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| **Product Name** | **GAOTek 8 Port Gigabit Industrial Ethernet Switch** |
| **Product SKU** | **GAOTek-ESR-166** |
| **Product URL** | https://gaotek.com/product/gaotek-8-port-gigabit-industrial-ethernet-switch/ |

# Table of Contents

# GAOTek 8 Port Gigabit Industrial Ethernet Switch

## 1. Overview

Industrial PoE Ethernet switch with 10/100/1000Mbps PoE BASE-TX, the Product meet CE, FCC, RoHS standards. Switch has the operating temperature of -40℃ ~ 75℃, has the super firmness can adapt to all kinds of harsh environment, can also be conveniently placed in the compact space of the control box. The installation characteristics of the guide rail, wide temperature operation, IP30 protection class housing and LED indicator light make the SW100-08-AGB a plug and play industrial grade device, providing a reliable and convenient solution for users to network their Ethernet devices.

## 2. Switch Panel
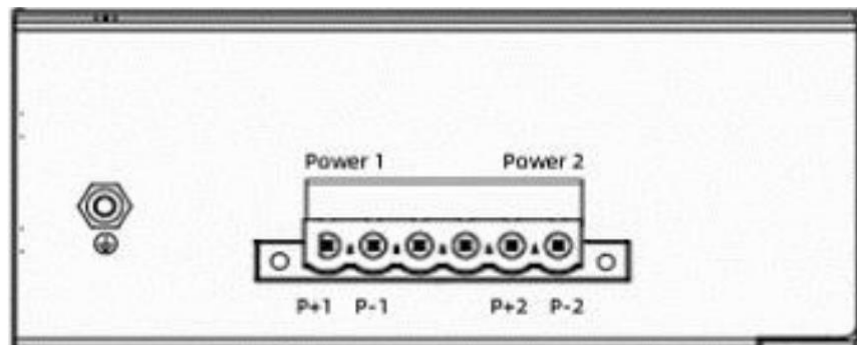


**Side panel:** P1 and P2 are the number of connecting terminals, P+1 and P-1 are respectively to the positive and negative poles to be connected; Earthing screw, used for earthing equipment.
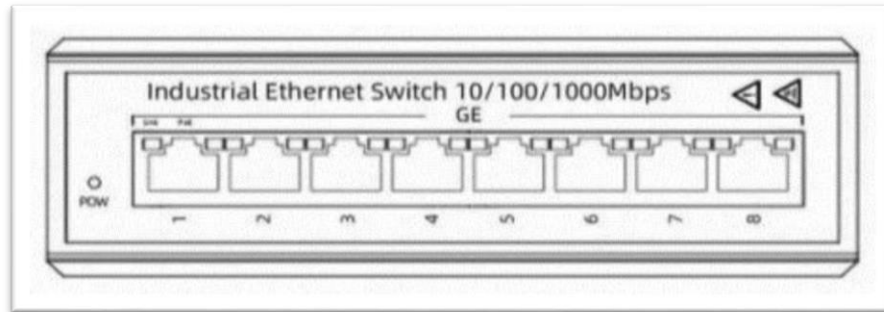
**Front panel:** The yellow light on the port is the LINK light, which is on when the connection is established and the data transmission is flashing. The green light is PoE light, which is only on when the switch port is supplying power to the PD devices. Power indicator light is on when connecting with Power.

**Switch size（mm）**
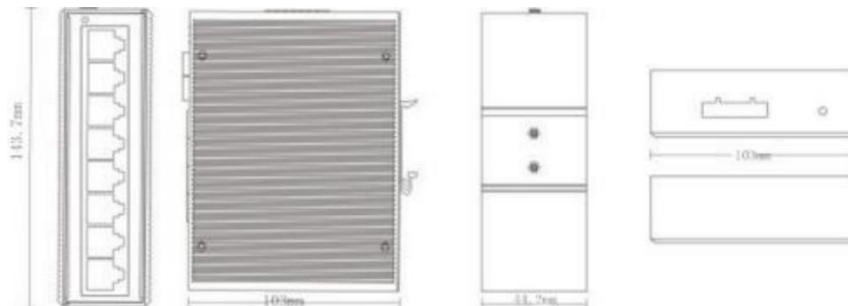


## 3. Features

- The use of high-quality photoelectric integration module to provide good optical and electrical characteristics.
- Ensure reliable data transmission and long working life.
- Support full duplex or half duplex mode, with automatic negotiation capability.
- Network port support automatic cross identification.
- Internal storage and forwarding mechanism, support a variety of protocols.
- In line with industrial operating standards, the average trouble-free work in more than 300,000 hours.

- Working power supply: DC 48-57V to provide reverse protection.
- Lightning Surge Protection (Power): 5000A(8/20μs).

