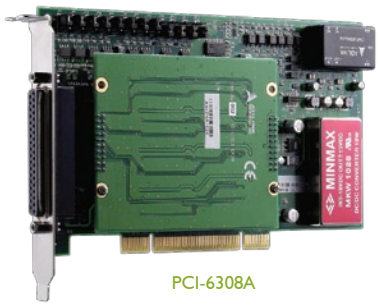
PCI-6308V/6308A

8-CH 12-Bit Isolated Analog Output Cards



PCI-6308A

Introduction

The PCI-6308V is a high-performance 12-bit analog output board with PCI interface. It provides 8 identical voltage output channels, with each channel capable of bipolar voltage outputs, unipolar voltage output and unipolar 0 to user defined voltage output. The PCI-6308V provides good monotonicity, low distortion, and low differential linearity error over long periods of time. The output ranges of the PCI-6308V are bipolar -10 to +10 V, unipolar 0 to 10 V and as well as user-defined ranges with external reference input, which are jumper selectable. The PCI-6308A device is the combination of the PCI-6308V with an 8-CH current output extended board, EXP-8A. The EXP-8A board includes 8 precision voltage-to-current converters.

ADLINK PCI-6308 series devices provide flexible and isolated analog output functionalities and are suitable for ATE, signal generation, industrial process control, servo control and other industrial control applications.

Features

- **Supports a 32-bit 5 V PCI bus**
- **12-bit D/A resolution (PCI-6308V & PCI-6308A)**
- **Isolated 8-CH 12-bit voltage output (PCI-6308V & PCI-6308A)**
- **Isolated 8-CH 12-bit current output (PCI-6308A)**
- **Bipolar or unipolar output ranges**
- **External reference input for user-defined ranges**
- **4-CH isolated digital outputs and 4-CH isolated digital inputs**
- **2500 VRMS optical isolation**
- **Compact, half-size PCB**

Operating Systems

- Windows 7/Vista/2000/XP/Server 2003
- Linux

Recommended Software

- AD-Logger
- VB.NET/VC.NET/VB/VC++/BCB/Delphi
- DAQBench

Driver Support

- DAQPilot for LabVIEW™
- DAQ-MTLB for MATLAB®
- PCIS-DASK for Windows
- PCIS-DASK/X for Linux

Specifications

Isolated Analog Output

- Number of channels: 8 voltage outputs (PCI-6308V & PCI-6308A)
- Resolution: 12 bits
- Output ranges (jumper selectable)

	Input Range
Bipolar	±10 V
Unipolar	0 to 10 V, 0 to EXTREF

- Settling time: 16 μs (20 V step)
- Maximum update interval: 90 μs for four channels simultaneously
- Gain error: ±0.2 % max.
- DNL: ±1 LSB
- Output driving capacity: ±5 mA
- Isolation voltage: 2500 VRMS
- Output initial status: 0 V (after RESET or POWER-ON)
- Data transfers: programmed I/O

Current Output (PCI-6308A)

- Number of channels: 8
- Resolution: 12 bits
- Output ranges (software programmable): 0-20 mA, 4-20 mA, and 5-25 mA
- Gain error: 0.3%
- Settling time: 17 μs (0-20 mA)
- Slew rate: 1.3 mA/μs
- DNL: ±1 LSB maximum
- Output resistance: 10 GΩ typical
- Current load resistance: 0 - 500 Ω
- Output initial status: 4 mA (after RESET or POWER-ON)
- Data transfer: programmed I/O

Isolated Digital Input

- Number of channels: 4
- Maximum input range: 24 V, non-polarity
- Digital logic levels
  - Input high voltage: 5 - 24 V
  - Input low voltage: 0 - 1.5 V
- Input resistance: 2.4 kΩ @ 0.5 W
- Isolation voltage: 2,500 VRMS
- Data transfers: programmed I/O

Isolated Digital Output

- Number of channels: 4 (PCI-6308V & PCI-6308A)
- Output type: photo-coupler transistors
- Supply voltage: 5 to 35 V
- Isolation voltage: 2,500 VRMS
- Data transfers: programmed I/O

General Specifications

- I/O connector: 37-pin D-sub female
- Operating temperature: 0°C to 55°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 5% to 95%, non-condensing
- Power requirements

Device	+5 V	+12 V
PCI-6308V	220 mA typical	175 mA typical
PCI-6308A	220 mA typical	250 mA typical 530 mA maximum

- Dimensions (not including connectors) 175 mm x 107 mm

Terminal Boards & Cables

DIN-37D-01

Terminal Board with One 37-pin D-sub Connector and DIN-Rail Mounting (Cables are not included.)

ACLD-9137-01

General-Purpose Terminal Board with One 37-pin D-sub Male Connector

ACL-10137-1MM

37-pin D-sub male/male cable, 1 M

ACL-10137-1MF

37-pin D-sub male/female cable, 1 M

*** For more information on mating cables, please refer to P2-61/62.**

Ordering Information

- **PCI-6308V**
  8-CH 12-Bit Isolated Voltage Output Card
- **PCI-6308A**
  8-CH 12-Bit Isolated Voltage & Current Output Card

Pin Assignment

DI3	1	20	DO3
DI2	2	21	DO2
DI1	3	22	DO1
DI0	4	23	DO0
DIGND	5	24	DOGND
ExtVref	6	25	-15Vout
+15Vout	7	26	AGND
AGND	8	27	A7
A6	9	28	V7
V6	10	29	AGND
AGND	11	30	A5
A4	12	31	V5
V4	13	32	A.GND
AGND	14	33	A3
A2	15	34	V3
V2	16	35	AGND
AGND	17	36	A1
A0	18	37	V1
V0	19		

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