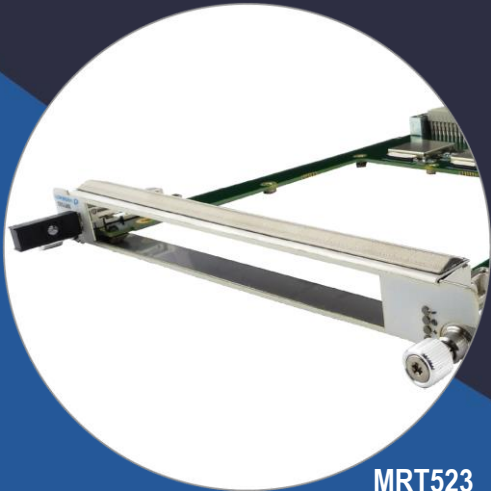


MRT523

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

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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.



Figure 1: MRT523

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 v2.0
Configuration	
Power	MRT523 Estimated 1 W, 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 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
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 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

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*		

Notes: *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



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

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