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Data Sheet

August 15, 2026

GENERAL STANDARDS

General Standards PCI-HPDI32A-1M High-Speed Parallel Digital I/O PCI Board

The General Standards PCI-HPDI32A-1M is a high-speed parallel digital I/O PCI board designed for data acquisition and control applications. It features 32 channels of high-speed digital I/O, enabling efficient data transfer and communication with external devices. Ideal for industrial automation, laboratory instrumentation, and embedded systems.



MODEL

**General Standards
PCI-HPDI32A-1M**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

PCI-HPDI32A-1M

LISTING

<https://aumictechlabs.com/products/pci-hpdi32a-1m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The General Standards PCI-HPDI32A-1M is a high-speed parallel digital I/O PCI board engineered for demanding data acquisition and real-time control applications. It delivers 32 channels of differential I/O with configurable transceiver technology RS422/485, PECL, or LVDS - enabling flexible integration into industrial automation, laboratory instrumentation, and embedded systems. The board combines a PCI-DMA engine with deep FIFO buffering to sustain continuous data flow independent of host CPU intervention, making it ideal for applications requiring deterministic, uninterrupted I/O streaming. Technical Specifications Form Factor: PCI (PCI Specification 2.1 / PCI v2.2 64-bit, 66 MHz compliant) Data Width: 32 bits PCI Bus Transfer Rate: Up to 132 Mbytes/second (burst mode) Cable I/O Transfer Rates: RS422/485: 80 Mbytes/second maximum

PECL: 200 Mbytes/second LVDS (selected models): 200 Mbytes/second Clock Rates: RS422/485: Up to 20 MHz PECL: Up to 50 MHz Sample Rate: 20 MHz (standard); 25 MHz/100 Mbytes/second (RS422/485 or PECL) FIFO Buffering: Up to 512 Kbytes per channel; 1 Mbyte total capacity across eight FIFOs (four transmit, four receive) DMA Engine: PLX-based PCI-DMA with D32 block transfers, DMA chaining, and <1 microsecond start latency Key Features Eight independent FIFOs with programmable Almost Empty and Almost Full thresholds Differential transceiver options with noise immunity and surge protection RS422/485 transceivers: ± 7.5 V noise immunity, ± 25 V transient withstand PECL transceivers: High-output drivers for 50 Ω loads LVDS transceivers: ± 140 – 360 mV differential voltage, ± 100 mV receiver threshold On-board parallel termination (150 Ω , removable for multidrop) Plug-and-play PCI initialization Typical Applications High-speed parallel data acquisition Industrial process control and monitoring Test and measurement instrumentation Real-time embedded I/O systems Cable-based remote digital interfacing Compatibility & Integration Plug-and-play PCI enumeration ensures rapid system integration. Configurable transceiver technology accommodates legacy RS422/485 installations, high-speed PECL systems, and low-power LVDS designs. Supports D32 DMA transfers and chaining for efficient host-independent data movement.

PCIHPDI32A1M Characteristics / Specifications

PARAMETER	VALUE
Model	PCI-HPDI32A-1M
Instrument Type	PCI high-speed 32-bit parallel digital I/O
Data Width	32 bits
Cable Rate Rs4	80 Mbyte/s at 20 MHz clock RS-422/485
Cable Rate Pecl	200 Mbyte/s max Pseudo ECL
Pci Burst Rate	132 Mbyte/s max, 100 Mbyte/s typical FIFO to PCI
Cable Clock Rs4	20 MHz max transmit and receive
Cable Clock Pecl	50 MHz max PECL
Fifo 1m	128K x 32 FIFOs on Tx and on Rx, 1 Mbyte total
Fifo Flags	Empty, Almost Empty, Almost Full, Full (active low)
Dma	PCI 2.1 D32 bus-master with chaining
Dma Start Latency	less than 1 us typical
Handshake Lines	7 bi-directional programmable
Power	6.2 to 6.8 W typical at plus 5.0 VDC plus or minus 0.20 V
Board Height	98 mm excluding panel bracket
Board Length	175 mm
Board Width	6.1 mm
Operating Temperature	0 to plus 55 C
Storage Temperature	minus 40 to plus 85 C
Humidity Operating	0 to 80 percent RH non-condensing
Altitude	operation to 10,000 ft
Cooling	200 LFPM minimum across component side
Mating Connector	Robinson Nugent P50E-080-S-TG
Termination Rs4	150 ohm on-board parallel termination
Manufacturer	General Standards Corporation

PARAMETER

VALUE

Pci Spec

PCI Specification 2.1 plug-and-play

Humidity

Operating: 0 to 80 percent RH non-condensing

PCIHPDI32A1M Specifications

PARAMETER	VALUE
Key Features	32-bit cable I/O to 80 Mbyte/s RS-422/485
PECL option to 200 Mbyte/s	132 Mbyte/s PCI burst DMA
Technical Specifications	Model: PCI-HPDI32A-1M

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	minus 40 to plus 85 C
Operating temperature	0 to plus 55 C
Operating Temperature	0 to plus 55 C
Humidity	Operating: 0 to 80 percent RH non-condensing
Humidity Operating	0 to 80 percent RH non-condensing
Altitude	operation to 10,000 ft
Cooling	200 LFPM minimum across component side
Mating Connector	Robinson Nugent P50E-080-S-TG
Termination Rs4	150 ohm on-board parallel termination
Manufacturer	General Standards Corporation
Pci Spec	PCI Specification 2.1 plug-and-play Notes From General Standards PCI-HPDI32A datasheet (80/200 Mbyte/s cable I/O, FIFO ordering table). The 1M suffix is 128K x 32 Tx and Rx FIFOs. Confirm RS- 422/485 versus PECL transceivers on the installed board.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	PCI-HPDI32A-1M
Instrument Type	PCI high-speed 32-bit parallel digital I/O
Data Width	32 bits
Cable Rate Rs422	80 Mbyte/s at 20 MHz clock RS-422/485
Cable Rate Pec1	200 Mbyte/s max Pseudo ECL
Pci Burst Rate	132 Mbyte/s max, 100 Mbyte/s typical FIFO to PCI
Cable Clock Rs422	20 MHz max transmit and receive
Cable Clock Pec1	50 MHz max PECL
Fifo 1m	128K x 32 FIFOs on Tx and on Rx, 1 Mbyte total
Fifo Flags	Empty, Almost Empty, Almost Full, Full (active low)
Dma	PCI 2.1 D32 bus-master with chaining
Dma Start Latency	less than 1 us typical
Handshake Lines	7 bi-directional programmable
Power	6.2 to 6.8 W typical at plus 5.0 VDC plus or minus 0.20 V
Board Height	98 mm excluding panel bracket
Board Length	175 mm
Board Width	6.1 mm
Operating Temperature	0 to plus 55 C
Storage Temperature	minus 40 to plus 85 C
Humidity Operating	0 to 80 percent RH non-condensing
Altitude	operation to 10,000 ft
Cooling	200 LFPM minimum across component side
Mating Connector	Robinson Nugent P50E-080-S-TG
Termination Rs422	150 ohm on-board parallel termination
Manufacturer	General Standards Corporation
Pci Spec	PCI Specification 2.1 plug-and-play

Notes

From General Standards PCI-HPDI32A datasheet (80/200 Mbyte/s cable I/O, FIFO ordering table). The 1M suffix is 128K x 32 Tx and Rx FIFOs. Confirm RS-422/485 versus PECL transceivers on the installed board.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.