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

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 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 or DC -48 for a total of 3600W.

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.

Figure 1: VT815 Chassis Front View

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.

Figure 2: VT815 Chassis Rear View

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.

Chassis Layout

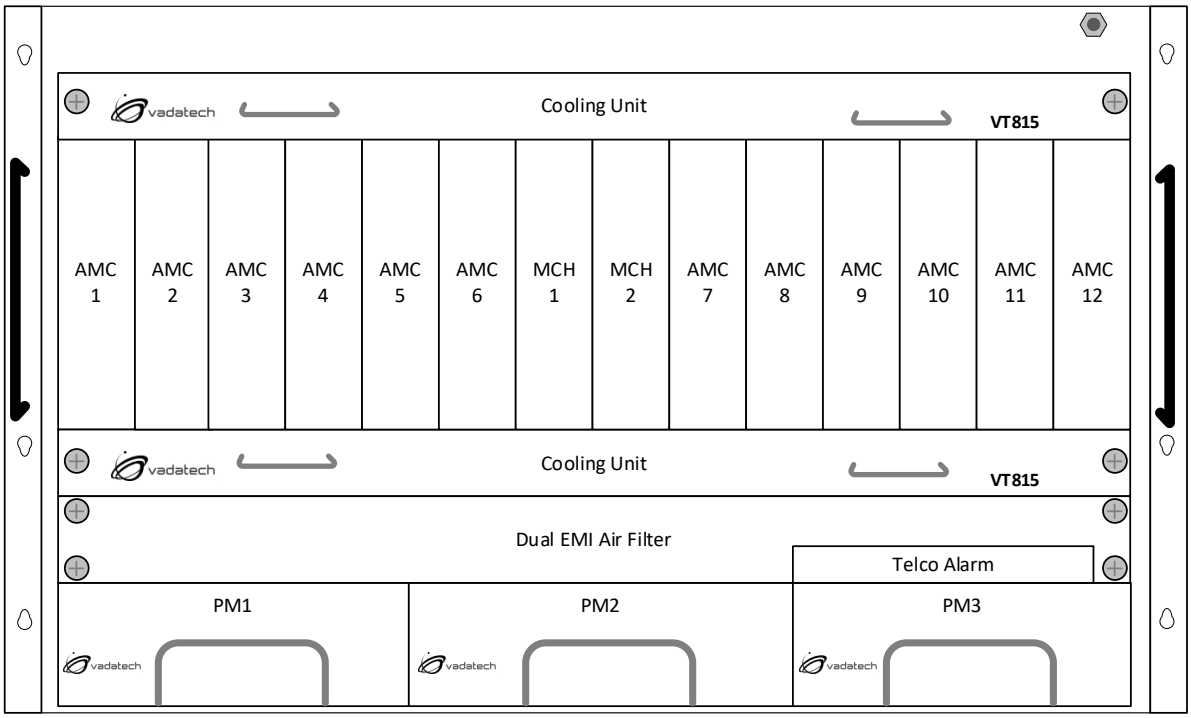


Figure 3: VT815 Chassis Layout Front View

