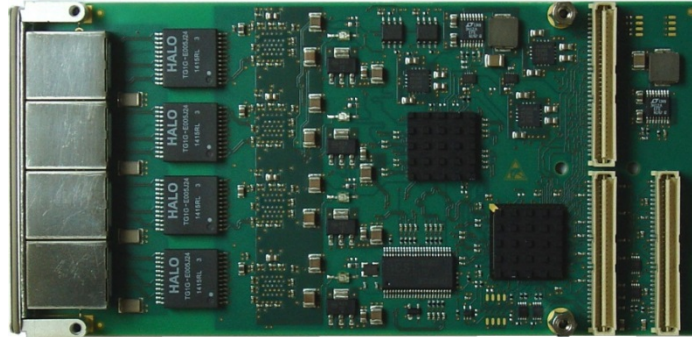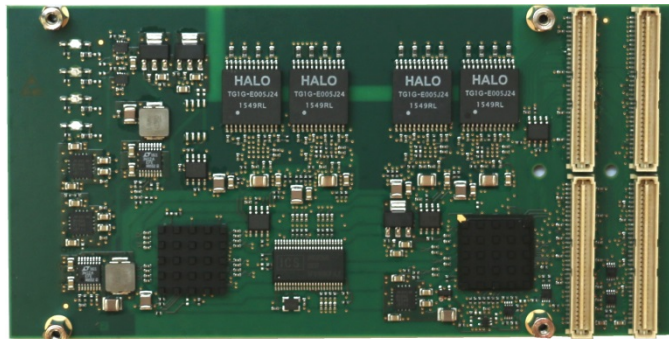# TPMC885   Dual/Four Channel 10/100/1000 Mbit/s Ethernet

TPMC885-10R

TPMC885-11R

Application Information

The TPMC885 is a PCI Mezzanine Card (PMC) compatible module providing a dual or 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 82574IT Gigabit Ethernet controllers. Each Ethernet interface supports 10, 100 and 1000 Mbit/s transmission rates for full duplex operation, 10 and 100 Mbit/s transmissions for half duplex operation, and is equipped with a 32 Kbit Serial EEPROM.

The two/four Ethernet interfaces of the TPMC885 are capable of performing an auto negotiation algorithm which allows both link-partners to find out the best link-parameters by themselves. The TPMC885 is widely user configurable via configuration and status register access over the PCI bus.

The TPMC885-10R provides four 10/100/1000 Mbit/s Ethernet connections via front panel RJ45 connectors.

The TPMC885-11R routes four Ethernet ports to the back I/O P14 connector without any RJ45 connector at the front.

The TPMC885-20R provides two 10/100/1000 Mbit/s Ethernet connections via front panel RJ45 connectors.

The TPMC885-21R routes two Ethernet ports to the back I/O P14 connector without any RJ45 connector at the front.

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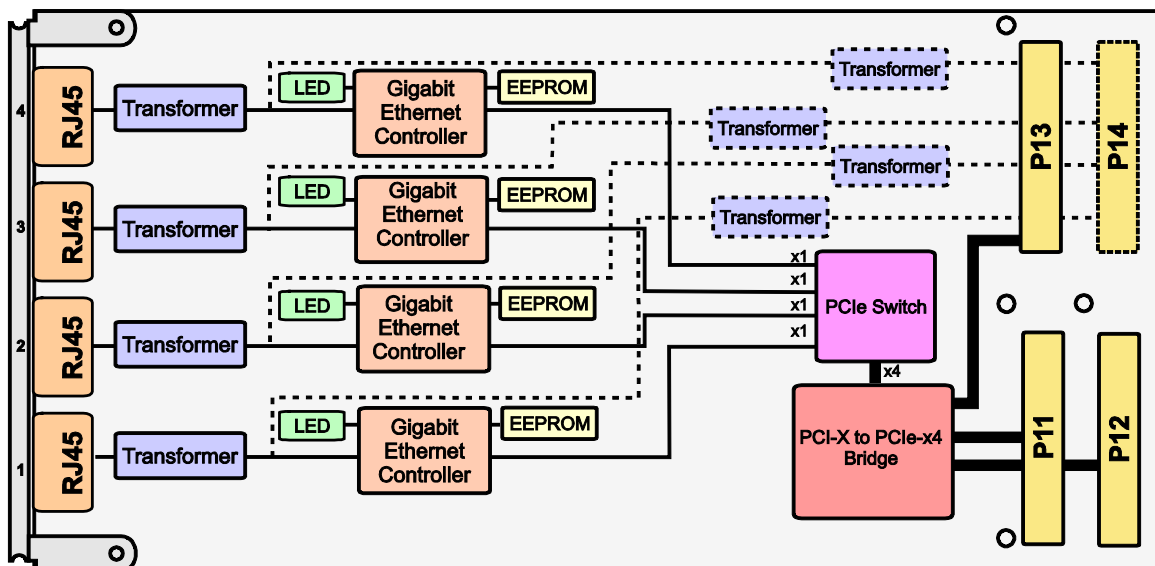
The module meets the requirements to operate in extended temperature range from -40° to +85°C.

Software Support:

o   Software support for Intel™ 82574IT at www.intel.com

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

Technical Information

- Form Factor: Standard single-width 64 bit PMC module conforming to IEEE P1386/P1386.1
  - Board size: 149 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
- 2 or 4 Intel™ 82574IT Gigabit Ethernet controllers
- 10Base-T / 100Base-TX / 1000Base-T
- Half or full-duplex operation

- For each interface: Configurable receive and transmit data FIFO, programmable in 1 KB increments
- Operating temperature -40°C to +85°C, constant airflow of 2m/s is required
- MTBF (MIL-HDBK217F/FN2 GB 20°C)
  TPMC885-10R: 359000 h
  TPMC885-11R: 502000 h
  TPMC885-20R: 491000 h
  TPMC885-21R: 579000 h

Order Information

RoHS Compliant

TPMC885-10R   4 Channel 10/100/1000BaseT Ethernet Interface, Intel 82574IT, RJ45
TPMC885-11R   4 Channel 10/100/1000BaseT Ethernet Interface, Intel 82574IT, P14 I/O
TPMC885-20R   2 Channel 10/100/1000BaseT Ethernet Interface, Intel 82574IT, RJ45
TPMC885-21R   2 Channel 10/100/1000BaseT Ethernet Interface, Intel 82574IT, P14 I/O

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

Documentation
TPMC885-DOC   User Manual

Related Products
TPIM006   PIM I/O Module for 10/100/1000 Ethernet PMC