



PRODUCT Brochure

Sichuan Odot Automation System Co., Ltd.

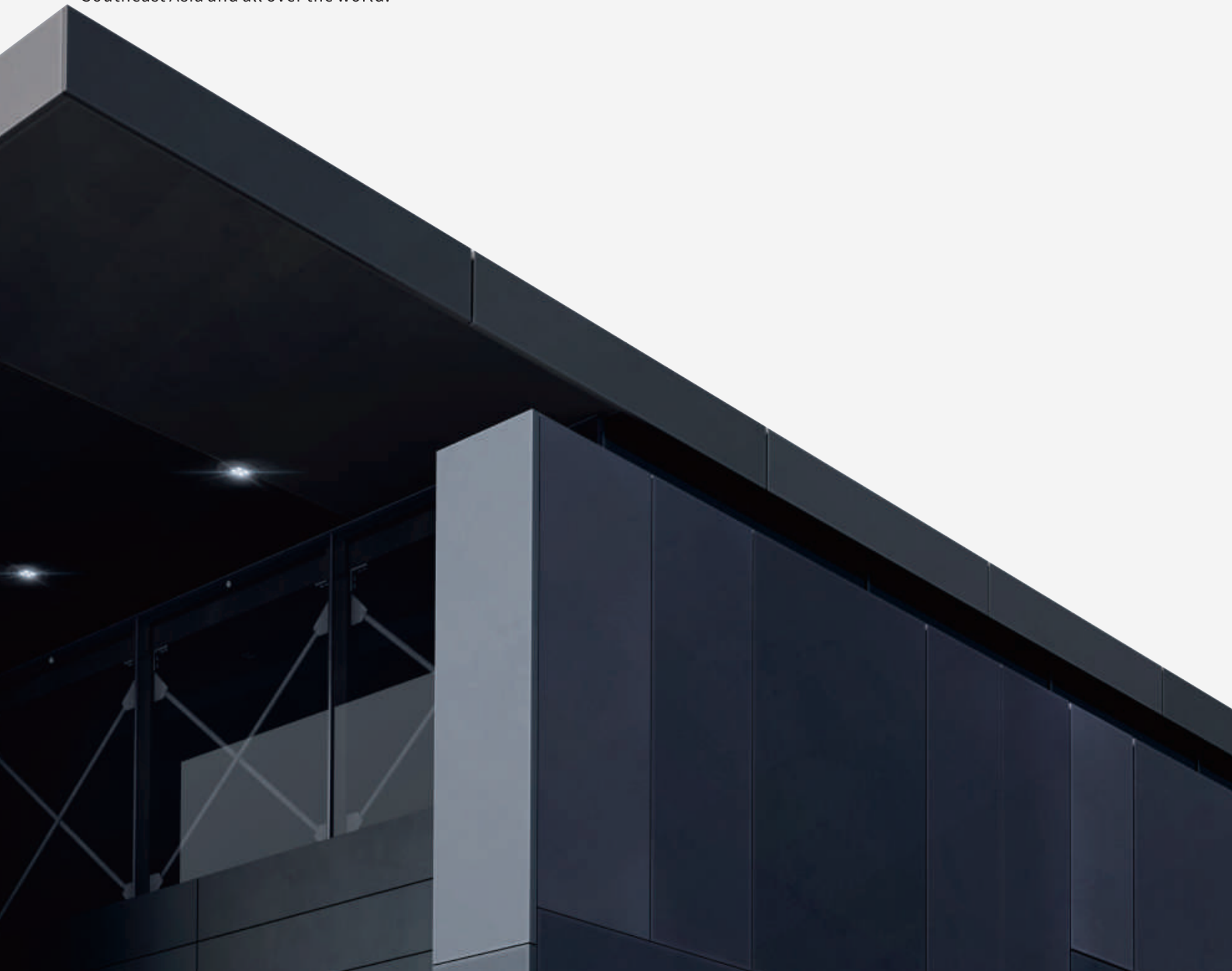
Introduction

Founded in 2003, ODOT Automation is a brand specialized in industrial communication and automation control system R&D and integrated technic service. We developed ODOT product series based on our 16-year experience in industrial communication and automation control. Our mission is focusing on IIOT, boosting smart factory.

We own a factory of over 1500 square meters and an independent R&D center as well as a professional technical team with 30 engineers. With the R&D center, we built ODOT product line which is consisted of remote I/O module, integrated I/O module, IIOT gateway, protocol converters, serial gateway, industrial Ethernet switches, industrial wireless, embedded modules and etc.

Since 2012 and ODOT Automation has successfully provided professional field data collection solutions for textile enterprises, automobile accessory enterprises, cereal & oil processing enterprises, food and beverage producing enterprise, water treatment, power management, hydro power station, liquor producing enterprises etc. With our expertise the site real-time data could be smoothly and accurately transmitted to the upper level management (MES and ERP), so that the smart manufacturing could be truly implemented and the real-time data of MES could show the first-hand data of the production site.

Our purpose is to help the intelligent manufacturing take solid steps; the smile of your customer with your product could be our pride. ODOT Automation has exported our products as cost-effective solutions to North America, Europe, Middle East, Southeast Asia and all over the world.



Partner

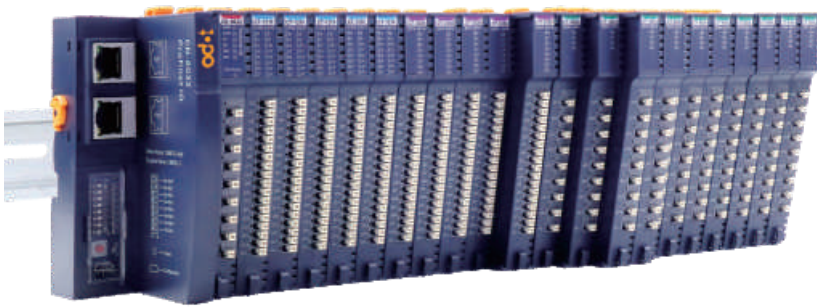


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ODOT Automation



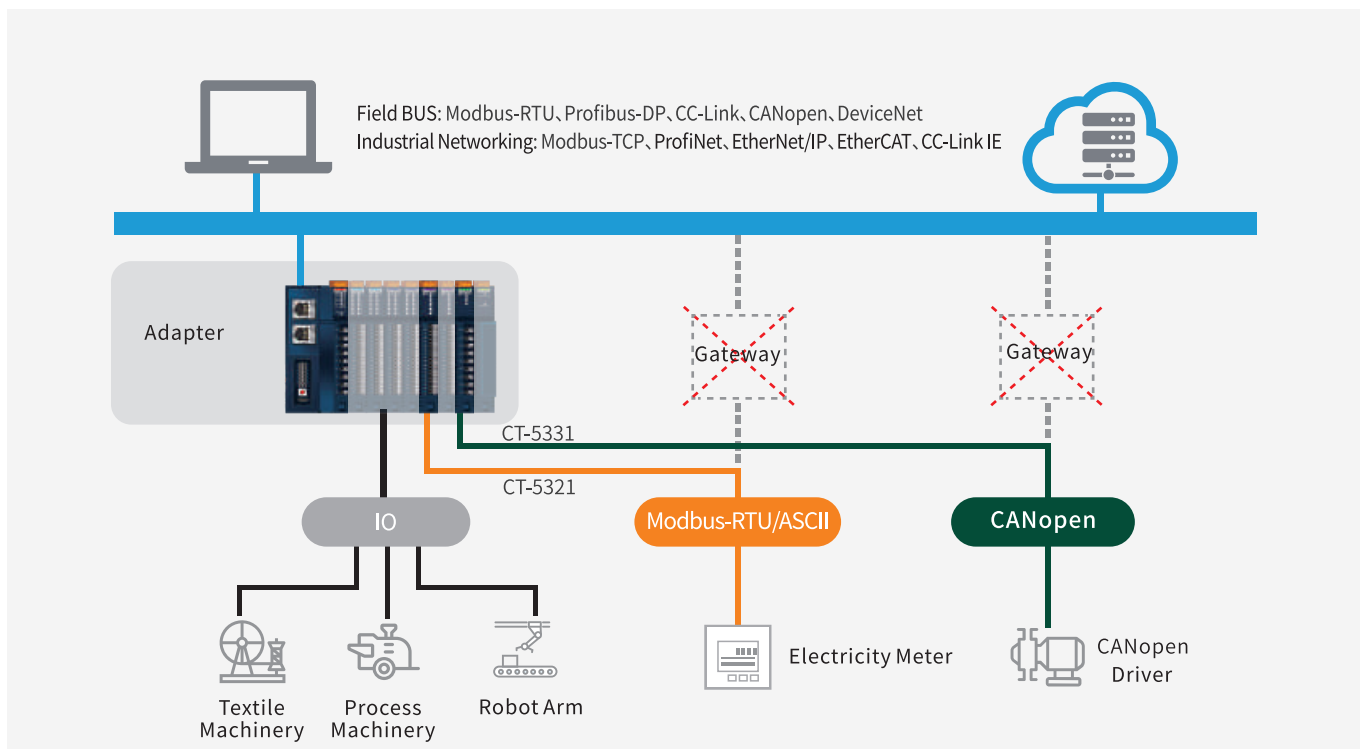
Agent/Distributor Seeking Globally
Connect Industrial Device
Collect Field Data
Create Automation Environment

Remote IO/AIObox/IIOT Gateway/Ethernet Switches Deep customization, IIOT, 4G, Cloud, MES, Smart Factory

ODOT latest remote IO module feature:

1. Slim & compact design to save more spaces;
2. Spring terminal for fast wiring of plug and play;
3. Innovation design of light guide terminal;
4. High speed back plane bus of 32 full analog modules of refreshing period at 1ms;
5. Supports max carried IO modules of 32pcs;
6. Provide deep customized solutions with special modules or ODM services are acceptable.

APPLIED TOPOLOGY



CN-8011 Modbus-RTU Network Adapter



Module Overview

CN-8011 Modbus-RTU network adapter supports standard Modbus-RTU communication, it supports function code of 01/02/03/04/05/06/15/16/23, and this device could monitor the IO module communication state in real time.

Modbus-RTU Parameter

Protocol: Modbus-RTU/ASCII
Function Code: 01 / 02 / 03 / 04 / 05 / 06 / 15 / 16
Baud Rate: 2400~115200bps

Environment Specification

Operation Temperature -40~85°C
Operation Humidity 5%-95% (No Condensation)
Protection: Ip20

Hardware Parameter

System Power Nominal Reverse Protection: YES 24Vdc,
Range: 9-36Vdc
Power Consumption: 30mA@24Vdc
Internal Bus Supply
Current Max: 2.5A@5VDC
Power Supply Nominal: 24Vdc, Range: 22-28Vdc
Field Power Current: Max. DC 8A
IO Modules Supported: 32 pcs
Wiring: Max. 1.5mm² (AWG 16)
Mounting Type: 35mm DIN-Rail
Size: 115*51.5*75mm
Weight: 130g

CN-8012 Profibus-DP Network Adapter



Module Overview

CN-8012 PROFIBUS-DP network adapter supports access of standard PROFIBUS-DP, and the protocol version it supports is DPV0.

Profibus-DP Parameter

Protocol: PROFIBUS DPV0
Interface Type: DB9 female head
Station Type: PROFIBUS Slave
Station Address: Dial code switch configuration

Environment Specification

Operation Temperature: -40~85°C
Operation Humidity: 5%-95% (No Condensation)
Protection Class: IP20

Hardware Parameter

Adapter Hardware Parameter
System Power Nominal Reverse Protection: YES :24Vdc,
Range: 9-36Vdc
Power Consumption: 30mA@24Vdc
Internal Bus Supply
Current Max: 2.5A@5VDC
Power Supply Nominal: 24Vdc, Range: 22-28Vdc
Field Power: Current Max. DC 8A
IO Modules Supported: 32 pcs
Wiring: Max. 1.5mm² (AWG 16)
Mounting Type: 35mm DIN-Rail
Size: 115*51.5*75mm

CN-8013 CC-Link Network Adapter



Module Overview

CN-8013 CC-Link network adapter supports standard CC-Link Ver.2 communication and it could monitor the communication status of IO modules in real time.

