

50-Port Unmanaged Gigabit Switch with 2-Port SFP

Quick Start Guide

V1.0.1






Foreword

General

This manual introduces the installation, functions and operations of the switch (hereinafter referred to as "the device"). Read carefully before using the device, and keep the manual safe for future reference.

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
 DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
 CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, reductions in performance, or unpredictable results.
 TIPS	Provides methods to help you solve a problem or save time.
 NOTE	Provides additional information as a supplement to the text.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions. For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.

- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, and comply with the guidelines when using it.

Transportation Requirements



Transport the device under allowed humidity and temperature conditions.

Storage Requirements



Store the device under allowed humidity and temperature conditions.

Installation Requirements



DANGER

Stability Hazard

Possible result: The device might fall down and cause serious personal injury.

Preventive measures (including but not limited to):

- Before extending the rack to the installation position, read the installation instructions.
- When the device is installed on the slide rail, do not place any load on it.
- Do not retract the slide rail while the device is installed on it.



WARNING

- Do not connect the power adapter to the device while the adapter is powered on.
- Strictly comply with the local electrical safety code and standards. Make sure that the ambient voltage is stable and meets the power supply requirements of the device.
- Personnel working at heights must take all necessary measures to ensure personal safety including wearing a helmet and safety belts.
- Please follow the electrical requirements to power the device.
 - ◇ Following are the requirements for selecting a power adapter.
 - The power supply must conform to the requirements of IEC 60950-1 and IEC 62368-1 standards.
 - The voltage must meet the SELV (Safety Extra Low Voltage) requirements and not exceed ES-1 standards.
 - When the power of the device does not exceed 100 W, the power supply must meet LPS requirements and be no higher than PS2.
 - ◇ We recommend using the power adapter provided with the device.
 - ◇ When selecting the power adapter, the power supply requirements (such as rated voltage) are subject to the device label.



- Do not place the device in a place exposed to sunlight or near heat sources.
- Keep the device away from dampness, dust, and soot.
- Put the device in a well-ventilated place, and do not block its ventilation.
- Use an adapter or cabinet power supply provided by the manufacturer.
- Do not connect the device to two or more kinds of power supplies, to avoid damage to the device.
- The device is a class I electrical appliance. Make sure that the power supply of the device is connected to a power socket with protective earthing.
- Make sure to install a circuit breaker in the external power circuit.

- A 16 A overcurrent protection device is required to be installed in the external power circuit of the product.
- Voltage stabilizer and lightning surge protector are optional depending on the actual power supply on site and the ambient environment.
- To ensure heat dissipation, the gap between the device and the surrounding area should not be less than 10 cm on the sides and 10 cm on top of the device.
- When installing the device, make sure that the power plug and appliance coupler can be easily reached to cut off power.
- All-pole power switches that meet the requirements of GB4943.1 standard should be installed in the electrical facilities of the building.

Operating Requirements



DANGER



- The device or remote control contains button batteries. Do not swallow the batteries due to the risk of chemical burns.
Possible result: The swallowed button battery can cause serious internal burns and death within 2 hours.

Preventive measures (including but not limited to):

- ◇ Keep new and used batteries out of reach of children.
- ◇ If the battery compartment is not securely closed, stop using the product immediately and keep out of reach of children.
- ◇ Seek immediate medical attention if a battery is believed to be swallowed or inserted inside any part of the body.

- Battery Pack Precautions

Preventive measures (including but not limited to):

- ◇ Do not transport, store or use the batteries in high altitudes with low pressure and environments with extremely high and low temperatures.
- ◇ Do not dispose the batteries in fire or a hot oven, or mechanically crush or cut the batteries to avoid an explosion.
- ◇ Do not leave the batteries in environments with extremely high temperatures to avoid explosions and leakage of flammable liquid or gas.
- ◇ Do not subject the batteries to extremely low air pressure to avoid explosions and the leakage of flammable liquid or gas.



