



PD310EC1

PROMPOWER

User Guide

**PROM
POWER**

Preface

Thank you for purchasing the PD310EC1 card. This manual describes how to use the product properly to get good benefits. Please be sure to read this manual carefully before using the product (installation, wiring, operation, maintenance, inspection, etc.).

The PD310EC1 card is an EtherCAT fieldbus adapter that complies with the internationally recognized EtherCAT Ethernet standard.

This manual is mainly introduced by EC_PD310_V1.0.xml, XML and its related files can be downloaded through the official website, in the process of use, if you have any problems or special requirements, please feel free to contact with our office or distributor, or directly with our customer service center, we will be happy to serve you.

Our company is committed to the continuous improvement of our products, therefore, the information related to this series is subject to change without prior notice. We apologize for any inconvenience this may cause.

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Safety Precautions

The staff who install and operate this expansion card must have passed the professional electrical training and safety knowledge training and examination, and have been familiar with the procedures and requirements for installation, commissioning, putting into operation and maintenance of this equipment, and can avoid various emergencies.

Before installing, removing and operating the expansion card, please read this manual and the safety precautions section of the AC drive manual carefully to ensure that the operation is done in a safe manner.

We will not be responsible for any injury or equipment damage caused by the user's failure to observe the safety precautions in this manual and the AC drive manual.

- Installation or removal of this expansion card requires disassembly of the AC drive enclosure, so it is important to completely disconnect all power inputs to the AC drive and ensure that the internal voltage of the unit has been secured, as described in the AC drive manual. Failure to comply with this requirement may result in serious personal injury or even death.
- Must be stored in a place that is dustproof, moisture-proof, free from electric shock and free from mechanical stress.
- The expansion card is sensitive to static electricity and must be properly protected against static electricity during relevant operations to avoid damage to components.
- When installing this expansion card, be sure to align the interface to ensure no loosening and proper grounding.

1 Product Information

1.1 Product Characteristics of EtherCAT Cards

1.1.1 Supported services

Supports EtherCAT COE protocol with automatic network address configuration. Supports both wire and star network topologies.

1.1.2 Supported functions

- 1) Support PDO service
- 2) Support SDO services
- 3) Support for manufacturer-defined object dictionaries
- 4) Support SDO read/write AC drive function code

1.1.3 EtherCAT Slave Information

The EtherCAT slave information file (XML file) is read by the master and is used to build the master-slave configuration. The file "EC_PD310_V1.0.xml" contains the information necessary for EtherCAT communication settings. Topology diagram.

1.1.4 Topological diagrams

- 1) EtherCAT communication card adopts standard RJ45 interface, and it can adopt line network topology and star network topology, and its electrical wiring diagram is shown in Fig. 1-4 and Fig. 1-5 respectively.
- 2) Please use CAT5, CAT5e, CAT6 cable for electrical connection, especially when the communication distance is more than 50 meters, please use high quality cable that meets the national standard.

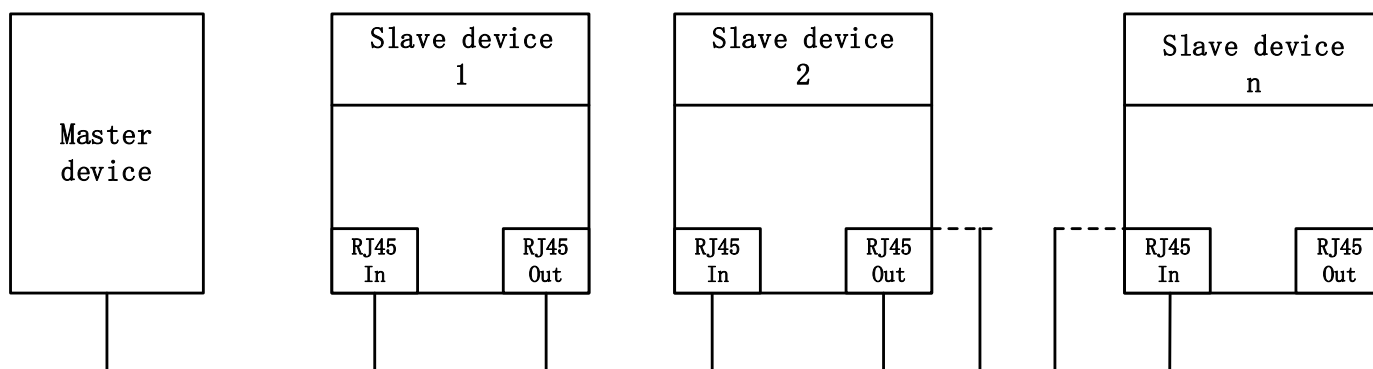


Figure 1-1 Line network topology electrical connection diagram

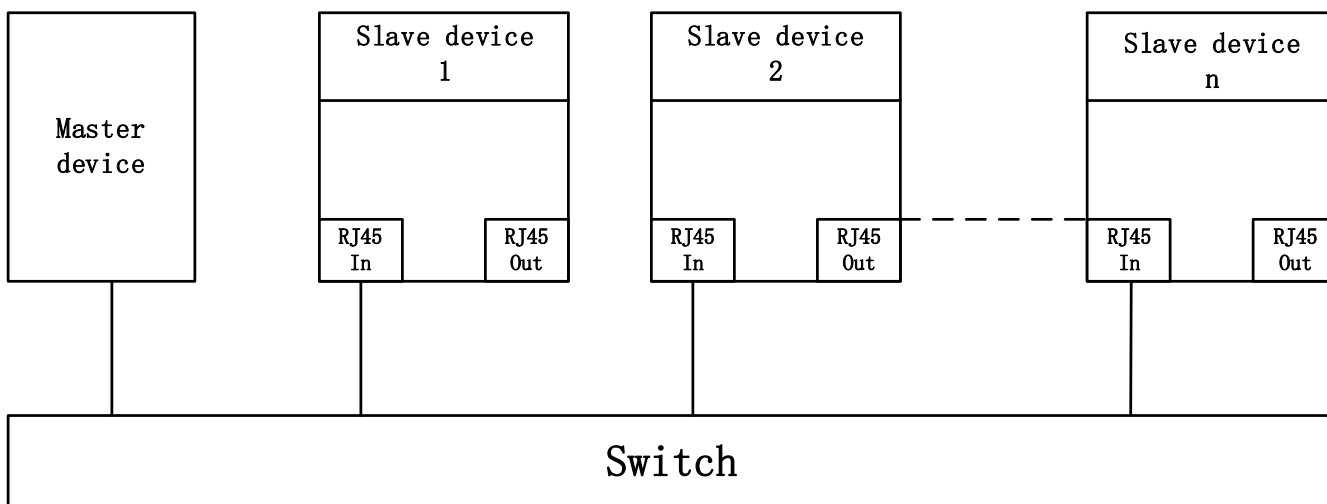


Figure 1-2 Star network topology electrical connection diagram

1.2 Physical and Wiring

1.2.1 Physical drawing of the expansion card



Figure 1-3 Physical drawing

1.2.2 Expansion Card Interface Layout Diagram and Interface Description

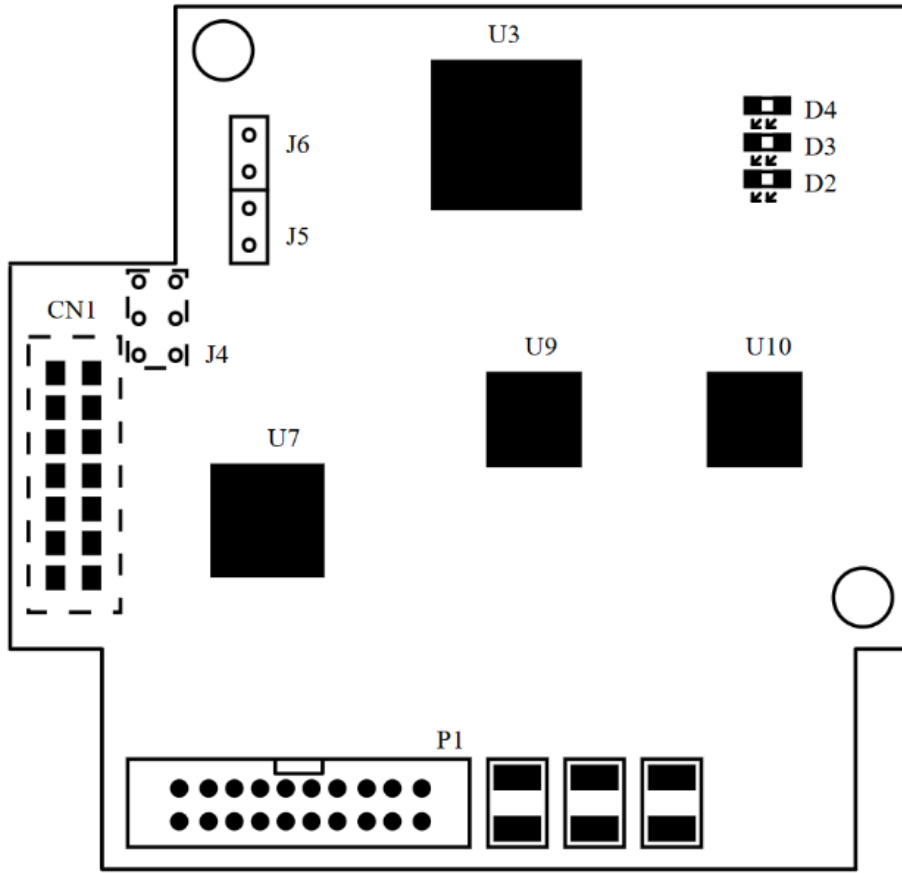


Figure 1-4 Interface layout

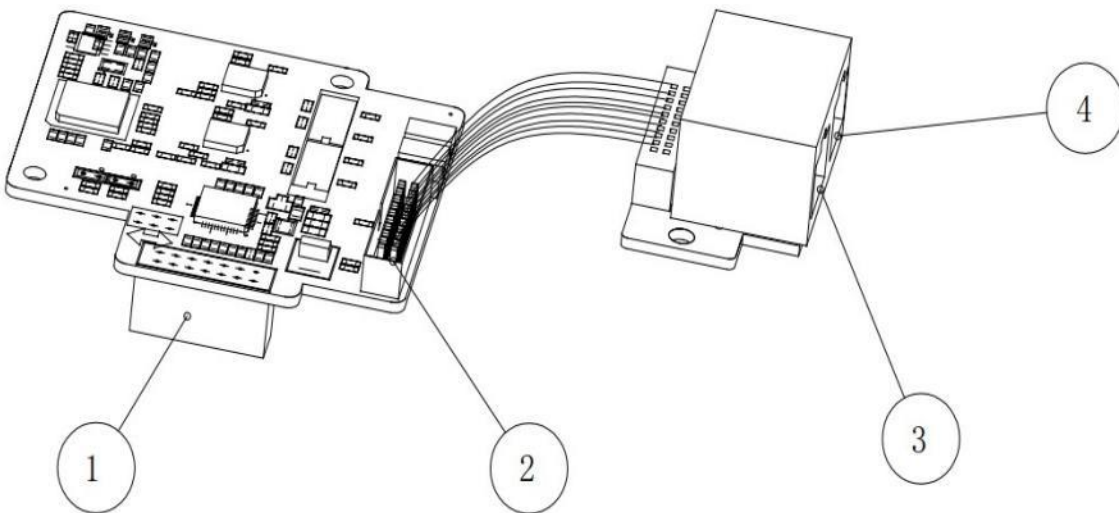


Figure 1-5 PD310EC1 Interface Schematics

Table 1-1 PD310EC1 Interface Labeling Description

Marking	Function	Description
1	Expansion card and control board interface	/
2	RJ45 adapter	/
3	RJ45-IN	EtherCAT Input network port
4	RJ45-OUT	EtherCAT Output network port

EtherCAT uses the standard RJ45 interface, this communication card has 2 RJ45 interfaces, the difference between the two directions, where RJ45-IN is the input network interface, RJ45-OUT is the output interface. The interface schematic is shown in Figure 1-6 below, and the interface function table is shown in Table 1-2.

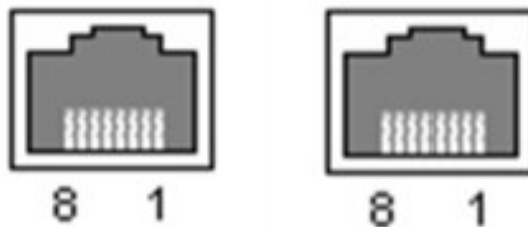


Figure 1-6 RJ45 interface

Table 1-2 RJ45 Interface Menu

Pin	Name	Description
1	TX+	Transmit Data+ (Send signal+)
2	TX-	Transmit Data- (Send signal-)
3	RX+	Receive Data+ (Receive signal+)
4	NC	Not connected (NC)
5	NC	Not connected (NC)
6	RX-	Receive Data- (Receive signal-)
7	NC	Not connected (NC)
8	NC	Not connected (NC)

1.2.3 Status indicators

An EtherCAT communication card is configured with three LED lights to indicate different status of the communication card (see Figure 1-4 Interface layout of the expansion card). For details, see Table 1-3.

Table 1-3 LED Lamp Status Definitions

LED	Color	Status	Description
D2	Green	ON	RJ45-OUT Connected device detected on network port
		Blinking	RJ45-OUT network port is transmitting data
		OFF	RJ45-OUT Connected device not detected on network port
D3	Green	ON	RJ45-IN Connected device detected on network port
		Blinking	RJ45-IN network port is transmitting data
		OFF	RJ45-IN Connected device not detected on network port
D4	Green	ON	EtherCAT communication connection failure
		Blinking	EtherCAT communication being established
		OFF	EtherCAT communication connection successful

2 Communication Parameters and Protocols

2.1 EtherCAT Communication Parameter Settings

Install the PD310EC1 card correctly in the AC drive and complete the configuration of relevant communication parameters before establishing communication with the AC drive.

Table 2-1 Communication Card Configuration Parameters

Function Code	Name	Content	Set value	Description
F0-00	Running command source selection	0: Operation keypad control (LED "L/R" off); 1: Terminal control (LED "L/R" on); 2: Communication control (LED "L/R" blinking)	2	Running command source selection
F0-02	Main frequency source X selection	0: UP/ DOWN setting (non-recorded after stop) 1: UP/ DOWN setting (retentive after stop) 2: AI1 3: AI2 4: Multi-speed 5: Simple PLC 6: PID 7: Communication setting 8: Pulse setting 9: Up/Down Change frequency Shutdown memory, power failure memory not 10: Keyboard potentiometer	7	Primary frequency source select communication
Fd-06	Communication protocol selection	0: MODbus RTU 1: Profibus-DP 2: CANopen 3: PROFINET 4: MODBUS TCP 5: EtherCAT	5	The communication protocol is EtherCAT

Function Code	Name	Content	Set value	Description
Fd-10~ Fd-19	Receive PZD3~ Receive PZD12 (RPDO2)	0~65535	0	Process data free allocation area (RPDO), the default value is 0, each function individually set an operation address to receive PZD for EtherCAT master to write AC drive. For example, if the PLC master needs to write the AC drive function code F0-20, it is necessary to merge and convert F0-20 to hexadecimal, then to decimal, and then input into the function code. Note: F0-20→0xF014→61460
Fd-20~ Fd-29	Send PZD3~ Send PPZD12 (TPDO2)	0~65535	0	Process Data Free Distribution Area (TPDO), the default value is 0. Each function sets an operation address individually and sends PZD for EtherCAT master to read AC drive. For example, PLC master needs to read AC drive function code F0-07 (preset frequency), it is necessary to merge and convert F0-07 to hexadecimal, then to decimal, and then input into the function code. Note: F0-07→0xF007→61447

2.2 EtherCAT Protocol Message Frame Data Structure

The EtherCAT bus communication method permits rapid data exchange between master (PLC) and slave (drive). Reading and writing of the AC drive data always takes place in a master-slave fashion, with the AC drives fixed as slaves and each slave itself having a defined address. This telegram is transmitted using 16 words (16 bits) and is structured as shown in the figure:

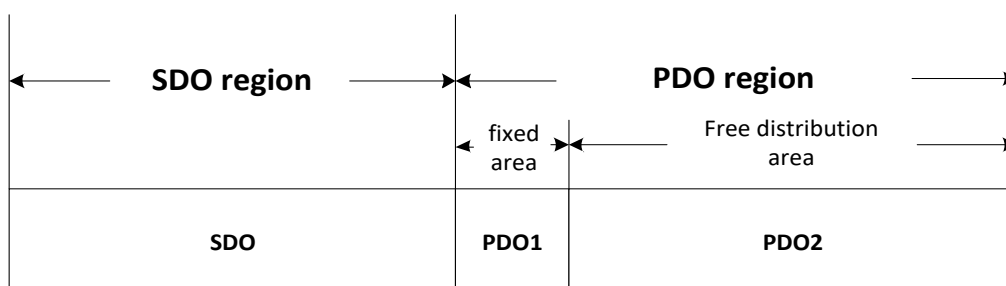


Figure 2-1 EtherCAT Message Frame Data Structure

2.2.1 SDO mailbox data

EtherCAT mailbox data SDO is used to transfer non-periodic data, such as the configuration of communication parameters, AC drive operation parameters configuration, in reading and writing need to look up the object dictionary. EtherCAT CoE service types include: emergency message, SDO request, SDO response, TxPDO, RxPDO. Users can modify the parameters of the frequency converter through the SDO in the use.

