CIO-DAS800 Series
Low-Cost 8-Channel Multifunction Plug-In Board

✔ **8 Analog Inputs**
✔ **7 Digital I/O**
✔ **3 Counters**
✔ **256 Sample Buffer**

MADE IN USA | 3 YEAR WARRANTY | OMEGA CARE Extended Warranty Program

The CIO-DAS800 series boards are multifunction analog and digital I/O boards for IBM PC and compatible computers. The boards install into a standard 8- or 16-bit ISA slot of any IBM PC or compatible computer. The CIO-DAS800 is the next generation in the Popular DAS-08 family. The CIO-DAS800 includes a number of enhancements over the traditional DAS-08 including higher sample rates, 256-sample FIFO, enhanced triggering and improved channel sequencer. The four different models in the family are shown in the table below.

ANALOG INPUTS

A standard 37-pin 'D' type connector brings on board the analog signals of the CIO-DAS80x directly into an analog multiplexer. The multiplexer provides 8 channels of differential or single-ended input. For the CIO-DAS-801, CIO-DAS802, and CIO-DAS802-16 the choice of single-ended or differential input is switch selectable on a channel-by-channel basis. The CIO-DAS800 provides single-ended inputs only.
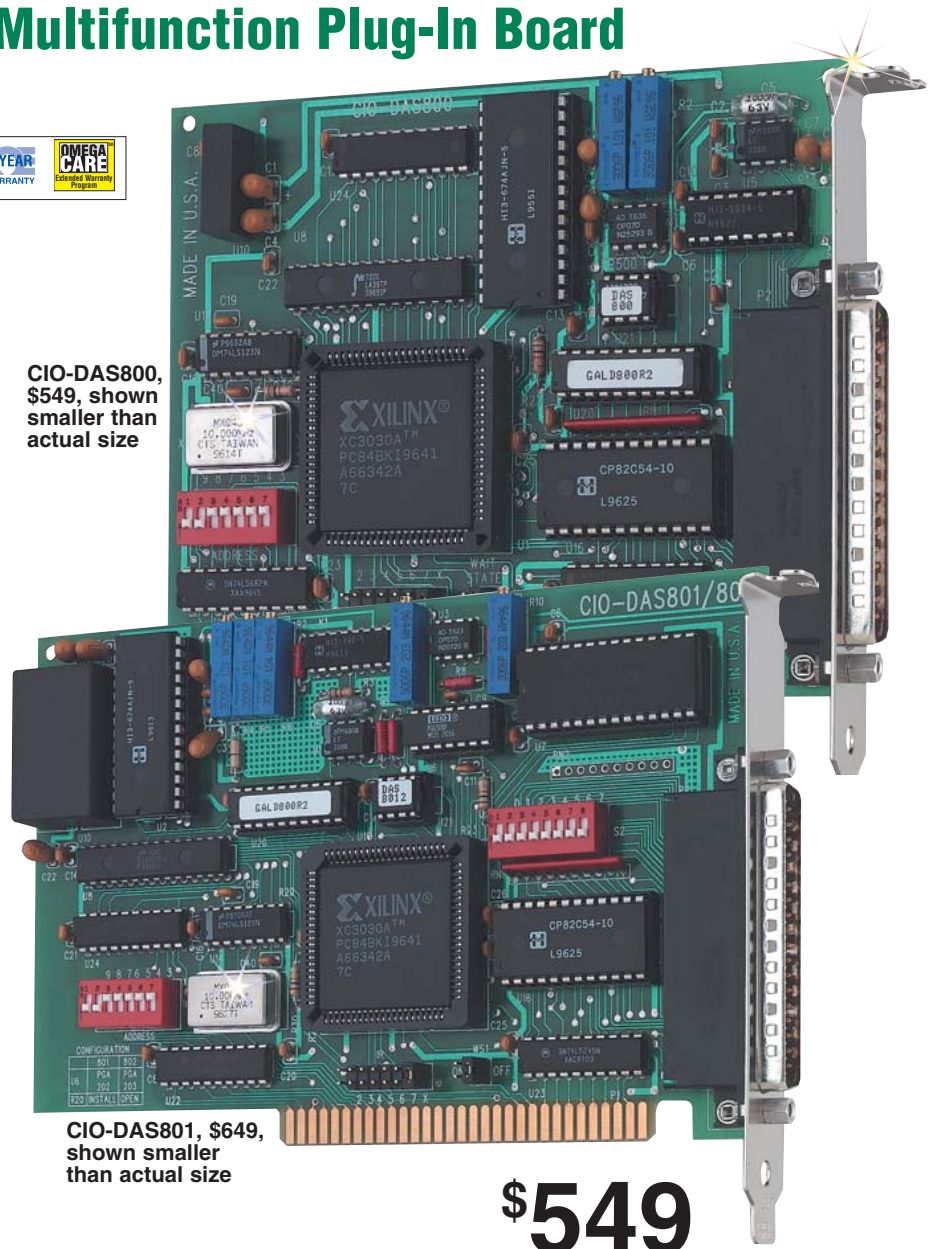
A sample and hold circuit captures the signal that is converted by the A/D converter. The models with a 12-bit A/D converter provide a resolution of 1/4096 parts of full scale. The 16-bit models provide a resolution of 1/65,536 parts of full scale. The CIO-DAS801, CIO-DAS802 and CIO-DAS802-16 also contain a programmable gain amplifier that allows the selection of different input ranges.

