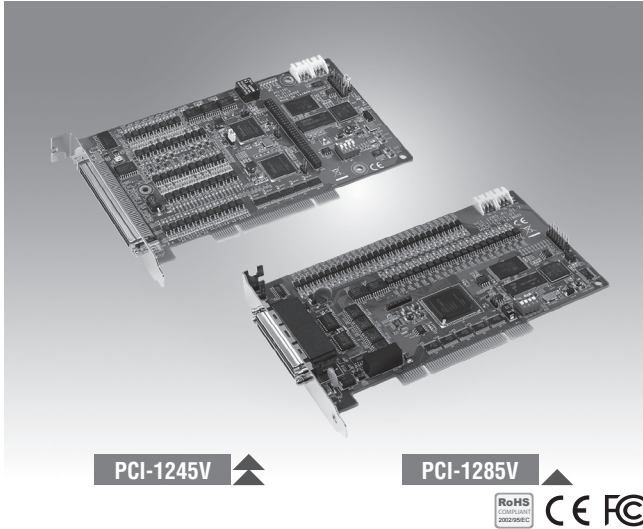


# PCI-1245V PCI-1285V

## Value DSP-Based 4/8-Axis Stepping and Servo Motor Control Universal PCI Card



### Features

- Encoder input is 10 MHz for 4xAB mode, 2.5 MHz for CW/CCW mode
- Pulse output up to 5 Mpps
- Supports linear and circular interpolation
- Hardware emergency input
- Supports E-Gear
- Supports programmable acceleration/deceleration rate
- Memory buffer (up to 10K points) for trajectory planning which is designed in DSP (Auto-blending is not supported)
- Position compares triggering up to 100 KHz, and memory buffer is up to 100 K points in DSP
- Position latch
- Programmable interrupt and watchdog timer
- RDY/LTC-dedicated input channels & SVON/CMP/CAM-DO/ERC-dedicated output channels are switchable for general input and output purposes

### Introduction

The PCI-1245V is a 4-axis universal PCI (supporting both 3.3 V and 5 V signal slot) stepping/pulse-type servo motor control card designed for applications which need to control interpolation, synchronization among multiple axes, and continuous contouring. The PCI-1245V utilizes 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 linear interpolation, 2/3-axis circular interpolation, compare triggers, T/S-curve acceleration/deceleration rates, and so on. In addition, Advantech supplies a Common Motion API library, graphical utility and user-friendly examples to decrease programming workloads.

### Specifications

#### Pulse Type Motion Control

- **Motor Driver Support** Pulse-type servo/stepping
- **Number of Axes** 4/8
- **Interpolation** Linear, 2/3-axis circular interpolation
- **Max. Output Speed** 5 Mbps
- **Step Count Range**  $\pm 2, 147, 483, 646$
- **Pulse Output Type** Pulse/direction (1-pulse, 1-direction type), 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
- **Position Compare I/O** CMP

#### Encoder Interface

- **Input Type** Quadrature (A/B phase) or up/down
- **Counts per Enc. Cycle** x1, x2, x4 (A/B phase only)
- **Input Range** 0-10 V
- **Isolation Protection** 2,500 V<sub>oc</sub>
- **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 60068-2-3)
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)
- **Storage Temperature** -20 ~ 85°C (-4 ~ 185°F)

### Ordering Information

- **PCI-1245V-AE** Value 4-axis Stepping/Pulse-type Servo Motor Control Universal PCI Card
- **PCI-1285V-AE** Value 8-axis Stepping/Pulse-type Servo Motor Control Universal PCI Card

#### Accessories

- **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-20253PA5-S2E** 50-pin Cable to Panasonic A4/A5 Servo, 2 m
- **PCL-20153YS5-S2E** 50-pin Cable to Yaskawa Sigma V/7 Servo, 2 m
- **PCL-20153MJ3-S2E** 50-pin Cable to Mitsubishi J3/J4 Servo, 2 m
- **PCL-20153DA2-S2E** 50-pin Cable to Delta A2 Servo, 2 m