2.2.2 PDO area data

PDO zone data realizes real-time AC drive data change and reading and periodic data interaction by the master station. The communication address of the data is directly configured by the AC drive and is divided into PDO1 and PDO2, (PDO1 [cured address], PDO2 [user specified]). It mainly contains the following:

- a) AC drive control commands, target frequency real-time given
- b) AC drive current status, operating frequency real-time readout
- c) Real-time interaction of functional and monitoring parameters between AC drive and EtherCAT master station

The PDO process data mainly accomplishes the cyclic data interaction between the master station and the AC drive, and the interaction data are listed in the following table:

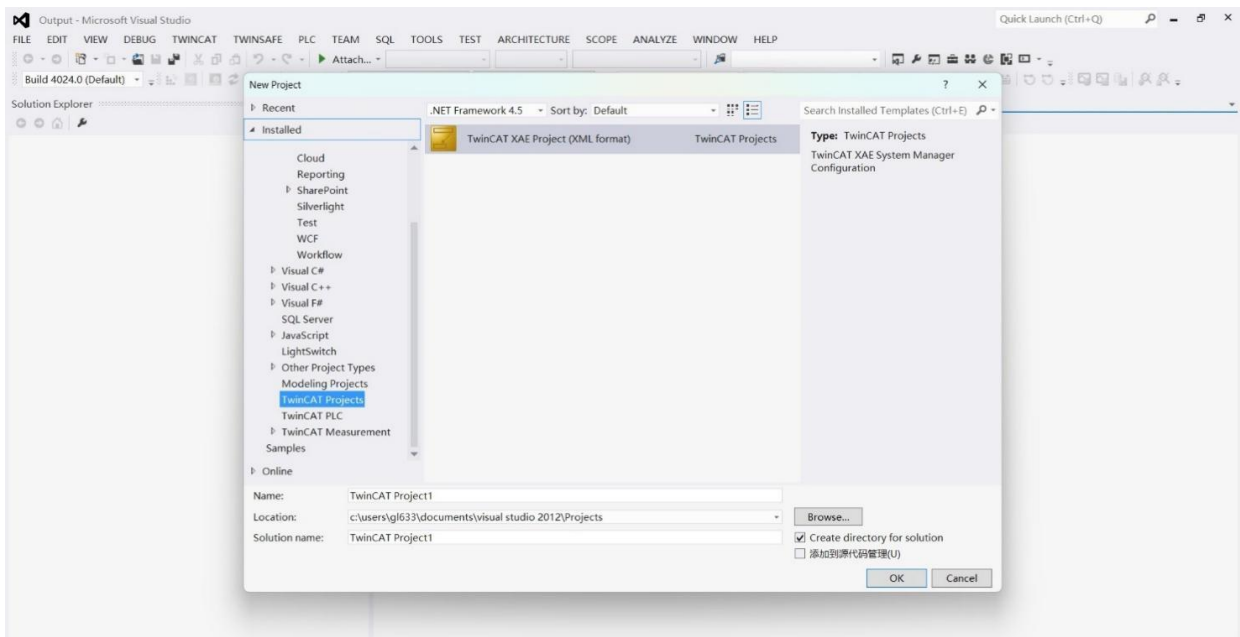
Table 2-2 PDO District Interactive Data

RPDO (Master sends data to slaves)		
Fixed RPDO-RPDO1		Variable RPDO-RPDO2
AC drive command	AC drive target frequency	AC drive function parameters are changed in real time, corresponding to OUTPUT1 to OUTPUT10 in the XML file. (User specified Fd-10~Fd-19)
index1	Index2	Index1~Index10
TPDO (slave sends data to master)		
Fixed TPDO—TPDO1		Variable TPDO—TPDO2
AC drive status	AC drive operating frequency	AC drive function parameter values are read in real time, corresponding to INPUT1 to INPUT10 in the XML file. (User-specified Fd-20 to Fd-29)
index1	Index2	Index1~Index10

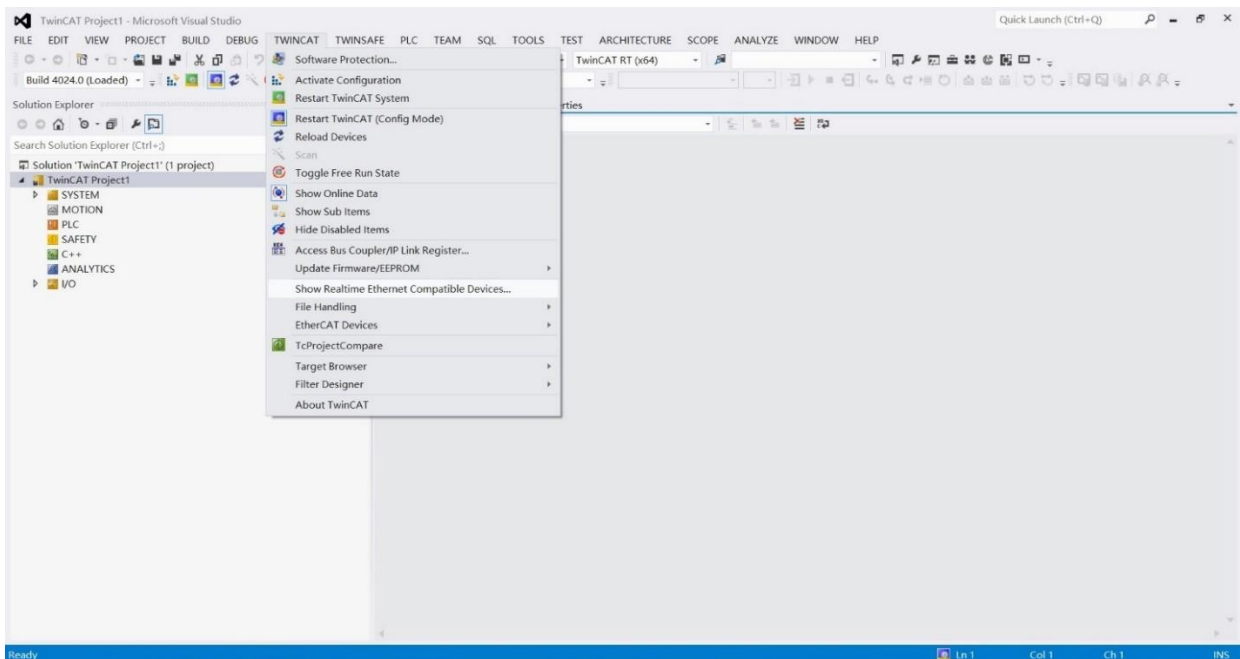
3 Communications Configuration

3.1 Configuring slaves in TWINCAT3

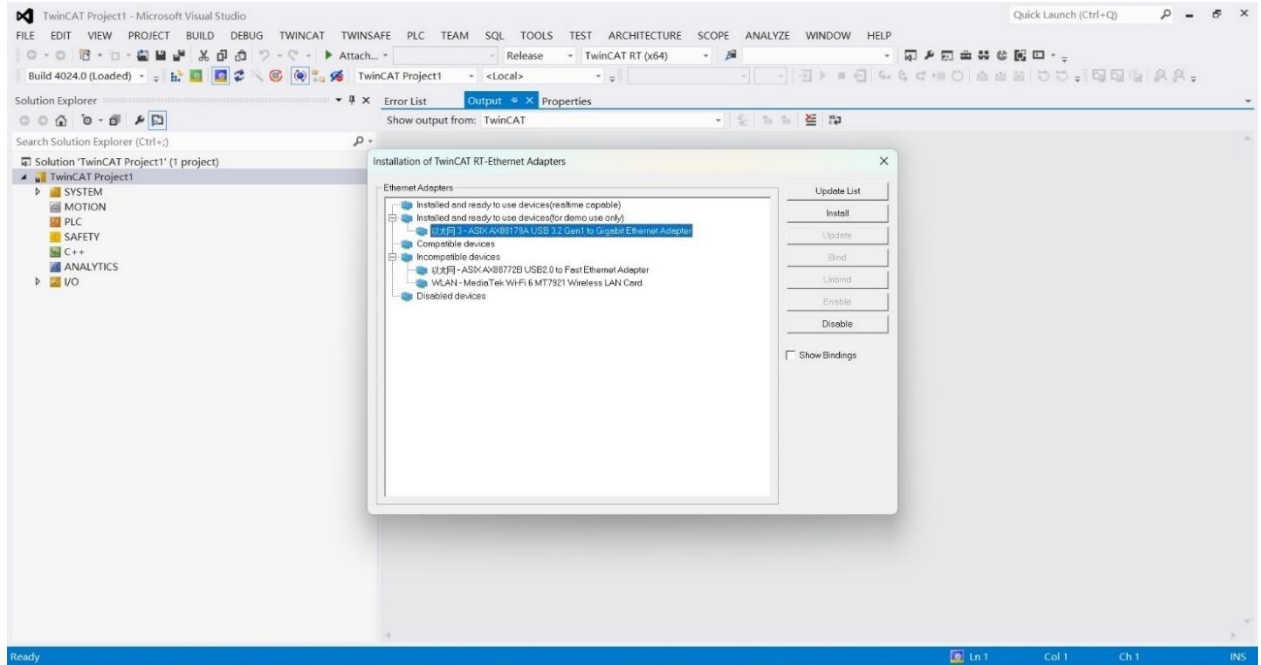
- 1) Installation of TWINCAT3 software
- 2) Copy the EtherCAT configuration file (EC_PD310_V1.0.xml) of PD310 to the installation directory of TwinCAT2: TwinCAT\3.1\config\IO\EtherCAT
- 3) Open TwinCAT3, create a new project, click "New Project", select "TwinCAT Projects", and then select the path to save and fill in the corresponding project name.



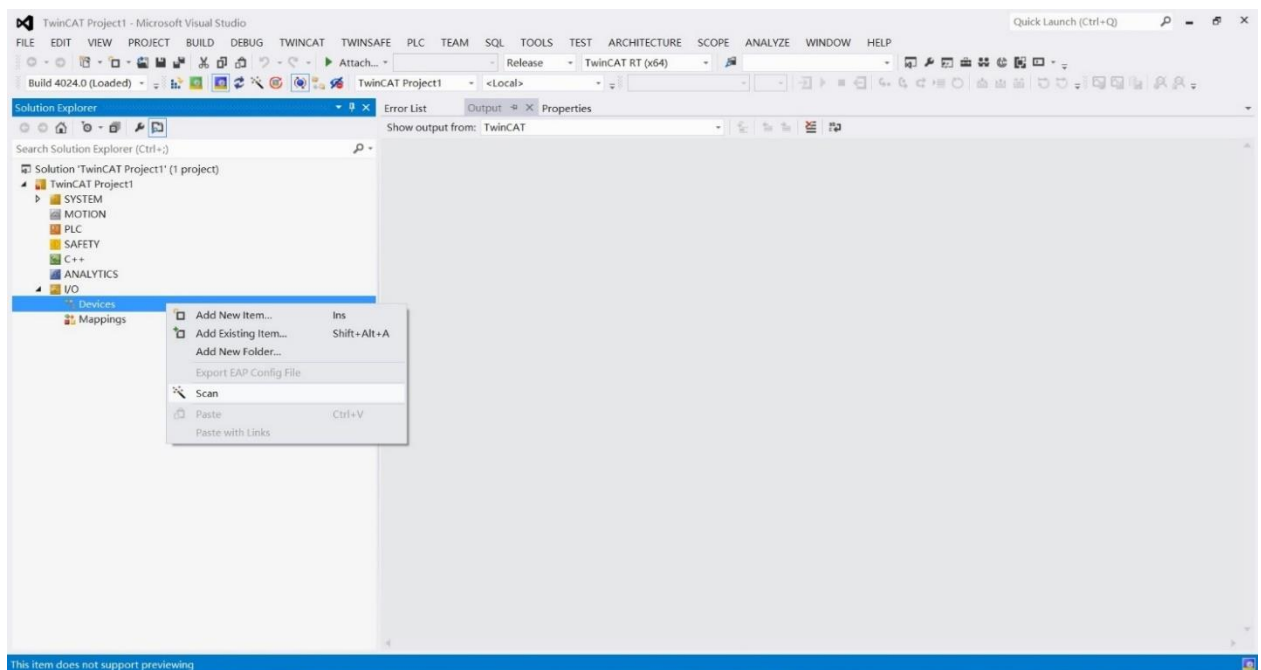
- 4) Install the TwinCAT NIC driver, you need to configure it when you use TwinCAT3 for the first time, the configuration is as follows:



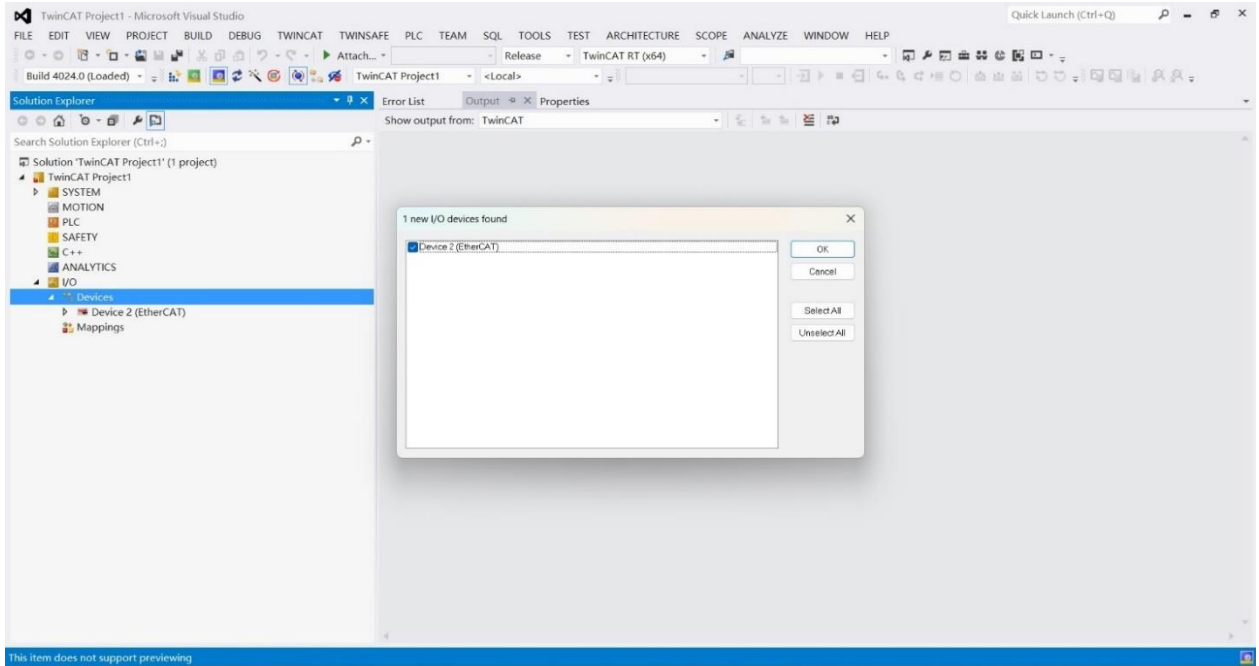
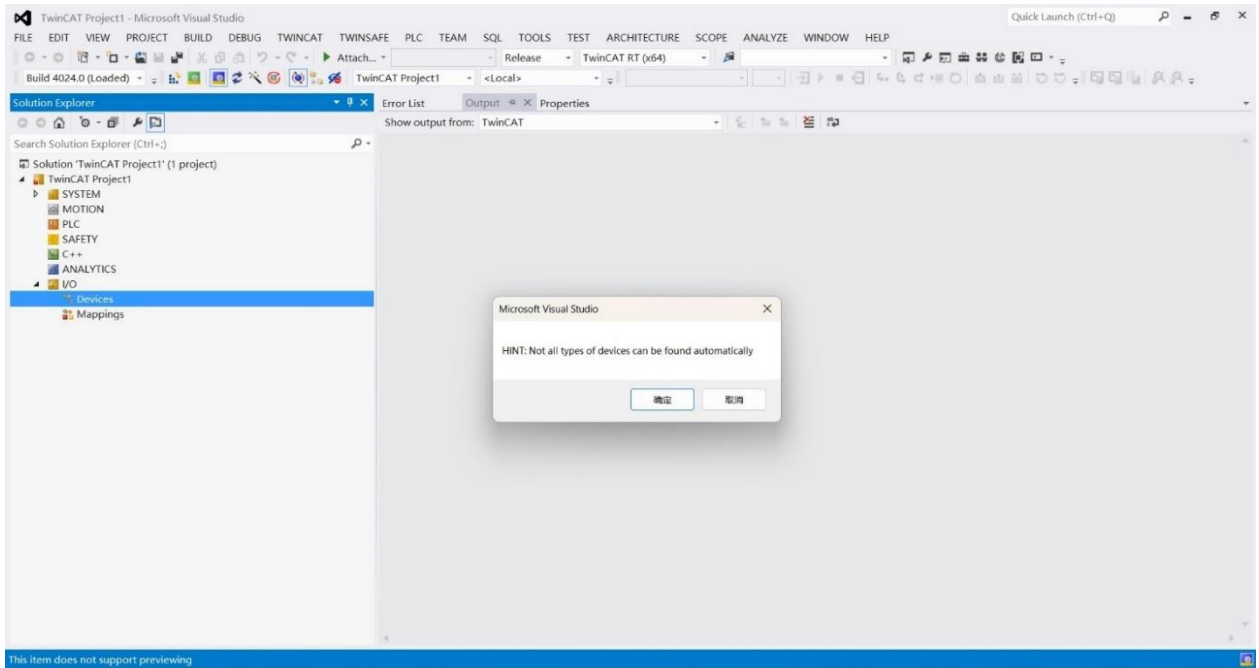
Open the above menu "Show Real Time Ethernet Compatible Devices...", the following dialog box will pop up, in the "Incompatible devices" field, select the local site and click "install". In the "Incompatible devices" field, select the local site and click "install". After the installation is completed, the installed NIC will appear in the "Installed and ready to use devices" column as shown below.



