

## 28-Port Full-gigabit Combo POE Managed Industrial Ethernet Switch



- 16 fixed 10/100/1000M Ethernet ports; rate self-adaption, full/half duplex mode, MDI/ MDI-X self-adaption;
- 8 fixed 10/100/1000M Combo (SFP slot or RJ45)
- 4 fixed 1000M SFP interfaces, adaptable to 1000M SFP optical module(support SM/MM)and 1000M SFP electrical interface module(Support twisted pair transmission);
- 16 Ethernet ports support the standard POE function and IEEE 802.3at/af standard. The total power cannot exceed 300W;
- Support Web, CLI and SNMP three management modes, and CLI supports Telnet and console log in;
- Support QoS, IGMP, 802.1Q VLAN function ;
- Support RSTP and CK-Ring for Ethernet redundancy;
- Support relay alarm output for power supply, port and ring network status alarm;
- Support wide range voltage 90~264V AC power input(DC 128~ 370V optional);
- Adopt with high strength IP40 housing and industrial EMC design;
- Working temperature range: -40~85℃, meet various industrial site requirements

### Product Overview

28-Port Full-gigabit Combo POE Managed Industrial Ethernet switch adopts with high strength IP40 protective housing, industrial EMC design. It's layer2 Ethernet switches independently developed by Shenzhen Comark Technology Co., Ltd., provides powerful management functions, which can be managed through Web browser, command line (CLI) and SNMP. The products provides 16 fixed 10/100/1000M self-adaptive Ethernet ports, 8 fixed 10/100/1000M Combo (SFP slot or RJ45), 4 fixed 1000M SFP interfaces(optional 1000base-X or 1000base-T module). The 16 Ethernet ports support the standard POE function and support the IEEE 802.3at/af standard. The total power cannot exceed 300W .Base on industrial installation requirements, provides 1U standard rack mounting installation mode. The products also adopts with fan-free, low power consumption, industrial design, working temperature range of - 40 ~ 85℃, which can meet the requirements of various industrial sites, and provide convenient Ethernet communication solutions.

### Features

#### Basic Switching Features

- Conform to IEEE802.3/802.3u /802.3ab/802.3z standard, store and forward switching
- Provide 16 fixed 10/100/1000M self-adaptive Ethernet ports, Auto MDI/MDIX
- Provide 8 fixed 10/100/1000M Combo (SFP slot or RJ45)
- Provide 4 fixed 1000M SFP interfaces, adaptable to 1000M SFP optical module(support SM/MM)and 1000M SFP electrical interface module(Support twisted pair transmission)
- The 16 Ethernet ports support the standard POE function and IEEE 802.3at/af standard. The total power cannot exceed 300W
- Adopt with high strength IP40 housing and industrial EMC design
- Support wide range voltage 90~264V AC single power input(128V DC ~370V DC optional)
- -40~85℃ working temperature range

#### Advanced Industrial Redundant Ethernet Network Features

- Support Web, CLI and SNMP three management modes, CLI supports 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 broadcast storm suppression function
- 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, and supports two ring network modes: single ring and tangent.
- Support relay alarm output
- Support the whole network system management

## Specification

### Technology

- Standard: IEEE802.3、IEEE802.3u、IEEE 802.3ab、IEEE 802.3z、IEEE802.3x、IEEE802.1Q、IEEE802.1p、IEEE802.1d、IEEE802.1w

### Interfaces

- RJ45 port:10/100/1000BASE-T rate self-adaption, Full/half duplex mode, MDI/MDI-X self-adaption.
- SFP interfaces:1000M SFP(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:1488096pps
- Transmission way:Store and forward.
- System switching bandwidth:56Gbps
- Cache size:1.5Mbits
- MAC address table:16K

### Power Supply

- Alternating current power supply: wide range voltage

90~264V AC(50 ~ 60Hz 1.2A) single power input, with three-wire single-phase power cord

- Direct-current power supply: wide range voltage 128~370V DC power input, with 4 cores 7.62mm spacing industrial terminal, power supply supports reverse connection protection and non polarity function

### Relay

- Relay alarm output: alarm output of port failure, power failure and ring network failure
- Max. contact capacity:1A@24VDC

### Mechanical Properties

- Dimension(W×H×D): 440mm×44mm×274mm
- Net weight: 3.15 Kg
- Housing: IP40 protection, metal housing
- Installation:1U standard rack installation

### Operating Environment

- Working temperature:-40℃~85℃
- Storage temperature: -40℃~ 85℃
- Relative humidity: 5% ~ 95% (no condensation)

