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Backplane
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EC2-P16C16

EtherCAT Slave I/O Module with Isolated 16-channel Digital Inputs and Isolated 16-channel Digital Outputs

◪ Features

■ On the fly processing: EtherCAT

■ 2 x RJ-45 bus interface

■ Distance between stations up to 100 m (100 BASE-TX)

■ Support daisy chain connection

■ Removable terminal block connector

■ LED indicators for the I/O status

■ Built-In Inputs and Outputs: 16 DI and 16 DO

■ Configurable Power-on Value Settings

■ Keep output values after state machine change

■ Low Pass Filter

◼ Introduction

The EC2-P16C16 is an industrial slave I/O module built in 16 digital inputs and 16 digital outputs. It is equipped with the EtherCAT protocol and installed by daisy chain connection that provides a more scalable system with fewer wires. Users can obtain the input and output status not only via the process data but also from its LED indicators. The EC2-P16C16 has passed and verified by the conformance test tool, therefore eligible EtherCAT Master or configurator can manipulate it simply and implement your various applications easily.

∗ EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

◼ Specifications

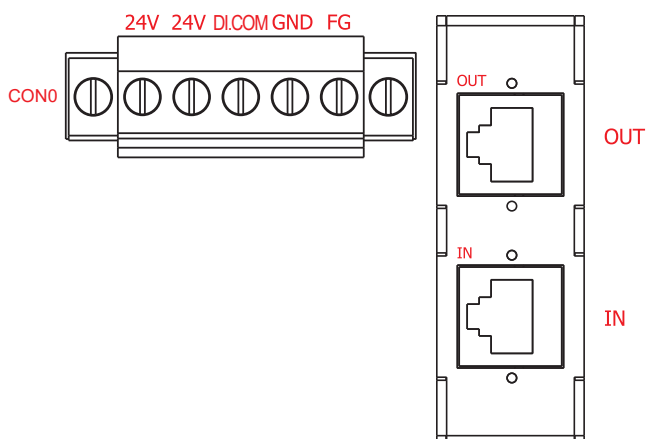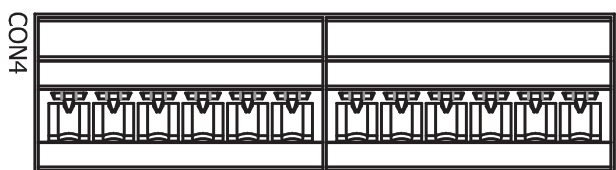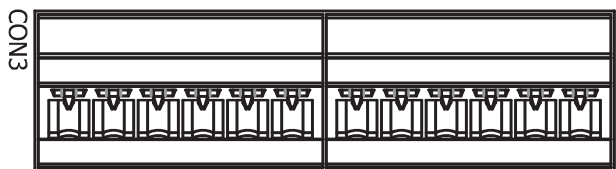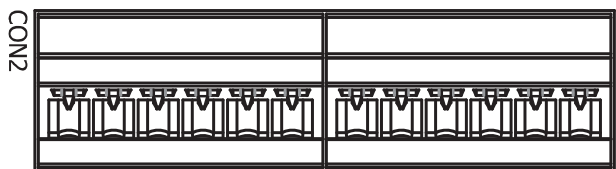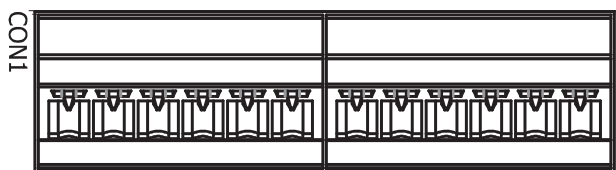| EMS Protection	
EFT (IEC 61000-4-4)	Signal: 1 KV Class B; Power: 1 KV Class B
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal
Surge (IEC 61000-4-5)	± 1 kV Class A
Digital Input	
Channels	16
Type	Wet (Sink & Source)/ Dry (Source)
ON Voltage Level	Wet Contact: +10 V ~ +24 V Dry Contact: Close to GND
OFF Voltage Level	Wet Contact :+4 V Max. Dry Contact: Open
Isolation	3750 VDC
Digital Output	
Channels	16
Type	Open Collector (Sink),with internal flywheel diode
Load Voltage	40 VDC Max.
Load Current	150 mA/Channel (Sink) @ 25°C 100 mA/Channel (Sink) @ 60°C
Isolation	3000 VDC
EtherCAT	
Ports	EtherCAT, 2 X RJ45
Distance Between Stations	Max. 100 m (100 Base-Tx)
Data Transfer Medium	Ethernet/EtherCAT cable (min. CAT5), shielded
Cycle Time	100 us
Distributed Clocks	Yes
Node ID	Up to 256

