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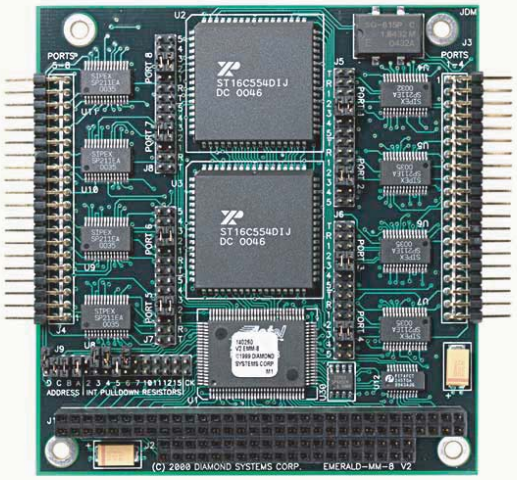
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Find the *Diamond Systems Emerald-MM-8* at our website: *Click HERE*

DIAMOND SYSTEMS CORPORATION

EMERALD-MM-8

8-Port RS-232/RS-422/RS-485 PC/104 Module



- 8 serial ports
- 8 digital I/O lines
- Jumper selectable RS-232, RS-422, RS-485 on all ports
- Up to 460.8kbps data rate
- 16C654 Quad UARTs with 64-byte FIFOs
- Interrupt sharing - any no. of ports or boards

DESCRIPTION

Now with higher density than ever, our new Emerald-MM-8 gives you 8 serial ports on a single PC/104 module. Each version of the board provides 8 serial ports operating at speeds up to 460.8kbps. Several versions are available:

EMM-8M-XT: 8 ports RS-232/422/485 user selectable
EMM-8232-XT: 8 ports fixed RS-232 (low-cost version)

In RS-232 mode, the full complement of standard PC serial port signals (8 signals + ground) are provided for each port. In RS-422 mode, Signals RX+, RX-, TX+, and TX- are provided, along with ground. In RS-485 mode, signals TX+/RX+ and TX-/RX- are provided, along with ground. Ports are grouped 4 per 40-pin I/O header. Ports 1-4 are on the right, and ports 5-8 are on the left.

Two 16C654 quad serial port ICs are used for the serial ports. This chip supports data rates up to 460.8kbps and contains a 64-byte transmit and receive FIFOs for each port to minimize processor overhead.

SPECIFICATIONS

Number of ports	8
Protocols Supported	RS-232, RS-422, RS-485
Max Baud Rate	460.8Kbps
Communications	5,6,7 or 8 data bits; Even, odd or no parity
Base UART	16C654
FIFO	64 bytes
Protocol Config	Jumper
Address / Interrupt Configuration	Jumper
Digital I/O	8 individually prog.
Short protection	Continuous, all outputs
Bus Interface	PC/104 (ISA)
Power Draw (typical)	+5VDC±10%
Operating temp	-40°C to +85°C
Weight	2.6oz / 74g

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Fully Programmable Serial Ports

All serial port address and interrupt level settings may be done in software. On power up, the serial ports are disabled. After programming the address and interrupt settings, the ports are enabled by setting a bit in an auxiliary control register. For applications that require the ports to be operating without user software intervention, the board provides 4 different hardware configurations.

Full Interrupt Sharing

Interrupt levels are individually programmable for each port. The available interrupt levels are 2, 3, 4, 5, 6, 7, 10, 11, 12, and 15. In addition, a 1K Ohm pulldown resistor is provided for each port and is selected with a jumper. Any number of ports can share the same interrupt level. And if you have two boards in one system, both boards can share the same interrupt level as well. An interrupt status register is provided to indicate the status of each serial port's interrupt request signal. This register is especially useful in Windows NT.

ORDERING INFORMATION

Part No.	Description
EMM-8M-XT	Emerald-MM 8-ch RS-232/422/485 extended temp.

FOR MORE INFORMATION

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