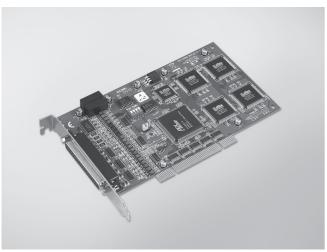
PCI-1784U

4-axis Quadrature Encoder and 4-ch Counter Universal PCI Card with 8-ch Isolated Digital I/O



Features

- 4 x 32-bit up/down counters
- Single-ended or differential inputs
- Pulse/direction and up/down counter
- x1, x2, x4 counts for each encoder cycle
- Optically isolated up to 2,500 V_{DC}
- 4-stage digital filter with selectable sampling rate
- Onboard 8-bit timer with wide range time-base selector
- Multiple interrupt sources for precision application
- 4 x isolated digital input and 4 x isolated digital output
- BoardID™ switch





Introduction

PCI-1784U is a 4-axis quadrature encoder and counter add-on card for PCI bus. The card includes four 32-bit quadruple A/B phase encoder counters, 8-bit timer with multi range time-base selector and 4 isolated digital inputs as well as 4 isolated digital outputs. Its flexible interrupt sources are suitable for motor control and position monitoring.

Specifications

Encoder Input

Number of Axes 4 (independent) Resolution 32-hit

• Max. Quadrature Input 1.0 MHz with digital filter

2.0 MHz without digital filter

Digital Filter

Drive Type Single-ended or differential Counter Modes Quadrature, up/down, pulse/direction

 $2,500 V_{DC}$ Isolation Protection Max. Input Pulse Freq. x 1, x 2, x 4 Sample Clock Freq. 8, 4, 2, or 1 MHz

Input Range

 Single Ended Logic 0: 0.8 V max. Configuration Logic 1: 2.8 V min. (12 V max.)

 Differential Logic 0: -0.2 V max.

Configuration Logic 1: 0.2 V min. (±12 V max.)

Isolated Digital Input

Channels

Logic 0:3 V max. Input Voltage

Logic 1: 10 V min. (30 V max.)

 Interrupt Capable Ch. DI0 ~ DI3 Isolation Protection 2,500 V_{DC} ■ Opto-Isolator Response 100 µs Overvoltage Protection 70 V_{DC}

Isolated Digital Output

Channels 5V Compatibility **Isolation Protection** $2,500 V_{DC}$ **Output Voltage** Logic 0: 0.8 V min. Logic 1: 2.0 max.

 Sink/Source Current 50 mA max./channel

Opto-Isolator Response 2 us

Counter/Timer

Channels Resolution 32 bits Compatibility 5 V/TTL Max.Input Frequency 8 MHz

Quadrature, 2-pulse, pulse/direction **Counter Modes**

Interrupt Capable Ch. Counter0 ~ Counter3

Digital Noise Filter

General

Bus Type Universal PCI V2.2

Connectors 37-pin D-sub female connector Dimensions (L x H) 175 x 100 mm (6.9" x 3.9") **Power Consumption** Typical: +5 V @ 200 mA Max.: +5 V @ 450 mA

Operating Temperature $0 \sim 60^{\circ}\text{C}$ (32 ~ 140°F) Storage Temperature -20 ~ 70°C (-4 ~ 158°F)

Storage Humidity 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)

Certification

Ordering Information

 PCI-1784U 4-axis Quadrature Encoder and Counter Card

 PCL-10137H-3E High-speed DB37 Cable, 3 m ADAM-3937 DB37 DIN-rail Wiring Board

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