Multifunction, Medium Speed Boards for IBM Compatibles
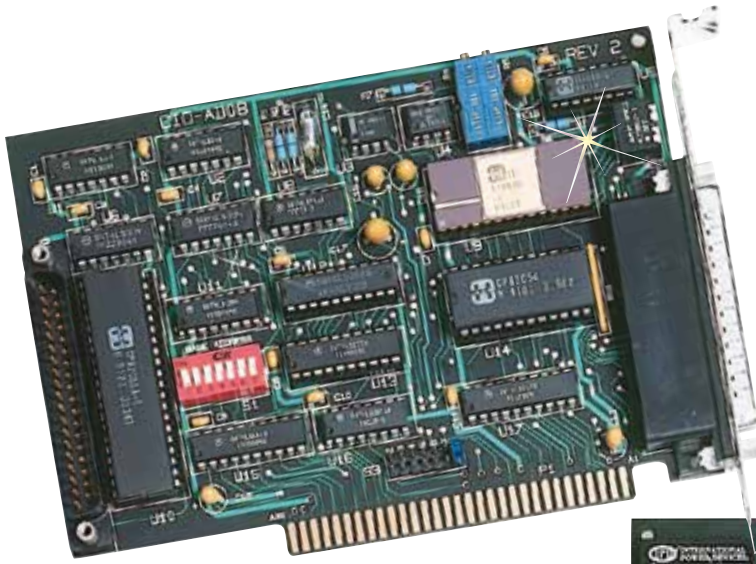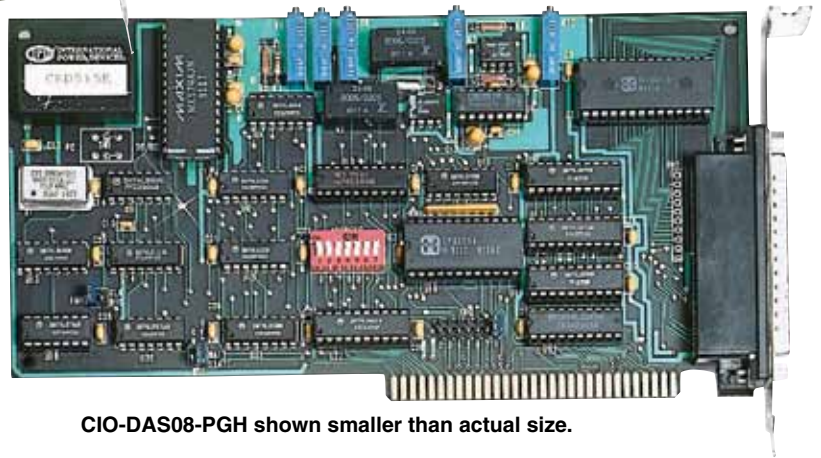

CIO-DAS08 shown smaller than actual size.

CIO-DAS08, CIO-DAS08 PGH/PGL

3 YEAR WARRANTY C€

✔ **8 Channels of Analog Input**
✔ **Software Programmable Ranges (CIO-DAS08-PGH/PGL Only)**
✔ **Up to 31 Digital I/O Lines**

CIO-DAS08-PGH shown smaller than actual size.

The CIO-DAS08, CIO-DAS08-PGH and CIO-DAS08-PGL low-cost multi-function boards for the IBM PC and compatibles feature eight analog input channels, seven digital I/O lines, and three counters. The CIO-DAS08 provides an additional 24 digital I/O lines through an auxiliary connector, for a total of 31 digital I/O lines. The CIO-DAS08 supports dip switch-selectable analog ranges, while the analog input ranges of the CIO-DAS08-PGH and CIO-DAS08-PGL are selectable through software.
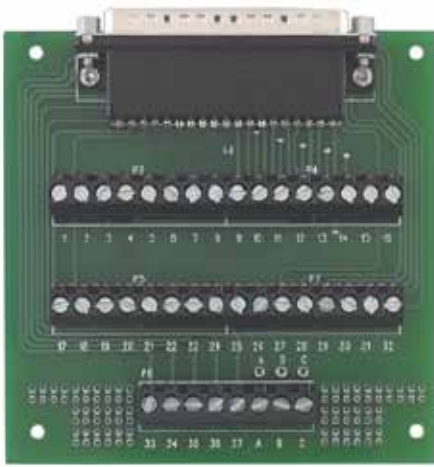
The analog signals are brought on board by a standard 37-pin, D-type connector directly to an analog multiplexer, which provides eight channels of input and is protected against 30 V max. The CIO-DAS08's input channels are single-ended. The CIO-DAS08-PGH/PGL's input channels may be single-ended or differential. The 12-bit A/D converter provides a resolution of 1/4095 parts of full scale. Speeds of up to 20,000 samples per second are possible.

The input ranges of the CIO-DAS08 of ±5 V, ±10 V and 0-10V are selected by dip switches on the board. The programmable amplifier of the CIO-DAS08-PGH/PGL allows the input ranges of these boards to be controlled the PC software. The gains of the CIO-DAS08-PGH are 0.5, 1, 5, 10, 50, 100, 500,1000 in both unipolar and bipolar ranges. The gains of the PGL are 0.5, 1, 2, 4 and 8 in unipolar bipolar ranges.

