

VT822

12U Rugged AdvancedTCA Shelf,
14 Slot, Front I/O



VT822

Key Features

- 19" rackmount 12U Rugged ATCA Shelf
- Conforms to PICMG 3.0 specification Rev.3.0
- 14-slot backplane with Dual Star base and fabric
- Full redundancy for all FRUs
- Split power distribution (odd slots on A1/B1, even slots on A2/B2)
- Bottom to rear cooling
- Passive backplane (40G capable)
- Customised front IO

Benefits

- Electrical, mechanical, software, and system-level expertise in house
- Superior shelf management solution from VadaTech
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

AdvancedTCA®
40G



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VT822

The VT822 is a 14 slot ATCA rugged Shelf which conforms to the PICMG 3.0 specification. The Shelf is a 12U, 19" rack mountable form factor compliant to EIA310

The VT822 was specifically designed for rugged applications in harsh environments such as temperature extremes, humidity, shock and vibration where commercial offerings cannot be deployed.

The VT822 was designed and tested to support up to 160 lbs of payload weight which includes Front and Rear Transition Modules and I/O connectors and cables.

The VT822 was designed with a unique airflow baffle provision integrated into the Front and RTM card guides to enable the system integrator to balance impedance between slots.

Shelf Architecture

The VT822 was specifically designed to maintain the PICMG 3.0 performance requirements while being deployed in harsh environments typical in industrial and military applications which exceed the NEBS environmental capability. The VT822 was designed specifically to meet the environmental requirements defined in MIL-STD-810G and MIL-STD-167 as well as EMI requirements defined in MIL-STD-461E for deployment in an intended military application.

The VT822 Shelf construction is composed of light-weight aluminium structure with an optimal 4:1 strength-to weight ratio to support a 160 lbs. payload inclusive of electronic modules, and internal I/O cables. The design includes high strength card guides to support electronic payloads in excess of the PICMG 3.0 sub rack requirements of 70.5 lbs. front module payload while being deployed in severe vibration, shock and acceleration environments encountered in military applications.

The VT822 also includes a unique airflow balance baffle provision integral to the front and RTM card guides. Typical sub-rack payload configurations may be composed of a mixture of high or low-impedance Front and Rear Transition Modules which tend to have uneven airflow through the slots with air from high impedance slots often diverted to neighbouring low impedance slots. In order to counteract this effect, the card guides were designed with an integral baffle provision to enable system integrators to balance the airflow for optimal performance within the Shelf.

Power Modules

The VT822 is designed to work with external –48 VDC power supplies.

Cooling and Temperature Sensors

The VT822 cooling is bottom to rear.

Shelf Input/Output

The VT822 provides front I/O from with rectangular BACC65AB style connectors to optimize available signal pin-out. The I/O pin-out definition are customizable to specific application requirement. Alternate I/O connector may also be utilized upon request.

Shelf Manager

Contact VadaTech Sales to discuss your shelf manager options.



