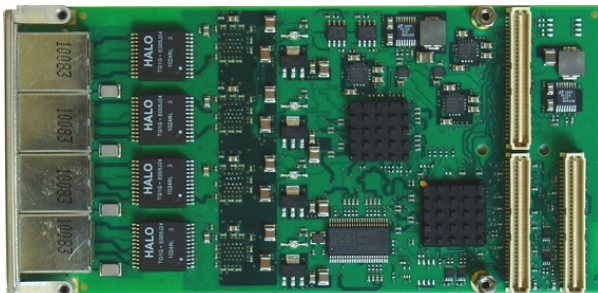# TPMC885   Four Channel 10/100/1000 Mbit/s Ethernet

Application Information

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

The 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 10/100/1000Mbit/s Ethernet connections via front panel RJ45 connectors.

The TPMC885-11R routes all four Ethernet ports to the back I/O P14 connector and there is no front panel mounted on the module.

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.
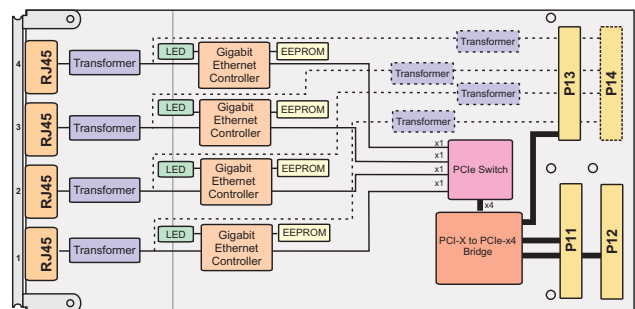
For First-Time-Buyers the engineering documentation TPMC885-ED is recommended. The engineering documentation includes TPMC885-DOC, schematics and data sheets of TPMC885.

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
❍ 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: 357349 h
  TPMC885-11R: 502396 h

Order Information

RoHS Compliant

TPMC885-10R   Four channel 10/100/1000 Mbit/s Ethernet interface RJ45 front panel I/O, extended temperature range

TPMC885-11R   Four channel 10/100/1000 Mbit/s Ethernet interface back I/O, extended temperature range

Documentation

TPMC885-DOC   User Manual
TPMC885-ED   Engineering documentation (TPMC885-DOC, Schematics, Assembly Drawing, Data Sheets)

Related Products

TPIM006   PIM I/O Module for Gigabit Ethernet PMCs