

Industrial

16+4 Managed Switch

➤ User Manual

industrial 16GE+4SFP+ / industrial 16GE PoE+4SFP+

Product Introduction

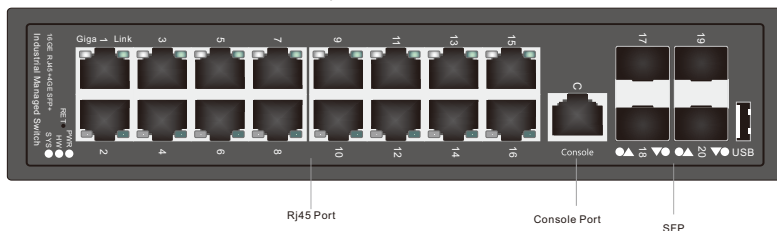
Industrial managed switch series feature the performance on an industrial level, which can withstand severe working environment. With rich series and flexible port configuration, the switches are suitable for using requirements in various industrial field. Owning an unique and special industry management interface, the switches provide a comprehensive security system, perfect ring network application, QOS strategy and rich VLAN function. It is convenient to manage and maintain which is satisfied in complex environment with high density such as in factories, mines, industry automation, transportation, infrastructure, port and farmlands. High-power PoE power supply and intelligent management function are applied in various network.

Features

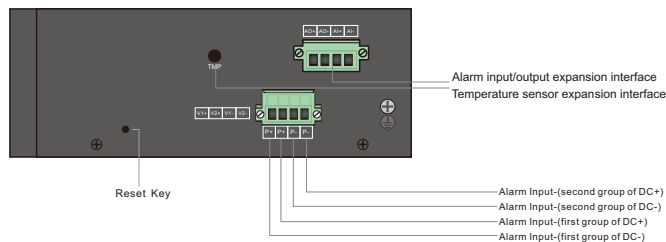
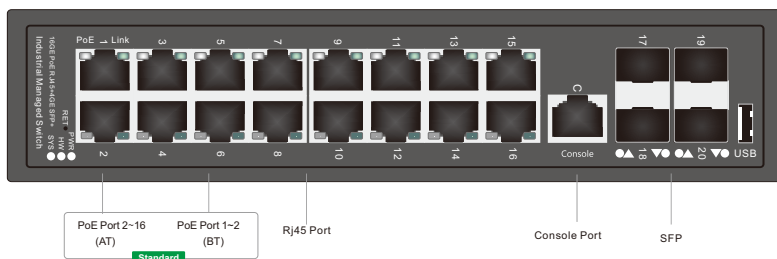
- ◆ Lightning protection: up to 6KV.
- ◆ ESD static protection: up to 8KV.
- ◆ Support industrial operation temperature: -40°C~80°C;
- ◆ Industrial operation humidity: 10%~90% RH non coagulation.
- ◆ BT power supply up to 90W(only for PoE model).
- ◆ Wide voltage input: 12-57V(SW)/ 37-57V(PoE).
- ◆ Unique advanced PoE dog function(only for PoE model).

Display & Description

Industrial 16GE+4SFP+, 16*10/100/1000M port+4*10G SFP



Industrial 16GE PoE+4SFP+, 16*10/100/1000M PoE port+4*10G SFP+



Indicator

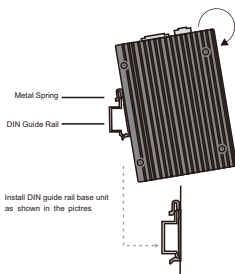
Indicator(Front)		Status	Description
PWR:Power system LED		Always ON	System in loading(<30S)/System crashed(>30S)
		Always OFF	Power unconnected
		Flicker for 1S	System in normal operation
Port Indicator Industrial 4GE+2SFP	Giga-Orange	Always ON	Corresponding ports operate at 1000M mode
		Always OFF	Corresponding ports operate at 100M mode or not communicated
	Link-Green	Always ON	Corresponding ports operate at 100M mode
		Always OFF	Network signal not communicated
Standard Rail Module PoE Port Indicator (Port 1~16)	PoE-Orange	Always ON	Powered device connected and power supply normal
		Always OFF	No powered device connected or no power supply
	Link-Green	Always ON	Network signal communicated
		Always OFF	Network signal not communicated

Function Indicator(Front)	Status	Description	Function Indicator(Front)	Status	Description
HW	Always ON		17-20:SFP LED	Always ON	SFP connected
	Always OFF			Always OFF	SFP not connected or abnormal
	Always ON	Power is normal and in power supply		Always ON	Power is normal and in power supply
P1: The first group of DC direct current access indicator lights	Always OFF	No power input	P2: Second group DC power access indicator light	Always OFF	No power input
	Flicker for 14s	Abnormal power supply and voltage		Flicker for 14s	Abnormal power supply and voltage
	Flicker for 1s	The power supply and voltage are normal and in standby mode		Flicker for 1s	The power supply and voltage are normal and in standby mode

Installation

DIN Guide Rail

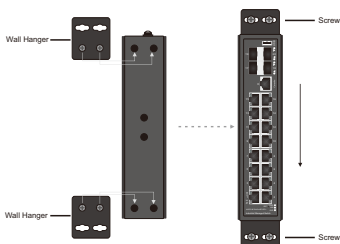
- Insert the top of DIN guide rail into the groove at the bottom of rigid metallic spring.