Figure 1: Front View

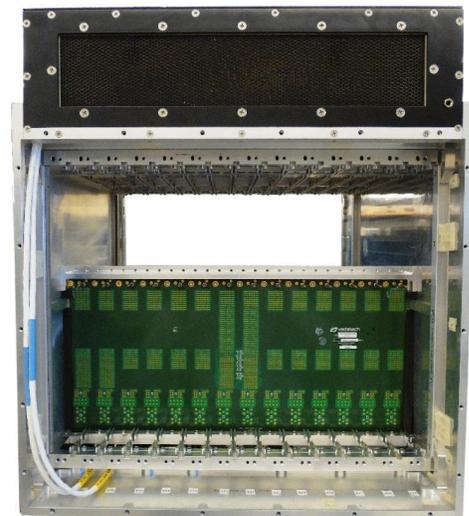


Figure 2: Rear View

Slot Distribution

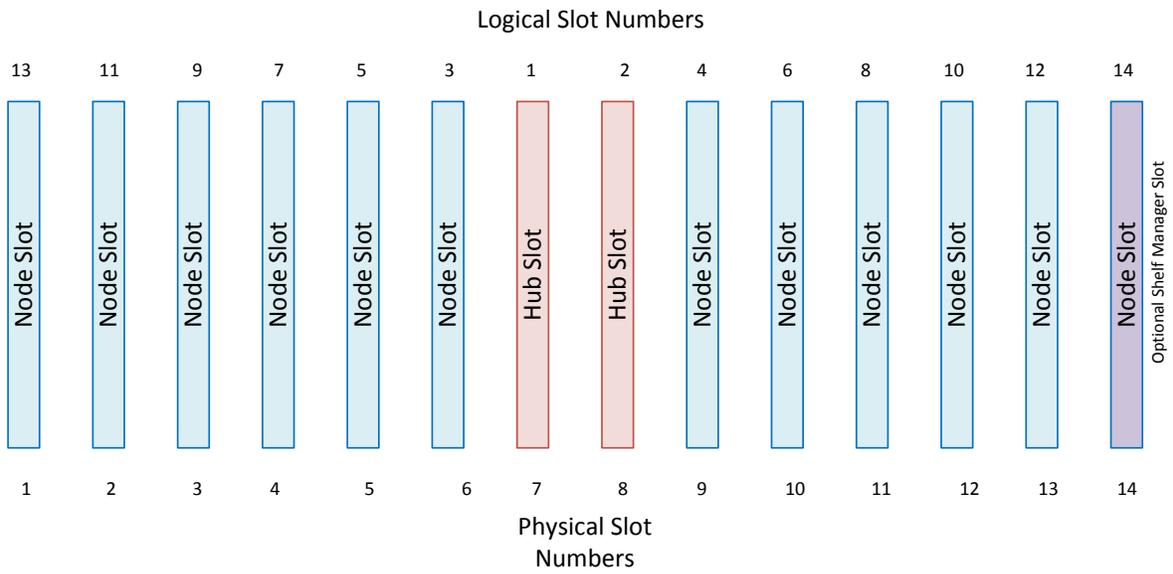


Figure 3: Shelf Slot Distribution - Front View

Air Flow

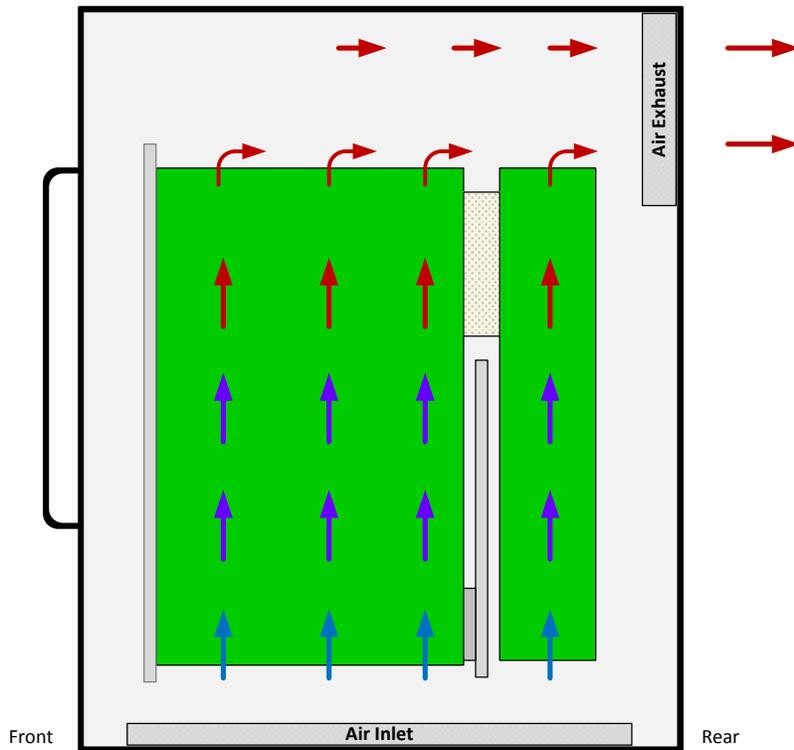


Figure 4: Shelf Air Flow

Specifications

Architecture		
Physical	Dimensions	Height: 12U Width: 19" Depth 21" (533.4 mm)
Type	ATCA Shelf	14 Slots
Standards		
ATCA	Type	PICMG 3.0 Rev 3.0
Configuration		
Environmental	Temperature	Operating temperature: -40° to 70°C (See environmental spec sheet) Storage Temperature: -55° to +85°C
	Vibration	MIL-STD-810G, Method 514.6 Procedure I
	Shock	MIL-STD-810G, Method 516.6 Procedure I 40G's, 11ms Half Sine Pulse
	Acceleration	MIL-STD-810G, Method 513.6 Procedure II Operational MIL-STD-810G, Method 513.6 Procedure III Crash
	Humidity	MIL-STD-810G, Method 507.5 Procedure II Aggravated Humidity
	EMI	MIL-STD-461E
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

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.

Ordering Options

VT822 – 00C-000-00J

C = Slide		J = Conformal Coating
0 = None 1 = Slides (MIL-STD-1472, up to 150 lbs. load)		0 = No coating 1 = Humiseal 1A33 polyurethane 2 = Humiseal 1B31 acrylic

Related Products

ATC806



- 40G or 10G ATCA switch, compliant to PICMG 3.1 specifications
- Scalable throughput based on desired performance level
- Managed Layer 3 software

ATC126



- Dual 14-core Intel® Xeon® E5-2658, 2680 or 2648L v4 processors
- Eight banks of DDR4 for up to 256 GB memory
- 10/40GbE Fabric channels

VT820



- 14-slot Fabric interface with Dual Star Interconnect
- Base Interface with Dual Star interconnect
- Split power distribution (odd slots on A1/B1, even slots on A2/B2)

Contact

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DOC NO. 4FM737-12 REV 01 | VERSION 1.0- FEB/17