MA200 Aperture A/D M/MA Module

The MA200 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.

Specifications:

A/D:

Resolution	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

-0001	±13V (min)
-0002	±180V (min)
Rejection Ratio	70db (dc-1KHz)

Input Impedance

-0001	10MΩ
-0002	
Differential	800KΩ
Common-mode	400KΩ

Input Protection

-0001	±40V (min)
-0002	±500V (momentary)

Calibration:
Software programmable trim resistors for offset and full scale

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

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 be also be derived from a front signal input or a backplane trigger.

External Inputs (EXTCLK/EXTRUN):

Input Threshold	0, +0.8, or +2.5V
Impedance	50Ω or >100KΩ

Threshold and impedance are switch-selectable

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

M Module Compliance
Complies with ANSI/VITA Std. 12-1996 for single-wide MA Modules

Addressing	A8
Data	16-bit
Interrupts	INTA
Triggers	TRIGA/B (input only)

Applications
• Acquisition of transient signals
• Real-time data compression
• General A/D Conversion

Input Accessories:
AM102 Anti-Aliasing Filter
AM110 Special Monitoring

Ordering Information

Standard CM	11027860-0001
High CM	11027860-0002
AM102 Filter	11027980-0001
AM110 Special	11029360-0001

Additional Information
User Manuals for C&H carriers and this module can be found on our website at www.chtech.com.