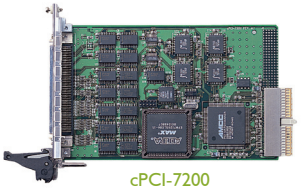
PCI/PCIe/cPCI-7200

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


PCI-7200


cPCI-7200


PCIe-7200

NEW

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

- **Support 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 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	5V @ 720 mA typical
cPCI-7200	5V @ 800 mA typical
PCIe-7200	12V @ 200 mA 3.3V @ 500 mA

- Dimensions (not including connectors)
  - 148 mm x 102 mm (PCI/PCIe-7200)
  - 160 mm x 100 mm (cPCI-7200)

Terminal Boards

PCI/PCIe-7200:

- DIN-37D-01
  Terminal Board with One 37-pin D-sub Connector and DIN-Rail Mounting (Cables are not included. For information on mating cables, refer to Section 14, Accessories.)
- 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

cPCI-7200:

- DIN-100S-01
  Terminal Board with One 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included. For information on mating cables, refer to Section 14, Accessories.)

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

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		

cPCI-7200

CN1

DO0	1	51	DO1
DO2	2	52	DO3
DO4	3	53	DO5
DO6	4	54	DO7
DO8	5	55	DO9
DO10	6	56	DO11
DO12	7	57	DO13
DO14	8	58	DO15
GND	9	59	GND
DO16	10	60	DO17
DO18	11	61	DO19
DO20	12	62	DO21
DO22	13	63	DO23
DO24	14	64	DO25
DO26	15	65	DO27
DO28	16	66	DO29
DO30	17	67	DO31
GND	18	68	GND
+5Vout	19	69	GND
+5Vout	20	70	GND
AUXIN0	21	71	AUXOUT0
AUXIN1	22	72	AUXOUT1
I_TRG	23	73	GND
I_REQ	24	74	GND
I_ACK	25	75	GND
O_TRG	26	76	GND
O_REQ	27	77	GND
O_ACK	28	78	GND
AUXIN2	29	79	AUXOUT2
AUXIN3	30	80	AUXOUT3
+5Vout	31	81	GND
+5Vout	32	82	GND
GND	33	83	GND
DIN0	34	84	DIN1
DIN2	35	85	DIN3
DIN4	36	86	DIN5
DIN6	37	87	DIN7
DIN8	38	88	DIN9
DIN10	39	89	DIN11
DIN12	40	90	DIN13
DIN14	41	91	DIN15
GND	42	92	GND
DIN16	43	93	DIN17
DIN18	44	94	DIN19
DIN20	45	95	DIN21
DIN22	46	96	DIN23
DIN24	47	97	DIN25
DIN26	48	98	DIN27
DIN28	49	99	DIN29
DIN30	50	100	DIN31