VT883

2U Rugged MicroTCA.1 Chassis, 5 AMC Slots, Full Mesh

VT883

Key Features

- Rugged MTCA.1 Chassis 19” x 2U x 250 mm deep
- Up to 6 single module AMC slots (optional)
- 5 slots Full Mesh or Fat-Pipes backplane option
- General purpose clock TCLKA, TCLKB, TCLKC, TCLKD and PCIe reference FCLKA clock routing
- Dual (redundant) removable Cooling Units
- Dual removable Power Modules (x2 or 1+1 redundant)
- Right to left cooling
- Designed and tested to JIS and IEC standard (vibration, shock and EMI/EMC)

Benefits

- Suitable for integration in vehicles/high-speed transport
- Full maintenance access from the front
- Supports flexible high-end clock and trigger distribution
- 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 VT883 is a 2U MTCA.1 rugged chassis providing up to six AMC slots that can accept AMC.1, AMC.2, AMC.3 and/or AMC.4. Direct communication of protocols such as PCIe, SRIO, Aurora, XAUI is via a mesh backplane on 5 slots (option for fat pipes routing).

Designed specifically to minimize both the integration footprint and the potential points of failure. All the modules are removable from the front for ease of maintenance.

An MCH module associated with the backplane routes five clock lanes to each AMC slot (FCLKA, TCLKA, TCLKB, TCLKC and TCLKD). This allows advanced clocking distribution and functions such as 1PPS, local reference clock (re)generation, GPS and SyncE.

The AMC Modules, Dual Power Modules and MCH are all hot-swappable.

Figure 1: VT883 Chassis

Power Supplies

The VT883 has two Power Modules which can be configured either together for high power demanding architecture or individually as required for redundant architecture.

Cooling and Temperature Sensors

The VT883 includes removable dual-embedded redundant cooling units with air filtering. The air filter incorporates a condition monitoring system. The cooling airflow is from right to left.

Numerous temperature sensors throughout the chassis monitor the intake and the outtake air temperature. As a result, the MCH automatically adjusts the cooling fan speed to maintain sufficient air flow, regulates power consumption and keeps noise to a minimum.

