



ECAT-2024/2028 series Quick Start

v1.1, Sep. 2024

Packing List

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



ECAT-202x Series

Technical Support

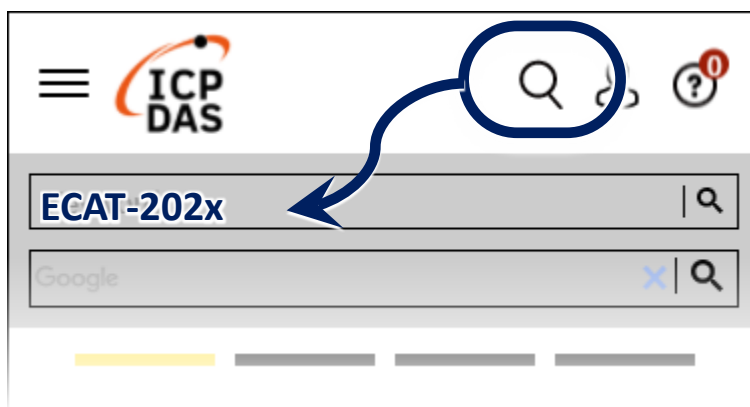
service@icpdas.com

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-2024>

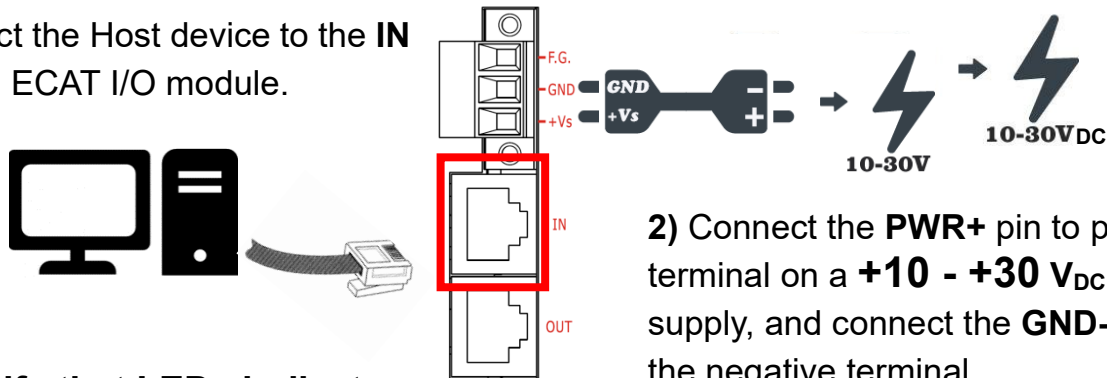
1 Connecting the Power and Host

※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



2 Search Modules

Download and Unzip file to get ESI file

The latest ESI file (**ECx-DIO....xml**) can be downloaded from website at

[ECAT-202x ESI XML.zip](#)

Unzip the “**ECAT-202x....zip**” to get the “**ECAT-2000_AO....xml**” ESI file(XML format)

