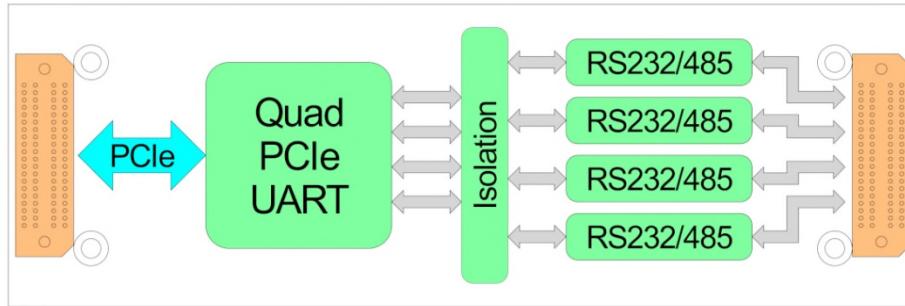


## TQMC402 4 Channel isolated RS232/RS422/RS485



TQMC402

## Application Information

The TQMC402 is a standard single-width QMC module conforming to the VITA 93.0 standard for small form factor (SFF) mezzanine modules. This versatile QMC module offers 4 channels of high performance RS232/RS422/RS485 full/half-duplex programmable asynchronous serial interface. Each of the four channels are isolated from the system and against each other by digital isolators and on board integrated DC/DC converters.

The serial channels can be individually programmed to operate as RS232, RS422 or RS485 full duplex/half duplex interface. In addition programmable slew-rate control and termination is provided for each channel.

Slew rate limiting makes the driver output rise/fall time slower so that stub lengths can be increased, relaxing cabling requirements.

RS232 supports RX and TX plus ground (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 256 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 20 Mbps. The UART offers readable FIFO levels.

Software Support for different operating systems is available.

The TQMC402 is available as air cooled and conduction cooled variant.



Conduction Cooled QMC

**Technical Information**

- Form Factor: Standard single QMC module conforming to VITA 93.0
  - Board size: 26 mm x 78.25 mm
- x1 PCI Express (Base Specification 2.0 Gen 1)
- IPMI resource: FRU hardware definition information stored in on-board EEPROM
- Asynchronous serial interface
- Quad UART: Exar XR17V354
- Programmable Interfaces:
  - RS232
  - RS422
  - RS485 full duplex
  - RS485 half duplex
  - Programmable termination
  - Slew-rate control
- RS232 support of RX, TX and GND
- RS422/RS485 support of RxD+/-, TxD+/- and GND for each full duplex channel; D+/- and GND for each half duplex channel
- Programmable baud rates
  - RS422/RS485 up to 20 Mbps
  - RS232 up to 1 Mbps
- 256 byte Transmit FIFO per channel
- 256 byte Receive FIFO per channel
- Operating temperature -40 °C to +85 °C
- Mean Time Between Failure (MTBF)
  - Contact factory

**Order Information****RoHS Compliant**

**TQMC402-10R-A** 4 Channel isolated RS232/RS422/RS485, air cooled

**TQMC402-10R-H** 4 Channel isolated RS232/RS422/RS485, conduction cooled

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