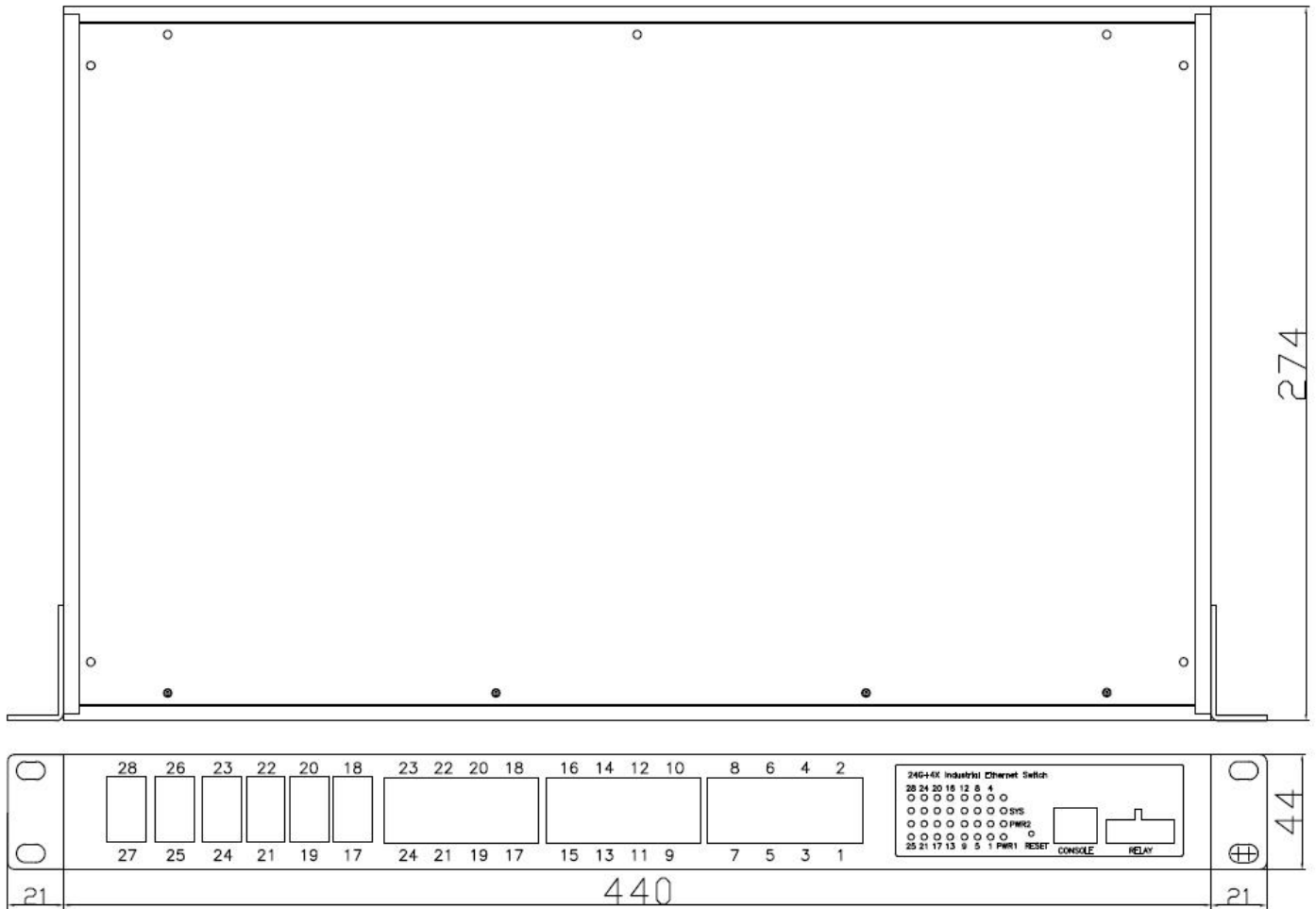
### Warranty

- Warranty: 5 years

## Standard

- IEC61000-4-2(ESD): ±8KV Contact Discharge, ±15KV Air Discharge
- IEC61000-4-3(RS): 10V/M (80-1000MHZ)
- IEC61000-4-4(EFT): Power Cable ±4KV, Data Cable ±4KV
- 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)
- IEC61000-4-16(Common Mode Conduction ) : 30V(cont.),300V(1s)
- IEC60068-2-6 (Vibration)
- IEC60068-2-27 (Shock)
- IEC60068-2-32 (Free fall)
- IEC61000-6-2(General Industrial Standards), IEC61850-3(Transformer Substation), IEEE1613(Power Substation)
- EN50121-4(Rail Transit)

**Dimension(mm)**



## Product Models

Product Models	Specification & Descriptions
CRS7228MP-16GT X8GC	Industrial Managed POE Switch,16*10/100/1000M self-adaptive Ethernet ports(POE), 8 fixed 10/100/1000M Combo (SFP slot or RJ45) ,4*1000M SFP interfaces,1U standard rack installation,-40°C~85°C

## Package List

- 28-Port Full-gigabit Combo POE Managed Industrial Ethernet Switch 1pcs (with power cable and debugging serial port wire)
- Product Manual 1pcs