

DAQ-1200 High Speed Data Acquisition Board for IBM AT and Compatible Computers



DAQ-1201
Shown

\$575
Basic Unit

- ✓ **Up to 400 KHz Sample/sec with DAQ-1200.**
- ✓ **12 Bit Resolution**
- ✓ **16 Single-Ended or Eight Differential Analog Channels, Software Configurable**
- ✓ **32-Bit Digital I/O, Two 12-Bit D/A, and One 16-Bit Counter/Timer**
- ✓ **Software Programmable Gain**
- ✓ **DATA FIFO and SCAN List FIFO**

OMEGA's DAQ-1200 Series is a mid-range data acquisition system with 12-bit analog input, 32-bit digital I/O, two channels of D/A, and one

16-bit programmable timer/counter. The maximum sampling rate is 400 KHz.

The DAQ-1200 offers 16 channel single-ended or eight channel differential analog inputs with 12-bit resolution. The input voltage is jumper selectable for either unipolar or bipolar ranges. The DAQ-1201 provides a software programmable gain of 1, 10, 100, and 1000. The DAQ-1202 provides software programmable gains of 1, 2, 4, and 8. The analog I/O connection, eight bits of digital I/O and their control lines, are accessed via a D-37 connector that fits in the rear slot of a PC. A second auxiliary D-37 connector is provided to the user for adding up to 24 additional digital I/O lines. This is via a ribbon cable from the board which will need to occupy an additional opening in the back of the PC. The DAQ-1200 contains a data FIFO. The data FIFO provides the cushion for the stream of data coming from the output of the A/D conversion and can facilitate the data integrity using interrupts under Windows. The DAQ-1200 also contains a scan list FIFO.



The SCAN LIST FIFO is used for scanning the input channels with their corresponding gains.

Software

The DAQ-1200 can be installed in any available I/O base address location without conflict with presently installed devices. The interrupt levels IRQ2-7, 10-12, 14, and 15 are register selectable.

The boards are supplied with DaqEZ software. DaqEZ is a Windows application which provides real-time data display and datalogging to disk. Also supplied are software drivers.

The software drivers provide support for various programming languages such as Microsoft C/C++, QuickBasic, TURBO PASCAL.

A Dynamic Link Library (DLL) is furnished for programming languages under Microsoft Windows. An optional Visual Basic Controls (VBX) is also available. The DAQ-1200 is also compatible with LABTECH NOTEBOOK and Snap-Master.

UIO-37

Both the main analog I/O connector and the auxiliary digital I/O connector use a standard male 37 pin D-type format. For easy field wiring to the connectors the UIO-37 terminal panel may be used. One UIO-37 is needed for each connector. A CP-DAQ cable is also required to connect each UIO-37 to the DAQ-1200.

Specifications

ANALOG INPUT

Input Ranges: 0 to 10V (unipolar)
±10 V (bipolar)(software selectable)

Channels: 16 single-ended,
8 differential (software-selectable)

SAMPLING RATE

DAQ-1200

Gain <1000: Single channel mode:
400 KHz, Multi-channel mode: 370
KHz

Gain = 1000: Single or
multi-channel mode: 100 KHz

GAIN RANGES

Model 1201: 1, 10, 100, 1000

Model 1202: 1, 2, 4, 8

Input Impedance: 1M Ω

Over Voltage Protection: ±20 V

Resolution: 12-bit

Convert Type: Successive
approximation

Size of Scan List:

512 K samples (DAQ-1200 only)

Data FIFO: 1K samples
(4K optionally available)

Zero Error: Adjustable to 0

ANALOG OUTPUT

CHANNELS 2

Output Ranges: 0-5V, 0-10V, ±5V,
±10V (jumper selectable)

Resolution: 12-bits

**Digital I/O (8 bits on main
D37 connector)**

Outputs: 4

Low/High Voltage: 0.4/3.8 V

Source/Sink Current: 0.5/2.5 mA

Inputs: 4 TTL compatible inputs

PROGRAMMABLE TIMER

Number of Counters: 1

Type: 82C54

**DIGITAL I/O (24 BITS ON
AUXILIARY CONNECTOR)**

Type: 8255A

I/O: 24 bits

Power Requirements: +5Vdc 800
mA typ, 1.0 A max, +12 Vdc 120
mA typ, 160 mA max

ENVIRONMENTS

Interrupt Level: 3-7, 9-12, 14, 15

DMA Channel: 5, 6, 7

Operating Temperature: 0 to 70°C

Humidity: 0 to 95%

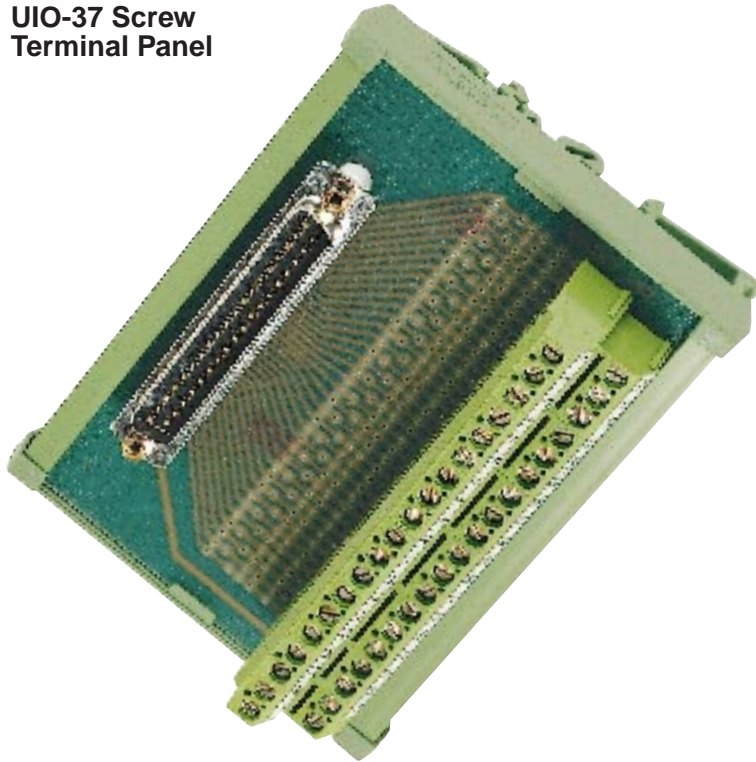
Dimensions: Length: 8.5" (22 cm)

Height: 4.8" (12 cm)

Connectors

The analog inputs and eight digital I/O are connected through a 37-pin D-type male connector at the rear of the connector. An auxiliary D-37 connector is employed to support additional 24-bit digital I/O.

UIO-37 Screw Terminal Panel



To Order (*Specify Model Number*)

| Model No. | Price | Description |
|-----------|-------|---|
| DAQ-1201 | 695 | 400 KHz data acquisition board with gains of 1, 10, 100 & 1000 and scan list FIFO |
| DAQ-1202 | 695 | 400 KHz data acquisition board with gains of 1, 2, 4 & 8 and scan list FIFO |

Comes with complete operator's manual and driver software.

Ordering Example: DAQ-1201 data acquisition board with 2 UIO-37 terminal panels and 2 CP-DAQ cables, \$695 + (2) \$110 + (2) \$30 = **\$1075**.

Accessories

| Model No. | Price | Description |
|-----------|-------|--|
| UIO-37 | \$110 | Terminal strip, can be used for main or auxiliary connector. Requires CP-DAQ cable |
| CP-DAQ | 30 | D37 male to D37 female shielded cable |
| VISUALDAQ | 195 | Visual Basic Controls |