavy duty sliding rails can be used to fix the chassis to a 19" cabinet. Contact VadaTech for the selection of sliding rails.

Use of MTCA.2 wedge locks allow to each module to be tightened to the chassis internal frame.

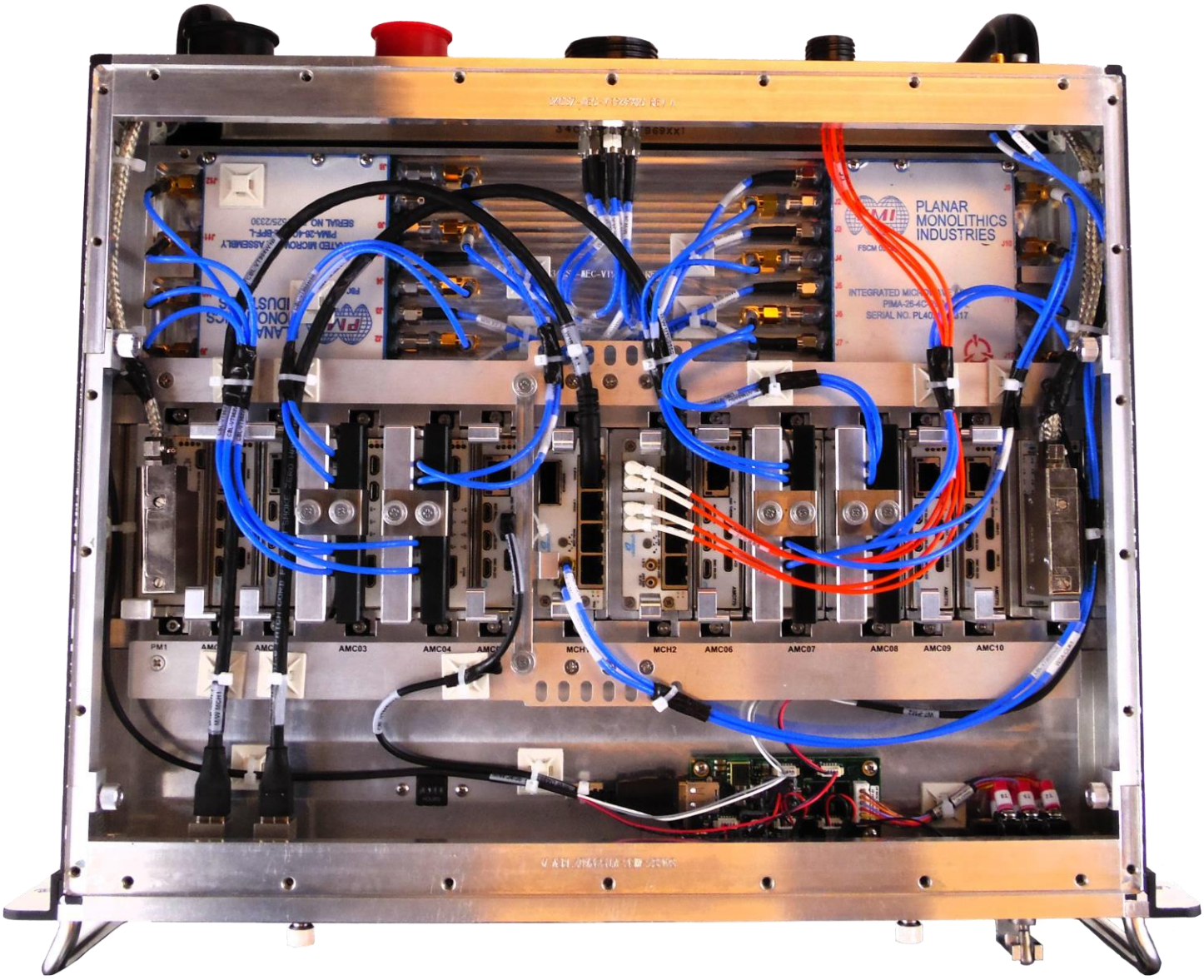


Figure 5: VT968 Chassis Top View in MTCA.1 10 slots configuration (without Cover) - Dual Power Modules and Dual MCH

Power Supplies

The VT968 has two single-width 6 HP slots to accept standard MicroTCA power modules.

