µTCA Chassis with 6 single-width AMC slots or 3 double-width slots
VT899

VT899 KEY FEATURES

- µTCA System Platform 5" x 7U x 9" deep (with handles 10" deep)
- Redundant Cooling Units
- Up to six AMCs: 6 full-size single-width or 3 full-size double width
- Radial I2C bus to each AMC
- High-speed routing on 26 layers
- High-speed µTCA connectors (12.5 GHz)
- Redundant FRU information devices
- Redundant Carrier Locator
- Telco Alarm
- CLK1, CLK2 and CLK3
- No active components on the backplane
- JTAG Switch Module (JSM) Slot
- ESD-Jack at the top front
- RoHS compliant

The VT899 is a 7U µTCA chassis that provides 6 AMC full-size single-width slots or 3 AMC full-size double-width that can accept any AMC.1, AMC.2, AMC.3 and/or AMC.4. It provides CLK1, CLK2, and CLK3 to each slot.

The VT899 has redundant Cooling units Units (CU) for higher MTBF values.

There is an option for redundant/non-redundant clock per µTCA specification. The CLK3 option can be configured for the Fabric clock as well as Telcom clock.

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 VT899 has a Telco Alarm as well as Redundant FRU information devices and carrier locators.

The VT899 has a JSM slot which routes to each JTAG port of the AMC. The JSM module could be ordered separately or shipped with the Chassis.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

SPECIFICATIONS

Architecture		
Physical	Dimensions	Height 7U
		Width: 5"
		Depth 9" without the handles and 10" with the handles
Type	µTCA Chassis	Six AMC.0 slots

Standards		
AMC	Type	AMC.0, AMC.1, AMC.2, AMC.3, and AMC.4
µTCA	Type	Telco Alarm, Dual Intelligent Cooling units

Configuration		
Power	VT863	500W supply
		110-240VAC with frequency from 47-63Hz
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
		Humiseal 1B31 Acrylic

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
Compliance	RoHS and NEBS
Warranty	Two (2) years
Trademarks and Logos	The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA[TM] and the AdvancedMC[TM] logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice.

IPMB Bus

The I2C bus from each AMC is routed radially to each of the MCH.

MCH IPMB / AMC IPMB

AMC 1 F-S* AMC 2 F-S AMC 3 F-S AMC 4 F-S AMC 5 F-S AMC 6 F-S
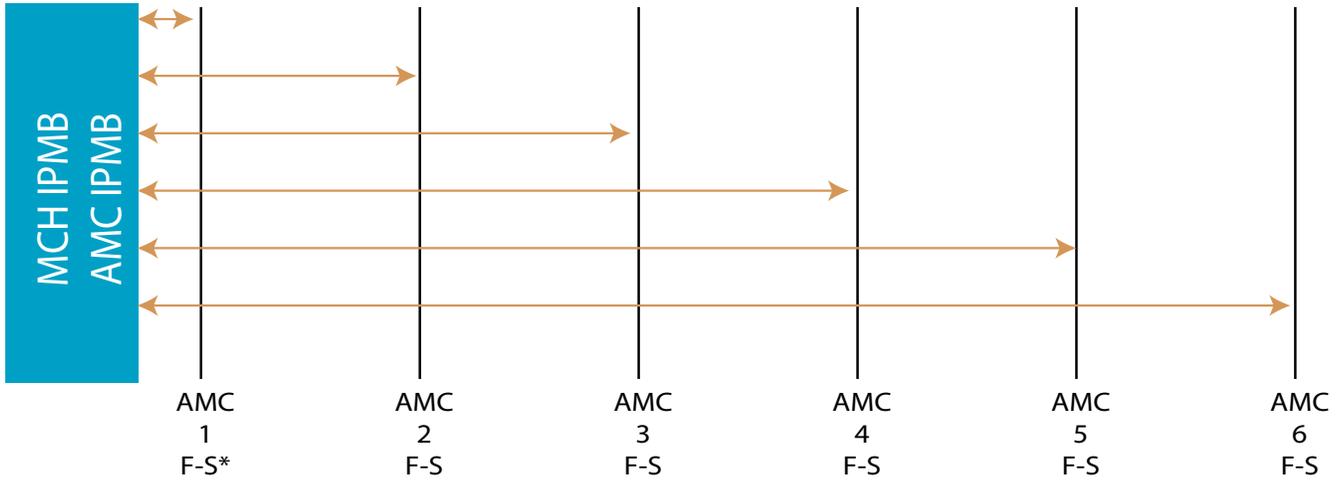
*F-S (Full-Size)

