

# PCI-7200/LPCI-7200S

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

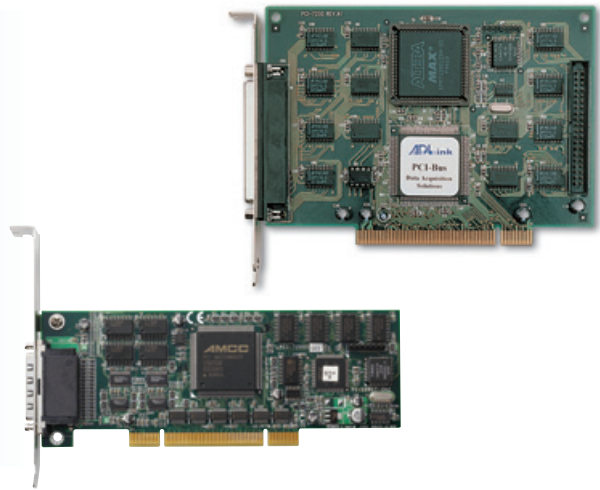
### Features

- 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

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

#### LPCI-7200S

CN1A		
DINO	A1 A35	GND
DIN1	A2 A36	GND
DIN2	A3 A37	GND
DIN3	A4 A38	GND
DIN4	A5 A39	GND
DIN5	A6 A40	GND
DIN6	A7 A41	GND
DIN7	A8 A42	GND
DIN8	A9 A43	GND
DIN9	A10 A44	GND
DIN10	A11 A45	GND
DIN11	A12 A46	GND
DIN12	A13 A47	GND
DIN13	A14 A48	GND
DIN14	A15 A49	GND
DIN15	A16 A50	GND
DIN16	A17 A51	GND
DIN17	A18 A52	GND
DIN18	A19 A53	GND
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

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	

#### CN1B

DOUT0	B1 B35	GND
DOUT1	B2 B36	GND
DOUT2	B3 B37	GND
DOUT3	B4 B38	GND
DOUT4	B5 B39	GND
DOUT5	B6 B40	GND
DOUT6	B7 B41	GND
DOUT7	B8 B42	GND
DOUT8	B9 B43	GND
DOUT9	B10 B44	GND
DOUT10	B11 B45	GND
DOUT11	B12 B46	GND
DOUT12	B13 B47	GND
DOUT13	B14 B48	GND
DOUT14	B15 B49	GND
DOUT15	B16 B50	GND
DOUT16	B17 B51	GND
DOUT17	B18 B52	GND
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