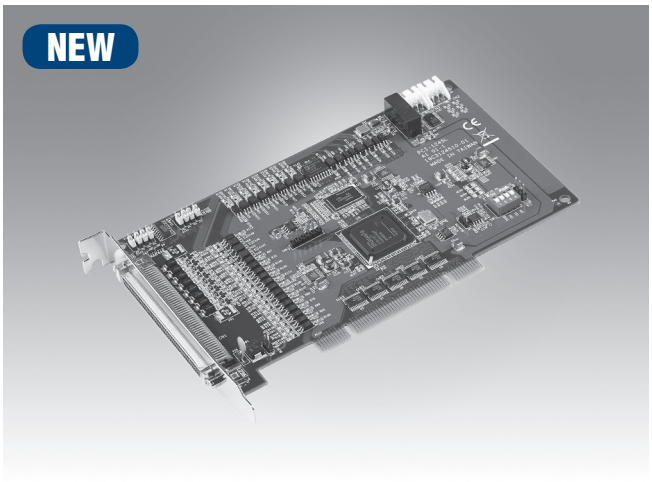
PCI-1274

Basic Motion Control Card with Multi Latch/Compare Trigger Function



Features

- Encoder input is 4 MHz for 4xAB mode, 1 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
- Support velocity motion
- Supports speed override
- Supports T/S-curve and programmable acceleration/deceleration rate
- Support 16 Home modes
- Support programmable interrupt
- Latch and Compare max. frequency up to 1kHz
- PCI-1274-12AE support 12-ch latch and 12-ch Compare function
- PCI-1274-16AE support 16-ch latch and 16-ch Compare function

Introduction

The PCI-1274 is a basic motion control PCI card with multi-latch/compare trigger function. PCI-1274 utilizes the high-performance FPGA to provide Point-to-Point, Latch and Compare Trigger with a SoftMotion algorithm inside to perform precise position control. PCI-1274 also has internal FIFO to enable high speed position compare and trigger pulse output. Users can link compare trigger outputs to latch inputs one by one, or link all compare trigger outputs to single channel of latch input only. Integrating a camera and sensor realizes AOI applications such as linear screw, and IC and vision inspection sorting machine. 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 (PCI-1274-12AE)
1 (PCI-1274-16AE)
- **Interpolation** 2-axis linear interpolation Only for PCI-1274-12AE
- **Max. Output Speed** 1 Mpps
- **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

Encoder Interface

- **Input Type** Quadrature (A/B phase) or up/down
- **Counts per Enc. Cycle** x1, x2, x4 (A/B phase only)
- **Input Range** 5~10 V
- **Isolation Protection** 2,500 V_{DC}
- **Max. Input Frequency** 4 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-1274-12AE** Basic 4-axis Motion Control Card with 12 Latch/12 Compare Trigger Function
- **PCI-1274-16AE** Basic 1-axis Motion Control Card with 16 Latch/16 Compare Trigger Function

Accessories

- **ADAM-3956-AE** 100-pin DIN-rail SCSI 4-axis Motion Wiring Board
- **ADAM-39100-AE** 100-pin DIN-rail SCSI Wiring Board
- **PCL-101100M-1E/2E/3E** 100-pin SCSI Cable, 1m/2m/3m
- **PCL-20153PA5-S2E** 50-pin Cable from ADAM-3955/ADAM-3956 to Panasonic A4 and A5 Servo, 2 m
- **PCL-20153YS5-S2E** 50-pin Cable from ADAM-3955/ADAM-3956 to Yaskawa Sigma V Servo, 2 m
- **PCL-20153MJ3-S2E** 50-pin Cable from ADAM-3955/ADAM-3956 to Mitsubishi J3 Servo, 2 m
- **PCL-20153DA2-S2E** 50-pin Cable from ADAM-3955/ADAM-3956 to Delta A2 Servo, 2 m

All product specifications are subject to change without notice.
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