vadatech
THE POWER OF VISION

VT866 – 5U µTCA Chassis, 12 AMC, 40GbE

5U µTCA Chassis, 12 AMCs

KEY FEATURES

- µTCA System Platform 19" x 5U x 17"
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and dual Power Modules
- Up to 12 AMCs in single width/full-size
- Radial I2C bus to each AMC
- High-speed routing on 36 layers
- 40GbE capable
- Redundant FRU information devices and carrier locators
- Redundant 1000W AC or DC Power supply
- Telco Alarm
- FCLKA, TCLKA, TCLKB, TCLKC and TCLKD with advanced redundancy capability
- JTAG Switch Module (JSM) option
- No active components on the backplane
- ESD-Jack at the top front
- RoHS compliant

Benefits of Choosing VadaTech

- First 40GbE MicroTCA Chassis in the industry
- Full redundancy including radial IPMB
- Unique easy-glide strips provide smooth PSU insertion/extraction
- Advanced clock redundancy option
- 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

40G

The VT866 is a 5U µTCA chassis that provides 12 full-size AMC slots that can accept any AMC.1, AMC.2, AMC.3 and/or AMC.4. It provides FCLK, TCLKA, TCLKB, TCLKC and TCLKD to each slot with clock redundancy between the two MCH modules. The chassis is the first in the market with 40GbE capabilities.

The VT866 is capable of having redundant MCH, Power Modules, and Cooling Units for high availability. The CLK3 option can be configured for the Fabric clock, Telecom clock, or Fabric B. There is an option for Port 2 and 3 to be directly connected among the adjacent AMCs or to the fabric B (AMC.3 SATA/SAS switch option on the MCH). The chassis also routes ports 12-15 to 17-20 of the adjacent slot. The VT866 has a Telco Alarm as well as redundant FRU information devices and carrier locators.

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POWER SUPPLIES

The VT866 has single or dual redundant 1000W AC or 1000W DC -48V single or dual power supplies. The AC input voltage is from 110 to 240V AC (frequency from 47 Hz to 63 Hz). The AC/DC input is from the back of the chassis. Unique easy-glide strips provide smooth PSU insertion/extraction.

COOLING AND TEMPERATURE SENSORS

The VT866 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.

TELCO ALARM

The VT866 provides Telco alarm functionality to alert about any anomaly within the chassis. The Telco Alarm is provide 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 above the fan tray.

FRU INFORMATION AND CARRIER LOCATOR

The VT866 has dual redundant FRU information and Carrier Locators. The Carrier Locator is assigned by mechanical dip switches which are easily accessible. The MCH reads the Locator via its private I2C bus.

40G BACKPLANE

The 40GbE backplane does not have any active components, making serviceability easy. With 36 layers, the backplane utilizes Megtron 6 PCB material and via back-drilling for superior signal integrity.

ADVANCED CLOCKING OPTION

The µTCA specification defines non-redundant and redundant clock networks for the three clocks as either CLK1, CLK2, CLK3 or CLK1A, CLK2, CLK1B respectively. However, this may not be enough to support all of the clocking needs of telco customers needing full redundancy across two pairs of clocks (such as a framing clock plus a bit clock or a GPS 1PPS signal plus bit clock). The AMC 2.0 specification provides for four telco clocks (TCLKA through D) and a fabric clock (FCLKA) which the VT866 chassis leverages to provide enhanced clock redundancy. With the VT866 topology, it is possible to source/sink two AMC telco clocks, TCLKA/B, from/to the primary MCH (plus the FCLKA) and in addition source/sink two AMC telco clocks, TCLKC/D, from/to the secondary MCH for a total of all five AMC clocks being handled by the µTCA system. Two additional clock update channels between the MCH modules are also provided which can be used for forwarding clocks as needed between them. Another benefit of this enhanced clock architecture is the ability to run PCIe with the fabric clock on FCLKA at the same time as the redundant telco clocking; which is something that is not possible with the original µTCA redundant clocking architecture.

