

## 10-Port Serial Port Modbus Managed Industrial Ethernet Switches



- 4~8\*100M RJ45 Ports, rate self-adaption, full/half duplex mode, MDI/ MDI-X self-adaption
- 0-2\*100M full duplex optical interfaces, default SC interface, FC/ST optional, max transmission up to 120 km
- 0-2\*SFP 1000Base-X modules(support SM/MM) or 1000Base-T modules (support twisted pair transmission)
- 1\* RS-232 Serial Port and optional 1\* RS-422/485 Serial Port or 3\* RS-485 Serial Ports
- Support Web, CLI and SNMP three management modes, CLI can support Telnet and CONSOLE log in
- Support QoS, IGMP, 802.1Q VLAN management function
- Support RSTP and CK-Ring, for Ethernet redundancy, ring network self-healing time < 20ms
- Support serial port to connect two serial port devices through network for serial port data transmission, and support three working modes of TCP server, TCP client and UDP three work modes
- Support ModbusTCP、ModbusRTU、IP、ARP and DNS protocols
- Support Modbus slave mode, with a maximum of 12 TCP master connections supported in slave mode
- Support relay alarm output for power supply, port and ring network status alarm
- Adopt with high strength IP40 housing and industrial EMC design
- Support redundant wide voltage 12~48V DC power input,full load power consumption less than 11W
- Support DIN-Rail Mounting installation
- Working temperature range:-40~85°C suitable for harsh environment application

### Product Overview

10-Port Serial Port Modbus Managed Industrial Ethernet Switches are specially designed to meet the needs of flexible industrial applications, and provides a cost-effective Ethernet solution. Provide powerful management function that can be managed through a web browser, command line (CLI), and SNMP. Support a wide range of redundant power input (12-48V DC) to increase the reliability of the communication network. Provide 4-8\*10 / 100BASE-T (X) RJ45 ports, 0-2\*100BASE-FX SC optical ports (optional FC/ST), 0-2\*SFP 1000BASE-X modules (support SM and MM) or 1000BASE-T modules (support twisted pair transmission), 1\*RS-232 serial port and optional 1\*RS-422 / 485 serial port or 3\*RS-485 serial ports, which can transmit the serial port data through Ethernet network, and the optical and electrical combination can flexibly carried out according to the requirements of the service port. Built-in ModbusTCP and ModbusRTU protocols enable users to easily connect Modbus Ethernet devices to Modbus serial devices. Base on the needs of industrial installation, DIN35 rail is provided. The product adopt with fan free, low power consumption, industrial grade design, - 40 ~ 85 °C working temperature range , which can meet the requirements of various industrial sites and provide convenient Ethernet communication solutions.

### Features

#### Basic Switching Features

- Conforms to IEEE802.3/802.3u/802.3ab/802.3x standard, store and forward switching mode
- Provide 4~8\*10/100BASE-T(X) RJ45 ports, Auto-Negotiation technology, auto negotiation rate(10M/100M), full duplex mode (half/full duplex), MDI/MDI-X self-adaption
- Provide 0~2\*100BASE-FX optical interfaces (default SC interface, FC/ST optional), max transmission up to 120 km
- Provide 1\*RS232 serial ports and optional 1\*RS422/RS485 serial port or 3 RS485 serial ports, support TCP Server, TCP Client, UDP three serial port transmitting modes
- Provide 0~2 \*SFP 1000Base-X module (support SM/MM) or 1000Base-T module(Support twisted pair transmission)
- Support broadcast storm suppression function

- Adopt with high strength IP40 housing and industrial EMC design
- Support redundant wide range voltage 12~48V DC power input, full load power consumption less than 11W

