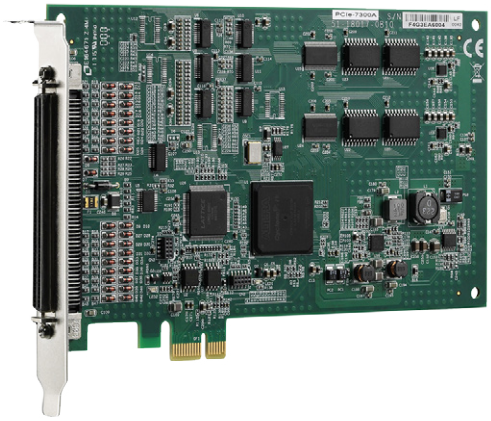
PCIe-7300A

32-ch 80 MB/s High-Speed Digital I/O Cards

Features

- x1 lane PCI Express® Interface
- 32-ch 5 V/TTL digital inputs/outputs
- 20 MHz (80 MB/s) maximum transfer rate
- 8, 16, or 32-bit transfers
- 4 auxiliary DI & 4 auxiliary DO
- Onboard 64 KB FIFO
- Onboard programmable timer pacer clock
- Timed digital input sampling controlled by internal timer or external clock
- Independent trigger signals to start data acquisition and pattern generation
- Scatter-gather DMA
- Supports handshaking digital I/O transfer mode
- Repeated digital pattern generation from FIFO
- Active terminators



Supported Operating System

- Windows 7/10, Linux

Driver and SDK

- LabVIEW, C/C++, Visual Studio.NET, MATLAB

Software Utility

- AD-Logger

Terminal Boards & Cables

- **DIN-100S-01**
  Terminal Board with One 100-pin SCSI-II Connector and DIN-Rail Mounting (Cables are not included.)

Note: Legacy DIN-502S can be replaced by two DIN-50S-01 and ACL-10252-1 (100-Pin to two 50-Pin Cable, 1 M)

- **ACL-102100-1**
  100-pin SCSI-II cable (mating with AMP-787082-9), 1 M

* For more information on matinsg cables, please refer to P3- 48/49.

Ordering information

- **PCIe-7300A**
  80 MB/S High-Speed 32-ch Digital I/O PCIe Card

Specifications

Digital I/O

- Numbers of channel (Software configurable)
  - 16 DI & 16 DO
  - 32 DI
  - 32 DO
- Compatibility: 5 V/TTL
- 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
- Input load
  - Terminator OFF
  - - Input high current: 1 mA
  - - Input low current: 20 mA
  - Terminator ON
  - - Termination resistor: 111 Ω
  - - Termination voltage: 2.9 V
  - - Input high current: 1 mA
  - - Input low current: 22.4 mA
- Output driving capacity
  - Source current: 8 mA
  - Sink current: 48 mA

Transfer characteristics

- Data transfers:
  Bus-mastering DMA with Scatter/Gather
- Data width: 32/16/8 bits (programmable)

Data transfer count

- 2 M double words (8 MB) for non-chaining mode DMA
- No limitation for chaining mode (scatter/gather) DMA

Max transfer rate

- DO: 80 MBytes/s, 32-bit output @ 20 MHz
  DI: 80 MBytes/s, 32-bit input @ 20 MHz

Trigger

- ADI_TRG for digital inputs,
  DO_TRG for digital outputs
- Compatibility: 5 V/TTL
- Trigger types: rising or falling edges
- Minimum pulse width: 32 ns

Clocking mode

- Internal clock
  - Internal clock sources: 20 MHz, 10 MHz, Timer#0 output (digital input pacer) and Timer #1 output (digital output pacer)
- External clock up to 40 MHz
- Handshaking
- Burst handshaking

Programmable counter

- Base clock: 10 MHz
- Timer #0 as digital input pacer
- Timer #1 as digital output pacer
- Timer #2: as interrupt source

Auxiliary digital I/O

- Number of channels
  - 4-ch digital inputs
  - 4-ch digital outputs
- Compatibility: 5 V/TTL
- Data transfers: programmed I/O

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	Power	Onboard terminator off	Onboard terminator on
PCIe-7300A	+12 V	119 mA typical	287 mA typical
	+3.3 V	499 mA typical	543 mA typical

- Dimensions (not including connectors)
  - 168 mm x 112 mm (6.55” x 4.36") (PCIe-7300A)

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