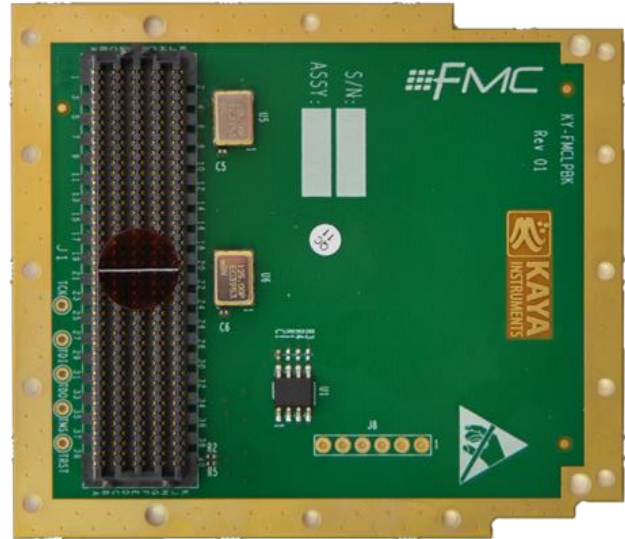


FMC loopback test board

Overview

The FMC loopback tester board enables developers and assembly factories to test and characterize the FMC carrier board interfaces. The board features full differential loopbacks on all the FMC high pin count (HPC) connector interfaces including LA, HA, HB, DP and CLK. It also provides a 125MHz transceiver LVDS reference clocks on GBTCLK signals. The FMC loopback board is based on VITA 57 standard with ruggedized conduction or air cooling.



Features

- VITA 57 FMC compliant
- HPC – High Pin count connector
- Provides loopbacks on the LA, HA and HB differentials pairs
- Provides TX to RX loopbacks on the Multi-gigabit differential pairs DP0 to DP9
- Ruggedized Conduction or air cooled
- 125MHz LVDS transceiver reference clocks
- Led indicator for powers and power good
- JTAG breakout to test points

Clocks

- 125MHz LVDS oscillators feed the GBTCLK pairs
- Loopback of CLKx_C2M to CLKx_M2C pairs

FMC IO interface

- Loopback of even to odd pairs on LA/HA/HB
- DP_C2M[9:0] loopback to DP_M2C[9:0]

About FMC

FPGA mezzanine card, or FMC, as defined in VITA 57.1, provides a specification describing an I/O mezzanine module with connection to an FPGA or other device with reconfigurable I/O capability.



The FMC standard describes a versatile module, which can target a range of applications, environments, and markets. The specification defines a commercial grade version, which extends to cover a ruggedized conduction variant. FPGA's provide a high pin count that can operate at many Gbps. The latest connector technology is defined to maintain the high performance interface from the I/O on the mezzanine module, to the FPGA on the carrier card. The FMC mezzanine module design minimizes design effort and resources through minimal system support and flexible pin allocation.

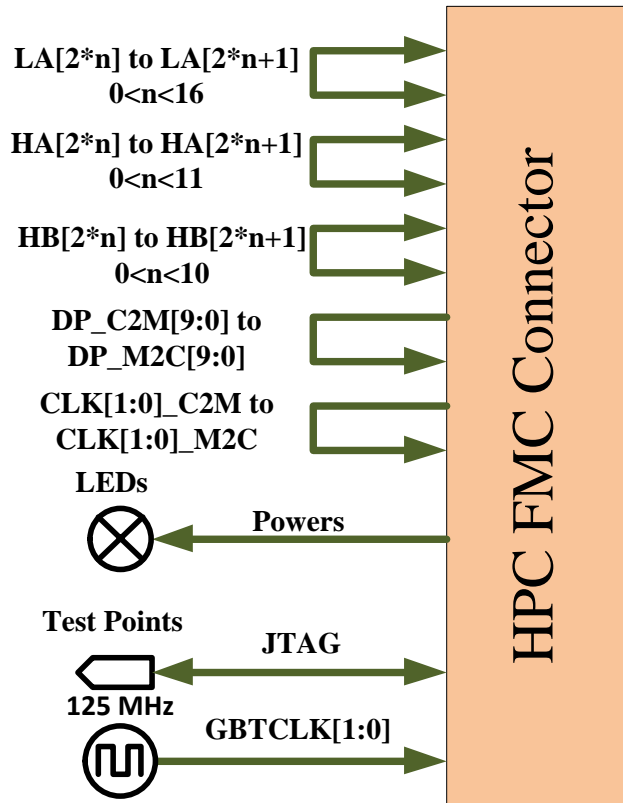
Specifications

Parameter	Value
Power consumption on +12V	0A
Power consumption on +3.3V	<0.1A
Power consumption on VADJ	0A
Power consumption on +3.3VAUX	<0.1A
Air cooled weight	TBD
Conduction cooled weight	TBD
Operating temperature	-40 to +85
Operating humidity	0% to 95% non condensing

Applications

- ✓ FMC carrier board testing during development
- ✓ FMC carrier board electrical validation
- ✓ FMC carrier board testing at assembly facilities

Block Diagram



Ruggedization

The FMC loopback test board is delivered in air and conduction cooled FMC standards. The board supports standard VITA 47 ruggedization levels for severe environmental conditions.

Deliverables

- FMC loopback test board
- Hardware user manual

Contact