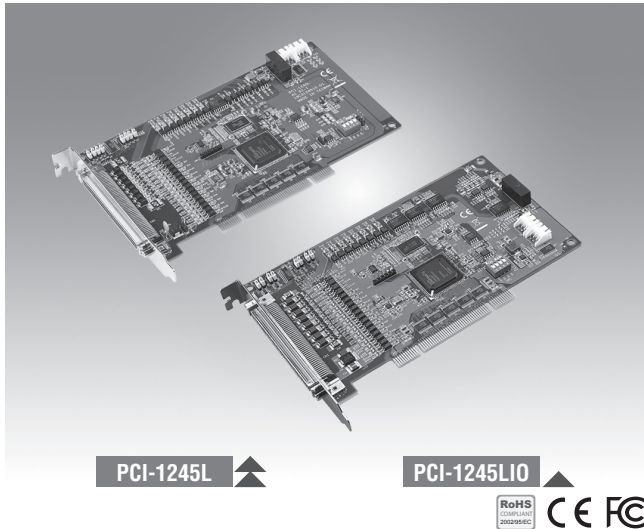# PCI-1245L
4-Axis Stepping and Servo Motor Control Universal PCI Card

PCI-1245LIO
4-Axis Stepping and Servo Motor Control Universal PCI Card with I/O Extension

PCI-1245L   **PCI-1245LIO**

Features

- Encoder input is 10 MHz for 4xAB mode, 2.5 MHz for CW/CCW mode
- Pulse output up to 1 Mpps and the output type can be switched to differential or single-end by jumper setting
- Supports 2 axis linear interpolation
- Supports 3 axis linear interpolation (PCI-1245LIO only)
- Supports 2 axis arc interpolation (PCI-1245LIO only)
- Supports T/S-curve
- Supports speed override
- Hardware emergency input
- Watchdog timer
- Supports programmable acceleration/deceleration rate
- Programmable interrupt
- RDY dedicated input channels & SVON/ERC dedicated output channels are switchable for general input and output purposes
- Supports extra 16 isolated DI / 16 isolated DO via wiring board (PCI-1245LIO only)

Introduction

The PCI-1245L/45LIO are 4-axis universal PCI card supporting (both 3.3 V and 5 V signal slots) stepping/pulse-type servo motor control cards designed for entry-level applications which need to control JOG, point to point, continuous move, and interpolation motion such as 2-axis linear, 3-axis linear (PCI-1245LIO) and 2-axis arc move (PCI-1245LIO). The PCI-1245LIO also provides an extra 16 DI and 16 DO via terminal board MTB-3956LIO. In addition, all Advantech motion controllers use the "Common Motion API" architecture which is a unified user programming interface and graphical utility. This architecture saves application maintenance and upgrades. Programmers can benefit from integrating any Advantech SoftMotion controller without changing large amounts of the application code. User-friendly examples decrease programming workload, helping users complete configuration and diagnosis easily.

Specifications

Pulse Type Motion Control

- **Motor Driver Support** — Pulse-type servo/stepping
- **Number of Axes** — 4
- **Interpolation** — 2-axis linear interpolation
- **Max. Output Speed** — 1 Mbps
- **Step Count Range** — ±2, 147, 483, 646
- **Pulse Output Type** — Pulse/direction (1-pulse, 1-direction type) , CW/CCW (2-pulse type) or single-ended +5V output
- **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 pin can be switchable to general-purpose input and SVON/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** — 3~10 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 @ 0.6 A
  Max.: 5 V @ 1 A
- **Humidity** — 5 ~ 95% RH, non-condensing (IEC 60068-2-3)
- **Operating Temperature** — 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature** — -20 ~ 85°C (-4 ~ 185°F)

Ordering Information

- **PCI-1245L-AE** — 4-axis Stepping/Pulse-type Servo Motor Control Universal PCI Card
- **PCI-1245LIO-AE** — 4-axis Stepping and Servo Motor Control Universal PCI Card with I/O-extension

Accessories

- **MTB-3956LIO-AE** — 100-pin DIN-rail SCSI 4-axis Motion Wiring Board w/ I/O-extension (Only for PCI-1245LIO)
- **ADAM-3956-AE** — 100-pin DIN-rail SCSI 4-axis Motion Wiring Board
- **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
- **PCL-101100M-1E/2E/3E** — 100-pin SCSI Cable, 1m/2m/3m
- **PCL-10251-1E/2E/3E** — 100-pin SCSI to Two 50-pin SCSI Cable, 1m/2m/3m
- **PCL-10153PA5-2E** — 50-pin Cable to Panasonic A4/A5 Servo, 2 m
- **PCL-10153YS5-2E** — 50-pin Cable to Yaskawa Sigma V/7 Servo, 2 m
- **PCL-10153MJ3-2E** — 50-pin Cable to Mitsubishi J3/J4 Servo, 2 m
- **PCL-10153DA2-2E** — 50-pin Cable to Delta A2 Servo, 2 m

ADVANTECH | **Intelligent Motion Control and Machine Vision**

All product specifications are subject to change without notice.

Last updated: 27-Jun-2018