FM550

Two Channel mini-SAS I/O FMC

The **FM550** is an I/O module equipped with two external mini-SAS x4 connectors. I/O FMCs of this sort are typically used to provide inter-module connectivity via the front-panels of carrier cards fitted with similar interfaces, or fan-out to multiple external devices such as mini-SAS drives.

Eight full-duplex high-speed serial lanes connect through the DP[0:7]_M2C/C2M lines of the HPC FMC connector to the FPGA of the carrier card. The mini-SAS connector is designed for signalling up to 10Gbps, contingent upon support of this rate by the interfacing FPGA device.

Any FPGA-supported protocol for implementation on one to four SerDes lanes may be utilized, with typical examples being external PCIe, XAUI, SRIO, SerialLite II, Aurora, SATA or SAS.

A low-jitter oscillator is fitted to the FM550, suitable for use as a reference clock source. The default value of the oscillator is 125MHz, but different values maybe requested upon ordering.

When matched with Parsec's **VF360** 3U VPX carrier card, the Aurora Rocket IO Firmware Reference Design can be used to accelerate development of a multi-card front-panel interconnectivity design.

FM550 SPECIFICATIONS

FRONT PANEL mini-SAS CHARACTERISTICS

- 2x SFF-8088 interfaces
- 4x lanes per interface
- Compliant with mini-SAS pin-out
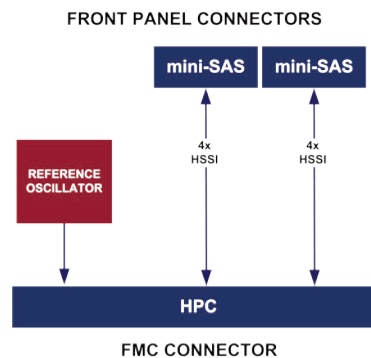- Designed for up to 10Gbps operation

REFERENCE OSCILLATOR

- LVDS signalling levels
- Default frequency: 125MHz
- Total stability: ±31.5ppm max
- Supplied on FMC GBTCLK0

HPC FMC INTERFACE

- 8x high-speed serial lanes on DP[0:7]_M2C/C2M
- 2x loopbacks on DP[8:9]_C2M/M2C
- 17x loopbacks on LA[33:0]
- 12x loopbacks on HA[23:0]
- 11x loopbacks on HB[21:0]

FIRMWARE SUPPORT

- FDK Kit for custom firmware development on VF360
- VF360 Firmware Reference Design (FRD) with Aurora RocketIO
- Firmware development services available on request

FRONT PANEL CONNECTORS

mini-SAS — mini-SAS

4x HSSI — 4x HSSI

REFERENCE OSCILLATOR

HPC

FMC CONNECTOR

APPLICATION EXAMPLES

- High-speed multi-board interconnect via front-panel
- Multi-link fan-out via breakout cables

ORDERING INFORMATION

FM550 –X
X: On-board oscillator (125MHz standard)

(Standard order code: FM550-125)