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Data Sheet

August 15, 2026

ACROMAG / XEMBEDDED / XYCOM

Acromag / Xembedded / Xycom PMC-DX2003 Reconfigurable FPGA with TTL and Differential I/O Module

The Acromag/Xembedded/Xycom PMC-DX2003 is a reconfigurable FPGA module designed for high-speed data acquisition and processing. It features both TTL and differential I/O, making it suitable for a variety of applications. The PMC form factor allows for easy integration into existing systems.



MODEL

**Acromag /
Xembedded /
Xycom PMC-
DX2003**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

PMC-DX2003

LISTING

<https://aumictechlabs.com/products/pmc-dx2003-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Acromag/Xembedded/Xycom PMC-DX2003 is a reconfigurable FPGA module built around a Xilinx Virtex-II XC2V2000 FPGA with 24,192 logic cells. It delivers high-speed digital I/O via 16 bidirectional TTL channels and 24 bidirectional RS422/485 differential channels, all configurable through downloadable FPGA code. The module implements a 32-bit PCI Master interface via PLX PCI 9056 at 66 MHz, dual-channel DMA support, and onboard 256K × 36-bit SRAM. Configuration loads via PCI bus or flash memory. Direction control, interrupt handling, and signal routing are

fully programmable in VHDL using Xilinx tools. Technical Specifications FPGA Core Xilinx Virtex-II XC2V2000 with 24,192 logic cells Configuration via PCI bus or onboard flash memory 256K × 36-bit SRAM for direct FPGA access PCI Interface PCI Local Bus Specification Revision 2.2 32-bit PCI Master (PLX PCI 9056) 66 MHz clock frequency 5V and 3.3V signaling compliance Dual-channel DMA support TTL I/O (16 Bidirectional Channels) Input voltage range: 0 to 5V DC Input thresholds: 3.5V typical (low-to-high), 1.5V typical (high-to-low) Input response time: 10 ns typical Output voltage range: 0 to 5V DC Output current: -32 to +32 mA Output turn-on/off time: 10 ns 4.7 kΩ socketed pullup resistors Direction controlled as signal pairs or two-channel groups; defaults to input on power-up Differential I/O (24 Bidirectional RS422/485 Channels) Driver output voltage (50 Ω load): 2V to 5V Common mode output voltage: 3V maximum Input impedance: 12 kΩ minimum 120 Ω termination resistor networks (socketed) Independent per-channel or 4-channel group direction control Rear I/O models support 23 channels Interrupts 8 channels, software programmable Trigger modes: high-to-low, low-to-high, or any change-of-state Key Features Single-width PMC form factor with front or rear I/O connector options Fully reconfigurable digital logic via FPGA bitstream download Mixed-signal I/O: TTL for short-range, differential for long-distance transmission Example VHDL code provided for PCI, SRAM, PLL, and I/O control Programmable interrupt generation on state transitions Typical Applications Hardware simulation and in-circuit diagnostics Communication protocol translation and bridging High-speed custom digital signal processing Real-time data acquisition with flexible I/O routing Compatibility & Integration Designed for PCI-based embedded systems. Xilinx design tools and VHDL proficiency required for custom logic implementation.

PMCDX2003 Characteristics / Specifications

PARAMETER	VALUE
Model	PMC-DX2003
Instrument Type	reconfigurable FPGA PMC
Form Factor	PMC
IO Types	TTL and differential
FPGA	user programmable
Bus Interface	PCI mezzanine
Manufacturer	Acromag Xembedded Xycom
Carrier Compatibility	PMC carriers
Operating Temperature Class	industrial
Power	PMC power rails
Cooling	airflow
Front IO	TTL plus differential banks
Configuration	FPGA bitstream
Development	HDL tools
DMA Class	PCI DMA capable
Reset	PCI local reset
Clocking	local and external clocks
LEDs	status class
Compliance	PMC standard
Humidity Class	non condensing
Storage Temperature Class	industrial
Isolation Class	per channel bank design
Logic	user FPGA fabric
Firmware	flash or host download class
Storage temperature	Class: industrial

PARAMETER	VALUE
Operating temperature	Class: industrial
Humidity	Class: non condensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	Class: industrial
Operating temperature	Class: industrial
Operating Temperature	Class: industrial
Humidity	Class: non condensing
Operating Temperature Class	industrial
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Cooling	airflow
Front IO	TTL plus differential banks
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Humidity Class	non condensing
Storage Temperature Class	industrial
Isolation Class	per channel bank design
Logic	user FPGA fabric
Firmware	flash or host download class Notes Identity from Acromag PMC-DX2003 inventory title. Exact FPGA size and IO map follow the Acromag DX2003 ordering options.

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	
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Notes

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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.