MVP-3245

4-Axis Embedded Motion Controller with 32-Channel Digital I/O

NEW

Windows Embedded · RoHS COMPLIANT 2002/95/EC · CE · FCC

Features

- Intel® Atom™ dual-core E3825, 1.33 G, processor
- Encoder input is 10 MHz for 4xAB mode and 2.5 MHz for CW/CCW mode
- Pulse output of up to 5 Mpps
- Equipped with a memory buffer (10K points) for trajectory planning
- Supports E-Gear and helical interpolation
- Supports E-CAM and provides 256 points for describing CAM profiles
- 2-axis position comparison trigger
- 3-axis arc interpolation
- 16-channel isolated digital input
- 16-channel isolated digital output

Introduction

MVP-3245 is an embedded motion control platform equipped with the latest Intel® Atom™ processor and SoftMotion technology and aimed at machinery applications that require compact platform with a slim form factor. To satisfy demands for industrial automation, MVP-3245 offers a variety of basic motion control functions, such as linear, circular and helical interpolation, T/S-curve speed profiles, as well as advanced motion functions, such as E-Gear, E-CAM, and Tangential Following.

MVP-3245 also features specific SoftMotion functions for sector applications, such as 2D comparison trigger, Path DO, and 3D arc move. Moreover, this controller supports serial communication ports and several other networking interfaces. Advantech also provides a common motion API library, graphical utility, and user-friendly examples to reduce the programming load and facilitate easy configuration and diagnosis.

Specifications

General

- **Certification** CE, FCC Class A
- **Dimensions (W x D x H)** 250 x 160 x 85 mm
- **Power Consumption** 24 W (typical)
- **Power Requirements** 10 ~ 30 V_{DC} (e.g 24 V @ 1 A) (Min. 48 W), AT
- **Weight** 2.4 kg (typical)
- **OS Support** Windows XP/7/8

System Hardware

- **CPU** Intel® Atom™ dual-core E3825, 1.33 G, processor
- **Memory** DDR3 2G
- **Storage** mSATA 32G

I/O Interface

- **Serial Ports** COM1 RS-232
  COM2 RS-232/422/485
- **Serial Port Speed** 50 ~ 115.2 kbps
- **LAN** 2 x 10/100/1000M (RJ45)
- **USB Ports** 4 x USB, EHCI, Rev. 2.0 compliant

Pulse-Type Motion Control

- **Number of Axes** 4
- **Interpolation** 2/3-axis linear, 2/3-axis circular
- **Max. Output Speed** 5 Mpps
- **Step Count Range** ±2, 147, 483, 646
- **Pulse Output Type** CW/CCW or pulse/direction
- **Velocity Profiles** T-curve, S-curve
- **Local I/O** LMT+, LMT-, ORG, ALM, INP, CMP, LTC
- **General Inputs** 16
- **General Outputs** 16

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 ~ 15 V
- **Isolation Protection** 2,500 V_{DC}
- **Max. Input Frequency** 10 MHz under 4xAB mode

Isolated Digital Input

- **Channels** 16
- **Input Voltage** Logic 0: 2 V max.; Logic 1: 5 V min. (24 V max.)
- **Isolation Protection** 1,000 V_{DC}

Isolated Digital Output

- **Channels** 16
- **Output Type** Sink type (NPN)
- **Output Voltage** 5 ~ 30 V max.
- **Sink Current** 200 mA max. per channel
- **Isolation Protection** 1,000 V_{DC}

Environment

- **Humidity** 5 ~ 95% RH, non-condensing (IEC 60068-2-3)
- **Operating Temperature** -10 ~ 50°C (14 ~ 122°F) @ 5 ~ 85% RH

Ordering Information

- **MVP-3245-AE** 4-axes embedded motion controller with 32-channel digital I/O

Accessories

- **PCL-101100M-1E/2E/3E** 100-pin SCSI cable, 1/2/3 m
- **PCL-10251-1E/2E/3E** 3E 100-pin SCSI to two 50-pin SCSI cable, 1/2/3 m
- **PCL-10137-1E/3E** DB25 cable, 1/3 m
- **ADAM-3956-AE** 100-pin DIN rail SCSI 4-axes motion wiring board
- **ADAM-3955-AE** 50-pin DIN rail SCSI 2-axes motion wiring board
- **ADAM-3952-AE** 50-pin DIN rail SCSI and box header board
- **ADAM-3937-AE** DB37 DIN rail wiring board
- **PCL-10153PA5-2E** 50-pin cable to Panasonic A4/A5 servo, 2 m
- **PCL-10153PA5LS-2E** 50-pin cable to Panasonic MINAS A servo, 2 m
- **PCL-10153YS5-2E** 50-pin cable to Yaskawa Sigma V/7 servo, 2 m
- **PCL-10153MJ3-2E** 50-pin cable to Mitsubishi J3/J4 servo, 2 m
- **PCL-10153DA2-2E** 50-pin cable to Delta A2 servo, 2 m

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