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

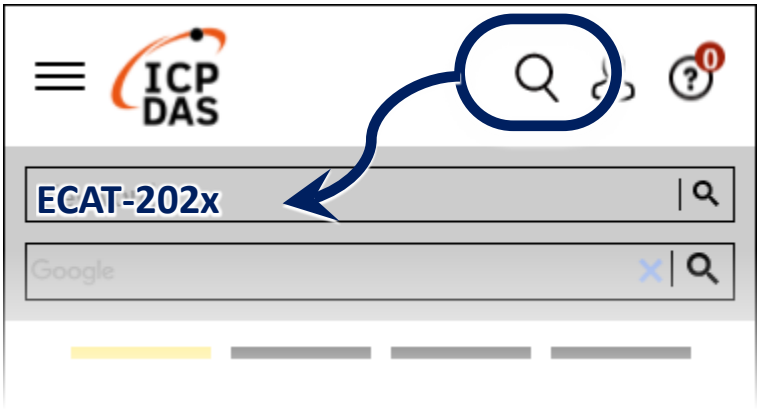
service@icpdas.com

www.icpdas.com

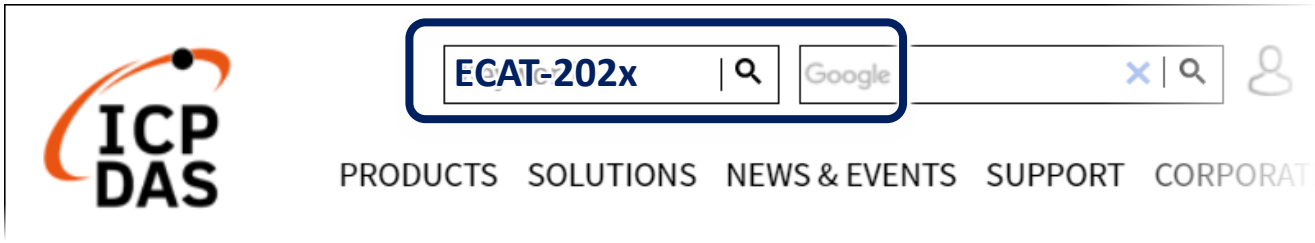
Resources

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

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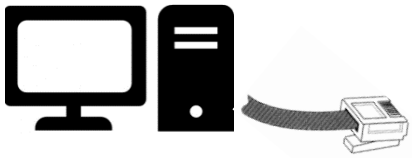
1 Connecting the Power and Host

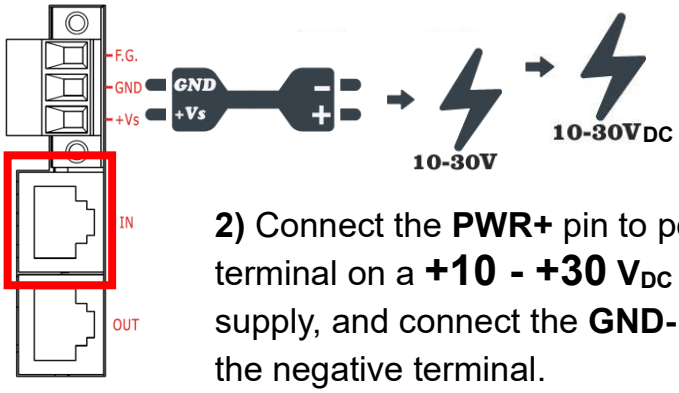
※Switch on module and connect it to an EtherCAT network

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).

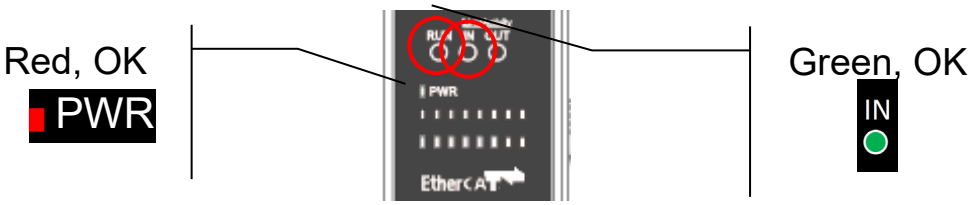
1) Connect the Host device to the **IN** port on ECAT I/O module.





