ECAT-2045/2057 series Quick Start

v1.2, Jun. 2020

Packing List

In addition to this guide, the package includes the following items:



ECAT-2045/2057/2057P/2057-NPN/2057-8P8N

Technical Support

service@icpdas.com

www.icpdas.com

Resources

How to search for ESI, manuals and spec information on ICP DAS website.

- For Mobile Web



- For Desktop Web



Related Information

For more detailed information related to the manual, hardware manual:

http://www.icpdas.com/en/download/index.php?model=ECAT-2057

http://www.icpdas.com/en/download/index.php?model=ECAT-2045

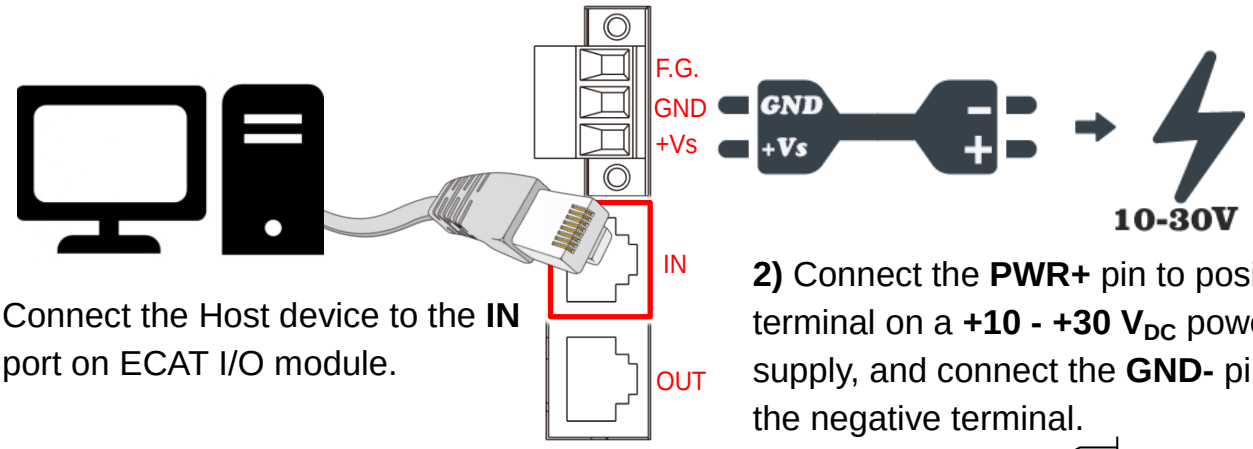
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1 Connecting the Power and Host

※Switch on module and connect it to an EtherCAT network

NOTE:

Attaching an ESC directly to an office network will result in network flooding, since the ESC will reflect any frame – especially broadcast frames – back into the network (broadcast storm).



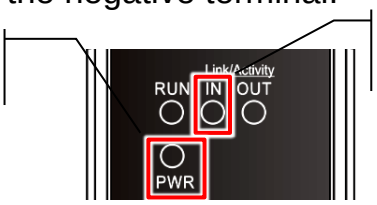
1) Connect the Host device to the **IN** port on ECAT I/O module.

2) Connect the **PWR+** pin to positive terminal on a **+10 - +30 V_{DC}** power supply, and connect the **GND-** pin to the negative terminal.

※Verify that LEDs indicator

Red, OK





Green, OK



2 Search Modules

ESI file

The latest ESI file (**ECAT-2000_DIO….xml**) can be downloaded from website at

ECAT-2000_DIO_Series_EtherCAT_Slave_Information(ESI).xml

Install the ESI file

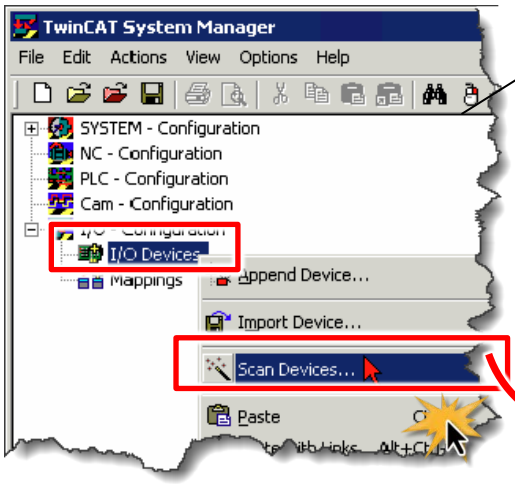
Copy the **"ECAT-2000_DIO….xml"** file to the Master Tools installation folder, as indicated in the table below.

