

VT815 – 9U μ TCA.0/ μ TCA.4 Chassis, 12 Full-size AMC, 120W/slot

9U μ TCA.0/.4 Chassis, 12 AMC



KEY FEATURES

- μ TCA Chassis Platform with rear I/O
- 19" x 9U x 14.9" deep (with handles 16.23" deep)
- Full redundancy with dual MicroTCA Carrier Hubs (MCH), dual cooling units and 3 PSUs
- Up to twelve AMCs: 12 full-size double module slots in front with 12 full-size, double module RTM slots available in the rear
- High-bandwidth (20-lane) connections between adjacent slots
- High-speed 30 layer passive backplane (40GbE ready)
- Redundant FRU information devices and carrier locators
- Three 1.1 kW AC Power supply for 3.3 kW total
- Telco alarm
- FCLKA, TCKA, TCKB, TCLKC AND TCLKD
- JTAG Switch Module (JSM) Slot on rear of chassis
- ESD Jack at the top front and back

40G

Benefits of Choosing VadaTech

- Tongue 2 connector on every AMC slot per μ TCA.0 providing up to 120W/slot of power and local connectivity
- Ideal platform for high-power processing AMCs (Intel, GPGPU, FPGA or DSP).
- Backplane options for MicroTCA.0 or MicroTCA.4 (with μ RTM)
- Ideal for High Energy Physics and other applications requiring rear I/O
- 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

The VT815 is a 9U μ TCA chassis that provides 12 AMC full-size double module slots that can accept any AMC.1, AMC.2, AMC.3 and/or AMC.4. It makes full use of the μ TCA specification capabilities to support high-power AMCs and provide high-bandwidth local interconnects. The RTM provision follows μ TCA.4 specification, but the extended options region does not since this is configured for FPGA and storage connectivity.

The VT815 provides FCLKA, TCLKA, TCLKB, TCLKC and TCLKD to each slot. It offers redundant MCH, power modules, as well as redundant cooling units for high availability. The three hot-plug capable power supplies can provide 1100W AC each for a total of 3300W.

The VT815 has a Telco Alarm as well as redundant FRU information devices and carrier locators. The VT815 has a JSM slot which routes to each JTAG port of the AMC.

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POWER SUPPLY

The VT815 has up to three 1100W N+1 AC power supplies. The input voltage is from 110-240V AC (frequency from 47-63 Hz).

COOLING AND TEMPERATURE SENSORS

The VT815 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 VT815 provides Telco Alarm functionality to alert about any anomaly within the chassis. The Telco Alarm is provided via a Micro DB-9 as well as LEDs in the front to show any anomaly. The Telco Alarm has its own dedicated slot.

FRU INFORMATION AND CARRIER LOCATOR

The VT815 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 some other μ TCA chassis on the market, the VT815 has no active components on the backplane. This supports 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.

INTEGRATION SERVICES AND APPLICATION-READY PLATFORMS

VadaTech has a full ecosystem of ATCA and μ TCA 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

