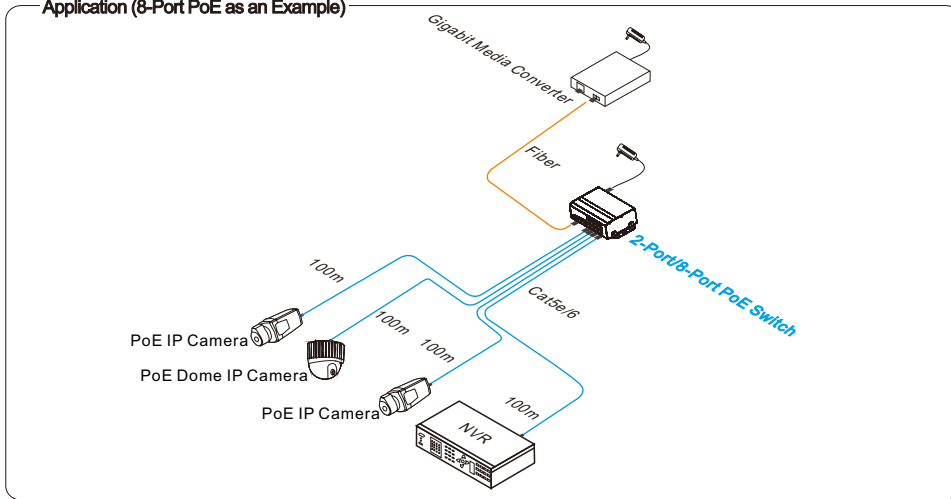


Industrial Ethernet Switch User Manual

13.238.101.1984
V 2.0

Full gigabit one-key ring industrial unmanaged switches provide 2/8*10/100/1000Base-T Ethernet port and 2*1000Base-X SFP slots. Support auto speed reduction on Ethernet ports, the transmission distance is up to 200 meters max. What's more, the series support one-key fast ring, one-key broadcast storm prevention (BSP), IEEE802.3af/at and PoE watchdog. With industrial components, fanless and low power consumption design, the series meet the requirement of industrial project, and are widely used in smart power grid, transportation, smart city, safe city, new energy, aerospace, smart manufacturing, military and other industrial fields.

Application (8-Port PoE as an Example)



Feature

- Provide 2/8*10/100/1000Base-T Ethernet port and 2*1000Base-X SFP slots.
- Support max 200 meters of transmission distance with auto speed reduction.
- Support one-key fast ring, with self-healing time in 20ms.
- Support one-key broadcast storm prevention (BSP), preventing crash of the switches.
- Support one channel relay alarm output, fanless, wave metal shell, low power consumption design.
- Support installation of DIN rail and wall mounted, adapting to a variety of environments.
- Support IEEE802.3af/at, max PoE power output for single port is up to 30W.
- Support wide voltage input range from DC 12V to DC 48V.
- Support PoE watchdog, auto reboot the connected failure PD devices.

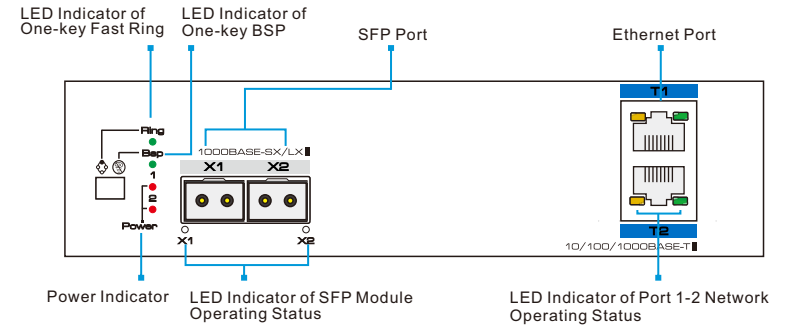
Notice

- 1) Transmission distance is related to the connecting cable. We suggest to use standard Cat5e/6 network cable to get the max transmission distance.
- 2) SFP modules need to be purchased separately.
- 3) Device must be connected with lightning protection grounding; otherwise protection level will be reduced; please use above 20AWG wire to connect the grounding terminal.

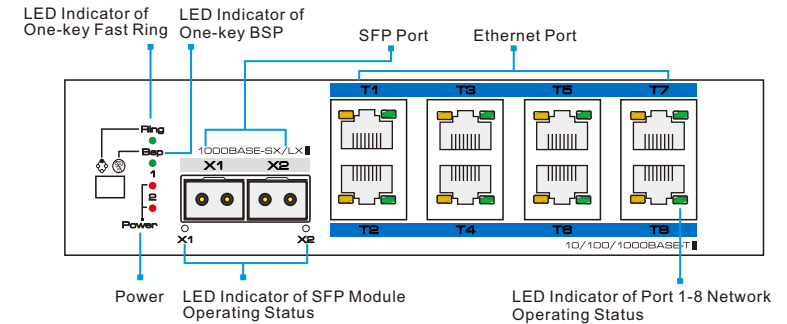
Board Diagram

Front Side

2-Port PoE Switch

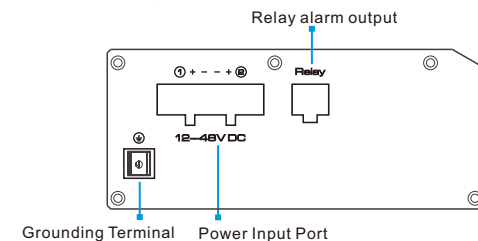


8-Port PoE Switch



Left Side

2-Port/8-Port PoE Switch



Installation Steps

Please check the following items before installation. If any missing, please contact the dealer.