FIGURE 1. VT899 Topology for AMC I2C Bus

Ports 0 and 1

MCH FABRIC A / AMC PORT 0   **MCH FABRIC A / AMC PORT 1**

AMC 1 F-S* AMC 2 F-S AMC 3 F-S AMC 4 F-S AMC 5 F-S AMC 6 F-S
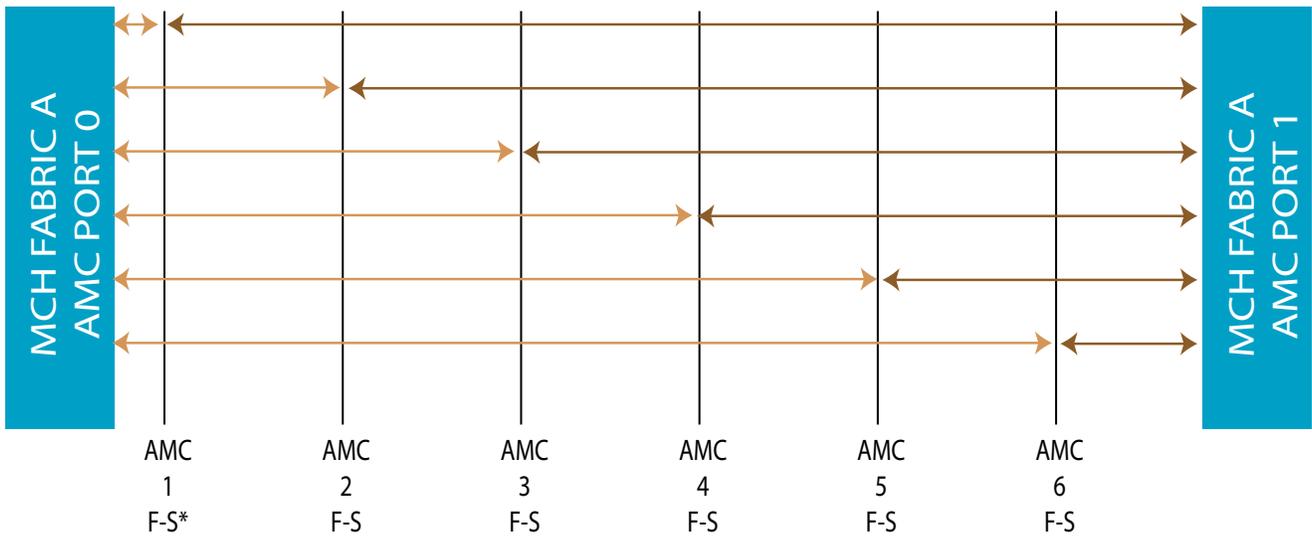
*F-S (Full-Size)

FIGURE 2. VT899 Topology for AMC Ports 0 and 1

Ports 2 and 3

Topology for Ports 2 and 3 with direct connections among the slots (ordering option)
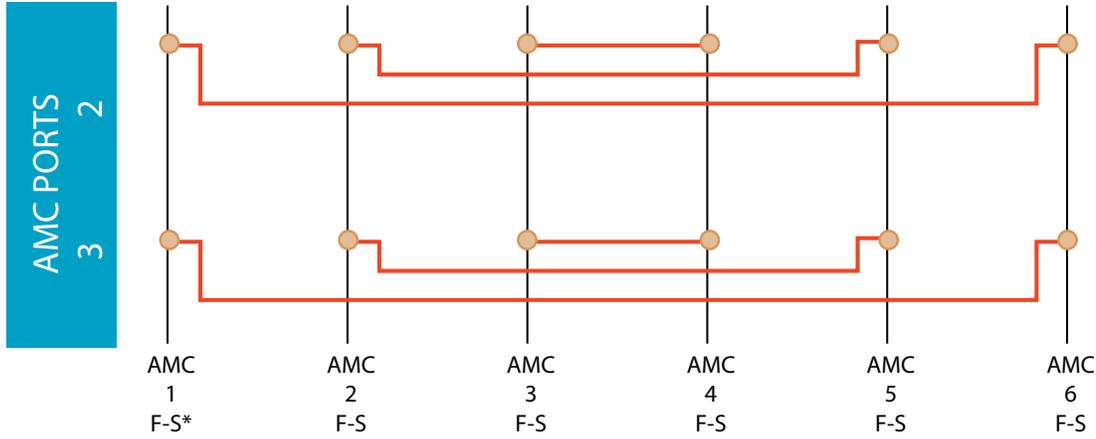
*F-S (Full-Size)

