8-Port BTPoE Gigabit + 2-Port SFP L2 Managed Ethernet Switch

Quick Installation Guide

This product includes three documents as below.

Documents	Descriptions	How to get it
Quick Installation Guide	Including product introductions and installation steps introductions.	In the packing box or contact your dealer.
Web-based Configuration Guide	Including Web network management system configuration instructions.	Please contact your dealer.
CLI-based Configuration Guide	Including CLI-based configuration instructions	Please contact your dealer.

This document is **Quick Installation Guide**. It is intended for engineers or anyone who needs to install the product.

The information in this document is subject to change without notice.

The document is only used as operation guide, except for other promises. No warranties of any kind, either express or implied are made in relation to the description, information or suggestion or any other contents of the manual.

The images shown here are indicative only. If there is inconsistency between the image and the actual product, the actual product shall govern.

The symbols that may be found in this document are defined as follows.

Symbol	Description
⚠ **DANGER**	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.
⚠ **WARNING**	Indicates a hazard with a medium or low level of risk, which if not avoided, could result in minor or moderate injury.
⚠ **CAUTION**	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.

Change History

Updates between document issues are cumulative. Therefore, the latest document issue contains all updates made in previous issues.

Version	State	Release Date	Description
V1.0	Released	2020-09-16	Initial commercial release.
V2.0	Released	2021-01-30	· "Update paragraph "3.2.3 Desktop Installation". Update the parameter of "working temperature", " MTBF" and "MTBF standard" in paragraph "4 Specifications". · Add description of another switch.

Content

1   Packing List

Open the box of the product and carefully unpack it. The box should contain the following items. Please check before installation, if any missing, please contact your dealer immediately.

No.	Items	Quantity
1	Switch	1 pc
2	Mounting Accessory	1 set
3	Quick Installation Guide	1 pc

2 Product Introduction

2.1 Overview

This series product is 8-Port BTPoE Gigabit + 2-Port SFP L2 Managed Ethernet Switch.

This series contains 2 types:

- 8-Port BTPoE Gigabit + 2-Port SFP L2 Managed Ethernet Switch(480W), short for 8-Port Switch (480W)
- 8-Port BTPoE Gigabit + 2-Port SFP L2 Managed Ethernet Switch(720W), short for 8-Port Switch (720W)

This series switch provides 8 Gigabit Ethernet RJ-45 ports and 2 Gigabit SFP uplink ports. The switch meets IEEE 802.3af/at/bt standard. Each RJ-45 ports support Power-over-Ethernet (PoE++) and deliver up to 90W power per port. The total PoE power budget is up to 480W/720W.
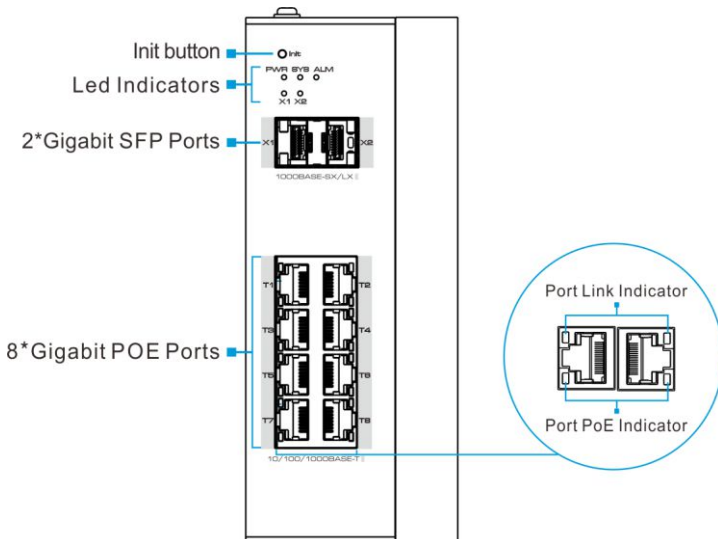
The switch has extensive L2 management functions, such as 802.1Q VLAN, 802.1P QoS, SNMP, IPv6, Fast Ring and PoE control. It can be easily managed via a WEB GUI (http/https), CLI (telnet/ssh/console) or SNMP.

The switch is equipped with an alarm relay that can be configured via software. It can be widely used in lighting industry, security monitoring, enterprise parks and so on.
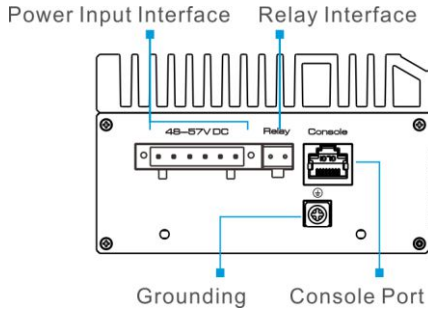
2.1 Hardware Introduction

The interfaces and indicators of this series switch are the same. Here takes 8-Port Switch (720W) as example.

