EC4-A16 series Quick Start

v1.0, Dec. 2025

Packing List

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



EC4-A16

Technical Support

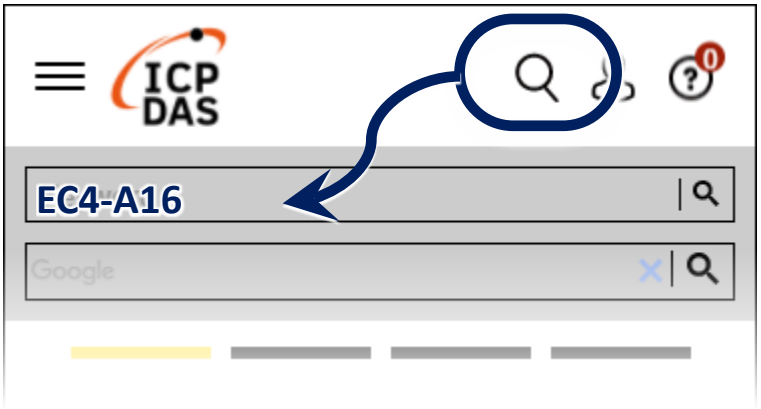
service@icpdas.com

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=EC4-A16

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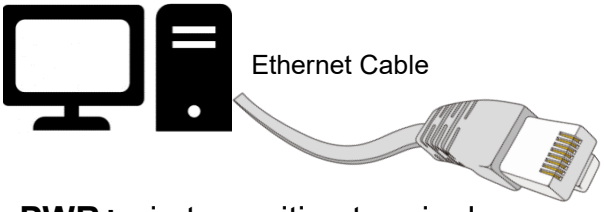
1 Connecting the Power and Host

※Switch on module and connect it to an EtherCAT network

NOTE:

It is recommended to use a dedicated network card and avoid connecting to network to prevent network storms(broadcast storm).

1) Connect the Host device to the **IN** port on 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

Green, OK

Green, OK

2 Search Modules

Download and Unzip file to get ESI file

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

EC4-IO_ESI_XML.zip

Unzip the **"ECx-IO….zip"** to get the **"EC4-IO….xml"** ESI file(XML format)

Install the ESI file

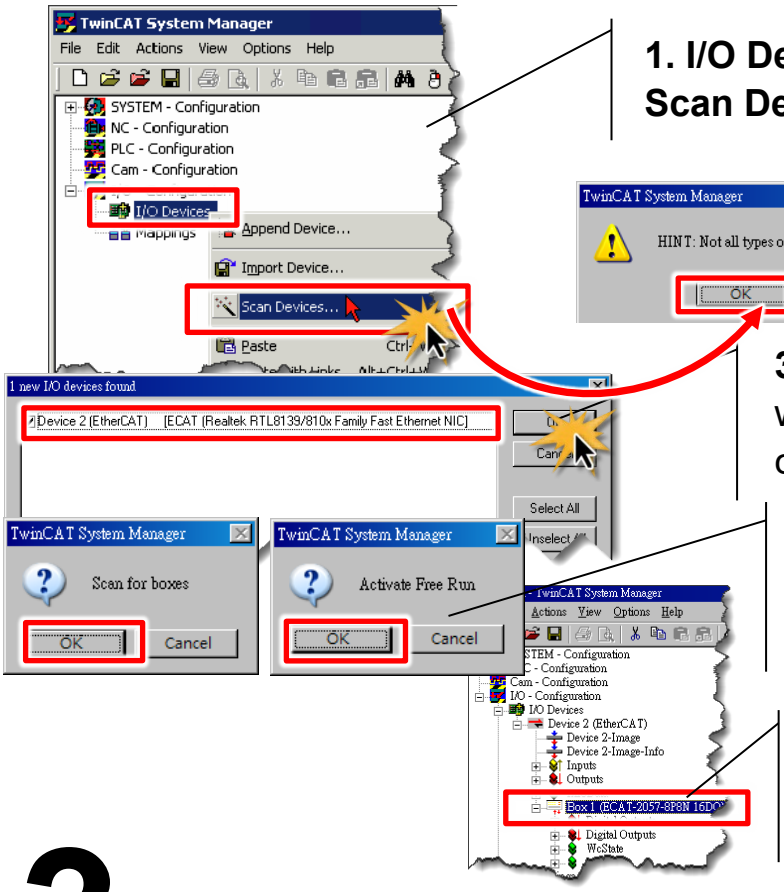
Copy the **"EC4-IO….xml"** file to the Master Tools installation folder, as indicated in the table below.

