

# PCI-ICM-1S

## Isolated Serial Communication Card

### FEATURES

- Universal PCI, PCI-X, 3.3V and 5V compatible
- Optically isolated, asynchronous serial communications
- Supports RS-422 and RS-485 protocols
- Automatic control of RS-485 driver under all operating systems
- Includes type 16550 UART with 16-byte FIFO buffers
- Baud rates up to 460,800 baud
- Detected as standard COM port by all operating systems
- No base address or IRQ switches to set
- RoHS Available. Please contact us for ordering information



MANUALS  
[PCI-ICM-1S.PDF](#)

ACCESSORIES  
 PCI-ICM-1S

LINKS  
[ACCES Home](#)  
[Tech Support](#)  
[Webmaster](#)

### FUNCTIONAL DESCRIPTION

The PCI-ICM-1S is a single port asynchronous optically isolated serial communication card that can be installed in any 3.3V or 5V PCI slot computer. 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.

The card supports RS-422 and RS-485 balanced-mode transmission/reception. Each card has capability to add bias voltage. (RS-485 communication requires that one transmitter in the network must supply 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 eliminate ringing. The card supports these options by means of jumpers on the card.

Type 16550 UARTs are used as the asynchronous communication elements. These include a 16-byte transmit/receive FIFO buffer to protect against lost data in multi-tasking systems while maintaining 100 percent compatibility with the original IBM serial port.

A crystal oscillator is located on the card and permits precise baud rate capability up to 115,200 baud. Higher baud rates, up to 460,800 baud, are achieved by changing a jumper on the card. The driver/receivers used, type 75176, are capable of driving extremely long communication lines at high baud rates. They can drive up to  $\pm 60$  mA on balanced lines and receive inputs as low as 200 mV differential signal superimposed on common mode noise of +12V to -7V. In case of communication conflict, the driver/receivers feature thermal shutdown.

When the card is first installed, the operating system will detect it as new hardware and assign it an IRQ number and base address. There are no switches to set or base addresses to assign, making it easy to use. From this point on, the card behaves as a standard COM port.

### RTS and AUTO TRANSCIEVER CONTROL

In RS-485 communications the driver must be enabled when needed and then disabled to permit all cards on the network to share a two-wire or four-wire cable. The card has two methods to control the driver: automatic (AUTO) and request-to-send (RTS) control. Under automatic control, the driver is enabled (and the receiver disabled) when data are ready to be transmitted. When transmission is complete, the driver remains enabled for the transmission time of one additional character and then is disabled. The card automatically adjusts its timing to the baud rate of the data. (NOTE: For use in half-duplex mode under Windows, the cards must be operated in the AUTO mode.) In the RTS mode, application software must set a bit to enable the driver and reset that bit to disable the driver.

Part Number	Price(USD)
RoHS PCI-ICM-1S	199.00

When ordering RoHS products, please identify this need by using a unique model number suffix, "-RoHS" on all orders. For pricing and lead times, please contact your sales representative.

[View / Download PCI-ICM-1S Manual \(in .PDF format\)](#)

[Return to top of page](#)