

XB6S-PT04A

PTO pulse output module

User Manual



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Nanjing Solidot Electronic Technology Co., Ltd.

Address: 11th Floor, Ang Ying Building, No. 91 Shengli Road, Jiangning District, Nanjing, Jiangsu Province Zip code: 211106 Tel: 4007788929 Website: http://www.solidotech.com

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Product Overview

1.1 Product Introduction

XB6S-PT04A is a slice PTO pulse output module, which uses X-bus bottom bus and is compatible with our XB6S series coupler module. It can be connected to a stepper/servo motor driver and drive the stepper/servo motor by outputting pulses. The module has 4 groups of pulse output channels.Each pulse output channel is equipped with 4-channel input, so there are a total of 16 input channels. The combination of input and output can meet the driving scenarios of most stepper/servo motors.

1.2 Product Features

- Four-channel pulse output
 Two modes can be set: single pulse (pulse + direction) and double pulse (CW/CCW).
- One output with four inputs
 Each channel output is equipped with local positive limit, negative limit, origin and brake signal input.
- Pulse function is rich
 Supports a series of functions such as trapezoidal acceleration and deceleration, return to zero, and braking.
- Support five sports modes
 Absolute position mode, relative position mode, speed mode, zero return mode, and jog mode.
- Support multiple return to zero methods
 Four return to zero modes are available. The return-to-zero speed and return-to-zero approach speed support configuration.
- Support motion merging The speed, position, operation mode, acceleration and deceleration time can be adjusted dynamically.
- Support safe mode
 The module's pulse output action can be set when the network is abnormal.
- Channel-level configuration
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The four channels support individual parameter configuration.

- Small size, easy to install
 The structure is compact, occupies little space, can be installed on DIN 35 mm standard rail, and uses spring-type wiring terminals, making wiring convenient and fast.
- Easy diagnosis
 The innovative channel indicator light design is close to the channel, clear at a glance, and easy to detect and maintain.
- Easy configuration
 The configuration is simple and supports mainstream master stations.

2 Product Parameters

2.1 General parameters

Interface parameters		
Product Model	XB6S-PT04A	
Bus protocol	X-bus	
Bus input power rated	5VDC (4.5V~5.5V)	
voltage		
Rated current	150mA	
consumption		
Power consumption	0.65W	
Process data volume:	56 Bytes	
Downstream		
Process data volume:	48 Bytes	
Uplink		
Channel Type	Input:16Ch, PNP/NPN	Output: 4 Ch, NPN
Refresh rate	1 ms	

Technical Parameters	
System input power	5VDC
Field side input power	24VDC (15V~30V)
	Pulse high level: determined by the input power supply on the field side
Pulse output voltage	(15V~30V)
	Pulse low level: 0V
Output Channel	4 channels
Pulse output frequency	200kHz
Pulse Mode	Single pulse (pulse + direction), double pulse (CW/CCW)
Pulse output type	NPN
Input Channels	16 channels
Input channel function	Positive limit, negative limit, origin switch, brake (all can be reused as
	general digital input)
Input Type	PNP/NPN
Input signal logic selection	Input signal can be configured as normally open/normally closed
Digital input type	Туре1/Туре3
Exercise	Absolute position mode, relative (incremental) position mode, speed
	mode, zero return mode, jog mode
Trapezoidal acceleration	Support
and deceleration	
Movement Merger	Supports configuration of single merge mode, continuous merge mode,
	and turning off this function
Channel-level parameter	Support
configuration	
Zero return mode	Support 4 types
Safe Mode	Supports continued operation, deceleration stop and brake stop
Braking	Support
Dimensions	106.4×25.7×72.3mm
weight	105g
Wiring method	Screw-free quick plug
Wire length	<30m (unshielded)
Installation	DIN 35 mm standard rail installation
Operating temperature	-20°C~+60°C
Storage temperature	-40°C~+80°C
Relative humidity	95%, non-condensing
Protection level	IP20

3 Panel

3.1 Panel structure

Product Parts Name



3.2 Indicator light function

Name	Logo	Color	State	Status description
		Green	Always on	Power supply is normal
Power indicator	PWR		Off	The product is not powered on or the
				power supply is abnormal
	SYS	Green	Always on	The system is running normally
			Flashing	No business data interaction, waiting
Communication			1Hz	to establish business data interaction
indicator			Flashing	Firmura Unarada
			10Hz	Firmware Opgrade
			Off	System not working

Name	Logo	Color	Input signal	State	Status description
			logic		
Innut		Green	Normally	Always on	Channel has signal input
input	3~6		Open	Off	Channel no signal input
indicator			Normally	Always on	Channel no signal input
Indicator			Closed	Off	Channel has signal input

Name	Color	Pulse output	Running	Positive/reverse pulse	A-Light	B Light
Name	Color	mode	direction	waveform	(ID: 0)	(Logo: 1)
	Green	Pulse+direction	Forward	а в	Always on	Always on
Output			Reversal	аГГГ В¬	Always on	Off
channel indicator		r Church		Forward	а В	Always on
			Reversal	А	Off	Always on

4 Installation and removal

4.1 Dimensions



4.2 Installation Guide

Installation\removal precautions

- The module protection level is IP20. The module needs to be installed in a cabinet and used indoors.
- Ensure that the cabinet has good ventilation measures (such as installing an exhaust fan in the cabinet).
- Do not install this device near or over any equipment that may cause overheating.
- Be sure to install the module vertically on the fixed rail and maintain air circulation around it (there should be at least 50 mm of air circulation space above and below the module).
- After installing the module, be sure to install the guide rail fixings at both ends to secure the module.
- Installation and removal must be performed with the power turned off.
- After the module is installed, it is recommended to wire and route the cables in an up-and-down manner.

A Warning

• If used in a manner not specified in the product user manual, the protection provided by the equipment may be impaired.





Ensure the module is installed vertically on the fixed rail



Be sure to install the rail fixings



Module upper and lower wiring diagram



4.3 Installation and removal steps

Module instal	Module installation and removal				
	1. Install the coupler module on the fixed guide rail first.				
	2. Install the required I/O modules or functional modules in sequence on the right side				
Module	of the coupler module.				
installation	3. After installing all required modules, install the terminal cover to complete the				
steps	module assembly.				
	4. Install the guide rail fixings at both ends of the coupler module and the terminal				
	cover to fix the module.				
Module	1. Loosen the guide rail fixings at both ends of the module.				
disassembly	2. Use a flat-blade screwdriver to pry open the module buckle.				
steps	3. Pull out the disassembled module.				

4.4 Installation and disassembly diagram

Coupler module installation

Align the coupler module vertically with the guide rail slot, as shown in Figure 1 below.



Press the coupler module towards the guide rail with force until you hear a "click" sound. The module



is then installed in place, as shown in Figure ② below.

2

I/O Module Installation

Follow the steps above to install the coupler module and install the required I/O modules or functional modules one by one. Push them in as shown in Figures ③, ④, and ⑤ below. When you hear a "click", the module is installed in place.



3





Terminal cover installation

Install the terminal cover on the right side of the last module, aligning one side of the terminal cover groove with the guide rail. For installation, refer to the installation method of the I/O module and push the terminal cover inwards into place, as shown in Figure ⁽⁶⁾ below.



After the terminal cover is installed, check whether the front of the entire module is flat, and ensure that all modules and end covers are installed in place and the front is flush, as shown in Figure below.



Guide rail fixing installation

Install and tighten the guide rail fixings close to the left side of the coupler, as shown in Figure (8) below.



Install the rail fixing on the right side of the terminal cover. First push the rail fixing toward the coupler to ensure that the module is installed firmly, and then tighten the rail fixing with a screwdriver, as shown in Figure (9) below.



Disassembly

Use a screwdriver to loosen the guide rail fixing at one end of the module and move it to one side to ensure that there is a gap between the module and the guide rail fixing, as shown in Figure (1) below.



10

Insert a flat-head screwdriver into the buckle of the module to be removed, and apply force sideways in the direction of the module (until you hear a sound), as shown in the following figure(1)and(12). Note:
 Each module has a buckle on the top and bottom, and the same method is used for both.



(11)



■ Follow the opposite operation of installing the module to remove the module, as shown below⁽³⁾ shown.



(13)

5 Wiring

5.1 Wiring Diagram



- *COM0~COM3 are DI common terminals, not interoperable internally, NPN/PNP compatible;
- *24V internal conduction; 0V internal conduction;
- *P0V~P3V are only supported after XB6S-PT04A[1] version.

5.2 Terminal Block Definition

	A		В	
Terminal marking	Illustrate	Terminal marking	Illustrate	
0	CH0 pulse output A line	0	CH1 pulse output A line	
1	CH0 pulse output B line	1	CH1 pulse output B line	
2	CH0 pulse power supply 24V	2	CH1 pulse power supply 24V	
3	CH0 input positive limit	3	CH1 input positive limit	
4	CH0 input negative limit	4	CH1 input negative limit	
5	CH0 input origin signal	5	CH1 input origin signal	
6	CH0 input brake	6	CH1 input brake	
7	CH0 input common terminal	7	CH1 input common terminal	
	c	D		
Terminal marking	Illustrate	Terminal marking	Illustrate	
0	CH2 pulse output A line	0	CH3 pulse output A line	
1	CH2 pulse output B line	1	CH3 pulse output B line	
2	CH2 pulse power supply 24V	2	CH3 pulse power supply 24V	
3	CH2 input positive limit	3	CH3 input positive limit	
4	CH2 input negative limit	4	CH3 input negative limit	
5	CH2 input origin signal	5	CH3 input origin signal	
6	CH2 input brake	6	CH3 input brake	
7	CH2 input common terminal	7	CH3 input common terminal	
8	Field side nower supply 24V	8	Field side power supply 24V	
	Tield side power supply 240	<u> </u>		

6 Use

6.1 Configuration parameter definition

There are 30 parameters in total for module configuration, including 6 module-level parameters and 6 channel-level parameters. The configuration parameters are introduced by taking channel 0 as an example, as shown in the following table. Note: Configuration parameters can only be modified when the channel is in static state.

Function	Parameter name	Value range	default value	
Pulse output mode	Pulse Mode	0: Pul+Direction Pul+Dir	0	
		1: Double pulse CW/CCW		
		0: Keep On Running		
Safe Mode	Safe Mode	1: Slow Down	0	
		2: Brake Stop		
Braking time	Brake Time (ms)	20~5000ms	200	
		0: Enable - single merge mode	- 0	
Motion Merge	Merge Config	1: Enable - continuous merging mode		
Configuration		2: Turn off the motion merging		
		function		
		0x0001: DI0 (CH0 positive limit)		
		0x0002: DI1 (CH0 negative limit)	0	
Digital input channel		0x0004: DI2 (CH0 origin)		
function configuration	Input Config	0x0008: DI3 (CH0 brake)		
		0x0010: DI4 (CH1 positive limit)		
		0x8000: DI15 (CH3 brake)		
Return to zero timeout	Homing Time Out (ms)	0~100000ms	0	
Startup speed	CH0 Startup Speed	1~200000Hz	1	

		0: mode 19		
7		1: mode 21	2	
Zero return mode	CHU Homing Mode	2: mode 24		
		3: mode 28		
Zero return speed	CH0 Homing Speed	1~20000Hz	1000	
7	CH0 Homing	1 20000011-	500	
Zero approach speed	Approach Speed	1~20000Hz		
		0: Limit normally open, origin brake		
		normally open		
		1: Limit normally open, origin brake		
Input signal logic		normally closed		
selection	CHU INPUT LOGIC	2: Limit normally closed, origin brake		
		normally open		
		3: Limit normally closed, origin brake	-	
		normally closed		
Scale	CH0 Scaling	1~60000	1	

Note: Pulse output mode, safety mode, brake time, motion merging configuration, digital input channel function configuration, and return to zero timeout are module-level parameters and are set uniformly for the four channels.

Start speed, zero return mode, zero return speed, zero return approach speed, input signal logic selection, and scale are channel-level parameters and are configured separately for each channel.

6.1.1 Pulse Mode Configuration

XB6S-PT04A supports two pulse output modes: 0: pulse + direction, 1: double pulse (CW/CCW). The four output channels share this configuration parameter and do not support separate configuration.

6.1.2 Safe Mode

When communication is interrupted, three safety modes can be selected: 0: Continue running, 1: Decelerate to stop, 2: Brake to stop. The four output channels share this configuration parameter and do not support separate configuration.

6.1.3 Braking time configuration

Once the brake command is triggered, the device will enter the braking phase and will stop within the set time regardless of the speed. The default braking time is 200ms. The four output channels share this configuration parameter and do not support separate configuration.

6.1.4 Motion Merge Configuration

Motion merging configuration supports three modes: single mode: each motion merging must set Start from 0 to 1; continuous mode: motion merging does not need to set Start from 0 to 1, directly modify the downlink data to start merging; merging disabled mode: turn off the motion merging function. The four output channels share this configuration parameter and do not support separate configuration.

6.1.5 Input channel function configuration

It is allowed to modify any digital input to normal mode, that is, turn off the positive and negative limit, origin, and brake functions. There are 16 bits in total for the 4 channels, and setting the corresponding bit to 1 means setting it to normal digital input.

Example 1: If the positive limit of channel 0 is turned off, the first bit is set to 1 (2#0001 converted to decimal is 10#1).

Example 2: If the positive limit of channel 1 is turned off, the 5th bit is set to 1 (2#0001 0000 converted to decimal is 10#16).

Note: If the origin is reused, the zero return function becomes invalid.

6.1.6 Return to zero timeout

A complete return to origin action will go through ① entering the origin signal and ② exiting the origin signal, as shown in the figure below. After the module stops at the origin signal, the time required to exit the origin signal is T. If the origin signal is abnormal and cannot exit after entering the origin signal, the module will consider the return to origin failure and report a timeout alarm.



The module supports setting the zero return timeout from 0 to 100000ms. The default value is 0, which means the zero return timeout detection is turned off. The four output channels share this configuration parameter and do not support separate configuration.

6.1.7 Start up speed

Four parameters are needed to determine a trapezoidal acceleration and deceleration curve: acceleration time, deceleration time, start speed, and running speed. The running speed, acceleration time, and deceleration time are frequently modified, so they are placed in the downlink instruction. The start speed is placed in the configuration parameters, and the four channels can be set separately. In actual use, the motion trajectories of the absolute/relative position mode, speed mode and return to zero mode all follow this set of trapezoidal acceleration and deceleration parameters.

6.1.8 Zero return parameters

Zero return means finding the origin signal through the combination of positive limit, negative limit and origin signal. There are three configuration parameters related to zero return: zero return mode, zero return speed and zero return approach speed. There are four zero return modes to choose from: zero return mode 19, 21, 24 and 28. These three parameters can be set separately for four channels. After successful zero return, the coordinate clear command will be automatically executed.

♦ Zero return mode 19:

①When there is no origin signal input:

- a. Move in the positive direction at the zero return speed, and when there is an origin signal input, decelerate to 0;
- b. Move in the negative direction again at the zero approach speed until the origin signal disappears and then stop moving.

②When the origin signal exists:

a. Move in the negative direction at the zero approach speed and stop when the origin signal disappears.



Zero return mode 21:

(1) When there is no origin signal input:

- a. Move in the negative direction at the zero return speed, and when there is an origin signal input, decelerate to 0;
- b. Move in the positive direction again at the zero approach speed until the origin signal disappears and then stop moving.

②When the origin signal exists:

a. Move in the positive direction at the zero approach speed and stop when the origin signal disappears.



Zero return mode 24:

(1) When there is no origin/positive limit signal input:

- a. Move in the positive direction at the zero return speed until the origin signal input is detected, then decelerate until the speed reaches 0;
- b. Then move in the negative direction at the zero approach speed until the origin signal disappears, and then decelerate until the speed reaches 0;
- c. Then move in the positive direction at the zero approach speed until the origin signal appears and stop moving.

②When there is no origin/positive limit signal input:

- a. Move in the positive direction at the zero return speed. When the positive limit signal is input, brake until the speed reaches 0.
- b. Then move in the negative direction at the zero return speed. When the origin signal is exited, decelerate until the speed reaches 0.
- c. Then move in the positive direction at the zero approach speed until the origin signal appears and stop moving.

③When the origin signal exists:

- a. Move in the negative direction at the zero approach speed. When exiting the origin signal, decelerate until the speed reaches 0.
- b. Then move in the positive direction at the zero approach speed until the origin signal appears and stop moving.



Zero return mode 28:

①When there is no origin/negative limit signal input:

- a. Move in the negative direction at the zero return speed until the origin signal input is detected, and then decelerate until the speed reaches 0;
- b. Then move in the positive direction at the zero approach speed until the origin signal disappears, and then decelerate until the speed reaches 0;
- c. Then move in the negative direction at the zero approach speed until the origin signal appears and stop moving.

②When there is no origin/negative limit signal input:

- a. Move in the negative direction at the zero return speed. When the negative limit signal is input, brake until the speed reaches 0.
- b. Then move in the positive direction at the zero return speed. When the origin signal is exited, decelerate until the speed reaches 0.
- c. Then move in the negative direction at the zero approach speed until the origin signal appears and stop moving.

③When the origin signal exists:

- a. Move in the positive direction at the zero approach speed. When exiting the origin signal, decelerate until the speed reaches 0.
- b. Then move in the negative direction at the zero approach speed until the origin signal appears and stop moving.



6.1.9 Input signal logic

The input signal Input Logic can be configured as:

- 0: Limit is normally open, origin brake is normally open;
- 1: Limit is normally open, origin brake is normally closed;
- 2: Limit is normally closed, origin brake is normally open;
- 3: Limit normally closed, origin brake normally closed;

The input signal logic can be set for the four channels individually, among which the positive limit and negative limit can only be set uniformly, and the origin and brake can only be set uniformly.

6.1.10 Scale

Set the speed and position units according to your needs. For example, if 1000 pulses are 1 circle in the actual field, Scaling can be set to 1000, then the running speed, running steps, starting speed, zero return speed, and zero return approach speed will all be multiplied by 1000. It can be understood that the units of the number of steps and speed parameters issued at this time will all be changed to circles.

6.2 Process data

6.2.1 Uplink data

Uplink data 48 bytes (12 bytes per channel, channel [n] ranges from 0 to 3)						
Name	Meaning	Value range	Data Types	Length		
CH[n] Pulse Output Direction	Actual pulse output direction	0: Forward 1: Reverse	bool	1 bit bit0		
CH[n] Pulse Status Flag 1	Pulse status	00: No pulse output 01: Accelerating	bool	2 bits		
CH[n] Pulse Status Flag 2	flag	10: Decelerating 11: Constant speed	bool	bit1~bit2		
CH[n] Homing Mode Running	Return to zero in operation	1: In zero return state 0: Not in zero return state	bool	1 bit bit3		
CH[n] Position Mode Running	Position mode in operation	1: In position mode 0: Not in position mode	bool	1 bit bit4		
CH[n] Velocity Mode Running	Speed mode in operation	1: In speed mode 0: Not in speed mode	bool	1 bit bit5		
CH[n] Homed	Return to zero completed	1: Return to zero completed 0: Return to zero is not completed	bool	1 bit bit6		
CH[n] Location Arrival	Location Arrival	1: Position reached 0: The position has not been reached	bool	1 bit bit7		
CH[n] Velocity Arrival	Speed arrival	1: Speedreached0: Speednot reached	bool	1 bit bit8		
CH[n] Positive Limit Signal	Positive limit signal input	1: There is signal input 0: No signal input	bool	1 bit bit9		
CH[n] Negative Limit Signal	Negative limit signal input	1: There is signal input 0: No signal input	bool	1 bit bit10		
CH[n] Home Signal	Origin signal input	1: There is signal input 0: No signal input	bool	1 bit bit11		
CH[n] Brake Signal	Brake signal input	1: There is signal input 0: No signal input	bool	1 bit bit12		
CH[n] Reserved	Reserve	Reserve	bool	3 bits bit13~bit15		

CH[n] Error Code	Alarm code	0x0001: Startup speed > running speed 0x0002: Startup speed > return to zero speed 0x0004: Start speed > return to zero approach speed 0x0008: Zero approach speed > zero return speed 0x0010: The running speed is out of range (speed × Scaling > 200000) 0x0020: The number of running steps is out of bounds (position × Scaling > 2^31-1 or position × Scaling < -2^31) 0x0040: Startup speed exceeds the limit (speed × Scaling > 200000) 0x0080: The return speed is out of range (speed × Scaling > 200000) 0x0080: The return speed is out of range (speed × Scaling > 200000 or speed × Scaling > 200000 or speed × Scaling < 1) 0x0100: The return to zero approach speed is out of range (speed × Scaling > 200000 or speed × Scaling > 200000 or speed × Scaling < 1) 0x0200: Acceleration time exceeds the limit (20~5000ms) 0x0800: Scaling out of range	unsigned16	2 bytes
		0x0200: Acceleration time exceeds the limit (20~5000ms) 0x0400: Deceleration time exceeds the limit (20~5000ms) 0x0800: Scaling out of range (1~60000) 0x1000: Positive limit trigger, no further forward movement is allowed 0x2000: Negative limit is triggered, and further movement in the negative direction is not allowed 0x8000: Return to zero failed		
CH[n] Current Location	Current location	-2,147,483,648 ~ 2,147,483,647	signed32	4 bytes
CH[n] Current Velocity	Current speed	0~200kHz	signed32	4 bytes

Data description:

• Pulse Output Direction

The pulse output direction flag can reflect the actual movement direction in different modes.

Pulse Status Flag

The status flag indicates the current state of the pulse output. It should be noted that normal deceleration and braking will cause the state to switch to deceleration. The current state can be determined by whether there is a signal input for positive and negative limit and brake.

Homing Mode Running

Indicates whether the current channel device is in zero return mode.

• Position Mode Running

Indicates whether the current channel device is running in position mode.

Velocity Mode Running

Indicates whether the current channel device is running in speed mode.

Return to zero and complete Homed

When the module starts the homing command and successfully finds the origin, this bit will be set to 1. When the channel starts moving again, it will be set to 0 again. It should be noted that if the homing fails for various reasons, this bit will not be set to 1.

Location Arrival

When the module is running in position mode and has reached the target position, this bit will be set to 1. When the channel starts moving again, it will be set to 0 again.

Velocity Arrival

When the module is running in speed mode and the running speed has reached the set value, this bit will be set to 1. When the channel starts moving again, it will be set to 0 again.

Positive Limit Signal, Negative Limit Signal, Origin Signal and Brake Signal

The four signals correspond to four input channels, indicating the presence or absence of the four input signals of the corresponding channels.

Error Code

Once a channel generates an alarm message, the movement related to the alarm message cannot be started, but the movement unrelated to the alarm message can still be started normally. Example 1: When the startup speed of channel 0 is greater than the running speed, the channel generates an alarm message, the first bit of the alarm message is 1 (2#0001 converted to decimal is 10#1), and the Online value of the Error Code is 1. Then channel 0 cannot start the speed/position mode, but can start back to zero normally.

Example 2: The 1st alarm message of channel 0 is not triggered, the 4th zero approach speed > zero speed generates an alarm message, the alarm code is 8 (2#1000 converted to decimal is 10#8), and the Online value of Error Code is 8. Then channel 0 cannot start zero return, but can start the speed/position mode normally.

Current Location

The current position indicates the number of offset pulses relative to the zero point, that is, the command position (coordinate). If the coordinate is cleared when there is no pulse output in the channel, the value will be directly set to 0.

Current Velocity

The actual running speed of the current channel.

6.2.2 Downlink data

Downlink instruction 56 bytes (14 bytes per channel, channel [n] ranges from 0 to 3)							
Name	Meaning	Value range	Data Types	Length			
	Direction of	0: Forward	bool	1 bit bit0			
CH[n] Running Direction	movement	1: Reverse					
CH[n] Absolute/Relative	Absolute/Relati	0: Absolute position	bool	1 bit bit1			
Position Mode	Ve Position Mode	1: Relative position					
CH[n] Position/Velocity	Position/Speed	0: Position mode	- bool	1 bit bit2			
Mode	Mode	1: Speed mode					
CH[n] Reset Coordinates	Current coordinates reset to zero	Edge control: 0->1 clears the current coordinates	bool	1 bit bit3			
CH[n] Start	Start a Movement	Edge control: 0->1 start	bool	1 bit bit4			
	Brako	0: No brake command	bool	1 bit bit5			
CH[n] Brake	command	1: Trigger the brake command					
CH[n] Home	Start back to zero	Edge control: 0->1 start	bool	1 bit bit6			
		0: decelerate and stop the	bool	1 bit bit7			
CH[n] JOG	Jog command	movement					
		1: Running speed mode					
CH[n] Clear State	Clear flag	Edge control: 0->1 effective	bool	1 bit bit8			
CH[n] Set Current Location	Set current location	Edge control: 0->1 effective	bool	1 bit bit9			
CH[n] Reserved	Reserve	Reserve	bool	6 bits bit10~bit15			
CH[n] Acceleration TimeAccelerationCH[n] Acceleration Timetimeconfiguration		20~5000ms	unsigned16	2 bytes			
CH[n] Deceleration Time	CH[n] Deceleration TimeDecelerationCH[n] Deceleration Timetimeconfiguration		unsigned16	2 bytes			
CH[n] Running Velocity	Running speed configuration	1~200000Hz	unsigned32	4 bytes			
CH[n] Running Position Running step configuration		-2^31~2^31-1	signed32	4 bytes			
Data description:

Running Direction

The movement direction is actually only valid in speed mode. Because the relative position mode can directly determine the positive and negative steps to set the direction, and the absolute position mode can directly determine the size relationship between the current coordinates and the target coordinates to determine the running direction, so only the speed mode needs to rely on this parameter to determine the running direction.

Absolute/Relative Position Mode, Position/Velocity Mode

These three parameters together determine how to move. Relative position mode and absolute position mode need to be established on the premise of selecting the position mode. If the current setting is speed mode, then this parameter is meaningless.

Absolute position mode:The running steps indicate the running from the current coordinate to the set coordinate position.

For example: the current position is 600 steps, and the running step number is 800, it means running to the position of 800 steps, that is, running 200 steps in the positive direction.

In this mode, the speed and position can be modified in real time, and the speed mode can be switched directly. It should be noted that the speed cannot be set to 0 in this mode.

For example: the current position is 10000 steps, the first start is in absolute position mode, the target position is 20000 steps, and during the operation, 20000 steps are changed to 50000 steps, then it will run directly to the position of 50000 steps.

Relative position mode:The number of running steps indicates how many steps are run directly. For example: if the running step number is -500, it means running 500 steps directly in the opposite direction.

In this mode, the speed and position can be modified in real time, and the speed mode can be switched directly. It should be noted that the speed cannot be set to 0 in this mode.

For example: the current position is 10000 steps, the first start is in relative position mode, the target position is 20000 steps, and during the operation, 20000 steps are changed to 50000 steps, then it will directly run to the position of 60000 steps.

Speed Mode:The channel will accelerate to the running speed according to the set acceleration curve and continue to run. In this mode, changing the running speed parameter will take effect immediately. If the speed is set to 0 in the speed mode, the channel will follow the set deceleration time to decelerate until the speed is reduced to 0 and the speed mode is closed. In this mode, the speed and running direction can be modified in real time, and it is allowed to switch directly to the position mode.

Note: In speed mode and position mode, it is not allowed to continue moving in the same direction after the limit is triggered. The limit is released after starting a movement in the reverse direction.

Reset Coordinates

32

Return the current coordinate to zero, and edge control 0->1 takes effect. This command can only take effect when the channel is stationary.

• Start the movement

Edge control: when the channel is in a stationary state, a movement is started when this parameter is detected to change from 0 to 1.

Brake commandBrake

The brake command has the highest priority in the entire system. It takes effect immediately at any time and is level controlled. Therefore, as long as the brake command is 1, not only will the current movement be immediately closed, but the next movement will not be allowed to start. In other words, if you want the device to move, the brake command must be 0.

• Start back to zero Home

Edge control, when the channel is in the stopped state, the channel zero return is started when this parameter changes from 0 to 1. The channel zero return mode and the corresponding speed follow<u>6.1.8 Return to zero parameters</u>Configuration in .

Jog command JOG

The jog command is level controlled. When the command is set to 1, the running speed mode is started, and when it is set to 0, the speed is decelerated and stopped.

Clear State

Clear flag command, edge control 0->1 is effective. When the parameter is detected from 0 to 1, two flags will be cleared, Homed and Location Arrival. This command can only take effect when the channel is stationary.

• Set Current Location

Set the current position, and edge control 0->1 takes effect. You can directly set the current position (Current Location) in the upstream data to the running steps (Running Position) set in the downstream data.

Acceleration Time, Deceleration Time, Running Velocity, Running Position

The acceleration time, deceleration time, running speed and running steps in this parameter jointly determine the trapezoidal acceleration and deceleration curve.

6.3 Use Cases

- Channel 0 runs 50,000 pulses in the forward direction at a speed of 100,000 Hz
 - a. Configure the configuration parameters as needed;
 - b. Set channel 0 to relative position mode;
 - a) CH0 Position/Velocity Mode is set to 0;
 - b) CH0 Absolute/Relative Position Mode is set to 1;
 - c. Configure channel 0 to run with 50000 steps, 100000 Hz running speed, and 500 acceleration and deceleration times;
 - a) Set CH0 Running Velocity to 100000;
 - b) Set CH0 Running Position to 50000;
 - c) Set CH0 Acceleration Time and CH0 Deceleration Time to 500;
 - d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
 - a) Make sure CH0 Brake, CH0 Pulse Status Flag 1, and CH0 Pulse Status Flag 2 are equal to 0;
 - e. Set the start command of channel 0 from 0 to 1 to start motion.
 - a) CH0 Start is set from 0 to 1.

Channel 0 is currently at 1000, moves to -20000, and runs at a speed of 100000 Hz

- a. Configure the configuration parameters as needed;
- b. Set channel 0 to absolute position mode;
 - a) CH0 Position/Velocity Mode is set to 0;
 - b) CH0 Absolute/Relative Position Mode is set to 0;
- c. Configure channel 0 to run at -20000 steps, 100000 Hz speed, and 500 acceleration and deceleration times;
 - a) Set CH0 Running Velocity to 100000;
 - b) Set CH0 Running Position to -20000;
 - c) Set CH0 Acceleration Time and CH0 Deceleration Time to 500;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;a) Make sure CH0 Brake, CH0 Pulse Status Flag 1, and CH0 Pulse Status Flag 2 are equal to 0;
- e. Set the start command of channel 0 from 0 to 1 to start motion.
 - a) CH0 Start is set from 0 to 1.

Channel 0 turns on speed mode, running speed 100000Hz

- a. Configure the configuration parameters;
- b. Set channel 0 to speed mode;
 - a) Set CH0 Position/Velocity Mode to 1;
- c. Configure channel 0 to run at a speed of 100 kHz, move in a forward direction of 0, and set the acceleration and deceleration times to 500.
 - a) Set CH0 Running Velocity to 100000;
 - b) CH0 Running Direction is set to 0;
 - c) Set CH0 Acceleration Time and CH0 Deceleration Time to 500;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
 - a) Make sure CH0 Brake, CH0 Pulse Status Flag 1, and CH0 Pulse Status Flag 2 are equal to 0;
- e. Set the start command of channel 0 from 0 to 1 to start the movement;

a) CH0 Start is set from 0 to 1.

• Channel 0 runs at 100000Hz, in jog mode

- a. Configure the configuration parameters;
- b. Configure channel 0 to run at a speed of 100000, run in a direction of 0 forward, and set the acceleration and deceleration times to 500;
 - a) Set CH0 Running Velocity to 100000;
 - b) CH0 Running Direction is set to 0;
 - c) Set CH0 Acceleration Time and CH0 Deceleration Time to 500;
- c. Make sure channel 0 is in a static state;
- d. Set the jog command of channel 0 from 0 to 1 to start movement.
 - a) CH0 JOG is set from 0 to 1.

• Channel 0 turns on and returns to zero

- a. Configure the configuration parameters, select the zero return mode and set the zero return speed and zero return approach speed;
- b. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;a) Make sure CH0 Brake, CH0 Pulse Status Flag 1, and CH0 Pulse Status Flag 2 are equal to 0;
- c. Set the zero return command of channel 0 from 0 to 1 to start zero return.
 - a) CH0 Home is set from 0 to 1.
- Channel 0 turns on speed mode, running at 100000Hz, and the speed is changed to 10000Hz during operation
 - a. Configure the configuration parameters, such as enabling single-shot mode in motion merge mode selection;
 - b. Set channel 0 to speed mode;
 - a) Set CH0 Position/Velocity Mode to 1;
 - c. Configure channel 0 to run at a speed of 100000Hz, the direction of motion to 0 forward, and the acceleration and deceleration times to 500;
 - a) Set CH0 Running Velocity to 100000;
 - b) CH0 Running Direction is set to 0;
 - c) Set CH0 Acceleration Time and CH0 Deceleration Time to 500;
 - d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
 - a) Make sure CH0 Brake, CH0 Pulse Status Flag 1, and CH0 Pulse Status Flag 2 are equal to 0;
 - e. Set the start command of channel 0 from 0 to 1 to start the movement;
 - a) CH0 Start is set from 0 to 1;
 - f. During the movement, change the running speed of channel 0 to 10000Hz;a) Set CH0 Running Velocity to 10000;
 - g. Reset the start command of channel 0 from 0 to 1 to start motion merging.a) CH0 Start is set from 0 to 1.
- The current position of channel 0 is 10000, and it moves to the position of 20000. During the movement, the position is changed to 50000.

- a. Configure the configuration parameters as needed, such as enabling the continuous mode in the motion merging mode selection;
- b. Set channel 0 to absolute position mode;
 - a) CH0 Position/Velocity Mode is set to 0;
 - b) CH0 Absolute/Relative Position Mode is set to 0;
- c. Configure channel 0 to run at 20000 steps, 1000 Hz speed, and 500 acceleration and deceleration times;
 - a) Set CH0 Running Velocity to 1000;
 - b) Set CH0 Running Position to 20000;
 - c) Set CH0 Acceleration Time and CH0 Deceleration Time to 500;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
 - a) Make sure CH0 Brake, CH0 Pulse Status Flag 1, and CH0 Pulse Status Flag 2 are equal to 0;
- e. Set the start command of channel 0 from 0 to 1 to start the movement;
 - a) CH0 Start is set from 0 to 1;
- f. During the motion process, change the running steps of channel 0 to 50000 and start motion merging.
 - a) CH0 Running Position is set to 50000.

6.4 Module Configuration Description

6.4.1 Application in TwinCAT3 software environment

1. Preparation

- Hardware Environment
 - > Module model XB6S-PT04A
 - > EtherCAT bus coupler module, end cap

This description takes the XB6S-EC2002 coupler module as an example

- > A computer with TwinCAT3 software pre-installed
- > EtherCAT dedicated shielded cable
- > Motor drivers, stepper/servo motors and other equipment
- > Switching power supply
- > Module mounting rails and rail fixings
- Device Profile

Configuration file acquisition address: https://www.solidotech.com/documents/configfile

• Hardware configuration and wiring Please follow the<u>4 Installation and removal</u>""<u>5 Wiring</u>Request action

2、 Pre-configured configuration files

Place the ESI configuration file (EcatTerminal-XB6S_V1.19_ENUM.xml) in the TwinCAT installation directory "C:\TwinCAT\3.1\Config\Io\EtherCAT", as shown in the figure below.

名称	修改日期	类型	大小
Beckhoff EL32xx.xml	2017/10/25 15:43	XML 文档	5,997 KB
Beckhoff EL66xx.xml	2017/10/27 8:55	XML 文档	1.820 KB
Beckhoff EKx9xx.xml	2017/11/3 9:53	XML文档	1.223 KB
Beckhoff EP7xxx.xml	2017/11/8 9:46	XML 文档	9.290 KB
Beckhoff ATH2xxx.xml	2017/11/23 13:22	XML 文档	439 KB
Beckhoff EPP3xxx.xml	2017/12/8 8:48	XML 文档	2,099 KB
Beckhoff EPP1xxx.xml	2017/12/14 11:34	XML 文档	480 KB
Beckhoff EL34xx.xml	2017/12/15 15:35	XML 文档	5,634 KB
Beckhoff EK13xx.xml	2017/12/19 14:30	XML 文档	16 KB
Beckhoff EPP2xxx.xml	2017/12/28 12:22	XML 文档	1,811 KB
Beckhoff EJ1xxx.xml	2018/1/4 10:00	XML 文档	67 KB
Beckhoff EJ3xxx.xml	2018/1/4 10:07	XML 文档	1,169 KB
Beckhoff EJ7xxx.xml	2018/1/4 10:11	XML文档	2,339 KB
Beckhoff EJ9xxx.xml	2018/1/4 10:23	XML 文档	160 KB
Beckhoff EJ6xxx.xml	2018/1/4 10:31	XML 文档	313 KB
Beckhoff EL30xx.xml	2018/1/11 13:03	XML 文档	11,508 KB
Beckhoff EL37xx.xml	2018/1/23 13:59	XML 文档	11,837 KB
Beckhoff EJ2xxx.xml	2018/1/23 14:21	XML 文档	239 KB
Beckhoff EL5xxx.xml	2018/1/23 15:11	XML 文档	6,307 KB
Beckhoff EJ5xxx.xml	2018/1/23 15:12	XML 文档	218 KB
Beckhoff EL2xxx.xml	2018/1/24 9:40	XML 文档	2,868 KB
Beckhoff EL33xx.xml	2018/1/26 9:34	XML 文档	6,727 KB
Beckhoff ELM3xxx.xml	2018/2/1 10:19	XML 文档	14,238 KB
Beckhoff AX5xxx.xml	2018/2/8 16:15	XML 文档	930 KB
Beckhoff EL1xxx.xml	2018/2/19 17:15	XML 文档	3,387 KB
Beckhoff EL25xx.xml	2018/2/21 10:23	XML 文档	6,543 KB
EcatTerminal-XB6S V1.19 ENUM.xml	2024/3/19 16:49	XML文档	1,129 KB

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3、 Create a project

a. Click the TwinCAT icon in the lower right corner of the desktop and select "TwinCAT XAE (VS xxxx)" to open the TwinCAT software, as shown in the figure below.



 b. Click "New TwinCAT Project". In the pop-up window, "Name" and "Solution name" correspond to the project name and solution name respectively, and "Location" corresponds to the project path. You can select the default for these three items, then click "OK". The project is created successfully, as shown in the figure below.

New TwinCAT P	roject	Get Started Beckhoff Net	WS
New Measurem	ent Project		What's New in TwinCAT 3
New Project			? ×
▶ Recent		.NET Framework 4.5 Sort by: Default	🔹 🏭 🔚 Search Installed 👂
 Installed Templates Other Project TwinCAT Mea TwinCAT PLC TwinCAT Proj Samples Online 	t Types asurement iects	TwinCAT XAE Projec TwinCAT Projects	Type: TwinCAT Projects TwinCAT XAE System Manager Configuration
		Click here to go online and tind templates.	
Name:	TwinCAT Proje	ct1	
Location:	D:\workspace\	TwinCAT Project	Browse
Solution name:	TwinCAT Proje	ct1	Create directory for solution

4、Scan Devices

a. After creating the project, right-click the "Scan" option under "I/O -> Devices" to scan the slave devices, as shown in the figure below.



b. Check the "Local Area Connection" network card, as shown in the figure below.
 1 new I/O devices found



c. In the pop-up window "Scan for boxes", click and select "Yes"; in the pop-up window "Activate Free Run", click and select "Yes", as shown in the following figure.



d. After scanning the device, you can see Box 1 (XB6S-EC2002) and Module 1 (XB6S-PT04A) in the left navigation tree. In "Online", you can see that TwinCAT is in "OP" state, and the RUN light of the slave device is always on, as shown in the figure below.



5、Verify basic functionality

a. Click "Box1 -> Startup -> New" in the left navigation tree to enter the configuration parameter editing page, as shown in the figure below.

解决方案资源管理器 ▼ 平 ×	Tw	inCAT Project	1 + × 起	始页			
00 <u>4</u> 0-2 0 / -	C	Seneral Ether	CAT DC	Process Data	Slots Startup CoE -	Online Diag History Online	
捜索解决方案资源管理器(Ctrl+;) ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・ ・							
解决方案"TwinCAT Project1"(1 个项目)		Transition	Protocol	Index	Data	Comment	
A TwinCAT Project1		C <ps></ps>	CoE	0xF030:00	0x00 (0)	clear slot cfg 0xF030 entries	
SYSTEM		C <ps></ps>	CoE	0xF030:01	0x0000E405 (58373)	download slot cfg 0xF030 entry	
MOTION		C <ps></ps>	CoE	0xF030:00	0x01 (1)	download slot cfg 0xF030 entry count	-
PLC							
SAFETY							
6 C++							
🔺 🗾 I/O							
Devices							
 Device 1 (EtherCAT) 							
🚉 Image							
🚉 Image-Info							
SyncUnits							
Inputs							
Outputs							
InfoData							
 Box 1 (XB6S-EC2002) 							
Inputs							
Outputs							
P Module 1 (XB6S-PT04A)							
WcState							
P 🛄 InfoData		Movellin	Move	Down		New	Edit
Mappings		move op	WOVE	DOWN		Deletem	Contra

b. In the Edit CANopen Startup Entry pop-up window, click the "+" in front of Index 2000:0 to expand the configuration parameter menu. Click any parameter to set the related configuration, as shown in the figure below.

Startup Entry					×
Index □S->P Sub-li □ 0->S □	: (hex): ndex (dec): alidate	0 0 Complete Access		OK Cancel	ľ
				Hex Edit	t
				Edit Entry	y
Name	Flags	Value	Unit		^
XB6S-PT04A Config	RO	> 30 <			
Pulse Mode	RW	Pul+Dir (0)	①脉冲输出模	式	100
Safe Mode	RW	Keep On Running (0)	②安全模式		
Brake Time(ms)	RW	0x000000C8 (200)	③刹车时间		
Merge Config	RW	Enable Single (0)	④运动合并配	置	
Input Config	RW	0x00000000 (0)	⑤数字量输入	通道功能配	置
Homing TimeOut(ms)	RW	0x00000000 (0)	⑥回零超时		
CH0 Startup Speed	RW	0x00000001 (1)	⑦启动速度		
CH0 Homing Mode	RW	mode 24 (2)	⑧回零模式		
CH0 Homing Speed	RW	0x000003E8 (1000)	⑨回零速度		
CH0 Homing Approach Spee	d RW	0x000001F4 (500)	⑩回零接近速	度	
CH0 Input Logic	RW	Limit Normally Open,	① 输入信号逻	辑选择	
CH0 Scaling	RW	0x00000001 (1)	②标度		
CH1 Startup Speed	RW	0x00000001 (1)			
CH1 Homing Mode	RW	mode 24 (2)			~
	Startup Entry Index S→P Sub-I O→S Sub-I O→S Sub-I O→S Sub-I O→ S Sub-I O→	Startup Entry	Startup Entry Index (hex): 0 □ S → P Sub-Index (dec): 0 □ O → S Validate Complete Access ✓ Validate Value × Kep On Running (N) RO Pulse Mode RW Safe Mode RW Pulse Mode	Startup Entry Index (hex): 0 S -> P Sub-Index (dec): 0 O -> S Validate Complete Access Validate Complete Access Validate Complete Access Validate Complete Access Validate Value Value Unit XB6S-PT04A Config RO > 30 <	Startup Entry Index (hex): S-> P Sub-Index (dec): O O-> S Validate Complete Access Hex Edit Edit Entr Kame Flags Value Unit Edit Entr Edit Entr Kame Flags Value Unit Edit Entr Edit Entr Kame Flags Value Unit Edit Entr Kame Flags Value Unit Edit Entr Kame Flags Value Unit Edit Entr Edit Entr Kame Flags Value Unit Edit Entr Kame Flags Value Unit Chi Safe Mode RW Flags Value Unit Chi Safe Mode RW Keep On Running(0) Startup Speed RW Ox0000000(0) Flabateg CH0 Homing Mode RW CH0 Startup Speed RW Ox0000011(1) Ch1 Homing Mode RW Ox0000001(1) Oficit CH1 Startup Speed RW Ox0000001(1) Oficit CH1 Homing Mode RW Mode 24 (2)

c. For example, to modify the startup speed parameter of channel 0, double-click "CH0 Startup Speed" and modify the parameter value, as shown in the figure below.

Edit CANopen	Startup Entry	6							×
Transition ☐ I -> P ☑ P -> S ☐ S -> 0	_S->P _0->S	Index (he: Sub-Inde: Valida	<): [<(dec): [ite [2000 7 Comple	te Acce	SS			OK Cancel
Data (hexbin):	01 00 00 0	Set Value Dialo	og					×	ex Edit
Validate Mask: Comment:	CH0 Start	Dec: Hex:	100 0x00000064				0 Car	K licel	lit Entry
Index	Name	Float	1.4012985e-4	13					^
. ± 10F1:0	Error Settir			20					
😟 10F3:0	Diagnosis								
⊞ 1C32:0	SM output	Bool:	0	1	1		Heyf	Edit	
	SM input p	2001.		-	-				
Ē 2000:0	XB6S-PT0	Binary:	64 00 00 00					4	
2000:01	Pulse Mod	Bit Size:	01 00	016	a 22	064	\bigcirc		
2000:02	Safe Mode	Dit Size.		010	U J2	004	01		
2000:03	Brake Time	e(ms)	RW	0000000	1008 (20	0)			
2000:04	Merge Cont	fig	RW	Enable	Single (I))			
2000:05	Input Config		RW	0x00000	000 (0)				
2000:06	Homing Tin	neOut(ms)	RW	0x00000	1000 (0)				
- 2000:07	CH0 Startup	o Speed	RW	0x00000	001 (1)				
2000:08	CH0 Homin	g Mode	RW	mode 2	4 (2)				
2000:09	CH0 Homin	g Speed	RW	0x00000	3E8 (10	00)			
- 2000:0A	CH0 Homin	g Approach Spee	d RW	0x00000	1F4 (50))			~
		10 SAMA 200							

d. After the parameter modification is completed, the modified parameter items and parameter values can be seen under Startup, as shown in the figure below. After the parameter setting is completed, the Reload operation and the module power-on are required to realize the automatic transmission of parameter settings by the master station.

解决方案资源管理器 ▼ ↓ ×	TwinCAT Project1 🔋 🗙 起始页	/
001 0-20 × -	General EtherCAT DC Process Data Slots Startup CoE - Online Diag History Online	
搜索解决方案资源管理器(Ctrl+;) 解决方案"TwinCAT Project1"(1 个项目) TwinCAT Project1	Transition Protocol Index Data Comment C <ps> CoE 0xF030:00 0x00 (0) clear slot cfg 0xF030 entries</ps>	
 TwincAT Project TwincAT Project MOTION PLC SAFETY C++ T/O Devices Temperative Temperative 	C <ps> CoE 0xf030:01 0x0000E405 (58373) download slot cfg 0xF030 entry C <ps> CoE 0xF030:00 0x01 (1) download slot cfg 0xF030 entry count C <ps> CoE 0xF030:00 0x01 (1) download slot cfg 0xF030 entry count E PS CoE 0x2000:07 0x00000064 (100) CH0 Startup Speed</ps></ps></ps>	
 ▷ SyncUnits ▷ Inputs ▷ Outputs ▷ InfoData □ InfoData □ InfoData □ InfoData ▷ Inputs ▷ Outputs ▷ PT Module 1 (XB6S-PT04A) ▷ WcState ▷ InfoData □ InfoData 	Move Up Move Down New Delete Edit	

e. The left navigation tree "Module 1 -> Inputs" displays the upstream data of the pulse output module and is used to monitor the status of the module, as shown in the following figure.

解决方案资源管理器 🔹 🕂 🗙	TwinCAT Project1 😐 🗙						<u>80</u>		
000 0-20 4-	Name		Online	Туре	Size	>Address	In/Out	User ID	Linked to
	✤ CH0 Pulse Output Direction	脉冲实际输出方向	0	BIT	0.1	41.0	Input	0	
投影解决力乘页际自注册(Cul+,)	😎 CH0 Pulse Status Flag 1	Do you a product of the later	0	BIT	0.1	41.1	Input	0	
a] 解决方案"TwinCAT Project1"(1 个项目)	CH0 Pulse Status Flag 2	脉/甲状念/标志/业	0	BIT	0.1	41.2	Input	0	
TwinCAT Project1	🕫 CH0 Homing Mode Running	回零运行中	0	BIT	0.1	41.3	Input	0	
P SYSTEM	CH0 Position Mode Running	位置模式运行中	0	BIT	0.1	41.4	Input	0	
	🕫 CH0 Velocity Mode Running	速度模式运行中	0	BIT	0.1	41.5	Input	0	
CALETY	♥ CH0 Homed	回零完成	0	BIT	0.1	41.6	Input	0	
SALETT	CH0 Location Arrival	位置到达	0	BIT	0.1	41.7	Input	0	
	CH0 Velocity Arrival	速度到达	0	BIT	0.1	42.0	Input	0	
Devices	CH0 Positive Limit Signal	止限位	0	BIT	0.1	42.1	Input	0	
 Device 2 (EtherCAT) 	CH0 Negative Limit Signal	负限位	0	BIT	0.1	42.2	Input	0	
🚼 Image	CH0 Home Signal	原点	0	BIT	0.1	42.3	Input	0	
📲 Image-Info	CH0 Brake Signal	刹车	0	BIT	0.1	42.4	Input	0	
SyncUnits	✤ CH1 Pulse Output Direction		0	BIT	0.1	43.0	Input	0	
👂 🛁 Inputs	CH1 Pulse Status Flag 1		0	BIT	0.1	43.1	Input	0	
Outputs	CH1 Pulse Status Flag 2		0	BIT	0.1	43.2	Input	0	
👂 🧧 InfoData	CH1 Homing Mode Running		0	BIT	0.1	43.3	Input	0	
 Box 1 (XB6S-EC2002) 	CH1 Position Mode Running		0	BIT	0.1	43.4	Input	0	
Inputs	CH1 Velocity Mode Running		0	BIT	0.1	43.5	Input	0	
Outputs	€ CH1 Homed		0	BIT	0.1	43.6	Input	0	
P Module 1 (XB6S-P104A)	CH1 Location Arrival		0	BIT	0.1	43.7	Input	0	
P inputs	 CH1 Velocity Arrival 		0	BIT	0.1	44.0	Input	0	
b WeState	 CH1 Positive Limit Signal 		0	BIT	0.1	44.1	Input	0	
	CH1 Negative Limit Signal		0	BIT	0.1	44.2	Input	0	
Appings	CH1 Home Signal		0	BIT	0.1	44.3	Input	0	
	CH1 Brake Signal		0	BIT	0.1	44.4	Input	0	
	CH2 Pulse Output Direction		0	BIT	0.1	45.0	Input	0	
	CH2 Pulse Status Flag 1		0	BIT	0.1	45.1	Input	0	
	CH2 Pulse Status Flag 2		0	BIT	0.1	45.2	Input	0	
	CH2 Homing Mode Running		0	BIT	0.1	45.3	Input	0	
	CH2 Position Mode Running		0	BIT	0.1	45.4	Input	0	
	CH2 Velocity Mode Kunning		0	DIT	0.1	45.5	Input	0	
	CH2 Location Arrival		0	DIT	0.1	45.0	Input	0	
	CH2 Velocity Arrival		0	BIT	0.1	46.0	Input	0	
	CH2 Positive Limit Signal		0	RIT	0.1	46.1	Input	0	
	CH2 Negative Limit Signal		0	BIT	0.1	46.2	Input	0	
	CH2 Home Signal		0	BIT	0.1	46.3	Input	0	
	CH2 Brake Signal		0	BIT	0.1	46.4	Input	0	
	CH3 Pulse Output Direction		0	BIT	0.1	47.0	Input	0	
	CH3 Pulse Status Flag 1		0	BIT	0.1	47.1	Input	0	
	CH3 Pulse Status Flag 2		0	BIT	0.1	47.2	Input	0	
	🕫 CH3 Homina Mode Runnina		0	BIT	0.1	47.3	Input	0	
	• CH3 Position Mode Running		0	BIT	0.1	47.4	Input	0	
			0	BIT	0.1	47.5	Input	0	
	✤ CH3 Homed		0	BIT	0.1	47.6	Input	0	
	CH3 Location Arrival		0	BIT	0.1	47.7	Input	0	
	CH3 Velocity Arrival		0	BIT	0.1	48.0	Input	0	
	CH3 Positive Limit Signal		0	BIT	0.1	48.1	Input	0	
	🕫 CH3 Negative Limit Signal		0	BIT	0.1	48.2	Input	0	
	🕶 CH3 Home Signal		0	BIT	0.1	48.3	Input	0	
	🕶 CH3 Brake Signal		0	BIT	0.1	48.4	Input	0	
	🕶 CH0 Error Code		1537	UINT	2.0	49.0	Input	0	
	CH1 Error Code	告警码	1537	UINT	2.0	51.0	Input	0	
	CH2 Error Code		1537	UINT	2.0	53.0	Input	0	
	CH3 Error Code		1537	UINT	2.0	55.0	Input	0	
	CH0 Current Location	当前位置	0	DINT	4.0	57.0	Input	0	
	CH0 Current Velocity	当前速度	0	DINT	4.0	61.0	Input	0	
	CH1 Current Location		0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity		0	DINT	4.0	69.0	Input	0	
	CH2 Current Location		0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity		0	DINT	4.0	77.0	input	0	
	CH3 Current Location		0	DINT	4.0	81.0	Input	0	
UI I	 CH3 Current Velocity 		U	DINI	4.0	92.0	input	U	

f. The left navigation tree "Module 1 -> Outputs" displays the downstream data of the pulse output module, which is used to monitor the output status of the module, as shown in the following figure.

