PLC | Motion control | Servo drive | HMI | Dedicated system | Software

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COTRUST

Focus on Industrial Control,
Driving the Intelligent Future.

Product Catalogue

PLC | Servo | HMI | Remote I/O | Motion control

COTRUST TECHNOLOGIES CO., LTD.

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COTRUST Technologies Co., Ltd. founded in 2003, is dedicated to R&D, manufacturing and sales of industrial automation control products.Relying on high quality, high performance automation control products and solutions to create maximum value for customers, determined to become the world's leading industrial automation solutions supplier.

As a high-tech enterprise, COTRUST provides a wide business coverage of intelligent equipment & robot, new energy vehicles, industrial Internet,smart factory. Main products include PLC, Motion control&servo drive, HMI, dedicated control system and automation software MagicWorks® (PLC/HMI/TUNER/OPC),the new launch MiCo remote solution, multi-robot cooperative control system widely used in customer solutions.

COTRUST built a long-term partnerships with customers. To achieve this, COTRUST offers more than just products: working with COTRUST gives customers access to leading integrated manufacturing and R&D facilities, as well as highly skilled engineering and industry specialists.

COTRUST invests 10% of revenues and 40% of employees in R&D, owned more than 30 trademark registration and 140 patents with certificates(including invention, utility models and appearance). Uses a uniquely rigorous engineering process that incorporates advanced design modelling,performance analysis and quality assurance techniques for improve production capacity continuously and promote sustainable development.

On the basis of owning industrial automation technologies with proprietary intellectual property rights, COTRUST perseveres in industry marketing and providing total solution to customers in segment market and achieves growth of both enterprise value and customer value.

Focus on Industrial Control,
Driving the Intelligent Future.

COTRUST SCENERY

CONTENTS

easier Control

2024 Ultra-slim PLC (Simple Series)

2023 CTL series remote I/O
CTMC series motion control PLC

2020 A4 series servo drive system

2018 TP-i series EtherNET HMI
Full range of PROFITNET slave module
CTH300 high integration CPU

2016 CTH200 series EtherNET PLC
MiCo remote solutions

2014 CTH300 series medium PLC

2013 EtherCAT high performance servo system
Motion control platform:Comotion®

2011 E10/H1A servo system

2009 Copanel HMI products
HMI software MagicWorks HMI

2007 ISO9001 certification
PLC software MagicWorks PLC

2005 CTSC-100, CTSC-200 series small PLC

2003 COTRUST founded,began to develop COTRUST PLC

Simple series ultra-compact PLC

- High performance, Ultra-compact PLC
- PLCopen compliant axis control
- Simulation mode for offline debugging
- Real-time fieldbus,Multi-protocols
- Convenient networking
- Powerful motion control
- Easy to expand

CTH300 series medium-sized PLC

- One platform, two architectures
- Multiple fieldbuses are supported
- Suitable for OEM equipment
- Meet the requirements of medium and large engineering projects
- Apply for complex motion control domain

Servo drive system

- Power range 100W-7.5kW
- Support Modbus and CANopen protocols
- Support EtherCAT protocol
- Support 2500 line incremental encoder (optional)
- Support 17Bit bus absolute encoder (optional)

Human Machine Interface (HMI)

- Integrated Ethernet interface expandable wifi module
- Remote interaction with MiCo client
- High-speed quad-core processor
- Mutiple network port communication
- Supports remote upload and download
- Support 4G module, WiFi module

Multiple variety of products → **Strong communication ability**

Integration of various control functions → **High reliability**

Simple series PLC

SP18

High performance, Ultra-compact PLC
Simple series suitable for multi-axis operation control,temperature control, communication networking, can meet the needs of small and medium-sized automation equipment.

NEW

CT-SI 522(CPU)

- 8DI/8DO transistor drain output
- 32M program data space, 512KB power-off hold storage
- Support 8x200KHZ motion control output pulse
- Support 8x 200KHZ high-speed counting, can be arbitrarily allocated use points
- Supports 8-axis EtherCAT control bus supports up to 72 EtherCAT slave stations
- 2x1000M hardware network ports support the switch function
- Support independent IP addresses
- Two expansion card slots support expansion RS485/CAN/ analog/4G, local expansion of 16 modules
- Programming platform: CODESYS SP18 version

CODESYS

Simple series modules

Type	Model	Product description
Coupler	CTSI-ECT	EtherCAT communication module, can be expanded to 16 modules.
	CTSI-PN	Profinet communication module, can be expanded to 16 modules.
Digital module	CTSI-DIT16-S1	Digital input module, 16 points input, 24VDC.
	CTSI-DQN16-S1	Digital output module, 16 point transistor drain output, 24VDC, 0.5A.
	CTSI-DQR08-S1	Digital output module, 8-point relay output, 24VDC, 2A.
	CTSI-DMN16-S1	Digital input/output module, 8-point input, 8-point transistor drain output, 24VDC, 0.5A.
Analog module	CTSI-AIS04-S1	Analog input voltage and current module, 16bit,±10V, 0~10V, 0~20mA, 4~20mA, support over limit and broken line detection.
	CTSI-AQS04-S1	Analog output voltage and current module, 16bit,±10V, 0~10V, 0~20mA, 4~20mA, support over limit and broken line detection.
Temperature module	CTSI-AIT04-S1	24bit temperature module , 4 thermocouple inputs, thermocouple type B, E,N, J,K, R,S, T, support over limit and broken line detection.
	CTSI-AIR04-S1	24 bit temperature module, 4 thermal resistance inputs Pt100/Pt500/ Pt1000/ Cu100/NTC10K/KTY84,support overrun and break line detection.

Simple series expansion cards

Type	Model	Product description
Communication expansion card	CTSI-485-E1	Supports 2xRS485 communication with RTC clock battery.
	CTSI-485/CAN-E1	Supports one RS485 and CAN communication.
Clock expansion card	CTSI-RTC-E1	Supports RTC clocks.
Analog expansion card	CTSI-AMS03-E2	Supports two current or voltage inputs, one voltage or current output, 12bit.
Wireless communication expansion card	CTSI-4G-E1	Support Mobile/Unicom/Telecom 4G, to achieve PLC remote.

Functional features:

Ultra-compact design, Save space

5CM ultra-slim CPU and 12mm ultra-thin module, saving 60% installation space;
Vertical plug terminals, straight plug wiring, more convenient disassembly.
Flexible I/O , supports multiple system builds.

Multi- protocols

The local network port supports remote programming, remote download programs, and firmware update by configuring 4G communication.
Support MODBUS, CANopen, CANfree, EtherCAT, Socket, OPC_UA, Ethernet/IP, S7 master-slave protocol, CTNET master-slave 64K data transmission protocol; Support visual WebVisu; Easy access to peripheral equipment, high-speed data transmission.

Self-tuning PID

Temperature module has 10HZ sampling frequency, 100ms fully channel acquisition rate;
Integrated debugging free self-tuning and self-adaptive PID algorithm library, users can easily control temperature control, liquid level control, mechanical control and other scenarios.

Easy programming

Friendly ST programming operation, improve algorithm programming efficiency;
Support instruction variable prompt, programmers can quickly develop without manual;
Support offline simulation, achieve no physical program debugging.

Convenient networking

Multi-network port 1000M design, can achieve setting dual independent IP, isolate the internal and external networks of the equipment.

Motion control

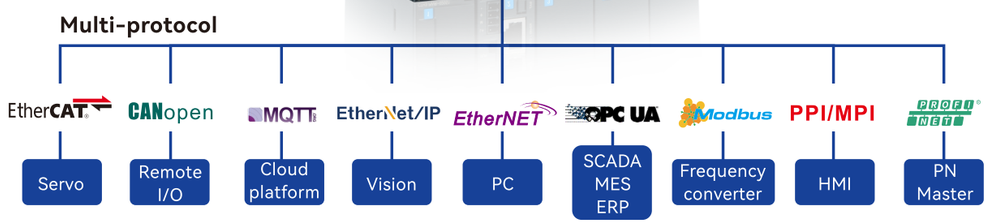
Support EtherCAT scanning function,
Support axis debugging function,
Support PLCopen standard motion control function, support interpolation, electronic CAM.

PLC download without power supply

The type-C port works as a programming port allowing support programs, uploading/downloading and debugging.

