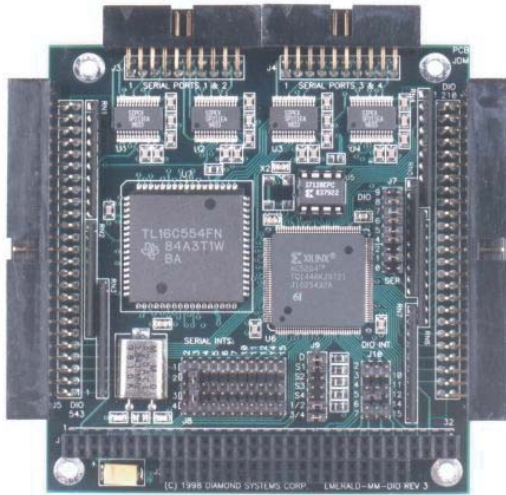# EMERALD-MM-DIO

4 - Port RS-232 + 48 Digital I/O PC/104 Module Extended Temperature

- Two boards in one saves space

- Industry-standard design compatible with any popular operating system

- 4 RS-232 ports

- 16C554 UART with 16-byte FIFOs

- 115.2K max baud rate

- Jumper-selected address and interrupts

DESCRIPTION

The two-in-one concept of Emerald-MM-DIO saves critical space for users with limited stack height in their enclo-sures. The 4 RS-232 ports feature a full set of 8 signals and are based on the 16C554 UART for compatibility with almost all embedded operating systems. Eight address combinations and eleven interrupt levels are provided for configuration flexibility.

The 48 digital I/O lines are organized into 6 8-bit ports. Output current is 0.3mA in high state and 8mA in low state. Emerald-MM-DIO uses inverting logic on the DIO lines. Port direction is programmable bit by bit: When a 0 is written to any bit, its output is tri-stated and pulled high by a 10K? resistor, indicating a logic 1 and enabling it to also be used as an input. When a 1 is written to a bit, its output is driven low indicating a logic 0. Input data is also inverted, so readback of output ports matches the written data.

Emerald-MM-DIO features edge detection capability on 24 DIO lines. You can enable or disable edge detection and select high or low edge on each bit independently. When any specified edge occurs, an interrupt will be generated. Edge detection is fully supported by our Universal Driver software, letting you run your own custom code whenever a change of state occurs. This

SPECIFICATIONS

# ports	4
Protocols Supported	RS232
Max Baud Rate	115.2Kbps
Communications	5,6,7 or 8 data bits; Even, odd or no parity
Base UART	16C554
FIFO	16 bytes
Address / Interrupt Configuration	Jumper
Digital I/O	48, programmable direction
Short protection	Continuous, all outputs
Bus Interface	PC/104 (ISA)
Power Draw (typical)	+5VDC±10%@100mA
Operating temp	-40°C to +85°C
Weight	3.2oz / 91g
# ports	4

powerful feature can be used for security and safety applications, pattern matching, and more.

ORDERING INFORMATION

Part No.	Description
EMM-DIO-XT	4 RS-232 ports, 48 digital I/O

FOR MORE INFORMATION

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