

ECAT-2601

Modbus/OPC UA to EtherCAT Main Device Accelerator
Ethernet Switch and Isolated RS-422/485 Ports

Features

- ■ Built-in EtherCAT MainDevice
  - ☐ Supports Free Run mode
  - ☐ Connects to SubDevice PDO without requiring an ESI file
  - ☐ Supports third-party EtherCAT SubDevices
  - ☐ Automatically connects to EtherCAT SubDevices within 10 seconds after power-on
  - ☐ Supports user-defined SDO startup entries
  - ☐ Minimum cycle time: 125us
- ■ Supports Modbus Server
- ■ Supports OPC UA Server
- ■ Built-in Web Server (HTTP/HTTPS)

Introduction

The ECAT-2601 is a proven and reliable protocol converter gateway module that enables seamless connectivity between EtherCAT and Modbus/OPC UA networks. Acting as an EtherCAT MainDevice, the ECAT-2601 allows I/O data to be exchanged between the two networks efficiently. It provides a data exchange buffer that enables EtherCAT and Modbus/OPC UA systems to exchange data quickly and easily, supporting a wide range of industrial automation applications.

An OPC UA Server is integrated into the ECAT-2601 firmware, providing a secure, open and reliable mechanism for information exchange. OPC UA supports both horizontal communication between machines and vertical communication between machine and higher-level IT systems, such as SCADA systems, and Cloud platforms. Standard OPC UA clients can connect directly to the ECAT-2601 without any customization, reducing system integration complexity and application development costs.

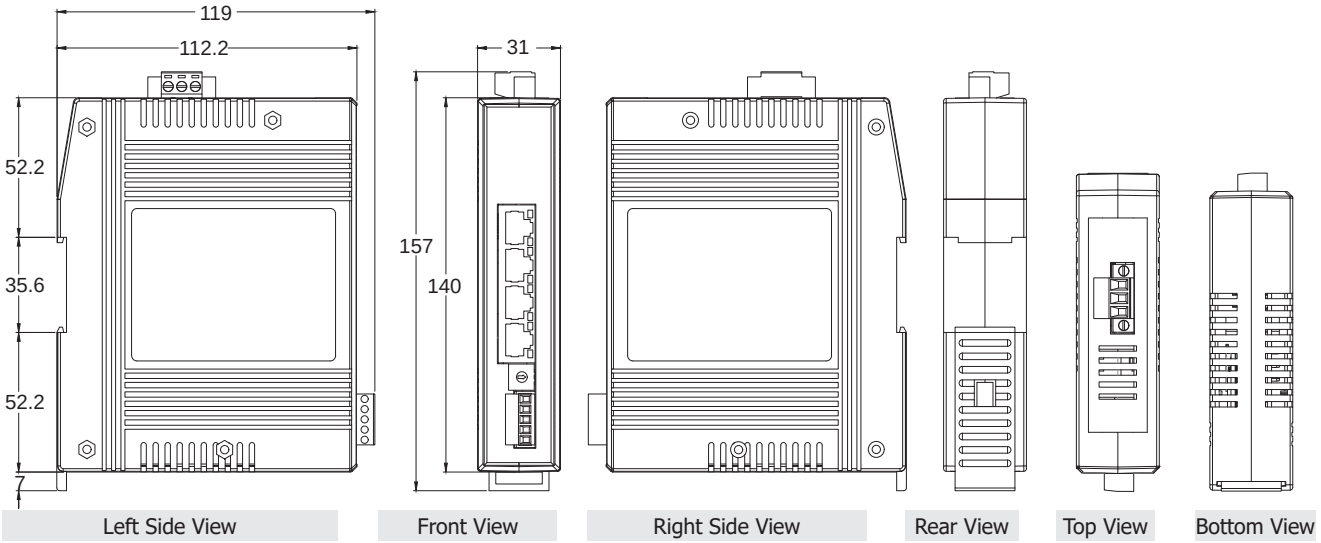
Applications



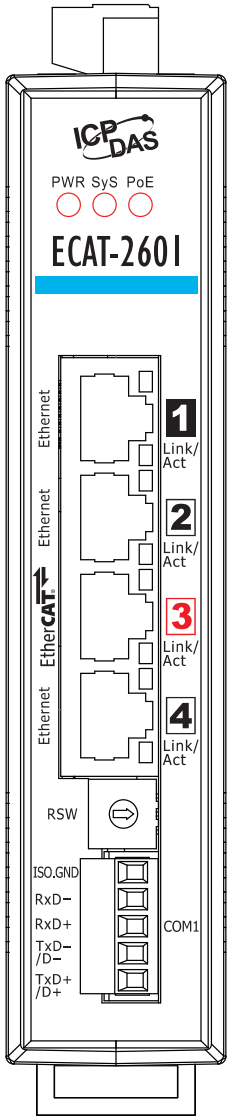
Specifications

Models	ECAT-2601
Software	
Function	Web Interface for Configuration
COM Ports	
Ports	1 x 422/485
Protocol	Modbus RTU (Salve)
EtherCAT	
Ports	RJ-45 x 1 Distance between Stations: Max. 100 m (100BASE-TX) Data Transfer Medium: Ethernet/EtherCAT Cable (Min. CAT 5e)
Cycle Time	0.125 ~ 32ms
Distributed Clocks	Yes
No. of Nodes	Max. 128
Ethernet	
Ports	RJ-45 x 3 2 x Distance between Stations: Max. 100 m (100BASE-TX) 1 x PoE (IEEE 802.3af, Class 2)
Protocol	Modbus TCP, Modbus TCP/TLS, Modbus UDP, OPC UA, SNTP, HTTP/HTTPS, IPv4, IPv6
Power	
Consumption	0.22 A @ 24 VDC
Powered from PoE	IEEE 802.3af, Class 2
Powered from Terminal Block	+12 ~ +48 VDC
Mechanical	
Casing	Plastic
Dimensions (mm)	119 x 31 x 157 (W x L x H)
Installation	DIN-Rail Mounting
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-30 ~ +80°C
Relative Humidity	10 ~ 90% RH, non-condensing

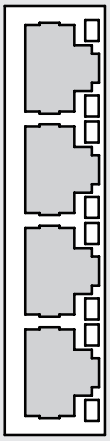
Dimensions (Units: mm)



Apparances



RJ-45 Interface

Terminal No.		Pin Assignment
	01	PoE
	02	Ethernet
	03	EtherCAT
	04	Ethernet

COM1 (Modbus RTU)

Terminal No.		Pin Assignment
COM1	05	ISO.GND1
	04	RxD1-
	03	RxD1+
	02	TxD1-/D1-
	01	TxD1+/D1+

Ordering Information

ECAT-2601 CR	Modbus/OPC UA to EtherCAT Main Device Accelerator (RoHS)