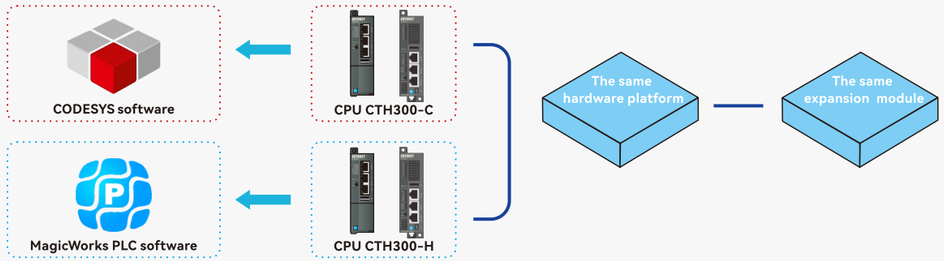
Medium PLC - CTH300 series

CTH300 series PLC, as a new generation of medium PLC provides a best control choice for OEM equipment and medium and large project engineering users with its advanced design concept, fully isolated system architecture, perfect protection mechanism, strong anti-interference ability and extremely high cost performance.



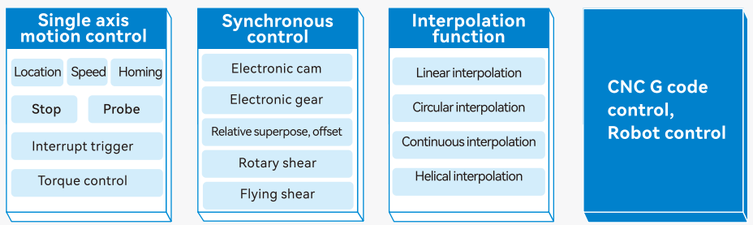
One platform, Two architectures

CTH300-C CPU and CTH300-H CPU use the same hardware platform and share the same expansion module.
CTH300-C is based on CODESYS software architecture, which is good at complex motion control.
CTH300-H is based on the more easy-to-use MagicWorks software architecture that is good at process control and motion control.

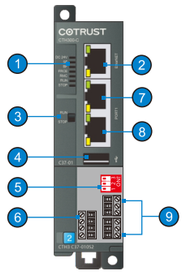


Powerful motion control

Based on PLCopen standard motion control library

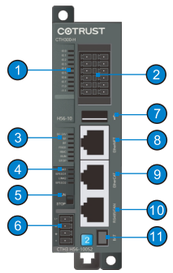


System Composition



H3X : H31-01/H35-01/H32-01/H32-02/H36-01/H36-02
C3X C35-02/C36-02/C37-02

① System status indicator
② Ethernet interface
③ System operation/stop dial switch
④ USB 2.0 interface
⑤ Terminal resistance dial switch and remote dial switch
(C36-02:1/2: terminal resistance switch,3. function switch.)
⑥ Power terminal
⑦ RS485 interface (H31-01/H35-01)
EtherCAT interface (H32-01/H36-01/C35-02/C37-02)
EtherCAT/EtherNET switchable interface (H36-02/H32-02/C36-02)
⑧ Rs485 interface (H31-01/H35-02)
CANopen interface (H32-01/H36-01/H36-02/H32-02/C35-02/C36-02/C37-02)
⑨ RS485 free port (CTH300-C) or PPI/free communication port (CTH300-H)

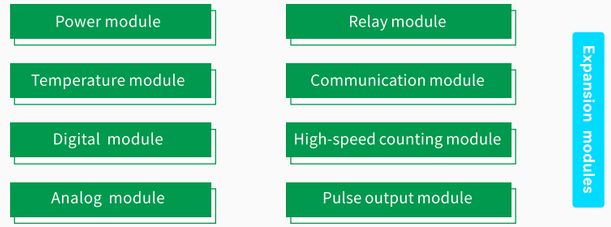


H5X H52-10/H56-10
C5X C56-10/C57-10

① Digital input indicator
② Digital input interface
③ System status indicator
④ Network interface communication indicator
⑤ System operation switch
⑥ Power terminal
⑦ USB interface
⑧ EtherENT interface
⑨ EtherCAT interface
⑩ RS485/CAN interface
External battery interface

Excellent Performance

- CTH300 CPU uses Cortex-A8 processor, which has higher computing speed.
- The CTH300 system supports a variety of expansion modules, with the largest I/O scale of 4096DI/DQ and 1024AI/AQ.
- The 55 Mbps expansion bus ensures high-speed data transmission between CPU and expansion modules.



Fully-isolated System

- All CTH300 CPU signal modules and function modules adopt isolation technology to isolate the power supply, bus and Input/output of the whole system.
- Digital input module with digital filter has strong anti-interference ability.
- Analog module signal is fully isolated, with strong anti-interference ability and accuracy up to 16 bits.

Environmental Adaptability

- PCB three-proofing treatment, mildew-proof, moisture-proof and salt spray proof.
- Comply with IEC 61000 electromagnetic compatibility test.
- Comply with IEC 60018-2 environmental test.

CTH300-C CPU

CPU C35-03 SP18

Standard motion control
32MB program storage
64KB power off hold data
55M expansion bus, 24V DC power supply
2×RS485 ports, 1×EtherNET port
1×USB port, 1×CAN port
1×EtherNET/EtherCAT port

CTH3-C35-003S2 NEW

- Supports single-axis motion
- Support visual WebVisu, EtherNet/IP master station,OPC_UA slave station, ModBus (RTU/TCP) master and slave station
- The maximum number of racks is 4 (including local racks)
- Supports up to 128 EtherCAT slave stations
- Supports CODESYS SP18 version

CPU C57-A3 SP18

Enhanced motor control
32MB program storage
64KB power-off hold data
55M expansion bus, 24V DC power supply
10×channels digital input
6×500KHz high speed counter
1×RS485 port,1×EtherNET port
1×USBport,1×CAN port,1×EtherCAT port

CTH3-C57-103S2 NEW

- Support single axis motion , interposition, electronic gear and electronic CAM, etc
- Support SoftMotion instruction , CNC function and scara
- Support visual WebVisu, EtherNet/IP master station,OPC_UA slave station,ModBus (RTU/TCP) master and slave station
- Maximum number of rack 4 (including local rack)
- Support up to 128 EtherCAT slave station
- Supports CODESYS SP18 version

CPU C56-10 / C57-10 SP11

Enhanced motor control
32MB program storage
64KB power-off hold data space
55M expansion bus, 24V DC power supply
10-channel digital inputs
6×500kHz high-speed counters
1×RS485 port (ModBus Free port protocol)
1×Ethernet port, 1×USB port, 1×CAN port
1×EtherCAT port

- Maximum number of racks: 4 (including local racks)
- Support up to 128 EtherCAT slave stations

CTH3 C56-102S2

- Support single axis motion control, interpolation, electronic gear and electronic CAM and other SoftMotion instruction functions

CTH3 C57-102S2

- Support single axis motion control, interpolation, electronic gear and electronic CAM and other SoftMotion instruction functions
- Support CNC function
- Support Scara function

CPU C35-02/C36-02/C37-02 SP11

32MB program storage, 64KB power-off hold data, 55M extension bus, 24V DC power supply,
Maximum number of racks: 4 (including local racks),supports up to 128 EtherCAT slaves.
Supports CODESYS Sp11 version.

- **CTH3 C35-002S2**

1×RS485 port (ModBus Free port Protocol),
1×Ethernet port, 1×USB port, 1×CAN port,
1×EtherCAT port, support single axis motion control.

- **CTH3 C36-002S2**

2×RS485 ports (ModBus Free Protocol), 1×EtherNET interface,
1×EtherNET/EtherCAT port, 1×CAN port, 1×USB port, Support PLCopen single axis motion , interpolation, electronic CAM and electronic gear, support SoftMotion instruction.

- **CTH3 C37-002S2**

1×RS485 port (ModBus free protocol), 1×Ethernet port, 1×USB port, 1×CAN port,1×EtherCAT port,
Support single-axis motion control, interpolation, electronic gear, electronic cam.
Support SoftMotion command and CNC function.

