ECAT-2051-32

EtherCAT Slave I/O Module with Isolated 32-ch Digital Inputs

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 input status
- Built-In isolated 32 digital inputs
- RoHS compliant
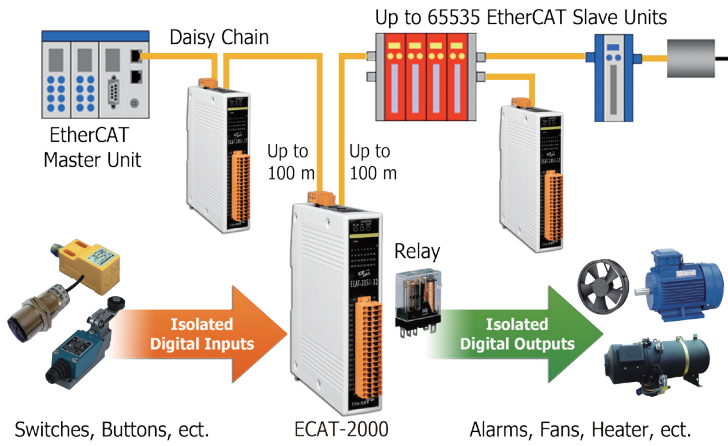- ESD Protection 4 KV Contact for each channel

Introduction

The ECAT-2051-32 is an industrial slave I/O module built in 16 digital inputs. 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-2051-32 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.
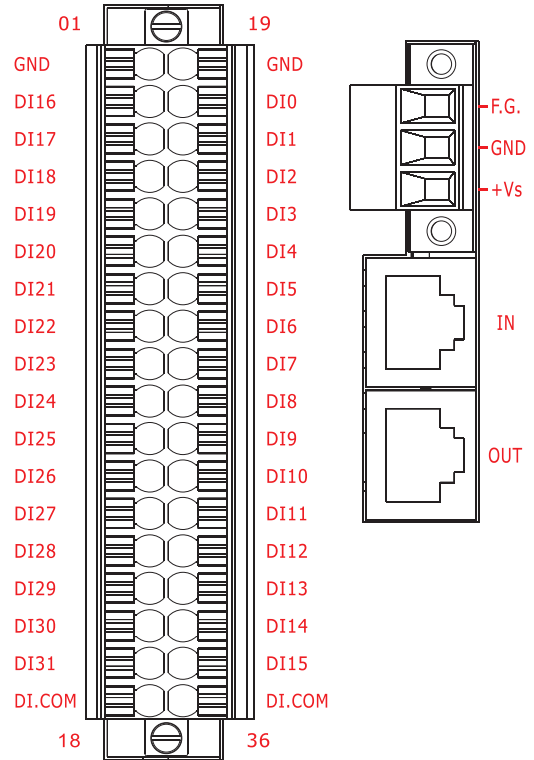
Hardware Specifications

Model	ECAT-2051-32	
Digital Input		
Channels	32	
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}	
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

Relay

Isolated Digital Inputs

Isolated Digital Outputs

Switches, Buttons, ect.

ECAT-2000

Alarms, Fans, Heater, ect.

■ Pin Assignments

01		19
GND		GND
DI16		DI0
DI17		DI1
DI18		DI2
DI19		DI3
DI20		DI4
DI21		DI5
DI22		DI6
DI23		DI7
DI24		DI8
DI25		DI9
DI26		DI10
DI27		DI11
DI28		DI12
DI29		DI13
DI30		DI14
DI31		DI15
DI.COM		DI.COM
18		36

F.G.
GND
+Vs

IN

OUT

■ Wire Connections

Digital Input/ Counter	Readback as 1	Readback as 0
Sink	+10 ~ +50 VDC	OPEN or <4 VDC
	DIx 10K + − DI.COM To other channels	DIx 10K + − DI.COM To other channels
Source	+10 ~ +50 VDC	OPEN or <4 VDC
	DIx 10K − + DI.COM To other channels	DIx 10K − + DI.COM To other channels

Digital Input/ Counter	Readback as 1	Readback as 0
Dry	Close to GND	Open
	DI.GND +S5 V DIx To other channels	DI.GND +S5 V DIx To other channels

■ Dimensions (Units: mm)

126
112.2
52.2
35.6
59.2

Left Side View

31
140
157

Front View

Right Side View

Rear View

Top View

Bottom View
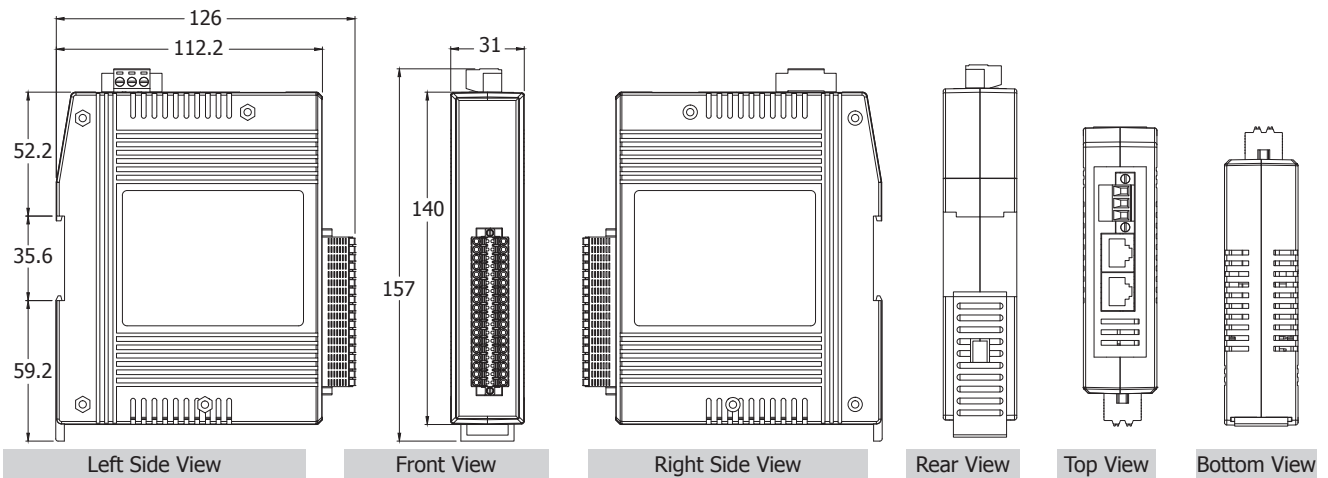
■ Ordering Information

ECAT-2051-32 CR	EtherCAT Slave I/O Module with Isolated 32-ch Digital Inputs (RoHS)