**Features**

- Encoder input is 10 MHz for 4xAB mode, 2.5 MHz for CW/CCW mode
- Pulse output up to 5 Mpps
- Memory buffer (up to 10K points) for trajectory planning which is designed in DSP
- Supports E-Gear, and helical interpolation
- Supports E-CAM providing 256 points to describe the CAM profiles which buffers located in DSP
- Hardware emergency input
- Watchdog timer
- Position latch
- Position compare triggering up to 100 KHz, and memory buffer is up to 100 K points in DSP
- Programmable interrupt
- Supports gantry mode by semi-closed loop pulse train control
- RDV/LTC-dedicated input channels & SVON/CMP/CAM-DO/ERC-dedicated output channels are switchable for general input and output purposes

**Introduction**

PCI-1245/65/85 is a 4/6/8-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, continuous contouring, and high speed triggering. PCI-1245/65/85 utilizes high-performance DSP and FPGA to calculate motion trajectories, synchronization timing control for multiple axes, and input/output handling to offer functionality, such as up to 4/6/8-axis linear interpolation, 2/3-axis circular interpolation, linear, 2/3-axis circular interpolation, helical interpolation, 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 help decrease programming workloads.

**Specifications**

**Pulse Type Motion Control**

- **Motor Driver Support:** Pulse-type servo/stripping
- **Number of Axes:** PCI-1245: 4
  PCI-1265: 6
  PCI-1285: 8
- **Interpolation:** Linear, 2/3-axis circular interpolation, 3-axis helical interpolation
- **Max. Output Speed:** 5 Mpps
- **Step Count Range:** ±2, 147, 483, 646
- **Pulse Output Type:** Pulse/direction (1-pulse, 1-direction type) or Quadrature (A/B phase) or up/down
- **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
  - **General Digital I/O:**
    - PCI-1245: 1 x 100-pin mini-SCSI female connector
    - PCI-1265: 1 x 100-pin mini-SCSI female connector
    - PCI-1285: 2 x 100-pin mini-SCSI female connector

**Encoder Interface**

- **Input Type:** Quadrature (A/B phase) or up/down
- **Counts per Enc. Cycle:** x1, x2, x4 (A/B phase only)
- **Input Range:** 0~10V
- **Isolation Protection:** 2,500 VDC
- **Max. Input Frequency:** 10 MHz under 4xAB mode

**General**

- **Bus Type:** Universal PCI V2.2
- **Connectors:**
  - PCI-1245: 1 x 100-pin mini-SCSI female connector
  - PCI-1265: 1 x 100-pin mini-SCSI female connector
  - PCI-1285: 2 x 100-pin mini-SCSI female connector
- **Dimensions (L x H):**
  - PCI-1245/65/85:典型: 5 V @ 850 mA
  - Maximum: 5 V @ 1 A
  - PCI-1285:
    - Typical: 5 V @ 300 mA
    - Maximum: 3.3 V @ 1.2 A
    - Maximum: 3.3 V @ 1.5 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-1245-AE: 4-axis Stepping/Servo Control Universal PCI Card
- PCI-1265 AE: 6-axis Stepping/Servo Control Universal PCI Card
- PCI-1285-AE: 8-axis Stepping/Servo 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
- ADAM-2009-AE: 20-pin DIN-rail Flat Cable Wiring Board
- PCL-10210-1/E2E: IDC-20 Flat Cable, 1m/2m
- PCL-101100M-1/E2E/3E: 10-pin SCSI Cable, 1m/2m (for PCI-1245/65)
- PCL-10251-1/E2E/3E: 10-pin SCSI to Two 50-pin SCSI Cable, 1m/2m (for PCI-1245/65 only)
- PCL-101100S-1/E2E/3E: Mini-SCSI-100 Shielded Cable, 1m/2m (for PCI-1285)
- PCL-20153PA5-3ZE: 50-pin Cable to Panasonic A4/A5 Servo, 2 m
- PCL-20153YS5-3ZE: 50-pin Cable to Yaskawa Sigma V7 Servo, 2 m
- PCL-20153MJ5-3JE: 50-pin Cable to Mitsubishi J5/J4 Servo, 2 m
- PCL-20153DA2-3ZE: 50-pin Cable to Delta A2 Servo, 2 m

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All product specifications are subject to change without notice.

Last updated: 9-Dec-2019