CC-Link Parameter

Protocol: CC-Link Ver.2
 Station Type: Remote device station
 Number of Logical Stations Occupied : 1, 2, 3, 4
 Extended Loop Setup: 1 time, 2 times, 4 times, 8 times
 I/O Data CapacityRX/RX capacity (bit) max. 896

Environment Specification

Operation Temperature: -40~85°C
 Operation Humidity: 5%-95% (No Condensation)
 Protection Class: IP20

Hardware Parameter

System Power: Nominal 24Vdc, Range 9-36Vdc
 Reverse Protection: YES
 Power Consumption: 110mA@24Vdc
 Internal Bus Supply Current: Max. 2.5A@5Vdc
 Power Supply: Nominal 24Vdc, Range 22-28Vdc
 Field Power Current: Max. DC 8A
 IO Modules Supported: 32pcs
 Wiring: Max.1.5mm²(AWG 16)
 Mounting Type: 35mm DIN-Rail
 Size: 115*51.5*75mm
 Weight: 130g

CN-8031 Modbus TCP Network Adapter



Module Overview

CN-8031 Modbus TCP Network Adapter supports the standard Modbus TCP Server Communication, and Ethernet supports the cascade function of dual-port switches. This adapter supports access to 5 Modbus TCP clients simultaneously, supports Modbus function code 01/02/03/04/05/06/15/16 /23, supports the Modbus application of watchdog, supports the process data maximum sum of input and output of 8192 bytes, and supports number of the extension IO module of 32. Module carries with the diagnostic function and it can monitor the communication state of IO module in real time.

Communication Interface Specification

Protocol: Modbus-TCP
 Process Data Area: Sum of input and output:8192 Byte
 Number of TCP: 5 Clients
 TCP Keepalive: YES
 Network Interface: RJ45x2
 Speed: 10/100Mbps, MDI/MIDX, Full-Duplex
 Distance: 100m

Environment Specification

Operation Temperature
 -40~85°C
 Operation Humidity5%-95% (No Condensation)
 Protection ClassIP20

Hardware Specification

System Power: Nominal 24Vdc, Range 9-36Vdc
 Reverse Protection: YES
 Power Consumption: 50mA@24Vdc
 Current Output
 Max.2.5A@5VDC
 Field Power: Nominal 24Vdc, Range 22-28Vdc
 Field Power Current: Max. 8A
 IO Modules Supported: 32 pcs
 Wiring: Max.1.5mm²(AWG 16)
 Mounting Type: 35mm DIN-Rail
 Size: 115*51.5*75mm
 Weight: 130g

CN-8032 Profinet Network Adapter



The module overview

The CN-8032 Profinet network adapter supports standard Profinet IO Device Communication. The adapter supports MRP media redundancy, and it could realize ring network redundancy. And it supports RT/IRT real-time and synchronous communication mode, with its RT real-time communication minimum period of 1ms and IRT synchronous communication minimum period of 250us. The adapter supports a maximum input of 1440 bytes, a maximum output of 1440 bytes, and the number of the extended IO modules it supports is 32.

Profinet Parameter

Protocol: Profinet IO Device
 I/O Data Size: Input Max.1440 Bytes, Output Max.1440 Bytes
 Network Interface: RJ45x2
 Speed: 10/100Mbps, MDI/MIDX, Full-Duplex
 Distance: 100m
 Profinet Device Name: DIP switch setting or Profinet monitor modifying

Environment Specification

Operational Temperature: -40~85°C
 Operational Humidity: 5%-95% (No Condensation)
 Protection Level: IP20

Hardware Specification

System Power: Nominal 24Vdc, Range 9-36Vdc
 Reverse Protection: YES
 Power Consumption: 110mA@24Vdc
 Current Output: Max 2A@5Vdc
 Field Power: Nominal 24Vdc, Range 22-28Vdc
 Reverse Protection: YES
 Field Power Current: Max. DC 8A
 IO Modules Supported: 32 pcs
 Wiring: Max.1.5mm² (AWG 16)
 Mounting Type: 35mm DIN-Rail
 Size: 115*51.5*75mm
 Weight: 130g

CN-8033 EtherCAT Network Adapter



The module overview

The CN-8033 EtherCAT I/O module supports standard EtherCAT protocol access. The adapter supports a Max. input of 1024 bytes and a Max. output of 1024 bytes. It supports 32 pcs of extended IO modules.

EtherCAT Parameter

Protocol: EtherCAT
 Process data area: Input Max.1024 Bytes, Output Max.1024 Bytes
 Network Interface: 2 RJ45
 Speed: 10/100Mbps, MDI/MIDX, Full-Duplex
 Max.Bus Length: 100m

Environment Specification

Operational Temperature: -40~85°C
 Operational Humidity: 5%~95% RH(Condensation)
 Protection Level: IP20

Hardware Specification

System Power: Nominal 24Vdc, Range 9-36Vdc
 Protection: Overcurrent Protection, Reverse Protection: YES
 Power Consumption: 110mA@24Vdc
 Internal BUS Supply Current: Max. 2A@5VDC
 Field Power Supply Power Supply: 22~28V (Nominal 24VDC)
 Field Power Supply Current: Max. DC 8A
 I/O Modules supported: 32 pcs
 Wiring: Max.1.5mm²(AWG 16)
 Mounting Type: 35mm Size DIN-Rail
 Size: 115*51.5*75mm
 Weight: 130g

CT-121F 16 channel digital input/24VDC/ Sink type



Module features

- ◆ the module supports 16 channels digital input, supports sink input, and input voltage is 24VDC.
- ◆ the module can collect digital output signal of field equipment (dry contact or active output).
- ◆ the module can be accessed to 2-wire or 3-wire digital sensor.
- ◆ the internal bus and field input of the module use opto-isolator.
- ◆ the module supports the input signal holding function, and the holding time can be set.
- ◆ the module carries 16 digital input channels with LED indicator on each channel.
- ◆ supports counting function, by adding counting sub-module.
- ◆ each input channel of the module supports a 32-bit counter with the counting frequency <200Hz.
- ◆ the module can set the digital signal input filtering time and the byte transmission order of the counter.
- ◆ each channel of the module can set the counting mode and counting direction independently.

CT-122F 16 channels digital input/0VDC/Source type



Module features

- ◆ the Module supports 16 channels digital input, supports source input, and input voltage 0V.
- ◆ the module could collect the digital output signal of field equipment (dry contact or active output).
- ◆ the module can be connected to a 2-wire or 3-wire digital sensor.
- ◆ the internal bus of the module and field input are isolated by optocoupler.
- ◆ the module supports input signal holding function, holding time can be set.
- ◆ the module carries with 16 digital input channel LED indicator.
- ◆ after adding counting submodule, the counting function is effective.
- ◆ each input channel of the module supports 32-bit counter with counting frequency <200Hz.
- ◆ the module could set the digital signal input filter time and counter byte transmission sequence.
- ◆ each channel of the module could set the counting mode and counting direction independently.

CT-2228 8 channel digital output/24VDC/ Source type



Module features

- ◆ the module supports 8-channel digital output, output high level effective, and output voltage 24V
- ◆ the module could drive field equipment (relay, solenoid valve, etc.)
- ◆ the module internal bus and field output are isolated by optocoupler
- ◆ the module carries with 8 digital output channel LED indicator
- ◆ the module has the functions of thermal shutdown and overcurrent protection
- ◆ the module supports short circuit protection and overload protection

CT-222F 16 channel digital output/24VDC/source type



Module features

- ◆ the module supports 16 channels digital output, the output high level is valid, the output voltage is 24VDC.
- ◆ module can drive field equipment. (relay, solenoid valve, etc.)
- ◆ the internal bus of the module and field output are using opto-coupler.
- ◆ the module has 16 digital output channel LED indicator light.
- ◆ the module has the functions of thermal shutdown and overcurrent protection.
- ◆ the module supports short circuit protection and overload protection.

CT-2718 8 channel relay output 2A/30VDC/60W



Module features

- ◆ 8-channel relay normally on output
- ◆ 8 LED channel indicators
- ◆ Low on resistance ($\leq 100\text{m}\Omega$)
- ◆ 250VAC/220VDC the max. switch voltage is 250VAC/220VDC

CT-3158 8 Channel Voltage Input 0~5VDC/0~10VDC/ $\pm 5\text{VDC}$ / $\pm 10\text{VDC}$, 12Bit



Module features

- ◆ The module supports 8 channels of voltage signal input
- ◆ The module could collect 0~5VDC, 0~10VDC, $\pm 5\text{VDC}$, $\pm 10\text{VDC}$, with a 12-bit resolution
- ◆ The module carries with 8 analog input channel LED indicator
- ◆ The module input signal is a single ended common grounding input

CT-3238 8-channel analog input /0~4-20mA/ 15-bit single-terminal



Module features

- ◆ The module supports 8-channel current signal acquisition.
- ◆ The module can be configured for 0-20mA or 4-20mA current signal acquisition.
- ◆ The module supports 2-wire (non-loop output, external power supply required) or 4-wire current sensor input.
- ◆ The internal bus of the module and field input adopts magnetic insulation.
- ◆ The module input channel is connected to the field active analog signal current output sensor.
- ◆ The module channel equips with TVS overvoltage protection.

CT-3713 3-channel RTD-PT100 temperature acquisition module



Module features

- ◆ The module supports 3-channel RTD thermal resistance (PT100) temperature acquisition
- ◆ The module could be connected to a 2-wire or 3-wire PT100 temperature sensor
- ◆ The internal bus of the module and field input adopts magnetic isolation
- ◆ The module carries with 3 analog input channel LED indicator
- ◆ 15-bit ADC resolution

CT-3804 4 channels Analog Input, Thermocouple



Module features

- ◆ The module supports 4-channel thermocouple signal acquisition
- ◆ The module carries with 4 analog indicators
- ◆ The module supports 9 kinds of conventional thermocouple temperature measurement type
- ◆ The internal bus of the module and field input adopts magnetic isolation
- ◆ The module input channel supports TVS overvoltage protection
- ◆ 24-bit ADC resolution ($\Sigma\delta$ type)

CT-4234 4-channel analog output /0&4-20mA/16-bit single-terminal



Module features

- ◆ 2 output ranges can be set(0-20mA、4-20mA)
- ◆ The module internal bus and field output adopts magnetic insulation
- ◆ Single-terminal grounded together output mode

CT-5321 Modbus Serial Port Module



Module features

- ◆ The Modbus serial port module supports 1 channel RS485/RS232 /RS422 (optional), supports Modbus RTU/ ASCII protocol, and supports master, slave and free transparent transmission mode.
- ◆ The serial Module CT-5321 could be applied with the adapter modules, so it could convert Modbus into other protocols such as Modbus TCP, Profinet, EtherCAT, EtherNet/IP, etc. When the module is used, serial port parameters and Modbus instructions should be configured in IO Config software.
- ◆ Devices with RS485/RS232/RS422 interface, which support modbus-RTU /ASCII, could be applied with CT-5321 to realize interconnection with upper PLC or upper computers. CT-5321 could be applied with devices such as: PLC, DCS, remote IO, VFD, motor start protection device, intelligent high and low voltage electrical apparatus, power measurement device, intelligent field measurement equipment and instruments, etc.

CT-5800 Terminal module



Module features

- ◆ Terminal modules are used to stabilize the internal bus communication. When the number of adapter extension IO modules reaches 16 or more and terminal modules should be required. When the number of adapter extending IO modules is less than 16, and the terminal module CT-5810 only for dustproof could be selected. The dustproof terminal could cover the internal bus and field power supply hardware of the last IO module. And terminal modules have no process data and configuration parameters.

CT-623F 8-channel digital input /24VDC/ source or sink type 8-channel digital output /24VDC/ source type



Module features

- ◆ The module supports 8-channel digital input, and supports source type and sink type two-way input. The input voltage is 0V/24VDC.
- ◆ The module supports 8-channel digital output, Output high level valid, and the output voltage is 24VDC.
- ◆ Module input channel can collect digital output signal of field equipment. (dry contact or active output)
- ◆ The input channel of the module can set the digital signal input filtering time and the byte transfer order of the counter.
- ◆ The input channel of the module can set the counting mode and counting direction independently.
- ◆ Module output channel can drive field equipment .(relay, solenoid valve, etc.)
- ◆ Module internal bus and field input and output , using Optocoupler isolation.
- ◆ Module has 16 digital input and output channel LED indicator light.

