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Data Sheet

August 15, 2026

DIAMOND SYSTEMS

Diamond Systems Emerald-MM-4M-XT 4-Port RS-232 and 48 Digital I/O PC/104 Module

The Diamond Systems Emerald-MM-4M-XT is a PC/104 embedded serial and digital I/O module delivering 4 configurable RS-232/RS-422/RS-485 serial ports and 48 channels of digital I/O in a compact form factor. Built around a 16C554 quad UART with 16-byte FIFOs per port, the module supports baud rates to 115.2 kbps standard, with optional 460.8 kbps operation. Engineered for industrial temperature ranges of -40°C to $+85^{\circ}\text{C}$, it integrates jumper-selectable addressing and interrupt configuration for flexible system deployment. Baud rates: up to 115.2 kbps (standard); up to 460.8 kbps with 7.3728 MHz crystal option RS-232: 8 signals + ground per port; RS-422: RX+, RX-, TX+, TX-, ground; RS-485: TX+/RX+, TX-/RX-, ground Inverting logic with 10 k Ω pull-up resistors; tri-state on logic 1, driven low on logic 0



MODEL

**Diamond Systems
Emerald-MM-4M-
XT**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

**Emerald-MM-4M-
XT**

LISTING

<https://aumictechlabs.com/products/emerald-mm-4m-xt-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

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supports baud rates to 115.2 kbps standard, with optional 460.8 kbps operation. Engineered for industrial temperature ranges of -40°C to $+85^{\circ}\text{C}$, it integrates jumper-selectable addressing and interrupt configuration for flexible system deployment. Technical Specifications Serial Interface 4 ports, configurable via jumpers for RS-232, RS-422, or RS-485 16C554 quad UART with 16-byte FIFO per port Baud rates: up to 115.2 kbps (standard); up to 460.8 kbps with 7.3728 MHz crystal option RS-232: 8 signals + ground per port; RS-422: RX+, RX-, TX+, TX-, ground; RS-485: TX+/RX+, TX-/RX-, ground Dual 20-pin I/O headers (2 ports per header) 120 Ω termination resistors for RS-422/485, jumper-selectable Digital I/O 48 channels organized as 6×8 -bit ports Output current: 0.3 mA (high state), 8 mA (low state) Inverting logic with 10 k Ω pull-up resistors; tri-state on logic 1, driven low on logic 0 Edge detection on 24 lines; independently selectable high/low edge per bit with interrupt generation Electrical & Environmental Power supply: +5 V only Operating temperature: -40°C to $+85^{\circ}\text{C}$ Configuration 8 jumper-selectable I/O address combinations; custom addressing available for OEM applications 10 interrupt levels: 2, 3, 4, 5, 6, 7, 10, 11, 12, 15; full interrupt sharing supported Key Features Quad UART with independent 16-byte buffering reduces CPU overhead Protocol flexibility via jumper configuration eliminates board redesign across RS-232/422/485 applications Edge-triggered interrupts on 24 DIO lines enable real-time event handling Interrupt sharing conserves ISA interrupt resources in multi-module systems Industrial temperature range supports extended deployment environments Typical Applications Embedded data acquisition in industrial controllers Multi-port serial concentrators in rugged systems Real-time digital event monitoring and logging Distributed I/O in PC/104 stacks Compatibility & Integration PC/104 form factor; jumper-configurable for legacy and modern ISA interrupt schemes. Interrupt status register supports legacy and contemporary operating systems requiring per-port interrupt identification.

EMERALDMM4MXT Characteristics / Specifications

PARAMETER	VALUE
Model	EMM-4M-XT
Also Known As	Emerald-MM-4M-XT
Instrument Type	PC/104 quad serial module
Serial Ports	4
Protocols	RS-232, RS-422, RS-485 model dependent jumper per port
Max Baud Rate	115 kbps
Data Bits	5, 6, 7 or 8
Parity	even, odd, or none
Base Uart	16C554
Fifo	16 bytes
Address Combinations	8 I/O address combinations
Irq Levels	10 IRQ levels
Headers	two 20-pin I/O headers, two ports per header
Rs232 Signals	full 8 signals plus ground per port
Termination	120 ohm jumper-selectable for RS-422/485
Short Protection	continuous, all outputs
Bus Interface	PC/104 (ISA)
Supply Voltage	plus 5 VDC plus or minus 10 percent
Supply Current	80 mA
Operating Temperature	minus 40 C to plus 85 C
Mass	2.5 oz (71 g)
Interrupt Sharing	built-in interrupt status register
Manufacturer	Diamond Systems Corporation
Family	Emerald-MM 4-port serial
Cable Accessory	C-DB9M-2 dual serial port cable

EMERALDMM4MXT Specifications

PARAMETER	VALUE
Applications	Embedded serial expansion for industrial PC/104 stacks needing four RS-232/422/485 ports on plus 5 V only.
Key Features	Four jumper-selectable RS-232/422/485 ports
Plus 5 V only at 80 mA	Minus 40 to plus 85 C
Technical Specifications	Model: EMM-4M-XT

General Specifications & Supplementary Characteristics

PARAMETER	VALUE
Operating temperature	minus 40 C to plus 85 C
Operating Temperature	minus 40 C to plus 85 C
Mass	2.5 oz (71 g)
Interrupt Sharing	built-in interrupt status register
Manufacturer	Diamond Systems Corporation
Family	Emerald-MM 4-port serial
Cable Accessory	C-DB9M-2 dual serial port cable Notes From Diamond Systems Emerald-MM-4M datasheet (EMMdatasheet). EMM-4M-XT is the extended-temperature four-port RS-232/422/485 population. Confirm jumper protocol, address, and IRQ settings.

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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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.