

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 120W/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



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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 and 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.

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.

12 chassis mounted temperature sensors monitor the intake and the outtake air temperature throughout the unit.

Telco Alarm

The VT815 is fitted with a Telco alarm that constantly monitors the chassis for any anomalies and alert the user by LED indication on the Front Panel. It is located above the fan tray and can be directly accessed via a Micro DB-9 connector.

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

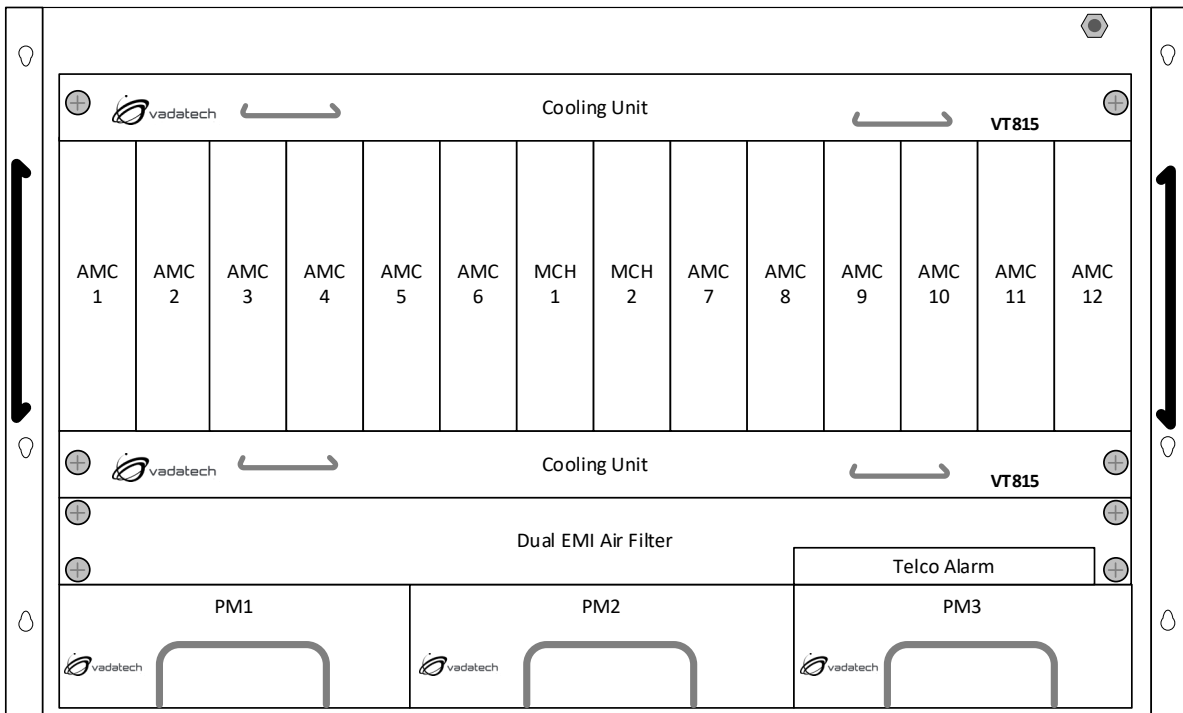


Figure 3: VT815 Chassis Layout Front View

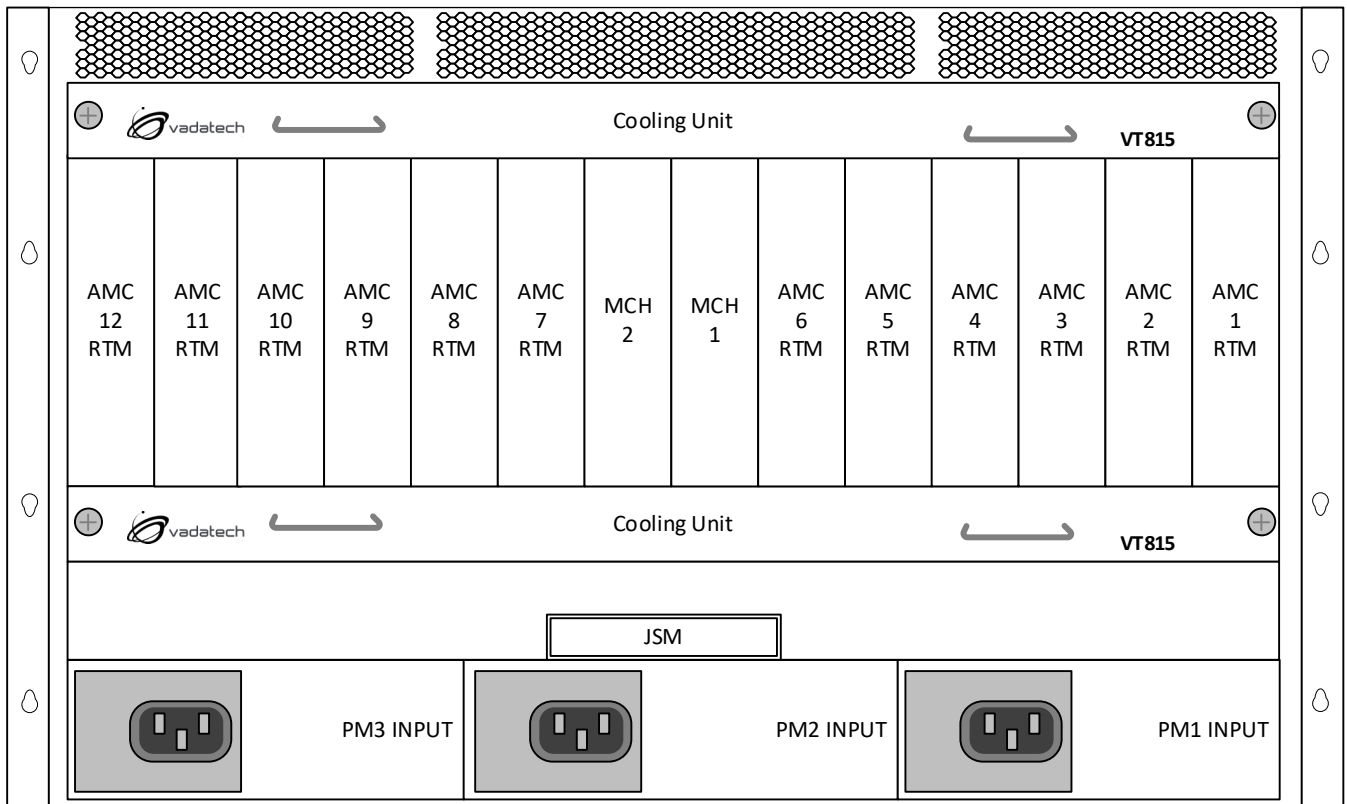


Figure 4: VT815 Chassis Layout Rear View

Backplane Connections

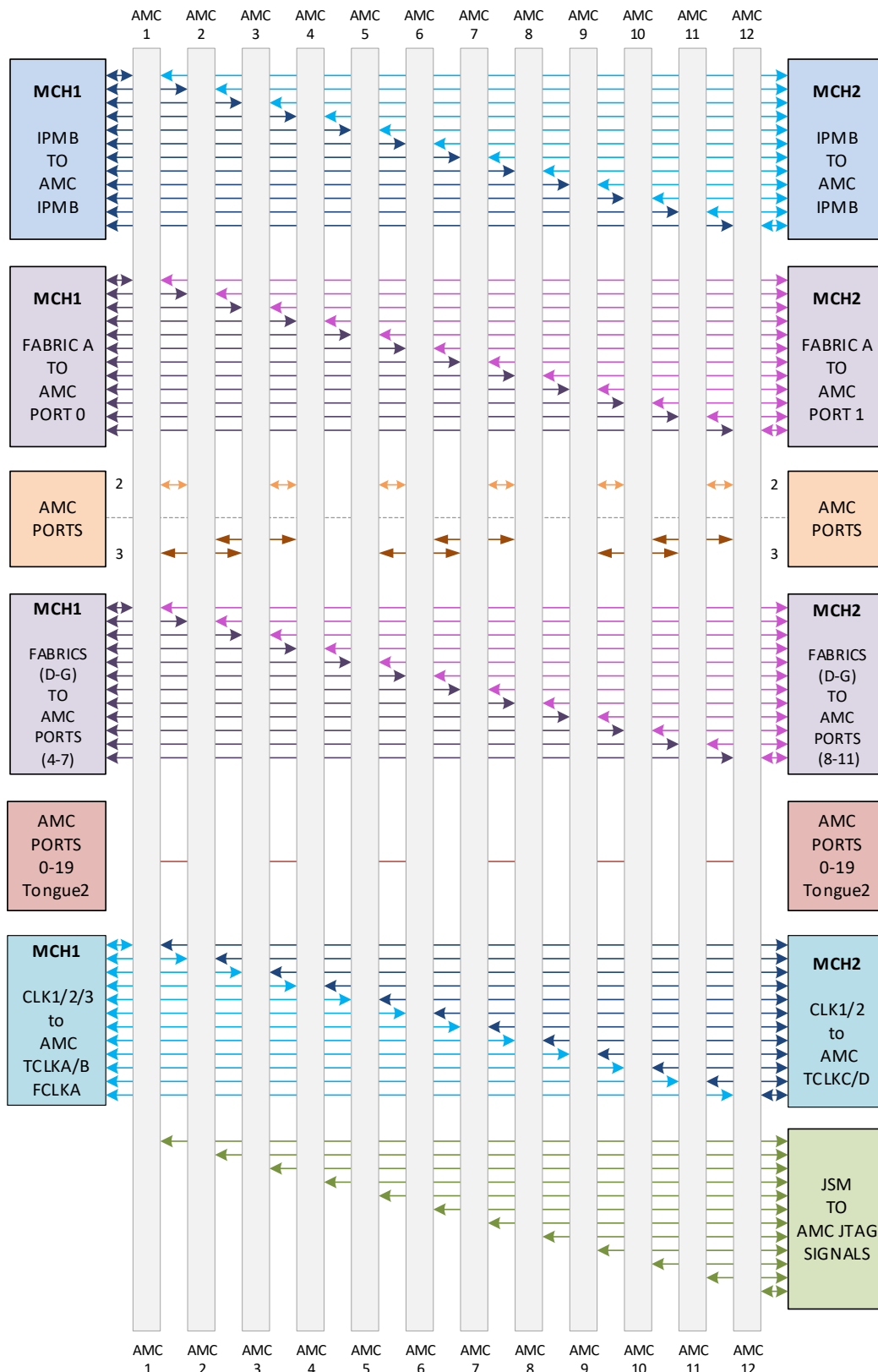
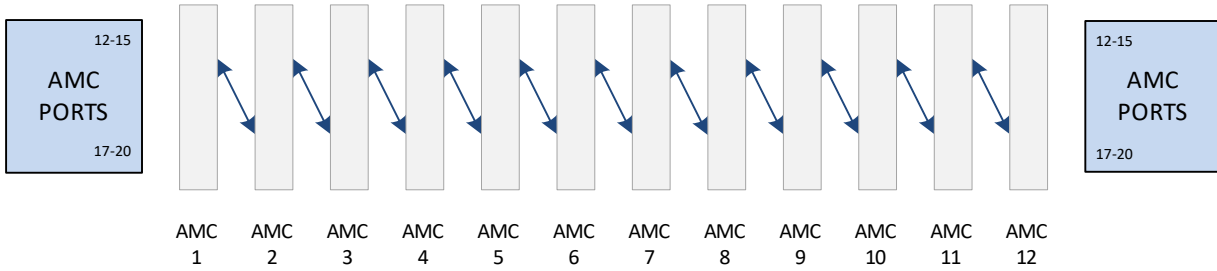