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 Main software (Beckhoff TwinCAT 2.X)

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

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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

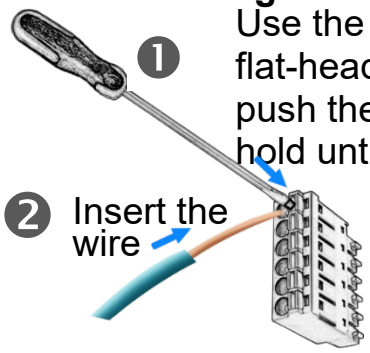
4. Click **"OK"** to start scanning Click **"OK"** to activate the free run mode for TwinCAT system manager

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

3 Wiring to the Connector

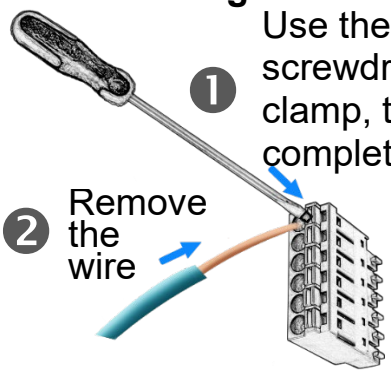
➢ Wiring Tip

Connecting the wire



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

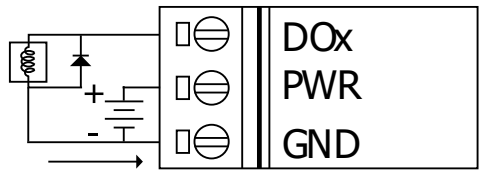
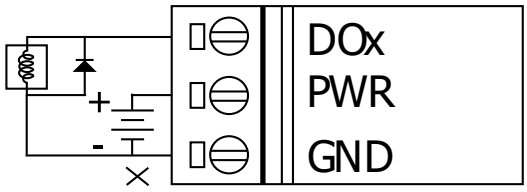
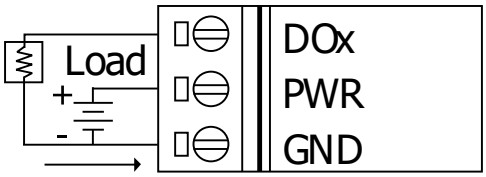
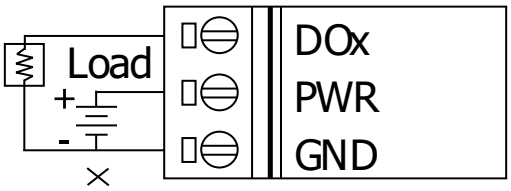
Removing the wire