Analog Accessories

For channel expansion beyond the base 8 channels, two external multiplexers are offered. The CIO-EXP16 and CIO-EXP32 are sixteen and thirty-two channel multiplexers respectively. Besides offering additional channels, these multiplexers also provide cold junction compensation for use with thermocouple temperature sensors.

CIO-DAS800, $549, shown smaller than actual size

CIO-DAS801, $649, shown smaller than actual size

$**549**
Basic Unit

Software

The CIO-DAS800 series includes a complete test and calibration program. The program provides a step-by-step procedure for installing and configuring the card.

It also creates a configuration file used by the optional Universal Library.
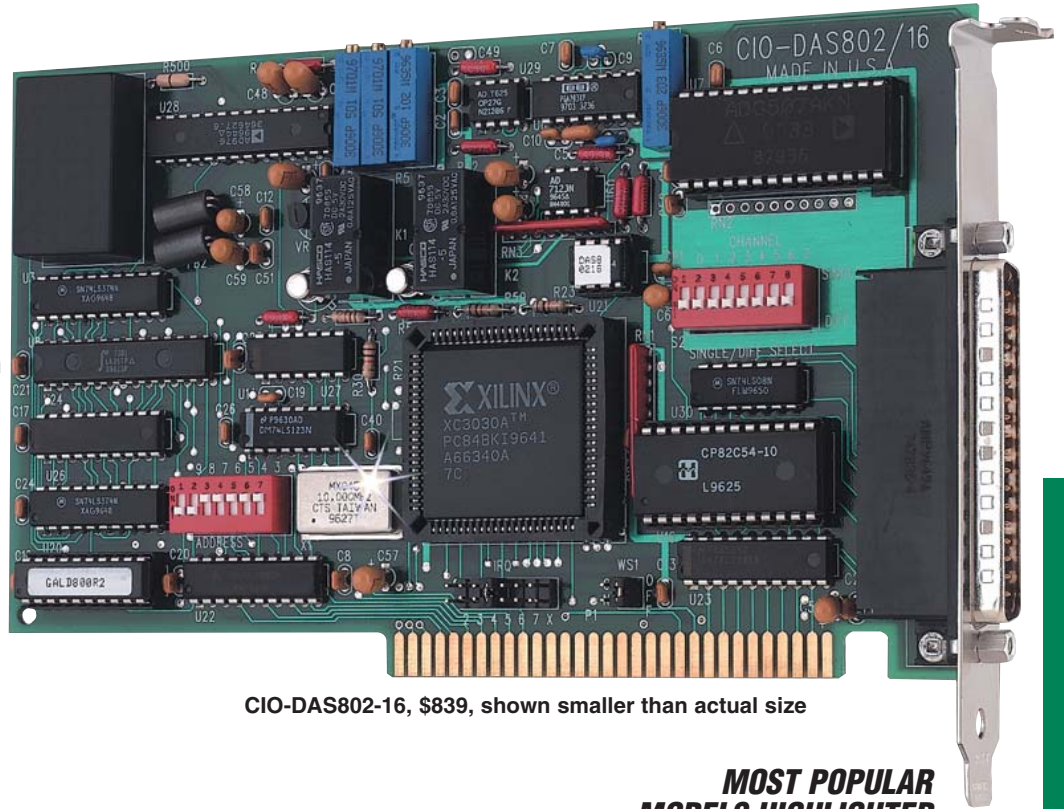
The Universal Library is a set of I/O ibraries and drivers for those users creating their own custom programs. The Universal Library is compatible with most Windows based languages and supports the entire CIO family of boards.

