

The KineticSystems Model V500 is a single-width, C-size, register-based, VXIbus module that allows you to add I/O functionality presently found in CAMAC instrumentation to a VXIbus environment.

It is ideally suited to situations where a CAMAC module is the only format in which a particular function is available.

APPLICATIONS

High energy physics experiments
Nuclear accelerator control and monitoring
General-purpose testing

V500 CAMAC-to-VXIbus Adapter



Use CAMAC (IEEE-583) modules in a VXI mainframe

FEATURES

- Brings CAMAC functionality to VXIbus platforms
- Preserves CAMAC instrumentation investment
- Accommodates single-wide CAMAC modules
- Maps CAMAC function code/subaddress combinations to VME/VXI address space
- Complies with IEEE Standards 583 (CAMAC) and 1155 (VXIbus)

GENERAL DESCRIPTION

The KineticSystems Model V500 is a single-width, C-size, register-based, VXIbus module that allows you to add I/O functionality presently found in CAMAC instrumentation to a VXIbus environment. It is ideally suited to situations where a CAMAC module is the only format in which a particular function is available. Likewise, at organizations which have large investments in CAMAC-based instrumentation but (because of changes in control and/or data acquisition philosophies and architectures) are implementing new systems in VXIbus, the V500 provides a convenient means of "recycling" that instrumentation.

The V500 is an adapter that accepts a wide variety of CAMAC modules. An 86-position printed circuit edge connector receives the CAMAC module's Dataway contacts, and a tapped block attached to the V500's front panel mounting hardware accepts the CAMAC module's jack-screw. Fuses are provided on the adapter for the six power lines tied to the Dataway connector's power pins (± 24 , ± 12 , $+5$ and -5.2 V). Because of differences between the CAMAC and VXIbus specifications, the dropping diodes or transistors normally found on the CAMAC module's ± 6 V power lines must be bypassed (shorted from input to output) prior to use in the V500.

In a VXIbus system, the V500 (and the CAMAC module mounted within) looks like an extended, register-based device. A fully standardized VXIbus interface is present on the module. The Offset Register in the defined Configuration Register area points to an area in the standard (A24) address space where the CAMAC functions can be accessed. A PROM-based circuit converts access to the addresses into a CAMAC "Dataway cycle" with a particular CAMAC Function Code and Subaddress combination asserted. All Function Code/Subaddress combinations are possible. The Q and X responses from each CAMAC cycle are captured in a status register. This register can be interrogated at any time to determine the state of Q and X for the last cycle executed.

In its standard form, the V500 anticipates that the CAMAC module's I/O connections will be completed through plugs or receptacles mounted to that module's front panel. For modules whose I/O connections are normally accomplished at the rear of the module (i.e., at connectors mounted in the "free space" above the Dataway connector), contact KineticSystems for advice and assistance.

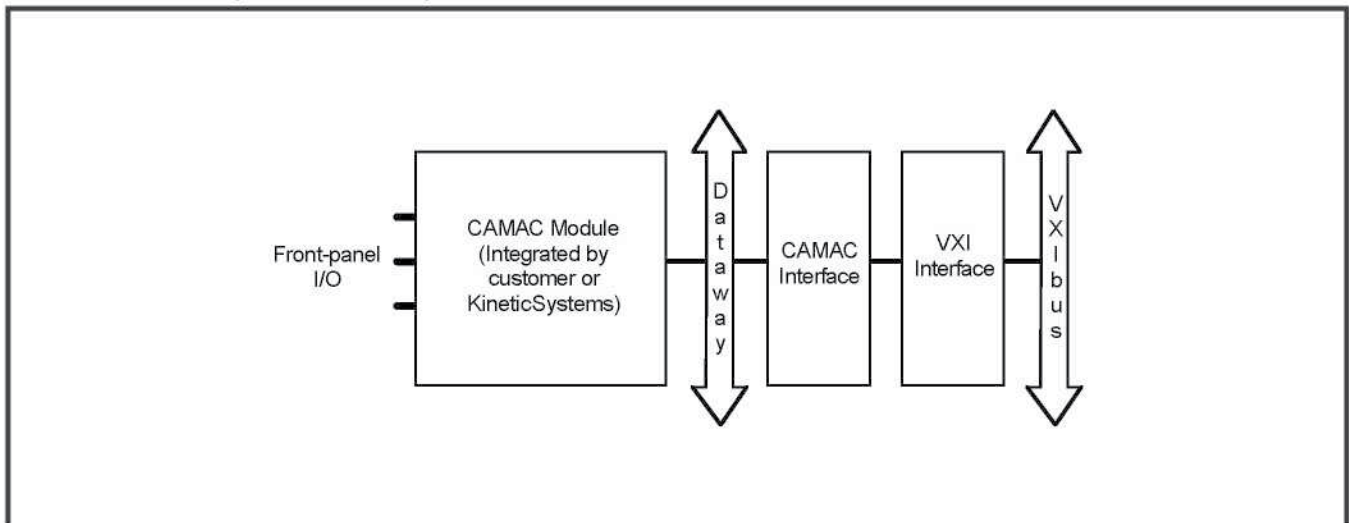
The V500 is available with or without integration services. The basic unit is provided with enough documentation so that you can mount your own

CAMAC module. The documentation describes register layouts and access procedures as an aid in software development. Optionally, you may send us a CAMAC module for integration. The module may be one of KineticSystems' manufacture or one manufactured elsewhere. Integration consists of mounting the module in the adapter and executing a basic response test. A computer generated printout of the Q and X responses from this test will be returned as part of this program. For greater levels of integration, functional testing, and software development assistance, consult the factory.

The V500 supports both static and dynamic configuration. It may be accessed using A24/A16, D16 data transfers.

Item	Specification
CAMAC Module Size	One single-width unit, as per IEEE Standard 583 (305 mm x 182.9 mm x 17 mm)
Cycle Time at CAMAC Module	1 μ s
Power Available to CAMAC Module	
+5 V	5 A
-5.2 V	5 A
± 12 V	2 A, each line
± 24 V	2 A, each line
Environmental and Mechanical (VXI)	
Operating temperature	0°C to +50°C
Storage temperature	-25°C to +75°C
Relative humidity	0 to 85%, non-condensing to 40°C
Cooling requirements	10CFM
Dimensions	340 mm x 233.35 mm x 30.48 mm (C-size VXIbus)
Front-panel potential	Chassis ground

V500 Block Diagram (showing an inserted CAMAC module)





RELATED PRODUCTS

A single-width CAMAC module (produced by KineticSystems or another manufacturer)

ORDERING INFORMATION

MODEL	DESCRIPTION
V500-ZA11	Single-width CAMAC-to-VXibus Adapter
V500-1000	Integration Service

Notes: The V500-ZA11 Adapter includes adapter, mapping PROM and documentation.

The V500-1000 Integration Service consists of mounting a user-supplied CAMAC module within a V500 Adapter (purchased separately), CAMAC response testing, and a test printout.

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