CT-7221 Power Supply Extension Module 5V/2A



Module features

- ◆ System Power and Field Power Extension
- ◆ System Power Output 2A@5VDC
- ◆ Field Power Extension 8A Current

AIOBOX Series Integrated IO



- ◆ AIOBOX-16 supports 3 slots, slot 0 for communication, slot 1/2 for IO module
- ◆ AIOBOX-32 supports 5 slots, slot 0 for communication, slot 1/2/3/4 for IO module
- ◆ Slot 0 can be Modbus-TCP/Modbus RTU, PROFINET, EtherCAT, PROFIBUS-DP, CANopen
- ◆ Slot 1/2/3/4 can be selected according to customer needs, Max. 32 channels
- ◆ Working temperature: -40°C~85°C

Product Introduction

AIOBOX-16/32 is a modularized integrated IO module. The product can collect the I/O signal (Digital, Analog signal) of the field device to the PLC or host computer with Modbus TCP/ Modbus RTU, PROFINET, PROFIBUS-DP, EtherCAT communication interface. The construction is firm, firm design. It supports DIN-rail installation.

Product Specification

AIOBOX-16

Standard voltage	24 VDC
Voltage Range	9-36 VDC
Power	Max.250mA@24Vdc
IO wiring	Max.1.5mm ² (AWG 16)
System wiring	3.81mm plug screw terminal
Field wiring	3.5mm plug screw terminal
Slots	3
Dimension	25*140*110mm

AIOBOX-32

Standard voltage	24VDC
Voltage Range	9-36VDC
Power	Max. 400mA@24VDC
IO wiring	Max. 1.5mm ² (AWG 16)
System wiring	3.81mm plug screw terminal
Field wiring	3.5mm plug screw terminal
Slots	5
Dimension	37 * 140 * 110mm

AIO-X8033(EtherCAT)

Adapter Type	EtherCAT slave
Ethernet Port	2
Speed	10/100Mbps adaptive MDI/MDIX
Transmission Distance	Max. 100m
Data Length	Max.256 Byte input Max. 256 Byte output

AIO-X8012(Profibus DP)

Adapter Type	PROFIBUS-DP slave
Protocol	PROFIBUS-DP/V0
Ports	DB9 * 1
Speed	9.6K-12Mbps adaptive
Data Length	Max. 244 Byte input Max. 244 Byte output
Address Config	8-bit dial code switch

AIO-X8032(ProfiNet)

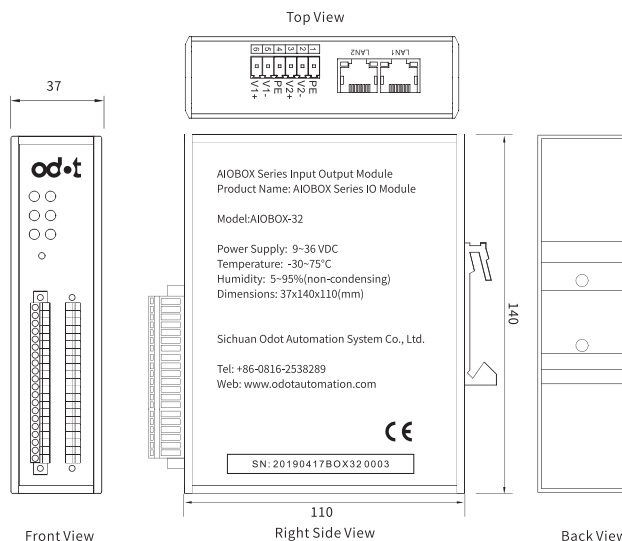
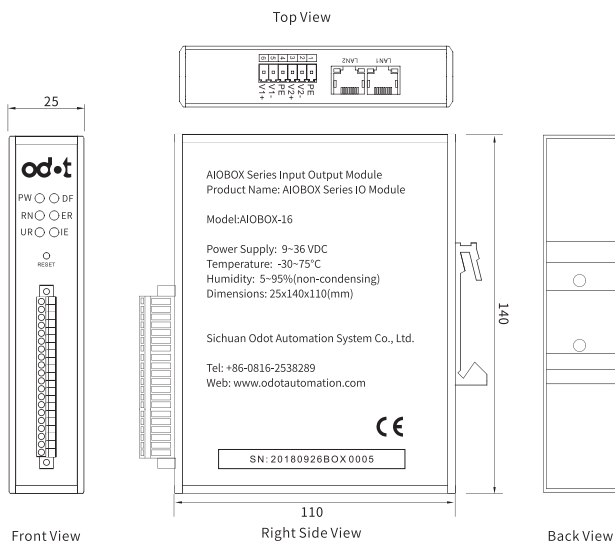
Adapter Type	PROFINET IO device
Ethernet Port	2 ports with switch function
Speed	10/100Mbps adaptive, Auto-MDI/MDIX
Transmission Distance	Max.100m
Data Length	Max.512 Byte input Max. 512 Byte output
Isolation	Electromagnetic isolation

AIO-X8021(CANopen)

Adapter	CANopen slave
Protocol	CANopen DS 401
Interface number	Db9 male 1 pc
Rate	10k - 1Mbit/sec, self adaptive
Data length	Input max. 512 Byte Output max. 512 Byte
Address configuration	8 bit DIP switch

Dimension

Unit: MM



AIO-X8031(MODBUS)

Ethernet Ports	2 ports with switch function
Adapter Type 1	Modbus-TCP Server
Speed	10/100Mbps adaptive, Auto-MDI/MDIX
Transmission Distance	Max.100m
Clients	Max. 2 clients at the same time
Function Code	01/02/03/04/05/06/15/16
Isolation	Electromagnetic isolation
Serial Port	1 RS485
Adapter Type 2	Modbus-RTU Slave
Wiring	3.81mm plug screw terminal
ESD Protection	±16KV
Data Bits	7, 8
Stop Bits	1, 2
Check digit	None, even, odd
Baud Rate	2400~115200bps
Function Code	01/02/03/04/05/06/15/16
Serial Mode	Supports RTU and ASCII

Mechanical

Shell	Aluminum alloy
Weight	AIOBOX-16: 416g AIOBOX-32: 548g

Working Environment

Working Temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95% (no condensation)

IO Modules

IO Modules (Max.2 IO for AIOBOX-16 and Max.4 for AIOBOX-32)

AIO-X1248	8 channel / digital input / 24VDC / source or sink type
AIO-X2228	8-channel / digital output / 24VDC / source type
AIO-X3318	8-channel / single-ended / 0&4-20mA input, 16-bit
AIO-X3424	4-channel/differential/0&4-20mA, ±20mA input, 16-bit
AIO-X3713	3-channel / RTD-PT100 / input
AIO-X3804	4-channel / TC thermocouple / input
AIO-X6227	7 channel / 24VDC / digital composite module 4DI + 3DO
AIO-X4312	2 channel 0-20/ 4-20/ 0-24mA current output 12 bytes
AIO-X4314	4 channel 0-20/ 4-20/ 0-24mA current output 12 bytes
AIO-X4322	2 channel 0-20/ 4-20/ 0-24mA current output 16 bytes
AIO-X4324	4 channel 0-20/ 4-20/ 0-24mA current output 16 bytes
AIO-X5102	2 channel/ Incremental encoder input/ 5V TTL input
AIO-X5112	2 channel/ Incremental encoder input/ 1Vpp Sinusoidal input

Power

Input Voltage	9~36 VDC
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Others

Certificate	EMS, CE
Warranty	3 years
Software	AIO-Box Config
Operating Platform	Supports Win XP, Win7, Win10 based on NET framework 4.0

Mini BOXIO



- ◆ AIOBOX-MT124F supports 16-channel DI, supports source and sink two-way Input, input voltage 24v/0v.
- ◆ AIOBOX-MT222F supports 16-channel DO, high-level voltage is valid, output voltage 24v.
- ◆ AIOBOX-MT623F supports 8-channel DI, supports source and sink two-way input, input voltage 24v/0v. AIOBOX-MT623F supports 8-channel DO, high-level voltage is valid, output voltage 24v.
- ◆ LED indicators for 16 channel input & output.
- ◆ Two or three-wire digital sensor can be connected through input channel.
- ◆ 32-bit counter is supported by every input channel (frequency: <200Hz).
- ◆ Thermal shutoff and overcurrent protection.
- ◆ The bus inside the module and the field input are isolated by optocoupler.

Product Introduction

This series of modules have the access of the standard Modbus-TCP and Modbus-RTU/ASCII protocols, Ethernet supports the cascade function of dual-port switch, and serial port supports the RS485 bus connection mode. DI signals (such as emergency stop signal, travel switch, photoelectric switch, button switch input) can be collected from the field, and DO signals can be the output field control status (such as relay output, valve output, indicator light display).

General Parameters

Dimension	27.5*110*110mm
System Power	9-36 VDC (standard 24VDC)
Isolation	isolation between power and IO
Field Power	22-28VDC (standard 24VDC)
Field Current	Max. 8A
Working Temperature	-30~75°C
Humidity	5%-95% (no condensation)
IP Protection	IP20
Wiring	Max.1.5mm ² (AWG 16)

Modbus-TCP Specifications

Protocol	Modbus TCP
Function Code	01 / 02 / 03 / 04 / 05 / 06 / 15 / 16
Connection Speed	10/100 Mbps
Max Length of Bus Wire	100m
Interface	RJ45*2
IP Configuration	Software for AIOBOX

Modbus RS485 Specifications

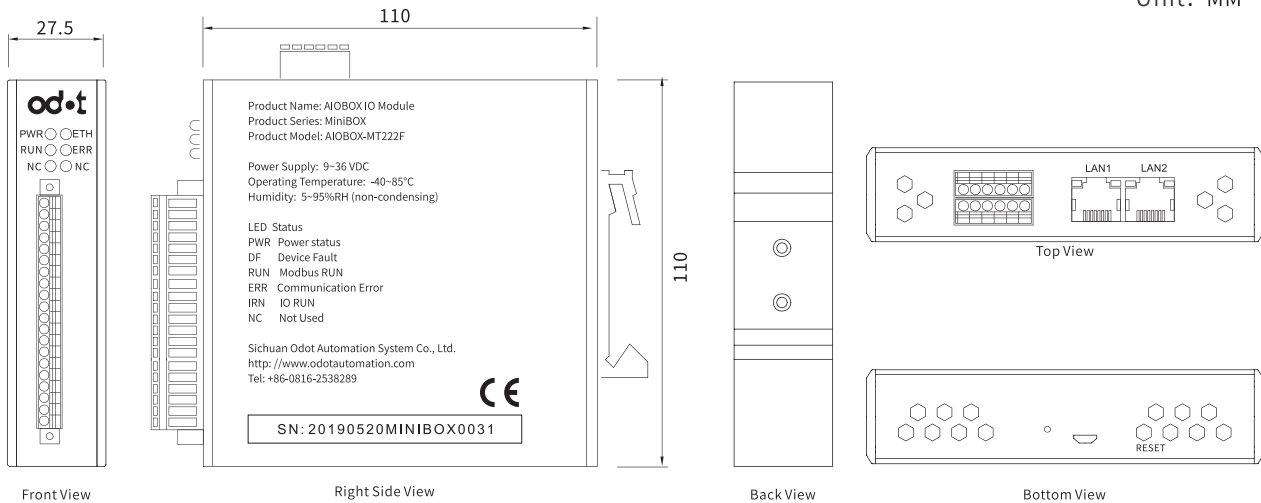
Protocol	Modbus RTU/ASCII
Function Code	01 / 02 / 03 / 04 / 05 / 06 / 15 / 16
Baud Rate	2400~115200bps
Station No	1~247
Data Bits	7, 8
Check digit	None, even, odd
Stop Bits	1, 2
Max Length of Bus Wire	1200m (RS485, 2400 Baud rate)
Interface of Rs485	1-way plug type screw terminal

