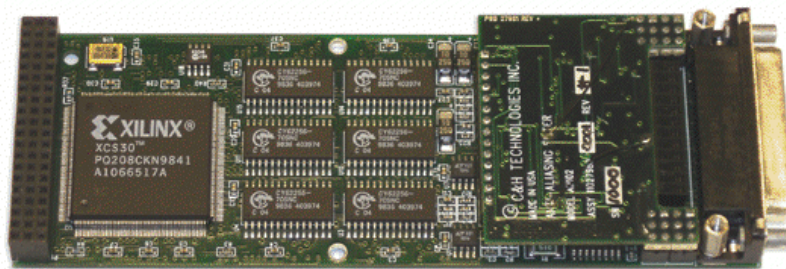# M200

Aperture A/D M/MA Module

The M200 is a 100kSPS 12-bit A/D converter module that will sample and selectively store differential analog signals along with a 31-bit time stamp at a rate up to 100kSPS. The 31-bit time tag allows almost six hours of uniquely time tagged data, at a resolution of 10 microseconds, to be stored by the host. The module has the ability to convert and store all data at the specified sample rate or selectively store input values that exceed the range of the programmed aperture window. This technique provides extensive real-time data compression for transient type input signals.

Applications for the M200:
> Acquisition of transient signals
> Real-time data compression
> General A/D Conversion

Features:

> Input accessories for the M200: Anti aliasing filter for plug in to the M-module, optional with the M200

> Input accessories for the M200: Voltage monitoring capability plug in to the M-module, optional with the M200

> Calibration: software programmable trim resistors for offset and full scale

> Local Memory: 32K 48-bit time-value data pairs

M-Module Compliancy

* Complies with ANSI/VITA Std. 12-1996 for single-wide MA-Modules
* Addressing: A8
* Data: 16-bit
* Interrupts: INTA
* Triggers: TRIGA/B (input only)

AD

* Resolution of 12-Bits
* Conversion Rate up to 100 kHz
* Integral Nonlinearity ±1LSB
* Input Range (switch-selectable): 10VPP Bipolar -5 to +5V; 10VPP Unipolar 0 to +10V; 20VPP Bipolar -10 to +10V
* Common Mode Voltage Range: standard CM ±13V (min); high CM ±180V (min)* Rejection Ratio 70dB (dc-1kHz)
* Input Impedance: standard/high CM 10M Ohm ; differential 800k Ohm; common mode 400k Ohm
* Input Protection: standard CM ±40V (min); high CM ±500V (momentary)

A/D Sample Clock

Internal Clock:
* Accuracy ±0.01%* jitter ±500ps* Frequency 10kHz or 100kHz* Prescaler 1, 2, 5, or 10

External Clock:
* Sample clock can also be derived from a front signal input or a backplane trigger

Product Characteristics

I/O Connector:
* 25-pin DSUB receptacle
* peripheral I/F connector (24 pin)

Temperature:
* Operating 0°C to 50°C* Storage -40°C to 70°C
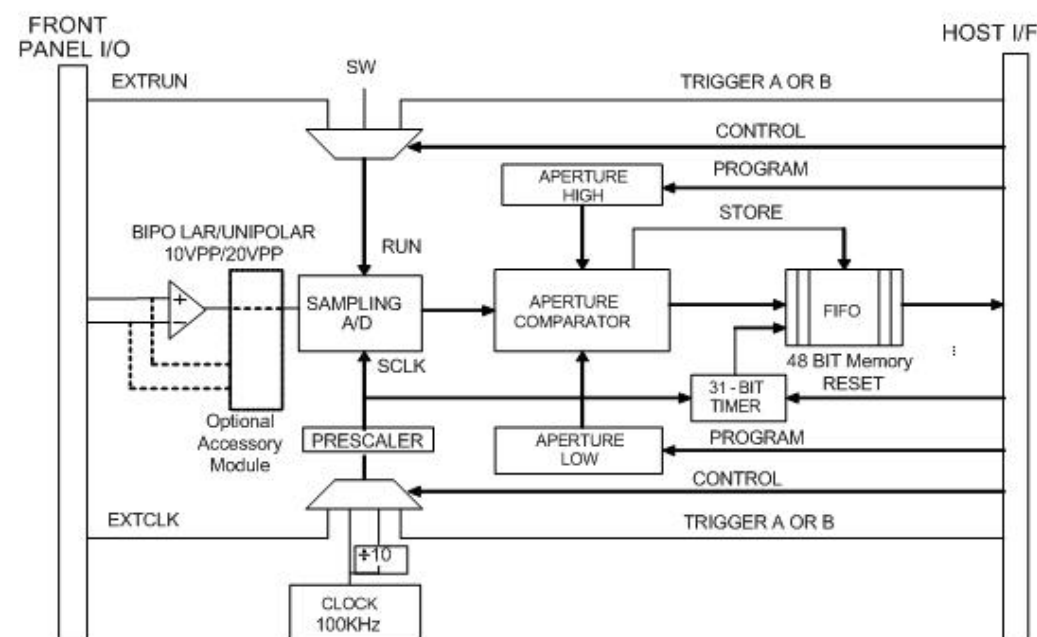
Power:
* +5V 100mA* +12V 20mA* -12V 20mA

External Inputs

EXTCLK/EXTRUN:
* Input Threshold 0, +0.8, or +2.5V
* Impedance 50 Ohm or >100k Ohm
* Threshold and impedance are switch-selectable

Ordering Information

* **M200/T01** Aperture A/D M-Module, normal common mode
* **M200/T02** Aperture A/D M-Module, high common mode
* **M200/AM102** Anti aliasing filter for M200 (plug in to the M-module, optional with the M200)
* **M200/AM110** Voltage monitoring for M200 (plug in to the M-module, optional with the M200)
* **M200/SW** APIS based software for M200
* **M200/VXI** VXI PnP driver for M200
* **M200/MAN** M200 manual on paper

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