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

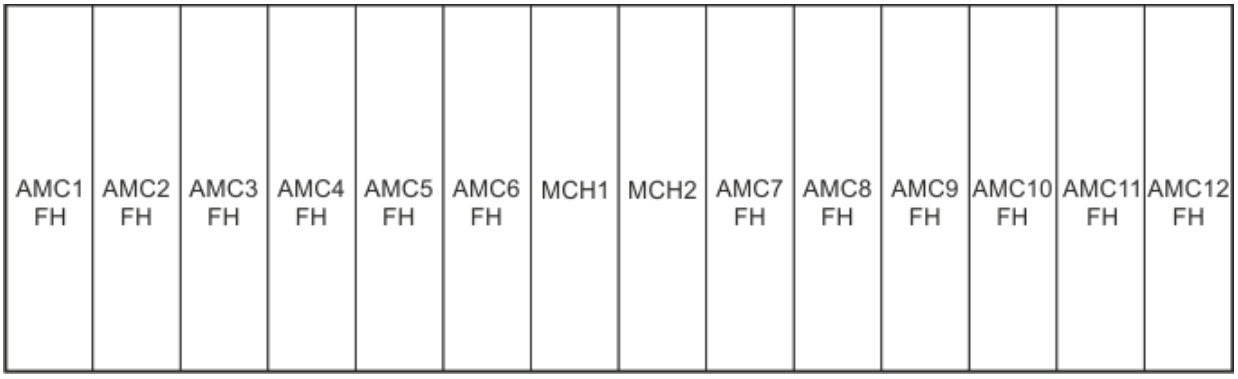


Figure 1: Front View

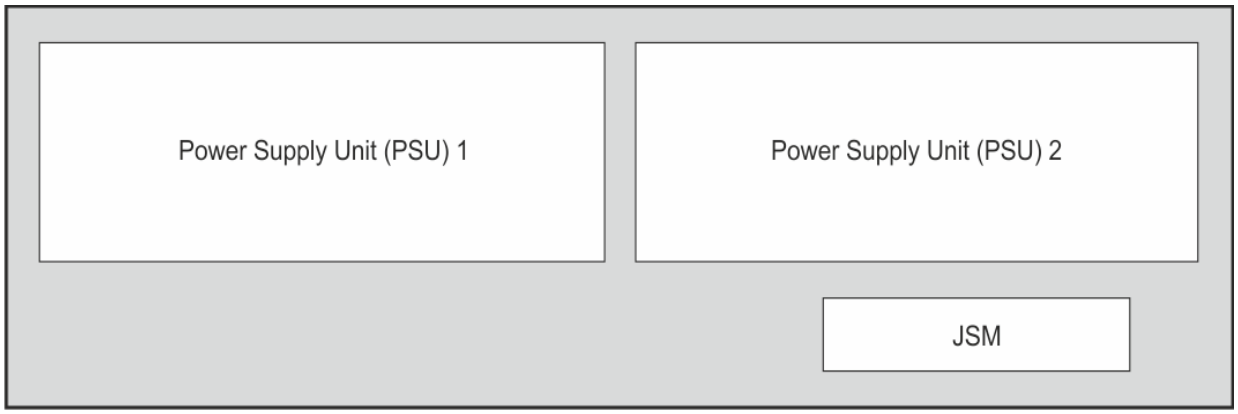
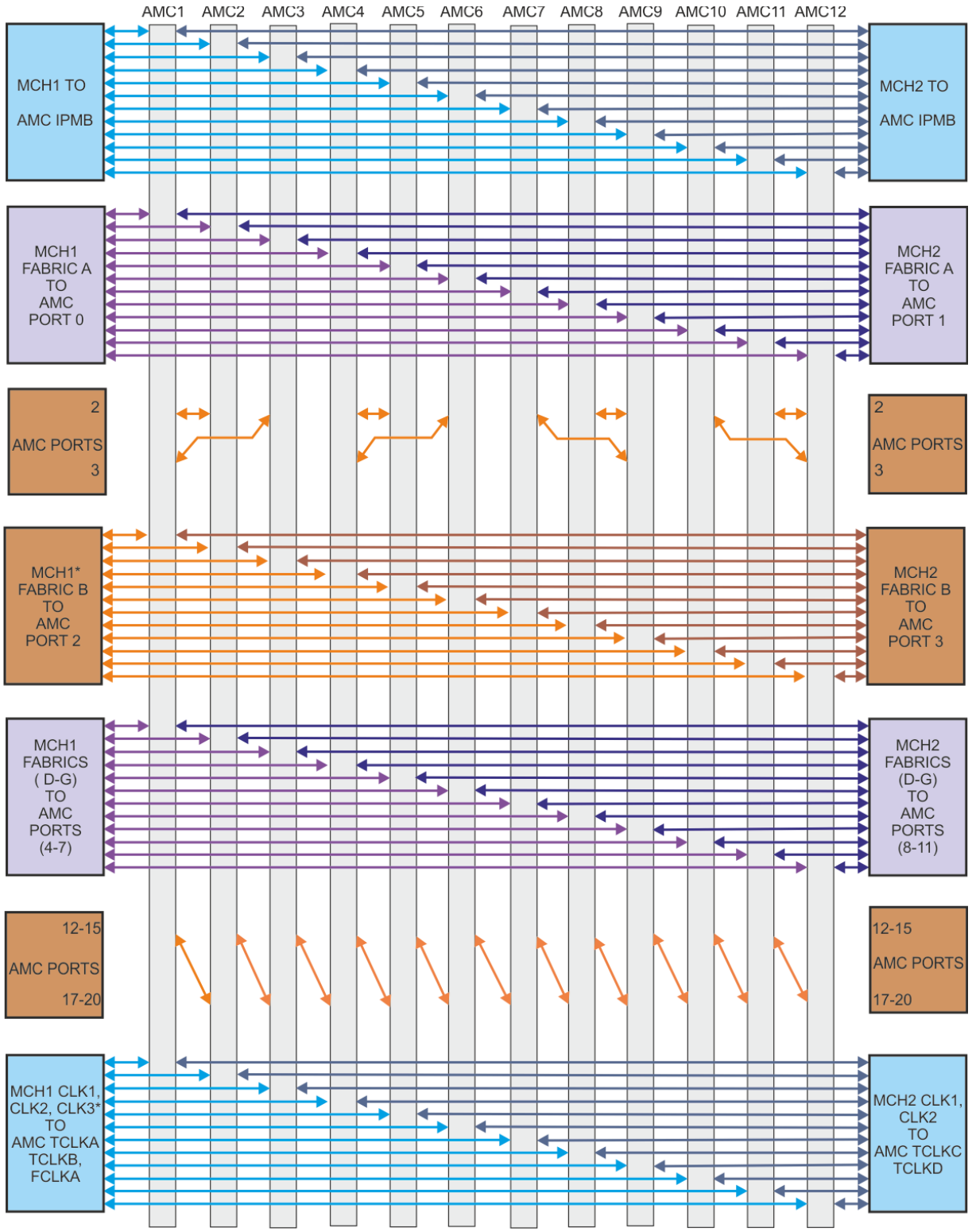