Input Specifications

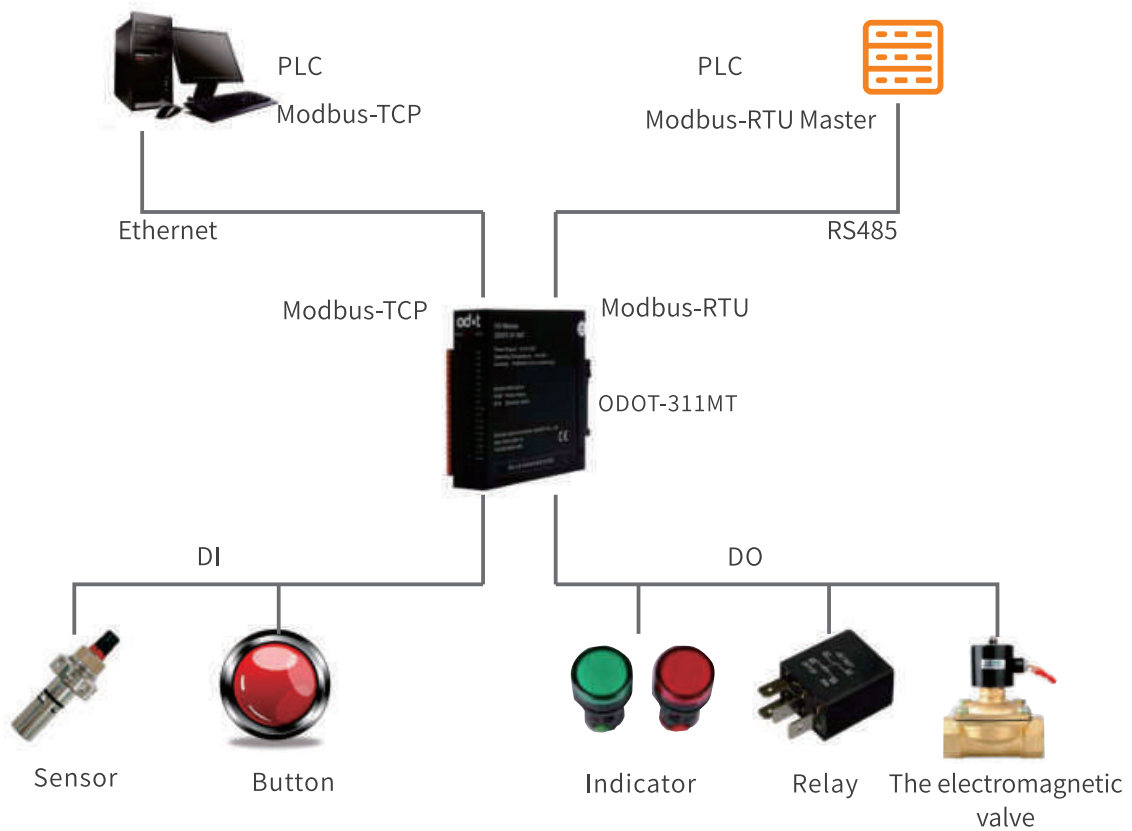
Channel	16-channel two-way input
Indicator	Led for 16-channel input
Threshold Voltage ON	High: 10 VDC ~24 VDC (Com port: 0VDC) Low: 0 VDC ~14 VDC (Com port: 24VDC)
Threshold Voltage OFF	High: Max. 5VDC (Com port: 0VDC) Low: Min. 19VDC (Com port: 24VDC)
Current ON	Max. 15mA/channel@28VDC
Input Impedance	>1.8kΩ
Input Delay	OFF to ON: Max. 3ms ON to OFF: Max 2ms
Filtering time	10ms
Sampling frequency	500Hz
Counting Frequency	<200Hz

Dimension

Unit: MM



Typical application topology



ODOT-DPM01



- ◆ Supports protocol conversion between Modbus and PROFIBUS
- ◆ Supports RS485, RS422 and RS232
- ◆ Supports Modbus master and slave, and supports RTU or ASCII
- ◆ Supports working environment of -40~85°C
- ◆ PROFIBUS-DP: Max. input 244 bytes, Max. output 244 bytes
- ◆ DPM01: 1-way Modbus to PROFIBUS slave gateway, sum of input and output is 288 bytes.
- ◆ DPM02: (customization) 1-way Modbus-RTU to PROFIBUS slave gateway, sum of input and output is 488 bytes.

Product Introduction

ODOT-DPM01 gateway is a Modbus-RTU/ASCII to PROFIBUS-DP protocol converter. This product can connect Modbus device to Siemens PLC(S7-300/1200/1500/400) with PROFIBUS-DP communication interface or DCS system with DP master. It adopts aluminum alloy shell with firm design and supports DIN-rail installation. All serial signal provides built-in photoelectric isolation.

Mechanical

Shell	Aluminum alloy
Weight	245g(ODOT-DPM01)
Dimension	30*80*110mm
Working Temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95% (no condensation)
Input Voltage	9~36 VDC
Wiring	3.81mm plug screw terminal
Power	Max. 100mA@24V

PROFIBUS Interface:

Protocol	Profibus-DP/V0
Module Slots	42pcs
Communication Rate	9.6Kbps ~ 12Mbps self-adaptive
Connection Type	Db9 female connector
Isolation Protection	Electromagnetic isolation
Terminal Number	1
Rotary Switch	PROFIBUS address 1-255

Others

Certificate	EMC, CE
Warranty	3 years
Software	Provide GSD documents Provide debug software

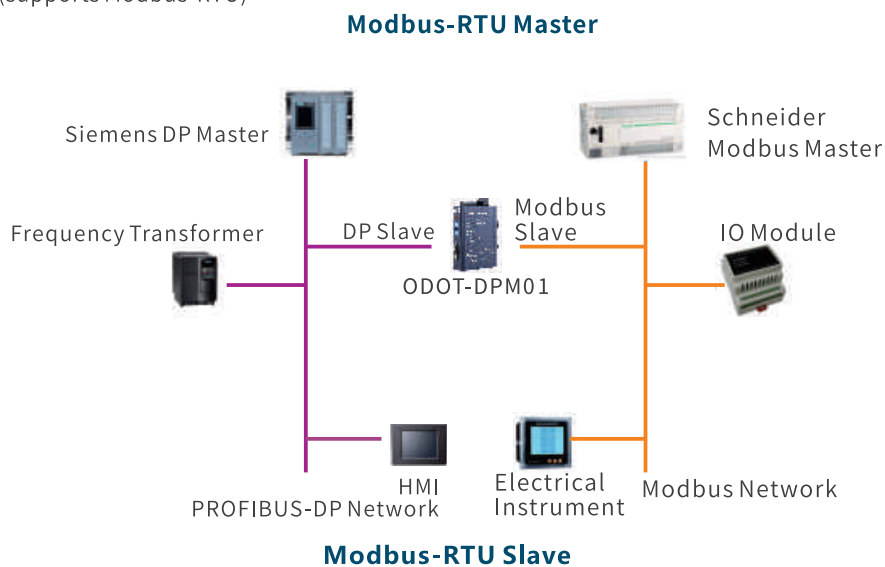
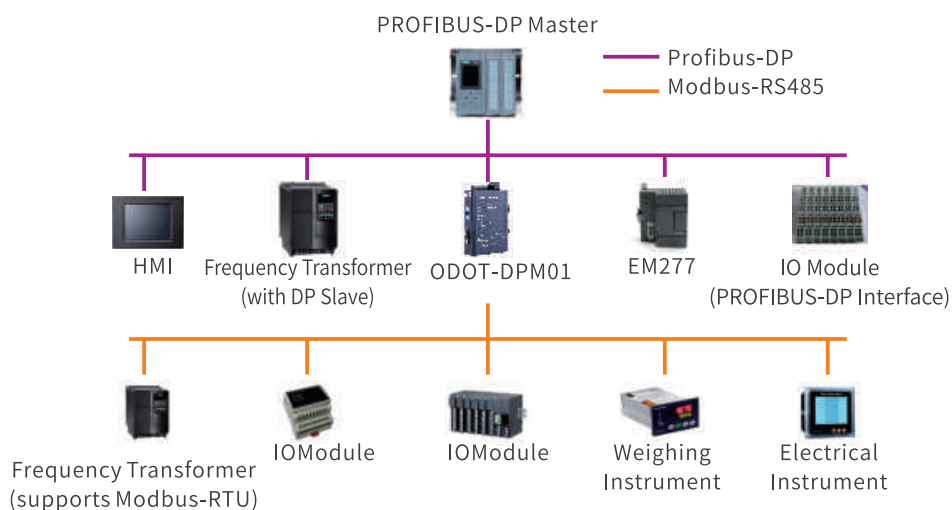
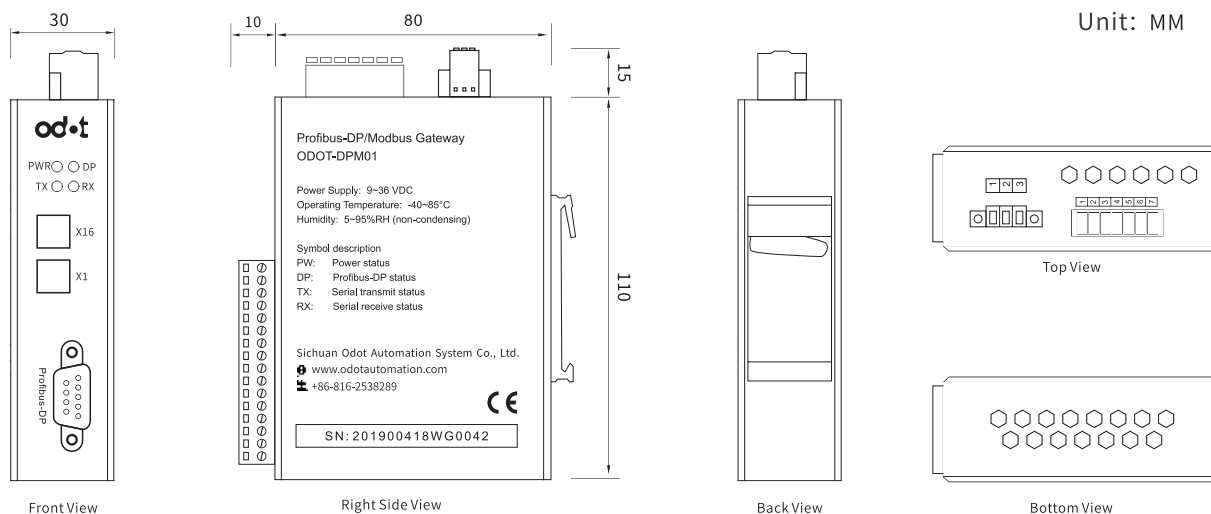
Modbus Serial

Port Number	1
Serial Port	RS485/422/232, hard wiring selection
Wiring	3.81mm plug screw terminal
ESD Protection	±16KV
Rs485 Terminal Resistance	built-in 120Ω
Data Bits	8
Stop Bits	1, 2
Check digit	None, even, odd
Baud Rate	1200~115200bps
Function Code	01/02/03/04/05/06/15/16

Main Technical Parameters

Function Code Support to Modbus	01/02/03/04/05/06/15/16
Supported Protocol	PROFIBUS-DP/V0
DP Communication Rate	9.6Kbps ~ 12Mbps self-adaptive
DP Data Zone	Max. input 244 bytes, Max. output 244 bytes, total sum of input and output is 288 bytes
DP Slave Max	42pcs
Modbus Slave Station Mode	Supports
Modbus Master	Supports
Modbus Station Number	Max. 31pcs
Modbus Baud Rate	1200~115200bps optional
Installation	35mm Standard Din-rail
IP Grade	IP20

Dimension



ODOT-S1E1



- ◆ Support TCP server pure transparent transmission, support two client access.
- ◆ Support TCP client pure transparent transmission, support to connect 1 server.
- ◆ Support UDP pure transparent transmission.
- ◆ Support with and without protocol transparent transmission, protocol transparent transmission supports MODBUS RTU/ASCII.
- ◆ Support for WEB browser configuration parameters.
- ◆ It has three interfaces of RS485, RS422 and RS232.
- ◆ Serial port baud rate support 1200 ~ 115200bps.

