



Introduction

We designed the PCL-844+ intelligent 8-port RS-232 or RS-422 interface card for lab and industrial applications where a PC needs to communicate with terminals, modems, or other instruments. RS-422 applications use the optional Opt-8F/8Z 8-port RS-232 to RS-422 converter, shown on the following page. You can install up to four PCL-844+ cards for a total of 32 ports in any AT/ISA bus-based PC.

The PCL-844+ card has an on-board RISC processor that takes over the communications load from the host PC. When you are processing large amounts of data from multiple ports, servicing the interrupts alone consumes a large percentage of the capacity of your computer's CPU. The PCL-844+ serves as a high speed dedicated interrupt processor. Its CPU directly controls the board's CD180 RISC-based UART, guaranteeing 921.6 Kbps performance over eight high speed data ports.

The PCL-844+ is virtually a self contained computer in its own right. It contains 512 KB of dual-port RAM which you can use to store and run programs. The dual-port RAM maps into the host system's address space to give you the fastest possible data transfers between the PCL-844+ and the PC memory.

When the PCL-844+ initializes, it downloads the driver software (which functions like a PC's BIOS) into on-board SRAM. This improves performance and makes version upgrading easy, with no hardware redundancy.

The PCL-844+ comes with a communication utility package called PC ComLIB. The package consists of configurable DOS and Windows drivers, a programming library that supports most common languages (such as C, Pascal, BASIC, assembly and Clipper) and DataScope. The PCI-1625 is the newest generation of intelligent 8-port communication card for PCI bus system. This card is equipped with the same high-performing functions as PCL-884+.

Features

- RISC Processor (TMS 320)
- 512 KB dual-port RAM
- Transmission speed up to 921.6 Kbps with eight ports on-line
- Complete RS-232 modem control signals
- Maps to just 16 KB of system memory. Choose one of six addresses from C8000 to DC000.
- Many IRQ options: 2, 3, 4, 5, 7, 10, 11, 12 or 15
- Easy-to-use menu driven installation program
- LEDs on connection box let you monitor the TxD/RxD status of any port
- Links to peripherals up to 1200 m (4000 ft) from controller (RS-422)

Applications

- Data acquisition and control with RS-232/RS-422 based devices
- PLC monitoring and control
- Instrument controller, distributed control system
- Modem server, database server, POS controller
- Multi-user system

Specifications

Board

- **Number of ports:** 8
- **Processor:** RISC, TI TMS320C203-57
- **Dual-ported RAM:** 512 KB
- **SRAM:** 16 KB
- **UART:** RISC-based CD180
- **Interrupt:** 2, 3, 4, 5, 7, 10, 11, 12 or 15
- **Maximum ports in one system:** 32
- **Operating temperature:** 0 ~ 55° C (32 ~ 131° F)
- **Power consumption:**
+5 V @ 155 mA, +12 V @ 110 mA, -12 V @ 160 mA
- **Weight:** 0.8 kg (1.8 lb)

RS-232 Interface

- **Signals:**
TxD, RxD, RTS, CTS, DTR, DSR, DCD and GND
- **Mode:** Asynchronous full duplex
- **Communication speed:** 50 ~ 921.6 Kbps
- **Data bits:** 5, 6, 7, 8
- **Stop bits:** 1, 1.5, 2
- **Parity:** Even, odd or none

Cable Wiring

Opt-8B: 8-port RS-232 Connection Box



- Eight male DB-25 connectors (DTE pin assignments)
- Includes 1.5-meter DB-62 to DB-62 cable
- **Shipping weight:** 1.4 kg (3.1 lb)
- **Dimensions:** 280 x 110 x 32 mm (11.0" x 4.3" x 1.3")

Opt-8C: DB-62 to 8 x DB-25 RS-232 Cable



- 1-meter male DB-62 to eight male DB-25 connectors (DTE pin assignments)
- **Shipping weight:** 1.0 kg (2.2 lb)

Opt-8F/8Z 8-port RS-232 to RS-422 Converter



Features

- RS-422 output for industrial and laboratory control
- 500 V_{DC} isolation protection
- Data transmission up to 1.2 km (4000 ft.)
- LED indicators on each port indicate data flow

Specifications

- **Speed:** 50 ~ 921.6 Kbps
- **Isolation:** 500 V_{DC} min.
- **Signals:** TxD+, TxD-, RxD+, RxD- and GND
- **Differential driver:**
Min. output voltage: 2 V (w/100 Ω termination resistor)
Max. output voltage: 5 V (w/o termination resistor)
- **Power consumption:** 4 W
- **Power adapter:** 110/220 V_{AC} input; +5 V_{DC} output
- **Shipping weight:** 1.9 kg (4.2 lb)

Ordering Information

- PCL-844+:** 8-port intelligent RS-232/RS-422 card, with ISA bus
- Opt-8A:** 8-port RS-232 (DCE) connection box with female DB-25 connectors
- Opt-8B:** 8-port RS-232 (DTE) connection box with male DB-25 connectors
- Opt-8C:** 8-port RS-232 connection cable with male DB-25 connectors
- Opt-8Z/110:** 8-port RS-422 converter with 1.5-meter DB-62 to DB-62 cable and external power adapter (110 V_{AC} input)
- Opt-8Z/220:** 8-port RS-422 converter with 1.5-meter DB-62 to DB-62 cable and external power adapter (220 V_{AC} input)
- Opt-8F/110:** Isolated 8-port RS-422 converter with 1.5-meter DB-62 to DB-62 cable and external power adapter (110 V_{AC} input)
- Opt-8F/220:** Isolated 8-port RS-422 converter with 1.5-meter DB-62 to DB-62 cable and external power adapter (220 V_{AC} input)
- Opt-8S:** 8-port RS-232 connection box with female DB-25 connectors and surge protectors
- PCI-1625:** 8-port Intelligent RS-232/422 Card, with PCI bus