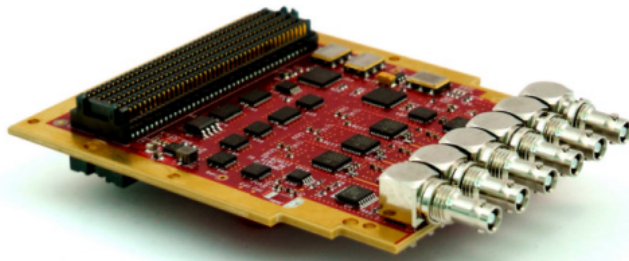


inrevium Original Board  
6G/12G-SDI FPGA Mezzanine Card (FMC)

Available: Q1 2015

6G/12G-SDI FMC for transport of 4k/60fps over a single coaxial cable

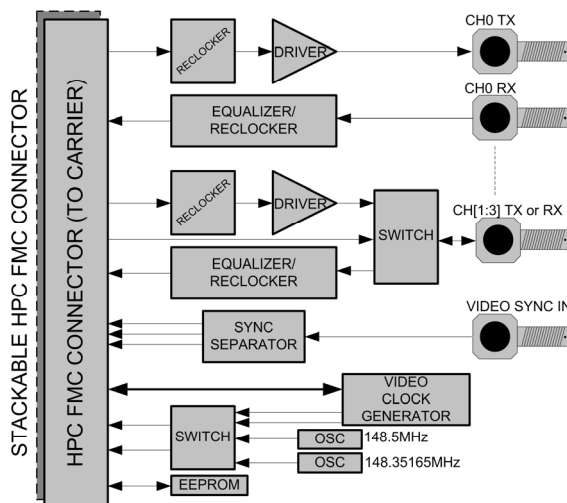
The inrevium 6G/12G-SDI FMC enables your next generation 4k/60fps designs today



### Features

- 6x 75Ω HD-BNC connectors
    - 1x 12G SDI input, 1x 12G SDI output, 3x 12G In or Out
    - 1x Video Sync input
  - Compatible with FMC Specification (VITA 57.1)
  - Designed for electrical compatibility\* with inrevium ACDC, Xilinx KC705, VC707, VC709, KCU105, and ZC706
  - Stackable FMC design supports additional TB-FMCH-12GSDI
- \* Verify your target mainboard with us prior to ordering

### Function Block Diagram



### Product Outline

#### 12G-SDI performance, featuring:

- MACOM chipset (M23145G, M23428G, M23554G)

#### FMC Connectors

- HPC FMC connector
- Expansion (stackable) HPC FMC
  - supports a second card of the same type

#### IO Connectors

- HD-BNC type, 75Ω
- Ch0: Dedicated input and dedicated output
- Ch1-3: Individually config. as input or output

#### Clocking

- Video Sync Separator (TI: LMH1981)
  - accepts an external video clock-in, and provides Field Sync, Vsync, and Hsync to the FMC conn
- Video Clock Generator (TI: LMH1983)
  - accepts Field Sync, Vsync, and Hsync from the FMC connector, and returns 4 synchronized video clocks, and 4 corresponding frame timing signals to the FMC connector
- Standard video frequency oscillators
  - 148.5MHz and 148.35165MHz
  - can be cross-switched to the FMC connector

#### Power Requirements (estimated)

- Main rails: 12V@0.3A and 3.3V
- VADJ: 1.5 to 3.3V (onboard level translators)
- Estimated dissipation: 5W

#### Board Dimension

- Single width, air-cooled, HPC FMC with regions 1,2,3

#### Adapter Cables

- QTY 5: HD-BNC-to-BNC, 10cm length

### Available References

#### Design Package (available under license)

- Schematics, PCB Layout, Artwork, Bill of Materials

#### FPGA Reference Designs

- Downloadable .bit file examples
- Licensable source (some blocks netlist encrypted)
- KC705 and KCU105 target, coming soon

Ordering Information (Order entry : Oct '14, Production : Jan '15)

Part Number : TB-FMCH-12GSDI

For more info: <http://solutions.inrevium.com/products/>

For North American distribution and support: <http://www.fidus.com>

... a design from inrevium and Fidus Systems