

TMPE863 3 Channel High Speed Sync/Async Serial Interface



TMPE863-10R with Heatsink mounted



TMPE863-10R without Heatsink

Application Information

The TMPE863 is a standard full PCI Express Mini Card, providing three high speed serial data communication channels.

The serial communication controller is implemented in FPGA logic along with the bus master capable PCIe interface, guaranteeing long term availability and having the option to implement additional functions in the future.

Data transfer to and from host memory is handled via TMPE863 initiated DMA cycles for minimum host/CPU intervention.

Each channel has a receive and transmit FIFO of 512 long words (32 bit) per channel for high data throughput.

Several serial communication protocols are supported for each channel, such as asynchronous (with oversampling), isochronous, synchronous and HDLC mode.

Available signal encodings for synchronous data communication are NRZ, NRZI, FM0, FM1 and Manchester.

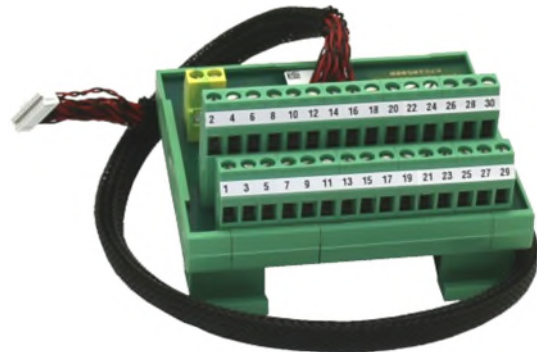
Available clock sources are 14.7456 MHz for standard asynchronous baud rates, 10 MHz for the 10 Mbit/s synchronous data rate and 24 MHz for other baud or data rates.

Each channel provides various interrupt sources which can be enabled or disabled individually.

The Differential I/O lines for EIA-422, EIA-485 Full-Duplex are terminated with 120 Ω on-board.

The I/O signals are accessible through a 30 pin Pico-Clasp latching connector. For Modules with Pico-Clasp Connector, the TA309 Cable Kit is available.

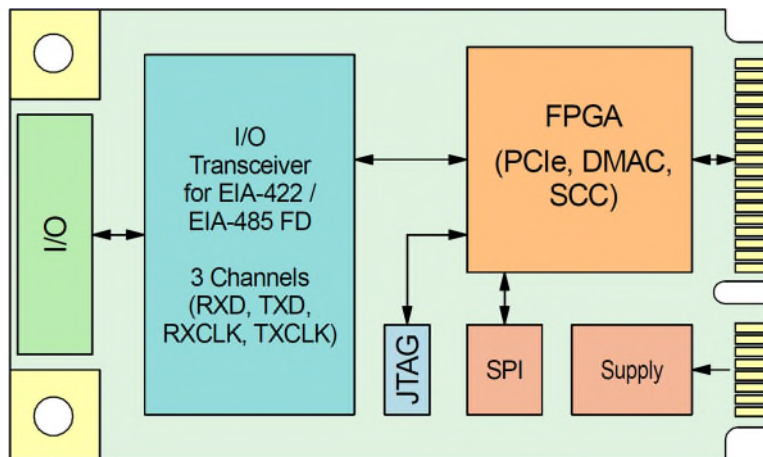
The TMPE863 provides a basic heatsink to facilitate thermal management. The heatsink can be used to install additional cooling solutions like passive or active heatsinks or to provide a thermal connection to an enclosure.



TA309 Cable Kit for Modules with Pico-Clasp Connector

Technical Information

- Form Factor: Full-Mini Card
 - Board size: 50.95 mm x 30 mm
 - PCI Express 2.1 compliant interface
- FPGA based PCIe endpoint
- Three high speed synchronous / asynchronous serial interface channels
- Support of differential RXD, RXCLK, TXD, TXCLK per channel
- ESD protected I/O lines for EIA-422, EIA-485 FD (Full-Duplex)
- Maximum Data Rate: 10 Mbit/s Synchronous, 2 Mbit/s Asynchronous
- I/O access via 30 pos. Pico-Clasp latching connector
- Operating temperature -40°C to +85°C
- MTBF (MIL-HDBK217F/FN2 GB 20°C) TMPE863: 1.200.000 h



TMPE863 Block Diagram

Order Information

RoHS Compliant

TMPE863-10R Three Channel High Speed Sync/Async Serial Interface, 30 pos. Pico-Clasp I/O Connector

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

Documentation

TMPE863-DOC User Manual

Software

TDRV009-SW-25 Integrity Software Support
TDRV009-SW-42 VxWorks Software Support (Legacy and VxBus-Enabled Software Support)
TDRV009-SW-65 Windows Software Support
TDRV009-SW-82 Linux Software Support
TDRV009-SW-95 QNX Software Support

For other operating systems please contact TEWS.

Related Products

TA309 Cable Kit for Modules with Pico-Clasp Connector