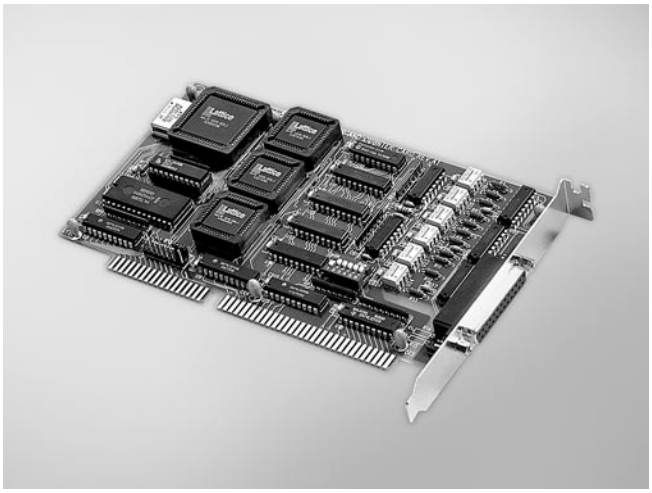
PCL-833

3-axis Quadrature Encoder and 2-ch Counter ISA Card



Features

- 1.0 MHz max. quadrature input rate
- Three 24-bit counters (can cascade up to 48 bits)
- Optically isolated up to 2,500 V_{RMS}
- 4-stage digital filter
- 2.4 MHz max. input pulse rate
- Pulse/direction and up/down counting
- Digital input with interrupt for each axis
- Programmable time-interval interrupt
- Half-size AT bus card

Introduction

PCL-833 is a 3-axis quadrature encoder and counter add-on card for the IBM PC/AT and compatibles (ISA bus). This card lets your PC perform position monitoring for motion control systems. Each input includes a decoding circuit for incremental quadrature encoding. Inputs accept either single-ended or differential signals. Quadrature input works with or without an index, allowing linear or rotary encoder feedback. PCL-833 has three independent 24-bit counters. The maximum quadrature input rate is 1.0 MHz, and the maximum input rate in counter mode is 2.4 MHz. You can individually configure each counter for quadrature decoding, pulse/direction counting or up/down counting.

PCL-833 provides five digital input channels. Each channel accepts digital input as an index input for a rotary encoder or as a home sensor input for a linear encoder. The card can generate an interrupt to the system based on a signal from its digital inputs, overflow/underflow of its counters, or on a programmed time interval. It can repeatedly generate interrupts at any time interval you specify, from 0.1 msec. to 255 sec. These interrupts let you precisely monitor the speed of a control system.

Specifications

Encoder Interface

- **Input Type** Quadrature (A/B phase)
- **Counts per Encoder** x1, x2, x4 (S/W selectable)
- **Input Range** 12 V max.
- **Drive Type** Single-ended or differential
- **Isolation Protection** 2,500 V_{RMS} (optical)
- **Max. Input Frequency** 2.4 MHz

Counter/Timer

- **Channels** 3
- **Resolution** 24 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 2.4 MHz
- **Counter Modes** 3 (quadrature, up/down, pulse/direction)
- **Interrupt Capable Ch.** Counter 0 ~ 2
- **Digital Noise Filter** 4 stage

Isolated Digital Input

- **Channels** 5 (Zin x 3 + DI0 + DI1)
- **Input Voltage** Logic 0: 1 V max.
Logic 1: 5 V min. (12 V max.)
- **Interrupt Capable Ch.** DI0, DI1
- **Isolation Protection** 2,500 V_{RMS} (optical)

General

- **Bus Type** ISA
- **Certifications** CE
- **Connectors** 1 x DB25 female connector
- **Dimensions (L x H)** 185 x 100 mm (7.3" x 3.9")
- **Power Consumption** Typical: 5 V @ 700 mA
Max.: 12 V @ 15 mA
- **Storage Humidity** 5 ~ 95% RH, non-condensing (IEC 68-2-3)
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F)
- **Storage Temperature** -20 ~ 70° C (-4 ~ 158° F)

Ordering Information

- **PCL-833** 3-axis Quadrature Encoder and Counter Card
- **ADAM-3925** DB25 DIN-rail Wiring Board
- **PCL-10125-1** DB25 Cable, 1 m
- **PCL-10125-3** DB25 Cable, 3 m