#### Advanced Industrial Redundant Ethernet Network Features

- Support Web, CLI and SNMP three management modes, CLI support Telnet and Console log in
- Support store and forward mechanism
- Support common port feature settings, such as port enabling, adaptive or forced, flow control, etc
- Support port mirroring for online debugging and monitoring of network data status
- Support the function of port bandwidth limitation and optimize bandwidth utilization
- support port aggregation function to expand network bandwidth and improve network transmission efficiency.
- Support port priority QoS settings to improve network

service quality

- Support port MAC address learning and data statistics functions
- Support 802.1Q VLAN setting and effectively control broadcast domain
- Support unicast / multicast MAC address management
- Support static IGMP multicast filtering, which is used to filter the multicast traffic in the industrial Ethernet protocol.
- Support SNMP V1 / V2C / V3 to make different levels of network management secure
- Support RSTP to avoid message proliferation and infinite loop in the loop network
- supports plug and play redundant self-healing Ethernet ring network technology (fault recovery time under full load < 20ms), and supports three ring network modes: single ring, tangent and intersection.
- Support serial port setting, and can connect two serial port devices through the network for serial port data transmission
- Support ModbusTCP、ModbusRTU、IP、ARP and DNS protocols
- Support Modbus slave mode, with a maximum of 12 TCP master connections supported in slave mode
- Support relay alarm output
- Support the whole network system management

## Specification

### Interface

- RJ45 port: 10/100Base-T(X)Rate self-detection, auto Full/Half Duplex , MDI/MDI-X self-adaption
- 100M optical interface: 100BASE-FX full Duplex (default SC interface, FC/ST optional), max transmission up to 120 km
- Serial port: RS-232 speed is 110-115.2kbps, support RXD, TXD, GND three wire working modes; RS-422 supports RX -, RX +, TX -, TX + full duplex working modes; RS-485 supports A,B half duplex working mode; communication speed support 110-115.2kbps optional. Built-in modbus TCP and ModbusRTU protocols, support MODBUS slave mode, with a maximum of 12 TCP master connections supported in

slave mode.The instantaneous isolation voltage is 5000V, and the continuous isolation voltage is 1000V; there is no terminal resistance inside the machine, please decide whether to connect externally as required.

- SFP slot: SFP 1000Base-X module (support SM/MM) or 1000Base-T module(Support twisted pair transmission)
- Console: RS-232(RJ45 connector) debugging serial ports

### Exchange Property

- 10M forwarding speed:14881pps
- 100M forwarding speed:148810pps
- 1000M forwarding speed: 1488095pps
- Transmission way: Store and forward.
- System switching bandwidth:5.6Gbps
- Cache size:1Mbits
- MAC address table:8K

### Power Supply

- Power input: support redundant power input, with 4 cores 7.62mm spacing standard industrial terminal
- Redundant wide range voltage 12~48V DC power input , typical working voltage 12V/24V/48V
- Full load power consumption less than 11W
- Built-in over current protection

### Relay

- Alarm output: 1 relay output, with 2 cores 7.62mm spacing standard industrial terminal
- Relay alarm output: alarm output of port failure, power failure and ring network failure
- Max. contact capability: 1A @24VDC, industrial terminal interface

### Physical Characteristics

- Dimensions ( W x H x D ): 150.5mm×50mm×125.5mm
- Net weight: 900 g
- Housing: Metal, IP40 protection,metal housing
- Installation: DIN rail mounting

### Environment Limits

- Working Temp.: -40℃~85℃
- Storage Temp.: -40℃~85℃
- Relative Humidity: 5%~95% (no-condensation)