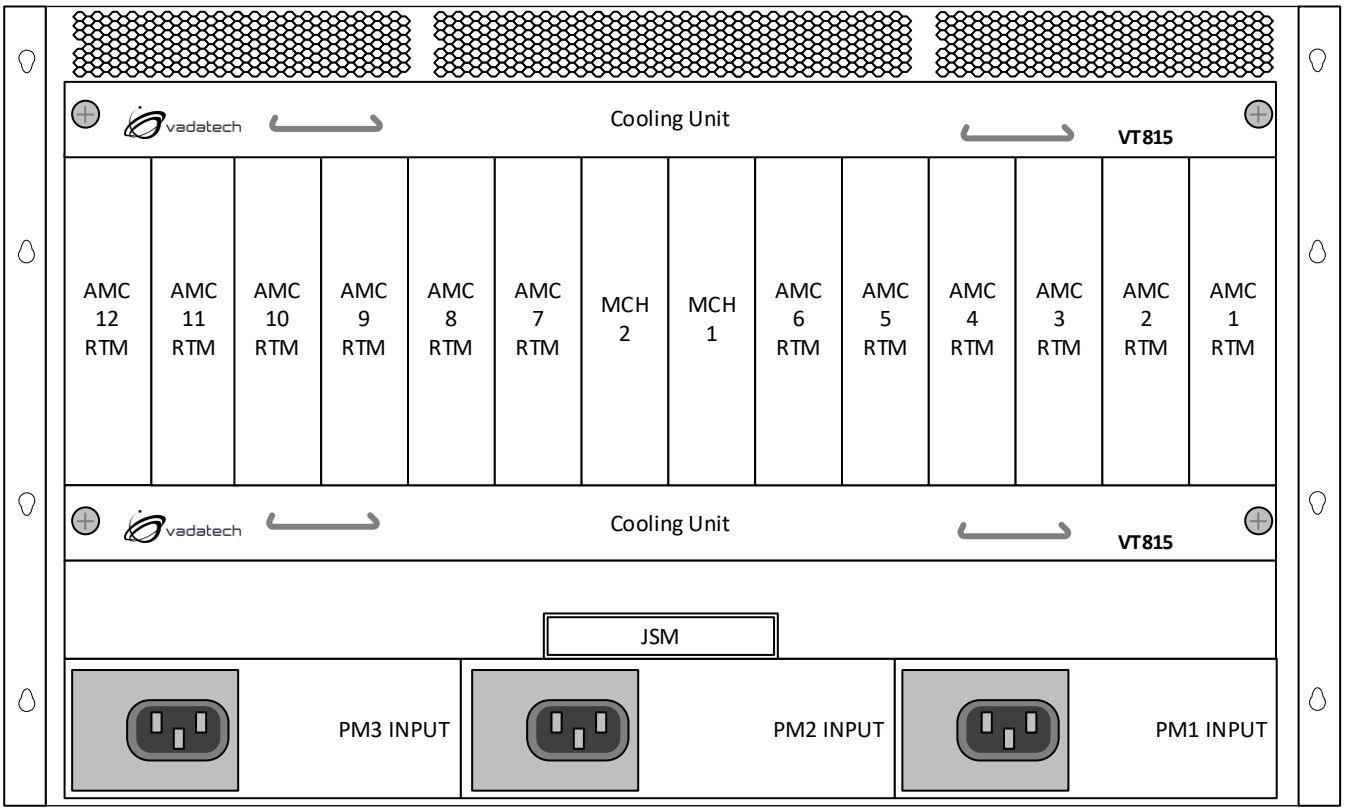


Figure 4: VT815 Chassis Layout Rear View

Backplane Connections

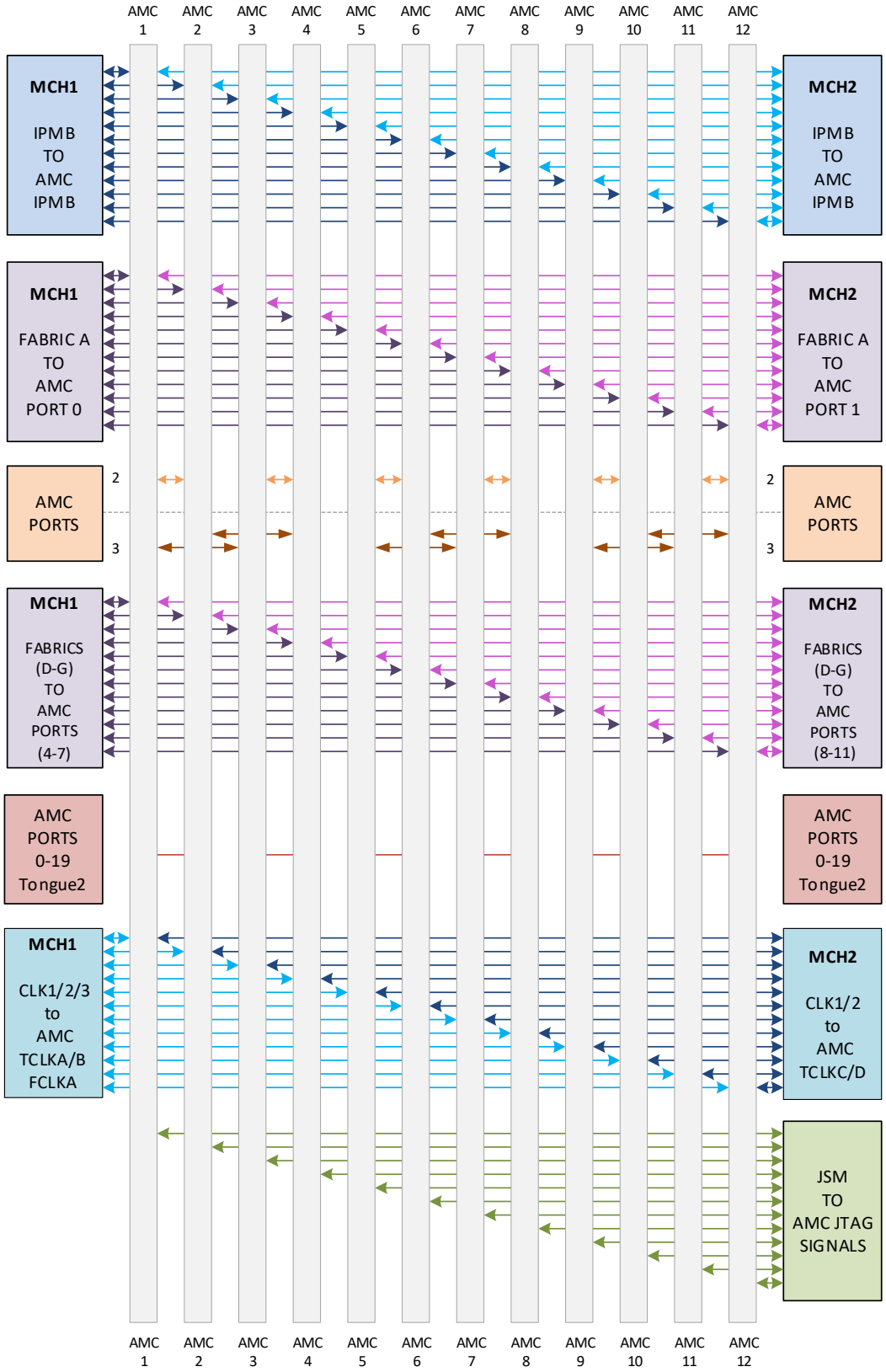
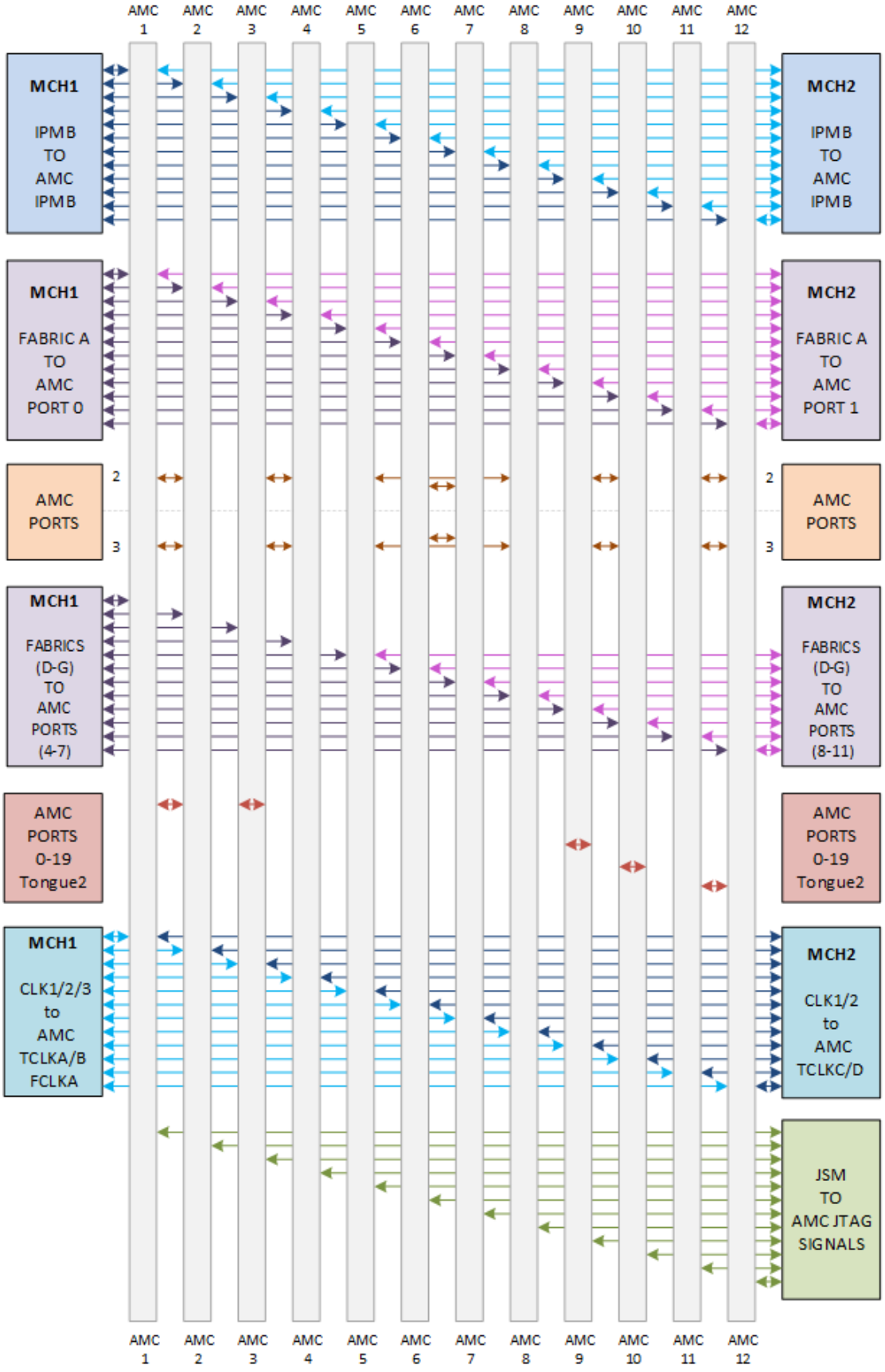