Cooling and Temperature Sensors

The VT968 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. Embedded temperature sensors monitor the intake and the outtake air temperature throughout the unit.

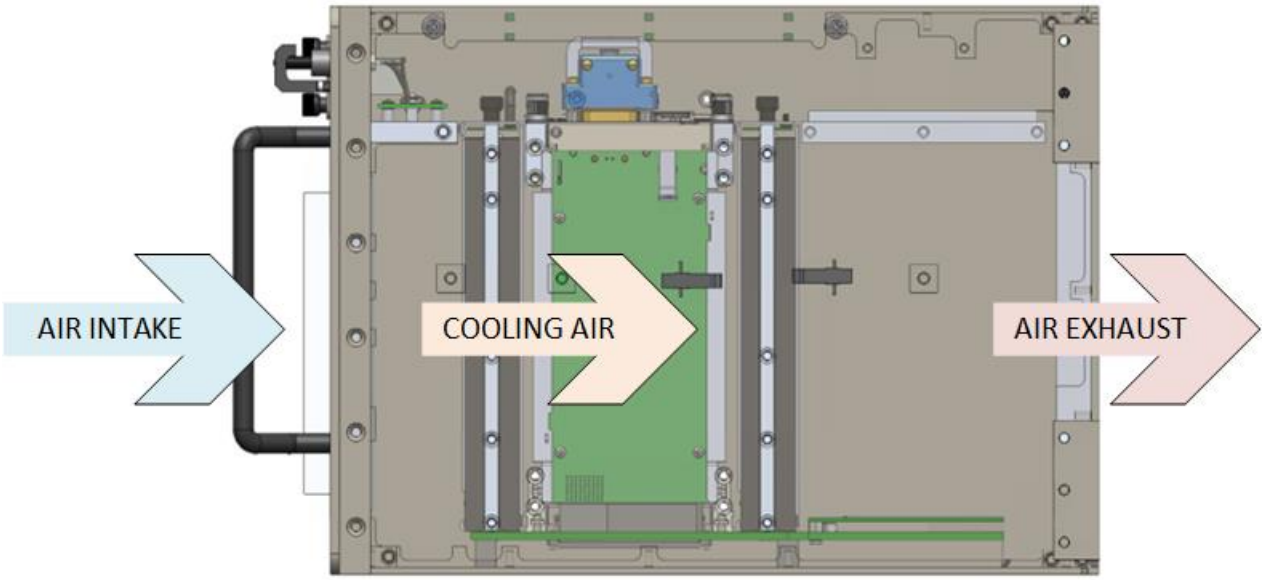


Figure 6: VT968 Airflow

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 7: VT968 Front View (LED marking shown as example, contact Sales for more information)

