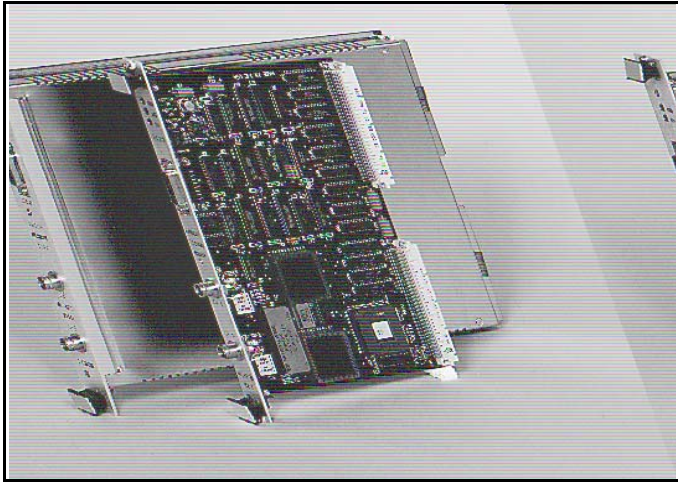




ANDOR DESIGN CORP



CIC201 MIL-STD-1553 A, B Simulator/Analyzer/Tester

CIC201B VME/VXI B Size Interface
CIC201C VME/VXI C Size Interface

FEATURES

- * SUPPORTS VALIDATION/PRODUCTION TEST PLANS.
- * SIMULTANEOUS BC, MULTIPLE RTS, MONITOR.
- * FULL ERROR DETECTION AND GENERATION.
- * ON BOARD MAJOR/MINOR FRAME TIMING.
- * PROGRAMMABLE MESSAGE PARAMETERS.
- * PROGRAMMABLE OUTPUT AMPLITUDE.
- * SOFTWARE WITH SOURCE CODE INCLUDED.
- * 128K x 16 DUAL PORT STATIC RAM.

DEVICE TYPE

Type: Memory
Addressing: A23/A16
Data Transfer: D16/D8(E0) slave
Interrupts: 7 levels

APPLICATION

CIC201B VME/VXI B Size
CIC201C VME/VXI C Size Shielded

DESCRIPTION

The CIC201 is a full-featured, high performance, Dual Redundant MIL-STD-1553A/B serial bus Simulator Analyzer Tester designed as a plug in card for a VME/VXI backplane. The CIC201 includes full error injection and can operate in independent or simultaneous mode as a Bus Controller, multiple simulated Remote Terminals and full/selective Monitor. Its data structure can be changed on the fly without interrupting the processor for real time operation. The active monitor stores, time tag and annotates bus traffic with the message type and any detected errors. Stored words are annotated with a break down of the word error.

APPLICATIONS

The CIC201 can be used for Validation Testing, Production Testing, full bus simulation and monitoring, as a general purpose 1553 interface or a stand alone bus Analyzer. For precise message scheduling and measurements, the Major and minor frame times are independent of message sequences or retransmissions on errors and the start of all command messages are independent of message length, response time or length of response. Message timing is calibrated and RT responses have low jitter.

GENERAL	SPECIFICATIONS
Parameter	Value
1553 SRAM	128K x 16
Major Frame Count	1 to 32768, Continuous
Major Frame Size	1 to 1024 Minor Frames
Minor Frame Time	0 to 419 msec
Minor Frame Size	0 to 32766 Commands
BC Messages	0 to 2048
Message intervals	2 to 6400 usec. in .1 usec. steps
Response timeout	2 to 33 usec. in .5 usec. steps
Reply Time	2 to 33 usec. in .5 usec. steps
Reply Time jitter	50ns Max
Retry on Error	Same or alternate bus
Internal time tag	16 bits, 6.4 or 64 usec. steps

DATA FILTERING

The CIC201 data filter looks at the complete command rather than just addresses and sub addresses. Individual Messages are designated to be ignored, monitored, replied to or monitored and replied to.

WORD ERROR INJECTION/DETECTION

- Low bit count (1, 2)
- High bit count (1, 2, 3)
- Parity error
- Manchester low
- Manchester high
- Inverted Sync
- Zero crossing deviation (+/- 150 nsec, External)

MESSAGE ERROR INJECTION/DETECTION

- Format
- Response/Late response
- Sync
- Non contiguous data (2 microsec.)
- Word count error
- Data on two channels
- Status word
- Invalid Word

MAXIMUM	RATINGS
Parameter	Value
Temperature Range	
Operating	0 to +70 Deg. C
Storage	-65 to +150 Deg. C
*Power supplies	
+5 Volts +/- 5%	0.7 Amps Max
+12 Volts +/- 5%	0.160 Amps 50% duty cycle
-12 volts +/- 5%	0.005 Amps Max
Physical characteristics	
CIC201B - VME B Size	6.299 x 9.187 inches
CIC201C - VXI C Size	13.50 x 9.187 inches

SOFTWARE

The CIC201 comes with an extended set of software on a floppy disc. This software package, with source code written in "C", includes drivers, software libraries and assorted utilities.

SWITCH PROGRAMMABLE

I/O channel address

ANDOR DESIGN CORP.

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

June 1, 1999

CIC201 OPERATION

The CIC201 processes 1553 messages with a minimum attention from the CPU. The user need only write a set of command Blocks, a message list and number of messages to define a minor frame of 1553 messages. 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 bus controller sends the major frame a number of times as programmed in the major frame count, without any further attention from the CPU.

In the Remote Terminal mode, the user writes a set of command Blocks, a look-up table for the CIC201 to respond autonomously to incoming messages. In both modes an active monitor analyzes, annotates and stores bus traffic in a monitor Buffer.

1553 OUTPUT

- Direct coupling
- Transformer stub coupling

TIMING

The CIC201 will normally return a DTACK to the CPU in 100 nanoseconds after receipt of a Data Strobe. This time is extendible to 900 nanoseconds if the CIC201 is transferring a Data Word to the 1553 circuitry. The CIC201 will start transmitting on the 1553 Bus 12 microseconds after receiving a start command.

COMPUTER INTERFACE

The CIC201 is designed to operate as a memory based slave device on the computer back plane. It can transfer data on either a 16 bit, 8 bit odd or 8 bit even path.

A Dual ported static RAM serves as the intermediate of data exchange with the 1553, while two registers control the mode of operation. Three additional registers are used to comply with the VXI requirement. Both the registers and the RAM can be loaded with new data while a message is being transmitted over the 1553 channel for real time applications. Programming the CIC201 consists of transferring data to or from the RAM.

The CIC201 generates ten interrupt flags to indicate completion of a frame in the BC mode, receipt of a specified message, receipt of a specified Data word, receipt of a specified Status word, detected message errors or triggers.

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

Specifications subject to change without notice.
Copyright (c) 1995 - 2007 by Andor Design Corp. All rights reserved.

www.AndorDesign.com
Telephone 516 364 1619
FAX 516 364 5428