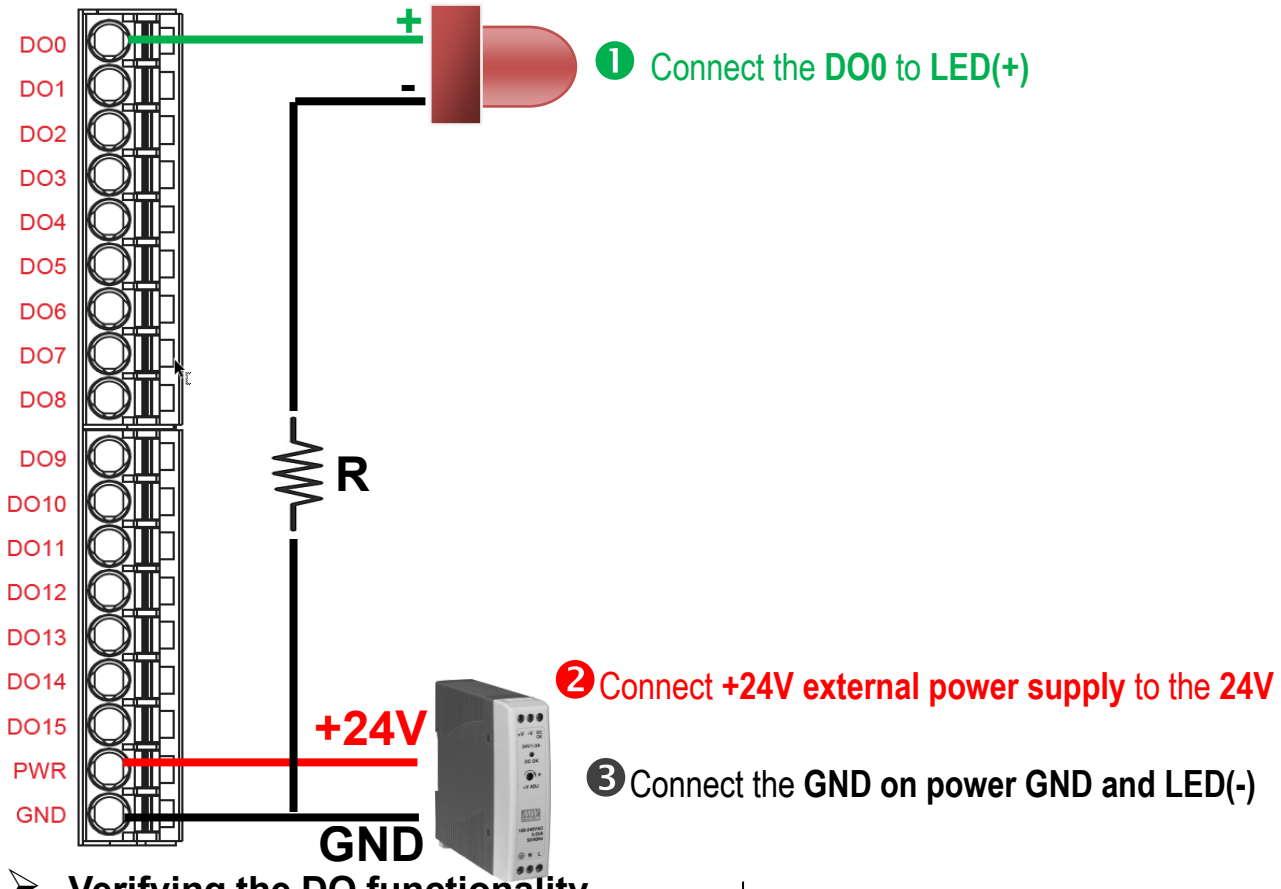
Use the blade of a flat-head screwdriver to push the wire clamp, then hold until step 2 complete.

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➢ Wire Diagrams

DO	Readback as 1 (ON State)	Readback as 0 (OFF State)
Driver Relay		
Resistance Load		

➢ Wiring the DO0 to LED

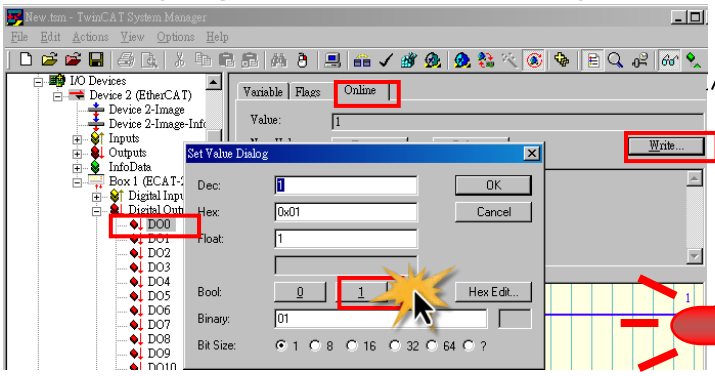


❶ Connect the **DO0** to **LED(+)**

❷ Connect **+24V external power supply** to the **24V**

❸ Connect the **GND on power GND and LED(-)**

➢ Verifying the DO functionality



In the left-hand of the window, click on the DO0.In the right-hand of the windows, click the online.
Click Write. Click 1 (Configure DO0).

LED will be lighting

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