WARNING

- Operating the device in a domestic environment may cause radio interference.
- Place the device in a location that children cannot easily access.
- Do not disassemble the device without professional instruction.
- Operate the device within the rated range of power input and output.
- Make sure that the power supply is correct before use.
- Make sure the device is powered off before disassembling wires to avoid personal injury.
- Do not unplug the power cord on the side of the device while the adapter is powered on.
- Ground the device to protective ground before you power it on.



- Use the device under allowed humidity and temperature conditions.
- Do not drop or splash liquid onto the device, and make sure that there is no object filled with liquid on the device to prevent liquid from flowing into it.
- Operating temperature: -30 °C to +65 °C (-22 °F to +149 °F).
- This is a class A product. In a domestic environment this may cause radio interference in which case you may be required to take adequate measures.
- Do not block the ventilator of the device with objects, such as a newspaper, table cloth or curtain.
- Do not place an open flame on the device, such as a lit candle.

Maintenance Requirements



DANGER

Replacing unwanted batteries with the wrong type of new batteries might result in explosion.

Preventive measures (including but not limited to):

- Replace unwanted batteries with new batteries of the same type and model to avoid the risk of fire and explosion.
- Dispose of the old batteries as instructed.



WARNING

Power off the device before maintenance.

1 Product Overview

1.1 Product Introduction

SG1050 Switch is 48 ports 10/100/1000Mbps+2-ports gigabit SFP Ethernet Switch. The switch provides the seamless network connection. This device integrates 1000Mbps Gigabit Ethernet, 100Mbps Fast Ethernet and 10Mbps Ethernet network capabilities in a highly flexible package. With 48-10/100/1000Mbps Auto-Negotiation RJ45 ports, all UTP ports support Auto MDI/MDIX function. The Switch with a low-cost, easy-to-use, high performance upgrade your old network to a 1000Mbps Gigabit network. resources. Support normal working mode, turn off flow control mode, port isolation (VLAN) mode, you can choose the working mode through the toggle switch. It is essential to helping solve network bottlenecks that frequently develop as more advanced computer user and newer applications continue to demand greater network resources. The switch is easy to install and use. It requires no configuration and installation. It is a great selection for office network.

1.2 Product Feature

- Comply with IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3x, IEEE802.3z, IEEE802.3ad standards
- Supports IEEE802.3x flow control for Full-duplex Mode and backpressure for Half-duplex Mode
- Supports MAC address auto-learning and auto-aging
- Store and forward mode operates
- Supports normal working mode, turn off flow control mode, port isolation (VLAN) mode
- Supports IEEE802.1Q VLAN, 4K VLAN Table
- LED indicators for monitoring power, link/activity, Speed
- Internal power adapter supply

1.3 Package Contents

Before installing the Switch, make sure that the following the "packing list" listed OK. If any part is lost and damaged, please contact your local agent immediately. In addition, make sure that you have the tools install switches and cables by your hands. The switch is easy to install and use. It requires no configuration and installation. It is a great selection for office network.

- One Ethernet Switch.
- One Installation Component
- One AC power cord.
- One User Manual.

1.4 Front Panel

The front panel of the Switch consists of a series of LED indicators, one Mode Switch, 48 x 10/100/1000Mbps RJ-45 ports and 2x SFP ports as shown as below.



LED indicators:

The LED Indicators will allow you to monitor, diagnose and troubleshoot any potential problem with the Switch, connection or attached devices.

Figure 1-2 Front panel



The following chart shows the LED indicators of the Switch along with explanation of each indicator.

Table 1-1 LED Indicator

LED Indicator	Faceplate Marker	Status	Indication
Power Indicator	PWR	Off	Power Off
		Solid green	Power On
Ethernet port indicators	1-48	Off	The port is NOT connected.
		Solid green	The port is connected at 1000Mbps.
		Solid orange	The port is connected at 100/10Mbps
		Blinking	The port is transmitting or receiving data.

