



PCIe-8620

PCI Express, 200 kS/s, 8-ch, 16-bit Simultaneously Sampled Analog Input Board with 4-ch Isolated DIO

Introduction

The PCIe-8620 is a bus-type, isolated high-speed Analog Input board with isolated DI/O. The simultaneously sampled AD offers a mix of up to 8 single-ended 16-bit Analog Input channels with a 2 k Sample hardware FIFO. All channels feature a programmable input range of ± 10 V or ± 5 V with a sampling rate up to 200 kS/s per channel. The PCIe-8620 provides 4 isolated Digital Input channels and 4 isolated Digital Output channels. The isolation range of the board has been increased to 2500 VDC, making it one of the most cost-effective solutions when considering isolated AD with DI/O boards.

PCIe-8620 also includes a second-order anti-alias analog filter where the -3 dB frequency for the ± 5 V input range is typically 15 kHz, and is typically 23 kHz for the ± 10 V input range.

The PCIe-8620 is a low-profile PCI Express board that is suitable for computers with limited space, and is also suitable for standard-size computers since the board is shipped with both full-height and low-profile brackets.



Full-height Bracket ▲

Low-profile Bracket ▲

Pin Assignments

Pin Assignment	Terminal No.	Pin Assignment
AD0	01	14 AGND
AD1	02	15 AGND
AD2	03	16 AGND
AD3	04	17 AGND
AD4	05	18 AGND
AD5	06	19 AGND
AD6	07	20 AGND
AD7	08	21 DGND
DGND	09	22 DIN0
DIN1	10	23 DIN2
DIN3	11	24 DOUT0
DOUT1	12	25 DOUT2
DOUT3	13	

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Features

- PCI Express x1 Interface, Full-profile or Low-profile
- 4-channel Isolated Digital Input
- 4-channel Isolated Digital Output
- 8 Single-ended Analog Input channels
 - Synchronous Sample and Hold
 - Analog Input Range: ± 10 V, ± 5 V
 - 16-bit, 200 kS/s Sampling Rate for each channel
 - Hardware FIFO for Analog Input with a total of 2048 Samples
 - Built-in MagicScan Controller



Software

Drivers

- 32/64-bit Windows 10/11

Sample Programs

- VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB



Hardware Specifications

Analog Input	
Isolation Voltage	2500 Vdc (Bus-type)
Channels	8 Single-ended
Resolution	16-bit
Sampling Rate	200 KS/s (Each Channel)
Bipolar Input	± 10 V, ± 5 V
FIFO Size	2 K Samples (Total)
Accuracy	0.05% of FSR ± 1 LSB @ 25°C, ± 10 V
Digital Input	
Channels	4
Isolation Voltage	2500 VDC
Digital Output	
Channels	4
Isolation Voltage	2500 Vdc
General	
Bus Type	PCI Express x1
Card ID	Yes (4-bit)
Connectors	Female DB25 x 1
Dimensions (W x L x D)	Full-profile: 120 mm x 107 mm x 22 mm Low-profile: 80 mm x 107 mm x 22 mm
Power Consumption	500 mA @ +3.3 V; 200 mA @ +12 V
Operating Temperature	0°C to +60°C
Humidity	5 to 85% RH, Non-condensing

Ordering Information

PCIe-8620 CR	PCI Express, 200 kS/s, 8-ch, 16-bit Simultaneously Sampled Analog Input Board with 4-ch Isolated DIO (RoHS) Includes one CA-PC25M D-Sub Connector and One Low-profile bracket
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Accessories

 CA-2520 CR	DB25 Male/90° to Male/90° Cable, 2M (RoHS)
 DN-25 CR	DIN-Rail Mountable I/O Connector Block with 25/9-pin D-sub Connector for PCIe-8620 (RoHS) Include: one CA-0920 Cable and one Ca-2520 Cable

