ICP DAS

EtherCAT

ECAT-2055-32

EtherCAT Slave I/O Module with Isolated 16-ch DO and 16-ch DI

Features

- On the fly processing: EtherCAT
- Powerful MCU handles efficient network traffic
- 2 x RJ-45 bus interface
- Distance between stations up to 100 m (100 BASE-TX)
- Support daisy chain connection
- EtherCAT conformance test tool verified
- Removable terminal block connector
- LED indicators for the output status
- Built-In Inputs and Outputs: 16 DI and 16 DO
- RoHS compliant
- ESD Protection 4 KV Contact for each channel
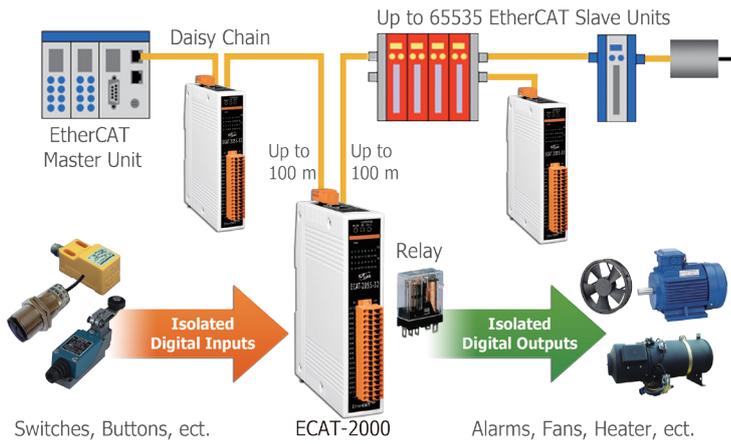
CE FC RoHS

Introduction

The ECAT-2055-32 is an industrial slave I/O module built in 8 digital inputs and 8 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 ECAT-2055-32 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.

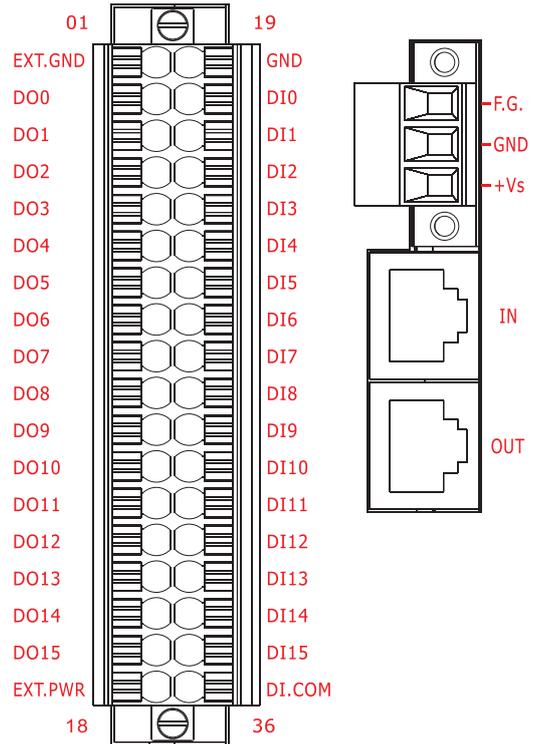∗ EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

Hardware Specifications

Model		ECAT-2055-32
Digital Output		
Channels		16
Input Type		Wet (Sink/Source)/ Dry (Source)
Wet Contact	ON Voltage Level	+10 V ~ +50 V
	OFF Voltage Level	+4 V Max.
Dry Contact	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Photo-Isolation		3750 V_{DC}
Digital Output		
Channels		16
Output Type		Open Collector (Sink)
Load Voltage		+3.5 ~ 50 V
Max. Load Current		500 mA per channel
Isolation Voltage		3750 V_{DC}
Communication Interface		
Connector		2 x RJ-45
Protocol		EtherCAT
Distance between Stations		Max. 100 m (100 BASE-TX)
Data Transfer Medium		Ethernet/EtherCAT Cable (Min. CAT 5), Shielded
EMS Protection		
ESD (IEC 61000-4-2)		±4 kV Contact for Each Terminal
EFT (IEC 61000-4-4)		Signal: 1 KV Class A; Power: 1 KV Class A
Surge (IEC 61000-4-5)		1 KV Class A
Power		
Input Voltage Range		10 ~ 30 V_{DC}
Power Consumption		4 W Max.
Mechanical		
Dimensions (H x W x D)		140 mm x 112.2 mm x 31 mm
Installation		DIN-Rail Mounting
Case Material		UL 94V-0 Housing
Environment		
Operating Temperature		-25 ~ +75°C
Storage Temperature		-30 ~ +80°C
Relative Humidity		10 ~ 90% RH, Non-condensing

