

PEX-DA4/PEX-DA8/PEX-DA16

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



Features ▶▶▶▶

- PCI Express x1 interface
- Voltage output: +/- 10 V
- Double-buffered D/A latch
- D/I with pull-high and pull-low jumpers
- 4-, 8- or 16-ch 14-bit analog output
- Current output: 0 ~ 20 mA (sink)
- 16-ch 5 V TTL D/I, 16-ch 5 V TTL D/O
- Card ID function

Introduction

The PEX-DA4/DA8/DA16 series analog output board supports PCI Express interface. It is equipped with 14-bit 4/8/16 analog output channels, and each of the D/A channels features double-buffered latch.

For the PEX-DA series, its voltage output range is from -10 V to +10 V, and the current output range is from 0 to 20 mA. In addition, PEX-DA series also features the following advantages:

Accurate and easy-to-use calibration: ICP DAS provides the software calibration, so that no jumpers and trim-pots are required anymore. The calibration data is saved in EEPROM for long-term use.

Individual channel configuration: Each channel can be individually configured as voltage output or current output.

Card ID: The PEX-DA series adds a Card ID switch for users to recognize the board by the ID via software when using two or more PEX-DA cards in one computer.

The PEX-DA series is designed as easy replacement for the PIO-DA series, and users can replace the PIO-DA series by PEX-DA series directly without any software/driver modification.

Software

- DOS Lib and TC/BC/MSC sample program (with source codes)
- Supports 32-bit and 64-bit Windows XP/2003/2008/7/8/10
- VB/VC/Delphi/BCB/VB.NET/C#.NET sample programs with source codes
- Supports LabVIEW and Linux

Hardware Specifications

Models	PEX-DA4	PEX-DA8	PEX-DA16
Analog Outputs			
Channels	4	8	16
Resolution	14-bit		
Accuracy	0.01% of FSR ± 2 LSB @ 25 °C, ± 10 V		
Output Range	+/- 10 V, 0 ~ 20 mA		
Output Driving	+/- 5 mA		
Slew Rate	0.71 V/µs		
Digital Inputs			
Channels	16-ch, 5 V/TTL		
Input Voltage	Logic 0: 0.8 V max., Logic 1: 2.0 V min.		
Response Speed	400 kHz (Typical)		
Digital Outputs			
Channels	16-ch, 5 V/TTL		
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	400 kHz (Typical)		
General			
Bus Type	PCI Express x1		
Card ID	Yes (4-bit)		
Connectors	Female DB-37 x 1, 20-pin box header x 2		
Power Consumption	600 mA @ +5 V	800 mA @ +5 V	1400 mA @ +5 V
Operating Temperature	0 °C ~ +60 °C		
Humidity	5 ~ 85% RH, non-condensing		

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
VO_0	01	20 IO_0
VO_1	02	21 IO_1
VO_2	03	22 IO_2
VO_3	04	23 IO_3
A.GND	05	24 A.GND
VO_4	06	25 IO_4
VO_5	07	26 IO_5
VO_6	08	27 IO_6
VO_7	09	28 IO_7
A.GND	10	29 A.GND
VO_8	11	30 IO_8
VO_9	12	31 IO_9
VO_10	13	32 IO_10
VO_11	14	33 IO_11
A.GND	15	34 IO_12
VO_12	16	35 IO_13
VO_13	17	36 IO_14
VO_14	18	37 IO_15
VO_15	19	

Pin Assignment	Terminal No.	Pin Assignment
DO 0	01	02 DO 1
DO 2	03	04 DO 3
DO 4	05	06 DO 5
DO 6	07	08 DO 7
DO 8	09	10 DO 9
DO 10	11	12 DO 11
DO 12	13	14 DO 13
DO 14	15	16 DO 15
GND	17	18 GND
+5V	19	20 +12V

Pin Assignment	Terminal No.	Pin Assignment
DI 0	01	02 DI 1
DI 2	03	04 DI 3
DI 4	05	06 DI 5
DI 6	07	08 DI 7
DI 8	09	10 DI 9
DI 10	10	12 DI 11
DI 12	12	14 DI 13
DI 14	14	16 DI 15
GND	16	18 GND
+5V	18	20 +12V

Ordering Information

PEX-DA4 CR	PCI Express, 4-ch Analog Output board (RoHS) Includes one CA-4002 D-Sub connector Art. No. 131952
PEX-DA8 CR	PCI Express, 8-ch Analog Output board (RoHS) Includes one CA-4002 D-Sub connector Art. No. 131953
PEX-DA16 CR	PCI Express, 16-ch Analog Output board (RoHS) Includes one CA-4002 D-Sub connector Art. No. 131954

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