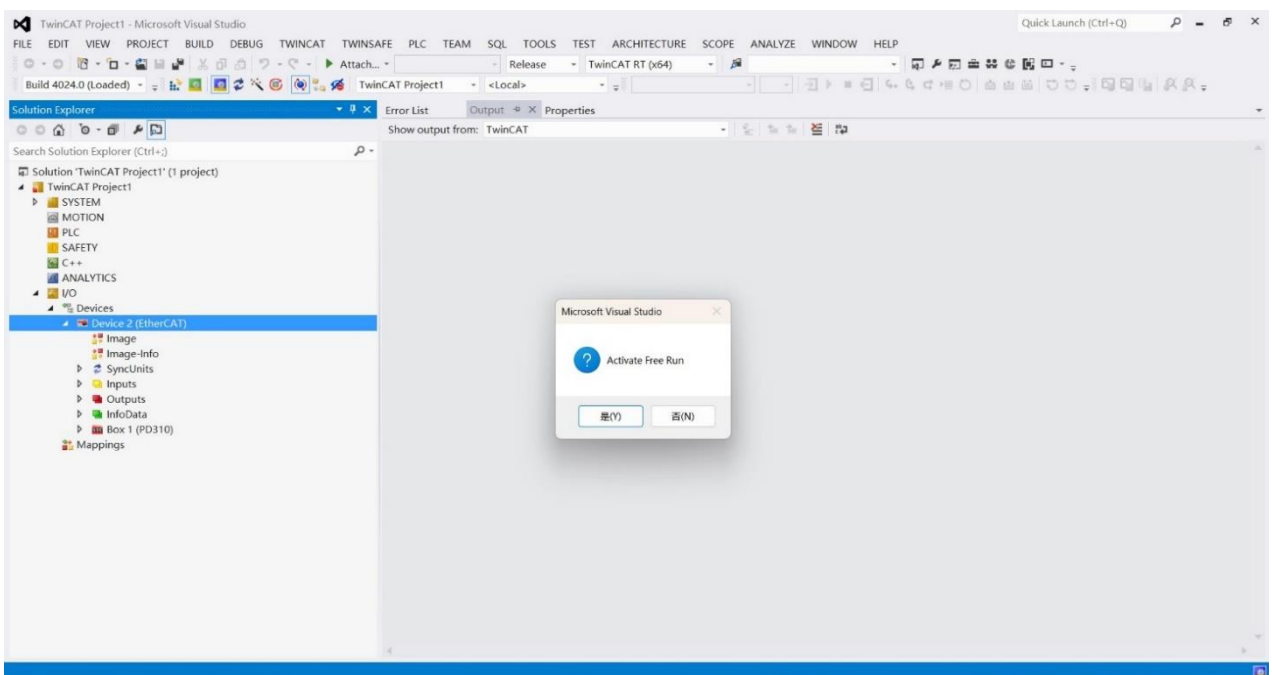
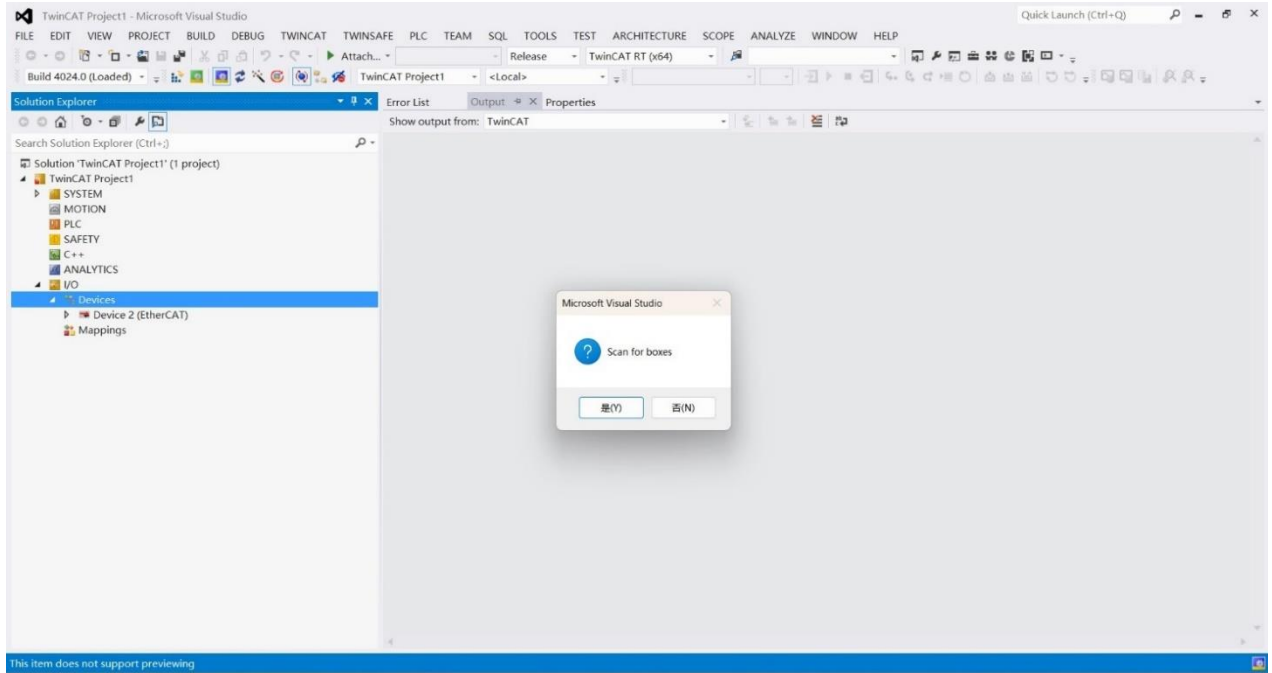
- 5) Search for devices: Right click Devices under the left I/O column, click Scan to scan for devices, as shown in the figure below.



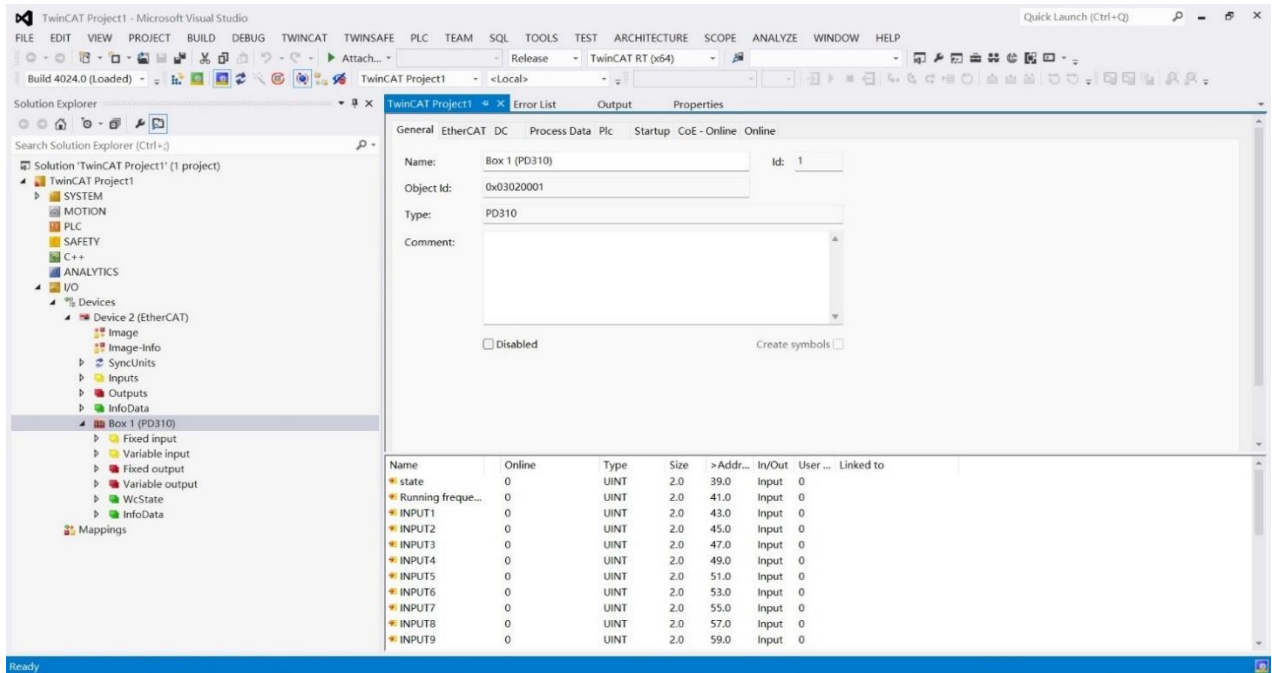
6) Click Confirm and OK in the pop-up window.



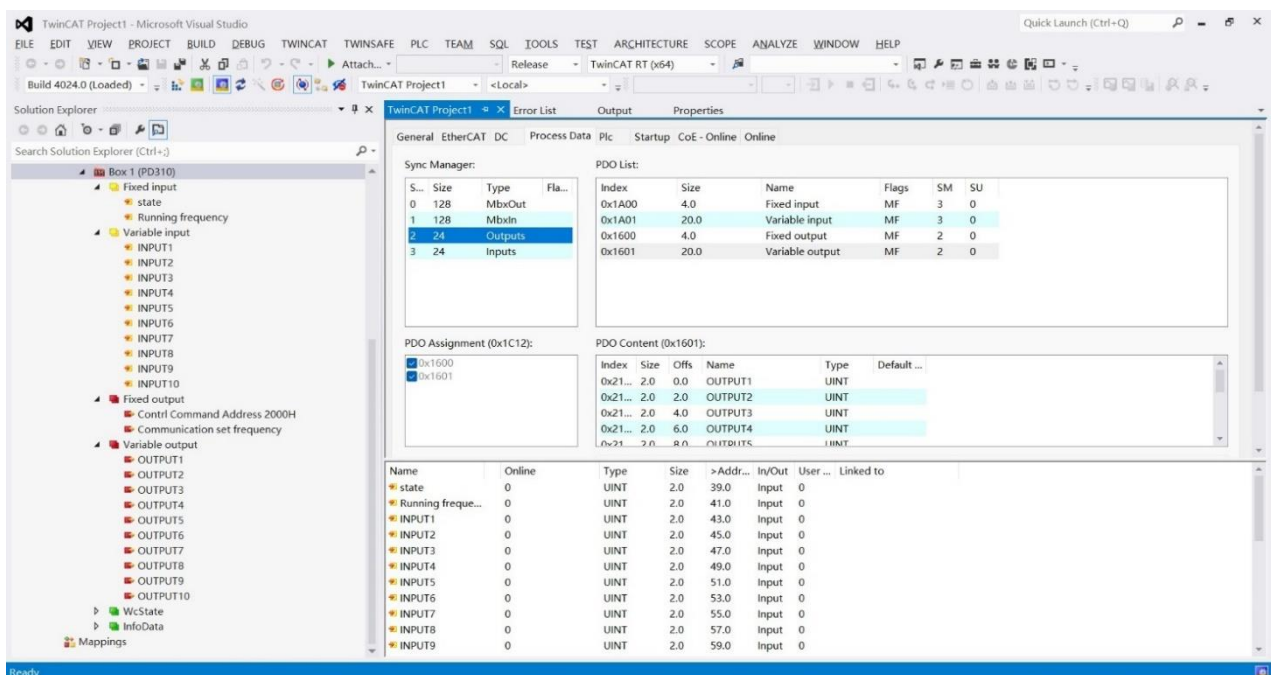
7) After scanning the EtherCAT devices, Scan for boxes will pop up, click Yes, then it will pop up whether to activate the free running mode or not, according to the user's own choice whether to go to the running mode or not.



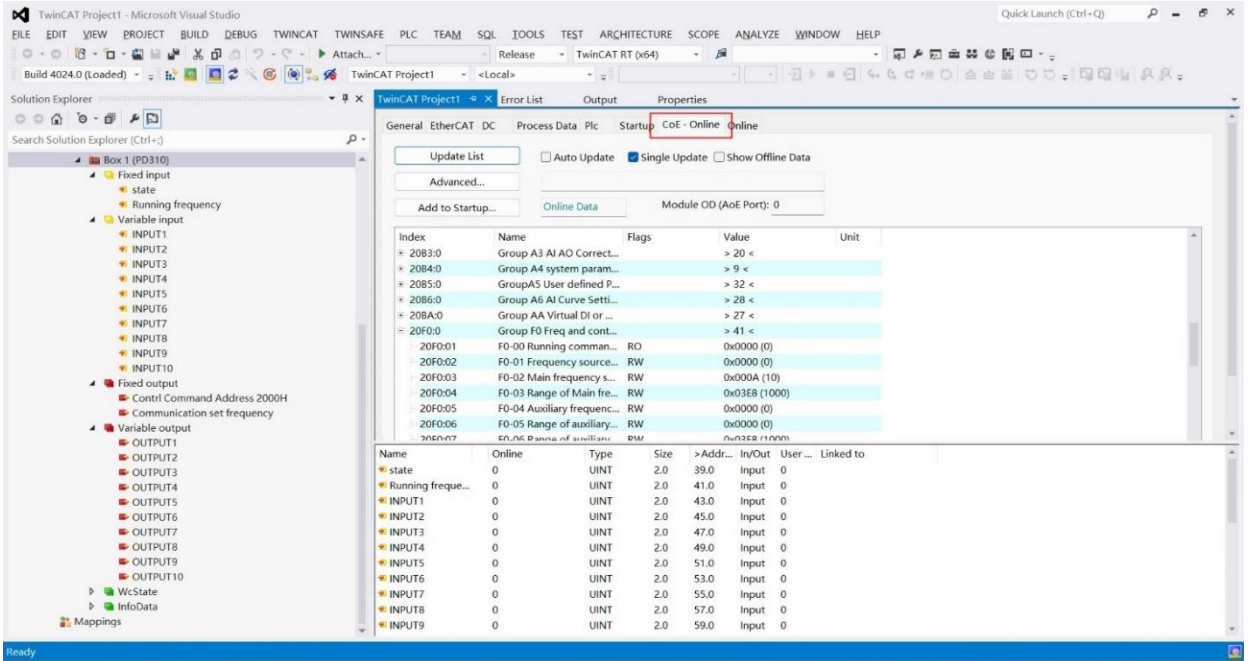
8) When the scanning is completed, as shown in the figure below:



9) Tap on the left side of the PD310 column can see the process data PDO has been configured, PD310 process data is divided into two categories, the first category for the fixed PDO data, the second category for the modifiable PDO data. Note: For the sake of uniformity with other communications, PD310 modifiable PDO data refers to modifying the relevant function code of AC drive (Fd-10~Fd-29) to modify the relevant AC drive function code address, instead of using TwinCat to reconfigure PDO here.



10) Click on the COE-Online function of the PD310 module to modify and read the object dictionary and the AC drive function code online.

