

VT815

9U MTCA.0/MTCA.4 Chassis, with 12 Full-size AMC Slots



VT815

Key Features

- MTCA 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
- Telco alarm

Benefits

- Tongue 2 connector on every AMC slot per MTCA.0 providing up to 120 W/slot of power and local connectivity
- Ideal platform for high-power processing AMCs (Intel, GPGPU, FPGA or DSP).
- 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



vadatech
THE POWER OF VISION



VT815

The VT815 is a 9U MTCA 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 MTCA specification capabilities to support high-power AMCs and provide high-bandwidth local interconnects. The RTM provision follows MTCA.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 1100 W AC each for a total of 3300 W.

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.

Power Supply

The VT815 has up to three 1100 W N+1 AC power supplies. The input voltage is from 110-240 V 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 is 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 MTCA 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.



Figure 1: VT815 Chassis Front View



Figure 2: VT815 Chassis Rear View

Chassis Layout

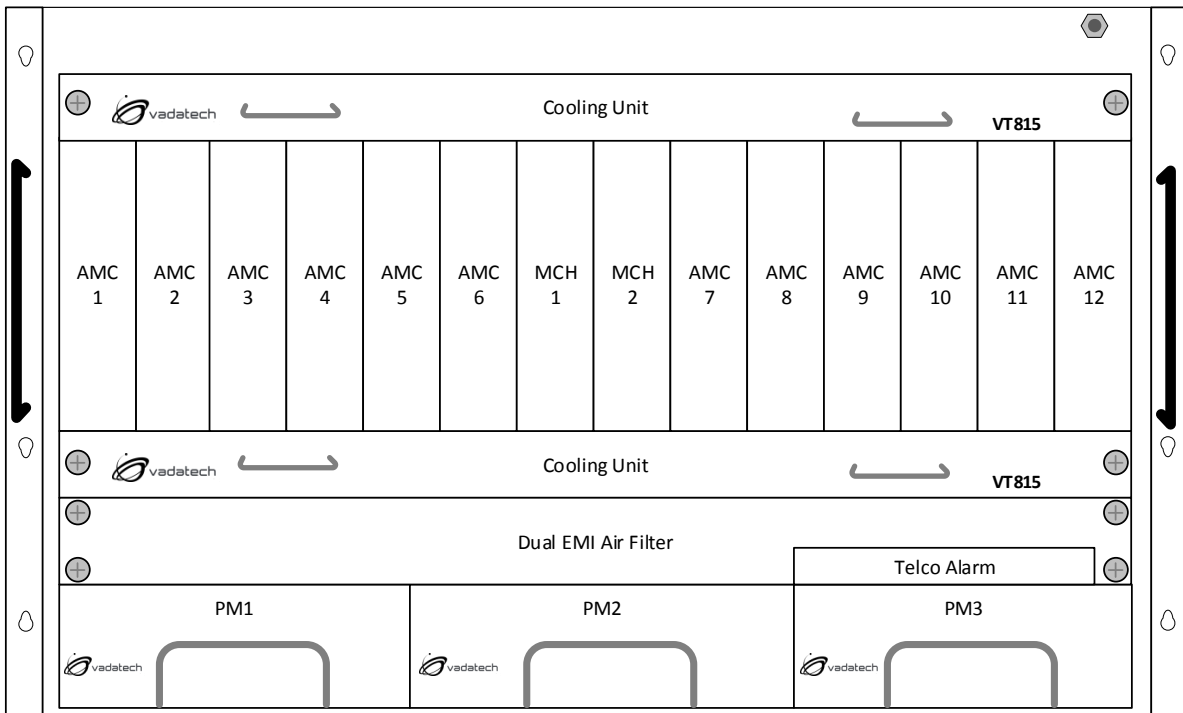


Figure 3: VT815 Chassis Layout Front View

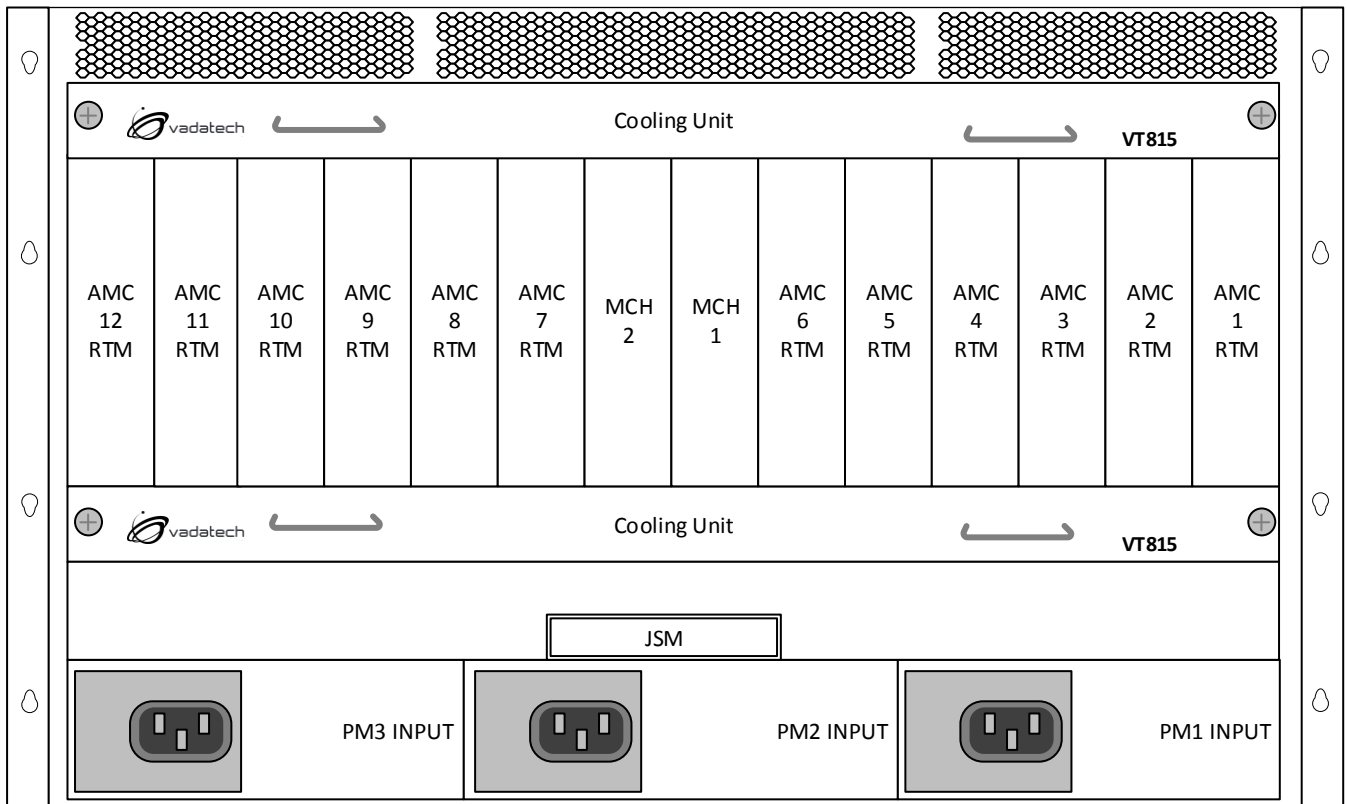


Figure 4: VT815 Chassis Layout Rear View

Backplane Connections

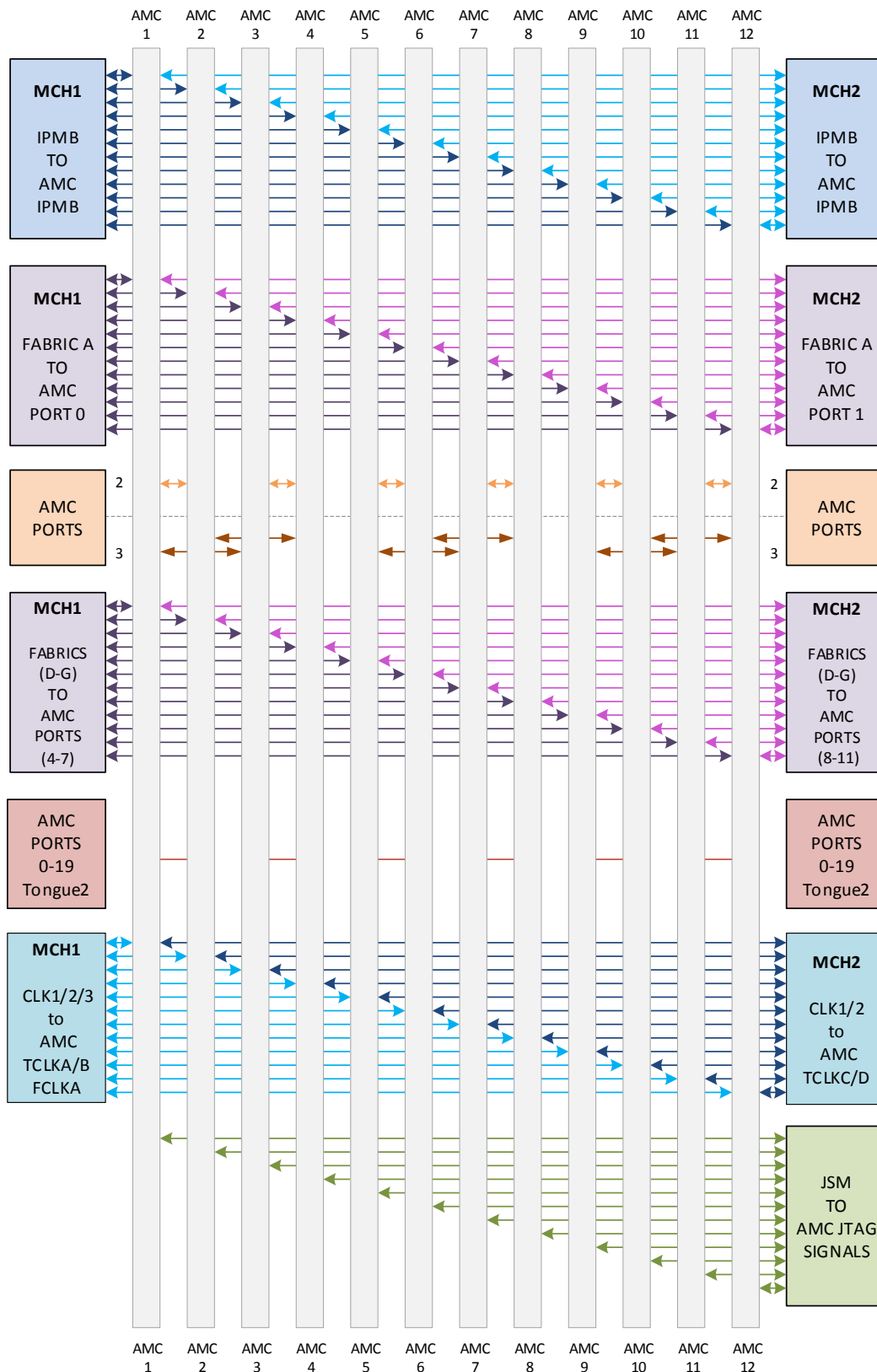
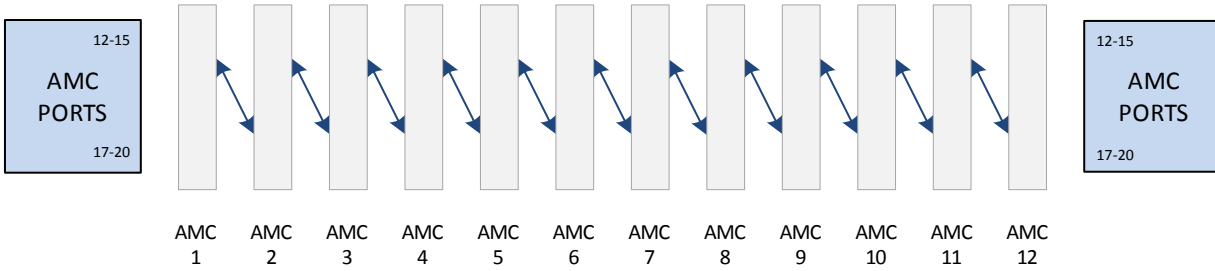


Figure 5: VT815 Backplane Connections

Ports 12-15 and 17-20

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 MTCA.4 specifications. See Figure 3Figure 6 below and Ordering options Page 7.