Figure 5: VT815 Backplane Connections

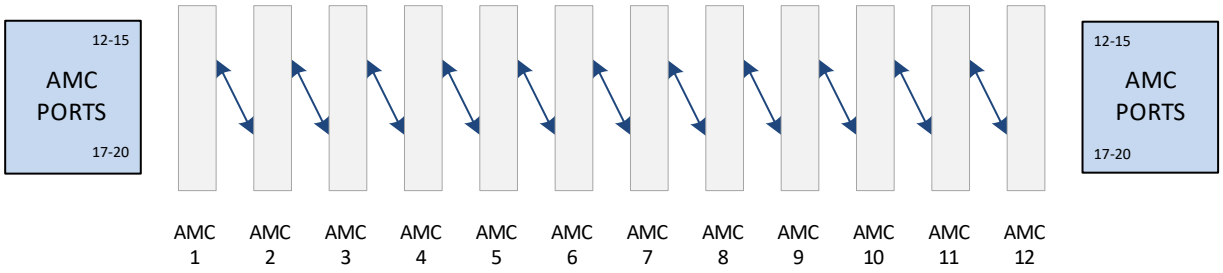
Special Back plane routing for Option D = 2 and F = 1



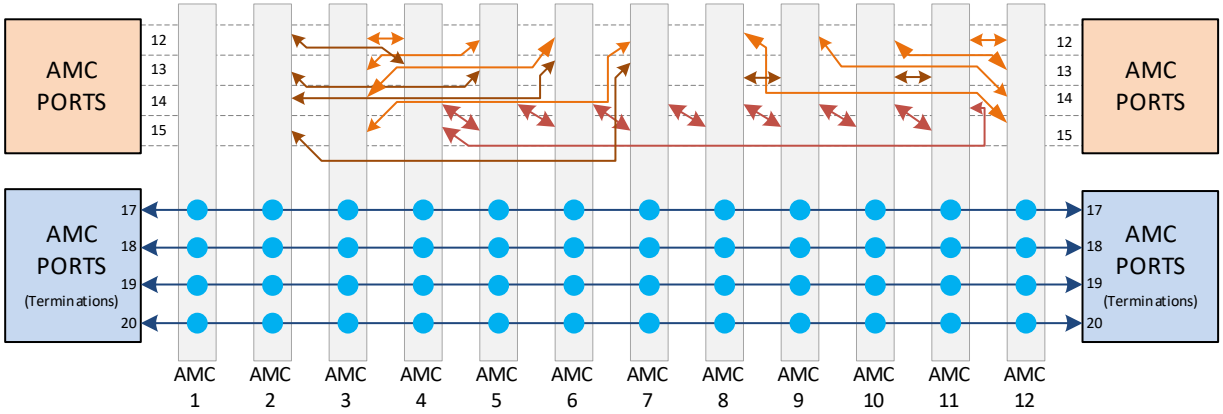
Ports 12-15 and 17-20

VT815 allows has three 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



Ordering Option D=2, F = 1 (Special route on ports 12-15 and Tongue 2)

