

# I/O Cards

## PISO-DA4U/DA8U/DA16U

Universal PCI, 14-bit 4/8/16-ch Isolated Analog Output Board



### Features ▶▶▶▶

- Universal PCI (3.3 V/5 V) interface
- 3000 Vdc power isolation protection
- Voltage output:  $\pm 10$  V
- Two pacer timer interrupt sources
- 16-ch 5 V TTL D/I
- D/I with pull-hill and pull-low jumpers
- Card ID function
- 2500 Vdc bus-type isolation protection
- 4-/8-/16-ch, 14-bit analog output
- Current output: 0 ~ 20 mA (sink)
- Double-buffered D/A latch
- 16-ch 5 V TTL D/O
- Software calibration
- Drop-in replacement for the PIO-DA4/DA8/DA16

### Introduction

The PISO-DA4U/DA8U/DA16U series cards (universal PCI versions) are compatible with the PIO-DA4/DA8/DA16 cards (PCI versions) and most users can replace the PIO-DA4/DA8/DA16 by PISO-DA4U/DA8U/DA16U directly without software/driver modification.

For the PISO-DA4U/DA8U/DA16U series add high voltage isolation design that offers a durable ability to keep user's computers safe from unexpected surge. It is the built-in high-quality isolation components that make PISO-DA4U/DA8U/DA16U featuring 2500 Vdc bus-typed isolation! their voltage output range is from -10 V to +10 V, and their current output range is from 0 to 20 mA. In addition, PISO-DA4U/DA8U/DA16U series also feature the following advantages by ICP DAS's innovation:

#### 1. Accurate and easy-to-use calibration.

ICP DAS provides the software calibration instead of the manual calibration so that no jumpers and trim-pots are required anymore. The calibration information can be saved in EEPROM for long-term use.

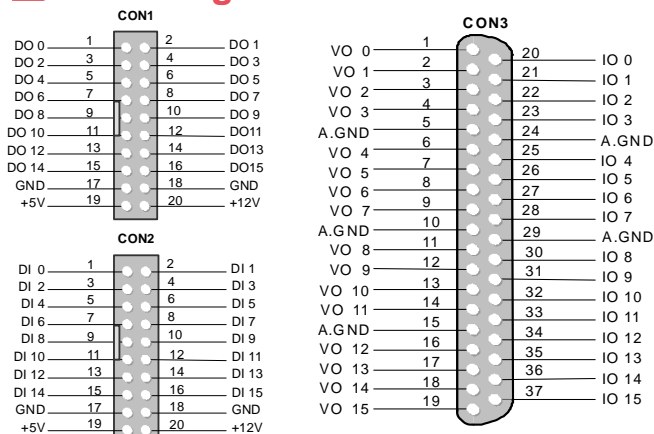
#### 2. Individual channel configuration.

In other words, every channel can be individually configured as voltage output or current output!

#### 3. Card ID.

ICP DAS provides the card ID function for PISO-DA4U/DA8U/DA16U (version 1.1 or above). Users can set card ID for each card and then recognize them one by one when more than two boards are used in a computer.

### Pin Assignments



### Software

- DOS Lib and TC/BC/MSC sample program (with source codes)
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes
- DLL and OCX SDK for 32-bit and 64-bit Windows XP/2003/Vista/2008/7
- Supports LabVIEW and Linux

### Hardware Specifications

Models	PISO-DA4U	PISO-DA8U	PISO-DA16U
<b>Analog Outputs</b>			
Channels	4	8	16
Isolation Voltage	2500 V (Bus-Type)		
Resolution	14-bit		
Accuracy	0.01% of FSR $\pm 2$ LSB @ 25 °C, $\pm 10$ V		
Output Range	$\pm 10$ V, 0~20 mA		
Output Driving	$\pm 5$ mA		
Slew Rate	0.71 V/ $\mu$ s		
<b>Digital I/O</b>			
Channels	16-ch, 5 V/TTL		
Input Voltage	Logic 0: 0.8 V max., Logic 1: 2.0 V min.		
Output Voltage	Logic 0: 0.4 V max., Logic 1: 2.4 V min.		
Output Capability	Sink: 2.4 mA @ 0.8 V, Source: 0.8 mA @ 2.0 V		
Response Speed	1.0 MHz (Typical)		
<b>General</b>			
Bus Type	Universal PCI, 3.3 V and 5 V, 33 MHz, 32-bit, Plug and Play		
Connectors	Female DB37 x1, 20-pin box header x2		
Power Consumption	2200 mA @ +5 V	2400 mA @ +5 V	3000 mA @ +5 V
Operating Temperature	0 °C ~ +60 °C		
Storage Temperature	-20 °C ~ +70 °C		
Humidity	5 ~ 85% RH, non-condensing		

### Ordering Information

PISO-DA4U CR	Universal PCI, 4-ch Isolation D/A Board (RoHS) Includes one CA-4002 D-Sub connector
PISO-DA8U CR	Universal PCI, 8-ch Isolation D/A Board (RoHS) Includes one CA-4002 D-Sub connector
PISO-DA16U CR	Universal PCI, 16-ch Isolation D/A Board (RoHS) Includes one CA-4002 D-Sub connector