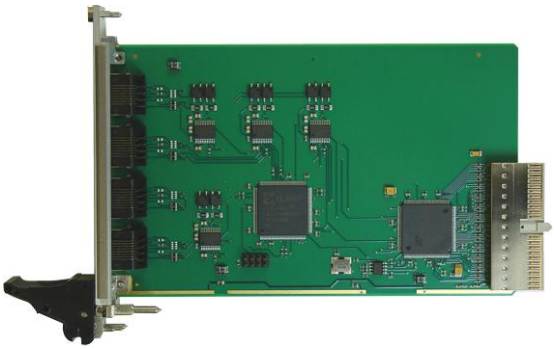
The Embedded I/O Company

TCP467 4 Channel RS232/RS422/RS485 Programmable Serial Interface

Application Information

The TCP467 is a standard 3U 32 bit CompactPCI module and offers 4 channels of high performance RS232/RS422/RS485 programmable asynchronous serial interface. The module offers front panel I/O with four RJ45 type connectors. The TCP467-10x provides a RJ45 I/O pinout according to EIA-232D. The TCP467-11x provides a non standard RJ45 I/O pinout (as used on Motorola CPU boards).



The serial channels can be individually programmed to operate as RS232, RS422 or RS485 full duplex/half duplex interface. In addition programmable termination is provided for the RS422/RS485 interfaces. After power-up all serial I/O lines are in a high impedance state.

Each RS232 channel supports RxD, TxD, RTS, CTS and GND. RS422 and RS485 full duplex support a four wire interface (RX+, RX-, TX+, TX-) plus ground (GND). RS485 half duplex supports a two wire interface (DX+, DX-) plus ground (GND).

Each channel has 64 byte transmit and receive FIFOs to significantly reduce the overhead required to provide data to and get data from the transmitters and receivers. The FIFO trigger levels are programmable and the baud rate is individually programmable up to 921.6 kbps for RS232 channels and 5.5296 Mbps for RS422/RS485 channels. The UART offers readable FIFO levels.

All channels generate interrupts on CompactPCI interrupt INTA. For fast interrupt source detection the UART provides a special Global Interrupt Source Register.

All serial channels use ESD protected transceivers up to ±15KV.

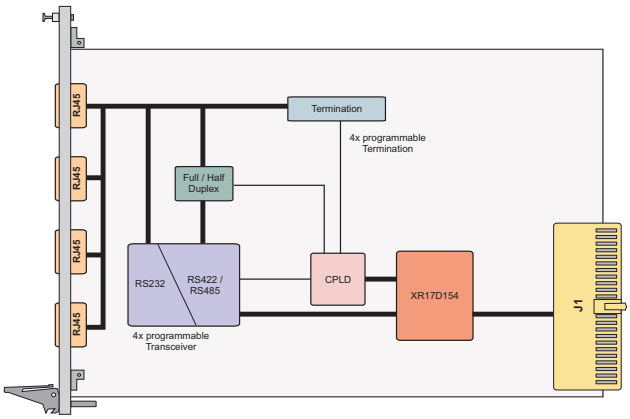
The TCP467 can operate with 3.3V and 5.0V PCI I/O signaling voltage.

For First-Time-Buyers the Engineering Documentation TCP467-ED is recommended. The Engineering Documentation includes TCP467-DOC, schematics and data sheets of TCP467.

Software Support (TDRV002-SW-xx) for different operating systems is available.

Technical Information

- Standard 3U 32 bit CompactPCI module conforming to PICMG 2.0 R3.0
  - Target Chip: XR17D154 (Exar)
  - PCI 2.3 compliant interface
  - PCI I/O signaling voltage 5V and 3.3V
- Board size: 160 mm x 100 mm
- Asynchronous serial interface
- Quad UART: Exar XR17D154
- Programmable Interfaces:
  - RS232
  - RS422
  - RS485 Full Duplex
  - RS485 Half Duplex
  - Programmable Termination for RS422/RS485
- Support of RxD, TxD, RTS, CTS and GND for each RS232 channel; RxD+/-, TxD+/- and GND for each RS422/RS485 FD channel; D+/- and GND for each RS485 HD channel.
- Programmable baud rates:
  RS232: up to 921.6 kbps
  RS422/RS485: up to 5.5296 Mbps
- 64 byte transmit FIFO per channel
- 64 byte receive FIFO per channel
- Readable FIFO levels
- Global Interrupt Source Register
- General Purpose 16 bit Timer/Counter
- ESD protected transceiver (up to ± 15KV)
- Operating temperature -40°C to +85°C



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Order Information

RoHS Compliant

TCP467-10R	4 Channel Serial Programmable Interface, front panel I/O
TCP467-11R	4 Channel Serial Programmable Interface, front panel (non standard RJ45 I/O pinout) I/O

None RoHS Compliant

TCP467-10	None RoHS compliant version of TCP467-10R
TCP467-11	None RoHS compliant version of TCP467-11R

Documentation

TCP467-DOC	User Manual
TCP467-ED	Engineering Documentation (TCP467-DOC, Schematics, Assembly Drawing, Data Sheets)

Software

TDRV002-SW-25	Integrity Software Support
TDRV002-SW-42	VxWorks Software Support (Legacy and VxBus-Enabled Software Support)
TDRV002-SW-65	Windows XP/XPE/2000 Software Support
TDRV002-SW-72	LynxOS Software Support
TDRV002-SW-82	LiNUX Software Support
TDRV002-SW-95	QNX 6 Software Support

For other operating systems please contact TEWS.

Related Products

TCP001-FP	6U front panel extension for 3U cPCI boards

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