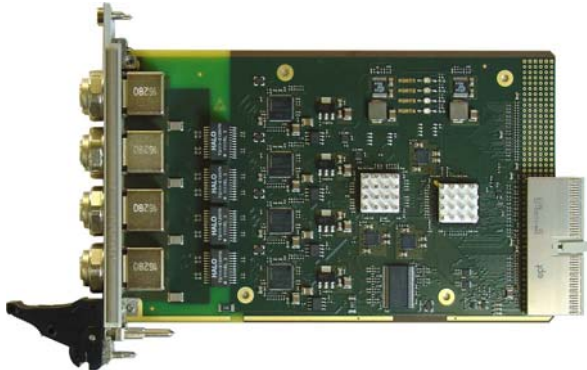# TCP886   Four Channel 10/100 Mbit/s M12 Industrial Ethernet

Application Information

The TCP886 is a 3U 32bit/64bit CompactPCI module providing a four channel M12 Industrial Ethernet 10BASE-T / 100BASE-TX interface.

The TCP886 is equipped with a transparent PCI/PCI-X to PCIe Bridge which is capable of performing data transfer with a bus width of up to 64 bit at bus frequencies of up to 133 MHz depending on the product order option and the system backplane configuration.

The Bridge and a PCIe Switch provide access to the Intel 82574IT Fast Ethernet controllers. Each Ethernet interface supports 10 and 100 Mbit/s transmission rates for full duplex and half duplex operation and is equipped with a 32 Kbit Serial EEPROM.

The four front panel D-coded M12 connector Ethernet interfaces of the TCP886 are capable of performing an auto negotiation algorithm which allows both link-partners to find out the best link-parameters by themselves.

The TCP886 is widely user configurable via configuration and status register access over the CompactPCI bus. All ports are galvanically isolated from the Ethernet controllers and LEDs indicate network activities.

On the TCP886-10 only CompactPCI connector J1 is fitted which means that the module is limited to 32bit PCI bus width.

The TCP886-20 is additionally equipped with CompactPCI connector J2 which allows 64bit data transfer in a corresponding backplane system configuration.

The module meets the requirements to operate in extended temperature range from -40° to +85°C.

For First-Time-Buyers the engineering documentation TCP886-ED is recommended. The engineering documentation includes TCP886-DOC, schematics and data sheets of TCP886.
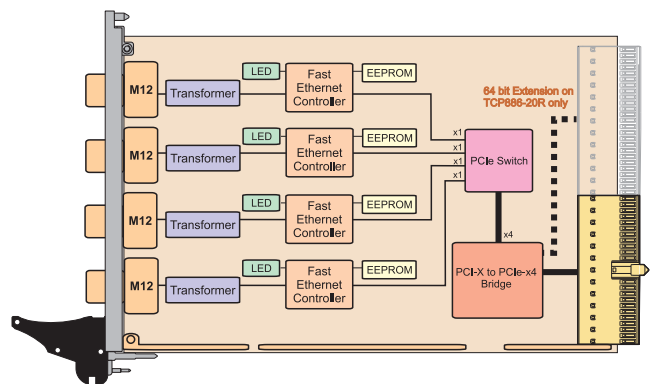
Software Support:

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: 3U, 4HP 32/64 bit CompactPCI module conforming to PICMG 2.0 Revision 3.0
  ❍ Board size: 100 mm x 160 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 Fast Ethernet controllers
❍ 10Base-T / 100Base-TX
❍ Half or full-duplex operation
❍ D-coded M12 Industrial Ethernet Connectors
❍ For each interface: Configurable receive and transmit data FIFO, programmable in 1 KB increments
❍ Operating temperature -40°C to +85°C
❍ MTBF (MIL-HDBK217F/FN2 GB 20°C)
  TCP886-10R: 404000 h
  TCP886-20R: 379000 h

Order Information

RoHS Compliant

TCP886-10R   Four channel 10/100 Mbit/s M12 Industrial Ethernet interface front panel I/O, 32bit (cPCI Connector J1 only), extended temperature range

TCP886-20R   Four channel 10/100 Mbit/s M12 Industrial Ethernet interface front panel I/O, 64bit (cPCI Connector J1 and J2), extended temperature range

Documentation

TCP886-DOC   User Manual

TCP886-ED   Engineering documentation (TCP886-DOC, Schematics, Assembly Drawing, Data Sheets)