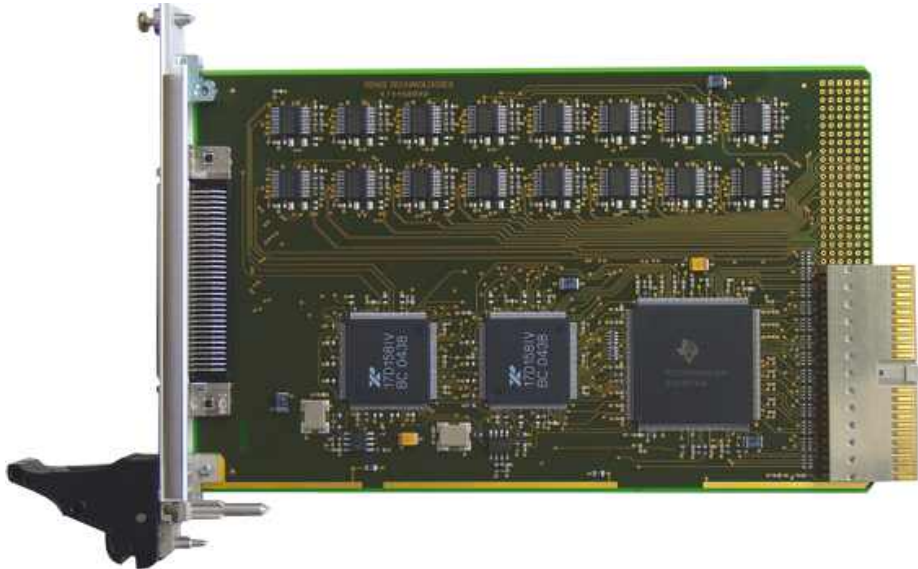# TCP460   16 Channel Serial Interface RS232/RS422

TCP460-10R

Application Information

The TCP460 is a standard 3U 32 bit CompactPCI module and offers 16 channels of high performance asynchronous serial interface.

Five different standard modules are available: The TCP460-10R provides 16 RS232 interfaces. The TCP460-11R provides 16 RS422 interfaces. The TCP460-12R provides 8 RS232 and 8 RS422 interfaces. The TCP460-13R provides 12 RS232 and 4 RS422 interfaces. The TCP460-14R provides 4 RS232 and 12 RS422 interfaces.

Other configurations are available as factory option on a per channel base.

All modules offer front panel I/O with a HD68 connector. The TCP460-2xR modules offer additional J2 rear I/O. Each RS232 channel supports RxD, TxD, RTS and CTS. Each RS422 supports RxD+/- and TxD+/-.

A transparent 32 bit / 66 MHz PCI-to-PCI Bridge provides access to the two Exar XR17D158 octal PCI-UARTs. The PCI-to-PCI Bridge allows 32 bit accesses on the local PCI bus and permits the high data throughput necessary for the high performance serial interfaces.

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 channels. The UART offers readable FIFO levels.

Interrupts are supported. For fast interrupt source detection each octal UART provides a special Global Interrupt Source Register.

All serial channels use ESD protected transceivers up to ±15KV according to IEC 1000-4-2.

The TCP460 can operate with 3.3V and 5.0V PCI I/O signaling voltage.