解决方案资源管理器 👻 🕂 🗙	TwinCAT Project1 🖷 🗙								
000 0.20 4-	Name		Online	Type	Size	>Address	In/Out	User ID	Linked to
	CH0 Running Direction	运动方向	0	BIT	0.1	41.0	Output	0	
授家解決万薬资源管理層(Ctrl+;)	CH0 Absolute/Relative Position Mode	绝对/相对位置模式	0	BIT	0.1	41.1	Output	0	
解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	位置/速度模式	0	BIT	0.1	41.2	Output	0	
 TwinCAT Project1 	CH0 Reset Coordinates	坐标清零	0	BIT	0.1	41.3	Output	0	
SYSTEM	CH0 Start	启动运动	0	BIT	0.1	41.4	Output	0	
MOTION	CH0 Brake	刹车指令	0	BIT	0.1	41.5	Output	0	
PLC	CH0 Home	开始回零	0	BIT	0.1	41.6	Output	0	
SAFETY	CH0 JOG	点动命令	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	清除标志位	0	BIT	0.1	42.0	Output	0	
A Tenvices	CH0 Set Current Location	设置当前位置	0	BIT	0.1	42.1	Output	0	
Device 2 (EtherCAT)	CH1 Running Direction		0	BIT	0.1	43.0	Output	0	
Image	CH1 Absolute/Relative Position Mode		0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode		0	BIT	0.1	43.2	Output	0	
SyncUnits	CH1 Reset Coordinates		0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start		0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake		0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home		0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG		0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State		0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location		0	BIT	0.1	44.1	Output	0	
 P Module 1 (XB6S-PT04A) 	CH2 Running Direction		0	BIT	0.1	45.0	Output	0	
Inputs	CH2 Absolute/Relative Position Mode		0	BIT	0.1	45.1	Output	0	
P Uutputs	CH2 Position/Velocity Mode		0	BIT	0.1	45.2	Output	0	
P westate	CH2 Reset Coordinates		0	BIT	0.1	45.3	Output	0	
P Mannings	CH2 Start		0	BIT	0.1	45.4	Output	0	
a mappings	CH2 Brake		0	BIT	0.1	45.5	Output	0	
	CH2 Home		0	BIT	0.1	45.6	Output	0	
	CH2 JOG		0	BIT	0.1	45.7	Output	0	
	CH2 Clear State		0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location		0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction		0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode		0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode		0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates		0	BII	0.1	47.3	Output	0	
	CH3 Start		0	BIT	0.1	47.4	Output	0	
	CH3 Brake		0	BIT	0.1	47.5	Output	0	
	CH3 Home		0	BII	0.1	47.0	Output	0	
	CH3 JOG		0	BIT	0.1	47.7	Output	0	
	CH3 Clear State		0	DIT	0.1	40.0	Output	0	
	CHO Acceleration Time	加油时间积累	0	LUNT	2.0	40.1	Output	0	
	CHO Acceleration Time	加速的问题里	0	UINT	2.0	49.0	Output	0	
	CHO Bunning Velocity	法行使问题署	0	LIDINT	4.0	53.0	Output	0	
	CHO Running Position	运行步数配置	0	DINT	4.0	57.0	Output	0	
	CH1 Acceleration Time	但11岁就能量	0	UINT	2.0	61.0	Output	0	
	CH1 Deceleration Time		0	UINT	2.0	63.0	Output	0	
	CH1 Running Velocity		0	UDINT	4.0	65.0	Output	0	
	CH1 Running Position		0	DINT	4.0	69.0	Output	0	
	CH2 Acceleration Time		0	UINT	2.0	73.0	Output	0	
	CH2 Deceleration Time		0	UINT	2.0	75.0	Output	0	
	CH2 Running Velocity		0	UDINT	4.0	77.0	Output	0	
	CH2 Running Position		0	DINT	4.0	81.0	Output	0	
	CH3 Acceleration Time		0	UINT	2.0	85.0	Output	0	
	CH3 Deceleration Time		0	UINT	2.0	87.0	Output	0	
	CH3 Running Velocity		0	UDINT	4.0	89.0	Output	0	

Module Functionality Examples

- Channel 0 runs 50,000 pulses in the forward direction at a speed of 100,000 Hz
 - a. Configure the configuration parameters as shown in the following figure.

Edit CANopen	Startup Entry				\times
Transition $\Box I \rightarrow P$ $\bigtriangledown P \rightarrow S$ $\Box S \rightarrow 0$	Index □ S -> P Sub-In □ O -> S □ ∨e	ndex (hex): 0 Sub-Index (dec): 0 Validate Complete Access			OK Cancel
Data (hexbin):					Hex Edit
Validate Mask: Comment:					Edit Entry
Index	Name	Flags	Value	Unit	^
·⊡- 2000:0	XB6S-PT04A Config	RO	> 30 <		
2000:01	Pulse Mode	RW	Pul+Dir (0)		
2000:02	Safe Mode	RW	Keep On Running (0)		
2000:03	Brake Time(ms)	RW	0x000000C8 (200)		
2000:04	Merge Config	RW	Enable Single (0)		
2000:04 2000:05	Merge Config Input Config	RW RW	Enable Single (0) 0x00000000 (0)		
2000:04 2000:05 2000:06	Merge Config Input Config Homing TimeOut(ms)	RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0)		
2000:04 2000:05 2000:06 2000:07	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed	RW RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x00000000 (1)		
2000:04 2000:05 2000:06 2000:07 2000:08	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed CH0 Homing Mode	RW RW RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x000000001 (1) mode 24 (2)		
2000:04 2000:05 2000:06 2000:07 2000:07 2000:08 2000:09	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed	RW RW RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x000000001 (1) mode 24 (2) 0x000003E8 (1000)		
2000:04 2000:05 2000:06 2000:07 2000:08 2000:09 2000:0A	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Spee	RW RW RW RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500)		
- 2000:04 - 2000:05 - 2000:06 - 2000:07 - 2000:08 - 2000:09 - 2000:0A - 2000:0B	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Spee CH0 Input Logic	RW RW RW RW RW RW ed RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500) Limit Normally Open, Origi		
- 2000:04 - 2000:05 - 2000:06 - 2000:07 - 2000:08 - 2000:09 - 2000:0A - 2000:0B - 2000:0C	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Spee CH0 Input Logic CH0 Scaling	RW RW RW RW RW RW RW RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500) Limit Normally Open, Origi 0x0000001 (1)		
- 2000:04 - 2000:05 - 2000:06 - 2000:07 - 2000:08 - 2000:09 - 2000:0A - 2000:0B - 2000:0C - 2000:0D	Merge Config Input Config Homing TimeOut(ms) CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Spee CH0 Input Logic CH0 Scaling CH1 Startup Speed	RW RW RW RW RW RW RW RW RW RW	Enable Single (0) 0x00000000 (0) 0x00000000 (0) 0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500) Limit Normally Open, Origi 0x0000001 (1) 0x0000001 (1)		

- b. Set channel 0 to relative position mode;
- c. Configure channel 0 to run with 50000 steps, 100000 Hz running speed, and 500 acceleration/deceleration time.
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1, as shown in the figure below.

解决方案资源管理器 🔹 🕂 🗙	TwinCAT Project1 👎 🗙							
000 jo-20 8-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
	CH0 Absolute/Relative Position Mode	1	BIT	0.1	41.1	Output	0	
。 解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	0	BIT	0.1	41.2	Output	0	
 TwinCAT Project1 	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P SYSTEM	CH0 Start	1	BIT	0.1	41.4	Output	0	
MOTION	👺 CH0 Brake	0	BIT	0.1	41.5	Output	0	
PLC	CH0 Home	0	BIT	0.1	41.6	Output	0	
SAFETY	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A Provines	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
Device 2 (EtherCAT)	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SvncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
👂 🛄 InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
Module 1 (XB6S-PT04A)	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
👂 🔁 Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
👂 🖳 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	100000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	50000	DINT	4.0	57.0	Output	0	

f. After the movement is completed, you can see that the channel 0 position has been set to 1, as shown in the figure below.

解决方案资源管理器 ▼ 및 ×	TwinCAT Project1 🌵 🗙							
0 0 🟠 io - 2 🗊 🖌 🗕	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
換支解冲方案深源管理器(Ctrl+·) 0 ▼	CH0 Pulse Output Direction	0	BIT	0.1	41.0	Input	0	
12230077003803((小田注前(CUIT))	🕫 CH0 Pulse Status Flag 1	0	BIT	0.1	41.1	Input	0	
解决方案"TwinCAT Project1"(1 个项目)	🕫 CH0 Pulse Status Flag 2	0	BIT	0.1	41.2	Input	0	
TwinCAT Project1	🕫 CH0 Homing Mode Running	0	BIT	0.1	41.3	Input	0	
▷ I SYSTEM	🕫 CH0 Position Mode Running	0	BIT	0.1	41.4	Input	0	
MOTION	🕫 CH0 Velocity Mode Running	0	BIT	0.1	41.5	Input	0	
	🕶 CH0 Homed	0	BIT	0.1	41.6	Input	0	
SAFETY	CH0 Location Arrival	1	BIT	0.1	41.7	Input	0	
4 🖼 1/0	🕫 CH0 Velocity Arrival	0	BIT	0.1	42.0	Input	0	
	🗷 CH0 Positive Limit Signal	0	BIT	0.1	42.1	Input	0	
Devices	🕫 CH0 Negative Limit Signal	0	BIT	0.1	42.2	Input	0	
= Device 2 (Effect AT)	🕶 CH0 Home Signal	0	BIT	0.1	42.3	Input	0	
Image-Info	💌 CH0 Brake Signal	0	BIT	0.1	42.4	Input	0	
SyncUnits	CH1 Pulse Output Direction	0	BIT	0.1	43.0	Input	0	
b Inputs	🕶 CH1 Pulse Status Flag 1	0	BIT	0.1	43.1	Input	0	
Outputs	🕶 CH1 Pulse Status Flag 2	0	BIT	0.1	43.2	Input	0	
🕨 🛄 InfoData	✓ CH1 Homing Mode Running	0	BIT	0.1	43.3	Input	0	
Box 1 (XB6S-EC2002)	CH1 Position Mode Running	0	BIT	0.1	43.4	Input	0	
Inputs	CH1 Velocity Mode Running	0	BIT	0.1	43.5	Input	0	
Outputs	✓ CH1 Homed	0	BIT	0.1	43.6	Input	0	
Pi Module 1 (XB6S-PT04A)	CH1 Location Arrival	0	BIT	0.1	43.7	Input	0	
Inputs	CH1 Velocity Arrival	0	BIT	0.1	44.0	Input	0	
Outputs	CH1 Positive Limit Signal	0	BIT	0.1	44.1	Input	0	
WcState	CH1 Negative Limit Signal	0	BIT	0.1	44.2	Input	0	
👂 🛄 InfoData	✓ CH1 Home Signal	0	BIT	0.1	44.3	Input	0	
📸 Mappings	🕶 CH1 Brake Signal	0	BIT	0.1	44.4	Input	0	
	CH2 Pulse Output Direction	0	BIT	0.1	45.0	Input	0	
		0	BIT	0.1	45.1	Input	0	
	✓ CH2 Pulse Status Flag 2	0	BIT	0.1	45.2	Input	0	
	✤ CH2 Homing Mode Running	0	BIT	0.1	45.3	Input	0	
	✓ CH2 Position Mode Running	0	BIT	0.1	45.4	Input	0	
	✓ CH2 Velocity Mode Running	0	BIT	0.1	45.5	Input	0	

g. You can also see that the current coordinate of channel 0 is 50000, as shown in the figure below.

解决方案资源管理器 ▼ 早 ×	TwinCAT Project1 😐 🗙							
○ ○ ☆ io - ≥ 司 ≯	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
	CH2 Homed	0	BIT	0.1	45.6	Input	0	
及系附伏刀柔页//rel理部(CUI+,)	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
M 解决方案"TwinCAT Project1"(1 个项目)	🕫 CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
TwinCAT Project1	🕶 CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
SYSTEM	🕫 CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
MOTION	CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
PLC	🕶 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
SAFETY	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
K C++	🕫 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
	CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
 Devices Device 2 (Ether(AT)) 	CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
■ Image	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
timage-Info	CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
Synclinits	✤ CH3 Homed	0	BIT	0.1	47.6	Input	0	
	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
Outputs	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
👂 🛄 InfoData	🕫 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
Box 1 (XB6S-EC2002)	CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
Inputs	🕶 CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
Outputs	🕫 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
A PS Module 1 (XB6S-PT04A)	🕫 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
👂 🛄 Inputs	🛩 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
Dutputs	🕫 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
WcState	🕶 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
👂 🛄 InfoData	CH0 Current Location	50000	DINT	4.0	57.0	Input	0	
📸 Mappings	CH0 Current Velocity	0	DINT	4.0	61.0	Input	0	
	CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	♥ CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	♥ CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	
	and the second se		11.16			100.000		

6 Use

- Channel 0 is currently at 1000, moves to -20000, and runs at a speed of 100000 Hz
 - a. Configure the configuration parameters as shown in the following figure.

dit CANopen	Startup Entry				>
Transition					ОК
I->P	Index (i	iex):	U		Cancel
∠P->S	S->P Sub-Inc	lex (dec):	0		
_S→0	0->S	date	Complete Access		
Data (hexbin):					Hex Edit
Validate Mask				i.	1
Comment:					Edit Entry
Index	Name	Flags	Value	Unit	^
Ė 2000:0	XB6S-PT04A Config	RO	> 30 <		
2000:01	Pulse Mode	RW	Pul+Dir (0)		
2000:02	Safe Mode	RW	Keep On Running (0)		
2000:03	Brake Time(ms)	RW	0x000000C8 (200)		
2000:04	Merge Config	RW	Enable Single (0)		
2000:05	Input Config	RW	0×00000000 (0)		
2000-06	Homing TimeOut(ms)	RW	0×00000000 (0)		
2000.00	riennig inneeda(me)		. /		
2000:08	CH0 Startup Speed	RW	0x00000001 (1)		
2000:07	CH0 Startup Speed CH0 Homing Mode	RW RW	0x00000001 (1) mode 24 (2)		
2000:08 2000:07 2000:08 2000:09	CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed	RW RW RW	0x00000001 (1) mode 24 (2) 0x000003E8 (1000)		
2000:08 2000:07 2000:08 2000:09 2000:0A	CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Speed	RW RW RW	0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500)		
2000.08 2000:07 2000:08 2000:09 2000:0A 2000:0B	CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Speed CH0 Input Logic	RW RW RW I RW RW	0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500) Limit Normally Open, Origi		
- 2000.08 - 2000:07 - 2000:08 - 2000:09 - 2000:0A - 2000:0B - 2000:0C	CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Speed CH0 Input Logic CH0 Scaling	RW RW RW RW RW RW	0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500) Limit Normally Open, Origi 0x00000001 (1)		
2000:07 2000:07 2000:08 2000:09 2000:04 2000:0B 2000:0C 2000:0D	CH0 Startup Speed CH0 Homing Mode CH0 Homing Speed CH0 Homing Approach Speed CH0 Input Logic CH0 Scaling CH1 Startup Speed	RW RW RW RW RW RW RW	0x00000001 (1) mode 24 (2) 0x000003E8 (1000) 0x000001F4 (500) Limit Normally Open, Origi 0x00000001 (1) 0x00000001 (1)		

b. The current position of channel 0 is 1000, as shown in the figure below.

解决方案资源管理器 ▼ I ×	TwinCAT Project1 🌵 🗙					<u> </u>		
004 0·20 ¥-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
埋索解浊方安溶源管理哭(Ctrl) 0 ▼	CH2 Homed	0	BIT	0.1	45.6	Input	0	
	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
解决方案"TwinCAT Project1"(1 个项目)	🕫 CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
IwinCAT Project1	CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
SYSTEM	🕫 CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
MOTION	🕫 CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
	🕫 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
SAFELY	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
	🕫 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
A Bavices	🕫 CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
A Device 2 (Ether(AT)	🕫 CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
	🕫 CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
	🕫 CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
SyncUnits	✤ CH3 Homed	0	BIT	0.1	47.6	Input	0	
Inputs	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
Outputs	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
InfoData	🕫 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
 Box 1 (XB6S-EC2002) 	CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
Inputs	🕫 CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
Outputs	🕫 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
Module 1 (XB6S-PT04A)	🕶 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
👂 🛄 Inputs	🕶 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
Outputs	🕫 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
WcState	🕶 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
👂 🔚 InfoData	🕫 CH0 Current Location	1000	DINT	4.0	57.0	Input	0	
Mappings	2 CH0 Current Velocity	0	DINT	4.0	61.0	Input	0	
	✤ CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	✓ CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	✤ CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	
						1000		

- c. Set channel 0 to absolute position mode;
- d. Configure channel 0 to run at -20000 steps, 100000 Hz speed, and 500 acceleration and deceleration times;
- e. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- f. Set the start command of channel 0 from 0 to 1, as shown in the figure below.

解决方案资源管理器 🔹 🕂 🗙	TwinCAT Project1 😕 🗙							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
(中京報告古家巡海管理県(Ctrl+1) 0・	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
12家肝沃力柔贞亦喜理爾(Cull+,)	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
回 解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	0	BIT	0.1	41.2	Output	0	
 TwinCAT Project1 	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P SYSTEM	CH0 Start	1	BIT	0.1	41.4	Output	0	
MOTION	CH0 Brake	0	BIT	0.1	41.5	Output	0	
	CH0 Home	0	BIT	0.1	41.6	Output	0	
SAFELY	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A Pevices	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
A Device 2 (EtherCAT)	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
Image	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SyncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
 Pi Module 1 (XB6S-PT04A) 	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
P 🛄 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	100000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	-20000	DINT	4.0	57.0	Output	0	

g. After the movement is completed, you can see that the channel 0 position has been set to 1, as shown in the figure below.

解决方案资源管理器 ▼ ↓ ×	TwinCAT Project1 😕 🗙							
○ ○ ☆ io - ≠ 司 ≯	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
#安報法古安姿源祭理器(C+rl++) 0-	CH0 Pulse Output Direction	1	BIT	0.1	41.0	Input	0	
投影解决力乘负标官理留(CUI+,)	🕫 CH0 Pulse Status Flag 1	0	BIT	0.1	41.1	Input	0	
解决方案"TwinCAT Project1"(1 个项目)	🕫 CH0 Pulse Status Flag 2	0	BIT	0.1	41.2	Input	0	
TwinCAT Project1	🕫 CH0 Homing Mode Running	0	BIT	0.1	41.3	Input	0	
▷ I SYSTEM	🕫 CH0 Position Mode Running	0	BIT	0.1	41.4	Input	0	
MOTION	🕫 CH0 Velocity Mode Running	0	BIT	0.1	41.5	Input	0	
PLC	💌 CH0 Homed	0	BIT	0.1	41.6	Input	0	
SAFETY	CH0 Location Arrival	1	BIT	0.1	41.7	Input	0	
₩ C++	CH0 Velocity Arrival	0	BIT	0.1	42.0	Input	0	
	CH0 Positive Limit Signal	0	BIT	0.1	42.1	Input	0	
Devices	💌 CH0 Negative Limit Signal	0	BIT	0.1	42.2	Input	0	
Image	✓ CH0 Home Signal	0	BIT	0.1	42.3	Input	0	
Image-Info	🕫 CH0 Brake Signal	0	BIT	0.1	42.4	Input	0	
SyncUnits	CH1 Pulse Output Direction	0	BIT	0.1	43.0	Input	0	
	🕶 CH1 Pulse Status Flag 1	0	BIT	0.1	43.1	Input	0	
Outputs	CH1 Pulse Status Flag 2	0	BIT	0.1	43.2	Input	0	
InfoData	CH1 Homing Mode Running	0	BIT	0.1	43.3	Input	0	
 Box 1 (XB6S-EC2002) 	CH1 Position Mode Running	0	BIT	0.1	43.4	Input	0	
Inputs	CH1 Velocity Mode Running	0	BIT	0.1	43.5	Input	0	
Outputs	✓ CH1 Homed	0	BIT	0.1	43.6	Input	0	
P Module 1 (XB6S-PT04A)	CH1 Location Arrival	0	BIT	0.1	43.7	Input	0	
Inputs	CH1 Velocity Arrival	0	BIT	0.1	44.0	Input	0	
Outputs	CH1 Positive Limit Signal	0	BIT	0.1	44.1	Input	0	
WcState	CH1 Negative Limit Signal	0	BIT	0.1	44.2	Input	0	
👂 🛄 InfoData	✓ CH1 Home Signal	0	BIT	0.1	44.3	Input	0	
📸 Mappings	✓ CH1 Brake Signal	0	BIT	0.1	44.4	Input	0	
	CH2 Pulse Output Direction	0	BIT	0.1	45.0	Input	0	
	CH2 Pulse Status Flag 1	0	BIT	0.1	45.1	Input	0	
	CH2 Pulse Status Flag 2	0	BIT	0.1	45.2	Input	0	
	🕫 CH2 Homing Mode Running	0	BIT	0.1	45.3	Input	0	
	✤ CH2 Position Mode Running	0	BIT	0.1	45.4	Input	0	
	CH2 Velocity Mode Running	0	BIT	0.1	45.5	Input	0	

h. You can also see that the current coordinate of channel 0 is -20000, as shown in the figure below.

解决方案资源管理器 ▼ ↓ ×	TwinCAT Project1 😕 🗙							
000 10 · 2 0 1 -	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
伊索報(h古安姿酒等理界(Ctrl_r) 0.*	🕫 CH2 Homed	0	BIT	0.1	45.6	Input	0	
12.84种大力采贝///自建留(CUTF,)	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
解决方案"TwinCAT Project1"(1 个项目)	🕫 CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
TwinCAT Project1	🕫 CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
SYSTEM	🕫 CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
MOTION	🕫 CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
PLC	🕫 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
SAFETY	✤ CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
1	🕫 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
	✤ CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
 Devices Device 2 (Ether(AT)) 	🕫 CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
	✤ CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
Image-Info	🕫 CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
A synclinits	✤ CH3 Homed	0	BIT	0.1	47.6	Input	0	
	🕶 CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
Outputs	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
🕨 🛄 InfoData	🕫 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
 Box 1 (XB6S-EC2002) 	🕶 CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
Inputs	🕶 CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
Outputs	🕶 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
Module 1 (XB6S-PT04A)	🕶 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
Inputs	🕶 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
Outputs	🕶 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
WcState	🕶 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
👂 🖳 InfoData	CH0 Current Location	-20000	DINT	4.0	57.0	Input	0	
Mappings	🕫 CH0 Current Velocity	0	DINT	4.0	61.0	Input	0	
	✤ CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	♥ CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	

• Channel 0 turns on speed mode, running speed 100000Hz

a. Configure the configuration parameters as shown in the following figure.

dit CANopen	Startup Entry				>
Transition					ОК
□I->P	Index (hex):	0		Cancol
✓ P→S	S->P Sub-In	dex (dec):	0		Cancer
_S->0	□0->S □Val	idate	Complete Access		
Data (hexbin):					Hex Edit
√alidate Mask:					
Comment:					Edit Entry
Index	Name	Flags	Value	Unit	^
Ė 2000:0	XB6S-PT04A Config	RO	> 30 <		
2000:01	Pulse Mode	RW	Pul+Dir (0)		
2000:02	Safe Mode	RW	Keep On Running (0)		
2000:03	Brake Time(ms)	RW	0x000000C8 (200)		
2000:04	Merge Config	RW	Enable Single (0)		
2000:05	Input Config	RW	0×00000000 (0)		
2000:06	Homing TimeOut(ms)	RW	0×00000000 (0)		
2000:07	CH0 Startup Speed	RW	0x00000001 (1)		
2000:08	CH0 Homing Mode	RW	mode 24 (2)		
2000:09	CH0 Homing Speed	RW	0x000003E8 (1000)		
2000:0A	CH0 Homing Approach Spee	d RW	0x000001F4 (500)		
2000:0B	CH0 Input Logic	RW	Limit Normally Open, Origi		
114 A 124	CH0 Scaling	RW	0x00000001 (1)		
2000:0C	on to bearing				
- 2000:0C - 2000:0D	CH1 Startup Speed	RW	0x00000001 (1)		

- b. Set channel 0 to speed mode;
- c. Configure channel 0 to run at a speed of 100000 Hz and move in a forward direction of 0;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

解决方案资源管理器 🔹 🕂 🗙	TwinCAT Project1 😕 🗙							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
増売報告方安姿源使神器(Ctrl_1) 0・	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
a」解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	1	BIT	0.1	41.2	Output	0	
TwinCAT Project1	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P SYSTEM	CH0 Start	1	BIT	0.1	41.4	Output	0	
MOTION	🖙 CH0 Brake	0	BIT	0.1	41.5	Output	0	
PLC CAFETY	CH0 Home	0	BIT	0.1	41.6	Output	0	
GAL CAL	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A Bevices	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
Device 2 (EtherCAT)	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SvncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
Box 1 (XB6S-EC2002)	CH1 JOG	0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
Module 1 (XB6S-PT04A)	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
👂 🔜 Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
👂 🛄 Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
👂 🔚 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	100000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	0	DINT	4.0	57.0	Output	0	

f. During the motion, you can see that the channel 0 speed arrival is set to 1, as shown in the figure below.

解决方案资源管理器 ▼ 早 ×	TwinCAT Project1 😕 🗙						
001 10 · # 🗇 🖌 🗕	Name	Online	Туре	Size	>Address	In/Out	User ID Linked to
搜索解決方案资源管理器(Ctrl+:) の・	🕫 CH0 Pulse Output Direction	0	BIT	0.1	41.0	Input	0
	🕫 CH0 Pulse Status Flag 1	1	BIT	0.1	41.1	Input	0
ig」 解决万案" I winCAI Project1"(1 个项目)	🕫 CH0 Pulse Status Flag 2	1	BIT	0.1	41.2	Input	0
IwinCAT Project1	🕫 CH0 Homing Mode Running	0	BIT	0.1	41.3	Input	0
P SYSTEM	🕫 CH0 Position Mode Running	0	BIT	0.1	41.4	Input	0
	🕫 CH0 Velocity Mode Running	1	BIT	0.1	41.5	Input	0
	🕫 CH0 Homed	0	BIT	0.1	41.6	Input	0
SAFELY	🕫 CH0 Location Arrival	0	BIT	0.1	41.7	Input	0
	🕫 CH0 Velocity Arrival	1	BIT	0.1	42.0	Input	0
- Devices	🕫 CH0 Positive Limit Signal	0	BIT	0.1	42.1	Input	0
■ Devices	🕫 CH0 Negative Limit Signal	0	BIT	0.1	42.2	Input	0
	🕫 CH0 Home Signal	0	BIT	0.1	42.3	Input	0
Image-Info	🕫 CH0 Brake Signal	0	BIT	0.1	42.4	Input	0
▷ SyncUnits	🕫 CH1 Pulse Output Direction	0	BIT	0.1	43.0	Input	0
Inputs	🕫 CH1 Pulse Status Flag 1	0	BIT	0.1	43.1	Input	0
Outputs	🕫 CH1 Pulse Status Flag 2	0	BIT	0.1	43.2	Input	0
👂 🛄 InfoData	🕫 CH1 Homing Mode Running	0	BIT	0.1	43.3	Input	0
 Box 1 (XB6S-EC2002) 	🕫 CH1 Position Mode Running	0	BIT	0.1	43.4	Input	0
Inputs	🕫 CH1 Velocity Mode Running	0	BIT	0.1	43.5	Input	0
Outputs	🕫 CH1 Homed	0	BIT	0.1	43.6	Input	0
PI Module 1 (XB6S-PT04A)	🕫 CH1 Location Arrival	0	BIT	0.1	43.7	Input	0
👂 🛁 Inputs	🕫 CH1 Velocity Arrival	0	BIT	0.1	44.0	Input	0
Outputs	🕫 CH1 Positive Limit Signal	0	BIT	0.1	44.1	Input	0
WcState	🕫 CH1 Negative Limit Signal	0	BIT	0.1	44.2	Input	0
🕨 🔚 InfoData	🕫 CH1 Home Signal	0	BIT	0.1	44.3	Input	0
Mappings	🕫 CH1 Brake Signal	0	BIT	0.1	44.4	Input	0
	🕫 CH2 Pulse Output Direction	0	BIT	0.1	45.0	Input	0
	🕫 CH2 Pulse Status Flag 1	0	BIT	0.1	45.1	Input	0
	🕫 CH2 Pulse Status Flag 2	0	BIT	0.1	45.2	Input	0
	🕫 CH2 Homing Mode Running	0	BIT	0.1	45.3	Input	0
	🕫 CH2 Position Mode Running	0	BIT	0.1	45.4	Input	0
	🕫 CH2 Velocity Mode Running	0	BIT	0.1	45.5	Input	0

g. During the movement, the actual running speed can also be 100000Hz, as shown in the figure below.

解决方案资源管理器 ▼ ↓ ×	TwinCAT Project1 🗢 🗙							
0 0 🟠 10 - 2 🗊 👂 🗕	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
搜索解冲方案资源管理器(Ctrl+·) 0 •	💌 CH2 Homed	0	BIT	0.1	45.6	Input	0	
	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
解决方案"TwinCAT Project1"(1 个项目)	🕫 CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
 TwinCAT Project1 	🕫 CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
P SYSTEM	🕫 CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
	🔊 CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
	🕫 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
SAFELY	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
	🕫 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
	💌 CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
Device 2 (EtherCAT)	🔊 CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
Image	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
Image-Info	🕫 CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
SyncUnits	💌 CH3 Homed	0	BIT	0.1	47.6	Input	0	
Inputs	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
Outputs	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
InfoData	🕫 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
 Box 1 (XB6S-EC2002) 	CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
Inputs	🕫 CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
Outputs	🔊 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
Module 1 (XB6S-PT04A)	🕫 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
👂 🛄 Inputs	💌 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
Outputs	🕫 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
WcState	🔊 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
👂 🛄 InfoData	CH0 Current Location	2835968	DINT	4.0	57.0	Input	0	
🌇 Mappings	🕫 CH0 Current Velocity	100000	DINT	4.0	61.0	Input	0	
	CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	🕫 CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	

h. Entering a brake command or triggering a positive limit signal can stop the movement, as shown in the figure below.

解决方案资源管理器 ▼ 및 ×	TwinCAT Project1 🔹 🗙						
0 0 4 To + #	Name	Online	Туре	Size	>Address	In/Out	User ID Linked to
搜索解浊方妄资源管理器((trl_+)) □ •	≁ CH2 Homed	0	BIT	0.1	45.6	Input	0
130月17日 (1111)	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0
解决方案"TwinCAT Project1"(1 个项目)	CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0
TwinCAT Project1	🕫 CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0
SYSTEM	🕫 CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0
MOTION	🕫 CH2 Home Signal	0	BIT	0.1	46.3	Input	0
	🕫 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0
SAFETY	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0
	🕫 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0
	🕶 CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0
 Devices Device 2 (Ether(AT)) 	2 CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0
	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0
Image-Info	🕫 CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0
Synclinits	✓ CH3 Homed	0	BIT	0.1	47.6	Input	0
	🕫 CH3 Location Arrival	0	BIT	0.1	47.7	Input	0
Outputs	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0
🕨 🛄 InfoData	🕫 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0
 Box 1 (XB6S-EC2002) 	🕫 CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0
Inputs	🕶 CH3 Home Signal	0	BIT	0.1	48.3	Input	0
Outputs	🕫 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0
Module 1 (XB6S-PT04A)	🔁 CH0 Error Code	0	UINT	2.0	49.0	Input	0
👂 🛄 Inputs	🕶 CH1 Error Code	1537	UINT	2.0	51.0	Input	0
Outputs	🕫 CH2 Error Code	1537	UINT	2.0	53.0	Input	0
WcState	🕶 CH3 Error Code	1537	UINT	2.0	55.0	Input	0
👂 🔜 InfoData	🕫 CH0 Current Location	27189910	DINT	4.0	57.0	Input	0
Mappings	CH0 Current Velocity	0	DINT	4.0	61.0	Input	0
	✓ CH1 Current Location	0	DINT	4.0	65.0	Input	0
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0
	✓ CH2 Current Location	0	DINT	4.0	73.0	Input	0
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0
	✓ CH3 Current Location	0	DINT	4.0	81.0	Input	0
	🕫 CH3 Current Velocity	0	DINT	4.0	85.0	Input	0

Channel 0 runs at 100000Hz, in jog mode

a. Configure the configuration parameters as shown in the following figure.

Edit CANopen	Startup Entry				×
Transition □I->P ☑P->S □S->0	Index (h □S→P Sub-Ind □O→S □Valit	ex): ex (dec): late	0 0 Complete Access		OK Cancel
Data (hexbin): Validate Mask:					Hex Edit
Comment:					Edit Entry
Index	Name	Flags	Value	Unit	^
2000.0	Pulse Mode	BW	Pul+Dir (II)		
2000:02	Safe Mode	RW	Keep On Running (0)		
2000:03	Brake Time(ms)	RW	0x000000C8 (200)		
2000:04	Merge Config	RW	Enable Single (0)		
2000:05	Input Config	RW	0×00000000 (0)		
2000:06	Homing TimeOut(ms)	RW	0×00000000 (0)		
2000:07	CH0 Startup Speed	RW	0×00000001 (1)		
2000:08	CH0 Homing Mode	RW	mode 24 (2)		
2000:09	CH0 Homing Speed	RW	0x000003E8 (1000)		
2000:0A	CH0 Homing Approach Speed	RW	0x000001F4 (500)		
2000:0B	CH0 Input Logic	RW	Limit Normally Open, Origi		
2000:0C	CH0 Scaling	RW	0x00000001 (1)		
2000:0D	CH1 Startup Speed	RW	0x00000001 (1)		
2000:0E	CH1 Homing Mode	RW	mode 24 (2)		~

6 Use

- b. Configure channel 0 to run at a speed of 100000, run in a direction of 0 forward, and set the acceleration and deceleration times to 500;
- c. Make sure channel 0 is in a static state;
- d. Set the jog command of channel 0 from 0 to 1 to start movement, as shown in the figure below.

解决方案资源管理器 ▼ 4 ×	TwinCAT Project1 * X 起始页							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
搜索解决方家资源管理器(Ctrl+:) の •	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
ig」解决方案"IwinCAI Project1"(1 个项目)	CH0 Position/Velocity Mode	0	BIT	0.1	41.2	Output	0	
IwinCAT Project1	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P SYSTEM	CH0 Start	0	BIT	0.1	41.4	Output	0	
	CH0 Brake	0	BIT	0.1	41.5	Output	0	
SAECTV	CH0 Home	0	BIT	0.1	41.6	Output	0	
GATELY	CH0 JOG	1	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A The Devices	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
Device 2 (EtherCAT)	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
Image	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SyncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
 Po Module 1 (XB6S-PT04A) 	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
P InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	100000	UDINT	4.0	53.0	Output	0	

e. During the motion, you can see the actual running speed and real-time position of channel 0, as shown in the figure below. Inputting a brake command or triggering a positive limit signal can stop the motion.

解决方案资源管理器 👻 🖣 🗙	TwinCAT Project1 🕈 🗙 起始页							
004 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
物を設定するなるででは、) 0、	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
10系引起大力案以前自建始(CUIT,)	CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
 解决方案"TwinCAT Project1"(1 个项目) 	🔊 CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
TwinCAT Project1	CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
▷ a SYSTEM	🔊 CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
MOTION	🕶 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
PLC	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
SAFELY	🕶 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
	🕶 CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
	CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
 Devices Device 2 (Ethor(AT)) 	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
	CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
Image-Info	🔁 CH3 Homed	0	BIT	0.1	47.6	Input	0	
SyncUnits	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
Inputs	🕶 CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
Outputs	🕶 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
👂 🛄 InfoData	2 CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
Box 1 (XB6S-EC2002)		0	BIT	0.1	48.3	Input	0	
Inputs	😕 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
Outputs	🕶 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
Module 1 (XB6S-PT04A)	🕶 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
Inputs	🕶 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
Outputs	🕶 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
WcState	CH0 Current Location	805853	DINT	4.0	57.0	Input	0	
👂 🛄 InfoData	✓ CH0 Current Velocity	100000	DINT	4.0	61.0	Input	0	
📸 Mappings	CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	🕫 CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	✓ CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	

Channel 0 turns on and returns to zero

a. Configure the configuration parameters, select the zero return mode and set the zero return speed and zero return approach speed, as shown in the figure below.

Edit CANopen	Startup Entry				×
Transition □ I -> P ☑ P -> S □ S -> 0	In □S->P S □O->S	dex (hex): ub-Index (dec):]Validate	2000 8 Complete Access		OK Cancel
Data (hexbin):	00 00 00 00				Hex Edit
Validate Mask:					
Comment:	CH0 Homing Mode				Edit Entry
Index	Name	Flags	Value	Unit	^
Ē 2000:0	XB6S-PT04A Config	RO	> 30 <		
2000:01	Pulse Mode	RW	Pul+Dir (0)		
2000:02	Safe Mode	RW	Keep On Running (0)	Î.	
2000:03	Brake Time(ms)	RW	0x000000C8 (200)		
2000:04	Merge Config	RW	Enable Single (0)		
2000:05	Input Config	RW	0×00000000 (0)		
2000:06	Homing TimeOut(ms)	RW	0x00000000 (0)		
2000:07	CH0 Startup Speed	RW	0x00000001 (1)		
2000:08	CH0 Homing Mode	RW	mode 19 (0)		
2000:09	CH0 Homing Speed	RW	0x000003E8 (1000)		
2000:0A	CH0 Homing Approach S	peed RW	0x000001F4 (500)		
2000:0B	CH0 Input Logic	RW	Limit Normally Open	, Origi	
2000:0C	CH0 Scaling	RW	0x00000001 (1)		
2000:0D	CH1 Startup Speed	RW	0x00000001 (1)		
2000:0E	CH1 Homing Mode	RW	mode 24 (2)		~

- b. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- c. Set the return to zero command of channel 0 from 0 to 1, as shown in the figure below.

解决方案资源管理器 ▼ 早 ×	TwinCAT Project1 🔹 🗙 起始页							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
12系所次/J柔贞///高速部(CUI+,)	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
如 解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	0	BIT	0.1	41.2	Output	0	
 TwinCAT Project1 	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P 🧧 SYSTEM	CH0 Start	0	BIT	0.1	41.4	Output	0	
	CH0 Brake	0	BIT	0.1	41.5	Output	0	
	CH0 Home	1	BIT	0.1	41.6	Output	0	
SAFELT	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A Pevices	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
Device 2 (EtherCAT)	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
Image	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SyncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
👂 🛁 Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
Module 1 (XB6S-PT04A)	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
P 🛄 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	10000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	0	DINT	4.0	57.0	Output	0	

d. Zero return mode 19 requires input of origin signal. After inputting the origin signal, it decelerates to 0 and moves in the negative direction again at the zero return approach speed until the origin signal disappears. Stop moving and zero return is completed. You can see that the coordinates of channel 0 are cleared and the zero return is set to 1, as shown in the figure below.

解决方案资源管理器 ▼ 및 ×	TwinCAT Project1 中 × 起始页							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
線索解決方案资源等理器/Ctrl+1) の・	CH0 Pulse Output Direction	1	BIT	0.1	41.0	Input	0	
	CH0 Pulse Status Flag 1	0	BIT	0.1	41.1	Input	0	
MJ 解决方案 TwinCAT Project1 (1 个项目)	CH0 Pulse Status Flag 2	0	BIT	0.1	41.2	Input	0	
b SVSTEM	CH0 Homing Mode Running	0	BIT	0.1	41.3	Input	0	
MOTION	CH0 Position Mode Running	0	BIT	0.1	41.4	Input	0	
PLC	CH0 Velocity Mode Running	0	BIT	0.1	41.5	Input	0	
5 SAFETY	CH0 Homed	1	BIT	0.1	41.6	Input	0	
6 C++	CH0 Location Arrival	0	BIT	0.1	41.7	Input	0	
🔺 🔄 I/O	CHO Velocity Arrival	0	BIT	0.1	42.0	input	0	
 Devices 	CHO Positive Limit Signal	0	DIT	0.1	42.1	Input	0	
Device 2 (EtherCAT)	CH0 Home Signal	0	BIT	0.1	42.2	Input	0	
Image	CHO Brake Signal	0	BIT	0.1	42.5	Input	0	
Image-Info	CH1 Pulse Output Direction	0	BIT	0.1	43.0	Input	0	
b Synconits	CH1 Pulse Status Flag 1	0	BIT	0.1	43.1	Input	0	
b Dutouts	CH1 Pulse Status Flag 2	0	BIT	0.1	43.2	Input	0	
InfoData	CH1 Homing Mode Running	0	BIT	0.1	43.3	Input	0	
Box 1 (XB6S-EC2002)	CH1 Position Mode Running	0	BIT	0.1	43.4	Input	0	
Inputs	CH1 Velocity Mode Running	0	BIT	0.1	43.5	Input	0	
Outputs	€ CH1 Homed	0	BIT	0.1	43.6	Input	0	
 P Module 1 (XB6S-PT04A) 	CH1 Location Arrival	0	BIT	0.1	43.7	Input	0	
Inputs	CH1 Velocity Arrival	0	BIT	0.1	44.0	Input	0	
Dutputs	CH1 Positive Limit Signal	0	BIT	0.1	44.1	Input	0	
WcState	CH1 Negative Limit Signal	0	BIT	0.1	44.2	Input	0	
P i InfoData	CH1 Home Signal	0	BIT	0.1	44.3	Input	0	
a wabbuigs	 CH1 Brake Signal 	0	BIT	0.1	44.4	Input	0	
	CH2 Pulse Output Direction	0	BIT	0.1	45.0	Input	0	
	CH2 Pulse Status Flag 1	0	BIT	0.1	45.1	Input	0	
	CH2 Homing Mode Pupping	0	BIT	0.1	45.2	Input	0	
	CH2 Position Mode Running	0	DIT	0.1	43.3	Input	0	
	CH2 Velocity Mode Running	0	BIT	0.1	45.5	Input	0	
	* CH2 Homed	0	BIT	0.1	45.6	Input	0	
	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
	CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
	CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
	CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
	♥ CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
	CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
	CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
	CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
	CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
	CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
	CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
	CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
	CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
	🕫 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
	🕶 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
	🕫 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
	🔊 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
	🕫 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
	* CH0 Current Location	0	DINT	4.0	57.0	Input	0	
	CH0 Current Velocity	0	DINT	4.0	61.0	Input	0	
	CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Location	0	DINT	4.0	73.0	Input	0	
No. 1		v	DINI	4.0	13.0	input	0	

Channel 0 turns on speed mode, running at 100000Hz, and the speed is changed to 10000Hz during operation

a. Configure the configuration parameters, such as enabling the single mode in the motion merge mode selection, as shown in the figure below.

Edit C <mark>AN</mark> open	Startup Entry				×
Transition □I->P ☑P->S □S->0	Inde □S→P Sub □O→S □	ex (hex): -Index (dec): /alidate	2000 4 Complete Access		OK Cancel
Data (hexbin):	00 00 00 00				Hex Edit
Validate Mask: Comment:	Merge Config				Edit Entry
Index	Name	Flags	Value	Unit	^
E 2000:0	XB6S-PT04A Config	RO	> 30 <		
2000:01	Pulse Mode	RW	Pul+Dir (0)		
2000:02	Safe Mode	RW	Keep On Running (0)		
2000:03	Brake Time(ms)	RW	0x000000C8 (200)		
2000:04	Merge Config	RW	Enable Single (0)		
2000:05	Input Config	RW	0x00000000 (0)		
2000:06	Homing TimeOut(ms)	RW	0x00000000 (0)		
2000:07	CH0 Startup Speed	RW	0x00000001 (1)		
2000:08	CH0 Homing Mode	RW	mode 24 (2)		
2000:09	CH0 Homing Speed	RW	0x000003E8 (1000)		
2000:0A	CH0 Homing Approach Sp	eed RW	0x000001F4 (500)		
2000:0B	CH0 Input Logic	RW	Limit Normally Open, Origi		
2000:0C	CH0 Scaling	RW	0x00000001 (1)		
2000:0D	CH1 Startup Speed	RW	0x00000001 (1)		
2000:0E	CH1 Homing Mode	RW	mode 24 (2)		× .

- b. Set channel 0 to speed mode;
- c. Configure channel 0 to run at a speed of 100000Hz, the direction of motion to 0 forward, and the acceleration and deceleration times to 500;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

解决方案资源管理器 ▼ 早 ×	TwinCAT Project1 # × 起始页							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
12系解决力集页标画理题(CUI+,)	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
M 解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	1	BIT	0.1	41.2	Output	0	
 TwinCAT Project1 	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
SYSTEM	CH0 Start	1	BIT	0.1	41.4	Output	0	
MOTION	CH0 Brake	0	BIT	0.1	41.5	Output	0	
PLC	CH0 Home	0	BIT	0.1	41.6	Output	0	
SAFELY	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
Devices	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SyncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
👂 🛄 InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
Module 1 (XB6S-PT04A)	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
👂 😓 Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
👂 🛄 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings 1	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	100000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	0	DINT	4.0	57.0	Output	0	

- f. During the movement, change the running speed of channel 0 to 10000Hz;
- g. Reset the start command of channel 0 from 0 to 1 to start motion merging, as shown in the figure below.

解决方案资源管理器 🔹 🕂 🗙	TwinCAT Project1 中 × 起始页							
004 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
抑索報告告定資源使用際(C+d+)	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
1080年273年2018年1月(2011年1)	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
■】解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	1	BIT	0.1	41.2	Output	0	
TwinCAT Project1	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P SYSTEM	CH0 Start	1	BIT	0.1	41.4	Output	0	
MOTION	CH0 Brake	0	BIT	0.1	41.5	Output	0	
PLC	CH0 Home	0	BIT	0.1	41.6	Output	0	
SAFELY	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A The Devices	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
Devices	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
b Synclinits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
D Inputs	CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
 Module 1 (XB6S-PT04A) 	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
👂 📑 Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
👂 🔚 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
and a second second	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	CH3 Home	0	BIT	0.1	47.6	Output	0	
	ECH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	10000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	0	DINT	4.0	57.0	Output	0	

h. You can see that channel 0 slows down to 10000Hz motion, as shown in the figure below.

