

AC800 Series IPC Motion Controller

Precision control for demanding industrial applications

- IPC architecture powered by high performance CPU
- Dual EtherCAT ports
- Embedded remote commissioning and industrial IoT functions



AC800 series features & functions



Comprehensive functionality

- Remote commissioning and industrial IoT capabilities
- Embedded Webvisu server (AC810)
- EoE support with Inovance SV660N 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: Intel i5 (AC810), or Celeron series (AC80X)
- UPS option for safe shut down in case of power failure



High performance

- 32 axes at 500 μ s EtherCAT period (AC810)
- 256 axes at 4 ms EtherCAT period (AC810)
- Dual EtherCAT ports (AC802 and AC810):
 - Creation of two separate EtherCAT networks
 - Communication redundancy within the same network
- EtherCAT I/O expansion support:
 - Up to 128 EtherCAT remote I/O modules per port^{*1}
 - GR10 & GL10^{**2} I/O expansion modules can be supported



Flexible communications

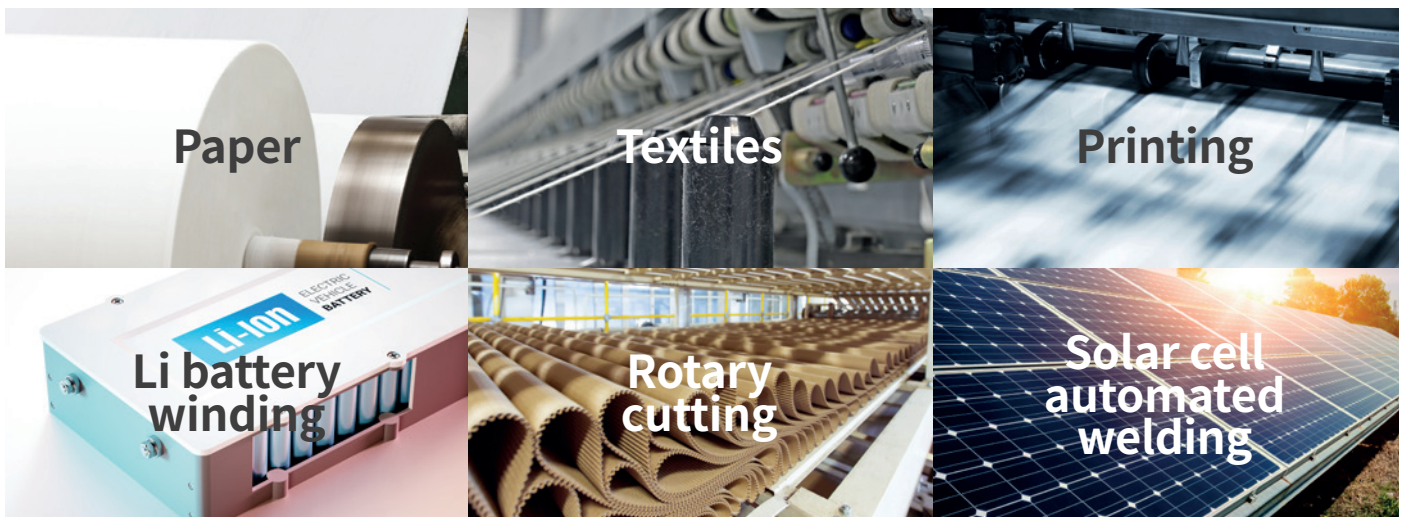
- Multi-layer networking due to support for multiple communication protocols including:

