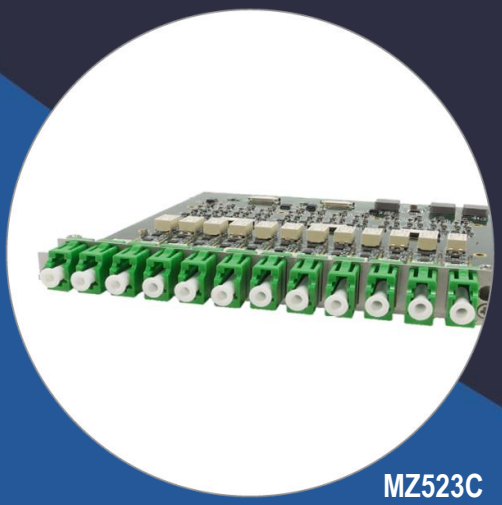
MZ523C

Mezzanine for MRT523, 12 Channel Optical Detector



MZ523C

Key Features

- 12 optical detectors routed to mezzanine connector
- Per channel programmable gain, bandwidth and AC/DC coupling
- 0 µW to 160 µW optical input power
- 1310 nm to 1650 nm input wavelength
- Noise 4 x 10-4 of full scale at min gain
- Linearity <1%
- Gain programmable 0-57 dB
- Sensitivity 0.7 W/A typical
- Mezzanine module for MRT523

Benefits

- Low noise and high linearity for demanding applications
- Gain and anti-aliasing programmable via MRT523 for ease of use
- DAQ Series software support for out-of-the-box operation
- Electrical, mechanical, software, and system-level expertise in house
- Full system supply from industry leader
- AS9100 and ISO9001 certified company

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MZ523C

The MZ523C is a mezzanine module for VadaTech's MRT523. The AMC/MRT523 combination provides 12-channel ADC 16-bit @ 125 MSPS. This mezzanine provides 12 optical detectors with low-noise and high linearity amplifiers, routing detected signals to the ADCs.

MZ523C provides user-programmable selection, per channel, of input gain. The user can set parameters via an I2C controller in the AMC523 FPGA, to allow work over a wide dynamic range (the module is designed for gain settings to be set between bursts of data samples, not during data acquisition).

The AMC523, MRT523 and MZ523C in combination have the ability to store calibration data and correct, on a channel by channel basis, for offset, gain, bandwidth and non-linearity, so providing optimum performance.

The MZ523C 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. Electrical connection to the MRT523 is via flexway cables and ZIF connectors for flexibility and ease of assembly.

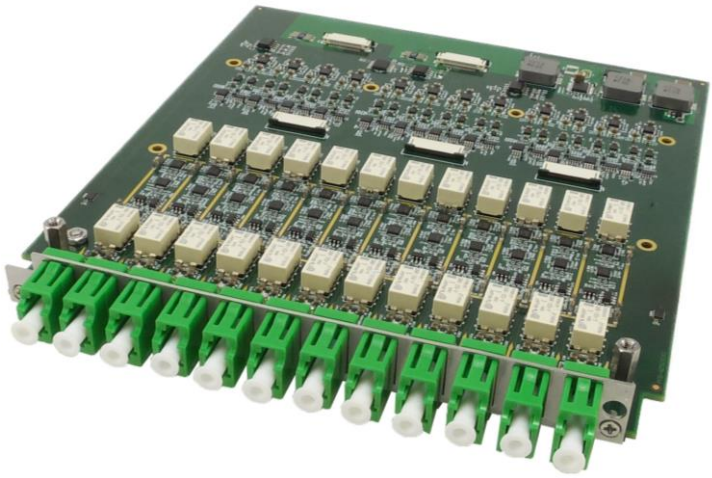

Figure 1: MZ523C

Block Diagram

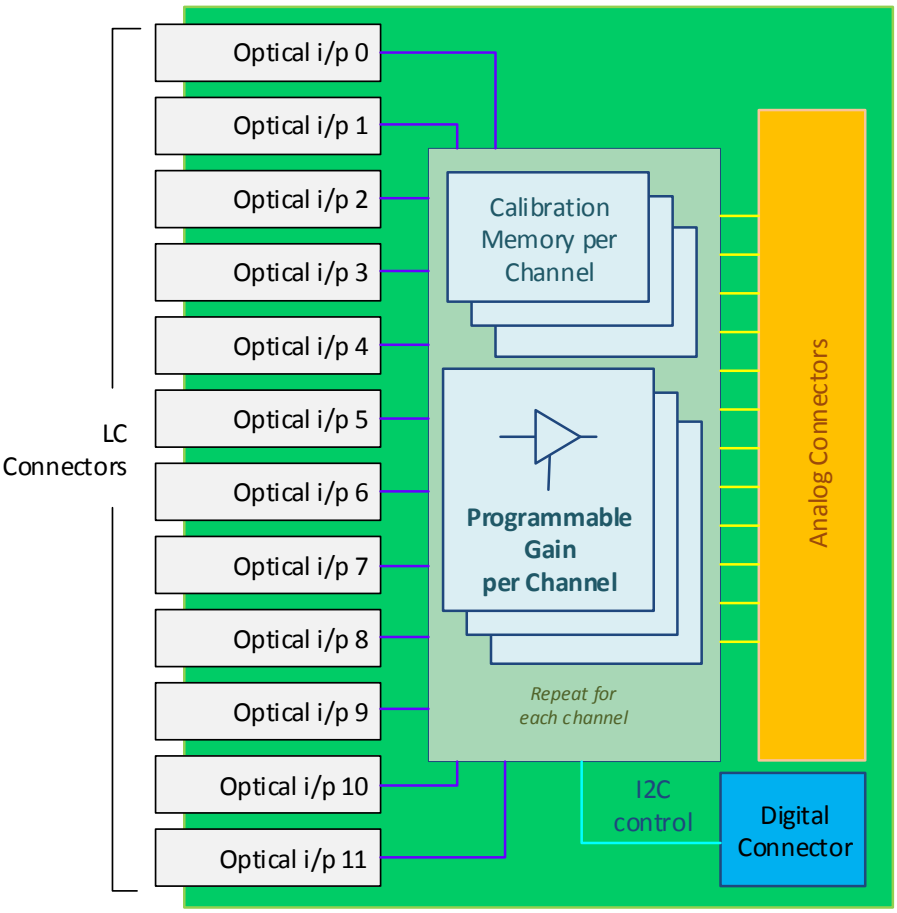

Figure 2: MZ523C Functional Block Diagram

Specifications

Architecture		
Physical	**Dimensions**	Per MRT523 Mezzanine Interface Specification (available on request)
Type	**RTM Mezzanine**	12 optical detectors to ADC
Configuration		
Power	**MZ523C**	TBD
Environmental	**Temperature**	See Ordering Options
		Storage Temperature: –40° to +85°C
	Relative Humidity	5 to 95% non-condensing
Front Panel	**Interface Connectors**	12 LC connectors
	LEDs	None
	Mechanical	Hot-swap ejector handle
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 ISO9001:2015 and AS9100D 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

MZ523C – 00C-000-00J

C = Front Panel Size*		J = Temperature Range and Coating
1 = Reserved 2 = Reserved 3 = Reserved 4 = Reserved 5 = Mid-size 6 = Full-size		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

Notes:
*Front Panel size must match the host MRT523.

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

MRT523

- 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

Contact

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DOC NO. 4FM737-12 REV 01 | VERSION 2.3 – MAR/20