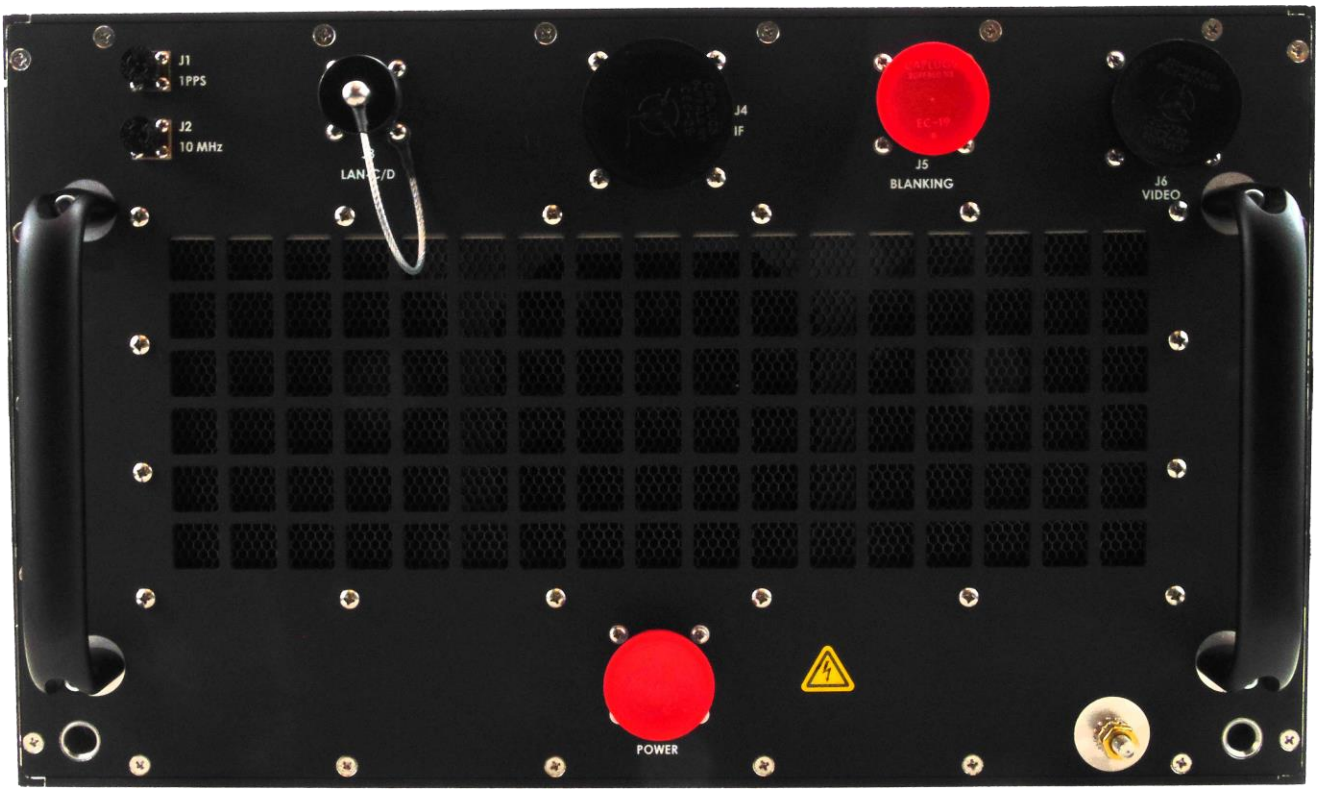


Figure 8: VT968 Rear View (I/O Connectors depends on option D, contact Sales for more information)

