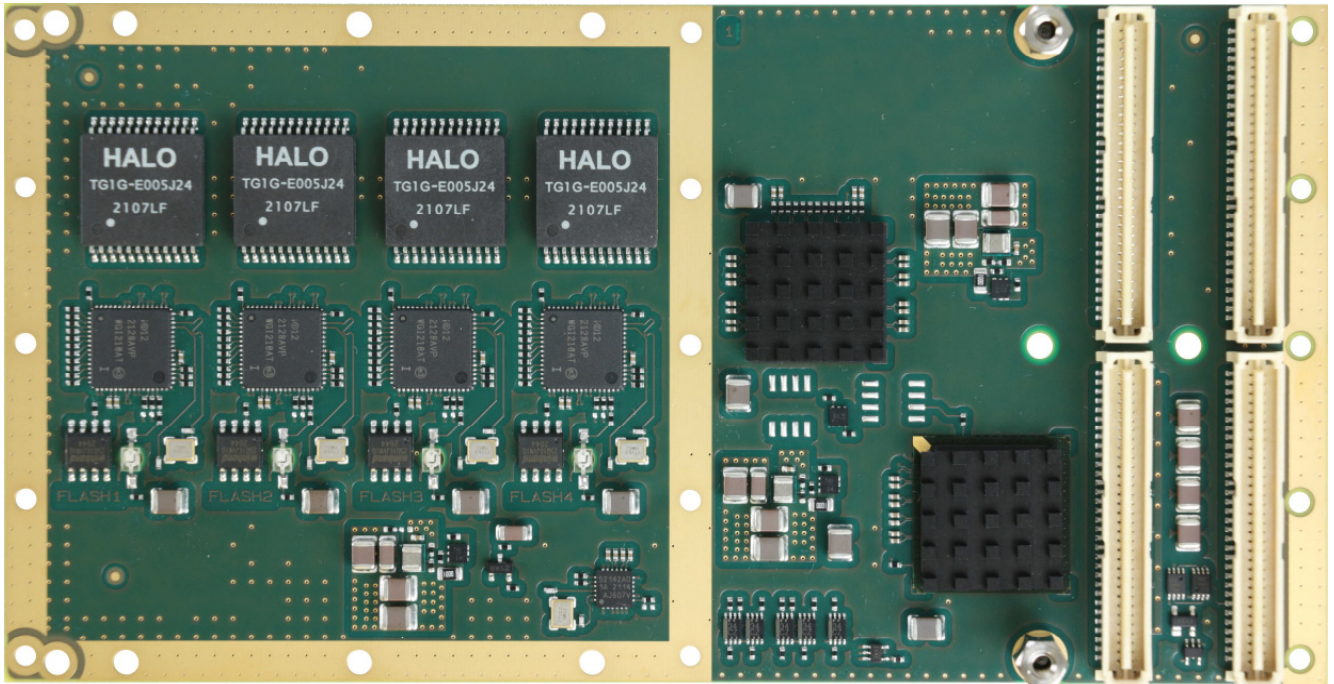# TPMC395 Conduction Cooled, Four Channel 10/100/1000 Mbit/s Ethernet

TPMC395-10R

Application Information

The TPMC395 is a Conduction Cooled PCI Mezzanine Card (CCPMC) compatible module providing a four channel Ethernet 10Base-T / 100Base-TX / 1000Base-T interface.

A transparent 64 bit, up to 133 MHz PCI-X/PCI to PCIe Bridge and a PCIe Switch provide access to the Intel I210IT Gigabit Ethernet controllers. Each Ethernet interface supports 10, 100 and 1000 Mbit/s transmission rates and is equipped with a 16 Mbit Serial Flash to support PXE and iSCSI boot.

The four Ethernet interfaces of the TPMC395 are capable of performing an auto negotiation algorithm which allows both link-partners to determine the best link-parameters. The TPMC395 supports IEEE 1588/802.1AS Precision Time Protocol (PTP) and IEEE 802.1Qav Audio/Video Bridging (AVB) traffic shaping (with software extensions).

The TPMC395-10R routes four Ethernet ports to the Back I/O P14 connector.