SFP port indicators	49-50	Off	The port is NOT connected.
		Solid green	The port is connected at 1000Mbps.
		Blinking	The port is transmitting or receiving data.

Mode Control:

You can select the switch mode.

Default: Enable Flow Control and all ports can communicate with each other.

Flow control off: turn off all ports flow control function, all ports can communicate with each other.

Isolation: 1 to 46 can not communicate with each other, but can communicate with 47-48 port and 49-50.

10/100/1000Mbps RJ-45 ports (1~48):

Designed to connect to the device with a bandwidth of 10Mbps, 100Mbps and 1000Mbps. Each has a corresponding Link/Act/Speed.

SFP ports (49~50):

Two SFP transceiver module ports, each port corresponds to one SFP indicator lights.

1.5 Rear Panel

The rear panel of the Switch contains Heat vent shown as below.

Figure 1-1 Front panel



AC Power Connector:

Power is supplied through an external AC power adapter. It supports AC 100~240V, 50/60Hz.

Grounding Terminal:

Located on the left side of the power supply connector, use wire grounding to lightning protection.

2 Installing and Connecting the Switch

This part describes how to install your Ethernet Switch and make connections to it. Please read the following topics and perform the procedures in the order being presented.

2.1 Front Panel

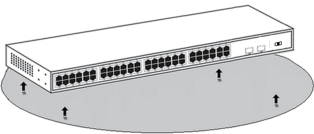
Please follow the following instructions in avoid of incorrect installation causing device damage and security threat.

- Put the Switch on stable place or desktop in case of falling damage.
- Make sure the Switch works in the proper AC input range and matches the voltage labeled on the Switch.
- To keep the Switch free from lightning, do not open the Switch's shell even in power failure.
- Make sure that there is proper heat dissipation from and adequate ventilation around the Switch.
- Make sure the cabinet to enough back up the weight of the Switch and its accessories.

2.1.1 Desktop Installation

Sometimes users are not equipped with the 19-inch standard cabinet. So when installing the Switch on a desktop, please attach these cushioning rubber feet provided on the bottom at each corner of the Switch in case of the external vibration. Allow adequate space for ventilation between the device and the objects around it.

Figure 2-1 Desktop Installation

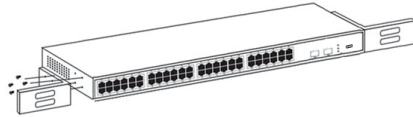


2.1.2 Rack-mountable Installation in 19-inch Cabinet

The Switch can be mounted in an EIA standard-sized, 19-inch rack, which can be placed in a wiring closet with other equipment. To install the Switch, please follow these steps:

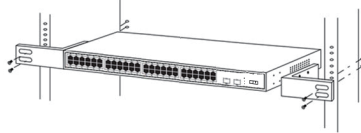
A. attach the mounting brackets on the Switch's side panels (one on each side) and secure them with the screws provided.

Figure 2-2 Bracket Installation



B. Use the screws provided with the equipment rack to mount the Switch on the rack and tighten it.

Figure 2-3 Rack Installation



2.2 Power on the Switch

The Switch is powered on by the AC 100-240V 50/60Hz internal high-performance power supply. Please follow the next tips to connect:

AC Electrical Outlet:

It is recommended to use single-phase three-wire receptacle with neutral outlet or multifunctional computer professional receptacle. Please make sure to connect the metal ground connector to the grounding source on the outlet.

AC Power Cord Connection:

Connect the AC power connector in the back panel of the Switch to external receptacle with the included power cord, and check the power indicator is ON or not. When it is ON, it indicates the power connection is OK.

2.3 Connect Computer (NIC) to the Switch

Please insert the NIC into the computer, after installing network card driver, please connect one end of the twisted pair to RJ-45 jack of your computer, the other end will be connected to any RJ-45 port of the Switch, the distance between Switch and computer is around 100 meters. Once the connection is OK and the devices are power on normally, the LINK/ACT/Speed status indicator lights corresponding ports of the Switch.