H series CPU

CPU H52-10

256KB+2*64KB program storage
1MB data storage
32KB data power-off storage
24VDC power supply
10 channels digital input
6×500KHz high-speed counter
1×RS485 port (PPI/ free port)
1×Ethernet port,1×USB port
1×CAN port, and 1×EtherCAT port

CTH3 H52-100S2

- Support single-axis motion control functions (such as positioning, speed and backtracking, etc.)
- Support linear/circular interpolation, continuous interpolation and spiral interpolation
- Support electronic CAM and electronic gear, probe function
- Support up to 8 EtherCAT slave stations
- Maximum number of racks is 1
- Support Trace function
- Support C language programming
- Support Profinet intelligent slave function

CPU H56-10

256KB+2*64KB program storage
1MB data storage
32KB data power-off storage
24VDC power supply
10 channels digital input
6×500KHz high-speed counter
1×RS485 port (PPI/ free port)
1×Ethernet port,1×USB port
1×CAN port, and 1×EtherCAT port

CTH3 H56-100S2

- Support single-axis motion control functions (such as positioning, speed and backtracking, etc.)
- Support linear/circular interpolation
- Support continuous interpolation and spiral interpolation
- Support electronic CAM and electronic gear, probe function
- Support up to 64 EtherCAT slave stations
- Maximum number of racks is 4
- Support Trace function
- Support C language programming
- Support Profinet intelligent slave function

CPU H36-02/H32-02

- **CTH3 H36-002S2/CTH3 H32-002S2**

256KB+2*64KB program storage,1MB data storage,32KB data power-off storage,24VDC power supply,
2×RS485 port (PPI/ free port),1×Ethernet port,1×USB port,1×CAN port, 1×Ethernet/EtherCAT port,
support single axis motion control, interpolation, electronic gear and electronic CAM,
support Trace function, support C language programming.

H32-02: Maximum number of racks is 1, support up to 8 EtherCAT slave stations.
H36-02: Maximum number of racks is 4, support up to 64 EtherCAT slave stations .

CPU H36-01/H32-01

- **CTH3 H36-001S2/CTH3 H32-001S2**

256KB+2*64KB program storage,1MB data storage,32KB data power-off storage,24VDC power supply,
1×RS485 port (PPI/ free port),1×Ethernet port,1×USB port,1×CAN port, 1×EtherCAT port,
supports single-axis motion control functions (such as positioning, speed and backtracking, etc.),
linear/circular interpolation, continuous interpolation and spiral interpolation, electronic CAM and
electronic gear, support probe function, support Trace function, support C language programming.

H32-01: Maximum number of racks is 1, support up to 8 EtherCAT slave stations.
H36-01: Maximum number of racks is 4, support up to 64 EtherCAT slave stations .

CPU H35-01/H31-01

- **CTH3 H35-001S2/CTH3 H31-001S2**

192KB+2×64KB program storage,512KB data storage,16KB data power-off storage,
24VDC power supply,2×RS485 port (PPI/ free port),1×Ethernet port,1×USB port,
supports single-axis motion control functions (such as positioning, speed and backtracking, etc.),
support Trace function, support C language programming.

H31-01: Maximum number of racks is 1.
H35-01:Maximum number of racks is 4.

Signal module

Input/output module

With a various types, including digital input, digital output, analog input, analog output, analog current and voltage input and output.
The number of points , including 8 points to 32 points. The number of analog module points covers 4 to 8 points

Temperature module

AIT thermocouple input module:
AIT-04, 4*TC, isolated,16bit precision,
AIT-08, 8*TC, isolation 16BIT accuracy,
AIR thermal resistance input module:
AIR-04, 4*RTD, isolation 16bit precision,
AIR-08, 8*RTD, isolated 16bit precision.

Function module

HUB-02

HUB EtherCAT splitter (CTH3-HUB-002S2)

EtherCAT splitter,24V DC,1 channel EtherCAT input,7 channels EtherCAT output.

HSC-02

HSC high speed counting module (CTH3-HSC-020S1)

2 channels 5V difference /24VDC single-end encoder signal input; Input frequency single end up to 500KHz difference up to 2MHZ, 32 bit counter format;Count clearing and count capture.

HSP-04

High speed pulse output Module (CTH3-HSP-040S1)

Pulse output module, support 4 channels 4MHz differential output or single 500KHz.

CAN-1M

CAN communication module (CTH3-CAN-1M0S1)

CAN-1M main station module: 1×CAN port (suitable for CTH3-H series CPU).

ECT-00

EtherCAT slave module (CTH3-ECT-000S1)

H36/H56 can support up to 64 EtherCAT slave stations, and C series CPU can support up to 128 EtherCAT slave stations.
The bus can communicate at 100Mbps.Communication distance of slave station is up to 100M.
Support for third party EtherCAT master.

PNT-00

PROFINET module (CTH3-PNT-000S1)

PROFINET slave module, up to 8 CTH300 IO modules (not including CAN module, EtherCAT slave module).

Power module

PWR-02

Power module (CTH3-PWR-020S1)

The PWR module provides stable and reliable 24V power supply for CPU, signal module, function module and communication module.Power input 110/220VAC self-adaptive, suitable for different countries in the world power supply network;
Excellent starting and buffering capabilities enhance the stability of the system;Excellent input anti-overvoltage performance and output overvoltage protection performance; Power module,220VAC to 24VDC,2A.

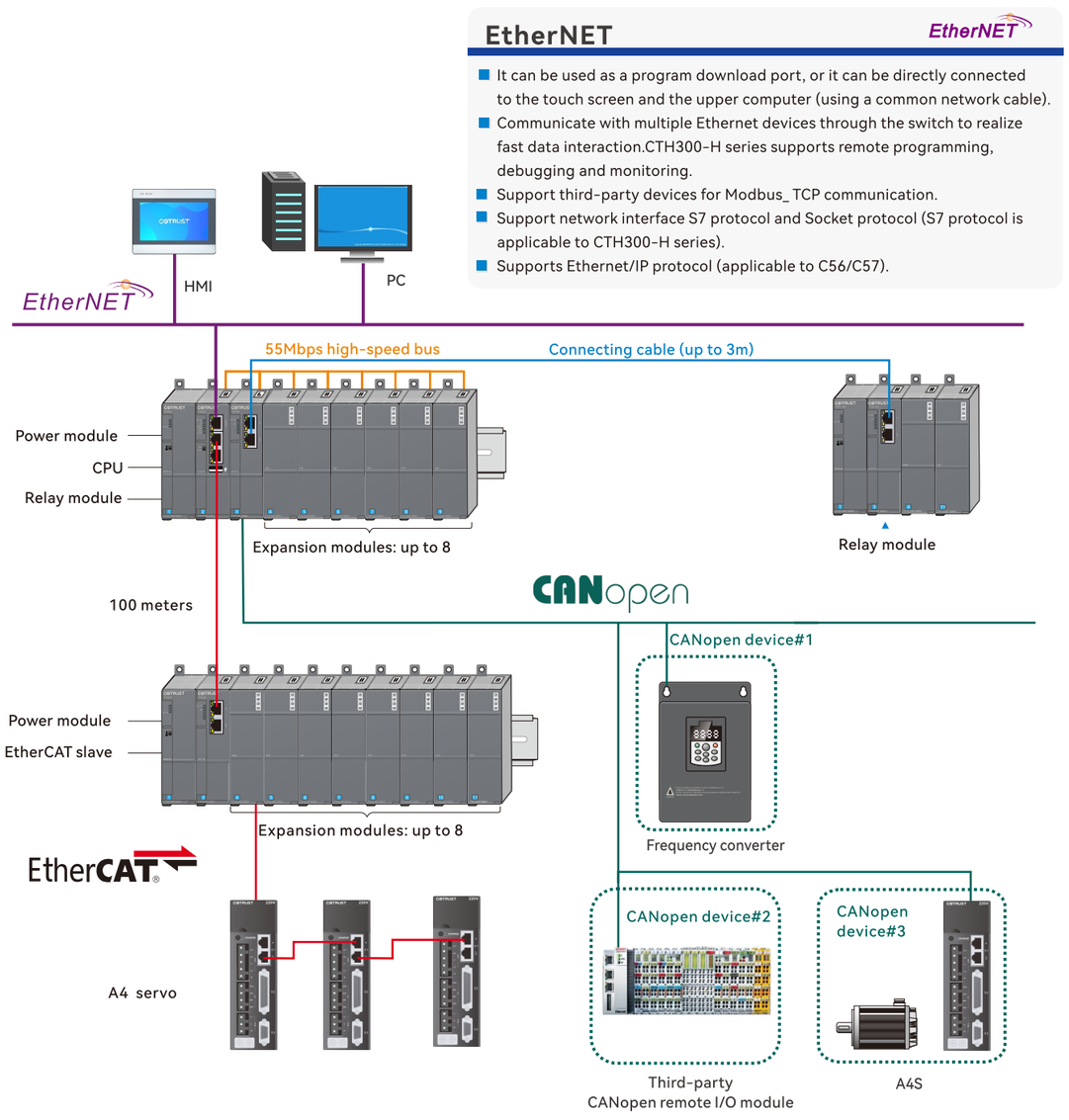
Relay module

INT-00

Relay module (CTH3-INT-000S1)

High-speed backplane bus, effectively ensure the communication between the master and slave frame advanced hardware design, simple selection.