All ports are galvanically isolated from the Ethernet controllers and LEDs on the board indicate the different network activities.
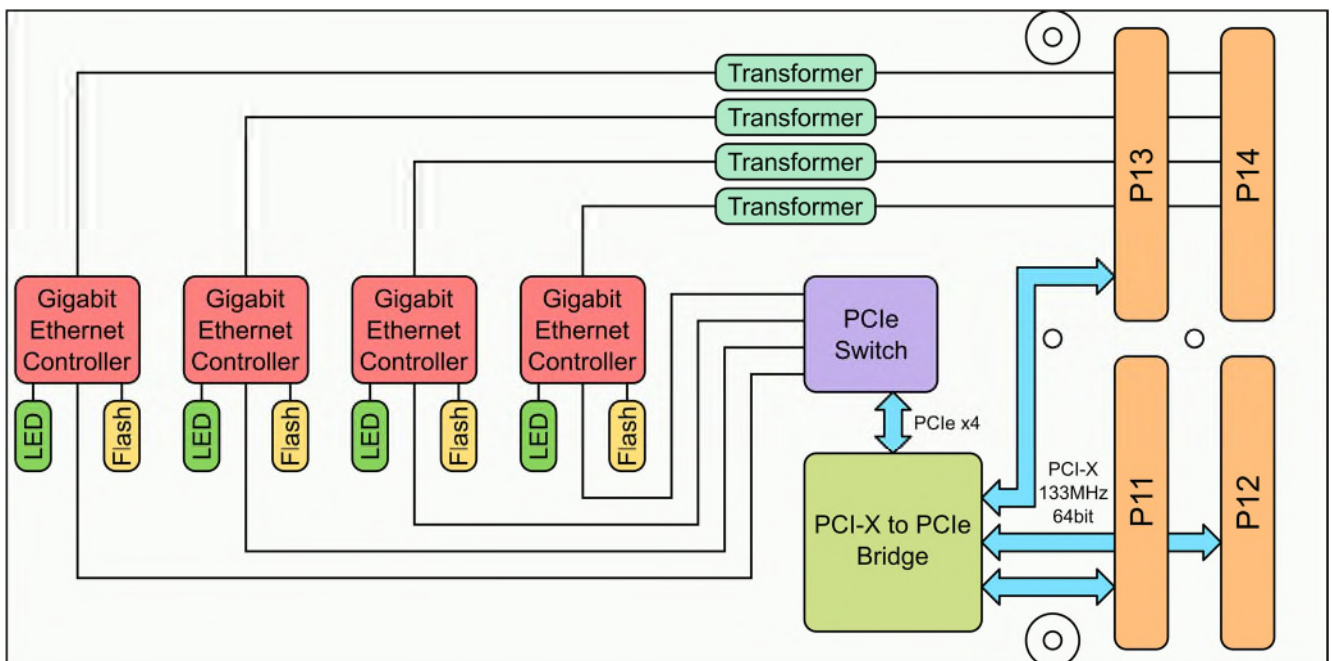
The module meets the requirements to operate in extended temperature range from -40°C to +85°C.

Software Support:

o   Software support for Intel I210IT at www.intel.com

o   For operating systems not supported by Intel, please contact TEWS.

The Embedded I/O Company

Technical Information

- Form Factor: Standard single-width 64 bit CCPMC module conforming to IEEE P1386/P1386.1 and ANSI/VITA 20
  - Board size: 143.75 mm x 74 mm
- PCI 3.0 (up to 66 MHz) and PCI-X 2.0a (up to 133 MHz) compliant interface
- 3.3V PCI signaling with 5V I/O tolerance
- Four Intel I210IT Gigabit Ethernet controllers
- Back I/O P14 connector
- 1000Base-T
  100Base-TX
  10Base-T

- IEEE 1588/802.1AS Precision Time Protocol (PTP)
  - V1 and V2 PTP frame format
- 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
- Operating temperature -40°C to +85°C
- MTBF (MIL-HDBK217F/FN2 G_B 20°C)
  TPMC395-10R: 587000 h

Order Information

RoHS Compliant
TPMC395-10R   Conduction Cooled, Four Channel 10/100/1000 Mbit/s Ethernet, Intel I210IT, P14 Back I/O

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

Documentation
TPMC395-DOC   User Manual

Related Products
TPIM006   PIM for four Channel 10/100/1000 Mbit/s Ethernet PMCs, RJ45