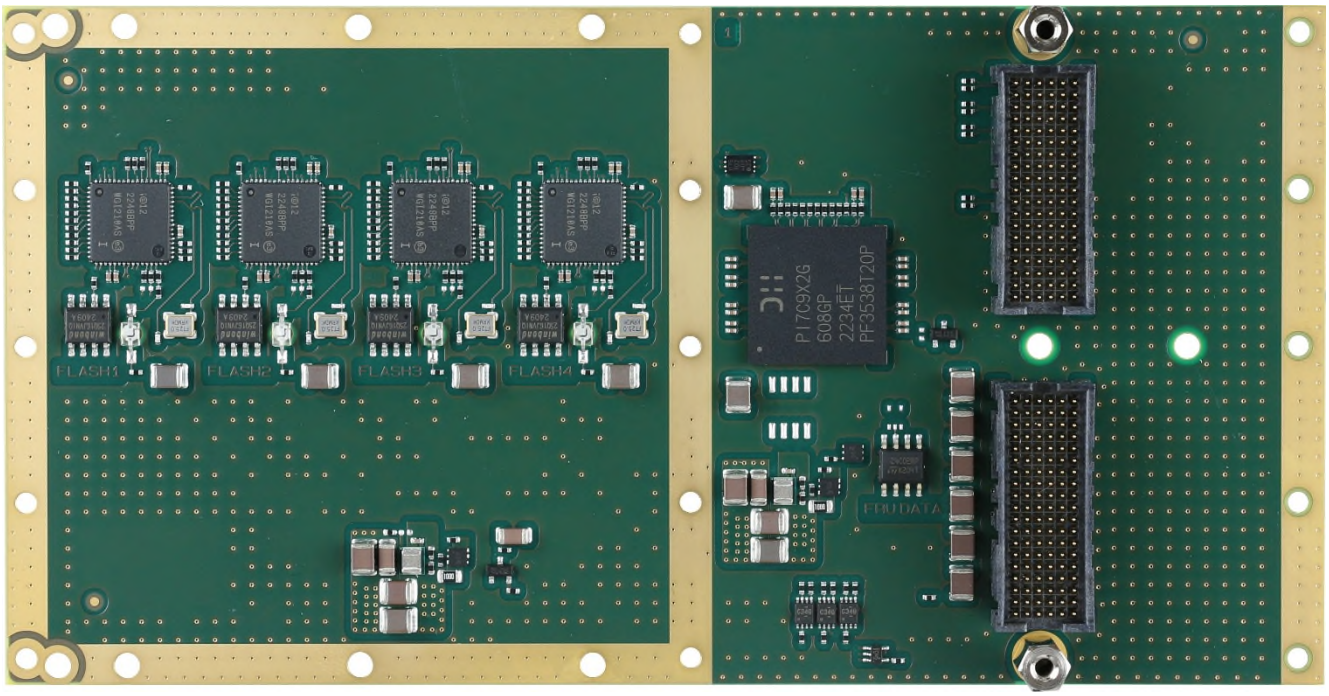
TXMC391 Conduction Cooled, 4 Channel 1000BASE-KX Ethernet



TXMC391-10R

Application Information

The TXMC391 is a Conduction Cooled Switched Mezzanine Card (CCXMC) compatible module providing a four channel 1000Base-KX Ethernet interface.

A PCIe Switch provides access to the Intel I210IS Gigabit Ethernet controllers. Each Ethernet interface supports 1000 Mbit/s transmission rate and is equipped with a 16 Mbit Serial Flash to support PXE and iSCSI boot.

The TXMC391 supports IEEE 1588/802.1AS Precision Time Protocol (PTP) and IEEE 802.1Qav Audio/Video Bridging (AVB) traffic shaping (with software extensions).

The TXMC391-10R routes four Ethernet ports to the Back I/O P16 connector. All ports are mapped in the X12d range specified in VITA46.9 standard.

The SDP (Software Definable Pins) of each Ethernet Controller are connected to the Back I/O P16 connector for IEEE 1588 auxiliary device connections and LEDs on the board indicate the different network activities.

The TXMC391 has an I²C board temperature sensor to facilitate measurement of the board heat near the Primary Thermal Interface of the Conduction Cooled Frame.

The module meets the requirements to operate in extended temperature range from -40°C to +85°C (Card Edge Temperature).

Software Support:

- Software support for Intel I210IS at www.intel.com
- For operating systems not supported by Intel, please contact TEWS.