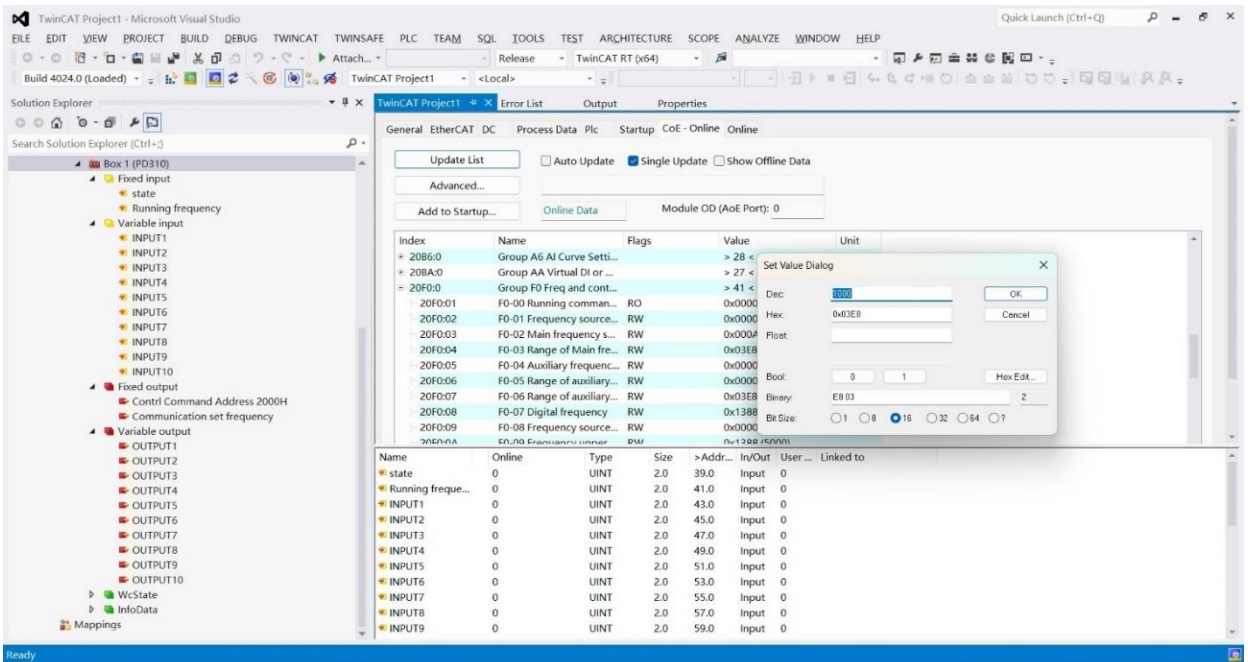


The screenshot shows the TwinCAT Project1 interface with the 'CoE-Online' tab selected. The 'Update List' section has 'Single Update' checked. The main area displays a table of object dictionary entries:

Index	Name	Flags	Value	Unit
20B3:0	Group A3 AI AO Correct...		> 20 <	
20B4:0	Group A4 system param...		> 9 <	
20B5:0	Group A5 User defined P...		> 32 <	
20B6:0	Group A6 AI Curve Setti...		> 28 <	
20BA:0	Group AA Virtual DI or ...		> 27 <	
20F0:0	Group F0 Freq and cont...		> 41 <	
20F0:01	F0-00 Running comman...	RO	0x0000 (0)	
20F0:02	F0-01 Frequency source...	RW	0x0000 (0)	
20F0:03	F0-02 Main frequency s...	RW	0x000A (10)	
20F0:04	F0-03 Range of Main fre...	RW	0x03E8 (1000)	
20F0:05	F0-04 Auxiliary frequenc...	RW	0x0000 (0)	
20F0:06	F0-05 Range of auxiliary...	RW	0x0000 (0)	
20F0:07	F0-06 Range of auxiliary...	RW	0x03E8 (1000)	
20F0:08	F0-07 Digital frequency	RW	0x1388	
20F0:09	F0-08 Frequency source...	RW	0x0000	
20F0:0A	F0-09 Frequency source...	RW	0x1388 (1000)	

Below the table is a list of variables:

Name	Online	Type	Size	>Addr...	In/Out	User ...	Linked to
state	0	UINT	2.0	39.0	Input	0	
Running freque...	0	UINT	2.0	41.0	Input	0	
INPUT1	0	UINT	2.0	43.0	Input	0	
INPUT2	0	UINT	2.0	45.0	Input	0	
INPUT3	0	UINT	2.0	47.0	Input	0	
INPUT4	0	UINT	2.0	49.0	Input	0	
INPUT5	0	UINT	2.0	51.0	Input	0	
INPUT6	0	UINT	2.0	53.0	Input	0	
INPUT7	0	UINT	2.0	55.0	Input	0	
INPUT8	0	UINT	2.0	57.0	Input	0	
INPUT9	0	UINT	2.0	59.0	Input	0	

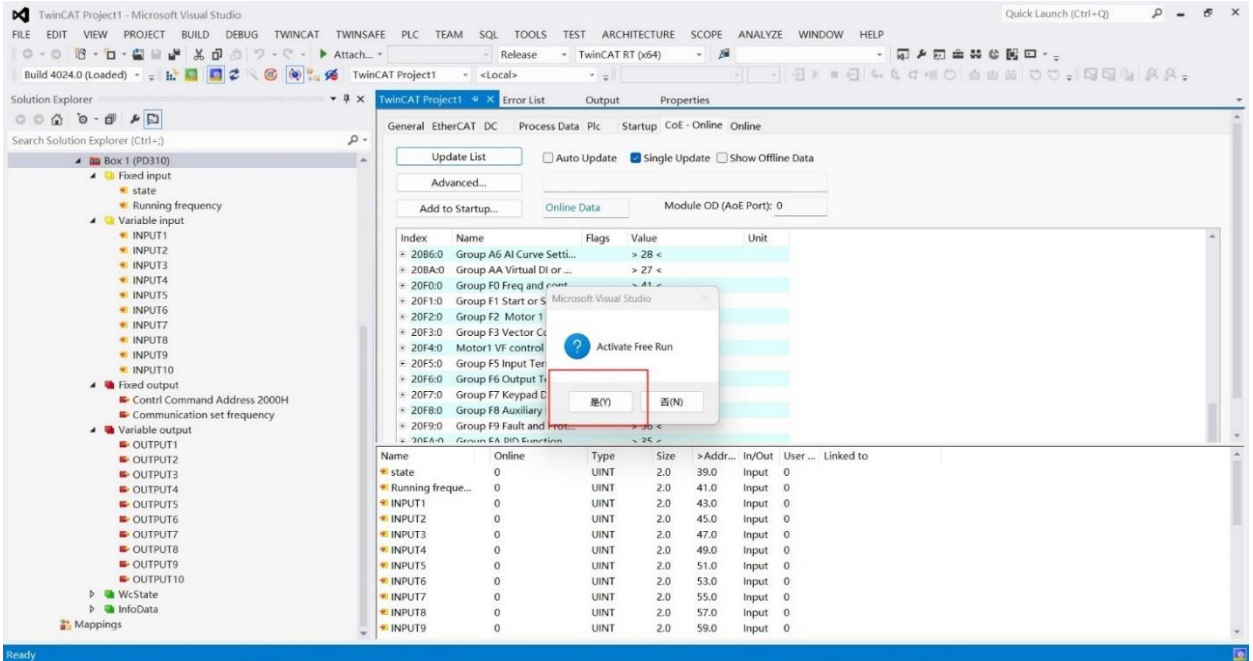


The screenshot shows the TwinCAT Project1 interface with the 'CoE-Online' tab selected. A 'Set Value Dialog' is open for index 20B6:0. The dialog shows the following values:

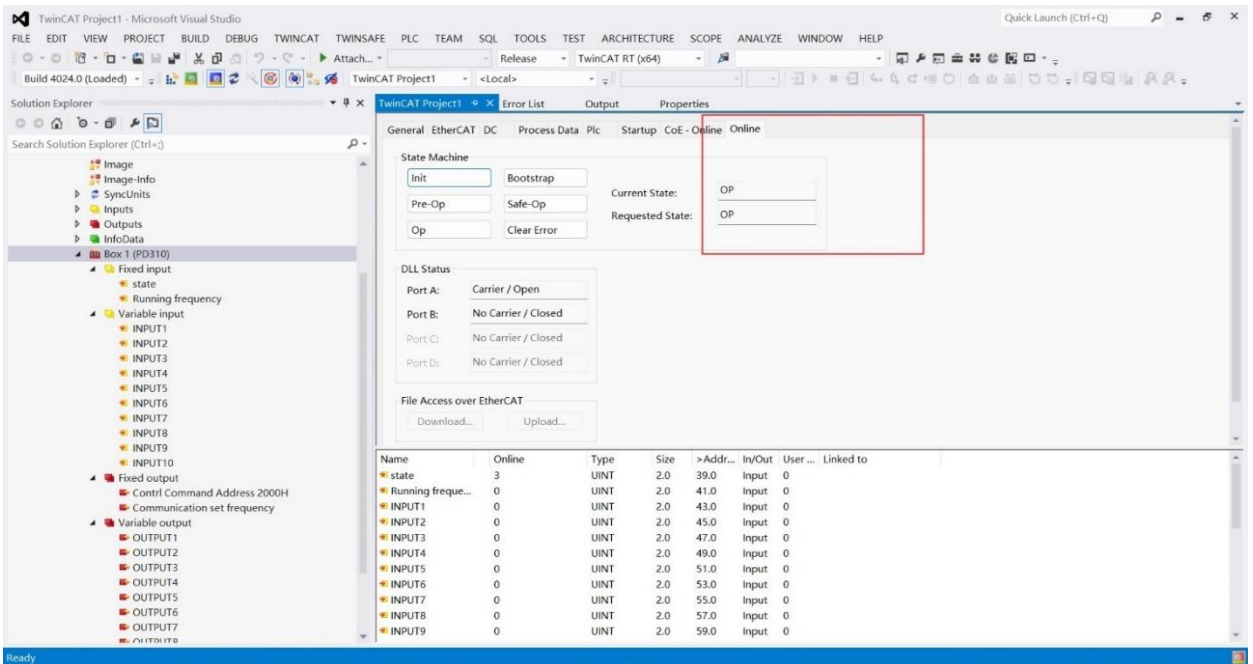
- Dec: 28
- Hex: 0x03E8
- Float: (empty)
- Bool: 0
- Binary: E8 03
- Bit Size: 16 (selected)

The background shows the same object dictionary table as in the previous screenshot.

- Click the Run button and also click OK in the Run pop-up window, the device goes through the state machine transition and finally enters the OP state.



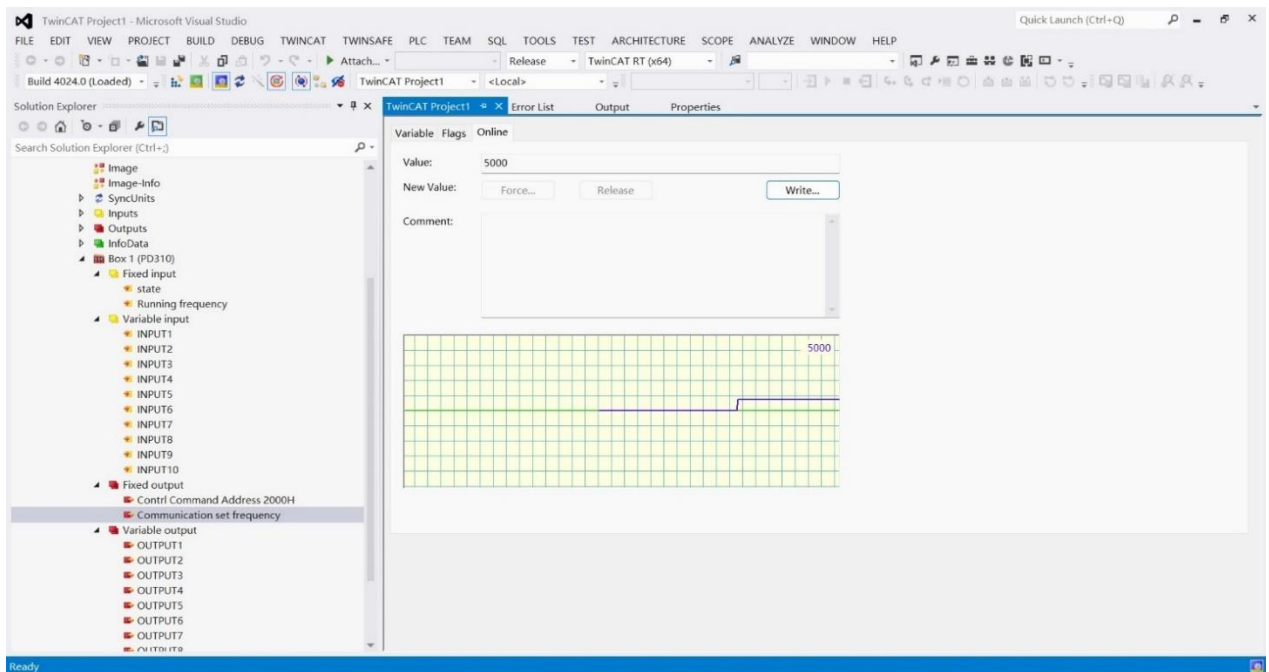
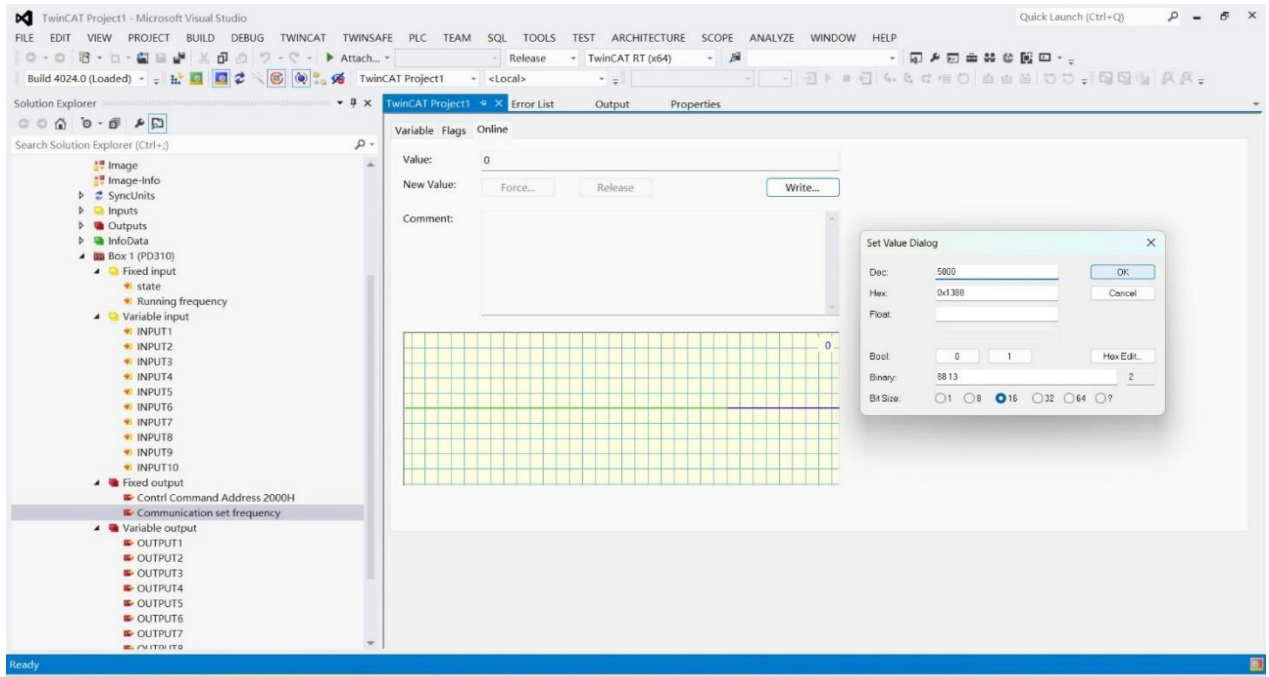
The screenshot shows the TwinCAT Project1 interface in Microsoft Visual Studio. The 'Run' button is highlighted in the top toolbar. A confirmation dialog box titled 'Activate Free Run' is displayed, with the 'Yes (Y)' button highlighted. The background shows the Solution Explorer with the 'Box 1 (PD310)' project selected, and the Properties window showing the 'Online' tab.

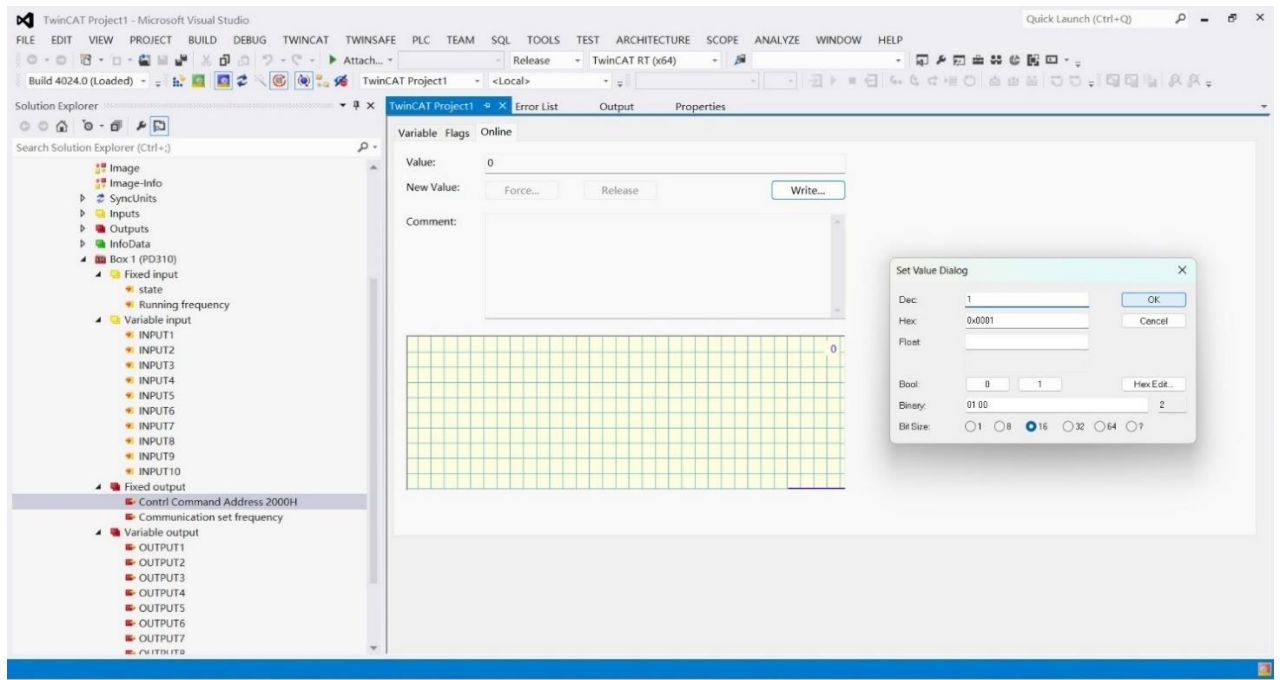


The screenshot shows the TwinCAT Project1 interface in Microsoft Visual Studio. The 'State Machine' configuration window is open, showing the 'Current State' and 'Requested State' both set to 'OP'. The 'DLL Status' section shows 'Port A: Carrier / Open'. The background shows the Solution Explorer with the 'Box 1 (PD310)' project selected, and the Properties window showing the 'Online' tab.

