PCI-1245E

Economic DSP-based 4-axis Stepping and Servo Motor Control Universal PCI Card

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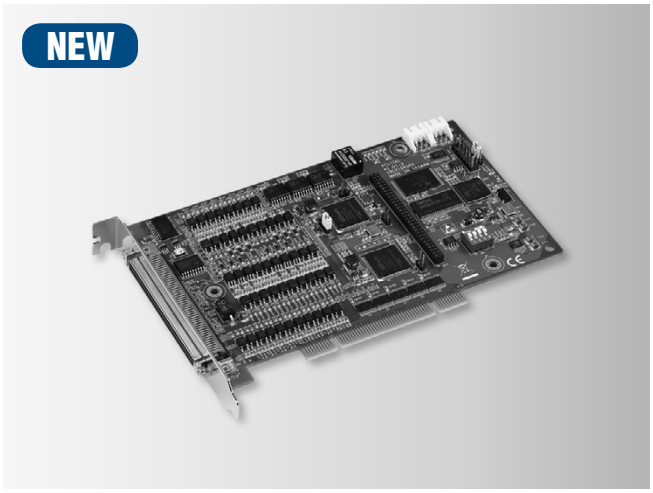

RoHS COMPLIANT 2002/95/EC CE FCC

Features

- Encoder input is 10 MHz for 4xAB mode, 2.5 MHz for CW/CCW mode
- Pulse output up to 5 Mpps
- Memory buffer for trajectory planning (circular trajectory and auto blending are not supported)
- Supports E-Gear
- Hardware emergency input
- Watchdog timer
- Position latch via ORG & index signal
- Programmable interrupt
- RDY/LTC-dedicated input channels & SVN/TrigP/CAM-DO/ERC-dedicated

Introduction

PCI-1245E is a 4-axis economic universal PCI (supporting both 3.3 V and 5 V signal slot) stepping/pulse-type servo motor control card designed for entry-level applications which need to control linear interpolation, electronic gear, continuous contouring (circular trajectories and auto blending are excluded). PCI-1245E utilizes the high-performance DSP and FPGA to calculate the motion trajectories, synchronization timing control for multiple axes and input/output handling to offer functionality, such as 2 to 4-axis linear interpolation, E-Gear, T/S-curve acceleration/deceleration rate, speed override, 11 home modes and so on. In addition, Advantech supplies a Common Motion API library, graphical utility and user-friendly examples to decrease programming load, helping users complete configuration and diagnosis easily.

Specifications

Pulse Type Motion Control

- **Motor Driver Support** Pulse-type servo/stepping
- **Number of Axis** 4
- **Interpolation** 2 axis linear
- **Max. Output Speed** 5 Mbps
- **Step Count Range** ±2, 147, 483, 646
- **Pulse Output Type** Pulse/direction (1-pulse, 1-direction type) or CW/CCW (2-pulse type)
- **Position Counters** Range of command and actual position
- **Velocity Profiles** T-Curve, S-Curve
- **Local I/O**
  - Machine Interfaces: LMT+, LMT-, ORG
  - Servo Driver Interfaces: ALM, INP
  - General Digital I/O: 16-ch DI, 16-ch DO (RDY/LTC pin can be switchable to general-purpose input and CAM-DO/TrigP/SVN/ERC pin to general-purpose output)

Encoder Interface

- **Input Type** Quadrature (A/B phase) or up/down
- **Counts per Enc. Cycle** x1, x2, x4 (A/B phase only)
- **Input Range** 5 ~ 15 V
- **Isolation Protection** 2,500 V_{DC}
- **Max. Input Frequency** 10 MHz under 4xAB mode

General

- **Bus Type** Universal PCI V2.2
- **Connectors** 1 x 100-pin SCSI female connector
- **Dimensions (L x H)** 175 x 100 mm (6.9" x 3.9")
- **Power Consumption** Typical: 5 V @ 850 mA
Max.: 5 V @ 1 A
- **Humidity** 5 ~ 95% RH, non-condensing (IEC 68-2-3)
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature** -20 ~ 85°C (-4 ~ 185°F)

Ordering Information

- **PCI-1245E-AE** Economic 4-axis Stepping/Servo Control Universal PCI Card

Accessories

- **ADAM-3955-AE** 50-pin DIN-rail SCSI 2-axis Motion Wiring Board
- **ADAM-3952-AE** 50-pin DIN-rail SCSI and Box Header Board
- **ADAM-39100-AE** 100-pin DIN-rail SCSI Wiring Board
- **PCL-101100M-3E** 100-pin SCSI Cable, 3 m
- **PCL-10251-1E** 100-pin SCSI to Two 50-pin SCSI Cable, 1 m
- **PCL-10251-2E** 100-pin SCSI to Two 50-pin SCSI Cable, 2 m
- **PCL-10251-3E** 100-pin SCSI to Two 50-pin SCSI Cable, 3 m
- **PCL-10153PA5-2E** 50-pin Cable from ADAM-3955 to Panasonic A4 and A5 Servo, 2 m
- **PCL-10153YS5-2E** 50-pin Cable from ADAM-3955 to Yaskawa Sigma V Servo, 2 m
- **PCL-10153MJ3-2E** 50-pin Cable from ADAM-3955 to Mitsubishi J3 Servo, 2 m