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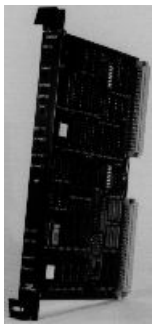
Find the *BiRa Systems 1700* at our website: ***Click HERE***

Bi Ra Systems, Incorporated

CAMAC FASTBUS VMEBUS NIM + MORE

MODEL 1700

VME READ-OUT BUFFER (RBUF)



FEATURES

- RS-485 interface to receive data and status from a SMART CRATE CONTROLLER (SCC) Bi Ra Model 1600 or other compatible data sources.
- Two data buffers, each capable of holding 4088 16-Bit words of normal and 8 16-Bit words of event status data.
- VME bus slave interface, which permits other modules to read and write buffer memories and other registers in the RBUF.
- Normal word count register and a status word count register.

APPLICATIONS

- High performance data acquisition from CAMAC based SMART CRATE CONTROLLER TO VMEbus based processor farms or other VMEbus modules.

GENERAL DESCRIPTION

The Bi Ra Model 1700 (RBUF) is a single-width with dual height (6U) VME module designed to receive data from a CAMAC based SMART CRATE CONTROLLER (SCC) or other compatible data sources and store it in internal memory buffers for read-out by VME master modules such as CPUs, event builders and etc. Data may be received by the RBUF every 500 ns even when VME is being simultaneously accessed. This easily accommodates the SCC which transmits at the maximum permissible CAMAC dataway rate of approximately 1 usec per transfer. A VMEbus master module initializes the RBUF and selects which buffer is to receive the next event; then monitors the module CSR. Once the buffer receives its data, status and an END OF EVENT signal from the external source; the status word count, normal word count, data and event status may be read out by the VMEbus master. New data may simultaneously flow into the other buffer while the event data and status is being read out. Each buffer may receive up to 4088 16-Bit data words and up to 8 16-Bit status words. Separate registers provide the status word count, data word count and overall module control/status information.

VMEbus INTERFACE

The RBUF implements an A32, D32 slave only interface. It responds to Extended Supervisory Data accesses and Extended Non-privileged Data accesses. It initiates no interrupts; and responds only to single cycle reads and writes, not block transfers. Data is read out over VMEbus in 32-Bit words. Typical response times are 260-300 ns AS to DS when no input operations are occurring and 260-500 ns when input operations are simultaneously occurring. Each RBUF contains 16 switches which are set by the user. The RBUF responds to VME operations only when the upper 16 address bits corresponds to the settings of those 16 switches. VMEbus functions are as follows:

- Read the 8-bit control/status register (CSR)
- Read the 4-bit status word count register
- Read the 12-bit normal word count register
- Randomly read or write a 32-bit long word, data buffer 0
- Randomly read or write a 32-bit longword, data buffer 1
- Selectively set bits in the CSR
- Selectively clear bits in the CSR

CONTROL/STATUS

The VMEbus accessible CONTROL/STATUS register (CSR) provides the following status information and control functions:

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- Buffer 0 has data
- Buffer 1 has data
- Status word count overflow, buffer 0
- Normal word count overflow, buffer 0
- Status word count overflow, buffer 1
- Normal word count overflow, buffer 1
- Buffer select; to select which buffer receives the next event
- Module reset

INPUT PORT

The RS-485 input port consists of 20 differential signals which comprise the following:

- A 16-bit data path which carries both normal data and status
- Data strobe
- Status strobe
- An END OF EVENT signal
- A WAIT signal, which the RBUF can use to delay transmissions of data from the data source to the RBUF

FRONT PANEL LED INDICATORS

VMESEL	VME selected
OWAIT	Output WAIT signal asserted
CDPEND	CAMAC data being strobed in
CSPEND	CAMAC data being strobed in
EOE	END OF EVENT signal received from source
BUF1EN	Buffer 1 enabled for input
BUF0EN	Buffer 0 enabled for input
BUF1HEV	Buffer has 1 event
BUF0HEV	Buffer 0 has event
DP10VFL	Data pointer for buffer 1 overflow
DPO0VFL	Data pointer for buffer 0 overflow
SPO0VFL	Status pointer for buffer 0 overflow
SP10VFL	Status pointer for buffer 1 overflow

POWER REQUIREMENTS:

5 Volts

WEIGHT:

.70Kg 1lb. 8oz.)

ORDERING INFORMATION:

Bi Ra MODEL 1700VME Read-out Buffer (RBUF)

ACCESSORIES:

Model 1600 Smart CAMAC Controller (SCC) List Processor

Model 1601 Smart Crate Controller Level Adaptor (SCCLA)

Place a Request For Quotation or Purchase Order with Bi Ra Systems

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CAMAC, FASTBUS, VMEBUS, NIM, AND MORE!

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