解决方案资源管理器 🔹 🕂 🗙	TwinCAT Project1 🙂 🗙 起始页							
004 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
	🔊 CH2 Homed	0	BIT	0.1	45.6	Input	0	
	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
M】解决方案"TwinCAT Project1"(1 个项目)	CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
IwinCAT Project1	🕫 CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
P SYSTEM	🕫 CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
	🔊 CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
	🔊 CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
SAFELY	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
	🔊 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
	🔊 CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
Device 2 (Ether(AT))	🕫 CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
Image-Info	🕫 CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
SvncUnits	🕶 CH3 Homed	0	BIT	0.1	47.6	Input	0	
Inputs	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
Outputs	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
InfoData	🔊 CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
 Box 1 (XB6S-EC2002) 	💌 CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
Inputs	🔊 CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
Outputs	💌 CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
 PI Module 1 (XB6S-PT04A) 	🕫 CH0 Error Code	0	UINT	2.0	49.0	Input	0	
👂 🛁 Inputs	🕶 CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
Outputs	🕫 CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
WcState	🕶 CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
👂 🔚 InfoData	CH0 Current Location	7966685	DINT	4.0	57.0	Input	0	
Mappings	🕫 CH0 Current Velocity	10000	DINT	4.0	61.0	Input	0	
	CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	✓ CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	🕶 CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	
	The second se							

- The current position of channel 0 is 10000, and it moves to the position of 20000. During the movement, the position is changed to 50000.
 - a. Configure the configuration parameters, such as the motion merge mode selection to enable the continuous mode, as shown in the figure below.

i Startup Entry				×
Index († □S->P Sub-Inc □O->S □Vali	iex): łex (dec): date	2000 4 Complete Access		OK Cancel
01 00 00 00				Hex Edit
Merge Config				Edit Entry
Name	Flags	Value	Unit	^
XB6S-PT04A Config	RO	> 30 <		
Pulse Mode	RW	Pul+Dir (0)		
Safe Mode	RW	Keep On Running (0)		
Brake Time(ms)	RW	0x000000C8 (200)		
Merge Config	RW	Enable Continuous (1)		
Input Config	RW	0×00000000 (0)		
Homing TimeOut(ms)	RW	0×00000000 (0)		
CH0 Startup Speed	RW	0×00000001 (1)		
CH0 Homing Mode	RW	mode 24 (2)		
CH0 Homing Speed	RW	0x000003E8 (1000)		
CH0 Homing Approach Speed	RW	0×000001F4 (500)		
CH0 Input Logic	RW	Limit Normally Open, Origi		
CH0 Scaling	RW	0x00000001 (1)		
	DUU	0.0000001 (1)		
CH1 Startup Speed	HVV	uxuuuuuuu (I)		
	Startup Entry Index (f S→P Sub-Inc O→S O→S O→S O→S O→S O→S O→S O→	Startup Entry Index (hex): S→P Sub-Index (dec): O→S 0 → S 0 → S 0 → S 1 00 00 00 0 → S 0 ↓ alidate 1 01 00 00 00 1 01 00 1 01 1 01	Startup Entry Index (hex): 2000 □ S → P Sub-Index (dec): 4 □ O → S Validate Complete Access 01 00 00 Validate Complete Access Merge Config Value X86S-PT04A Config RO Name Flags Value XB6S-PT04A Config RO > 30 <	Startup Entry Index (hex): 2000 S → P Sub-Index (dec): 4 O → S Validate Complete Access 01 00 00 00 Complete Access 4 Merge Config Validate Complete Access Name Flags Value Unit XB6S-PT04A Config RO > 30 <

解决方案资源管理器 ▼ 平 ×	TwinCAT Project1 + × 起始页							
000 0-20 4-	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
御奈紹治古安姿源悠田県(Ctrl+1) 0・	CH1 Velocity Arrival	0	BIT	0.1	44.0	Input	0	
12系件次/J架页/// 首建語(CUIT,)	CH1 Positive Limit Signal	0	BIT	0.1	44.1	Input	0	
■ 解决方案"TwinCAT Project1"(1 个项目)	CH1 Negative Limit Signal	0	BIT	0.1	44.2	Input	0	
 TwinCAT Project1 	🕫 CH1 Home Signal	0	BIT	0.1	44.3	Input	0	
SYSTEM	🕫 CH1 Brake Signal	0	BIT	0.1	44.4	Input	0	
MOTION	CH2 Pulse Output Direction	0	BIT	0.1	45.0	Input	0	
PLC	CH2 Pulse Status Flag 1	0	BIT	0.1	45.1	Input	0	
SAFETY	CH2 Pulse Status Flag 2	0	BIT	0.1	45.2	Input	0	
	CH2 Homing Mode Running	0	BIT	0.1	45.3	Input	0	
A Pevices	CH2 Position Mode Running	0	BIT	0.1	45.4	Input	0	
Device 2 (EtherCAT)	CH2 Velocity Mode Running	0	BIT	0.1	45.5	Input	0	
tmage	✓ CH2 Homed	0	BIT	0.1	45.6	Input	0	
Image-Info	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
SyncUnits	CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
Inputs	CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
Outputs	CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
👂 🛄 InfoData	CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
 Box 1 (XB6S-EC2002) 	CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
👂 🔁 Inputs	✤ CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
Outputs	🕫 CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
Po Module 1 (XB6S-PT04A)	CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
P J Inputs	CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
Outputs	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
WcState	CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
P 🔚 InfoData	CH3 Homed	0	BIT	0.1	47.6	Input	0	
Mappings	CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
	CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
	CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
	CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
	CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
	CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
	CH0 Error Code	0	UINT	2.0	49.0	Input	0	
	CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
	* CH2 Error Code	1537	UINT	2.0	53.0	Input	0	
	CH3 Error Code	1537	UINT	2.0	55.0	Input	0	
	CH0 Current Location	10000	DINT	4.0	57.0	Input	0	
	CH0 Current Velocity	0	DINT	4.0	61.0	Input	0	
	CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	CH3 Current Location	0	DINT	4.0	81.0	Input	0	
	CH3 Current Velocity	0	DINT	4.0	85.0	Input	0	

- c. Set channel 0 to absolute position mode;
- d. Configure channel 0 to run at 20000 steps, 1000 Hz speed, and 500 acceleration and deceleration times;
- e. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- f. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

解决方案资源管理器 ▼ 平 ×	TwinCAT Project1 + X 起始页							
00 G 10 + 2 B + 0 0 0	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
投索解出方家资源等理課(Ctrl_1) 0 -	CH0 Running Direction	0	BIT	0.1	41.0	Output	0	
	CH0 Absolute/Relative Position Mode	0	BIT	0.1	41.1	Output	0	
a」解决方案"TwinCAT Project1"(1 个项目)	CH0 Position/Velocity Mode	0	BIT	0.1	41.2	Output	0	
 TwinCAT Project1 	CH0 Reset Coordinates	0	BIT	0.1	41.3	Output	0	
P SYSTEM	CH0 Start	1	BIT	0.1	41.4	Output	0	
	CH0 Brake	0	BIT	0.1	41.5	Output	0	
SALETY	CH0 Home	0	BIT	0.1	41.6	Output	0	
GAL	CH0 JOG	0	BIT	0.1	41.7	Output	0	
	CH0 Clear State	0	BIT	0.1	42.0	Output	0	
A Pevices	CH0 Set Current Location	0	BIT	0.1	42.1	Output	0	
A Device 2 (EtherCAT)	CH1 Running Direction	0	BIT	0.1	43.0	Output	0	
Image	CH1 Absolute/Relative Position Mode	0	BIT	0.1	43.1	Output	0	
Image-Info	CH1 Position/Velocity Mode	0	BIT	0.1	43.2	Output	0	
SyncUnits	CH1 Reset Coordinates	0	BIT	0.1	43.3	Output	0	
Inputs	E-CH1 Start	0	BIT	0.1	43.4	Output	0	
Outputs	CH1 Brake	0	BIT	0.1	43.5	Output	0	
InfoData	CH1 Home	0	BIT	0.1	43.6	Output	0	
 Box 1 (XB6S-EC2002) 	CH1 JOG	0	BIT	0.1	43.7	Output	0	
👂 🔜 Inputs	CH1 Clear State	0	BIT	0.1	44.0	Output	0	
Outputs	CH1 Set Current Location	0	BIT	0.1	44.1	Output	0	
 Po Module 1 (XB6S-PT04A) 	CH2 Running Direction	0	BIT	0.1	45.0	Output	0	
Inputs	CH2 Absolute/Relative Position Mode	0	BIT	0.1	45.1	Output	0	
Outputs	CH2 Position/Velocity Mode	0	BIT	0.1	45.2	Output	0	
WcState	CH2 Reset Coordinates	0	BIT	0.1	45.3	Output	0	
P 🔄 InfoData	CH2 Start	0	BIT	0.1	45.4	Output	0	
Mappings	CH2 Brake	0	BIT	0.1	45.5	Output	0	
	CH2 Home	0	BIT	0.1	45.6	Output	0	
	CH2 JOG	0	BIT	0.1	45.7	Output	0	
	CH2 Clear State	0	BIT	0.1	46.0	Output	0	
	CH2 Set Current Location	0	BIT	0.1	46.1	Output	0	
	CH3 Running Direction	0	BIT	0.1	47.0	Output	0	
	CH3 Absolute/Relative Position Mode	0	BIT	0.1	47.1	Output	0	
	CH3 Position/Velocity Mode	0	BIT	0.1	47.2	Output	0	
	CH3 Reset Coordinates	0	BIT	0.1	47.3	Output	0	
	CH3 Start	0	BIT	0.1	47.4	Output	0	
	CH3 Brake	0	BIT	0.1	47.5	Output	0	
	E CH3 Home	0	BIT	0.1	47.6	Output	0	
	CH3 JOG	0	BIT	0.1	47.7	Output	0	
	CH3 Clear State	0	BIT	0.1	48.0	Output	0	
	CH3 Set Current Location	0	BIT	0.1	48.1	Output	0	
	CH0 Acceleration Time	500	UINT	2.0	49.0	Output	0	
	CH0 Deceleration Time	500	UINT	2.0	51.0	Output	0	
	CH0 Running Velocity	1000	UDINT	4.0	53.0	Output	0	
	CH0 Running Position	20000	DINT	4.0	57.0	Output	0	

g. During the motion process, change the running step number of channel 0 to 50000 and start motion merging, as shown in the figure below.

Wame On 提案解決方案資源管理器(Ctrl+:) CH0 Running Direction On 第決方案'TwinCAT Project1'(1 个项目) CH0 Absolute/Relative Position Mode On 第決方案'TwinCAT Project1'(1 个项目) CH0 Position/Velocity Mode On MOTION CH0 Reset Coordinates On MOTION CH0 Position/Velocity Mode On SAFETY CH0 Position/Velocity Mode On MOTION CH0 Position/Velocity Mode On SAFETY CH0 Position/Velocity Mode On MOTION CH0 Absolute/Relative Position Mode On Motion CH0 Position/Velocity Mode On Mamage CH1 Running Direction On Image CH1 Absolute/Relative Position Mode On Marge CH1 Position/Velocity Mode On Mappings CH1 Reset Coordinates On Module 1 (XB6S-EC2002) CH1 Home On Module 1 (XB6S-PT04A) CH2 Position/Velocity Mode On Mappings CH2 Position/Velocity Mode On CH2 Position/Velocity Mode CH2 Position/Velocity Mode On CH2 Position/Velocity Mode	Doline 7 6 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Type Siz 31T 0. 31T 0.	ze >Address 1 41.0 1 41.1 1 41.2 1 41.3 1 41.4 1 41.5 1 41.6	In/Out Output Output Output Output Output	User ID 0 0 0 0	Linked to
按案解決方案 党繁智理嗯(Ctrl+:)) E E B B B B B B B B B B B B B B B B B B	BIT 0. BIT 0.	1 41.0 1 41.1 1 41.2 1 41.3 1 41.4 1 41.5 1 41.6	Output Output Output Output Output	0 0 0	
● CH0 Absolute/Relative Position Mode 0 ● CH0 Position/Velocity Mode 0 ● CH1) E 6 B 7 B 8	BIT 0.	1 41.1 1 41.2 1 41.3 1 41.4 1 41.5 1 41.6	Output Output Output Output	0 0 0	
ig] #法方第:TwinCAT Project1'(1 个项目) ● Gitspace ● Git) E E B B B B B B B B B B B B B B B B B B	BIT O.	1 41.2 1 41.3 1 41.4 1 41.5 1 41.6	Output Output Output	0	
Image Image <t< td=""><td>6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8</td><td>BIT 0. BIT 0. BIT 0. BIT 0. BIT 0.</td><td>1 41.3 1 41.4 1 41.5 1 41.6</td><td>Output Output</td><td>0</td><td></td></t<>	6 6 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	BIT 0. BIT 0. BIT 0. BIT 0. BIT 0.	1 41.3 1 41.4 1 41.5 1 41.6	Output Output	0	
▶ SYSTEM ■ CH0 Start 1 MOTION ■ CH0 Brake 0 ■ PLC ■ CH0 Home 0 SAFETY ■ CH0 JOG 0 ■ CH0 JOG ■ CH0 Clear State 0 ■ Devices ■ CH0 Start 0 ■ Devices ■ CH0 Clear State 0 ■ Devices (EtherCAT) ■ CH0 Start Location 0 ■ Tange Info ■ CH1 Reset Coordinates 0 ■ Device 2 (EtherCAT) ■ CH1 Position/Velocity Mode 0 ■ InfoData ■ CH1 Reset Coordinates 0 ■ InfoData ■ CH1 Istart 0 ■ InfoData ■ CH1 Start 0 ■ InfoData ■ CH1 Start 0 ■ InfoData ■ CH1 Istart 0 ■ Outputs ■ CH1 Start 0 ■ Outputs ■ CH1 Start 0 ■ InfoData ■ CH1 Reset Coordinates 0 ■ Outputs ■ CH1 Reset Coordinates 0 ■ InfoData ■ CH2 Running Direction 0 ■ Outputs ■ CH2 Running Direction 0 ■ InfoData ■ CH2 Rus	8 8 8 8 8 8 8	BIT 0. BIT 0. BIT 0. BIT 0.	1 41.4 1 41.5 1 41.6	Output		
MOTION ■CH0 Brake 0 ■PLC ■CH0 Home 0 SAFETY ■CH0 JOG 0 ■C++ ■CH0 Clear State 0 ■Devices ■CH0 Set Current Location 0 ■Device 2 (EtherCAT) ■CH1 Absolute/Relative Position Mode 0 ■Tagg=Info ■CH1 Position/Velocity Mode 0 ■SyncUnits ■CH1 Position/Velocity Mode 0 ■InfoData ■CH1 Start 0 ■InfoData ■CH1 JOG 0 ■InfoData ■CH1 JOG 0 ■InfoData ■CH1 JOG 0 ■InfoData ■CH1 JOG 0 ■InfoData ■CH1 Start 0 ■InfoData ■CH1 Start 0 ■InfoData ■CH1 Start 0 ■InfoData ■CH2 Running Direction 0 ■InfoData ■CH1 Start 0 ■InfoData ■CH2 Running Direction 0 ■InfoData ■CH2 Running Direction 0 ■InfoData ■CH2 Running Direction 0 ■CH2 Absolute/Relative Position/Velocity Mode 0	B B B B B	BIT 0. BIT 0. BIT 0.	1 41.5 1 41.6		0	
PLC ■ CH0 Home 0 SAFETY ■ CH0 JOG 0 ■ CH0 Set Current Location 0 0 ■ Device2 (EtherCAT) ■ CH1 Absolute/Relative Position Mode 0 ■ Image ■ CH1 Absolute/Relative Position Mode 0 ■ Image ■ CH1 Position/Velocity Mode 0 ■ Image ■ CH1 Statt 0 ■ Dovice 2 (EtherCAT) ■ CH1 Statt 0 ■ Image ■ CH1 Statt 0 ■ Doutputs ■ CH1 Ibrake 0 ■ Doutputs ■ CH1 Statt 0 ■ Box 1 (XB6S-EC2002) ■ CH1 State 0 ■ Doutputs ■ CH2 Statt 0 ■ Mappings ■ CH2 Statt 0	e B B B	BIT O. BIT O.	1 41.6	Output	0	
SAFEIY Image 0 Image Image 0 Imputs Image 0 Imputs Imputs Image Imputs Image Imputs Image	B	BIT O.		Output	0	
Image Image <t< td=""><td>B</td><td></td><td>1 41.7</td><td>Output</td><td>0</td><td></td></t<>	B		1 41.7	Output	0	
Image Image <t< td=""><td>B</td><td>BIT O.</td><td>1 42.0</td><td>Output</td><td>0</td><td></td></t<>	B	BIT O.	1 42.0	Output	0	
Image Image <t< td=""><td></td><td>BIT 0.</td><td>1 42.1</td><td>Output</td><td>0</td><td></td></t<>		BIT 0.	1 42.1	Output	0	
Image Image Image 0 Image Image	B	BIT 0.	1 43.0	Output	0	
Image-info Image-info Image-info Image-info ▷ SyncUnits Image-info Image-info Image-info ▷ Inputs Image-info Image-info Image-info ▷ Inputs Image-info Image-info Image-info ▷ Inputs Image-info Image-info Image-info ▷ Imputs Image-info Image-info Image-info ▷ Image-info Image-info Image-info Image-info ▷ Image-info Image-info Image-info Image-info Image-info ▷ Image-info Imageein Imageein Image	e	BIT O.	1 43.1	Output	0	
Image integer Image integer<	P	BIT 0.	1 43.2	Output	0	
▶ Inputs ■ CH1 Start 0 ▶ Outputs ■ CH1 Brake 0 ▶ InfoData ■ CH1 Home 0 ■ InfoData ■ CH1 Home 0 ■ InfoData ■ CH1 Clear State 0 ▶ Inputs ■ CH1 Set Current Location 0 ▶ Outputs ■ CH2 Running Direction 0 ▶ Outputs ■ CH2 Position/Velocity Mode 0 ▶ InfoData ■ CH2 Start 0 ▶ InfoData ■ CH2 Position/Velocity Mode 0 ▶ InfoData ■ CH2 Position/Velocity Mode 0 ■ ■ InfoData ■ CH2 Position/Velocity Mode 0 ■ ■ CH2 Position/Velocity Mode 0 ■ CH2 Position/Velocity Mode 0 ■ ■ CH2 Position/Velocity Mode 0 ■ CH2 Position/Velocity Mode 0 ■ ■ CH2 Position/Velocity Mode 0 ■ CH2 Position/Velocity Mode 0 ■ ■ CH2 Position/Velocity Mode 0 ■ CH2 Position/Velocity Mode 0	P	BIT O.	1 43.3	Output	0	
▶ ■ CH1 Brake 0 ▶ ■ InfoData ■ CH1 Home 0 ▶ ■ InfoData ■ CH1 Home 0 ▶ ■ InfoData ■ CH1 JOG 0 ▶ ■ InfoData ■ CH1 JOG 0 ▶ ■ Outputs ■ CH1 Clear State 0 ▶ ■ Outputs ■ CH1 Set Current Location 0 ▶ ■ InfoData ■ CH2 Reset Coordinates 0 ▶ ■ InfoData ■ CH2 Reset Coordinates 0 ▶ ■ InfoData ■ CH2 Brake 0 ■ ■ InfoData ■ CH2 Start 0 ■ ■ CH2 Implity ■ CH2 Clear State 0 ■ ■ CH2 Position/Velocity Mode 0 ■ ■ CH2 Reset Coordinates 0 ■ ■ CH2 Start 0 ■ ■ CH2 JOG 0 ■ ■ CH2 Implity ■ CH2 Clear State 0 ■ ■ CH2 Clear State 0 ■ ■ CH3 Runing Direction 0 ■ ■ CH3 Runing Direction 0 ■ ■ CH3 Runing Direction 0 ■ ■ CH3 Position/Velocity Mode 0	P	BIT O.	1 43.4	Output	0	
▶ InfoData ■ CH1 Home 0 ▲ InfoData ■ CH1 Home 0 ▲ Inputs ■ CH1 JOG 0 ▶ Outputs ■ CH1 Clear State 0 ▲ P[Module 1 (XB6S-PT04A) ■ CH2 Running Direction 0 ▶ Outputs ■ CH2 Absolute/Relative Position Mode 0 ▶ Outputs ■ CH2 Position/Velocity Mode 0 ▶ Outputs ■ CH2 Running Direction 0 ▶ Outputs ■ CH2 Running Direction 0 ▶ Outputs ■ CH2 Position/Velocity Mode 0 ■ ■ CH2 Brake 0 ■ CH2 Brake 0 ■ ■ CH2 Running Direction 0 ■ CH2 Clear State 0 ■ ■ CH2 JOG 0 ■ CH2 Clear State 0 ■ ■ CH2 JOG 0 ■ CH2 Start IO 0 ■ ■ CH2 JOG 0 ■ CH2 Clear State 0 ■ ■ CH3 Absolute/Relative Position Mode 0 ■ CH3 Position/Velocity Mode 0	P	BIT O.	1 43.5	Output	0	
▲ I Box 1 (XB6S-EC2002) ■·CH1 JOG 0 ▶ I Inputs ■·CH1 Clear State 0 ▶ I Outputs ■·CH1 Set Current Location 0 ▲ PI Module 1 (XB6S-PT04A) ■·CH2 Running Direction 0 ▶ I Inputs ■·CH2 Running Direction 0 ▶ I Inputs ■·CH2 Position/Velocity Mode 0 ▶ I InfoData ■·CH2 Reset Coordinates 0 ■·CH2 Start ■·CH2 Start 0 ■·CH2 Absolute/Relative Position Mode 0 ■·CH2 Start 0 ■·CH2 Absolute/Relative Position Mode 0 ■·CH2 Start 0 ■·CH2 Absolute/Relative Position Mode 0 ■·CH2 Start 0 ■·CH2 JOG 0 ■·CH2 JOG 0 ■·CH2 Start 0 ■·CH2 Start 0 ■·CH2 JOG 0 ■·CH2 Start 0 ■·CH2 Start 0 ■·CH2 Start 0 ■·CH2 Absolute/Relative Position Mode 0 ■·CH2 Start 0 ■·CH2 Absolute/Relative Position Mode 0 ■·CH2 Start 0 ■·CH2 Absolute/Relative Position Mode 0 ■·CH2 Absolute/Relative Position Mode <td>E</td> <td>BIT O.</td> <td>1 43.6</td> <td>Output</td> <td>0</td> <td></td>	E	BIT O.	1 43.6	Output	0	
▶ Inputs ■ CH1 Clear State 0 ▶ Outputs ■ CH1 Set Current Location 0 ■ P[Module 1 (XB6S-PT04A) ■ CH2 Running Direction 0 ● Inputs ■ CH2 Absolute/Relative Position Mode 0 ● Outputs ■ CH2 Position/Velocity Mode 0 ● InfoData ■ CH2 Start 0 ■ CH2 Mappings ■ CH2 Home 0 ■ CH2 Clear State 0 ■ CH2 JOG 0 ■ CH2 JOG 0 ■ CH2 Start 0 ■ CH2 JOG 0 ■ CH2 Start 0 ■ CH2 JOG 0 ■ CH2 JOG 0 ■ CH2 Start 0 ■ CH2 Start 0 ■ CH2 Home 0 ■ CH2 Start 0 ■ CH2 JOG ■ ■ ■ CH2 Start 0 ■ CH2 Home 0 ■ ■ ■ 0 <t< td=""><td>P</td><td>BIT 0.</td><td>1 43.7</td><td>Output</td><td>0</td><td></td></t<>	P	BIT 0.	1 43.7	Output	0	
CH2 Set Current Location Fi Module 1 (XB65-PT04A) Fi Module 1 (XB65-PT04A) CH2 Running Direction Fi Mother (XB65-PT04A) CH2 Running Direction 0 CH2 Start Fi Morphings CH2 Reset Coordinates CH2 Start CH2 Start CH2 Home CH2 JOG CH2 Clear State CH2 Start CH2 Start CH2 Start CH2 Start CH2 Home CH2 Start CH2 Clear State CH2 Start CH2 Start CH2 Clear State CH2 Start	E	BIT O.	1 44.0	Output	0	
 ▶ Module 1 (XB6S-PT04A) ▶ Inputs ▶ CH2 Running Direction ■ CH2 Absolute/Relative Position Mode 0 ● CH2 Position/Velocity Mode ■ CH2 State ■ CH2 State ■ CH2 Rest Coordinates ■ CH2 Brake ■ CH2 Brake ■ CH2 CH2 Clear State ■ CH3 Running Direction ■ CH3 Running Direction ■ CH2 State ■ CH2 Clear State ■ CH3 Running Direction ■ CH3 Running Direction ■ CH3 Position/Velocity Mode ■ CH3 Position/Velocity Mode 	E	BIT O.	1 44.1	Output	0	
Inputs Inputs CH2 Absolute/Relative Position Mode CH2 Position/Velocity Mode CH2 Reset Coordinates InfoData Mappings Mappings CH2 Start CH2 Start CH2 Home CH2 JOG CH2 Clar State CH3 Running Direction CH3 Absolute/Relative Position Mode CH3 Running Direction CH3 Absolute/Relative Position Mode CH3 Position/Velocity Mode	F	BIT 0.	1 45.0	Output	0	
▶ Outputs ■ CH2 Position/Velocity Mode 0 ▶ ■ WcState ■ CH2 Reset Coordinates 0 ▶ ■ InfoData ■ CH2 Start 0 ■ CH2 Brake 0 ■ CH2 Brake 0 ■ CH2 Brake 0 ■ CH2 Dame 0 ■ CH2 JOG 0 ■ CH2 JOG 0 ■ CH2 State 0 ■ CH2 State 0 ■ CH2 JOG 0 ■ CH2 State 0 ■ CH2 Absolute/Relative Position Mode 0 ■ CH3 Absolute/Relative Position Mode 0 ■ CH3 Position/Velocity Mode 0 ■ CH3 Position/Velocity Mode 0	E	BIT O.	1 45.1	Output	0	
WCState Image: CH2 Reset Coordinates 0 Image: Mappings Image: CH2 Start 0 Image: CH2 Brake 0 Image: CH2 Brake 0 Image: CH2 Brake 0 Image: CH2 Brake 0 Image: CH2 Brake 0 Image: CH2 Brake 0 Image: CH2 Clear State 0 Image: CH2 State 0 Image: CH2 State 0 Image: CH2 State 0 Image: CH2 State 0 Image: CH2 State 0 Image: CH2 State 0 Image: CH2 State 0 Image: CH3 Running Direction 0 Image: CH3 Absolute/Relative Position Mode 0 Image: CH3 Position/Velocity Mode 0 Image: CH3 Position/Velocity Mode 0	E	BIT O.	1 45.2	Output	0	
InfoData CH2 Start O CH2 Start CH2 Brake O CH2 Home O CH2 JOG CH2 JOG CH2 Clar State O CH2 Clar State O CH3 Running Direction O CH3 Absolute/Relative Position Mode O CH3 Position/Velocity Mode O	F	BIT O.	1 45.3	Output	0	
Mappings Image: CH2 Brake 0 Image: CH2 Home 0 Image: CH2 JOG 0 Image: CH2 Clear State 0 Image: CH2 Clear State 0 Image: CH2 Clear State 0 Image: CH3 Running Direction 0 Image: CH3 Absolute/Relative Position Mode 0 Image: CH3 Position/Velocity Mode 0	F	BIT O.	1 45.4	Output	0	
CH2 Home 0 CH2 JOG 0 CH2 JOG 0 CH2 Clar State 0 CH3 Extraction 0 CH3 Absolute/Relative Position Mode 0 CH3 Position/Velocity Mode 0	F	BIT 0.	1 45.5	Output	0	
CH2 JOG CH2 Clear State 0 CH2 Clear State 0 CH2 Set Current Location 0 CH3 Running Direction 0 CH3 Absolute/Relative Position Mode 0 CH3 Position/Velocity Mode 0	F	BIT 0.	1 45.6	Output	0	
Image: CH2 Clear State 0 Image: CH2 Set Current Location 0 Image: CH3 Running Direction 0 Image: CH3 Absolute/Relative Position Mode 0 Image: CH3 Position/Velocity Mode 0	F	BIT 0.	1 45.7	Output	0	
CH3 Position/Velocity Mode	F	BIT O.	1 46.0	Output	0	
CH3 Running Direction CH3 Absolute/Relative Position Mode CH3 Position/Velocity Mode 0	F	BIT O.	1 46.1	Output	0	
CH3 Absolute/Relative Position Mode CH3 Position/Velocity Mode 0	F	RIT O	1 47.0	Output	0	
CH3 Position/Velocity Mode 0	F	RIT O	1 47 1	Output	0	
	F	RIT O	1 47.2	Output	0	
ECH3 Reset Coordinates 0	F	ar o	1 47.3	Output	0	
Er CH3 Start 0		ar o.	1 47.5	Output	0	
Er CH3 Brake			1 47.5	Output	0	
E CH3 Home			1 47.5	Output	0	
E CH3 Home 0			1 47.0	Output	0	
E CH3 Class State			1 48.0	Output	0	
Ex CH3 Set Current Location			1 49.1	Output	0	
ErcHo Acceleration Time 50	00 1	IINT 2	0 49.0	Output	0	
Er CHO Deceleration Time		UNIT 20	0 510	Output	0	
E CHO Pupping Valocity 10	000		0 52.0	Output	0	
Ex CHO Running Velocity 10	000		0 57.0	Output	0	
Cho Running Position 50	0000	2011 4.0	57.0	Juiput		

h. After the movement is completed, you can see that the current coordinate of channel 0 is 50000, as shown in the figure below.

解决方案资源管理器 ▼ 平 ×	TwinCAT Project1 🖕 × 起始页							
	Name	Online	Туре	Size	>Address	In/Out	User ID	Linked to
	CH1 Velocity Arrival	0	BIT	0.1	44.0	Input	0	
□ 反称称大刀条页称首星础(CUT+,)	🕫 CH1 Positive Limit Signal	0	BIT	0.1	44.1	Input	0	
回 解决方案"TwinCAT Project1"(1 个项目)	🕫 CH1 Negative Limit Signal	0	BIT	0.1	44.2	Input	0	
 TwinCAT Project1 	🕶 CH1 Home Signal	0	BIT	0.1	44.3	Input	0	
SYSTEM	🕫 CH1 Brake Signal	0	BIT	0.1	44.4	Input	0	
MOTION	✤ CH2 Pulse Output Direction	0	BIT	0.1	45.0	Input	0	
PLC	CH2 Pulse Status Flag 1	0	BIT	0.1	45.1	Input	0	
SAFETY	CH2 Pulse Status Flag 2	0	BIT	0.1	45.2	Input	0	
C++	CH2 Homing Mode Running	0	BIT	0.1	45.3	Input	0	
	CH2 Position Mode Running	0	BIT	0.1	45.4	Input	0	
Devices	CH2 Velocity Mode Running	0	BIT	0.1	45.5	Input	0	
Device 2 (EfferCAT)	♥ CH2 Homed	0	BIT	0.1	45.6	Input	0	
* Image Info	CH2 Location Arrival	0	BIT	0.1	45.7	Input	0	
b Synclinits	😎 CH2 Velocity Arrival	0	BIT	0.1	46.0	Input	0	
b D Inputs	♥ CH2 Positive Limit Signal	0	BIT	0.1	46.1	Input	0	
Dutputs	CH2 Negative Limit Signal	0	BIT	0.1	46.2	Input	0	
InfoData	✓ CH2 Home Signal	0	BIT	0.1	46.3	Input	0	
A Box 1 (XB6S-EC2002)	♥ CH2 Brake Signal	0	BIT	0.1	46.4	Input	0	
Inputs	CH3 Pulse Output Direction	0	BIT	0.1	47.0	Input	0	
Outputs	CH3 Pulse Status Flag 1	0	BIT	0.1	47.1	Input	0	
 PI Module 1 (XB6S-PT04A) 	♥ CH3 Pulse Status Flag 2	0	BIT	0.1	47.2	Input	0	
👂 🛁 Inputs	♥ CH3 Homing Mode Running	0	BIT	0.1	47.3	Input	0	
Outputs	CH3 Position Mode Running	0	BIT	0.1	47.4	Input	0	
WcState	CH3 Velocity Mode Running	0	BIT	0.1	47.5	Input	0	
👂 🖳 InfoData	• CH3 Homed	0	BIT	0.1	47.6	Input	0	
Mappings	♥ CH3 Location Arrival	0	BIT	0.1	47.7	Input	0	
	* CH3 Velocity Arrival	0	BIT	0.1	48.0	Input	0	
	CH3 Positive Limit Signal	0	BIT	0.1	48.1	Input	0	
	CH3 Negative Limit Signal	0	BIT	0.1	48.2	Input	0	
	* CH3 Home Signal	0	BIT	0.1	48.3	Input	0	
	T CH3 Brake Signal	0	BIT	0.1	48.4	Input	0	
	CH0 Error Code	0	UINT	20	49.0	Input	0	
	CH1 Error Code	1537	UINT	2.0	51.0	Input	0	
	CH2 Error Code	1537	LIINT	20	53.0	Input	0	
	CH3 Error Code	1537	LIINT	20	55.0	Input	0	
	CH0 Current Location	50000	DINT	40	57.0	Input	0	
	CH0 Current Velocity	0	DINT	4.0	61.0	Input	0	
	* CH1 Current Location	0	DINT	4.0	65.0	Input	0	
	CH1 Current Velocity	0	DINT	4.0	69.0	Input	0	
	CH2 Current Location	0	DINT	4.0	73.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	77.0	Input	0	
	CH2 Current Location	0	DINT	4.0	91.0	Input	0	
	CH2 Current Velocity	0	DINT	4.0	01.0	Input	0	
	 CH3 Current Velocity 	0	DINI	4.0	85.0	input	U	

1、 Preparation

- Hardware Environment
 - > Module model XB6S-PT04A
 - > EtherCAT bus coupler module, end cap
 - This description takes the XB6S-EC2002 coupler module as an example
 - > A computer with Sysmac Studio software pre-installed
 - > An Omron PLC. This description takes the model NX1P2-9024DT as an example.
 - > EtherCAT dedicated shielded cable
 - > Motor drivers, stepper/servo motors and other equipment
 - > Switching power supply
 - > Module mounting rails and rail fixings
 - > Device Profile

Configuration file acquisition address: https://www.solidotech.com/documents/configfile

- Hardware configuration and wiring
 Please follow the <u>4 Installation and removal</u>" and "<u>5 Wiring</u>Request action
- Computer IP requirements

Set the IP address of the computer and the IP address of the PLC, and ensure that they are in the same network segment.

2、New Construction

Sysmac Studio (64bit)

a. Open Sysmac Studio and click New Project.

		_
Offline New Project Den Project Den Project Den Project	Project Properties Project name X86S Author 29719	
<u>Export</u> Online <u>Connect to Device</u> Notice	Comment Type Standard Project	
Version Control Explorer	Select Device Category Controller ▼	
License	Device NX1P2 V-9024DT Version 1.49	
Robot System	Create	

• Project name: Custom.

п
- Select the device: Select the corresponding PLC model in "Device" and the corresponding version number of the PLC in "Version".
- b. After entering the project properties, click Create.
- c. Click "Controller -> Communications Setup" in the menu bar, select the method to be used each time you connect to the controller while online, and enter the "Remote IP Address", as shown in the figure below.



d. Click Ethernet Communication Test. The system displays that the test is successful.

3、Installation XML File

- a. In the left navigation tree, expand Configurations and Setup and double-click EtherCAT.
- b. Right-click "Master" and select "Display ESI Library", as shown in the following figure.



c. In the pop-up "ESI Library" window, click "Install (File)", select the XML file path of the module, and click "Yes" to complete the installation, as shown in the following figure.

🔛 ESI Li	brary			\times
- All	ESI files		_	
± (Omron 3G3AX-MX2-ECT			
.	Omron 3G3AX-RX2-ECT			
+ (Omron 3G3AX-RX-ECT			
÷ (Omron CJ1W-ECTxx			
÷ (Omron E3NW-ECT			
•	Omron E3X-ECT			
+ (Omron EJ1N-HFUC-ECT			
± (Omron FHV7x-xxxxx			
±	Omron FH-xxxx-xx		-	
•	Omron FQ-MS12x-x-ECT Sysmac Studio			
+ (Omron FZM1-XXX-ECT			
+	Omron GRT1-ECT_Ver2_0 The colocted ESL files will be inst	allod		
+	Omron GX-Analog IO Do you want to continue?	alleu.		-
+	Omron GX-Digital IO			
+	Omron GX-Digital IO-T FcatTerminal-XB6S_V1.19.16_FN	UM.xml		
÷ (Omron GX-Encoder			
+	Omron GX-IO-Link			
+	Omron GX-JC			
+	Omron GX-JC06-H <u>Y</u> es <u>N</u> o			
•	Omron NX_Coupler			
±				
	Omron R88D-1SAN10H-ECT			
	Omron R88D-15AN15F-FCT			
	Omron R88D-1SAN15H-FCT			
	Omron R88D-1SAN20F-FCT			
	Omron R88D-1SAN20H-ECT			
	Omron R88D-1SAN30F-ECT			1000
	Omron R88D-1SAN30H-FCT			\sim
Install	(File) Install (Folder) Uninstall		L	Close

4. Add a device

There are two ways to add devices: online scanning and offline adding. This description takes offline adding as an example.

a. Under the "Toolbox" column on the right, click to expand all suppliers and select "Nanjing Solidot Electronic Technology Co., Ltd.", as shown in the figure below.



b. Click to select XB6S Series Fieldbus, double-click the XB6S-EC2002 coupler module, and add a slave device, as shown in the following figure.



c. On the EtherCAT main page, select the XB6S-EC2002 coupler module that you just added and select "Edit Module Configuration", as shown in the figure below.



d. Position the cursor in "Module", click the module in the toolbox module list on the right, and add I/O modules one by one according to the order of I/O module configuration. Note: The order and model must be consistent with the physical topology!

XB6S - new_Controller_0 - Sysmac St	studio (64bit)	- 🗆 X
File Edit View Insert Project C	Controller Simulation Tools Window Help	
	■ 라 < 삶 G 見 ☆ Ă U ▼ ▲ X & & A * = O 5 22 Ц Q Q 3	
File Edit View Insert Project C Wultiview Explorer Configurations and Setup Configurations and Setup Configurations Configuration	Controller Simulation Tools Window Help	Toolbox 9 Broup Digital Input Terminals Digital Input Terminals 1 Digital Output Terminals 1 Analog Output Terminals 1 Public Io Terminals 1 Publ
	I Description I Program I Location I	Model : XB6S-PT04A Product name : 4 Chanr Vendor : Naniing Solidi
<	Output Build	

5、Set the node address

a. Click "Controller->Online" in the menu bar to switch the controller to online status. Right-click the master device and click "Write Slave Node Address", as shown in the figure below.

b. In the window for setting the node address, click the value under Setting Value, enter the node address, and click Write to change the node address of the slave device, as shown in the following figure.



c. After writing, a power-on prompt pops up, as shown in the figure below. Click "Write" and then restart the power of the slave device according to the prompt.

Slave Node Address Writing	×				
Node addresses are written to the slaves. In order to reflect the result of this operation, you have to cycle the prover supply to the slaves age Be sure it is safe to do this operation.					
Write Cancel					
Slave Node Address Writing	×				
Writing node addresses to slaves was successfully completed. Cycle the power supply to the slave to reflect the settings.					
Close					

6. Download the configuration to the PLC

a. Click the menu bar "Controller -> Teleport (A) -> Teleport to Controller (T)" button, as shown in the figure below.

XB6S - new_Controller_0 - Sysmac	Studio (64bit)				- 🗆 ×
File Edit View Insert Project	Controller Simulation Tools Windo	w Help			
	Communications Setup		A X & & + + + O P P		
	Change Device				
Multiview Explorer 👻	Online	Ctrl+W	-	-	Toolbox 👻 🖡
new_Controller_0 🔻	Offline	Ctrl+Shift+W			All vendors
Configurations and Setup	Synchronize	Ctrl+M	Item name	Value	All groups
EtherCAT	Transfer	•	To Controller Ctrl+T	Master	Terminal Coupler
▼ -□ Node1 : XB6S-EC2002(E00	Mode	•	From Controller Ctrl+Shift+T	Master	Servo Drives
∟ <= 0 : XB6S-PT04A(M1)	Monitor		Number of Slaves	1 2000 ur	
CPU/Expansion Racks	Stop Monitoring		PDO Communications Cyc	US	Show all versions
	Set/Reset	•	Transmission Delay Time	Setting	NX-ECC201 Rev:1.2
Controller Setup	Forced Refreshing	•	Reference Clock	Exist	NX-ECC201 EtherCAT couple =
Cam Data Settings	MC Test Run	٠	Total Cable Length	1000 m	NX-ECC202 Rev:1.2 NX-ECC202 EtherCAT couple
 Event Settings 	MC Monitor Table		Fail-soft Operation Setting Wait Time for Slave Startup	Fail-soft operation 30 s	NX-ECC203 Rev:1.7
s Task Settings	CNC Coordinate System Monitor Table	•	PDO communications tim	2 times	R88D-1SAN02H-ECT Rev:1.
🖂 Data Trace Settings	SD Memory Card		Revision Check Method Serial Number Check Met	Setting <= Actual device No check	B R88D-1SAN02H-ECT 200V/2
Programming	Controller Clock				R88D-1SAN04H-ECT 200V/4
V 🖬 POUs	Release Access Right				R88D-1SAN08H-ECT Rev:1. R88D-1SAN08H-ECT 200V/7
▼ III Programs	Update CPU Unit Name		C Device name		
V He Programu	Security	•	Set a name for the master.		Model name : NX-EC
	Clear All Memory				Revision : 1.2
上駕 Function Blocks	Reset Controller				Comment - EtherCAT
▶ m Data	Build			- ‡ ×	Controller Status 🗸 🕂
► 🖿 Tasks	🔀 0 Errors 🔝 0 Warnings				X X
	I Description	Progra	m I Location I	1	ONLINE 0 192.168.250.1
					ERR/ALM RUN mode
≪ III filter					123
	Build				12

Download the configuration to the PLC. A pop-up window will pop up to confirm the transfer. b. Click "Execute". In the subsequent pop-up windows, click "Yes/OK" in sequence, as shown in the figure below. After the download is complete, you need to power on again.



7、Parameter settings

Switch the configuration to offline state, edit the module configuration page in node 1, select a. the XB6S-PT04A module, and click "Edit Setting Parameters", as shown in the figure below.



Note: If The PLC firmware version is too low, and the EC CoESDOWrite and EC CoESDORead instructions are required to write and read the SDO address.

b. Exist On the XB6S-PT04A parameter setting page, you can see the configuration parameters. Click any parameter to set the related configuration, as shown in the figure below.

Edit Setting Parameters	- 🗆 X
Item name	Value
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dír
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single 🔹
0x2000:05 XB6S-PT04A Config/Input Config	0
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24 🔹 🗸
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1 🗠
	Maya Un Maya Daym Add Pamaya
	Nove op Nove Down Add Kellove
	Return to Default
_ Help	
Data type :	
Comment :	
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting.	
Select Synchronize on the Toolbar to transfer.	
	OK Cancel Apply

c. For example, to modify the startup speed parameter of channel 0, click "CH0 Startup Speed" and modify the parameter value, as shown in the figure below. After all parameters are configured, you need to re-download the program to the PLC, and the PLC and module need to be powered on again.

Statis Setting Parameters	- 🗆 ×
Item name	Value
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running 🔹 🔹
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single
0x2000:05 XB6S-PT04A Config/Input Config	0
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	100
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1
	Move Up Move Down Add Remove
	Return to Default
c Help	
Data type · I IDINT	
Valid range : 0 - 200000	
Comment :	
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting. Select Synchronize on the Toolbar to transfer.	
	OK Cancel Apply

8、I/O Function

a. Double-click I/O Mapping in the left navigation tree to view the mapping table of the modules in the topology, so as to monitor the channel input and output values, as shown in the following



Module Functionality Examples

- Channel 0 runs 50,000 pulses in the forward direction at a speed of 100,000 Hz
 - a. Configure the configuration parameters as shown in the following figure.

Edit Setting Parameters	- 🗆 X
Item name	Value
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running 🔹 🔽
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single 🔹
0x2000:05 XB6S-PT04A Config/Input Config	0
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24 🔹
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000
0x2000:0A XB6S-PT04A Config/CH0 Horning Approach Speed	500
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24 🔹 👻
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open 🔹 🔹
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1
	Move Up Move Down Add Remove
	Return to Default
c Help	
Data tupo :	
Comment :	
comment.	
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting. Select Synchronize on the Toolbar to transfer.	
	OK Cancel Apply

- b. Set channel 0 to relative position mode;
- c. Configure channel 0 to run with 50000 steps, 100000 Hz running speed, and 500 acceleration/deceleration time.
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1, as shown in the figure below.

XB6S - new_Controller_0 - Sysmac St	tudio (64bit)					- 🗆 ×
Eile Edit View Insert Project Q	ontroller Sim	ulation Iools <u>W</u> indow <u>H</u> elp				
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Multiview Explorer	TherCAT	-T Node1 - YD6S-EC2002 /E0			_	- Toolhox - J
	Position	Port	Description R	W Data Tvi	oe Value Variable	< Search >
new_Controller_0		There are the two the two the two				
 Configurations and Setup 	Node1	▼ TXB6S-EC2002				
▼		Outputs_CouplerCtrl_F200_01	w	UINT	0	
Node1 · XB6S-EC2002(E001)		Inputs_CouplerState_F100_01	R	UINT	0	
0 - XB65-PT044(M1)	Slot 0	XB6S-PT04A				
		Outputs_CH0 Running Direction_7001_01	W	BOOL	FALSE	
CPO/Expansion Racks	_	Outputs_CH0 Absolute/Relative Posit_7001_02	w	BOOL	TRUE	
I/O Map		Outputs_CH0 Position/Velocity Mode_7001_03	w	BOOL	FALSE	
Controller Setup	_	Outputs_CH0 Reset Coordinates_7001_04	w	BOOL	FALSE	
Motion Control Setup		Outputs_CH0 Start_7001_05	w	BOOL	TRUE	
e' Cam Data Settings	_	Outputs_CH0 Brake_7001_06	W	BOOL	FALSE	
Event Settings	_	Outputs_CH0 Home_7001_07	w	BOOL	FALSE	
Task Settings	_	Outputs_CH0.JOG_7001_08	vv	BOOL	FALSE	
편 Data Trace Settings		Outputs_CH0 Clear State_7001_09	VV	BOOL	FALSE	
Programming	-	Outputs_CH0 Set Current Location_7001_04	vv	BOOL	FALSE	
	_	Outputs_CH1 Absolute/Polative Posit 7001_11	vv	ROOL	FALSE	
V POOS	_	Outputs_CH1 Position A/elocity Mode 7001_12	w	ROOL	FALSE	
▼ ;#; Programs	_	Outputs CH1 Reset Coordinates 7001 14	w	BOOL	FALSE	
▼	_	Outputs CH1 Start 7001 15	w	ROOL	FALSE	
L d Section0	_	Outputs CH1 Brake 7001 16	w	BOOL	FALSE	
L 🛒 Functions	_	Outputs CH1 Home 7001 17	w	BOOL	FALSE	
LIE Function Blocks		Outputs CH1 JOG 7001 18	w	BOOL	FALSE	
▶ Data		Outputs CH1 Clear State 7001 19	w	BOOL	FALSE	
► m Tasks	_	Outputs_CH1 Set Current Location_7001_1A	w	BOOL	FALSE	
		Outputs_CH2 Running Direction_7001_21	w	BOOL	FALSE	
		Outputs_CH2 Absolute/Relative Posit_7001_22	w	BOOL	FALSE	Controller Status 🚽 🖡
		Outputs_CH2 Position/Velocity Mode_7001_23	w	BOOL	FALSE	
		Outputs_CH2 Reset Coordinates_7001_24	w	BOOL	FALSE	
		Outputs_CH2 Start_7001_25	w	BOOL	FALSE	ERR/ALM RUN mode
		Outputs_CH2 Brake_7001_26	w	BOOL	FALSE	Kort mode
		Outputs_CH2 Home_7001_27	w	BOOL	FALSE	
		Outputs CH2 IOG 7001 28	w	ROOI	FALSE	
	- Monitor type				, Bit order	
	Data type	e 🕒 Binary 🔵 Hex 🌑 Signed decimal 🌑 Unsigned decim			🔵 MSB-LSB 🔵 I	LSB-MSB

XB6S - new_Controller_0 - Sysmac Studie	io (64bit)												-		×
Eile Edit View Insert Project Contr	troller <u>S</u> imu	lation Ioc	ols <u>W</u> indo	w <u>H</u> elp											
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Multiview Explorer 🗸 🗸 🞆	EtherCAT	- Node1 :	XB6S-EC200	2 (EO 🥔	I/O Map 🗙						•	Toolbox			→ ‡
new_Controller_0	Position	OL	utputs CH2 F	Port osition/Velocit	v Mode 7001 23	Descriptio	n R/W W	Data Type BOOL	FALSE	Variable		<search></search>		•	₽×
Configurations and Setup		OL	tputs_CH2 F	eset Coordinat	es_7001_24		w	BOOL	FALSE						
▼ 3 EtherCAT			tputs_CH2 S	tart_7001_25			w	BOOL	FALSE						
= Nodol : VR65 EC2002(E001)		OL	utputs_CH2 E	rake_7001_26			w	BOOL	FALSE						
			utputs_CH2 H	lome_7001_27			w	BOOL	FALSE						
L-0 0 : XB6S-PT04A(MT)		OL	utputs_CH2 J	OG_7001_28			w	BOOL	FALSE						
CPU/Expansion Racks			utputs_CH2 (lear State_700	1_29		w	BOOL	FALSE						
🔳 🐷 I/O Map		OL	tputs_CH2 S	et Current Loca	ation_7001_2A		w	BOOL	FALSE						
Controller Setup		OL	utputs_CH3 F	unning Directi	on_7001_31		w	BOOL	FALSE						
► ⊕ Motion Control Setup		OL	utputs_CH3 #	bsolute/Relativ	/e Posit_7001_32		w	BOOL	FALSE						
✓ Cam Data Settings			utputs_CH3 F	osition/Velocit	y Mode_7001_33		w	BOOL	FALSE						
Event Settings		OL	utputs_CH3 F	leset Coordinat	es_7001_34		w	BOOL	FALSE						
P Event Settings		OL	tputs_CH3 S	tart_7001_35			w	BOOL	FALSE						
Task Settings		OL	utputs_CH3 E	rake_7001_36			w	BOOL	FALSE						
Data Trace Settings		OL	utputs_CH3 H	lome_7001_37			w	BOOL	FALSE						
Programming		OL	utputs_CH3 J	OG_7001_38			w	BOOL	FALSE						
V 🖪 POUs		OL	utputs_CH3 (lear State_700	1_39		w	BOOL	FALSE						
▼ 5€ Programs		OL	tputs_CH3 S	et Current Loca	ation_7001_3A		w	BOOL	FALSE						
T C Program0		OL	utputs_CH0 /	cceleration Tin	ne_7001_41		w	UINT	500						
		OL	tputs_CH0 [Deceleration Tir	ne_7001_42		w	UINT	500						\sim
L & SectionU			utputs_CH0 F	lunning Velocit	y_7001_43		w	UDINT	100000						
L 3€ Functions		OL	utputs_CH0 F	lunning Positio	n_7001_44		w	DINT	50000						
L 🕱 Function Blocks			utputs_CH1 #	cceleration Tin	ne_7001_45		w	UINT	0						
▶ 🎟 Data		OL	tputs_CH1 [Deceleration Tir	ne_7001_46		w	UINT	0						
▶ Pa Tasks			utputs_CH1 F	lunning Velocit	y_7001_47		w	UDINT	0						
		OL	utputs_CH1 F	lunning Positio	n_7001_48		w	DINT	0						
			tputs_CH2 /	cceleration Tin	ne_7001_49		w	UINT	0			Controller Sta	atus		- - 🖡
		OL	tputs_CH2 [Deceleration Tir	ne_7001_4A		w	UINT	0						
			utputs_CH2 F	lunning Velocit	y_7001_4B		w	UDINT	0					102 100	2504
		OL	tputs_CH2 F	lunning Positio	n_7001_4C		w	DINT	0					192.168.	250.1
			utputs_CH3 /	cceleration Tin	ne_7001_4D		w	UINT	0			EKK/ALW		KUN IIIG	de
		OL	tputs_CH3 [eceleration Tir	ne_7001_4E		w	UINT	0						
		Οι	utputs CH3 F	lunnina Velocit	v 7001 4F		w	UDINT	0		\sim				
	<							_	D .		>				
	Onitor type –	🔵 Binary 🌘	🕽 Hex 🔵 Si	gned decimal (Unsigned decir	nal			Bit on	der 1SB-LSB 🔵 LSE	B-MSB				

f. After the movement is completed, you can see that the channel 0 position has been set to 1, as shown in the figure below.

