



EM405-8X106/7 LXI Event Detector

The EM405-8X106 and EM405-8X107 are 64 and 128 channel input modules that sample and selectively store up to 128 bits of data along with a 31-bit time tag at rates up to 5 MSPS. These instruments have the ability to store all data at the specified sample rate or to selectively store input values based upon changes in state on one or more of the inputs. These 1U high rack mountable units easily integrate into a typical Ethernet (LAN) or LXI system.

Overview:

Input signals are conditioned through programmable threshold circuitry before being debounced then sampled at the configured sample-clock rate. At every sample-clock edge, the boolean values of the inputs are compared to the last stored value. If any of the desired inputs have changed state, the new data and the current time-stamp are stored in memory.

A programmable bit-mask allows the selection of channels that are watched for input changes. A store-all configuration allows the inputs to be stored at every clock period regardless of whether an input has changed. In addition, a current value register allows real-time monitoring of the inputs even when not sampling.

The sample-clock is highly programmable allowing for a large selection of internal clock frequencies or the use of an external clock of up to 5 MHz. The external clock can be provided via the front panel, a TTL trigger input or one of eight LVDS triggers.

The boolean value of all channels are stored along with a 31-bit time stamp into a 32K deep memory. The time-value pairs are retrieved by the user in a first-in first-out (FIFO) manner. Data is read through a single FIFO data port register allowing rapid data retrieval.

An IVI-C custom specific driver provides a common API for easy integration into your software application. A soft front panel executable provides interactive control of the instrument without the need to write software.

LXI Compliance

Complies with LXI Standard Rev. 1.2 for a Class C instrument.

Conformance:

These modules will be CE compliant for Emissions, Immunity and Safety

Applications

- Acquisition of transient signals
- Real-time data compression
- Logic Analysis
- Event counting

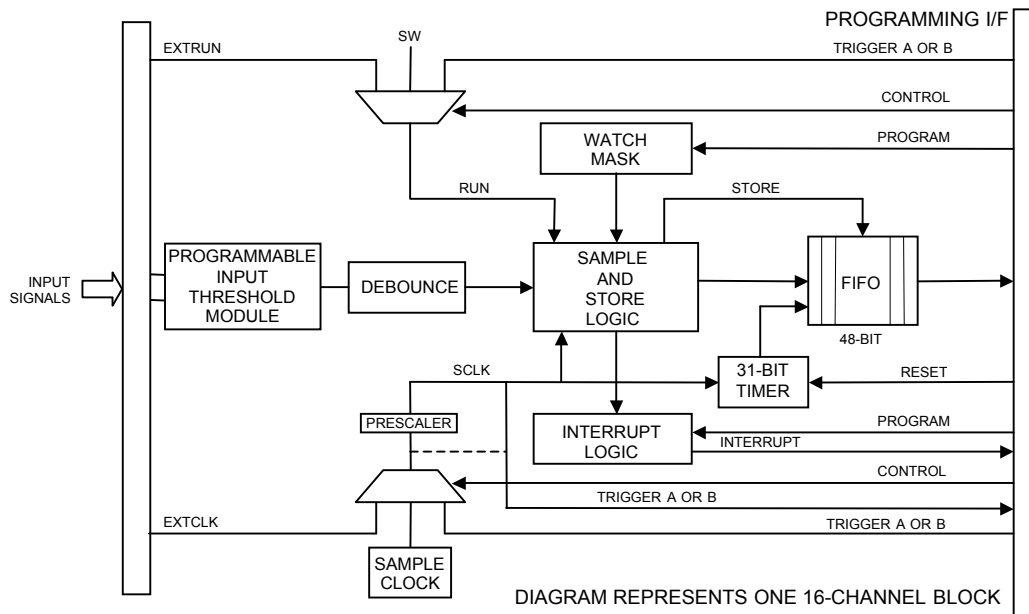
Ordering Information:

Description

64-Channel	11030010-0002
128-Channel	11030010-0003

Additional Information

User Manuals and driver for this instrument and C&H M-modules can be found on our website at www.chtech.com.



Specifications:

Number of Channels: 64 or 128

Sample Rate: up to 5 Msps

Timestamp: 31-bit

Input Specifications:

Threshold Selection	Programmable
Threshold Resolution	100mV
Threshold Range	0 to 25.6V
Threshold Accuracy	±0.5% of FS
Max. Input Voltage	48V
Input Hysteresis	25mV
Input Impedance	>100KΩ
Input Current	<300μA
Debounce (software prog.)	0 to 128ms

Local Memory:

- Storage for 32K events (timestamp-data pairs)
- First-In First-Out (FIFO) retrieval

Run Source

- Synchronizes start and stop of sampling
- Software Run
- Front Panel
- External Trigger
- Software Programmable

Sample Clock:

- Internal up to 5 MHz
- Front Panel up to 5 MHz
- External Trigger up to 5 MHz
- Source and prescaler software programmable

Misc. Programmable Features

- Watch mask selects channels to be monitored
- Per-channel input polarity selection
- Store-all allows storage at every clock period
- Current value provides real-time input monitoring

External Triggers:

- External TTL
- Eight LVDS

I/O Connectors:

- 44 pin DSUB per 16 channels

Networking:

- LXI Rev. 1.2 Compliant
- Easy configuration through web based interface
- TCP/IP and UDP/IP supported for communication
- Static IP, DHCP, and AutoIP addressing supported
- Ethernet 10Base-T or 100Base-TX (Auto Sensing)

Power:

- AC Input 85 to 265VAC, 47 to 63Hz
- Alternatively DC Powered by 36 to 75V

Implementation:

- Both versions use ANSI/VITA Standard 16-Channel M-Modules (MA203) to provide the event detection functionality. The 64-Channel version has four M-Module positions available for additional functions. For a list of available M-Module functions visit our website.

Temperature:

Operating	0° C to 50° C
Storage	-40° C to 70° C

Mechanical:

- 1U 19" Rack Mountable (IEC 60297)
- Dimensions: 19.0"W x 12.2"D x 1.72"H
- Weight: 9.8 lbs (64 channel) 10.5 lbs (128 channel)

Software Support:

- IVI-C Custom Specific Driver (chEventDetect)
- Soft Front Panel Executable
- DLL for LabView Support