

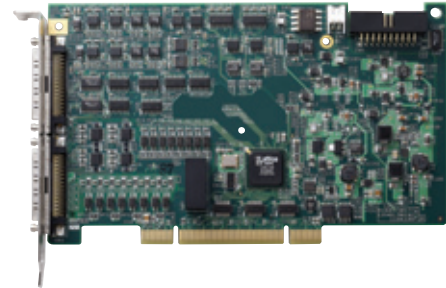


PCI-6202

4-CH 16-Bit 1 MS/s Analog Output & 32-CH Isolation DIO Card

Features

- Supports a 32-bit 3.3 V or 5 V PCI bus
- Hardware-based waveform generation
- DNL Linearity less than 1 LSB
- Digital triggering for waveform generation
- 16-CH isolation digital inputs & 16-CH isolation digital outputs
- 8-CH TTL DI and 8-CH TTL DO
- 2-CH timer/counter, base clock: 40 MHz
- 4-CH PWM output
- 3-CH encoder inputs, supporting AB phase and CW/CCW
- Multiple card synchronization through SSI (System Synchronization Interface) bus
- **Operating Systems**
 - Windows Vista/XP/2000/2003
 - Linux
- **Recommended Software**
 - VB.NET/VC.NET/VB/VC++/BCB/Delphi
 - DAQBench
- **Driver Support**
 - DAQPilot for Windows
 - DAQ-LVIEW PnP for LabVIEW™
 - DAQ-MTLB for MATLAB®
 - PCIS-DASK for Windows
 - PCIS-DASK/X for Linux



Introduction

The ADLINK PCI-6202 is a 4-CH, 16-bit high resolution voltage output card with hardware timed waveform generation. Four analog output channels can update simultaneously and support up to 1 MS/s update rate per channel. PCI-6202 features excellent linearity (DNL < 1 LSB), which is suitable for dynamic signal simulation and control applications requiring high accuracy through voltage output. Furthermore, PCI-6202 provides additional I/O control lines for system integration, such as 16-CH isolated digital input and 16-CH isolated output, 8-CH TTL DI and 8-CH TTL DO, 3-CH encoder inputs, and 4-CH PWM outputs. Combined, these I/O functionalities, solid voltage output linearity, and high accuracy, make PCI-6202 the best single-board solution for both equipment manufacturers and laboratory research applications.

Specifications

Analog Output

- Resolution: 16-bits
- Number of channels: Four (simultaneous update)
- Maximum update rate: 1 MS/s
- FIFO buffer size: 512 Samples (4-CH Sharing)
- Output range: ±10 V
- DNL: Less than ±1 LSB
- Offset Error: 0.3 mV
- Positive Gain Error: 0.3 mV
- Negative Gain Error: 0.3 mV
- Settling Time: 3 μs
- Slew Rate: 20 V/μs
- Rise Time: 0.67 μs
- Falling Time: 0.705 μs
- Output Current Capacity: 5 mA
- Trigger source: Software, External digital, SSI bus
- Data Transfer: Software polling, DMA

Isolated Digital Input

- Number of channels: 16
- Maximum input range: 24 V, non-polarity
- Digital logic level
 - Input high voltage: 10-24 V
 - Input low voltage: 0-1.5 V
- Isolation voltage: 2500 V_{RMS}

Isolated Digital Output

- Number of channels: 16
- Source current limitation: 500 mA for one channel @ 100% duty
- Supply voltage: 5-35 V_{DC}
- Isolation voltage: 2500 V_{RMS}

Encoder Input

- Number of channels: Three
- Encoder type
 - CW/CCW encoder
 - x1 AB phase encoder
 - x2 AB phase encoder
 - x4 AB phase encoder

Function I/O

- Digital I/O: Eight DO (3.3 V TTL Level)/Eight DI (3.3 V or 5 V TTL Level)
- General Timer/Counter: Two 32-bit, Base clock: 80 MHz, external to 10 MHz
- Pulse Generation: Four PWM Outputs
 - Single pulse generation
 - Pulse train generation
- AFIO/AFI1: D/A Convert Clock or Start Trigger

General Specifications

- PCI Bus: 5 V and 3.3 V universal PCI bus
- I/O Connector: Two 68-pin SCSI-VHDCI female
- Operation temperature: 0°C to 55°C
- Storage temperature: -20°C to 70°C
- Relative humidity: 5% to 95%, non-condensing
- Power requirements:

	+5 V	+12 V
	500 mA typical	110 mA typical

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

Termination Boards

DIN-68S-01

Termination board with one 68-pin SCSI-II connector and DIN-Rail Mounting (Cables are not included. For more information on mating cables, refer to Section 12.)