Specifications

Power	
Input Range	+24 VDC
Consumption	3 W
Mechanical	
Casing	Metal with IP40
Dimensions (mm)	83 x 122 x 65 (W x L x D)
Installation	DIN-Rail or Wall Mounting
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-30 ~ +80°C
Humidity	10 ~ 90% RH, Non-condensing

Pin Assignments

CON1 — DI00 ~ DI03   GND24V   DO00 ~ DO03   GND24V

CON2 — DI04 ~ DI07   GND24V   DO04 ~ DO07   GND24V

CON3 — DI08 ~ DI11   GND24V   DO0 ~ DO11   GND24V

CON4 — DI12 ~ DI15   GND24V   DO12 ~ DO15   GND24V

CON0 — 24V 24V DI.COM GND FG

OUT

IN

Wire Connections

Digital Input/ Counter	Readback as 1	Readback as 0
Sink	+10 ~ +24V	OPEN or <4 V_{DC}
Source	+10 ~ +24V	OPEN or <4 V_{DC}
Dry Contact	Close to GND	Open

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay		
Resistance Load		

■ Applications

EtherCAT Master Unit

Daisy Chain

Up to 100m

ECAT-2512

Up to 65535 EtherCAT Slave Units

Up to 100m

EC2 Series

Isolated Digital Inputs

Switches, Buttons, etc.

Isolated Digital Outputs

Relay, Alarms, Fans, Heater, etc.

■ Dimensions (Units: mm)

