

AC703 IPC Motion Controller

Precision control for demanding industrial applications

- IPC architecture powered by high performance CPU
- Webvisu functionality
- Embedded remote commissioning and industrial IoT functions



AC703 features & functions



Comprehensive functionality

- Remote commissioning and industrial IoT capabilities
- Embedded Webvisu server
- EoE support with Inovance drives



Advanced programming capabilities

- IEC 61131-3 programming languages:
 - ST, LD, SFC, CFC
- System software contains:
 - PLCopen, CAM, CNC, and ROBOT motion control components



Cutting-edge hardware

- CPU: Celeron series
- Safe shut-down (registers are saved in non-volatile memory)



High performance

- 32 axes at 1 ms EtherCAT period
- Maximum 32 axes, 128 slave stations
- EtherCAT I/O expansion support:
 - Up to 128 EtherCAT remote I/O modules^{*1}
 - GR10, GL10 & GL20 I/O expansion modules can be supported



Flexible communications

- Multi-layer networking due to support for multiple communication protocols including:

EtherNet/IP

OPC UA

Modbus TCP

- Compatible with legacy equipment through built-in Modbus RTU master/slave protocol and 2 separate communication interfaces: RS485 and RS232

^{*1} Please note: 128 is the total number of EtherCAT slaves

^{*2} GL10-RTU-ECAT EtherCAT bus coupler required for GL10 modules.