Product Introduction

ODOT-S1E1 is a converter between RS232/485/422 and TCP/UDP. It could easily connect serial port devices to Ethernet and realize network upgrade of serial port devices. The converter supports the function of "data transmission", which can be set as a client or a server. This function can easily realize the data communication between PLC, server and other Ethernet devices and the underlying serial port devices. Modules that support this feature are ODOT-S1E1 and ODOT-S2E1.

Mechanical Property

Shell	Aluminum alloy
Dimension	30*80*110mm
Working Temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95% (no condensation)
Input Voltage	9~36 VDC
Wiring	3.81mm plug screw terminal
Power	Max.30mA@24V(ODOT-S1E1) Max.50mA@24V(ODOT-S2E1)

ModSerial Port

Port Number	1
Port Protocol	Modbus or NONE
Serial Standard	1*RS485/RS232/RS422(ODOT-S1E1) 2*RS485/RS232/RS422(ODOT-S2E1)
Wiring	3.81mm plug screw terminal
ESD Protection	±16KV
Rs485 Terminal Resistance	External 120Ω
Data Bits	8
Stop Bits	1
Check digit	None
Baud Rate	1200~115200bps

Ethernet Port

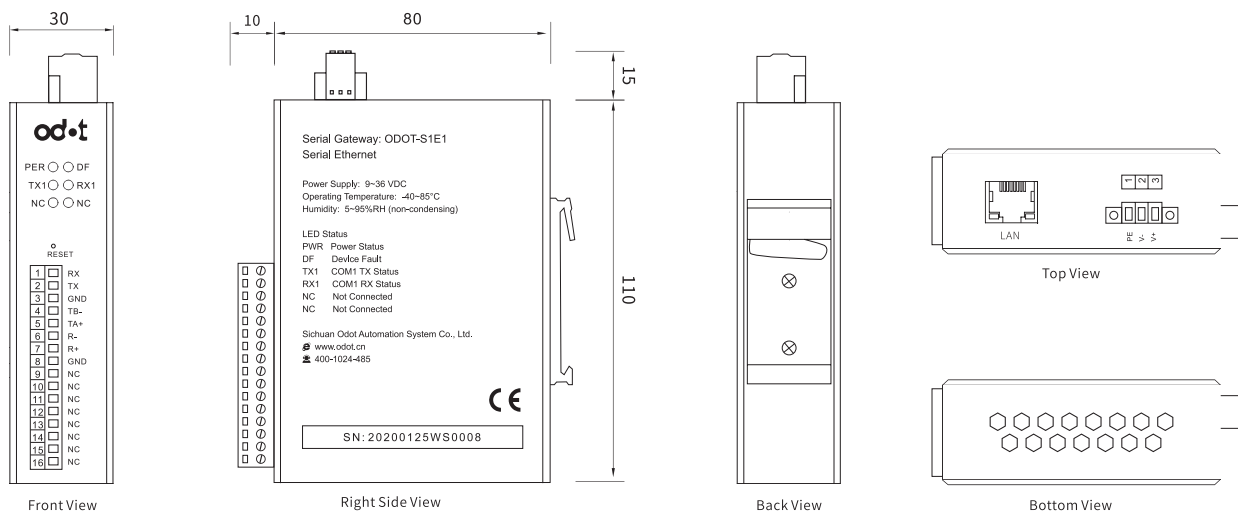
Protocol	Modbus protocol or free protocol
Ports Number	1PC
Communication Rate	10M/100Mbps, self-adaptive
Connector	RJ45

Others

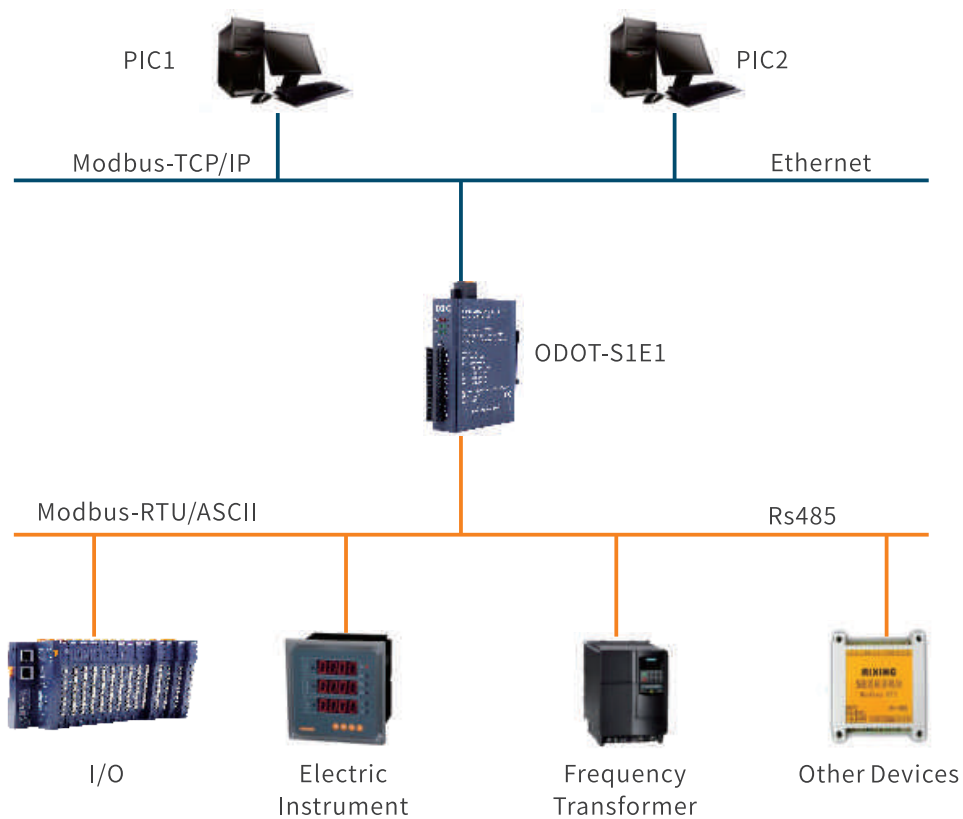
Certificate	EMC, CE
Warranty	3 years
Software	webpage configuration
Operating Platform	windows xp, win7, win10, Provide debug software

Dimension

Unit: MM



Typical application topology



ODOT-S2E2/S4E2

Modbus RTU/ASCII to Modbus TCP gateway



- ◆ Supports protocol conversion between Modbus-RTU and Modbus-TCP
- ◆ Supports the connection of 5 TCP clients simultaneously
- ◆ ODOT-S2E2 supports 2*RS485
- ◆ ODOT-S4E2 supports wiring of RS485/RS232/RS422
- ◆ Each serial port supports Modbus master and slave
- ◆ ODOT-S2E2: 2 serial Modbus-RTU/ASCII to Modbus-TCP Server gateway
- ◆ ODOT-S4E2: 4 serial Modbus-RTU/ASCII to Modbus-TCP Server gateway
- ◆ Supports one key reset
- ◆ Gateway working mode: Transparent transmission, address mapping

Introduction

ODOT-S2E2/S4E2 gateway is a Modbus-RTU/ASCII to Modbus-TCP protocol converter. This product can connect Modbus device to PLC and master computer that supports Modbus-TCP (client) functions. It supports the connection of 5 TCP clients simultaneously. And product adopts aluminum alloy shell with firm design and supports DIN-rail installation. All serial signal provide built-in photoelectric isolation.

Mechanical Property

Shell	Aluminum alloy
Dimension	30*80*110mm
Working Temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95% (no condensation)
Input Voltage	9~36 VDC
Wiring	3.81mm plug screw terminal
Power	Max.100mA@24V(ODOT-S2E2) Max.200mA@24V(ODOT-S4E2)

Ethernet Interface

Protocol	Modbus-TCP server
Ports Number	2个 (supports switching function)
Communication Rate	10M/100Mbps, self-adaptive
Connector	RJ45

Others

Certificate	EMC, CE
Warranty	3 years
Software	Provide software ODOT-MG CC Config
Operating Platform	Based on NET framework4.0 windows xp, win7, win10 Provide debug software

Modbus Serial

Port Number	2 (ODOT-S2E2)
Port Protocol	Modbus-RTU/ASCII
Serial Standard	2*RS485 (ODOT-S2E2) RS485/RS232/RS422 (ODOT-S4E2)
Wiring	3.81mm plug screw terminal
ESD Protection	±16KV
Rs485 Terminal Resistance	External 120Ω
Data Bits	7, 8
Stop Bits	1, 2
Check digit	None, even, odd
Baud Rate	1200~115200bps
On Load	Each serial port theoretically can hang 31pcs of devices (RS485/RS422)

Main Technical Parameters

Network Working Mode	Transparent transmission and address mapping are optional, Modbus TCP protocol
Network Protocol	ETHERNET, ARP, IP, TCP, ICMP
TCP Connection	Max. 5 pcs
Supports Slave	Max. 62pcs (no relay)
Mapping Mode Protocol Function Code	0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x0F, 0x10
Modbus Data Storage Area	0xxxx area (coil): 8192 Bit 1xxxx area (discrete input): 8192 Bit 3xxxx area (input register): 2048 Word 4xxxx area (holding register): 2048 Word 3xxxx area (system diagnosis area): 263 Word

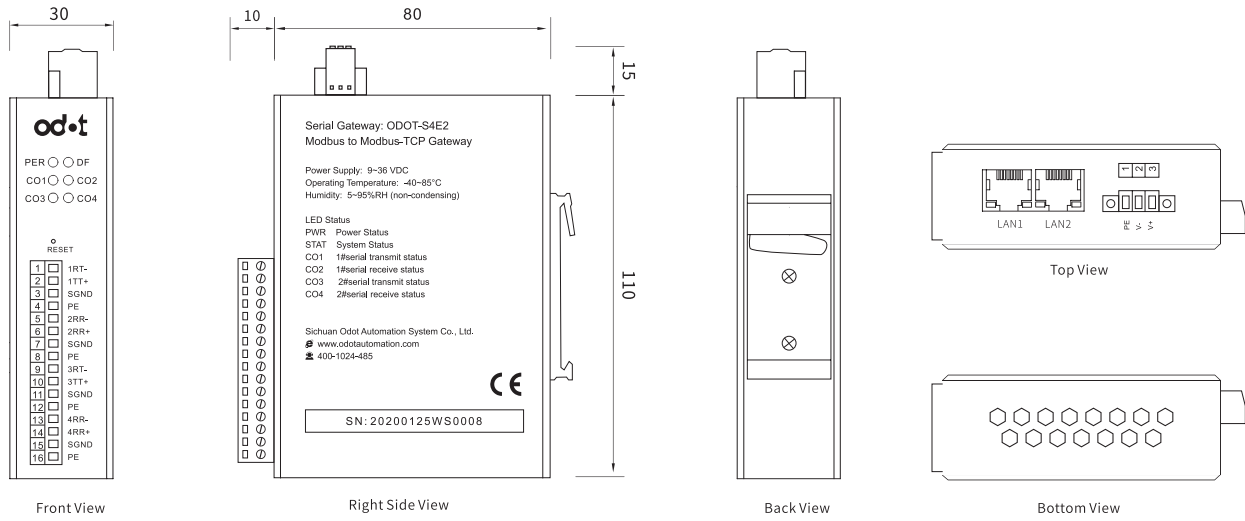
Ordering Information

ODOT-S2E2 2 Ports Modbus RTU/ASCII to Modbus TCP Server Gateway, Serial supports RS485, 9~36V DC, -40~85°C