XB6S - new_Controller_0 - Sysmac Str	udio (64bit)										-
<u>File Edit View Insert Project C</u>	ontroller <u>S</u> ir	mulation <u>I</u> or	ols <u>W</u> indow	Help				-			
	5 F A	. ស្រុក ត្	2. # #	9 R A	63 🔉	🖉 🦒 🐿	0 % 5	, a			
Multiview Explorer 🚽 👎	EtherCAT	-🗖 Node1	: XB6S-EC2002	(E0 🧬 I/O Map	×					- Toolbox	* 4
Multivez Explorer rew_Controller_0 ▼ Configurations and Setup The EtherCAT For Configurations and Setup To XB65-FC2002(E001) Control Restup Controller Setup Controller Setup Controller Setup Controller Setup Controller Setup Controller Setup Forgarmming Pols Forgarmming Pols Forgarman Control Blocks For Data Forgarman Control Blocks For Data Forgarman Control Blocks For Data Forgarman Fo			X805-4C2002 Partis, CH0 Public puts, CH1 Public puts, CH2 Public Public Public CH2 Public Publi	ED. UVCMap Pot Output Direction, Solar Status Flag 1: 6001.0, Status Flag 1: 6001.0, Status Flag 1: 6001.0, Status Flag 1: 6001.0, and Mode Running, E0 ed. 6001.07 bion Arrowal.6001.09 we Limit Signal.6001.00 es Signal.6001.00 es Signal.6001.00 es Signal.6001.00 es Signal.6001.00 Status Flag 1: 6001.10 circle Arrowal.6001.13 circle Arrowal.6001.13 circle Arrowal.6001.13 circle Arrowal.6001.13 circle Arrowal.6001.13 circle Arrowal.6001.13 circle Arrowal.6001.15 circle Signal.6001.10 es Signal.60	X 11.01 2 3 01.04 01.05 01.06 00 00 00 00 00 00 00 00 00	Description F	KW Dota Type 8 BOOL 4 BOOL 5 BOOL 4 BOOL 5 BOOL 4 BOOL 4 BOOL 5 BOOL 6 BOOL 8 BOOL <td>e Value FALSE</td> <td>Variable</td> <td>Controller Status</td> <td>- Q → Q → Q → Q → Q → Q → Q → Q →</td>	e Value FALSE	Variable	Controller Status	- Q → Q → Q → Q → Q → Q → Q → Q →
		In	puts_CH2 Velo	city Mode Running_60	01_25 01_26	F	R BOOL	FALSE			
	Monitor typ	e pe 🌑 Binary 🌗	Duts CH2 Hom Hex 🌑 Sigi	ed 6001 27 ned decimal 🔵 Unsig	ned decim	al	R BOOL	FALSE Bit or	rder MSB-LSB 🔵 LSB-MSB		

g. You can also see that the current coordinate of channel 0 is 50000, as shown in the figure below.

XB6S - new_Controller_0 - Sysmac St	udio (64bit)						-	
Eile Edit View Insert Project C	ontroller Sim	ulation Tools Window Help						
		<u> </u>						
	B 4 4	A 64 55 A 9 14	. 🔺 🔺 68	#°. • • • 0				
Multiview Explorer 🗸 🗸	EtherCAT	-🗔 Node1 : XB6S-EC2002 (E0	I/O Map 🗙			-	Toolbox	• 4
new Controller 0 🔻	Position	Port		Description R/W	Data Type Va	alue Variable	<search></search>	▼ 8 ×
		Inputs_CH2 Position Mode R	unning_6001_25	ĸ	BOOL FAL	St A		
Configurations and Setup		Inputs_CH2 Velocity Mode R	unning_ouu1_26	R	BOOL FAL	SE SE		
▼ ₩ EtherCAT		Inputs_CH2 Location Arrival	6001.29	R D	BOOL FAL	SE		
▼ -= Node1 : XB6S-EC2002(E001)		Inputs_CH2 Velocity Arrival	0001_20	D D	ROOL FAL	SE		
L C 0 : XB6S-PT04A(M1)		Inputs CH2 Positive Limit Sic	nal 6001 24	R	BOOL FAL	SE		
Grude CPU/Expansion Racks		Inputs CH2 Negative Limit S	ional 6001 28	R	ROOL FAL	SE		
I/O Map		Inputs CH2 Home Signal 60	01 2C	R	BOOL FAL	SE		
Controller Setup		Inputs CH2 Brake Signal 600	1 2D	R	BOOL FAL	SE		
 A Motion Control Setup 	_	Inputs CH3 Pulse Output Dir	ection_6001_31	R	BOOL FAL	SE		
Con Data California	_	Inputs_CH3 Pulse Status Flag	1_6001_32	R	BOOL FAL	SE		
er cam Data Settings		Inputs_CH3 Pulse Status Flag	2_6001_33	R	BOOL FAL	SE		
Event Settings		Inputs_CH3 Homing Mode R	unning_6001_34	R	BOOL FAL	SE		
Task Settings		Inputs_CH3 Position Mode R	unning_6001_35	R	BOOL FAL	SE		
🖂 Data Trace Settings		Inputs_CH3 Velocity Mode R	unning_6001_36	R	BOOL FAL	SE		
Programming		Inputs_CH3 Homed_6001_37		R	BOOL FAL			
V 🖞 POUs		Inputs_CH3 Location Arrival_	6001_38	R	BOOL FAL	SE		
▼ at Programs		Inputs_CH3 Velocity Arrival_6	001_39	R	BOOL FAL	SE		
The Program()		Inputs_CH3 Positive Limit Sig	nal_6001_3A	R	BOOL FAL	SE		
- Cestion0		Inputs_CH3 Negative Limit S	ignal_6001_3B	R	BOOL FAL	SE		<u>~</u>
Le Sectiono		Inputs_CH3 Home Signal_60	01_3C	R	BOOL FAL	SE		
L 🖲 Functions		Inputs_CH3 Brake Signal_600	1_3D	R	BOOL FAL	SE		
∟源 Function Blocks		Inputs_CH0 Error Code_6001	_41	R	UINT 0			
▶ Data		Inputs_CH1 Error Code_6001	_42	R	UINT 153	7		
► m Tasks		Inputs_CH2 Error Code_6001	_43	R	UINI 153	7		
		Inputs_CH3 Error Code_6001	_44	ĸ	UINI IS:	100		5 1996
		Inputs_CH0 Current Location	_6001_45	R	DINI SUL	100	Controller Status	- 4
		Inputs_CH0 Current Velocity	0001_40	R	DINT 0		e	X
		Inputs_CH1 Current Velocity	6001_47	R	DINT 0		ONLINE 🔵	192.168.250.1
		Inputs_CH1 Current Velocity	6001_40	R	DINIT 0		ERR/ALM	RUN mode
		Inputs CH2 Current Velocity	6001 40	R	DINT 0			
		Inputs CH3 Current Location	6001 4B	R	DINT 0	~		
	<		0001-10	K				
	- Monitor type					Bit order		
	Data type	Binary Hex Signed decimal	Unsigned decimal			SB-LSB SLSB-MSB		

- Channel 0 is currently at 1000, moves to -20000, and runs at a speed of 100000 Hz
 - a. Configure the configuration parameters as shown in the following figure.

Edit Setting Parameters			- 0) C	<
Item name	Value			1	
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir				~
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running				
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200				1
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single				1
0x2000:05 XB6S-PT04A Config/Input Config	0				1
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0				11
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1				11
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24				1
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000				1
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500				1
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open				
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1				1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1				
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24			-	
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000			-	
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500			-	
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open				
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1				\simeq
	Move Un Move Down	۵dd		Remove	
	more op	7100		ternove	
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CHelp					
Data type :					
Comment :					
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting.					
Select Synchronize on the Toolbar to transfer.					
		ОК	Cancel	Appl	

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0:XB6S-PT04A(M1)

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Data Trace Settin

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3001 3001 BOOL BOOL

BOO UINT UINT UINT UINT

DINT DINT DINT DINT DINT

False False False

1537 1000

Bit order

ontroller Status

ONLINE FRR/ALM

192.168.250.1 RUN mod

b. The current position of channel 0 is 1000, as shown in the figure below.

- Set channel 0 to absolute position mode; с.
- d. Configure channel 0 to run at -20000 steps, 100000 Hz speed, and 500 acceleration and deceleration times;

al 🔵 I

- Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state; e.
- Set the start command of channel 0 from 0 to 1, as shown in the figure below. f.

ny 🔵 Hex 🔵 S

<u>File Edit View Insert Project</u>	<u>Controller</u>	nulation <u>T</u> ools <u>W</u> indow <u>H</u> elp				
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Multiview Explorer 🗸 🗸	EtherCAT	-🗖 Node1 : XB6S-EC2002 (E0 🥔 I/O Map 🗙				
new Controller 0 -	Position	Port	Description R/	N Data Type	Value Variable	
	Slot 0	▼ XB6S-PT04A				
 Configurations and Setup 		Outputs_CH0 Running Direction_7001_01	W	BOOL	FALSE	
▼ ₩ EtherCAT		Outputs_CH0 Absolute/Relative Posit_7001_02	w	BOOL	FALSE	
v 🖙 Node1 : XB6S-EC2002(E001)		Outputs_CH0 Position/Velocity Mode_7001_03	W	BOOL	FALSE	
L -□ 0 : XB6S-PT04A(M1)		Outputs_CH0 Reset Coordinates_7001_04	W	BOOL	FALSE	
E COLL/Expansion Packs		Outputs_CH0 Start_7001_05	W	BOOL	TRUE	
		Outputs_CH0 Brake_7001_06	W	BOOL	FALSE	
📕 🥃 І/О Мар		Outputs_CH0 Home_7001_07	W	BOOL	FALSE	
Controller Setup		Outputs_CH0 JOG_7001_08	w	BOOL	FALSE	
●		Outputs_CH0 Clear State_7001_09	W	BOOL	FALSE	
		Outputs_CH0 Set Current Location_7001_0A	W	BOOL	FALSE	
Event Settings		Outputs_CH1 Running Direction_7001_11	W	BOOL	FALSE	
Tack Settings		Outputs_CH1 Absolute/Relative Posit_7001_12	W	BOOL	FALSE	
		Outputs_CH1 Position/Velocity Mode_7001_13	W	BOOL	FALSE	
Data Trace Settings		Outputs_CH1 Reset Coordinates_7001_14	W	BOOL	FALSE	
Programming		Outputs_CH1 Start_7001_15	W	BOOL	FALSE	
🖉 🔻 🖪 POUs		Outputs_CH1 Brake_7001_16	W	BOOL	FALSE	
▼ II Programs		Outputs_CH1 Home_7001_17	W	BOOL	FALSE	
V 🖂 Program0		Outputs_CH1 JOG_7001_18	W	BOOL	FALSE	
L ♣ Section0		Outputs_CH1 Clear State_7001_19	W	BOOL	FALSE	
- SE Functions		Outputs_CH1 Set Current Location_7001_1A	W	BOOL	FALSE	
E Standing Disale		Outputs_CH2 Running Direction_/001_21	W	BOOL	FALSE	
L選 Function Blocks	I	Outputs_CH2 Absolute/Relative Posit_7001_22	W	BOOL	FALSE	
📄 🕨 🥅 Data		Outputs_CH2 Position/Velocity Mode_/001_23	W	BOOL	FALSE	
🕨 🖿 Tasks		Outputs_CH2 Reset Coordinates_7001_24	W	BOOL	FALSE	
		Outputs_CH2 Start_/001_25	W	BOOL	FALSE	
		Outputs_CH2 Brake_7001_26	W	BOOL	FALSE	
		Outputs_CH2 Home_/001_2/	W	BOOL	FALSE	
		Outputs_CH2 JOG_7001_28	W	BOOL	FALSE	
		Outputs_CH2 Clear State_/001_29	W	BOOL	FALSE	
		Outputs_CH2 Set Current Location_/001_2A	W	BOOL	FALSE	
		Outputs_CH3 Running Direction_/001_31	W	BOOL	FALSE	
		Outputs CH3 Absolute/Relative Posit 7001 32	W	BOOL	TALSE	>
	Monitor type				T Bit order	
	Data typ	e 🕒 Binary 🌑 Hex 🌑 Signed decimal 🌑 Unsigned decin	nal		S MSB-LSB S LS	SB-MSB

<u>File Edit View Insert Project O</u>	ontroller	<u>S</u> imulation	<u>T</u> ools	<u>W</u> indov	w <u>H</u> elp)	_	_	_	_	-	_	-	_	_	-	_
	BB 6 1 /	< 🔏 🛛	3 5	A A		民	A 1	63		п _р е	• C		r₽	D			
	_								_	_	-	_	-	_	_	_	
Multiview Explorer 🚽 📮	EGH EtherC/					e 1/0	Мар 🗙										-
new Controller 0 🔻	Positio	on			Port				Descr	ription	R/W	Data	Туре	Value	Varia	ble	
		_	Outpu	its_CH1 H	ome_700	1_17					W	BOOL		FALSE			\sim
 Configurations and Setup 			Outpu	its_CH1 JC	G_/001_	18					w	BOOL		FALSE			
▼ iiii EtherCAT			Outpu	its_CH1 CI	lear State	_/001_19	7004				w	BOOL		FALSE			
V - Node1 : XB6S-EC2002(E001)			Outpu	ILS_CHI SE	et Curren	t Locatio	n_/001_	IA			vv	BOOL		FALSE			
∟ -= 0 : XB6S-PT04A(M1)		_	Outpu	Its_CH2 RU	unning D	Irection_	/001_21	1 22			W	BOOL		EALSE			
► S CPU/Expansion Backs			Outpu		DSOIULE/P	locity M	ode 700	1_22			VV	BOOL		EALSE			
I/O Map	-		Outpu	te CH2 Pa	set Coor	dinates	7001 24	1_23			W/	ROOL		FALSE			
Controller Setup			Outpu	ts CH2 St	art 7001	25	1001_24				w	BOOL		FALSE			
	-		Outpu	its CH2 Br	ake 7001	1 26					w	BOOL		FALSE			
▶ ⊕ Motion Control Setup			Outpu	ts CH2 H	ome 700	1 27					w	BOOL		FALSE			
			Outpu	its CH2 JC	OG 7001	28					w	BOOL		FALSE			
Event Settings	-		Outpu	ts CH2 CI	ear State	7001 29	9				w	BOOL		FALSE			
💼 Task Settings			Outpu	its_CH2 Se	et Curren	t Locatio	n_7001_	2A			w	BOOL		FALSE			
Data Trace Settings			Outpu	its_CH3 Ru	unning D	irection_	7001_31				w	BOOL		FALSE			
Programming			Outpu	its_CH3 Al	bsolute/F	Relative P	osit_700	1_32			w	BOOL		FALSE			
▼ I POUs			Outpu	its_CH3 Po	osition/Ve	elocity M	ode_700	1_33			w	BOOL		FALSE			
▼ 🗃 Programs			Outpu	its_CH3 Re	eset Coor	dinates_	7001_34				w	BOOL		FALSE			
			Outpu	ts_CH3 St	art_7001	_35					w	BOOL		FALSE			
			Outpu	its_CH3 Br	rake_7001	1_36					w	BOOL		FALSE			
L d Section0			Outpu	ts_CH3 H	ome_700	1_37					W	BOOL		FALSE			
∟ 📧 Functions			Outpu	its_CH3 JC	G_7001_	38					w	BOOL		FALSE			
∟罵 Function Blocks			Outpu	ts_CH3 CI	lear State	_7001_39	9				W	BOOL		FALSE			
▶ m Data			Outpu	rts_CH3 Se	et Curren	t Locatio	n_7001_	3A			w	BOOL		FALSE			
Tasks			Outpu	its_CH0 A	cceleratic	on Time_	7001_41				w	UINT		500			
			Outpu	its_CH0 D	eceleratio	on Time_	7001_42				w	UINT		500			
		_	Outpu	its_CH0 Ru	unning Ve	elocity_7	001_43				w	UDINT		100000			
			Outpu	its_CH0 Ri	unning Po	osition_7	001_44				w	DINT		-20000			
		_	Outpu	its_CH1 A	cceleratic	on Time_	7001_45				W	UINT		0			
	1		Outpu	its_CH1 D	eceleratio	on Time_	7001_46				W	UINT		0			
			Outpu	its_CH1 Ru	unning Ve	elocity_7	001_4/				W	UDINI		0			
			Outpu	Its_CHT RI	unning Po	osition_/	001_48				w	DINI		0			
			Outpu	ILS CH2 A	cceleratic	on Time	7001 49				W			0			
	Monitor ty	/pe												T Bit o	rder —		
	🔵 Data t	ype 🔵 Bir	ary 🔵 H	ex 🔵 Sig	ned deci	imal 🔵	Unsigne	d decim	ial						MSB-LSB	🕘 LS	B-MSB

g. After the movement is completed, you can see that the channel 0 position has been set to 1, as shown in the figure below.

<u>File Edit View Insert Project </u>	<u>C</u> ontroller	<u>S</u> imu	ulation <u>T</u> ools	<u>W</u> indov	w <u>H</u> elp									
	30 -	~		887 Ä		R	A 🔉		a 🖡 e	• G			Q Q 10	
Multiview Explorer 🗸 🗸 🗸	EAT Ether	CAT	-🗖 Node1 : XB	6S-EC2002	2 (EO	🗢 1/0 N	lap 🗙							
	Posi	tion			Port			D	escription	R/W	Data Type	e Value	Variable	
			Input	s_CH0 Puls	e Output	Direction	_6001_01			R	BOOL	TRUE		<u> </u>
 Configurations and Setup 			Input:	s_CH0 Puls	se Status	Flag 1_600	1_02			R	BOOL	FALSE		
▼ @ EtherCAT			Input:	s_CH0 Puls	se Status	Flag 2_600	1_03			R	BOOL	FALSE		
▼ -= Node1 : XB6S-EC2002(E001)			Input	s_CH0 Hor	ning Moo	de Running	1_6001_04	ļ.		R	BOOL	FALSE		
0:XB6S-PT04A(M1)	l (Input	s_CH0 Pos	ition Mod	le Running	_6001_05			R	BOOL	FALSE		
			Input	s_CH0 Velo	ocity Mod	le Running	_6001_06			R	BOOL	FALSE		
	·		Input	s_CH0 Hor	ned_600	_07				R	BOOL	FALSE		
I/O Мар			Input	s_CH0 Loc	ation Arri	val_6001_0	18			R	BOOL	TRUE		
Controller Setup	—		Input	s_CHU Velo	ocity Arriv	/al_6001_0	9	_		R	BOOL	FALSE		
● 泰 Motion Control Setup	. — —		Input	S_CHU POS	itive Limi	t Signal_60	01_0A			ĸ	BOOL	FALSE		
er Cam Data Settings	l — —	_	Input	S_CHU Nec	jative Lin	iit Signal_b	001_08	_		R	BOOL	FALSE		
Event Settings		_	input		ne signal	_0001_0C				ĸ	BOOL	FALSE		
Task Settings	. — —		Input	S_CHU Brai	ke Signal	_6001_0D	6001 11	_		R D	BOOL	EALSE		
网 Data Trace Settings			Input		se Output	Elag 1 600	1 12			D	POOL	EALSE		
Programming			Input	CH1 Puls	e Status	Flag 2 600	1 13			R	ROOL	FALSE		
			Input	CH1 Hor	ning Mor	le Running	6001 14	ii ii		R	ROOL	FALSE		
V POUS			Input	CH1 Pos	ition Mod	le Running	6001 15			R	BOOL	FALSE		
▼ III Programs			Input	CH1 Veld	ocity Mod	le Running	6001 16			R	BOOL	FALSE		
V 🖽 Program0			Input	CH1 Hor	ned 6001	1 17				R	BOOL	FALSE		
∟ de Section0			Input	s CH1 Loc	ation Arri	val 6001 1	8			R	BOOL	FALSE		
L ■ Functions			Input	CH1 Velo	ocity Arriv	al 6001 19	9			R	BOOL	FALSE		
L意 Function Blocks			Input	s_CH1 Pos	itive Limi	t Signal_60	01_1A			R	BOOL	FALSE		
► m Data			Input	_CH1 Nec	ative Lim	nit Signal_6	001_1B			R	BOOL	FALSE		
Tasks			Input	s_CH1 Hor	ne Signal	_6001_1C				R	BOOL	FALSE		
P En rusio			Input	s_CH1 Bral	ke Signal	_6001_1D				R	BOOL	FALSE		
			Input	s_CH2 Puls	e Output	Direction_	_6001_21			R	BOOL	FALSE		
			Input	s_CH2 Puls	se Status	Flag 1_600	1_22			R	BOOL	FALSE		
			Input:	s_CH2 Puls	se Status	Flag 2_600	1_23			R	BOOL	FALSE		
			Input	s_CH2 Hor	ning Mod	de Running	_6001_24			R	BOOL	FALSE		
			Input	s_CH2 Pos	ition Mod	le Running	_6001_25			R	BOOL	FALSE		
			Input	s_CH2 Velo	ocity Mod	le Running	_6001_26			R	BOOL	FALSE		
	-		Input	s CH2 Hor	ned 600	27				R	BOOL	FALSE		$1 \sim 1$
	Monitor	type									_	Rit o	rder	
	O Data	a type	🔵 Binary 🔵 F	lex 🔵 Sig	ned deci	mal 🔵 Ur	nsigned d	ecimal					MSB-LSB 🔵 L	SB-MSB

h. You can also see that the current coordinate of channel 0 is -20000, as shown in the figure below.

<u>File Edit View Insert Project 9</u>	Contro	oller	Simu	Ilation	I	ools	<u>W</u> in	dow	<u>H</u> elp		_				_							
	3D	5	く	<u>ک</u> م ۱	63	R.		Ä (9		A	*				6		£₽	D.			
								_				_	-	_	-	-		-	_	_	-	
Multiview Explorer 🚽 🗸	ECAT E									a 1/0	D Map	×										-
new_Controller_0 🔻		Posit	ion					Po	rt			04.05		Descrip	tion	R/W	Data	Туре	Value	Varia	ole	
					1	nputs_	CH2	Positio	n Mod	ie Kunn	ing_60	01_25				ĸ	BOOL		FALSE			Ê
Configurations and Setup			_			nputs_	CHZ	velocity		le Runn	ing_60	01_26	_			ĸ	BOOL		FALSE			
■ ▼ arrow EtherCAT	<u> </u>					nputs_	CH2	Homeu	1_0001	21	1 20					R D	BOOL		EALCE			
▼ -□ Node1 : XB6S-EC2002(E001)						nputs_		Volocit	Arriv		1_20					D	BOOL		EALSE			
L -□ 0 : XB6S-PT04A(M1)					1	nputs_		Positive	y Aniv a Limit	Signal	6001	20				R	ROOL		FALSE			
CPU/Expansion Racks						nnuts	CH2	Negativ	velim	it Signa	L 6001	2R				R	BOOL		FALSE			
I/O Map	-				li I	nouts	CH2	Home !	Signal	6001	PC					R	BOOL		FALSE			
Controller Setup	_				1	nputs	CH2	Brake S	Signal	6001 2	D					R	BOOL		FALSE			
 A Motion Control Setup 	1				l	nputs	CH3	Pulse C	Output	Directi	on 600	01 31				R	BOOL		FALSE			
	1				l	nputs	CH3 I	Pulse S	tatus l	Flag 1 (5001 3	2				R	BOOL		FALSE			
Cam Data Settings					li	nputs	CH3	Pulse S	tatus l	Flag 2_6	5001_3					R	BOOL		FALSE			
Event Settings					l	nputs	CH3	Homing	g Moc	le Runr	ing_60	001_34				R	BOOL		FALSE			
Task Settings					l	nputs_	CH3	Position	n Mod	le Runn	ing_60	01_35				R	BOOL		FALSE			
Data Trace Settings					li	nputs	CH3	Velocity	y Mod	le Runn	ing_60	01_36				R	BOOL		FALSE			
Programming					li	nputs_	CH3	Homed	I_6001							R	BOOL		FALSE			
V 🖪 POUs					l	nputs_	CH3	Locatio	on Arri	val_600	1_38					R	BOOL		FALSE			
▼ 🖅 Programs					li	nputs_	CH3	Velocity	y Arriv	al_600*	_39					R	BOOL		FALSE			
▼ I Program0					li	nputs_	CH3	Positive	e Limit	Signal	_6001_	3A				R	BOOL		FALSE			
					li	nputs	CH3	Negativ	ve Lim	it Signa	al_6001	_3B				R	BOOL		FALSE			
L de Sectiono					li	nputs_	_CH3	Home S	Signal	_6001_	3C					R	BOOL		FALSE			
L窟 Functions					li	nputs	CH3	Brake S	Signal_	6001_3	D					R	BOOL		FALSE			
∟選 Function Blocks					li	nputs	CHO	Error C	ode_6	001_41						R	UINT		0			
🗾 🕨 🥅 Data					li	nputs_	_CH1	Error C	ode_6	001_42						R	UINT		1537			
Tasks					li	nputs	CH2	Error C	ode_6	001_43						R	UINT		1537			
						nputs_	_CH3	Error C	ode_6	001_44			_			R	UINT		1537			
						nputs_	CHO	Current	t Loca	tion_60	01_45		-			R	DINT		-20000			
					1	nputs_	CHU	Current	t velo	city_601	1_46					ĸ	DINI		0			
						nputs_	CHI	Current	t Loca	tion_60	01_4/					ĸ	DINI		0			
					- 1	nputs_	CHI	Current	t velo	tion CO	01 40					K D	DINT		0			
						nputs_	CH2	Current	t Loca t Vole	city 600	01_49					P	DINT		0			
					1			Current		tion 60	01 /0					D	DINT		0			~
		<			_	nouts	СПЗ	cunem	LUCA		01-4D					IV.			·			
	Mo	nitor	type -	-		-	-												Bit o	rder —		
	0	Data	type	Bi	nary	He	ex 🕘	Signeo	d deci	mal 🔵	Unsig	ned de	cima	I						MSB-LSB	S IS	B-MSB

Channel 0 turns on speed mode, running speed 100000Hz

a. Configure the configuration parameters as shown in the following figure.

Edit Setting Parameters			- (×
Item name	Value				1
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir				1~
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running				
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200				1
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single				
0x2000:05 XB6S-PT04A Config/Input Config	0				
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0				
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1				11
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24				
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000				
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500				
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open				
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1				71
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1				
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24				
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000				
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500				
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open				
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1				(\mathbf{X})
	Move Up Move Down	Add		Remove	
			Return	to Defau	ult
_ Help					
Data type :					
Comment :					
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting. Select Synchronize on the Toolbar to transfer.					
		ОК	Cancel	Appl	ly

- b. Set channel 0 to speed mode;
- c. Configure channel 0 to run at a speed of 100000 Hz and move in a forward direction of 0;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

<u>File Edit View Insert Project</u>	controller Simulation	<u>I</u> ools <u>W</u> indow <u>H</u> elp						
	国中人家国	S 🖽 🎎 🛤 👰 🗖 🕅 🗛 🔉 68	68 🖡 📬	. 0		D.	0 0 °	
			-					
Multiview Explorer 🗸 📮	₩ EtherCAT -□ No	de1 : XB6S-EC2002 (E0						-
	Position	Port	Description	R/W	Data Type	Value	Variable	
new_controller_0	Slot 0 🗸 🗸	XB6S-PT04A						
 Configurations and Setup 		Outputs_CH0 Running Direction_7001_01		w	BOOL	FALSE		
▼ ₩ EtherCAT		Outputs_CH0 Absolute/Relative Posit_7001_02		W	BOOL	FALSE		
▼ -□ Node1 : XB6S-EC2002(E001)		Outputs_CH0 Position/Velocity Mode_7001_03		W	BOOL	TRUE		
		Outputs_CH0 Reset Coordinates_7001_04		w	BOOL	FALSE		
		Outputs_CH0 Start_7001_05		w	BOOL	TRUE		
► ISI CPO/Expansion Racks		Outputs_CH0 Brake_7001_06		w	BOOL	FALSE		
📕 🥔 I/O Мар		Outputs_CH0 Home_7001_07		W	BOOL	FALSE		
Controller Setup		Outputs_CH0 JOG_7001_08		W	BOOL	FALSE		
▶ ☆ Motion Control Setup		Outputs_CH0 Clear State_7001_09		w	BOOL	FALSE		
er Cam Data Settings		Outputs_CH0 Set Current Location_7001_0A		W	BOOL	FALSE		
► Event Settings		Outputs_CH1 Running Direction_/001_11		w	BOOL	FALSE		
Task Settings		Outputs_CH1 Absolute/Relative Posit_/001_12		w	BOOL	FALSE		
58 Data Traco Sottings		Outputs_CH1 Position/Velocity Mode_/001_13		w	BOOL	FALSE		
Data frace Settings		Outputs_CH1 Reset Coordinates_/001_14		w	BOOL	FALSE		
Programming		Outputs_CH1 Start_7001_15		w	BOOL	FALSE		
V 🖞 POUs		Outputs_CHT Brake_7001_16		w	BOOL	FALSE		
▼ III Programs		Outputs_CH1 Home_7001_17		w	BOOL	FALSE		
V 🔤 Program0		Outputs_CH1JOG_7001_18		vv	BOOL	FALSE		
∟ 🕾 Section0		Outputs_CH1 Clear State_7001_19		vv	BOOL			
1 🐨 Functions		Outputs_CH1 Set Current Location_7001_1A		VV	BOOL	EALCE		
, St Function Blocks		Outputs_CH2 Kunning Direction_7001_21		VV	BOOL	EALSE		
		Outputs_CH2 Absolute/Relative Posit_7001_22		VV M/	POOL	EALSE		
		Outputs_CH2 Position/Velocity Mode_7001_25		WV M/	POOL	EALSE		
▶ 🖿 Tasks		Outputs_CH2 Start 7001_25		w/	ROOL	FALSE		
		Outputs CH2 Brake 7001_25		w/	ROOL	FALSE		
		Outputs_CH2 Home 7001_20		W	ROOL	FALSE		
		Outputs CH2 IOG 7001_27		W	ROOL	FALSE		
		Outputs CH2 Clear State 7001 29		w	ROOL	FALSE		
		Outputs CH2 Set Current Location Z001 2A		w	BOOL	FALSE		
		Outputs CH3 Running Direction 7001 31		w	BOOL	FALSE		
		Outputs CH3 Absolute/Relative Posit 7001 32		w	BOOL	FALSE		\sim
	Monitor type		1			Bit or	der	
	Data type 🔵 Bina	ary Thex The Signed decimal The Unsigned decim	nar				ISB-LSB 🔵 LS	DD-IMSB
	Onitor type Otata type Data type	ary 🌑 Hex 🌑 Signed decimal 🌑 Unsigned decin	nal			Bit or	der ISB-LSB 🔵 LS	SB-MSB

<u>Eile Edit View Insert Project 9</u>	Contro	oller	Sim	lation	Ic	ools	Wir	ndov	v <u>Н</u> е	p											
	3D	ц	~	× 17	0	E		ä	Ø	F 2	A	A 🕺		5. 6	6 C) 🖓		'n			
	-	-			~	00			-			_			- `	ы р — 111				· ~	
Multiview Explorer 🚽 📮	CTAT	Ether	CAT		ode1	: XB6	5S-EC	2002	(E0	21	/O Maj	p X									-
	S.M.	Posit	ion						Port				Des	cription	R/W	/ Data	Туре	Value	Varia	able	
new_Controller_0			Í		C	Dutpu	its_CF	H1 JO	G_700'	l_18					w	BOOL		FALSE			
 Configurations and Setup 					C	Dutpu	its_CF	H1 Ck	ear Stat	e_7001	_19				w	BOOL		FALSE			
▼					C	Dutpu	its_CH	H1 Se	t Curre	nt Locat	tion_70	001_1A			w	BOOL		FALSE			
Node1 : XB6S-EC2002(E001)					C	Dutpu	its_CF	12 Ri	Inning	Directio	n_7001	1_21			w	BOOL		FALSE			
					C	Dutpu	its_CH	H2 Ab	osolute,	Relative	e Posit_	_7001_22			W	BOOL		FALSE			
					C	Dutpu	its_CF	H2 Pc	sition/	Velocity	Mode_	_7001_23			W	BOOL		FALSE			
CPU/Expansion Racks					C	Dutpu	its_CF	12 Re	set Co	ordinate	s_7001	1_24			w	BOOL		FALSE			
I/O Map					C	Dutpu	its_CF	H2 Sta	art_700	1_25					W	BOOL		FALSE			
Controller Setup					C	Dutpu	its_Cl	H2 Br	ake_70	01_26					W	BOOL		FALSE			
Motion Control Setup					C	Dutpu	its_CF	12 Ho	ome_70	01_27			_		W	BOOL		FALSE			
🖌 Cam Data Settings					C	Dutpu	its_CF	12 JO	G_700	1_28					W	BOOL		FALSE			
Event Settings					C)utpu	its_CF	12 CI	ear Stat	e_/001	_29		_		W	BOOL		FALSE			
Task Settings		Outputs_CH2 Set Current Location_7001_2A W BOOL FALSE Outputs_CH3 Running Direction_7001_31 W BOOL FALSE																			
- Data Traca Sattings		Outputs_CH3 Running Direction_7001_31 W BOOL FALSE																			
					C	Jutpu	its_CF	13 At	osolute,	Relative	e Posit_	_/001_32			w	BOOL		FALSE			
Programming					C C	Jutpu	Its_CF	13 PC	sition/	velocity	Mode_	_/001_33	_		VV	BOOL		FALSE			= 1
V 🖻 POUs						Jutpu	Its_CF	13 Ke	set Co		s_7001	1_34			W	BOOL		FALSE			
▼ III Programs			_			Jutpu	te Cl	13 36	arc_700	1_33			_		VV M	BOOL		EALSE			
🔻 🔤 Program0					c c	Jutou	te CL	13 DI 12 LI/	ake_70	01 27					WV W/	ROOL		FALSE	-		
∟ 🕾 Section0					c c	Jutou	te CL	12 10	C 700	01_37			_		W	POOL		EALSE			
L I Functions					c c	Jutou	its_CF	13 /0	ar Stat	_30 0 7001	20				W	ROOL		FALSE			
Exerction Blocks					с С	Jutou	te Ch	12 50		nt Local	 tion 70	01.24	_		W	ROOL		FALSE			
					C	Dutnu	its Ch		celerat	ion Tim	e 7001	41			w	UINT		500			
			_		6	Jutnu	its Ch		celerat	ion Tim	e 7001	1 42	_		w	UINT		500			
					c	Dutpu	ts Ch	10 RL	innina	Velocity	7001	43			w	UDIN		100000			
					C	Dutpu	its CH	10 Ru	inning	Position	7001	44	1		W	DINT		0	1		
					c	Dutpu	its_CF	H1 Ac	celerat	ion Tim	e_7001	_45			w	UINT		0			
					C	Dutpu	its_CF	H1 De	ecelerat	ion Tim	e_7001	1_46			w	UINT		0			
					c	Dutpu	its_CH	11 RL	inning	Velocity	_7001_	47			w	UDIN		0			
					C	Dutpu	its_Cl-	H1 RL	inning	Position	_7001_	48			w	DINT		0			
					C	Dutpu	its_CH	12 Ac	celerat	ion Tim	e_7001	_49			W	UINT		0			
					C	Dutpu	its CH	12 De	ecelerat	ion Tim	e 7001	1 4A			W	UINT		0			\sim
		$\leq $																Dit			
		Data	type -	Rin		• н	ex C	Sig	ned de	cimal 4	Unsi	ianed deci	imal						nder MSB-I SP	A 15	R-MSR
		Duta	ope		ien y		on C	July	neu de	annur (Chai	igned deci	initia						1100 230		

f. During the motion, you can see that the channel 0 speed arrival is set to 1, as shown in the figure below.

<u>File Edit View Insert Project</u>	<u>C</u> ontroller	r <u>S</u> in	nulation	Tools	<u>W</u> indo	w <u>H</u> el	р											
	3D F	1	X 7	3 5	# #		茂	A	63 🖄		5 9	• C) Q1	P	D			
Multiview Explorer 🚽 🕂	EAR Ethe	erCAT	-🗆 No	ode1 : XE	6S-EC200	02 (EO	1/0	Map >	<									-
new Controller 0	Po	sition				Port				Descr	ription	R/W	Data	Туре	Value	Varia	ble	
				Input	s_CH0 Pul	lse Outpu	it Directic	on_6001	_01			R	BOOL		FALSE			
 Configurations and Setup 				Input	s_CH0 Pul	lse Status	Flag 1_6	001_02				ĸ	BOOL		TRUE		_	
▼ ₩ EtherCAT				Input	s_CH0 Pul	lse Status	Flag 2_6	001_03				R	BOOL		TRUE		_	
▼ -= Node1 : XB6S-EC2002(E001)				Input	s_CHU Ho	ming Mo	de Runni	ng_6001	1_04			R	BOOL		FALSE			
L -□ 0 : XB6S-PT04A(M1)				Input	S_CHU POS	SITION MO	de Kunni	ng_6001	_05			K D	BOOL		FALSE		_	
► St CPU/Expansion Backs				Input	s_CHU Vel		de Runnii	ng_600 i	_06			R D	BOOL		EALCE			
= I/O Map				Input		med_600	1_07					R D	BOOL		EALSE		_	
				Input		Lation An	IVal_0001	_00				N	BOOL		TRUE			
R Controller Setup				Input	CHO Por	citive Lim	it Signal	_05- 6001_0/				P	ROOL		FALSE			
▶				Input		antivo Lir	nit Signal	6001_0	י 10			D	POOL		FALSE			
er Cam Data Settings				Input		me Signa		_0001_0 C	00			R	ROOL		FALSE		_	
Event Settings		Inputs_CH0 Brake Signal_0001_0D R BOOL FALSE																
Task Settings		Inputs_CH0 Brake Signal_6001_0D R BOOL F Inputs CH1 Pulse Output Direction 6001 11 R BOOL F								FALSE								
🖂 Data Trace Settings		Inputs_CH1 Pulse Output Direction_6001_11 R BOOL Inputs CH1 Pulse Status Flag 1 6001 12 R BOOL								FALSE								
Programming				Input	s CH1 Pul	lse Status	Flag 2 6	001 13				R	BOOL		FALSE			
■ # POLIs				Input	s CH1 Ho	mina Mo	de Runni	na 6001	1 14			R	BOOL		FALSE			
				Input	s_CH1 Pos	sition Mo	de Runni	ng_6001	_ I_15			R	BOOL		FALSE			
V a, Programs				Input	s_CH1 Vel	locity Mo	de Runni	ng_6001	_16			R	BOOL		FALSE			
▼ 🔤 Program0				Input	s_CH1 Ho	med_600	1_17					R	BOOL		FALSE			
∟ ē- Section0				Input	s_CH1 Loo	cation Arr	ival_6001	_18				R	BOOL		FALSE			
L 🖀 Functions				Input	s_CH1 Vel	locity Arri	val_6001	_19				R	BOOL		FALSE			
LIE Function Blocks				Input	s_CH1 Pos	sitive Lim	it Signal_	6001_1A				R	BOOL		FALSE			
▶ III Data				Input	s_CH1 Ne	gative Lir	nit Signal	_6001_1				R	BOOL		FALSE			
► m Tasks				Input	s_CH1 Ho	me Signa	1_6001_1					R	BOOL		FALSE			
				Input	s_CH1 Bra	ike Signa	L_6001_10					R	BOOL		FALSE			
				Input	s_CH2 Pul	lse Outpu	t Directic	n_6001				R	BOOL		FALSE			
		Inputs_CH2 Pulse Status Flag 1_6001_22 R BOOL FALSE																
				Input	s_CH2 Pul	lse Status	Flag 2_6	001_23				R	BOOL		FALSE			
				Input	s_CH2 Ho	ming Mo	de Runni	ng_6001	1_24			R	BOOL		FALSE			
				Input	s_CH2 Pos	sition Mo	de Runni	ng_6001	_25			R	BOOL		FALSE			
				Input	s_CH2 Vel	locity Mo	de Runni	ng_6001	_26			R	BOOL		FALSE			
	21			Input	s CH2 Ho	med 600	1 27					R	BOOL		FALSE			
	Monite	or type													- Bit o	rder —		
	🔵 Da	ita type	e 🔵 Bin	iary 🔵 I	lex 🔵 Si	gned dec	timal 🔵	Unsigne	ed decim	nal					0	MSB-LSB	ISI	B-MSB

g. During the movement, the actual running speed can also be 100000Hz, as shown in the figure below.

<u>File Edit View Insert Project</u>	ontroller <u>S</u> imulation <u>T</u> ools <u>W</u> indow <u>H</u> elp									
	◎ ff < & ぬ 転 器 # 9 🕺 🔺 😣 🕸 🖗 🖡 O 및 🖓									
Multiview Explorer 🚽 📮	🛗 EtherCAT 🛛 🗂 Node1 : XB6S-EC2002 (E0 🧬 I/O Map 🗙									
new Controller 0	Position Port Description R/W Data Type	Value Variable								
	Inputs_CH2 Position Mode Running_6001_25 R BOOL F/	ALSE								
 Configurations and Setup 	Inputs_CH2 Velocity Mode Running_6001_26 R BOOL F/	ALSE								
■ ▼ 翻 EtherCAT	Inputs_CH2 Homed_6001_27 R BOOL FA	ALSE								
🔻 🖙 Node1 : XB6S-EC2002(E001)	Inputs_CH2 Location Anival_0001_28 K BOOL 77	ALSE								
L -□ 0 : XB6S-PT04A(M1)	Inputs_CH2_Velocity AInval_0001_29 R BOOL 17	ALSE AI SE								
CPU/Expansion Racks	Inputs_CH2_Negative_Limit_Signal_6001_28 R BOOL F	ALSE								
I/O Map	Inputs CH2 Home Signal 6001 2C R BOOL F	ALSE								
► ■ Controller Setup	Inputs_CH2 Brake Signal_6001_2D R BOOL FALSE									
the Motion Control Setup	Inputs CH3 Pulse Output Direction 6001 31 R BOOL Fi	ALSE								
	Inputs CH3 Pulse Status Flag 1 6001 32 R BOOL FA	ALSE								
& Cam Data Settings	Inputs_CH3 Pulse Status Flag 2_6001_33 R BOOL Fa	ALSE								
Event Settings	Inputs_CH3 Homing Mode Running_6001_34 R BOOL F4	ALSE								
n Task Settings	Inputs_CH3 Position Mode Running_0001_35 R BOOL FALSE									
🖂 Data Trace Settings	Inputs_CH3 Velocity Mode Running_6001_36 R BOOL F	ALSE								
Programming	Inputs_CH3 Homed_6001_37 R BOOL F/	ALSE								
V 🖪 POUs	Inputs_CH3 Location Arrival_6001_38 R BOOL F/	ALSE								
▼ III Programs	Inputs_CH3 Velocity Arrival_6001_39 R BOOL FA	ALSE								
▼ Im Program0	Inputs_CH3 Positive Limit Signal_6001_3A R BOOL F/	ALSE								
Fortion0	Inputs_CH3 Negative Limit Signal_6001_3B R BOOL FA	ALSE								
	Inputs_CH3 Home Signal_6001_3C R BOOL FA	ALSE								
	Inputs_CH3 Brake Signal_6001_3D R BOOL F/	ALSE								
∟湾 Function Blocks	Inputs_CH0 Error Code_6001_41 R UINT 0									
📄 🕨 🥅 Data	Inputs_CH1 Error Code_6001_42 R UINT 1	537								
🗖 Þ 🖿 Tasks	Inputs_CH2 Error Code_6001_43 R UINT 1	537								
	Inputs_CH3 Error Code_6001_44 R UINI IS	037								
	Inputs_CH0_Current_Location_6001_45 R DINT 14	4893000								
	Inputs_CH0 Current velocity_6001_46 R DINT IN									
	Inputs_CFT Current Velocity 6001_47 R DINT 0									
	Inputs_CH1 Current / cooky_0001_48 R DINT 0									
	Inputs CH2 Current Velocity 6001_49 R DINT 0									
	Inputs CH3 Current Location 6001 48									
	Monitor type	Bit order								
	Data type Binary Hex Signed decimal Unsigned decimal	MSB-LSB CSB-MSB								

h. Entering a brake command or triggering a positive limit signal can stop the movement, as shown in the figure below.

<u>File Edit View Insert Project (</u>	ontroller	Simulatio	on <u>T</u> ools	<u>W</u> indow	<u>H</u> elp		-	_	-	-		_	_	_
X 🛍 🛍 🛅 つ ĉ 🖻	30 6	くぶ	53 F5	<u>м</u> М	<u>9</u> R	AX	63	🚱 🌾 🕯	6 C	- - 11	P	Ð,	ପ୍"ଧ୍	
Multiview Explorer 🚽 🗸	Ether C	AT -🗖	Node1 : XB	6S-EC2002 (I	EO 🥔 I/0	О Мар 🗙								Ŧ
new_Controller_0 🔻	Positi	on	Input	Pr s_CH2 Positic	ort on Mode Runr	ing_6001_	_25	Description	R/W R	Data T BOOL	ype Valu FALSE	Je	Variable	
Configurations and Setup			Input	s_CH2 Veloci	ty Mode Runn	ing_6001_	_26		R	BOOL	FALSE			
▼ T EtherCAT			Input	s_CH2 Home	d_6001_27				R	BOOL	FALSE			
▼ -□ Node1 : XB6S-EC2002(E001)			Input	s_CH2 Locati	on Arrival_600	1_28			R	BOOL	FALSE			
0 : XB6S-PT04A(M1)			Input	s_CH2 Veloci	ty Arrival_600	1_29			R	BOOL	FALSE			
CPLI/Expansion Backs			Input	s_CH2 Positiv	/e Limit Signal	_6001_2A			R	BOOL	FALSE			
		_	Input	s_CH2 Negat	ive Limit Signa	al_6001_26	В		ĸ	BOOL	FALSE			
			Input	s_CH2 Home	Signal_6001_	20			ĸ	BOOL	FALSE			
Controller Setup			Input	s_CH2 Brake	Signal_6001_2	D			K	BOOL	FALSE	_		
▶ ⊕ Motion Control Setup			input	CUD Pulse	Cutput Direct	001_0001_			R D	BOOL	FALSE			
			Input	CH3 Pulse	Status Flag 1_0	5001_32 5001_32			K D	BOOL	EALSE			
Event Settings			Input	S_CH3 Pulse	Status riag 2_0	0001_00	24		D	ROOL	EALSE			
Task Settings		_	Input		ng Mode Runn	ing_6001	25		D	POOL	EALSE	_		
Data Trace Settings			Input	s_CH3 Veloci	tr Mode Runn	ing_0001_	-26 _55		R	BOOL	FALSE			
Programming			Input	CH3 Home	d 6001 37	ing_0001_	_50		R	BOOL	FALSE			
			Input	CH3 Locati	on Arrival 600	1 38			R	BOOL	FALSE			
V POUS			Innut	s CH3 Veloci	ty Arrival 600	1 39			R	BOOL	FALSE			
▼ III Programs			Innut	s CH3 Positin	e Limit Signal	6001 34			R	BOOL	FAI SE			
V 🖂 Program0			Input	s CH3 Negat	ive Limit Signa	al 6001 3F	в		R	BOOL	FALSE			
∟ de Section0			Input	s CH3 Home	Signal 6001	30			R	BOOL	FALSE			
∟ I Functions			Input	s CH3 Brake	Signal 6001	D			R	BOOL	FALSE			
∟ /# Function Blocks			Input	s CH0 Error (Code 6001 41				R	UINT	0			
► ■ Data			Input	s CH1 Error (Code 6001 42				R	UINT	1537			
			Input	s CH2 Error (Code 6001 43				R	UINT	1537			
			Input	s_CH3 Error (Code_6001_44				R	UINT	1537			
			Input	- s_CH0 Currer	nt Location_60	01_45			R	DINT	18183	284		
			Input	s_CH0 Currer	nt Velocity_600	01_46			R	DINT	0			
			Input	s_CH1 Currer	nt Location_60	01_47			R	DINT	0			
			Input	s_CH1 Currer	nt Velocity_600	01_48			R	DINT	0			
			Input	s_CH2 Currer	nt Location_60	01_49			R	DINT	0			
			Input	s_CH2 Currer	nt Velocity_600	01_4A			R	DINT	0			
			Input	s CH3 Currer	nt Location 60	01 4B			R	DINT	0			\sim
														\geq
	O Data	type 🍥 I	Binary 🔵 F	lex 🔵 Signe	ed decimal 🥘	Unsigned	d decim	al			Bit	MSB-	LSB 🔵 LSB	-MSB

Channel 0 runs at 100000Hz, in jog mode

a. Configure the configuration parameters as shown in the following figure.

M Edit Setting Parameters	- 🗆 X
Item name	Value
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single
0x2000:05 XB6S-PT04A Config/Input Config	0
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24 🗸
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open 🗸 🗸 🗸
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1
	Move Up Move Down Add Remove
	Return to Default
C Help	
Data type :	
Comment :	
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting. Select Synchronize on the Toolbar to transfer.	
	OK Cancel Apply

- b. Configure channel 0 to run at a speed of 100000, run in a direction of 0 forward, and set the acceleration and deceleration times to 500;
- c. Make sure channel 0 is in a static state;
- d. Set the jog command of channel 0 from 0 to 1 to start movement, as shown in the figure below.



e. During the motion, you can see the actual running speed and real-time position of channel 0, as shown in the figure below. Inputting a brake command or triggering a positive limit signal can stop the motion.

<u>File Edit View Insert Project 0</u>	Contro	ller	Simu	lation	To	ols	Wind	ow <u>H</u>	lelp	_	_	_	_	_	_	_	_	_	~	_	_	_
월 🏝 🖄 호 순 🛍	3D	ð	く	<u>ک</u> ا ا	63 B		63 nn 🖡	i 🚇	1	Ř,	A	*	63	69 I		6) 🖓	Ê		€,	ବ୍ "ଧ	
Multiview Explorer 🗸 📮		EtherC	:AT		ode1 :	XB65	S-EC20	02 (E0		at 1/0) Map	×										-
new_Controller_0 🔻		Posit	ion		In	puts_	CH2 Po	Port osition I	Node	Runni	ing_60	01_25		Descrip	otion	R/W	Data BOOL	Туре	Value FALSE	2	Variable	e
Configurations and Setup Therefore Therefore					in In	puts_ puts_	CH2 V CH2 H	elocity N omed_6	/lode i001_2	Runni 27	ng_60	01_26				R R	BOOL		FALSE			
▼ <□ Node1 : XB6S-EC2002(E001) ∟ <□ 0 : XB6S-PT04A(M1)					in In In	puts_ puts_ puts_	CH2 LC CH2 V CH2 P	elocity A	Arrival	1_6001 1_6001	1_28 _29 6001 1	20				R R R	BOOL		FALSE FALSE FALSE			
CPU/Expansion Racks I/O Map					In In	puts_ puts_	CH2 N CH2 H	egative ome Sic	Limit Inal_6	Signa 5001_2	I_6001 C	_2B				R R	BOOL		FALSE FALSE			
►					In In	puts_ puts_	CH2 BI CH3 PI	ake Sig ulse Out	nal_60 tput D	001_21 Directio	D on_600	01_31				R R	BOOL BOOL		FALSE FALSE			
e∕ Cam Data Settings ► Event Settings					In In	puts_ puts_	CH3 Pi CH3 Pi	ulse Stat ulse Stat	tus Fla tus Fla	ag 1_6 ag 2_6	001_3; 001_3;	2 3				R R	BOOL		FALSE			
Task Settings					in In In	puts_ puts_ puts_	CH3 H CH3 Po CH3 W	oming f osition f plocity f	Mode Mode	Runni Runni	ing_60 ing_60 ng_60	01_34 01_35 01_36				R R R	BOOL		FALSE FALSE FALSE			
Programming POUs					In In	puts_ puts_ puts_	CH3 H CH3 L	omed_6	i001_3 Arriva	37 1_6001	1_38					R R	BOOL		FALSE			
▼ III Programs					In In	puts_ puts_	CH3 Ve CH3 Pe	elocity A ositive L	Arrival imit S	l_6001 Signal_	_39 _6001_:					R R	BOOL BOOL		False False			
La Section0					In In	puts_ puts_	CH3 N CH3 H	egative ome Sig	Limit Inal_6	Signa 001_3	I_6001 C	_3B				R R	BOOL		FALSE			
L I Function Blocks					In In	puts_ puts_ puts_	CH3 BI	rake Sig ror Cod	nal_60 le_600	001_31 01_41	J					R R	UINT		FALSE 0 1537			Η.
► Data ► Tasks					in In In	puts_ puts_ puts_	CH1 Er CH2 Er CH3 Fr	TOF COD TOF COD	le_600 le_600	01_42 01_43						R R	UINT		1537 1537 1537			
					In In	puts_ puts_	CH0 C	urrent L urrent V	ocatio elocit	on_600	01_45 1_46					R R	DINT DINT		7039094 100000	F.		
					in In	puts_ puts_	CH1 C CH1 C	urrent L urrent V	ocatic 'elocit	on_600 sy_600	01_47 1_48					R R	DINT DINT		0 0			
					Inj Inj	puts_ puts_	CH2 C CH2 C	urrent L urrent V	ocatic 'elocit	on_600 sy_600	01_49 1_4A					R R	DINT DINT		0			
	Mo	onitor	type -	n Pi	In	outs	CH3 C	urrent L	ocatio	on 600)1 4B	nod do	cimal	_		R	DINT		0 Bit o	rder		

Channel 0 turns on and returns to zero

a. Configure the configuration parameters, select the zero return mode and set the zero return speed and zero return approach speed, as shown in the figure below.