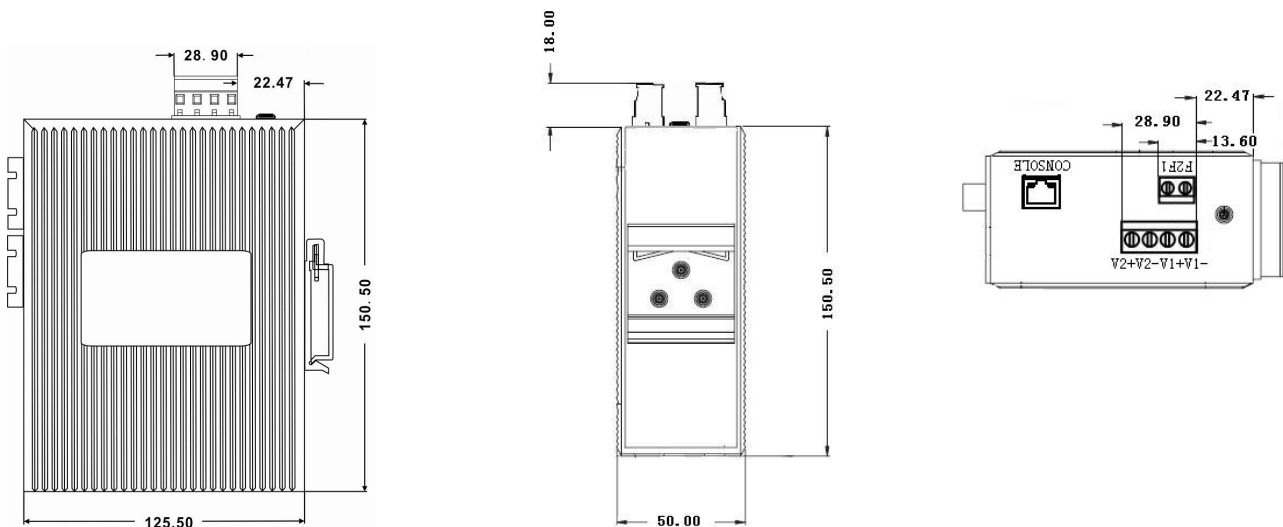
### Warranty

- Warranty Period: 5 years

## Standard and Certifications

- IEC61000-4-2(ESD): ±6KV Contact Discharge, ±15KV Air Discharge
- IEC61000-4-3(RS): 10V/m (80-1000MHZ)
- IEC61000-4-4(EFT): Power Cable ±2/4KV, Data Cable ±2KV
- IEC61000-4-5(Surge): Power Cable±4KV CM/±2KV DM, Data Cable: ±4KV
- IEC61000-4-6(Radio Frequency Conduction): 3V(10KHZ-150KHZ),10V(150KHZ-80MHZ)
- IEC61000-4-8(Power Frequency Magnetic Field): 100A/M COUNT 1000A/M, 1S TO 3S
- IEC61000-4-12/18(Oscillating Wave): 2.5KV CM, 1KV DM
- IEC61000-4-10(Damped Oscillation): 30A/M
- IEC61000-4-16(Common Mode Conduction): 30V COUNT 300V, 1S
- IEC61000-6-2(General Industrial Standards), IEC61850-3(Transformer Substation), IEEE1613(Power Substation)
- EN50121-4(Rail Transit)

## Dimensions



## Models

Models	Specs
Ck6080S-04	Industrial Managed Switch, 8*10/100Base-T(X) RJ45 ports, 1*RS232+3*RS485, DIN35 rail mounting
Ck6080S-03	Industrial Managed Switch, 8*10/100Base-T(X) RJ45 ports, 1*RS232+1*RS485+1*RS422, DIN35 rail mounting
Ck6042S-04	Industrial Managed Switch, 4*10/100Base-T(X) RJ45 ports, 2*100Base-FX optical interfaces, single-mode/multi-mode, 1*RS232+3*RS485, DIN35 rail mounting
Ck6042S-03	Industrial Managed Switch, 4*10/100Base-T(X) RJ45 ports, 2*100Base-FX optical interfaces, single-mode/multi-mode, 1*RS232+1*RS422+1*RS485, DIN35 rail mounting
Ck7080S-04	Industrial Managed Switch, 8*10/100Base-T(X) RJ45 ports, 1*RS232+3*RS485, 2*1000M SFP slots (optical or electrical interface optional), DIN35 rail mounting
Ck7080S-03	Industrial Managed Switch, 8*10/100Base-T(X) RJ45 ports, 1*RS232+1*RS485+1*RS422, 2*1000M SFP slots (optical or electrical interface optional), DIN35 rail mounting
Ck7042S-04	Industrial Managed Switch, 4*10/100Base-T(X) RJ45 ports, 2*100Base-FX optical interfaces, single-mode/multi-mode, 1*RS232+3*RS485, 2*1000M SFP slots (optical or electrical interface optional), DIN35 rail mounting
Ck7042S-03	Industrial Managed Switch, 4*10/100Base-T(X) RJ45 ports, 2*100Base-FX optical interfaces, single-mode/multi-mode, 1*RS232+1*RS422+1*RS485, 2*1000M SFP slots (optical or electrical interface optional), DIN35 rail mounting

## Package List

- 10-Port Serial Port Modbus Managed Industrial Ethernet Switch 1pcs (with industrial terminal and debugging serial port wire)
- Product Manual 1pcs