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

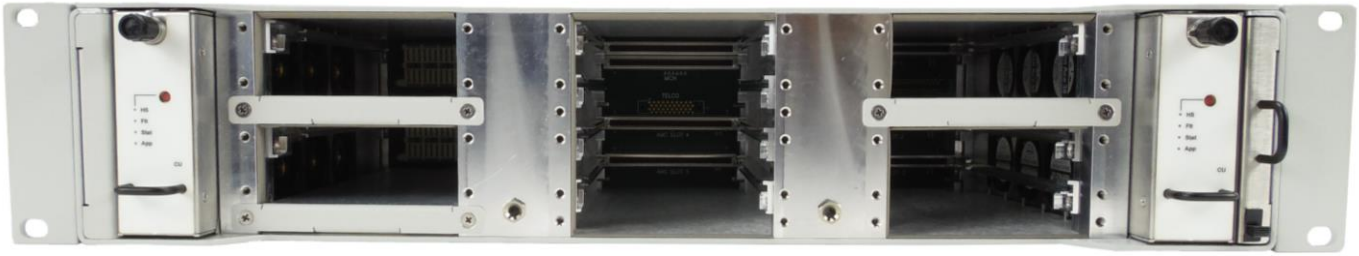

Figure 2: VT883 Front View

Figure 3: VT883 Rear View

Chassis Configuration

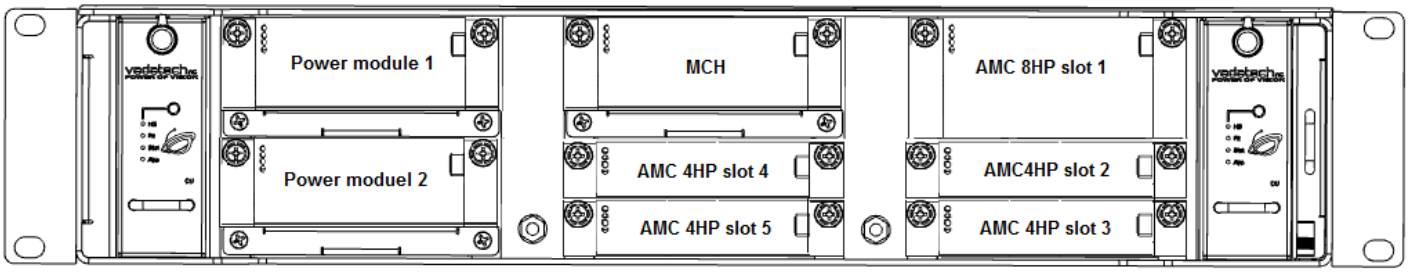

Figure 4: VT883 Chassis Layout with Slot 1 used as 8 HP (without Slot 6 option H=0)

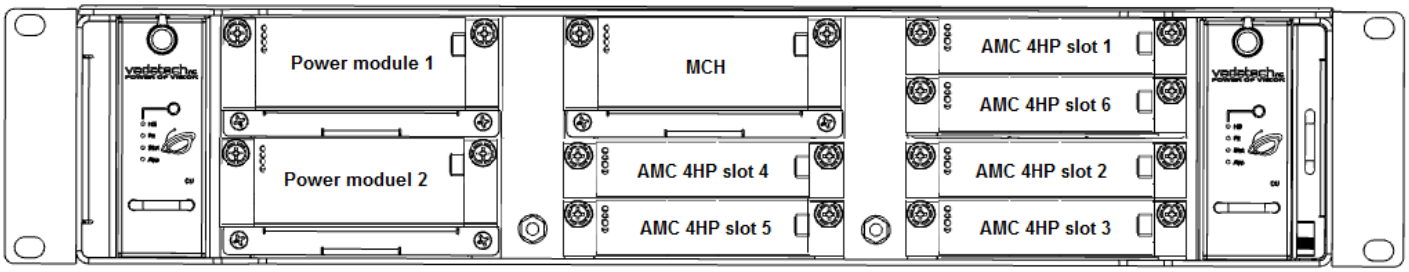

Figure 5: VT883 Chassis Layout with Slot 1 and Slot 6 used as 4 HP (option H=1)

Air Flow

Best airflow with UTC020 468W power modules and UTC002 MCH. Contact VadaTech Sales for airflow assessment with your specific configuration.