Figure 2: Rear View

BACKPLANE CONNECTIONS



*Fabric B is partially routed when CLK3 is utilized.

SPECIFICATIONS

Architecture		
Physical	Dimensions	Height 5U
		Width 19”
		Depth ~17.0”
Type	µTCA Chassis	12 AMC.0 full size slots
Standards		
AMC	Type	AMC.0, AMC.1, AMC.2, AMC.3 and AMC.4
µTCA	Type	PICMG 3.0 Rev 3.0
Configuration		
Power	VT866	1000 W, 110V to 240V AC with frequency from 47 to 63 Hz or 1000W, -48DC
Environmental	Temperature	Operating Temperature: 0° to 55° C
		Storage Temperature: –40° to +70° C
	Altitude	10,000 ft operating
		40,000 ft non-operating
	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	
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REAR VIEW

ORDERING OPTIONS

VT866 – ABC – D00 – 00J

A = Power Supply
0 = 1000 W AC single
1 = 1000 W AC dual
2 = 1000 W DC –48V single
3 = 1000 W DC, –48V dual

B = Ports 2 and 3
1 = Direct connections
2 = To MCH

C = MCH CLK3 Channels
1 = Telco
2 = FCLKA
3 = Fabric B

D = JSM
0 = JSM not included
1 = JSM included

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

RELATED PRODUCTS

UTC004 40G MCH

AMC534 100G FPGA

AMC626 Storage Module

CONTACT US

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