

CAMAC Equipment

CAMAC, Computer Automated Measurement And Control, is an IEEE-standard (583), modular, high-performance, realtime data acquisition and control system concept.

Since 1969, CAMAC has been used in many thousands of scientific, industrial, aerospace, and defense test systems around the world.

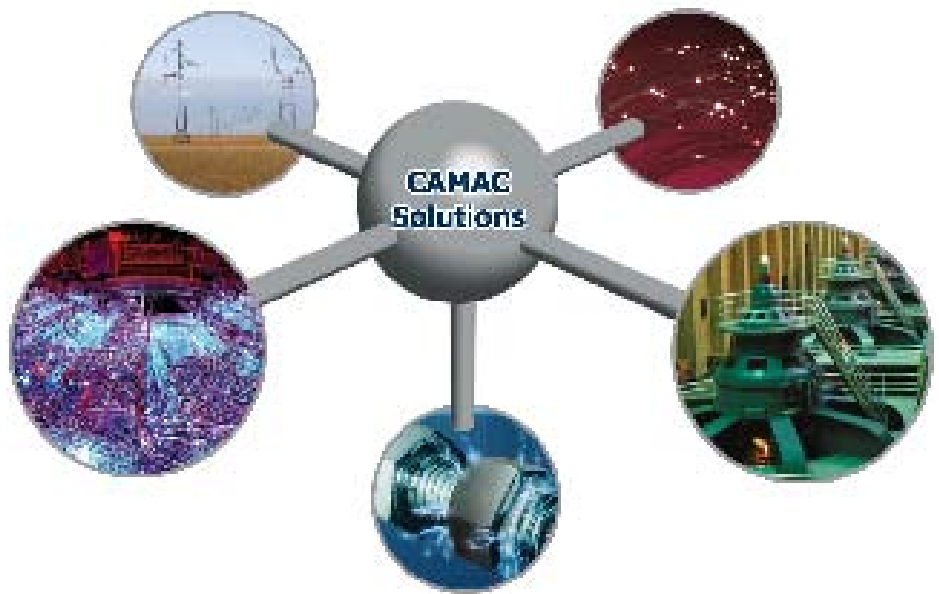
APPLICATIONS

Realtime I/O interface for a personal computer or workstation

Distributed data acquisition and control

Systems requiring high throughput with minimum software overhead

2115 PCI Serial Highway Driver



The Model 2115 Enhanced Serial Highway Driver (SHD) interfaces a host computer to the CAMAC Serial Highway using the Peripheral Component Interface (PCI) bus.

FEATURES

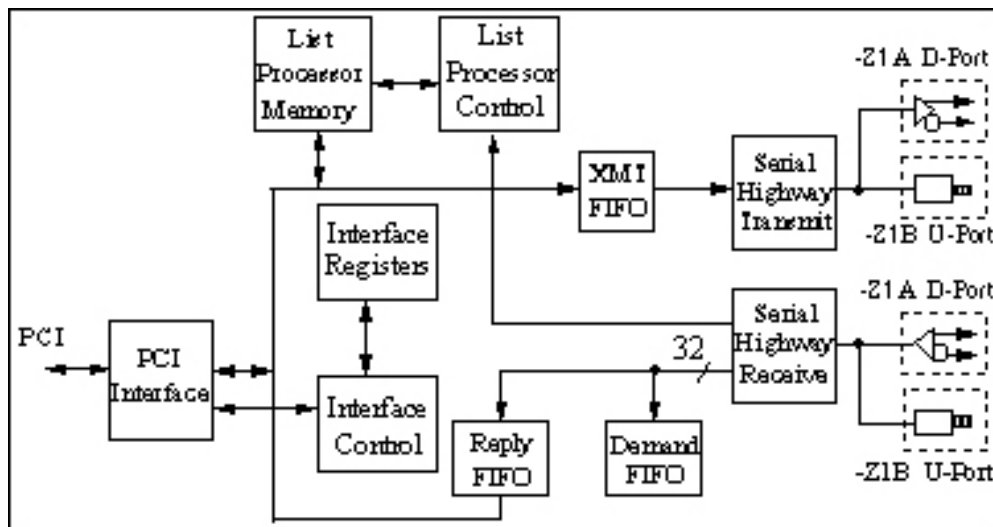
- Interfaces the Peripheral Component Interface (PCI) to the CAMAC Serial Highway (IEEE Standard 583)
- Supports the Enhanced Highway Mode with 3 Mbyte/s throughput
- 32K x 32 RAM for high-speed hardware List Processing
- Timer-initiated List Processing for synchronous data acquisition
- Includes Multi-Buffer functionality
- Provides up to 2 km (6560 ft) between highway nodes at full throughput using appropriate U-port adapter

GENERAL DESCRIPTION

The Model 2115 Enhanced Serial Highway Driver (SHD) interfaces a host computer to the CAMAC Serial Highway using the Peripheral Component Interface (PCI) bus. This single card fits into any computer that can accept a full size PCI adapter card. The SHD operates the CAMAC Serial Highway from 0.5 MHz to 5 MHz in the byte-serial mode.

The 2115 SHD communicates with the host through a 32-bit data path that is used to configure and initiate highway operations. A DMA (Direct Memory Access) mechanism is incorporated to transfer the data to/from the Serial Highway. The 2115 supports PCI burst transfers, yielding a maximum transfer burst of 15 Mbyte/s.

The SHD includes a list processor to execute a preloaded list of highway operations. The list of operations is read from a 32K x 32 RAM memory and then executed. List processing may be initiated by software trigger or by an internal, crystal-controlled, programmable counter/timer. The timer provides for triggering rates ranging from 0.06 Hz to 500 KHz in 1 microsecond increments. The 2115 uses host memory to implement multi-buffer functionality. The multi-buffer activity includes DMA data chaining and setting of buffer segment flags which, in turn, may generate PCI interrupts. This function allows the host computer to read a memory buffer previously filled by the 2115 while another segment of the buffer is filled.



A 2048-word FIFO is provided on the 2115 for storing asynchronous demand messages received from the highway. These messages are generated by Serial Crate Controllers (SCC) in response to a LAM (Look-At-Me) in a chassis.

In addition to the Enhanced Mode, the 2115 includes software-selectable operating modes for Q-Ignore, Q-Stop, Q-Repeat, and Q-Scan operations, making it usable with any Type L-2 SCC meeting the IEEE-595 specification. Enhanced Mode messages require the KSC Model 3952-Z1G or a 3952-Z1H. The compatibility of the enhanced protocol allows "Enhanced" and "Standard" L-2 SCCs to be mixed on the same highway, provided that the software directs enhanced block messages only to the "Enhanced" SCCs.

The 2115-Z1A option contains a D-Port adapter which attaches to the serial highway by means of two 25-position D-type connectors. To drive the CAMAC Serial Highway using a fiber-optic U-Port requires Model 2115-Z1B. This option supports both 5 MHz and 2.5 MHz clock rates. Either option of the 2115 requires only one full-size, PCI expansion slot.



ACCESSORIES

- Model 3830-Z1A List Sequencer
- Model 3939-Zxx Byte Serial, Fiber-optic U-Port Adapter
- Model 3952-Z1G Enhanced Type L-2 Serial Crate Controller
- Model 3952-Z1H Enhanced Type L-2 Serial Crate Controller with High Gauss relays
- Model AB11-BAA5 Alpha/Open VMS Software Driver

ORDERING INFORMATION

MODEL	DESCRIPTION
2115-Z1A	PCI Enhanced Serial highway Driver with D-Port
2115-Z1B	PCI Enhanced Serial highway Driver with U-Port

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