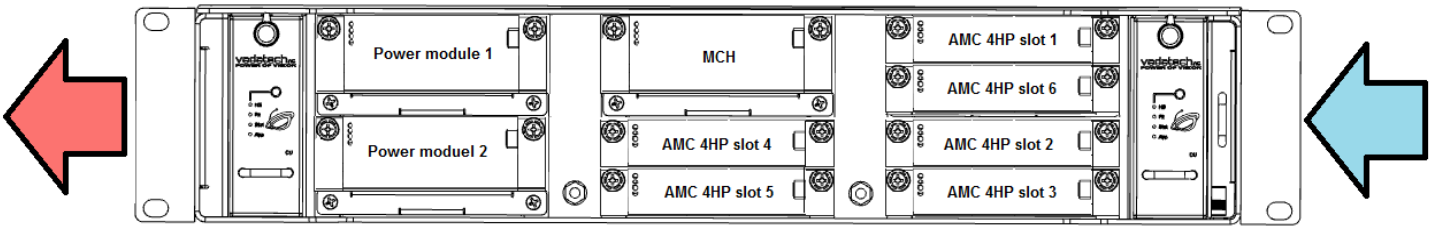

Figure 6 VT883 Chassis Airflow direction Layout

Backplane Routing Option

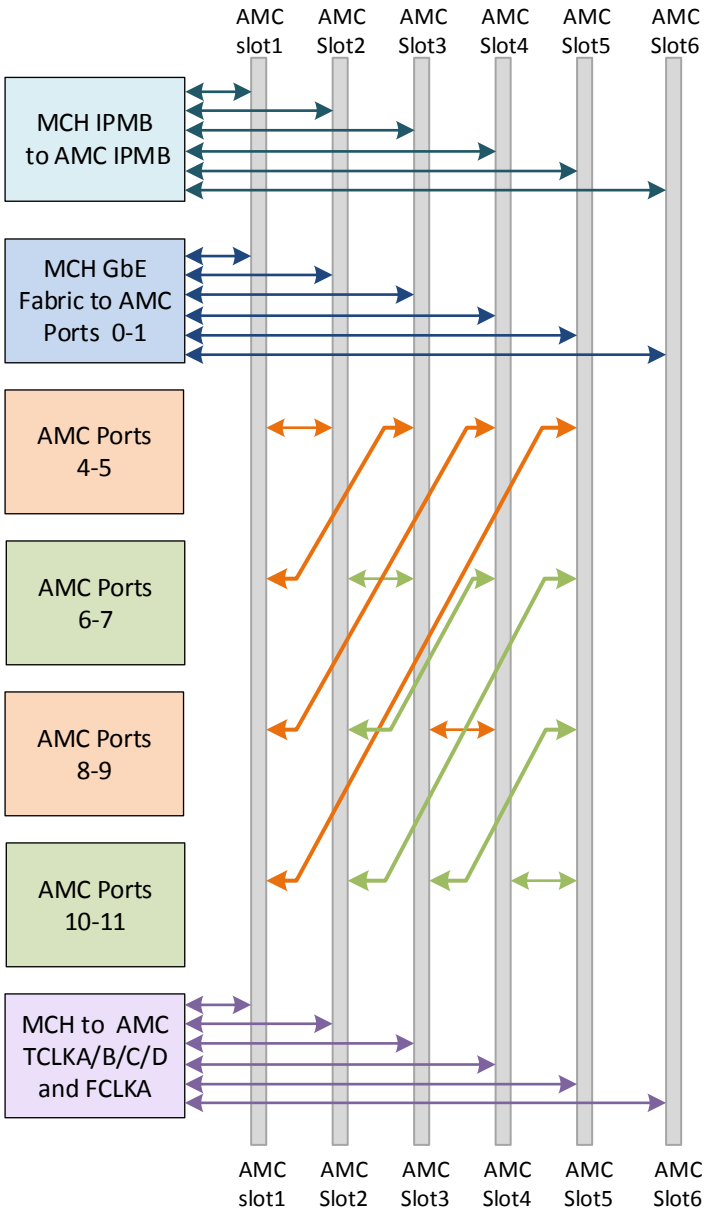

Figure 7: VT883 Backplane Connections with A=0 Full Mesh option

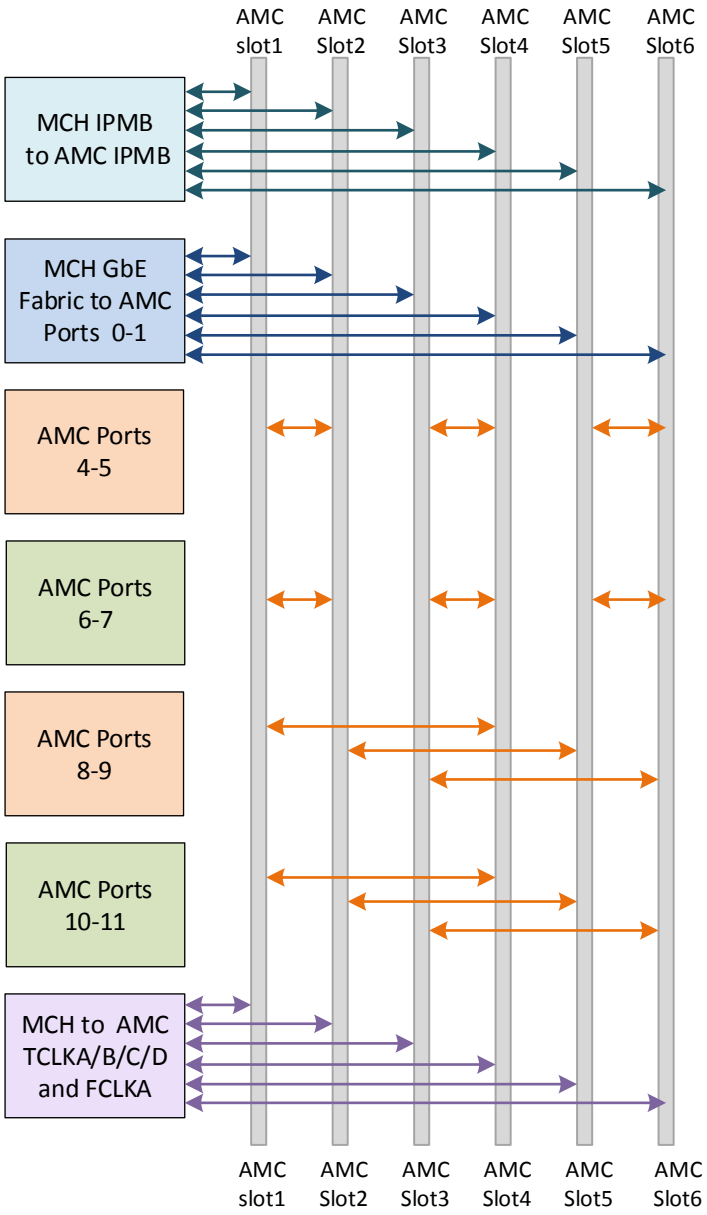

Figure 8: VT883 Backplane Connections with A=1 Fat Pipes option

Specifications

Architecture		
Physical	**Dimensions**	Height: 2U
		Width: 19” (440mm inner rack, smaller than traditional 19” inner rack 450 mm)
		Depth: 9.84” (250 mm)
Type	**MTCA Shelf**	MTCA.1: 6x AMC Slots, 1x MCH and x2 Power Modules
Standards		
AMC	**Type**	AMC.0, AMC.1, AMC.2, AMC.3 and AMC.4
MTCA	**Type**	PICMG MicroTCA.1
Module Management	**IPMI**	v2.0; Telco alarm
Configuration		
Power	**VT883**	Dual Power Modules (removable)
Cooling	**Type**	Dual Cooling Units (removable), right to left airflow
		Air filter (removable)
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Vibration	MTCA.1 (8G random operating); tested to JIS E 3014 Class1-B and IEC61373 Cat1-B (*)
	Shock	MTCA.1 (25G operating); tested to JIS E 3015 Class1-B and IEC61373 Cat1-B (*)
	EMC/EMI	Tested to IEC-62236 (*)
	Relative Humidity	5 to 95% non-condensing
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	One (1) year, see VadaTech Terms and Conditions	

(*) Contact Sales for details.

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

VT883 – A00-000-0HJ

A = Backplane Routing		
0 = Full Mesh 1 = Fat Pipes		
		H = Slot 6
		0 = No Slot 6 1 = Slot 6
		J = Temperature and Conformal Coating
		0 = Commercial (–10° to +55°C), No coating 1 = Commercial (–10° to +55°C), Humiseal 1A33 Polyurethane 2 = Commercial (–10° 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

Related Products

AMC581

- Xilinx UltraScale+ XCZU15EG FPGA
- Carrier for single FMC HPC site
- 8 GB of 64-bit wide DDR4 Memory (single bank) with ECC, MPSoC with block RAM and UltraRAM

AMC702

- Processor AMC with QorIQ T4240
- SRIO on Ports 4-11
- Three banks of 64-bit DDR3 memory (Up to 24 GB total)

UTC020

- DC Power Module -36V to -75V DC input
- Compact 468W version allows airflow in horizontal mounted AMC slots such as VT883
- Available with MTCA.1 captive screw

Contact

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