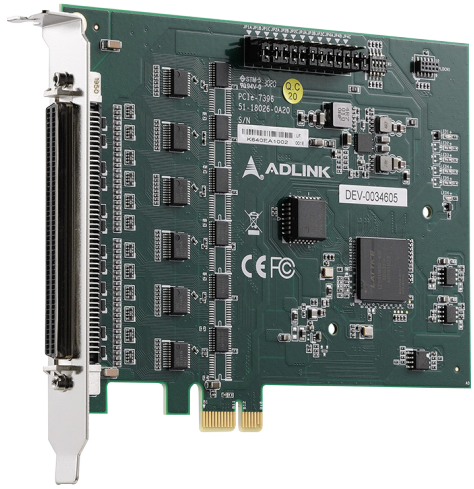
PCIe-7396

96-CH High-Driving DIO Card

Features

- Supports a 32-Bit 5 V PCI Express bus
- 96-CH digital TTL inputs/outputs
- High 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
- Onboard 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



Introduction

The PCIe-7396 is a 96-bit parallel digital input/output (DIO) card designed for industrial applications. The plug and play feature of PCI Express Bus architecture makes it easy for users to install the PCIe-7396 on their systems quickly.

The PCIe-7396 emulates two/four 8255 Programmable Peripheral Interface (PPI) chips. Each PPI offers three 8-bit DIO ports which can be accessed simultaneously. The total 6/12 ports can be programmed as input or output independently.

The PCIe-7396 supports external triggering to capture digital input data. The "Change of State" (COS) interrupt is provided so that when any digital input changes its state, an interrupt will be generated for the user to handle the external event.

Software Support

- **Supported Operating System**
  Windows® 7/10 (x64/x86)
  Linux for Ubuntu 18.04 & 20.04
  - 4.15.0-20-generic, 5.4.0-26-generic, 5.4.0-47-generic
- **Driver and SDK**
  LabVIEW, C/C++, Visual Basic, Visual Studio.NET
- **Software Utility**
  ACE, Soft-Front Panel

Ordering Information

- **PCIe-7396**
  96-CH High-Driving DIO Card

Terminal Boards & Cables

- **DIN-100S-01**
  Terminal Board with One 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included.)
- **DIN-96DI-01**
  96-CH Isolated DI Terminal Board with DIN-Rail Mounting (Cables are not included.)
- **ACL-102100-1**
  100-pin SCSI-II cable (mating with AMP-787082-9), 1 M

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Specifications

Digital I/O

- Number of channels
  - 96 input/output
- 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 2 MHz internal clock),
  - Change-of-state detection on any bit of PPI 3 & PPI 4

General Specifications

- I/O connector : One 100-pin SCSI-II female
- Operating temperature: 0˚C to 60˚C (32˚F to 140˚F)
- Storage temperature: -20˚C to 80˚C (-4˚F to 176˚F)
- Relative humidity: 5% to 95%, non-condensing
- Power requirements

Device	+5 V
PCIe-7396	450 mA typical

- Dimensions (not including connectors)
  138.96 mm x 98.4 mm

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