12) PDO operation is possible in OP state.

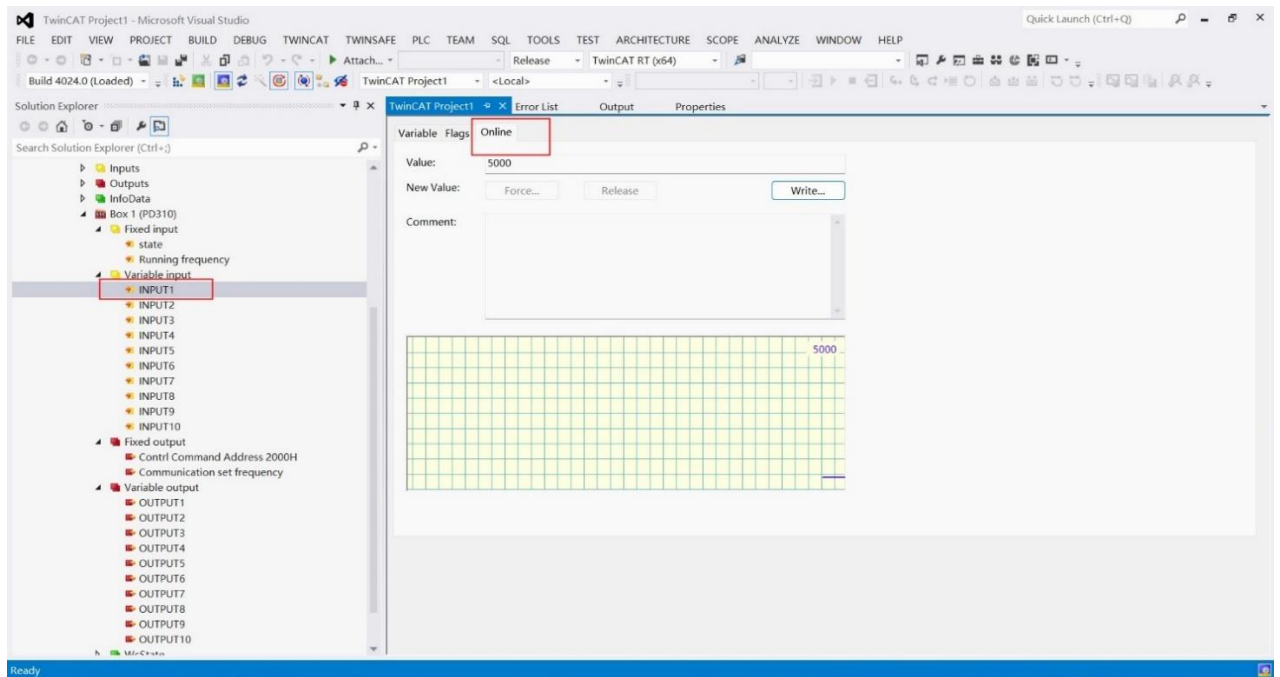
- a) The start/stop of the AC drive and the set frequency are controlled through the PDO fixed zone, and the AC drive status and operating frequency can also be read.



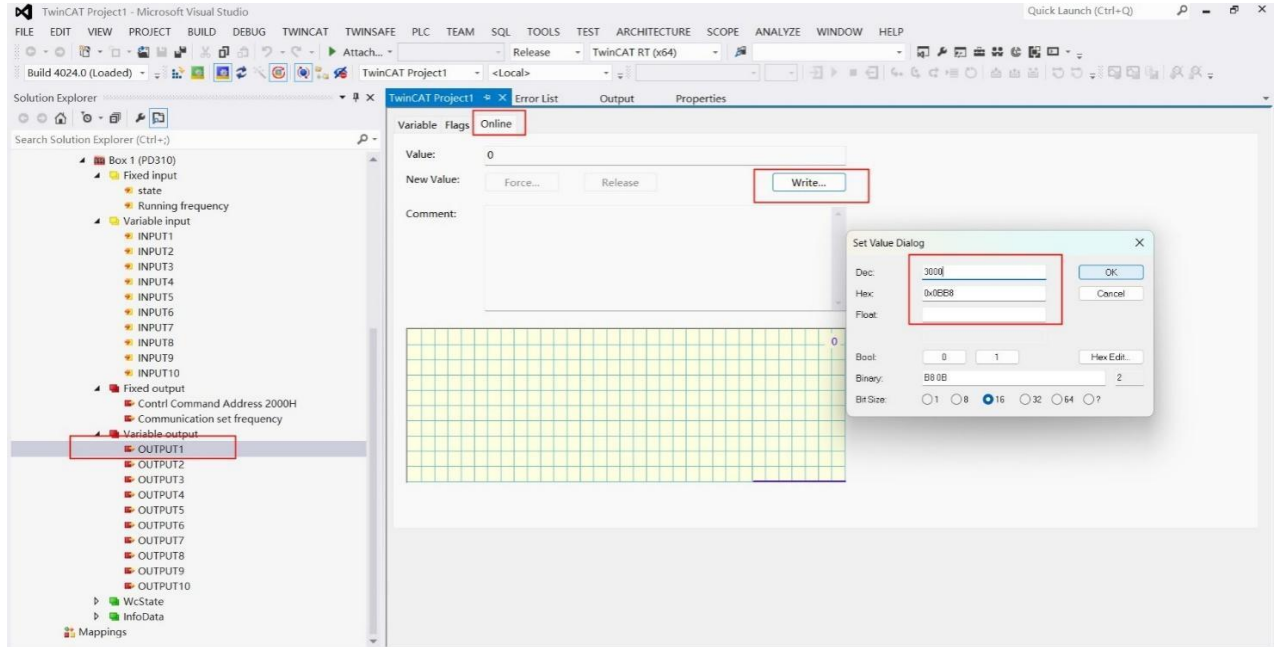


- b) Modify and read other parameters of AC drive through PDO modifiable area, combined with AC driveFd group parameters.

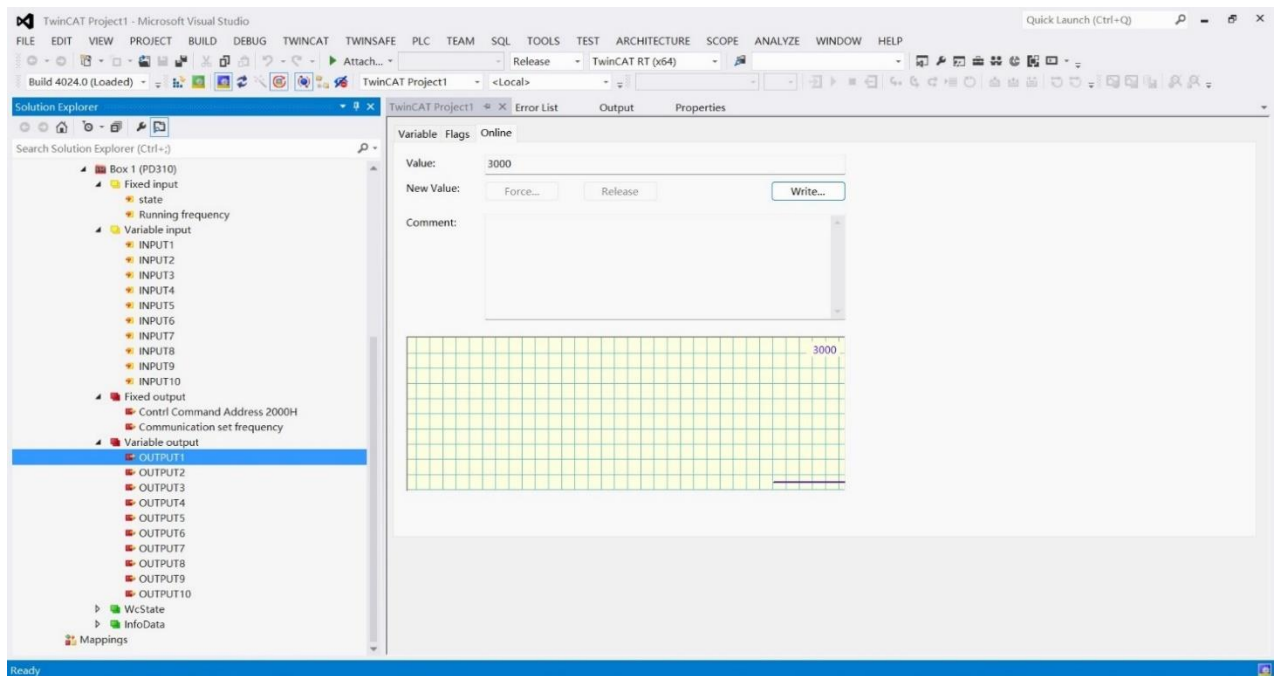
Example 1: To read AC drive F0-07, first set AC drive parameter Fd-20 = 0007 (RAM address of parameter F0-07), and then click INPUT1 in the changeable area to read the value of AC drive parameter F0-07.



Example 2: Modify F0-07 through PDO modifiable area, first set AC drive parameter Fd-10 = 0007 (RAM address of parameter F0-07), then click OUTPUT1 of modifiable area, click Online, click Modify, and then click OK after filling in the corresponding value.

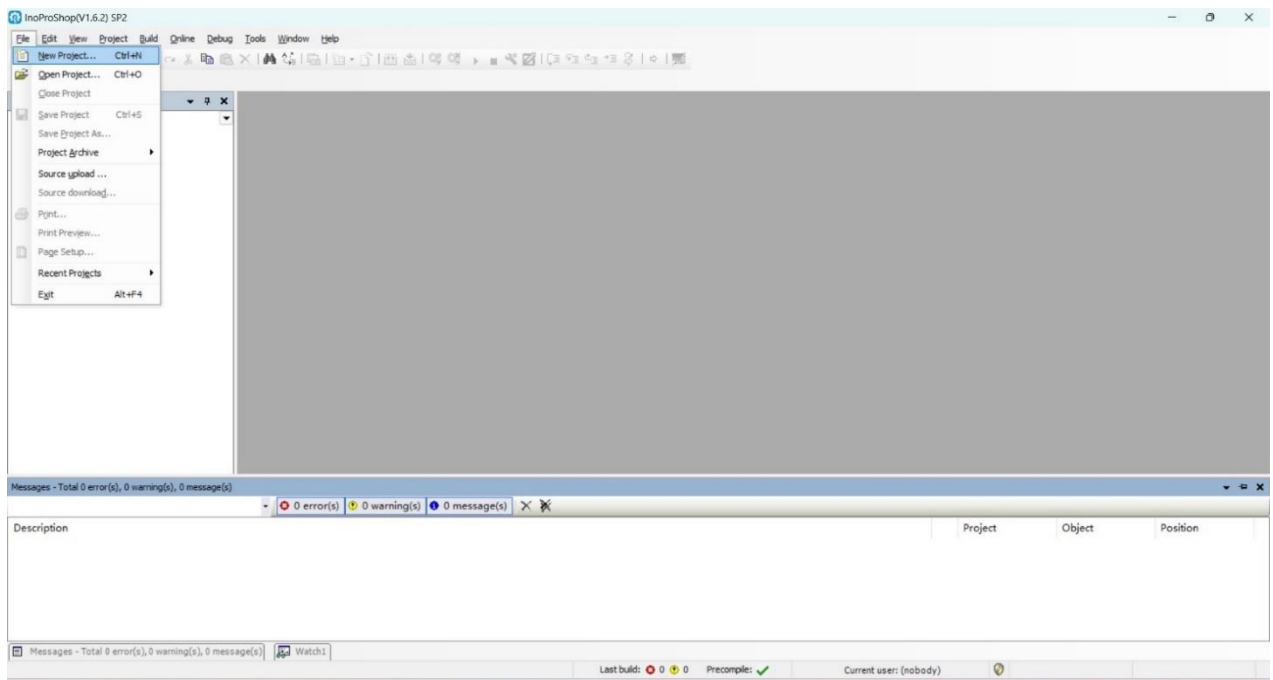


You can see the value after successful modification.

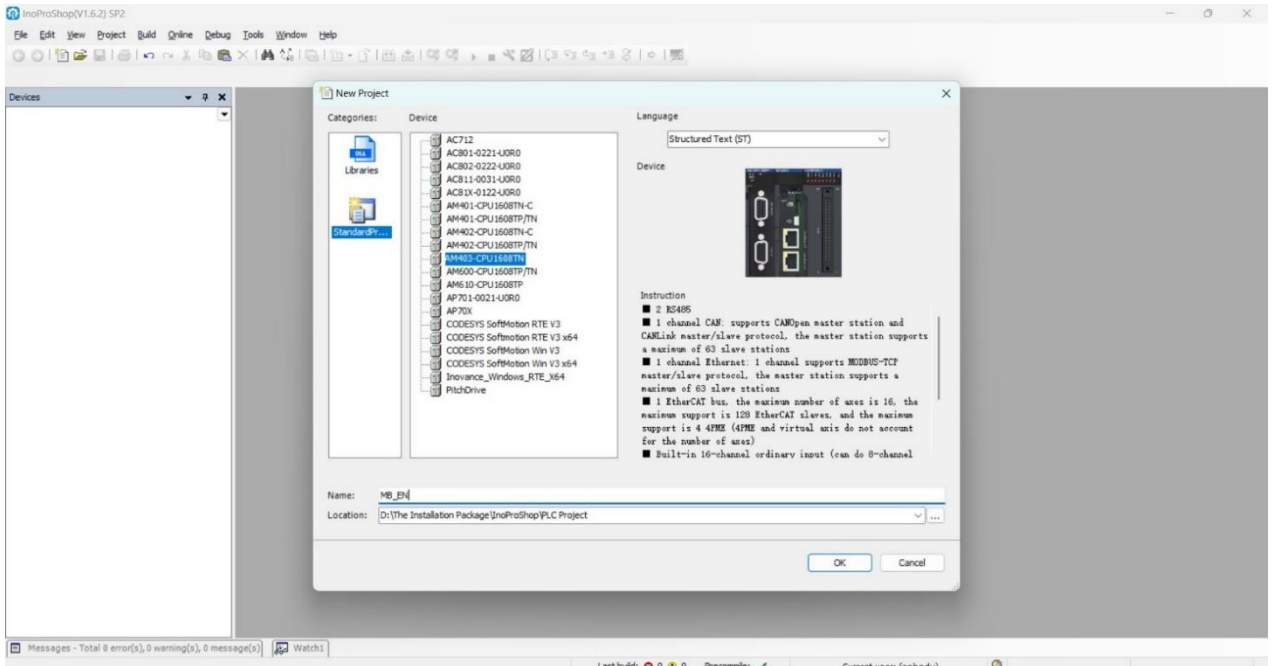


3.2 Device Configuration in CODESYS

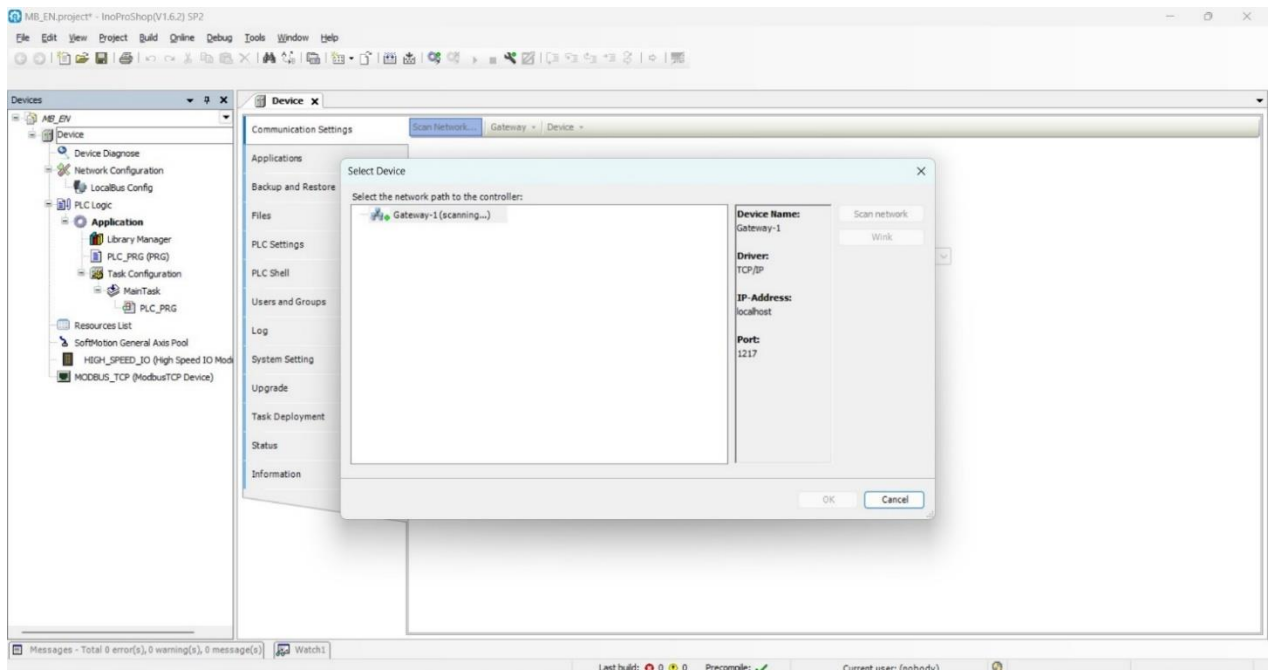
- 1) Install the corresponding CODESYS software. Since the PLC used in this example is AM403, the corresponding software is installed.
- 2) Connect the PLC and the PD310EC1 card, connect the PLC's network port to the PD310EC1 card, and connect the computer via another network cable to complete the wiring operation.
- 3) Set the corresponding AC drive and expansion card parameters after power-on, mainly communication protocol Fd-06 = 05, etc. For detailed description, refer to Table 2-1 Communication Card Configuration Parameters.
- 4) Open CODESYS software, choose to create a new project.

