Low Cost, PCI-Bus Compatible, 8-Channel Analog Input Board

PCI-DAS08

1 YEAR WARRANTY CE

PCI-DAS08

- ✔ **Extremely Low Cost**
- ✔ **Eight Single-Ended Analog Inputs**
- ✔ **12-bit A/D Resolution**
- ✔ **50 kHz Sample Rate**
- ✔ **7 Digital I/O (4 Out and 3 In)**
- ✔ **Three 16-bit Counter/Timers**
- ✔ **Connector and Software Compatible with CIO-DAS08**
- ✔ **Fully Plug-and-Play**

The PCI-DAS08 is a low cost analog input board for IBM or compatible computers with the PCI bus. It offers eight single-ended analog inputs with sample rates up to 50 kHz. The board also provides four digital output bits, three digital input bits and three 16-bit down counters (in the form of a single 82C54). The PCI-DAS08 is connector and software compatible with the popular ISA based CIO-DAS08 board and is supported by the same wide variety of external signal conditioning products.

The PCI-DAS08 is completely plug-and-play. There are no switches, jumpers or potentiometers on the board. All board addresses, interrupt channels, etc., are set by your computer's plug-and-play software.

All I/O signals are brought through a 37-pin "D" connector. The (optional) C37FF-XX series cable brings all of the pins out and is suitable for use with all compatible screw terminal and signal conditioning accessory boards.

Expansion Multiplexers

The PCI-DAS08 can be used in conjunction with any CIO-EXP multiplexing board to increase channel capacity to 128 differential inputs. The CIO-EXP16 can be used to measure up to sixteen millivolt, volt or thermocouple inputs, while the CIO-EXP32 can handle up to 32, since it is actually two CIO-EXP16's in one. For bridge-type inputs, such as strain gages, load cells and bridge-type pressure sensors, the CIO-EXP-BRIDGE16 can be used. Any of these multiplexers can be mixed and matched. Up to eight CIO-EXP16's and CIO-EXP-BRIDGE16's or four CIO-EXP32's can be connected to one PCI-DAS08 card.

Software Support

The PCI-DAS08 series is supplied with InstaCal software for calibration and testing. In addition, it is also supported by the optional Universal Library. The Universal Library is a set of I/O libraries and drivers for users creating their own custom programs. The Universal Library is compatible with most DOS and Windows (16-bit and 32-bit) based languages (DLL and VXD) and supports the entire CIO family of boards. The Library includes an extensive set of programming examples written in Visual Basic, C and Pascal for DOS, Windows 3.1, Windows 95 and Windows NT. An optional driver for LabVIEW is also available. Icon driven control programs such as Labtech Notebook, Labtech Control and Dasylab support the PCI-DAS08 series.

Specifications

ANALOG INPUT SECTION
Resolution: 12 bits (2.44 mV)
Input Range: ±5 V
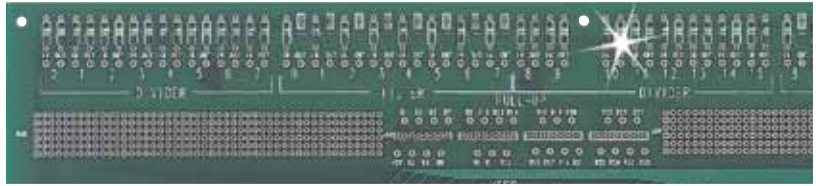**A/D Pacing:** Software polled
Number of Channels: 8 single-ended
A/D Conversion Time: 10 μs
Throughput: 50 kHz
Relative Accuracy: ±1 LSB
Integral Linearity Error: ±1 LSB
No Missing Codes Guaranteed: 12 bits

CIO-Terminal

CIO-EXP-BRIDGE16 Bridge Input Expansion Board

CIO-MINI37 Terminal Panel

Input Leakage Current : ±60 nA
Input Impedance: 10 MΩ
Absolute Max. Input Voltage:
±15 V
VREF Output: +10.00 V ±0.1V @
2 mA max

DIGITAL I/O
Configuration: 3 fixed input,
4 fixed output
Output Chip: 74ACT273
Input Chip: 74LS244
Output High: 3.94 volts min
@ -24 mA
Output Low: 0.36 volts max
@ 24 mA
Input High: 2.0 volts min,
7 volts absolute max
Input Low: 0.8 volts max,
-0.5 volts absolute min
Interrupt Enable: external,
programmable
Interrupt Sources: external

COUNTER/TIMERS
Configuration: three 16-bit down
counters (82C54). Gate, Clock and
Output of counters 0 and 1 are
available at connector. Gate and
Output of counter 2 are available
at connector; CLK 2 is connected
to a frequency divider set at
PCI bus clock/8
Clock Input Frequency: 10 MHz
max (30 ns min pulse width)
Input Low: 0.8 V max
Input High : 2.0 V min
Output Low: 0.4 V max
Output High: 3.0 V min at ±2.4 mA

ENVIRONMENTAL
Operating Temp: 0 to 50°C
(32 to 122°F)
Storage Temp: -20 to 70°C
(-4 to 158°F)
Humidity: 0 to 90%
non-condensing
Power Consumption:
+5 V Operating : 251 mA
typical, 436 mA max
+12 V: 13 mA typical, 19 mA
max
-12 V: 17 mA typical, 23 mA max

To Order

Model No.	Description
PCI-DAS08	Low cost, 8-channel, 12-bit analog input board for PCI-bus computers
CIO-EXP16	16-channel voltage or thermocouple multiplexer expansion card (see Section D1 for more info) (requires cable)
CIO-EXP-BRIDGE16	16-channel bridge input expansion card (see Section H) (requires cable)
CIO-MINI37	Screw terminal panel, 4 x 4" (102 x 102 mm) for connecting inputs to CIO-DAS16-M1 boards (requires cable)
CIO-TERMINAL	Screw terminal panel, 16 x 4" (406 x 102 mm) with prototype area (requires cable)
ENC-MINI37	Plastic enclosure for the CIO-MINI37
C37FF-2	2-foot, 37-pin ribbon cable
C37FFS-10	10-foot shielded cable, molded female connectors, 37-pin

The PCI-DAS08 comes with InstaCal testing software and complete operator's manual.

*OMEGACARE℠ extended warranty is available for models shown on this page.
Ask your sales representative for full details when placing order.*

***Ordering Example: PCI-DAS08** A/D card, **CIO-MINI37** terminal panel, **C37FFS-10** cable, **OMEGACARE℠** 1-year extended warranty for **PCI-DAS08** (adds 1 year to standard 3-year warranty).*