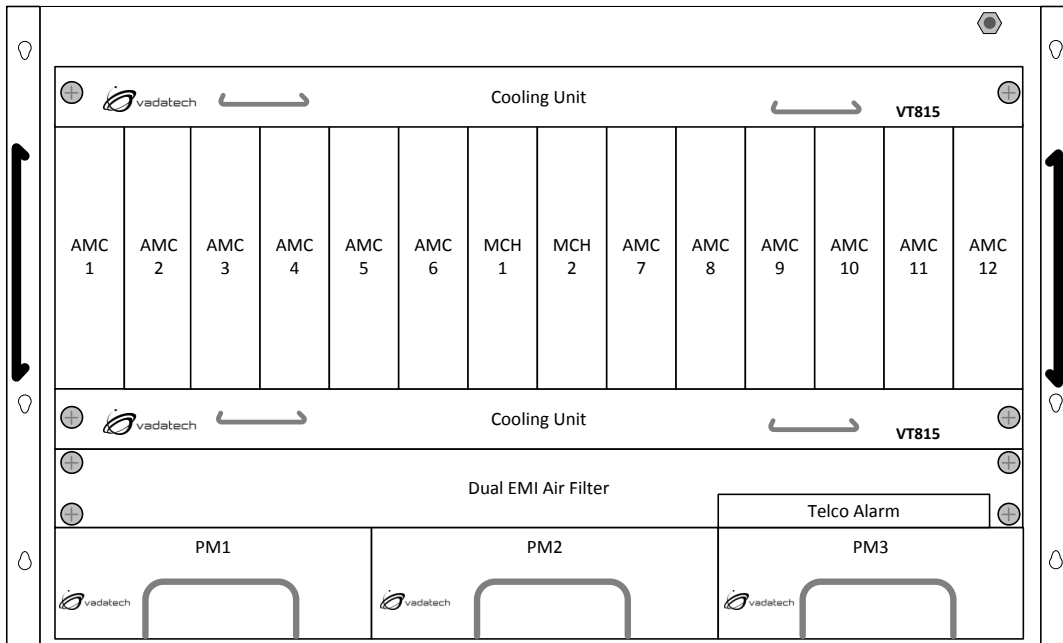


Figure 1: Chassis Layout Front View

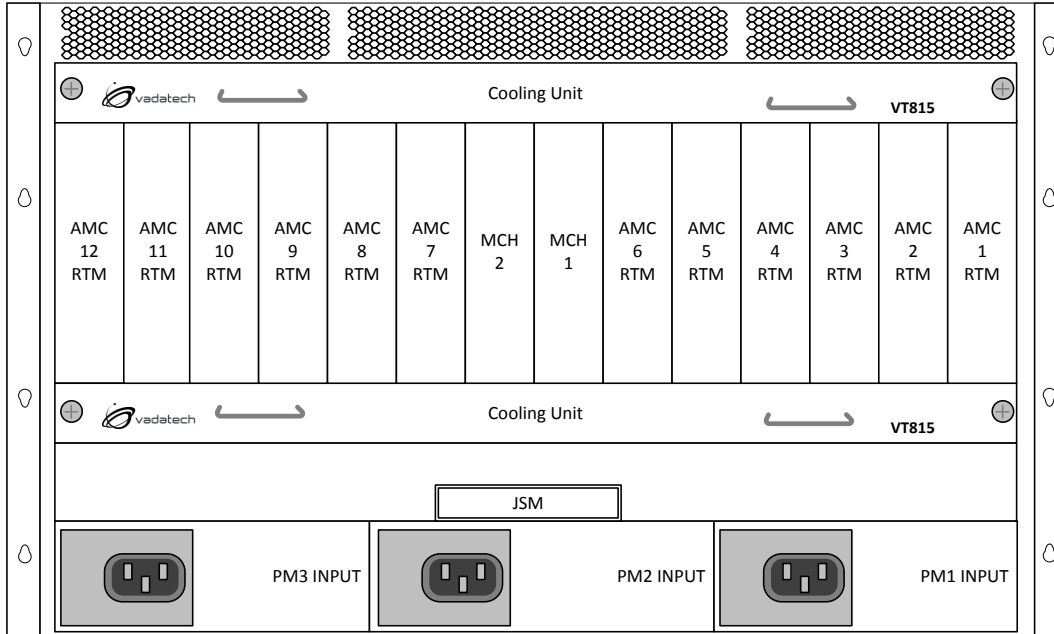
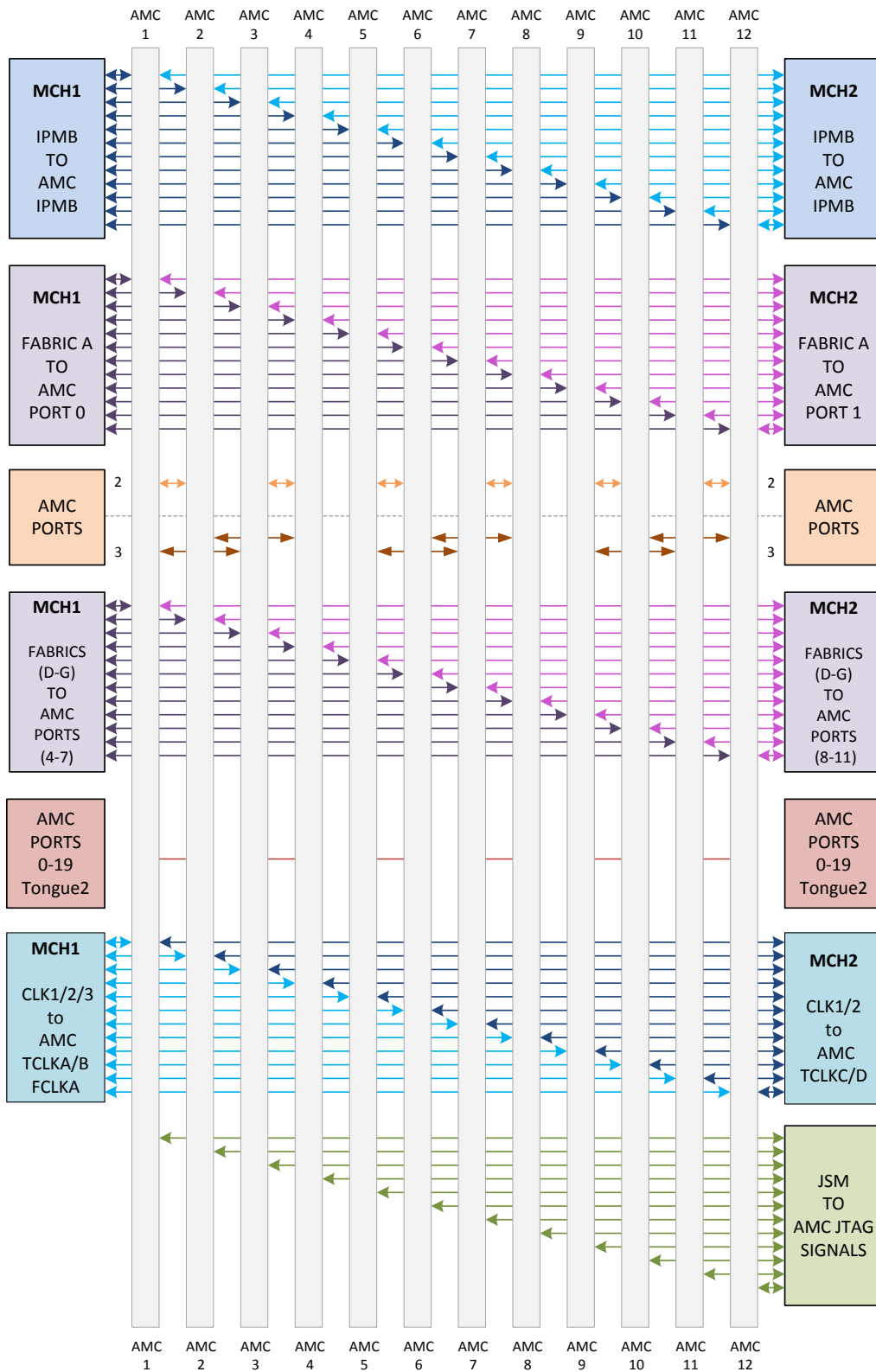


