

PCI-ICM-2S

Isolated Serial Interface Card

FEATURES

- Universal PCI, PCI-X, 3.3V and 5V compatible
- Optically isolated, asynchronous serial communications
- Two independent ports each supports RS-422 or RS-485 communications
- Type 16550 buffered UARTs protect against data loss in multitasking systems
- Baud rates up to 460,800 baud
- Usable at cable lengths up to 4,000 feet
- Detected as standard COM ports under Windows



MANUALS
[PCI-ICM-2S.PDF](#)

ACCESSORIES
PCI-ICM-2S

DESCRIPTION

The PCI-ICM-2S serial communications card can be installed in five-volt PCI-bus computer slots and provides effective communication on long lines in noisy environments. Data lines are opto-isolated from the computer and from each other to assure communication even when large common mode voltages and noise are imposed.

By means of jumper placement on the card, each port can be set up for either RS-485 or RS-422 operation. RS-422 operation uses differential balanced line drivers for long range and high noise immunity. RS-485 operation improves on that by providing multi-drop capability for as many as 32 devices. RS-485 communication requires that one device on the network provide a bias voltage to ensure a known "zero" state when all transmitters are off. Also, receiver inputs at each end of the network should be terminated to avoid "ringing". Both ports on PCI-ICM-2S support those needs by means of jumpers on the cards.

The card supports half-duplex and full-duplex communications in 2- and 4-wire cable connections. Half duplex allows traffic to travel in both directions, but only one way at a time. In full-duplex operation, data travels both ways at the same time. Most RS-485 communications use the half-duplex mode because only a single pair of wires needs to be used and installation costs are dramatically reduced. In RS-485 operation the driver must be enabled and disabled as needed to allow all cards to share a two wire or four wire cable. Control circuits on PCI-ICM-2S enable the driver when data are to be transmitted. When transmission is complete, the driver remains enabled for the transmission time of one additional character and then is automatically disabled. The receiver at that port is disabled during transmission time and then enabled at the completion of data transmission.

Type 16550 UART's are used. These include 16-byte FIFO buffers to protect against data loss in multitasking operating systems. A crystal oscillator is located on the card. This oscillator and supporting circuits provides means for precise selection of baud rates up to 115,200. Rates up to 460,800 are available by jumper selection.

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Specifications

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Communications

- Serial Ports: Two shielded male D-sub 9-pin connectors compatible with RS-485 and RS-422 specifications.
- Serial Data Rates: Up to 115,200 baud, asynchronous. A faster range of rates, up to 460,800 baud, is achieved by jumper selection on the card.
- Asynchronous Communication Element: Type 16550 UART which includes 16-byte FIFO.
- Receiver Input Sensitivity: ± 200 mV differential input.
- Common Mode Voltage Rejection: +12V to -7V.
- Transmitter Output Drive Capability: 60 mA.

Environmental

- Operating Temperature Range: 0° to +60° C.
- Storage Temperature Range: -50° to +120° C.
- Humidity: 5% to 95%, non-condensing.
- Power Required: +5VDC at 125 mA typical, +12VDC at 5 mA typical, 750 mW total power consumption.
- Size: 6.15" long (156mm) by 3.875" high (98mm)

Regulatory Compliance

Declaration of Conformity, and Test Reports are on file. Users must use appropriate shielded cables.

| Part Number | Price(USD) |
|-------------|------------|
| PCI-ICM-2S | 249.00 |

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