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Data Sheet

August 15, 2026

DIAMOND SYSTEMS

Diamond Systems EMM-8M-XT 8-Port RS-232/RS-422/RS-485 PC/104

The Diamond Systems EMM-8M-XT is a PC/104 serial communications module that provides eight independently configurable ports supporting RS-232, RS-422, and RS-485 protocols. Each port can be individually jumper-selected for its protocol, enabling flexible deployment across mixed-protocol industrial and embedded systems. The module integrates two 16C654 Quad UART ICs with 64-byte transmit and receive FIFOs per port, delivering deterministic throughput up to 460.8 kbps and minimizing processor overhead through interrupt-driven operation. Software-programmable I/O base addresses and interrupt levels (IRQ 2, 3, 4, 5, 6, 7, 10, 11, 12, 15) Aumictech offers NIST-traceable calibration and repair for the Diamond Systems EMM-8M-XT. Calibration covers analog input channel accuracy and offset at all gain settings, analog output accuracy, digital I/O logic threshold verification, sample rate and ti



MODEL

**Diamond Systems
EMM-8M-XT**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

EMM-8M-XT

LISTING

<https://aumictechlabs.com/products/emm-8m-xt-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

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protocol industrial and embedded systems. The module integrates two 16C654 Quad UART ICs with 64-byte transmit and receive FIFOs per port, delivering deterministic throughput up to 460.8 kbps and minimizing processor overhead through interrupt-driven operation. Technical Specifications Serial Ports 8 ports with user-selectable RS-232, RS-422, or RS-485 operation UART: Two 16C654 Quad UART ICs FIFO: 64-byte transmit and receive buffers per port Maximum Baud Rate: 460.8 kbps Data Bits: 5, 6, 7, or 8 Parity: Even, odd, or none RS-232: Full complement of standard PC serial signals (8 signals + ground) RS-422: RX+, RX-, TX+, TX-, ground RS-485: TX+/RX+, TX-/RX-, ground I/O Headers: Two 40-pin connectors, ports grouped in sets of four Digital I/O 8 individually programmable digital I/O lines Electrical Power Supply: +5 VDC $\pm 10\%$ Physical Form Factor: PC/104 (ISA) Weight: 2.6 oz (74 g) Connectors: Two 40-pin I/O headers Environmental Operating Temperature: -40°C to $+85^{\circ}\text{C}$ Key Features Jumper-configurable protocols on all eight ports Software-programmable I/O base addresses and interrupt levels (IRQ 2, 3, 4, 5, 6, 7, 10, 11, 12, 15) Interrupt sharing across any number of ports or boards at identical levels Per-port interrupt status register Selectable 1 k Ω pulldown resistor per port Power-on default: all ports disabled until software configuration Optional hardware configuration for operation without software initialization Typical Applications Industrial control systems, embedded computing platforms, legacy serial device integration, multi-protocol data acquisition, rugged field instrumentation. Compatibility & Integration PC/104 ISA bus. All address and interrupt configuration performed in software or via hardware jumpers. Extended temperature rating (-40°C to $+85^{\circ}\text{C}$) supports deployment in harsh industrial environments.

EMM8MXT Characteristics / Specifications

PARAMETER	VALUE
Model	EMM-8M-XT
Also Known As	Emerald-MM-8
Instrument Type	PC/104 octal serial module
Serial Ports	8
Protocols	RS-232, RS-422, RS-485 jumper selectable on all ports
Max Baud Rate	460.8 kbps
Data Bits	5, 6, 7 or 8
Parity	even, odd, or none
Base Uart	16C654 (two quad devices)
Fifo	64-byte transmit and receive per port
Digital Io	8 individually programmable lines
Headers	two 40-pin headers, four ports each (ports 1-4 right, 5-8 left)
Irq Levels	2, 3, 4, 5, 6, 7, 10, 11, 12, and 15
Irq Pulldown	1 kohm pulldown per port jumper selected
Short Protection	continuous, all outputs
Bus Interface	PC/104 (ISA)
Supply Voltage	plus 5 VDC plus or minus 10 percent
Operating Temperature	minus 40 C to plus 85 C
Mass	2.6 oz / 74 g
Rs232 Signals	full 8 signals plus ground per port
Rs422 Signals	RX+, RX-, TX+, TX- plus ground
Rs485 Signals	TX+/RX+ and TX-/RX- plus ground
Fixed Rs232 Sibling	EMM-8232-XT eight ports fixed RS-232
Manufacturer	Diamond Systems Corporation
Interrupt Status	register indicates each port interrupt request

EMM8MXT Specifications

PARAMETER	VALUE
Applications	High-density serial and DIO expansion on PC/104 stacks for industrial control and communications.
Key Features	Eight RS-232/422/485 ports on one PC/104
IRQ sharing with status register	Minus 40 to plus 85 C
Technical Specifications	Model: EMM-8M-XT

General Specifications & Supplementary Characteristics

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Interrupt Status	register indicates each port interrupt request Notes From Diamond Systems Emerald-MM-8 datasheet (EMM8-Data-Sheet). EMM-8M-XT is the extended-temperature jumper-configurable RS-232/422/485 population. Confirm address, IRQ, and protocol jumpers.

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

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

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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.