

PCI-COM485/4 AND PCI-COM485/4S1

Serial Interface Cards

FEATURES

- Universal PCI, PCI-X, 3.3V and 5V compatible
- Four-port serial communications card for PCI bus
- Supports RS-485 multidrop networks
- Includes type 16550 UART with 16-byte FIFO buffers
- Baud rates up to 460,800 baud
- Automatic control of RS-485 driver under Windows systems
- Choice of I/O connection methods
- No base address or IRQ switches to set



MANUALS
[PCI-COM-485-4.PDF](#)

ACCESSORIES
PCI-COM485/4

ACCESSORIES
PCI-COM485/4S1

FUNCTIONAL DESCRIPTION

The PCI-COM485/4 is a four-port, asynchronous serial communications card designed for use in PCI-Bus systems. The cards feature four independent, asynchronous RS-485 serial ports, type 16550 buffered UARTs, and for Windows compatibility, automatic control to transparently enable/disable the transmission drivers. The card may be installed in any 3.3V or 5V PCI or PCI-X slot.

There are two I/O Connector options. Model PCI-COM485/4 includes a single 25-pin connector on the mounting bracket plus a "spider" or breakout cable that terminates in four 9-pin D-type male connectors. Thus, this version only requires one I/O slot. The standard model PCI-COM485/4 S1 includes two 9-pin male connectors on the card mounting bracket plus a second mounting bracket with two more 9-pin male connectors plus ribbon cables to connect them to the headers on the card.

Each independent port supports RS-485 balanced mode transmission/reception. Each port has the 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 networks at each end of the networks should be terminated to eliminate ringing. These cards support that need 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 multitasking systems while maintaining 100% compatibility with the original IBM port.

A crystal oscillator is located on the card and permits precise baud rate capability up to 115,200. Higher baud rates, up to 460,800 baud, are achieved by changing a jumper on the card. The driver/receiver used, type 75176, is capable of driving extremely long communications lines at high baud rates. They can drive up to +/- 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. PCI-COM485/4 supports Half-Duplex communications with two-wire cable connections. Half-Duplex allows traffic to travel in both directions, but only one way at a time.

When the card is first installed, Windows 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 standard COM ports at COM 5,6,7, and 8. You cannot set or change the card's base address, you can only determine what the system has assigned. The PCI Bus supports 64K of I/O address space so your card's address may be located anywhere in the 0000 to FFFF range.

AUTO RTS TRANSCIEVER CONTROL

In RS-485 communications, the driver must be enabled and disabled as needed, allowing all cards to share a two wire cable. The PCI-COM485/4 controls the driver automatically. With automatic control, the driver is enabled when data is ready to be transmitted. The driver remains enabled for one additional character's transmission time after data transfer is complete and then is disabled. The receiver is also normally enabled, then disabled during RS-485 transmissions, and then re-enabled after transmission is completed (plus one character transmission time). The PCI-COM485/4 automatically adjusts its timing to the baud rate of the data.

Specifications

Communications Interface

- I/O Connection: 9-pin D-sub connectors.
- Serial Ports: Four shielded male D-sub 9-pin IBM AT style connectors compatible with RS-485 specifications. (Note: On model COM485/4, the breakout cable terminates with four female D-sub 9-pin connectors.)
- Character length: 5, 6, 7, or 8 bits.
- Parity: Even, odd or none.
- Stop Interval: 1, 1.5, or 2 bits.
- Serial Data Rates: Up to 115,200 baud, Asynchronous, A faster range of rates, up to 460,800, is achieved by jumper selection on the card. Type 16550 buffered UART.
- Address: Continuously mappable within 000 to FFFF (hex) range of PCI bus addresses.
- Receiver Input Sensitivity: ± 200 mV, differential input.
- Common Mode Rejection: +12V to -7V
- Transmitter Output Drive Capability: 60 mA, with thermal shutdown.

Environmental

- Operating Temperature Range: 0 ° to +60 ° C
- Storage temperature Range: -50 ° to +120 ° C
- Humidity: 5% to 90%, non-condensing.
- Power Required: +5VDC at 125 mA typical, -12VDC at 5 mA typical, +12VDC at 5 mA typical, 750 mW total power consumption.
- Size: 7.82" (198 mm) long by 3 7/8" (99 mm)

Regulatory Compliance

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

Part Number	Price(USD)
PCI-COM485/4	294.00
PCI-COM485/4S1	259.00