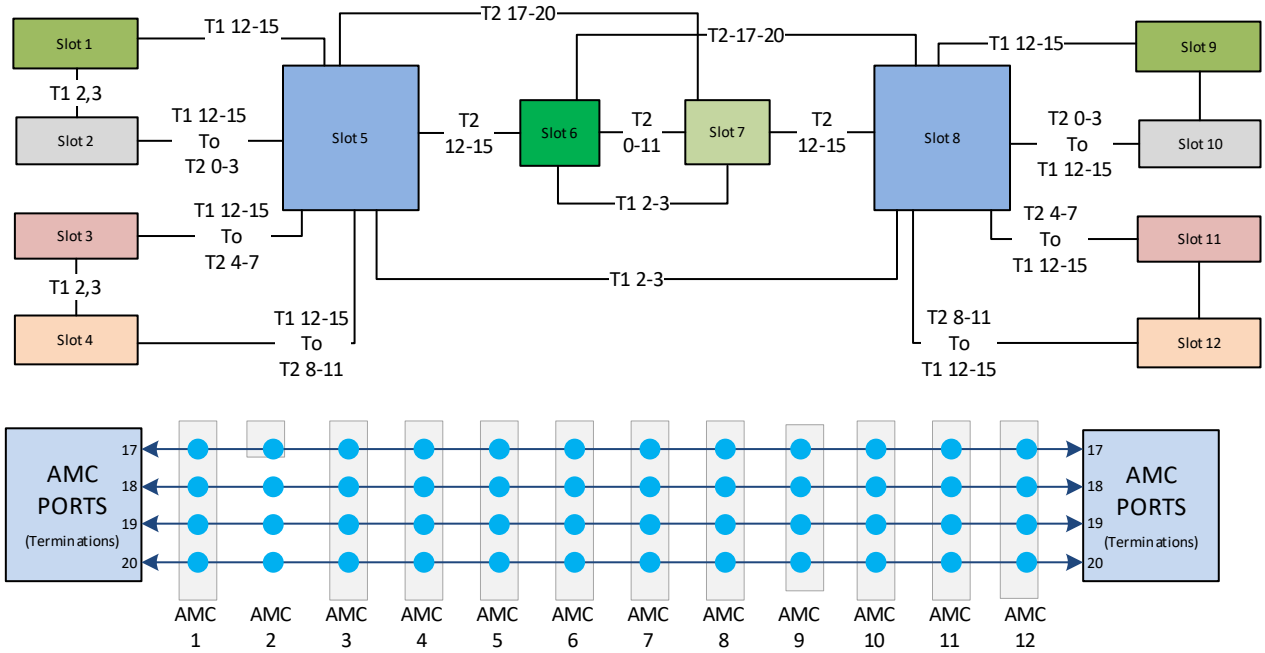


Figure 6: Ports 12-15 and 17-20 Backplane Routing Options

9 Node Full Mesh

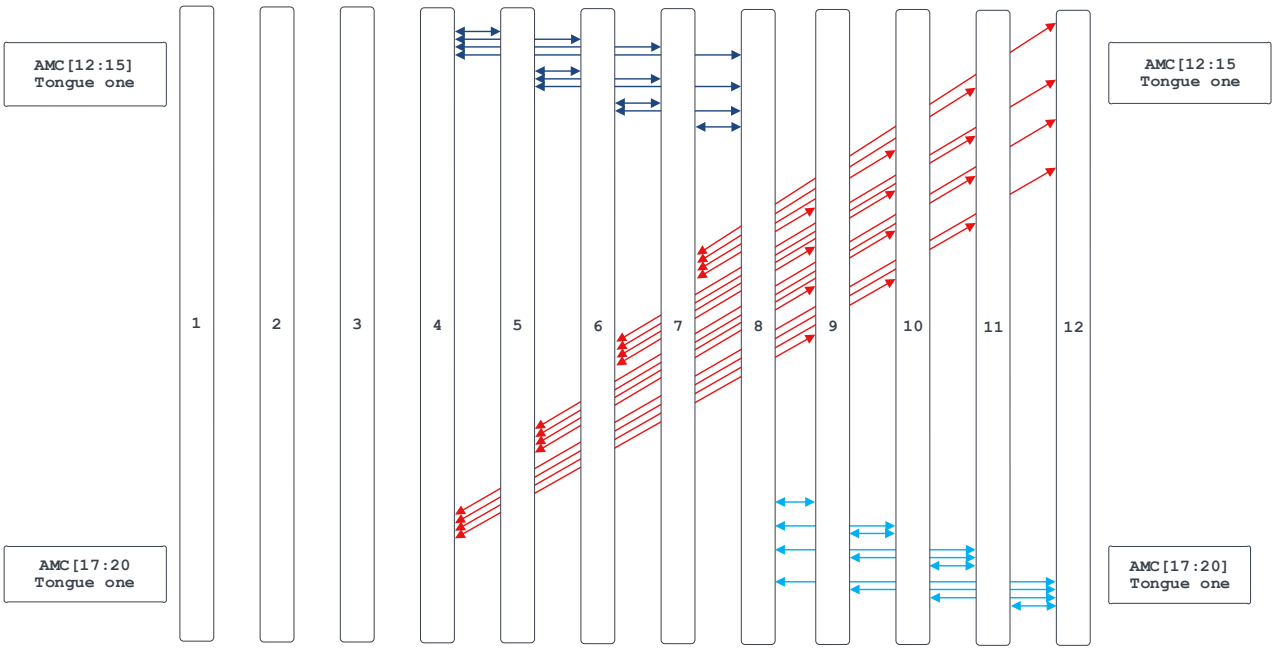


Figure 7: Ports 12-15 and 17-20 Backplane Routing Options (9 Node Full Mesh)

