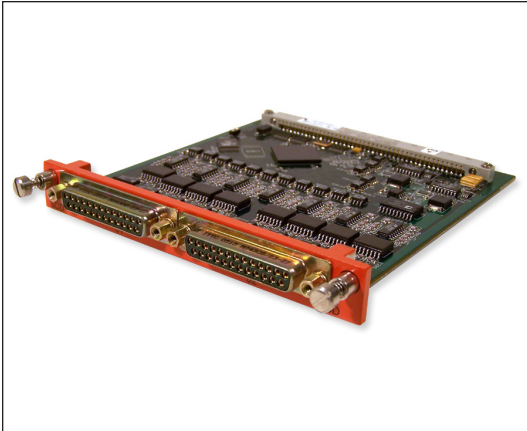


12-Channel Signal Conditioning Card - Programmable Voltage Excitation per channel, Programmable Digital Filtering & Simultaneous Sampling



Applications

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

Features

- 12 channels per card
- Simultaneous sampling or divided rate simultaneous sampling (thinning -10 omg) capability
- 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 a 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
 - Analog anti-aliasing filter
- Programmable voltage excitation on a per-channel basis
- Programmable gain and offset
 - >10,000 settings from 1 to 1,000
- Zero and voltage substitution calibration
- >1,000 M Ω input impedance (power on)
- $\pm 0.25\%$ system accuracy (auto cal enabled)
- $\pm 0.5\%$ system accuracy (auto cal disabled)
- > 1 M Ω 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-112D-2 is a 12-channel plug-in signal conditioning card for use in TTC's EDAU-20XX, CDAU-20XX and WDAU-20XX products. The card is intended for applications that require significant signal conditioning flexibility and simultaneous sampling capability. The card provides constant voltage excitation on a per-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 6th order Butterworth filter with a software-specified -3dB frequency falling within broad 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 01/29/2016

SCD-112D Datasheet

©2016 Teletronics - A Curtiss-Wright Company
 Specifications subject to change without notice.

Approved for Public Release 16-S-1463



CAIS
Compatible



Management
System
AS9100C
ISO 9001:2008

Teletronics - A Curtiss-Wright Company

15 Terry Drive, Newtown, PA 18940

phone: 267.352.2020 fax: 267.352.2021 Sales@ttcdas.com

www.ttcdas.com