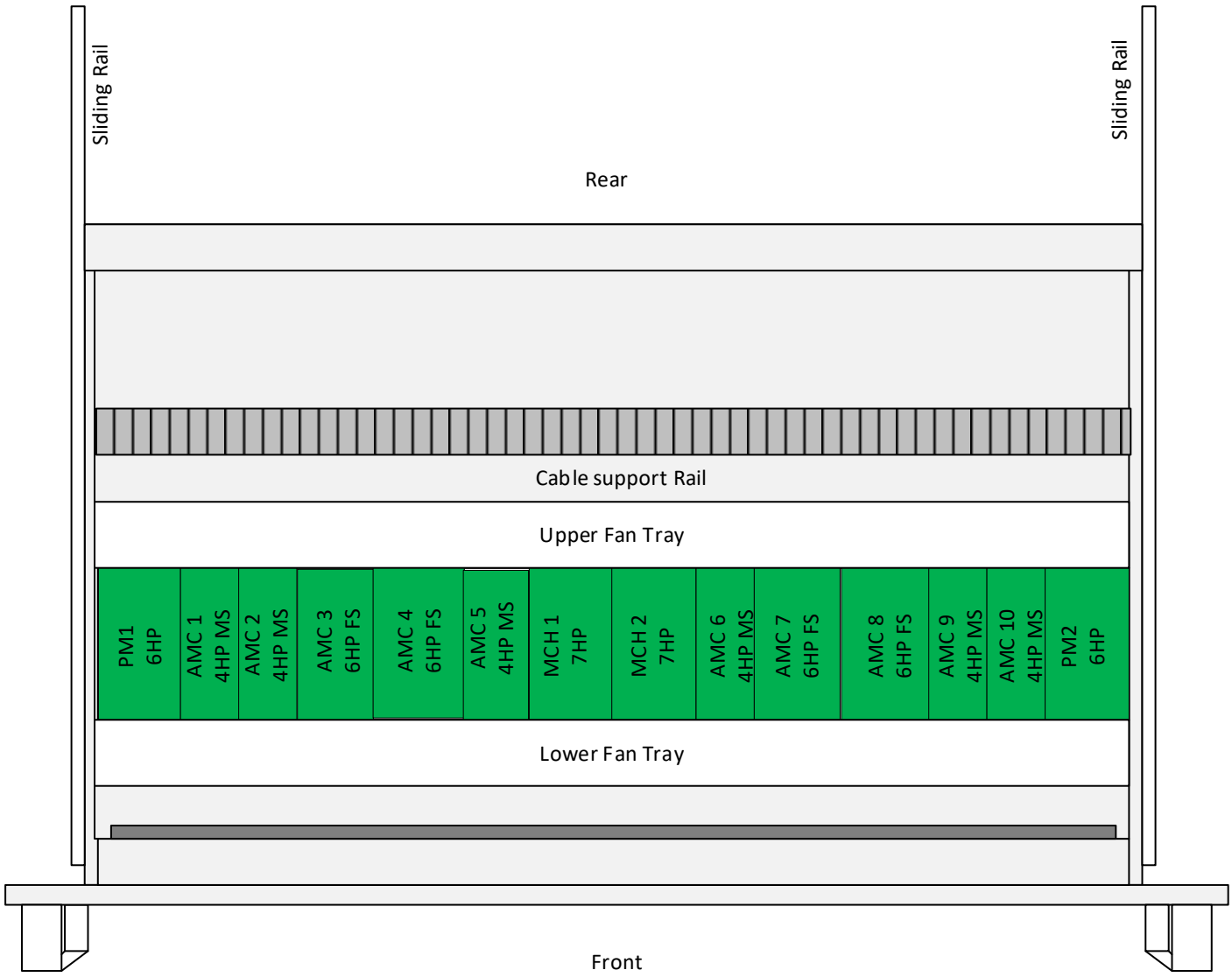
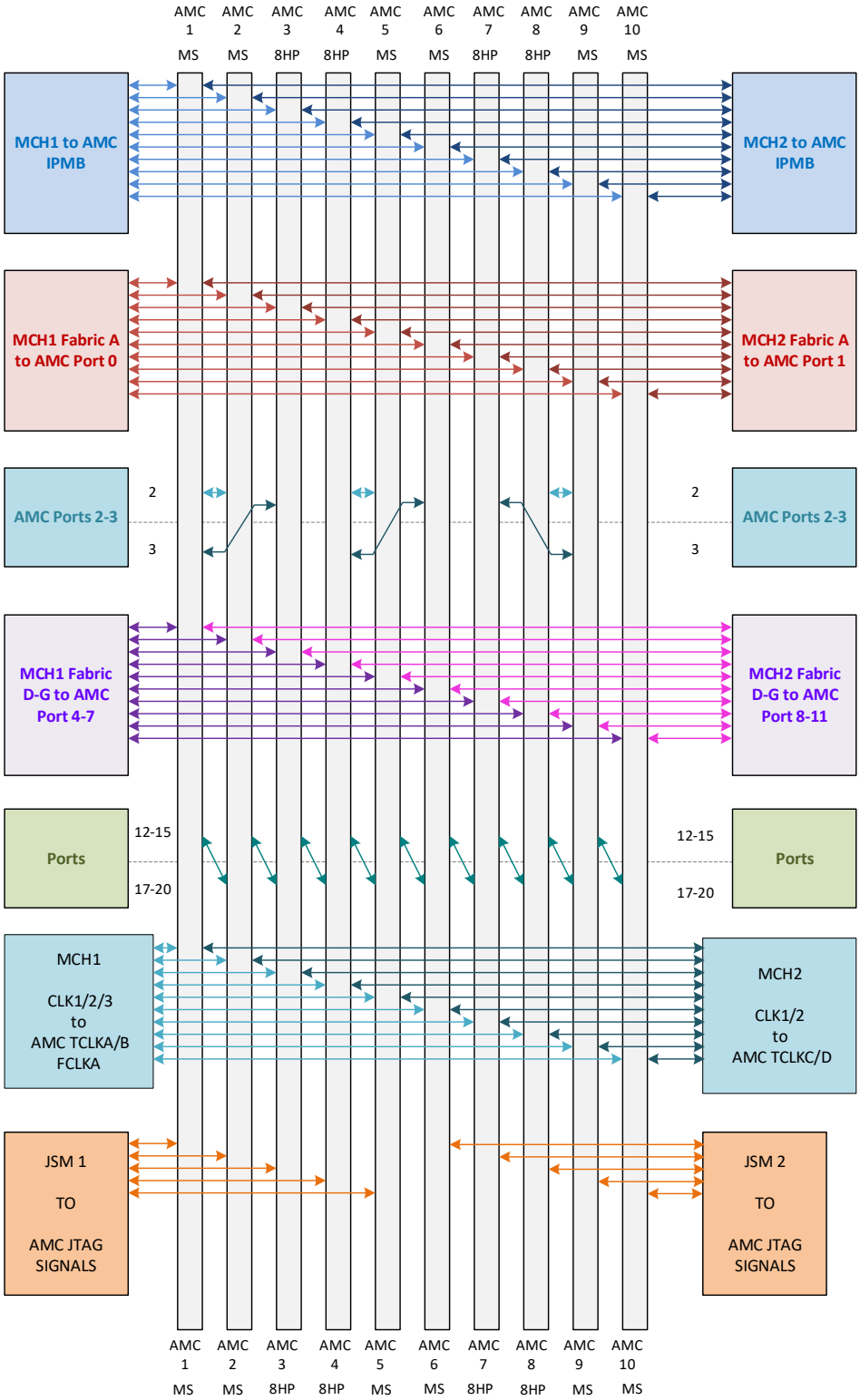


