Rugged 14 Slot ATCA Chassis

VT820

VT820 KEY FEATURES

- 14 Slot Rugged ATCA Chassis
- Conforms to PICMG 3.0 specification
- 14-slot Fabric interface with Dual Star Interconnect
- Base Interface with Dual Start interconnect
- Split power distribution (odd slots on A1/B1, even slots on A2/B2)
- Front to back cooling
- Redundant Power supply
- Airflow Baffle Plate Provision
- Bussed IPMI
- Passive Backplane
- Customized Rear I/O (BACC MIL- 26500 Connectors)
- RoHS compliant

The VT820 is a 14 slot ATCA rugged chassis which conforms to the PICMG 3.0 specification. The chassis is a 12U, 19” rack mountable form factor compliant to EIA310

The VT820 was specifically designed for rugged applications in harsh environments such as temperature extremes, humidity, shock and vibration where commercial offerings can not be deployed.

The VT820 can handle up to 160 *lbs* of payload weight which includes Front and Rear Transition Modules, redundant power supplies and I/O connectors and cables.

The VT820 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.

VadaTech can modify this product to meet special customer requirements without NRE (minimum order placement is required).

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Rugged 14 Slot ATCA Chassis

SPECIFICATIONS

Architecture		
Physical	Dimensions	Height 12U
		Width: 19”
		Depth 23”
Type	ATCA Chassis	14 ATCA Modules
Standards		
ATCA	Type	PICMG 3.0
Configuration		
Environmental	Temperature	Operating Temperature: -40° to 70° C
		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
		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	
Compliance	RoHS	
Warranty	Two (2) years	
Trademarks and Logos	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.	

Features

The VT820 is an ATCA 14 slot chassis which conforms to the PICMG 3.0 specification. Typical commercial ATCA product offerings are designed to the Telecordia GR-63-CORE, NEBS environmental requirements intended for telecommunication applications. The VT820 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 VT820 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 VT820 chassis construction is composed of light-weight aluminum structure with an optimal 4:1 strength-to weight ratio to support a 160 lbs payload inclusive of electronic modules, power supplies and internal I/O cables. The design includes high strength card guides to support electronic payloads in excess of the PICMG 3.0 subrack requirements of 70.5 lbs front module payload while being deployed in severe vibration, shock and acceleration environments encountered in military applications.

The VT820 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-impedance and low-impedance Front and Rear Transition Module which tend to have uneven airflow through the slots with air from high impedance slots often diverted to neighboring 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 chassis.