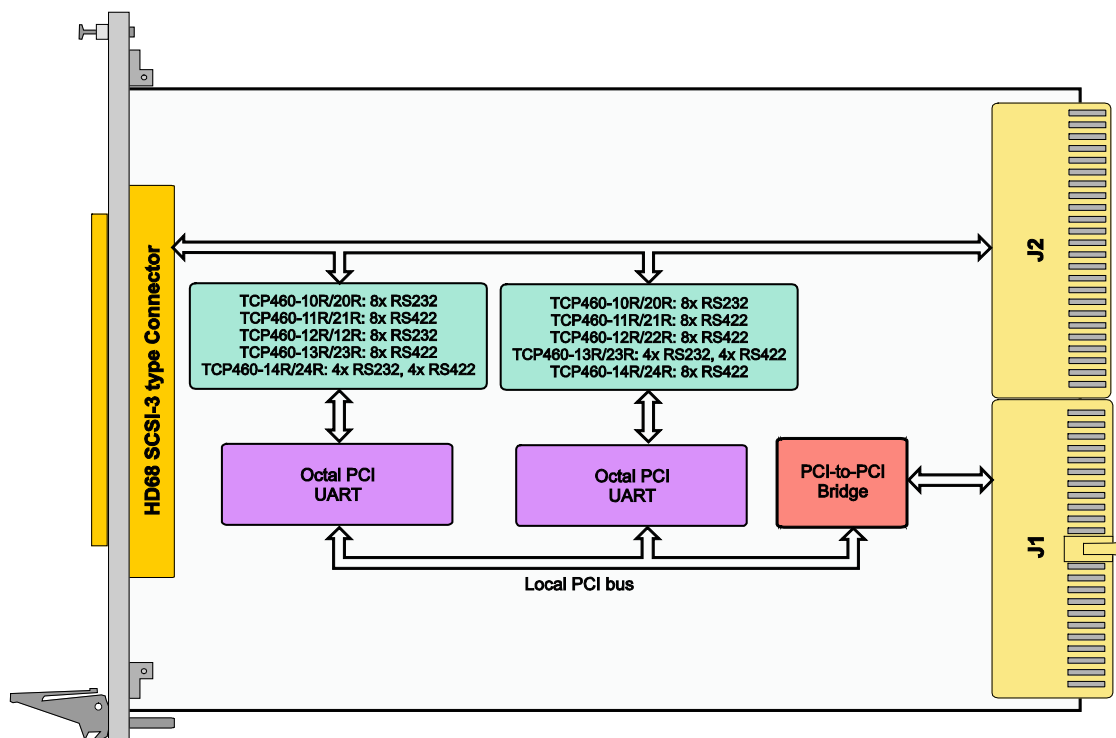Software Support (TDRV002-SW-xx) for different operating systems is available.

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Technical Information

- Standard 3U 32 Bit CompactPCI module conforming to PICMG 2.0 R3.0
- Board size: 160 mm x 100 mm
- Asynchronous serial interface
- PCI-to-PCI Bridge
  - PCI2050b
  - PCI I/O signaling voltage 5V and 3.3V
  - 32 bit / 66 MHz
- UARTs:
  - XR17D158 Octal UART (Exar)
  - PCI 2.2 compliant interface
  - 32 bit / 33 MHz
  - 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
- Support of RxD, TxD, RTS and CTS for each RS232 channel and RxD+/- and TxD+/- for each RS422 channel of the TCP460
- Programmable baud rates:
  RS232: up to 921.6 kbps
  RS422: up to 5.5296 Mbps
- ESD protected transceiver (up to ± 15KV according to IEC 1000-4-2)
- Operating temperature -40° to +85°

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Order Information

RoHS Compliant

TCP460-10R	16 Channel Serial RS232, HD68
TCP460-11R	16 Channel Serial RS422, HD68
TCP460-12R	8 Channel Serial RS232, 8 Channel Serial RS422, HD68
TCP460-13R	12 Channel Serial RS232, 4 Channel Serial RS422, HD68
TCP460-14R	4 Channel Serial RS232, 12 Channel Serial RS422, HD68
TCP460-20R	16 Channel Serial RS232, HD68 and J2 I/O
TCP460-21R	16 Channel Serial RS422, HD68 and J2 I/O
TCP460-22R	8 Channel Serial RS232, 8 Channel Serial RS422, HD68 and J2 I/O
TCP460-23R	12 Channel Serial RS232, 4 Channel Serial RS422, HD68 and J2 I/O
TCP460-24R	4 Channel Serial RS232, 12 Channel Serial RS422, HD68 and J2 I/O

Other configurations are available as factory option on a per channel base.

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

Documentation

TCP460-DOC	User Manual

Software

TDRV002-SW-25	Integrity Software Support
TDRV002-SW-42	VxWorks Software Support (Legacy and VxBus-Enabled Software Support)
TDRV002-SW-65	Windows Software Support
TDRV002-SW-82	Linux Software Support
TDRV002-SW-95	QNX Software Support

For other operating systems please contact TEWS.

Accessories

TA304	Cable Kit for Modules with HD68 Connector
TCP001-FP	6U Front Panel Extension for 3U cPCI Boards