Front Panel

The interfaces and indicaotors of this series switch are of the same parameter as following.

Led Indicators Instructions

Indicators		Status	Descriptions
PWR	Power Indicator	On	The power is on.
		Off	The power is off.
SYS	System Working Indicator	Blink	System is working normally.
		On/Off	System failure
ALM	Relay Alarm Indicator	On	The device alarms.
		Off	The device is working normally.
X1~2	X1/X2 SFP Port indicator	On	X1/X2 SFP port is linking normally.
		Blink	X1/X2 SFP port is transmitting or receiving data.
		Off	X1/X2 SFP port is linking down.
Port Link Indicator		On	The port is linking normally.
		Blink	The port is transmitting or receiving data.
		Off	The port links down.
Port PoE Indicator		On	The port is supplying PoE normally.
		Off	The port stops supplying PoE.

Power Supply Port

The input power supply port of the device adopts removable 6-position terminal block. The electrical performance are as follows.

Specifications	Descriptions
Wire range	28~12 AWG (2.5mm²)
Torque	4.08kgf.cm (3.5Lb-In.)
Wire strip length	7~8mm
Dielectric Strength	AC 2500V/1 minute
Rating	300V/15A

Relay Interface

The switch supports relay alarm function.

The input port of the relay interface adopts removable 2-position terminal block. The electrical performance are as follows.

Specifications	Descriptions
Wire range	28~12 AWG (2.5mm²)
Torque	4.08kgf.cm (3.5Lb-In.)
Wire strip length	7~8mm
Dielectric Strength	AC 2500V/1 minute
Rating	300V/15A

The "Relay Interface" could be connected with warner device, such as a buzzer.

In the following cases, the switch will alarm and the ALM Indicator will turn on.

Alarm cases	Descriptions	Indicators
Port Network Disconnected	The linking port is disconnected. In this case, the port link indicator is off, please check the network cable.	
Port PoE Off	The port stops supplying PoE. In this case, the port PoE indicator is off, please check the PoE function.	

Console Port

The device contains a serial RS-232 interface as the console port for local management interface. For the console port, a standard RJ-45 connector is used. Use a RS-232 calbe (Sub-D9 to RJ-45) to connect the console port with the COM port of a PC.

Default configuration:

Data	Default value
Transfer rate	115200 bit/s
Flow control mode	Not support
Test mode	Not support
Stop bits	1
Data bits	8

Init Button

The init button has two operating modes.

- By short pressing the button, the switch will be reset and the configuration is as previous setting saved.
- By pressing the button over 5s, the switch will be restored to the original factory default setting.

3 Installations

3.1 Safety Precaution

To minimize the technically residual risk, it is imperative to obey the following rules. Read all the instructions before operation.

The Caution, Warning and Danger items in this document do not cover all the safety precautions that must be followed. They are only supplementary information.

When operating the device, obey the local safety regulations. The safety precautions provided in the documents are supplementary and shall be in compliance with the local safety regulations.

Operator

- Only qualified and skilled personnel can install, configure, and disassemble the device.
- Only the personnel authorized can operate the device.
- Any replacement or change to the device or parts of the device (including the software) must be done by qualified or authorized personnel.
- Any fault or error that might cause safety problems must be reported immediately to the person in charge.

Ground

For better protection performance, it is recommended as follows.

- Do not damage the ground conductor or operate the device in the absence of well installed ground conductor. Conduct the appropriate electrical inspection.
- When operating the unit, always make the ground connection first and disconnect it at the end.

Human Safety

- Do not operate the device or cables at lightning strikes.
- If the device is designed with optical port, do not look directly into the optical port to prevent the laser radiation from injuring your eyes.
- Do not wear jewelry or watches when you operate the device.

Equipment Safety

- Before operation, the device must be fixed securely on the floor or to other reliable objects, such as the desktop, the walls or the mounting racks.
- Do not block the ventilation while the device is running. Keep a minimum distance of 5 cm from the ventilation to the walls or the other objects that block the ventilation.
- Tighten the thumbscrews by using a tool after both initial installation and subsequent access to the panel.

⚠️ **DANGER**

Do not place the device in the environment that has inflammable and explosive air or fog. Do not perform any operation in this environment.

Operating the electrical device in inflammable environment can be fatal.

Moisture Proof

⚠️ **WARNING**

Water or moisture in the equipment will damage the circuit of the equipment.

- The installation environment of the equipment must be strictly prohibited from water seepage, dripping, and condensation, otherwise it is necessary to install dehumidification equipment (such as air conditioners with dehumidification function, special dehumidifiers), etc.
- It is forbidden to operate the equipment under or near the water source, such as the sink, laundry room or other high humidity areas.
- It is forbidden to touch the device with wet hands.