Extension System



EtherNET

- It can be used as a program download port, or it can be directly connected to the touch screen and the upper computer (using a common network cable).
- Communicate with multiple Ethernet devices through the switch to realize fast data interaction.CTH300-H series supports remote programming, debugging and monitoring.
- Support third-party devices for Modbus_ TCP communication.
- Support network interface S7 protocol and Socket protocol (S7 protocol is applicable to CTH300-H series).
- Supports Ethernet/IP protocol (applicable to C56/C57).

- EtherNET
- EtherNET/IP
- EtherCAT
- Profinet
- CANopen
- MQTT
- RS485
- OPC_UA

Maximum Local Extension

CTH300 backplane can be extended when the user require signalmodules or functional module more than eight:

- Up to 32 modules can be installed in 4 racks;
- Up to 3 expansion racks can be connected to the main rack;
- Each rack can be inserted into 8 modules;
- The maximum distance between two racks is 3 meters.

EtherCAT splitter HUB-02

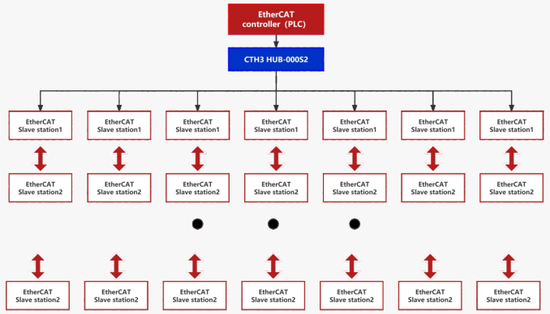
NEW

System Architecture

EtherCAT

CTH3-HUB-0000S2 acts as an EtherCAT splitter and can connect multiple EtherCAT slave stations.
1 channel EtherCAT input, 7 channels EtherCAT output.

HUB-02



Distributed remote I/O-CTL series

NEW

CTL ECT

EtherCAT

CTL series EtherCAT slave station module
Expandable up to 16 CTL Series I/O moduless

CTL PN

PROFINET

CTL series Profinet slave station module
Expandable up to 16 CTL Series I/O modules

CTL DIT16

- **CTL DIT16**
  CTL series digital input module
  16 input, 24VDC

CTL DQR16

- **CTL DQR16**
  CTL series digital output module
  16 relay output
  24VDC.2A

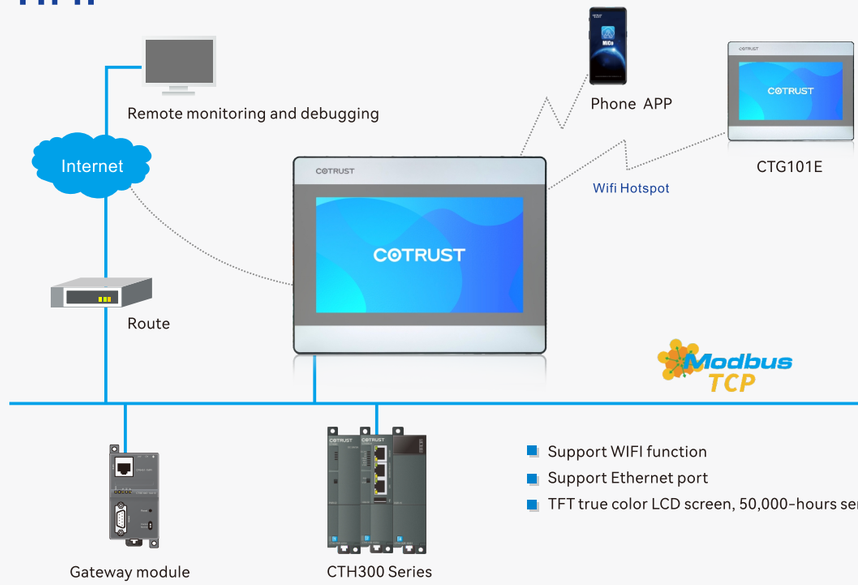
CTL DQT16

- **CTL DQT16**
  CTL series digital output module
  16 transistor drain output
  24VDC,0.5A

Friendly interactive interface—— HMI

COTRUST Human Machine Interface (HMI) has a wide range of products, including the TD series text display operation panel, the TP-i series and the CTG series graphic touch screen.

HMI



- Support WIFI function
- Support Ethernet port
- TFT true color LCD screen, 50,000-hours service time

TP-i Series

4.3"-12.1"

- 1×RS485 port,1×Ethernet port,1×USB port
- Support remote monitoring
- Support wifi module
- Display size covers 4.3"-12.1"
- Product models include TP04i/TP07i/TP10i/ TP12i

CTG Series

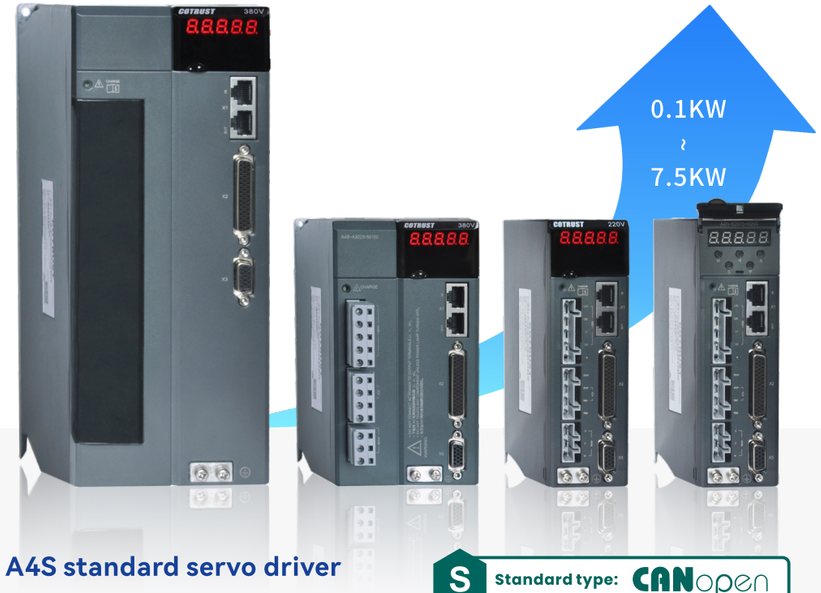
NEW

7"-10.1"

- Integrated Ethernet port, software and hardware
- Performance and structure comprehensive upgrade
- High bright wide view Angle display
- Using higher performance processor
- Communication speed and startup speed faster
- Support remote download
- Support wifi module and 4G module

A4 Servo driver system

A4S series AC servo can support CANopen protocol, and can be connected with COTRUST CTH300, CTH200, CTMC, CTSC-200 and other hosts to form a CANopen bus-based control servo system. The configuration is simple and convenient, the system control anti-noise ability is strong, with outstanding real-time and flexibility.
A4N series AC servo can form a comprehensive motion control platform CoMotion with COTRUST CTH3-C series motion controller and Copanel series HMI. With 100Mbps high-speed motion bus EtherCAT, powerful motion control instructions, electronic gear/electronic CAM synchronization functions can be realized. At the same time with CNC machine tool control function, support five axis linkage.
Cooperation with our high-performance PLC products or motion controllers based on EtherCAT, CANopen and other bus can be widely used in textile machinery, food processing machinery, packaging machinery, glass and woodworking machinery, electronic equipment, printing machinery, injection molding machines and any other industries.



