MRT523B

MTCA.4 RTM for AMC523, 8 Channel ADC 16-bit @ 125 MSPS

MRT523B

Key Features

- Double module, mid-size (full-size optional)
- MicroTCA.4 RTM for the AMC523
- Eight channel ADC 16-bit @ 125 MSPS utilizing AD9653 device routed to AMC523 with front end attenuation
- Two ADC inputs via Logarithmic Detector with attenuation
- Two analog outputs from AMC523's DACs Mezzanine
- Digital I/O via LEMO style connectors

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

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MRT523B

The MRT523B is a Rear Transition Module (RTM) for VadaTech's AMC523.

The MRT523B provides two quad channel ADCs (AD9653) on board to provide a total of 8 channels ADC 16-bit @ 125 MSPS. The ADC input is via a High-Density RF Connector. There are also dual DAC outputs with routing to the AMC523 where the DAC ICs reside. The DAC outputs are via SMA connectors. One of DAC output goes thru a low pass filter and both DAC outputs are DC-coupled.

Ordering Options are available for the RF clock to be routed via the RTM or AMC523. The digital I/O is via LEMO style connectors. The I/O can be used as Trig In/Out as well as for external controls.

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

Figure 1: MRT523B

Block Diagram

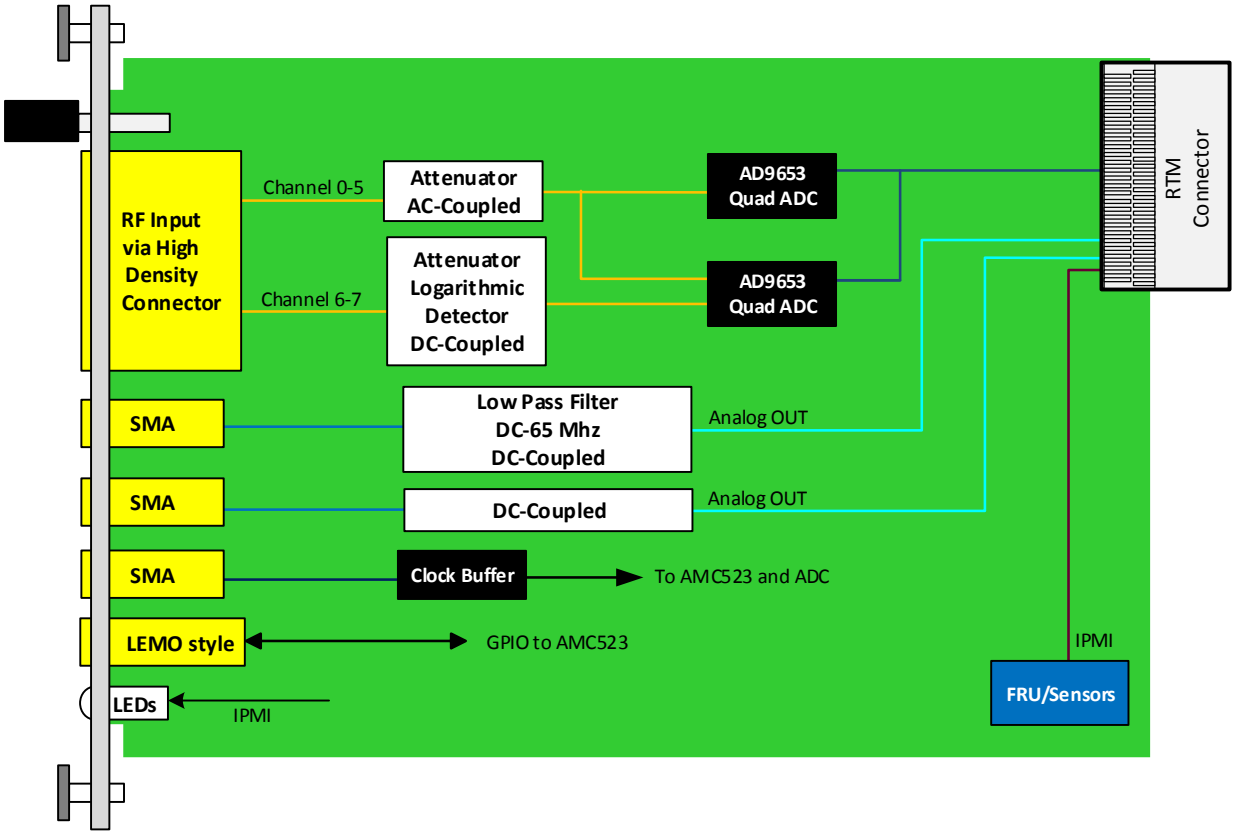

Figure 2: MRT523B Functional Block Diagram

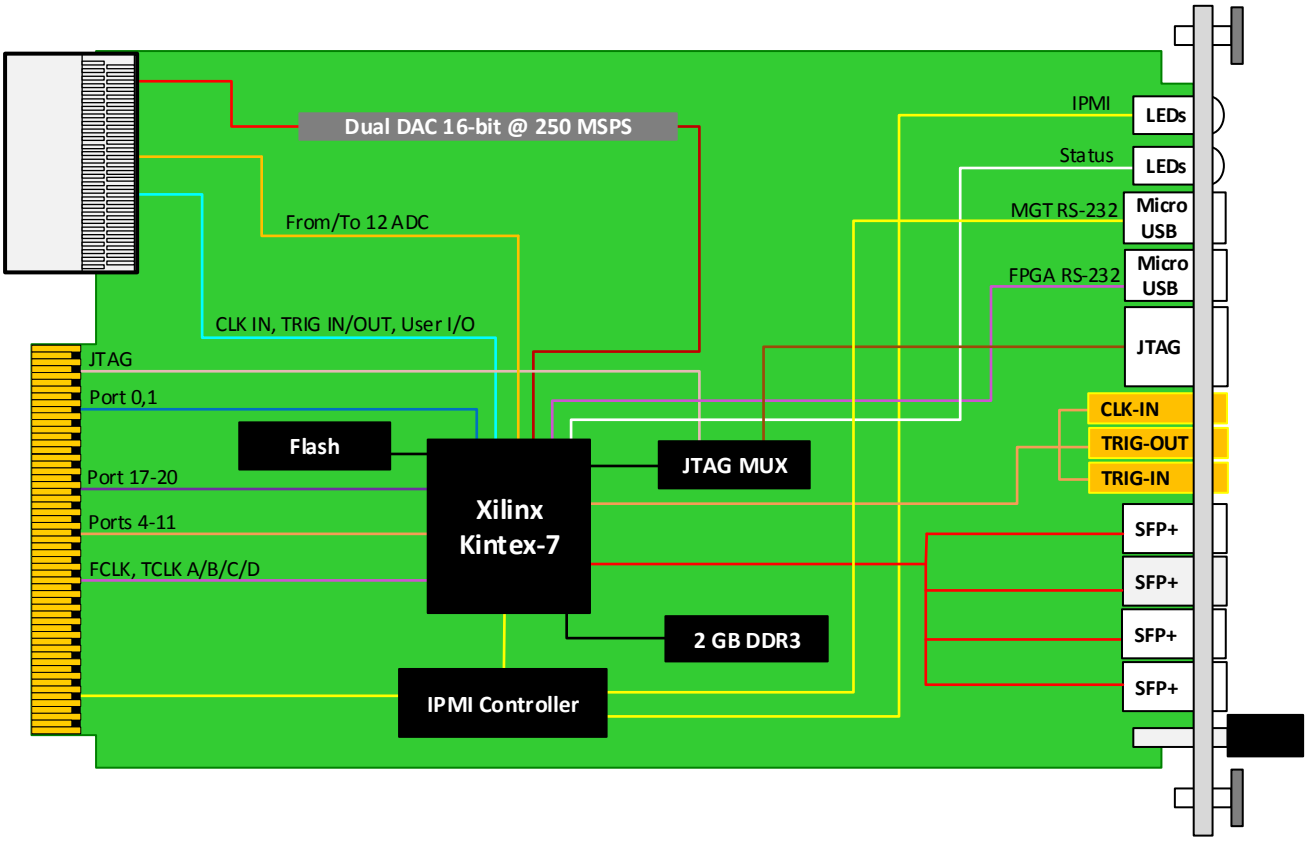

Figure 3: AMC523 Block Diagram (sold separately)

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		8 ADC inputs and 2 DAC outputs, CLK, TRIG and User IO to AMC523
		Single Mezzanine Card Slot
Standards		
MTCA	**Type**	MTCA.4 RTM