Software	Default Path
Beckhoff EtherCAT Configuration	C:\EtherCAT Configurator\EtherCAT
Beckhoff TwinCAT 3.X	C:\TwinCAT\3.x\Config\Io\EtherCAT
Beckhoff TwinCAT 2.X	C:\TwinCAT\Io\EtherCAT

Run the EtherCAT Master software (Beckhoff TwinCAT 2.X)

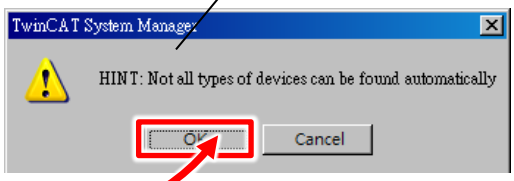
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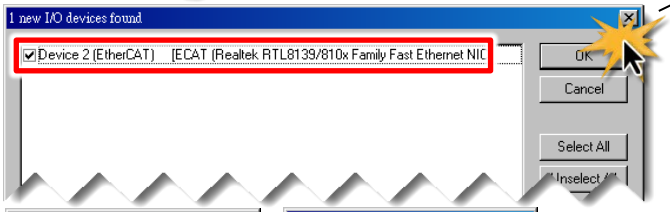
Switch on power and execute the TwinCAT System Manager (Config mode)



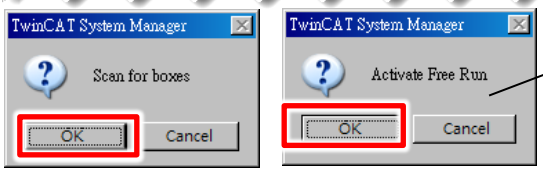
1. I/O Devices → Right click → Scan Devices…

2. Click **“OK”** button

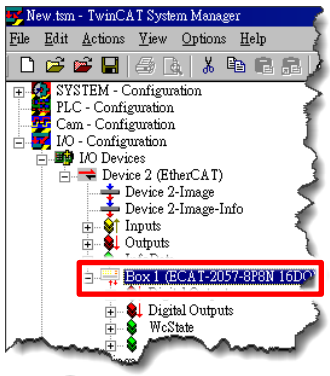




3. Choose the correct network device which is connected to ECAT Module and click **“OK”** button



4. Click **“OK”** to start scanning Click **“OK”** to activate the free run mode for TwinCAT system manager



5. In the left-hand window, **ECAT Module** is now shown in the TwinCAT system Manager

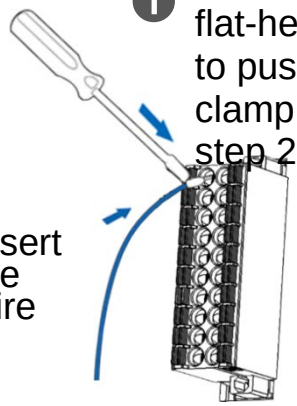
3 Wiring to the Connector

➢ Wiring Tip

Connecting the wire

❶ Use the blade of a flat-head screwdriver to push the wire clamp, then hold until step 2 complete.

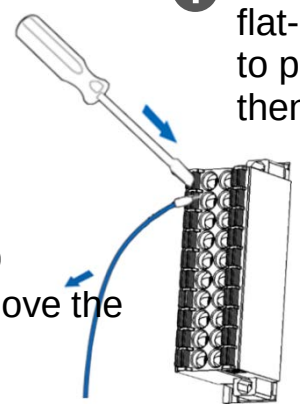
❷ Insert the wire



Removing the wire

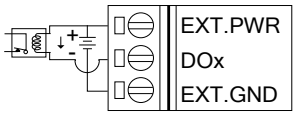
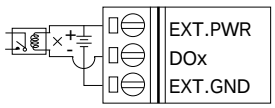
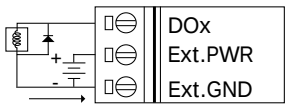
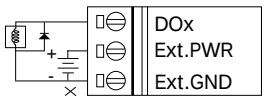
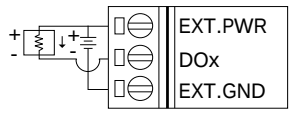
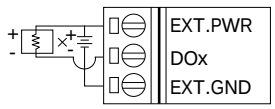
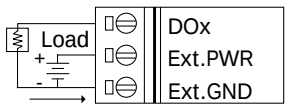
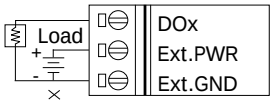
❶ Use the blade of a flat-head screwdriver to push the wire clamp, then hold until step 2

