ECAT-2016N Quick Start

v1.0, Nov. 2019

What's in the box?

The package includes the following items:

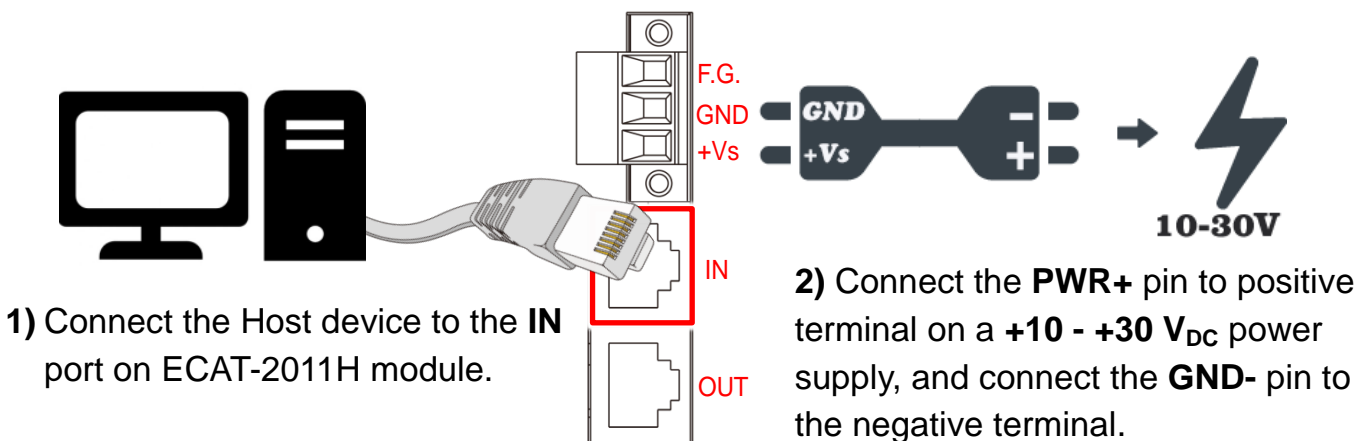ECAT-2016N Module x 1

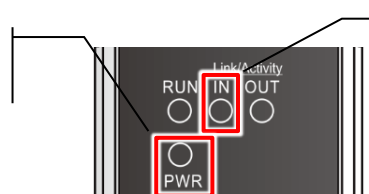Quick Start x1 (This Document)

1 Connecting the Power and Host PC

➢ **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).**

F.G.
GND
+Vs

IN

OUT

GND
+Vs

10-30V

1) Connect the Host device to the **IN** port on ECAT-2011H 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

RUN IN OUT
Link/Activity

PWR

IN

2 Search Modules

ESI file

The latest ESI file (**ICPDAS ECAT-2016.xml**) can be downloaded from ICP DAS website at

http://ftp.icpdas.com/pub/cd/fieldbus_cd/ethercat/slave/ecat-2000/software/
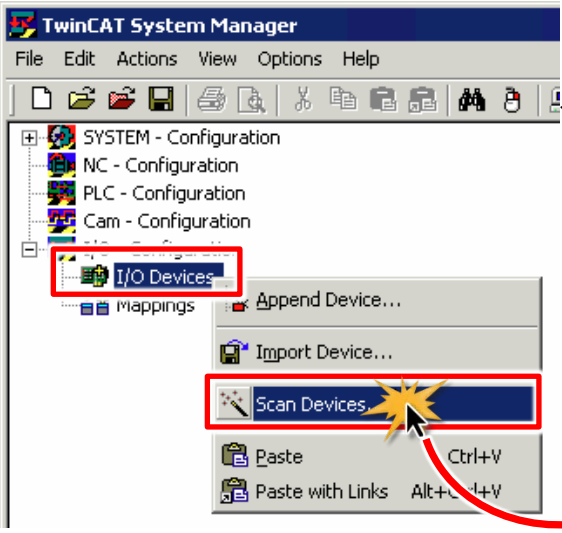
Install the ESI file

Copy the **"ICPDAS ECAT-2016.xml"** file to the Master Tools installation folder, as indicated in the table below.

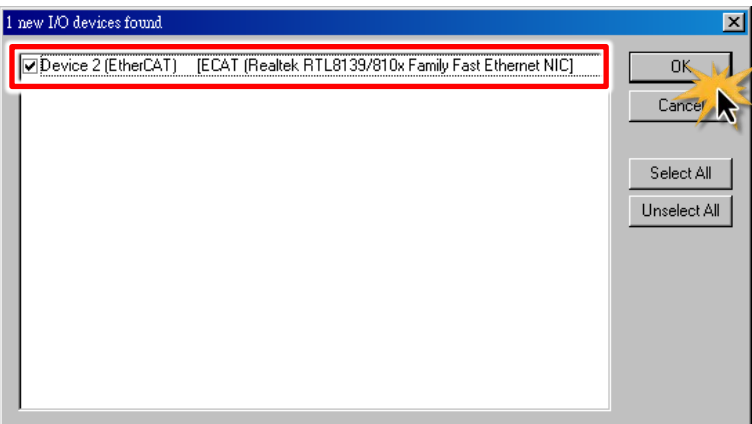| Software	Default Path
Beckhoff EtherCAT Configuration	C:\EtherCAT Configurator\EtherCAT
Beckhoff TwinCAT 3.X	C:\TwinCAT\3.x\Config\Io\EtherCAT
Beckhoff TwinCAT 2.X	C:\TwinCAT\Io\EtherCAT

