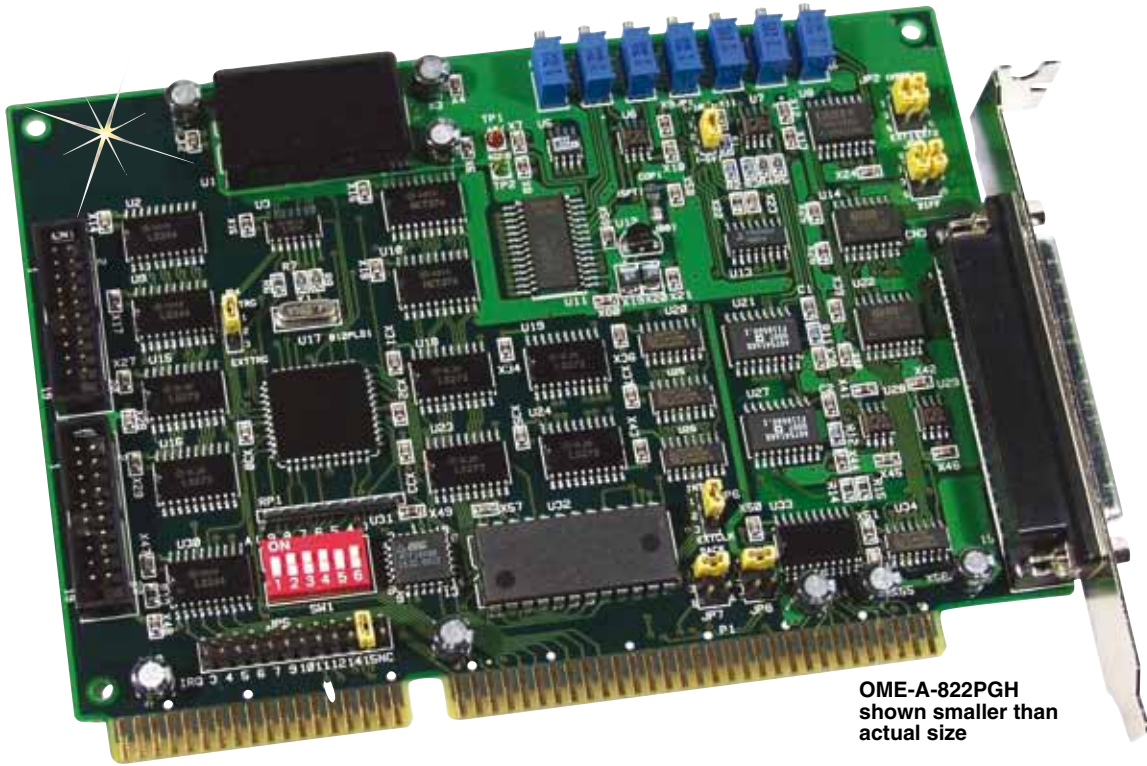


# 125 KS/s 16-Channel 12-Bit Analog Input Board

## with Analog Output and Digital I/O for the ISA Bus



OME-A-822PGH  
shown smaller than  
actual size

### OME-A-822PGH/ OME-A-822PGL



- ✓ 12-Bit A/D Converter
- ✓ 16 Single-Ended or 8 Differential Input Channels
- ✓ 125 KS/s Sampling Rate
- ✓ Two 12-Bit Analog Output Channels
- ✓ Analog Output Range: 0 to 5V, 0 to 10V
- ✓ Software Programmable Gain
- ✓ A/D Trigger Modes: Software Trigger, Pacer Trigger, External Trigger, Event Trigger
- ✓ A/D Data Transfer Modes: Poling, Interrupt, DMA
- ✓ 16 Digital Inputs and 16 Digital Outputs

The OME-A-822PGH/L are 12-bit multifunction analog and digital I/O boards for PC/AT compatible computers.

The OME-A-822PGH/L offers 16 single-ended or 8 differential analog inputs, plus two channels of analog output with 12-bit resolution. In addition, the OME-A-822PGH/PGL has 16 digital inputs, 16 digital outputs and one counter/timer channel. The OME-A-822PGH provides gains of 0.5, 1, 5, 10, 50, 100, 500 and 1000 while the OME-A-822PGL provides gains of 0.5, 1, 2, 4 and 8. It has a maximum sampling rate of 125 KS/s, DMA operation is jumper selectable for levels 1 or 3. Interrupts are jumper selectable between 3 and 15.

#### Software Development Kit

All data acquisition boards are supplied with a standard software development kit for Windows 98/NT/2000/XP. The software development kit includes DLL files for programming in C, C++ or other high level languages and OCX files for Visual Basic or Active X programming. LabView drivers are also included.

#### Specifications

##### Analog Input Channels:

16-channel single-ended or 8-channel differential

**Resolution:** 12-bits

**Conversion Rate:** 125 KS/s

**Input Impedance:** 10,000 M $\Omega$  // 6pF

**Overvoltage Protection:** + 35V

**Linearity:**  $\pm$ 1-bit

**Sample & Hold:** on chip

**Zero Drift:**  $\pm$ 25 ppm /  $^{\circ}$ C of full scale

##### D/A OUTPUTS

**Channels:** 2 independent

**Type:** 12-bit double buffers

**Linearity:** 0.006% FS

**Output Range:**

**Internal Reference:**

0 to 5V or 0 to 10V;

