

PCI/PCIe/cPCI-7200

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



PCI EXPRESS® **PCI** **CompactPCI**

Introduction

ADLINK's PCI/PCIe/cPCI-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/cPCI-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)
- 3U EuroCard form factor, CompactPCI compliant (PICMG 2.0 R2.1) (cPCI-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
- Linux

Recommended Software

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

Driver Support

- DAQPilot for Windows
- 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
 - cPCI-7200
 - One 100-pin SCSI-II female
- 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
cPCI-7200	5 V @ 800 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)
 - 160 mm x 100 mm (cPCI-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-IMM

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

ACL-10137-IMF

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

cPCI-7200:

DIN-100S-01

Terminal Board with One 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included.)

ACL-102100-I

100-pin SCSI-II cable (mating with AMP-787082-9), 1 M

* For more information on mating cables, please refer to P2-59/60.

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

cPCI-7200

12 MB/s High-Speed 32-CH DI & 32 CH DO Module Card for Low-Profile PCI

Pin Assignment

PCI/PCIe-7200

CNI	
DI16	1
DI17	2
DI18	3
DI19	4
DI20	5
DI21	6
DI22	7
DI23	8
DI24	9
DI25	10
DI26	11
DI27	12
DI28	13
DI29	14
DI30	15
DI31	16
DI32	17
DI33	18
DI34	19
DI35	20
DI36	21
DI37	22
DI38	23
DI39	24
DI40	25
DI41	26
DI42	27
DI43	28
DI44	29
DI45	30
DI46	31
DI47	32
DI48	33
DI49	34
DI50	35
DI51	36
DI52	37
DI53	38
DI54	39
DI55	40

cPCI-7200

CNI	
DO0	1
DO1	2
DO2	3
DO3	4
DO4	5
DO5	6
DO6	7
DO7	8
DO8	9
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