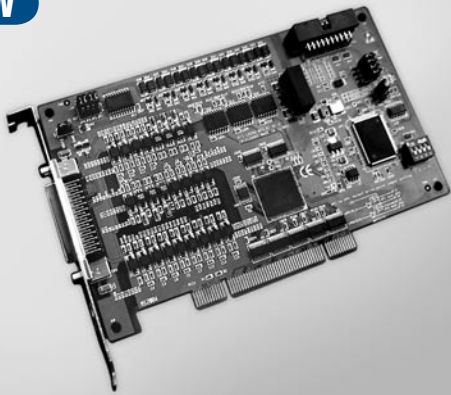# PCI-1220U

2-axis Stepping and Servo Motor Control Universal PCI Card

NEW

Features

- Independent 2-axis motion control
- Hand wheel and jog function
- 2-axis linear interpolation function
- 2-axis circular interpolation function
- Continuous interpolation function
- Programmable T/S-curve acceleration/deceleration rate
- Up to 4 Mpps output for each axis
- Two pulse output types: CW/CCW or pulse/direction
- Up to 1 MHz encoder input for each axis
- Two encoder pulse input types: A/B phase or up/down
- Constant speed control
- Position management and software limit switch function
- BoardID™ switch

RoHS COMPLIANT 2002/95/EC   CE

Introduction

Advantech's PCI-1220U is a 2-axis Universal PCI stepping/pulse-type servo motor control card. This card adopts NOVA MCX312 IC which supports 2-axis motion control with interpolations. Besides, functions like continuous interpolation, programmable T/S-curve acceleration/deceleration, constant speed control are also accomplished. For users that only need to drive two motors at most, PCI-1220U is a cost-effective solution than 4-axis motion control cards. The DLL driver for PCI-1220U together with the utility make it easy for users to test the functionalities of the card and to develop their own application.

Specifications

Pulse Type Motion Control

- **Motor Driver Support**   Pulse-type servo/stepping
- **Number of Axes**   2
- **Interpolation**   2-axis linear, 2-axis circular
- **Max. Output Speed**   4 Mpps
- **Step Count Range**   ± 2,147,483,646 (32 bits)
- **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: PEL x 2, MEL x 2, ORG x 2
  Servo Driver Interfaces: ALM x 2, INP x 2
  Position Compare I/O: CMP x 2
  General Inputs: 6 (X_IN0 ~ 2, Y_IN0~2)
  General Outputs: 8 (X_OUT4 ~ 7, Y_OUT4~7)

Encoder Interface

- **Input Type**   Quadrature (A/B phase) or up/down
- **Counts per Enc. Cycle**   x1, x2, x4 (A/B phase only)
- **Input Range**   0 ~ 2 V_{DC} for low; 5 ~ 30 V_{DC} for high
- **Isolation Protection**   2,500 V_{DC}
- **Max. Input Frequency**   1 MHz

General

- **Bus Type**   Universal PCI V2.2
- **Certifications**   CE
- **Connectors**   1 x 50-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-1220U**   2-axis Stepping and Servo Motor Control PCI Card
- **ADAM-3952**   50-pin DIN-rail SCSI Wiring Board
- **PCL-10152-1**   50-pin SCSI Cable, 1 m
- **PCL-10152-3**   50-pin SCSI Cable, 3 m