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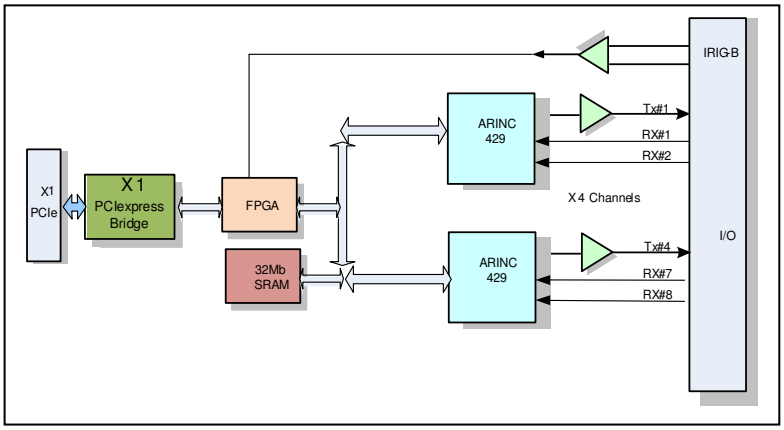
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Find the *Alphi Technology PCIe-Mini-ARINC429-4/8* at our website: *Click HERE*

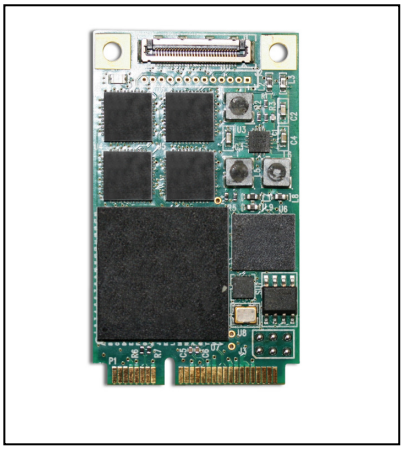
PCIe-Mini-ARINC429-4/8

PCIexpress Mini
ARINC 429 Controller up 4 TX /8 RX

Features



- ARINC 429-based PCIe-Mini card ARINC controller
- Up to 4 transmitters and 8 receivers channels for ARINC controller
- Programmable label recognition for 256 labels per channel
- 32 x 32 Receive FIFOs and Priority-Label buffers
- Dependent data rates for Transmit and Receive
- Meets the ARINC 429 specifications for loading, level detection, timing, and protocol
- Software selected data rate of 12.5kbps or 100kbps with automatic slew rate adjustment
- Burst and continuous mode available
- Programmable word length selection, with the parity bit generated automatically
- Programmable Interrupt support
- Differential IRIG B Input



Block Diagram and Operational Overview

The **PCIe-ARINC429-4/8** PCIexpress Mini board has an ARINC controller that supports the ARINC specifications. ARINC429 (Aeronautical Radio Incorporated) is a specification, which defines how avionics equipment and system should communicate with each other. ARINC 429 employs a unidirectional data bus standard known as Mark 33 Digital Information Transfer System (DITS). Messages are transmitted and received at a bit rate of either 12.5kbps or 100kbps.

The receiver input circuitry and logic are designed to directly meet the ARINC 429 specifications.

The transmitter section provides the ARINC 429 communication protocol.

The SPI data bus on the ARINC controller exchanges the 32-bit ARINC data word in two steps when either loading the transmitter or interrogating the receivers..

The SRAM stores received data and transmitted data.

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PCIe-Mini-ARINC429-4/8

Applications:
This is a perfect solution for:
- Avionics equipment, or
- Avionic data communication systems

Software Support:

ARINC 429 Device Specifications:
- Meets the ARINC 429 specifications
- Label matching for all receiver channels
- Two receivers and an independent transmitter are provided per device
- Master clock frequency is 1 MHz.
- The receiver input circuitry and logic are designed to meet the ARINC 429 specifications for loading, level detection, timing, and protocol.
- Each independent receiver monitors the data stream with a sampling rate 10 times the data rate.
- The sampling rate is software selectable at either 1MHz or 125KHz.
- The transmitter has a First In, First Out (FIFO) memory to store 8 ARINC words for transmission.
- Programmable word length selection, with the parity bit generated automatically
- Automatic word gap timer
- Self test mode
- Parity functions
- Repeater operations supported

ARINC Transmit Driver Specifications
- Designed to directly drive the ARINC 429 bus
- A logic input is provided to control the slope of the differential output signal
- Internal resistor and capacitor for slope control tested to ARINC requirements
- Output has series 37.5 for each line driver output

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, ½ sine
- Weight – tbd
- MTBF – >250,000 hours

Operating Environment:
- Operating temperature
  Commercial: 0 to +70 ºC
  Optional: -40 ºC to +85 ºC
- Non-operating: -50 ºC to +90 ºC
- Airflow requirement – 5 CFM
- Humidity – 5 to 90% (non-cond)
- Altitude – 0 to 10,000 feet

Ordering Information:

Part number:	PCIe-Mini-ARINC429-2/4	ARINC 429 controller 2 TX and 4 RX PCIe module
Part number:	PCIe-Mini-ARINC429-4/8	ARINC 429 controller 4 TX and 8 RX PCIe module

Optional Accessories

Part number:	Micro-ARINC429-CBL-12-X	12 inch pigtail Micro Cable X number of Channels

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