

MRT523

MicroTCA.4 RTM for AMC523,
12 Ch ADC 16-bit @ 125 MSPS



MRT523

Key Features

- MicroTCA.4 RTM for the AMC523
- Twelve channel ADC 16-bit @ 125 MSPS utilizing AD9653 device routed to AMC523
- Two analog outputs from AMC523's DACs Mezzanine
- ADC and DAC signal routed through a mezzanine
- Three pairs of user defined digital IO
- Double module, mid-size (full-size optional)

Benefits

- Expertise in RTM and MTCA.4 board design
- Full ecosystem of MicroTCA.4 AMCs, PMs, MCH, RTMs, chassis, and application-ready systems
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- AS9100 and ISO9001 certified company

AdvancedMC™



vadatech
THE POWER OF VISION



MRT523

The MRT523 is a Rear Transition Module (RTM) for VadaTech's AMC523. The MRT523 accepts a mezzanine card (sold separately) to provide the ADC, DAC and Clock I/Os.

The MRT523 provides three quad channel ADCs (AD9653) on board to provide a total of 12 channels ADC 16-bit @ 125 MSPS. The ADC accept input voltage of ± 1 V, DC coupled, 100 ohm load. There are also dual DAC outputs with routing to the AMC523 where the DAC ICs reside. The ADCs, DAC and Clocks signals to the mezzanine are provided through five 20-pin ZIF connectors on-board the MRT523.

Refer to the mezzanine card datasheets (MZ523x for VadaTech versions) for available I/O channels and signal conditioning options. If you are using a custom or third party mezzanine, ensure that the analog inputs are within ± 1 V.

VadaTech offers a wide range of MicroTCA.4 products, including full systems. Contact your local salesperson or representative for details.



Block Diagram

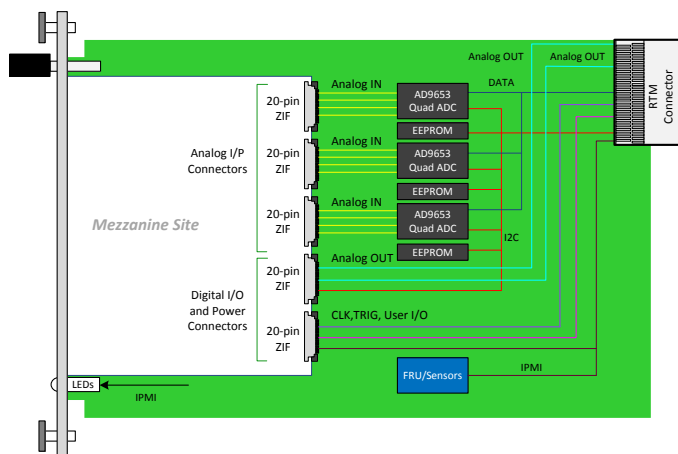


Figure 1: MRT523 Block Diagram

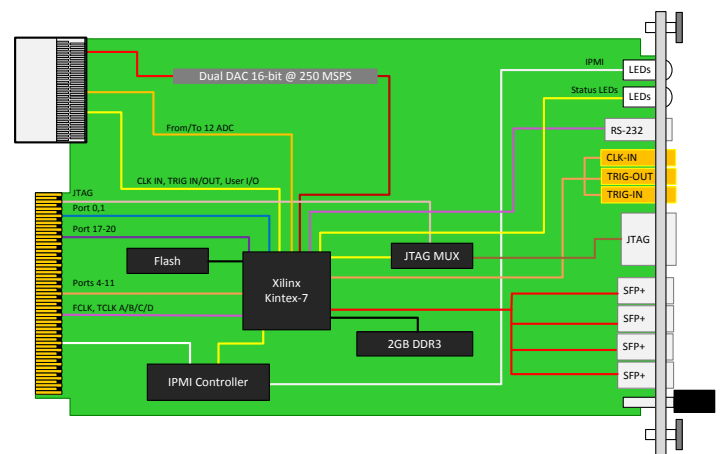


Figure 2: AMC523 Block Diagram (sold separately)

Specifications

Architecture		
Physical	Dimensions	Double module, mid-size (full-size optional)
		Width: 5.85" (148.5 mm)
		Depth 7.18" (182.6 mm)
		Weight: 0.3 lbs (136 g)
Type		Routes 12 analog inputs and 2 analog outputs, CLK, TRIG and User IO between the mezzanine and the AMC523 via RTM connector
		Single Mezzanine Card Slot
Standards		
MTCA	Type	MTCA.4 RTM
Module Management	IPMI	IPMI version 2.0
Configuration		
Power	MRT523	Estimated 1 W, application specific
Environmental	Temperature	Operating temperature: -5° to 45° C (55°C for limited time, performance restrictions may apply), industrial versions also available (See environmental spec sheet)
		Storage Temperature: -40° to +85°C
	Vibration	Operating 9.8 m/s² (1G), 5 to 500Hz on each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95 per cent, non-condensing
Front Panel	Interface Connectors	Five 20-pin ZIF connectors on board
		RTM connector to route signals to AMC523
	LEDs	IPMI management control
	Mechanical	Hot swap ejector handle
Software Support	Operating System	Independent
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 µTCA 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.

Trademarks and Disclaimer

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.

Ordering Options

MRT523 – A0C-000-00J

A = I/O Mezzanine		
0 = MZ523A (Passive Pass-through)		
1 = MZ523B (Programmable Gain)		
2 = No Mezzanine		
3 = MZ523C (Optical Detector)		
C = Front Panel Size		
1 = Reserved		
2 = Reserved		
3 = Reserved		
4 = Reserved		
5 = Mid-size, MTCA.4 (captive screws)		
6 = Full-size, MTCA.4 (captive screws)		
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*		

* Edge of module for conduction cooled boards.

Related Products

AMC523



- Dual DAC 16-bit @ 250 MSPS utilizing MAX5878 device (user programmable for lower sampling rate)
- Xilinx Kintex-7 FPGA XC7K410T in FFG900 package
- Supported by DAQ Series™ data acquisition software

VT811



- µTCA System Platform 19" x 8U x 14.9" deep (with handles 16.23" deep)
- Full redundancy with dual MicroTCA Carrier Hub (MCH), dual Cooling Units and quad Power Modules
- Up to twelve AMCs: 12 front mid-size double module slots and RTM slots

UTC018



- Double-module, 12HP height module per AMC.0
- Universal AC input (85 to 265V), 1000W
- Provides power up to 12 AMCs, 2 MCHs and Cooling Units

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, Wenhui Street, Neihu District, Taipei 114, Taiwan

Phone: +886-2-2627-7655 | Fax: +886-2-2627-7792

VadaTech European Sales Office

Ocean Village Innovation Centre, Ocean Way, Ocean Village,
Southampton, SO14 3JZ

Phone: +44 2380 381982 | Fax: +44 2380 381983

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



Trademarks and Disclaimer

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.

© 2017 VadaTech Incorporated, All rights reserved.

DOC NO. 4FM737-12 REV 01 | VERSION 4.0- FEB/17



vadatech
THE POWER OF VISION