Figure 5: VT815 Backplane Connections

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 route Ports 12-15 and Ports 17-20 per MTCA.4 specifications. See [Figure 6](#) and [Ordering Options](#)

Ordering Option D=0, Adjacent Slots



Ordering Option D=1, MTCA.4 Compliant

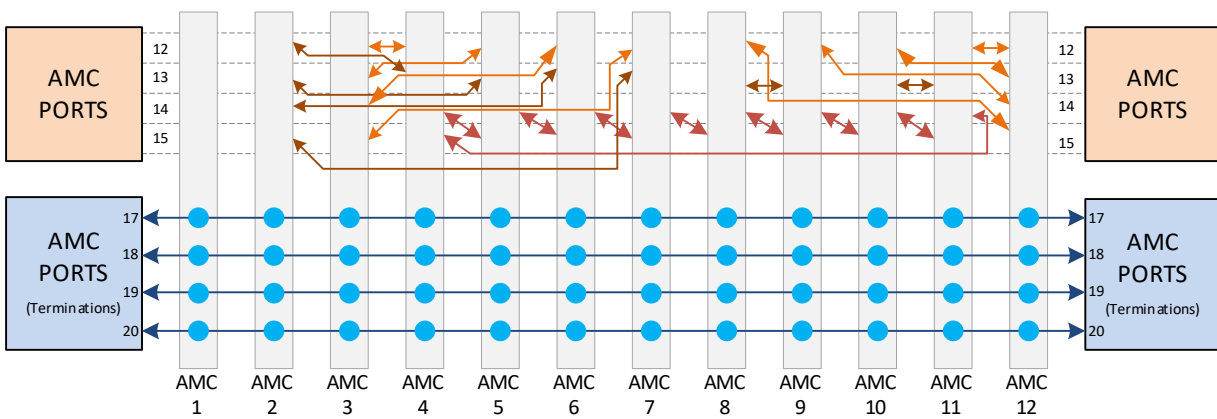


Figure 6: Ports 12-15 and 17-20 Backplane Routing Options

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 1100W AC supply (Up to <u>Three</u>) 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% 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 |

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 = Single supply (1100W) 2 = Dual Supply (total 2200W) 3 = Triple Supply (total 3300W) | D = Ports 12-15 and 17-20 0 = Adjacent slots 1 = MTCA.4 compliant | |
| B = JSM** 0 = No JSM 1 = 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 16-bit @ 250 MSPS (MAX5878, user programmable for lower sampling rate)
- Ten channels of ADC 16-bit @ 125 MSPS (AD9268)
- 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)

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