Topology for Ports 2 and 3 to MCH (ordering option for direct connection between the ports)
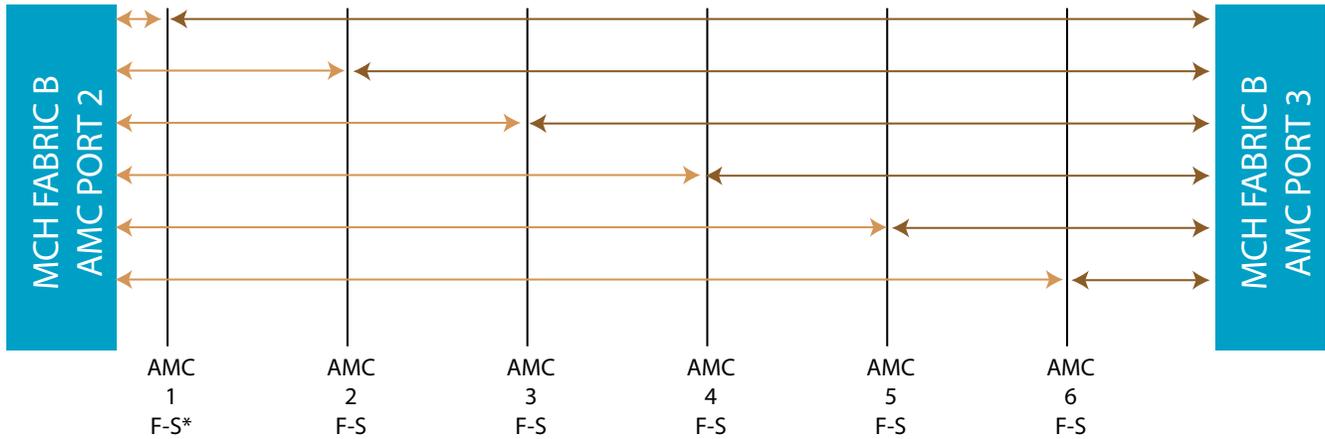

*F-S (Full-Size)

FIGURE 3. VT899 Topology for AMC Ports 2 and 3

When CLK3 is non-redundant, Fabric B will be partially provided only on ports 1 to 6. CLK3 is routed on Fabric B on ports 7 to 12.

Ports 4-7 and 8-11

MCH FABRIC D TO G AMC PORT 4 TO 7

MCH FABRIC D TO G AMC PORTS 8-11

AMC 1 F-S*	AMC 2 F-S	AMC 3 F-S	AMC 4 F-S	AMC 5 F-S	AMC 6 F-S
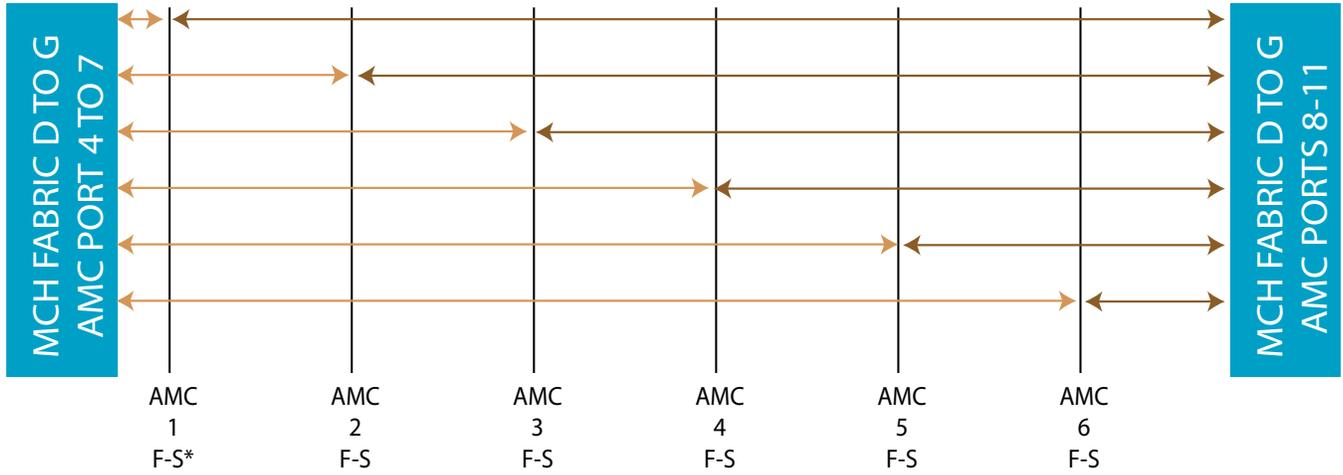
*F-S (Full-Size)

