

## 4-Channel Signal Conditioning Module - Voltage Excitation, Programmable Digital Filtering & Simultaneous Sampling



### Applications

- Flight Test Instrumentation
- Factory Automation & Process Control
- Strain Gauges, Load Cells, Pressure Transducers, ...
- Research Measurements and Experiments

### Features

- 4-Channels per Module
- Simultaneous Sampling Capability
- Programmable Digital FIR or IIR Presample Filtering
  - Multiple Finite-Impulse-Response (FIR) filters
  - Software selection of 120, 90, 60 and 40 Tap FIR filters
  - 120 Tap FIR filter provides comparable response to 12-pole Butterworth Filter
  - Stop Band Attenuation of 85dB
  - Multiple Infinite-Impulse-Response (IIR) filters
  - Software selection of 6-pole and 8-pole Butterworth, 6-pole Bessel and 6-pole Chebyshev filters
  - Analog anti-aliasing filter
  - Automatic adaptive filter based on format sample rate
- Programmable Voltage Excitation
- Programmable Gain and Offset
  - >10,000 settings from 1 to 1,000
- Zero Calibration
- >1,000 Megohms Input Impedance (Power On)
- $\pm 0.25\%$  System Accuracy (Auto Cal Enabled)
- $\pm 0.5\%$  System Accuracy (Auto Cal Disabled)
- > 2 Megohm Input Impedance (Power Off)
- Automatic parasitic offset correction on power up and ZCAL. This feature can be disabled.
- $\pm 35\text{VDC}$  Overvoltage Protection
- Windows 95/98/NT/2000/XP Software Included

### Description

The MSCD-104D is a 4-channel plug-in signal conditioning module for use in TTC's MEDAU/MCDAU/MWDAU-2000 products. The module is intended for applications that require significant signal conditioning flexibility and/or simultaneous sampling capability. The module provides constant voltage excitation, programmable presample filtering, calibration, and user programmable gain and offset. FIR or IIR digital presample filtering may be selected. Each digital filter is phase locked to the channel format sample rate to maintain time correlation between the input signal and the PCM output. The filter can be set for 3, 4, 5, 6, 8 or 10 times oversampling (the filter -3dB point will be automatically set to the format sampling rate divided by the oversampling value). The conditioned analog signal is digitized at up to 16-bit resolution for transmission in the system PCM output format.

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### MSCD-104D-2 Datasheet

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Specifications subject to change without notice.



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