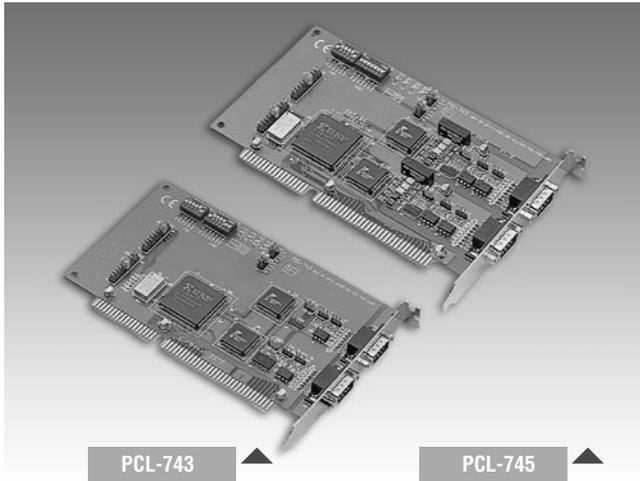# PCL-743
PCL-745

2-port High-speed RS-422/485 COMM Cards

2-port High-speed RS-422/485 COMM Cards w/ Isolation

Features

- Two independent RS-422/485 serial ports
- Provides 3000 V_{DC} isolation (PCL-745B/745S)
- Provides 2500 V_{DC} surge protection (PCL-743S/745S)
- 16C550 UARTs with on-chip 16-byte FIFO
- Transmission speeds up to 921.6 kbps
- I/O address and interrupt selectable
- Wide IRQ selection: 3, 4, 5, 6, 7, 9, 10, 11, 12 or 15
- Supports 2 wire or 4 wire operation
- Supports Tx, Rx, RTS, and CTS signals
- Automatic RS-485 data flow control or RTS control
- Termination resistors jumper enable/disable
- Space reserved for optional surge protection on data lines (PCL-743B/745B)
- Supports standard DOS COM1, COM2, COM3, and COM4
- Supports Windows® 98/2000/XP, Linux®
- Powerful and easy-to-use utility (ICOM Tools)

PCL-743 ▲   **PCL-745** ▲

CE

Introduction

PCL-743 and PCL-745 provide two RS-422/485 serial ports. Each port utilizes a 16C550 UART with an on-chip 16-byte FIFO buffer for reliable, high-speed serial I/O.

The UART buffer divides data into 16-byte packets before sending them onto the bus. This drastically reduces CPU load and avoids data loss due to failure to respond to the interrupt request in time. The UART is especially useful for high speed serial I/O under Windows.

The PCL-745B/745S card differs from the PCL-743B/743S card in that the former uses on-board optical isolators to protect your PC and equipment against damages from ground loops, increasing system reliability in harsh environments. To further increase reliability, PCL-743S and PCL-745S offers surge protection, protecting your system from abrupt high voltage surges (up to 2500 V_{DC}) such as those caused by lightning.
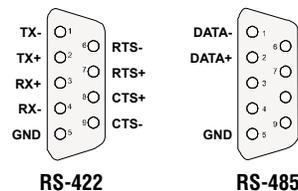
Specifications

- **Ports**   2
- **UART**   2 x 16C550 with 16-byte FIFO
- **Signal Support**   TxD+, TxD-, RxD+, RxD-, CTS+, CTS-, RTS+ and RTS-
- **I/O Address**   From 200H to 3F8H
- **IRQ**   3, 4, 5, 6, 7, 9, 10, 11, 12 or 15
- **Isolation Voltage**   3000 V_{DC} (PCL-745B/745S)
- **Surge Protection**   2500 V_{DC} (PCL-743S/745S)
- **Power Consumption**   +5 V @ 400 mA typical, 950 mA max.
- **Connectors**   Dual DB9 male connectors
- **Operating Temperature**   0 ~ 65° C (32 ~ 149° F)
- **Dimensions**   185 x 100 mm (7.3" x 3.9")
- **Shipping Weight**   0.6 kg (1.3 lb)

Ordering Information

- **PCL-745B**   2-port RS-422/485 communication card with isolation protection
- **PCL-745S**   2-port RS-422/485 communication card with isolation and surge protection
- **PCL-743B**   2-port RS-422/485 communication card
- **PCL-743S**   2-port RS-422/485 communication card with surge protection

Pin Assignments

TX-	1				DATA-	1		

TX- ○1   6○ RTS-
TX+ ○2   7○ RTS+
RX+ ○3   8○ CTS+
RX- ○4   9○ CTS-
GND ○5

DATA- ○1   6○
DATA+ ○2   7○
○3
○4
GND ○5   9○

RS-422   **RS-485**

Applications

- PLC monitoring and control
- Serial communication interface for harsh environments
- Data entry terminals
- Remote data acquisition and control systems
- Instrument controller and distributed control systems