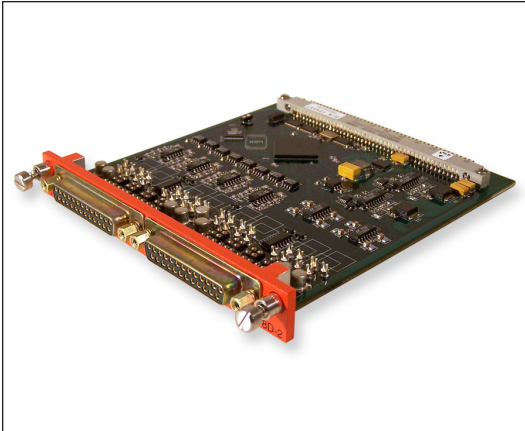


### 8-Channel Signal Conditioning Card - Voltage Excitation, Bridge Completion, Programmable Digital Filtering & Simultaneous Sampling



#### Applications

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

#### Description

The SCD-608D-10 is an 8-channel plug-in signal conditioning card for use in TTC's EDAU-20XX, CDAU-220XX and WDAU-20XX products. The card is intended for applications that require significant signal conditioning flexibility and simultaneous sampling capability. The card provides AC and DC input coupling, constant current and constant voltage excitation, numerous bridge and potentiometer input configurations, 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). 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.

#### Features

- 8 channels per card
- Simultaneous sampling capability
- Divided simultaneous sampling 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
- Constant current excitation
- Programmable AC or DC input coupling
- Programmable gain and offset
  - >10,000 settings from 1 to 2,000
- Zero, RCAL and voltage substitution calibration
- >1,000 Megohms input impedance (power on)
- ± 0.5% system accuracy
- Automatic parasitic offset correction on power-up and ZCAL. This feature can be disabled
- ±35VDC overvoltage protection
- Compatible with WDAU-20XX operating to 20Mbps
- Microsoft Windows application software included

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#### SCD-608D-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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