Three digital input and four digital output lines are accessible from the boards' main 37-pin connector. Through an auxiliary 37-pin connector, the CIO-DAS08 adds 24 more lines of digital I/O that are programmable as inputs or outputs in groups of eight. These additional I/O lines, which use an industry standard 8255 chip, require a separate terminal panel and cable. The number of CIO-DAS08 or CIO-DAS08-PGH/PGL analog inputs can be expanded from eight up to 128 in increments of 16 or 32. The CIO-EXP series expansion multiplexer boards provide gains

of up to 800, thermocouple cold junction compensation and 12-22 AWG screw terminals all on one 16 x 4" accessory board (CIO-EXP32; CIO-EXP16 measures 9 x 4").

Optional software drivers are available for users writing their own programs. The UNIV-DRVR universal library package provides support for Windows 95/98/NT/2000/XP programming languages. Both 16-bit and 32-bit drivers can be used. Windows support includes Microsoft C, Visual C++, Visual Basic, Borland C, C++ and Delphi. LabVIEW Drivers are also available.

CIO-MINI37 (left)
CIO-TERMINAL (bottom)
accessory boards, shown
smaller than actual size.

Specifications

Analog Channels: 8 single ended
(or differential for CIO-DAS08-PGH/PGL)
A/D Type: Successive approx. AD674
Conversion Time: 15microsec
Accuracy: 0.01% ±1 LSB
Integral Linearity: ± 1 LSB
Maximum Overvoltage: +/35 V
continuous
Input Leakage Current:
250 na max. at 25C
CIO-DAS08 Ranges: ±5 Vdc,
±10 Vdc, 0 to10 Vdc

CIO-DAS08-PGH Ranges:
±10 V, ±5 V, ±1 V, ±0.5 V, ±0.1 V,
±0.05 V, ±0.01 V, ±0.005 V, 0 to 10 V,
0 to 2 V, 0 to 1 V, 0 to 0.2 V, 0-0.1 V,
0 to 0.02 V, 0 to 0.01 V.

CIO-DAS08-PGL Ranges:
±10 V, ±5 V, ±2.5 V, ±1.25 V, ±0.625 V,
0 to 10 V, 0 to 5 V, 0 to 2.5 V, 0 to 1.25 V.

Digital IO

OP1-OP4 low	0.5V max. @ 8ma sink
OP1-OP4 high	2,7V min. @-0.4 ma source
IP1-IP3 low	0.8V max.
IP1-IP3 high	2V max. @ 20 microamps
8255 output low	0.5V max. @2.5 ma
8255 output high	2.4V min. @ -200 microamps
8255 input low	-0.5V min.
8255 input high	2.0V min., 7V max.
8255 drive	5 LSTTL loads

8254 COUNTER TIMER
Counters: Three 16-bit count down
counters, user accessible
Output Drive: 2.2ma @ 0.45Vdc,
5 LSTTL loads
Input Load: ±10 microamps TTL/DTL/
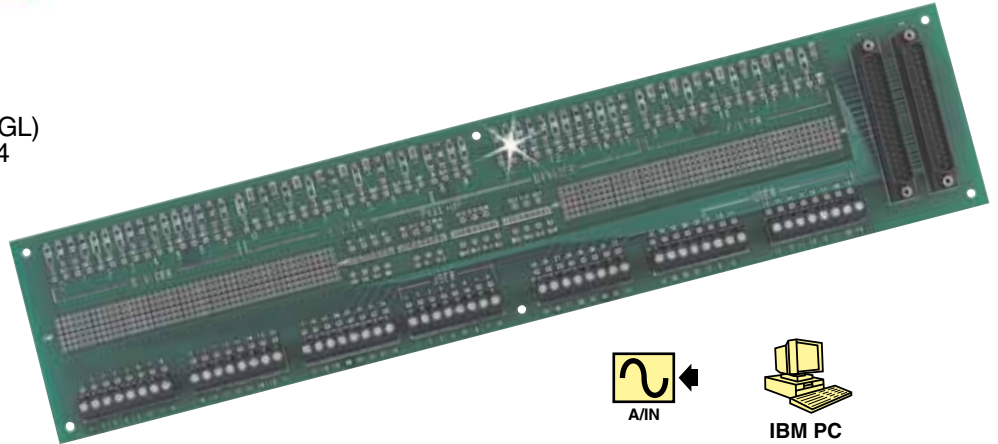CMOS
Input Frequency: 10 MHz max.

ENVIRONMENTAL
Operating Temp: 0 to 50°C
(32 to 122°F) 0 to 90% RH
Storage Temp: -20 to 70°C
(-4 to 158°F)
Dimensions: 108 H x 149 W
(4 1/4 x 5 7/8")
Weight: 142 g (5 oz)

A/IN   IBM PC

To Order

Model Number	Description
CIO-DAS08	Multifunction Board
CIO-DAS08-PGH	Multifunction Board with gains of 0.5, 1, 10, 100, 500, 1000
CIO-DAS08-PGL	Multifunction Board with gains of 0.5, 1, 2, 4, 8
CIO-TERMINAL	16 x 4" screw terminal board with prototype area, requires any C37FF cable
CIO-MINI37	4 x 4" screw terminal board, requires any C37FF cable
C37FF-2	2' cable with female connectors
C37FFS-5	5' shielded cable, 37–pin with female connectors
C37FFS-10	10' shielded cable, 37-pin with female connectors
BP37	Cable assembly. Brings out rear 37-pin digital IO connector on CIO-DAS08 to back of PC. Requires any C37FF cable and CIO-MINI37
SSR-RACK24	24 channel solid state relay rack Requires AC or DC modules.

*Each **CIO-DAS08** board includes a complete operator's manual
and Instacal software.*

***Ordering example: CIO-DAS08** board, **CIO-MINI37** terminal panel,
C37FF-2 cable and **OCW-1**, OMEGACARE ℠ extends standard 3-year
warranty to a total of 4 years.*