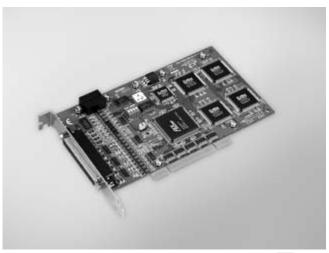
# PCI-1784U

## 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<sub>DC</sub>
- 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-bit

• Max. Quadrature Input 1.0 MHz with digital filter 2.0 MHz without digital filter

• Digital Filter 4 stage

• **Drive Type** Single-ended or differential

• Counter Modes Quadrature, up/down, pulse/direction

Isolation Protection 2,500 V<sub>DC</sub>
 Max. Input Pulse Freq. x 1, x 2, x 4
 Sample Clock Freq. 8, 4, 2, or 1 MHz

**Input Range** 

Single Ended Configuration
 Differential Logic 0: -0.2 V max.
 Configuration
 Logic 0: -0.2 V max.
 Logic 1: 0.2 V min. (±12 V max.)

Isolated Digital Input

Channels

■ Input Voltage Logic 0 : 3 V max.

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

#### **Isolated Digital Output**

Channels 4
 Compatibility 5V
 Isolation Protection 2,500 V<sub>DC</sub>
 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 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  $0 \sim 60^\circ$  C  $(32 \sim 140^\circ$  F) • Storage Temperature  $-20 \sim 70^\circ$  C  $(-4 \sim 158^\circ$  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 DIN-rail Wiring Board