## 4. Specification

### 4.1 Standard:

IEEE802.310BASE-TIEEE802.3i 10Base-T; IEEE802.3u;100Base-TX/FX; IEEE802.3ab1000Base-T; IEEE802.3z1000Base-X; IEEE8 02.3x; IEEE802.3af, IEEE802.3at

### 4.2 Interface: 8-Port PoE 10/100/1000Mbps Industrial Switch

### 4.3 Work environment: -40 ～ 75 °C Storage: -40 ～ 75 °C

### 4.4 Switch:

Bandwidth: 20Gbps

Packet Buffer Memory: 2Mbit

Packet Forwarding Rate: 15Mpps

MAC Address Table: 8K

### 4.5 Power supply: input voltage: DC48-57V (two-way power redundancy backup); Access terminal: Phoenix terminal; Support dual power redundancy; Support built-in over current 4.0A protection; Support reverse connection protection

### 4.6 Mechanical characteristic
- IP30 steel alloy
- DIN rail installs
- Natural colling, no fan
- Weight: 0.52Kgs
- Measurement: 143.7 x 103 x 47.7 mm

## 4.7 Industrial standard:

FCC CFR47 Part 15, EN55022/CISPR22, Class A IEC61000-4-2 (ESD): ±6kV (contact), ±8kV

(air)

IEC61000-4-3 (RS): 10V/m (80~1000MHz) IEC61000-4-4 (EFT): Power Port: ±2kV; Data

Port: ±1kV

IEC61000-4-5 (Surge): Power Port: ±1kV/DM,

±2kV/CM; Data Port: ±1kV

IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz)

IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)

Frequency range：150kHz-80MHz +

Impact: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

**5. Interface Definition 10/100/1000Base-TX ethernet interface:**



Ethernet cable

This series of switches provides MDI/MDI-X self-identification with cable support on all 10/100/1000Base-TX ports. In use, the Ethernet port of the switch can be connected with other Ethernet terminal devices through network cables (direct or cross). Please use Class 5 shielded twisted pair. The Ethernet port pin definition is shown in the following figure:

RJ45 port supports automatic MDI/MDI-X operation, you can use a straight line to connect to the PC or server, connect to other switches or hubs. In the through line (MDI), pins 1, 2, 3, 4, 5, 6, 7, 8 correspond to the connection; For the MDI-X port of a switch or hub, cross lines are used: 1-3, 2-6, 3-1, 6-2, 4-7, 5-8, 7-4, 8-5.10Base-T/1000Base-T (X) pins are defined as follows:

| Pin No. | MDI Signal | MDI-X Signal |
|:---:|:---:|:---:|
| 1 | TX+ | RX+ |
| 2 | TX- | RX- |
| 3 | RX+ | TX+ |
| 6 | RX- | TX- |
| 4,5,7,8 | - | - |

Note: "Tx ±" refers to sent data ±, "Rx ±" refers to received data ±, and "-" refers to unused data.

## 6. LED Indicator

| LED indicator | Status | Definition |
|---|---|---|
| **Power** | Red LED on | Power supplying in normal |
| | Red LED off | Power supply abnormal or no powering |
| **RJ45 Indicator** | Yellow LED on | Network Connection in normal |
| | Yellow LED flashing | Link communication in normal |
| | Green LED on | PoE feeding in normal |
| | Yellow/ Green LED off | No connection at port |

## 7. Installation caution

### 7.1 Installation precautions

In order to avoid damage to equipment and personal injury caused by improper use, please follow the following precautions:

- In order to avoid damage caused by falling of the equipment, please put the equipment in a stable environment.
- When supplying power to the equipment, pay attention to confirm the range of power supply voltage, as well as the positive and negative poles of the power supply, so as not to damage the equipment by wrong operation.
- In order to reduce the risk of electric shock, ensure that the equipment is well grounded in the working environment.

- No matter when, please do not arbitrarily remove the equipment shell.

- When placing the switch, please avoid the area with dust and strong electromagnetic interference.

## 7.2 Din rail installation:



The first step is to check the grounding and stability of the guide rail: the guide rail slot of the switch is clamped into the guide rail; The second step: from the center to both sides of the guide rail positioning screws in order. Step 3: Use screws to fix the mounting rail card slot on the fixed guide groove at both ends of the guide rail to ensure that the guide rail and the switch are fixed on the guide rail vertically and stably.

## 7.3 Grounding
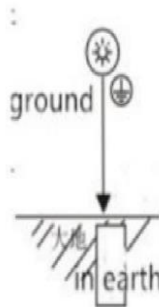


Fix the grounding wire to the grounding screw above the switch, and ensure good reliable connection of the grounding system.

## 7.4 Power Connection

Insert the power cord into the specified position of the 6-core terminal, and insert the terminal into the standard power supply inlet (P+1 and P-1 input corresponding to the first power supply P1, and P+2 and P-2 input corresponding to the second power supply P2). The available voltage standard of the power supply is supported from 48VDC to 57VDC
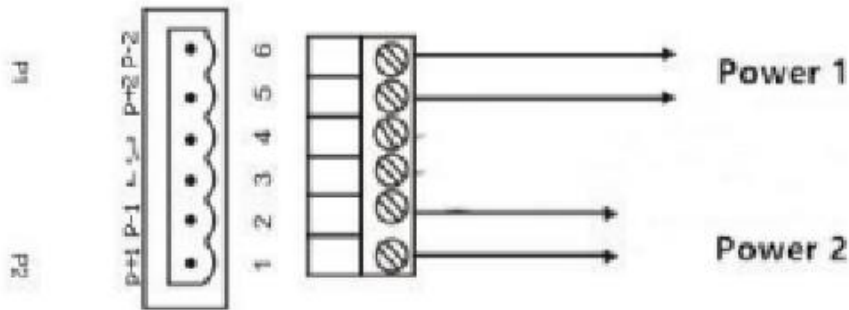


## 8. Packages

| Content | QTY |
|---|---|
| Industrial Switch | 1 PCS |
| User Manual | 1 PCS |