

**Aumictech**

Test & measurement • bought, sold, repaired, calibrated

Data Sheet

August 13, 2026

RTD EMBEDDED TECHNOLOGIES

RTD Embedded Technologies DM6814HR PC/104 Quadrature Encoder Input DAQ Module

RTD Embedded Technologies DM6814HR PC/104 Quadrature Encoder Module The RTD DM6814HR isaPC/104 (dataModule) incremental quadrature encoder interface. It provides three 16-bit up/down encoder counters with diode-protected inputs for rotary or linear encoders, six bit-programmable digital I/O lines, twelve input-only digital lines, and three 16-bit timer/counters clocked from an on-board 8 MHz oscillator. DM6814 adds the AT bus connector versus DM5814 for stacking and AT interrupts. Operation is from a single +5 V supply. Product is end-of-life. The RTD DM6814HR isaPC/104 (dataModule) incremental quadrature encoder interface. It provides three 16-bit up/down encoder counters with diode-protected inputs for rotary or linear encoders, six bit-programmable digital I/O lines, twelve input-only digital lines, and three 16-bit timer/counters clocked from an on-board 8 MHz oscillator. DM6814 adds the AT bus connector versus DM5814 for stacking and AT interrupts. Operation is from a single +5 V supply. Product is end-of-life. Embedded motion position and velocity; PC/104 CPU stacks; Opto-22 digital I/O; IDAN milled-frame packaging (IDAN-DM6814HR).



MODEL

RTD Embedded Technologies DM6814HR

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

DM6814HR

LISTING

<https://aumictechlabs.com/products/dm6814hr-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The RTD Embedded Technologies DM6814HR is a PC/104 quadrature encoder input and data acquisition module engineered for industrial applications demanding precise position and velocity measurement. This stackable ISA bus module delivers three independent encoder inputs with integral 16-bit up/down counters, programmable digital I/O, and timer/counter functions in a compact embedded form factor.

Technical Specifications

Form Factor: PC/104 with stackable ISA Bus interface

Encoder Inputs: Three quadrature encoder channels, diode protected, each with 16-bit up/down counter

Digital I/O: Six bit-programmable lines; twelve input-only lines

Timer/Counters: Three 16-bit timer/counter circuits

Clock: 8 MHz on-board oscillator

Pull-up/Pull-down Resistors: Configurable per bit or per port

Power Supply: Single +5V supply

Operating Temperature: -40°C to +85°C

Connectors: Two 50-pin 0.1" DIL headers

Construction: Milled Aluminum Alloy 6061, Temper-T6 with clear chromate finish

Key Features

- Configurable encoder and digital I/O circuits - use all three as encoder inputs or allocate remaining channels as 16-line programmable I/O blocks
- Diode-protected encoder inputs for incremental rotary and linear position encoders
- AT bus connector for interrupt access and module stacking
- Direct compatibility with Opto-22 I/O modules
- Optional rugged IDAN enclosure for harsh environments

Typical Applications

Motion control, position/velocity feedback systems, industrial automation, portable embedded data acquisition, and multi-axis encoder monitoring in military and aerospace platforms.

Compatibility & Integration

PC/104 ecosystem integration with DOS drivers and example source code (BASIC and C), plus Windows drivers for 98/NT/2000/XP. Stackable architecture enables integrated encoder and DAQ solutions within confined form factors.

Features & description

From manufacturer datasheet

Features

- Three 16-bit incremental quadrature encoder channels • Diode-protected encoder inputs • 6 bit-programmable DIO plus 12 input-only lines • Three 16-bit timer/counters, 8 MHz on-board clock • AT-bus connector on DM6814 for AT IRQs • Single +5 V; PC/104 stackable ISA

DM6814HR Characteristics / Specifications

PARAMETER	VALUE
Model	DM6814HR
Manufacturer	RTD Embedded Technologies
Instrument Type	PC/104 Quadrature Encoder Input dataModule
Series	DM6814 / DM5814
Alias	DM6814HR; DM6814; 911000013
Bus	PC/104 with AT bus connector (DM6814)
Encoder Channels	three 16-bit incremental up/down counters
Encoder Inputs	diode protected for rotary or linear position encoders
Bit Programmable DIO	6 lines
Input Only Digital	12 lines
Timer Counters	three 16-bit, on-board 8 MHz clock
IRQ Select	jumper 2/9, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15
Headers	two standard 50-pin 0.1 in DIL
Pull Resistors	pull-up/pull-down on each bit or each port
Supply	single +5 V
I/O Map	occupies 32 bytes of I/O space (family listings)
Opto	direct connection to Opto-22 I/O system modules
Software	DOS examples BASIC and C; diagnostics
IDAN Length	5.983 in (152 mm)
IDAN Width	5.117 in (130 mm)
IDAN Height	1.339 in (34 mm)
IDAN Weight	approximately 0.92 lb (0.42 kg)
IDAN Operating Temperature	-40 to +85 C at 90 percent RH noncondensing
IDAN Storage Temperature	-55 to +125 C
IDAN Frame	6061-T6 aluminum, MIL-PRF-85285 topcoat