❷ Remove the wire



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Wire Diagrams

Module Name	ECAT-2045/ECAT-2057-NPN/ ECAT-2057-8P8N (DO8-15)		ECAT-2057/ECAT-2057P ECAT-2057-8P8N(DO0-7)	
Output Type	Sink		Source	
	ON State Readback as 1	OFF State Readback as 0	ON State Readback as 1	OFF State Readback as 0
Drive Relay				
Resistance				

Wiring the DO

ECAT-2045/2057-NPN/2057-8P8N(DO8-15)

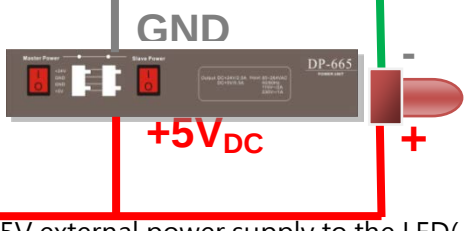
3 Connect the GND on external power supply to the EXT.GND(Pin2)

Terminal No.	Pin Assignment
1	EXT.GND
3	DO0
5	DO1
7	DO2
9	DO3
11	DO4
13	DO5
15	DO6
17	DO7
19	EXT.PWR

Pin Assignment	Terminal No.
EXT.GND	2
DO8	4
DO9	6
DO10	8
DO11	10
DO12	12
DO13	14
DO14	16
DO15	18
EXT.PWR	20



1 Connect the **DO8**(Pin4) to the **LED**(-)



2 Connect +5V external power supply to the LED(+) and EXT.PWR(pin18)

ECAT-2057/2057P/2057-8P8N(DO0-7)

3 Connect the GND on external power supply to the EXT.GND(Pin1) and LED(-)

1 Connect the **DO0**(Pin3) to the **LED**(+)





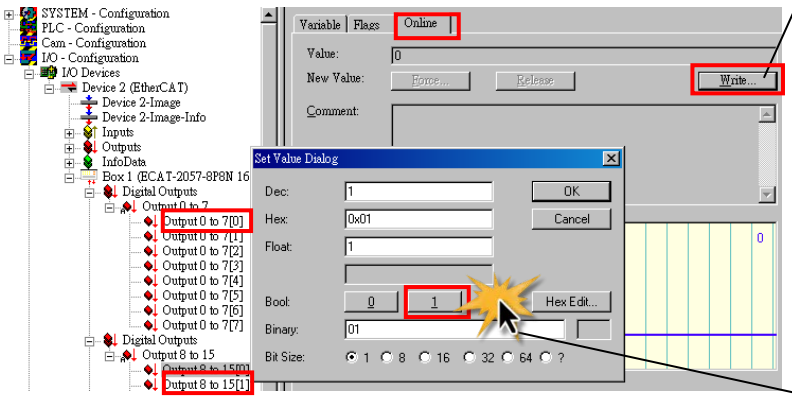
Terminal No.	Pin Assignment
	EXT.GND
	DO0
5	DO1
7	DO2
	DO3
	DO4
	DO5
15	DO6
17	DO7
	EXT.PWR

Pin Assignment	Terminal No.
EXT.GND	2
DO8	4
DO9	6
DO10	8
DO11	10
DO12	12
DO13	14
DO14	16
DO15	18
EXT.PWR	20



2 Connect +5V external power supply to EXT.PWR(pin19)

Verifying the DO functionality



In the left-hand of the window, click on the Output 0 to 7 or Output 8 to 15, then click Output 0 to 7[0] or Output 0 to 15[0].

In the right-hand of the windows, click the online.

Click Write.

Click 1 (Configure DO0 or DO8 to Logic1).

LED is lighting.



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