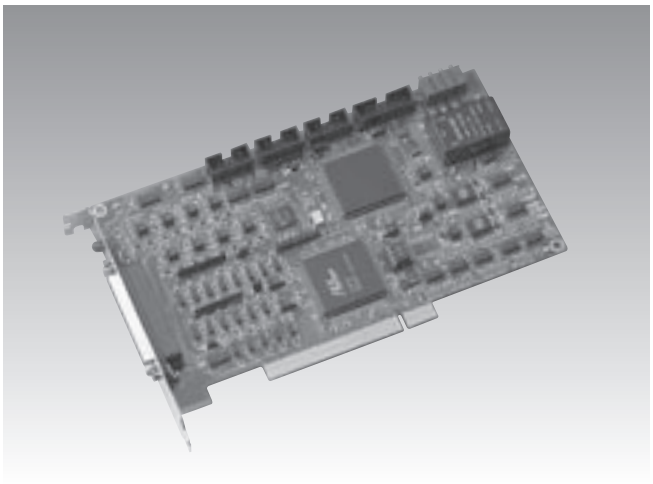
PCI-1242

4-axis Pulse-type Servo Motor Control Card



FCC CE

Features

- PCI bus interface
- Asynchronous 4-axis motion control
- Linear, helical interpolation functions
- 2/3-axis arc, circle interpolation functions
- Jog functions
- Continuous interpolation functions
- T/S-curve acceleration/decelerations
- Constant speed and over speed control
- In position and compensation functions
- Go home functions
- Position management and software limit switch functions
- Event trigger functions
- Up to 4 MPPS pulse output for each axis

Introduction

The PCI-1242 realizes 4-axis asynchronous control with a DDA (Digital Differential Analyzer) that ensures even movement of each axis. At pulse output control, it can also read back motor encoder values via its encoder input port. In the control of each axis, there is a set of sensor input points, including home points, plus limit points and minus limit points. Further, there are servo-on signal output points, position ready output point and an emergency stop input point. For advanced applications, we supply Windows® DLL drivers and user-friendly examples to decrease your programming load. Moreover, through a free bundled PCI-1242 motion utility, you can complete configuration and diagnosis easily.

Specifications

Pulse Type Motion Control

- **Motor Driver Support** Pulse-type servo/stepping
- **Number of Axes** 4 axes
- **Interpolation** 3-axis linear, 2-axis circular, Helical
- **Max. Output Speed** 4 Mpps
- **Step Count Range** ± 8,388,608
- **Pulse Output Type** Pulse/Direction, CW/CCW, A/B Phase
- **Position Counters** ± 2, 147, 483, 647
- **Home Modes** 14
- **Velocity Profiles** T/S-Curve, Acceleration/Deceleration
- **Local I/O**
  Machine Interfaces: PEL x 4, MEL x 4, ORG x 4, EMG x 1
  Servo Driver Interfaces: SVON x 4, PRDY x 1
  Manual Pulse: General Input: 1 set

Isolated Digital Input

- **Input Voltage** Logic 0 : 1 V max.
  Logic 1 : 18 V (30 V max.)
- **Isolation Protection** 2,500 V_{RMS}
- **Opto-Isolator Response** 50μs
- **Input Resistance** 5.4 kΩ @ 18 V

Isolated Digital Output

- **Output Type** Sink (NPN) (open collector Darlington transistors)
- **Isolation Protection** 2,500 V_{RMS}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 100 mA max./channel; 500 mA max (Total)

Encoder Interface

- **Input Type** Quadrature (AB phase), or Up/Down
- **Drive Type** Single-ended or differential
- **Counts per Enc. Cycle** x0, x1, x2, x4 (A/B phase only)
- **Input Range**
  Single Ended Configuration
  Logic 0 : 1 V max.
  Logic 1 : 5 V min. (5 V ±10% max.)
  Differential Configuration
  Logic 0 : -3 V max.
  Logic 1 : 3 V min. (±5 V max.)
- **Isolation Protection** 2,500 V_{DC}
- **Max. Input Frequency** 2 MHz

General

- **Bus Type** PCI V2.2
- **Certifications** CE, FCC class A
- **Connectors** 1 x 10-pin block head, 1 x 68-pin SCSI II femal
- **Dimensions** 175 x 107 mm (6.85" x 4.2")
- **Power Consumption** Typical: 5 V @ 850 mA, 12 V @ 600 mA
  Max: 5 V @ 1 A, 12 V @ 700 mA
- **Storing Humidity** 5 ~ 95% RH, non-condensing (IEC 68-2-3)
- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F)
- **Storing Temperature** -20 ~ 85° C (-4 ~ 185° F)

Ordering Information

- **PCI-1242** 4-axis Pulse-type Servo Motor Control Card
- **PCL-10168** 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- **ADAM-3968** 68-pin SCSI-II Wiring Terminal Board for DIN-rail mounting