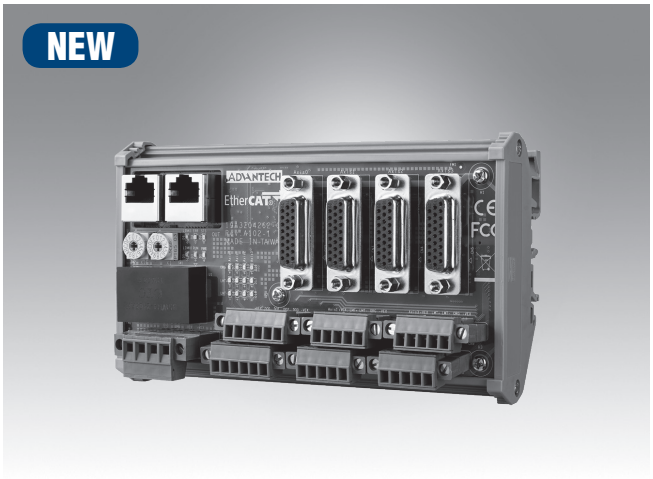
AMAX-3245

Advanced 4-axis EtherCAT Motion Slave Modules



Features

- Max. 5 MHz, 4-axis pulse output
- Encoder input is 10 MHz for 4xAB mode, 2.5 MHz for CW/CCW mode
- BoardID is switchable
- Easily visible LED indicators on board to do diagnosis
- Direct wire to servo drive to save terminal board space while installation
- Horizontal installation for for servo or stepping motor driver
- Suitable for DIN-rail mounting
- Programmable interrupt
- Memory buffer (10K points) for trajectory planning which is designed in DSP
- 4-axis position compare triggering up to 100 KHz, and memory buffer is up to 100 K points
- Position latch
- Supports gantry mode by semi-closed loop pulse train control
- LTC-dedicated input channels & SVON/CMP/RST/ERC-dedicated Output channels are switchable for general input and output purposes

Introduction

AMAX-3245 provides the ability to connect step motor drives and servo motor drives with CW/CCW and Pulse/Direction interfaces to EtherCAT networks controlled by Advantech EtherCAT master PCI/PCIE-1203. AMAX-3245 has open frame designs for horizontal placement and an interface connector mounted on the board. With a to-servo-drive transfer cable, it can be conveniently connected to Mitsubishi J3/J4, Yaskwa Sigma V/7, and Panasonic A4/A5 servos.

AMAX-3245 is a 4-axis EtherCAT motion slave module that supports motion interpolation, axes synchronization, and continuous contouring. 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

Pulse-Type Motion Control

- **Motor Driver Support** Pulse-type servo
- **Number of Axes** 4
- **Max. Output Speed** 5 Mpps
- **Step Count Range** ±134, 217, 728
- **Pulse Output Type** OUT/DIR, CW/CCW
- **Position Counter** ±134, 217, 728
- **Home Modes** 16 home mode
- **Velocity Profiles** T-Curve, S-Curve
- **Local I/O**

General Input Signal
Input voltage: 24Vdc Max.
Input delay: 100us Max. (isolation delay)
Signal:
EMG (emergency stop)
ORG, LMT+, LMT-
INPOS (in position signal)
ALARM (servo alarm)

General Output Signal
Output voltage: Open collect 24Vdc Max
Output delay: 100us Max. (isolation delay)
Sink current: 500mA per channel
Signal:
SVON (servo on)
RALM (reset driver alarm)
ERC (counter clear signal)

General Purpose I/O:
4-ch DI/LTC (General DI can be switchable to LTC function)
4-ch DO/CMP (General DO can be switchable to CMP function)

Encoder Interface

- **Input Type** A/B phase, CW/CCW
- **Counts per Enc. Cycle** x1, x2, x4 (AB phase only)
- **Input Range** Low: 0 ~ 0.5V
  High: 3.5 ~ 5V
- **Isolation Protection** 1,000 V_{RMS}
- **Max. Input Frequency** 10 MHz @ 4xAB

General

- **Bus Type** EtherCAT
- **Certification** CE, FCC Class A
- **Connectors** 2 x RJ-45 for communication port
  1 x Terminal block (4P) for power
  4 x DB-26 connector by transfer cable to servo drives
  4 x Terminal block (5P) for home, Limit
  1 x Terminal block (6P) for 4DI
  1 x Terminal block (6P) for 4DO
- **Dimensions (L x W x H)** 153 x 90 x 53 mm (6 x 3.5 x 2.2")
- **Power Consumption** 6W MAX (250mA @ 24V)
- **Power Input** $24V_{DC}$ ± 10%
- **Humidity** 5 ~ 95% RH, non-condensing (IEC 60068-2-3)
- **Operating Temperature** 0 ~ 60°C (32 ~ 140°F)

Ordering Information

- **AMAX-3245-AE** Advanced 4-axis EtherCAT Motion Slave Modules

Accessories

- **PCL-20153PA5-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

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All product specifications are subject to change without notice.

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