Security Recommendation

1. Account Management

1.1 Use complex passwords

Please refer to the following suggestions to set passwords:

- The length should not be less than 8 characters;
- Include at least two types of characters: upper and lower case letters, numbers and symbols;
- Do not contain the account name or the account name in reverse order;
- Do not use continuous characters, such as 123, abc, etc.;
- Do not use repeating characters, such as 111, aaa, etc.

1.2 Change passwords periodically

It is recommended to periodically change the device password to reduce the risk of being guessed or cracked.

1.3 Allocate accounts and permissions appropriately

Appropriately add users based on service and management requirements and assign minimum permission sets to users.

1.4 Enable account lockout function

The account lockout function is enabled by default. You are advised to keep it enabled to protect account security. After multiple failed password attempts, the corresponding account and source IP address will be locked.

1.5 Set and update password reset information in a timely manner

Our device supports password reset function. To reduce the risk of this function being used by threat actors, if there is any change in the information, please modify it in time. When setting security questions, it is recommended not to use easily guessed answers.

2. Service Configuration

2.1. Enable HTTPS

It is recommended that you enable HTTPS to access Web services through secure channels.

2.2 Encrypted transmission of audio and video

If your audio and video data contents are very important or sensitive, we recommend you to use encrypted transmission function in order to reduce the risk of your audio and video data being eavesdropped during transmission.

2.3 Turn off non-essential services and use safe mode

If not needed, it is recommended to turn off some services such as SSH, SNMP, SMTP, UPnP, AP hotspot etc., to reduce the attack surfaces. If necessary, it is highly recommended to choose safe modes, including but not limited to the following services:

- SNMP: Choose SNMP v3, and set up strong encryption and authentication passwords.
- SMTP: Choose TLS to access mailbox server.
- FTP: Choose SFTP, and set up complex passwords.
- AP hotspot: Choose WPA2-PSK encryption mode, and set up complex passwords.

2.4 Change HTTP and other default service ports

It is recommended that you change the default port of HTTP and other services to any port between 1024 and 65535 to reduce the risk of being guessed by threat actors.

3. Network Configuration

3.1 Enable Allow list

It is recommended that you turn on the allow list function, and only allow IP in the allow list to access the device. Therefore, please be sure to add your computer IP address and supporting device IP address to the allow list.

3.2 MAC address binding

It is recommended that you bind the IP address of the gateway to the MAC address on the device to reduce the risk of ARP spoofing.

3.3. Build a secure network environment

In order to better ensure the security of devices and reduce potential cyber risks, the following are recommended:

- Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
- According to the actual network needs, partition the network: if there is no communication demand between the two subnets, it is recommended to use VLAN, gateway and other methods to partition the network to achieve network isolation.
- Stablish 802.1x access authentication system to reduce the risk of illegal terminal access to the private network.

4. Security Auditing

4.1 Check online users

It is recommended to check online users regularly to identify illegal users.

4.2 Check device log

By viewing logs, you can learn about the IP addresses that attempt to log in to the device and key operations of the logged users.

4.3 Configure network log

Due to the limited storage capacity of devices, the stored log is limited. If you need to save the log for a long time, it is recommended to enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.

5. Software Security

5.1 Update firmware in time

According to the industry standard operating specifications, the firmware of devices needs to be updated to the latest version in time in order to ensure that the device has the latest functions and security. If the device is connected to the public network, it is recommended to enable the online upgrade automatic detection function, so as to obtain the firmware update information released by the manufacturer in a timely manner.

5.2 Update client software in time

It is recommended to download and use the latest client software.

6. Physical Protection

It is recommended that you carry out physical protection for devices (especially storage devices), such as placing the device in a dedicated machine room and cabinet, and having access control and key management in place to prevent unauthorized personnel from damaging hardware and other peripheral equipment (e.g. USB flash disk, serial port).