■ Applications

Up to 65535 EtherCAT Slave Units

Daisy Chain

EtherCAT Master Unit

Up to 100 m   Up to 100 m

Isolated Digital Inputs → ECAT-2000 → Isolated Digital Outputs

Relay

Switches, Buttons, ect.   Alarms, Fans, Heater, ect.

■ Pin Assignments

01		19
EXT.GND		GND
DO0		DI0
DO1		DI1
DO2		DI2
DO3		DI3
DO4		DI4
DO5		DI5
DO6		DI6
DO7		DI7
DO8		DI8
DO9		DI9
DO10		DI10
DO11		DI11
DO12		DI12
DO13		DI13
DO14		DI14
DO15		DI15
EXT.PWR		DI.COM
18		36

F.G.
GND
+Vs

IN

OUT

■ Wire Connections

Digital Input/ Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 V$_{DC}$	OPEN or <4 V$_{DC}$
	DIx 10K ... To other channels + - DI.COM	DIx 10K ... To other channels + - DI.COM
Source	+10 ~ +50 V$_{DC}$	OPEN or <4 V$_{DC}$
	DIx 10K ... To other channels - + DI.COM	DIx 10K ... To other channels - + DI.COM
	Close to GND	Open
	DI.GND +S5 V ... To other channels DIx	DI.GND +S5 V ... To other channels DIx

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay	EXT.PWR DOx EXT.GND	EXT.PWR DOx EXT.GND
Resistance Load	EXT.PWR DOx EXT.GND	EXT.PWR DOx EXT.GND

■ Dimensions (Units: mm)

126
112.2
52.2
35.6
59.2

31
140
157

| Left Side View | Front View | Right Side View | Rear View | Top View | Bottom View |
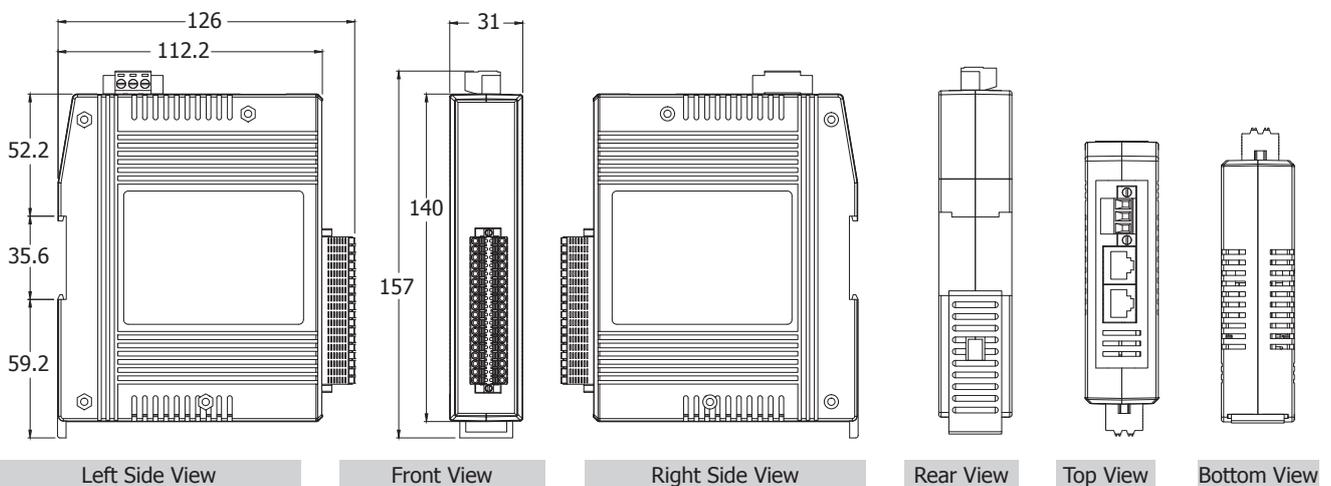
■ Ordering Information

ECAT-2055-32 CR	EtherCAT Slave I/O Module with Isolated 16-ch DO and 16-ch DI (RoHS)