Edit Setting Parameters	- L X
Item name	Value
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single
0x2000:05 XB6S-PT04A Config/Input Config	0
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	0: mode 19 🔹 🔹
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open 🔹 🔹
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24 🔹 🔻
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open 🔹 🔹
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1
	Move Up Move Down Add Remove
	Return to Default
_ Help	
Data type :	
Comment :	
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting	
Select Synchronize on the Toolbar to transfer	

- b. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- c. Set the return to zero command of channel 0 from 0 to 1, as shown in the figure below.

Multicity Description Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>	<u>File Edit View Insert Project C</u>	ontroller	r <u>S</u> in	nulation	Iools	s <u>W</u> indo	ow <u>H</u> e	elp		_	_			_			
Multivixe Sergioner Image: Sergioner Image: Sergioner Image: Sergioner Image: Sergioner Image: Sergioner Sergion	Xeesta	30 đ	1 ~	26 F	a 🖪	63 P		民	A	53		S	0	말 많	II Q		
Multice toplore Image: Controlling of the control is a section of the cont										_				2010 2010 -	1		
Production Portion Port Description Ref/ Data Type Windble Contiguations and Stup Control 1: X865-EC2002(E001) Co	Multiview Explorer 🚽 🕂	Ethe	erCAT	-🗆 N	ode1:X	B6S-EC20	02 (E0	8	I/O Map	×							
Configurations and Seturp Outputs; CH0 Nation/Moodly Mode; 2001; 03 W BOOL ALSE • In Add 1: X865-FECADU; EX001; EX001; CH0 Next, COND, 64 W BOOL ALSE Outputs; CH0 Set, TOOL, 04 W BOOL ALSE • In Add 1: X865-FECADU; EX001; EX001; CH0 Next, COND, 64 W BOOL ALSE Outputs; CH0 Next, COND, 64 W BOOL ALSE • Noted 1: X865-FECADU; EX001; CH0 Next, COND, 64 W BOOL ALSE Outputs; CH0 Next, COND, 64 W BOOL ALSE • Noted Control Setup Outputs; CH0 Next, COND, 108 W BOOL ALSE • Controller Setup Outputs; CH1 Adsonker/Relative Fool; 7001, 13 W BOOL ALSE • Controller Setup Outputs; CH1 Adsonker/Relative Fool; 7001, 13 W BOOL ALSE • Controller Setup Outputs; CH1 Next Controller Setup Outputs; CH1 Next Controller Setup Outputs; CH1 Next Controller Setup BOOL ALSE • Controller Setup Outputs; CH1 Next Controller Setup Outputs; CH1 Next Controller Setup BOOL ALSE • Controller Setup Outputs; CH2 Next Controll Nex	new Controller 0	Por	sition				Port				1	Descrip	otion	R/W	Data Type	Value	Variable
Configurations and Setup		8			Outp	puts_CH0	Position,	/Velocity	Mode_7	001_03				w	BOOL	FALSE	
• Note: • Note: <t< td=""><td>Configurations and Setup</td><td></td><td></td><td></td><td>Outp</td><td>puts_CH01</td><td>Reset Co</td><td>oordinate</td><td>es_7001_0</td><td>04</td><td></td><td></td><td></td><td>W</td><td>BOOL</td><td>FALSE</td><td></td></t<>	Configurations and Setup				Outp	puts_CH01	Reset Co	oordinate	es_7001_0	04				W	BOOL	FALSE	
• Node1::X865-FC2002(6001) L_0 0: X865-FT04A(M1) Outputs.(CH Binker, 2001,07 W BOOL PALS Outputs.(CH Display, CH	▼				Outr	puts_CH0	Start_70	01_05						w	BOOL	FALSE	
L 0 : X865-PT04(M1) Outputs. CH0 JOG, 201, 98 W BOOL, PAXS OUtputs. CH0 XGC 201, 98 W BOOL, PAXS I O MAP Outputs. CH0 XGC 201, 98 W BOOL, PAXS I O MAP Outputs. CH0 XGC 201, 98 W BOOL, PAXS I O Motion Control Setup Outputs. CH1 Mostink/Relative Paxit, 7001, 11 W BOOL, FAXS I O a Data Settings Outputs. CH1 Mostink/Relative Paxit, 7001, 12 W BOOL, FAXS I B Data Taxee Settings Outputs. CH1 Mostink/Relative Paxit, 7001, 14 W BOOL, FAXS I B Data Taxee Settings Outputs. CH1 Mask, 7001, 17 W BOOL, FAXS I B Odds Outputs. CH1 Mask, 7001, 17 W BOOL, FAXS I B Pogramming Outputs. CH1 Mask, 7001, 17 W BOOL, FAXS I B Pogram Outputs. CH2 Mostink/Relative Pasit, 7001, 18 W BOOL, FAXSE I B Pogram Outputs. CH2 Mostink/Relative Pasit, 7001, 21 W BOOL, FAXSE I B Pogram Outputs. CH2	Node1 : XB6S-EC2002(E001)				Outp	puts_CH01	Brake_/(001_06						w	BOOL	FALSE	
Bit CPUSPaparation Rades Outputs, CHO (Legs State, 2001, 99) W BOOL FALSE • 10 OMap Outputs, CHO (Legs State, 2001, 90) W BOOL FALSE • • 0 Motion Control Setup Outputs, CHO (Legs State, 2001, 11) W BOOL FALSE • • 0 Motion Control Setup Outputs, CHO Running Direction, 7001, 11 W BOOL FALSE • • Control Setup Outputs, CHO Running Direction, 7001, 11 W BOOL FALSE • • Cam Data Settings Outputs, CHO Running Direction, 7001, 13 W BOOL FALSE • Task Settings Outputs, CHI Running Direction, 7001, 14 W BOOL FALSE • Task Settings Outputs, CHI Running Direction, 7001, 14 W BOOL FALSE • Task Settings Outputs, CHI Running Direction, 7001, 14 W BOOL FALSE • Task Settings Outputs, CHI Running Direction, 7001, 14 W BOOL FALSE • * Congramming Outputs, CHI Running Direction, 7001, 14 W BOOL FALSE • * Settings Outputs, CHI Running Direction, 7001, 23 W </td <td>L 🖙 0 : XB6S-PT04A(M1)</td> <td></td> <td></td> <td></td> <td>Out</td> <td>puts_CH01</td> <td>Home_/</td> <td>7001_07</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>W</td> <td>BOOL</td> <td>TRUE</td> <td></td>	L 🖙 0 : XB6S-PT04A(M1)				Out	puts_CH01	Home_/	7001_07						W	BOOL	TRUE	
• O'O'Dipandon Nados Outputs, CHO Section, 7001, 00 W BOAL PALSE • O'O'Map Outputs, CHO Section, 7001, 11 W BOOL FALSE • O'O'Map Outputs, CHO Section, 7001, 11 W BOOL FALSE • O'O'Map Outputs, CHI Section, 7001, 12 W BOOL FALSE • O'Motion Control Setup Outputs, CHI Section, 7001, 13 W BOOL FALSE • Cantrol Lease Outputs, CHI Sect. Coordinates, 7001, 13 W BOOL FALSE • Cantrol Lease Settings Outputs, CHI Sect. Coordinates, 7001, 14 W BOOL FALSE • Task Settings Outputs, CHI Sect. Coordinates, 7001, 15 W BOOL FALSE • Task Settings Outputs, CHI Sect. Coordinates, 7001, 14 W BOOL FALSE • Task Settings Outputs, CHI Sect. Coordinates, 7001, 14 W BOOL FALSE • Poptamon Outputs, CHI Sect. Coordinates, 7001, 21 W BOOL FALSE • Poptamon Outputs, CHI Sect. Coordinates, 7001, 23 W BOOL FALSE • Popta	CPLI/Expansion Backs				Outp	puts_CHU.	JOG_/00	01_08						w	BOOL	FALSE	
- 100Map Outputs_CH1 Result W BOOL FALSE • 0 Motion Control Setup Outputs_CH1 Resolute/Relative Post, 7001_11 W BOOL FALSE • (an Data Settings) Outputs_CH1 Resolute/Relative Post, 7001_12 W BOOL FALSE • (an Data Settings) Outputs_CH1 Reset Coordinates, 7001_14 W BOOL FALSE • [ask Settings) Outputs_CH1 Reset Coordinates, 7001_16 W BOOL FALSE • [ask Settings) Outputs_CH1 Reset Coordinates, 7001_16 W BOOL FALSE • [ask Settings) Outputs_CH1 Reset Coordinates, 7001_18 W BOOL FALSE • [a POUS Outputs_CH1 Reset 7001_19 W BOOL FALSE • [a POUS Outputs_CH1 Reset 7001_14 W BOOL FALSE • [a POUS Outputs_CH2 Running Direction, 7001_14 W BOOL FALSE • [a POUS Outputs_CH2 Running Direction, 7001_23 W BOOL FALSE • [a POUS Outputs_CH2 Running Direction, 7001_23 W BOOL FALSE • [a POUS<	Si CPO/Expansion Racks	<u> </u>			Outp	puts_CH0	Clear Sta	ate_7001	_09					w	BOOL	FALSE	
• @ Motion Control Setup Outputs, CH1 Running Direction, 7001, 11 W BOOL FALSE • @ Motion Control Setup Outputs, CH1 RostburkeRelate Posit, 7001, 12 W BOOL FALSE • @ Carn Data Settings Outputs, CH1 RostburkeRelate Posit, 7001, 13 W BOOL FALSE • Lask Settings Outputs, CH1 RostburkeRelate Posit, 7001, 13 W BOOL FALSE • Lask Settings Outputs, CH1 RostburkeRelate Posit, 7001, 14 W BOOL FALSE • Last Settings Outputs, CH1 RostburkeRelate Posit, 7001, 17 W BOOL FALSE • Mosting Ch105, CH1 Setting Outputs, CH1 Rost Settings Outputs, CH1 Rost Settings We BOOL FALSE • Motions Outputs, CH1 Rost Settings Outputs, CH2 Rost Settings We BOOL FALSE Contputs, CH2 Rost Settings Outputs, CH2 Rost Setis	I/O Мар	_			Outp	puts_CHU	Set Curr	rent Loca	ition_/00	1_0A				w	BOOL	FALSE	
• Motion Control Setup <i>el</i> Motion Control Setup <i>el</i> Motion Control Setup <i>el</i> Motion Control Setup • Outputs, CH1 Passinov/Moder, 2001, 12 • W & BOOL #LSE • Levent Settings Outputs, CH1 Passinov/Moder, 2001, 13 W & BOOL #LSE • Levent Settings Outputs, CH1 Passinov/Moder, 2001, 14 W & BOOL W BOOL • Lask Settings Outputs, CH1 Brake, 2001, 16 W BOOL W BOOL • Lask Settings Outputs, CH1 Brake, 2001, 16 W BOOL W BOOL • Lask Settings Outputs, CH1 Brake, 2001, 17 W BOOL W BOOL • Lask Settings Outputs, CH1 Brake, 2001, 18 W BOOL • Lask Settings Outputs, CH2 Assolute/Relative Posit, 7001, 21 W BOOL • Lask Settings Outputs, CH2 Assolute/Relative Posit, 7001, 22 W BOOL · Lask Settings	Controller Setup	<u> </u>			Out	puts_CH1	Running) Directio	on_7001_	11				w	BOOL	FALSE	
outputs, CH1 Pestion/Webody Mode_7001_13 W BOOL PAISE • Event Settings Outputs, CH1 Sart_7001_15 W BOOL FAISE • Task Settings Outputs, CH1 Sart_7001_16 W BOOL FAISE • Data Trace Settings Outputs, CH1 Brake_7001_17 W BOOL FAISE • Programming Outputs, CH1 Brake_7001_17 W BOOL FAISE • Programming Outputs, CH1 Brake_7001_18 W BOOL FAISE • Programming Outputs, CH1 Brake_7001_17 W BOOL FAISE • Programming Outputs, CH2 Running Direction_7001_21 W BOOL FAISE • Program0 Outputs, CH2 Running Direction_7001_21 W BOOL FAISE • L # Section0 Outputs, CH2 Start_7001_25 W BOOL FAISE • L # Function Blocks Outputs, CH2 Farke_7001_25 W BOOL FAISE • Data Outputs, CH2 Farke_7001_25 W BOOL FAISE • Outputs, CH2 Farke_7001_28 W BOOL FAISE	Motion Control Setup				Outp	puts_CH1	Absolute	e/Relativ	e Posit_7	001_12				w	BOOL	FALSE	
• Event Settings Outputs, CH1 Reset Coordinates, 2001,14 W BOOL PL3E • Task Settings Outputs, CH1 Bart, 2001, 15 W BOOL ALSE • Data Trace Settings Outputs, CH1 Bart, 2001, 16 W BOOL ALSE • Programming Outputs, CH1 Book, 2001, 18 W BOOL ALSE • If POUS Outputs, CH1 Home, 7001, 17 W BOOL ALSE Outputs, CH1 Home, 7001, 18 W BOOL ALSE Outputs, CH1 Book, 7001, 28 W BOOL ALSE Outputs, CH2 Book (PALSHME Posit, 7001, 23 W BOOL ALSE L @ Functions Outputs, CH2 Book (PALSHME Posit, 7001, 23 W BOOL ALSE Outputs, CH2 Book (PALSHME Posit, 7001, 28 W BOOL L @ Functions </td <td>& Cam Data Settings</td> <td></td> <td></td> <td></td> <td>Outp</td> <td>puts_CHT</td> <td>Position,</td> <td>Velocity</td> <td>Mode_/</td> <td>001_13</td> <td></td> <td></td> <td></td> <td>w</td> <td>BOOL</td> <td>FALSE</td> <td></td>	& Cam Data Settings				Outp	puts_CHT	Position,	Velocity	Mode_/	001_13				w	BOOL	FALSE	
In Task Settings Outputs, CH1 Start, 2001, 15 W BOOL PALSE ID Data Trace Settings Outputs, CH1 Bake, 2001, 16 W BOOL FALSE ID Data Trace Settings Outputs, CH1 Hone, 7001, 17 W BOOL FALSE Image: Settings Outputs, CH1 Hone, 7001, 18 W BOOL FALSE Image: Settings Outputs, CH1 Hone, 7001, 19 W BOOL FALSE Image: Settings Outputs, CH1 Hone, 7001, 19 W BOOL FALSE Image: Settings Outputs, CH2 Running Direction, 7001, 21 W BOOL FALSE Image: Settings Outputs, CH2 Running Direction, 7001, 21 W BOOL FALSE Image: Settings Outputs, CH2 Running Direction, 7001, 23 W BOOL FALSE Image: Settings Outputs, CH2 Sett, 7001, 25 W BOOL FALSE Image: Settings Outputs, CH2 Sett, 7001, 26 W BOOL FALSE Image: Settings Outputs, CH2 Setting, 7001, 26 W BOOL FALSE Image: Settings Outputs, CH2 Setting, 7001, 28 W BOOL FALSE Image: Settings Outputs, CH2 Setting, 7001, 24 W BOOL FALSE Image: Setting Setting, CH2 Ranke, 7001, 32 <td>Event Settings</td> <td></td> <td></td> <td></td> <td>Out</td> <td>puts_CHT</td> <td>Reset Co</td> <td>oordinate</td> <td>es_/001_</td> <td>14</td> <td></td> <td></td> <td></td> <td>w</td> <td>BOOL</td> <td>FALSE</td> <td></td>	Event Settings				Out	puts_CHT	Reset Co	oordinate	es_/001_	14				w	BOOL	FALSE	
Image: Data Trace Settings Outputs_CH1 Winks 2001_16 W BOOL PALSE Image: Data Trace Settings Outputs_CH1 Mone, 7001_17 W BOOL FALSE Image: Data Trace Settings Outputs_CH1 Mone, 7001_17 W BOOL FALSE Image: Data Trace Settings Outputs_CH1 Clear State_7001_18 W BOOL FALSE Image: Data Trace Settings Outputs_CH1 Clear State_7001_21 W BOOL FALSE Image: Data Trace Settings Outputs_CH2 Maning Direction_7001_21 W BOOL FALSE Image: Data Trace Settings Outputs_CH2 Master Post_7001_22 W BOOL FALSE Image: Data Trace Settings Outputs_CH2 Master Post_7001_23 W BOOL FALSE Image: Data Trace Settings Outputs_CH2 Master Post_7001_24 W BOOL FALSE Image: Data Trace Settings Outputs_CH2 Master Clear Trace Tr	Task Settings	<u> </u>			Out	puts_CH1 :	Start_70	01_15						w	BOOL	FALSE	
Build Tack Settings Outputs_CH1 Nor, 7001_17 W BOOL FALSE Programming Outputs_CH1 Nor, 7001_18 W BOOL FALSE V # Program Outputs_CH1 Set Current Location, 7001_1A W BOOL FALSE V # Program Outputs_CH2 Extraint Docation, 7001_21 W BOOL FALSE V # Program Outputs_CH2 Extraint Docation, 7001_22 W BOOL FALSE U # Extrain Outputs_CH2 Extrainton/Velocity Model, 7001_22 W BOOL FALSE U # Section0 Outputs_CH2 Rest Confinates, 7001_24 W BOOL FALSE U # Functions Outputs_CH2 Sett, 7001_25 W BOOL FALSE U # Total Outputs_CH2 Sett, 7001_27 W BOOL FALSE Outputs_CH2 CH2 Set, Current Location, 7001_27 W BOOL FALSE Outputs_CH2 CH2 Set, Current Location, 7001_27 W BOOL FALSE Outputs_CH2 Mode, 7001_28 W BOOL FALSE Outputs_CH2 CH2 Set, Current Location, 7001_31 W BOOL FALSE	Tosk Settings				Outp	puts_CH11	Brake_70	001_16						w	BOOL	FALSE	
Image and the program is the progr	E Data frace Settings				Outp	puts_CH1	Home_/	/001_1/						w	BOOL	FALSE	
• ■ POUs • ■ Outputs_CH1 Clear State_7001_19 • ● ₩ 900L • ▲ ALSE • ▲ Programs • Outputs_CH2 Running Direction_7001_21 • ₩ 900L • ▲ ALSE • ▲ Section0 • Outputs_CH2 Running Direction_7001_22 • ₩ 900L • ▲ ALSE • ▲ Section0 • Outputs_CH2 Running Direction_7001_23 • ₩ 900L • ▲ ALSE • ▲ Section0 • Outputs_CH2 Running Direction_7001_24 • ₩ 900L • ▲ ALSE • ▶ ■ Data • Outputs_CH2 Running Direction_7001_24 • ₩ 900L • ▲ ALSE • ● Tasks • Outputs_CH2 Rune_7001_25 • ₩ 900L • ▲ ALSE • ● Outputs_CH2 Rune_7001_27 • ₩ 900L • ▲ ALSE • • ● Outputs_CH2 Rune_7001_27 • ₩ 900L • ▲ ALSE • • • • ● Outputs_CH2 Rune_7001_27 • ₩ 900L • ▲ ALSE • • • • • • • • • • • • • • •	Programming				Outp	puts_CH1.	JOG_/00	01_18						w	BOOL	FALSE	
• (St Programs Outputs_CH2 Set Current Tocation_7001_21 W BOOL False Outputs_CH2 Associates_7001_22 W BOOL False Outputs_CH2 Absolute/Relative Posit_7001_23 W BOOL False Outputs_CH2 Position/Velocity Mode_7001_23 W BOOL False Outputs_CH2 Position/Velocity Mode_7001_24 W BOOL False Outputs_CH2 Set Cordinates_7001_26 W BOOL False Outputs_CH2 Set Cordinates_7001_27 W BOOL False Outputs_CH2 Inter Cordinates_7001_28 W BOOL False Outputs_CH2 Inter Cordinates_7001_29 W BOOL False Outputs_CH2 Inter Cordinates_7001_28 W BOOL False Outputs_CH2 Inter Cordinates_7001_28 W BOOL False Outputs_CH2 Inter Cordinates_7001_32 W BOOL False Outputs_CH2 Set Cordinates_7001_32 W BOOL False Outputs_CH3 Exter Totol_33 W BOOL False Outputs_CH3 Exter Totol_33 W BOOL False Outputs_CH3 Exter Totol_34 W BOOL False Outputs_CH3 Exter Totol_35 W BOOL False Outputs_CH3 Exter Totol_37 W BOOL False<!--</td--><td>V 🖬 POUs</td><td></td><td></td><td></td><td>Out</td><td>puts_CH1</td><td>Clear Sta</td><td>ate_7001</td><td>1_19</td><td></td><td></td><td></td><td></td><td>w</td><td>BOOL</td><td>FALSE</td><td></td>	V 🖬 POUs				Out	puts_CH1	Clear Sta	ate_7001	1_19					w	BOOL	FALSE	
With Program0 Let's Section0 Let's Excitan0 Let's Excitan0 Outputs_CH2 Restrict Relative Posit_7001_22 W BOOL FALSE Upty Excitan0 Outputs_CH2 Position/Velocity Mode_7001_23 W BOOL FALSE Outputs_CH2 Reset Coordinates_7001_24 W BOOL FALSE Outputs_CH2 Reset Coordinates_7001_28 W BOOL FALSE Outputs_CH2 Clear State 7001_28 W BOOL FALSE Outputs_CH2 Clear State 7001_28 W BOOL FALSE Outputs_CH2 Clear State 7001_20 W BOOL FALSE Outputs_CH2 Clear State 7001_20 W BOOL FALSE Outputs_CH2 Clear State 7001_20 W BOOL FALSE Outputs_CH2 Clear State 7001_23 W BOOL FALSE Outputs_CH2 Clear State 7001_23 W BOOL FALSE Outputs_CH3 Reset Coordinates 7001_31 W BOOL FALSE Outputs_CH3 Reset Coordinates 7001_34 W BOOL FALSE	V 🕅 Programs				Outp	puts_CH1	Set Curr	rent Loca	tion_/00	1_1A				w	BOOL	FALSE	
Let SectionD Outputs, CH2 Absolute/Relative Point/23 W BOOL FALSE Liff FunctionS Outputs, CH2 Rest Coordinates, 7001_23 W BOOL FALSE Liff Function Blocks Outputs, CH2 Rest Coordinates, 7001_24 W BOOL FALSE Liff Function Blocks Outputs, CH2 Rest Coordinates, 7001_26 W BOOL FALSE Liff Function Blocks Outputs, CH2 Rest Rest Coordinates, 7001_27 W BOOL FALSE Im Data Outputs, CH2 Home, 7001_27 W BOOL FALSE Outputs, CH2 Cert State, 7001_28 W BOOL FALSE Outputs, CH2 Cert State, 7001_29 W BOOL FALSE Outputs, CH2 Cert State, 7001_29 W BOOL FALSE Outputs, CH2 Cert State, 7001_29 W BOOL FALSE Outputs, CH2 Rest State, 7001_29 W BOOL FALSE Outputs, CH3 Rest Coordinates, 7001_31 W BOOL FALSE Outputs, CH3 Rest Coordinates, 7001_32 W BOOL FALSE Outputs, CH3 Rest Coordinates, 7001_33 W BOOL FALSE Outputs, CH3 Rest Coordinates, 7001_34 W BOOL FALSE Outputs, CH3 Rest Coordinates, 7001_36 W BOOL FALSE <td>▼ Program0</td> <td></td> <td></td> <td></td> <td>Out</td> <td>puts_CH2</td> <td>Running</td> <td>) Directio</td> <td>on_7001_</td> <td>21</td> <td></td> <td></td> <td></td> <td>w</td> <td>BOOL</td> <td>FALSE</td> <td></td>	▼ Program0				Out	puts_CH2	Running) Directio	on_7001_	21				w	BOOL	FALSE	
User Schollow Outputs_CH2 Position/Velocity Mode_7001_23 W BOOL FALSE User Functions Outputs_CH2 Start_7001_25 W BOOL FALSE Image: Start Tool Outputs_CH2 Start_7001_25 W BOOL FALSE Image: Start Tool Outputs_CH2 Start_7001_25 W BOOL FALSE Image: Start Tool Outputs_CH2 Start_7001_26 W BOOL FALSE Image: Start Tool Outputs_CH2 Instart, CH2 Instart, CH2 Instart W BOOL FALSE Image: Start Tool Outputs_CH2 Instart, CH2 Ins	. # Section0				Outp	puts_CH2	Absolute	e/Relativ	re Posit_7	001_22				w	BOOL	FALSE	
Life Functions Outputs_CH2 Reset Coordinates_7001_24 W BOOL FALSE Life Function Blocks Outputs_CH2 Brake_7001_25 W BOOL FALSE Im Tasks Outputs_CH2 Brake_7001_26 W BOOL FALSE Outputs_CH2 Der 7001_27 W BOOL FALSE Outputs_CH2 Iden Coutputs_CH2 Clear State 7001_28 W BOOL FALSE Outputs_CH2 Set Current Location_7001_2A W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_31 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_33 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_34 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_37 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_38 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_34 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_37 W BOOL FALSE Outputs_CH3 Reset Coordinates_7001_38 W BOOL F	- Sections				Out	puts_CH2	Position,	/Velocity	/ Mode_/	001_23				w	BOOL	FALSE	
L 28 Function Blocks Outputs, CH2 Start, 7001,25 W BOOL 74155 Data Outputs, CH2 Hake, 7001,26 W BOOL 74155 Outputs, CH2 DG, 7001,28 W BOOL 74155 Outputs, CH2 CG, 7001,28 W BOOL 74155 Outputs, CH2 CG, 7001,28 W BOOL 74155 Outputs, CH2 Care State, 7001,29 W BOOL 74155 Outputs, CH2 Brake, 7001,31 W BOOL 74155 Outputs, CH3 Absolute/Relative Posit, 7001,32 W BOOL 74155 Outputs, CH3 Brake, 7001,32 W BOOL 74155 Outputs, CH3 Brake, 7001,33 W BOOL 74155 Outputs, CH3 Brake, 7001,33 W BOOL 74155 Outputs, CH3 Brake, 7001,33 W BOOL 74155 Outputs, CH3 Brake, 7001,35 W BOOL 74155 Outputs, CH3 Brake, 7001,36 W BOOL 74155 Outputs, CH3 Brake, 7001,36 W BOOL 74155 Outputs, CH3 Brake, 7001,36 W BOOL 74155 Outputs, CH3 Brake, 7001,37 W BOOL 74155 Outputs, CH3 Brake, 7001,38 W BOOL 74155 Outputs, CH3 Brake, 7001,38 W BOOL 74155 Outputs, CH3 CG, 7001,37 W BOOL 74155 Outputs, CH3 CG, 7001,37 W BOOL 74155 Outputs, CH3 CG, 7001,38 W BOOL 74155 Outputs, CH3 CG, 7001,34 W BOOL 74155 Outputs, CH3 CCC), 700,743 W UDINT 10000 Outputs, CH3 CCC, 700,743 W UDIN	Lar Functions				Outp	puts_CH21	Reset Co	oordinate	es_7001	24				w	BOOL	FALSE	
▶ m Data Outputs, CH2 Brake, 7001,26 W BOOL FALSE ▶ m Tasks Outputs, CH2 IOR, 7001,27 W BOOL FALSE Outputs, CH2 IOR, 7001,27 W BOOL FALSE Outputs, CH2 IOR, 7001,28 W BOOL FALSE Outputs, CH2 IOR, 7001,29 W BOOL FALSE Outputs, CH2 Set Current Location, 7001,31 W BOOL FALSE Outputs, CH3 Running Direction, 7001,31 W BOOL FALSE Outputs, CH3 Rusning Direction, 7001,31 W BOOL FALSE Outputs, CH3 Rusning Direction, 7001,31 W BOOL FALSE Outputs, CH3 Rusning/Nedexity Mode, 7001,33 W BOOL FALSE Outputs, CH3 Rusning Direction, 7001,34 W BOOL FALSE Outputs, CH3 Rusning Direction, 7001,35 W BOOL FALSE Outputs, CH3 Rusning Direction, 7001,36 W BOOL FALSE Outputs, CH3 Rusning Direction, 7001,37 W BOOL FALSE Outputs, CH3 Rusning Englisher, 7001,39 W BOOL FALSE Outputs, CH3 Rusning Englisher, 7001,30	L 第 Function Blocks				Outp	puts_CH2	Start_70	01_25						w	BOOL	FALSE	
Outputs, CH2 Home, 7001, 27 W BOOL FALSE Outputs, CH2 DG, 7001, 28 W BOOL FALSE Outputs, CH2 CG, 7001, 28 W BOOL FALSE Outputs, CH2 CG, 7001, 29 W BOOL FALSE Outputs, CH2 CG, 7001, 29 W BOOL FALSE Outputs, CH2 CH3 State, 7001, 29 W BOOL FALSE Outputs, CH3 Running Direction, 7001, 31 W BOOL FALSE Outputs, CH3 Position/Velocity Mode, 7001, 32 W BOOL FALSE Outputs, CH3 Brake, 7001, 33 W BOOL FALSE Outputs, CH3 Brake, 7001, 35 W BOOL FALSE Outputs, CH3 Brake, 7001, 36 W BOOL FALSE Outputs, CH3 Brake, 7001, 38 W BOOL FALSE Outputs, CH3 CH3 Cright, CH3 ISE, 7001, 38 W BOOL FALSE Outputs, CH3 CH3 Cright, CH3 ISE, 7001, 39 W BOOL FALSE Outputs, CH3 CH3 Cright, CH3 ISE, 7001, 34 W BOOL FALSE Outputs, CH3 CH3 Cright, C	🔲 🕨 🥅 Data				Outp	puts_CH2	Brake_70	001_26						w	BOOL	FALSE	
Outputs, CH2 JOG, 7001,28 W BOOL FALSE Outputs, CH2 Clear State, 7001,29 W BOOL FALSE Outputs, CH2 Set Current Location, 7001,2A W BOOL FALSE Outputs, CH3 Absolute, Relative Posit, 7001,33 W BOOL FALSE Outputs, CH3 Absolute, Relative Posit, 7001,33 W BOOL FALSE Outputs, CH3 Position, Velocity Mode, 7001,33 W BOOL FALSE Outputs, CH3 Position, Velocity Mode, 7001,33 W BOOL FALSE Outputs, CH3 Reset, Coordinates, 7001,34 W BOOL FALSE Outputs, CH3 Brake, 7001,35 W BOOL FALSE Outputs, CH3 Brake, 7001,36 W BOOL FALSE Outputs, CH3 Brake, 7001,36 W BOOL FALSE Outputs, CH3 Brake, 7001,37 W BOOL FALSE Outputs, CH3 Brake, 7001,38 W BOOL FALSE Outputs, CH3 Cer, 7001,38 W BOOL FALSE Outputs, CH3 Cer, 7001,37 W BOOL FALSE Outputs, CH3 Cer, 7001,38 W BOOL FALSE Outputs, CH3 Cer, 7001,37 W BOOL FALSE Outputs, CH3 Cer, 7001,38 W BOOL FALSE <t< td=""><td>▶ m Tasks</td><td></td><td></td><td></td><td>Out</td><td>puts_CH2</td><td>Home_7</td><td>7001_27</td><td></td><td></td><td></td><td></td><td></td><td>w</td><td>BOOL</td><td>FALSE</td><td></td></t<>	▶ m Tasks				Out	puts_CH2	Home_7	7001_27						w	BOOL	FALSE	
Outputs, CH2 Clear State, 7001, 29 W BOOL FALSE Outputs, CH2 Set Current Location, 7001, 2A W BOOL FALSE Outputs, CH3 Running Direction, 7001, 31 W BOOL FALSE Outputs, CH3 Running Direction, 7001, 31 W BOOL FALSE Outputs, CH3 Russilter, Relative Posit, 7001, 32 W BOOL FALSE Outputs, CH3 Russilter, Relative Posit, 7001, 33 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001, 34 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001, 34 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001, 34 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001, 34 W BOOL FALSE Outputs, CH3 Reset Rev Coordinates, 7001, 34 W BOOL FALSE Outputs, CH3 Reset Rev Tool, 37 W BOOL FALSE Outputs, CH3 Log Cr001, 38 W BOOL FALSE Outputs, CH3 Caceleration Time, 7001, 34 W BOOL FALSE Outputs, CH3 Caceleration Time, 7001, 41 W UINT S00 Outputs, CH0 Reversion Time, 7001, 42 W UINT S00 Outputs, CH0 Running Velocity, 7001, 43 W UDINT T0000					Outp	puts_CH2.	JOG_700	01_28						w	BOOL	FALSE	
Outputs, CH2 Set Current Location, 7001_2A W BOOL FALSE Outputs, CH3 Running Direction, 7001_31 W BOOL FALSE Outputs, CH3 Absolute/Relative Posit, 7001_32 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001_33 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001_34 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001_34 W BOOL FALSE Outputs, CH3 Brake, 7001_36 W BOOL FALSE Outputs, CH3 Brake, 7001_36 W BOOL FALSE Outputs, CH3 Brake, 7001_36 W BOOL FALSE Outputs, CH3 Cert Oroll, 37 W BOOL FALSE Outputs, CH3 Cert Oroll, 38 W BOOL FALSE Outputs, CH3 Cert Oroll, 38 W BOOL FALSE Outputs, CH3 Cert Coroll, 7001_34 W BOOL FALSE Outputs, CH3 Cert Current Location, 7001_34 W BOOL FALSE Outputs, CH4 Deceleration Time, 7001_42 W UINT 500 Outputs, CH0 Deceleration Time, 7001_43 W UDINT 10000 Outputs, CH0 Running Velocity, 7001_43 W UDINT 10000 <td></td> <td></td> <td></td> <td></td> <td>Outp</td> <td>puts_CH2</td> <td>Clear Sta</td> <td>ate_7001</td> <td>_29</td> <td></td> <td></td> <td></td> <td></td> <td>w</td> <td>BOOL</td> <td>FALSE</td> <td></td>					Outp	puts_CH2	Clear Sta	ate_7001	_29					w	BOOL	FALSE	
Outputs, CH3 Auxining Direction, 7001,31 W BOOL FALSE Outputs, CH3 Absolute/Relative Posit, 7001,32 W BOOL FALSE Outputs, CH3 Position/Velocity Mode, 7001,33 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001,34 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001,34 W BOOL FALSE Outputs, CH3 Start, 7001,35 W BOOL FALSE Outputs, CH3 Brake, 7001,36 W BOOL FALSE Outputs, CH3 Home, 7001,37 W BOOL FALSE Outputs, CH3 Iden, 7001,38 W BOOL FALSE Outputs, CH3 Cod, 7001,34 W BOOL FALSE Outputs, CH3 Acceleration Time, 7001,41 W UINT S00 Outputs, CH0 Acceleration Time, 7001,42 W UINT S00 Outputs, CH0 Running Velocity, 7001,43 W UDINT 100000 Outputs, CH0 Running Velocity, 7001,44 W UINT S00					Outp	puts_CH2	Set Curn	rent Loca	tion_700	1_2A				w	BOOL	FALSE	
Outputs, CH3 Absolute/Relative Point W BOOL FALSE Outputs, CH3 Restert, Coordinates, 7001,33 W BOOL FALSE Outputs, CH3 Restert, Coordinates, 7001,34 W BOOL FALSE Outputs, CH3 Restert, Coordinates, 7001,36 W BOOL FALSE Outputs, CH3 Restert, Coordinates, 7001,37 W BOOL FALSE Outputs, CH3 Restert, Coordin,38 W BOOL FALSE Outputs, CH3 Cars, CH3 Cars, Cars, Coordin,39 W BOOL FALSE Outputs, CH3 Cars, Cars, Cars, Coordin,39 W BOOL FALSE Outputs, CH3 Cars, Cars, Cars, Coordin,39 W BOOL FALSE Outputs, CH3 Cars, Cars, Cars, Coordin,30 W BOOL FALSE Outputs, CH3 Cars, Cars, Cars, Coordin,34 W UINT SOO Outputs, CH0 Reventation Time, 7001,41 W UINT SOO Outputs, CH0 Running Velocity, 7001,43 W UNINT ININT Outputs, CH0 Running Velocity, 7001,43 W UNINT INI					Outp	puts_CH3	Running) Directio	on_7001_	31				w	BOOL	FALSE	
Outputs, CH3 Position/Velocity Mode/7001_33 W BOOL FALSE Outputs, CH3 Reset Coordinates, 7001_34 W BOOL FALSE Outputs, CH3 Start, 7001_35 W BOOL FALSE Outputs, CH3 Brake, 7001_36 W BOOL FALSE Outputs, CH3 Instee, 7001_37 W BOOL FALSE Outputs, CH3 Instee, 7001_38 W BOOL FALSE Outputs, CH3 IOG, 7001_38 W BOOL FALSE Outputs, CH3 IOG, 7001_38 W BOOL FALSE Outputs, CH3 Clear State, 7001_38 W BOOL FALSE Outputs, CH3 Clear State, 7001_34 W BOOL FALSE Outputs, CH3 Clear State, 7001_34 W UINT 500 Outputs, CH4 Occlearistion, 7001_41 W UINT 500 Outputs, CH0 Deceleration Time, 7001_42 W UINT 500 Outputs, CH0 Running Velocity, 7001_43 W UDINT 10000 Outputs, CH3 Burning Decition, 7001_44 W UINT 500					Out	puts_CH3	Absolute	e/Relativ	re Posit_7	001_32				w	BOOL	FALSE	
Outputs, CH3 Reset Coordinates, 7001_34 W BOOL FALSE Outputs, CH3 Start, 7001_35 W BOOL FALSE Outputs, CH3 Brake, 7001_36 W BOOL FALSE Outputs, CH3 Home, 7001_37 W BOOL FALSE Outputs, CH3 Iong, 7001_38 W BOOL FALSE Outputs, CH3 Cong, 7001_39 W BOOL FALSE Outputs, CH3 Cong, 7001_34 W BOOL FALSE Outputs, CH0 Acceleration, 7001_34 W UINT S00 Outputs, CH0 Deceleration, Time, 7001_42 W UINT 500 Outputs, CH0 Running Velocity, 7001_43 W UDINT 10000 Outputs, CH0 Running Velocity, 7001_44 W UINT 500					Outr	puts_CH3	Position,	/Velocity	Mode_7	001_33				w	BOOL	FALSE	
Outputs_CH3 Start_7001_35 W BOOL FALSE Outputs_CH3 Riske_7001_36 W BOOL FALSE Outputs_CH3 Home_7001_37 W BOOL FALSE Outputs_CH3 GG_7001_38 W BOOL FALSE Outputs_CH3 CH3 Carbon_30 W BOOL FALSE Outputs_CH3 CH3 Carbon_30 W BOOL FALSE Outputs_CH3 CH3 Carbon_30 W BOOL FALSE Outputs_CH3 Carbon_30 W BOOL FALSE Outputs_CH3 Carbon_30 W BOOL FALSE Outputs_CH3 Carbon_30 W UINT S00 Outputs_CH0 Deceleration Time_7001_44 W UINT 500 Outputs_CH0 Running Velocity_7001_43 W UINT 10000 Outputs_CH0 Burnings Devidue 7001_44 W UINT 10000					Outp	puts_CH3	Reset Co	oordinate	es_7001_	34				w	BOOL	FALSE	
Outputs, CH3 Brake, 7001, 36 W BOOL FALSE Outputs, CH3 Home, 7001, 37 W BOOL FALSE Outputs, CH3 JOG, 7001, 38 W BOOL FALSE Outputs, CH3 Clear State, 7001, 38 W BOOL FALSE Outputs, CH3 Clear State, 7001, 38 W BOOL FALSE Outputs, CH3 Clear State, 7001, 30 W BOOL FALSE Outputs, CH3 Clear State, 7001, 30 W BOOL FALSE Outputs, CH3 Clear State, 7001, 34 W UINT 500 Outputs, CH0 Deceleration Time, 7001, 41 W UINT 500 Outputs, CH0 Running Velocity, 7001, 43 W DDINT 10000 Outputs, CH3 Burgning Decition, 7001, 44 W DINT 0					Outp	puts_CH3 :	Start_70	01_35						w	BOOL	FALSE	
Outputs, CH3 Inder, 7001, 37 W BOOL FALSE Outputs, CH3 IoG, 7001, 38 W BOOL FALSE Outputs, CH3 CH3 CH3, 7001, 39 W BOOL FALSE Outputs, CH3 CH4 State, 7001, 39 W BOOL FALSE Outputs, CH3 CH4 State, 7001, 30 W BOOL FALSE Outputs, CH3 CH4 Acceleration Time, 7001, 41 W UINT 500 Outputs, CH0 Deceleration Time, 7001, 42 W UINT 500 Outputs, CH0 Running Velocity, 7001, 43 W UDINT 100000 Outputs, CH3 Burning Decition 7001, 44 W UINT 500					Outp	puts_CH3	Brake_70	001_36						w	BOOL	FALSE	
Outputs, CH3 J06, 7001,38 W BOOL FALSE Outputs, CH3 Clear State, 7001,39 W BOOL FALSE Outputs, CH3 Set Current Location, 7001,3A W BOOL FALSE Outputs, CH4 Set Current Location, 7001,3A W BOOL FALSE Outputs, CH0 Acceleration Time, 7001,41 W UINT 500 Outputs, CH0 Deceleration Time, 7001,42 W UINT 500 Outputs, CH0 Running Velocity, 7001,43 W DINT 10000 Outputs, CH8 Burging Breitign 7001,44 W DINT 10000					Outp	puts_CH3	Home_7	7001_37						w	BOOL	FALSE	
Outputs_CH3 Clear State 2001.39 W BOOL FALSE Outputs_CH3 Set Current Location_7001_3A W BOOL FALSE Outputs_CH3 Cet Current Location_7001_41 W UINT 500 Outputs_CH0 Deceleration Time_7001_42 W UINT 500 Outputs_CH0 Running Velocity_7001_43 W UDINT 10000 Outputs_CH0 Running Perition 7001_44 W DINT 0					Outp	puts_CH3.	JOG_700	01_38						w	BOOL	FALSE	
Outputs, CH3 Set Current Location, 7001, 3A W B/OL FALSE Outputs, CH0 Acceleration Time, 7001, 41 W UINT 500 Outputs, CH0 Deceleration Time, 7001, 42 W UINT 500 Outputs, CH0 Running Velocity, 7001, 43 W UDINT 10000 Outputs, CH0 Running Velocity, 7001, 44 W DINT 10000 Outputs, CH0 Running Velocity, 7001, 44 W DINT 10000					Out	puts_CH3	Clear Sta	ate_7001	1_39					w	BOOL	FALSE	
Outputs_CH0 Acceleration Time_7001_41 W UINT 500 Outputs_CH0 Deceleration Time_7001_42 W UINT 500 Outputs_CH0 Running Velocity_7001_43 W UDINT 10000 Outputs_CH0 Running Pectrion 7001 44 W DINT 10000					Outp	puts_CH3	Set Curr	rent Loca	ition_700	1_3A				w	BOOL	FALSE	
Outputs_CH0 Deceleration Time_7001_42 W UINT 500 Outputs_CH0 Running Velocity_7001_43 W UDINT 10000 Outputs_CH0 Running Decition 7001_44 W DINT 0					Outp	puts_CH0	Accelera	ation Tim	ne_7001_4	11				w	UINT	500	
Outputs_CH0 Running Velocity_7001_43 W UDINT 10000 Outputs_CH0 Running Decition 7001.44 W DINT 0					Outp	puts_CH0 I	Decelera	ation Tim	ne_7001_	42				w	UINT	500	
Outoute CHA Dunning Decition 7001 AA W DINT C					Out	puts_CH0	Running	y Velocity	y_7001_4	3				w	UDINT	10000	
- Manitor type		Ea!			Outr	nute CHA	Running	Docition	n 7001 A	4				W/	DINT	6	121
		- Monite	or type													Bit order	
O Data type ● Binary ● Hex ● Signed decimal ● Unsigned decimal O MSB-LSB ● LS8-MS8		O Da	ata type	e 🌒 Bir	nary 🌒	Hex 🌑 S	Signed d	lecimal (Unsig	ned decim	al					O MSB	I-LSB 🌑 LSB-MSB

d. Zero return mode 19 requires input of origin signal. After inputting the origin signal, it decelerates to 0 and moves in the negative direction again at the zero return approach speed until the origin signal disappears. Stop moving and zero return is completed. You can see that the coordinates of channel 0 are cleared and the zero return is set to 1, as shown in the figure below.

<u>Eile Edit View Insert Project (</u>	Controller Sim	mulation <u>T</u> ools <u>W</u> indow <u>H</u> elp		
X 🖲 🖻 🖮 th ct 🗐	፼ 년 <	🔏 🗔 🗟 🔮 🐴 😟 🗮 🔺 🔕 63	1 말 같 이 🖷 📣 🚱] Q Q %
Multiview Explorer 🗸 🗸	EtherCAT	-🗖 Node1 : XB6S-EC2002 (E0 🧈 I/O Map 🗙		-
	Position	Port	Description R/W Data Type	Value Variable
new_controller_0		Inputs_CH0 Pulse Output Direction_6001_01	R BOOL	TRUE
 Configurations and Setup 		Inputs_CH0 Pulse Status Flag 1_6001_02	R BOOL	FALSE
▼ 3 EtherCAT		Inputs_CH0 Pulse Status Flag 2_6001_03	R BOOL	FALSE
- Node1 · YR65-EC2002(E001)		Inputs_CH0 Homing Mode Running_6001_04	R BOOL	FALSE
		Inputs_CH0 Position Mode Running_6001_05	R BOOL	FALSE
L = 0 : XB65-PT04A(MT)		Inputs_CH0 Velocity Mode Running_6001_06	R BOOL	FALSE
CPU/Expansion Racks		Inputs_CH0 Homed_6001_07	R BOOL	TRUE
📕 🥔 I/O Map		Inputs_CH0 Location Arrival_6001_08	R BOOL	FALSE
Controller Setup		Inputs_CH0 Velocity Arrival_6001_09	R BOOL	FALSE
► ⊕ Motion Control Setup		Inputs_CH0 Positive Limit Signal_6001_0A	R BOOL	FALSE
Cam Data Settings		Inputs_CH0 Negative Limit Signal_6001_0B	R BOOL	FALSE
 Event Settings 		Inputs_CH0 Home Signal_6001_0C	R BOOL	FALSE
P Event Settings		Inputs_CH0 Brake Signal_6001_0D	R BOOL	FALSE
Task Settings		Inputs_CH1 Pulse Output Direction_6001_11	R BOOL	FALSE
Data Trace Settings		Inputs_CH1 Pulse Status Flag 1_6001_12	R BOOL	FALSE
Programming		Inputs_CH1 Pulse Status Flag 2_6001_13	R BOOL	FALSE
V 🛛 POUs		Inputs_CH1 Homing Mode Running_6001_14	R BOOL	FALSE
▼ III Programs		Inputs_CH1 Position Mode Running_6001_15	R BOOL	FALSE
The Program()		Inputs_CH1 Velocity Mode Running_6001_16	R BOOL	FALSE
		Inputs_CH1 Homed_6001_17	R BOOL	FALSE
Le SectionU		Inputs_CH1 Location Arrival_6001_18	R BOOL	FALSE
∟≋ Functions		Inputs_CH1 Velocity Arrival_6001_19	R BOOL	FALSE
上冠 Function Blocks		Inputs_CH1 Positive Limit Signal_6001_1A	R BOOL	FALSE
🗖 🕨 🥅 Data		Inputs_CH1 Negative Limit Signal_6001_1B	R BOOL	FALSE
► 🛱 Tasks		Inputs_CH1 Home Signal_6001_1C	R BOOL	FALSE
		Inputs_CH1 Brake Signal_6001_1D	R BOOL	FALSE
		Inputs_CH2 Pulse Output Direction_6001_21	R BOOL	FALSE
		Inputs_CH2 Pulse Status Flag 1_6001_22	R BOOL	FALSE
		Inputs_CH2 Pulse Status Flag 2_6001_23	R BOOL	FALSE
		Inputs CH2 Homing Mode Running 6001-24	R BOOI	FALSE
	Monitor type	a		- Bit order
	 Data type 	e 🕒 Binary 🌑 Hex 🌑 Signed decimal 🌑 Unsigned decimal		MSB-LSB SLSB-MSB

<u>Eile Edit View Insert Project C</u>	ontroller <u>S</u> im	ulation <u>T</u> ools <u>W</u> i	ndow <u>H</u> elp	_		_	_	_		
	ॼ 占 ㅅ	x = = *	A 🛛 🕅 🗚	63 🔏	🙆 🖡 🐿	o 🖫	g 91	୍ର୍ଚ	ર "ઉ	
										_
Multiview Explorer 🚽 4	ECAT EtherCAT	- Node1 : XB6S-E0	22002 (E0	×		10.44				-
new_Controller_0 🔻	Position	Inpute CH	POR 2 Volocity Arrival 6001-20		Description	P R/W			variable	
		Inputs_CH	2 Positive Limit Signal 6001	24		R	ROOL	FALSE		
Configurations and Setup		Inputs_CH	2 Negative Limit Signal 600	 1 2R		R	ROOL	FALSE		
▼		Inputs CH	2 Home Signal 6001 2C	1_20		R	BOOL	FALSE		
▼ □ Node1 : XB6S-EC2002(E001)		Inputs CH	2 Brake Signal 6001 2D			R	BOOL	FALSE		
∟ 🖘 0 : XB6S-PT04A(M1)		Inputs CH	3 Pulse Output Direction 60	01 31		R	BOOL	FALSE		
CPU/Expansion Racks		Inputs CH	3 Pulse Status Flag 1 6001	32		R	BOOL	FALSE		
I/O Map		Inputs CH	3 Pulse Status Flag 2 6001	33		R	BOOL	FALSE		
Controller Setup	_	Inputs CH:	3 Homina Mode Runnina 6	001 34		R	BOOL	FALSE		
► ☆ Mation Control Setup		Inputs_CH:	3 Position Mode Running_6	001_35		R	BOOL	FALSE		
Com Date Cattings	_	Inputs_CH	3 Velocity Mode Running_6	001_36		R	BOOL	FALSE		
e Cam Data Settings		Inputs_CH	3 Homed_6001_37			R	BOOL	FALSE		
Event Settings		Inputs_CH	3 Location Arrival_6001_38			R	BOOL	FALSE		
Task Settings		Inputs_CH	3 Velocity Arrival_6001_39			R	BOOL	FALSE		
🖂 Data Trace Settings		Inputs_CH	3 Positive Limit Signal_6001	_3A		R	BOOL	FALSE		
Programming		Inputs_CH	3 Negative Limit Signal_600	1_3B		R	BOOL	FALSE		
V 🖪 POUs		Inputs_CH	3 Home Signal_6001_3C			R	BOOL	FALSE		
		Inputs_CH	3 Brake Signal_6001_3D			R	BOOL	FALSE		
The Program()		Inputs_CH	Error Code_6001_41			R	UINT	0		
		Inputs_CH	1 Error Code_6001_42			R	UINT	1537		
La Sectionu		Inputs_CH	2 Error Code_6001_43			R	UINT	1537		
L 🕄 Functions		Inputs_CH	3 Error Code_6001_44			R	UINT	1537		
L I Function Blocks		Inputs_CH	0 Current Location_6001_45			R	DINT	0		
🕨 🖿 Data		Inputs_CH	0 Current Velocity_6001_46			R	DINT	0		
► Tasks		Inputs_CH	1 Current Location_6001_47			R	DINT	0		
2000 (AB)		Inputs_CH	1 Current Velocity_6001_48			R	DINT	0		
		Inputs_CH	2 Current Location_6001_49			R	DINT	0		
		Inputs_CH	2 Current Velocity_6001_4A			R	DINT	0		
		Inputs_CH:	3 Current Location_6001_4B			R	DINT	0		
	<	Innuts CH	3 Current Velocity 6001 4C			R	DINT	0		
	Monitor type							Bit or	der	
	🕒 Data type	Binary 🔵 Hex 🌘	Signed decimal 🔵 Unsig	gned decima	31				NZR-FZR 🔵 FZ	B-MSB

- Channel 0 turns on speed mode, running at 100000Hz, and the speed is changed to 10000Hz during operation
 - a. Configure the configuration parameters, such as enabling the single mode in the motion merge mode selection, as shown in the figure below.