Module Management	**IPMI**	IPMI v2.0
Configuration		
Power	**MRT523**	Estimated 3W, application specific
Environmental	**Temperature**	See Ordering Options and Environmental Spec Sheet
		Storage Temperature: –40° to +85°C
	Vibration	Operating 9.8 m/s^2 (1G), 5 to 500 Hz on each axis
	Shock	30Gs each axis
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	LEMO connectors for digital input/output
		RTM connector to route signals to AMC523
	LEDs	IPMI management control
	Mechanical	Hot swap ejector handle
Software Support	**Operating System**	Independent
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

MRT523B – A0C-D00-00J

A = RF CLK to ADC	D = Front End Attenuator for ADC	
0 = AMC523 1 = MRT523B 2 = Reserved	0 = 1dB channel 0-5, 15dB Channel 6-7 1 = Reserved 2 = Reserved 3 = Reserved	
C = Front Panel Size		**J = Temperature Range and Coating**
1 = Reserved 2 = Reserved 3 = Reserved 4 = Reserved 5 = Mid-size, MTCA.4 (captive screws) 6 = Full-size, MTCA.4 (captive screws)		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: *Edge of module for conduction cooled boards.

For operational reasons VadaTech reserves the right to supply a higher speed FPGA device than specified on any particular order/delivery at no additional cost, unless the customer has entered into a Revision Lock agreement with respect to this product.

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

- MTCA 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, 12 HP 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, 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

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