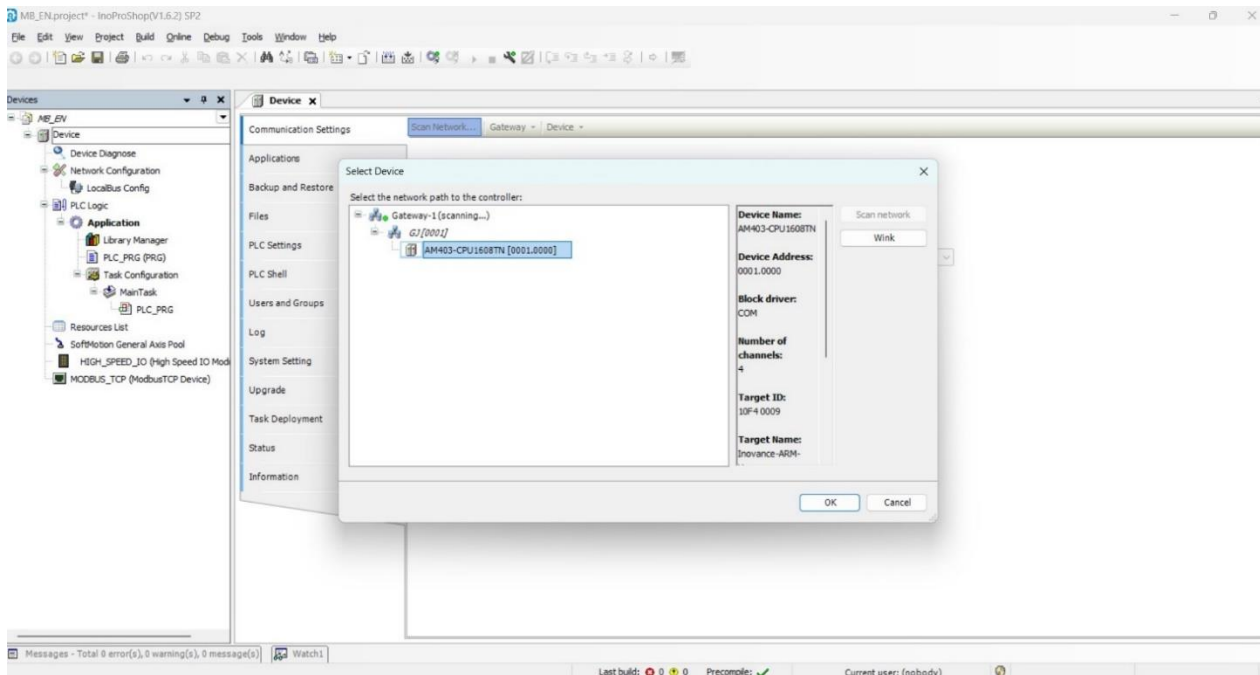


- 5) Select the corresponding PLC model, enter the project name and save path (no Chinese path), and click Create.

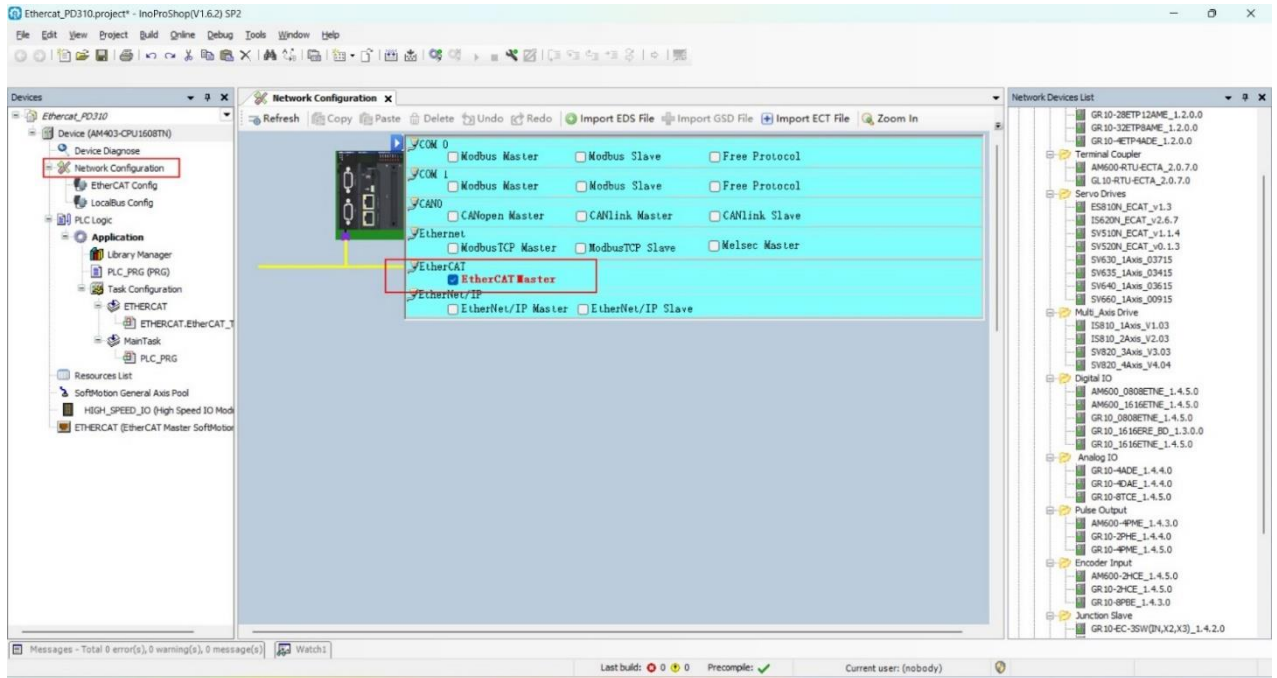


- 6) After creating the project, click Device to scan the PLC.

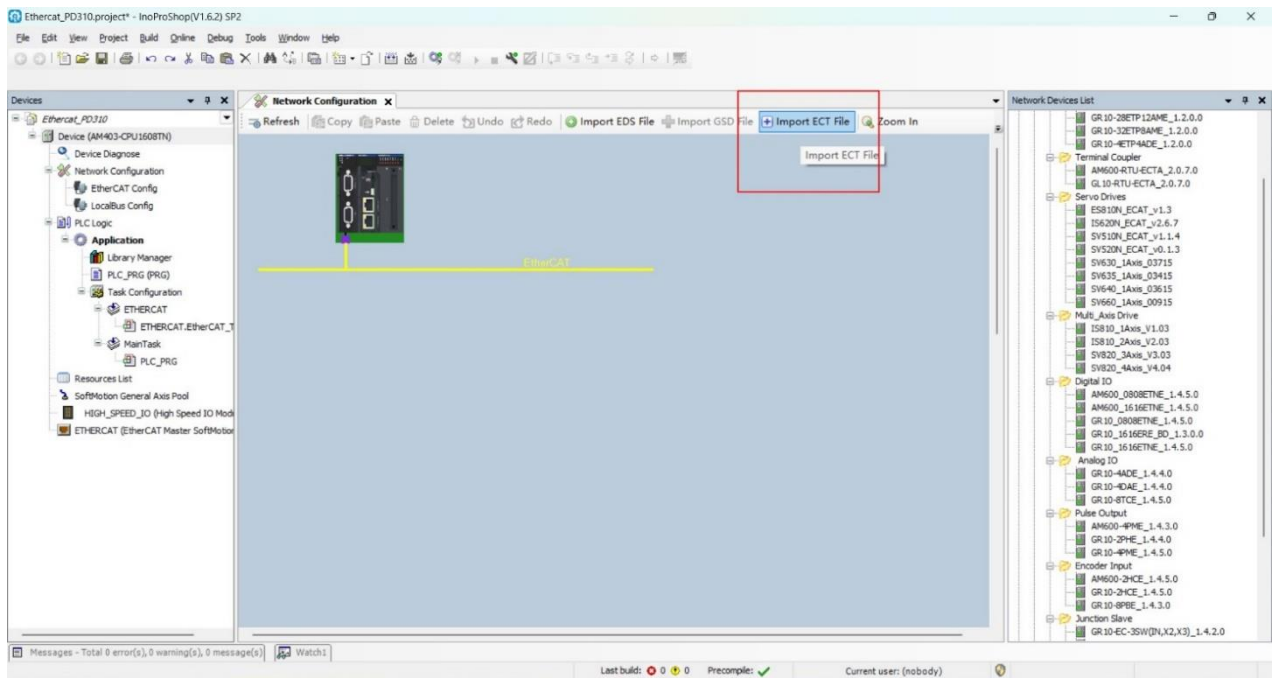




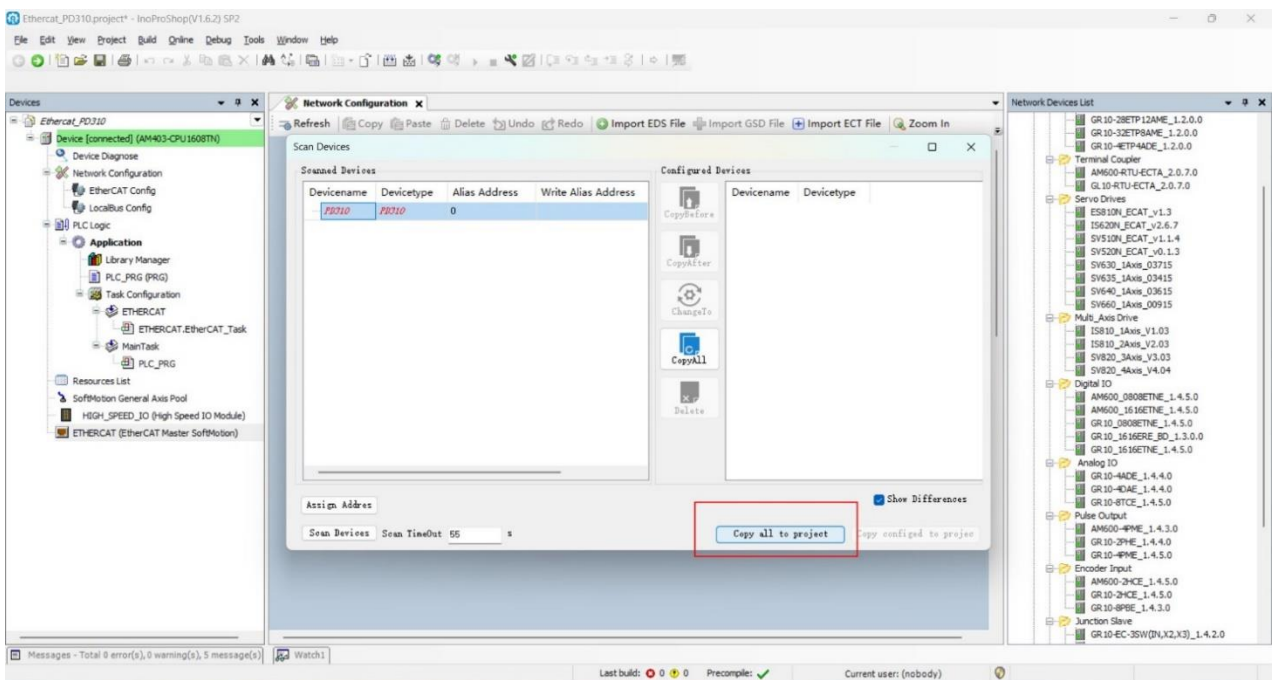
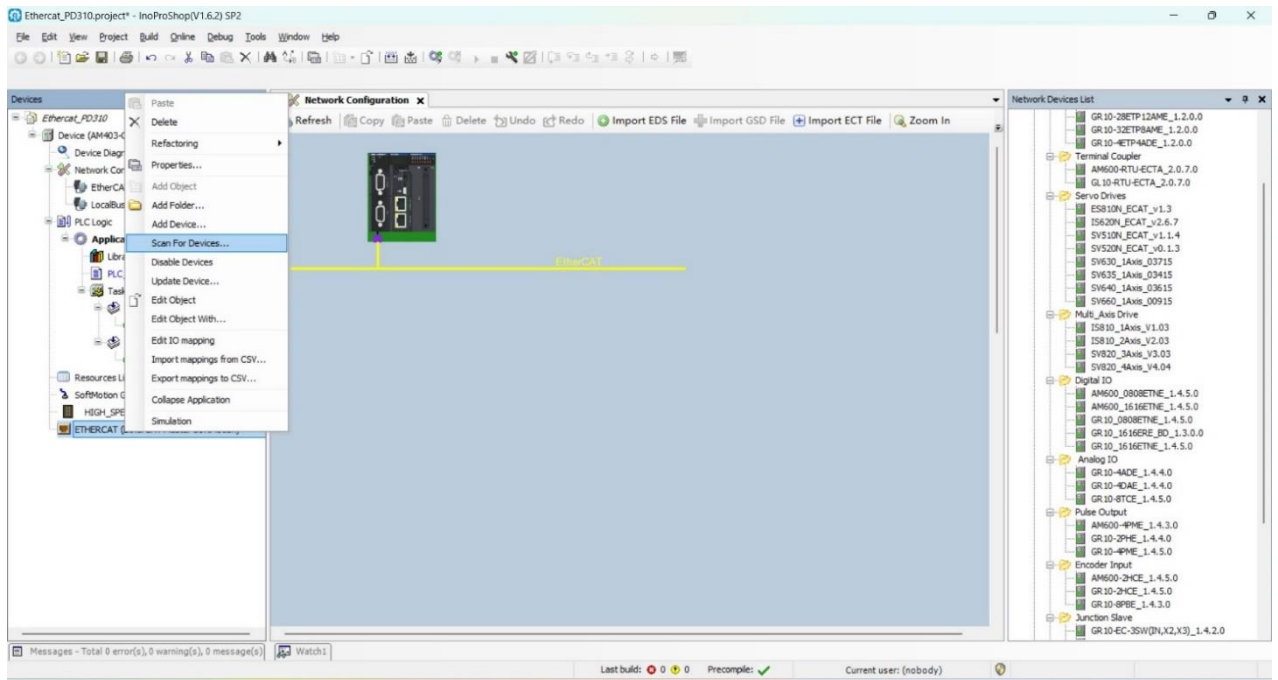
7) After connecting the PLC, click Network Configuration and select EtherCAT Master.



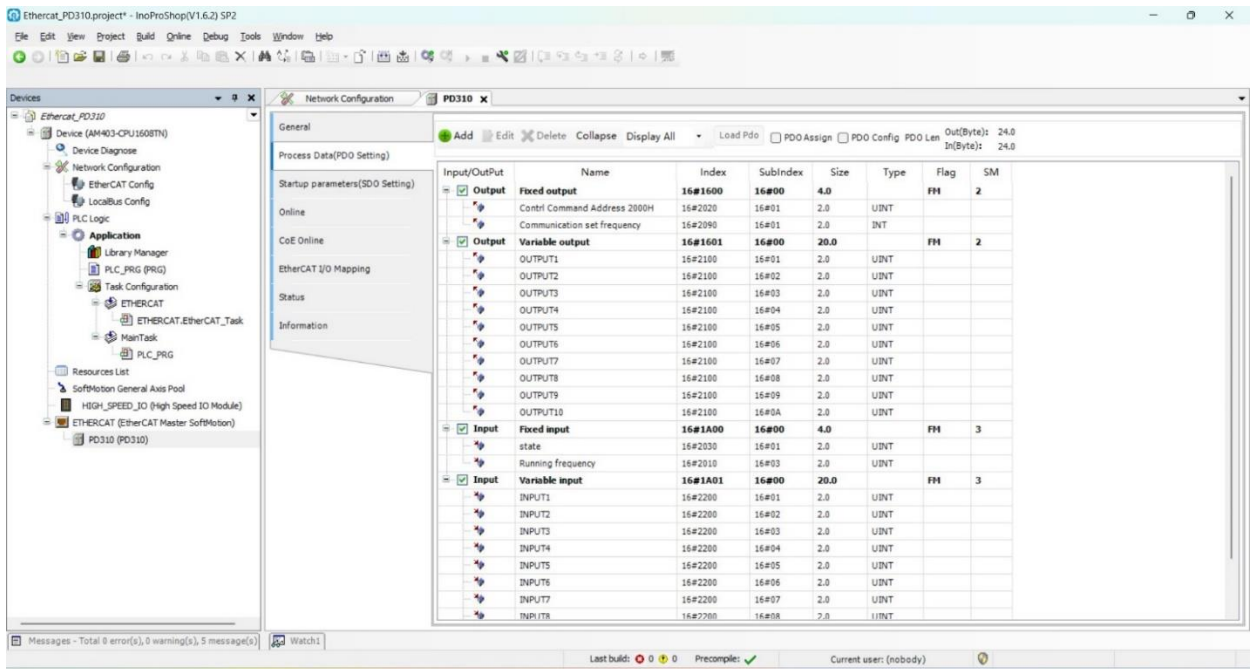
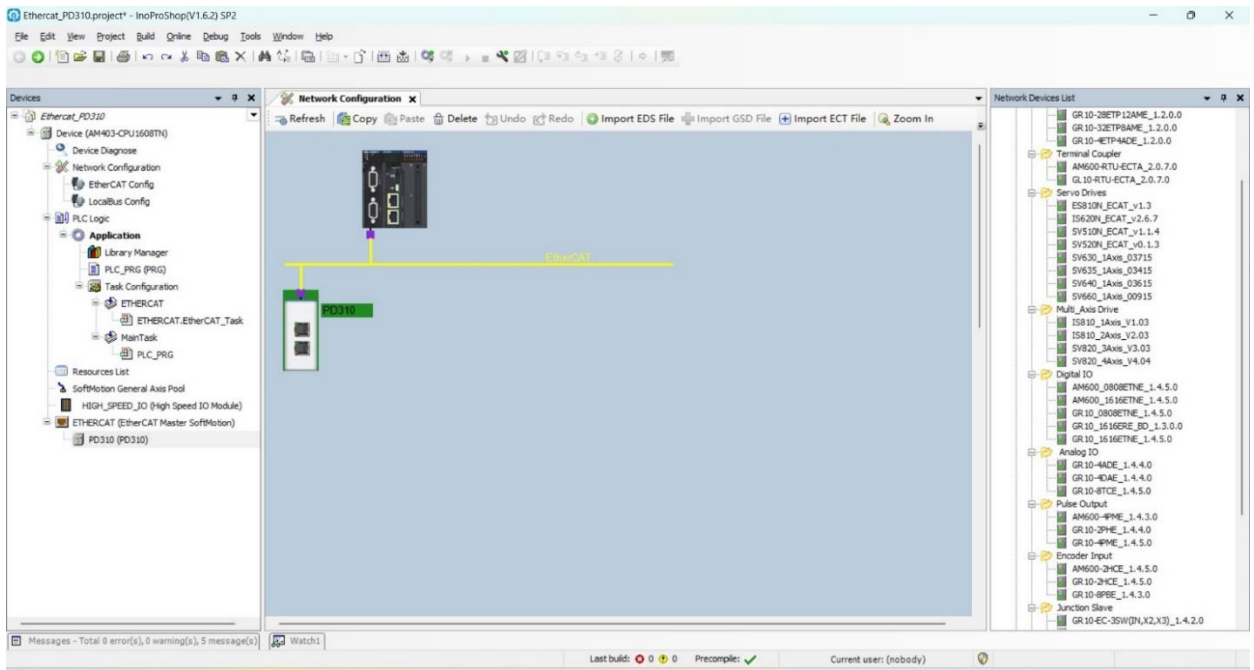
8) Install the EC_PD310_V1.0.XML file.