- Industrial PoE Switch 1 pc
- Hanger 2 pcs
- Rail Bracket 1 pc
- User Manual 1 pc
- Mounting Kits 1 pc

Please follow the installation steps below

- 1) Please turn off the signal source and the device's power, installation with power on may damage the device.
- 2) Use network cables to connect IP cameras with the product's RJ45 Ethernet ports.
- 3) Use another network cable or (optical fiber) to connect switch's UPLINK port with NVR or computer.
- 4) Connect switch with power adapter.
- 5) Check if the installation is correct and device is good, make sure all the connection is reliable and power up the system.
- 6) Make sure every network device power supply works normally.

Trouble Shooting

Please find the following solution when the device doesn't work

- Please confirm if the installation is correct.
- Please confirm if the RJ45 cable order in accordance with the EIA/TIA568A or 568B industry standards.
- Each POE port could output max 30W power to POE device, please don't use POE device with power consumption over 30W.
- Please replace the failure device with a good one to check if this device is in normal operation or not.
- If the problem still exist, please contact the factory.

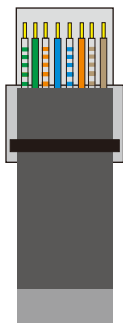
RJ 45 Making Method

Instruments to be used: wire crimper, network tester.

Wire sequence of RJ45 plug should conforms with EIA/TIA568A or 568B standards.

- 1) Shuck off about 2cm long of the insulating layer to expose the 4 pairs UTP cables;
- 2) Separate the 4 pairs UTP cables and straighten them up;
- 3) Line up the 8 pieces of cables per EIA/TIA 568A or 568B standards;
- 4) Brunt cut the cables to leave 1.5cm wire exposed and make sure the wire ends are leveled off;
- 5) Plug 8 cables into RJ45 plug, make sure each cable is in each pin;
- 6) Then use wire crimper to crimp it;
- 7) Repeat above 5 steps to make the another end;
- 8) Using network tester to test the cable .

| pin color | |
|-----------|--------------|
| 1 | white/green |
| 2 | green |
| 3 | white/orange |
| 4 | blue |
| 5 | white/blue |
| 6 | orange |
| 7 | white/brown |
| 8 | brown |



EIA/TIA 568A

| pin color | |
|-----------|--------------|
| 1 | white/orange |
| 2 | orange |
| 3 | white/green |
| 4 | blue |
| 5 | white/blue |
| 6 | green |
| 7 | white/brown |
| 8 | brown |



EIA/TIA 568B



Notice

- Make sure if one end is EIA/TIA568A, the other end should also be EIA/TIA568A.
- Make sure if one end is EIA/TIA568B, the other end should also be EIA/TIA568B.

Specification

| Item | 2-Port PoE Switch | 8-Port PoE Switch |
|------------------------|---|---|
| Physical Port | | |
| Downlink Ports | 2*10/100/1000Base-T PoE | 8*10/100/1000Base-T PoE |
| Uplink Ports | 2*1000 Base-X SFP Slots | |
| Alarm Output | One channel relay alarm output, 1A@DC 9V, 2 cores, 5.08mm terminal | |
| DIP Switch | 1. Enable / Disable fast ring & PoE watchdog, with self-healing time less than 20ms. 2. Enable / Disable broadcast storm prevention. | |
| Switching Performance | | |
| Standards | IEEE 802.3 , IEEE 802.3u, IEEE 802.3ab, IEEE 802.3Z, IEEE 802.3X, IEEE 802.1af/at | |
| Switching Capacity | 8Gbps | 20Gbps |
| Packet Forwarding Rate | 3.8Mpps | 14.9Mpps |
| Packet Buffer | 2Mbit | |
| MAC Table | 16k | |
| Jumbo Frame | 10k bytes | |
| LED Indicator | Port: 1*Link/Act (Green) & 1*PoE Status(Orange) 1*One-key Fast Ring (Green), 1*One-key BSP (Green), 2*PWR (Red) | |
| PoE | | |
| PoE Line Pair | 1/2(+) , 3/6(-) | |
| PoE Output Power | Max POE output for single ports≤30W Whole machine output PoE power: 60W(12V), 60W(24V), 60W(48V). | Max POE output for single ports≤30W Whole machine output PoE power: 80W(12V), 120W(24V), 240W(48V). |
| Power Supply | | |
| Input Terminal | 4 PIN / 5.08mm | |
| Input Voltage | DC 12~48V DIN-rail industrial power supply (Optional) | |
| Power Consumption | ≤6W (Not include PoE) | ≤12W (Not include PoE) |
| Environment | | |
| Surge Immunity | 6kV, Standard: IEC61000-4-5 | |
| ESD Protection | 6kV: Contact discharge, 8kV: Air discharge, Standard: IEC61000-4-2 | |
| Operating Temperature | -40~75°C | |
| Storage Temperature | -40~85°C | |
| Operating Humidity | 5%~95% (Non-condensation) | |
| Physical Parameter | | |
| Material | Aluminium alloy, IP40 | |
| Dimensions (W*D*H) | 159mm*110mm*46.5mm | |
| Installation | DIN rail / Wall mounted | |
| Weight | 823g±10g | 942g±10g |
| Certifications | CE, FCC | |

Version, V2.0, updated 2020.7.6

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