

TCP460 16 Channel Serial Interface RS232/RS422

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 TCP460-10x provides 16 RS232 interfaces. The TCP460-11x provides 16 RS422 interfaces. The TCP460-12x provides 8 RS232 and 8 RS422 interfaces. The TCP460-13x provides 12 RS232 and 4 RS422 interfaces. The TCP460-14x provides 4 RS232 and 12 RS422 interfaces.

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



TCP460-10R

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

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.

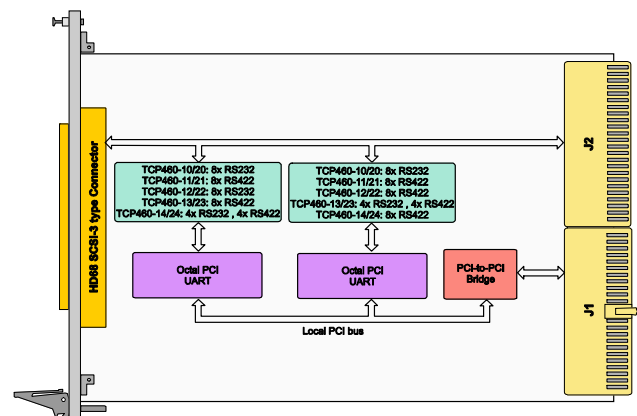
The TCP460 can operate with 3.3V and 5.0V PCI I/O signaling voltage.

For First-Time-Buyers the engineering documentation TCP460-ED is recommended. The engineering documentation includes TCP460-DOC, schematics and data sheets of TCP460.

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
- 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 Rx, Tx, RTS and CTS for each RS232 channel and Rx+/- and Tx+/- 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°



Order Information

RoHS Compliant

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

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

None RoHS Compliant

TCP460-10	None RoHS compliant version of TCP460-10R
TCP460-11	None RoHS compliant version of TCP460-11R
TCP460-12	None RoHS compliant version of TCP460-12R
TCP460-13	None RoHS compliant version of TCP460-13R
TCP460-14	None RoHS compliant version of TCP460-14R
TCP460-20	None RoHS compliant version of TCP460-20R
TCP460-21	None RoHS compliant version of TCP460-21R
TCP460-22	None RoHS compliant version of TCP460-22R
TCP460-23	None RoHS compliant version of TCP460-23R
TCP460-24	None RoHS compliant version of TCP460-24R

Documentation

TCP460-DOC	User Manual
TCP460-ED	Engineering documentation (TCP460-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

TA304	Cable Kit for modules with HD68 SCSI-3 type connector
TCP001-FP	6U front panel extension for 3U cPCI boards