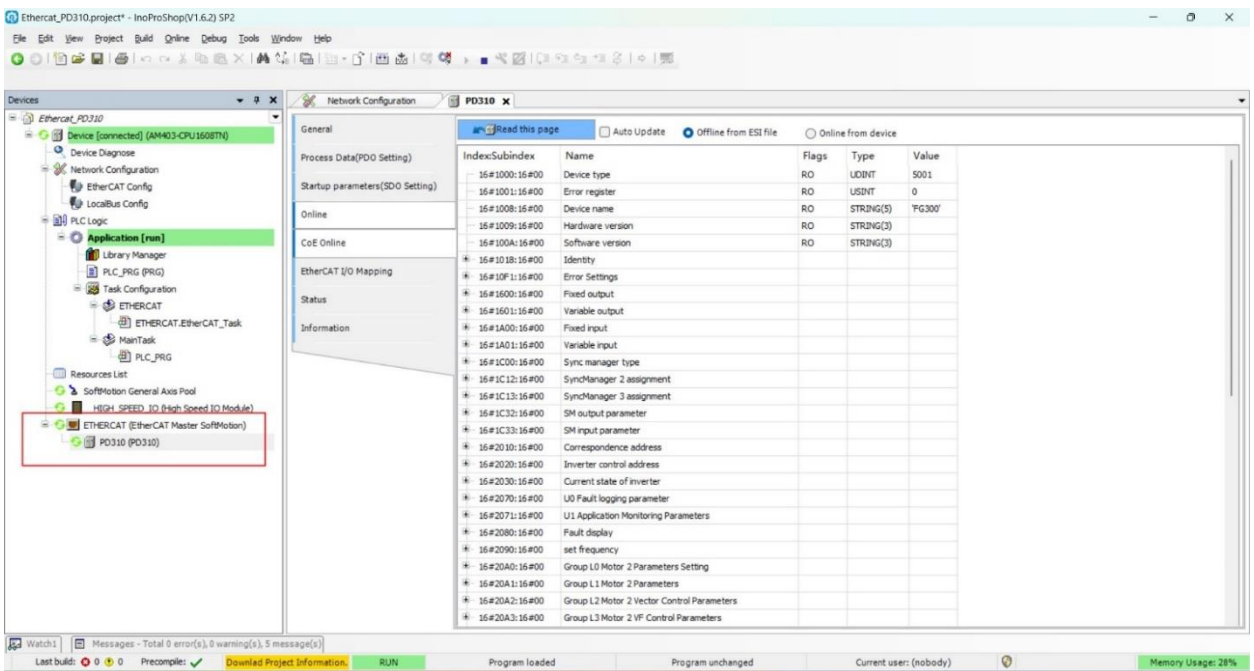
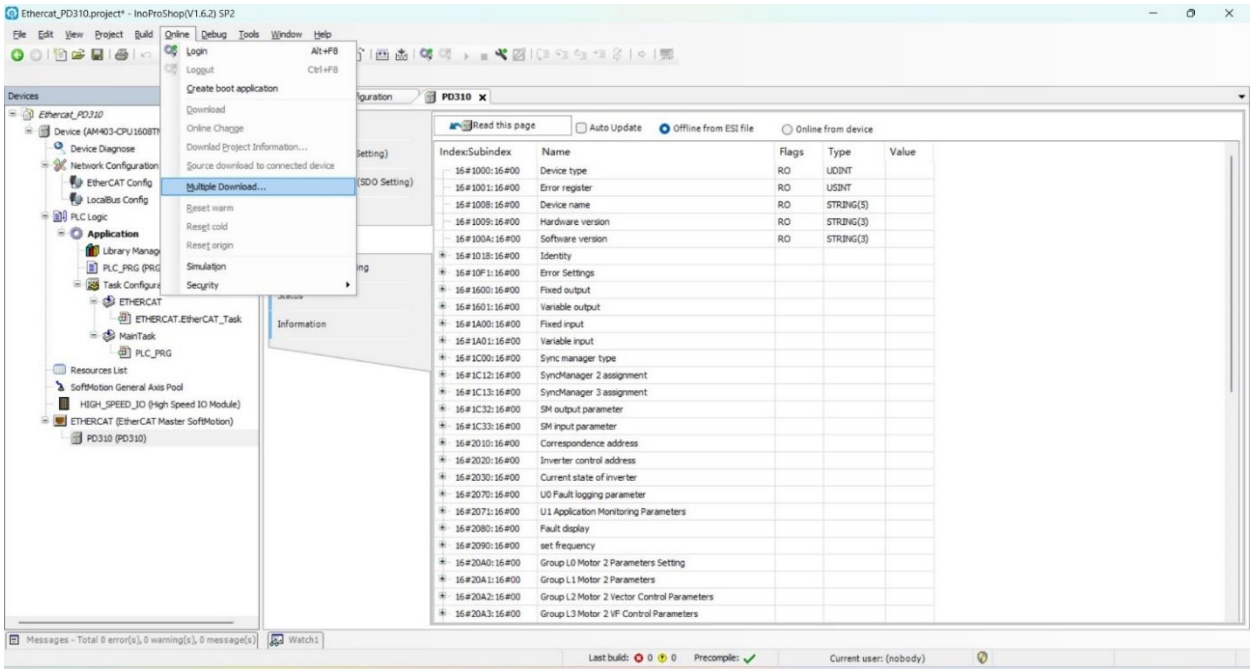
9) After installing the corresponding device description file, right-click the EtherCAT master device and click Scan.



10) After scanning the added devices, as shown below.

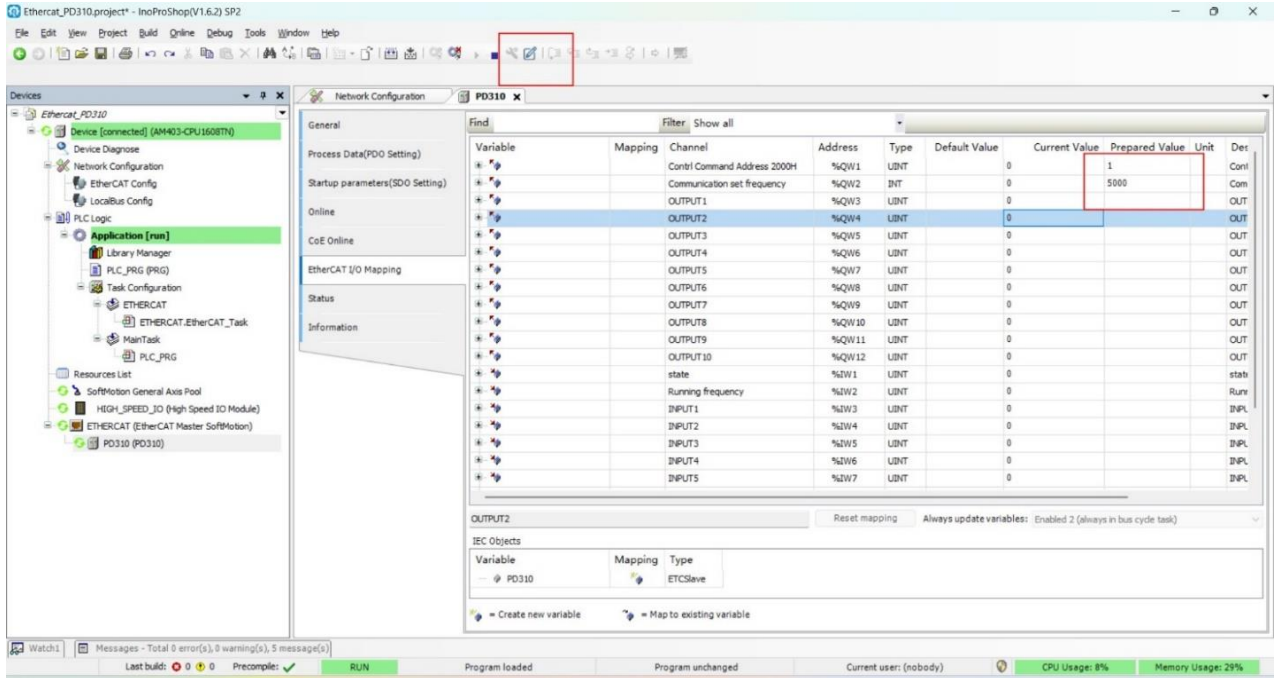


11) Then click compile and then download, then click run, the device is connected successfully as shown in the picture below:



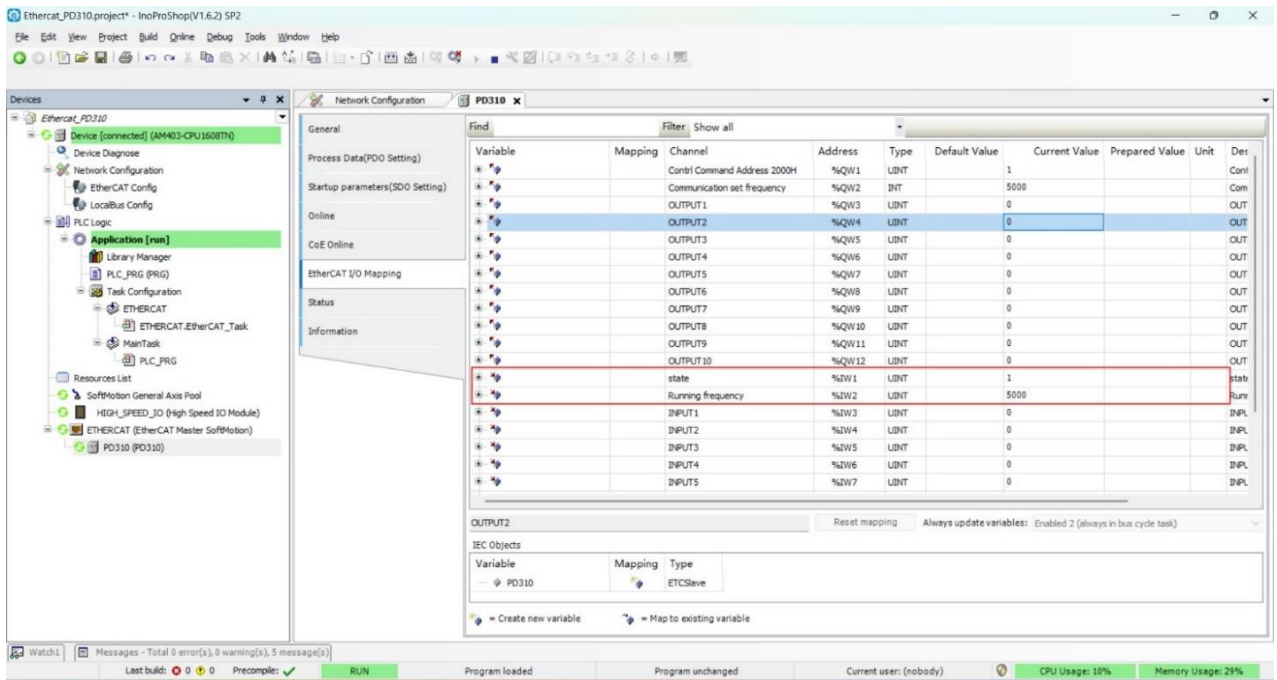
12) When the device is successfully connected, it enters the OP state and can perform PDO operation.

a) The start/stop of the AC drive and the set frequency are controlled through the PDO fixed zone, and the AC drive status and operating frequency can also be read.



The screenshot shows the 'Network Configuration' window for device PD310. The 'Find' table lists various variables and their mappings. The 'Communication set frequency' variable is highlighted, showing a 'Prepared Value' of 5000.

Variable	Mapping	Channel	Address	Type	Default Value	Current Value	Prepared Value	Unit	Des
Cont# Command Address 2000H			%QW1	UBINT	0		1		Cont
Communication set frequency			%QW2	INT	0		5000		Com
OUTPUT1			%QW3	UBINT	0				OUT
OUTPUT2			%QW4	UBINT	0				OUT
OUTPUT3			%QW5	UBINT	0				OUT
OUTPUT4			%QW6	UBINT	0				OUT
OUTPUT5			%QW7	UBINT	0				OUT
OUTPUT6			%QW8	UBINT	0				OUT
OUTPUT7			%QW9	UBINT	0				OUT
OUTPUT8			%QW10	UBINT	0				OUT
OUTPUT9			%QW11	UBINT	0				OUT
OUTPUT10			%QW12	UBINT	0				OUT
state			%IW1	UBINT	0				stat
Running frequency			%IW2	UBINT	0				Run
INPUT1			%IW3	UBINT	0				INPL
INPUT2			%IW4	UBINT	0				INPL
INPUT3			%IW5	UBINT	0				INPL
INPUT4			%IW6	UBINT	0				INPL
INPUT5			%IW7	UBINT	0				INPL



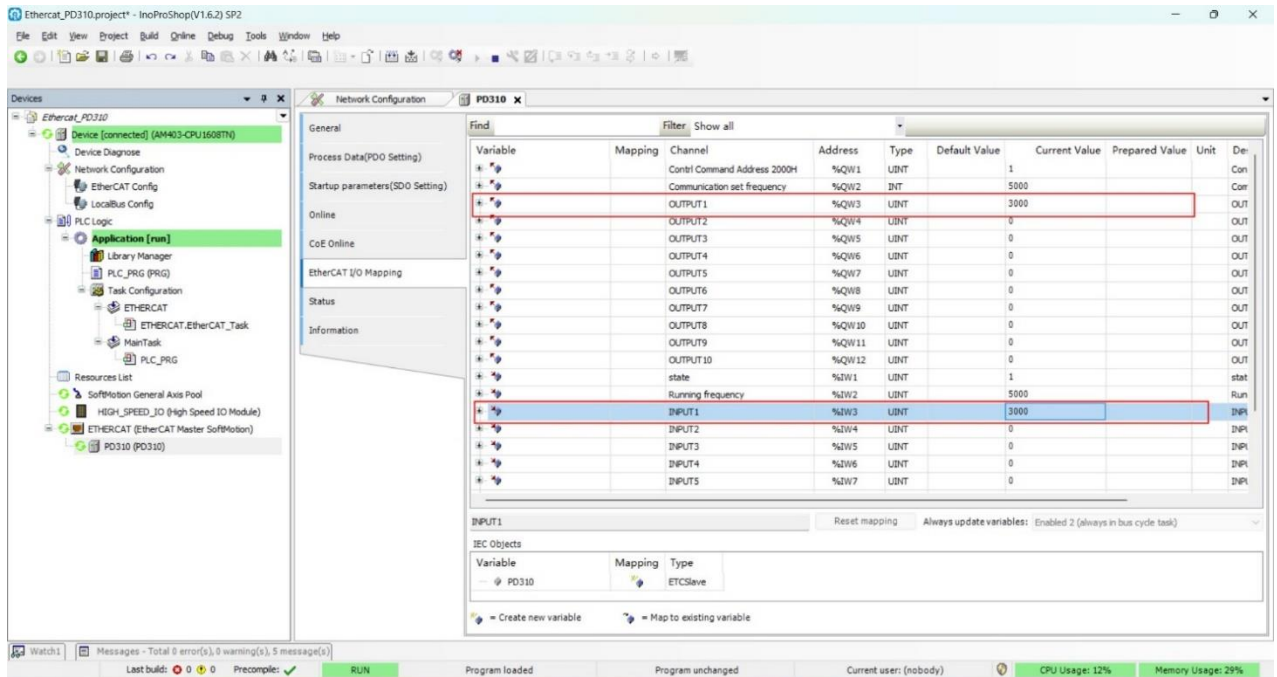
The screenshot shows the 'Network Configuration' window for device PD310. The 'Find' table lists various variables and their mappings. The 'state' and 'Running frequency' variables are highlighted, showing their 'Current Values'.