- Install DIN guide rail base unit as shown in the pictures

Wall-mounting

- Install the wall hangers onto the switch.
- Secure the switch length onto the wall by using screws.



Attentions

- Please read the user manual detailed before using the switch, or improper operation can cause damage to machine components.
- Do not use it in the place near fire source.
- Do not throw it into the water neither do not wet the inner machine components.
- Do not short circuit the positive and negative poles of the battery with metal conductor.
- Do not dismantle or disassemble inner components, or factory will not underwrite the warranty stipulation.

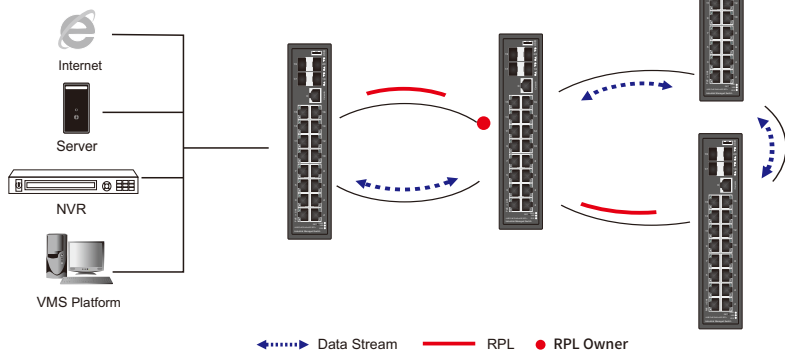
Product List



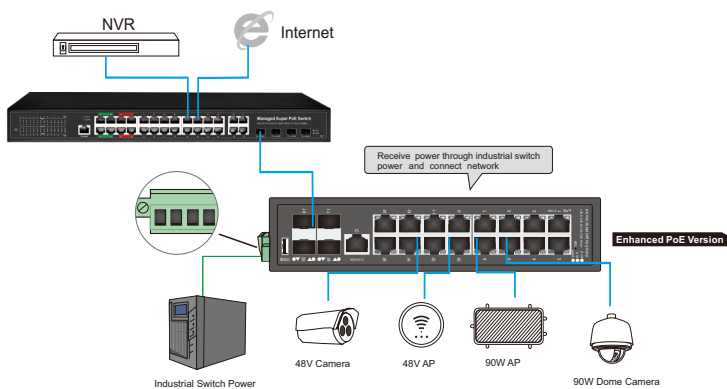
Application

1. Application of Video Surveillance System Ring Network

Establish a ring network and quickly build a reliable network



2. PoE and high-power power supply applications



Technical parameters (hardware)

