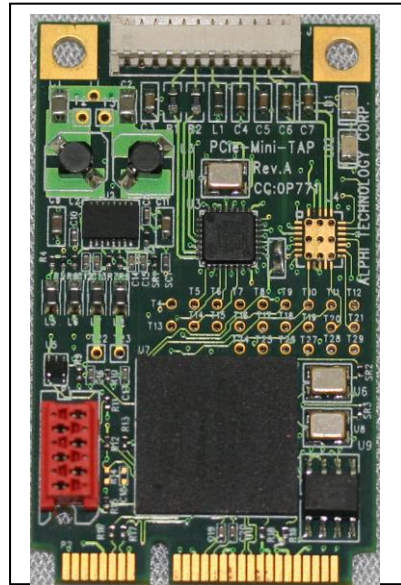


PClexpress Mini

USER RECONFIGURABLE ALTERA CYCLONE IV 16 Channels RS-422/485

Features

- Altera Cyclone IV FPGA
- **USER RECONFIGURABLE ALTERA CYCLONE IV**
- 16 Pairs RS-422/485 Bidirectional channels
- 20 Mbps RS485
- Software-Selectable, Half-/Full-Duplex
- Logic-Selectable 120Ω Termination Resistor
- Change-of-state/level interrupts (up to 8)
- Interrupts are software-programmable for a change of state or level detection



Block Diagram and Operational Overview

The PCIe-Mini-DIO16D monitors or controls the on/off (high/low) status of up to 16 Differential devices. Each channel can be used as an input or output.

Input channels can be configured with interrupts for a change of state or level detection of any bit on up to 8 channels. The RS-422/485 input threshold includes hysteresis for increasing noise immunity.

In order to ensure safe, reliable control under all conditions, output operation is "fail-safe." That is, the outputs are always off upon power-up and are automatically cleared following a software reset.

Loopback monitoring of critical control signals is easy since the input and output circuitry are connected in tandem to each channel.

Application:

This is a perfect solution for:

- Process control
- Industrial control
- Precision instrumentation
- Data acquisition systems (DAS)
- Multiaxis positioning systems

Digital I/O Specifications:

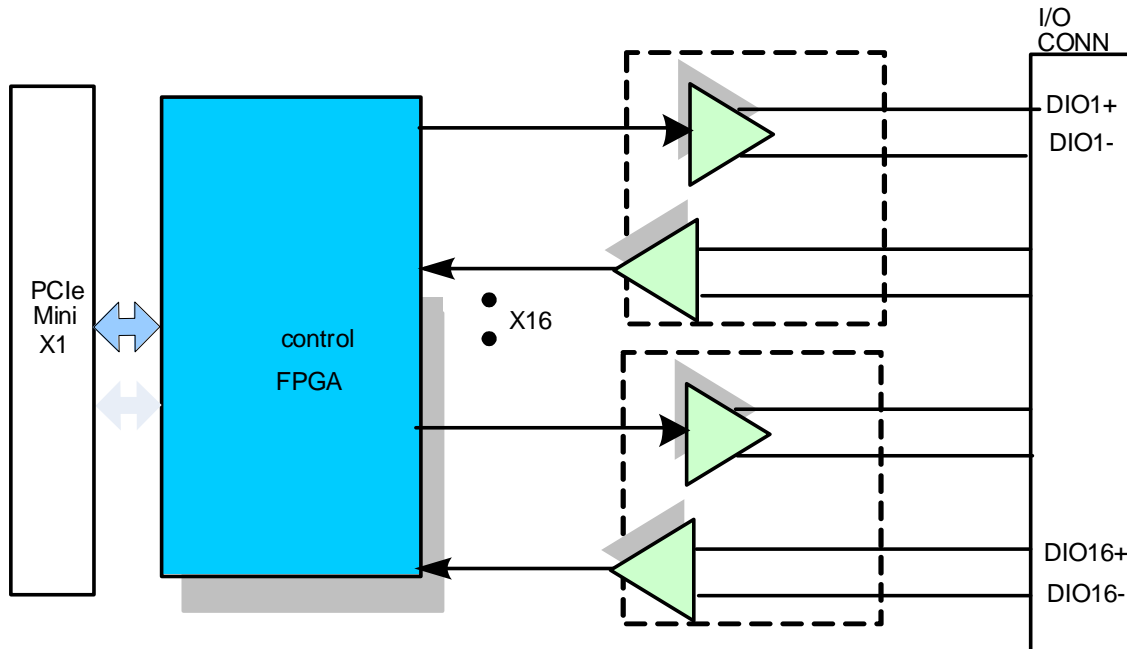
- 16 pair RS-422/485
- 20 Mbps RS485
- High Input Impedance Supports 256 Nodes
- Software-Selectable, Half-/Full-Duplex
- Enhanced ESD protection allows to withstand $\pm 15\text{kV}$
- Logic-Selectable 120Ω Termination Resistor

Mechanical: Environmental:

- Size – Mini PCIe Module
30 mm x 50.95mm
- Power – T.B.D.
- Front panel I/O
- Vibration – 0.5G, 20-2000 Hz rand
- Shock – 20G, 11 msec, 1/2 sine
- Weight – tbd
- MTBF – >250,000 hours

Operating Environment

- Operating temperature
-40 °C to +85 °C
- Airflow requirement – 5 CFM
- Humidity – 5 to 90% (non-cond)
- Altitude – 0 to 10,000 feet



Ordering Information

Part number: PCIe-Mini-DIO16D 16 Channels Differential RS-422/485 I/O
Ext Temp: -40 °C to +85 °C