FIGURE 4. VT899 Topology for AMC Ports 4-7 and 8-11

FIGURE 5. VT899 Topology for JSM

AMC JTAG SIGNALS

JSM SLOT

AMC 1 F-S*	AMC 2 F-S	AMC 3 F-S	AMC 4 F-S	AMC 5 F-S	AMC 6 M-S*
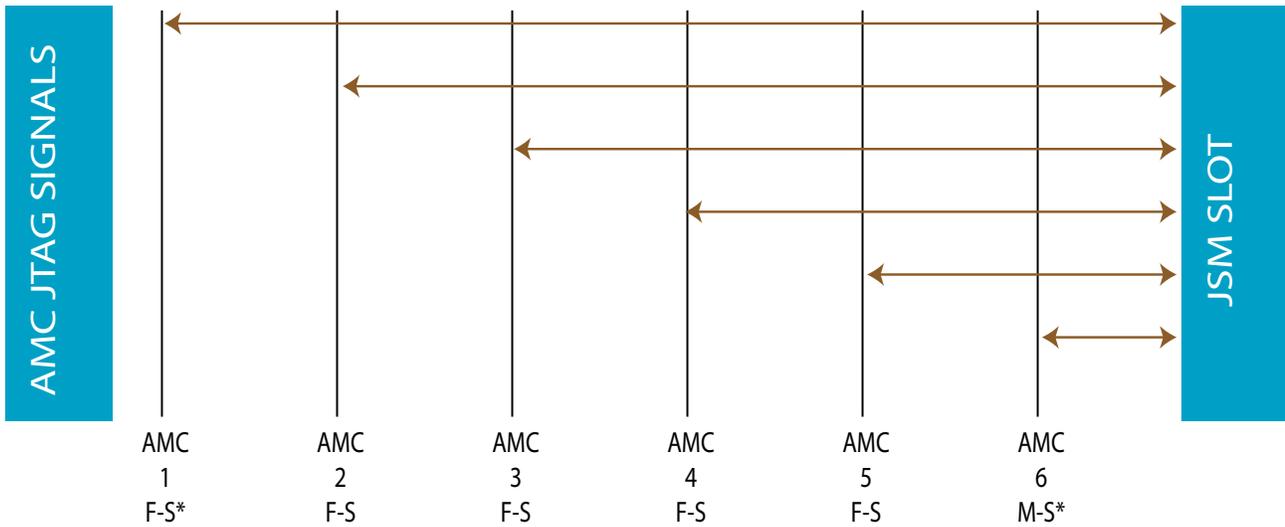
*F-S (Full-Size), M-S (Mid-Size)

