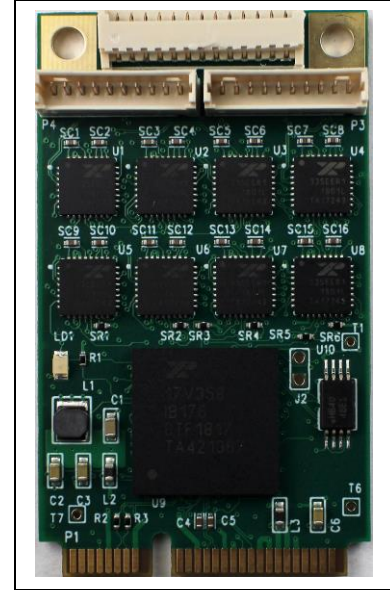


PCIe Mini High Performance Octal
With Programmable Transceiver
RS-232/RS-485/RS-422

Features

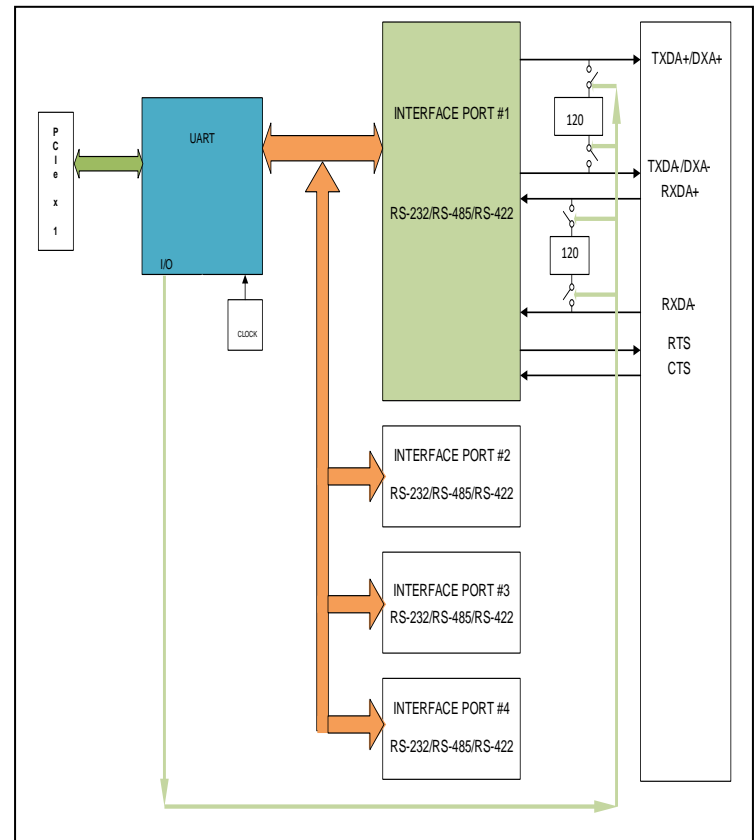
- 8 Independent 16C550-class UARTs
- 256-bytes TX and RX FIFOs
- Up to 31.25Mbps serial data rate
- Fractional baud rate generator
- Automatic RTS/CTS or DTR/DSR hardware flow control software
- Selectable serial mode in pairs RS-232, RS-485 and RS-422
- Robust $\pm 15\text{KV}$ ESD protection (IEC 61000-4-2 air gap)
- Up to 16 drivers, 16 receivers RS-232/V.28
- Up to 8 drivers, 8 receivers RS-485/RS-422
- Full or half duplex configurations
- 1/8th unit load, up to 256 receivers on
- Mixed RS-232/RS-485 modes
- On board termination 120Ω software selectable



Block Diagram and Operational Overview

The **PCIe-Mini-COM-8** is an 8-channel PCI Express (PCIe) UART (Universal Asynchronous Receiver and Transmitter) optimized for higher performance. The **PCIe-Mini-COM-8** serves as a single lane PCIe bridge to 8 independent enhanced 16550 compatible UARTs.

All 8 channels can be programmed in pairs with the required front-end interface:
 Software selectable RS-232, RS-485 and RS-422;
 Software selectable 120Ω termination for RS-422 and RS-485 interfaces.



Applications

This board is optimally suited for communications gateway and protocol converters. This is a perfect solution for:

- Avionics equipment
- Avionic data communication systems
- Medical systems
- Industrial controls
- Factory automation and process control

Communication Specifications

- PCIe 2.0 Gen 1 compliant
- 16550 compatible register set
- 256-byte TX and RX FIFOs
- Global interrupt status register for all eight UARTs
- Up to 31.25Mbps serial data rate
- Automatic RTS/CTS or DTR/DSR hardware flow control
- Automatic Xon/Xoff software flow control
- RS-485 half duplex direction control output with programmable turn-around delay

I/O Specifications

- ±15KV ESD protection (IEC 61000-4-2 air gap)
- Supports RS-232, RS-485 and RS-422
- Full or half duplex
- Mixed RS-232/RS-485 modes
- RS-485 advanced fail safe on open, short or terminated lines
- Multi-port RS-232/RS-422/RS-485 cards

Available Software Drivers

- C library dll's
- Linux® drivers
- Windows® drivers
- VxWorks® drivers

Mechanical

- Size: Mini PCIe Module
30mm x 50.95mm
- Power: tbd
- Front panel I/O
- Vibration: 0.5G, 20-2000Hz rand
- Shock: 20G, 11msec, ½ sine
- Weight: tbd
- MTBF: >250,000 hours

Operating Environment

- Operating temperature
Industrial: -40°C to +85°C
- Non-operating: -60°C to +120°C
- Humidity: 5 to 90% (non-cond)
- Altitude: 0 to 10,000 feet

Ordering Information

PCIe-Mini-COM-8: OCTAL PCI EXPRESS Mini UART, Industrial Temp: -40°C to +85°C

PCIe-Mini-COM-8CC: Same as above, Conformal Coated

Optional Accessories

CBL-Mini-COM-8: Communication Cable, 4 Inch Micro IDT to Micro IDT

TB-Mini-COM-8: Terminal Module from Micro IDT to 8 PICO Latch connectors.