

# PCI-7200/LPCI-7200S

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

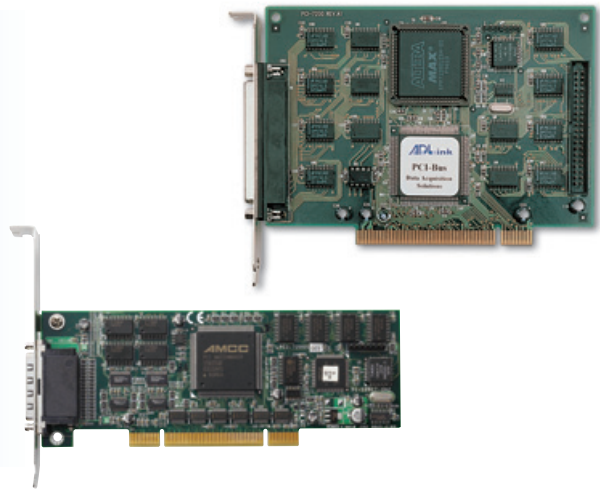
### Features

- Support a 32-bit 5V PCI bus (PCI-7200)
- Support a 32-bit 3.3V or 5V PCI bus (LPCI-7200S)
- 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
- On-board programmable timer pacer clock
- Timed digital input sampling controlled by an on-board timer
- Timed digital output update controlled by an on-board timer
- Supports handshaking digital I/O transfer mode
- Multiple programmable interrupt sources
- 5 V power available on connectors
- Compact, half size PCB (PCI-7200)
- Compact, low-profile PCI size PCB (LPCI-7200)

- **Operating Systems**
  - Windows 98/NT/2000/XP/2003
  - Linux
  - DOS

- **Recommended Software**
  - VB/VC++/BCB/Delphi
  - DAQBench
  - DAQCreator

- **Driver Support**
  - DAQ-LVIEW PnP for LabVIEW
  - DAQ-MTLB for MATLAB
  - DAQBOY for Windows
  - PCIS-DASK for Windows
  - PCIS-DASK/X for Linux



### Introduction

ADLINK PCI-7200/LPCI-7200 is a high-speed digital I/O card. It consists of 32 digital input channels, and 32 digital output channels. High performance designs and the state-of-the-art technology make this card suitable for high speed data transfer and pattern generation applications.

The PCI-7200/LPCI-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 12MB 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. It is very suitable for interfacing high-speed peripherals with your computer system.

### 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-7200
    - ♦ 37-pin D-sub female
    - ♦ 40-pin ribbon male
  - LPCI-7200S
    - ♦ 68-pin VHDCI female x2 (stack)
- Operating temperature: 0 to 60°C
- Storage temperature: -20 to 80°C
- Relative humidity: 5 to 95%, noncondensing

#### Power requirements

Device	+3.3V	+5 V
PCI-7200	--	720 mA typical
LPCI-7200S	120 mA	500 mA

#### Dimensions (not including connectors)

- 148 mm x 102 mm (PCI-7200)
- 168 mm x 64 mm (LPCI-7200S)

### Termination Boards

#### PCI-7200:

##### ■ DIN-37D

Termination Board with a 37-pin D-sub Connector and Din-Rail Mounting (Including One 1-meter ACL-10137 Cable)

##### ■ ACLD-9137

General-Purpose Termination Board with a 37-pin D-sub Male Connector

##### ■ ACLD-9137F

General-Purpose Termination Board with a 37-pin D-sub Female Connector

#### LPCI-7200S:

##### ■ DIN-68S/1M

Termination Board with 68-pin SCSI-II Connector and Din-Rail Mounting(Including One 1-meter ACL-10568 Cable)

### Ordering Information

- **PCI-7200**  
12 MB/s High Speed 32-CH DI & 32-CH DO Card
- **LPCI-7200S**  
12 MB/s High Speed 32-CH DI & 32 CH DO Card for Low-Profile PCI

