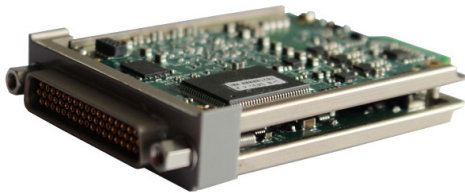


# ASCD-412A

Full/1/2 bridge ADC (voltage/current excitation, programmable analog gain, balance and classic shunt) 12ch at 25 ksp/s

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## Key Features

- 12 full or 1/2 bridge, potentiometer or differential ended input channels
- Programmable input range
- High accuracy (0.02% FSR typical)
- Programmable current or voltage excitation per channel
- Short on any channel does not affect others
- 16-bit simultaneous sampling with three configurable output streams on each channel
- Completion resistors and classic shunt

## Applications

- Bridge sensors and strain gage measurement
- Differential voltage measurement

## Overview

The ASCD-412A provides independent excitation for up to 12 channels and is intended for full or 1/2 bridge sensors, or for differential input measurements.

At the heart of the ASCD-412A is a hard-wired state-machine that oversamples all channels and digitally filters any noise above the user-programmable cutoff frequency.

This is achieved using cascaded, 15-tap FIR filters with output rate decimation, followed by a final FIR or IIR filter. If IIR filtering mode is selected, the last digital filter in the filtering chain is an 8th or 16th order (selectable) Butterworth filter. If FIR mode is selected, the last digital filter in the filtering chain is a 49-tap Kaiser window, Beta 6 filter.

There are three independently configurable output streams per channel, allowing different sample rate, cutoff, and filter type to be selected for each output stream.

All signals are sampled simultaneously. Thus, when several channels are sampled at different sampling rates, at the start of an acquisition cycle, all channels are aligned.

The AXN/ADC/404 supports programmable primary gain, excitation type (current or voltage, with compliance up to 30 mA/10.2V), digital filter type as well as completion resistors and high accuracy.

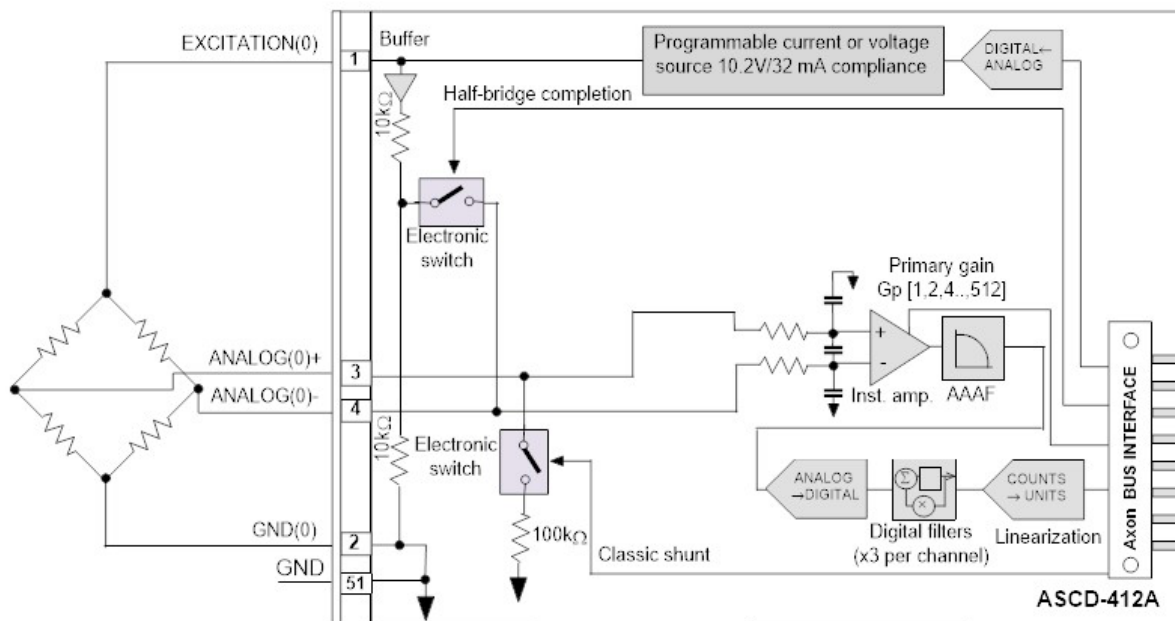


Figure 1: First of 12 channels on the ASCD-412A

## Ordering information

PART NUMBER	MODEL NUMBER	DESCRIPTION
TBD	ASCD-412A-1	Full/½ bridge ADC (voltage/current excitation, programmable analog gain, balance and classic shunt) 12ch at 25 ksp/s

By default, the standard mating connector, CON-AUSR-1, is included with each module in the shipment. Its part number will be added to the Confirmation of Order unless an alternative option is specified.

## Revision history

REVISION	DIFFERENCES	STATUS
ASCD-412A	First release	Preliminary draft; contact Curtiss-Wright support for details

## Supporting software

SOFTWARE	DETAILS
TTCWare	User interface for setup and management of data acquisition, network switches, recorders and ground stations in an integrated environment

## Related products

PART NUMBER	MODEL NUMBER	DESCRIPTION
770000400-001	CON-AUSR-1	Standard Axon module top block mating connector
770000400-002	CON-AUSR-2	Standard Axon module top block mating connector with rubber grommet for increased strain relief
311050202-001	BAC-AUSR-1	Backshell, nickel-plated aluminum straight-through, for Axon connectors
311230202-001	BAC-AUSR-2	Backshell, nickel-plated aluminum 20 degree, for Axon connectors

## Related documentation

DOCUMENT	DETAILS
DOC/HBK/008	Environmental Qualification Handbook for Axon Products. (Contact Curtiss-Wright support for availability of this document.)