

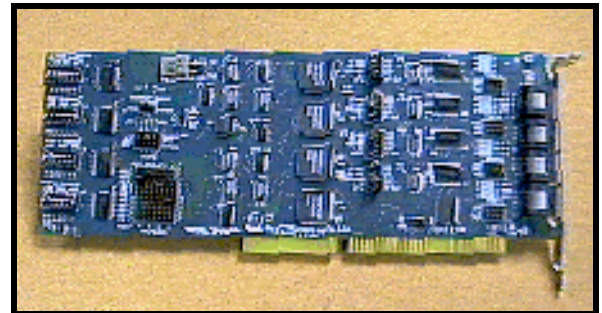
4 Port, Any Address, Any IRQ RS-232/422/485 Serial Card CE with Interrupt Status Register & Send Data Control Models: 3PXSD4A & 3PXSD4B

Description:

The 3PXSD4A interface card offers four ports with exceptional setup flexibility on one card. Each of the four ports can be independently configured for any I/O address, any available interrupt, as well as RS-232, RS-422, or RS-485 data protocols. 3PXSD4A cards provide automatic RS-485 driver control circuitry for hassle-free communications. Since this feature is handled in hardware, it works regardless of the operating system or program you are running. Each port uses a buffered, high speed UART (16550A). Also available is the 16850 UART with 128 byte FIFO's (Model 3PXSD4B), making it ideal for high speed multitasking applications. The 3PXSD4A has interrupt sharing capabilities and an Interrupt Status Register to increase throughput in shared-IRQ applications. The shared IRQ feature of the 3PXSD4A is supported by B&B Electronics' SimpCom serial port driver software for DOS. The 3PXSD4A uses 8 conductor RJ45 connectors. Pre-wired adapter kits are available to convert to DB9 and DB25 connectors.

Features:

- PC, XT and AT compatible, ISA or EISA bus
- Each port independently configurable for RS-232/422/485
- Automatic Send Data driver control in RS-485 mode
- High speed FIFO 16550A UARTS (Model 3PXSD4A) or 16850 UARTS (Model 3PXSD4B)
- Supports RS-422/485 baud rates to 460.8K Baud, 115.2K Baud in RS-232 mode
- Each port independently configurable for any hex address, 0 - 3F8h
- Full 16 bit address decoding prevents COM4-Video conflicts
- Each port independently configurable for any interrupt (2-7, 10-12, 14 and 15)
- Shared IRQ capability with Interrupt Status Register
- RS-232 mode supports TD, RD, RTS, CTS, DSR, DCD & DTR
- RS-422 and RS-485 modes support TD and RD



Connectors:

Each port of the 3PXSD4A uses an RJ45 connector. Pinouts of the RJ45 are shown in Table 1. B&B Electronics has two adapter kits available to convert the ports into either male DB9 (B&B Model MDB9) or male DB25 (B&B Model MDB25) connectors. The connector kits include one 7' RJ45 cable (B&B Model 8C7F) and one RJ45 to DB9 or DB25 male adapter (B&B Model 9M8CK or 25M8CK). The adapters in these kits are pre-wired for standard RS-232 DTE pinouts (pinouts are easily changed using a pin extractor tool, B&B Model 232PET). For other connector variations, the unwired adapters are available individually from B&B Electronics.

Table 1

RJ45 Pin Number	RS-232 Mode Signal	RS-422/485 Mode Signal	MDB9 Adapter Pin Number	MDB25 Adapter Pin Number
1	RTS	TD(B)	7	4
2	TX	TD(A)	3	2
3	CTS	RD(B)	8	5
4	RX	RD(A)	2	3
5	DTR		4	20
6	DSR		6	6
7	CD		1	8
8	GND	GND	5	7

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This product designed and manufactured in USA of domestic and imported parts by

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Sharing IRQs:

With multiple serial ports installed in a computer, interrupt conflicts become hard to avoid. The 3PXS4A allows any or all of its four ports to share one interrupt line. If the shared IRQ ports are to be used at the same time, your software must support this shared IRQ feature. If you're writing your own serial application, using our serial port driver, SimpCom, will allow you to efficiently share all four ports. 3PXS4A serial port interrupt lines may be shared without special software, provided the software is never loaded at the same time.

When in Shared mode, the Scratch Pad Register of Port A is replaced with a read-only, 4-bit Interrupt Status Register. This register indicates which of the ports the pending interrupt came from. For example, if each of the four ports was sharing IRQ 4, and an interrupt was received, the interrupt service software should read the Interrupt Status Register, to determine which port to service. B&B Electronics' SimpCom version 1.04 and higher software will handle this task for anyone writing their own DOS based serial application. The Interrupt Status Register offers significant throughput gains over servicing all four ports whenever an interrupt is received.

Specification Summary:

Bus Type: PC, XT and AT compatible (ISA or EISA bus)
UARTs: 16550A 16 byte TX and RX buffers (A model), or 16850 128 byte TX and RX buffers (B model)
Baud Rates: 460,800 Baud Max - RS-422/485
115,200 Baud Max - RS-232
Addresses: Each port can be independently configured to any hex address 0 - 3F8h
Interrupts: Each port can be set to any interrupt 2-7, 10-12, 14 and 15
Shared Interrupts: Any or all of the four ports can share the Port A interrupt. A four bit Interrupt Status Register replaces the Scratch Pad Register of Port A to indicate which port(s) have an interrupt pending.
Connectors: Four RJ45 connectors
Dimensions: 29.2 cm x 10.2 cm (11.5" x 4.3")
RS-485 mode: SD Control - driver is automatically enabled with data, disabled 1 character time after transmission. RTS Control - software must set the RTS control line to enable the driver. The receiver can always be enabled, or be controlled by with the driver.
Termination: A 120Ω termination resistor may be set In or Out with a jumper.
Power Consumption: All ports unloaded
+5V, 325 mA, 1.625 W
+12V, 45 mA, 540 mW
-12V, 45 mA, 540 mW

DECLARATION OF CONFORMITY

Manufacturer's Name: B&B Electronics Manufacturing Company
Manufacturer's Address: P.O. Box 1040
707 Dayton Road
Ottawa, IL 61350 USA
Model Numbers: 3PXS4A
Description: ISA Four Port Serial PCI Card
Type: Light industrial ITE equipment
Application of Council Directive: 89/336/EEC
Standards: EN 50082-1:1992 IEC 801 (-2, -3, -4)
EN 61000 (-4-2, -4-3, -4-4, -4-6)
EN 50082-1:1998



Michael J. Fahrion, Director of Engineering



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