FMC100
FMC+ Dual CXP Connectors

Key Features
- FPGA Mezzanine Card (FMC+) per VITA 57.4
- Single module
- Dual CXP style connector
- Six distinct oscillators to allow maximum flexibility per x4 lane speed

Benefits
- Design utilizes proven VadaTech subcomponents and engineering techniques
- Electrical, mechanical, software, and system-level expertise in house
- Full ecosystem of front and rear boards, enclosures, specialty modules, and test/dev products from one source
- AS9100 and ISO9001 certified company
FMC100

The FMC100 is an FMC+ module with two CXP style connectors on the front panel. The module routes 24 pairs of high-speed signals from the FMC+ connector to the CXP connectors.

The FMC100 has six oscillators onboard which provide SERDES clock to each quad sector. This allows each x4 lanes to have its own clock for maximum flexibility.

Due to the height of the CXP connector (which is beyond 10 mm), the CXP is placed on the top of the FMC+ module. While the module will mate to a standard FMC+ carrier, the front panel of the carrier must be designed to accommodate this height difference.

The module has six Independent oscillators that output by default 156.25 MHz. Each oscillator outputs to each of the GBTCLK’s on the FMC+ pinout (GBTCLK0+/− to GBTCLK5+/−). Module could be ordered with different Oscillator values, please contact VadaTech Sales.

Figure 1: FMC100
Figure 2: FMC100 Functional Block Diagram
Specifications

<table>
<thead>
<tr>
<th>Architecture</th>
<th>Dimensions</th>
<th>Single Module</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Width: 2.71&quot; (69 mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Depth: 3.011&quot; (76.5 mm)</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>FMC</td>
<td>Dual CXP</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Single FMC+ slot</td>
</tr>
<tr>
<td>Standards</td>
<td>FMC Type</td>
<td>ANSI/VITA 57.4 – 2008 (note module height exception)</td>
</tr>
<tr>
<td>Configuration</td>
<td>Power</td>
<td>FMC100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CXP Fiber Optic dependent (with no transceiver &lt; 0.5W)</td>
</tr>
<tr>
<td>Environmental</td>
<td>Temperature</td>
<td>See Ordering Options</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Storage Temperature: –40° to +85°C</td>
</tr>
<tr>
<td></td>
<td>Vibration</td>
<td>Operating 9.8 m/s² (1G), 5 to 500 Hz</td>
</tr>
<tr>
<td></td>
<td>Shock</td>
<td>30Gs each axis</td>
</tr>
<tr>
<td></td>
<td>Relative Humidity</td>
<td>5 to 95% non-condensing</td>
</tr>
<tr>
<td>Front Panel</td>
<td>Interface Connectors</td>
<td>Dual CXP connectors</td>
</tr>
<tr>
<td></td>
<td>LEDs</td>
<td>None</td>
</tr>
<tr>
<td>Other</td>
<td>MTBF</td>
<td>MIL Handbook 217-F@TBD Hrs.</td>
</tr>
<tr>
<td></td>
<td>Certifications</td>
<td>Designed to meet FCC, CE and UL certifications, where applicable</td>
</tr>
<tr>
<td></td>
<td>Standards</td>
<td>VadaTech is certified to both the ISO9001:2015 and AS9100D standards</td>
</tr>
<tr>
<td>Warranty</td>
<td></td>
<td>Two (2) years, see VadaTech Terms and Conditions</td>
</tr>
</tbody>
</table>

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

**FMC100 – A00-000-0HJ**

<table>
<thead>
<tr>
<th>A = Oscillators values</th>
<th>H = Temperature Range</th>
<th>J = Conformal Coating</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = All six Oscillators are 156.25MHz</td>
<td>0 = Commercial (–5° to +55°C)</td>
<td>0 = No coating</td>
</tr>
<tr>
<td>1 = Reserved</td>
<td>1 = Industrial (–20° to +70°C)</td>
<td>1 = Humiseal 1A33 Polyurethane</td>
</tr>
<tr>
<td>2 = Reserved</td>
<td></td>
<td>2 = Humiseal 1B31 Acrylic</td>
</tr>
<tr>
<td>3 = Reserved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Related Products**

**AMC517**
- AMC FPGA carrier for FMC per VITA 57
- Xilinx Virtex-7 410T FPGA in FFG-900 package with optional P2040
- Supported by DAQ Series™ data acquisition software

**AMC532**
- AMC FPGA based on Altera Stratix-V (5SGXEA) in F1932 package
- VITA 57.1 FMC HPC Connector (compatible with LPC)
- All FMC LA, HA, HB pairs routed bi-directionally

**FMC210**
- FPGA Mezzanine Card (FMC) per VITA 57
- Single ADC EV10AS150B @ 2.6 GSPS
- 5 GHz Full Power Input Bandwidth (–3dB)
Contact

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