Edit Setting Parameters	- 🗆 X
Item name	Value
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running 🔹 🔹
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200
0x2000:04 XB6S-PT04A Config/Merge Config	0: Enable Single
0x2000:05 XB6S-PT04A Config/Input Config	0
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open 🔹 🔹
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open 🔹 👻
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1
	Move Up Move Down Add Remove
	ketum to Default
, Help	
Data type :	
Comment :	
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting. Select Synchronize on the Toolbar to transfer.	
	OK Cancel Apply

- b. Set channel 0 to speed mode;
- c. Configure channel 0 to run at a speed of 100000Hz, the direction of motion to 0 forward, and the acceleration and deceleration times to 500;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

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Multiview Explorer 🗸 🗸	ETH EtherCAT	- Node1 : XB6S-EC2002 (E0 🛃 I/O Map 🗙			_		3
new Controller 0 💌	Position	Port	Description	R/M	/ Data Type	e Value	Variable
	Slot 0	▼ XB6S-PT04A					
 Configurations and Setup 		Outputs_CH0 Running Direction_7001_01		w	BOOL	FALSE	
▼		Outputs_CH0 Absolute/Relative Posit_7001_02		w	BOOL	FALSE	
v - Node1 : XB6S-EC2002(E001)		Outputs_CH0 Position/Velocity Mode_7001_03		w	BOOL	TRUE	
		Outputs_CH0 Reset Coordinates_7001_04		w	BOOL	FALSE	
E CDU/Expansion Packs		Outputs_CH0 Start_7001_05		w	BOOL	TRUE	
► Second CPO/Expansion Racks		Outputs_CH0 Brake_7001_06		W	BOOL	FALSE	5
📕 🥔 І/О Мар		Outputs_CH0 Home_7001_07		w	BOOL	FALSE	
Controller Setup		Outputs_CH0 JOG_7001_08		w	BOOL	FALSE	
▶ 奇 Motion Control Setup		Outputs_CH0 Clear State_7001_09		w	BOOL	FALSE	
		Outputs_CH0 Set Current Location_7001_0A		w	BOOL	FALSE	
Event Settings		Outputs_CH1 Running Direction_7001_11		w	BOOL	FALSE	
Task Cattings		Outputs_CH1 Absolute/Relative Posit_7001_12		w	BOOL	FALSE	
Task Seturitys		Outputs_CH1 Position/Velocity Mode_7001_13		w	BOOL	FALSE	
Data Trace Settings		Outputs_CH1 Reset Coordinates_7001_14		w	BOOL	FALSE	
Programming		Outputs_CH1 Start_7001_15		w	BOOL	FALSE	
V 👩 POUs		Outputs_CH1 Brake_7001_16		w	BOOL	FALSE	
V 🕷 Programs		Outputs_CH1 Home_7001_17		w	BOOL	FALSE	
		Outputs_CH1 JOG_7001_18		w	BOOL	FALSE	
		Outputs_CH1 Clear State_7001_19		w	BOOL	FALSE	
Le Sectiono		Outputs_CH1 Set Current Location_7001_1A		w	BOOL	FALSE	
L 😹 Functions		Outputs_CH2 Running Direction_7001_21		w	BOOL	FALSE	
LIN Function Blocks		Outputs_CH2 Absolute/Relative Posit_7001_22		w	BOOL	FALSE	
🕨 🖿 Data		Outputs_CH2 Position/Velocity Mode_7001_23		w	BOOL	FALSE	
▶ 🖿 Tasks		Outputs_CH2 Reset Coordinates_7001_24		w	BOOL	FALSE	
		Outputs_CH2 Start_7001_25		w	BOOL	FALSE	
		Outputs_CH2 Brake_7001_26		w	BOOL	FALSE	
		Outputs_CH2 Home_7001_27		W	BOOL	FALSE	
		Outputs_CH2 JOG_7001_28		w	BOOL	FALSE	
		Outputs_CH2 Clear State_7001_29		W	BOOL	FALSE	
		Outputs_CH2 Set Current Location_7001_2A		W	BOOL	FALSE	
		Outputs_CH3 Running Direction_7001_31		w	BOOL	FALSE	
		Outputs_CH3 Absolute/Relative Posit_7001_32		w	BOOL	FALSE	
		Outputs_CH3 Position/Velocity Mode_7001_33		w	BOOL	FALSE	
		Outpute CH2 Resot Coordinates 7001-24		14/	POOI	FALSE	
	Monitor hype					Rit order	2
	 Data type 	e 🔵 Binary 🌑 Hex 🔵 Signed decimal 🌑 Unsigned decimal	1			Sit order	LSB 🔵 LSB-M

<u>Eile Edit View Insert Project C</u>	ontroller <u>S</u> im	ulation <u>I</u> ools <u>W</u> indow <u>H</u> elp			
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Multiviau Evoloror	THE CAT				
	ETAT ETHERCAT		A Description		Versel Mericele
new_Controller_0 🔻	Position	Port Outputs CH1 Start 7001 15	Description		
Configurations and Sotup		Outputs CH1 Brake 7001 16		W BOOL	FALSE
Configurations and Setup		Outputs CH1 Home 7001 17		W BOOL	FALSE
thercal		Outputs CH1 JOG 7001 18		W BOOL	FALSE
▼ -□ Node1 : XB6S-EC2002(E001)		Outputs CH1 Clear State 7001 19		W BOOL	FALSE
∟ 🖂 0 : XB6S-PT04A(M1)		Outputs_CH1 Set Current Location_700	01_1A	W BOOL	FALSE
CPU/Expansion Racks		Outputs_CH2 Running Direction_7001	21	W BOOL	FALSE
📕 🐭 I/O Map		Outputs_CH2 Absolute/Relative Posit_	7001_22	W BOOL	FALSE
Controller Setup		Outputs_CH2 Position/Velocity Mode_	7001_23	W BOOL	FALSE
►		Outputs_CH2 Reset Coordinates_7001	_24	W BOOL	FALSE
Com Data Sottings		Outputs_CH2 Start_7001_25		W BOOL	FALSE
E Cant Data Settings		Outputs_CH2 Brake_7001_26		W BOOL	FALSE
Event Settings		Outputs_CH2 Home_7001_27		W BOOL	FALSE
Task Settings		Outputs_CH2 JOG_7001_28		W BOOL	FALSE
🖂 Data Trace Settings		Outputs_CH2 Clear State_7001_29		W BOOL	FALSE
Programming		Outputs_CH2 Set Current Location_700	01_2A	W BOOL	FALSE
V 🖪 POUs		Outputs_CH3 Running Direction_7001	31	W BOOL	FALSE
▼ I Programs		Outputs_CH3 Absolute/Relative Posit_	/001_32	W BOOL	FALSE
▼⊡ Program0		Outputs_CH3 Position/Velocity Mode_	/001_33	W BOOL	FALSE
Fighting		Outputs_CH3 Reset Coordinates_7001	34	W BOOL	FALSE
Le Sectiono		Outputs_CH3 Start_7001_35		W BOOL	FALSE
L 🕷 Functions		Outputs_CH3 Brake_7001_36		W BOOL	FALSE
L) Function Blocks		Outputs_CH3 Home_7001_37		W BOOL	FALSE
🗾 🕨 🥅 Data		Outputs_CH3 JOG_7001_38		W BOOL	FALSE
▶ 🗈 Tasks		Outputs_CH3 Clear State_7001_39		W BOOL	FALSE
		Outputs_CH3 Set Current Location_700	01_3A	W BOOL	FALSE
		Outputs_CH0 Acceleration Time_7001_	41	W UINT	500
		Outputs_CH0 Deceleration Time_7001	42	W UNT	500
		Outputs_CH0 Running Velocity_7001_4	3	W UDINT	100000
		Outputs_CH0 Running Position_/001_4	4	W DINT	0
		Outputs_CHT Acceleration Time_7001	45	W UINT	
		Outputs_CH1 Deceleration Time_/001	46	W UNI	
	7	Outputs_CHT Running Velocity_7001_4	1	W UDINT	
	- Monitor type				- Bit order
	 Data type 	🕒 Binary 🌑 Hex 🌑 Signed decimal 🌑 Unsig	ned decimal		🔵 MSB-LSB 🔵 LSB-MSB

- f. During the movement, change the running speed of channel 0 to 10000Hz;
- g. Reset the start command of channel 0 from 0 to 1 to start motion merging, as shown in the figure below.

Multiview Explorer 🗸 📮	EtherCAT	- Node1 : XB6S-EC2002 (E0 🔡 I/O Map 🗙					-
now Controller 0	Position	Port	Description	R/W	Data Type	Value	Variable
		Outputs_CH0 Position/Velocity Mode_7001_03		w	BOOL	TRUE	
Configurations and Setup		Outputs_CH0 Reset Coordinates_7001_04		W	BOOL	FALSE	
▼ III EtherCAT		Outputs_CH0 Start_7001_05		w	BOOL	TRUE	
Node1 : YP65_EC2002/E001)		Outputs_CH0 Brake_7001_06		w	BOOL	FALSE	
		Outputs_CH0 Home_7001_07		w	BOOL	FALSE	
L = 0 : XB6S-P104A(M1)		Outputs_CH0 JOG_7001_08		w	BOOL	FALSE	
CPU/Expansion Racks		Outputs_CH0 Clear State_7001_09		w	BOOL	FALSE	
📕 👷 I/O Map		Outputs_CH0 Set Current Location_7001_0A		w	BOOL	FALSE	
Controller Setup		Outputs_CH1 Running Direction_7001_11		w	BOOL	FALSE	
►		Outputs_CH1 Absolute/Relative Posit_7001_12		w	BOOL	FALSE	
Cam Data Settings		Outputs_CH1 Position/Velocity Mode_7001_13		w	BOOL	FALSE	
b Event Cettings		Outputs_CH1 Reset Coordinates_7001_14		w	BOOL	FALSE	
Event Settings		Outputs_CH1 Start_7001_15		w	BOOL	FALSE	
Task Settings		Outputs_CH1 Brake_7001_16		w	BOOL	FALSE	
Data Trace Settings		Outputs_CH1 Home_7001_17		w	BOOL	FALSE	
Programming		Outputs_CH1 JOG_7001_18		W	BOOL	FALSE	
V 🛙 POUs		Outputs_CH1 Clear State_7001_19		W	BOOL	FALSE	
▼ S# Programs		Outputs_CH1 Set Current Location_7001_1A		w	BOOL	FALSE	
		Outputs_CH2 Running Direction_7001_21		w	BOOL	FALSE	
		Outputs_CH2 Absolute/Relative Posit_7001_22		w	BOOL	FALSE	
L 🗟 Section0		Outputs_CH2 Position/Velocity Mode_7001_23		w	BOOL	FALSE	
L 💥 Functions		Outputs_CH2 Reset Coordinates_7001_24		w	BOOL	FALSE	
L I Function Blocks		Outputs_CH2 Start_7001_25		w	BOOL	FALSE	
▶ m Data		Outputs_CH2 Brake_7001_26		w	BOOL	FALSE	
► 🖿 Tasks		Outputs_CH2 Home_7001_27		w	BOOL	FALSE	
		Outputs_CH2 JOG_7001_28		w	BOOL	FALSE	
		Outputs_CH2 Clear State_7001_29		w	BOOL	FALSE	
		Outputs_CH2 Set Current Location_7001_2A		w	BOOL	FALSE	
		Outputs_CH3 Running Direction_7001_31		w	BOOL	FALSE	
		Outputs_CH3 Absolute/Relative Posit_7001_32		w	BOOL	FALSE	
		Outputs_CH3 Position/Velocity Mode_7001_33		w	BOOL	FALSE	
		Outputs_CH3 Reset Coordinates_7001_34		w	BOOL	FALSE	
		Outputs_CH3 Start_7001_35		w	BOOL	FALSE	
		Outputs_CH3 Brake_7001_36		w	BOOL	FALSE	
		Outputs_CH3 Home_7001_37		w	BOOL	FALSE	
		Outputs_CH3 JOG_7001_38		W	BOOL	FALSE	
		Outputs_CH3 Clear State_7001_39		W	BOOL	FALSE	
		Outputs_CH3 Set Current Location_7001_3A		W	BOOL	FALSE	
		Outputs_CH0 Acceleration Time_7001_41		w	UINT	500	
		Outputs_CH0 Deceleration Time_7001_42		W	UINT	500	
		Outputs_CH0 Running Velocity_7001_43		W	UDINT	10000	
		Outputs CH0 Running Position 7001 44		W	DINT	0	
	1						

h. You can see that channel 0 slows down to 10000Hz motion, as shown in the figure below.

File Edit View Insert Project Controller	Simulation Tools Window Help		
Multiview Explorer - 🗣 🛗 EtherC	AT -□ Node1 : XB6S-EC2002 (E0 🔄 I/O Map 🗙		
new Controller 0 v	n Port	Description R/W Data T	ype Value Variable
	Inputs_CH2 Pulse Status Flag 1_6001_22	R BOOL	FALSE
Configurations and Setup	Inputs_CH2 Pulse Status Flag 2_6001_23	R BOOL	FALSE
▼	Inputs_CH2 Homing Mode Running_6001_24	R BOOL	FALSE
▼ -= Node1 : XB6S-EC2002(E001)	Inputs_CH2 Position Mode Running_6001_25	R BOOL	FALSE
L == 0 : XB6S-PT04A(M1)	Inputs_CH2 Velocity Mode Running_6001_26	R BOOL	FALSE
CPU/Expansion Packs	Inputs_CH2 Homed_6001_27	R BOOL	FALSE
	Inputs_CH2 Location Arrival_6001_28	R BOOL	FALSE
	Inputs_CH2 Velocity Arrival_6001_29	R BOOL	FALSE
► R Controller Setup	Inputs_CH2 Positive Limit Signal_6001_2A	R BOOL	FALSE
Motion Control Setup	Inputs_CH2 Negative Limit Signal_6001_28	R BOOL	FALSE
	Inputs_CH2 Home Signal_6001_2C	R BOOL	FALSE
► Event Settings	Inputs_CH2 Brake Signal_6001_2D	R BOOL	FALSE
Task Settings	Inputs_CH3 Pulse Output Direction_6001_31	R BOOL	FALSE
	Inputs_CH3 Pulse Status Flag 1_6001_32	R BOOL	FALSE
M Data Trace Settings	Inputs_CH3 Pulse Status Flag 2_6001_33	R BOOL	FALSE
Programming	Inputs_CH3 Homing Mode Running_6001_34	R BOOL	FALSE
V 🖞 POUs	Inputs_CH3 Position Mode Running_6001_35	R BOOL	FALSE
V 🔐 Programs	Inputs_CH3 Velocity Mode Running_6001_36	R BOOL	FALSE
▼ en Program0	Inputs_CH3 Homed_6001_37	R BOOL	FALSE
section0	Inputs_CH3 Location Arrival_6001_38	R BOOL	FALSE
	Inputs_CH3 Velocity Arrival_6001_39	R BOOL	FALSE
L , Functions	Inputs_CH3 Positive Limit Signal_6001_3A	R BOOL	FALSE
L 🗑 Function Blocks	Inputs_CH3 Negative Limit Signal_6001_3B	R BOOL	FALSE
Data	Inputs_CH3 Home Signal_6001_3C	R BOOL	FALSE
▶ 🗈 Tasks	Inputs_CH3 Brake Signal_6001_3D	R BOOL	FALSE
	Inputs_CH0 Error Code_6001_41	R UINT	0
	Inputs_CH1 Error Code_6001_42	R UINT	1537
	Inputs_CH2 Error Code_6001_43	R UINT	1537
	Inputs_CH3 Error Code_6001_44	R UINT	1537
	Inputs_CH0 Current Location_6001_45	R DINT	2361810
	Inputs_CH0 Current Velocity_6001_46	R DINT	10000
	Inputs_CH1 Current Location_6001_47	R DINT	0
	Inputs_CH1 Current Velocity_6001_48	R DINT	0
	lanuta CHD Comment Lanation COOL 40	D DINIT	
Monitor	уре		r Bit order
💿 Data	iype 🕒 Binary 🕘 Hex 🔵 Signed decimal 🌑 Unsigned decima		🔵 MSB-LSB 🕘 LSB-MSE

- The current position of channel 0 is 10000, and it moves to the position of 20000. During the movement, the position is changed to 50000.
 - a. Configure the configuration parameters, such as the motion merge mode selection to enable the continuous mode, as shown in the figure below.

Edit Setting Parameters		- 0	×
Item name	Value		
0x2000:01 XB6S-PT04A Config/Pulse Mode	0: Pul+Dir		
0x2000:02 XB6S-PT04A Config/Safe Mode	0: Keep On Running		
0x2000:03 XB6S-PT04A Config/Brake Time(ms)	200		
0x2000:04 XB6S-PT04A Config/Merge Config	1: Enable Continuous		
0x2000:05 XB6S-PT04A Config/Input Config	0		
0x2000:06 XB6S-PT04A Config/Homing TimeOut(ms)	0	-	
0x2000:07 XB6S-PT04A Config/CH0 Startup Speed	1		
0x2000:08 XB6S-PT04A Config/CH0 Homing Mode	2: mode 24		
0x2000:09 XB6S-PT04A Config/CH0 Homing Speed	1000		
0x2000:0A XB6S-PT04A Config/CH0 Homing Approach Speed	500		
0x2000:0B XB6S-PT04A Config/CH0 Input Logic	0: Limit Normally Open, Origin Brake Normally Open		
0x2000:0C XB6S-PT04A Config/CH0 Scaling	1		
0x2000:0D XB6S-PT04A Config/CH1 Startup Speed	1		
0x2000:0E XB6S-PT04A Config/CH1 Homing Mode	2: mode 24		
0x2000:0F XB6S-PT04A Config/CH1 Homing Speed	1000		
0x2000:10 XB6S-PT04A Config/CH1 Homing Approach Speed	500		
0x2000:11 XB6S-PT04A Config/CH1 Input Logic	0: Limit Normally Open, Origin Brake Normally Open		
0x2000:12 XB6S-PT04A Config/CH1 Scaling	1		\sim
	Move Up Move Down Add	Rer	nove
	more op more bonn / had		1010
		Return to I	Default
CHelp			
Data type :			
Comment :			
This Setting Parameters are saved in the CPU Unit as a part of EtherCAT setting.			
Select synchronize on the Tooldar to transfer.			
	ОК	Cancel	Apply

b. The current position of channel 0 is 10000, as shown in the figure below.

<u>Eile E</u> dit <u>V</u> iew Insert Project <u>C</u>	ontro	ller	<u>S</u> imu	lation	Tools	<u>W</u> in	dow <u>H</u>	elp	_	-	_	_	_	_	-	_	-	_	-	
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Multiview Explorer	TH c	thorC	۸T				2002 (E0		(O Man	~	-			-	-		-	-	-	
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Li≋ Function Blocks ▶ m Data ▶ m Tasks					Input Input Input Input Input Input Input Input	B_CH3 B_CH3 B_CH0 B_CH1 B_CH2 B_CH3 B_CH3 B_CH0 B_CH0 B_CH1 B_CH1 B_CH1 B_CH2 B_CH2 B_CH2 B_CH2 B_CH2 B_CH2 B_CH2 B_CH3 B_CH3 B_CH4 B_	Brake Sig Error Coc Error Coc Error Coc Error Coc Current L Current V Current L Current V Current L Current V	nal_6001_ e_6001_4 e_6001_4 e_6001_4 e_6001_4 e_6001_4 ccation_£ elocity_60 ccation_£ elocity_60 ccation_£					R R R R R R R R R R R R R	BOOL UINT UINT UINT UINT DINT DINT DINT DINT DINT		FALSE 0 1537 1537 1537 10000 0 0 0 0 0 0 0				

c. Set channel 0 to absolute position mode;

- d. Configure channel 0 to run at 20000 steps, 1000 Hz speed, and 500 acceleration and deceleration times;
- e. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- f. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

X Image: Control Ison Co	
Multiview Explorer Image: Controller_0 Image: Controller_0<	
Multiview Explorer Image: Controller_0 Image: Controller_0<	
Position Position Position Position Position RW Data Type Value Variable V Configurations and Setup Outputs, CH0 Running Direction_7001_01 W BOOL FALSE V EtherCAT Outputs, CH0 Absolute/Relative Posit_7001_02 W BOOL FALSE V Node1 : XB65-FC2002(E001) Utputs, CH0 Rest Coordinates_7001_04 W BOOL FALSE L<	•
▼ Configurations and Setup Slot 0 ▼ 2805-P104A W BOOL ALSE ▼ Configurations and Setup Outputs, CH0 Running Direction, 7001_01 W BOOL FALSE ▼ ChierCAT Outputs, CH0 Running Direction, 7001_02 W BOOL FALSE ▼ ChierCAT Outputs, CH0 Running Direction, 7001_03 W BOOL FALSE • © Node1 : XB6S-EC2002(E001) Utputs, CH0 Rosition, V4elocity Mode, 7001_03 W BOOL FALSE • © CPU/Expansion Racks Outputs, CH0 Rake, 7001_05 W BOOL FALSE • © CPU/Expansion Racks Outputs, CH0 Rake, 7001_06 W BOOL FALSE • © Controller Setup Outputs, CH0 Brake, 7001_07 W BOOL FALSE • © Motion Control Setup Outputs, CH0 Set Current Location, 7001_09 W BOOL FALSE • © Controller Setup Outputs, CH0 Set Current Zoation, 7001_00 W BOOL FALSE • © Control Setup Outputs, CH0 Set Current Zoation, 7001_00 W BOOL FALSE • © Control Setup Outputs, CH0 Set Current Zoation, 7001_00 W BOOL FALSE	
▼ Configurations and Setup Outputs_CH0 Running Direction_/001_01 W BOOL FALSE ▼ EtherCAT Outputs_CH0 Absolute/Relative Posit_7001_02 W BOOL FALSE V ⊂ Rode1 : XB6S-EC2002(E001) Outputs_CH0 Position/Velocity Mode_7001_03 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_04 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_04 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_04 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_05 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_05 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_05 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_05 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Coordinates_7001_06 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Clear State_7001_09 W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0 Reset Current Location_7001_0A W BOOL FALSE • □ : XB6S-FC4A(M1) Outputs_CH0	
▼ ≥ Ether(AT Outputs_CH0 Absolute/Netarive Post_0/01_02 W BOOL FALSE Outputs_CH0 Absolute/Netarive Post_0/01_03 W BOOL FALSE Outputs_CH0 Postion/Velocity Mode (2001_03 W BOOL FALSE Outputs_CH0 Reset Coordinates_7001_04 W BOOL FALSE Outputs_CH0 Reset Coordinates_7001_05 W BOOL FALSE Outputs_CH0 Brat_7001_05 W BOOL FALSE Image: State_7001_06 W BOOL FALSE Image: State_7001_07 W BOOL FALSE Image: State_7001_08 W BOOL FALSE Image: State_7001_09 W BOOL FALSE Image: State_7001_00 W BOOL FALSE Image: State_7001_700 W BOOL FALSE Image: State_7001_700 W BOOL FALSE Image: State_7001_700 W BOOL FALSE Image: State_7001	
✓ □ Node1 : X865-EC2002(E001) ○ Utiputs, CH0 Position/Vede_/001_0.3 W BOOL FALSE ○ Utiputs, CH0 Position/Vede_/001_0.3 W BOOL FALSE ○ Utiputs, CH0 Position/Vede_/001_0.4 W BOOL FALSE ○ Utiputs, CH0 Position/Vede_/001_0.6 W BOOL FALSE ○ Utiputs, CH0 Pake_/001_0.6 W BOOL FALSE ○ Utiputs, CH0 Pake_/001_0.6 W BOOL FALSE ○ Utiputs, CH0 Pake_/001_0.6 W BOOL FALSE ○ Utiputs, CH0 Pome /001_07 W BOOL FALSE ○ Utiputs, CH0 Pome /001_08 W BOOL FALSE ○ Utiputs, CH0 Clear State / 7001_09 W BOOL FALSE ▷ € Motion Control Setup Outiputs, CH0 Set Current Location / 7001_0A W BOOL FALSE ▷ € Comp Statigner Outiputs, CH0 Set Current Location / 7001_0A W BOOL FALSE	
L ⇔ 0 : XB6S-PT04A(M1) Outputs_CH0 Reset Coornates_7001_04 W BOOL FALSE Outputs_CH0 Start_27001_05 W BOOL IRUE S CPU/Expansion Racks Outputs_CH0 Start_27001_06 W BOOL FALSE I/O Map Outputs_CH0 Mome_7001_07 W BOOL FALSE I Controller Setup Outputs_CH0 Jog_7001_08 W BOOL FALSE I © Motion Control Setup Outputs_CH0 Clear State_7001_09 W BOOL FALSE I © Control Setup Outputs_CH0 Set Current Location_7001_0A W BOOL FALSE I © Can Data Settings Outputs_CH0 Set Current Location_7001_11 W BOOL FALSE	
▶ © CPU/Expansion Racks Outputs, CH0 Stat (2:00) 53 W BOOL FALSE ▶ © CPU/Expansion Racks Outputs, CH0 Brake 2001_06 W BOOL FALSE ▶ I/O Map Outputs, CH0 Brake 2001_07 W BOOL FALSE ▶ © Controller Setup Outputs, CH0 Brake 2001_08 W BOOL FALSE ▶ © Motion Control Setup Outputs, CH0 Set Current Location.7001_09 W BOOL FALSE ▶ © Motion Control Setup Outputs, CH0 Set Current Location.7001_04 W BOOL FALSE ▶ Cam Data Settings Outputs, CH0 Set Current Location.7001_01 W BOOL FALSE	
Controller Setup Outputs_CH0 JOIng_7001_08 W BOOL FALSE Outputs_CH0 Clear State_7001_09 W BOOL FALSE or Cam Data Settings Outputs_CH0 Set Current Location_7001_0A W BOOL FALSE Outputs_CH0 Set Current Location_7001_1A W BOOL FALSE	
A Controller Setup Couputs_CH0 Class Co	
Control Setup Control	
Event Settings	
P Liven Settings	
Task Settings	
Couperation Couperations and the section of th	
Couponts CH1 Sec Continues_1001_14 W BOOL Proce	
T DOLL	
Outputs (H1 Home 700117 W BOOL FAISE	
V @ Programs Outputs CH1 IOG 7001 18 W BOOL FAISE	
V	
Let Section0 Outputs CH1 Set Current Location 7001 1A W BOOL FALSE	
L® Functions Outputs CH2 Running Direction 7001 21 W BOOI FALSE	
Li Function Blocks Outputs CH2 Absolute/Relative Posit 7001 22 W BOOI FALSE	
Data Outputs CH2 Position/Velocity Mode 7001 23 W BOOL FALSE	
Dutputs CH2 Reset Coordinates 7001 24 W BOOL FALSE	
Outputs CH2 Start 7001 25 W BOOL FALSE	
Outputs CH2 Brake 7001 26 W BOOL FALSE	
Outputs_CH2 Home_7001_27 W BOOL FALSE	
Outputs CH2 JOG 7001 28 W BOOL FALSE	
Outputs_CH2 Clear State_7001_29 W BOOL FALSE	
Outputs_CH2 Set Current Location_7001_2AW BOOL FALSE	
Outputs_CH3 Running Direction_7001_31 W BOOL FALSE	
Outputs_CH3 Absolute/Relative Posit_7001_32 W BOOL FALSE	

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<u>File Edit View Insert P</u> roject <u>C</u>	ontroller	<u>S</u> imulatio	n <u>T</u> ools <u>W</u> i	indow <u>H</u> elp)		_	_				
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Multiview Explorer 🚽 📮	EtherC	AT -C	Node1 : XB6S-E0	C2002 (E0	💣 I/O M	ap 🗙						-
new Controller 0	Positi	on		Port			Description	R/W	Data Type	Value	Variable	
			Outputs_C	H1 JOG_7001_	18			W	BOOL	FALSE		
Configurations and Setup			Outputs_C	H1 Clear State	_7001_19			W	BOOL	FALSE		
EtherCAT			Outputs_C	H1 Set Current	t Location_7	001_1A		W	BOOL	FALSE		
▼			Outputs_Cl	H2 Running Di	irection_700	01_21		W	BOOL	FALSE		
			Outputs_C	H2 Absolute/R	kelative Posi	t_7001_22		W	BOOL	FALSE		
			Outputs_Cl	H2 Position/Ve	elocity Mod	e_7001_23		W	BOOL	FALSE		
CPU/Expansion Racks			Outputs_C	H2 Reset Coor	dinates_700	01_24		W	BOOL	FALSE		
a⇒ I/O Map			Outputs_Cl	H2 Start_7001_				W	BOOL	FALSE		
Controller Setup			Outputs_C	H2 Brake_7001	1_26			W	BOOL	FALSE		
► ⊕ Motion Control Setup			Outputs_Cl	H2 Home_700	1_27			W	BOOL	FALSE		
e/ Cam Data Settings			Outputs_C	H2 JOG_7001_	28			W	BOOL	FALSE		
Event Settings			Outputs_C	H2 Clear State	_7001_29			W	BOOL	FALSE		
P Event Settings			Outputs_C	H2 Set Current	t Location_7	001_2A		W	BOOL	FALSE		
lask Settings			Outputs_C	H3 Running Di	irection_700	01_31		W	BOOL	FALSE		
🖂 Data Trace Settings			Outputs_C	H3 Absolute/R	Relative Posi	t_7001_32		W	BOOL	FALSE		
Programming			Outputs_C	H3 Position/Ve	elocity Mod	e_7001_33		W	BOOL	FALSE		
V 🖪 POUs			Outputs_C	H3 Reset Coon	dinates_700	01_34		W	BOOL	FALSE		
▼ 🖅 Programs			Outputs_C	H3 Start_7001_				W	BOOL	FALSE		
Program0			Outputs_C	H3 Brake_7001	1_36			w	BOOL	FALSE		
			Outputs_C	H3 Home_700	1_37			W	BOOL	FALSE		
L 클 Section0			Outputs_C	H3 JOG_7001_	38			W	BOOL	FALSE		
L 🕱 Functions			Outputs_C	H3 Clear State	_7001_39			W	BOOL	FALSE		
L ﷺ Function Blocks			Outputs_C	H3 Set Current	t Location_7	7001_3A		w	BOOL	FALSE		
▶ m Data			Outputs_C	H0 Acceleratio	on Time_700	1_41		W	UINT	500		
Tasks			Outputs_C	H0 Deceleratio	on Time_700	01_42		W	UINT	500		
			Outputs_C	H0 Running Ve	elocity_7001	_43		W	UDINT	1000		
			Outputs_C	H0 Running Po	osition_7001	1_44		w	DINT	20000		
			Outputs_C	H1 Acceleratio	on Time_700	1_45		W	UINT	0		
			Outputs_C	H1 Deceleratio	on Time_700	01_46		w	UINT	0		
			Outputs_C	H1 Running Ve	elocity_7001	47		w	UDINT	0		
			Outputs_C	H1 Running Pg	osition_7001	1_48		W	DINT	0		
			Outputs_C	H2 Acceleratio	on Time_700	01 49		w	UINT	0		
			Outputs_C	H2 Deceleratio	on Time_700	01 4A		w	UINT	0		
			Outerite C	112 D	-1 7001	40		147	UDINIT			
	Monitor	hino							_	Pit of	rdor	
	 Monitor i Data 	type 🔵 B	inary 🔵 Hex 🌔	Signed deci	imal 🔵 Un	signed decim	nal				der MSB-LSB 🔵 LS	B-MSB

g. During the motion process, change the running step number of channel 0 to 50000 and start motion merging, as shown in the figure below.

<u>File Edit View Insert Project</u>	<u>C</u> ontr	oller	Sim	nulatio	n	<u>T</u> ools	Win	dow	Help)											
X 🗓 🕯 💼 to ct 🗊	3D	ď	く	2	63	5		Ä	0	苠	A	8			6 C) 🖓		þ			
Multiview Explorer - 1	m	Ethor	~лт		Nod	-1 • VD	DES ECT	0002 /6	0	1/	O Map	~						<u> </u>	-		
	ELAI	Posit	tion					Po	rt.	v	owap	^	Des	cription	I RAW	/ Data	Type	Value		ariable	
new_Controller_0		T OSI	aon			Outp	uts CH	1 Rese	t Cool	dinates	7001	14	000	cuption	w	BOOL	Jpc	FALSE		unubic	
Configurations and Setup	-					Outp	uts_CH	1 Start	7001	_15					w	BOOL		FALSE			
EtherCAT						Outp	uts_CH	1 Brak	e_700	1_16					w	BOOL		FALSE			
- Nodol - XR65 EC3003/E001						Outp	uts_CH	1 Horr	ne_700	1_17					W	BOOL		FALSE			
						Outp	uts_CH	1 JOG	_7001_	18					W	BOOL		FALSE			
L = 0 : XB6S-P104A(M1)						Outp	uts_CH	1 Clea	r State	_7001_					w	BOOL		FALSE			
CPU/Expansion Racks						Outp	uts_CH	1 Set (Curren	t Locati	on_700	1_1A			W	BOOL		FALSE			
🚽 I/O Map						Outp	uts_CH	2 Runr	ning D	irection	_7001_	21			w	BOOL		FALSE			
Controller Setup						Outp	uts_CH	2 Abso	olute/F	Relative	Posit_7	001_22			W	BOOL		FALSE			
Motion Control Setup						Outp	uts_CH	2 Posit	tion/Ve	elocity I	Node_7	001_23			w	BOOL		FALSE			
🖉 🎸 Cam Data Settings						Outp	uts_CH	2 Rese	t Cooi	rdinates	_7001_	24			W	BOOL		FALSE			
Event Settings						Outp	uts_CH	2 Start	_/001	_25					w	BOOL		FALSE			
Task Settings						Outp	uts_CH	2 Brak	e_700	1_26			_		W	BOOL		FALSE			
Data Trace Settings						Outp	uts_CH	2 Hom	1e_/00	1_27					w	BOOL		FALSE			
						Outp	uts_CH	2 JUG	_/001_	28	20				W	BOOL		FALSE			
Programming						Outp	ute CH	2 Cied	State	_/001_i	29 op 700	1 2 4			VV	POOL		EALSE			
Ver POUs						Outp	uts_CH	2 300 C	ning D	irection	7001	1_2A 21			w	BOOL		FALSE			
▼ Iff Programs						Outp	uts_CH	3 Absc	hing D	Pelative	Docit 7	001 32			w	ROOL		FALSE			
Ver Program0	-					Outp	uts CH	3 Posit	tion/V	elocity I	Mode 7	001 33			w	BOOL		FALSE			
∟ de Section0						Outp	uts CH	3 Rese	t Cool	dinates	7001	34			w	BOOL		FALSE			
L I Functions	-					Outp	uts CH	3 Start	7001	35					w	BOOL		FALSE			
∟憲 Function Blocks	-					Outp	uts CH	3 Brak	- e 700	- 136					w	BOOL		FALSE			
▶ m Data						Outp	uts_CH	3 Hom	ne_700	1_37					w	BOOL		FALSE			
Tasks						Outp	uts_CH	3 JOG	_7001_	38					w	BOOL		FALSE			
E TUSKS						Outp	uts_CH	3 Clea	r State	_7001_:	39				w	BOOL		FALSE			
						Outp	uts_CH	3 Set (Curren	t Locati	on_700	1_3A			w	BOOL		FALSE			
						Outp	uts_CH	0 Acce	leratio	on Time	_7001_4	1 1			W	UINT		500			
						Outp	uts_CH	0 Dece	eleratio	on Time	_7001_	42			w	UINT		500			
						Outp	uts_CH	0 Runr	ning V	elocity_	7001_4				W	UDIN		1000			
						Outp	uts_CH	0 Runr	ning P	osition_	7001_4	4			W	DINT		50000			
	_					Outp	uts_CH	1 Acce	leratio	on Time	_7001_4	15			W	UINT		0			
						Outp	uts_CH	1 Dece	eleratio	on Time	_7001_	46			w	UINT		0			
		<				A	<i></i>	1.0	× /		mo4 4										>
	M	onitor	type	-		-												Bit o	rder –		
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h. After the movement is completed, you can see that the current coordinate of channel 0 is 50000, as shown in the figure below.

<u>File Edit View Insert Project C</u>	ontroller	Simu	lation	Iools	Win	idow <u>H</u>	elp		_	_	_	_		_	
X 🕮 🖻 🗇 ở 🖻	B 4	~	ज रह	5 12	66 700.	Ä 🚇	Ř	A	X 5	ð : 🚰 i 🍢	f (Ï	⊕ , Q, ™3	
Multiview Explorer 🗸 🗸	Ether	CAT	-🗆 No	de1:XE	6S-EC2	2002 (E0	. e 1/	О Мар	×						Ţ
now Controller 0 -	Posi	tion				Port				Description	n R/W	/ Data Type	Value	Variable	
				Input	s_CH2	Homed_6	001_27				R	BOOL	FALSE		
 Configurations and Setup 				Input	s_CH2	Location .	Arrival_60	01_28			R	BOOL	FALSE		
EtherCAT				Input	s_CH2	Velocity A	rrival_600	1_29			R	BOOL	FALSE		
▼ -□ Node1 : XB6S-EC2002(E001)				Input	s_CH2	Positive L	imit Signa	I_6001_2	2A		R	BOOL	FALSE		
				Input	s_CH2	Negative	Limit Sign	al_6001_	_2B		R	BOOL	FALSE		
				Input	s_CH2	Home Sig	nal_6001_	<u>2</u> C			R	BOOL	FALSE		
CPU/Expansion Racks				Input	s_CH2	Brake Sig	nal_6001	2D			R	BOOL	FALSE		
🚽 🖬 I/O Map				Input	s_CH3	Pulse Out	put Direct	tion_600	1_31		R	BOOL	FALSE		
Controller Setup				Input	s_CH3	Pulse Stat	us Flag 1_	6001_32	2		R	BOOL	FALSE		
A Motion Control Setup				Input	s_CH3	Pulse Stat	us Flag 2_	6001_33	:		R	BOOL	FALSE		
🖌 Cam Data Settings				Input	s_CH3	Homing N	Aode Run	ning_600	01_34		R	BOOL	FALSE		
Event Settings				Input	s_CH3	Position N	Aode Run	ning_600	01_35		R	BOOL	FALSE		
Task Settings				Input	s_CH3	Velocity N	Aode Runi	ning_600	01_36		R	BOOL	FALSE		
				Input	s_CH3	Homed_6	001_37				R	BOOL	FALSE		
Data Trace Settings	———			Input	s_CH3	Location	Arrival_60	01_38			R	BOOL	FALSE		
Programming				Input	s_CH3	Velocity A	rrival_600	1_39			R	BOOL	FALSE		
🔳 🔻 👩 POUs				Input	s_CH3	Positive L	imit Signa	I_6001_3	A		R	BOOL	FALSE		
▼ III Programs				Input	s_CH3	Negative	Limit Sign	al_6001_	_3B		ĸ	BOOL	FALSE		
Ver Program0				Input	s_CH3	Home Sig	nal_6001_	3C			R	BOOL	FALSE		
L ⊕ Section0				Input	s_CH3	Brake Sig	nal_6001_	3D	_		R	BOOL	FALSE		
Sections				Input	s_CH0	Error Cod	e_6001_41	1			R	UINI	0		
E ar, runctions	—			Input	S_CHI	Error Cod	e_6001_42		_		ĸ	UINI	1537		
	— —			Input	s_CH2	Error Cod	e_6001_4:	5			R	UINT	1537		
🖉 Þ 🕅 Data	<u></u>			Input	S_CH3	Error Cod	e_6001_44	1	_		R	UINI	1037		
Tasks		_		Input	S_CHU	Current D	ocation_6	JUI_45			ĸ	DINI	0		
	—			Input	S_CHU	Current v	elocity_60	01_40	_		R	DINI	0		
	-	_		Input	S_CHI	Current L	ocation_60	JUI_47			ĸ	DINT	0		
		_		Input	S_CHI	Current V	elocity_60	01_48	_		R	DINT	0		
				Input	s_CH2	Current L	olocity 60	01 449			R P	DINT	0		
	—			Input		Current V	elocity_00	01_4A			D	DINT	0		
				mput	s_CH3	Current L	ocation_60	JO1_46			K				
	- Monitor	type -											Bit or	rder	
	🔵 Dat	a type	🔵 Bina	ary 🔵 I	lex 🔵) Signed c	lecimal 🥘	Unsigr	ned decir	mal			0	MSB-LSB 🔵 LSI	B-MSB
	L														

6.4.3 Application in TIA Portal V17 software environment

1. Preparation

- Hardware Environment
 - > Module model XB6S-PT04A
 - > PROFINET bus coupler module, end cap
 - This description takes the XB6S-PN2002 coupler module as an example
 - > A computer with TIA Portal V17 software pre-installed
 - > A Siemens PLC. This description takes Siemens S7-1500 CPU 1511-1 PN as an example.
 - > PROFINET special shielded cable
 - > Motor drivers, stepper/servo motors and other equipment
 - > Switching power supply
 - > Module mounting rails and rail fixings
 - Device Profile
 Configuration file acquisition address:<u>https://www.solidotech.com/documents/configfile</u>
- Hardware configuration and wiring Please follow the<u>4 Installation and removal</u>""<u>5 Wiring</u>Request action

2. New Construction

a. Open the TIA Portal V17 software, click "Create New Project", and click the "Create" button after entering all the information, as shown in the figure below.



- Project name: Custom, you can keep the default.
- Path: The project path can be kept as default.
- Version: You can keep the default value.
- Author: You can keep the default value.
- Note: Customized, optional.

3、 Add a PLC controller

- C:\Users\29719\Documents\XB6S\XB6S Totally Integrated Auto 启动 新手上路 项目:"XB6S" 已成功打开。请选择下一步: 2.5 打开现有项目 设备与网络 创建新项目 * 移植项目 关闭项目 运动控制 & 技术 0 Q Q 组态设备 🦱 欢迎光临 ۲ 创建 PLC 程序 新手上路 组态 工艺对象 100 组态 HMI 画面 Ń 已安装的软件 帮助 🕥 用户界面语言 → 项目视图 打开项目视图 ▶ 项目视图 已打开的项目: C:\Users\29719\Documents\XB6S\XB6S
- a. Click "Configure Device", as shown in the following figure.

b. Click "Add New Device", select the PLC model currently used, and click "Add", as shown in the figure below. After adding, you can see that the PLC has been added to the device navigation tree.

				T	otally Integrated Automation PORT	AL
	添加新设备					
 显示所有设备 添加新设备 初本网络 	控制器	 ▼ SIMATIC 57-1500 ▼ CPU ▼ CPU ▼ CPU 1511-1 PN ■ 6E57 511-1 AK00-0A80 ■ 6E57 511-1 AK01-0A80 ■ GE57 511-1 AK02-0A80 ■ CPU 1511-C1 PN ■ CPU 1511-C1 PN ■ CPU 1511-C1 PN ■ CPU 1513-1 PN ■ CPU 1513-2 PN ■ CPU 1516-3 PNIDP ■ CPU 1516-3 PNIDP ■ CPU 1517-3 PNIDP 	▲ · · · · · · · · · · · · · · · · · · ·		CPU 1511-1 PN 6E57 511-1AK02-0AB0 V2.9	
君助阿爾	PC 系统	(iii) CPU 1518-4 PNIDP (iii) CPU 1518-4 PNIDP PODK (iii) CPU 1518-4 PNIDP NOP (iii) CPU 1518-1 PN (iii) CPU 1518-7 PN (iii) CPU 15157-2 PN (iii) CPU 15187-4 PNIDP (iii) CPU 15187-2 PN (iii) CPU 15157-2 PN (iii) CPU 15167-3 PNIDP (iiii) C	○糸材量中で、肌内内内>>	PU帯有最大 目 MB 表現 1 MB 表現 1 3 (1) 1 MB 表現 1 新 2 MB 方 1 MB 方 2 MB 7 MB 7 MB 7 MB 7 MB 7 MB 7 MB 7 MB 7	開:工作存储器可存储150 K8 代码 (近指告设行时间 60 nc : 43 KB μ 能:运动控制) 一闭开控制 计接写测 :运行系统进作: 每时间步模式 说 所有 FROFINET 接口: 传输协议 (用户安全通信: 57 通信 57 路日 61 服务器: DNS 客户端(OFC UA: 61 服务器) DNS 客户端(OFC UA: 61 服务器) DNS 客户端(OFC UA: 59 踢器 支持 KIRKI 性能升级 5. 双端口:智能设备:支持 MRP、 涉模式:固件版本 V2.9	
	☑ 打开设备视图				添加	~

4、 Scan for connected devices

a. Click "Online Access -> Update Accessible Devices" in the left navigation tree, as shown in the figure below. After the update is complete, the connected slave devices are displayed, as shown in the figure below.



The computer's IP address must be in the same network segment as the PLC. If not, change the computer's IP address and repeat the above steps.

 Double-click "Online and Diagnosis" under the slave device in the left navigation tree. In the "Function" menu, you can assign the IP address and device name of the current slave. Click "Assign IP Address", fill in "Subnet Mask" first, then fill in "IP Address", and click "Assign IP Address" at the bottom, as shown in the figure below.

	项目树 💷 🕯	(在线访问 + Realtek PCIe Gbl	E Family Controller + 6 [192.168.0.7] + 6 [192.168.0.7] [192.168.0.7] 💶 🖬 🗮 🗙
	设备		
	1 🖬 🔲 🖬	▼ 诊断	分配吧地址
		常规	22 HG ** 2021
面	▼ 🔄 XB6S	▼ 功能	
ίΠ.	📑 添加新设备	(小声) ののたいにすぶりき クネ	为该议备分配 IP 地址
	📥 设备和网络	方面, FROFINET 设置名称 信位为出口设置	▲ 连接到企业网络或直接连接到 internet 的设备必须采取合适的保护措施以防止未经推
	PLC_1 [CPU 1511-1 PN]	夏四小山)改五	例如通过使用防火墙或网络分段。
	> 🔜 未分组的设备		有大上並女王性的更多信息。 頂切凹 http://www.siemens.com/industrialsecurity
	▶ 100 安全设置		<u>ingenterinterinterinterinterinterinterinter</u>
	▶ 20 跨设备功能		
			MAC 地址: 8C -F3 -E7 -22 -93 -08 可访问设备
	▼ → 在线访问		
	▲ (1256)/1-5		• IP 地址: 192 . 168 . 0 . 7
	▶ COM [RS232/PPI 多主站编程由 総]	2	子网摘码: 255.255.0
	Realtek PCIe GbE Family Controller		
	♣? 更新可访问的设备		使用路田裔
	➡ 显示更多信息		路由器地址: 192.168.0.7
	▶ 🛅 plc_1.profinet 接口_1 [192.168.0.1]		
	▼ 🛅 6 [192.168.0.7]		为18K IP 383位
	9. 在线和诊断		
	Intel(R) Wi-Fi 6 AX201 160MHz		
	▶ 🛄 PC internal [本地] 🛛 🕅		
	• 🛄 USB [S7USB]		
	▶ U TeleService [自动协议识别]		
	▶ Ц雪 读卡器/USB 存储器		
		and the second se	

c. Click Assign PROFINET Device Name, enter the PROFINET Device Name, and click Assign Name, as shown in the following figure.

项	目(2) 編輯(E) 視園(2) 插入(1) 在线(2) 🔅 9 🕒 🔒 保存项目 📑 🔏 🗐 ն 🗙 🔊	法项心 工具の 窗口(20) 帮助(11) 1 ± (* ± 🗟 🛄 🔟 🛄 関 🕼 🚿 #) 至在线 🖉 转	至离线		 在项目 	中搜索>		Totally Integra
	项目树 🛛	▲ 在线访问 → Realtek PCle G	bE Family Con	itroller 🕨 6	5 [192.168.0.7]	6 [192.16	8.0.7] [192.168.0.7]		_ # = X
	设备								
쵠	₩	 → 诊断 常規 → 功能 	分配 PRC	DFINET 设备	名称				
	■ 添加新设备 品 设备和网络	分配 IP 地址 分配 PROFINET 设备名称 复位为出厂设置			组态的 PROF	FINET 设备	Lungs mineral		
					PROFINE	:1设备类型:	PNIO		
	 □ 宿言和538 ○ 振声控動接口 ○ 最 在线访问 ¥ 显示稳罐接口 ▶ □ COM [RS232]PPI 多主始編程电缆] 	Noș			设备过滤器 (仅显示	同一类型的设备	ř.		
	 Realtek PCIe GbE Family Controller 更新可访问的设备 只一面多位自 	ja j	-		□ 仅显示	滚到设置错误的没有名称的设备	919) 1		
	▶ □ plc_1.profinet 接口_1 [192.168.0.1]		1	网络中的可访	问节点:				
	 □ 6 [192.168.0.7] ● ① 在我和途街 ● ① Intel(8) Wi-Fi 6 AX201 160MHz ● ① P C internal [本地] ● ① USB [S7USB] 			IP 地址	MAC 地址	设备	PROFINET 设备名称	状态	
	 ▶ 1 TeleService (自动协议识别) ▶ 1 读卡器/USB 存储器 		(<			III · 秋氏 c	更新列表	→ 分配名称
			<						>

5. Adding a GSD Profile

a. In the menu bar, select "Options -> Manage General Station Description File (GSDML) (D)", as shown in the figure below.



 b. Click "Source Path" to select a folder and check whether the status of the GSD file to be added is "Not Installed". If it is not installed, click the "Install" button. If it is already installed, click "Cancel" to skip the installation step., as shown in the figure below.

