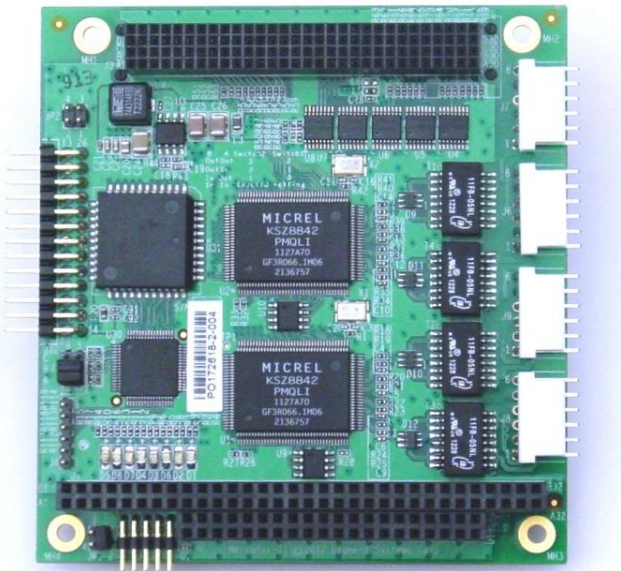


MERCATOR II



PC/104-Plus I/O Expansion Module with Ethernet and Digital I/O



- 4 PCI-based 10/100Mbps Ethernet Ports
- 24 digital I/O using 82C55 on ISA bus
- Latching pin headers
- Stack through ISA + PCI buses
- +5VDC +5% power input
- Support for Windows Embedded Standard 7 and Linux 2.6
- PC/104-Plus form factor (3.55" x 3.775")
- Operating temperature -40°C to +85°C

DESCRIPTION

The Mercator II PC/104-Plus module integrates 4 PCI-based 10/100 Ethernet ports with 24 user-configurable digital I/O lines in the compact and rugged PC/104 format. This 2-in-1 combination of Ethernet and digital I/O can help lower the size and cost of your embedded system by eliminating one additional board from your PC/104 stack.

The Ethernet ports utilize two Micrel KSZ8842 dual Ethernet Mac + Phy PCI controller chips. The 24 digital I/O lines are based on an 82C55 chip and feature programmable direction in 4- and 8-bit groups. All I/O lines contain user-configurable 10K Ohm pull-up resistors for convenience.

Extended temperature capability (-40°C to +85°C) enables the board to operate in environments with extreme temperature swings, such as vehicles or outdoor installations. In addition, the board may be custom-configured with 0-ohm resistors in place of jumper blocks for increased ruggedness in high-vibration environments.

Diamond Systems offers appropriate mating cables for your convenience. Cable number C-PRZ-02 provides a panel mountable RJ-45 connector for the Ethernet ports.

SPECIFICATIONS

Ethernet & General

Ethernet	4 ports
Protocol	IEEE 802.3 10Base-T / 100Base-TX compatible
Maximum baud rate	100Mbps
Ethernet connector	6-pin straight male headers
Digital I/O connector	26-pin (2x13) .025" square pin header on .1" centers
Dimensions	3.55" x 3.775" (PC/104 standard)
Power supply	+5VDC ±5%
Operating temperature	-40°C to +85°C
Operating humidity	5% to 95% non-condensing
PC/104-Plus bus	Both PC/104 (ISA) and PC/104-Plus (PCI) stack through headers

Digital I/O

Number of I/O lines	24
Direction	Programmable
Input Voltage	Low -0.5V min, 0.8V max High 2.0V min, 5.5V max
Output Voltage	Low 0.0V min, 0.4V max High 3.0V min, Vcc - 0.4V max
Output current	±2.5mA max, each line
Pull-up / pull-down operation	Jumper configurable

Configuration Options

- Digital I/O base address (8 address options with 3 jumpers)
- Digital I/O is jumper configurable for pull-up or pull-down operation
- PCI slot selection for each Ethernet port

ORDERING INFORMATION

Part No.	Description
MRC-424-XT	PC/104-Plus Quad 10/100Mbps Ethernet Module with 24 Digital I/O, extended temperature

FOR MORE INFORMATION

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