MZ523B – Mezzanine for MRT523, 12 Channel Variable Gain

KEY FEATURES

- Mezzanine module for MRT523
- Routes 12 analog inputs, 2 analog outputs and CLK IN from rear panel SMPM to mezzanine connector
- Routes TRIG IN/OUT, user I/O routed from rear panel DensiShield to mezzanine connectors
- Per channel AC/DC selection and programmable gain
- RoHS compliant

The MZ523B 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 MZ523B provides user-programmable selection, per channel, AC or DC coupling and input gain. The user can set these parameters via the rear-panel or by an I2C controller in the AMC523 FPGA.

- ADC gain selection per channel allows analog input signal +/-0.5V, +/-1V, +/-5V or +/-10V
- AC coupling or DC coupling selection per channel
- 50Ω or 1MΩ impedance selection per channel (1MΩ fixed for +/-10V input voltage)

The selection of the configuration per channel is persistent over system power cycles.

The MZ523B 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.

Benefits of Choosing VadaTech

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

Figure 1: MZ523B Block Diagram

Figure 2: MZ523B
### SPECIFICATIONS

#### Architecture

<table>
<thead>
<tr>
<th>Physical</th>
<th>Dimensions</th>
<th>Per MRT523 Mezzanine Interface Specification (available on request)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>RTM Mezzanine</td>
<td>Routes 12 analog inputs, 2 analog outputs, 1 clock input, 1 trigger I/O, and 3 user defined digital I/O</td>
</tr>
</tbody>
</table>

#### Configuration

<table>
<thead>
<tr>
<th>Power</th>
<th>MZ523B</th>
<th>Under 10 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental</td>
<td>Temperature</td>
<td>Operating Temperature: -5° to 45°C (55°C for limited time, performance restrictions may apply)</td>
</tr>
<tr>
<td></td>
<td>Relative Humidity</td>
<td>5 to 95 percent, non-condensing</td>
</tr>
<tr>
<td>Rear Panel</td>
<td>Interface Connectors</td>
<td>15 SMPM connectors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 high density DensiShield connector</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 micro USB</td>
</tr>
</tbody>
</table>

#### Other

<table>
<thead>
<tr>
<th>MTBF</th>
<th>MIL Hand book 217-F @ TBD Hrs</th>
</tr>
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<tbody>
<tr>
<td>Certifications</td>
<td>Designed to meet FCC, CE and UL certifications where applicable</td>
</tr>
<tr>
<td>Standards</td>
<td>VadaTech is certified to both the ISO9001:2000 and AS9100B:2004 standards</td>
</tr>
<tr>
<td>Warranty</td>
<td>Two (2) years</td>
</tr>
</tbody>
</table>

### 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

MZ523B – 00C – 000 – 00J

C = Front Panel *
1 = Reserved
2 = Reserved
3 = Reserved
4 = Reserved
5 = Mid-size
6 = Full-size

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

* Front Panel size must match the host MRT523

RELATED PRODUCTS

AMC523
DAC Converter

VT811 MTCA.4
Chassis

MRT523 12-ch ADC
RTM for AMC523

CONTACT US

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, Wenhua 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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www.vadatech.com