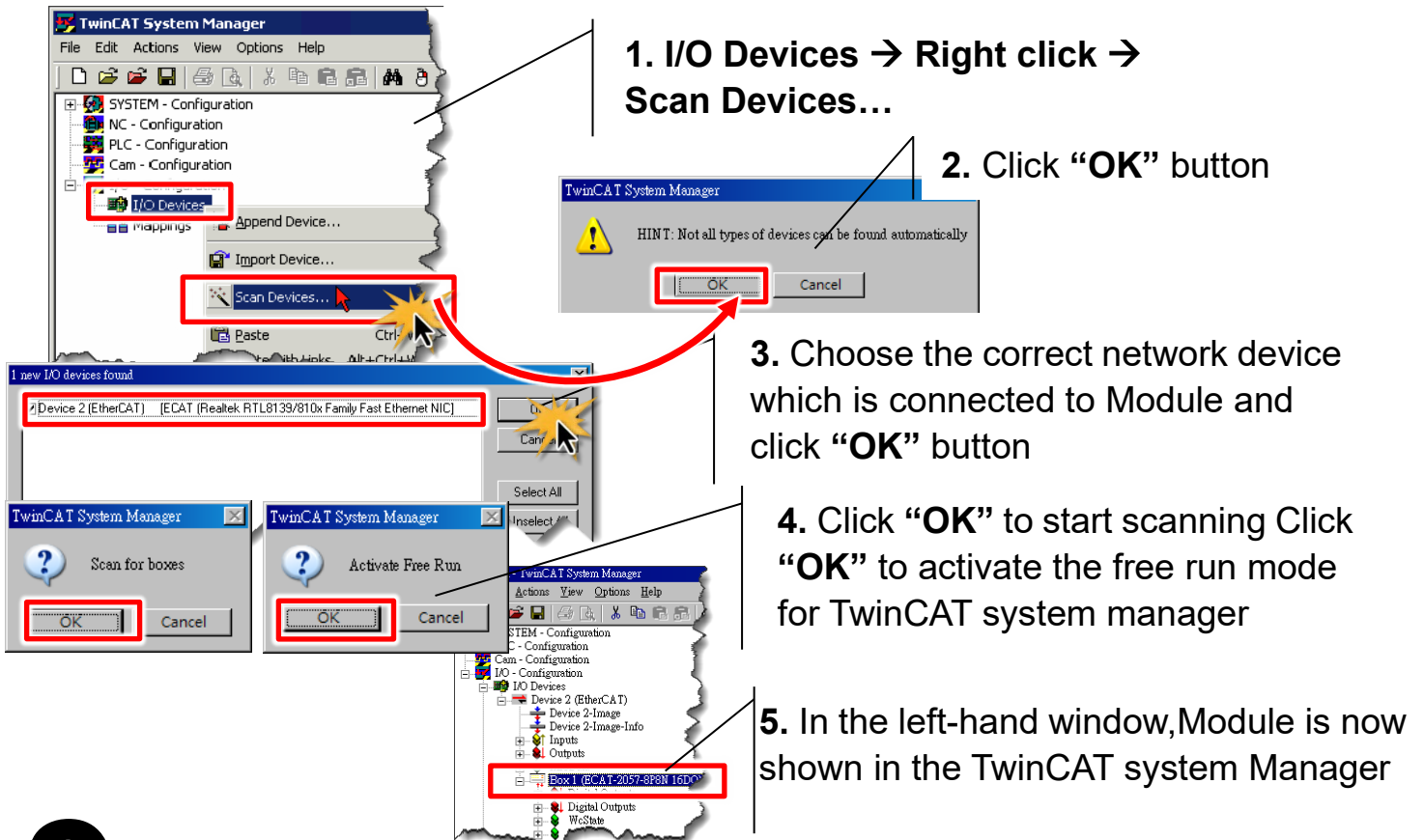
Install the ESI file

Copy the “**ECAT-2000_AO....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 MainDevice software (Beckhoff TwinCAT 2.X)

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

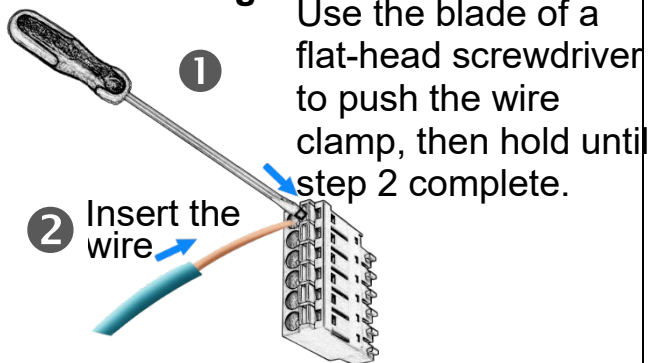


1. I/O Devices → Right click → Scan Devices...
2. Click "OK" button
3. Choose the correct network device which is connected to Module and click "OK" button
4. Click "OK" to start scanning Click "OK" to activate the free run mode for TwinCAT system manager
5. In the left-hand window, Module is now shown in the TwinCAT system Manager

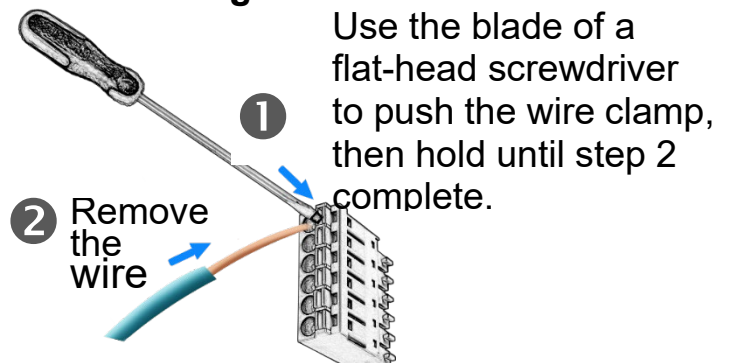
3 Wiring to the Connector

➤ Wiring Tip

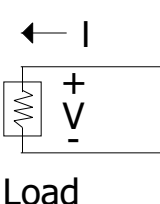
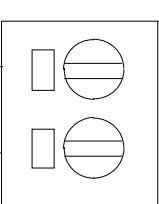
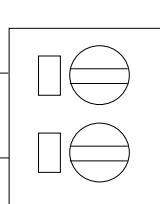
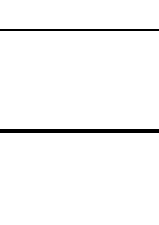
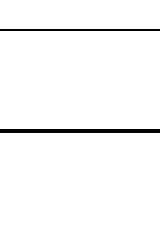
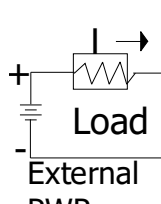
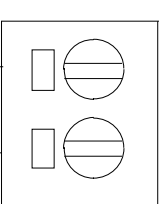
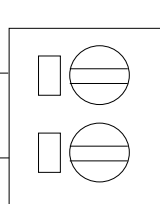
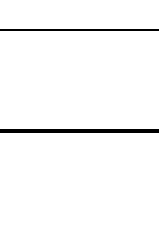
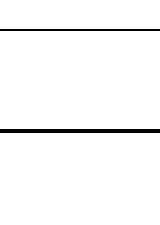
Connecting the wire