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



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

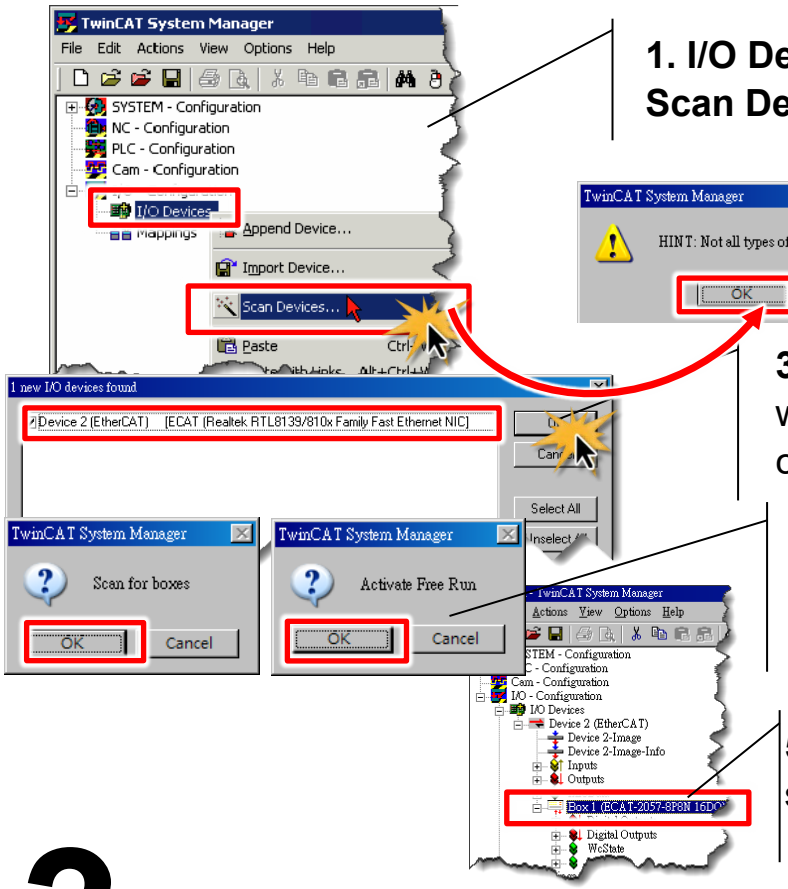
Copy the **"ECAT-2000_AO….xml"** file to the Master Tools installation folder, as indicated in the table below.

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

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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

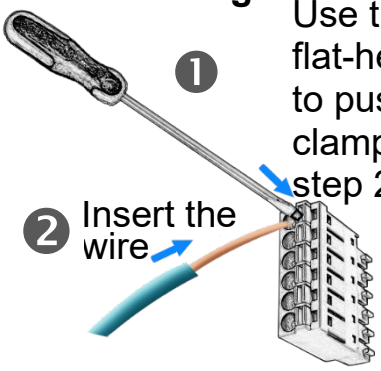
4. Click **“OK”** to start scanning Click **“OK”** to activate the free run mode for TwinCAT system manager

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

3 Wiring to the Connector

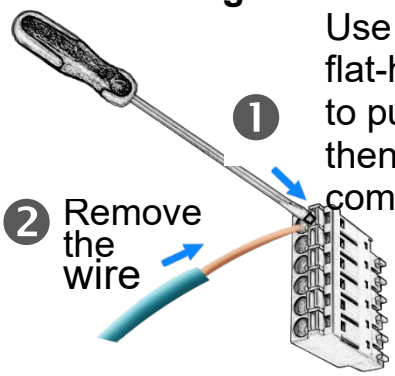
➢ Wiring Tip

Connecting the wire



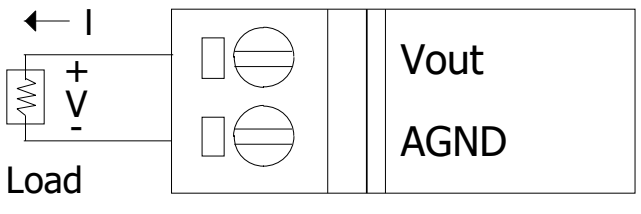
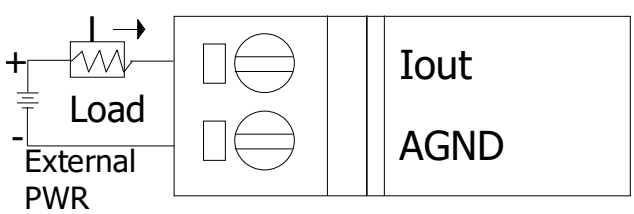
Use the blade of a flat-head screwdriver to push the wire clamp, then hold until step 2 complete.