A4S standard servo driver

S Standard type: CANopen

- Power range: 100W-7.5KW
- Speed ring bandwidth 1.2KHz
- Support high speed pulse input control mode, differential mode 500KHz, collector mode 200KHz
- Support MODBUS RTU and CANopen communication protocols
- Optional support 2500 line incremental encoder and 17Bit bus absolute encoder
- Support vibration suppression, rigid class selection, inertia recognition

A4N standard servo driver

N Network type: EtherCAT

- Power range: 100W-7.5KW
- Speed ring bandwidth 1.2KHz
- Support MODBUSRTU and EtherCAT communication protocols;
- Support two channel probe assist function, latched position
- Optional support 2500 line incremental encoder and 17Bit bus absolute encoder;
- Support vibration suppression, rigid class selection, inertia recognition.

Perfect product range

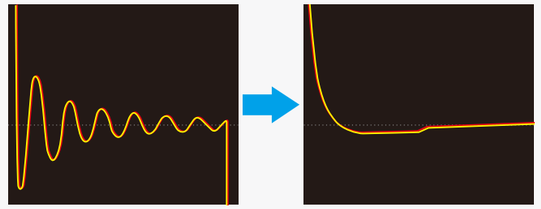
Servo power range :100W~7.5kw;
Various drive types:

- Pulse control type,
- Analog voltage input control type
- MODBUS RTU Communication control mode
- CANopen communication control type
- EtherCAT bus control type:

Various types of motor support:
Multiple encoders, magnetic, optical (2500 line incremental /17bit absolute); Spin (reserved).

Vibration suppression

Action: To overcome low frequency mechanical resonance and positioning end swing phenomenon with large inertia load

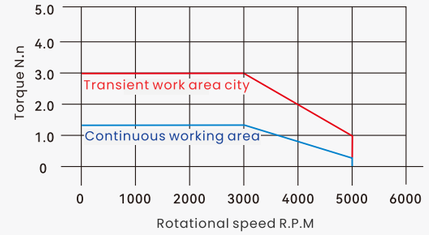


Before enabling the vibration suppression function

After the vibration suppression function is enabled

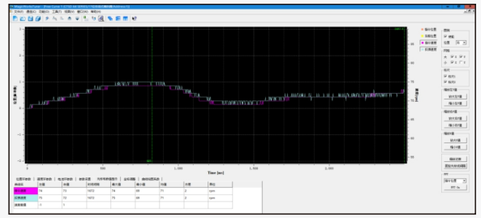
High speed

5000rpm high speed 300% torque output,40/80 flange motor



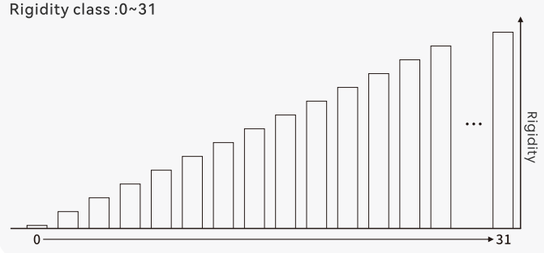
Low torque and stable speed.

Low torque stability control speed: When A4 is controlled at low speed and 1rpm, the torque fluctuates by 0.5%.



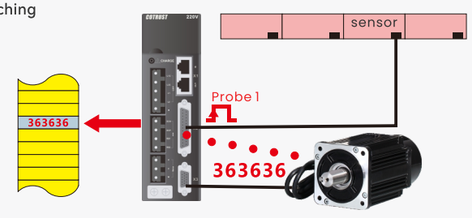
Support rigid class selection

Rigidity class :0~31



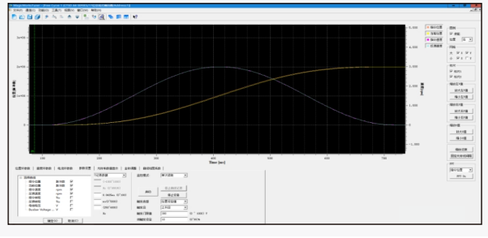
Supports two probes

Probe function: high-speed DI can capture instantaneous position coordinates, response time 2us; Supports two-way high-speed DI fetching



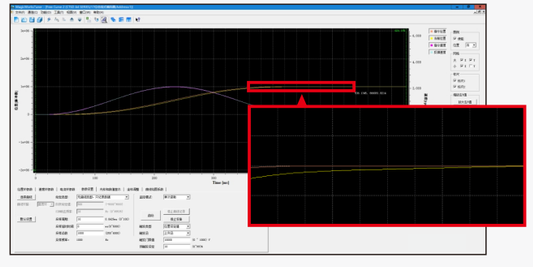
Support optional curve,Convenient debugging

MagicWorks Tunner Optional Curve: Users can select monitoring position, speed and torque curves for easy debugging and problem locating



Precise positioning control

Positioning control, with 10 times inertia load, positioning curve

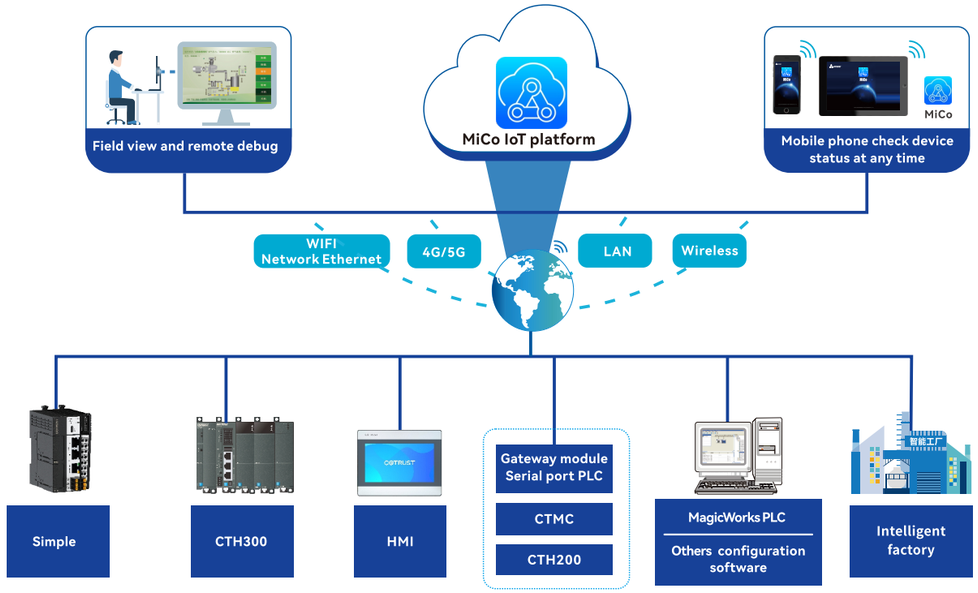


MiCo remote solution

COTRUST Mico remote solution, adopts 128bit dynamic data encryption mode, It is an open, stable and secure Internet of things platform,the device can be easily connected to the MiCo network through PLC (CTH200, CTH300,CTMC), gateway module or TP-i/CTG series intelligent HMI.
The gateway module provides RS485 or Ethernet interface and embedded multiple protocols, which can connect different equipment (CTSC-100, CTSC-200 and third party products) safely, quickly and conveniently to realize remote monitoring and maintenance of equipment.
MiCo provides Android and IOS, PC client, provides an open interface and connect to the third-party software like ERP.
So that each device in the Internet can connection anywhere.

Processing and Application of Industrial Big Data

Support the ways of WIFI / Ethernet, RS485 communications, data through 4G, LAN, wireless network access to the Internet, so as to achieve the large industrial data processing and application.