Ordering Option D=0, Adjacent Slots



Ordering Option D=1, μ TCA.4 Compliant

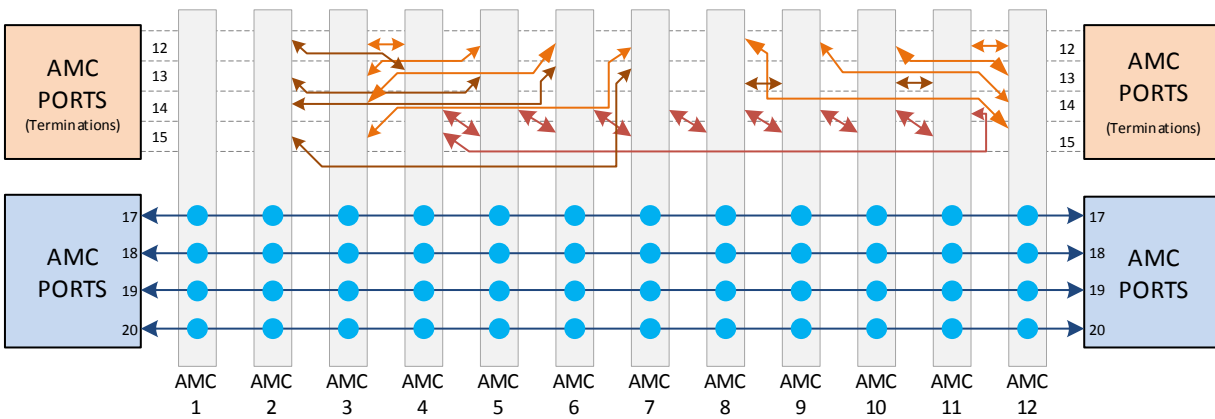


Figure 6: Ports 12-15 and 17-20 Backplane Routing Options

Specifications

| Architecture | |
|-----------------------|--|
| Physical | Dimensions Height: 9U Width: 19" Depth: 14.9" without handles, 16.23" with handles |
| Type | MTCA 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 |
| MTCA | Type JSM, Telco Alarm, Dual MCH, Tri Power Module and Dual Intelligent Cooling Unit |
| Configuration | |
| Power | VT815 Up to Three 1100 W AC supply 90-246 V 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% 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 ISO9001:2000 and AS9100B:2004 standards |
| Warranty | Two (2) years |

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

VT815 – ABC-DE0-00J*

| | | |
|--|---|---|
| A = Power Module 1 = Reserved 2 = Dual Supply (total 2200 W) 3 = Triple Supply (total 3300 W) | D = Ports 12-15 and 17-20 0 = Adjacent slots 1 = MTCA.4 compliant | |
| B = JSM** 0 = No JSM 1 = With JSM | E = RTM Configuration 0 = Standard per MTCA.4 1 = No RTM (single rear panel, no RTM cooling) | |
| C = FRU Configuration for Power Modules 0 = 1+1 (One primary, one redundant) 1 = 2+1 (Two primary, one redundant) | | J = Conformal Coating 0 = No coating 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

AMC520



- Dual DAC with 250 MSPS @ 16-bit resolution utilizing MAX5878 device (user programmable for lower sampling rate)
- Ten channels of ADC with 125MSPS @ 16-bit resolution utilizing AD9268 device
- Internal clock or precision external clock from RTM/backplane/front panel clocks

MRT520



- MicroTCA.4 RTM for the AMC520
- Two analog outputs from AMC520's DACs via SSMC connectors
- Ten analog inputs (AC or DC coupled) interfacing directly with AMC520's ADC ICs via SSMC connectors

UTC006



- Double module, full size per AMC.0 and MTCA.4
- Fabric options include PCIe Gen3, 40/10GbE, SRIO, CBS or Xilinx Virtex-7 690T FPGA for complete flexibility
- Front panel fabric expansion, e.g. quad ports for PCIe Gen 3 (x4, x8, or x16)

Contact

VadaTech Corporate Office

198 N. Gibson Road, Henderson, NV 89014

Phone: +1 702 896-3337 | Fax: +1 702 896-0332

Asia Pacific Sales Office

7 Floor, No. 2, Wenhua Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR

Phone: +44 2380 016403

info@vadatech.com | www.vadatech.com

Choose VadaTech

We are technology leaders

- First-to-market silicon
- Constant innovation
- Open systems expertise

We commit to our customers

- Partnerships power innovation
- Collaborative approach
- Mutual success

We deliver complexity

- Complete signal chain
- System management
- Configurable solutions

We manufacture in-house

- Agile production
- Accelerated deployment
- AS9100 accredited



vadatech
THE POWER OF VISION

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.

© 2018 VadaTech Incorporated. All rights reserved.
DOC NO. 4FM737-12 REV 01 | VERSION 1.1 – AUG/18