65.0
56.4
29.8
44.7
33.2
44.1

Left View

83.0
122.0

Front View

Right View

Rear View

Top View

Bottom View
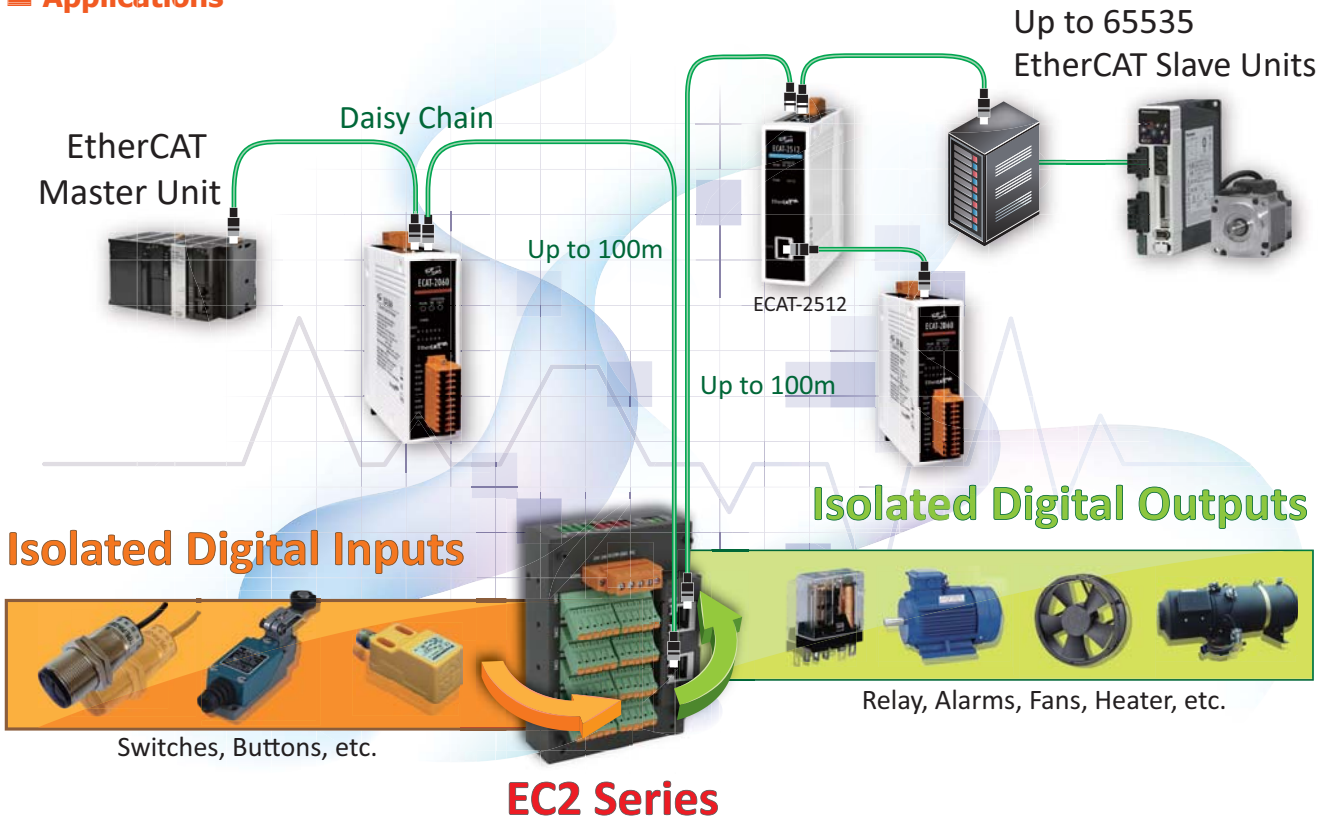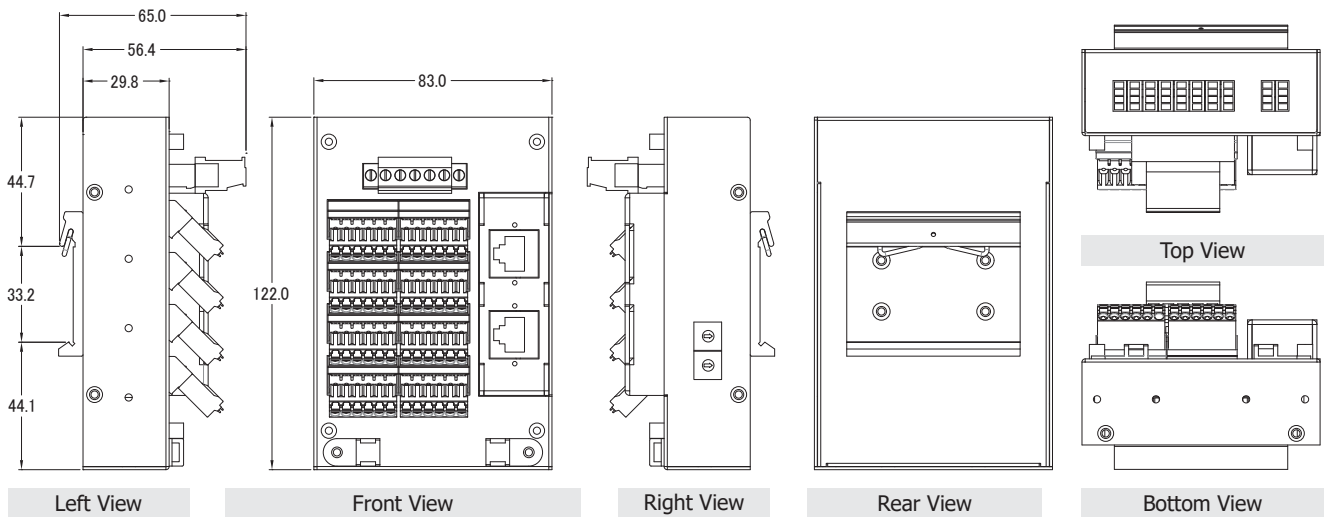
■ Ordering Information

EC2-P16C16 CR	EtherCAT Slave I/O Module with Isolated 16-channel Digital Inputs and 16-channel Digital Outputs (RoHS)