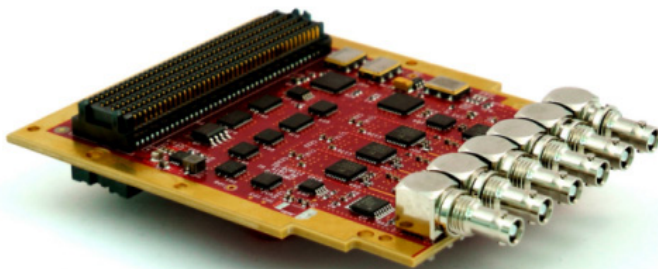


# 6/12G-SDI FMC – Transport of 4k/60fps on Coax

March, 2015

Available Now

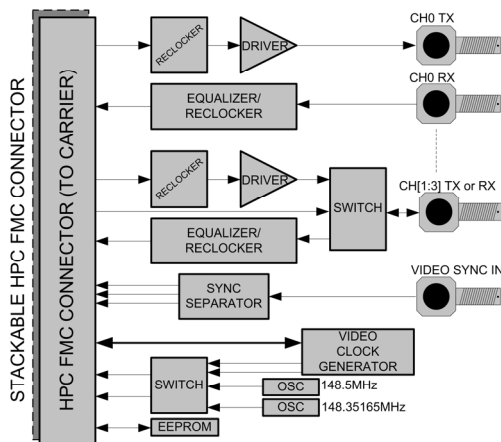
The 12G-SDI FMC enables your next generation 4k/60fps designs today



## 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 TBFMCH-12GSDI
- \* **Verify your target mainboard with us prior to ordering**

## Function Block Diagram



## Product Outline

### 12G-SDI performance, featuring:

- M/A-COM® chipset (M23145G, M23428G, M23554G)

### FMC Connectors

- HPC FMC connector
- Expansion (stackable) HPC FMC
  - supports a second 12G-SDI card (do not mix and match)

### 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's LMH1981™)
  - accepts an external video clock-in, and provides Field Sync, Vsync, and Hsync to the FMC conn
- Video Clock Generator (TI's 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

- 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 2: HD-BNC-to-BNC, ~10cm (~4") 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

For Inquiries or Orders: Email – [products@us.inrevium.com](mailto:products@us.inrevium.com)

Part Number : TB-FMCH-12GSDI