



EC4-P16 series Quick Start

v1.0, Nov. 2024

Packing List

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



EC4-P16

Technical Support

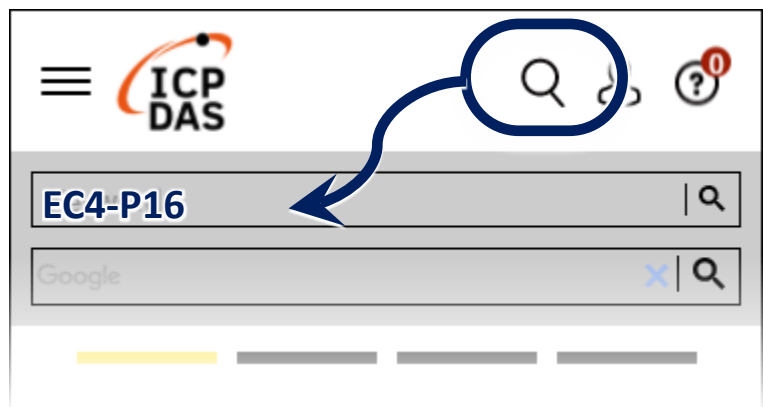
service@icpdas.com

www.icpdas.com

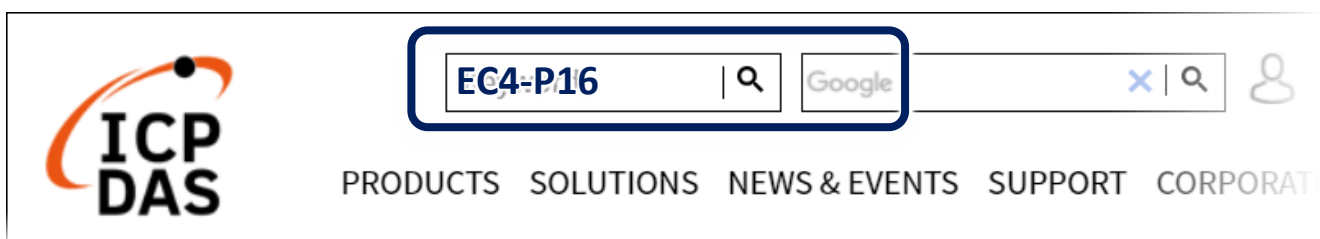
Resources

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-P16>

1 Connecting the Power and Host

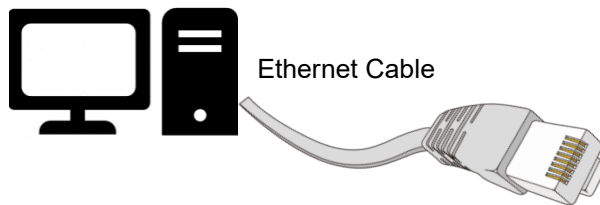
※Switch on module and connect it to an EtherCAT network



NOTE:

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

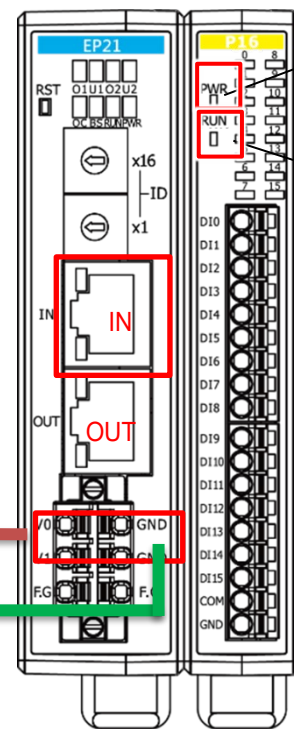
- 1) Connect the Host device to the IN port on module.



- 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.