**Output Driving:**  $\pm$ 5 mA

##### DIGITAL I/O

**Input:** 16 (LSTTL)

**Input Low:** VIL = 0.8V max

IIL = -0.4 mA max

**Input High:** VIH = 2.0V min

IIH = 20  $\mu$ A max

**Outputs:** 16 channel TTL levels

**Outputs Low:** VOL = 0.5V max

@ IOL = 8 mA max

**Outputs High:** VOH = 2.7V min

IOH = -400  $\mu$ A max

**COUNTER/TIMER**

**Programmable Internal Timer:**

0.0045 Hz to 0.5 MHz

**Type:** 82C54

**A/D Pacer:** 32-bit counter

**General Environmental**

**Power Requirements:**

±5 V @ 350 mA (max)

**Operating Temperature:**

0 to 50°C (32 to 122°F)

**Storage Temperature:**

-20 to 70°C (-4 to 158°F)

**Humidity:** 0 to 90% RH

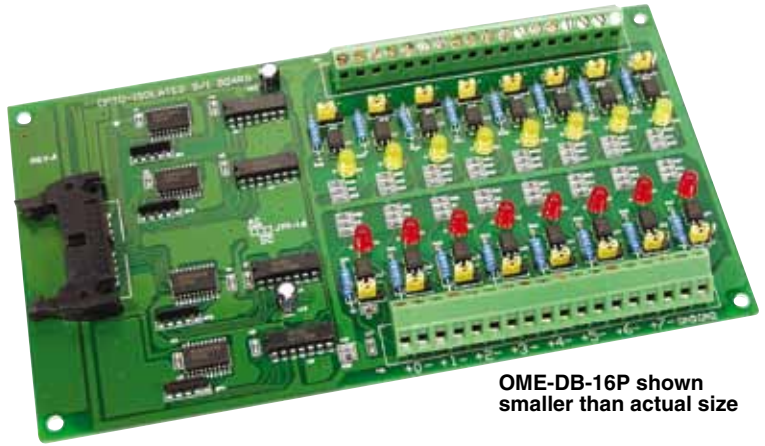
non-condensing

**Dimensions:**

122 H x 170 mm W

(4.8 x 6.7")

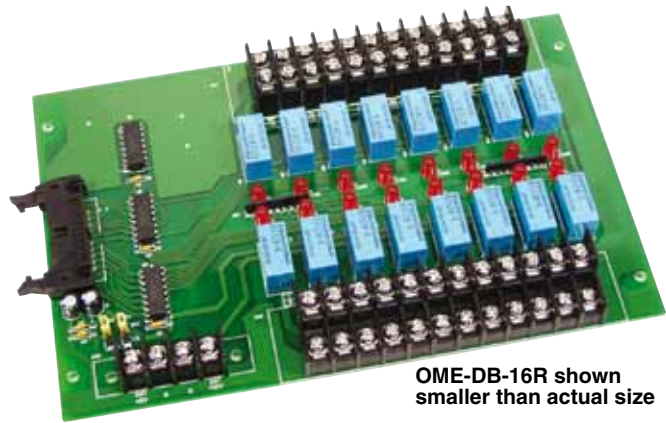
**Connector:** Analog I/O, 37-pin D-Sub; digital I/O, two 20-pin headers, (the 20-pin digital I/O headers can be extended to the PC slot window by using the OME-ADP-20/PCI adaptor)



OME-DB-16P shown smaller than actual size

OME-A-822PGL Analog Input Ranges			
Gain	Bipolar	Unipolar	Throughput
0.5	±10V	-	125 KS/s
1	±5V	0 to 10V	125 KS/s
2	±2.5V	0 to 5V	125 KS/s
4	±1.25V	0 to 2.5V	125KS/s
8	±0.625V	0 to 1.25V	100 KS/s

OME-A-822PGH Analog Input Ranges			
Gain	Bipolar	Unipolar	Throughput
0.5	±10V	-	125 KS/s
1	±5V	0 to 10V	125 KS/s
5	±1V	-	80 KS/s
10	±0.5V	0 to 1V	80 KS/s
50	±0.1V	-	10 KS/s
100	±0.05V	0 to 0.1V	10 KS/s
500	±0.01V	-	1 KS/s
1000	±0.005V	0 to 0.01V	1 KS/s



OME-DB-16R shown smaller than actual size



OMEGACARE<sup>SM</sup> extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARE<sup>SM</sup> covers parts, labor and equivalent loaners.

To Order	
Model No.	Description
OME-A-822PGL	125 KS/s 12-bit low gain multifunction board
OME-A-822PGH	125 KS/s 12-bit high gain multifunction board
OME-DB-8225/1	Screw terminal board for analog I/O with 1 m (3') 37-pin D-Sub cable
OME-DB-8225/2	Screw terminal board for analog I/O with 2 m (6.5') 37-pin D-Sub cable
OME-ADP-20/PCI	20-pin extender (includes two 20-pin cables)
OME-DB-37	Direct connect 37-pin screw terminal board for analog I/O
OME-DN-37	37-pin D-Sub DIN rail mount I/O connector board (two 37-pin D-Sub connectors, one for expansion) for analog inputs, includes one 1 m (3') cable
OME-DB-889D	16-channel analog input multiplexer board, includes 1 m (3') cable
OME-DB-16P	16-channel Isolated digital input board, includes 1 m (3') cable
OME-DB-16R	16-channel relay output board, includes 1 m (3') cable
OME-DB-24C	24-channel open-collector output daughter board
OME-DB-24SSR	24-channel SSR output board

Comes complete with utility software and operator's manual on CD ROM.

**Ordering Example:** OME-A-822PGL 12-bit low gain multifunction board and OCW-1, OMEGACARE<sup>SM</sup> extends standard 1-year warranty to a total of 2 years.