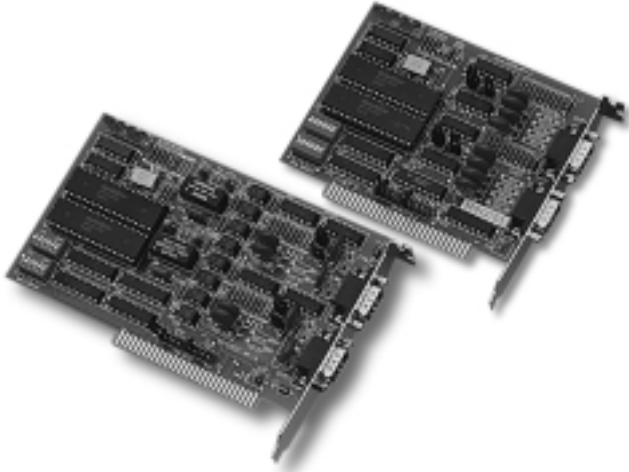


AX4285A+/B+

Dual Channel Isolated RS-422/485 Interface Board



■ Features

- Two independent EIA RS-422/485 interface
- Reliable communication up to 4000 feet (1.2Km) at 100K bps
- IBM compatible serial ports up to 57,600 baud rates
- Selectable UART port address from hex 200 to 3F8
- Jumper selectable interrupt level IRQ 2,3,4,5,6,7
- Supports TX, RX, RTS and CTS signals
- Two or four wires operation
- RS-485 transmitter enable jumper operations: always enable and RTS enable
- Onboard termination resistors
- Onboard surge absorbers
- Fully isolated input and output for AX4285A
- Onboard TX and RX LED indicators

■ General Description

The AX4285, a dual channel asynchronous serial communication which is provided with two RS-422/485 serial interface, is a half-sized interface card that plugs directly into any IBM™ PC/XT/AT or compatible computers. The AX4285 permits higher data rates and longer cable lengths of asynchronous communications than RS-232. Complete with AX4285, your PC can communicate with other computers or devices having the same communication parameters and interface through the two 9-pin D-type connectors on the right edge of the card.

As the AX4285 is designed for long distance data transmission, possibly this card is connected with outdoor cables that the high voltage from the

environment may damage the integrated circuit on the board. For protection, at both channel, we provide a varistor (and termination resistor) connected between each of the communication wire lines and ground.

You could fully integrate your PC with the AX4285 simply by plugging it in an empty expansion slot. If the two standard serial ports COM1 and COM2 are used, then no certain control code will be needed.

RS-422 and RS-485 use differential signal lines which will decrease noise effect in data transmission. RS-422 supports a unipolarity differential protocol good to 10M bauds and to 4000 feet. RS-485 is similar to RS-422, but with additional specifications so that many drivers and receivers can share a single line. Thus, the feature of RS-422 is one driver to many receivers while RS-485 is many drivers to many receivers multi-drop communication.

■ Specifications

- **Baud Rate:** 50 to 57,600 bps
- **UART:**
16C450 (can be replaced with 16C550)
- **Clock Input:** 1.8432 MHz
- **Interrupt Level:**
IRQ 2, 3, 4, 5, 6, 7
- **I/O Connector:**
Dual 9-pin D-type male connectors
- **Transmitter:**
 - Device: SN75172 or equivalent
 - High level voltage:
3.7V typical at 33mA source
 - Low level voltage:
1.1V typical at 33mA source
 - High level current:
60mA source max.
 - Low level current:
60mA sink max.
- **Receiver:**
 - Device: SN75173 or equivalent
 - Differential input threshold: 0.2V max.
 - Hysteresis: 50mA typical
 - Input impedance:
>12KΩ with terminators

Power Requirements

- **AX4285A:** +5VDC, 600mA typ.
- **AX4285B:** +5VDC, 400mA typ

Dual Channel Isolated RS-422/485 Interface Board

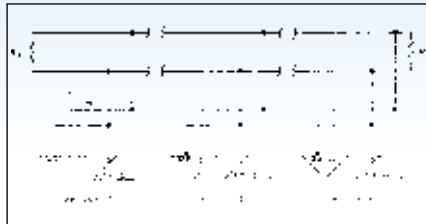
Physical/Environmental

- **Dimensions:**
AX4285A: 170 x 100mm
AX4285B: 132 x 100mm
- **Weight:**
AX4285A: 172g
AX4285B: 145g
- **Relative Humidity:**
0 to 90%, non-condensing

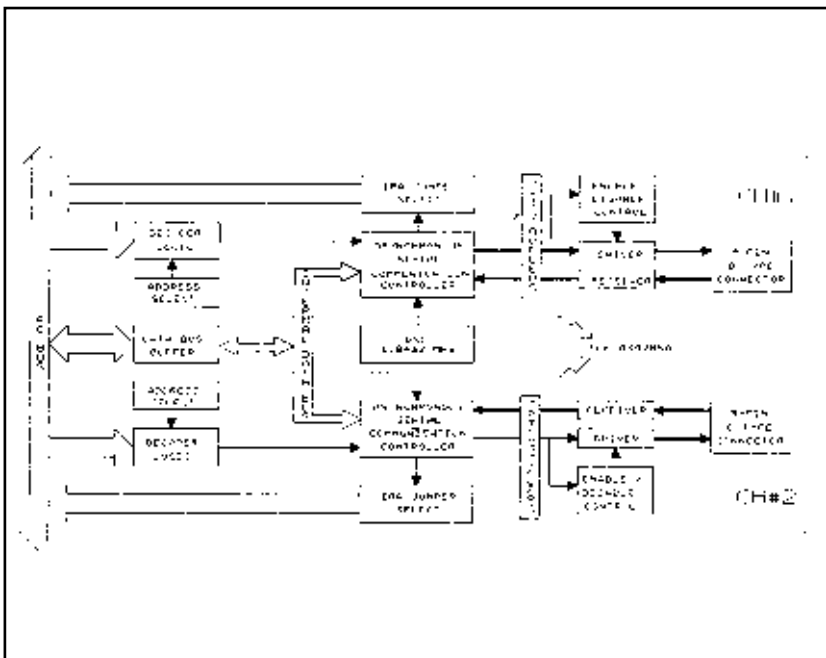
Ordering Information

- **AX4285A**
Dual Channel Isolated RS-422/485 Interface Board
- **AX4285A+**
AX4285A uses 16550 UART
- **AX4285B**
Dual Channel RS-422/485 Interface Card
- **AX4285B+**
AX4285B uses 16550 UART
- Include Axcommdrv RS-422/485 Windows 32 driver

Wiring Diagram



Block Diagram



Connector Pin Assignment