+24VDC

GND



※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)

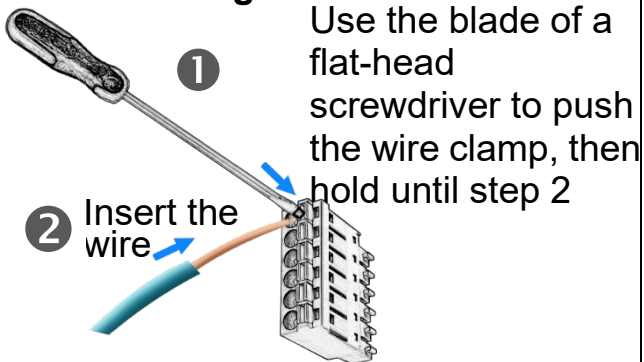
Switch on power and execute the TwinCAT System Manager (Config mode)

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

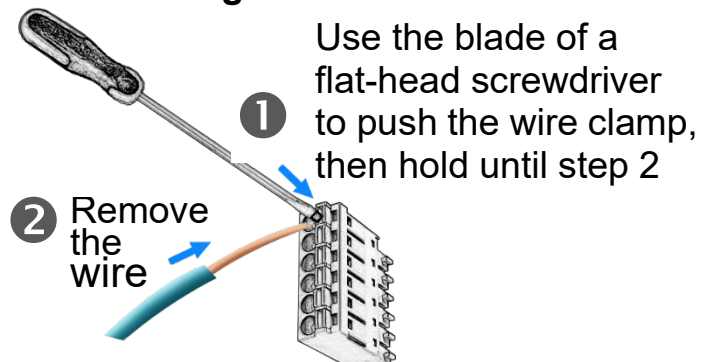
3 Wiring to the Connector

➤ Wiring Tip

Connecting the wire



Removing the wire

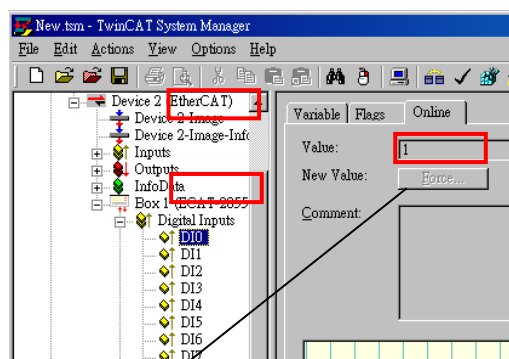
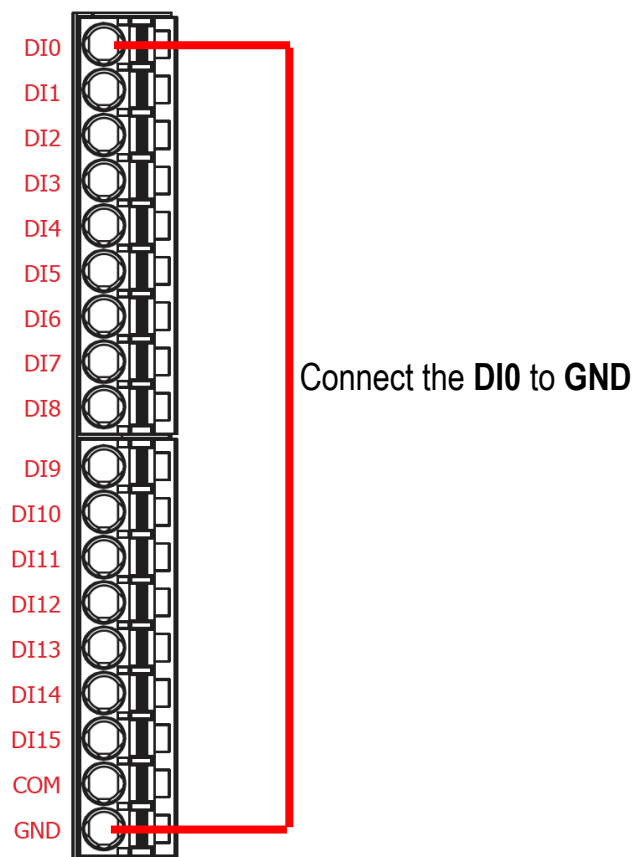


➤ Wire Diagrams

DI	Readback as 1 (+5 ~ +24 VDC)	Readback as 0 (Open or < 5VDC)
Sink		
Source		
DI	Readback as 1 (Close to GND)	Readback as 0 (Open)
Dry		

➤ Wiring the DI0 to GND

➤ Verifying the DI functionality



In the left-hand of the window, click DI0.
In the right-hand of the windows, click the online.
Check Value is 1.