

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

Interface to DIGITAL Q-bus computers or VME-based computers

Interface to IBM PC/AT®, PS/2®

Interface to PCI-based Macintosh™ (with Sparrow Kmax* driver software)

General-purpose data acquisition and control

Laboratory automation

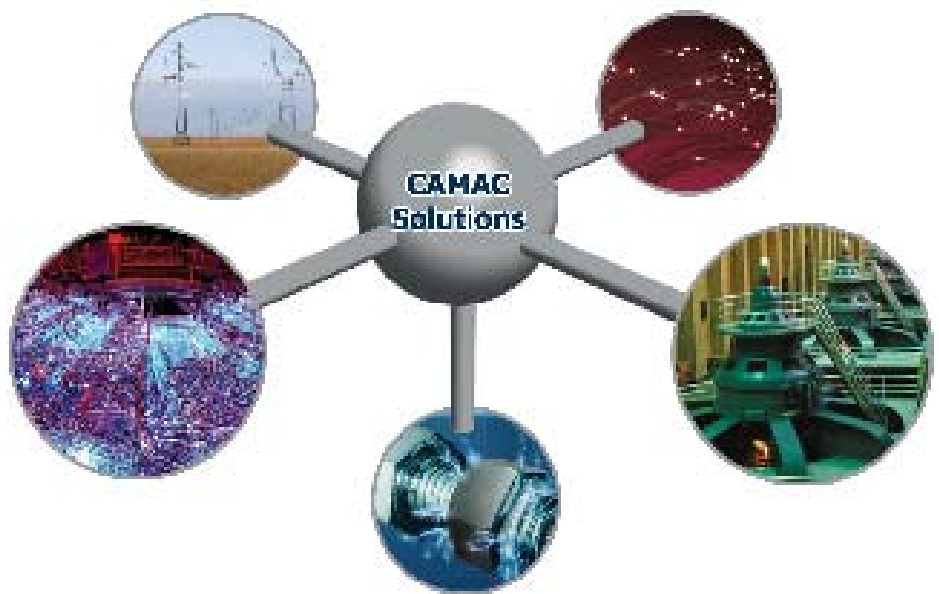
Industrial process control

Remote distributed system

Replacement for Parallel Highway systems

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3922 Parallel Bus Crate Controller



The Model 3922 is a double-width CAMAC crate controller that connects to the associated computer interface card via a parallel bus.

FEATURES

- Forms a dedicated Q-bus™ interface with a 2922 card or VME interface with a 2917 card
- Forms a dedicated PC interface with an associated 2926, 2927, 2928, or 2932card
- Field-selectable as a main or auxiliary crate controller
- Up to eight crate controllers addressed on a single bus
- Supports DMA with 2922, 2926, and 2928 and block transfers with 2917 and 2932
- Includes a 24-bit LAM mask
- Interface connection made via a 40-wire, rear ribbon cable
- Contains RS-485 balanced-line signaling for high noise immunity
- Supports interface bus lengths up to 91 meters (300 feet)



GENERAL DESCRIPTION

The Model 3922 is a double-width CAMAC crate controller that connects to the associated computer interface card via a parallel bus. When used with the Model 2926, 2927, or 2928 interface card, the combination forms a computer-based CAMAC system with an IBM PC/AT reg. or PS/2® or compatible processor as the host. The Model 2922 interface card can also be used with the 3922 to form a DIGITAL Q-bus-based CAMAC system. A Macintosh II host is interfaced using the Model 2932, any VME-based computer is interfaced using the Model 2917, and PCIbus systems can utilize the 2915 PCI adapter.

Up to eight 3922s can be addressed on the interface bus. The crate address (0 through 7) is selected by a front-panel switch. A single 40-wire ribbon cable is connected to the computer interface card and looped-through the crate controllers. Interface bus connections are made at the rear of each 3922. The last 3922 terminates the bus. RS-485 balanced-line signaling is used on the interface bus to allow reliable operation with up to 91 meters (300 feet) of total bus length. Twisted-pair, flat-ribbon bus cable enhances data integrity. The eight-bit interface bus is multiplexed for address and data transfer. Appropriate control/response signals are also included.

The 3922 supports the DMA capabilities of the 2922, 2926, 2927, and 2928 adapters. Sixteen-bit DMA data is transferred at rates up to 1 Mbyte/s for the Model 2922, and 250 kbyte/s for the 2926, 800kbyte/s for the 2927, and 500 kbyte/s for the 2928. Block transfers are supported when interfacing to a computer with the 2917 VME adapter, 2932 Macintosh II adapter, or our newest addition: the 2915 PCI adapter.

A 24-bit LAM mask is included to simplify the host software. A "Selected LAM Present" causes a service request to the computer interface. A parallel poll is performed to determine which 3922s are requesting service.

This module is configured at the factory as a main crate controller. It can be changed in the field to function as an auxiliary crate controller. An additional 40-contact, rear-panel connector is then used for the Auxiliary Controller Bus.

INTERNAL REGISTERS (N = 30)

Command		Q	Description
F(1)A(0)	RD2	On-line	Reads Control/Status register
F(1)A(12)	RD2	On-line	Reads LAM Pattern
F(1)A(13)	RD2	On-line	Reads LAM Mask
F(17)A(0)	WT2	On-line	Writes Control/Status register
F(17)A(13)	WT2	On-line	Write LAM Mask
Notes: 1. X = 1 for all valid addressed commands. 2. Q = 1 for all valid addressed commands when the 3922 is set on-line by the front-panel switch			

POWER REQUIREMENTS

+ 6 volts — 3.3 A

WEIGHT

1.2 kg (2 lb. 9 oz.)



ACCESSORIES

Model 5843-Txyz — Twisted-pair, Flat-ribbon Cable Assembly (required)

Model 2915-Z1A — PCIbus Interface

(See also Sparrow's Kmax* software support)

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Model 2917-Z1A — VME Interface

Model 2922-Z1B — Q-bus Adapter

Model 2926-Z1A — IBM PC Interface with DMA

Model 2927-Z1A — IBM PC/AT Interface with DMA

Model 2928-Z1A — IBM PS/2 Interface

Model 2932-Z1A — Macintosh II Interface

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®IBM PC/AT and PS/2 are registered trademarks of IBM Corporation

ORDERING INFORMATION

MODEL	DESCRIPTION
3922-Z1B	Parallel Bus Crate Controller (replaced the Model 3922-Z1A)

Specifications contained within this data sheet are subject to change without notice.

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