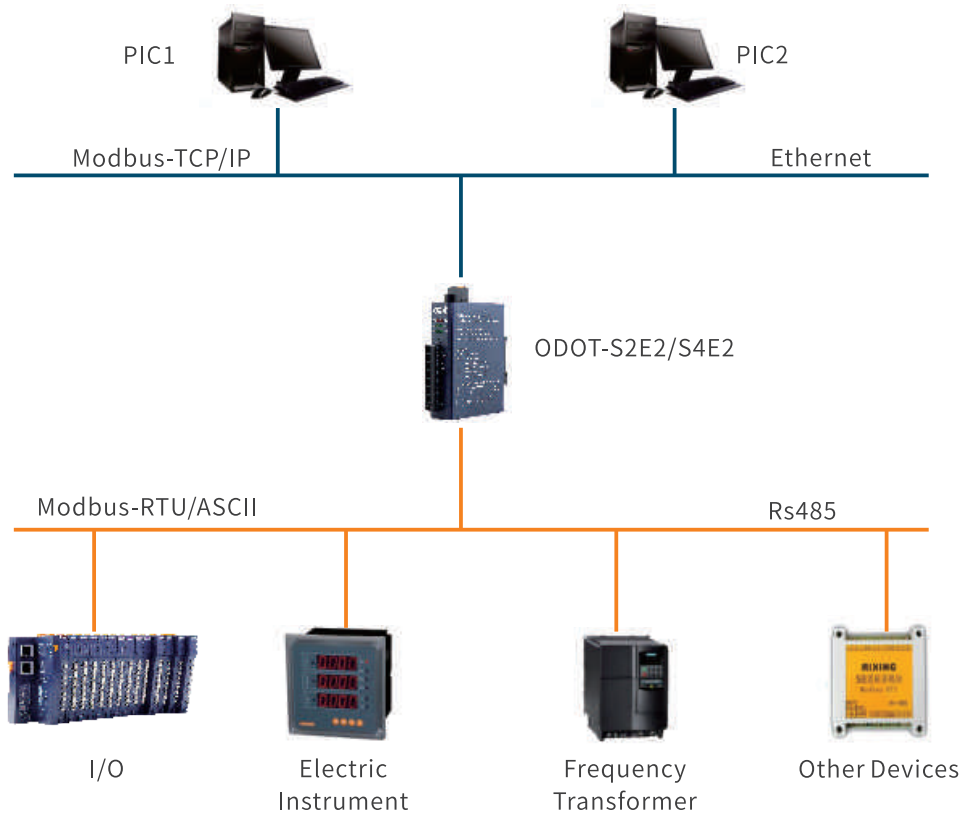
ODOT-S4E2 4 Ports Modbus RTU/ASCII to Modbus TCP Server Gateway, Serial supports RS485, 9~36V DC, -40~85°C

Dimension

Unit: MM



Typical application topology



MG-IOT01

PLC protocol to Modbus TCP and MQTT gateway



- ◆ 2 Ethernet Ports, with switch function, supports cascade
- ◆ 2KV Ethernet Port isolation protection, 10M/100Mbps rate adaptation, (Auto-MDI/MDIX)
- ◆ Supports for connecting to Siemens 200 PLC, Omron HOSTLINK
Protocol PLC, Mitsubishi FX Protocol PLC, Delta MODBUS Protocol PLC
- ◆ Supports simultaneous connection of 5 Modbus-TCP/IP clients
- ◆ Supports 200 collection points, supports MQTT connection to cloud
- ◆ 4 Serial Port Real-time Refresh, Short Scanning Cycle, Strong Load Capacity
- ◆ Supports bridge mode, collecting PLC data without affecting the communication between PLC and HMI
- ◆ Supports IAP download, through the ethernet port to update the firmware program in the product
- ◆ Supports one-key reset function, restore factory Settings.
- ◆ EMC complies with EN 55022:2010 & EN 55024:2010 international standards.

Product Introduction

MG-IOT01 is a protocol converter from PLC protocol to Modbus-TCP/IP and MQTT. All devices with RS485/RS422/RS232 interface and supports Siemens (PPI), Omron (HOSTLINK), Mitsubishi (FX2N), Delta (MODBUS) and other devices can connect to Modbus-TCP/IP network through this converter, and to the cloud through MQTT. Thus, the low-speed serial port equipment can be connected to high-speed Ethernet and cloud server to realize the function of industrial data collection. Gateway has two different working modes of "straight through" and "bridge" mode. Gateway in "straight through" mode is directly connected to PLC for data collection, and "bridge" mode can be used for data collection when it is compatible with the original PLC communication to HMI without adding more communication interfaces.

Mechanical Properties

Case	Metal shell
Size	27.5*110*110mm
Operating temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95% (No Condensation)
Input Voltage	9~36VDC
Power Consumption	Max. 200mA@24V

Serial Port Parameters

Quantity of Serial Port	4-way RS485/RS232 or 2-way RS422
Communication Mode	4 PLC protocols optional
Baud Rate	2400~115200 bps
Check Pattern	No check, Odd, Even
Supported Quantity of Slave Stations	Maximum 124 (Without Repeater)
Supported Quantity of Data Points	200

Ethernet Parameters

Working Mode	Transparent Transmission Mode and Address Mapping Mode optional, Modbus-TCP/IP Protocol
Interface Quantity	2 RJ45, 10M/100M adaptive rate, with switch function
Network Protocol	ETHERNET, ARP, IP, TCP, ICMP, MQTT
TCP connections	Maximum 5

Others

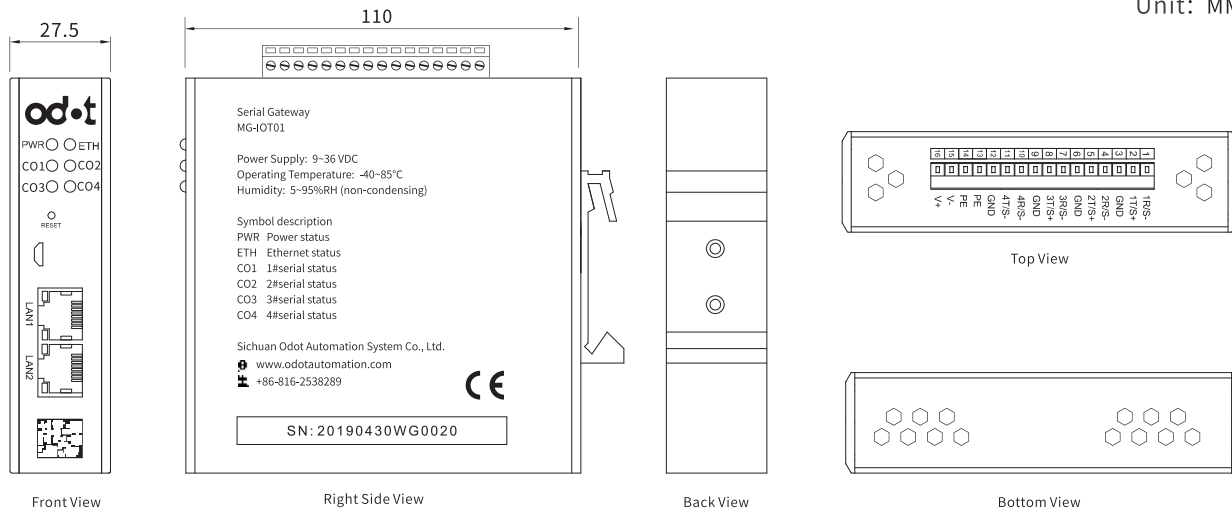
Certificate	EMC, CE
Warranty	3 years
	Provide Testing Software

Main Technical Parameters

supporting and configuration	Supports for MQTT connections to the cloud Supports data sort exchange Supports for data type conversion Supports data calculation Watchdog optional enable, watchdog time can be set External terminal resistance and bias circuit, strong stability Data package sending interval can be freely adjusted, more flexible usage
Installation	35mm Din-rail
Power Port Quantity	1

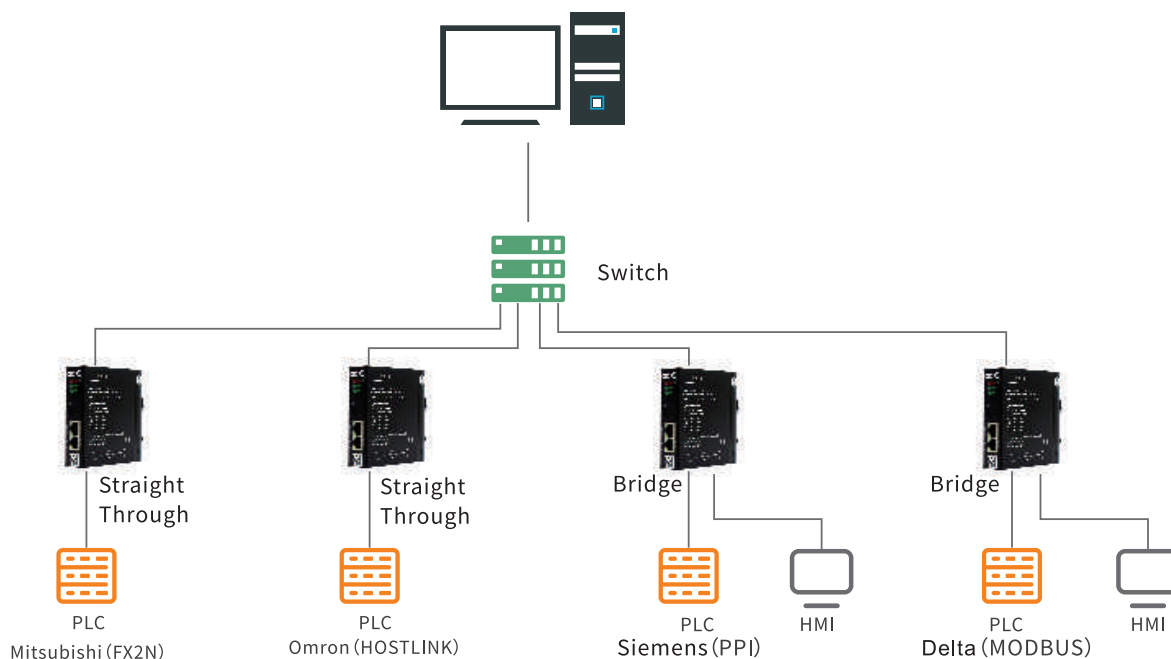
Dimension

Unit: MM



Typical Application Topological Graph

Supports MES of Modbus-TCP
Supports SCADA Cloud Platform of MQTT



MG-IOT02

MODBUS RTU to Modbus-TCP/IP and MQTT gateway



- ◆ 2 Ethernet Ports, with switch function, supports cascade
- ◆ 2KV Ethernet Port isolation protection, 10M/100Mbps rate adaptation, (Auto-MDI/MDIX)
- ◆ Supports connection to Modbus-RTU/ASCII protocol
- ◆ Supports simultaneous connection of 5 Modbus-TCP/IP clients
- ◆ Supports 200 collection points
- ◆ Supports MQTT connection to cloud, ethernet port and 4G to cloud optional
- ◆ Supports data sort exchange and data type conversion
- ◆ Supports data calculation
- ◆ Supports IAP download, through the ethernet port to update the firmware program in the product
- ◆ EMC complies with EN 55022:2010 & EN 55024:2010 international standards.

Introduction

MG-IOT02 is a protocol converter from Modbus-RTU to Modbus-TCP/IP and MQTT. All devices with RS485/RS422/RS232 interface can be connected to Modbus-TCP/IP network through this converter. In this way, low-speed serial port devices can be connected to high-speed Ethernet and cloud servers, so as to realize the function of industrial data collection, and meanwhile support the connection to cloud platform through 4G network MQTT.

