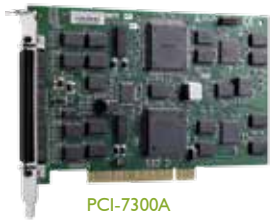
PCI/PCIe-7300A, cPCI-7300

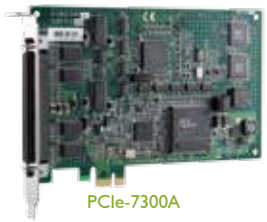
32-CH 80 MB/s High-Speed Digital I/O Cards

CompactPCI

PCI EXPRESS® PCI



PCI-7300A



PCIe-7300A



cPCI-7300

Features

- **x1 lane PCI Express® Interface (PCIe-7300A)**
- **Supports a 32-Bit 5 V PCI bus (PCI-7300A)**
- **3U Eurocard form factor, CompactPCI compliant (PICMG 2.0 R2.1) (cPCI-7300)**
- **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 for high-speed and longdistance data transfer**

Supported Operating System

- Windows 7/8 x64/x86, Linux

Driver and SDK

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

Software Utility

- AD-Logger

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 Bit (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

- DI_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
PCI-7300A	+5 V	830 mA typical	1.0 A typicall
PCIe-7300A	+12 V	119 mA typical	287 mA typical
	+3.3 V	499 mA typical	543 mA typical
cPCI-7300	+5 V	830 mA typical	1.0 A typical

- Dimensions (not including connectors)
  - 179 mm x 106 mm (6.98" x 4.13") (PCI-7300A)
  - 168 mm x 112 mm (6.55" x 4.36") (PCIe-7300A)
  - 160 mm x 100 mm (6.24" x 3.9") (cPCI-7300)

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 mating cables, please refer to P3-48/49.**

Ordering Information

- **PCI-7300A**
  80 MB/S High-Speed 32-CH Digital I/O PCI Card
- **PCIe-7300A**
  80 MB/S High-Speed 32-CH Digital I/O PCIe Card
- **cPCI-7300**
  80 MB/s High-Speed 32-CH Digital I/O CompactPCI Card

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