

Model RS422AT-P

RS422/485 Interface Card



FEATURES

- RS-422/485 Interface
- Selectable Address
- Two or Four Wire Operation
- Short Slot
- PC/XT/AT Compatible
- 16450 UART



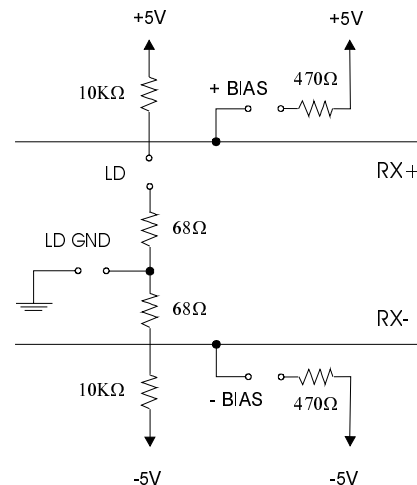
DESCRIPTION

This half size card can be installed in either long or short slots of ISA bus computers. This card can be used for either RS-422 or RS-485 asynchronous serial communications. The card uses the 16450 type UART. It is 100% compatible with MS-DOS if the address is set to any COM 1 through COM 4 address. However, you are not limited to only those addresses. Continuous address selection can be setup anywhere in the I/O address range of 000 to 3FF hex.

A crystal controlled oscillator is located on the card. This oscillator permits precise selection of baud rate from 56 to 56,000 baud. For applications that require higher baud rates, the 16550 UART is available as a special option.

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 maximum of -7V to +12V. The transceiver also features a thermal shutdown mode in case of communication conflict.

For increased noise immunity, the communications lines are loaded at the receiver and biased at the transmitter. A transmission line should be terminated at the receiving end in its characteristic impedance. Installing a jumper at a location marked LD on the card applies a 136Ω load across the input for RS-422 mode and across the transmit/receive input/output for RS-485 operation. When noise is a potential problem on long lines, the terminating resistance can be divided and the center point grounded by installing a jumper at a location marked LD GND on the card. If needed, optional tranzorbs that limit very high noise transients may be added on the I/O lines.



DESCRIPTION

Model RS422AT-P

In RS-485 operations, where there can be as many as 32 transmitters on a two-wire “party line”, only the RS-485 ports at each end of the network should have terminating resistors as described above. If the card is to have an ungrounded load, you can omit the LD GND jumper mentioned above. Also, for RS-485 operation, there must be a bias on the Rx+ and Rx- lines. The RS422AT-P card can provide this bias if jumpers are installed at locations marked +BIAS and -BIAS on the card.

SPECIFICATIONS

Multipoint

Compatible with RS-422 and RS-485 specifications. Up to 32 drivers and receivers allowed on one line.

Input Common Mode Voltage

-7V to +12V

Receiver Input Sensitivity

±200mV

Driver Output

60mA max

Baud Rate

50 to 56K baud

Address

Continuously mappable within 000 to 3FFF hex

Temperature Range

Operating: 0 to 60°C
Storage: -50 to +120°C

Power Required

+5VDC @ 400mA typical

In addition to differential Transmit and Receive lines, single-ended, buffered RTS and CTS line are provided on the I/O connector. CTS must be pulled up to +5VDC for the card to operate. If CTS won't be controlled by software in your application, then you have two options. You can install a jumper at the CTS jumper position on the card. You can also omit the jumper and install a jumper between pins 5 and 9 of the mating I/O connector. When the latter is done, you should check for proper installation of the communications cable. Full Duplex, Half Duplex, or Simplex operation can be selected by jumper options.

SOFTWARE

A disk is provided that includes a graphical Set-up program, and a routine titled FINDBASE that helps select an I/O base address (if you are not using the standard COM addresses) that will not conflict with other resources already installed in the computer. Another software feature included is Windows DLLs that are designed to work with any Windows language that allows calls to DLLs. These DLLs support Windows 3.1x, Windows 95 and Windows NT.

Operating Systems Supported

DOS 3.3 and higher
Windows 3.1x
Windows 95
Windows NT

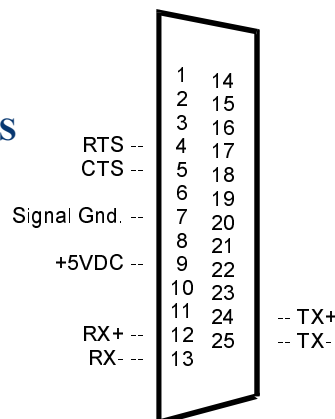
Languages Supported

QuickBASIC V4.5
Turbo C V2.0
Turbo Pascal V6.0 or higher

Demo/Example Programs Included

Examples in C, and Pascal as well as Windows sample programs in C.

PIN CONNECTIONS



ORDERING GUIDE

Model RS422AT-P

Board, Manual, Software



6260 Sequence Drive
San Diego, CA 92121
800 523-2320
fax 858 677-0895
www.icsadvent.com