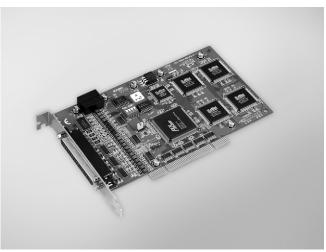
PCI-1784U

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

• 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

 Isolation Protection $2,500 \, V_{DC}$ • Max. Input Pulse Freq. x1, x2, x4 · 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. Logic 1: 0.2 V min. (±12 V max.) Configuration

Isolated Digital Input

Channels

 Input Voltage Logic 0:3 V max.

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

 Interrupt Capable Ch. DI0 ~ DI3 Isolation Protection 2,500 V_{DC} ■ Opto-Isolator Response 25µs Overvoltage Protection 70 V_{DC}

Isolated Digital Output

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

 Sink/Source Current 50 mA max./channel

• Opto-Isolator Response 2 us

Counter/Timer

Channels 4 Resolution 32 bits Compatibility 5 V/TTL Max.Input Frequency 8 MHz

 Counter Modes Quadrature, 2-pulse, pulse/direction

 Interrupt Capable Ch. Counter0 ~ Counter3

 Digital Noise Filter 4 stage

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

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

Certifications

Ordering Information

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

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