Mechanical Properties

Case	Metal shell
Size	27.5*110*110mm (Not including antenna)
Operating Temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95%(No Condensation)
Input Voltage	9~36 VDC
Power Consumption	Max.200mA@24V

Ethernet Parameters

Working Mode	Transparent Transmission Mode and Address Mapping Mode optional, Modbus-TCP/IP Protocol
Interface Quantity	2 RJ45, 10M/100M adaptive rate, with switch function
Network Protocol	ETHERNET, ARP, IP, TCP, ICMP, MQTT
TCP connections	Maximum 5

Others

Certificate	EMC, CE
Warranty	3 years
	Provide Testing Software

4G Module Parameters

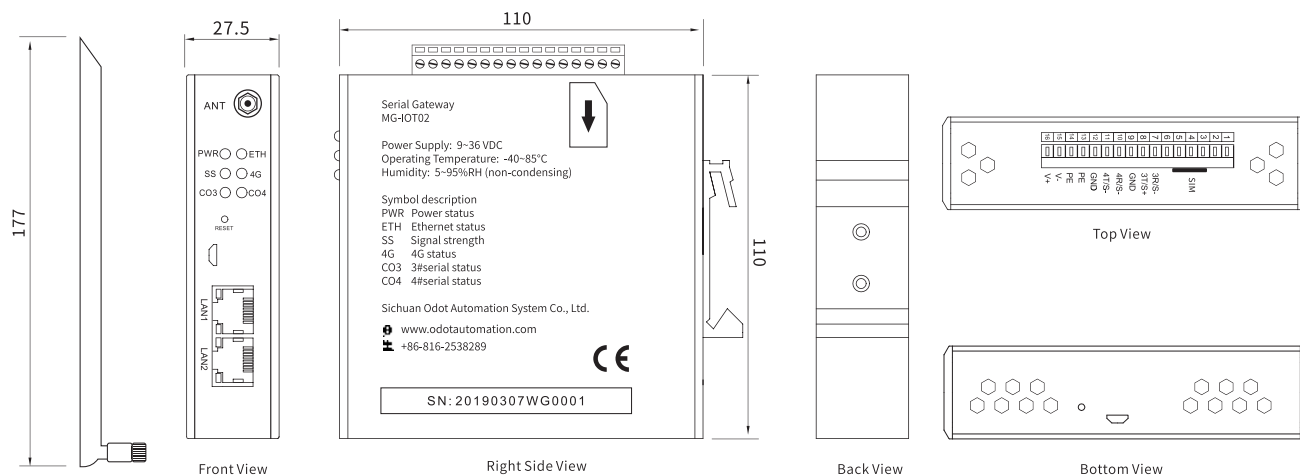
Supported Frequency Band	LTE FDD, LTE TDD, WCDMA, TD-SCDMA, CDMA
Supported Rate of LTE Frequency Band	LTE FDD: Max 150Mbps(DL)/Max 50Mbps(UL) LTE TDD: Max 130Mbps(DL)/Max 35Mbps(UL)
Supported Rate of UMTS Frequency Band	DC-HSDPA: Max 42Mbps(DL) HSUPA: Max 5.76Mbps(UL)
Supported Rate of TD-SCDMA Frequency Band	TD-SCDMA: Max 4.2Mbps(DL) Max 2.2Mbps(UL)
Supported Rate of CDMA2000 Frequency Band: EVDO	Max 3.1Mbps(DL)/Max 1.8Mbps(UL) 1X Advanced: Max 307.2Kbps(DL/UL)
Supported Rate of GSM Frequency Band	EDGE: Max 296Kbps(DL)/Max 236.8Kbps(UL) GPRS: Max 1.7Kbps(DL)/Max 85.6Kbps(UL)

Serial Port Parameters

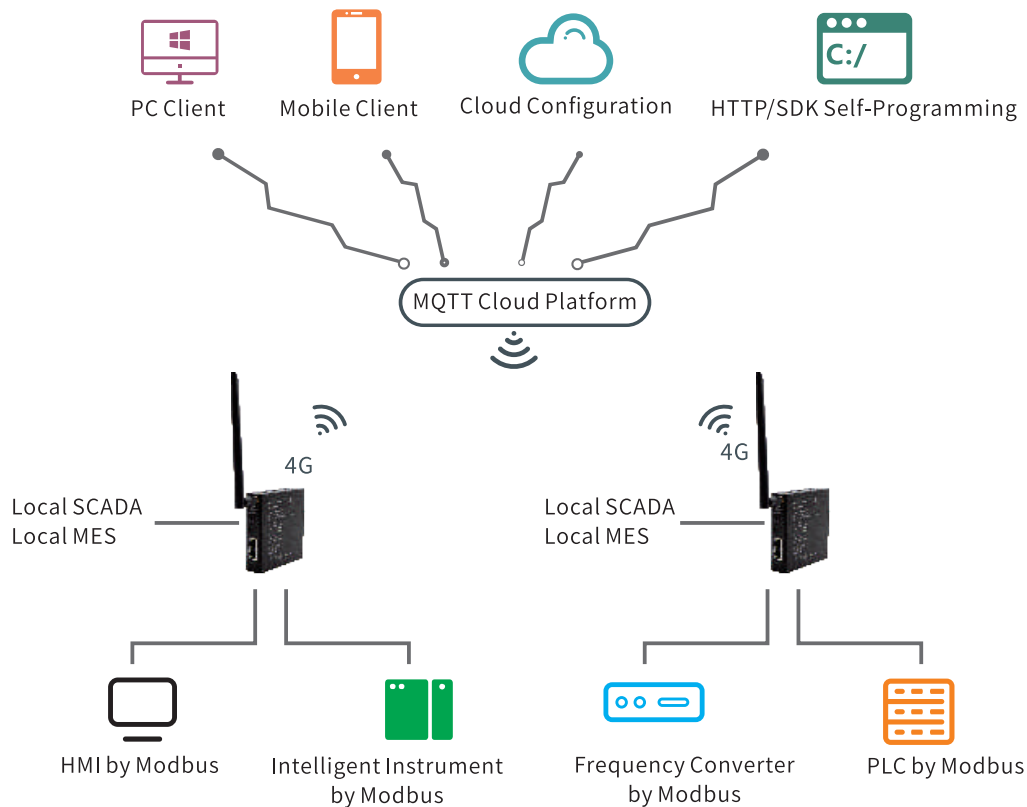
Quantity of Serial Port	2-way RS485/RS232 or 1-way RS422
Communication Mode	Modbus-RTU/ASCII
Baud Rate	1200~115200 bps
Check Pattern	No check, Odd, Even
Supported Quantity of Slave Stations	Maximum 62 (Without Repeater)
Supported Quantity of Data Points	200

Dimension

Unit: MM



Typical Application Topological Graph



MG-IOT03

S7-TCP to MODBUS-TCP and MQTT gateway



- ◆ It supports S7-200 SMART, S7-300/400, S7-1200/1500, and Siemens S7 Ethernet to MODBUS-TCP and MQTT protocols
- ◆ It supports Auto negotiation 10/100Mbps, half/full duplex, Auto MDI/MDIX
- ◆ It supports 200 collection points
- ◆ It supports equipment search, lighting test
- ◆ It supports data sort swap
- ◆ It supports data type conversion
- ◆ It supports data calculation
- ◆ It supports IAP download, update and upgrade the firmware program in the product through the Ethernet port
- ◆ It supports wide temperature work: environment temperature -40 ~ 85 °C
- ◆ It supports one-key reset
- ◆ It supports 35mm DIN-Rail
- ◆ It supports 9 ~ 36V DC wide voltage input and anti-reverse connection protection
- ◆ It supports broadcast storm protection

Introduction

MG-IOT03 is an industrial-grade Ethernet gateway with protocol conversion functions; it carries with 5*100Mbps ports, all of which support 10/100Mbps auto-negotiation, and auto-MDI /MDIX. The gateway could convert Siemens S7 Ethernet protocol to Modbus TCP and MQTT through ODOT software configuration.

Mechanic Properties

Shell	Aluminum Shell
Size	27.5*110*110mm (Not including antenna)
Operating Temperature	-40~85°C
Storage Temperature	-55~125°C
Relative Humidity	5~95%(No Condensation)
Input Voltage	9~36 VDC
Power Consumption	Max.200mA@24V
Installation	35mm DIN-Rail

Ethernet parameters

Working Mode	transparent transmission mode, address mapping is optional, Modbus-TCP/IP protocol
Ethernet port number	5 RJ45, 10M, 100M Auto negotiation, with gateway function
Protocol	ETHERNET, ARP, IP, TCP, ICMP, MQTT
PLC number supported	Max. 4pcs simultaneously
Data point collected	200pcs

Others

Certificate	EMC, CE
Warranty	3 years

Switch parameters

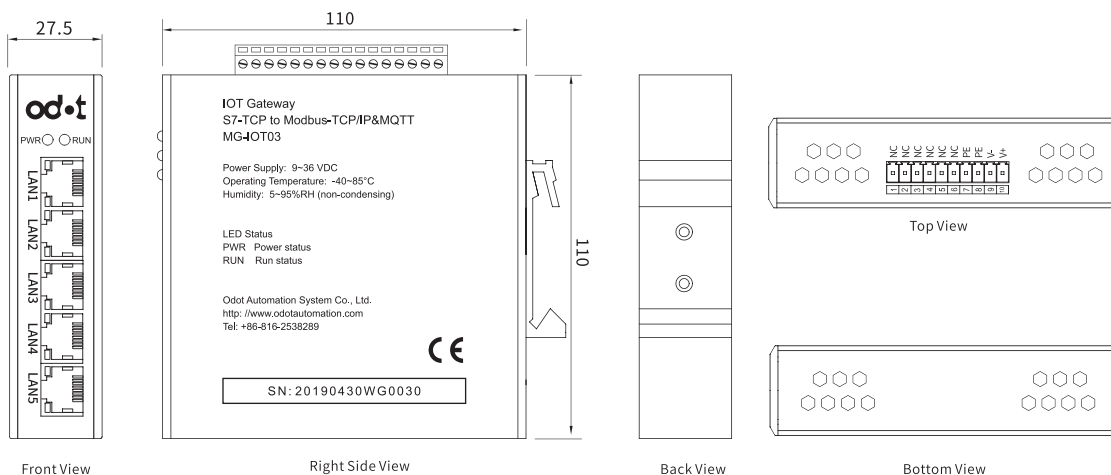
	IEEE 802.3 applied to 10BaseT IEEE 802.3u applied to 100BaseT (X) and 100BaseFX IEEE 802.3x applied to Flow Control
Process type	Storage and forwarding
Flow control	IEEE802.3x full duplex, backpressure flow control

Main technical parameters

	It supports MQTT connection with Cloud. It supports data sort swap. It supports data type conversion. It supports data calculation. Watchdog enable is optional, Watchdog time could be set. Data packet sending interval could be . freely adjusted, more flexibility in using.
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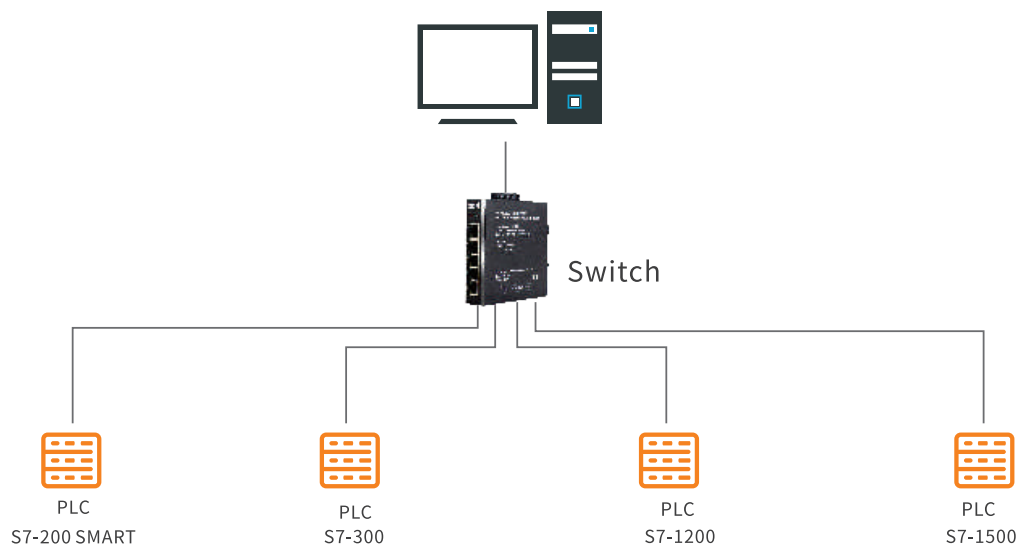
Dimension

Unit: MM



Typical Application Topological Graph

It supports MES of Modbus-TCP
It supports SCADA platform of MQTT



MG-CANEX

CANopen to Modbus-TCP gateway



- ◆Dual Ethernet port with switch function, supports cascade
- ◆2KV network port isolation protection, 10M/100Mbps rate adaptive, (Auto-MDI/MDIX)
- ◆Supports address mapping mode, to achieve rapid response to TCP client requests
- ◆Supports up to 10 TCP clients accesses
- ◆6KB large data cache area, more data transfer
- ◆CAN interface supports CANopen, CAN2.0A and CAN2.0B
- ◆Equipped with powerful diagnostic function, real-time monitoring of communication status from the slave device
- ◆Supports One-Key reset function, restore to factory settings
- ◆EMC complies with EN 55022:2010 & EN55024:2010 international standards

Introduction

MG-CANEX is a protocol converter that CANopen to Modbus TCP/IP. The device acts as the Master in the CANopen network, with NMT network management function, and can be connected by standard CANopen slave devices. Supports the PDO, SDO data transmission, Error-Control supports Node Guarding, Heartbeat. Supports synchronous message sending. As a TCP server in Modbus-TCP/IP network, the device can be accessed by multiple TCP clients at the same time, and can access to PLC controller and various host configuration softwares. It can connect to the optical terminal and other equipment to realize long-distance data transmission.