model	industrial 16GE+4SFP+	industrial 16GE PoE+4SFP+
product name	Industrial grade 4 optical 16 electrical management switch	
management port	1*console	
Reset	1	
Downlink Port	16*10/100/1000Base-TX RJ45□ (Data)	16*10/100/1000M 1-2 ports support BT PoE (maximum 90W/port) 3-16 ports support AT PoE
uplink port	4*10G SFP	
Network Protocol	IEEE 802.3x IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z IEEE 802.3ad IEEE 802.3q, IEEE 802.3q/p IEEE 802.1w, IEEE 802.1d, IEEE 802.1S IEEE 802.3z 1000BASE-X STP(Spanning Tree Protocol) RSTP/MSTP(Rapid Spanning Tree Protocol) EPPS ring network protocol EAPS ring network protocol	IEEE 802.3x IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z IEEE 802.3ad IEEE 802.3q, IEEE 802.3q/p IEEE 802.1w, IEEE 802.1d, IEEE 802.1S IEEE 802.3z 1000BASE-X STP(Spanning Tree Protocol) RSTP/MSTP(Rapid Spanning Tree Protocol) EPPS ring network protocol EAPS ring network protocol 802.3AF/AT/HiPoE/BT
Network port characteristics	1-16 ports 10/100/1000BaseT (X) automatic detection, full/half duplex MDI/MDI-X adaptive	
Forwarding mode	Store and forward (full line speed)	
backplane bandwidth	56Gbps	
packet forwarding rate	41.664Mpps	
MAC address	8K	
Packet forwarding cache	4.1M	
Twisted pair transmission	10BASE-T : Cat3,4,5 UTP(≤250 meter) 100BASE-TX : Cat5 or later UTP(≤100 meter) 1000BASE-TX : Cat6 or later UTP(≤1000 meter) 1000BASE-SX:62.5µm/50µm MMF(2m~550m) 1000BASE-LX:62.5µm/50µm MM(2m~550m) or 10µm SMF(2m~5000m) Support universal type BIDI	
FLASH	16M	
RAM	128M	
power consumption	Standby power consumption ≤ 10W Full load of the whole machine ≤ 25W	Standby power consumption ≤ 10W Only network full load ≤ 25W Full load of the whole machine ≤ 360W
LED indicator light	17-20: (5-6 light port connection indicator light) Ports 1-16: (green/100M; green+orange/1000M) PWR: Power indicator light/ SYS system indicator light V1: Main power indicator light V2: From the power indicator light HW:/	17-20: (Light port connection indicator light) Ports 1-16 (green/network indicator light; orange/ PoE indicator light)PWR: Power indicator light/ SYS system indicator light V1: Main power indicator light V2: From the power indicator light HW:/
power input	2 sets of independent power inputs SW: DC 12-57V	2 sets of independent power inputs SW: DC 12-57V PoE: DC 37-57V
Working temperature/humidity	-40~80 °C; 10%~90% RH without condensation	
Storage temperature/humidity	-40~+5 °C; 5%~95% RH without condensation	
protection grade	Port lightning protection: 6KV 8/20us; 8KV ESD electrostatic protection; Protection level: IP40	
Product size	(L*W*H): 208mm*140mm*50mm	
Net weight (kg)	1.58kg	1.62kg
Installation method	3C; CE mark, commercial; CE/LVD EN60950; FCC Part 15 Class B; RoHS;	
Warranty period	Complete machine for 1 year (excluding accessories)	

Technical parameters (software)

Model	industrial16GE+4SFP	industrial 16GE PoE+4SFP
Network Protocol	IEEE 802.3x IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z IEEE 802.3ad IEEE 802.3q, IEEE 802.3q/p IEEE 802.1w, IEEE 802.1d, IEEE 802.1S, IEEE 802.1X	
MAC	Support 8K MAC address table, automatic update, bidirectional learning	
VLAN Configuration	Support based on port VLAN Supports up to 4096 VLANs Supports Voice VLAN and can configure QoS for voice data Support 802.1Q standard VLAN	
Spanning Tree	Support STP spanning tree protocol; Support RSTP for fast tree generation protocol; Support MSTP for fast tree generation protocol; Support EPPS ring network protocol; Support EAPS ring network protocol; Support 802.1x argumentation protocol	
Port Aggregation	Supports 8 groups of aggregation, with a maximum of 8 ports per group;	
Port Mirroring	Support bidirectional port mirroring for sending and receiving	
Loop Protection	Support loop protection function, real-time detection, rapid alarm, precise positioning, intelligent blocking, and automatic recovery	
Port Isolation	Support isolation between downstream ports and communication with upstream ports	
Flow Control	Half duplex based on back pressure control; Full duplex based on PAUSE frames	
Negotiable Mode	The port supports automatic negotiation function (self negotiated transmission rate and duplex mode)	
line rate	Support port based input/output bandwidth management	
Multicast Control	IGMPv1/2/3 and MLDv1/2 Snooping; Support GMRP protocol registration for multicast address management, multicast VLAN, multicast routing ports, and static multicast addresses	
DHCP	DHCP Snooping	
Storm suppression	Support storm suppression for unknown unicast, multicast, unknown multicast, and broadcast types; Storm suppression based on bandwidth adjustment and storm filtering	
Security features	Support user port+IP address+MAC address; ACL based on IP and MAC; Support security properties based on port based MAC address quantity	
QOS	802.1p port queue priority algorithm; Cos/Tos, QoS tags WRR (Weighted Round Robin), Weighted priority rotation algorithm; Support three priority scheduling modes: WRR, SP, and WFQ	
cable sequence	Support Auto MDIX Automatically identify direct and cross network cables	
Negotiable Mode	The port supports automatic negotiation function (self negotiated transmission rate and duplex mode)	
system maintenance	Support uploading upgrade packages; Support system log viewing; Support WEB to restore factory settings	
PoE function (PoE type only)	Port switch Schedule arrangement, timed switch Voltage, current, and power display System total power display, system total power configuration PoE watchdog, device crashes and automatically restarts, scheduled restarts, supports IP binding restarts Support port power configuration (AF.AT HiPoE. BT) Support power indicator light prompt Support port PoE type configuration (48V/24V power supply)	
network management	Support web interface management; Based on Telnet. TFTP CLI management of Console; Support SNMP V1/V2/V3 management Support RMON V1/V2 management; RMON Management	

The above are the main software functions and do not represent all of them.
If you do not have any functions, please consult us first! Support software development with customization requirements!