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

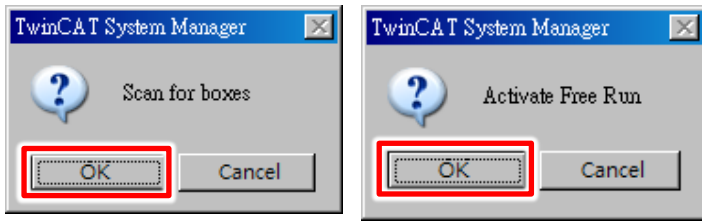Switch on power and execute the TwinCAT System Manager (Config mode)
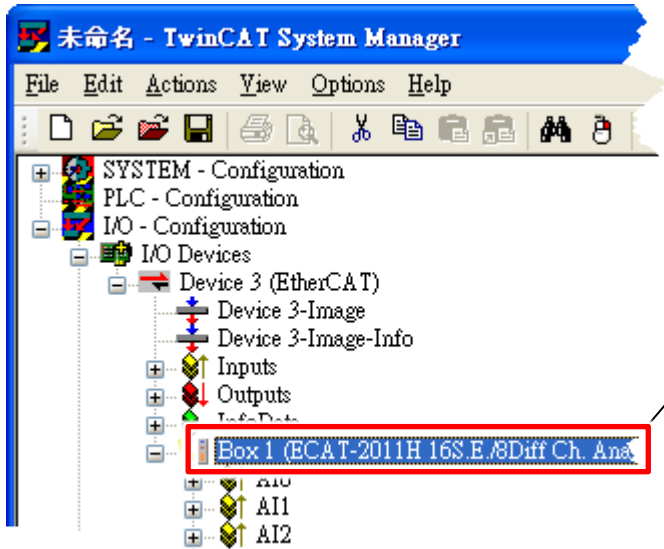
1. I/O Devices → Right click → Scan Devices…

2. Click **"OK"** button

3. Choose the correct network device which is connected to ECAT-2016N and click **"OK"** button

4. Click **"OK"** to start scanning
Click **"OK"** to activate the free run mode for TwinCAT system manager
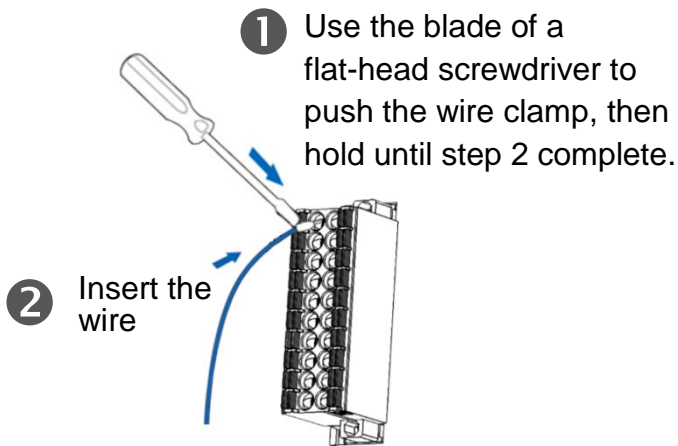
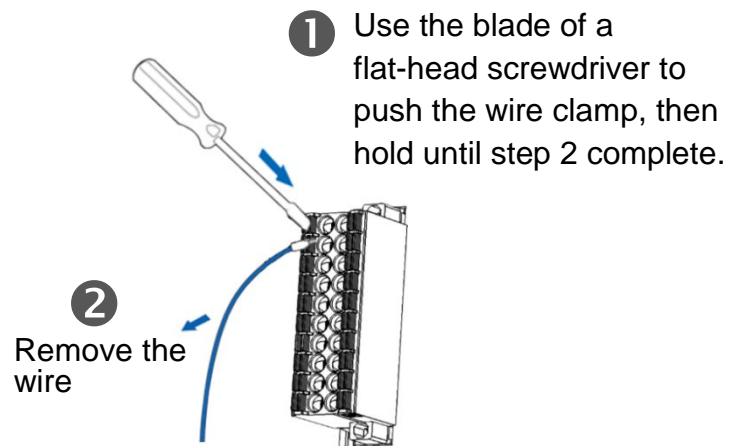**5.** In the left-hand window, **ECAT-2016N** is now shown in the TwinCAT system Manager
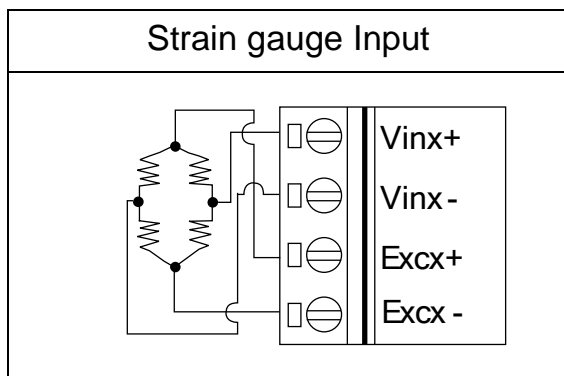
3   Wiring to the Connector

