



Description

The RS422AT-PA card is 5.025-inches long (128mm) and can be installed in IBM PC/XT/AT or compatible computers. The card can be used for either RS422 or RS485 serial communications. (The RS485 specification allows multiple transmitters and receivers to communicate over a two-wire "party line" bus.) Type16550 buffered UARTs are used as the Asynchronous Communication Element (ACE). These include 16-byte transmit/receive FIFO buffers to protect against data overrun in multitasking operating systems. The card is 100 percent backward compatible when the card address is set as either COM1, 2, 3, or COM4. However, use of the RS422AT-PA card is not restricted to those I/O addresses. Continuous address selection is available anywhere within the I/O address range 000 to 3F8 hex (on 8 byte boundaries).

A crystal oscillator is located on the card. This oscillator permits precise selection of baud rate from 50 to 115,200. By jumper selection, baud rates up to 460,800 are available. Baud rate is program selected and rates available are listed in a table in the Programming section of this manual.

The transceiver used, type 75176, is capable of driving extremely long communication lines at high baud rates. It is capable of driving up to 60mA on balanced lines and receiving inputs as low as 200mV differential signal superimposed on common mode noise of maximum -7V/+12V. In case of communication conflict, the transceivers feature thermal shutdown. In RS485 applications, the driver must be enabled and disabled as needed allowing all cards to share a two-wire or four-wire cable. The RS422AT-PA controls the driver automatically. With automatic control, the driver is enabled when data are ready to be transmitted. The driver remains enabled for the transmission time of one additional character after data transfer is complete and then is disabled. The receiver is normally enabled but is disabled during transmissions and then re-enabled after transmission is completed. The card automatically adjusts its timing to the baud rate of the data. For increased noise immunity, the communication lines are loaded at the receiver and biased at the transmitter. If you have a card model RS422AT-PA(T), then optional transzorbs have been added to the I/O lines to increase noise immunity and protect against transients.

Features

- RS-422/485 Interface
- Selectable Address
- Two or Four Wire Operation
- Short Slot
- PC/XT/AT Compatible
- 16550 UART

Support

- Superior pre-sales and post-sales technical support
- All products carry a two year warranty



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Multipoint

Compatible with RS422 and RS485 specifications
Up to 32 drivers and receivers allowed on line
Serial communications ACE used is type NS16550 with 16 byte FIFO buffer
Transceivers used are type 75176

Common Mode Voltage

-7V to +12V

Receiver Input Sensitivity

+/- 200mV, differential input. Thermal shutdown protection

Output Drive Capability

+/- 60mA max., differential. Thermal shutdown protection

Tranzorbs

Optional Tranzorbs can be added to I/O lines for additional protection (Option T)

Baud Rate

50 to 460,800-baud. Crystal oscillator provided

Address

Eight bytes, continuously mappable within I/O address range 000 to 3F8 hex

Power Required

+5VDC at 400mA typical

Size

5.025-inch long (128 mm) and 1.925-inch seated height (49 mm).

Operating Temperature

0 ° to 60 °C

Storage Temperature

-50 ° to 120 °C

Humidity

5 to 95%, non-condensing

Ordering Guide

Model RS422AT-PA

Connector Pin Assignments

The popular 9-pin D subminiature connector is used for interfacing to communication lines. The connector is equipped with 4-40 threaded standoffs (female screw lock) to provide strain relief. We recommend using vinyl-jacketed, multiple twisted-pair cable.

Pin No.	Assignment
1	Receive Line - (RX-)
2	Transmit Line + (TX+)
3	Transmit Line - (TX-)
4	
5	Signal Ground
6	
7	
8	
9	Receive Line + (RX+)

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