Ports 12-15
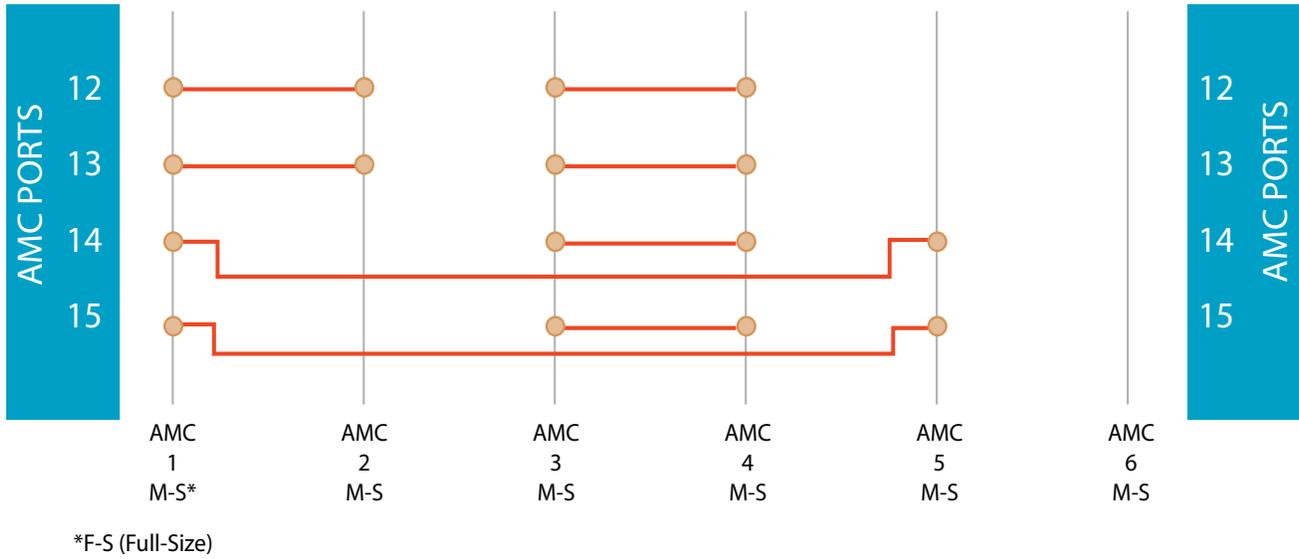
FIGURE 6. VT899 Topology for AMC Ports 12-15

Ports 17-20
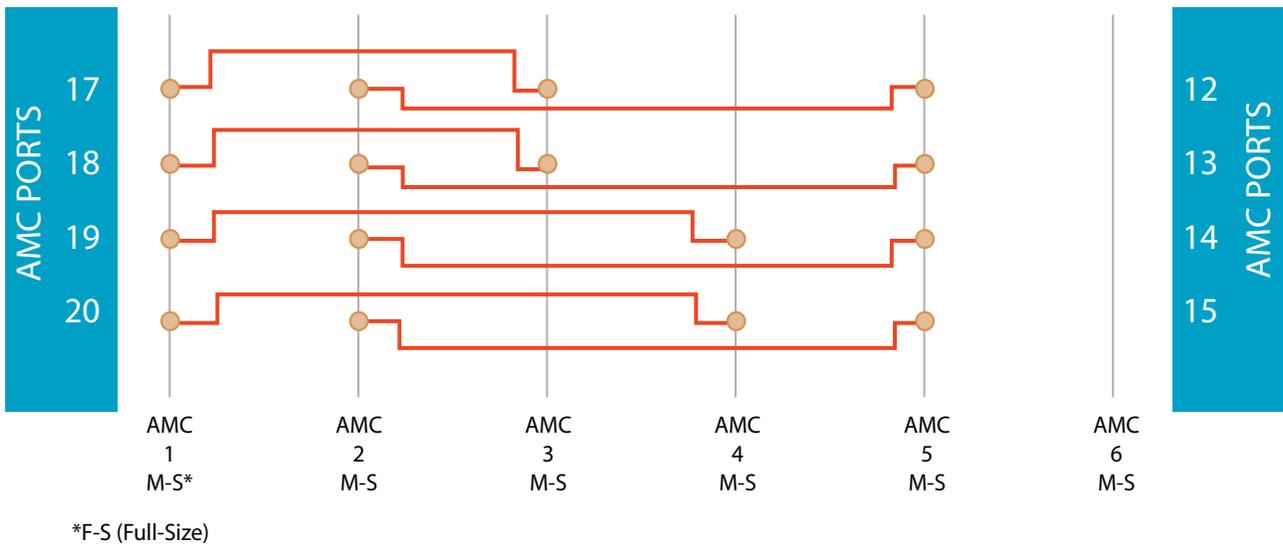
FIGURE 7. VT899 Topology for AMC Ports 17-20

Clock Options

The µTCA specifies three clocks: CLK1, CLK2, and CLK3. They are routed to each of the AMC slots from the MCH. The CLK3 could be routed as the Fabric Clock (PCIe clock, HCSL) or as MLVDS as Telco clock.