Figure 2: Chassis Layout Rear View

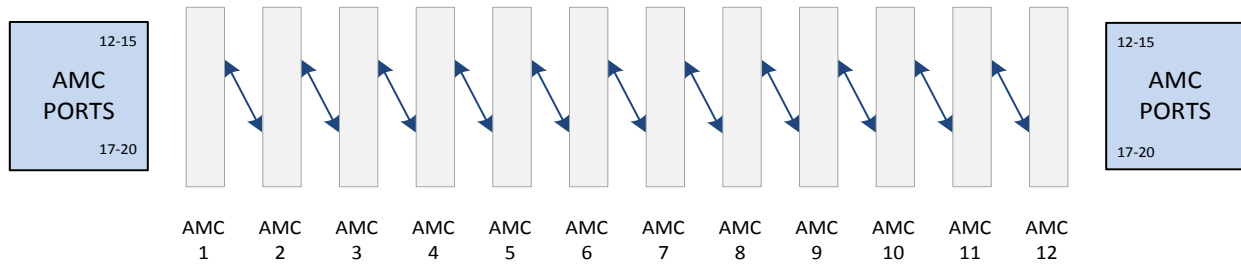
BACKPLANE CONNECTIONS



PORTS 12-15 AND 17-20 OPTIONS

VT815 allows two types of backplane routing for Ports 12-15 and 17-20. Ordering option D=0 routes ports 12-15 to ports 17-20 of the adjacent slots and ordering option D=1 routes ports 12-15 and ports 17-20 per μ TCA.4 specifications. See [Figure 3](#) and [Ordering Options](#) table for available ordering options.

