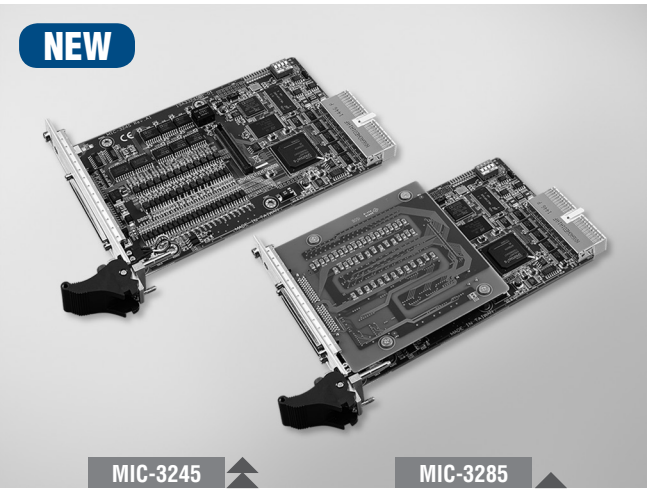
MIC-3245
MIC-3285

DSP-based 4/8-axis Stepping and Servo Motor Control Compact PCI Card



Features

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

Introduction

MIC-3245/3285 is a 4/8-axis compact PCI stepping/pulse-type servo motor control card designed for applications which need to control linear interpolation, electronic gear, continuous contouring (circular trajectories and auto blending are excluded). MIC-3245/3285 utilizes the 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, helical interpolation, T/S-curve acceleration/deceleration rate, speed override, 16 home modes and so on. In addition, Advantech supplies a Common Motion API library, graphical utility and user-friendly examples to decrease programming load, helping users complete configuration and diagnosis easily.

Specifications

Pulse Type Motion Control

- **Motor Driver Support** Pulse-type servo/stepping
- **Number of Axis** MIC-3245: 4
MIC-3285: 8
- **Interpolation** Linear, 2/3-axis Circular, Helix
- **Max. Output Speed** 5 Mbps
- **Step Count Range** ±2, 147, 483, 646
- **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: 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)
- **Isolation Protection** 2,500 V_{DC}
- **Max. Input Frequency** 10 MHz under 4xAB mode

General

- **Bus Type** Compact PCI interface
- **Connectors** MIC-3245: 1 x 100-pin mini-SCSI female connector
MIC-3285: 2 x 100-pin mini-SCSI female connector
- **Dimensions (L x H)** 160 x 100 mm (6.3" x 3.9")
- **Power Consumption** MIC-3245: Typical: 5 V @ 850 mA
Max.: 5 V @ 1 A
MIC-3285: Typical: 5 V @ 530 mA
3.3 V @ 160 mA
Max.: 5 V @ 500 mA
3.3 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

- **MIC-3245-AE** 4-axis Stepping/Servo Control Compact PCI Card
- **MIC-3285-AE** 8-axis Stepping/Servo Control Compact 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-39100-AE** 100-pin DIN-rail SCSI Wiring Board
- **PCL-101100M-1E/2E/3E** 100-pin SCSI Cable, 1m/2m/3m
- **PCL-10251-1E/3E** 100-pin SCSI to Two 50-pin SCSI Cable, 1m/3m
- **PCL-101100SB-1E/2E/3E** Mini-SCSI-100 Shielded Cable, 1m/2m/3m (for PCI-1285E)
- **PCL-10153PA5-2E** DB-26 pin to SCSI-50 pin 50-pin Cable from ADAM-3955/ADAM-3956 to Panasonic A4 and A5 Servo, 2 m
- **PCL-10153PA5LS-2E** DB-26 pin to SCSI-50 pin 50-pin Cable from ADAM-3955/ADAM-3956 to Panasonic MINAS A Servo, 2 m
- **PCL-10153YS5-2E** DB-26 pin to SCSI-50 pin 50-pin Cable from ADAM-3955/ADAM-3956 to Yaskawa Sigma V Servo, 2 m
- **PCL-10153MJ3-2E** DB-26 pin to SCSI-50 pin 50-pin Cable from ADAM-3955/ADAM-3956 to Mitsubishi J3 Servo, 2 m
- **PCL-10153DA2-2E** DB-26 pin to SCSI-50 pin Cable from ADAM-3955/ADAM-3956 to Delta A2 Servo, 2 m

Date updated: 30-Nov-2015