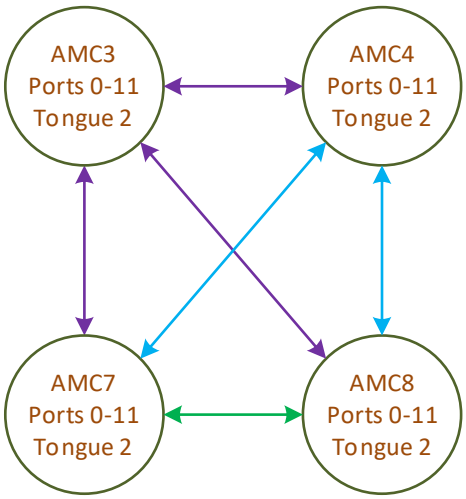
Figure 9: VT968 Slot Profile (Top View A=4 configuration)

Backplane Connections



*Fabric B is partially routed when CLK3 is utilized.
**MS= Mid-size = 4HP

Figure 10: 10 Slots with Dual JSM (A=1)



Full Mesh among Four Slots on Tongue 2
x4 lanes to each slot

Figure 11: 10 Slots Tongue 2

Specifications

Architecture		
Physical	**Dimensions**	Height: 6U
		Width: 19”
		Depth 13.64” deep (without handles and connectors)
Type	**MTCA Chassis**	Per option A
Standards		
AMC	**Type**	AMC.0, AMC.1, AMC.2, AMC.3 and AMC.4
MTCA	**Type**	PICMG 3.0 Rev 2.0
Module Management	**IPMI**	v2.0
Configuration		
Power	**VT968**	Power Module dependent
		DC Input from 18-36V, 10-36V or -36 to -75V (Power Module dependent)
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Altitude	10,000 ft operating
		40,000 ft non-operating
	Vibration	8G random operating (contact Sales for other requirements)
	Shock	20G/11ms operating (contact Sales for other requirements)
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	Contact Sales
	LEDs	Power and Activity/Fault/Ready
Software Support	**Operating System**	Agnostic
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 ISO9001:2015 and AS9100D standards	
Warranty	Two (2) year, see VadaTech Terms and Conditions	

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

VT968 – ABC-000-0HJ

A = Backplane*		
0 = Reserved 1 = 10 slots with dual JSM (MTCA.2) 2 = Reserved 3 = Reserved		
B = Port 2 and 3		**H = Temperature Range**
1 = Direct connections 2 = Reserved		0 = Commercial 1 = Industrial
C = MCH CLK3 Channels		**J = Conformal Coating**
1 = Telco 2 = FCLKA 3 = Fabric B		0 = No coating 1 = Humiseal 1A33 Polyurethane 2 = Humiseal 1B31 Acrylic

Notes:

*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

UTC020

- Single module, full-size per AMC.0
- Dual -36V DC to -75V DC input, 936W (available in 468W)
- Hot swappable with support for power module redundancy

UTC042

- MTCA.1 ruggedization
- Unified 1 GHz quad-core CPU for MicroTCA Carrier Management Controller (MCMC), Shelf Manager, Clocking, and Fabric management
- Automatic fail-over with redundant UTC042s

Contact

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