Removing the wire



➤ Wire Diagrams

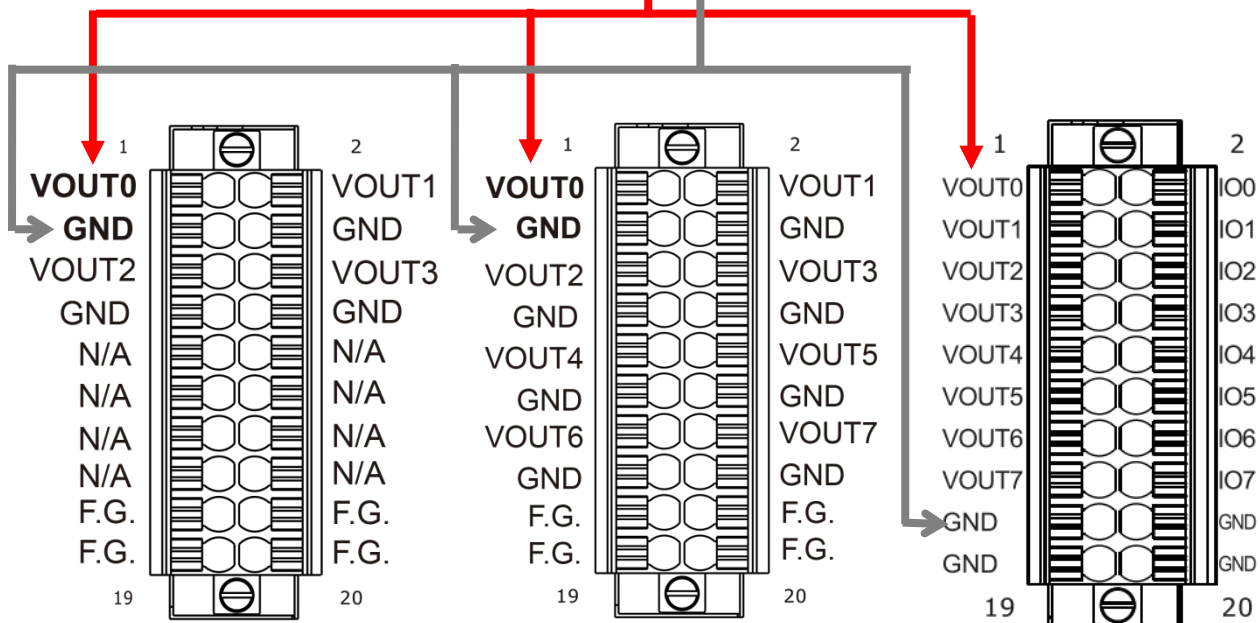
Voltage Output		Current Output(Only for ECAT-2028C)	
 Load			Vout
			AGND
 Load			Iout
			AGND

➤ Wiring the AOO

Multi-meter

❶ Connect the positive probe (+) of Multi-meter to VOUT0 (Pin 01)

❷ Connect the negative probe (-) of Multi-meter to GND (Pin 03)

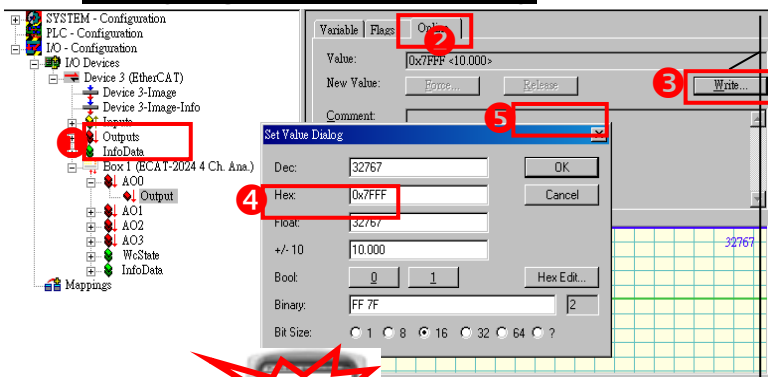


▲ ECAT-2024

▲ ECAT-2028

▲ ECAT-2028C

➤ Verifying AO functionality



1. Click **AO0** and **Output** in the left-hand window.
2. Click **Online** in the right-hand window.
3. Click **Write**.
4. **Type the voltage value** (e.g., 10) in the +/-10 field.
5. Click **OK**.



Check the value on multi-meter they should be identical to the values set in program. **(The value read on meter may be a little difference from the DA value because of the resolution limit of meter or the measurement error.)**