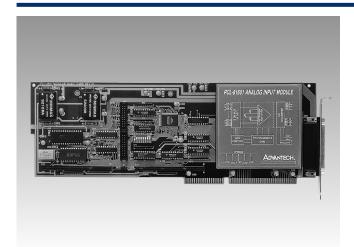
# PCL-816/816-DA Modular High-resolution Multifunction Card



#### **Features**

- 16-bit resolution A/D converter
- High-performance 100 KHz sampling rate
- Accepts 16 differential analog inputs with separately programmable gains (x 1, 2, 4 or 8)
- Programmable DMA channel
- Programmable IRQ level
- · Metal-shielded A/D module for noise reduction
- Auto channel scanning circuit
- Versatile language drivers for C/C++, Pascal and BASIC
- Optional 16-bit D/A output module

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## Introduction

The PCL-816 modular DAS card allows you to choose your own customized data acquisition configuration. Its 100 KHz A/D module offers 16-bit resolution with 16 channels of differential analog input measurement. The A/D module has its own protective cover, ensuring excellent signal shielding and noise immunity. A DB-37 cable connector provides fully-shielded signal connections to the A/D module. In addition to the standard A/D module, the carrier board has two 64-pin piggyback connectors for additional function expansion modules. Accepting most sub-modules, this modular system makes customizing and upgrading easy.

# **Specifications**

#### **Analog Input**

Channels 16, differential Resolution 16 bits Conversion Time 8.5 µsec. Max. Sampling Rate 100 KHz

Software Programmable Input Range (V)

Bipolar: ±10, ±5, ±2.5, ±1.25 Unipolar:  $0 \sim 10$ ,  $0 \sim 5$ ,  $0 \sim 2.5$ ,  $0 \sim 1.25$ 

 Trigger Mode software, pacer or external trigger

 Data Transfer software, interrupt (IRQ 2-7, S/W select) or DMA

(channel 1 or 3, S/W select)

Accuracy 0.003% ±1 LSB Input Impedance  $> 10 \text{ M}\Omega$  Input Overvoltage ±15 V Connector Female DB-37

#### **Digital Input**

Channels

 Logic Level TTL-compatible

> Logic level 0: 0.8 V max. Logic level 1: 2.0 V min.

20-pin flat cable Connector

#### Digital Outputcom

Channels

Logic Level

Logic level 0: 0.4 V max. @ 16 mA (sink) Logic level 1: 2.4 V min. @ 800 mA (source)

Connector 20-pin flat cable

Programmable Pacer Clock

Device: Intel 8254 or equivalent Time base: 10 MHz

Max. rate: 2.5 MHz Min. rate: 0.00023 Hz

I/O Ports each card occupies 16 consecutive I/O addresses the PCL-816 accepts one PCL-816-DA D/A module, Expansion

providing 2 channels of 16-bit analog output

 Power Consumption +5 V @ 430 mA typical

+5 V @ 500 mA max. +12 V @ 260 mA typical +12 V @ 280 mA max.

- Dimensions (L x H) 337 x 112 mm (13.3" x 4.4")

#### PCL-816-DA 2-channel 16-bit D/A module

Channels

Resolution 16 bits, double-buffered **Output Ranges** bipolar ±10 V **Output Current** ±5 mA max. Settling Time 5 µsec.

 Data Transfer software, DMA Accuracy ±0.003% full scale range Linearity ±2 LSB typical, ±4 LSB max.

Reset (power-on) Status All D/A channels will be at 0 V after reset or

15 PPM/° C of full span (0  $\sim$  50° C) Temperature Drift

# **Ordering Information**

PCL-816 Modular High-Resolution Multifunction card. Includes

on-board 16-bit A/D module, user's manual and driver

CD-ROM. (cable not included)

PCL-816-DA 2-channel 16-bit D/A Module

www.DataSheet4U.com

### Accessories

PCLD-10120-1
PCLD-10120-2
PCL-10137-1
PCL-10137-2
PCL-10137-3
DB-37 cable assembly, 1 m
DB-37 cable assembly, 2 m
DB-37 cable assembly, 3 m

PCLD-782
PCLD-782B
16-channl opto-isolated digital input board
24-channl opto-isolated digital input board

PCLD-785 16-channl relay output board
PCLD-785B 24-channl relay output board
PCLD-788 Relay Scanner/Multiplexer board

PCLD-789D Amplifier & Multiplexer board with DB-37 connector

PCLD-8115 Wiring terminal boardPCLD-880 Wiring terminal board

# **Applications**

• Transducer and sensor measurements

• Waveform acquisition and analysis

· Process control and monitoring

Vibration and transient analysis

## **Software and Drivers**

• Windows DLL Driver The PCL-816's Windows 95/98/ME/NT/XP/2000

dynamic link library (DLL) driver lets you write Microsoft Windows programs using tools such as Visual BASIC, Microsoft Visual C++, Borland C++ and

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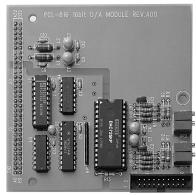
ActiveX Control
Advantech ActiveDAQ provides ActiveX Control for

Visual Basic programming.

• **Application Packages** The PCL-816 is supported by a wide range of data

acquisition software packages, including LabVIEW and

Advantech Data Acquisition Software



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