MiCo software

- 128bit dynamic data encryption mode,It is an open, stable and secure Internet of things platform
- The most economical cost: using COTRUST Ethernet PLC or gateway can realize the remote object connection
- Three client platforms: Android , iSO and PC client
- Various network access modes: WIFI/ Ethernet, 4G/5G and other access modes are supported
- Local and remote picture sharing
- Support remote update PLC engineering, HMI firmware
- Support offline alarm function
- Support audio alarm function

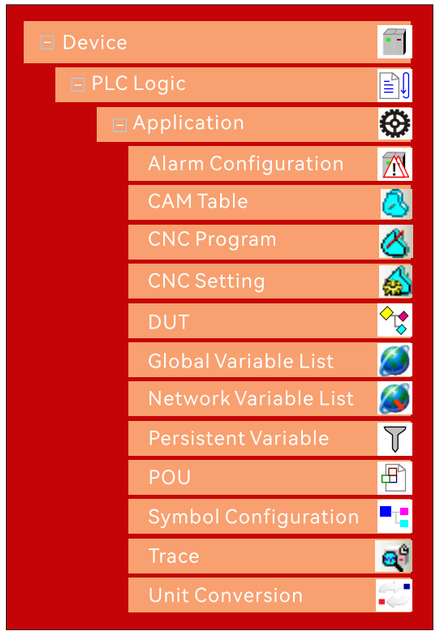
MiCo software download

IOS

Android & PC

CODESYS: Programming software for CT-SI522/CTH300-C CPU

CODESYS is a programming tool for machine developers. It is easy to learn, set adjustment control in one, can Complete the control function quickly and safely.



Programming

- Support standard data types such as BOOL/integer/real/time, and support Union/ reference/pointer.IEC extended data types, supporting user-defined data types such as arrays/structures/enumerations.
- Complies with IEC61131-3 programming environment, supports CFC/FBD/LD/IL/ST/SFC language, and the program can be composed of POUs in different languages.
- Multi task programming, the execution cycle and priority of each task can be set separately. Syntax error check, variable and symbol highlight processing.
- Online programming ensures that the device works properly during user debugging.

Motion control

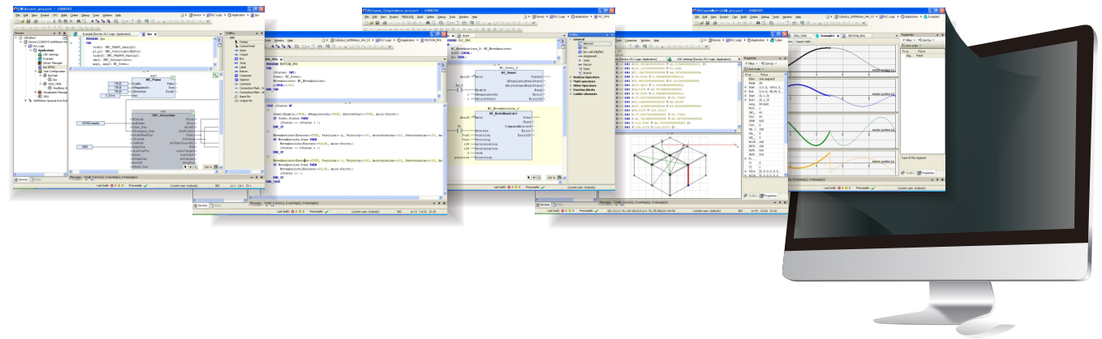
- PLCopen-compliant motion control function block
- The CAM cam editor quickly completes the electronic cam configuration and modifies the cam table in real time
- 5-axis linkage CNC function based on DIN66025

Graphical

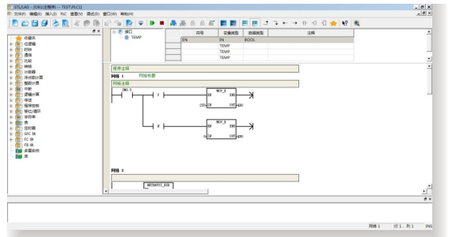
- Path view shows the planned motion path of G code
- Trace function displays the change curve of multiple variables in real time
- The cam configuration can be completed by simply dragging the cam curve of the CAM Table

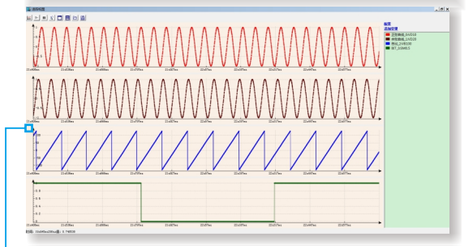
Safety and diagnosis

- Multi-level access rights to protect users' intellectual property
- Vendor ID check at startup
- Complete system diagnosis and exception handling mechanism



MagicWorks PLC Programming software





MagicWorks PLC programming software is suitable for COTRUST PLC full range of products, including: CTSC-100/CTSC-200/ CTH200/CTMC/ CTH300-H. MagicWorks PLC programming software Provide programming block, data block, status table, communication,download/upload, cross-reference, wizard ,etc.

MagicWorks PLC programming software :

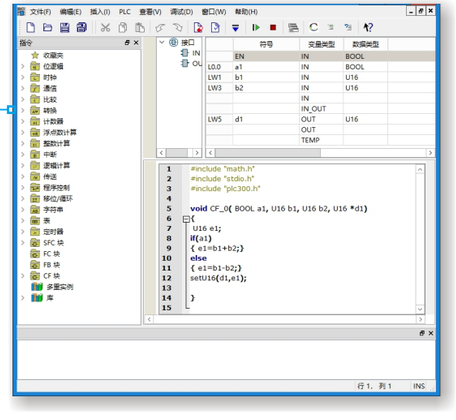
- Strictly comply with IEC61131-3 international standards
- Comply with PLCopen standard motion control instruction
- Trace function
- Ladder diagram LAD, instruction list STL, C language
- English And Chinese programming
- Tree project management structure
- Real-time online monitoring function
- Powerful online debugging function
- Convenient online help function
- Refined functional blocks, organizational blocks, and library file functions
- Ethernet programming features
- Convenient CANopen function block

Trace function

- A way to configure and display application-specific trace data in one or more charts.
- Used for BUG location and motion control analysis.
- Save data and import data for analysis.

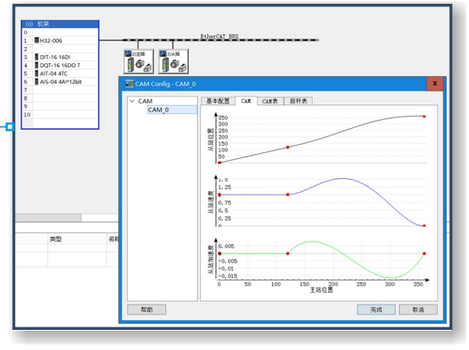
C language programming function

- Used to write C function subroutines
- Used for complex mathematical operations, improve the efficiency of the program operation code encryption, enhance the confidentiality of the program
- Support multiple calls, greatly improve programming efficiency



Electronic CAM function

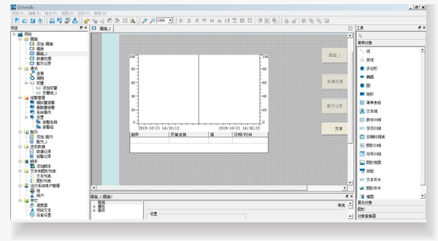
- Easy configuration using the axis configuration wizard
- Easily configure CAM data using electronic CAM wizard
- View CAM curve graph and intuitively analyze CAM motion trajectory
- Support for CAM table "one-dimensional array" and "two-dimensional array" compilation types



MagicWorks HMI configuration software

Based on Windows Innovative graphic configuration software,can be apply in single machine and production line equipment.