GL20-RTU-ECAT EtherCAT bus coupler required for GL20 modules



Paper



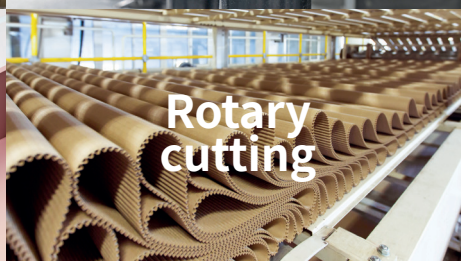
Textiles



Printing



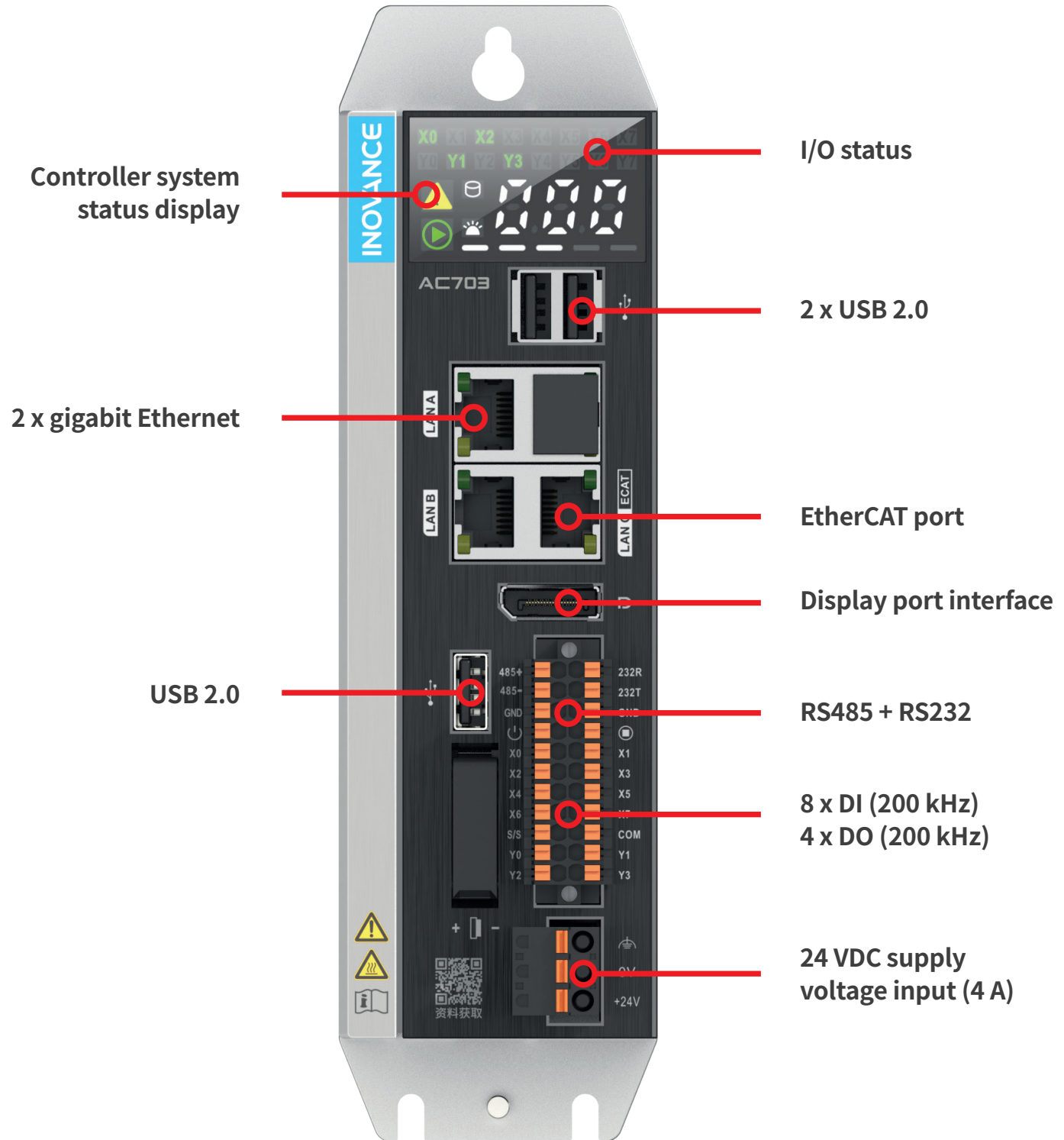
Li battery winding



Rotary cutting

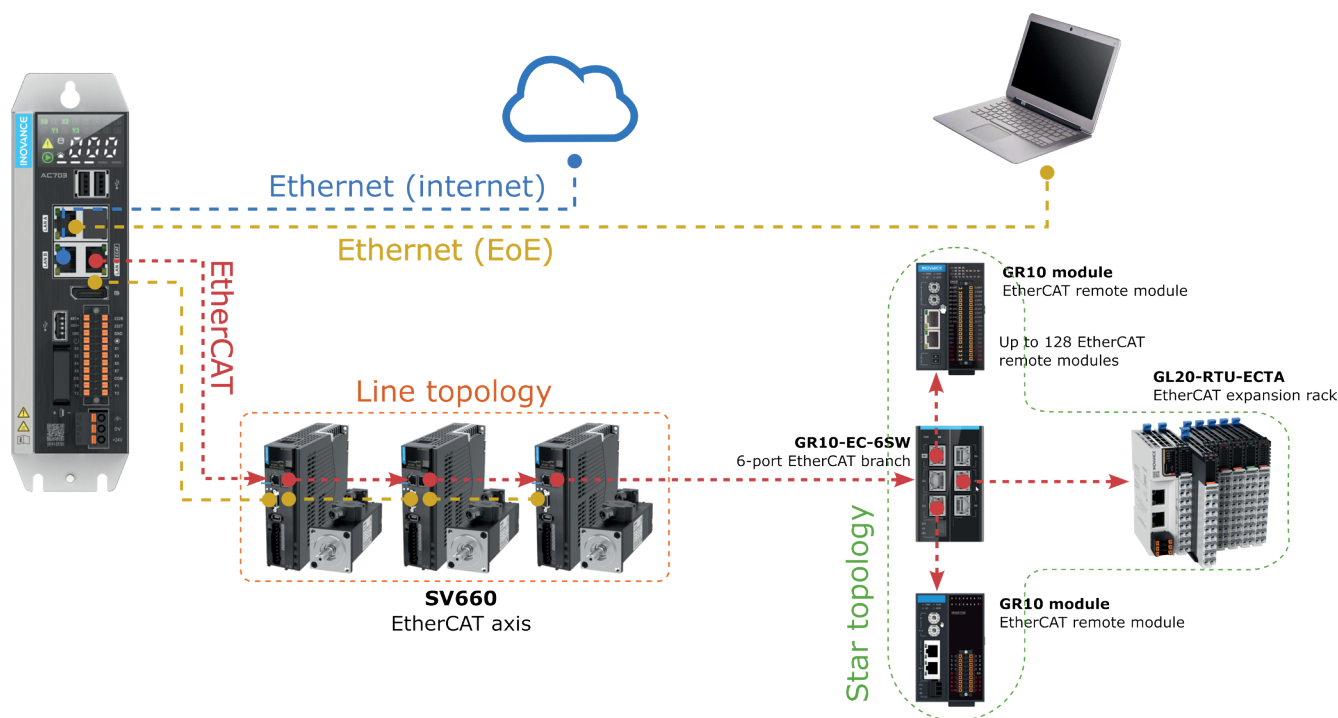


Solar cell automated welding



Please note: this image shows AC703 at actual 1:1 size

Example EtherCAT system architecture



Specifications

| Hardware | |
|-------------------------------|---|
| Processor | Intel J1900, 2.0 GHz |
| Memory | 4G DDR3, 64G mSATA SSD, 64M SPI Flash |
| Status display | DI/DO status, fault code, SSD drive activity, running status, CPU usage |
| Ethernet ports | 1x EtherCAT, 2x Ethernet |
| Serial communication | 1x RS485, 1x RS232 |
| DI/DO | 8x High Speed inputs (200 kHz), 4x High Speed outputs (200 kHz) |
| Display port | DP |
| Power input | 24VDC (-15%~20%) |
| UPS backup power | Built-in Safe Shut-Down (registers are saved in non-volatile memory) |
| Cooling fan | Fanless natural cooling |
| EMC test standards | EN/IEC 61000-6-2:2019, EN/IEC 61000-6-4:2019, EN 61131-2:2007, EN 55011:2016/A11:2020 |
| Working / storage temperature | -5°C~55°C/-25°C~70°C |
| Dimensions (H x W x D) | 160 x 55 x 147 (mm) |
| Mass | 1.3 kg |

| Software | |
|--|---|
| OS | Linux/RT |
| System software | Full support for PLCopen Inovance InoProShop based on CODESYS® PLCopen/SoftMotion with CODESYS Runtime, supporting all motion control functions such as PLCopen/CAM/CNC/ROBOT |
| Bus | EtherCAT master |
| Control axis capability of EtherCAT master | 32 axes at 1 ms period Max. 32 axes, supports 128 stations |
| Display port (DP) | Reserved |
| Ethernet protocols | Ethernet/IP (scanner and adapter), OPC UA (server), Modbus TCP (master/slave) |

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