

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

- 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
- I/O connector: 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	Onboard terminator off	Onboard terminator on
PCI-7300A	+5 V	830 mA typical	1.0 A typical
PCIe-7300A	+12 V +3.3 V	119 mA typical 499 mA typical	287 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 (PCI-7300A)
 - 168 mm x 112 mm (PCIe-7300A)
 - 160 mm x 100 mm (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 P2-61/62.

Ordering Information

■ PCI-7300A

80 MB/S High-Speed 32-CH Digital I/O 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 Module

Pin Assignment

GND	1	51	PB15
GND	2	52	PB14
GND	3	53	PB13
GND	4	54	PB12
GND	5	55	PB11
GND	6	56	PB10
GND	7	57	PB9
GND	8	58	PB8
GND	9	59	PB7
GND	10	60	PB6
GND	11	61	PB5
GND	12	62	PB4
GND	13	63	PB3
GND	14	64	PB2
GND	15	65	PB1
GND	16	66	PB0
GND	17	67	DO_ACK
GND	18	68	DO_REQ
GND	19	69	DO_TRG
GND	20	70	AUXO3
GND	21	71	AUXO2
GND	22	72	AUXO1
GND	23	73	AUXO0
GND	24	74	TERMPWR
GND	25	75	TERMPWR
GND	26	76	TERMPWR
GND	27	77	TERMPWR
GND	28	78	AUXI3
GND	29	79	AUXI2
GND	30	80	AUXI1
GND	31	81	AUXI0
GND	32	82	DI_ACK
GND	33	83	DI_REQ
GND	34	84	DI_TRG
GND	35	85	PA15
GND	36	86	PA14
GND	37	87	PA13
GND	38	88	PA12
GND	39	89	PA11
GND	40	90	PA10
GND	41	91	PA9
GND	42	92	PA8
GND	43	93	PA7
GND	44	94	PA6
GND	45	95	PA5
GND	46	96	PA4
GND	47	97	PA3
GND	48	98	PA2
GND	49	99	PA1
GND	50	100	PA0