



# MZ523A – Mezzanine for MRT523, 12 Channel Passive Pass-through



## **KEY FEATURES**

- Mezzanine module for MRT523
- Routes 12 analog inputs, 2 digital outputs, input clock, trigger in/out, three pairs of user defined digital I/O from rear panel to mezzanine connectors
- Direct connection on all analog channels, giving full performance of the ADC
- RoHS compliant

### Benefits of Choosing VadaTech

- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

The MZ523A is a mezzanine module for VadaTech's MRT523. The AMC/MRT523 combination provides 12-channel ADC 16-bit @ 125 MSPS, and this mezzanine routes analog inputs to the ADC.

The MZ523A is intended primarily for system development/evaluation purposes. It provides no buffering or limiting of the input signals, so the user must ensure inputs are within +/-1 V to avoid damage to the ADCs.

The board implements a differential double balun on each mezzanine single ended analog input, as recommended by the AD9653 datasheet for optimum performance. Inputs have  $50\Omega$  termination to ground, and are then coupled to ADC inputs via a 0.4 to 800 MHz balun.

The MZ523A complies with the MRT523 Mezzanine Interface Specification, which can be made available to research partners to allow them to develop their own application-specific mezzanine modules.

### **BLOCK DIAGRAM**

MZ523A ADC IN 0 ADC IN 1 ADC IN 2 ADC IN 3 ADC IN 4 **Analog Connector** ADC IN 5 ADC IN 6 ADC IN 7 SMPM Connectors ADC IN 8 ADC IN 9 ADC IN 10 ADC IN 11 DAC OUT 0 DAC OUT 1 CLK IN DensiShield TRIG IN-OUT Digital Connector User I/O Connector

Figure 1: MZ523A Block Diagram

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## **SPECIFICATIONS**

Architecture			
Physical	Dimensions	Per MRT523 Mezzanine Interface Specification (available on request)	
Туре	RTM Mezzanine	Routes 12 analog inputs, 2 analog outputs, 1 clock input, 1 differential trigger IO and 3 user defined digital IO pairs	
Configuration			
Power	MZ523A	Under 1 W	
Environmental	Temperature	Operating Temperature: -5° to 45°C (55°C for limited time, performance restrictions may apply)	
		Storage Temperature: -40° to +85° C	
	Relative Humidity	5 to 95 percent, non-condensing	
Rear Panel	Interface Connectors	15 SMPM connectors	
		1 high density DensiShield connectors	
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 b	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.

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### ORDERING OPTIONS

### MZ523A - 00C - 000 - 00J



### VadaTech Corporate Office

198 N. Gibson Rd. Henderson, NV 89014 Email: info@vadatech.com Telephone: +1 702 896-3337 Fax: +1 702 896-0332

#### Asia Pacific Sales Office

7 Floor, No. 2, Wenhu Street, Neihu District Taipei 114,Taiwan Email: info@vadatech.com Telephone: +886-2-2627-7655 Fax: +886-2-2627-7792

#### VadaTech European Sales Office

VadaTech House, Bulls Copse Road, Southampton, SO40 9LR Email: info@vadatech.com Telephone: +44 2380 016403

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info@vadatech.com