Variable	Mapping	Channel	Address	Type	Default Value	Current Value	Prepared Value	Unit	Des
Cont# Command Address 2000H			%QW1	UBINT	0				Cont
Communication set frequency			%QW2	INT	0	5000			Com
OUTPUT1			%QW3	UBINT	0				OUT
OUTPUT2			%QW4	UBINT	0				OUT
OUTPUT3			%QW5	UBINT	0				OUT
OUTPUT4			%QW6	UBINT	0				OUT
OUTPUT5			%QW7	UBINT	0				OUT
OUTPUT6			%QW8	UBINT	0				OUT
OUTPUT7			%QW9	UBINT	0				OUT
OUTPUT8			%QW10	UBINT	0				OUT
OUTPUT9			%QW11	UBINT	0				OUT
OUTPUT10			%QW12	UBINT	0				OUT
state			%IW1	UBINT	0	1			stat
Running frequency			%IW2	UBINT	0	5000			Run
INPUT1			%IW3	UBINT	0				INPL
INPUT2			%IW4	UBINT	0				INPL
INPUT3			%IW5	UBINT	0				INPL
INPUT4			%IW6	UBINT	0				INPL
INPUT5			%IW7	UBINT	0				INPL

- b) Modify and read other parameters of AC drive through PDO modifiable area, combined with AC driveFd group parameters.

Example: To read AC drive F0-07, first set AC drive parameter Fd-20 = 0007 (RAM address of parameter F0-07), and then click INPUT1 in the changeable area to read the value of AC drive parameter F0-07.

Modify F0-07 first set AC drive parameter Fd-10 = 0007 (RAM address of parameter F0-07), then click OUTPUT1 in the changeable area, click Online, click Modify, fill in the corresponding value and then click OK.

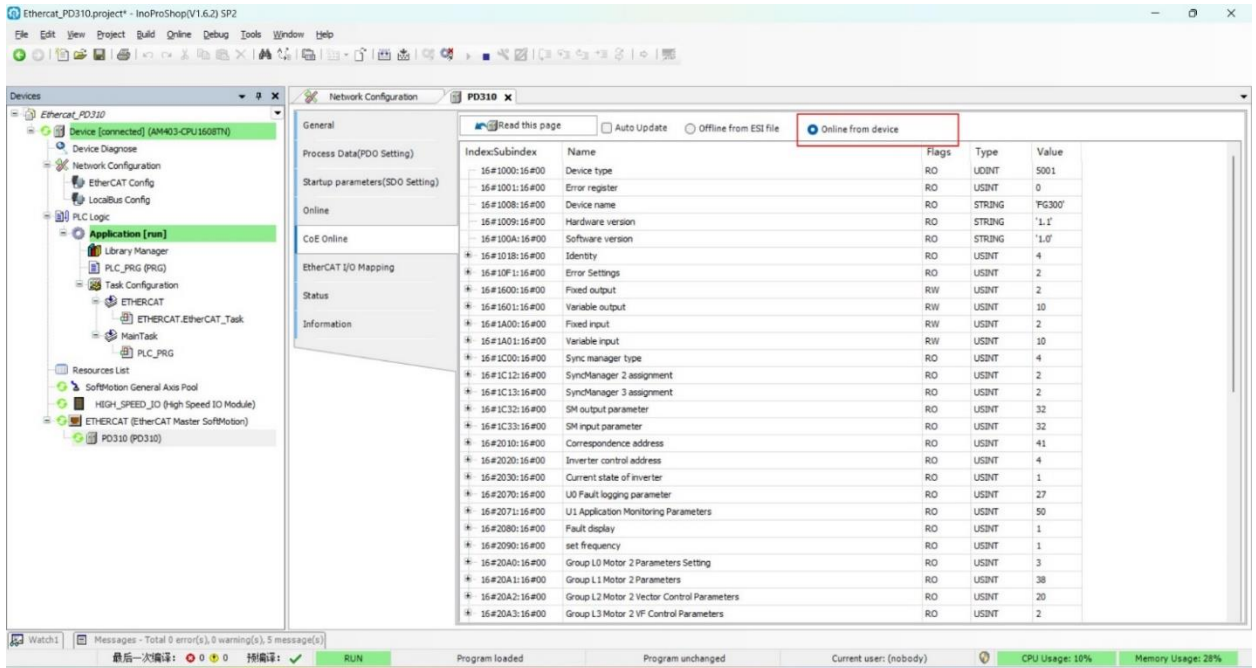


The screenshot shows the 'PD310' configuration window in InoProShop. The 'Find' table is as follows:

Variable	Mapping	Channel	Address	Type	Default Value	Current Value	Prepared Value	Unit	De
+	+	Contl Command Address 2000H	%QW1	UBINT	1				Con
+	+	Communication set frequency	%QW2	INT	5000				Cor
+	+	OUTPUT1	%QW3	UBINT	3000				OUT
+	+	OUTPUT2	%QW4	UBINT	0				OUT
+	+	OUTPUT3	%QW5	UBINT	0				OUT
+	+	OUTPUT4	%QW6	UBINT	0				OUT
+	+	OUTPUT5	%QW7	UBINT	0				OUT
+	+	OUTPUT6	%QW8	UBINT	0				OUT
+	+	OUTPUT7	%QW9	UBINT	0				OUT
+	+	OUTPUT8	%QW10	UBINT	0				OUT
+	+	OUTPUT9	%QW11	UBINT	0				OUT
+	+	OUTPUT10	%QW12	UBINT	0				OUT
+	+	state	%IW1	UBINT	1				stat
+	+	Running frequency	%IW2	UBINT	5000				Run
+	+	INPUT1	%IW3	UBINT	3000				INP
+	+	INPUT2	%IW4	UBINT	0				INP
+	+	INPUT3	%IW5	UBINT	0				INP
+	+	INPUT4	%IW6	UBINT	0				INP
+	+	INPUT5	%IW7	UBINT	0				INP

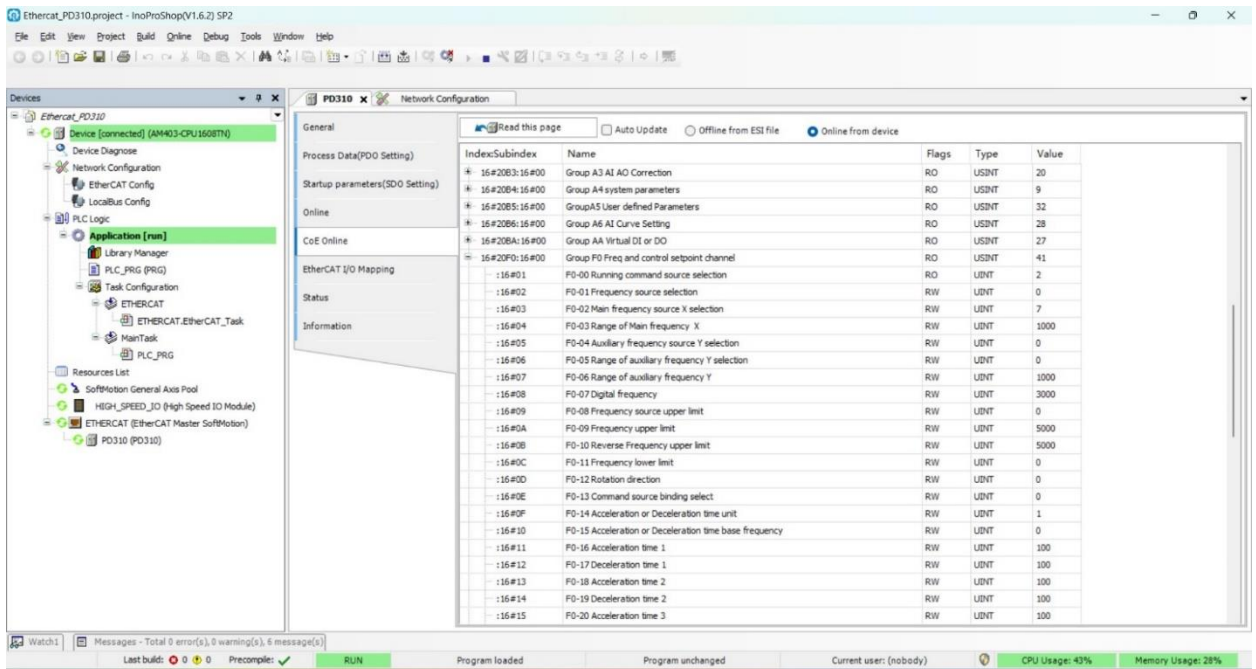
Below the table, the 'INPUT1' configuration is shown with 'Reset mapping' and 'Always update variables: Enabled 2 (always in bus cycle task)'. The 'IEC Objects' section shows 'Variable: PD310', 'Mapping: ETCslave', and 'Type: ETCslave'. At the bottom, the status bar indicates 'CPU Usage: 12%' and 'Memory Usage: 29%'.

13) With the online COE, function code values can be observed or written directly.



The screenshot shows the InoProShop software interface for a PD310 device. The 'Online from device' radio button is selected. The main window displays a table of COE parameters with the following columns: Index/Subindex, Name, Flags, Type, and Value.

Index/Subindex	Name	Flags	Type	Value
16#1000:16#00	Device type	RO	UDINT	5001
16#1001:16#00	Error register	RO	UDINT	0
16#1008:16#00	Device name	RO	STRING	PG3007
16#1009:16#00	Hardware version	RO	STRING	'1.1'
16#100A:16#00	Software version	RO	STRING	'1.0'
16#1018:16#00	Identity	RO	UDINT	4
16#10F1:16#00	Error Settings	RO	UDINT	2
16#1600:16#00	Fixed output	RW	UDINT	2
16#1601:16#00	Variable output	RW	UDINT	10
16#1A00:16#00	Fixed input	RW	UDINT	2
16#1A01:16#00	Variable input	RW	UDINT	10
16#1C00:16#00	Sync manager type	RO	UDINT	4
16#1C12:16#00	SyncManager 2 assignment	RO	UDINT	2
16#1C13:16#00	SyncManager 3 assignment	RO	UDINT	2
16#1C32:16#00	SM output parameter	RO	UDINT	32
16#1C33:16#00	SM input parameter	RO	UDINT	32
16#2010:16#00	Correspondence address	RO	UDINT	41
16#2020:16#00	Inverter control address	RO	UDINT	4
16#2030:16#00	Current state of inverter	RO	UDINT	1
16#2070:16#00	U0 Fault logging parameter	RO	UDINT	27
16#2071:16#00	U1 Application Monitoring Parameters	RO	UDINT	50
16#2080:16#00	Fault display	RO	UDINT	1
16#2090:16#00	set frequency	RO	UDINT	1
16#20A0:16#00	Group L0 Motor 2 Parameters Setting	RO	UDINT	3
16#20A1:16#00	Group L1 Motor 2 Parameters	RO	UDINT	38
16#20A2:16#00	Group L2 Motor 2 Vector Control Parameters	RO	UDINT	20
16#20A3:16#00	Group L3 Motor 2 VF Control Parameters	RO	UDINT	2



The screenshot shows the InoProShop software interface for a PD310 device. The 'Online from device' radio button is selected. The main window displays a table of COE parameters with the following columns: Index/Subindex, Name, Flags, Type, and Value.

Index/Subindex	Name	Flags	Type	Value
16#20B3:16#00	Group A3 AI AO Correction	RO	UDINT	20
16#20B4:16#00	Group A4 system parameters	RO	UDINT	9
16#20B5:16#00	Group A5 User defined Parameters	RO	UDINT	32
16#20B6:16#00	Group A6 AI Curve Setting	RO	UDINT	28
16#20BA:16#00	Group AA Virtual DI or DO	RO	UDINT	27
16#20F0:16#00	Group FO Freq and control setpoint channel	RO	UDINT	41
16#01	F0-00 Running command source selection	RO	UDINT	2
16#02	F0-01 Frequency source selection	RW	UDINT	0
16#03	F0-02 Main frequency source X selection	RW	UDINT	7
16#04	F0-03 Range of Main frequency X	RW	UDINT	1000
16#05	F0-04 Auxiliary frequency source Y selection	RW	UDINT	0
16#06	F0-05 Range of auxiliary frequency Y selection	RW	UDINT	0
16#07	F0-06 Range of auxiliary frequency Y	RW	UDINT	1000
16#08	F0-07 Digital Frequency	RW	UDINT	3000
16#09	F0-08 Frequency source upper limit	RW	UDINT	0
16#0A	F0-09 Frequency upper limit	RW	UDINT	5000
16#0B	F0-10 Reverse Frequency upper limit	RW	UDINT	5000
16#0C	F0-11 Frequency lower limit	RW	UDINT	0
16#0D	F0-12 Rotation direction	RW	UDINT	0
16#0E	F0-13 Command source binding select	RW	UDINT	0
16#0F	F0-14 Acceleration or Deceleration time unit	RW	UDINT	1
16#10	F0-15 Acceleration or Deceleration time base frequency	RW	UDINT	0
16#11	F0-16 Acceleration time 1	RW	UDINT	100
16#12	F0-17 Deceleration time 1	RW	UDINT	100
16#13	F0-18 Acceleration time 2	RW	UDINT	100
16#14	F0-19 Deceleration time 2	RW	UDINT	100
16#15	F0-20 Acceleration time 3	RW	UDINT	100

Ethercat_PD310.project - InoProShop(V1.6.2) SP2

File Edit View Project Build Online Debug Tools Window Help

Devices Ethercat_PD310

- Device [connected] (AM403-CPU16087N)
 - Device Diagnose
 - Network Configuration
 - EtherCAT Config
 - LocalBus Config
 - PLC Logic
 - Application [run]
 - Library Manager
 - PLC_PRG (PRG)
 - Task Configuration
 - ETHERCAT
 - ETHERCAT.ETHERCAT_Task
 - MainTask
 - PLC_PRG
 - Resources List
 - SoftMotion General Axis Pool
 - HIGH_SPEED_IO (High Speed IO Module)
 - ETHERCAT (EtherCAT Master SoftMotion)
 - PD310 (PD310)

PD310 Network Configuration

General Read this page Auto Update Offline from ESI file Online from device

Index/Subindex	Name	Flags	Type	Value
+ 16#20B3:16#00	Group A3 AI AD Correction			
+ 16#20B4:16#00	Group A4 system parameters			
+ 16#20B5:16#00	Group A5 User defined Parameters			
+ 16#20B6:16#00	Group A6 AI Curve Setting			
+ 16#20BA:16#00	Group AA Virtual DI or DO			
+ 16#20F0:16#00	Group F0 Freq and control setpoint channel			
-:16#01	F0-00 Running command source selection	RO	UINT	2
-:16#02	F0-01 Frequency source selection	RW	UINT	0
-:16#03	F0-02 Main frequency source X selection	RW	UINT	7
-:16#04	F0-03 Range of Main frequency X	RW	UINT	1000
-:16#05	F0-04 Auxiliary frequency source Y selection	RW	UINT	0
-:16#06	F0-05 Range of auxiliary frequency Y selection	RW	UINT	0
-:16#07	F0-06 Range of auxiliary frequency Y	RW	UINT	1000
-:16#08	F0-07 Digital frequency	RW	UINT	3000
-:16#09	F0-08 Frequency source upper limit	RW	UINT	0
-:16#0A	F0-09 Frequency upper limit	RW	UINT	5000
-:16#0B	F0-10 Reverse Frequency upper limit	RW	UINT	5000
-:16#0C	F0-11 Frequency lower limit	RW	UINT	0
-:16#0D	F0-12 Rotation direction	RW	UINT	0
-:16#0E	F0-13 Command source binding select	RW	UINT	0
-:16#0F	F0-14 Acceleration or Deceleration time unit	RW	UINT	1
-:16#10	F0-15 Acceleration or Deceleration time base frequency	RW	UINT	0
-:16#11	F0-16 Acceleration time 1	RW	UINT	100
-:16#12	F0-17 Deceleration time 1	RW	UINT	100
-:16#13	F0-18 Acceleration time 2	RW	UINT	100
-:16#14	F0-19 Deceleration time 2	RW	UINT	100
-:16#15	F0-20 Acceleration time 3	RW	UINT	100

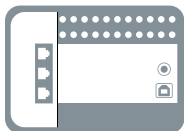
Messages - Total 0 error(s), 0 warning(s), 6 message(s)

Last build: 0 0 0 Precompile: ✓ RUN Program loaded Program unchanged Current user: (nobody) CPU Usage: 44% Memory Usage: 29%

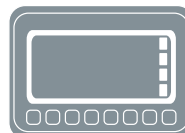
ВСЕ ДЛЯ АВТОМАТИЗАЦИИ:



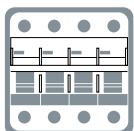
Реле



ПЛК



Панели оператора



НКА



Электропривод



Датчики



Блоки питания



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