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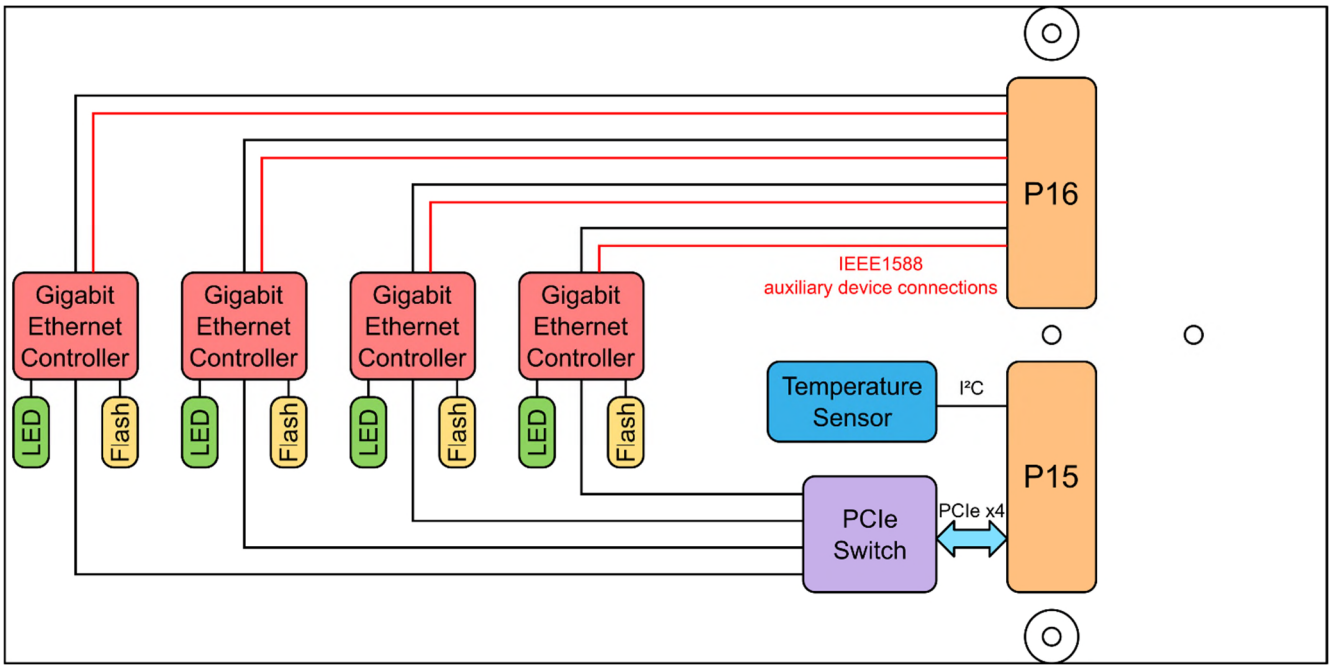
Technical Information

- Form Factor: Standard single-width CCXMC module conforming to ANSI/VITA 42.0 and ANSI/VITA 20
  - Board size: 143.75 mm x 74 mm
- x4 PCI Express 2.1 compliant interface conforming to ANSI/VITA 42.3
- IPMI resource: FRU hardware definition information stored in on-board EEPROM
- Four Intel I210IS Gigabit Ethernet controllers
- Back I/O P16 connector
  - All four ports mapped in X12d range (VITA46.9)
- 1000Base-KX
- IEEE 1588/802.1AS Precision Time Protocol (PTP)
  - V1 and V2 PTP frame format
  - auxiliary device support via Back I/O P16 connector
- IEEE 802.1Qav Audio/Video Bridging (AVB) traffic shaper (with software extensions)
- 16 Mbit serial flash for every channel storing configuration data and providing memory for Boot ROM
- I²C board temperature sensor near Primary Thermal Interface
- Operating temperature -40°C to +85°C (Card Edge)
- MTBF (MIL-HDBK217F/FN2 GB 20°C)
  TXMC391-10R: 943000 h



Block Diagram

Order Information

RoHS Compliant

TXMC391-10R 4 Channel 1000BASE-KX Ethernet; P16 Back I/O (X12d); Conduction Cooled; IEEE 1588 auxiliary devices via Back I/O

For the availability of non-RoHS compliant (leaded solder) products please contact TEWS.

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