

## CAMAC Equipment

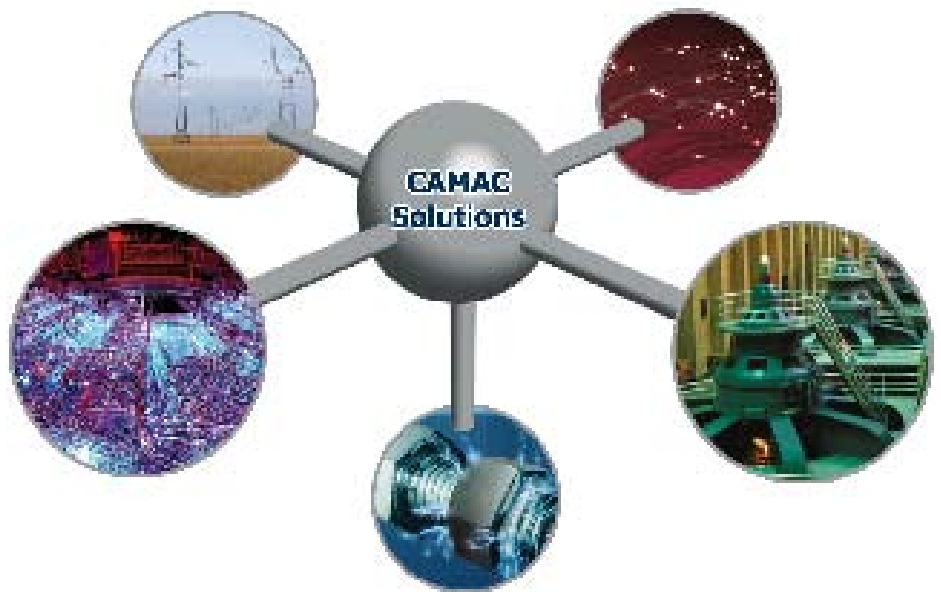
CAMAC, Computer Automated Measurement And Control, is an IEEE-standard (583), modular, high-performance, realtime data acquisition and control system concept.

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

### APPLICATIONS

Analog waveform generation  
Reconstruction of digitized transients  
Simulation

## 3115 Timed D/A Converter



The Model 3115 is a single-width CAMAC module containing six channels of sampling digital-to-analog conversion.

### FEATURES

- Six analog output channels
- 1024 by 12 FIFO driving each channel
- Options available with 2K, 4K FIFO
- Selectable sampling clock frequencies
- External clock option
- Programmable recycle feature
- LAM request generation when FIFO less than half-full
- Selectable voltage ranges



## GENERAL DESCRIPTION

The Model 3115 is a single-width CAMAC module containing six channels of sampling digital-to-analog conversion. Each channel is comprised of a 12-bit D/A converter which is driven by a 1024-word First In, First Out memory. Once loaded from the Dataway, data is clocked out of the FIFO and into the converter unit where it is transformed to an analog voltage signal. Strap options are provided so that the output range of each channel can be changed in the field to +2.5 volts, +5 volts, +10, 0 to 5 volts, or 0 to +10 volts, independent of other channel settings. The module uses a two's complement technique to represent the data in the bipolar ranges and complementary straight binary for the unipolar ranges.

Clocking FIFO outputs is common for all channels on the module and is accomplished at a rate determined by the clock control register. The eight clock rates, selected from an on-board, crystal-controlled source, are 10, 5, 2.5, and 1 kilohertz, and 500, 250, 100, and 50 hertz. An external clock input and a clock output connection are also provided, so that one 3115 can act as the master clock source for other modules. The maximum external clock frequency is 200 kilohertz; the maximum length of the data stream is 1024 points.

Circuitry is provided so that any channel can generate a LAM request signal once it reaches the half-full point. This signal can interrupt the controlling computer to load additional waveform data.

The 3115's recycle feature permits retransmission of FIFO data once all data has been read out. This allows the module to generate repetitive waveforms. Common to all channels, this feature must be separately enabled from the Dataway and is disabled if any channel is rewritten with new data. While enabling this feature is common to all channels, the recycling in any channel is controlled by end-of-data for that channel. This allows different waveform periods for the various channels.

All analog outputs are available on the 3115's front panel via single-contact LEMO connectors; so are TTL level clock input and output connections. Front-panel LEDs show when the module is addressed, whether or not it is in the sample state, and indicate the presence of a LAM condition.

## ACCESSORIES

Model 5910-Z1A Mating Connector  
Model 5857-Axyz and -Bxyz LEMO Cable Assemblies

## ORDERING INFORMATION

### *3115 Products and Part Numbers*

MODEL	DESCRIPTION
3115-L1A	Timed D/A Converter, 6 channels, 12 bits, 1K x 12 FIFO, six 1-contact LEMO conn.
3115-L2A	Timed D/A Converter, 6 channels, 12 bits, 2K x 12 FIFO, six 1-contact LEMO conn.
3115-L3A	Timed D/A Converter, 6 channels, 12 bits, 3K x 12 FIFO, six 1-contact LEMO conn.

Updated December 16th, 2005

Copyright © 2005 KineticSystems Company, LLC. All rights reserved.

## KineticSystems Company, LLC

900 N. State St.  
Lockport, IL 60441-2200

### **Toll-Free (US and Canada):**

phone 1-800-DATA NOW  
1-800-328-2669

### **Direct:**

phone +1-815-838-0005  
fax +1-815-838-4424

### **Email:**

mkt-info@kscorp.com

To find your local sales representative or distributor or to learn more about KineticSystems' products visit:

**[www.kscorp.com](http://www.kscorp.com)**