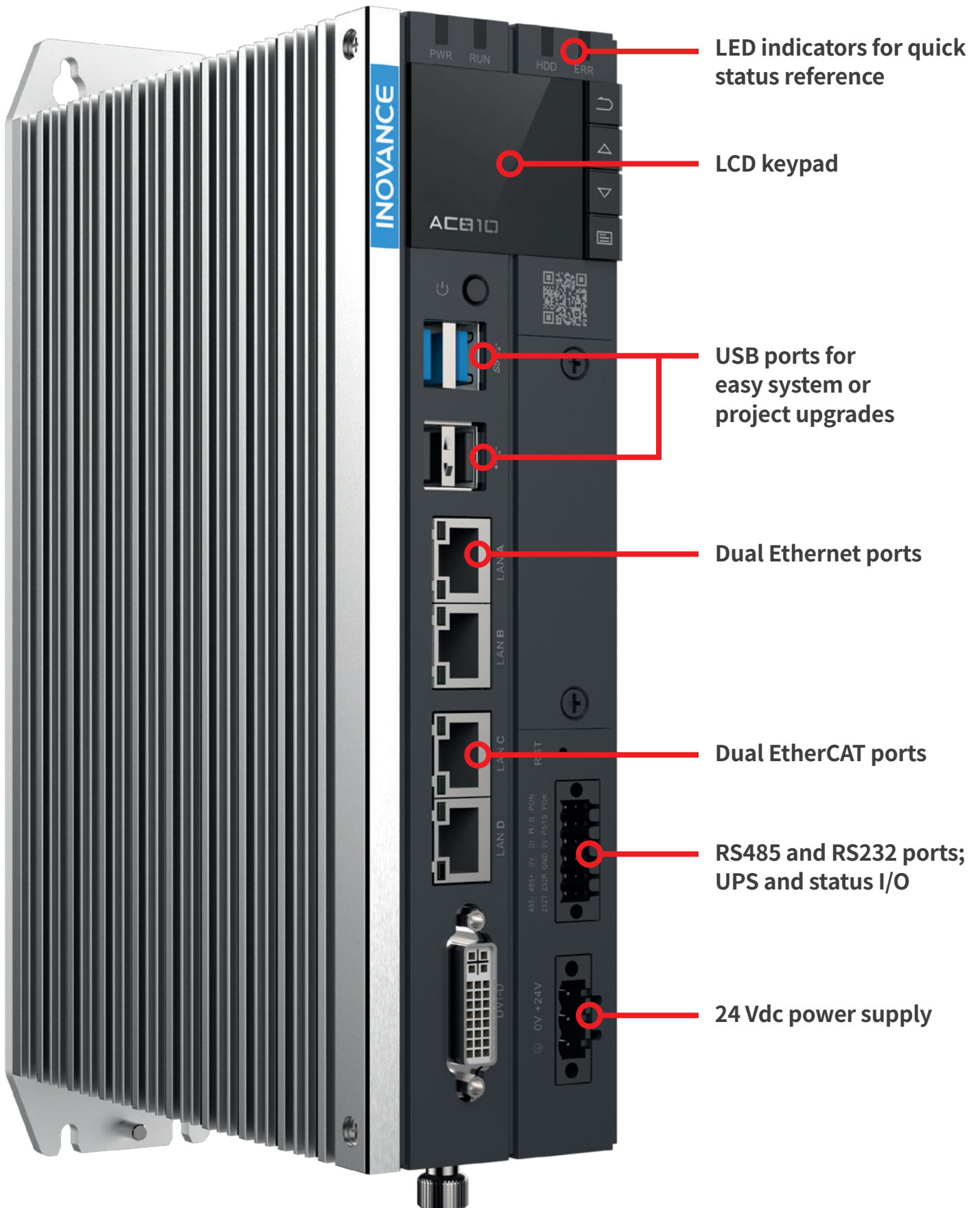
EtherNet/IP **OPC UA** **Modbus TCP**

- 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 per port

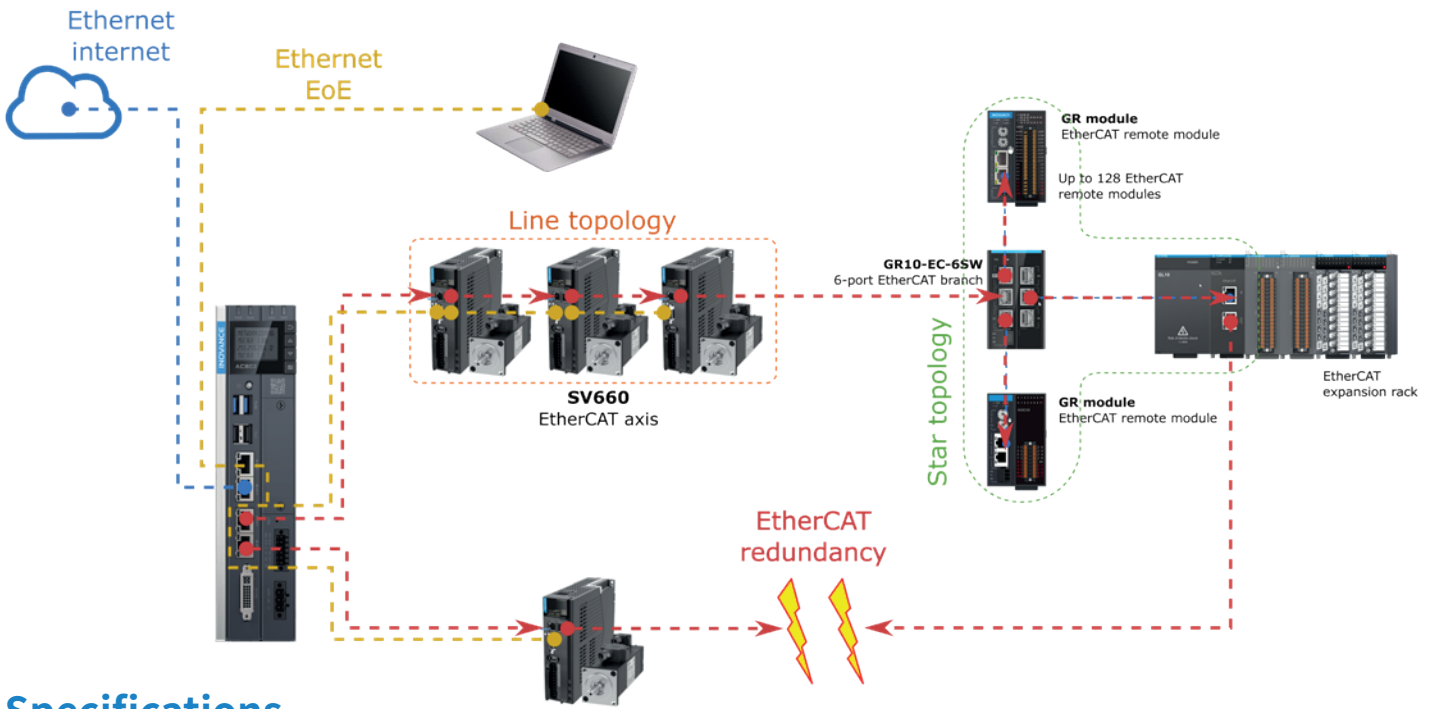
^{**2}GL10-RTU-ECAT EtherCAT bus coupler required for GL10 modules





Please note: this image shows AC800 at actual 1:1 size

Example EtherCAT system architecture



Specifications

Hardware			
Model	AC810-0122-U0R0	AC802-0222-U0R0	AC801-0221-U0R0
Processor	Intel core, i5, 2.3 GHz	Intel Celeron, 1.6 GHz	Intel Celeron, 1.6 GHz
Memory	DDR4G, SSD128G		DDR4G, SSD64G
Display	Built-in system status display module, 128 × 64 dot matrix, 4 buttons		
Bus	2 × EtherCAT master redundancy supported LAN		1 × EtherCAT master
Serial communication	1 × RS485, 1 × RS232		
DI/DO	For power failure retention trigger/ system alarm signal output		
Power input	24 Vdc, 1.5 A		
UPS backup power interface	UPS buffer option for safe shut down (GA10-UPS12)		
Cooling fan	2 long-life fans		None
EMC test standard	IEC61131-2 compliant		
Working / storage temperature	-5°C ~ 55°C / -40°C ~ 70°C		
Dimensions	164*65*265 (mm)		
Ordering code	01440038	01440101	01440103
Mass	2.5 kg	2.5 kg	2.5 kg

Software			
Model	AC810-0122-U0R0	AC802-0222-U0R0	AC801-0221-U0R0
OS	Linux/RT	Linux/RT	Linux/RT
System software	Full support for PLCopen		
	CODESYS® AP-based Inovance InoProShop		
	PLCopen/SoftMotion with CODESYS Runtime, supporting all motion control functions such as PLCopen/ CAM/ CNC/ ROBOT		
Axis capability of EtherCAT master	32 axes at 500 µs period	16 axes at 500 µs period	16 axes at 1 ms period
	Max. 128 + 128 axes (each channel supports 128 stations)	Max. 64 + 64 axes (each channel supports 128 stations)	Max. 48 axes (supports 128 stations)
DVI display	Reserved		
OPC/UA protocol	Built-in		
Ethernet/IP protocol	Built-in		

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