ART500A

ATCA Rear Transition Module (RTM) for ATC500

ART500

Key Features

- AdvancedTCA RTM for ATC500
- Quad 100GbE
- Dual PCIE x8
- GbE and RS-232 for management
- GPS receiver and extensive clock/trigger I/O
- RS-232/RS-485/RS-422 for GPS Position and Velocity
- IPMI 2.0 compliant

Benefits

- Expertise in RTM design
- Full ecosystem of AdvancedTCA switches, processors, chassis platforms, and specialty blades
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- AS9100 and ISO9001 certified company

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ART500A

The ART500A is an I/O expansion ATCA Rear Transition Module (ARTM) that is designed to mate with the ATC500 ATCA Carrier and provide high-bandwidth rear panel expansion.

The module provides four zQSFP+ Ports, each supporting 100GbE, two Oculink Ports, each supporting PCIe x8 (to uplink to external PC or a root complex) and a vast array of I/O in support of the ATC500 blade.

ART500A also routes clock and trigger signals from Zone 3 to the rear panel and includes a built-in GPS receiver. The on-board GPS allows synchronizing to the GPS clock 1PPS and also provides the location, time data, etc. The bi-directional NMEA 0183 V3.0 protocol offers industry-standard data messages and command set for easy interface.
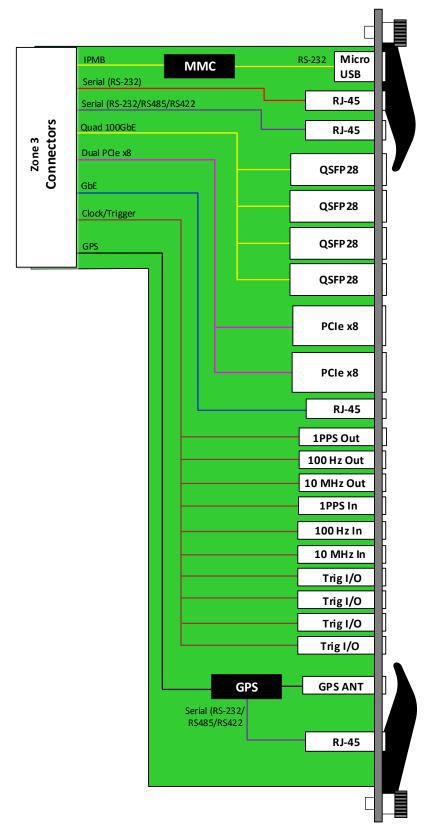

Figure 1: ART500A

Block Diagram

Figure 2: ART500A Functional Block Diagram

ART500A – ATCA Rear Transition Module for ATC500

Specifications

Architecture		
Physical	**Dimensions**	Width: 12.69" (322.25 mm)
		Depth: 3.7" (94 mm)
		Weight: 0.8 lbs (362.87 g)
Type	**ATCA RTM**	Rear I/O module for ATC500
Standards		
PICMG	**ATCA**	PICMG 3.0 revision 2.0
Module Management	**IPMI**	IPMI v2.0
Ethernet		100GbE, GbE
Configuration		
Power	**ART500A**	~20W with SR Transceivers
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +90°C
	Vibration	Operating 9.8 m/s^2 (1G), 5 to 500 Hz on each axis
	Shock	Operating 30G on each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	Quad zQSFP+ for 100GbE
		RJ-45 for GbE
		Dual Oculink for PCIE x8
		RJ-45 RS-232/485, Micro USB as RS-232
		12 x SMA for clock/trigger I/O
	LEDs	IPMI management control
	Mechanical	Hot swap ejector handle
Software Support	**Operating System**	Agnostic
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, 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.
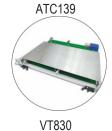
Ordering Options

ART500A – A00-000-00J

A = QSFP28 TXCVRs*		
0 = No TXCVRs 1 = SR 2 = LR (1 KM) 3 = LR (10 KM) 4 = Reserved 5 = Reserved		
		J = Temperature Range and Coating
		0 = Commercial (–5° to +55°C), No coating 1 = Commercial (–5° to +55°C), Humiseal 1A33 Polyurethane 2 = Commercial (–5° to +55°C), Humiseal 1B31 Acrylic 3 = Industrial (–20° to +70°C), No coating 4 = Industrial (–20° to +70°C), Humiseal 1A33 Polyurethane 5 = Industrial (–20° to +70°C), Humiseal 1B31 Acrylic 6 = Extended (–40° to +85°C), Humiseal 1A33 Polyurethane 7 = Extended (–40° to +85°C), Humiseal 1B31 Acrylic

Notes: *Four transceivers will be included

Related Products

ATC139

- Carrier for dual Shelf Manager slots (VadaTech's VT011)
- PICMG 3.0 Rev 3.0 compliant
- Redundant failover between the two shelf managers

VT830

- 19" rackmount 6U ATCA Chassis with integrated Switch and Shelf Manager
- 10GbE/GbE Managed Layer 2
- 40GbE/10GbE/GbE Managed Layer 3

VT011

- Shelf manager for AdvancedTCA systems
- Utilizing VadaTech Third Generation Shelf Manager VT003
- Quad Core ARM Freescale processor @ 1 GHz per core

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