### Pin Assignment

PCI-7200				LPCI-7200S			
CN1				CN1A			
D16	1	2	DO16	DIN0	A1	A35	GND
D17	3	4	DO17	DIN1	A2	A36	GND
D18	5	6	DO18	DIN2	A3	A37	GND
D19	7	8	DO19	DIN3	A4	A38	GND
D20	9	10	DO20	DIN4	A5	A39	GND
D21	11	12	DO21	DIN5	A6	A40	GND
D22	13	14	DO22	DIN6	A7	A41	GND
D23	15	16	DO23	DIN7	A8	A42	GND
D24	17	18	DO24	DIN8	A9	A43	GND
D25	19	20	DO25	DIN9	A10	A44	GND
D26	21	22	DO26	DIN10	A11	A45	GND
D27	23	24	DO27	DIN11	A12	A46	GND
D28	25	26	DO28	DIN12	A13	A47	GND
D29	27	28	DO29	DIN13	A14	A48	GND
D30	29	30	DO30	DIN14	A15	A49	GND
D31	31	32	DO31	DIN15	A16	A50	GND
+5Vout	33	34	GND	DIN16	A17	A51	GND
O-ACK	35	36	O-TRG	DIN17	A18	A52	GND
O-REQ	37	38	N/C	DIN18	A19	A53	GND
N/C	39	40	N/C	DIN19	A20	A54	GND
				DIN20	A21	A55	GND
				DIN21	A22	A56	GND
				DIN22	A23	A57	GND
				DIN23	A24	A58	GND
				DIN24	A25	A59	GND
				DIN25	A26	A60	GND
				DIN26	A27	A61	GND
				DIN27	A28	A62	GND
				DIN28	A29	A63	GND
				DIN29	A30	A64	GND
				DIN30	A31	A65	GND
				DIN31	A32	A66	GND
				I_REQ	A33	A67	I-ACK
				I_TRG	A34	A68	+5Vout

CN2				CN1B			
D10	1	20	DO0	DOUT0	B1	B35	GND
D11	2	21	DO1	DOUT1	B2	B36	GND
D12	3	22	DO2	DOUT2	B3	B37	GND
D13	4	23	DO3	DOUT3	B4	B38	GND
D14	5	24	DO4	DOUT4	B5	B39	GND
D15	6	25	DO5	DOUT5	B6	B40	GND
D16	7	26	DO6	DOUT6	B7	B41	GND
D17	8	27	DO8	DOUT7	B8	B42	GND
D18	9	28	DO7	DOUT8	B9	B43	GND
D19	10	29	DO9	DOUT9	B10	B44	GND
D10	11	30	DO10	DOUT10	B11	B45	GND
D11	12	31	DO11	DOUT11	B12	B46	GND
D12	13	32	DO12	DOUT12	B13	B47	GND
D13	14	33	DO13	DOUT13	B14	B48	GND
D14	15	34	DO14	DOUT14	B15	B49	GND
D15	16	35	DO15	DOUT15	B16	B50	GND
+5Vout	17	36	GND	DOUT16	B17	B51	GND
I-ACK	18	37	I-TRG	DOUT17	B18	B52	GND
I-REQ	19			DOUT18	B19	B53	GND
				DOUT19	B20	B54	GND
				DOUT20	B21	B55	GND
				DOUT21	B22	B56	GND
				DOUT22	B23	B57	GND
				DOUT23	B24	B58	GND
				DOUT24	B25	B59	GND
				DOUT25	B26	B60	GND
				DOUT26	B27	B61	GND
				DOUT27	B28	B62	GND
				DOUT28	B29	B63	GND
				DOUT29	B30	B64	GND
				DOUT30	B31	B65	GND
				DOUT31	B32	B66	GND
				O_REQ	B33	B67	I-ACK
				O_TRG	B34	B68	+5Vout