*F-S (Full-Size)
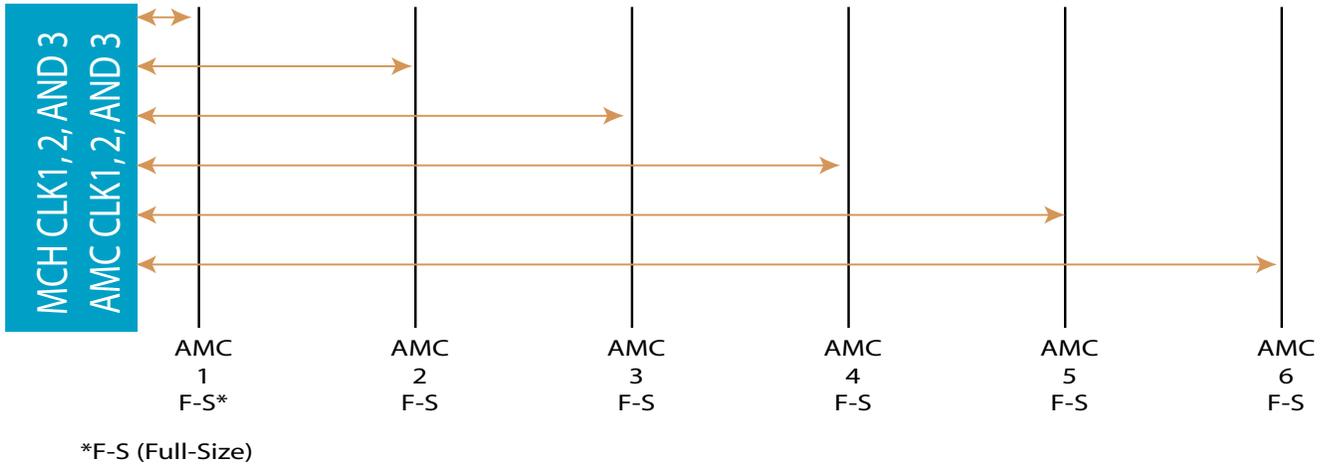
**FIGURE 8.** VT899 non-redundant clock Topology, CLK3 can run as Fabric Clock (i.e. PCIe clock)
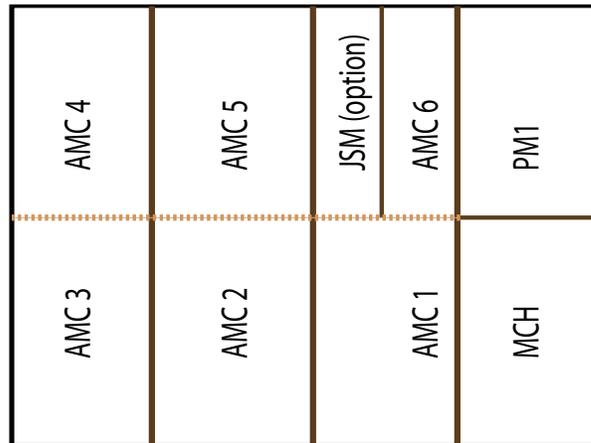
FIGURE 9. VT899 Slot locations

Cooling and Temp Sensors

The VT899 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 VT899 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 LED's in the front to show any anomaly. The Telco Alarm has its own dedicated slot.

FRU Information and Carrier Locator

The VT899 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.

No active components

Unlike other μTCA chassis in the market, the VT899 has no active components on its back plane. This allows ease of serviceability.

End to End Integrated Solution

VadaTech has the entire μTCA infrastructure: MicroTCA Carrier Hub (product UTC001, UTC002 or UTC004) and Power Module (UTC010, ~800W). Please consult the appropriate data sheet to obtain more information.

VadaTech can integrate any of its over 150 AMC modules, customer AMCs, as well as other third party AMCs into the chassis and deliver a complete system for deployment. Please contact VadaTech Sales for more information.

ORDERING OPTIONS

VT899 - ABC - 000 - G0J*

A = JTAG Switch Module (JSM) Installed**

    1 = Without JSM
    2 = With JSM

B = Ports 2 and 3

    1 = Direct connection per Fig. 3
    2 = To MCH

C = CLK3

    1 = Telco
    2 = Fabric CLK

G = AC Power supply

    0 = None
    1 = 500W

J = Conformal Coating

    0 = None
    1 = Humiseal 1A33 Polyurethane
    2 = Humiseal 1B31 Acrylic

*VadaTech has an MCH (UTC001, UTC002 and UTC004) and Power Module (UTC010, UTC012 and UTC013) as well as over 150 AMC modules. Contact your sales representative for an end-to-end integrated solution.

**With the JSM option the AMC slot 4 can take a mid-height AMC not a full-height

Rear View with 500W AC Supply