With the most rapid configuration effect, including page template,grouping variable,bilk operation



- Support multilingual configuration and the interface
- Support JavaScript language scripting
- Support communication protocol:COTRUST,Mitsubishi,Omron,
- Delta,Siemens etc PLC communication
- Support G Code editor for CN function
- Support data records,can download history query in a form
- Support table import variable, alarm, etc
- Add MiCo device type, convenient for users to select the remote scene configuration
- The projects of different resolution screens can be converted to each other
- Simulators support serial port, network port online connection PLC

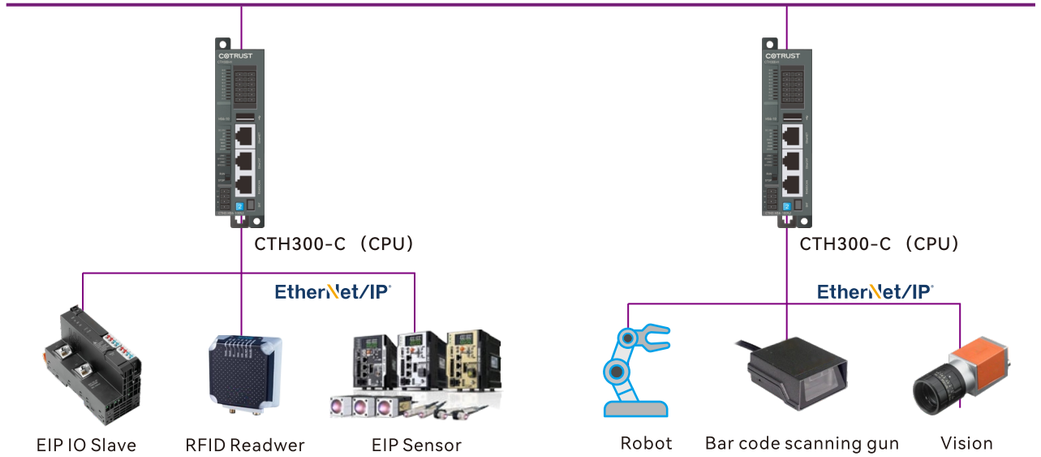
MagicWorks® SCADA

- SCADA integration graph configuration,report forms,file,communication,scripting;
- SCADA integration My SQL database,support data archiving;
- SCADA integration powerful report forms function,records and browsing history data;
- SCADA possess open-end OPC communication function,can connect to the industrial equipment of all kinds of support of OPC;
- Support 64K variable;
- Software for free,provide technical support.
- Multiple functional modules, complete the real-time monitoring function report, display history curve, real-time curve, alarm and other functions.
- Powerful real-time database, store all kinds of data, such as analog quantity, discrete quantity, character type, etc., to realize data exchange with external devices.

EtherNet/IP communication control solution

EtherNet/IP, based on TCP/IP protocol, extends the standard TCP/IP Ethernet to industrial real-time control, and combines with the general industrial protocol (CIP) to help users obtain a more open and integrated overall solution for industrial automation and informatization. All standard Ethernet communication modules, such as PC interface cards, cables, connectors, hubs and switches, can be used together with EtherNet/IP, supporting the complete realization of all network functions such as equipment configuration, real-time control, information collection, etc.

EtherNet/IP industrial Ethernet communication



Industry application

EtherNet/IP is one of the leading Ethernet-based communication technologies, which can effectively interconnect industrial equipment. It is widely used in factory automation and process control applications: 3C industry,Photovoltaic industry, food and beverage processing, logistics car, robot (such as ABB robot), RFID industry, railway and mining industry.

Flexible network system construction

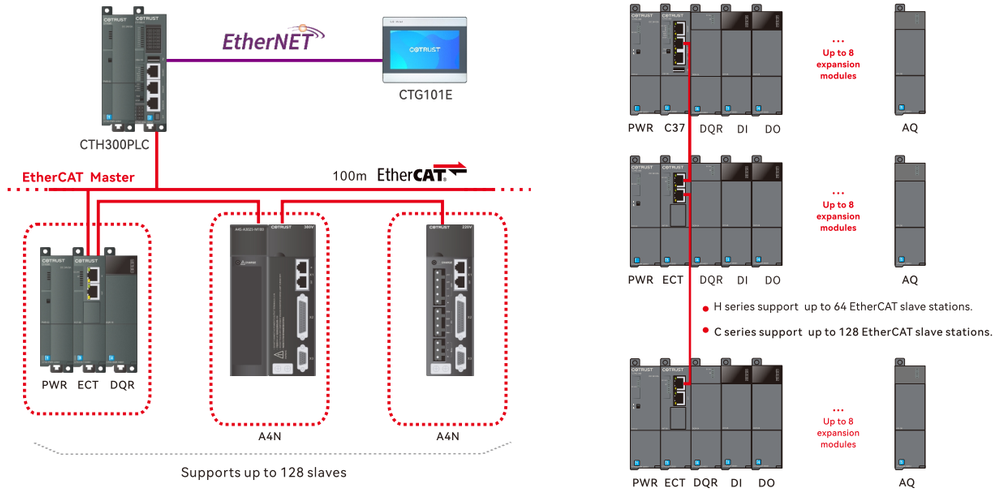
Supports star and linear network topologies, allowing for rapid expansion and management of production line compatible IT networks without the need for network cutting or maintenance by professional IT technicians.

Industry standard

Real-time EtherNet system EtherNet/IP(or Ethernet Industry Protocol or EIP) is an open bus standard promoted and maintained by the ODVA organization. Built on the application layer of the "Common Industrial Protocol" (CIP), EtherNet/IP extends the standard protocols TCP or UDP so that standard and automated networks can run in parallel.

EtherCAT communication control solution

As an important member of the new generation of EtherCAT solutions , A4N servo drivers can realize the synchronous refresh cycle of 128 axis by 100Mbps Ethernet only need 1ms, with high real-time performance. Drive comes with dual network port can form a communication ring network, which makes the communication network safe and reliable.
Simple wiring, only need network cable to connect. The maximum connection distance between stations is 100 meters.



Cooperated CTH300-C motion control CPU, through Codesys "axis" mode to connect powerful motion control algorithm.

Single-axis motion control function

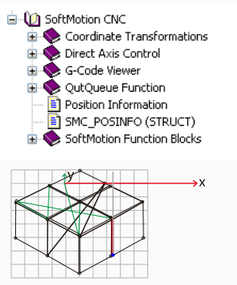
- PLCopen standard motion control instructions
- No distinction between the master axis and the pulse axis
- Self dimensional conversion
- Multiple regression models
- Complete exception handling mechanism

Electronic Cam and Electronic Gear

- PLCopen standard motion control instructions
- Support virtual shaft as electronic CAM/electronic gear spindle
- The same electronic CAM table can be called by multiple axes at the same time, the CAM curve can be based on demand for translation, expansion, relative/absolute coordinate switch, cycle/non-cycle switch and other operations

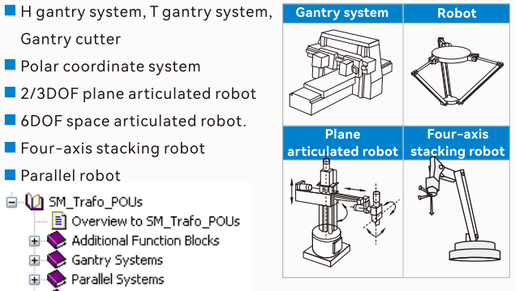
CNC function

- Support DXF file import based on DIN66025 standard G code
- Coordinate transformation, road pretreatment, GCODE file reading and writing
- CNC path preview, all changes in the CNC editor will be automatically updated in the path view
- Supports real-time modification of GCODE files in the controller through Copanel series HMI



Gantry system and Robot

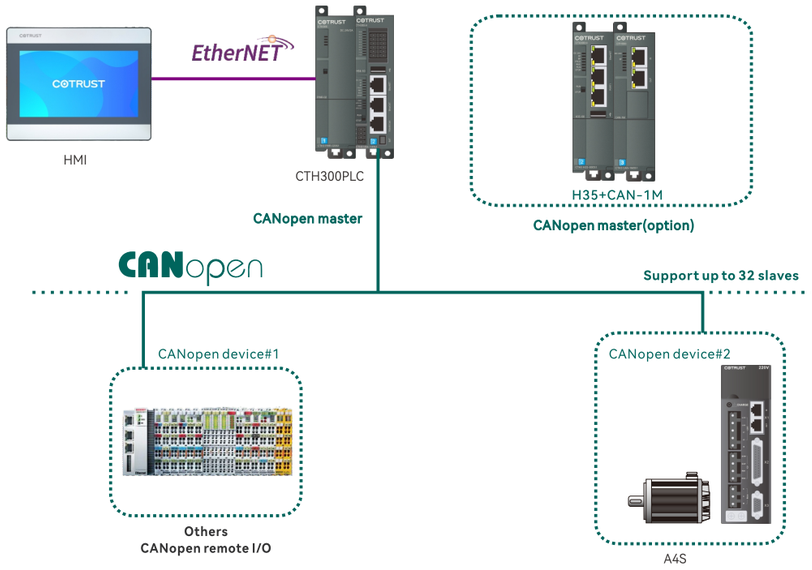
- H gantry system, T gantry system, Gantry cutter
- Polar coordinate system
- 2/3DOF plane articulated robot
- 6DOF space articulated robot.
- Four-axis stacking robot
- Parallel robot



Cooperated CTH300-H series medium PLC, through EtherCAT communication port,servo drive can realize function such as single axis relative/absolute position control, speed control, multiple return mode, interpolation, electronic CAM, electronic gear,ect.Logic program simple but servo position/speed control can be realized, real-time feedback monitoring parameters.

