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Data Sheet

August 13, 2026

RTD EMBEDDED TECHNOLOGIES

RTD Embedded Technologies DM6430HR-1 16-bit, 100 kHz Analog I/O and Full AT Bus Interface Module

RTD Embedded Technologies DM6430HR-1 16-bit 100 kHz Analog I/O Module The RTD DM6430HR-1 isaPC/104 analog dataModule with 16-bit A/D at 100 kHz throughput and a full AT bus interface. Software selects 16 single-ended or 8 differential inputs, +/-10 V range, and gains 1, 2, 4, and 8. Conversion is 10 μ s with matched sample-and-hold. A 1024-sample FIFO plus 1024 $\times$ 24 channel-gain scan memory support gap-free DMA. Two 16-bit D/A channels output +/-10 V with 10 μ s settling. Digital I/O includes 8 bit-programmable lines with advanced interrupts and an 8-bit port. Power is 3.5 W typical at 5 VDC. The RTD DM6430HR-1 isaPC/104 analog dataModule with 16-bit A/D at 100 kHz throughput and a full AT bus interface. Software selects 16 single-ended or 8 differential inputs, +/-10 V range, and gains 1, 2, 4, and 8. Conversion is 10 μ s with matched sample-and-hold. A 1024-sample FIFO plus 1024 $\times$ 24 channel-gain scan memory support gap-free DMA. Two 16-bit D/A channels output +/-10 V with 10 μ s settling. Digital I/O includes 8 bit-programmable lines with advanced interrupts and an 8-bit port. Power is 3.5 W typical at 5 VDC. Embedded high-speed DAQ; PC/104 AT stacks; pre/post/about triggering; analog control with dual DACs; Windows/DOS data logging.



MODEL

**RTD Embedded Technologies
DM6430HR-1**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

DM6430HR-1

LISTING

<https://aumictechlabs.com/products/dm6430hr-1-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The RTD Embedded Technologies DM6430HR-1 is a PC/104 form factor data acquisition module delivering 16-bit analog I/O with full AT bus interface and DMA support. It captures analog signals at 100 kHz with 10 μ s conversion time, processes up to 16 single-ended or 8 differential input channels across ± 10 V range, and generates two 16-bit analog outputs. The module integrates programmable digital I/O, dual 16-bit timer/counters, and an 8 MHz on-board clock for precise timing and synchronization in embedded systems.

Technical Specifications

Analog Input 16-bit resolution, 100 kHz sampling rate, 10 μ s conversion time 16 single-ended or 8 differential channels ± 10 V input range with programmable gains of 1, 2, 4, and 8 1024 $\times$ 24-entry channel-gain scan memory with skip bit 1024-sample A/D buffer supporting gap-free acquisition

Software, pacer clock, and external trigger modes with pre-trigger, post-trigger, and about-trigger capabilities Random scan, burst, and multi-burst scan modes ± 12 V overvoltage protection; ± 10 V common-mode input voltage (differential)

Analog Output 2 channels, 16-bit resolution ± 10 V output range, 10 μ s settling time (full scale) 5 mA output current

Digital I/O 1 KB input buffer Port 0: 8 bit-programmable lines; Port 1: 8-bit programmable port

Event interrupt (any bit change) and match interrupt modes

Output drive: $-12/+24$ mA

Timers and Counters Programmable high-speed sample counter Two 16-bit timer/counters 8 MHz on-board clock

Interfaces & Physical Full AT bus interface (PC/104 stackable ISA); DMA transfers supported 3.775 $\times$ 3.550 inches, 0.600-inch standoff height; 0.34 lbs

Key Features Gap-free sampling with dedicated 1024-sample A/D buffer Flexible triggering and scan modes for complex measurement sequences Dual-port digital I/O with advanced interrupt logic Stackable PC/104 form factor for compact embedded systems

Typical Applications High-speed embedded data acquisition systems Real-time control and monitoring in industrial environments Multi-channel signal conditioning and acquisition PC/104 stack-based instrumentation

Compatibility & Integration Software support includes DOS, Windows (98, NT4.0, 2000, XP/XPe), and Linux (2.4.x, 2.6.x) with source code provided. Compatible with LabVIEW and MATLAB toolkits through Windows drivers.

Features & description

From manufacturer datasheet

Features

- 16 SE / 8 DIFF, 16-bit, 10 μ s, 100 kHz • Gains 1, 2, 4, 8; +/-10 V; +/-12 V overvoltage protection • 1K FIFO A/D and 1K channel-gain table with skip bit • Dual 16-bit DAC +/-10 V, 10 μ s, 5 mA • 8 bit-programmable DIO plus 8-bit port; 1K digital FIFO • DMA, interrupt REP INS, programmed I/O; +5 V only

DM6430HR Characteristics / Specifications

PARAMETER	VALUE
Model	DM6430HR-1
Manufacturer	RTD Embedded Technologies
Instrument Type	PC/104 Analog I/O dataModule
Series	DM6430HR
Alias	DM6430HR-1; DM6430HR; DM6430
Bus	PC/104 full AT 16-bit to A/D and D/A
Analog Inputs	16 single-ended or 8 differential software selectable
ADC Resolution	16 bit
Conversion Time	10 us (100 kHz throughput)
Input Range	+/-10 V
Programmable Gains	1, 2, 4, 8
Overvoltage Protection	+/-12 V
Common Mode Differential	+/-10 V
Channel Gain Memory	1024 × 24 with skip bit
A/D FIFO	1024 samples
Digital Input FIFO	1024 samples
DAC Channels	two 16-bit
DAC Range	+/-10 V
DAC Settling	10 us full scale
DAC Output Current	5 mA
Bit Programmable DIO	8 lines with event and match interrupts
Port Programmable DIO	8 lines
DIO Drive	-12 / +24 mA
Timers	six 16-bit timer/counters (two user available), 8 MHz clock
Sample Counter	16-bit programmable high-speed

PARAMETER	VALUE
Triggers	software, pacer, external; pre, post, about
Scan Modes	scan, burst, multiburst via channel-gain table
Transfers	DMA, programmed I/O, interrupt
Power	3.5 W at 5 VDC typical
Form	PC/104 stackable
IDAN Option	IDAN-DM6430HR-1-62S packaging
Pull Resistors	pull-up or pull-down on 16 digital lines
Software	Windows VB/C examples; DOS BASIC/C; diagnostics
Burst Rate Max	100 kHz or less
Input Configuration	channel-by-channel SE/DIFF
Matched SHA	internal sample and hold on ADC Notes Specs from RTD DM6430 hardware manual and DM6430HR product page. The -1 suffix denotes the AT-bus HR configuration. Confirm FIFO/IRQ jumpers and +/-10 V analog range before stacking.

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.

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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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NIST-traceable calibration · SAM registered ·
30-day returns
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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.