

# PCIE-1760

## 8-Ch Relay and 8-Ch Isolated Digital Input PCI Express Card



### Features

- 8 opto-isolated digital input channels with counter/timer function
- 8 relay actuator output channels
- 2 opto-isolated Counter I/O (PWM, Event Counting, Frequency Measurement and Timer/Pulse)
- LED indicators to show activated relays
- Jumper-selectable dry/wet-contact input signals
- Up event counters for DI
- Programmable digital filter function for DI
- Pattern match interrupt function for DI
- Change-of-state interrupt function for DI
- Board ID switch

### Introduction

The PCIE-1760 relay actuator and isolated digital input card is a PC add-on card for the PCI Express bus that satisfies the PCI Express (Revision 1.0) standard. PCIE-1760 features 8 opto-isolated digital inputs with up to 2,500 V<sub>DC</sub> isolation protection for collecting digital inputs in noisy environments, 8 relay actuators that can be used as on/off control devices or small power switches, and 2 isolated counters for custom applications.

For easy monitoring, each relay is equipped with a single red LED that indicates the on/off status. Each isolated input supports both dry and wet contact to enable easy interfacing with other devices when no voltage is present in the external circuit.

### Specifications

#### Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 3.0V max.  
Logic 1: 10V min. (30V max.)
- **Interruptible Channels** 8
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Opto-Isolator Response** 100 μs max.

#### Counter/Timer

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** Sink(NPN): 5-40V<sub>DC</sub>  
Source: 5V/TTL
- **Input Frequency\*** 1KHz Max.
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Input Debounce Filter** 1 μs ~ 255 μs, high/low period set independently, software configurable

#### Relay Output

- **Channels** 8
- **Relay Type** Form C x 2, form A/B x 6, selected by jumpers
- **Contact Rating** 125V<sub>AC</sub> @ 0.5A, 30V<sub>DC</sub> @ 1A  
62.5VA, 30W
- **Operate/Release Time** 5 / 3.5 ms max
- **Resistance** <100mΩ initially
- **Life Expectancy (Electrical)** 30 V<sub>DC</sub> @ 1A, 125 V<sub>AC</sub> @ 1 A: 3 x 10<sup>5</sup> operations min.,  
30 V<sub>DC</sub> @ 1 A, 125 V<sub>AC</sub> @ 0.5 A: 106 operations min.

#### General

- **Bus Type** PCI Express x1, V1.0
- **I/O Connectors** 1 x DB37, female
- **Dimensions (L x W x H)** 175 x 100 x 18 mm<sup>3</sup> (6.9" x 3.9" x 0.7")
- **Power Consumption** +3.3 V: 150 mA typ., 750 mA max.  
+12 V: 40 mA typ., 80 mA max.
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

### Ordering Information

- **PCIE-1760-B** 8-ch relay/IDI PCIe card w/ counter/timer

#### Accessories

- **PCL-10137-1E** DB37 cable, 1 m
- **PCL-10137-2E** DB37 cable, 2 m
- **PCL-10137-3E** DB37 cable, 3 m
- **ADAM-3937-BE** DB37 DIN-rail Wiring Board

\* Input for event counting, frequency measurement, refer to user manual for more details