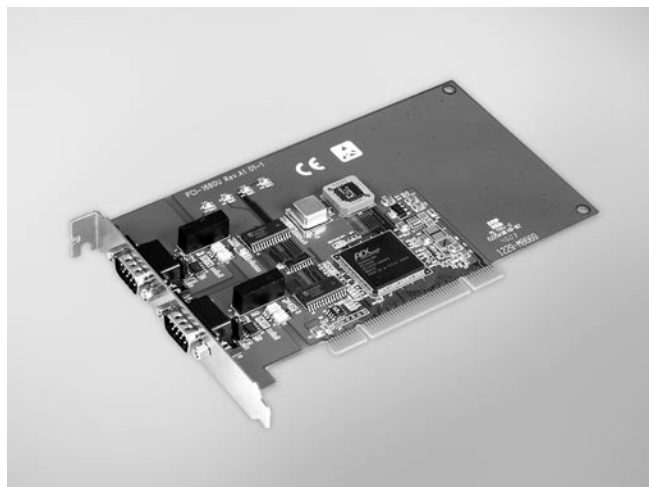# PCI-1680U

## 2-port CAN-bus Universal PCI Communication Card with Isolation Protection



## Features

- PCI bus 2.2 compliant
- Operates two separate CAN networks at the same time
- High speed transmission up to 1 Mbps
- 16 MHz CAN controller frequency
- Optical isolation protection of 1000 $V_{DC}$ ensures system reliability
- I/O address automatically assigned by PCI PnP
- LED indicated transmit/receive status on each port
- Windows® DLL library and examples included
- Universal PCI Universal PCI (Supports 3.3 V or 5 V PCI bus signal)
- Supports Windows® 2000/XP/Vista and Linux

RoHS COMPLIANT 2002/95/EC   FCC   C€

## Introduction

PCI-1680U is a special purpose communication card that offers the connectivity of the Controller Area Network (CAN) to your PC. With its built-in CAN controllers, the PCI-1680U provides bus arbitration and error detection with an automatic transmission repeat function. This drastically reduces the chance of data loss and ensures system reliability. The onboard CAN controllers are located at different positions in the memory, and you can run both CAN controllers independently at the same time. Besides, PCI-1680U has a universal PCI connector, which is compatible with both new 3.3 V signaling systems and traditional 5 V signaling systems. With high-compatibility, the PCI-1680U can be used in diverse systems.

### Controller Area Network (CAN)

The CAN is a serial bus system especially suitable for networking "intelligent" I/O devices as well as sensors and actuators within a machine or plant. Characterized by its multi-master protocol, real-time capability, error correction, high noise immunity, and the existence of many different silicon components, the CAN serial bus system, originally developed by Bosch™ for use in automobiles, is increasingly being used in industrial automation.

### Direct Memory Mapping Enables Direct Access to the CAN Controller

The PCI-1680U is assigned a memory address. This is the simplest method of integrating a board in a PC and provides the quickest access since the board is treated by the PC as being standard RAM.

### Optical Isolation Protection

Onboard optical isolators protect your PC and equipment against damage from ground loops, which increases system reliability in harsh environments.

## Specifications

### General

- **Card Interface**      Universal PCI V 2.2
- **Certifications**      CE, FCC class A
- **Connectors**      2 x DB9-M
- **Dimensions**      185 x 100 mm (7.3" x 3.9")
- **Ports**      2
- **Power Consumption**      5 V @ 400 mA (Typical)

### Communication

- **CAN Controller**      SJA-1000
- **CAN Transceiver**      82C250
- **Protocol**      CAN 2.0 A/B
- **Signal Support**      CAN_H, CAN_L
- **Speed**      1 Mbps

### Protection

- **Isolation Protection**      1,000 $V_{DC}$

### Environment

- **Humidity (Operating)**      5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- **Operating Temperature**  0 ~ 65° C (refer to IEC 68-2-1, 2) (32 ~ 149° F)
- **Storage Temperature**      -25 ~ 85° C (-13 ~ 185° F)

## Ordering Information

- **PCI-1680U**      2-port CAN-bus Uni PCI COMM Card w/Iso