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Find the *Curtiss-Wright / Parvus PRV-0847-02* at our website: ***Click HERE***

PC/104 ARINC 429 Receiver & Carrier

ARINC 429 Quad Receiver (w/ DPRAM Carrier)

Click on the image below for a closer look



General Description

Designed for both commercial and military aerospace instrumentation and control systems, the **PC/104 ARINC 429 Quad Receiver** provides four optically isolated receiver ports for ARINC 429 avionics communications - the Air Transport Industry's standard for transfer of digital data between various avionics systems. Capable of supporting the full 32-bit ARINC 429 data set, the Quad Receiver has been successfully implemented in a variety of aviation applications, including systems utilizing a 24-bit radar altimeter data subset.

The ARINC 429 Quad Receiver utilizes a daughter and carrier board mechanical design, complying with PC/104 form factor dimensions. The carrier board includes two 16-bit PC/104 busses to bridge between two CPUs in a card stack, acting as a dual port RAM (DPRAM) interface between the host PC/104 processor and the daughter board's 68CH11 MPU, providing both CPUs with access to shared memory locations. Wait state and interrupt generation are handled onboard.

Acquiring the ARINC data stream is as simple as reading specific memory locations each time an interrupt is received. The DPRAM can be placed anywhere on 4k boundaries within the low 1Mb address space of the PC/104 data bus. Jumper selectable interrupts allow flexible configuration of the PC/104 host system.

The ARINC 429 Quad Receiver has four receiver ports and no transmitter ports. The receivers are optically isolated with an input impedance of greater than 1k ohms and can receive from 1 to 32 bits. The end of the transmission frame occurs when more than 4-8 bit times have passed with no active data present. Bit rates of 12K - 14K, and 100K are possible by setting the crystal frequency and speed select bits in the configuration. The receiver can receive at a data rate of 10-15K and at 90-110K in high and low speed modes. Bipolar RZ signaling is maintained throughout. Although a transmitter portion is defined in the shared memory map, it is only for consistency with other Parvus products and future versions of this product. Reads and writes to the transmitter have no effect on the operation of the module.

The addressing of the shared memory is defaulted to &HD000; or &HD800.; The Internal address is

fixed at &H4000; for on-board 68HC11 MPUs. The network is attached to the card through a screw clamp header. The shared memory card is mounted upside down on the Multi-Function DPRAM Carrier Board. Most of the data populated in the shared memory map is for reference only.

The Quad Receiver's design allows RAM memory of an embedded control system to be viewed as a common access vehicle for sharing information between different systems. By using the shared memory approach, it is possible to separate time consuming processes from an application CPU, such as isolating network communications, which easies the burden on the central processor.

Features

- Supports Full 32-Bit ARINC 429 Data Set
- Capable of Receiving 1 to 32 Bits
- 8-Pin ARINC Connector
- PC/104 Compliant Carrier/Daughter Board
- Drivers and Sample Source Code
- Four Optically Isolated Receiver Ports
- Local 68CH11 MPU with 32K EPROM, 32K SRAM
- 34-Pin Header Connection (Matching JEDEC EPROM Pinout Standard)
- Activity LED Indicators
- Test Software

Quad Receiver Mounted on Carrier (Rendering)

ARINC 429 Quad Receiver Daughter Board (Rendering)

Dual Port RAM Carrier (Rendering)

Board Dimensional Line Drawings

Line Drawing of ARINC429 Daughter Board Components

Line Drawing of DPRAM Carrier Board Components

Specifications

- Carrier Board Dimensions: 3.550" x 3.775"
- Does Not Support Data Transmission
- Daughter Board Dimensions: 2.50" x 3.50"
- Operating temperature range of 0º C to +70º C (Extended Temp Option Available)

Ordering Information (ORDER ON-LINE: simply click the part number below)

Part Number	Description
PRV-0847X-02	**ARINC 429 Quad Receiver (w/ DPRAM Carrier)**

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