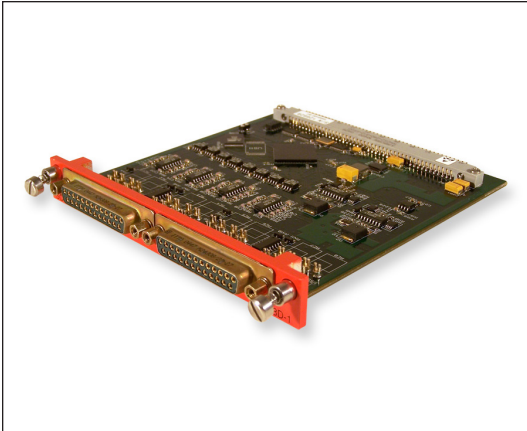


8-Channel Signal Conditioning Card - Voltage Excitation, Bridge Completion, Programmable Digital Filtering & Simultaneous Sampling



Applications

- Flight test instrumentation
- Factory automation and process control
- Strain gages, load cells, pressure transducers, ...
- Research measurements and experiments

Features

- 8 channels per card
- Simultaneous sampling capability
- Divided simultaneous sampling rate capability (Thinning)
- Programmable digital FIR or IIR presample filtering
 - Software selected FIR filters: 120, 90, 60 and 40 taps
 - 120 tap FIR filter provides comparable response to 12- pole Butterworth filter
 - Software selected IIR filters: 6-pole and 8-pole Butterworth, 6-pole Bessel and 6-pole Chebyshev
 - Automatic adaptive filter based on format sample rate or on software-selected -3dB frequency (6 pole Butterworth characteristic only)
 - Analog anti-aliasing filter
- Bridge or potentiometer inputs
 - 1/4, 1/2, 3/4 and full configurations
 - On card completion of up to 3 arms
- Programmable voltage excitation
- Programmable gain and offset
 - >10,000 settings from 1 to 1,000
- Zero and voltage substitution calibration
- >1,000 Megohms input impedance (power on)
- $\pm 0.25\%$ system accuracy (auto cal enabled)
- $\pm 0.5\%$ system accuracy (auto cal disabled)
- > 1 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
- Compatible with WDAU-20XX operating to 20Mbps
- Microsoft Windows application software included

Description

The SCD-108D-10 is an 8-channel plug-in signal conditioning card for use in TTC's EDAU-20XX, CDAU-20XX and WDAU-20XX products. It is intended for applications requiring significant signal conditioning flexibility and simultaneous sampling capability. The card provides constant voltage excitation on a four channel basis, programmable presample filtering, calibration and user-programmable gain. The user may select between digitally implemented FIR and IIR filters. All filters are 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). Alternatively, a filter with a user specified -3dB frequency that falls within limits calculated by TTCWare may be selected. The conditioned analog signal is digitized at up to 16-bit resolution for transmission in the system PCM output format.

Revision 10/25/2016

SCD-108D-10 Datasheet

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Specifications subject to change without notice.

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CAIS
Compatible



Management
System
AS9100C
ISO 9001:2008

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