CANopen communication control solution

Several series of PLC and servo drivers all support CANopen protocol. Can support CANopen PLC, the third party CANopen remote I/O module, servo driver to form a high-speed communication network based on CANopen, the realization of field bus control, the system is flexible, efficient and reliable.



Easy wiring

Servo driver with dual RJ45 port can communicate directly with ordinary standard network cable, which saves a lot of tedious wiring work.

Convenient programming

Through a simple drag action, the parameter configuration can be completed in the Magicworks PLC upper computer. The user can control multiple servo on the PLC directly, change the position, speed and other instructions, and read the position, speed and other servo feedback information.

Strong expansion

CANopen communication network allows one master station and multiple slave station, and a single network can support up to 32 slave stations, easily realizing distributed control. And CTH300-H series PLC allows the expansion of multiple CANopen master station modules, the expansion ability more stronger.

Efficient and reliable

Transmission rate is up to 1Mbps, the maximum transmission distance is 2.KM.The safe and reliable data processing me chanism ensures the real-time communication of the communication network, and low probability of interference.

Note: COTRUST PLC support CANopen master station,H52-10/H56-10/C35-01/C36-01/C37-01/C56-10/C57-10 comes with CAN port,H35-01/ H31-01/H36-01/ H32-01 are supported by the extension CAN-1M module. CTSC-200(V5), CTH200, and CTMC series CPU are supported by EBH-CAN expansion board.

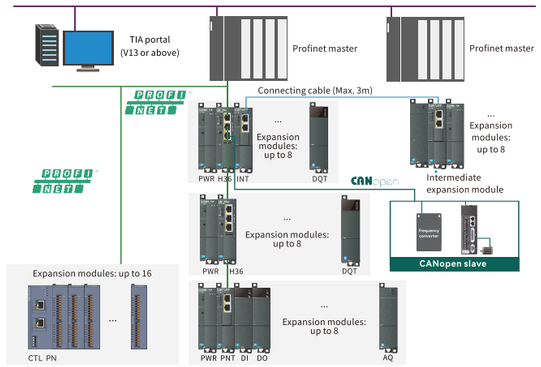
PROFINET communication control solution

PROFINET is a new generation of automation bus based on industrial Ethernet technology, suitable for a complete solution with different requirements. The distributed IO communication control solution based on PROFINET bus can extend remote distributed I/O easily.

CPU switch mode

Supported models:

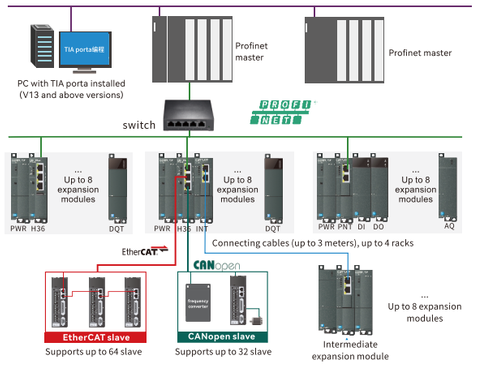
H36-02/H32-02
dual serial port , dual network port



CPU single network port mode

Supported models:

H31-01 H35-01 H32-01 H36-01 H36-02
H52-10 H56-10



High-speed

Profinet bus communication rate 100Mbps,the maximum communication distance up to 100m between two slave module.

Networking flexible

The topological structure support star,tree,linear,ring structure.

Expansion

Each slave module allow to extend 8 I/O module(digital module,analog module,temperature module,PID module.
But CAN module,motion control module,weighting module are not include).

Strong suitability

PN intelligent slave station is suitable for multiple models of Profinet master station: S7-200SMART, S7-300, S7-400, S7-1200, S7-1500

Software requirement

TIA Portal V13 and above version
SMART programming software V2.4 and above version
STEP7 Edit software V5.6 and above version

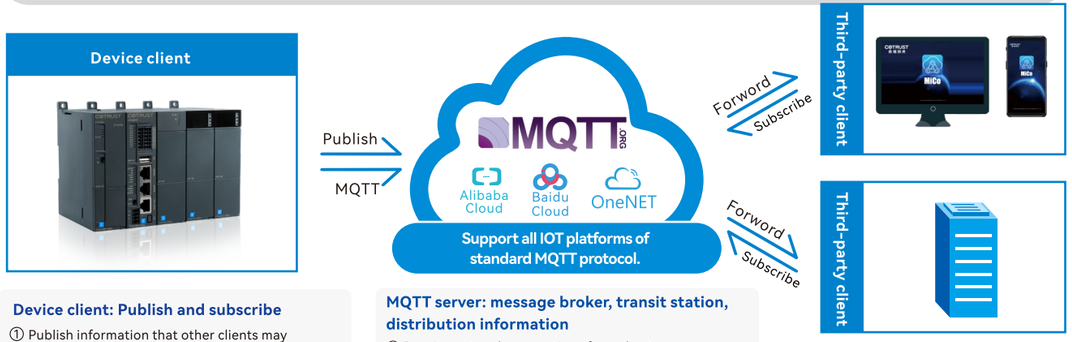
A variety of options

COTRUST provides CTSC-200 series, CTH200 series, CTH300 series of PROFINET interface modules, users can choose different series of distributed 10 according to application requirements

MQTT communication control solution

A communication protocol based on client/server publish/subscribe mode. The CTH300-H CPU of COTRUST PLC supports MQTT Internet of Things protocol.

- MQTT is a simple, stable, open and easy to implement message protocol.
- Send and receive only when there are updates, and the efficiency burden is light.
- Save flow and do not need to cycle.
- Internal encryption mechanism to prevent eavesdropping.
- It has wide applicability in information collection, industrial control, intelligent building and other aspects under the application of the Internet of Things.



Device client: Publish and subscribe

① Publish information that other clients may subscribe to.
② Subscribe to messages published by other clients.
③ Unsubscribe or delete the message of the application.
④ Disconnect from the server.

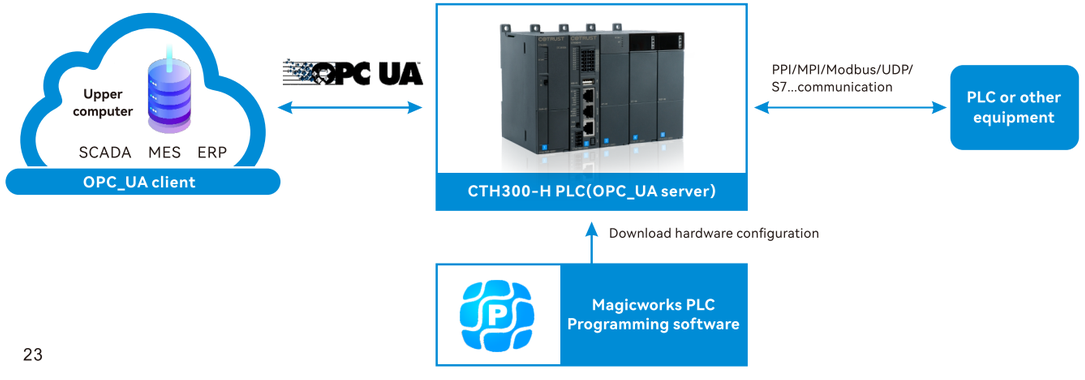
MQTT server: message broker, transit station, distribution information

① Receive network connections from clients.
② Receive the application information published by the client.
③ Process subscription and unsubscribe requests from clients.
④ Forward application messages to subscribed clients.

OPC_UA communication control solution

It is independent of a specific operating system, supports such as Windows, Linux, Apple OS X, real-time operating system or mobile operating system (Android or IOS), and is suitable for cross-level data exchange. It uses a simple client/server mechanism for communication.

- Magicworks PLC (V2.23) supports OPC UA server, which is only applicable to CTH300-H series PLC.
- By adding OPC UA elements, the read and write permissions, variable types and node information of PLC variables and DB variables can be managed, so as to realize configuration access to PLC variables..



Application