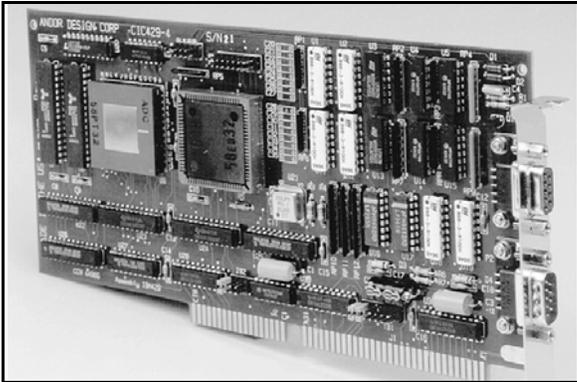




ANDOR DESIGN CORP



CIC429

8 CHANNELS ARINC 429 Simulator Analyzer Tester

5/8 size ISA Bus Interface Card

AVIONICS BUSES SUPPORTED

ARINC 429, 571, 575, 706 or similar buses

FEATURES

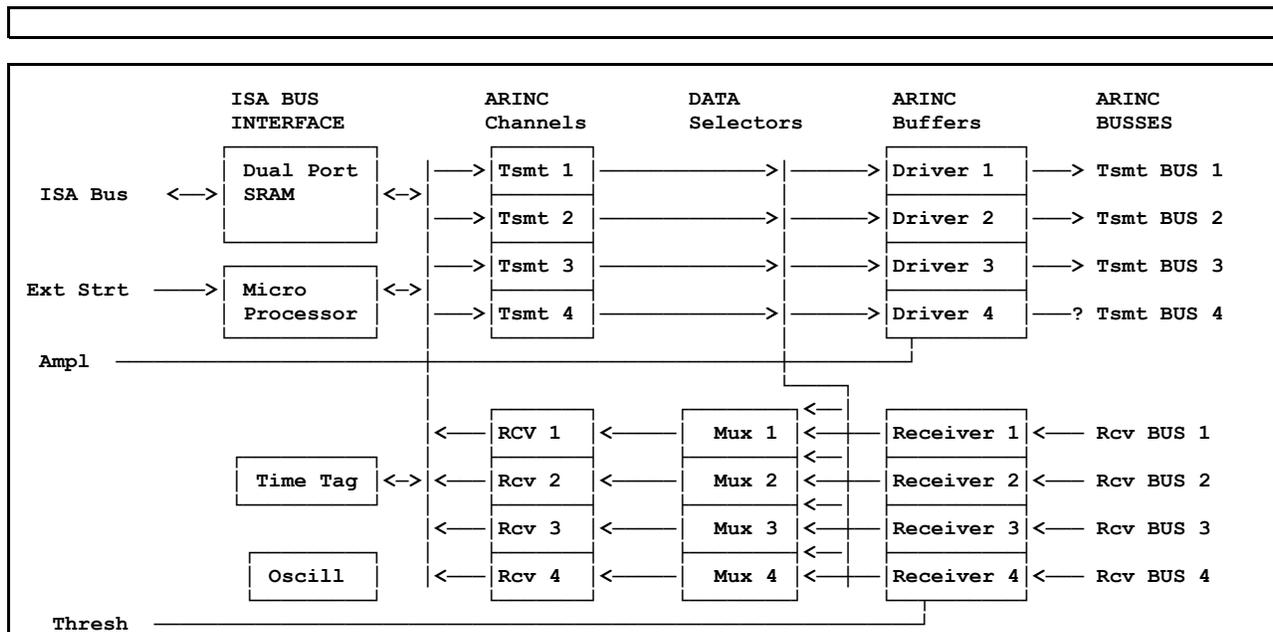
- * 5/8 SIZE PC CARD.
- * 8 INDEPENDENT CHANNELS.
- * PROGRAMMABLE ERROR INJECTION.
- * PROGRAMMABLE WORD GAP.
- * MULTIPLE OR CONTINUOUS TRANSMISSIONS.
- * PERIODIC/APERIODIC MESSAGE SCHEDULING
- * 256 KBYTE DUAL PORT, FAST, STATIC RAM.
- * 24 BITS TIME TAG.
- * ON BOARD MICROPROCESSOR.

DESCRIPTION

The CIC429 is a full featured, high performance Serial bus Simulator Analyzer Tester developed by Andor Design for test and simulation of ARINC 429 or similar Avionic buses. The CIC429 is designed as a 5/8 size plug-in card for an ISA bus.

