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DATA SHEET

RTM – Break-out Card

Overview

The Rear-transition Module – Break-out Card (RTM-BOCRT) from Mistral is an eight layer plug-in module for the Keystone II family of EVMs starting with the TCIEVMK2X and the EVMK2H EVMs showcasing the Multicore DSP+ARM KeyStone II System-on-Chips from Texas Instruments. The TCIEVMK2X and EVMK2HX are double wide AMC form factor cards which provide Hyperlink, AIF2, and XFI interfaces over the AMC.4 μTCA connector.

The RTM-BOC provides high-speed digital data interface to the RTM connector (AMC.4 μTCA) for validating the 10GigE, Hyperlink, and AIF2 subsystems of the Keystone II SOC on the EVMs. In addition, the RTM BOC contains four Gigabit Ethernet ports with PHY to support the SGMII lanes on future EVMs through RTM connector.

The RTM BOC primarily consists of Retimer chip for 10G Ethernet, Quad port Ethernet PHY for 1G Ethernet and external interfacing connectors.

The RTM BOC board provides the following four interfaces:

- AIF2
- HYPERLINK
- XFI(10Ge)
- SGMII

Features

- Eight-layer PCB with IT168 dielectric material for high speed data support
- Fully Open Source Linux Board Support Package
- Two port (Each port of 4 lanes) Hyperlink interface
  - Supports data rate up to 12.5Gbps per lane*
  - iPass HD Hyperlink connector
- Four lane 2nd Generation Antenna interface (AIF2)
  - Supports data rate up to 6.144Gbps per lane
  - 2x2 Stacked SFP+ connector
- XFI interface
  - Two 10 Gbps speed Ethernet channels
  - Four channel Retimer IC Chip
  - 2x1 stacked SFP+ connector
- Quad port SGMII interface (for future expandability)
  - Quad port PHY
  - 10/100/1000 Mbps data rate support
  - Two dual port RJ45 connectors with integrated magnetics and LEDs
- Two Hard Metric ZD type μTCA connectors
  - supporting up to 15Gbps signals
- Power from onboard +12v DC jack or power from EVM board through μTCA connector

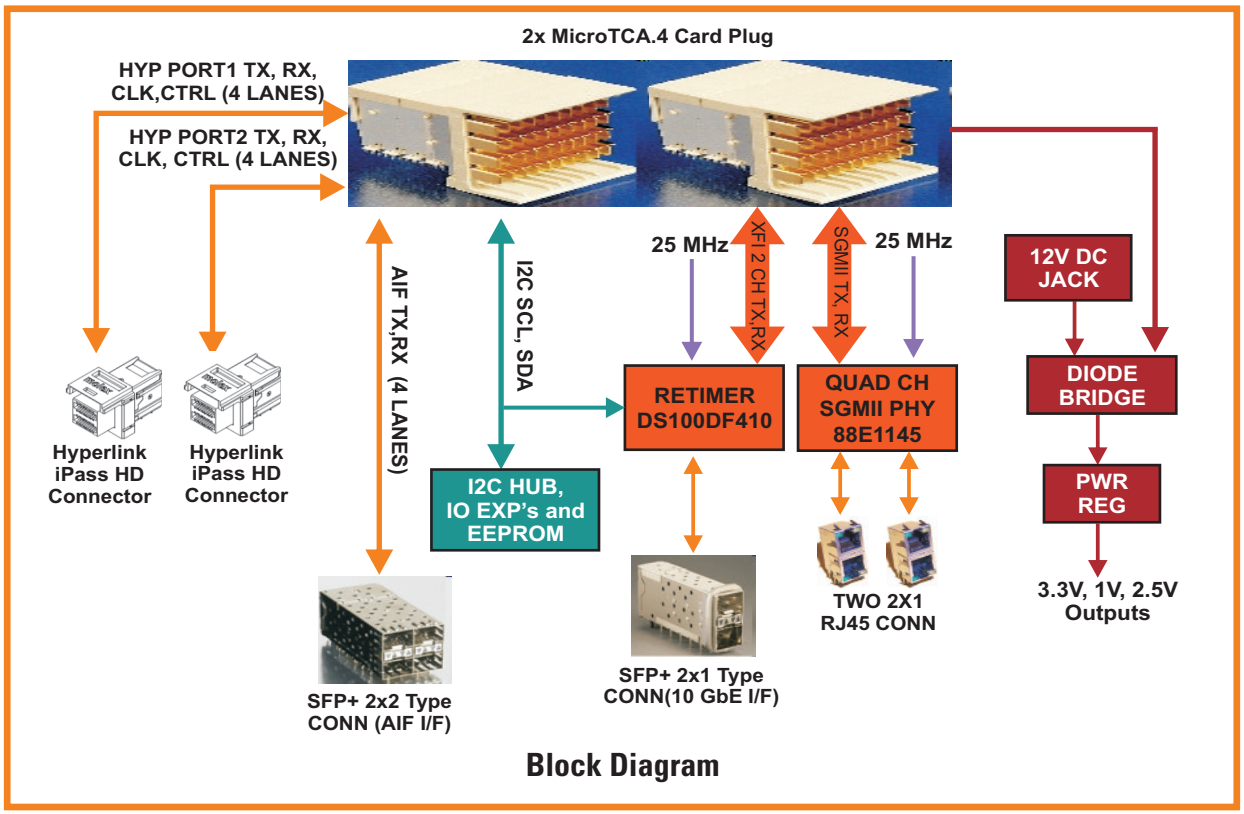
Applications

This card along with TCIEVMK2X and the EVMK2H EVMs serves as a reference design for the following applications:

- Video infrastructure & broadcasting
- Routers
- Switches
- Networking control plane
- High performance computing

Texas Instruments
Design Network

*Hyperlink is for SoC to SoC connection and not meant to go through connectors. So full data rate may not be feasible due to long lengths of routing and cables along with multiple connectors.



Block Diagram

Deliverables

- RTM-BOC card
- Software and user manual for the RTM-BOC can be downloaded form Mistral's website after product registration .

Ordering

For ordering information please email us at sales@mistralsolutions.com or call +1-972-548-2606 for USA and +91-80-3091-2600 for the rest of the world.

About Mistral

Mistral is a technology design and systems engineering company providing end-to-end solutions for product design and application deployment. Mistral focuses in two business domains: Product Engineering Services and Defense Solutions. Mistral provides total solutions for a given requirement, which may include hardware board design, embedded software development, FPGA design, systems integration and customized turnkey solutions. Mistral's strategic partnerships with leading technology companies help provide customers with a comprehensive package of end-to-end solutions.

Mistral Solutions is a Platinum Member of Texas Instrument Design Network offering development platforms, reference designs and services in the area of software and hardware design, development and consulting on various TI DSPs.

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