PCI-7396/7348

96/48-CH High Driving DIO Cards

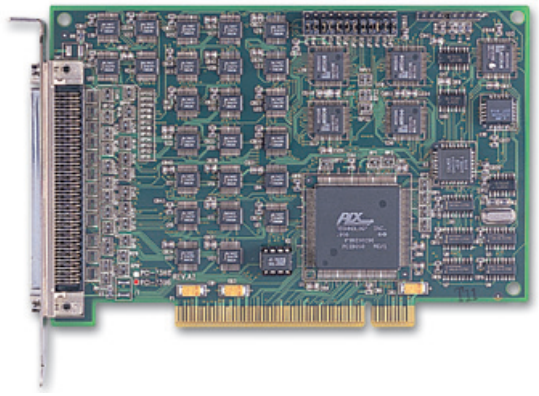
Features

- Supports a 32-bit 5 V PCI bus
- 96-CH digital TTL inputs/outputs (PCI-7396)
- 48-CH digital TTL inputs/outputs (PCI-7438)
- Higher driving up to 48 mA (sink) and 15 mA (source)
- Emulates 4/2 industry standard 8255 PPI (mode 0)
- Ports are independently configurable as input or output
- External latch signal available for digital inputs
- Output status read back
- Known power-up states
- On-board 8254 timer/counter chip
- 1-CH 16-bit event counter for external signal
- 1-CH 32-bit timer for timed interrupt generation
- Change-of-state (COS) interrupt
- Multiple programmable interrupt sources
- Compact, half-size PCB

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

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

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



Introduction

The PCI-7396 and PCI-7348 are 96/48-bit parallel digital input/output (DIO) cards designed for industrial applications. The PCI-7396 and PCI-7248 emulate four/two 8255 Programmable Peripheral Interface (PPI) chips. Each PPI offers 3 8-bit DIO ports which can be accessed simultaneously. The total 12/6 ports can be configured as input or output independently.

The PCI-7396 and PCI-7348 devices feature external trigger to latch the digital input data, and also provides "Change of State" (COS) interrupt, which means when any of the digital inputs changes its state, an interrupt will be generated. Users could power up the PCI-7396 and PCI-7348 digital I/O lines in a user-defined state - either high or low, by simply setting the pull-high/pull-low resistors with a jumper.

Specifications

Digital I/O
- Number of channels
  - 96 input/output (PCI-7396)
  - 48 input/output (PCI-7348)
- Compatibility: 5 V/TTL
- Power-on state: input
- Digital logic levels
  - Input high voltage: 2-5.25 V
  - Input low voltage: 0-0.8 V
  - Output high voltage: 2.4 V minimum
  - Output low voltage: 0.5 V maximum
- Output driving capacity
  - Source current: 15 mA
  - Sink current: 48 mA
- Data transfers: programmed I/O

Interrupt
- Interrupt #0 sources
  - P1C0
  - P1C3
  - 16-bit event counter
  - Change-of-state detection on any bit of PPI 1 & PPI 2
- Interrupt #1 sources
  - P2C0
  - P2C3
  - 32-bit timer (based on 2MHz internal clock),
  - Change-of-state detection on any bit of PPI 3 & PPI 4

General Specifications
- I/O connector : 100-pin SCSI-II female
- Operating temperature: 0 to 60˚C
- Storage temperature: -20 to 80˚C
- Relative humidity: 5 to 95%, noncondensing
- Power requirements

Device	+5 V
PCI-7396	450 mA typical
PCI-7348	350 mA typical

- Dimensions (not including connectors)
  158 mm x 107 mm

Termination Boards

- **DIN-100S**
  Termination Board with a 100-pin SCSI-II Connector and DIN-Rail Mounting (Including One 1-meter ACL-102100 Cable)

- **DIN-96DI**
  96-CH Isolated DI Termination Board with DIN-Rail Mounting (Including One 1-meter ACL-102100 Cable)

- **DIN-96DO**
  96-CH Isolated DO Termination Board with DIN-Rail Mounting (Including One 1-meter ACL-102100 Cable)

Ordering Information

- **PCI-7396**
  96-CH High Driving DIO Card
- **PCI-7348**
  48-CH High Driving DIO Card

Pin Assignment

P1A0	1	51	P3A0/EVENT
P1A1	2	52	P3A1
P1A2	3	53	P3A2
P1A3	4	54	P3A3
P1A4	5	55	P3A4
P1A5	6	56	P3A5
P1A6	7	57	P3A6
P1A7	8	58	P3A7
P1B0	9	59	P3B0
P1B1	10	60	P3B1
P1B2	11	61	P3B2
P1B3	12	62	P3B3
P1B4	13	63	P3B4
P1B5	14	64	P3B5
P1B6	15	65	P3B6
P1B7	16	66	P3B7
P1C0	17	67	P3C0
P1C1	18	68	P3C1
P1C2	19	69	P3C2
P1C3	20	70	P3C3
P1C4	21	71	P3C4
P1C5	22	72	P3C5
P1C6	23	73	P3C6
P1C7	24	74	P3C7
GND	25	75	GND
P2A0	26	76	P4A0
P2A1	27	77	P4A1
P2A2	28	78	P4A2
P2A3	29	79	P4A3
P2A4	30	80	P4A4
P2A5	31	81	P4A5
P2A5	32	82	P4A6
P2A7	33	83	P4A7
P2B0	34	84	P4B0
P2B1	35	85	P4B1
P2B2	36	86	P4B2
P2B3	37	87	P4B3
P2B4	38	88	P4B4
P2B5	39	89	P4B5
P2B6	40	90	P4B6
P2B7	41	91	P4B7
P2C0	42	92	P4C0
P2C1	43	93	P4C1
P2C2	44	94	P4C2
P2C3	45	95	P4C3
P2C4	46	96	P4C4
P2C5	47	97	P4C5
P2C6	48	98	P4C6
P2C7	49	99	P4C7/EXTTRG
GND	50	100	GND