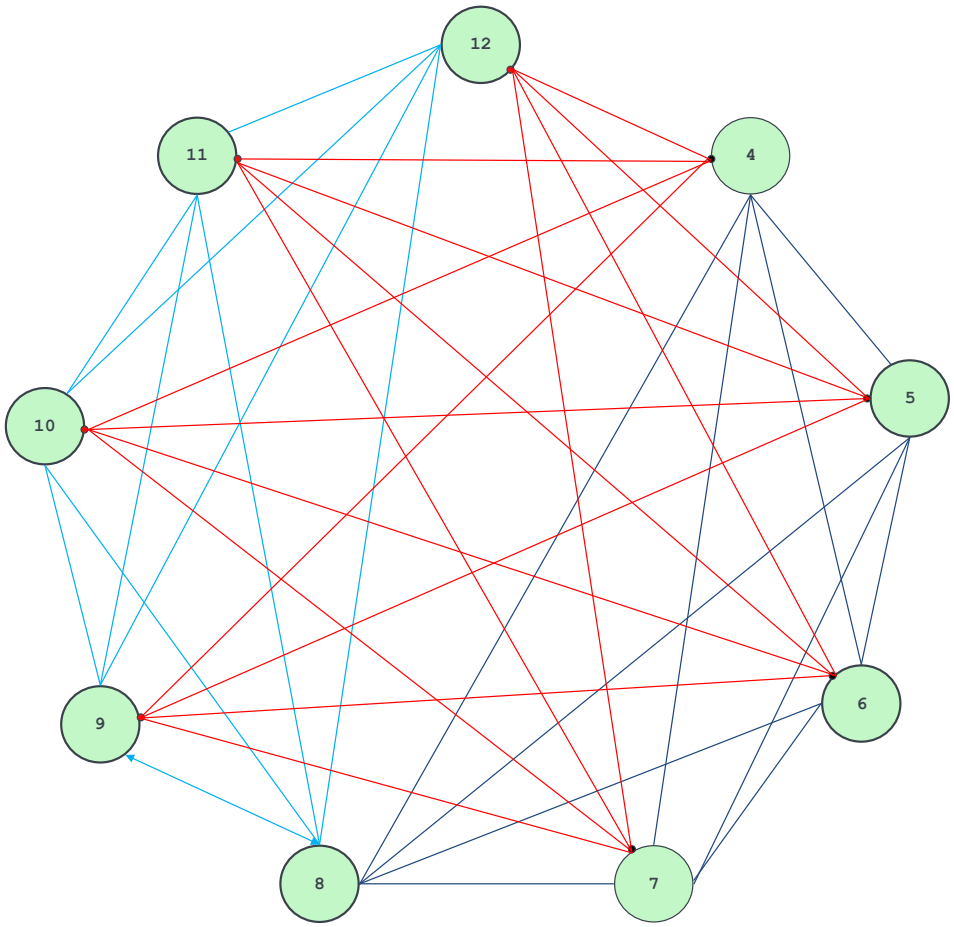


Figure 7A: Ports 12-15 and 17-20 Backplane Routing Option (9 Node Full Mesh)