Removing the wire



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

➢ Wire Diagrams

Voltage Output	Current Output(Only for ECAT-2028C)
	

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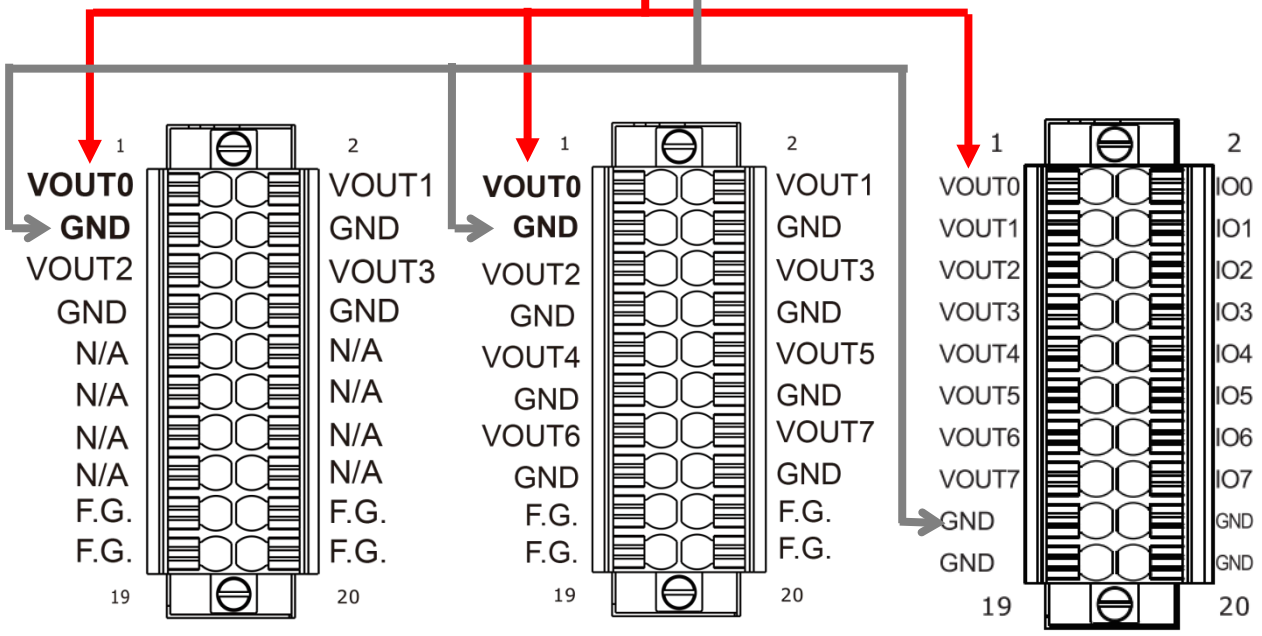
➢ Wiring the AO0

Multi-meter



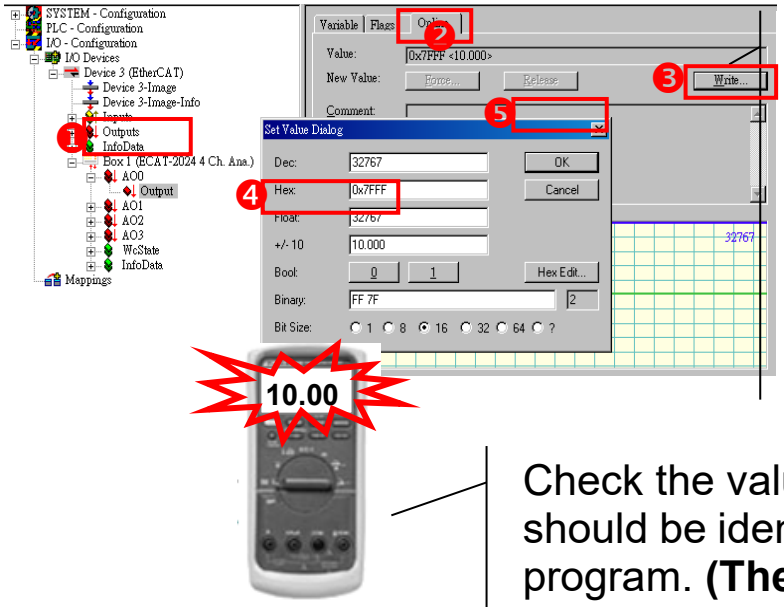
❶ Connect the **positive probe (+) of Multi-meter** to **VOUT0 (Pin 01)**

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.)**

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