管理通用站描述文件 已安装的 GSD 项目中的 GSD					×
源路径: D:\					
导入路径的内容					
☑ 文件	版本	语言	状态	信息	
GSDML-V2.43-sDot-XB6S-PN2002-20240731.xml	V2.43	英语,中文	尚未安装	XB6S-PN2002	
<	Ш				>
			除 [安装 取	消

6、 Adding a slave device

- a. Double-click "Devices & Networks" in the left navigation bar.
- b. Click the vertical button of "Hardware Catalog" on the right, and the catalog will be displayed as shown in the figure below.



- c. Select "Other field devices -> PROFINET IO -> I/O -> sDot -> Solidotech XB6S System -> XB6S -> XB6S-PN2002".
- d. Drag or double-click "XB6S-PN2002" to "Network View", as shown in the figure below.

目树	□	• 设备和网络				_ # = ×	硬件目录	7 1
设备				🛃 拓扑视图	📥 网络视图	₩ 设备视图	选项	
à	🔟 🖻 💦 Mi	E 🚼 连接 HMI连接	•	品 关系 🕎 🥫	∎ ⊞ 🔳 🔍	± 🖪 🗌		
						^	▼ 目录	_
XB6S	^				1			144
■ 添加新设置	PLC	-	PNIO	-		=	→ 讨速 配置文件 <全部>	-
前 设备和问语	CPU 1	511-1 PN	XB65-PN2002					1000 (
 PLC_1 [CPU 1511-1 PN] 			未分配				Controllers	
			11772 141				HM	
Q 在线和诊断					1		C systems	
▶ 软件单元							Drives & starters	
▶ 🔜 程序块	=						Network components	
▶ 🙀 工艺対象							Detecting & Monitoring	
▶ 📾 外部源文件							Distributed I/O	
▶ 浸 PLC 变量							Power supply and distribution	
▶ 📴 PLC 数据类型							Field devices	
▶ I 监控与强制表						1	 Other field devices 	
▶ 🙀 在线备份						- 3	Additional Ethernet devices	
🕨 🔀 Traces						13	 PROFINET IO 	
▶ 🔯 OPC UA 通信							Drives	
▶ 🐻 Web 应用程序							Encoders	
▶ III 设备代理数据							Gateway	
2 程序信息							▼ 10	
► PIC 监控和报整							BAYMRS	
■ PLC 招幣文本列表							> 📑 Sdot	
▶ □ 木地植块							▼ 🕅 sDot	
1 主公组的设备							 Solidotech XB6S System 	m
							▼ 1 × 865	
· · · · · · · · · · · · · · · · · · ·							XB65-PN2002	
							SIEMENS AG	
▶ ○ 八井敷垣								
						~	Sensors	
· [1] 又相成显	< III			> 100%		 ? 🗐 📃	PROFIBUS DP	
	~			0 届性 *	1 信負 🔍 🕴			
¥ 如 词 [2]								

e. Click "Unassigned (blue font)" on the coupler or slave device and select "PLC_1.PROFINET interface_1", as shown in the following figure.

网络 🎦 连接 🖽 连接	☐ 拓扑视图	📥 网络视图	■ 设备视图
网络 🔡 连接 田州连接 🔍 🖬 日 💷			Management of the local data and
	 ≤ 		
			^
LC_1 PU 1511-1 PN 2U 1511-1 PN 2D 2D 2D 2D 2D 2D 2D 2D 2D 2D 2D 2D 2D			=
			_
			~

f. After the connection is completed, it will look like the following figure.

XB6S > 设备和网络		_ 7	≡×
	🛃 拓扑视图 📠 网络视图	B 📑 设备视	8
▶ 网络 11 连接 HMI 连接	±	=	
	4 IO 系统: PLC_1.PROFINET I	O-System (100)	4
PLC_1 CPU 1511-1 PN PLC_1 PLC_1.PROFINET IO-Syste			
			网络数据
< m	> 100% •		~

g. Click the device name to rename the device, as shown in the following figure.

評 拓扑视图 品 网络视图 Ⅲ 设备 ■ 网络 11 12 13 11 10 10 10 54 10 10 54 10	§视 □ 0) [图 <	
■ 网络 13 连接 HMI连接 ■ 品关系 22 33 12 11 0. ± ■ IO 系统: PLC_1.PROFINET IO-System (10)	0)	^	
平 IO 系统: PLC_1.PROFINET IO-System (10	0)	^	
	-		
PLC_1 CPU 1511-1 PN PLC_1 PLC_1 PLC_1.PROFINET IO-Syste			网络数据
	-	~	

h. Click "Device View" to enter the device overview of the coupler. Under "Hardware Catalog" on the right, add modules in sequence according to the actual topology (the order must be consistent with the actual topology, otherwise communication will not be successful), as shown in the following figure.

项目(P) 編輯(E) 視問(Y) 插入(U) 在线(Q) 选项(M) 📑 🔁 🔒 保存项目 📑 🗶 🗐 🛅 🗙 🎝 🖢 (²¹ ±	工具(T) 窗口(W) 帮助(H) 	在线 🖉 转	至离线	k: IR I	× =		8条> 🖬	1	Tot	ally Integrated Automation PORTAL
项目树 □ ◀ X	XB6S ▶ 未分组的设备 ▶ XB6S-PN2002 [XB6S-PN2002]				■ ■ × 硬件目录 ■ □ ▶					
设备	🔓 拓扑视图 📠 网络视图			₩ 设备视图		选项				
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	设备概览									
	₩ 模块		₽ 插槽 I地址 O地址 类型 订货号		订货号	固件		▼ 目录		
× → XB65	 XB6S-PN2002 	0	0			XB65-PN2002	XB65-PN2002	V18.0.5	~	est est 👬
添加新设备	PN-IO	0	0 X1			PNIO				
(注)	XB6S-PT04A_1	0	1	047	055	XB6S-PT04A		1.0		
PLC_1 [CPU 1511-1 PN]		0	2						1	Head module
□1 设备组态		0	3							Module
☑ 在线和诊断		0	4							Analog Input
 · · ·		0	5						-	Analog Output
		0	6							Digital I/O
▶ ₩ 1艺対象		0	7							Digital input
▶ 圖 外部源文件		0	8							Digital Output
▶ 🛃 PLC 变量		0	9							Function I/O
▶ _ C PLC 数据类型		0	10							▼ Pulse I/O
监控与强制表	-	0	11						-	XB65-PC80
 • Q 在线备份 		0	12							XB6S-PL20
Traces		0	13							XB6S-PS20D
▶ 🀼 OPC UA 通信		0	14							XB6S-PT04A
▶ 👩 Web 应用程序		0	15							1
▶ 🔛 设备代理数据		0	16							-
22 程序信息		0	17							
GF PLC 监控和报警		0	18							
PLC 报警文本列表		0	19							
 		0	20							
▶ 🛅 分布式 I/O		0	21							
🕨 🔙 未分组的设备		0	22							
▶ 🚟 安全设置		0	23							
▶ 🔀 跨设备功能		0	24							
▶ 1 ▲ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○		0	25							
▶ 1 文档设置		0	- 0						-	
▶ 100 语言和资源		_	_	10	_	land and the land		/	-	1
▶ 🔂 師木控制接口 🔨						🧕 属性 🚺	「信息」として	诊断 🔰 🗖 🗖		
▶ 详细视图 常規 交叉引用 编译									> 信息	
◀ Portal 视图 🔠 总览 👗 XB65	5-PN2002 2 在线和诊断							1 扫描接口 R	lealt	ek PCIe GbE Family Con

7、 Assigning a Device Name

a. Switch to "Network View", right-click the connection line between the PLC and the coupler, and select "Assign Device Name", as shown in the figure below.

			🛃 拓扑视图	📥 网络视图	■ 设备视	图
■ 网络 11 连接 HMI 连接	- 品 关系	🕎 📲 🖿 🔲 🔍 t				
			平 IO 系统: PL	C_1.PROFINET IO-Sy	stem (100)	^
PLC_1 xb6s-pn2 CPU 1511-1 PN PLC_1 PLC_1	2002	1				=
PLC_1.PROFINI	■ X 剪切(1)	Ctrl+X				
	100 夏制(Y)	Ctrl+C				
	🛅 粘贴(P)	Ctrl+V				
	★ 删除(D)	Del				
	重命名(N)	F2				12
	分配给新的 DP	主站/10 控制器				
	编译	•				
	下载到设备(L)	•				
	💋 转至在线(N)	Ctrl+K				
	✓ 转至离线(F)	Ctrl+M				
	2 在线和诊断(D)	Ctrl+D				
	2 分配设备名称	7 10				
	Assign PROFIS	ate address				
	─────────────────────────────────────	的知识作为				
	B-D3	Columbia				
	亚小日來	Ctri+Snitt+C				
	🧕 属性	Alt+Enter				
1			100%			ž
			100%			
络中的可访问节	组态的 PROFINE i PROFINE i i 在线访问 PGIPC 撤 PGIPC 撤 PGIPC 撤 PGIPC 撤 Q 做 立 撤器 (位显示额 (位显示数)	VET 设备 设备名称: 设备名称: 口的类型: 口的类型: 」 二次型的设备 有名称的设备	pic_1.profinet 按口_1 CPU 1511-1 PN PN/IE Realtek PCIe GbE Famil	y Controller	• • • •	
------------------	--	--	--	--------------	-----------------	
路中的可访问于	PROFINETi i 在线访问 PGIPC撤 PGIPC撤 PGIPC撤 PGIPC撤 PGIPC撤 (公示称 (公示称 (公示称))	设备名称: 设备类型: 口的类型: 5/PC 接口: 一类型的设备 有名称的设备	plc_1.profinet 接口_1 CPU 1511-1 PN ♥PN/IE ₩ Realtek PCIe GbE Famil 的合	y Controller	• • • © Q	
路中的可访问于	i 在线访问 PGIPC接I PG 设备过滤器 ● 仅显示问 ● 仅显示题 ● 仅显示题	 ○ 首 (14) ○ 資 (14) ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○	CPU 1511-1 PN CPU 1511-1 PN PN/IE PN/IE PN/IE PN/IE	y Controller	•	
路中的可访问于	在线访问 PGIPC接I PG 设备过滤器 ● 仅显示题 ● 仅显示题 ● 仅显示题	口的类型: 5/PC 接口: 一类型的设备 教设置错误的 有名称的设备	L PN/IE ■ Realtek PCIe GbE Famil 前 近後音	y Controller	•	
缩中的可访问于	社 35 切 Pi PGIPC 接I PG ひ 备 过 滤器 ● 仅显示同 ● 仅显示影 ● 仅显示影	口的类型: 5/PC 接口: 一类型的设备 数设置错误的 有名称的设备	♥ PN/IE ■ Realtek PCIe GbE Famil う 後番	y Controller	•	
缩中的可访问于	PGC (1) PG ひ 御 过 滤 器 ● 仅显示同 ● 仅显示参 ● 仅显示参	口的关望。 5/PC接口: 一类型的设备 数设置错误的 有名称的设备	Profile From L	y Controller	•	
络中的可访问寺	设备过滤器 ☑ 仅显示同 □ 仅显示参 □ 仅显示炎	一类型的设备 数设置错误的 有名称的设备	ieux realer PCIE GUE Parini 的设备	y controller		
缩中的可访问计	设备过滤器 ● 仅显示同 ● 仅显示参 ● 仅显示参 ● 仅显示参	一类型的设备 数设置错误的 有名称的设备	i)设备			
3络中的可访问于	 仅显示同 ① 仅显示参 ① 仅显示没 	一类型的设备 数设置错误的 清名称的设备	讨论备			
猪中的可访问节	 ● 仅显示参照 ● 仅显示炎 	一类型的设置 微设置错误的 有名称的设备	, 9设备 5			
猪中的可访问节	□ 仅显示参	数设置错误的 有名称的设备]设备			
络中的可访问节	🗌 仅显示没	有名称的设备				
络中的可访问节						
2244436363631631	まち :					
> +#1+1+	MAC that	设备	PROFINET 设备名称	状态		
202E	HALE YOM	~ H	THOTAL AND	000		
(III			
				E新列表	分配名称	
<	[11	

c. Select PLC in the device name and click "Update List". After the update is complete, check whether the node status in "Accessible nodes in the network" is "Confirmed". If it is not confirmed, select the device and click "Assign Name", as shown in the figure below.

	组态的 PROFINI PROFINET设 设 在线访问 PGIPC接口 PGIPC接口 PGIPC接口	ET 设备 备名称: 备类型:	plc_1.profinet 接口_1 CPU 1511-1 PN		×
—	PROFINET设 设 在线访问 PG/PC接口 PG/PC接口	备名称: 备类型:	plc_1.profinet 接口_1 CPU 1511-1 PN		•
-	PROFINE I 读 设 在线访问 PG/PC接口 PG/PC接口	● 白小 - 备类型:	CPU 1511-1 PN		
	在线访问 PG/PC接口 PG/	的米刑。	Cronstraina		
	仕残访回 PG/PC接口 PG/	165 米 刑・			
	PG/C 112		D pulit		-
	FG		Prote Children Children	il. Controllor	
			Kar Realter FCIe GDE Fam	ily controller	
	设备过滤器				
	☑ 仅显示同-	-类型的设备			
	□ 仅显示参数	设置错误的	设备		
	□ 仅見示没有	有名称的设备			
网络中的	阿访问节点:	机泵	anorum il & Ath	415+	
P 地址 192.160	8.0.1 8C-F3-19-77-1C-A1	攻軍 S7-1500	plc 1.profinet 接口 1	√ 确定	
— 福斯 LED					
<			111		>
				更新列表	分配名称
在线状态信息:					
1 搜索完成。找到1个设备(共)	2个)。				
<					>
					(
					关闭
					关闭

d. Select Coupler for the device name, click Update List, and assign names using the same method after the update, as shown in the figure below.

分配 PROFINET 设备名利	ት•					×
-		组态的 PROFINI	ET 设备			
		PROFINET设	备名称:	xb6s-pn2002		-
		设	备类型:	XB65-PN2002		
		在线访问				
		PG/PC 接口	的类型:	PN/IE		-
		PGi	PC接口:	Realtek PCIe GbE Fan	nily Controller	• 🖲 🖸
		设备过滤器				
		☑ 仅显示同-	-类型的设行	2 H		
		□ 仅显示参数	设置错误的	的设备		
		口仅显示没有	1 全称的设备	\$		
			1.00101001			
	网络中的可访问	节点:	20.45		46-	
	192 168 0 2	MAC JUJE 8C-F3-F7-22-93-08	1反首 PNIO	PROFINET 设备名称 xh6s-on2002	√ 協定	
	192.100.0.2	001001220000		1003 pri2002	- HITLAE	
- 问版 LED						
	<			III		>
1					更新列表	分配名称
在线状态信息:						
 搜索完成。找到1 	个设备(共 2 个)	0				
 搜索完成。找到1 	个设备(共2个)	•				
<						
						关闭

e. Check whether the MAC address on the module silk screen is the same as the MAC address of the assigned device name. Click Close.

8. Downloading the configuration structure

- a. In the network view, select the PLC. First click the Compile button in the menu bar, then click the Download button to download the current configuration to the PLC.
- b. In the pop-up "Extended Download to Device" interface, configure as shown below.

展下载到设备			_				_
	组态访问节点属于	"PLC_1"					
	设备	设备类型	插槽	接口类型	地址	子网	
	PLC_1	CPU 1511-1 PN	1 X1	PN/IE	192.168.0.1	PN/IE	_1
		PG/PC 接口的	1类型:	PN/IE			•
		PG/PC	: 接口:	Realtek PCI	e GbE Family Controller		 • 🔊
		接口/子网络	()连接:	PN/IE 1	controller		
		第一·					
	选择目标设备:	20 dar sie and		ste wat	显示所有兼容的设备	ł	
	设备	设备类型	接口	突型 :	地址 注::::::::::::::::::::::::::::::::::::	目标设备	ì
1 问诉: LED							
王线状态信息:					🗌 仅显示错误消息	—	治搜索(<u>5</u>)

c. Click the Start Search button as shown in the following figure.

	组态访问节占属	∓ "PLC 1"					
	设备 PLC_1	设备类型 CPU 1511-1 PN	插槽 1 X1	接口类型 PN/IE	地址 192.168.0.1	子网 PN/IE_1	
-							
		PG/PC 接口的	英型:	PN/IE		-	1
		PG/PC	接口:	Realtek PCIe	GbE Family Controller	-	
		接口/子网的	涟接:	PN/IE_1			
		第一个	- 网关:) 🕐
	选择目标设备 ·	设备类型	接口续	논型 地	显示所有兼合的设备 的址	目标设备	
-	PLC_1	CPU 1511-1 PN	PN/IE	1	92.168.0.1	PLC_1	
	-	-	PN/IE	บั	与问地址	-	
ŧ							
1 闪烁 LED							
I 闪烁 LED						开始	搜索(5)
I 闪烁 LED 浅状态信息:					🗌 仅显示错误消息	开始	搜索(<u>s</u>)
現券 LED 現立与地址为1 扫描已完成。 拔引 扫描与信息检索已	192.168.0.1 的设备连排 到了 1 个与 3 可访问设 2完成。	ള∘ 备相兼容的设备∘			🗌 仅显示错误消息	开始	搜索(<u>S</u>)
1 7) 八烁 LED 見建立与地址为1 月描记完成。 找5 月描写信息检索日 正在检索设备信息	192.168.0.1 的设备连排 到了 1 个与 3 可访问设 完成。 是	ĝ。 資相兼容的设备。 			□ 仅显示描误消息	开始	搜索(S)

d. Click "Download" and the download preview window will pop up, as shown in the figure below.

下载預	览				>
8	下载前	检查			
状态	1	目标	消息	动作	
+0	9	▼ PLC_1	下载准备就绪。	加载"PLC_1"	^
	4	▼ 保护	保护系统,防止未授权的访问		
			连接到企业内缘或直接连接到internet的设备必须采取合适的保护 措施以防止未经授权的访问。例如通过使用防火措或网络分段。有 关工业安全性的更多信息。请访问 http://www.siemens.com/industrialsecurity		
	0	▶ 停止模块	模块因下载到设备而停止。	全部停止	
	0	▶ 设备组态	删除并替换目标中的系统数据	下载到设备	_
	0	▶ 软件	将软件下载到设备	一致性下载	_
	0	证书组态	保护机密 PLC 组态数据的密码已更改。系统将删除所有动		~
<			11		>
					刷新
			完成	装载	取消

- e. Click Mount.
- f. Click Finish.
- g. Power on the device again.

9. Communication connection

a. Click the "Start CPU" button in the menu bar, and then click the "Go Online" button. If the icons are all green, the connection is successful, as shown in the figure below.

项	目(2)编辑(2) 视图(2) 插入(1) 在线(2) 注 🕒 🔒 保存项目 📑 📈 💷 📬 🗙	选项(N) う ± (***	9) 工具口》窗口(22) 帮助(21) *** 🗟 🔃 🖸 🖳 🌌 转至在线 🖉 转至离线 🎎 🕞 📑 🗶 🖃 🛄 《在项目中搜索》	Tota
1	项目树		XB6S ▶ 设备和网络	_ # = X
	设备 団	•	『新小祝図』▲ 网络视图 『「「网络」 註 连接 HMI 连接 ▼ 品 关系 世 電 目 日 □ ◎ ↓ 』 Q 金 4 』 I Q 系统: PLC 1. PROFINET IQ-SX	₩ 设备视图
设备与网络	 ★ 2865 ★ 添加時设备 ▲ 设备和网络 ▲ UC_1 (CPU 1511-1 PN) ▼ 未分组的设备 ▼ ● 本が65-pn2002 [X865-PN2002] ■ 设备组态 ● 过春组态 ● 过春组态 		PLC_1 PLC_1 CPU 1511-1 PN PLC_1 PLC_1 PLC_1 PLC_1 PLC_1	=
				三 西 新 教 授
			< III > 100%	

10. Parameter settings

a. In offline state, open the "Network View", select the coupler module, switch to the device view, right-click the XB6S-PT04A module, and click the "Properties" button to view and set the module parameters, as shown in the figure below.

XB	6S) 未分组的设备)	xb6s-p	n2002	[XB6S-P	N2002]				_ 7	∎×
						5	7 拓扑视图	网络视图	₩ 设备视图	<u>8</u>
•	设备概览									
^	₩ 模块		机架	插槽	1地址	Q 地址	类型	订货号	固件	
	 xb6s-pn2002 		0	0			XB65-PN2002	XB65-PN2002	V18.0.5	^
	► PN-IO		0	0 X1			PNIO			
	XB6S-PT04A_1	更改	设备		7	055	XB6S-PT04A		1.0	
		启动	设备工具	ų						
		🗶 剪切	(T)	Ctr	rl+X					
		1 复制	(γ)	Ctr	rl+C					=
		1 粘贴	(P)	Ctr	rl+V					
		★ 删除	(D)		Del					
		重命	名(N)		F2					
		压缩	地址							
	<u>.</u>	解压	缩地址							
		编译	0		•					
		下载	到设备(1	_)	. •					
		💋 转至	在线(N)	Ctr	rl+K					
		愛 转至	离线(F)	Ctr	1+M					
		1113	和哆町(U いろ友知	2) Ctr	1+0					
		一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一一	并显示强	, 諸的操作教	śh					
		「山大豆	218		511					
			31/13 引用信息	Shift+I	F11					
			미쿡	Ctrlushi	e.c.					
		364		Cui+siin	1.+C					
		→ 守田	視 状标题	全余(L)…						
		2 属性		Alt+Er	nter					
Ě	2	- 转到	设备视图	9		11				~

b. On the property page, click "Module Parameters", as shown in the figure below. The parameters can be configured according to actual needs. After the configuration is completed, re-download the program to the PLC, and the PLC and the module need to be powered on again.

					_	
XB6S-PT04A_1 [XE	36S-PT04A]	<u>s</u>	性	3.信息 🔒 🗓 诊断		
常規 10 变量	量 系统常数 文本					
▼ 常规 目录信息	模块参数					- =
模块参数 1/0 地址	XB6S-PT04A 参数					
	脉冲输出模式:	方向脉冲			-	
	安全模式:	继续运行			-	
	刹车时间(ms):	200				
	运动合并配置:	单次合并模式			•	
	数字里输入通道功能配置:	0				
	回零超时:	0				
	通道0启动速度:	1				
	通道0回零模式:	模式 24			•	
	通道0回零速度:	1000				
	通道0回零接近速度:	500				
	通道0输入逻辑:	限位常开。原点刹车常开			-	
	通道0标度:	1				
	通道1启动速度:	1				
	通道1回零模式:	模式 24			-	
	通道1回零速度:	1000				
	通道1回零接近速度:	500				
	通道1输入逻辑:	限位常开.原点刹车常开			-	
	通道1标度:	1				
	通道2启动速度:	1				
	通道2回零模式:	模式 24			•	
						~

11, Functional Verification

a. Expand the project navigation on the left and select "Monitoring and Enforcement Table", double-click "Add New Monitoring Table", and the system will add a new monitoring table, as shown in the figure below.

项	泪(2)编辑(2) 视图(2) 插入(1) 在 🖥 🔁 🔒 保存项目 📑 🐰 🤨 🖻 💼	3銭(Q) 选项(N) × うま(~		(W) 帮助(H) 图 📮 🚿	转至在线 🖉 🕯	专至离线 🏭 🖪	. ×	•	Totally	Integrated Aut	omation PORTAL
	项目树		XB6S → PLC_	1 [CPU 1511	-1 PN] ▶ 监持	空与强制表 → 监打	空表_1				_ # = X
	设备										
				a B. 4. 4	<u>3</u> 434 00 00	,					
			= _ II			日子终于	收留信	修动值	3	计解释	
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	PLC_T[CPOISTI-TPN]										
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	- 扁本刀組的反面								A 44	100 34 000	
	• 至 安主攻血	~						9. 属性	1 信息	2 诊断	
	〉 详细视图		常提								

Den the "Device View" and check the channel I address (channel address of input signal) and Q address (channel address of output signal) of each module in the device overview.
 For example, the "I address" of the XB6S-PT04A module is 0 to 47, and the "Q address" is 0 to 55, as shown in the figure below.

65) 未	分组的设备 🕨 🗴	b6s-p	n2002	[XB6S-	PN2002]				- 6	n = X
							🛃 拓扑视图	📥 网络视图	🛛 👔 设备初	18
设备	既览									
1	莫块		机架	插槽	1地址	Q地址	类型	订货号	固件	
V •	xb6s-pn2002		0	0			XB65-PN2002	XB65-PN2002	V18.0.5	^
~	PN-IO		0	0 X1			PNIO			
	XB6S-PT04A_1		0	1	047	055	XB6S-PT04A		1.0	
			0	2						
			0	3						
			0	4						
			0	5						=
			0	6						
			0	7						
			0	8						
-			0	9						
-			0	10						
1			0	11						
-			0	12						

Fill in the input and output channel addresses in the address cells of the monitoring table, such as
 "IB0" to "IB47", "QB0" to "QB55", press the "Enter" key, and click button to monitor the data.

= = \times

d. The module's upstream data is shown in the monitoring table as shown below.

aa							
· · ·	(1/0~) 20 /1/0~	1 見示格式	监视值	修改值	4	注释	
	10.0	布尔型	FALSE	12PA IB	0	CHO Pulse Output Direction	
	%10.1	布尔型	FALSE			CHO Pulse Status Flag 1	
	%10,2	布尔型	FALSE			CHO Pulse Status Flag 2	
	%10.3	布尔型	FALSE			CHO Homing Mode Running	
	%10.4	布尔型	FALSE		Ä	CHO Position Mode Running	
	%10.5	布尔型	FALSE			CH0 Velocity Mode Running	
	%10.6	布尔型	FALSE		Ā	CH0 Homed	
	%10.7	布尔型	FALSE		ā	CHO Location Arrival	
	%11.0	布尔型	FALSE			CHO Velocity Arrival	
	%11.1	布尔型	FALSE			CHO Positive Limit Signal	
	%11.2	布尔型	FALSE			CH0 Negative Limit Signal	
	%11.3	布尔型	FALSE			CH0 Home Signal	
	%11.4	布尔型	FALSE			CHO Brake Signal	
	%12.0	布尔型	FALSE			CH1 Pulse Output Direction	
	%12.1	布尔型	FALSE			CH1 Pulse Status Flag 1	
1	%12.2	布尔型	FALSE			CH1 Pulse Status Flag 2	
	%12.3	布尔型	FALSE			CH1 Homing Mode Running	
1	%12.4	布尔型	FALSE			CH1 Position Mode Running	
	%12.5	布尔型	FALSE			CH1 Velocity Mode Running	
1	%12.6	布尔型	FALSE			CH1 Homed	
	%12.7	布尔型	FALSE			CH1 Location Arrival	
	%13.0	布尔型	FALSE			CH1 Velocity Arrival	
	%I3.1	布尔型	FALSE			CH1 Positive Limit Signal	
+	%13.2	布尔型	FALSE			CH1 Negative Limit Signal	
	%13.3	布尔型	FALSE			CH1 Home Signal	
	%13.4	布尔型	FALSE			CH1 Brake Signal	
	%14.0	布尔型	FALSE			CH2 Pulse Output Direction	
1	%14.1	布尔型	FALSE			CH2 Pulse Status Flag 1	
	%14.2	布尔型	FALSE			CH2 Pulse Status Flag 2	
1	%14.3	布尔型	FALSE			CH2 Homing Mode Running	

e. The module's downstream data is shown in the monitoring table as shown below. XB6S > PLC_1 [CPU 1511-1 PN] > 监控与强制表 > 监控表_1

学 学 🛝	: 📭 D	9 91 90 27						
i	名称	地址	显示格式	监视值	修改值	9	注释	
65		%Q0.0	布尔型	FALSE			CHO Running Direction	^
66		%Q0.1	布尔型	FALSE			CHO Absolute/Relative Position Mode	
67		%Q0.2	布尔型	FALSE			CH0 Position/Velocity Mode	
68		%Q0.3	布尔型	FALSE			CHO Reset Coordinates	
69		%Q0.4	布尔型	FALSE			CH0 Start	
70		%Q0.5	布尔型	FALSE			CHO Brake	
71		%Q0.6	布尔型	FALSE			CH0 Home	
72		%Q0.7	布尔型	FALSE			CH0 JOG	
73		%Q1.0	布尔型	FALSE			CH0 Clear State	
74		%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75		%Q2.0	布尔型	FALSE			CH1 Running Direction	
76		%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	- 11
77		%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78		%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
79		%Q2.4	布尔型	FALSE			CH1 Start	
80		%Q2.5	布尔型	FALSE			CH1 Brake	=
81		%Q2.6	布尔型	FALSE			CH1 Home	
82		%Q2.7	布尔型	FALSE			CH1 JOG	
83		%Q3.0	布尔型	FALSE			CH1 Clear State	
84		%Q3.1	布尔型	FALSE			CH1 Set Current Location	
85		%Q4.0	布尔型	FALSE			CH2 Running Direction	
86		%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
87		%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
88		%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
89		%Q4.4	布尔型	FALSE			CH2 Start	
90		%Q4.5	布尔型	FALSE			CH2 Brake	
91		%Q4.6	布尔型	FALSE			CH2 Home	
92		%Q4.7	布尔型	FALSE			CH2 JOG	
93		%Q5.0	布尔型	FALSE			CH2 Clear State	
94		%Q5.1	布尔型	FALSE			CH2 Set Current Location	~

Module Functionality Examples

- Channel 0 runs 50,000 pulses in the forward direction at a speed of 100,000 Hz
 - a. Configure the configuration parameters as shown in the following figure.

常規 10 登量 系统常数 文本 常規 日末信息 模块参数 国政信息 酸中輸出模式: 方向脉冲 度全模式: 继续运行 安全模式: 继续运行 送中輸出模式: 方向脉冲 支全模式: 继续运行 送中輸出模式: 方向脉冲 支全模式: 继续运行 送中輸出模式: 第4年时间(ms): 200 三 运动合并配置: 単次合并模式 数字壁輸入通道功能跟置: 0 通道向助速度: 1	
 常規 日景信徳 日景信徳 日景信徳 日景信徳 日景信徳 日 日月信徳 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日 日	
HF ** 10 地 10 地址	
第2年編出模式: 方向第2年 方会模式: 建续运行 初年时间(m2): 200 运动合并配置: 单次合并模式 数字重編入通道功能器: 0 直導加合效症度: 1	
安全観式: 建築治行 新年时间(m): 200 运动合井配置: 単次合井視式 数字星輸入通道功能器: 0 通道向前加速器: 0 通道向前加速器: 1	
 ※年前词(ms): 200 运动合并配置: 単次合并模式 数字里輸入通通功能配置: 0 回零超时: 0 通道の启动速度: 1 	
 运动合并配置:単次合并模式 数字里输入通通功能配置:0 回零超时:0 回零超时:1 通道の自动速度:1 	
数字里輸入通通功能配置: 0 回零超时: 0 通道の启动速度: 1	
回葉超时: 0 通道の启动速度: 1	
通道0启动速度: 1	
通道0回零模式: 模式 24	
· 通道·回零速度: 1000	
通道0回零接近速度: 500	
通道0输入逻辑: 限位常开.原点刹车常开	
通道0标度: 1	
通道1启动速度: 1	
通道1回零模式: 模式 24	-
通道1回零速度: 1000	
通道1回零接近速度: 500	
通道1输入逻辑: 限位常开. 原点刹车常开	
通道1标度: 1	
通道2启动速度: 1	
通道2回零模式: 模式 24	
通道2回零速度: 1000	

- b. Set channel 0 to relative position mode;
- c. Configure channel 0 to run with 50000 steps, 100000 Hz running speed, and 500 acceleration/deceleration time.
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1, as shown in the figure below.

*		91 18 17 St	זי 1					
i	名称	地址	显示格式	监视值	修改值	9	注释	
65		3 %Q0.0	布尔型	FALSE			CHO Running Direction	^
66		%Q0.1	布尔型	TRUE	TRUE		CH0 Absolute/Relative Position Mode	
67		%Q0.2	布尔型	FALSE			CH0 Position/Velocity Mode	
68		%Q0.3	布尔型	FALSE			CHO Reset Coordinates	
69		%Q0.4	布尔型	TRUE	TRUE		CH0 Start	
70		%Q0.5	布尔型	FALSE			CH0 Brake	
71		%Q0.6	布尔型	FALSE			CH0 Home	
72		%Q0.7	布尔型	FALSE			CH0 JOG	
73		%Q1.0	布尔型	FALSE			CHO Clear State	
74		%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75		%Q2.0	布尔型	FALSE			CH1 Running Direction	
76		%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77		%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78		%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
79		%Q2.4	布尔型	FALSE			CH1 Start	
80		%Q2.5	布尔型	FALSE			CH1 Brake	=
81		%Q2.6	布尔型	FALSE			CH1 Home	
82		%Q2.7	布尔型	FALSE			CH1 JOG	_
83		%Q3.0	布尔型	FALSE			CH1 Clear State	
84		%Q3.1	布尔型	FALSE			CH1 Set Current Location	
85		%Q4.0	布尔型	FALSE			CH2 Running Direction	
86		%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
87		%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
88		%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
89		%Q4.4	布尔型	FALSE			CH2 Start	
90		%Q4.5	布尔型	FALSE			CH2 Brake	
91		%Q4.6	布尔型	FALSE			CH2 Home	
92		%Q4.7	布尔型	FALSE			CH2 JOG	
93		%O5.0	布尔刑	FALSE			CH2 Clear State	~

XB6S ► P	LC_1 [CPU 15	11-1 PN] > 监控与强制	表 ▶ 监控表_1			- •	${\scriptstyle \blacksquare} \times$
🖈 👻 💰	1 19 10 9	1 2 2 00 00					
i	名称 地址	显示格式	监视值	修改值	9	注释	
91	1 %Q4	.6 布尔型	FALSE			CH2 Home	^
92	%Q4	.7 布尔型	FALSE			CH2 JOG	
93	%Q5	.0 布尔型	FALSE			CH2 Clear State	
94	%Q5	.1 布尔型	FALSE			CH2 Set Current Location	
95	%Q6	.0 布尔型	FALSE			CH3 Running Direction	
96	%Q6	.1 布尔型	FALSE			CH3 Absolute/Relative Position Mode	
97	%Q6	.2 布尔型	FALSE			CH3 Position/Velocity Mode	
98	%Q6	.3 布尔型	FALSE			CH3 Reset Coordinates	
99	%Q6	.4 布尔型	FALSE			CH3 Start	
100	%Q6	.5 布尔型	FALSE			CH3 Brake	
101	%Q6	.6 布尔型	FALSE			CH3 Home	
102	%Q6	.7 布尔型	FALSE			CH3 JOG	
103	%Q7	.0 布尔型	FALSE			CH3 Clear State	
104	%Q7	.1 布尔型	FALSE			CH3 Set Current Location	
105	%QV	V8 无符号十进制	500	500	M 🛃	CH0 Acceleration Time	
106	%QV	v10 无符号十进制	500	500	M 🛓	CH0 Deceleration Time	
107	%QD	012 无符号十进制	100000	100000	M 🚹	CH0 Running Velocity	
108	%QD	016 无符号十进制	50000	50000	M 🚹	CHO Running Position	
109	%QV	V20 无符号十进制	0			CH1 Acceleration Time	
110	%QV	V22 无符号十进制	0			CH1 Deceleration Time	
111	%QD	24 无符号十进制	0			CH1 Running Velocity	=
112	%QD	28 无符号十进制	0			CH1 Running Position	
113	%QV	V32 无符号十进制	0			CH2 Acceleration Time	
114	%QV	V34 无符号十进制	0			CH2 Deceleration Time	
115	%QD	36 无符号十进制	0			CH2 Running Velocity	
116	%QD	040 无符号十进制	0			CH2 Running Position	
117	%QV	V44 无符号十进制	0			CH3 Acceleration Time	
118	%QV	V46 无符号十进制	0			CH3 Deceleration Time	
119	%QD	248 无符号十进制	0			CH3 Running Velocity	
120	%QD	52 无符号十进制	0			CH3 Running Position	~
<			III				>

f. After the movement is completed, you can see that the channel 0 position has been set to 1, as shown in the figure below.

65 PLC_	1 [CPU 1511-1 P	N] M 温控·	与强制表 / <u>温</u> 控	表_1				
🥐 🦛 🛙	1 1. 1. 1.							
i 名	称 :	地址	显示格式	监视值	修改值	9	注释	
		%10.0	布尔型	FALSE			CH0 Pulse Output Direction	
		%10.1	布尔型	FALSE			CHO Pulse Status Flag 1	
		%10.2	布尔型	FALSE			CHO Pulse Status Flag 2	
		%10.3	布尔型	FALSE			CH0 Homing Mode Running	
	1	%10.4	布尔型	FALSE			CHO Position Mode Running	
		%10.5	布尔型	FALSE			CH0 Velocity Mode Running	
	1	%10.6	布尔型	FALSE			CH0 Homed	
		%10.7	布尔型	TRUE			CHO Location Arrival	
		%11.0	布尔型	FALSE			CH0 Velocity Arrival	
		%11.1	布尔型	FALSE			CHO Positive Limit Signal	
	,	%11.2	布尔型	FALSE			CHO Negative Limit Signal	
	,	%11.3	布尔型	FALSE			CH0 Home Signal	
	,	%11.4	布尔型	FALSE			CHO Brake Signal	
		%12.0	布尔型	FALSE			CH1 Pulse Output Direction	
		%12.1	布尔型	FALSE			CH1 Pulse Status Flag 1	
	,	%12.2	布尔型	FALSE			CH1 Pulse Status Flag 2	
	1	%12.3	布尔型	FALSE			CH1 Homing Mode Running	
		%12.4	布尔型	FALSE			CH1 Position Mode Running	
		%12.5	布尔型	FALSE			CH1 Velocity Mode Running	
	,	%12.6	布尔型	FALSE			CH1 Homed	
		%12.7	布尔型	FALSE			CH1 Location Arrival	
	1	%13.0	布尔型	FALSE			CH1 Velocity Arrival	
	,	%13.1	布尔型	FALSE			CH1 Positive Limit Signal	
	,	%13.2	布尔型	FALSE			CH1 Negative Limit Signal	
		%13.3	布尔型	FALSE			CH1 Home Signal	
		%13.4	布尔型	FALSE			CH1 Brake Signal	
		%14.0	布尔型	FALSE			CH2 Pulse Output Direction	
		%14.1	布尔型	FALSE			CH2 Pulse Status Flag 1	
		%14.2	布尔型	FALSE			CH2 Pulse Status Flag 2	

g. You can also see that the current coordinate of channel 0 is 50000, as shown in the figure below.

e e 18	. lø lo 91 %	5 27 PP PP						
i	名称	地址	显示格式	监视值	修改值	9	注释	
6		%15.1	布尔型	FALSE			CH2 Positive Limit Signal	1
7		%15.2	布尔型	FALSE			CH2 Negative Limit Signal	
8		%15.3	布尔型	FALSE			CH2 Home Signal	
9		%15.4	布尔型	FALSE			CH2 Brake Signal	
0		%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
1		%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
2		%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
3		%16.3	布尔型	FALSE			CH3 Homing Mode Running	
4		%16.4	布尔型	FALSE			CH3 Position Mode Running	
5		%16.5	布尔型	FALSE			CH3 Velocity Mode Running	=
6		%16.6	布尔型	FALSE			CH3 Homed	
7		%16.7	布尔型	FALSE			CH3 Location Arrival	
8		%17.0	布尔型	FALSE			CH3 Velocity Arrival	
9		%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
0		%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
1		%17.3	布尔型	FALSE			CH3 Home Signal	
2		%17.4	布尔型	FALSE			CH3 Brake Signal	
3		%IW8	十六进制	16#0000			CH0 Error Code	
4		%IW10	十六进制	16#0601			CH1 Error Code	
5		%IW12	十六进制	16#0601			CH2 Error Code	
6		%IW14	十六进制	16#0601			CH3 Error Code	
7		%ID16	带符号十进制	50000			CH1 Current Location	
8		%ID20	带符号十进制	0			CH1 Current Velocity	
9		%ID24	带符号十进制	0			CH2 Current Location	
0		%ID28	带符号十进制	0			CH2 Current Velocity	
1		%ID32	带符号十进制	0			CH3 Current Location	
2		%ID36	带符号十进制	0			CH3 Current Velocity	
3		%ID40	带符号十进制	0			CH4 Current Location	
4		%ID44	带符号十进制	0			CH4 Current Velocity	~

- Channel 0 is currently at 1000, moves to -20000, and runs at a speed of 100000 Hz
 - a. Configure the configuration parameters as shown in the following figure.

XB6S-PT04A_1 [X	B6S-PT04A]	◎ 属性 🛛 信息 🛛	诊断 🛛 🗆 🗸
常規 10 变	量 系统常数 文本		
▼ 常规 日录信自	模块参数		A
模块参数 1/0 地址	XB6S-PT04A 参数		
	脉冲输出模式:	方向脉冲	
	安全模式:	继续运行	
	刹车时间(ms):	200	
	运动合并配置:	单次合并模式	•
	数字里输入通道功能配置:	0	
	回零超时:	0	
	通道0启动速度:	1	
	通道0回零模式:	模式 24	•
	· 通道O回零速度:	1000	
	通道0回零接近速度:	500	
	通道0输入逻辑:	限位常开。原点刹车常开	•
	通道0标度:	1	
	通道1启动速度:	1	
	通道1回零模式:	模式 24	
	通道1回零速度:	1000	
	通道1回零接近速度:	500	
	通道1输入逻辑:	限位常开.原点刹车常开	
	通道1标度:	1	
	通道2启动速度:	1	
	通道2回零模式:	模式 24	
	通道2回零速度:	1000	~

b. The current position of channel 0 is 1000, as shown in the figure below.

1 1 A	1 1 9 1 9							
i	名称	地址	显示格式	监视值	修改值	9	注释	
36		%15.1	布尔型	FALSE			CH2 Positive Limit Signal	^
37		%15.2	布尔型	FALSE			CH2 Negative Limit Signal	
38		%15.3	布尔型	FALSE			CH2 Home Signal	
39		%15.4	布尔型	FALSE			CH2 Brake Signal	
40		%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
¥1		%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42		%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
43		%16.3	布尔型	FALSE			CH3 Homing Mode Running	
14		%16.4	布尔型	FALSE			CH3 Position Mode Running	
15		%16.5	布尔型	FALSE			CH3 Velocity Mode Running	=
16		%16.6	布尔型	FALSE			CH3 Homed	
47		%16.7	布尔型	FALSE			CH3 Location Arrival	
48		%17.0	布尔型	FALSE			CH3 Velocity Arrival	
19		%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50		%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51		%17.3	布尔型	FALSE			CH3 Home Signal	
52		%17.4	布尔型	FALSE			CH3 Brake Signal	
53		%IW8	十六进制	16#0000			CH0 Error Code	
54		%IW10	十六进制	16#0601			CH1 Error Code	
55		%IW12	十六进制	16#0601			CH2 Error Code	
56		%IW14	十六进制	16#0601			CH3 Error Code	
57		%ID16	带符号十进制	1000			CH1 Current Location	
58		%ID20	带符号十进制	0			CH1 Current Velocity	
59		%ID24	带符号十进制	0			CH2 Current Location	
50		%ID28	带符号十进制	0			CH2 Current Velocity	
51		%ID32	带符号十进制	0			CH3 Current Location	
52		%ID36	带符号十进制	0			CH3 Current Velocity	
53		%ID40	带符号十进制	0			CH4 Current Location	
54		%ID44	带符号十进制	0			CH4 Current Velocity	~

- c. Set channel 0 to absolute position mode;
- d. Configure channel 0 to run at -20000 steps, 100000 Hz speed, and 500 acceleration and deceleration times;
- e. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- f. Set the start command of channel 0 from 0 to 1, as shown in the figure below.

			_1 [CPU 1511	1 PN] > 监控	与强制表 ▶ 监控				_ • •	iX
1	*	u#	19 1. 9. 9							
	i		名称	地址	显示格式	监视值	修改值	9	注释	
65				%Q0.0	布尔型	FALSE			CH0 Running Direction	^
66				%Q0.1	布尔型	FALSE	FALSE		CHO Absolute/Relative Position Mode	
57				%Q0.2	布尔型	FALSE			CH0 Position/Velocity Mode	
58				%Q0.3	布尔型	FALSE			CHO Reset Coordinates	
59				%Q0.4	布尔型	TRUE	TRUE	Image: A state of the state	CH0 Start	
70				%Q0.5	布尔型	FALSE			CHO Brake	
71				%Q0.6	布尔型	FALSE			CH0 Home	
12				%Q0.7	布尔型	FALSE			CH0 JOG	
73				%Q1.0	布尔型	FALSE			CH0 Clear State	
74				%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75				%Q2.0	布尔型	FALSE			CH1 Running Direction	
76				%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77				%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78				%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
79				%Q2.4	布尔型	FALSE			CH1 Start	_
30				%Q2.5	布尔型	FALSE			CH1 Brake	-
31				%Q2.6	布尔型	FALSE			CH1 Home	
32				%Q2.7	布尔型	FALSE			CH1 JOG	-
33				%Q3.0	布尔型	FALSE			CH1 Clear State	
34				%Q3.1	布尔型	FALSE			CH1 Set Current Location	
35				%Q4.0	布尔型	FALSE			CH2 Running Direction	
36				%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
37				%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
38				%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
39				%Q4.4	布尔型	FALSE			CH2 Start	
90				%Q4.5	布尔型	FALSE			CH2 Brake	
91				%Q4.6	布尔型	FALSE			CH2 Home	
92				%Q4.7	布尔型	FALSE			CH2 JOG	
93				%Q5.0	布尔型	FALSE			CH2 Clear State	~
	<					IIII			2	>

XB6 S	5 € PL	.C_1 [CPU 151	11-1 PN] → 监控	与强制表 🕨 监控表	L1			_ 0 1	×
1	ė 👘	1 Lo 91	% ₽ °° °1						
	i	名称	地址	显示格式	监视值	修改值	9	注释	
92			%Q4.7	布尔型	FALSE			CH2 JOG	^
93			%Q5.0	布尔型	FALSE			CH2 Clear State	
94			%Q5.1	布尔型	FALSE			CH2 Set Current Location	
95			%Q6.0	布尔型	FALSE			CH3 Running Direction	
96			%Q6.1	布尔型	FALSE			CH3 Absolute/Relative Position Mode	
97			%Q6.2	布尔型	FALSE			CH3 Position/Velocity Mode	
98			%Q6.3	布尔型	FALSE			CH3 Reset Coordinates	
99			%Q6.4	布尔型	FALSE			CH3 Start	
100			%Q6.5	布尔型	FALSE			CH3 Brake	
101			%Q6.6	布尔型	FALSE			CH3 Home	
102			%Q6.7	布尔型	FALSE			CH3 JOG	
103			%Q7.0	布尔型	FALSE			CH3 Clear State	
104			%Q7.1	布尔型	FALSE			CH3 Set Current Location	
105			%QW8	无符号十进制	500	500	M 1	CHO Acceleration Time	
106			%QW10	无符号十进制	500	500	M 4	CHO Deceleration Time	
107			%QD12	无符号十进制	100000	100000	M 1	CHO Running Velocity	
108			%QD16	带符号十进制	-20000	-20000	M 4	CHO Running Position	
109			%QW20	无符号十进制	0			CH1 Acceleration Time	
110			%QW22	无符号十进制	0			CH1 Deceleration Time	
111			%QD24	无符号十进制	0			CH1 Running Velocity	-
112			%QD28	无符号十进制	0			CH1 Running Position	
113			%QW32	无符号十进制	0			CH2 Acceleration Time	
114			%QW34	无符号十进制	0			CH2 Deceleration Time	
115			%QD36	无符号十进制	0			CH2 Running Velocity	
116			%QD40	无符号十进制	0			CH2 Running Position	
117			%QW44	无符号十进制	0			CH3 Acceleration Time	
118			%QW46	无符号十进制	0			CH3 Deceleration Time	
119			%QD48	无符号十进制	0			CH3 Running Velocity	
120			%QD52	无符号十进制	0			CH3 Running Position	~
	<				Ш				>

g. After the movement is completed, you can see that the channel 0 position has been set to 1, as shown in the figure below.

n 🔮 🤌 🕼	o 🕫 % 🕫 🖤 🖤						
1 名称	地址	显示格式	监视值	修改值	9	注释	
	%10.0	布尔型	TRUE			CH0 Pulse Output Direction	^
2	%IO.1	布尔型	FALSE			CHO Pulse Status Flag 1	
3	%10.2	布尔型	FALSE			CHO Pulse Status Flag 2	
1	%10.3	布尔型	FALSE			CH0 Homing Mode Running	=
5	%10.4	布尔型	FALSE			CHO Position Mode Running	
5	%10.5	布尔型	FALSE			CH0 Velocity Mode Running	
7	%10.6	布尔型	FALSE			CH0 Homed	
3	%10.7	布尔型	TRUE			CHO Location Arrival	
9	%11.0	布尔型	FALSE			CHO Velocity Arrival	
10	%11.1	布尔型	FALSE			CHO Positive Limit Signal	
1	%11.2	布尔型	FALSE			CHO Negative Limit Signal	
12	%11.3	布尔型	FALSE			CH0 Home Signal	
13	%11.4	布尔型	FALSE			CHO Brake Signal	
14	%12.0	布尔型	FALSE			CH1 Pulse Output Direction	
15	%12.1	布尔型	FALSE			CH1 Pulse Status Flag 1	
16	%12.2	布尔型	FALSE			CH1 Pulse Status Flag 2	
17	%12.3	布尔型	FALSE			CH1 Homing Mode Running	
18	%12.4	布尔型	FALSE			CH1 Position Mode Running	
19	%12.5	布尔型	FALSE			CH1 Velocity Mode Running	
20	%12.6	布尔型	FALSE			CH1 Homed	
21	%12.7	布尔型	FALSE			CH1 Location Arrival	
22	%13.0	布尔型	FALSE			CH1 Velocity Arrival	
23	%13.1	布尔型	FALSE			CH1 Positive Limit Signal	
24	%13.2	布尔型	FALSE			CH1 Negative Limit Signal	
25	%13.3	布尔型	FALSE			CH1 Home Signal	
26	%13.4	布尔型	FALSE			CH1 Brake Signal	
27	%14.0	布尔型	FALSE			CH2 Pulse Output Direction	
28	%14.1	布尔型	FALSE			CH2 Pulse Status Flag 1	
29	%14.2	布尔型	FALSE			CH2 Pulse Status Flag 2	~

h. You can also see that the current coordinate of channel 0 is -20000, as shown in the figure below.

