# AMAX-328510

## Advanced 8-axis EtherCAT Motion Slave Modules with 16DI/16DO Expansion



#### **Features**

- Max. 5 MHz, 8-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
- 2-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
- RDY/LTC-dedicated input channels & SVON/CMP/CAM-DO/ERC-dedicated
- Output channels are switchable for general input and output purposes



### Introduction

AMAX-328510 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-1203. AMAX-328510 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-328510 is an 8-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

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 + home motion defined by CiA402

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+, LMTINPOS (in position signal)
LTC (counter latch)

LTC (counter latch) RDY (servo ready) ALARM (servo alarm)

General Output Signal Output voltage: Open collect 24Vdc Max

Output delay: 100us Max. (isolation delay)

Sink current: 100mA per channel

Signal:

CMP (position compare in range output)

SVON (servo on)
RALM (reset driver alarm)

ERC (counter clear signal)
General Purpose I/O: 16DI/16DO (terminal block)

#### **Encoder Interface**

Input Type
 Counts per Enc. Cycle
 A/B phase, CW/CCW
 x1, x2, x4 (AB phase only)

• Input Range Low:  $0 \sim 0.5V$ 

High: 3.5 ~ 7V

Isolation Protection 2,500 V<sub>RMS</sub>
 Max. Input Frequency 10 MHz @ 4xAB

#### General

Bus Type EtherCATCertification CE, FCC Class A

**Connectors** 2 x RJ-45 for communication port

1 x Terminal block (4P) for power 1 x Terminal block (2P) for +5V output

8 x DB-26 connector by transfer cable to servo drives 8 x Terminal block (16P) for home, Limit, LTC, CMP

and extra 16DI/16DO

Dimensions (L x W x H) 255 x 141 x 60 mm (5.6 x 4.3 x 2.4")

Power Consumption
 15W MAX (625mA @ 24V)

■ Power Input 24V<sub>DC</sub> ± 10%

• **Humidity** 5 ~ 95% RH, non-condensing (IEC 60068-2-3)

• Operating Temperature  $0 \sim 60^{\circ}\text{C} (32 \sim 140^{\circ}\text{F})$ 

## **Ordering Information**

 AMAX-3285IO-AE
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#### Accessories

PCL-20153PA5-S2E
 PCL-20153YS5-S2E
 PCL-20153MJ3-S2E
 PCL-20153DA2-S2E
 PCL-20153DA2-S2E
 S0-pin cable to Yaskawa Sigma V/7 servo, 2 m
 50-pin cable to Mitsubishi J3/J4 servo, 2 m
 50-pin cable to Delta A2 servo, 2 m