PCI/PCIe-7200

12 MB/s High-Speed 32-CH DI & 32-CH DO Cards



PCI-7200



PCIe-7200

Introduction

ADLINK's PCI/PCIe-7200 are high-speed digital I/O cards consisting of 32 digital input channels, and 32 digital output channels. High-performance designs and the state-of-the-art technology make these cards suitable for high-speed data transfer and pattern generation applications.

The PCI/PCIe-7200 performs high-speed data transfers using bus-mastering DMA via 32-bit PCI bus architecture. The maximum data transfer rates can be up to 12 MB per second. Several digital I/O transfer modes are supported, such as direct programmed I/O control, timer pacer control, external clock mode and handshaking mode. They are very suitable for interfacing high-speed peripherals with your computer system.

Features

- **Supports a 32-bit 5 V PCI bus (PCI-7200)**
- **x1 lane PCI Express® interface (PCIe-7200)**
- **32-CH TTL digital inputs and 32-CH TTL digital outputs**
- **Up to 12 MB/s transfer rate**
- **Bus-mastering DMA for both digital inputs and outputs**
- **Onboard programmable timer pacer clock**
- **Supports handshaking digital I/O transfer mode**
- **Multiple programmable interrupt sources**
- **5 V power available on connectors**
- **Compact, half-size PCB (PCI-7200/PCIe-7200)**

Operating Systems
- Windows 7/Vista/XP/2000/2003 Server
- 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

Digital I/O

- Number of channels:
  - 32-CH digital inputs
  - 32-CH digital outputs
- Compatibility: 5 V/TTL
- Data transfer rate
  - 12 MB/s with external 3 MHz clock, handshaking or external strobe
  - 8 MB/s with internal 2 MHz timer pacer
- Digital logic levels
  - Input high voltage: 2-5.25 V
  - Input low voltage: 0-0.8 V
  - Output high voltage: 2.7 V minimum
  - Output low voltage: 0.5 V maximum
- Output driving capacity
  - Source current: 3.0 mA
  - Sink current: 24 mA
- Data transfers:
  - programmed I/O, interrupt, bus-mastering DMA

Programmable Counter

- Base clock: 4 MHz
- Timer 0: DI clock source
- Timer 1: DO clock source
- Timer 2: Base clock source of timer 0 & 1

Interrupt

- Sources:
  EO_ACK, EI_REQ, Timer 0, Timer 1 or Timer 2

General Specifications

- I/O connector
  - PCI/PCIe-7200
    - 37-pin D-sub female
    - 40-pin Header
- Operating temperature: 0°C to 60°C
- Storage temperature: -20°C to 80°C
- Relative humidity: 5% to 95%, non-condensing
- Power requirements

Device	Power Consumption
PCI-7200	5 V @ 720 mA typical
PCIe-7200	12 V @ 200 mA 3.3 V @ 500 mA

- Dimensions (not including connectors)
  - 148 mm x 102 mm (PCI/PCIe-7200)

Terminal Boards & Cables

PCI/PCIe-7200:

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

ACLD-9137F-01
General-Purpose Terminal Board with One 37-pin D-sub Female 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-7200
12 MB/s High-Speed 32-CH DI & 32-CH DO Card

PCIe-7200
12 MB/s High-Speed 32-CH DI & 32-CH DO PCI Express® card

Pin Assignment

PCI/PCIe-7200

CN1

DI16	1	2	DO16
DI17	3	4	DO17
DI18	5	6	DO18
DI19	7	8	DO19
DI20	9	10	DO20
DI21	11	12	DO21
DI22	13	14	DO22
DI23	15	16	DO23
DI24	17	18	DO24
DI25	19	20	DO25
DI26	21	22	DO26
DI27	23	24	DO27
DI28	25	26	DO28
DI29	27	28	DO29
DI30	29	30	DO30
DI31	31	32	DO31
+5Vout	33	34	GND
O-ACK	35	36	O-TRG
O-REQ	37	38	N/C
N/C	39	40	N/C

CN2

DI0	1	20	DO0
DI1	2	21	DO1
DI2	3	22	DO2
DI3	4	23	DO3
DI4	5	24	DO4
DI5	6	25	DO5
DI6	7	26	DO6
DI7	8	27	DO8
DI8	9	28	DO7
DI9	10	29	DO9
DI10	11	30	DO10
DI11	12	31	DO11
DI12	13	32	DO12
DI13	14	33	DO13
DI14	15	34	DO14
DI15	16	35	DO15
+5Vout	17	36	GND
I-ACK	18	37	I-TRG
I-REQ	19		

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