XB6	S ▶ PL	.C_1 [CPU 1511	-1 PN] → 监控	与强制表 🕨 监控表	L1			-	• • ×
3		1 la 9, 1							
	1	名称	地址	显示格式	监视值	修改值	9	注释	
36			%15.1	布尔型	FALSE			CH2 Positive Limit Signal	^
37			%15.2	布尔型	FALSE			CH2 Negative Limit Signal	
38			%15.3	布尔型	FALSE			CH2 Home Signal	
39			%15.4	布尔型	FALSE			CH2 Brake Signal	
40			%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
41			%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42			%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
43			%16.3	布尔型	FALSE			CH3 Homing Mode Running	
44			%16.4	布尔型	FALSE			CH3 Position Mode Running	
45			%16.5	布尔型	FALSE			CH3 Velocity Mode Running	=
46			%16.6	布尔型	FALSE			CH3 Homed	
47			%16.7	布尔型	FALSE			CH3 Location Arrival	
48			%17.0	布尔型	FALSE			CH3 Velocity Arrival	
49			%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50			%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51			%17.3	布尔型	FALSE			CH3 Home Signal	
52			%17.4	布尔型	FALSE			CH3 Brake Signal	
53			%IW8	十六进制	16#0000			CH0 Error Code	
54			%IW10	十六进制	16#0601			CH1 Error Code	
55			%IW12	十六进制	16#0601			CH2 Error Code	
56			%IW14	十六进制	16#0601			CH3 Error Code	
57			%ID16	带符号十进制	-20000			CH1 Current Location	
58			%ID20	带符号十进制	0			CH1 Current Velocity	
59			%ID24	带符号十进制	0			CH2 Current Location	
60			%ID28	带符号十进制	0			CH2 Current Velocity	
61			%ID32	带符号十进制	0			CH3 Current Location	
62			%ID36	带符号十进制	0			CH3 Current Velocity	
63			%ID40	带符号十进制	0			CH4 Current Location	
64			%ID44	带符号十进制	0			CH4 Current Velocity	~
	<				IXII				>

Channel 0 turns on speed mode, running speed 100000Hz

a. Configure the configuration parameters as shown in the following figure.

XB6S-PT04A_1 [XE	36S-PT04A]	· 属性 因 信息 见 诊断	18-
常規 10 变量	量 系统常数 文本		
▼ 常规 日录信自	模块参数		^
模块参数 1/0 地址	XB6S-PT04A 参数		
	脉冲输出模式:	方向脉冲	
	安全模式:	继续运行	
	刹车时间(ms):	200	
	运动合并配置:	单次合并模式	•
	数字里输入通道功能配置:	0	
	回零超时	0	
	通道0启动速度:	1	
	通道0回零模式:	模式 24	•
	通道0回零速度:	1000	
	通道0回零接近速度:	500	
	通道0输入逻辑:	限位常开。原点刹车常开	•
	通道0标度:	1	
	通道1启动速度:	1	
	通道1回零模式:	模式 24	
	通道1回零速度:	1000	
	通道1回零接近速度:	500	
	通道1输入逻辑:	限位常开。原点刹车常开	
	通道1标度:	1	
	通道2启动速度:	1	
	通道2回零模式:	模式 24	•
	通道2回零速度:	1000	~

- b. Set channel 0 to speed mode;
- c. Configure channel 0 to run at a speed of 100000 Hz and move in a forward direction of 0;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

	PLC_1 [CPU 1511-1	PN] → 监控	与强制表 > 监控	表_1			_ # i	∃×
	• 🖌 h. 9. %	2 00 00						
1	名称	地址	显示格式	监视值	修改值	9	注释	
65		%Q0.0	布尔型	FALSE			CH0 Running Direction	~
66		%Q0.1	布尔型	FALSE			CH0 Absolute/Relative Position Mode	
67		%Q0.2	布尔型	TRUE	TRUE		CH0 Position/Velocity Mode	
68		%Q0.3	布尔型	FALSE			CH0 Reset Coordinates	
69		%Q0.4	布尔型	TRUE	TRUE		CH0 Start	
70		%Q0.5	布尔型	FALSE			CH0 Brake	
71		%Q0.6	布尔型	FALSE			CH0 Home	
72		%Q0.7	布尔型	FALSE			CH0 JOG	
73		%Q1.0	布尔型	FALSE			CH0 Clear State	
74		%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75		%Q2.0	布尔型	FALSE			CH1 Running Direction	
76		%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77		%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78		%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
79		%Q2.4	布尔型	FALSE			CH1 Start	
80		%Q2.5	布尔型	FALSE			CH1 Brake	=
B1		%Q2.6	布尔型	FALSE			CH1 Home	
82		%Q2.7	布尔型	FALSE			CH1 JOG	
83		%Q3.0	布尔型	FALSE			CH1 Clear State	
84		%Q3.1	布尔型	FALSE			CH1 Set Current Location	
85		%Q4.0	布尔型	FALSE			CH2 Running Direction	
86		%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
87		%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
38		%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
39		%Q4.4	布尔型	FALSE			CH2 Start	
90		%Q4.5	布尔型	FALSE			CH2 Brake	
91		%Q4.6	布尔型	FALSE			CH2 Home	
92		%Q4.7	布尔型	FALSE			CH2 JOG	
93		%Q5.0	布尔型	FALSE			CH2 Clear State	~

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i	名称	地址	显示格式	监视值	修改值	9	注释	
92		%Q4.7	布尔型	FALSE			CH2 JOG	1
93		%Q5.0	布尔型	FALSE			CH2 Clear State	
94		%Q5.1	布尔型	FALSE			CH2 Set Current Location	
95		%Q6.0	布尔型	FALSE			CH3 Running Direction	
96		%Q6.1	布尔型	FALSE			CH3 Absolute/Relative Position Mode	
97		%Q6.2	布尔型	FALSE			CH3 Position/Velocity Mode	
98		%Q6.3	布尔型	FALSE			CH3 Reset Coordinates	
99		%Q6.4	布尔型	FALSE			CH3 Start	
100		%Q6.5	布尔型	FALSE			CH3 Brake	
101		%Q6.6	布尔型	FALSE			CH3 Home	
102		%Q6.7	布尔型	FALSE			CH3 JOG	
103		%Q7.0	布尔型	FALSE			CH3 Clear State	
104		%Q7.1	布尔型	FALSE			CH3 Set Current Location	
105		%QW8	无符号十进制	500	500	M 4	CH0 Acceleration Time	
106		%QW10	无符号十进制	500	500	M 4	CH0 Deceleration Time	
107		%QD12	无符号十进制	100000	100000	M 4	CHO Running Velocity	
108		%QD16	带符号十进制	0			CHO Running Position	
109		%QW20	无符号十进制	0			CH1 Acceleration Time	
110		%QW22	无符号十进制	0			CH1 Deceleration Time	
111		%QD24	无符号十进制	0			CH1 Running Velocity	
112		%QD28	无符号十进制	0			CH1 Running Position	
113		%QW32	无符号十进制	0			CH2 Acceleration Time	
114		%QW34	无符号十进制	0			CH2 Deceleration Time	
115		%QD36	无符号十进制	0			CH2 Running Velocity	
116		%QD40	无符号十进制	0			CH2 Running Position	
117		%QW44	无符号十进制	0			CH3 Acceleration Time	
118		%QW46	无符号十进制	0			CH3 Deceleration Time	
119		%QD48	无符号十进制	0			CH3 Running Velocity	
120		%QD52	无符号十进制	0			CH3 Running Position	Y

f. During the motion, you can see that the channel 0 speed arrival is set to 1, as shown in the figure below.

KB6S → PLC_1 [CP	U 1511-1 PN] → <u>监</u> 招	5 当 単 「 「 」 「 」 「 」 「 」 「 」 「 」 「 」 」 「 」 」 「 」 」 「 」 」 「 」 」 「 」 」 」 「 」 」 」 「 」 」 」 」 」 … 」 …					
🔹 🔮 🖉 🕼	1 % 2 00 1						
i 名称	地址	显示格式	监视值	修改值	9	注释	
	%10.0	布尔型	FALSE			CHO Pulse Output Direction	^
	%I0.1	布尔型	TRUE			CHO Pulse Status Flag 1	
1	%10.2	布尔型	TRUE			CHO Pulse Status Flag 2	
F.	%10.3	布尔型	FALSE			CH0 Homing Mode Running	=
	%10.4	布尔型	FALSE			CHO Position Mode Running	
5	%10.5	布尔型	TRUE			CHO Velocity Mode Running	
	%10.6	布尔型	FALSE			CH0 Homed	
1	%10.7	布尔型	FALSE			CHO Location Arrival	
)	%I1.0	布尔型	TRUE			CHO Velocity Arrival	
0	%11.1	布尔型	FALSE			CHO Positive Limit Signal	
1	%11.2	布尔型	FALSE			CHO Negative Limit Signal	
2	%11.3	布尔型	FALSE			CHO Home Signal	
3	%11.4	布尔型	FALSE			CHO Brake Signal	
4	%12.0	布尔型	FALSE			CH1 Pulse Output Direction	
5	%12.1	布尔型	FALSE			CH1 Pulse Status Flag 1	
6	%12.2	布尔型	FALSE			CH1 Pulse Status Flag 2	
7	%12.3	布尔型	FALSE			CH1 Homing Mode Running	
8	%12.4	布尔型	FALSE			CH1 Position Mode Running	
9	%12.5	布尔型	FALSE			CH1 Velocity Mode Running	
:0	%12.6	布尔型	FALSE			CH1 Homed	
21	%12.7	布尔型	FALSE			CH1 Location Arrival	
2	%13.0	布尔型	FALSE			CH1 Velocity Arrival	
3	%I3.1	布尔型	FALSE			CH1 Positive Limit Signal	
24	%13.2	布尔型	FALSE			CH1 Negative Limit Signal	
.5	%13.3	布尔型	FALSE			CH1 Home Signal	
16	%13.4	布尔型	FALSE			CH1 Brake Signal	
27	%14.0	布尔型	FALSE			CH2 Pulse Output Direction	
.8	%14.1	布尔型	FALSE			CH2 Pulse Status Flag 1	
19	%14.2	布尔型	FALSE			CH2 Pulse Status Flag 2	~

g. During the movement, the actual running speed can also be 100000Hz, as shown in the figure below.

		.C_1 [CPU 1511-1	PN] ▶ 监控	与强制表 > 监控表					_ 🖬 🖬 🗙
3	2 J	19 6 9, %	2 00 00						
	i	名称	地址	显示格式	监视值	修改值	9	注释	
35			%15.0	布尔型	FALSE			CH2 Velocity Arrival	^
36			%15.1	布尔型	FALSE			CH2 Positive Limit Signal	
37			%15.2	布尔型	FALSE			CH2 Negative Limit Signal	
38			%15.3	布尔型	FALSE			CH2 Home Signal	
39			%15.4	布尔型	FALSE			CH2 Brake Signal	
40			%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
41			%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42			%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
43			%16.3	布尔型	FALSE			CH3 Homing Mode Running	
44			%16.4	布尔型	FALSE			CH3 Position Mode Running	=
45			%16.5	布尔型	FALSE			CH3 Velocity Mode Running	
46			%16.6	布尔型	FALSE			CH3 Homed	
47			%16.7	布尔型	FALSE			CH3 Location Arrival	
48			%17.0	布尔型	FALSE			CH3 Velocity Arrival	
49			%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50			%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51			%17.3	布尔型	FALSE			CH3 Home Signal	
52			%17.4	布尔型	FALSE			CH3 Brake Signal	
53			%IW8	十六进制	16#0000			CH0 Error Code	
54			%IW10	十六进制	16#0601			CH1 Error Code	
55			%IW12	十六进制	16#0601			CH2 Error Code	
56			%IW14	十六进制	16#0601			CH3 Error Code	
57			%ID16	带符号十进制	8800418			CH1 Current Location	
58			%ID20	带符号十进制	100000			CH1 Current Velocity	
59			%ID24	带符号十进制	0			CH2 Current Location	
60			%ID28	带符号十进制	0			CH2 Current Velocity	
61			%ID32	带符号十进制	0			CH3 Current Location	
62			%ID36	带符号十进制	0			CH3 Current Velocity	
63			%ID40	带符号十进制	0			CH4 Current Location	~
	<				III				>

h. Entering a brake command or triggering a positive limit signal can stop the movement, as shown in the figure below.

XB6S ► PL	C_1 [CPU 1511-1 PN]	▶ 监控与强制表 ▶ 监控:	表_1				_ # = ×
e e	1 10 9 18 27	00 00					
i	名称 地址	显示格式	监视值	修改值	9	注释	
35	%15.0	0 布尔型	FALSE			CH2 Velocity Arrival	~
36	%15.	布尔型	FALSE			CH2 Positive Limit Signal	
37	%15.3	2 布尔型	FALSE			CH2 Negative Limit Signal	
38	%15.3	布尔型	FALSE			CH2 Home Signal	
39	%15.4	4 布尔型	FALSE			CH2 Brake Signal	
40	%16.0) 布尔型	FALSE			CH3 Pulse Output Direction	
41	%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42	%16.3	2 布尔型	FALSE			CH3 Pulse Status Flag 2	
43	%16.	高 布尔型	FALSE			CH3 Homing Mode Running	
44	%16.4	4 布尔型	FALSE			CH3 Position Mode Running	=
45	%16.5	5 布尔型	FALSE			CH3 Velocity Mode Running	
46	%16.	5 布尔型	FALSE			CH3 Homed	
47	%16.7	7 布尔型	FALSE			CH3 Location Arrival	
48	%17.0	布尔型	FALSE			CH3 Velocity Arrival	
19	%17.	布尔型	FALSE			CH3 Positive Limit Signal	
50	%17.	2 布尔型	FALSE			CH3 Negative Limit Signal	
51	%17.	布尔型	FALSE			CH3 Home Signal	
52	%17.4	4 布尔型	FALSE			CH3 Brake Signal	
53	%IW8	3 十六进制	16#0000			CH0 Error Code	
54	%IW1	0 十六进制	16#0601			CH1 Error Code	
55	%IW	2 十六进制	16#0601			CH2 Error Code	
56	%IW	4 十六进制	16#0601			CH3 Error Code	
57	%ID1	6 带符号十进制	11485762			CH1 Current Location	
58	%ID2	·0 带符号十进制	0			CH1 Current Velocity	
59	%ID2	4 带符号十进制	0			CH2 Current Location	
50	%ID2	8 带符号十进制	0			CH2 Current Velocity	
51	%ID3	2 带符号十进制	0			CH3 Current Location	
52	%ID3	6 带符号十进制	0			CH3 Current Velocity	
53	%ID4	0 带符号十进制	0			CH4 Current Location	~

• Channel 0 runs at 100000Hz, in jog mode

a. Configure the configuration parameters as shown in the following figure.

XB6S-PT04A	_1 [XB65	-PT04A]				🧕 属性	1 信息	2 诊断		•
常規	0 变量	系统常数	文本							
▼常规 目录信息		模块参数								- =
模块参数 1/0 地址		XB6S-PT04A	錢後							
			脉冲输出	模式: 方向脉冲	þ				-	
			安全	模式: 继续运行	ř				•	
			刹车时间((ms): 200						
			运动合并	配置: 单次合并	模式				-	
		数字里输	入通道功能	配置: 0						
			回零	超时: 0						
			通道0启动;	速度: 1						
			通道0回零	模式: 模式 24					-	
	•		通道0回零)	速度: 1000						
		通道	直0回零接近)	速度: 500						
	-		通道0输入	逻辑: 限位常开	F. 原点刹车常开				-	
			通道の	标度: 1						
			通道1启动	速度: 1						
			通道1回零	模式: 模式 24					-	
			通道1回零)	速度: 1000						
		通道	道1回零接近)	速度: 500						
			通道1输入;	逻辑: 限位常开	F. 原点刹车常开				-	
			通道17	标度: 1						
			通道2启动	速度: 1						
			通道2回零	模式: 模式 24					-	
			通道2回零)	速度: 1000						~

- b. Configure channel 0 to run at a speed of 100000, run in a direction of 0 forward, and set the acceleration and deceleration times to 500;
- c. Make sure channel 0 is in a static state;
- d. Set the jog command of channel 0 from 0 to 1 to start movement, as shown in the figure below.

	PLC_1 [CPU 15	11-1 PN] > 监控	与强制表 ・ 监控				_ # i	■×
	* D. D. /	/1 /11 DOD DOD						
2 2 i	<i>Ⅱ</i> 二 12 10 71 名称	76 Z7 1	显示格式	监视值	修改值	9	注释	
65	HI	%Q0.0	布尔型	FALSE	FALSE		CHO Running Direction	^
66		%Q0.1	布尔型	FALSE			CHO Absolute/Relative Position Mode	
67		%Q0.2	布尔型	FALSE			CH0 Position/Velocity Mode	
68		%Q0.3	布尔型	FALSE			CH0 Reset Coordinates	
69		%Q0.4	布尔型	FALSE			CH0 Start	
70		%Q0.5	布尔型	FALSE			CH0 Brake	
71		%Q0.6	布尔型	FALSE			CH0 Home	
72		%Q0.7	布尔型	TRUE	TRUE		CH0 JOG	
73		%Q1.0	布尔型	FALSE			CH0 Clear State	
74		%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75		%Q2.0	布尔型	FALSE			CH1 Running Direction	
76		%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77		%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78		%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
79		%Q2.4	布尔型	FALSE			CH1 Start	
80		%Q2.5	布尔型	FALSE			CH1 Brake	=
81		%Q2.6	布尔型	FALSE			CH1 Home	
82		%Q2.7	布尔型	FALSE			CH1 JOG	
83		%Q3.0	布尔型	FALSE			CH1 Clear State	
84		%Q3.1	布尔型	FALSE			CH1 Set Current Location	
85		%Q4.0	布尔型	FALSE			CH2 Running Direction	
86		%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
87		%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
88		%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
89		%Q4.4	布尔型	FALSE			CH2 Start	
90		%Q4.5	布尔型	FALSE			CH2 Brake	
91		%Q4.6	布尔型	FALSE			CH2 Home	
92		%Q4.7	布尔型	FALSE			CH2 JOG	
93		%Q5.0	布尔型	FALSE			CH2 Clear State	~

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i	名称	地址	显示格式	监视值	修改值	9	注释	
2		%Q4.7	布尔型	FALSE			CH2 JOG	^
3		%Q5.0	布尔型	FALSE			CH2 Clear State	
4		%Q5.1	布尔型	FALSE			CH2 Set Current Location	
5		%Q6.0	布尔型	FALSE			CH3 Running Direction	
6		%Q6.1	布尔型	FALSE			CH3 Absolute/Relative Position Mode	
7		%Q6.2	布尔型	FALSE			CH3 Position/Velocity Mode	
8		%Q6.3	布尔型	FALSE			CH3 Reset Coordinates	
9		%Q6.4	布尔型	FALSE			CH3 Start	
00		%Q6.5	布尔型	FALSE			CH3 Brake	
01		%Q6.6	布尔型	FALSE			CH3 Home	
02		%Q6.7	布尔型	FALSE			CH3 JOG	
03		%Q7.0	布尔型	FALSE			CH3 Clear State	
04		%Q7.1	布尔型	FALSE			CH3 Set Current Location	
05		%QW8	无符号十进制	500	500		CH0 Acceleration Time	
06		%QW10	无符号十进制	500	500	M 4	CH0 Deceleration Time	
07		%QD12	无符号十进制	100000	100000		CH0 Running Velocity	
08		%QD16	带符号十进制	0			CHO Running Position	
09		%QW20	无符号十进制	0			CH1 Acceleration Time	
10		%QW22	无符号十进制	0			CH1 Deceleration Time	
11		%QD24	无符号十进制	0			CH1 Running Velocity	-
12		%QD28	无符号十进制	0			CH1 Running Position	
13		%QW32	无符号十进制	0			CH2 Acceleration Time	
14		%QW34	无符号十进制	0			CH2 Deceleration Time	
15		%QD36	无符号十进制	0			CH2 Running Velocity	
16		%QD40	无符号十进制	0			CH2 Running Position	
17		%QW44	无符号十进制	0			CH3 Acceleration Time	
18		%QW46	无符号十进制	0			CH3 Deceleration Time	
19		%QD48	无符号十进制	0			CH3 Running Velocity	
20		%QD52	无符号十进制	0			CH3 Running Position	Y

e. During the motion, you can see the actual running speed and real-time position of channel 0, as shown in the figure below. Inputting a brake command or triggering a positive limit signal can stop the motion.

KB6S ⊧	PLC_1 [CPU 15	511-1 PN] → 监控	「与强制表) 监控オ					
🧈 🤨 .	12 1/9 1/0 👂	1 8 27 1 1						
i	名称	地址	显示格式	监视值	修改值	9	注释	
35		%15.0	布尔型	FALSE			CH2 Velocity Arrival	
6		%15.1	布尔型	FALSE			CH2 Positive Limit Signal	
37		%15.2	布尔型	FALSE			CH2 Negative Limit Signal	
8		%15.3	布尔型	FALSE			CH2 Home Signal	
39		%15.4	布尔型	FALSE			CH2 Brake Signal	
10		%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
11		%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
12		%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
13		%16.3	布尔型	FALSE			CH3 Homing Mode Running	
14		%16.4	布尔型	FALSE			CH3 Position Mode Running	1
45		%16.5	布尔型	FALSE			CH3 Velocity Mode Running	
46		%16.6	布尔型	FALSE			CH3 Homed	
17		%16.7	布尔型	FALSE			CH3 Location Arrival	
18		%17.0	布尔型	FALSE			CH3 Velocity Arrival	
19		%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50		%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51		%17.3	布尔型	FALSE			CH3 Home Signal	
52		%17.4	布尔型	FALSE			CH3 Brake Signal	
53		%IW8	十六进制	16#0000			CH0 Error Code	
54		%IW10	十六进制	16#0601			CH1 Error Code	
55		%IW12	十六进制	16#0601			CH2 Error Code	
56		%IW14	十六进制	16#0601			CH3 Error Code	
57		%ID16	带符号十进制	15840866			CH1 Current Location	
58		%ID20	带符号十进制	100000			CH1 Current Velocity	
59		%ID24	带符号十进制	0			CH2 Current Location	
50		%ID28	带符号十进制	0			CH2 Current Velocity	
51		%ID32	带符号十进制	0			CH3 Current Location	
52		%ID36	带符号十进制	0			CH3 Current Velocity	
53		%ID40	带符号十进制	0			CH4 Current Location	

• Channel 0 turns on and returns to zero

a. Configure the configuration parameters, select the zero return mode and set the zero return speed and zero return approach speed, as shown in the figure below.

XB6S-PT04A_	1 [XB6S	-PT04A]				🧟 属性	1 信息	2 诊断		•
常規() 变量	系统常数	文本 文本							
▼常規 目录信息		模块参数								*
模块参数 I/O 地址		XB6S-PTO	4A 参数							
			脉冲输出	讃式: 方向脉	冲				•	
			安全	≧模式: 继续运	行				-	
			刹车时间](ms): 200						
			运动合并	和置: 单次合	并模式				•	
		数字	= 重输入通道功能	翻畫: 0						
	_		回零	超时: 0						
	_		通道0启动	b速度: 1						
			通道0回零	模式: 模式 19	9				•	
	1		通道0回零	速度: 1000						
	- 1		通道0回零接近	<u> </u>						
			通道0输入	逻辑: 限位常	开. 原点刹车常开				-	
			通道(0标度: 1						
			通道1启动	速度: 1						
	_		通道1回零	模式: 模式 24	4				-	
			通道1回零	速度: 1000						
			通道1回零接近	i速度: 500						
	_		通道1输入	逻辑: 限位常	开.原点刹车常开				•	
			通道1	1标度: 1						
			通道2启动	b速度: 1						
			通道2回零	模式: 模式 24	4				•	
			通道2回零	速度: 1000						~

After all parameters are configured, the program needs to be downloaded to the PLC again, and the PLC and the module need to be powered on again.

- b. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- c. Set the return to zero command of channel 0 from 0 to 1, as shown in the figure below.

XB6S ► PL	_C_1 [CPU 1511-1 PN]	▶ 监控与强制表	▶ 监控表_1			- 🖷	∎×
₩ ₹° #		1					
i	名称 地址	显示格式	监视值	修改值	4	注释	
65	10 %Q0.0	布尔型	FALSE			CH0 Running Direction	^
66	%Q0.1	布尔型	FALSE			CH0 Absolute/Relative Position Mode	
67	%Q0.2	布尔型	FALSE			CH0 Position/Velocity Mode	
68	%Q0.3	布尔型	FALSE			CH0 Reset Coordinates	
69	%Q0.4	布尔型	FALSE			CH0 Start	
70	%Q0.5	布尔型	FALSE			CH0 Brake	
71	%Q0.6	布尔型	TRUE	TRUE	🗹 🔺	CH0 Home	
72	%Q0.7	布尔型	FALSE			CH0 JOG	
73	%Q1.0	布尔型	FALSE			CH0 Clear State	
74	%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75	%Q2.0	布尔型	FALSE			CH1 Running Direction	
76	%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77	%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78	%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
79	%Q2.4	布尔型	FALSE			CH1 Start	=
80	%Q2.5	布尔型	FALSE			CH1 Brake	
81	%Q2.6	布尔型	FALSE			CH1 Home	
82	%Q2.7	布尔型	FALSE			CH1 JOG	
83	%Q3.0	布尔型	FALSE			CH1 Clear State	
84	%Q3.1	布尔型	FALSE			CH1 Set Current Location	
85	%Q4.0	布尔型	FALSE			CH2 Running Direction	
86	%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
87	%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
88	%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
89	%Q4.4	布尔型	FALSE		A	CH2 Start	
90	%Q4.5	布尔型	FALSE		Ä	CH2 Brake	
91	%Q4.6	布尔型	FALSE		Ä	CH2 Home	
92	%Q4.7	布尔型	FALSE			CH2 JOG	~
<			II	1			>

d. Zero return mode 19 requires input of origin signal. After inputting the origin signal, it decelerates to 0 and moves in the negative direction again at the zero return approach speed until the origin signal disappears. Stop moving and zero return is completed. You can see that the coordinates of channel 0 are cleared and the zero return is set to 1, as shown in the figure below.

XB6S ►	PLC_1 [CP		▶ 监控与强制表	▶ 监控表_1				- • • ×
2 2 L	<i>#</i> 🕼 L.	9.2.2	00- 1					
i	名称	地址	显示格式	监视值	修改值	3	注释	
1		%10.0	布尔型	TRUE			CH0 Pulse Output Direction	^
2		%IO.1	布尔型	FALSE			CHO Pulse Status Flag 1	
3		%10.2	布尔型	FALSE			CHO Pulse Status Flag 2	
4		%10.3	布尔型	FALSE			CH0 Homing Mode Running	=
5		%10.4	布尔型	FALSE			CHO Position Mode Running	
6		%10.5	布尔型	FALSE			CH0 Velocity Mode Running	
7		%10.6	布尔型	TRUE			CH0 Homed	
8		%10.7	布尔型	FALSE			CH0 Location Arrival	
9		%11.0	布尔型	FALSE			CH0 Velocity Arrival	
10		%11.1	布尔型	FALSE			CHO Positive Limit Signal	
11		%11.2	布尔型	FALSE			CHO Negative Limit Signal	
12		%11.3	布尔型	FALSE			CHO Home Signal	
13		%11.4	布尔型	FALSE			CH0 Brake Signal	
14		%12.0	布尔型	FALSE			CH1 Pulse Output Direction	
15		%I2.1	布尔型	FALSE			CH1 Pulse Status Flag 1	
16		%12.2	布尔型	FALSE			CH1 Pulse Status Flag 2	
17		%12.3	布尔型	FALSE			CH1 Homing Mode Running	
18		%12.4	布尔型	FALSE			CH1 Position Mode Running	
19		%12.5	布尔型	FALSE			CH1 Velocity Mode Running	
20		%12.6	布尔型	FALSE			CH1 Homed	
21		%12.7	布尔型	FALSE			CH1 Location Arrival	
22		%13.0	布尔型	FALSE			CH1 Velocity Arrival	
23		%I3.1	布尔型	FALSE			CH1 Positive Limit Signal	
24		%13.2	布尔型	FALSE			CH1 Negative Limit Signal	
25		%13.3	布尔型	FALSE			CH1 Home Signal	
26		%13.4	布尔型	FALSE			CH1 Brake Signal	
27		%14.0	布尔型	FALSE			CH2 Pulse Output Direction	
28		%14.1	布尔型	FALSE			CH2 Pulse Status Flag 1	~

- Channel 0 turns on speed mode, running at 100000Hz, and the speed is changed to 10000Hz during operation
 - a. Configure the configuration parameters, such as enabling the single mode in the motion merge mode selection, as shown in the figure below.

XB6S-PT04A_1 [XB6	S-PT04A]		🧕 属性	1 信息	2 诊断		-
常規 10 变量	系统常数 文本						
▼ 常規	模块参数						*
日永信念 模块参数 ⅢO 地址	XB6S-PT04A 参数						
	脉冲输出模式:	方向脉冲				-	
	安全模式:	继续运行				-	
	刹车时间(ms):	200					
	运动合并配置:	单次合并模式					
	数字重输入通道功能配置:	0					
	回零超时:	0					
	通道0启动速度:	1					
	通道0回零模式:	模式 24					
•	通道0回零速度:	1000					
	通道0回零接近速度:	500					
	通道0输入逻辑:	限位常开。原点刹车常开				-	
	通道0标度:	1					
	通道1启动速度:	1					
	通道1回零模式:	模式 24				•	
	通道1回零速度:	1000					
	通道1回零接近速度:	500					
	通道1输入逻辑:	限位常开。原点刹车常开				-	
	通道1标度:	1					
	通道2启动速度:	1					
	通道2回零模式:	模式 24				-	
	通道2回零速度:	1000					~

- b. Set channel 0 to speed mode;
- c. Configure channel 0 to run at a speed of 100000Hz, the direction of motion to 0 forward, and the acceleration and deceleration times to 500;
- d. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- e. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

🦉 💇 🖉	1 10 91 % 2	000 000					
i á	名称 地址	显示格式	监视值	修改值	9	注释	
5	🔳 %Q0.0	布尔型	FALSE			CH0 Running Direction	1
6	%Q0.1	布尔型	FALSE			CHO Absolute/Relative Position Mode	
7	%Q0.2	布尔型	TRUE	TRUE	🗹 🔺	CH0 Position/Velocity Mode	
8	%Q0.3	布尔型	FALSE			CHO Reset Coordinates	
9	%Q0.4	布尔型	TRUE	TRUE		CH0 Start	
0	%Q0.5	布尔型	FALSE			CH0 Brake	
1	%Q0.6	布尔型	FALSE			CH0 Home	
2	%Q0.7	布尔型	FALSE			CH0 JOG	
3	%Q1.0	布尔型	FALSE			CHO Clear State	
4	%Q1.1	布尔型	FALSE			CH0 Set Current Location	
5	%Q2.0	布尔型	FALSE			CH1 Running Direction	
6	%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
7	%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
8	%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	=
9	%Q2.4	布尔型	FALSE			CH1 Start	
0	%Q2.5	布尔型	FALSE			CH1 Brake	-
1	%Q2.6	布尔型	FALSE			CH1 Home	
2	%Q2.7	布尔型	FALSE			CH1 JOG	
3	%Q3.0	布尔型	FALSE			CH1 Clear State	
4	%Q3.1	布尔型	FALSE			CH1 Set Current Location	
5	%Q4.0	布尔型	FALSE			CH2 Running Direction	
6	%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
7	%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
8	%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
9	%Q4.4	布尔型	FALSE			CH2 Start	
0	%Q4.5	布尔型	FALSE			CH2 Brake	1

22	1 1/2 10 91 % 27						
i	名称 地址	显示格式	监视值	修改值	9	注释	
91	1 %Q4.6	布尔型	FALSE			CH2 Home	^
92	%Q4.7	布尔型	FALSE			CH2 JOG	
93	%Q5.0	布尔型	FALSE			CH2 Clear State	
94	%Q5.1	布尔型	FALSE			CH2 Set Current Location	
95	%Q6.0	布尔型	FALSE			CH3 Running Direction	
96	%Q6.1	布尔型	FALSE			CH3 Absolute/Relative Position Mode	
97	%Q6.2	布尔型	FALSE			CH3 Position/Velocity Mode	
98	%Q6.3	布尔型	FALSE			CH3 Reset Coordinates	
99	%Q6.4	布尔型	FALSE			CH3 Start	
100	%Q6.5	布尔型	FALSE			CH3 Brake	
101	%Q6.6	布尔型	FALSE			CH3 Home	
102	%Q6.7	布尔型	FALSE			CH3 JOG	
103	%Q7.0	布尔型	FALSE			CH3 Clear State	
104	%Q7.1	布尔型	FALSE			CH3 Set Current Location	
105	%QW8	无符号十进制	500	500	M 1	CHO Acceleration Time	
106	%QW10	无符号十进制	500	500	M 4	CH0 Deceleration Time	
107	%QD12	无符号十进制	100000	100000	🗹 🥼	CHO Running Velocity	
108	%QD16	无符号十进制	0			CHO Running Position	
109	%QW20	无符号十进制	0			CH1 Acceleration Time	
110	%QW22	无符号十进制	0			CH1 Deceleration Time	
111	%QD24	无符号十进制	0			CH1 Running Velocity	=
112	%QD28	无符号十进制	0			CH1 Running Position	
113	%QW32	无符号十进制	0			CH2 Acceleration Time	
114	%QW34	无符号十进制	0			CH2 Deceleration Time	
115	%QD36	无符号十进制	0			CH2 Running Velocity	
116	%QD40	无符号十进制	0			CH2 Running Position	
117	%QW44	无符号十进制	0			CH3 Acceleration Time	
118	%QW46	无符号十进制	0			CH3 Deceleration Time	
119	%QD48	无符号十进制	0			CH3 Running Velocity	
120	%QD52	无符号十进制	0			CH3 Running Position	V

- f. During the movement, change the running speed of channel 0 to 10000Hz;
- g. Reset the start command of channel 0 from 0 to 1 to start motion merging, as shown in the figure below.

1 1. 2	000h ▶ 1				
名称 地址	显示格式	监视值	修改值	9	注释
1 %Q4.0	布尔型	FALSE			CH2 Running Direction
%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mod
%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode
%Q4.3	布尔型	FALSE			CH2 Reset Coordinates
%Q4.4	布尔型	FALSE			CH2 Start
%Q4.5	布尔型	FALSE			CH2 Brake
%Q4.6	布尔型	FALSE			CH2 Home
%Q4.7	布尔型	FALSE			CH2 JOG
%Q5.0	布尔型	FALSE			CH2 Clear State
%Q5.1	布尔型	FALSE			CH2 Set Current Location
%Q6.0	布尔型	FALSE			CH3 Running Direction
%Q6.1	布尔型	FALSE			CH3 Absolute/Relative Position Mode
%Q6.2	布尔型	FALSE			CH3 Position/Velocity Mode
%Q6.3	布尔型	FALSE			CH3 Reset Coordinates
%Q6.4	布尔型	FALSE			CH3 Start
%Q6.5	布尔型	FALSE			CH3 Brake
%Q6.6	布尔型	FALSE			CH3 Home
%Q6.7	布尔型	FALSE			CH3 JOG
%Q7.0	布尔型	FALSE			CH3 Clear State
%Q7.1	布尔型	FALSE			CH3 Set Current Location
%QW8	无符号十进制	500	500		CHO Acceleration Time
%QW10	无符号十进制	500	500		CH0 Deceleration Time
%QD12	无符号十进制	100000	10000		CH0 Running Velocity
%QD16	无符号十进制	0			CH0 Running Position
%QW20	无符号十进制	0			CH1 Acceleration Time
%QW22	无符号十进制	0			CH1 Deceleration Time

🦈 👻 🖉	1 10 2 20 2						
i	名称 地址	显示格式	监视值	修改值	3	注释	
65	5 %Q0.0	布尔型	FALSE			CH0 Running Direction	3
56	%Q0.1	布尔型	FALSE			CHO Absolute/Relative Position Mode	
57	%Q0.2	布尔型	TRUE	TRUE	🗹 🧵	CH0 Position/Velocity Mode	
58	%Q0.3	布尔型	FALSE			CHO Reset Coordinates	
59	%Q0.4	布尔型	TRUE	TRUE	🗹 🤺	CH0 Start	
70	%Q0.5	布尔型	FALSE			CH0 Brake	
71	%Q0.6	布尔型	FALSE			CH0 Home	
72	%Q0.7	布尔型	FALSE			CH0 JOG	
73	%Q1.0	布尔型	FALSE			CH0 Clear State	
74	%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75	%Q2.0	布尔型	FALSE			CH1 Running Direction	
76	%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77	%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
/8	%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	
9	%Q2.4	布尔型	FALSE			CH1 Start	
30	%Q2.5	布尔型	FALSE			CH1 Brake	
31	%Q2.6	布尔型	FALSE			CH1 Home	
32	%Q2.7	布尔型	FALSE			CH1 JOG	
33	%Q3.0	布尔型	FALSE			CH1 Clear State	
34	%Q3.1	布尔型	FALSE			CH1 Set Current Location	
35	%Q4.0	布尔型	FALSE			CH2 Running Direction	
36	%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
37	%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
38	%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
39	%Q4.4	布尔型	FALSE			CH2 Start	
90	%Q4.5	布尔型	FALSE			CH2 Brake	,
<							>

h. You can see that channel 0 slows down to 10000Hz motion, as shown in the figure below.

XB6S ► P	PLC_1 [CPU 1511-1 P	N] ▶ 监控与强制表	・ 监控表_1				_ # = ×
9 9 il.	1 1 9 16 91 96 2	烈 00 00					
i	名称 地址	显示格式	监视值	修改值	9	注释	
39	%15.4	布尔型	FALSE			CH2 Brake Signal	^
40	%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
41	%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42	%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
43	%16.3	布尔型	FALSE			CH3 Homing Mode Running	
44	%16.4	布尔型	FALSE			CH3 Position Mode Running	
45	%16.5	布尔型	FALSE			CH3 Velocity Mode Running	_
46	%16.6	布尔型	FALSE			CH3 Homed	
47	%16.7	布尔型	FALSE			CH3 Location Arrival	
48	%17.0	布尔型	FALSE			CH3 Velocity Arrival	=
49	%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50	%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51	%17.3	布尔型	FALSE			CH3 Home Signal	
52	%17.4	布尔型	FALSE			CH3 Brake Signal	
53	%IW8	十六进制	16#0000			CH0 Error Code	
54	%IW10	十六进制	16#0601			CH1 Error Code	
55	%IW12	十六进制	16#0601			CH2 Error Code	
56	%IW14	十六进制	16#0601			CH3 Error Code	
57	%ID16	带符号十进制	19187164			CH1 Current Location	
58	%ID20	带符号十进制	10000			CH1 Current Velocity	
59	%ID24	带符号十进制	0			CH2 Current Location	
60	%ID28	带符号十进制	0			CH2 Current Velocity	
61	%ID32	带符号十进制	0			CH3 Current Location	
62	%ID36	带符号十进制	0			CH3 Current Velocity	
63	%ID40	带符号十进制	0			CH4 Current Location	
64	%ID44	带符号十进制	0			CH4 Current Velocity	~

- The current position of channel 0 is 10000, and it moves to the position of 20000. During the movement, the position is changed to 50000.
 - a. Configure the configuration parameters, such as the motion merge mode selection to enable the continuous mode, as shown in the figure below.

XB6S-PT	04A_1	[XB6S-F	PT04AJ				<u>s</u> ,	重性	1.信息	2 诊断		
常規	10	变量	系统常数	文本								
▼ 常规 目录	信息	模块	参数		10							·
模块参数 1/0 地址	Ϋ́,	XB	6S-PT04A 参	数								
				脉冲输出模式	: 方向脉冲						-	
	_			安全模式	: 继续运行						-	
	-			刹车时间(ms)	: 200							
				运动合并配置	: 连续合并模	観式					-	
			数字里输)	通道功能配置	: 0							
	_			回零超时	: 0							
	-		i	通道0启动速度	: 1							
	1		i	通道0回零模式	: 模式 24						-	
			i	通道0回零速度	: 1000							
			通道	0回零接近速度	: 500		1					
	-		3	通道0输入逻辑	: 限位常开,	原点刹车常开					-	
	-			通道0标度	: 1]					
			÷	通道1启动速度	: 1							
	_			通道1回零模式	: 模式 24							
	-			通道1回零速度	: 1000							
			通道	1回零接近速度	: 500		1					
				通道1输入逻辑	: 限位常开.	原点刹车常开						
				通道1标度	: 1							
< .	>			通道2户計速度	. 1							~

# #	u# 19	L 9. 2 2	≅ ©05 005 ▶ 1					
i	名称	地址	显示格式	监视值	修改值	9	注释	
39		%15.4	布尔型	FALSE			CH2 Brake Signal	^
40		%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
41		%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42		%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
43		%16.3	布尔型	FALSE			CH3 Homing Mode Running	
44		%16.4	布尔型	FALSE			CH3 Position Mode Running	
45		%16.5	布尔型	FALSE			CH3 Velocity Mode Running	
46		%16.6	布尔型	FALSE			CH3 Homed	
47		%16.7	布尔型	FALSE			CH3 Location Arrival	
48		%17.0	布尔型	FALSE			CH3 Velocity Arrival	=
49		%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50		%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51		%17.3	布尔型	FALSE			CH3 Home Signal	
52		%17.4	布尔型	FALSE			CH3 Brake Signal	
53		%IW8	十六进制	16#0000			CH0 Error Code	
54		%IW10	十六进制	16#0601			CH1 Error Code	
55		%IW12	十六进制	16#0601			CH2 Error Code	
56		%IW14	十六进制	16#0601			CH3 Error Code	
57		%ID16	带符号十进制	10000			CH1 Current Location	
58		%ID20	带符号十进制	0	-		CH1 Current Velocity	
59		%ID24	带符号十进制	0			CH2 Current Location	
60		%ID28	带符号十进制	0			CH2 Current Velocity	
61		%ID32	带符号十进制	0			CH3 Current Location	
62		%ID36	带符号十进制	0			CH3 Current Velocity	
63		%ID40	带符号十进制	0			CH4 Current Location	
64		%ID44	带符号十进制	0			CH4 Current Velocity	~

- c. Set channel 0 to absolute position mode;
- d. Configure channel 0 to run at 20000 steps, 1000 Hz speed, and 500 acceleration and deceleration times;
- e. Make sure the brake command of channel 0 is 0 and channel 0 is in a stationary state;
- f. Set the start command of channel 0 from 0 to 1 to start motion, as shown in the figure below.

		PU 1511-1 P	N] → 监控与强制表 →	监控表_1			_ #	×
1	11 IA	o 9. 9. 1	70 00 00 1					
i	名称	地址	显示格式	监视值	修改值	9	注释	
65		%Q0.0	布尔型	FALSE			CH0 Running Direction	^
66		%Q0.1	布尔型	FALSE			CHO Absolute/Relative Position Mode	
67		%Q0.2	布尔型	FALSE			CH0 Position/Velocity Mode	
68		%Q0.3	布尔型	FALSE			CHO Reset Coordinates	
69		%Q0.4	布尔型	TRUE	TRUE	🗹 🔺	CH0 Start	
70		%Q0.5	布尔型	FALSE			CH0 Brake	
71		%Q0.6	布尔型	FALSE			CH0 Home	
72		%Q0.7	布尔型	FALSE			CH0 JOG	
73		%Q1.0	布尔型	FALSE			CH0 Clear State	
74		%Q1.1	布尔型	FALSE			CH0 Set Current Location	
75		%Q2.0	布尔型	FALSE			CH1 Running Direction	
76		%Q2.1	布尔型	FALSE			CH1 Absolute/Relative Position Mode	
77		%Q2.2	布尔型	FALSE			CH1 Position/Velocity Mode	
78		%Q2.3	布尔型	FALSE			CH1 Reset Coordinates	=
79		%Q2.4	布尔型	FALSE			CH1 Start	
80		%Q2.5	布尔型	FALSE			CH1 Brake	
81		%Q2.6	布尔型	FALSE			CH1 Home	
82		%Q2.7	布尔型	FALSE			CH1 JOG	
83		%Q3.0	布尔型	FALSE			CH1 Clear State	
84		%Q3.1	布尔型	FALSE			CH1 Set Current Location	
85		%Q4.0	布尔型	FALSE			CH2 Running Direction	
86		%Q4.1	布尔型	FALSE			CH2 Absolute/Relative Position Mode	
87		%Q4.2	布尔型	FALSE			CH2 Position/Velocity Mode	
88		%Q4.3	布尔型	FALSE			CH2 Reset Coordinates	
89		%Q4.4	布尔型	FALSE			CH2 Start	
90		%Q4.5	布尔型	FALSE			CH2 Brake	~
<								>

F 👕 // 🛯	✓ =□ /1 /0 ~/ 3称 地址	· ▶ 1 显示格式	监视值	修改值	4	注释	
15	%Q6.0	布尔型	FALSE			CH3 Running Direction	1
6	%Q6.1	布尔型	FALSE			CH3 Absolute/Relative Position Mode	
7	%Q6.2	布尔型	FALSE		Ā	CH3 Position/Velocity Mode	
8	%Q6.3	布尔型	FALSE		ā	CH3 Reset Coordinates	
9	%Q6.4	布尔型	FALSE			CH3 Start	
00	%Q6.5	布尔型	FALSE			CH3 Brake	
01	%Q6.6	布尔型	FALSE			CH3 Home	
02	%Q6.7	布尔型	FALSE			CH3 JOG	
03	%Q7.0	布尔型	FALSE			CH3 Clear State	
04	%Q7.1	布尔型	FALSE		8	CH3 Set Current Location	
05	%QW8	无符号十进制	500	500	M 🖌	CH0 Acceleration Time	
06	%QW10	无符号十进制	500	500	🗹 🔺	CH0 Deceleration Time	
07	%QD12	无符号十进制	1000	1000	M 1	CH0 Running Velocity	
08	%QD16	无符号十进制	20000	20000	🗹 🔺	CH0 Running Position	
09	%QW20	无符号十进制	0			CH1 Acceleration Time	
10	%QW22	无符号十进制	0			CH1 Deceleration Time	
11	%QD24	无符号十进制	0			CH1 Running Velocity	
12	%QD28	无符号十进制	0			CH1 Running Position	
13	%QW32	无符号十进制	0			CH2 Acceleration Time	=
14	%QW34	无符号十进制	0			CH2 Deceleration Time	
15	%QD36	无符号十进制	0			CH2 Running Velocity	
16	%QD40	无符号十进制	0			CH2 Running Position	
17	%QW44	无符号十进制	0			CH3 Acceleration Time	
18	%QW46	无符号十进制	0			CH3 Deceleration Time	
19	%QD48	无符号十进制	0			CH3 Running Velocity	
20	%QD52	无符号十进制	0			CH3 Running Position	~

g. During the motion process, change the running step number of channel 0 to 50000 and start motion merging, as shown in the figure below.

XB6S ►	PLC_1 [CPU 1511-1 PN	〕▶ 监控与强制表	 监控表_1 			- *	∎×
	\$ 14 1. 9 9. 9						
	名称 地址	□ 1	监视值	修改值	9	注释	
95	%Q6.0	布尔型	- FALSE	1	í n	CH3 Running Direction	~
96	%Q6.1	布尔型	FALSE		Ä	CH3 Absolute/Relative Position Mode	
97	%Q6.2	布尔型	FALSE		Ä	CH3 Position/Velocity Mode	
98	%Q6.3	布尔型	FALSE		Ā	CH3 Reset Coordinates	
99	%Q6.4	布尔型	FALSE		Ē	CH3 Start	
100	%Q6.5	布尔型	FALSE			CH3 Brake	
101	%Q6.6	布尔型	FALSE			CH3 Home	
102	%Q6.7	布尔型	FALSE			CH3 JOG	
103	%Q7.0	布尔型	FALSE			CH3 Clear State	
104	%Q7.1	布尔型	FALSE			CH3 Set Current Location	
105	%QW8	无符号十进制	500	500	🗹 🧧	CH0 Acceleration Time	
106	%QW10	无符号十进制	500	500	M 4	CH0 Deceleration Time	
107	%QD12	无符号十进制	1000	1000	M 4	CH0 Running Velocity	
108	%QD16	无符号十进制	50000	50000		CHO Running Position	
109	%QW20	无符号十进制	0			CH1 Acceleration Time	
110	%QW22	无符号十进制	0			CH1 Deceleration Time	
111	%QD24	无符号十进制	0			CH1 Running Velocity	
112	%QD28	无符号十进制	0			CH1 Running Position	
113	%QW32	无符号十进制	0			CH2 Acceleration Time	=
114	%QW34	无符号十进制	0			CH2 Deceleration Time	
115	%QD36	无符号十进制	0			CH2 Running Velocity	
116	%QD40	无符号十进制	0			CH2 Running Position	
117	%QW44	无符号十进制	0			CH3 Acceleration Time	
118	%QW46	无符号十进制	0			CH3 Deceleration Time	
119	%QD48	无符号十进制	0			CH3 Running Velocity	
120	%QD52	无符号十进制	0			CH3 Running Position	~
<			III				>

h. After the movement is completed, you can see that the current coordinate of channel 0 is 50000, as shown in the figure below.

XB6S ► P	LC_1 [CF	PU 1511-1 PN])	监控与强制表	b 监控表_1			-	- # = ×
# # ▶ 10 1 1 1 1 1 m m								
i	名称	地址	显示格式	监视值	修改值	9	注释	
38		%15.3	布尔型	FALSE			CH2 Home Signal	^
39		%15.4	布尔型	FALSE			CH2 Brake Signal	
40		%16.0	布尔型	FALSE			CH3 Pulse Output Direction	
41		%16.1	布尔型	FALSE			CH3 Pulse Status Flag 1	
42		%16.2	布尔型	FALSE			CH3 Pulse Status Flag 2	
43		%16.3	布尔型	FALSE			CH3 Homing Mode Running	
44		%16.4	布尔型	FALSE			CH3 Position Mode Running	
45		%16.5	布尔型	FALSE			CH3 Velocity Mode Running	
46		%16.6	布尔型	FALSE			CH3 Homed	
47		%16.7	布尔型	FALSE			CH3 Location Arrival	=
48		%17.0	布尔型	FALSE			CH3 Velocity Arrival	
49		%17.1	布尔型	FALSE			CH3 Positive Limit Signal	
50		%17.2	布尔型	FALSE			CH3 Negative Limit Signal	
51		%17.3	布尔型	FALSE			CH3 Home Signal	
52		%17.4	布尔型	FALSE			CH3 Brake Signal	
53		%IW8	十六进制	16#0000			CH0 Error Code	
54		%IW10	十六进制	16#0601			CH1 Error Code	_
55		%IW12	十六进制	16#0601			CH2 Error Code	
56		%IW14	十六进制	16#0601			CH3 Error Code	
57		%ID16	带符号十进制	50000			CH1 Current Location	
58		%ID20	带符号十进制	0			CH1 Current Velocity	
59		%ID24	带符号十进制	0			CH2 Current Location	
60		%ID28	带符号十进制	0			CH2 Current Velocity	
61		%ID32	带符号十进制	0			CH3 Current Location	
62		%ID36	带符号十进制	0			CH3 Current Velocity	
63		%ID40	带符号十进制	0			CH4 Current Location	~
<				III				>