The FMC221 is an FPGA Mezzanine Module per VITA 57 specification. The FMC221 has a single DAC 14-bit at 2.5 GSPS. The DAC converter utilizes the Analog Devices AD9739.

The FMC221 is designed for synthesizing of broadband signals, with enhanced linearity and band flatness performances. The Analog output can be programmed for +/- 1V.
FMC221 – FMC High-speed DAC 14-bit at 2.5 GSPS Module

BLOCK DIAGRAM

FRONT PANEL

Doc No. 4FM737-12 Rev 01

www.vadatech.com

Version 5.1 – JUN/16

info@vadatech.com
## SPECIFICATIONS

### Architecture

<table>
<thead>
<tr>
<th>Physical</th>
<th>Dimensions</th>
<th>Single FMC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width 2.71&quot; (69 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depth 3.01&quot; (76.5 mm)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>FMC</td>
<td>Single AD9739 DAC, FMC slot</td>
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### Standards

<table>
<thead>
<tr>
<th>Standards</th>
<th>FMC</th>
<th>ANSI/VITA 57.1-2008</th>
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### Configuration

<table>
<thead>
<tr>
<th>Power</th>
<th>FMC221</th>
<th>4 W</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td>Temperature</td>
<td>Operating Temperature: -5° to 55° C (air flow requirements &gt;400 LFM)</td>
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<tr>
<td></td>
<td>Storage Temperature: -40° to +85° C</td>
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</tr>
<tr>
<td></td>
<td>Vibration</td>
<td>1G, 5 to 500 Hz on each axis</td>
</tr>
<tr>
<td></td>
<td>Shock</td>
<td>30Gs each axis</td>
</tr>
<tr>
<td>Front Panel</td>
<td>Interface Connectors</td>
<td>MMCX</td>
</tr>
<tr>
<td></td>
<td>LEDs</td>
<td>Status</td>
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<tr>
<td></td>
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<tr>
<td></td>
<td>Conformal Coating</td>
<td>Humiseal 1A33 Polyurethane (Optional)</td>
</tr>
<tr>
<td></td>
<td>Humiseal 1B31 Acrylic (Optional)</td>
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</table>

### Other

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<tr>
<th>MTBF</th>
<th>MIL Hand book 217-F @ TBD Hrs</th>
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<tbody>
<tr>
<td></td>
<td>Certifications</td>
</tr>
<tr>
<td></td>
<td>Standards</td>
</tr>
<tr>
<td></td>
<td>Warranty</td>
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## 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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FMC221 – FMC High-speed DAC 14-bit at 2.5 GSPS Module

ORDERING OPTIONS
FMC221 – AB0 – D00 – GHJ

A = RF PLL Synthesizer*
0 = 1.8 GHz for sampling at 1.8 GSPS
1 = 2.5 GHz for sampling at 2.5 GSPS
2 = 1.28 GHz for sampling at 1.28 GSPS
3 = 2.0 GHz for sampling at 2.0 GSPS
4 = 2.1 GHz for sampling at 2.1 GSPS
5 = 1.6 GHz for sampling at 1.6 GSPS

B = Input Clock
0 = 10 MHz
1 = 100 MHz

D = Input Impedance
0 = 75Ω Input Impedance
1 = 50Ω Input Impedance

G = FMC Board Spacing
0 = 10 mm (per VITA-57 specification)
1 = 17.5 mm **

H = Operating Temperature
0 = Commercial
1 = Industrial

J = Conformal Coating
0 = None
1 = Humiseal 1A33 Polyurethane
2 = Humiseal 1B31 Acrylic

* Contact VadaTech for more information on other PLL synthesizer frequencies and input clocks
** For use with carriers that require higher mating clearance, such as VadaTech AMC595. Requires full size AMC.

COMMON CONFIGURATIONS
FMC221-100-000-000

RELATED PRODUCTS
AMC515 Virtex-7 FPGA
AMC532 Altera FPGA
FMC210 ADC 10-bit 2.6 GSPS

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