RANGE TABLE

Model No.	Resolution	Speed (Samples/Sec)	Input Range (Vdc)
CIO-DAS800	12-bits	50,000	±5
CIO-DAS801	12-bits	50,000	±10, ±5, ±1, ±0.5, ±0.1, ±0.05 ±0.01, ±0.005
CIO-DAS802	12-bits	50,000	±10, ±5, ±2.5, ±1.25, 0-10, 0-5, 0-2.5, 0-1.25
CIO-DAS802-16	16-bits	100,000	±10, ±5, ±2.5, ±1.25, 0-10, 0-5, 0-2.5, 0-1.25

CIO-DAS802-16, $839, shown smaller than actual size

An optional driver for LabView is also available. The LabView driver works in conjunction with the Universal Library, so both are needed to use the CIO-DAS80x in LabVIEW. The CIO-DAS80x is also compatible with many off-the-shelf programs including Labtech, DASYLab and SnapMaster.

Specifications
Analog Input
Channels: 8 single-ended or differential(CIO-801/802 and CIO-DAS802-16), 8 single-ended(CIO-DAS800)
Resolution: 12-bit (CIO-DAS800 and CIO-801/802), 16-bit (CIO-DAS802-16)
Accuracy: 0.01% of reading ±1bit(CIO-DAS800 and CIO-801/802), 0.0015% of reading ±1.5bit (CIO-DAS802-16)
Sample Speed: 50,000 samples/s(CIO-DAS800 and CIO-801/802), 100,000 samples/s(CIO-DAS802-16)
Input Range: See range table
Overvoltage: ±30 V
Linearity: ±1-bit (CIO-DAS800 and CIO-801/802), ±1.5-bit CIO-802-16)
Impedance: 100MW

DIGITAL I/O
Inputs: 4-bits
Input Voltage: Low = 0.8 V max., High = 2.0 V min @20µA
Outputs: 4-bits
Output Voltage:
Low = 0.5 V max. @ 8.0 mA (sink), High = 2.4 V min. @ -0.4 mA (source)
COUNTER/TIMER
Counters:
Three 16-bit down counters
Type: 82C54
Input Frequency: 10 MHz max.
ENVIRONMENTAL
Temperature Range:
0 to 50°C (operating), -20 to 70°C (storage)
Humidity: 0 to 90% non-condensing

MOST POPULAR
MODELS HIGHLIGHTED

To Order *(Specify Model Number)*

Model Number	Price	Description
CIO-DAS800	$549	8-channel 12-bit A/D board with fixed input range
CIO-DAS801	649	8-channel 12-bit A/D board with programmable input ranges, gains of 1, 10, 100 &1000
CIO-DAS802	649	8-channel 12-bit A/D board with programmable input ranges, gains of 1, 2, 4 & 8
CIO-DAS802-16	839	8-channel 16-bit A/D board with programmable input ranges, gains of 1, 2, 4 & 8

Each board includes a user's manual and test and calibration software.
OMEGACARE℠ extended warranty is available for models shown on this page.
Ask your sales representatives for full details when placing order.

Ordering Example: CI0-DAS802-16** board, **CIO-TERMINAL** screw terminal panel, **OMEGACARE℠** 1 year extended warranty for **CIO-DAS802-16** (adds 1 year to standard 3 year warranty) and **C37FF-2** cable, $839 + 99 + 62 + 25 = **$1025.

Accessories

Model Number	Price	Description
CIO-TERMINAL	$99	Screw terminal panel, 16"x4" with prototype area, requires cable
CIO-MINI37	69	Screw terminal panel, 4"x4" with prototype area, requires cable
CIO-EXP16	299	16-channel multiplexer (see CIO-EXP page for additional details)
CIO-EXP32	399	32-channel multiplexer (see CIO-EXP page for additional details)
C37FF-2	25	2' ribbon cable, used with screw terminal panels and multiplexers
UNIV-DRVR	49	Universal Driver Library
CIO-LABVIEW-DRVR	49	LabVIEW driver, requires Universal Driver Library

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