Mechanical

Shell	Aluminium Alloy
Dimension	30*110*125mm
Operating Temperature	-40~85°C
Storage Temperature	-45~125°C
Humidity	5~95% (No Condensation)
Input Voltage	9~36VDC, 3KV Isolation Voltage
Power	Max.110mA@24V

Ethernet Parameters

Interface Quantity	2 RJ45 ports, 10M/100M adaptive rate, with switch function
Serial Port Standard	RS485
Network Protocol	ETHERNET, ARP, IP, TCP, ICMP
TCP connections	Maximum 10
Supported Protocol Function Code	01/02/03/04/05/06/15/16

Others

Certificate	EMC, CE
Warranty	3 years
EOS Software	MG-CANEX Config

CANopen Parameters

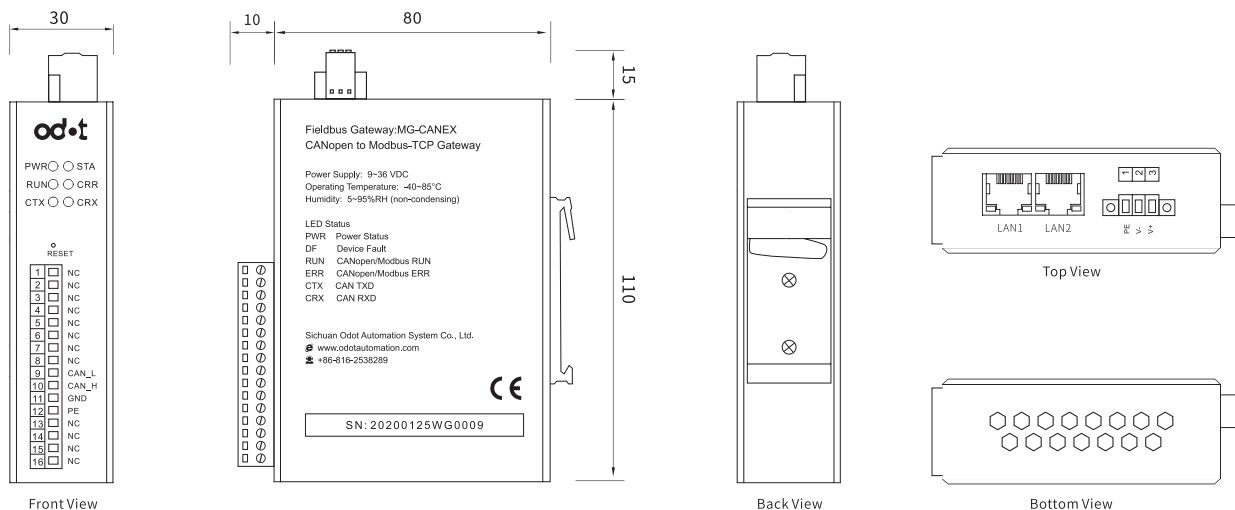
CAN Baud Rate	10K~1Mbps
CANopen Protocol	CANopen, CAN2.0A, CAN2.0B Optional
PDO Function	Supports TPDO, RPDO data transmission, Can be configured with 200 PDO
SDO Function	Supports up to 8 byte SDO segment transfer and up to 4 byte fast SDO transfer. 400 SDO commands can be configured

Main Technical Parameters

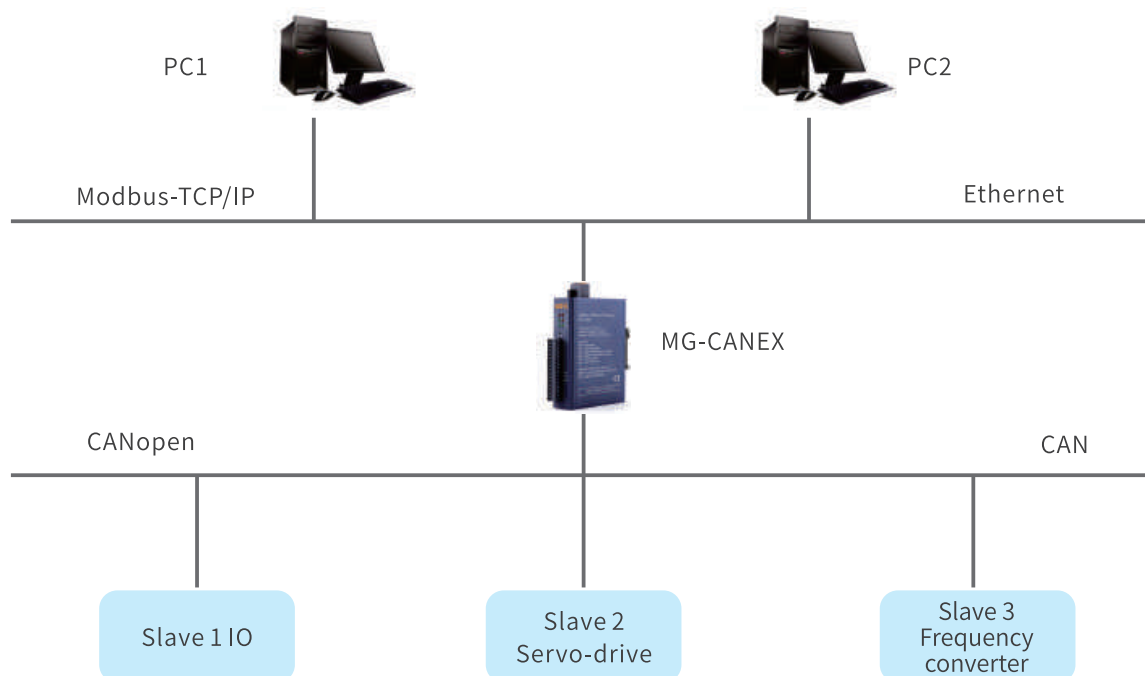
Power Interface Quatity	1Port
Modbus-TCP Function Code	0x01, 0x02, 0x03, 0x04, 0x05, 0x06, 0x0F, 0x10
Modbus Data Storage Area	0xxxx Area(Coil): 8192 Bit 1xxxx Area(Discrete Input): 8192 Bit 3xxxx Area(Input Register): 2048 Word 4xxxx Area(Holding Register): 2048 Word 3xxxx/4xxxx Area(System Diagnosis/Control Area): 116 Word
Error Control	Supports Node Guarding and Heartbeat
Installation	35mm Din-Rail

Dimension

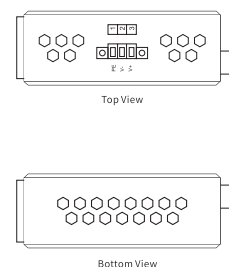
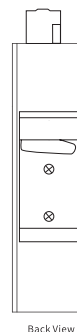
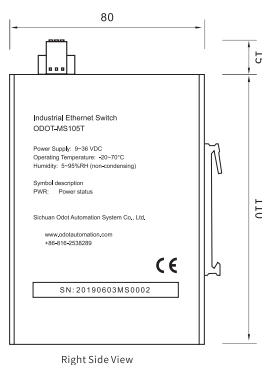
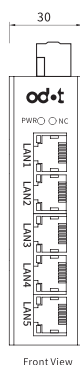
Unit: MM



Typical application topology



ODOT-MS100T Series



Unit: MM

- ◆10/100Mbps adaptive, Auto-MDI/MDIX
- ◆Supports IEEE802.3/802.3u/802.3x

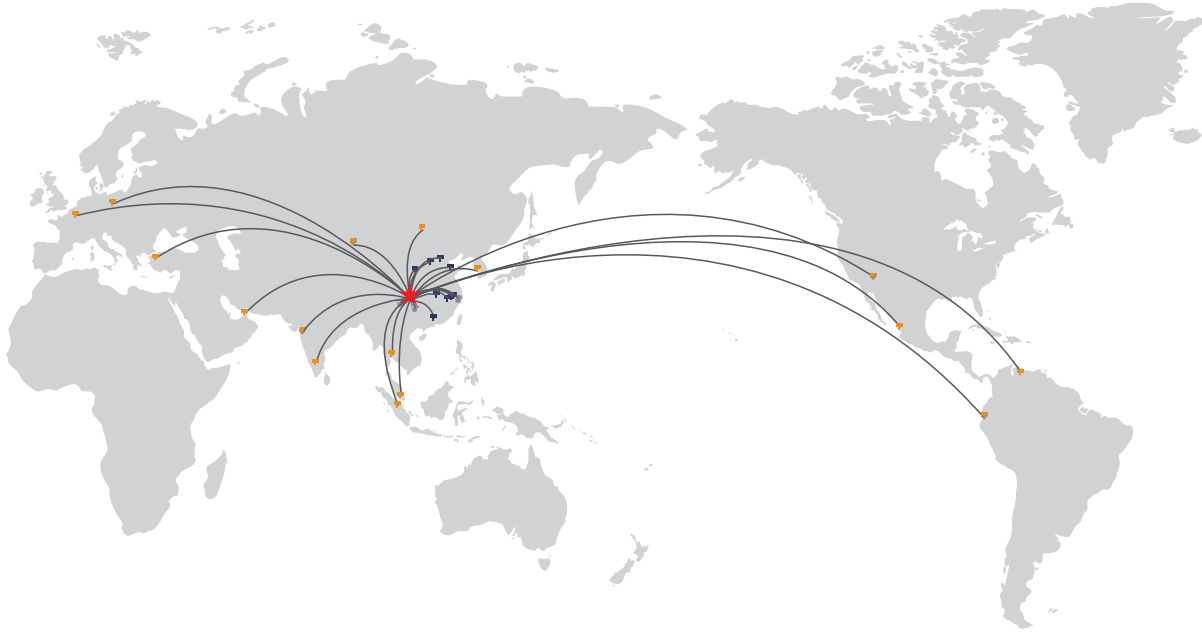
- ◆Supports broadcast storm suppression
- ◆Working temperature: -40°C~85°C

Product Introduction

ODOT-MS100T series is a basic plug and play industrial-grade unmanaged Ethernet switch, equipped with 5/8/16 100 MB ports, all ports supports IEEE802.3/802.3u/802.3x, supports broadcast storm protection, adapt to various industrial environment, protection grade is IP20. The product adopts metal shell and supports 35mm DIN-rail installation.

Mechanical	
Shell	Aluminum alloy
Weight	245g(ODOT-MS105T) 245g(ODOT-MS108T) 480g(ODOT-MS116TT)
Dimension	30*80*110mm (ODOT-MS105T) 40*80*110mm (ODOT-MS108T) 40*100*140mm (ODOT-MS116T)
Specifications	
Standard	IEEE 802.3 for 10BaseT IEEE802.3u for 100BaseT and 100BaseFX IEEE 802.3x for flow control
Type	Store and forward
Flow control	IEEE802.3x full duplex, back pressure flow control
Working Environment	
Working Temperature	-40~85°C
Storage Temperature	-55~125°C
Humidity	5~95% (no condensation)

Switching Properties	
MAC Address Table Size	1K (ODOT-MS105T/MS108T) 16K (ODOT-MS116T)
Packet Cache Size	448K bit (ODOT-MS105T/MS108T) 4MB (ODOT-MS116T)
Power	
Input	9~36 VDC
Wiring	3.81mm plug screw terminal
Power Consumption	Max.200mA@24V(ODOT-MS105T) Max.300mA@24V(ODOT-MS108T) Max.500mA@24V(ODOT-MS116T)
Interface	
Number of RJ45 Ports	5/8/16
Others	
Certificate	EMC, CE
Warranty	3 years



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