Ordering Option D=0, Adjacent Slots



Ordering Option D=1, μ TCA.4 Compliant

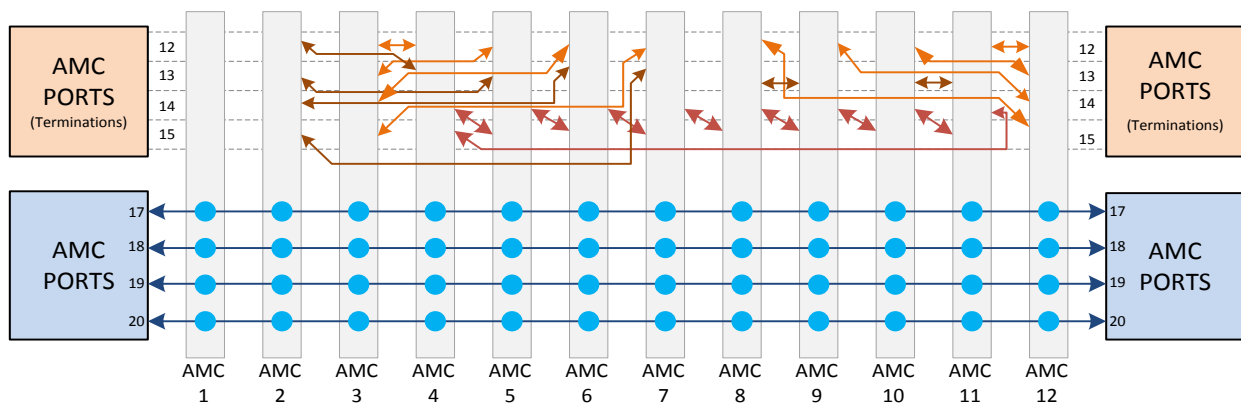


Figure 3: Ports 12-15 and 17-20 Backplane Routing Options

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SPECIFICATIONS

Architecture		
Physical	Dimensions	Height 9U Width 19" Depth 14.9" without handles, 16.23" with handles
Type	μ TCA.4 Chassis	12 full-size AMC double module slots with Tongue 2 in front and RTM
Standards		
AMC	Type	AMC.1, AMC.2, AMC.3 and AMC.4
μ TCA	Type	JSM, Telco Alarm, Dual MCH, Tri Power Module and Dual Intelligent Cooling Unit
Configuration		
Power	VT815	Up to three 1100 W AC supply 90-246V AC with frequency from 47-63 Hz
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		
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
Trademarks and Disclaimer		The VadaTech logo is a registered trademark of VadaTech, Inc. Other registered trademarks are the property of their respective owners. AdvancedTCA™ and the AdvancedMC™ logo are trademarks of the PCI Industrial Computers Manufacturers Group. All rights reserved. Specification subject to change without notice

REAR PHOTO



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ORDERING OPTIONS

VT815 – ABC – DE0 – 00J*

A = Power Module

- 1 = Reserved
- 2 = Dual supply (total 2200 W)
- 3 = Triple supply (total 3300 W)

B = JSM**

- 0 = No JSM module
- 1 = With JSM module (UTC030)

C = Chassis FRU Configuration for Power Modules

- 0 = 1+1 (One primary, one redundant)
- 1 = 2+1 (Two primary, one redundant)

D = Ports 12-15, 17-20

- 0 = Adjacent slots
- 1 = MTCA.4 compliant

E = RTM Configuration

- 0 = Standard per MTCA.4
- 1 = No RTM (single rear panel, no RTM cooling)

J = Conformal Coating

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

Notes:

* Contact VadaTech sales for end-to-end integrated solutions

** JSM can be purchased separately

RELATED PRODUCTS



AMC522 MTCA.4
250 MSPS ADC



UTC006 MCH



MRT520 MTCA.4
RTM

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