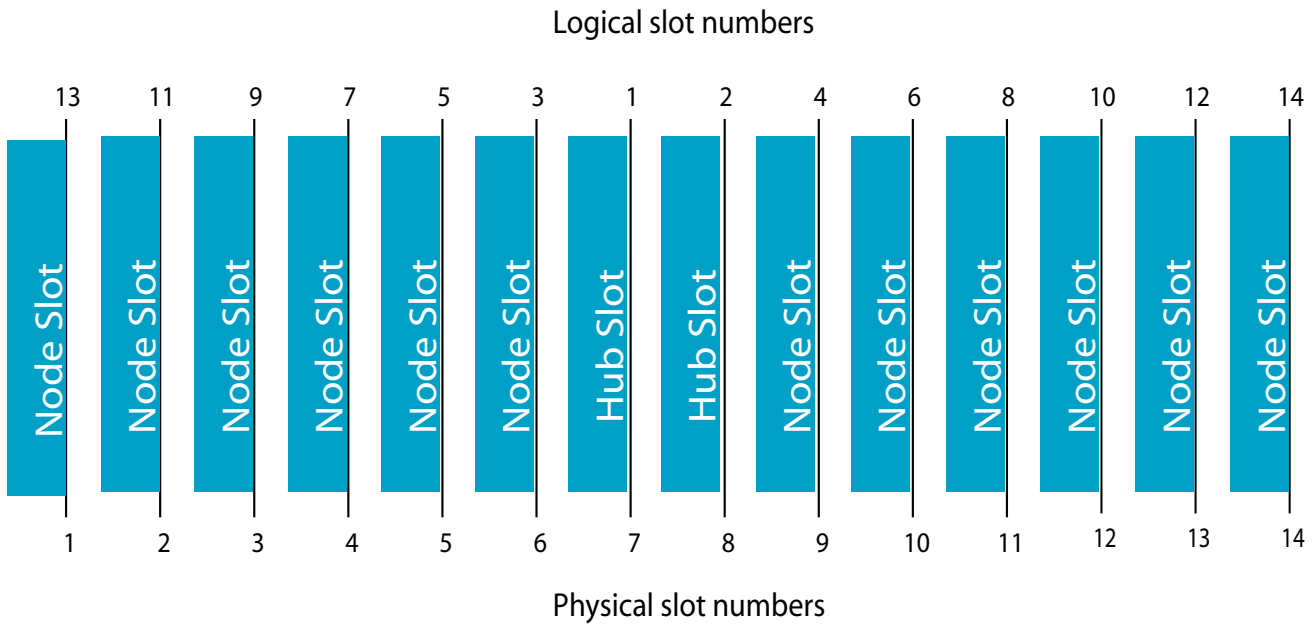

FIGURE 1. VT820 Module Allocation

Power supply

The VT820 has an option for two power supplies. The power modules can be AC universal (110-240 VAC, frequency from 47-63Hz) or DC 270V or -36 to -75V. Each power module outputs 3000W.

Cooling

The VT820 cooling is front to back.

