



Features

- 16 isolated DI and 16 isolated DO channels
- High voltage isolation on all isolated channels (2500 V_{DC})
- High sink current on isolated output channels (200 mA/channel)
- Supports dry contact or 5 ~ 48 V_{DC} isolated inputs
- Interrupt handling
- Timer/Counter interrupt capability

Introduction

The PCI-1750 card offers 16 isolated digital input channels, 16 isolated digital output channels, and one isolated counter/timer for the PCI bus. With isolation protection of 2,500 V_{DC}, and dry contact support, the PCI-1750 is ideal for industrial applications where high-voltage protection is required.

Each I/O channel of the PCI-1750 corresponds to a bit in a PC I/O port. This makes the PCI-1750 very easy to program. This card also offers a counter or timer interrupt and two digital input interrupt lines to a PC. Users can easily configure them through software.

PCI-Bus Plug and Play

The PCI-1750 uses a PCI controller to interface the card to the PCI bus. The controller fully implements PCI bus specification Rev 2.1. All bus relative configurations, such as base address and interrupt assignment, are automatically controlled by the software. No jumper or DIP switch is required for user configuration.

On-board Programmable Counter/Timer

The PCI-1750 provides a programmable counter/timer for generating periodic interrupts to the host computer. The counter/timer chip is an 82C54, which includes three 16-bit counters based on a 10 MHz clock. One counter is used to count events coming from the isolated input channel. The other two are cascaded together to make a 32-bit timer.

Applications

- Industrial ON/OFF control
- Contact closure monitoring
- Switch status sensing
- BCD interfacing
- Digital I/O control
- Industrial and lab automation

Specifications

Digital Input

- 16 Optically-isolated inputs

- **Input range:** 5 ~ 48 V_{DC} or dry contact
- **Isolation voltage:** 2,500 V_{DC}
- **Throughput:** 10 kHz

Digital Output

- 16 Optically-isolated outputs
- **Output range:** Open collector 5 ~ 40 V_{DC}
- **Sink Current:** 200 mA max. per channel
- **Isolation voltage:** 2,500 V_{DC}
- **Throughput:** 10 kHz

Programmable Counter/Timer

- One 32-bit timer
- One 16-bit optically-isolated counter
 - Shares pin with isolated input 15
 - Throughput: 1 MHz max.
 - Isolation voltage: 2,500 V_{DC}

General

- **Interrupt source:** Isolated input 0, 8, counter and timer
- **Power consumption:** 5 V @ 850 mA (typical)
5 V @ 1.0 A (max.)
- **Operating temperature:** 0 ~ +70° C (32 ~ 158° F)
- **Storage temperature:** -20 ~ +80° C (-4 ~ 176° F)
- **Operating humidity:** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Connectors:** One 37-pin D-type female connector
One 2-pin terminal block for extended ground
- **Dimensions:** 175 mm (L) x 100 mm (H) (6.9" x 3.9")

Ordering Information

- PCI-1750: 32-channel isolated DIO and counter card
- PCL-10137: DB-37 cable assembly, 1 m
- ADAM-3937: 37-pin D-type cable wiring terminal for DIN-rail mounting
- PCLS-OCX: ActiveX control for data acquisition and control