# TPMC462 4 Channel Serial Interface RS232/RS422

Application Information

The TPMC462 is a standard single-width 32 bit PMC module and offers 4 channels of high performance asynchronous serial interface.

Three different standard modules are available: The TPMC462-10x provides 4 RS232 interfaces. The TPMC462-11x provides 4 RS422 interfaces. The TPMC462-12x provides 2 RS232 and 2 RS422 interfaces.

Other configurations are available as factory build option on a per channel base.
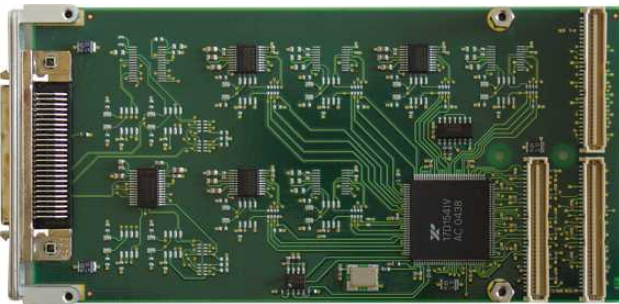
TPMC462-10

All modules offer front panel I/O with a HD50 SCSI-2 type connector and P14 I/O. Each RS232 channel supports RxD, TxD, RTS, CTS and GND. Each RS422 channel supports RxD+/-, TxD+/- and GND. One channel of the TPMC462-10x/-12x offers full modem support (TxD, RxD, CTS, RTS, DSR, DTR, CD, RI and GND) for RS232. One channel of the TPMC462-11x supports RxD+/-, TxD+/-, RTS+/-, CTS+/- and GND for RS422.

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.

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

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

The TPMC462 can operate with 3.3V and 5.0V PCI I/O signaling voltage.

For First-Time-Buyers the Engineering Documentation TPMC462-ED is recommended. The Engineering Documentation includes TPMC462-DOC, schematics and data sheets of TPMC462.

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

Technical Information

- Standard single-width 32 bit PMC module conforming to IEEE P1386.1
  - Target Chip: XR17D154 (Exar)
  - PCI 2.3 compliant interface
  - PCI I/O signaling voltage 5V and 3.3V
- Board size: 149 mm x 74 mm
- Asynchronous serial interface
- Quad UART: Exar XR17D154
- Support of RxD, TxD, RTS, CTS and GND for each RS232 channel; RxD+/-, TxD+/- and GND for each RS422 channel. One channel offers extended support (full modem or RTS+/- and CTS+/-)
- Programmable baud rates:
  RS232: up to 921.6 kbps
  RS422: 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
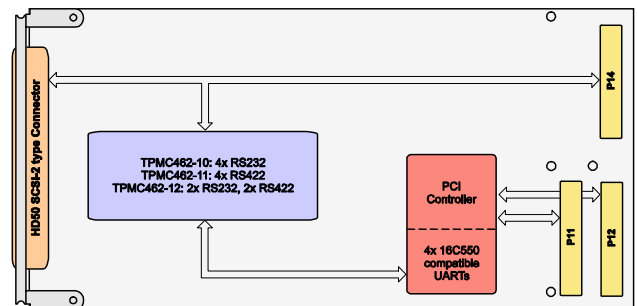
Order Information

RoHS Compliant

TPMC462-10R   4 Channel Serial RS232 (1x full modem), front panel and P14 I/O

TPMC462-11R   4 Channel Serial RS422 (1x plus RTS+/-, CTS+/-), front panel and P14 I/O

TPMC462-12R   2 Channel Serial RS232 (1x full modem), 2 Channel Serial RS422, front panel and P14 I/O

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

None RoHS Compliant

TPMC462-10   None RoHS compliant version of TPMC462-10R

TPMC462-11   None RoHS compliant version of TPMC462-11R

TPMC462-12   None RoHS compliant version of TPMC462-12R

Documentation

TPMC462-DOC   User Manual

TPMC462-ED   Engineering Documentation (TPMC462-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

TA301   Cable Kit for modules with HD50 connector

TPIM001   PIM I/O Module with HD50 SCSI-2 type connector

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