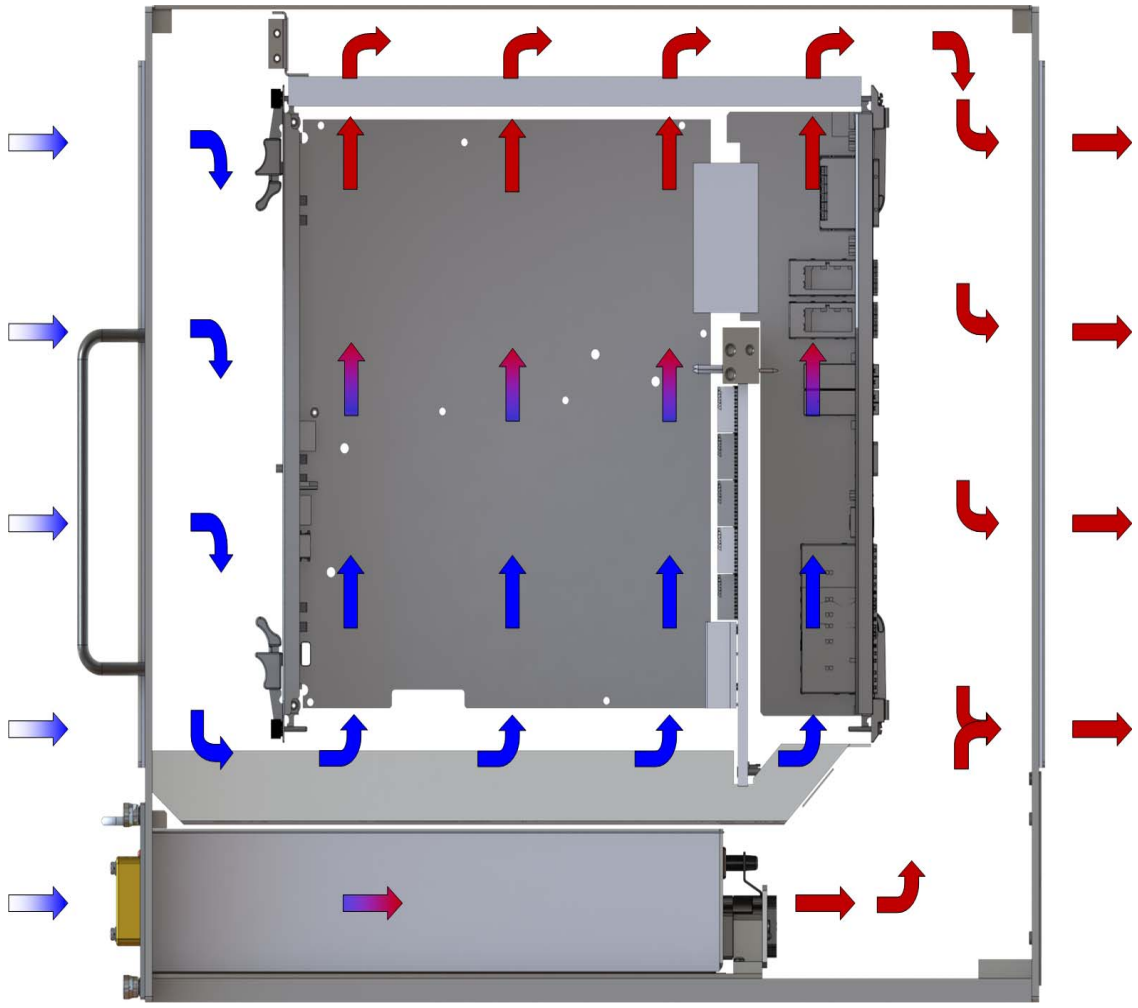

FIGURE 1. Chassis Air Flow

Chassis Input/Output

The VT820 provides rear I/O from with rectangular BACC style (MIL-26500) connectors to optimize available signal pin-out. The rear I/O pin-out definition are customizable to specific application requirement. Alternate I/O connector may also be utilized upon request.

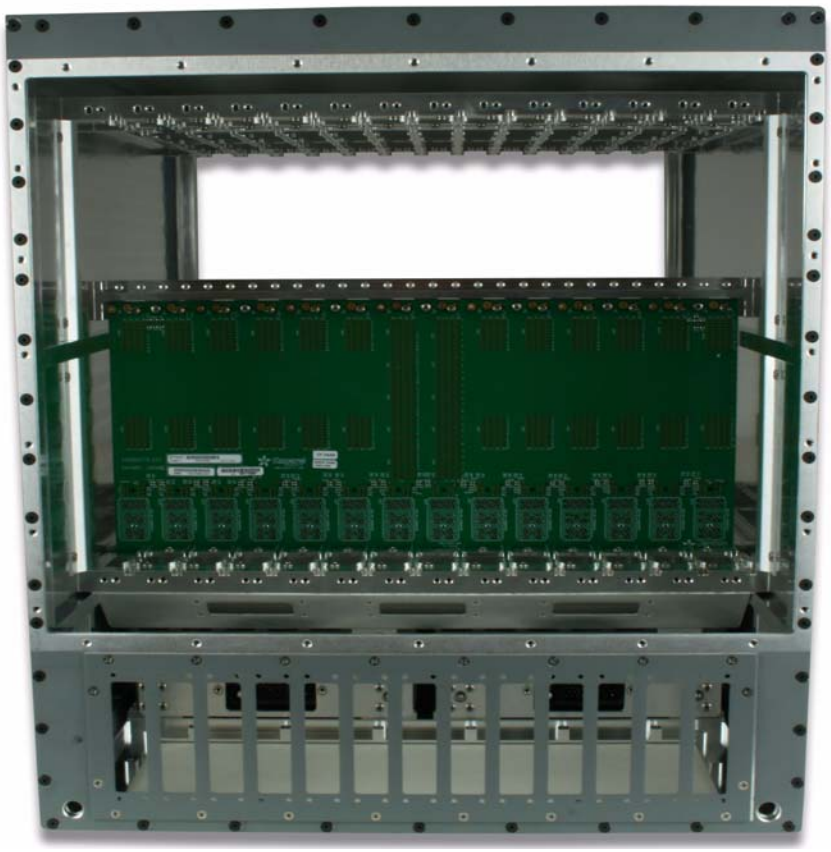

FIGURE 1. Rear view without the cover

End to End Integrated Solution

VadaTech has a full line of ATCA and μTCA chassis offereings as well as over 15 unique ATCA shelf manger products, 170 AMC modules and over 50 ATCA Front and Rear Transition Modules (RTM).

Please contact VadaTech Sales for more information.

ORDERING OPTIONS

VT820 - A00 - 000 - 00J

A = Power supply (3000W)

0 = None
1 = AC single
2 = AC dual
3 = 270 VDC single
4 = 270 VDC dual
5 = -36VDC to -75VDC single
6 = -36VDC to -75VDC dual
7 = Reserved

J = Conformal Coating

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

FIGURE 3. Front view with the cover

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