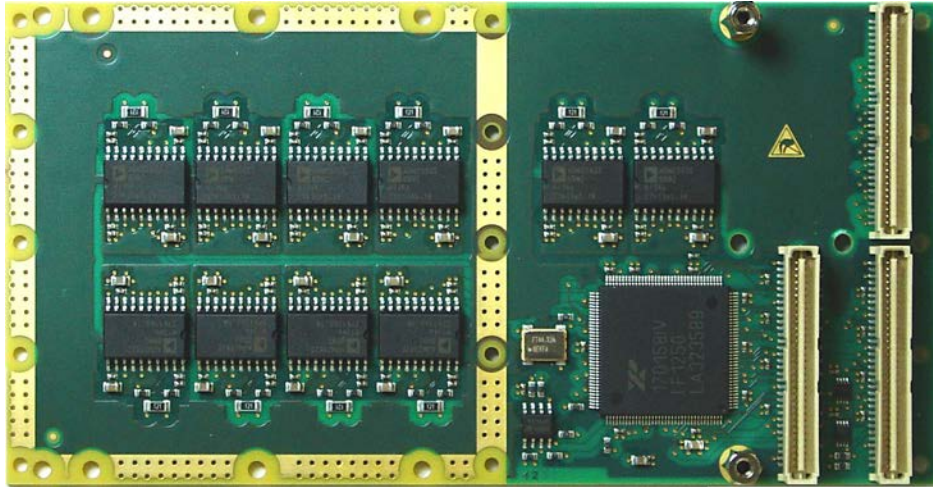


## TPMC378 Conduction cooled 8 channel isolated RS422 interface



### Application Information

The TPMC378 is a conduction cooled single-width 32 bit PMC module offering 8 channels of high performance RS422 asynchronous serial interface with P14 I/O. Each of the eight channels is isolated from the system and against each other by isolated transceivers with integrated DC/DC converters.

Each RS422 channel supports a four wire interface (RX+, RX-, TX+, TX-) plus ground (GND). Two channels additionally support flow control with RTS+/- and CTS+/-.

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 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.

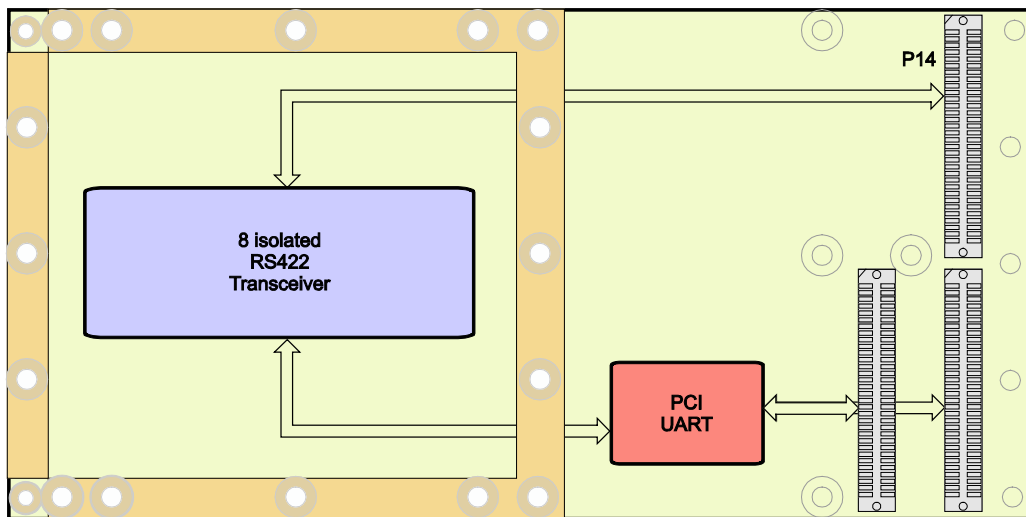
All serial channels use ESD protected transceivers. ESD protection is up to  $\pm 15\text{KV}$ .

The TPMC378 can operate with 3.3V and 5.0V PCI I/O signaling voltage.

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

### Technical Information

- Conduction cooled single-width 32 bit PMC module conforming to IEEE P1386.1
  - Board size: 143.75 mm x 74 mm
  - Target Chip: XR17D158 (Exar)
  - PCI 2.3 compliant interface
  - Universal PCI I/O signaling voltage: 5 V or 3.3 V
- Asynchronous serial interface
- Octal UART: Exar XR17D158
- Supports RxD+/-, TxD+/- and GND for each channel. Two channels offer extended support (RTS+/- and CTS+/-)
- Galvanic isolation of each Transceiver Channel
- Programmable baud rates: 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  $\pm 15KV$ )
- Operating temperature -40°C to +85°C
- MTBF (MIL-HDBK217F/FN2 GB 20°C) TPMC378-10R: 1.000.000 h



### Order Information

#### RoHS Compliant

**TPMC378-10R** ccPMC, 8 Channel Isolated RS422, P14 I/O

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

#### Documentation

**TPMC378-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.

#### Related Products

**TPIM001** PIM I/O Module, HD50 connector