An on board microprocessor off loads the host by organizing the data in a predefined structure in the dual port RAM. Programming the CIC429 consists of changing this data, which can be done on the fly for real time applications. The CIC429 features four independent transmit and four independent receive channels. Each channel can be programmed for either 32 or 25-bit data format and high or low data rate.

Each transmit channel provides a message scheduler for periodic or aperiodic and single or continuous transmission. Transmit messages are programmable for parity, error injection and gap setting. The input to each receive channel can be selected from its own bus or any of the four output channels. Received data words are filtered, time tagged, annotated with a breakdown of detected errors and stored under program control in a circular buffer. The user may define additional circular buffers for each Channel Label and SDI bits.



PROGRAMMABLE

- Word Length 32 or 25 Bits
- Data Rate 100 or 12.5 Kilo Bits per sec
- Parity Even, Odd, None
- Filtering Per Label & SDI
- Word Gap 2 to 65536 Null Bits
- Minor Frame 16 bits, 80 micro sec. Res.

EXTERNAL

- Amplitude Adjust 2 to 10 Volts A to B
- Threshold Adjust 0 to 7 Volts A to B
- External Starts 5 Volts TTL Pulses

ERROR INJECTION/REPORTING

- Parity
- Encoding
- High bit count
- Low bit count / Gap

MAXIMUM	RATINGS
Parameter	Value
Temperature Range	
Operating	0 to +70 Deg. C
Storage	-65 to +150 Deg. C
Power supplies	
Logic +5 Volts +/- 5%	.350 Amps Max.
+12 Volts +/- 5%	.035 Amps Max.
-12 Volts +/- 5%	.035 amps Max.
Physical characteristics	
5/8 ISA Size	4.4 x 8.4 x 0.44 inches

SOFTWARE

The CIC429 comes with software libraries, drivers and assorted utilities for DOS, Windows and Windows NT. Source code written in "C" is included.

STAND ALONE OPERATION

A menu driven user interface is included for stand alone operation. With this program the user can schedule and initiate ARINC messages on the transmit channels. He can receive and monitor all or selected ARINC traffic in real time.

SWITCH PROGRAMMABLE

- I/O channel address
- Interrupt level
- Rise/Fall time

ANDOR DESIGN CORP.

20 Pond View Drive
Syosset, New York, USA 11791-4409

Data Sheet, Jan 15, 1997

TRANSMIT OPERATION

The user writes a set of Command Blocks, a message list and number of messages to define a Minor Frame. He writes a Minor Frame time, the number of Minor Frames per Major Frame and a Minor Frame list to define a Major Frame. The Major and Minor frames define the periodic / aperiodic message schedule. The transmitter sends the Major Frame a number of times as programmed in the Major Frame count, without any further attention from the CPU.

RECEIVE OPERATION

The user writes a set of Command Blocks and a filtering table to capture incoming messages. Filtering is defined for each channel per Label and SDI bits. Captured messages are time tagged, annotated with the channel number and a breakdown of any detected errors and saved in the static RAM. An interrupt can be enabled on selected messages.

DATA BUFFERING

Buffers are assigned by the user for messages of interest per Channel, Label and SDI combinations. An additional dedicated buffer is shared by all messages. Both buffers are circular, the size of the first is user defined. Messages can be stored in either or both under program control.

TIMING

The CIC429 will normally return an I/O channel ready to the CPU in 50 to 100 nanoseconds. This time is extendible to 900 nanoseconds if the CIC429 is accessing the dual port RAM.

COMPUTER INTERFACE

The CIC429 operates as a 16-bit I/O channel slave device. It generates interrupt flags to show completion of a frame, receipt of a specified Label and SDI Bits, detected message errors or triggers.

A dual ported, I/O mapped, static RAM serves as the intermediate for data exchange with the ARINC bus. An auto incrementing address register serves to hold the initial RAM address while a single I/O address serves for data transfer. Both the register and the RAM can be loaded with new data while a message is being transmitted over the ARINC channel.

For specialized features or unique interface requirements, please contact the factory.

Specifications subject to change without notice.
Copyright (c) 1997 – 2007 by Andor Design Corp.
All rights reserved.

www.AndorDesign.com

Telephone 516 364 1619
FAX 516 364 5428