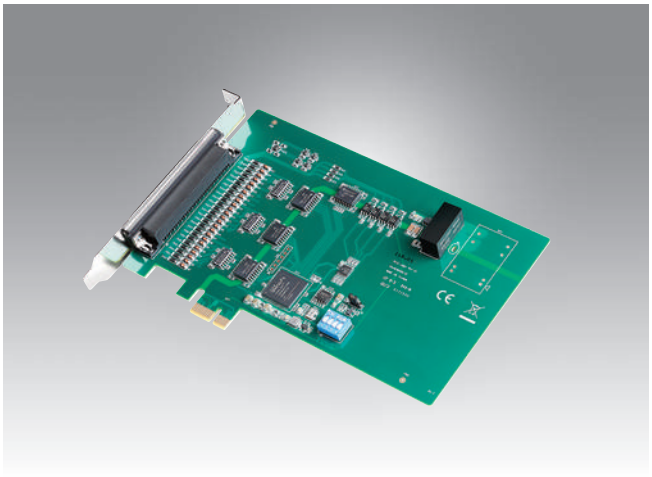
PCIE-1884

32-bit, 4-ch Encoder Counter with Preload Position Compare FIFO PCI Express Card



Features

- Four 32-bit programmable encoder counters
- Quadrature (X1, X2, X4), dual pulse (CW/CCW), signed pulse (OUT/DIR) modes
- Programmable trigger output (preload FIFO) for position comparison
- Single-ended or differential inputs
- 2,500 V_{DC} isolation protection for all signals
- Digital filter with selectable values

Introduction

The PCIE-1884 is a 4-ch encoder counter PCI Express card. It includes four 32-bit encoder counters with programmable trigger output (preload FIFO) for position comparison which is suitable for motor control and position monitoring applications. It also provides general counter functions such as frequency measurement, pulse width measurement, pulse output, and PWM output. All channels are protected by 2,500 V_{DC} isolation circuit.

Specifications

Encoder Counters

- **Channels** 4
- **Resolution** 32 bits
- **Max. Input Frequency** 10 MHz (40 MHz for quadrature X4)
- **Max. Output Frequency** 10 MHz
- **Digital Filter** 1.28 µs ~ 1.31 ms
- **Preload FIFO Size** 1,024 values
- **Isolation Protection** 2,500 V_{DC}
- **Input Voltage** Single-ended
Logic 0: 0.8 V max.
Logic 1: 2.8 V min. (12 V max.)
Differential
Logic 0: -0.5 V max. (-12 V min.)
Logic 1: 0.5 V min. (12 V max.)
- **Output Voltage** 0.8V max. @+24mA
2V min. @-24mA
- **Encoder Counter** Quadrature (X1, X2, X4), dual pulse (CW/CCW), signed pulse (OUT/DIR), position compare output
- **General Counter** Frequency measurement, pulse width measurement, pulse output, PWM output

Digital Input

- **Channels** 4 (shared with CNTn_SCLK/L pins)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-isolator response** 100 ns
- **Input Voltage** Logic 0 : 2V max.
Logic 1 : 5V min. (50V max.)

Digital Output

- **Channels** 4 (shared with CNTn_OUT pins)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 100 ns
- **Output Type** 5V / TTL
- **Sink/Source Current** 24mA max.

General

- **Form Factor** PCI Express x1
- **I/O Connector** 37-pin D-sub female connector
- **Dimensions (L x W)** 167 x 100 mm (6.6" x 3.9")
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Board ID** TM switch
- **Power Consumption** typical: 3.3V @ 290mA
12V @ 95mA
Max.: 3.3V @ 360mA
12V @ 245mA

Ordering Information

- **PCIE-1884-AE** 32-bit, 4-ch encoder counter with programmable trigger output PCI express card

Accessories

- **PCL-10137H-1E** High-speed DB37 cable, 1m
- **PCL-10137H-3E** High-speed DB37 cable, 3m
- **ADAM-3937-BE** DB37 DIN-rail wiring board

All product specifications are subject to change without notice.