SSI Bus Cables

(for multiple card synchronization)

- **ACL-SSI-2**
SSI Bus cable for two devices
- **ACL-SSI-3**
SSI Bus cable for three devices
- **ACL-SSI-4**
SSI Bus cable for four devices

Pin Assignment

CN1			CN2		
DO_0	1 35	GPTC_OUT0	IDI_0	1 35	IDI_8
DO_1	2 36	GPTC_GATE0	IDI_1	2 36	IDI_9
DO_2	3 37	GPTC_UD0	IDI_2	3 37	IDI_10
DO_3	4 38	GPTC_AUX0	IDI_3	4 38	IDI_11
DO_4	5 39	GPTC_CLK0	IDI_4	5 39	IDI_12
DO_5	6 40	GPTC_OUT1	IDI_5	6 40	IDI_13
DO_6	7 41	GPTC_GATE1	IDI_6	7 41	IDI_14
DO_7	8 42	GPTC_UD1	IDI_7	8 42	IDI_15
DGND	9 43	GPTC_AUX1	COM	9 43	COM
DGND	10 44	GPTC_CLK1	COM	10 44	COM
DI_0	11 45	DGND	EA0+	11 45	EA1+
DI_1	12 46	DGND	EA0-	12 46	EA1-
DI_2	13 47	DGND	EB0+	13 47	EB1+
DI_3	14 48	DGND	EB0-	14 48	EB1-
DI_4	15 49	DGND	EZ0+	15 49	EZ1+
DI_5	16 50	DGND	EZ0-	16 50	EZ1-
DI_6	17 51	DGND	EORG0	17 51	EORG1
DI_7	18 52	DGND	EA2+	18 52	EZ2+
DGND	19 53	PWM_0	EA2-	19 53	EZ2-
DGND	20 54	PWM_1	EB2+	20 54	EORG2
DGND	21 55	PWM_2	EB2-	21 55	Ext. 24V
DGND	22 56	PWM_3	Ext. GND	22 56	Ext. 24V
DGND	23 57	AFIO	IGND	23 57	Ext. GND
AGND	24 58	AFI1	IGND	24 58	IGND
AGND	25 59	NC	VDD	25 59	IGND
AGND	26 60	AGND	VDD	26 60	ISO5V
AGND	27 61	AGND	IDO_0	27 61	IDO_8
AGND	28 62	AGND	IDO_1	28 62	IDO_9
AGND	29 63	AGND	IDO_2	29 63	IDO_10
AGND	30 64	AGND	IDO_3	30 64	IDO_11
AO_CH0	31 65	AGND	IDO_4	31 65	IDO_12
AO_CH1	32 66	AGND	IDO_5	32 66	IDO_13
AO_CH2	33 67	AGND	IDO_6	33 67	IDO_14
AO_CH3	34 68	AGND	IDO_7	34 68	IDO_15

Ordering Information

- **PCI-6202**
4-CH 16-Bit 1 MS/s Analog Output & 32-CH Isolation DIO Card

- 1 Software Solutions
- 2 PXI/CompactPCI Platforms
- 3 Modular Instrument
- 4 PXI/CompactPCI Modules
- 5 Bus Interface
- 6 GPIB Interface
- 7 PCI/PCI Express® DAQ Cards
- 8 PCI/PCI Express® DIO Cards
- 9 PC/104-Plus Modules
- 10 ISA DAS/ DIO Cards
- 11 System Product
- 12 Wiring Termination Boards
- 13 Motion, HSL, Vision, COM & GEME
- 14 Remote I/O Modules
- 15 Industrial Computers