Dust Proof

- Install the equipment far away from sand and dust sources, such as coal mines, rural roads, and farmland, etc.
- It is forbidden to operate the device in a dense dust environment.

Ventilation

⚠️ **WARNING**

Operating equipment will release heat. Please ensure that the environment where the equipment is installed is well ventilated to ensure the equipment operating normally.

- It is strictly forbidden to install the equipment near heat sources, such as stoves, heaters, etc.
- Ensure that the equipment installation environment has good air flow.
- If the equipment is designed with heat dissipation holes, it is strictly prohibited to block the heat dissipation hole of the device.
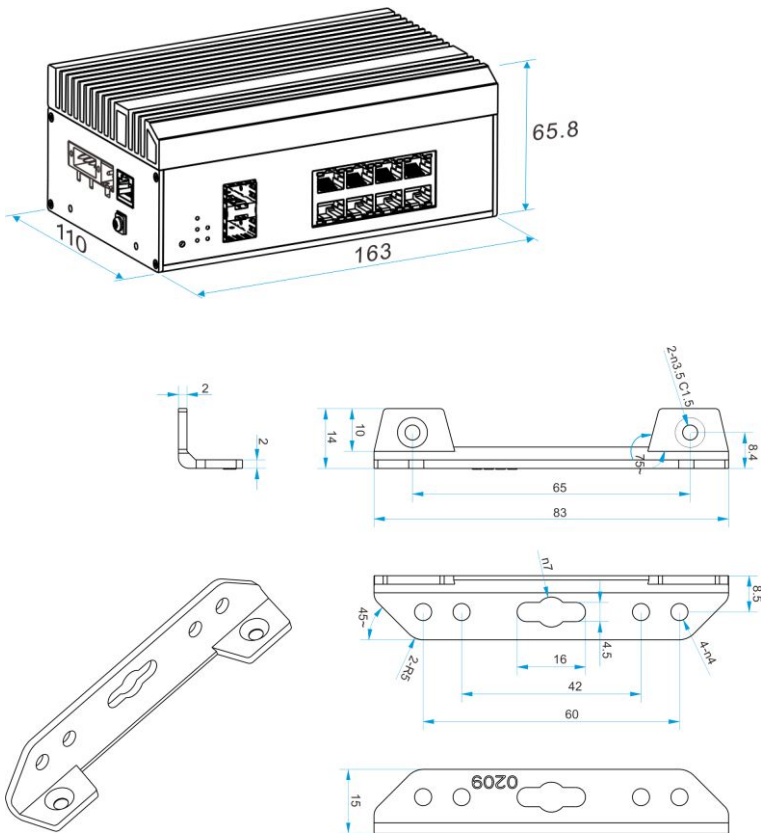
3.2 Installation Steps

This series switch supports 3 installation ways:

• DIN rail installation
• Wall mounted installation
• Desktop installation

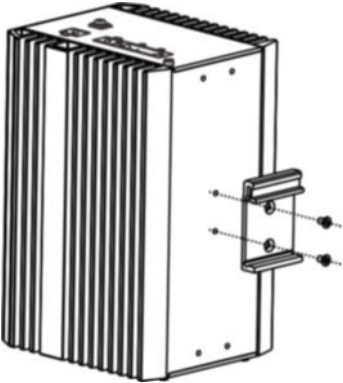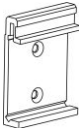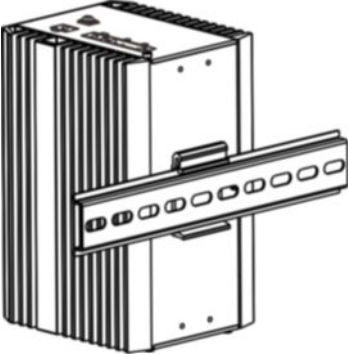The dimensions and installation of this series switch are the same.

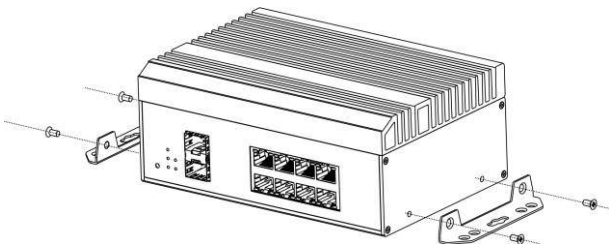Following with the dimensions of the switch and its insatallation accessories.