PARAMETER	VALUE
IDAN Connectors	62-pin or 68-pin high density (IDAN-DM6814HR-62D / 68D)
P2 Functions	3 encoder inputs, 6 DIO, +5 V, 1 external interrupt, 3 timers, 3 gates, 3 clocks
P3 Functions	12 diode-protected digital lines, +5 V, 1 external interrupt
Channel Build Option	one, two, or three encoder circuits at order; unused circuits become 16-bit programmable DIO
Sibling	DM5814 same board without AT connector
Status	phased out / EOL Notes Specs from RTD DM6814/DM5814 hardware manual and DM6814HR/IDAN catalog pages. Encoder electrical thresholds and max count rate belong in the hardware manual for the installed build. Confirm three-channel versus mixed DIO configuration.
Storage temperature	55 to +125 C
Operating temperature	40 to +85 C at 90 percent RH noncondensing

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Storage temperature	55 to +125 C
Operating temperature	40 to +85 C at 90 percent RH noncondensing
Operating Temperature	40 to +85 C at 90 percent RH noncondensing
IDAN Storage Temperature	-55 to +125 C
IDAN Frame	6061-T6 aluminum, MIL-PRF-85285 topcoat
IDAN Connectors	62-pin or 68-pin high density (IDAN-DM6814HR-62D / 68D)
P2 Functions	3 encoder inputs, 6 DIO, +5 V, 1 external interrupt, 3 timers, 3 gates, 3 clocks
P3 Functions	12 diode-protected digital lines, +5 V, 1 external interrupt
Channel Build Option	one, two, or three encoder circuits at order; unused circuits become 16-bit programmable DIO
Sibling	DM5814 same board without AT connector
Status	phased out / EOL Notes Specs from RTD DM6814/DM5814 hardware manual and DM6814HR/IDAN catalog pages. Encoder electrical thresholds and max count rate belong in the hardware manual for the installed build. Confirm three-channel versus mixed DIO configuration.

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	DM6814HR
Manufacturer	RTD Embedded Technologies
Instrument Type	PC/104 Quadrature Encoder Input dataModule
Series	DM6814 / DM5814
Alias	DM6814HR; DM6814; 911000013
Bus	PC/104 with AT bus connector (DM6814)
Encoder Channels	three 16-bit incremental up/down counters
Encoder Inputs	diode protected for rotary or linear position encoders
Bit Programmable DIO	6 lines
Input Only Digital	12 lines
Timer Counters	three 16-bit, on-board 8 MHz clock
IRQ Select	jumper 2/9, 3, 4, 5, 6, 7, 10, 11, 12, 14, 15
Headers	two standard 50-pin 0.1 in DIL
Pull Resistors	pull-up/pull-down on each bit or each port
Supply	single +5 V
I/O Map	occupies 32 bytes of I/O space (family listings)
Opto 22	direct connection to Opto-22 I/O system modules
Software	DOS examples BASIC and C; diagnostics
IDAN Length	5.983 in (152 mm)
IDAN Width	5.117 in (130 mm)
IDAN Height	1.339 in (34 mm)
IDAN Weight	approximately 0.92 lb (0.42 kg)
IDAN Operating Temperature	-40 to +85 C at 90 percent RH noncondensing
IDAN Storage Temperature	-55 to +125 C
IDAN Frame	6061-T6 aluminum, MIL-PRF-85285 topcoat
IDAN Connectors	62-pin or 68-pin high density (IDAN-DM6814HR-62D / 68D)

PARAMETER	VALUE
P2 Functions	3 encoder inputs, 6 DIO, +5 V, 1 external interrupt, 3 timers, 3 gates, 3 clocks
P3 Functions	12 diode-protected digital lines, +5 V, 1 external interrupt
Channel Build Option	one, two, or three encoder circuits at order; unused circuits become 16-bit programmable DIO
Sibling	DM5814 same board without AT connector
Status	phased out / EOL

Notes

Specs from RTD DM6814/DM5814 hardware manual and DM6814HR/IDAN catalog pages. Encoder electrical thresholds and max count rate belong in the hardware manual for the installed build. Confirm three-channel versus mixed DIO configuration.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·
30-day returns
NAICS 423690 · 811210 · 541380
Generated August 13, 2026

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