PCL-747+/747R

Multiport RS-232/422 Controller

Introduction

The PCL-747+/747R is an expandable intelligent multi-serial communication controller available in 8, 16, 24 and 32-port configurations. With its 40 MHz RISC processor, 512 KB of RAM, and a suite of software drivers/tools for Advantech multiport boards, the intelligent PCL-747+/747R acts as a front end I/O processor, relieving the workload of the host computer. Four PCL-747+/747R Multi-port Controllers can be installed in a single host computer, providing up to 128 serial communication channels. The PCL-747+/747R complies with ISA specifications.

Control Board

The PCL-747+/747R Control Board resides in the host computer with an on-board RISC processor managing I/O traffic. The Control Board and external multi-port modules communicate with each other via a high speed RS-422 synchronous interface over a standard 2-meter cable.

Basic Module (Rackmount)

The Basic Module has its own RISC processor that works with the Control Board, and provides 8 or 16 serial ports with RJ-45 connectors. Equipped with high speed UARTs, the Basic Module supports transfer rates of up to 460.8 Kbps. The Basic Module comes with a rackmount kit and is easily installed in a standard industrial 19-inch rack cabinet.

Extension Module (Rackmount)

The Extension Module is used when more ports are needed for the system. It provides an additional 8 or 16 serial ports with RJ-45 connectors.

CPU Module (Desktop)

The CPU Module also has its own RISC processor which works with the Control Board to reduce host CPU overhead. This double CPU architecture can raise performance to the highest degree. The CPU Module features power-on and self-test LED's which allow you to monitor individual port activity for easy diagnostics.

UART Module (Desktop)

To improve overall performance, each UART Module is equipped with an efficient serial communication controller that allows transfer rates of 460.8 Kbps per port. The UART Module is available with an RS-232 or an RS-422 interface and male or female DB-25 connectors

Software Features

For optimum system performance, an intelligent board needs smart firmware. This relieves the host CPU of all device interrupt handling, performs "cooked" data processing and handles all hardware and software flow control. The PCL-747+/747R supports all popular operating systems such as Windows 3.x, Windows 95, Windows NT, and DOS. All drivers are shipped with easy window-style installation.
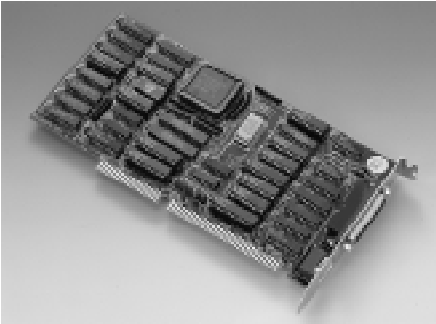
Specifications

Control Board

- 40 MHz TMS-320C52 RISC processor
- 512 KB dual-port RAM with 16 KB memory window
- IRQ: 2, 3, 4, 5, 7, 10, 11, 12, 15
- ISA bus (EISA compatible)
- Max. 4 Control Boards per system
- Operating temp.: 0 ~ 55° C (32 ~ 131° F)
- FCC Class A

Basic Module (Rackmount)

- 40 MHz TMS-320C52 RISC processor
- 8 or 16 serial ports, RJ-45 connectors
- Max. speed up to 460.8 Kbps
- High-speed TI550C UART with 16-byte FIFO and on-chip hardware flow control
- RS-232 interface: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
- 19-inch rackmountable

Extension Module (Rackmount)

- 8 or 16 serial ports, RJ-45 connectors
- Max. speed up to 460.8 Kbps
- High-speed TI550C UART with 16-byte FIFO and on-chip hardware flow control
- RS-232 interface: TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
- 19-inch rackmountable

CPU Module (Desktop)

- 40 MHz TMS-320C52 RISC processor
- 16 KB ROM
- 32 KB RAM
- LEDs and 2 seven segment displays
- FCC Class A

UART Module (Desktop)

- High-speed TI550C UART with 16-byte FIFO and on-chip hardware flow control
- 8 serial ports
- Optional RS-232 or RS-422 interface
- RS-232 (Female or Male connectors): TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND (full modem control)
- RS-422 (Female connectors): TxD+, TxD-, RxD+, RxD-, RTS+, RTS-, CTS+, CTS-, GND
- FCC Class A

Ordering Information

- ❑ **PCL-747+/232**: Multiport control board, with CPU module, 2-meter DB-25 to DB-25 cable, 8-port RS-232 UART module, user's manual and software
- ❑ **PCL-747+/422**: Multiport control board, with CPU module, 2-meter DB-25 to DB-25 cable, 8-port RS-422 UART module, user's manual and software
- ❑ **Opt-8E+/232**: Additional 8-port RS-232 UART module
- ❑ **Opt-8E+/422**: Additional 8-port RS-422 UART module
- ❑ **Opt-8E+/422I**: Additional isolated 8-port RS-422 UART module
- ❑ **PCL-747R**: Multiport control board, 2-meter DB-25 to DB-25 cable, 16 port RS-232 module, user's manual and rackmount kit
- ❑ **PCL-747R-8E**: 8-port RS-232 extension module, DB-37 link cable and rackmount kit
- ❑ **PCL-747R-16E**: 16-port RS-232 extension module, DB-37 link cable and rackmount kit
- ❑ **PA2:** Power adapter for CPU module, only required when CPU-to-card distance is greater than 6.5 feet (2m)

Industrial Communication

6