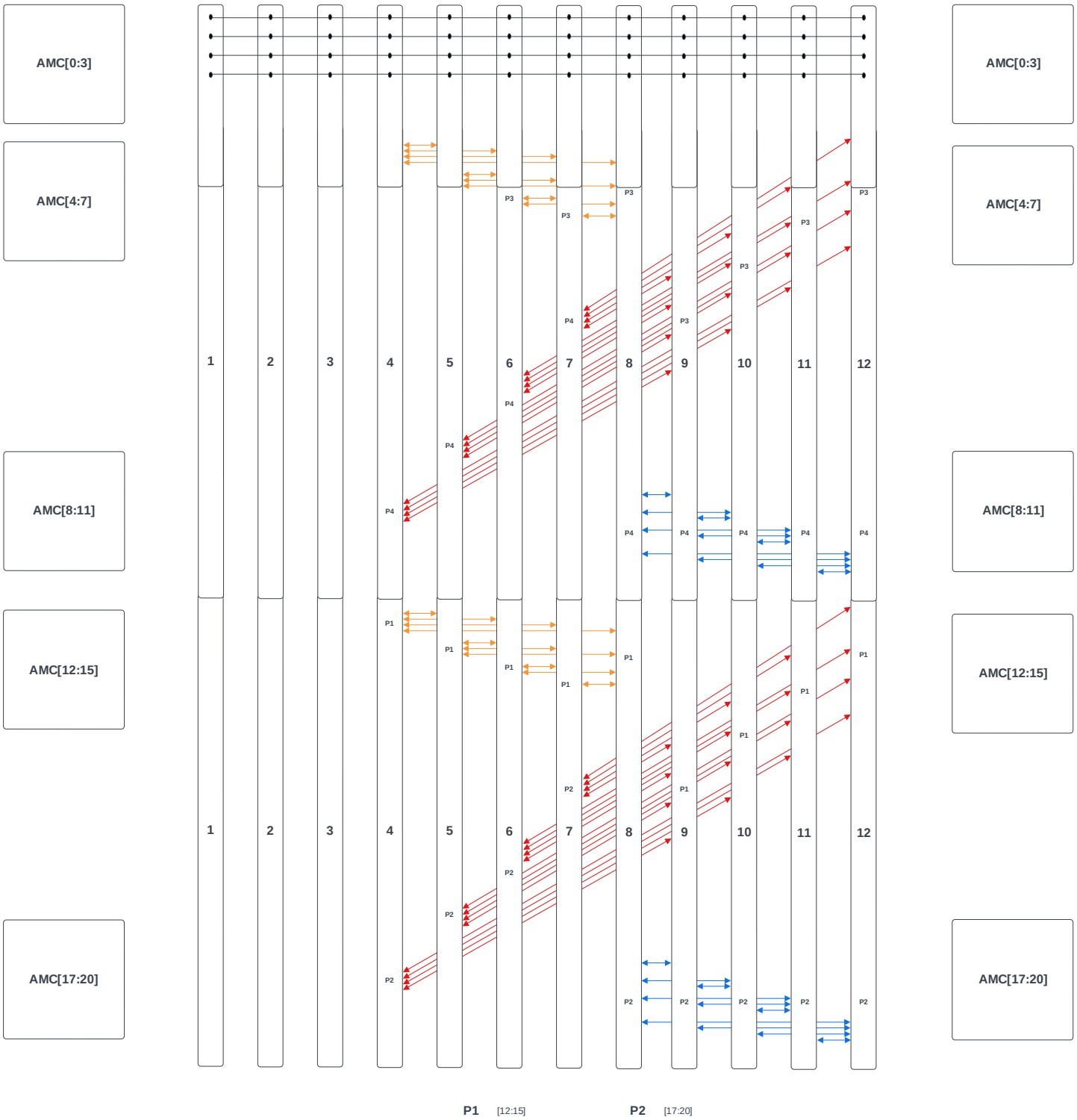


Figure 8: Tongue 2 (9 Node Full Mesh)

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 Three)
		90-246V AC with frequency from 47-63 Hz or DC -48V (-40V to -72V)
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-DEF-00J*

A = Power Module	D = Ports 12-15 and 17-20***	
1 = Single supply AC (1100W) 2 = Dual Supply AC (total 2200W) 3 = Triple Supply AC (total 3300W) 4 = Single Supply DC -48V (1200W) 5 = Dual Supply DC -48V (2400W) 6 = Triple Supply DC -48V (3600W)	0 = Adjacent slots 1 = MTCA.4 compliant 2 = Special Route on 12-15, 17-20 as MLVDS 3 = 9 Node Full Mesh (figure 7, 7A and 8)	
B = JSM**	**E = RTM Configuration**	
0 = No JSM 1 = JSM	0 = Standard per MTCA.4 1 = No RTM (single rear panel, no RTM cooling)	
C = FRU Configuration for Power Modules	**F = Ports 2-3, T1 12-15, T2 0-20*** **	**J = Conformal Coating**
0 = 1+1 (One primary, one redundant) 1 = 2+1 (Two primary, one redundant)	0 = Standard 1 = Special route on each slot Figure 6 2 = Special route on each slot Figure 8	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.

*** D = 2 and F = 1 option go together, they are not exclusive; D = 3 and F = 2 option go together, they are not excusive

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)

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, Wenhu 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

DOC NO. 4FM737-12 REV 01 | VERSION 1.4 – OCT/24