

# DAS-800

- 8 analog input channels, externally expandable to 128 inputs
- Switch-selectable single-ended/differential inputs per channel on the DAS-801 & DAS-802
- Up to 40 kSamples/s sampling rate
- 4-location FIFO
- 3 digital inputs, 4 digital outputs
- External hardware trigger and gate
- 100% register and connector compatible with the DAS-8 Series
- 32-bit DriverLINX drivers plus a suite of bundled software including ExceLINX, VisualSCOPE, TestPoint, and LabVIEW drivers

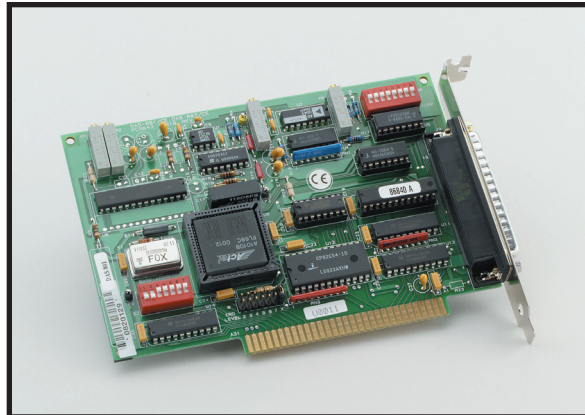
## Ordering Information

**DAS-800** 40 kSample/s Analog and Digital I/O Board

**DAS-801** 40 kSample/s Analog and Digital I/O Board with gains of 0.5, 1, 10, 100, 500

**DAS-802** 40 kSample/s Analog and Digital I/O Board with gains of 0.5, 1, 2, 4, 8

# 40kHz, 12-Bit Multifunction Boards



The DAS-800 Series consists of three analog and digital I/O boards: the DAS-800, the DAS-801, and the DAS-802. You'll find flexibility and many advanced features in the analog input section of this series. The DAS-800 features 8 analog inputs with a fixed input range of  $\pm 5V$ . The DAS-801 and DAS-802 also have 8 analog inputs, which can be individually switch-selected for single-ended or differential operation. The DAS-800 Series boards are low impact, upscale paths for boards in the DAS-8 Series.

## DAS-800 SERIES SELECTOR GUIDE

	DAS-800	DAS-801	DAS-802
Analog Inputs	8 single-ended	8 switch-selectable for single-ended or differential	8 switch-selectable for single-ended or differential
Maximum Speed	40 kS/s	40 kS/s	40 kS/s
Resolution	12 bits	12 bits	12 bits
FIFO	4 locations	4 locations	4 locations
Input Ranges			
Unipolar	–	0–10V, 0–1V, 0–100mV, 0–20mV	0–10V, 0–5V, 0–2.5V, 0–1.25V
Bipolar	$\pm 5V$	$\pm 10V, \pm 5V, \pm 500mV, \pm 50mV, \pm 10mV$	$\pm 10V, \pm 5V, \pm 2.5V, \pm 1.25V, \pm 625mV$
Digital Inputs	3	3	3
Digital Outputs	4	4	4
Compatible DAS-8 Board	DAS-8	DAS-8PGA	DAS-8PGA/G2

## ACCESSORIES AVAILABLE

C1800	DAS-800 Series to STA or STP-37 Cable	STA-08PGA	Screw Terminal Accessory Board for the DAS-801/2
EXP-16	16-Channel Multiplexer Accessory Board	STA-MB	Screw Terminal Accessory for the MB-Series modules
STC-37	Screw Terminal Connector	STP-37	Screw Terminal Panel
STA-08	Screw Terminal Accessory Board for the DAS-800	TESTPOINT	TestPoint Software Package

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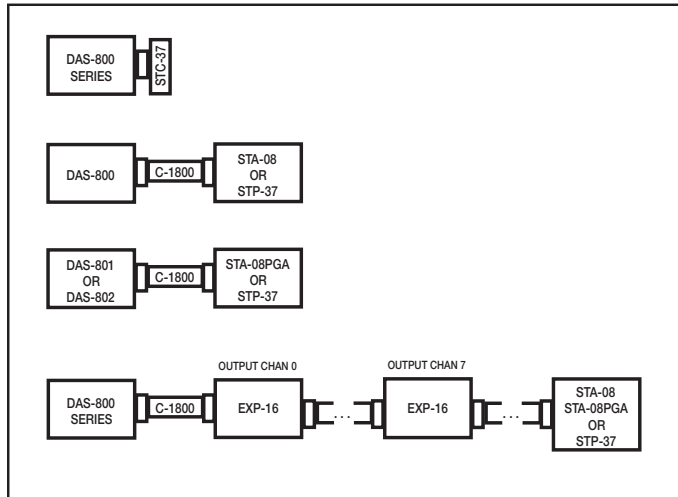
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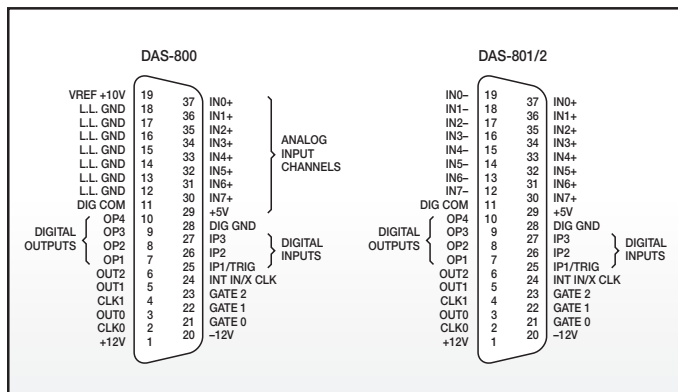
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## Configuration Guide



