

Programmable Logic Controller

For Equipment

Compact Modular AX Series PLC AX-3

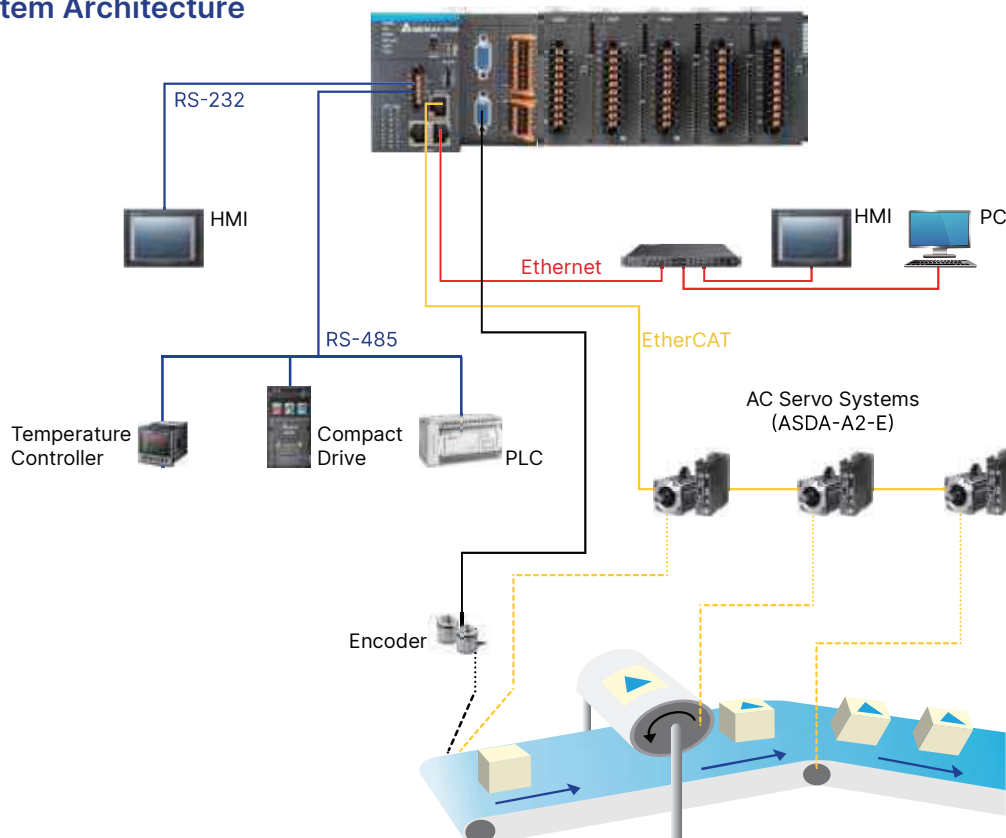
Combines Flexibility and User-Friendliness to
Achieve High-Performance

Provides a flexible motion control solution for various applications
with **DIA** Designer-AX platform and EtherCAT communication

- Provides multiple controller solutions
 - EtherCAT motion controllers
 - AX-308E/AX-316E/AX-332E CPUs support up to 8/16/32-axis EtherCAT motion control ability (min. sync time of AX-332E: 0.5 ms for 16 axes)
 - AX-304EL/AX-364EL CPUs support 4/64-axis EtherCAT point-to-point control ability
 - Logic controllers
 - AX-300N/AX-324N CPUs built-in 0/24 DIO points
- Supports AS power, DIO, AIO and temperature expansion modules (max. 32 modules)
- High performance, min. execution time: 5 ns
- IEC 61131-3 compliant software provides a standardized programming and controller development platform, offering motion instructions such as position, velocity, torque, multi-axis interpolation, E-gear, E-CAM, and more
- Built-in 16 DI and 8 DO, incremental encoder × 2, SSI absolute encoder, RS-232/485, Ethernet and EtherCAT interfaces



System Architecture



Applications

Woodworking, Packaging, Printing, Textiles, and Pharmaceutical machines

Compact Modular Mid-Range PLC AS

Flexible, Smart, Friendly - An Ideal Option for Upgrading Multitasking Equipment for Automated Equipment Control



- Max. I/O: 1,024 points
- Max. program capacity: 128k steps
- Data register: 60k words
- Max. extension ability: 32 modules
- 32-bit SoC (System on Chip) CPU for high-performance and high-speed computing
- CPU with built-in RS-485 port × 2, mini USB port, Ethernet port, micro SD card slot and CANopen port (*1)
- Max. 8 axes control via CANopen motion network / max. 6 axes control via pulse control (200 kHz)
- Robust rackless design and patented DIN rail clips for easy plug-in / plug-out module installation and replacement
- Various modules for selection: digital I/O, analog I/O, load cell, temperature, serial communication and industrial bus
- PLC programming software (ISPSoft) for program editing, hardware and network configuration, system diagnosis and axis positioning control

Note 1: AS300 CPUs don't support built-in CANopen port

Advanced CPU Performance

High-speed execution: up to 40k steps/ms
(Condition: 40% LD instruction / 60% MOV instruction)

LD instruction	0.025 μs
MOV instruction	0.15 μs
Floating point operation instruction	1.6 μs
Trigonometric operation instruction	3.5 μs

Positioning Control - High-Speed Pulse

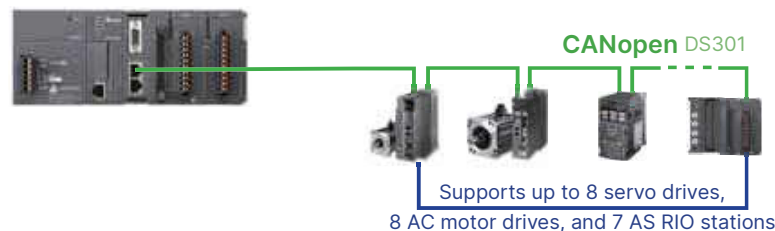
- AS transistor CPU: Up to 6 axes (or 12 channels) 200 kHz
- AS324MT-A differential CPU: 2 axes 4 MHz + 4 axes 200 kHz
- Positioning planning table for fast positioning planning and path simulation
- Choose any given 2 axes for linear and arc interpolation



AC Servo Drive
ASDA Series

Positioning Control - Delta's CANopen Control

- The AS CPU supports up to 8 Delta servo drives and 8 AC motor drives (AS-FCOPM function card is needed for AS300)
- Fast positioning configuration in one initialization instruction, a CANopen data exchange table not required
- Axis control by instructions for easy maintenance and high PLC program readability



Applications

High-end equipment for Electronics Manufacturing, Machinery processing, Food packaging and other industries