Dimensions (mm)

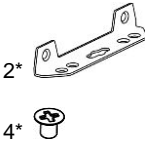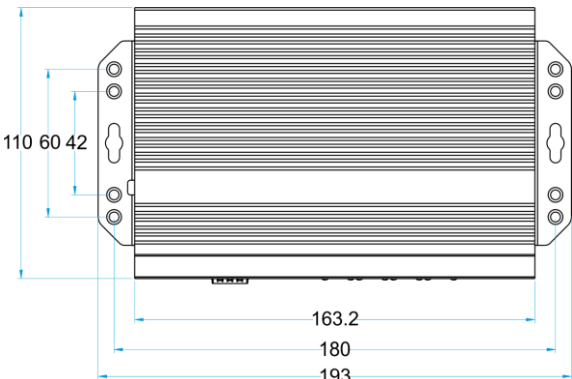### 3.2.1 DIN-rail Installation

Please follow the steps below.

Step 1：Fix the DIN-rail hanger to the switch.	Accessories
	1* 2*
Step 2：**Install the switch to the DIN rail.**	**Accessories**
	N/A

3.2.2 Wall mounted Installation

Please follow the steps as below.

Step 1： Fix the two hangers to the switch.	Accessories
	2* 4*
Step 2: Install the switch on desktop or drill 4 holes on the wall where the switch is going to be installed. Please refer to the dimensions as below.	**Accessories**
	4*

3.2.3 Desktop Installation

The switch supports desktop installation. Users can put this product on clean, stable, grounded workbench. The installation steps are as below:

- Carefully put the device upside down, clean the grooves on the chassis backplane with soft cloth to make sure there is no oil or dust in it.
- Remove the stickers on the foot pad, paste the foot pad in backplane groove.
- Carefully put the device upright on the workbench.

3.2.4 DC Power Cable Connection

There are two ways for the switch to connect the DC power.
- Through terminal block.
- Connect with power adapter of DIN rail power supply.

The installation processes are as follows.
- Before installation, ensure that the device is disconnected from the power supply.
- Connect one end of the protective grounding cable to the grounding screw on the side panel of the device, and the other end is well grounded nearby.
- Connect the positive and negative wires of DC power separately to the "+" and "-" power terminal on the switch as following figure, tightening with screw driver.
- Turn on the DC power, and check if the PWR led turns on, which means the power supply is connected correctly.

Installation steps are finished.

⚠ CAUTION

- For better transmission performance, it is recommended to use Cat6A or better cables to connect the switch and powered device.
- For better protection performance, it is recommended always to make the ground connection first and disconnect it at the end when operating the unit.
- Power on the system only after confirming that the wiring is correct, to avoid damage to the equipment.
- Read the user manual carefully before operating or maintaining the repeater to avoid misoperation.

4 Specifications

Items	8-Port Switch (480W)	8-Port Switch (720W)
Physical Port		
Downlink Ports	8*10/100/1000Base-T PoE++ RJ-45(Auto-MDI/MDI-X)	
Uplink Ports	2*1000 Base-X SFP(Mini-GBIC)	
Console Port	1*RS-232 console port (115200,8,N,1)	
Alarm Output	1 channel relay alarm output, 1A@DC 12V 2 cores, 5.08mm terminal	
PoE		
PoE Standard	802.3af/at/bt (PSE)	
PoE Power Supply Type	End-span	
PoE Line Pair	3/6/4/5(+), 1/2/7/8(-)	3/6/4/5(+), 1/2/7/8(-)
PoE Power Output	52~57V DC	
PoE Budget	90W max for each port (full load with 52V DC input voltage), 480W max for whole switch	90W max for each port (full load with 52V DC input voltage), 720W max for whole switch
Switching Property		
Standard and Protocols	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x, IEEE 802.1D	
Forwarding Modes	Store and Forward	
Packet Buffer	4Mbits	
MAC Table	8k	
Switching Capacity	20Gbps / non-blocking	
Packet Forwarding Rate	14.9Mpps	
Jumbo Frame	16kB	
Power Supply		
Input Voltage	DC 48V~57V	
Power Consumption	≤20W (Not included PoE)	
Reliability		
Surge Immunity	6kV, Standard: IEC6000-4-5	
ESD Immunity	8kV Contact Discharge,8kV Air Discharge Standard: IEC61000-4-2	
MTBF	285130h	
MTBF Standards	Telcordia SR-332, 25℃	

Operating Temperature	-10℃~50℃	-40℃~55℃ (720W) -40℃~75℃ (420W)
Storage Temperature	-40~85℃	
Operating Humidity	5%~95% (Non-condensation)	
Physical Parameters		
LED Indicator	1* Power indicator 1* System status indicator 1* Alarm indicator 2* SFP port indicators 8* Port Link/ACT indicators 8* PoE indicators	
Init Button	Short press to restart Long press ＞5s to initialize the system	
Dimension(W*D*H)	163.2mm*110mm*65.8mm	
Net Weight	1210g±20g	1560g±20g
Material	Metal shell	
Installation	DIN-rail/wall mounted/desktop	
Certifications		
Certifications	CE, FCC	