## Connector Pin Assignments



## Specifications

These specifications apply to the DAS-800, DAS-801, and DAS-802 unless otherwise noted.

### ANALOG INPUTS

CHANNELS: 8.

CHANNEL CONFIGURATION: DAS-800: Single ended. DAS-801/2 (per channel): Switch selectable single ended or differential.

INPUT RANGES:

DAS-800:  $\pm 5V$

DAS-801:  $\pm 10V$ ,  $\pm 5V$ ,  $\pm 500mV$ ,  $\pm 50mV$ ,  $\pm 10mV$ ,  $0-10V$ ,  $0-1V$ ,  $0-100mV$ ,  $0-20mV$

DAS-802:  $\pm 10V$ ,  $\pm 5V$ ,  $\pm 2.5V$ ,  $\pm 1.25V$ ,  $\pm 625mV$ ,  $0-10V$ ,  $0-5V$ ,  $0-2.5V$ ,  $0-1.25V$

INPUT RANGE SELECTION:

DAS-800: Fixed.

DAS-801 & DAS-802: Software programmable.

INPUT CHANNEL SELECTION: Software selectable or automatic scanning.

MAXIMUM OVERVOLTAGE:  $\pm 35V$  single channel.

INPUT IMPEDANCE:  $> 1G\Omega$  typical.

INPUT CURRENT:  $\pm 30nA$  @  $25^\circ C$ .  $\pm 250nA$  over temperature.

A/D CONVERTER TYPE: Successive approximation with internal sample and hold.

RESOLUTION: 12-bits.

LINEARITY:  $\pm 1$  bit.

CONVERSION TIME:  $25\mu s$  max.

ACCURACY - DAS-800:  $\pm 0.01\%$  of full scale  $\pm 1$  bit, max.

ACCURACY - DAS-801:  $\pm 0.01\%$  of full scale  $\pm 1$  bit, typical.  $\pm 0.05\%$  of full scale  $\pm 1$  bit, max.

ACCURACY - DAS-802:  $\pm 0.01\%$  of full scale  $\pm 1$  bit, typical.  $\pm 0.05\%$  of full scale  $\pm 1$  bit, max.

THROUGHPUT UNDER DOS:  $40ks/s$  at gain  $\leq 100$ .  $25ks/s$  at gain = 500.

TEMPERATURE COEFFICIENTS:

GAIN - DAS-800:  $\pm 45ppm/^\circ C$  max.

GAIN - DAS-801/2:  $\pm 50ppm/^\circ C$  max.

ZERO - DAS-800:  $100\mu V/^\circ C$  max.

ZERO - DAS-801/2:  $(\pm 2\mu V \pm 100\mu V/gain)/^\circ C$  max.

CLOCKING: Software, internal timebase, external clock.

TRIGGERING: Software, external hardware digital trigger.

GATING: External hardware digital gate.

DATA TRANSFER METHOD: I/O Read.

FIFO LENGTH: 4-words.

COMMON MODE REJECTION:	Gain = 1	70dB min
@ 60Hz: (DAS-801/2):	Gain = 10	90dB min
	Gain $\geq 100$	100dB min

### DIGITAL I/O

INPUT BITS: 3.

INPUT LOW VOLTAGE: 0.08V max.

INPUT HIGH VOLTAGE: 2.0V min.

INPUT LOW CURRENT:  $-0.4mA$  max.

INPUT HIGH CURRENT:  $20\mu A$  max @ 2.7V

OUTPUT BITS: 4.

OUTPUT LOW VOLTAGE: 0.5V max @ 8.0mA.

OUTPUT HIGH VOLTAGE: 2.7V min @  $-0.4mA$ .

### ENVIRONMENTAL

OPERATING TEMPERATURE:  $0^\circ C$  to  $50^\circ C$ .

STORAGE TEMPERATURE:  $-20^\circ C$  to  $+70^\circ C$ .

HUMIDITY: 0 to 90% (non-condensing).

EMC: Conforms to European Union Directive 89/336/EEC.

SAFETY: Meets EN61010-1/IEC 1010.

DIMENSIONS:

DAS-800:  $5.0in \times 4.25in \times .75in$  ( $12.7cm \times 10.8cm \times 1.9cm$ ).

DAS-801 & DAS-802:  $6.0in \times 4.25in \times .75in$  ( $15.2cm \times 10.8cm \times 1.9cm$ ).

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