➢ **Wiring Tip**

Connecting the wire	**Removing the wire**
❶ Use the blade of a flat-head screwdriver to push the wire clamp, then hold until step 2 complete.	❶ Use the blade of a flat-head screwdriver to push the wire clamp, then hold until step 2 complete.
❷ Insert the wire	❷ Remove the wire

➢ **Wire Diagrams**

Strain gauge Input
Vinx+
Vinx -
Excx+
Excx -

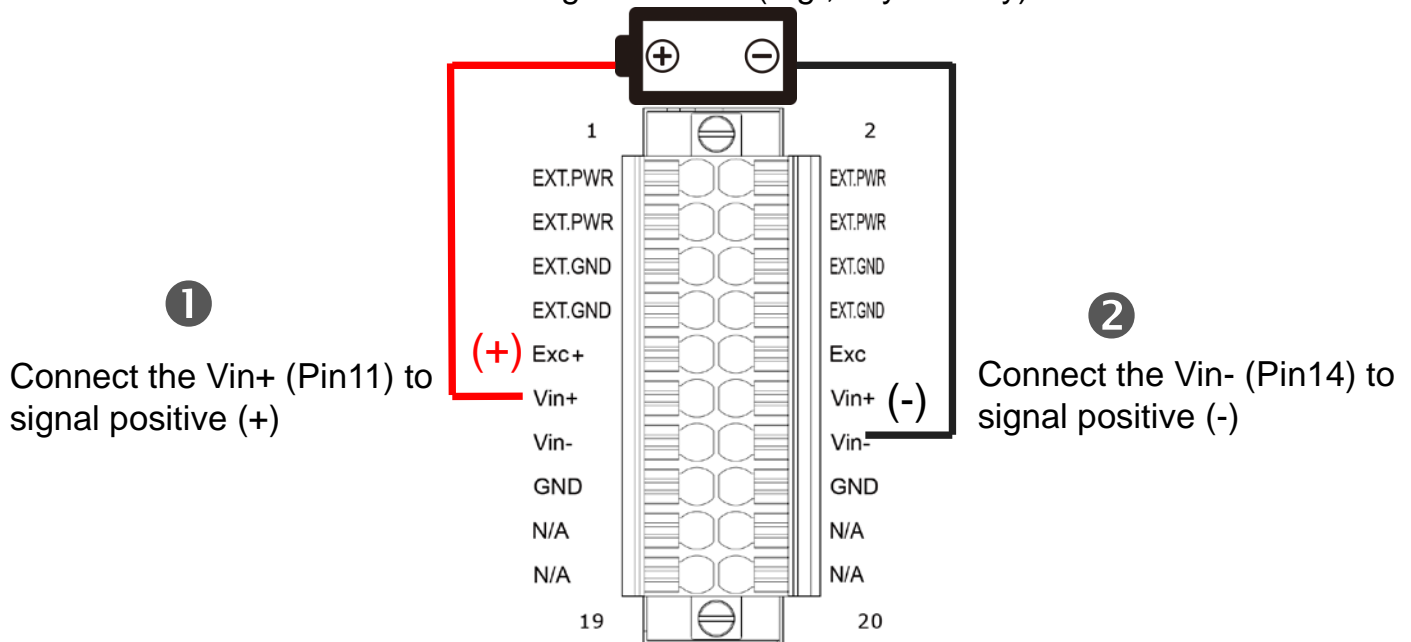
➢ **Wiring the AI0 (Analog Input type default is Differential input)**

Stable Signal Source (e.g., Dry Battery)

❶
Connect the Vin+ (Pin11) to signal positive (+)

❷
Connect the Vin- (Pin14) to signal positive (-)

➢ **Verifying the Strain guage Functionality**

2. In the right-hand window, check the voltage value in the **"Value"** item.

1. Click "**AI0"** in the left-hand window.

Related Information

- EtherCAT Series Product Page:

http://www.icpdas.com/root/product/solutions/industrial_communication/fieldbus/ethercat/ethercat_selection_guide.html

- Documentation & Software:

http://ftp.icpdas.com/pub/cd/fieldbus_cd/ethercat/slave/ecat-2000/