Unpacking Information

Thank you for purchasing this product. Before installation, please verify that your package contains the following items.

- One 24-Port Gigabit Ethernet switch with 2 SFP ports
- One AC power cord
- Rack-mount bracket x2
- Rubber foot x4 and screws
- One user manual

Introduction

Easily boost your networking throughput, the rack-mountable switch provides you 24 10/100/1000Mbps ports that lead you to a real Gigabit connection. Users are now able to transfer large and high bandwidth-needed files faster and hence get a real efficiency improvement. In addition to the cooper ports, 2 ports support fiber connection with the 2 equipped Mini-GBIC ports for obtaining long-distance communication.

The switch offers users with fast and reliable network. The store-and-forward architecture filters errors and forwards packets in a non-blocking environment. Flow control ensures the correctness of data transmitting. The 802.3x and backpressure flow control mechanisms work respectively for full and half duplex modes.

The switch features with easy installation and maintenance. It supports N-Way auto-negotiation protocol, which detects the networking speed (either 10/100/1000 Mbps) and the duplex modes (Full or Half duplex mode) automatically and do an immediately adjustment to advance the capability and performance.

Auto-MDI/MDI-X function alleviates the effort to use crossover cables. Users need not to prepare crossover cables for equipment connectivity. Also, rich diagnostic LEDs are provided for users to get real-time information of the connection status that helps to do quick response and correction.

Table of Contents

Key Feature

- Complies with 10BASE-T specifications of the IEEE802.3 standard
- Complies with 100BASE-TX specifications of the IEEE802.3u standard
- Complies with 1000BASE-T specifications of the IEEE802.3ab standard
- Complies with 1000BASE-X specifications of the IEEE802.3z standard
- Complies with IEEE802.3az Energy Efficient Ethernet
- Complies with IEEE 802.1p Cos
- Supports back-pressure (half duplex) and flow control (IEEE 802.3x)
- Supports N-Way protocol for speed (10/100/1000Mbps) and duplex mode (Half/Full) auto-detection
- Supports MDI/MDI-X auto crossover and polarity correction
- Store-and-forward architecture filters fragment & CRC error packets
- Push on/off button to enable/disable IEEE802.3az
- Provides 2 SFP ports for optional fiber connection
- Supports 4K entries MAC address
- Support 4.1M bit buffer memory
- Support 10K bytes jumbo frames
- Supports extensive LED indicators for network diagnostics
- Rack mountable
- Internal power supply
- 100~240V AC/50~60Hz universal input
- EMC: FCC, CE Class A
- Safety: LVD EN60950-1

Front Panel

The front panel of the switch contains the RJ45 ports, LEDs, 2 SFP ports and an IEEE802.3az EEE ON/OFF button. For detailed LED definition, please refer to the next paragraph. The front panel of the switch is shown as below:

LED Definition

This switch contains one power LED and Link/Act LEDs that shows the activities and information of the ports.

LED	Status	Operation
Power	Steady Green	The switch is powered on.
	Off	The switch is powered off.
Link/ Act	Steady Green	Valid port connection.
	Blinking Green	Valid port connection and there is data transmitting/ receiving.
	Off	Port disconnected.

RJ-45 Ports

All the RJ-45 ports in the device are auto-negotiating and auto-crossover. An auto-negotiating port can detect and adjust to the optimum Ethernet speed (10/100/1000 Mbps) and duplex mode (full duplex or half duplex) of the connected device. An auto-crossover (auto-MDI/MDI-X) port automatically works with a straight-through or crossover Ethernet cable.

Mini-GBIC Ports

There are two slots for mini-GBIC (Gigabit Interface Converter) transceivers. You can plug the SFP port modules into the switch. The SPF port modules are to be used with fiber-optical transceiver cabling in order to uplink various other networking devices for a gigabit link that may span great distances.

You can change transceivers while the switch is operating and use different transceivers to connect to Ethernet switches with different types of fiber-optic or even copper cable connectors.

The SFP module is a hot-pluggable transceiver and specified by a multi-source agreement (MSA). See the SFF committee's INF-8074i specification Rev 1.0 for details.

802.3az ON/OFF Button

The IEEE802.3az ON/OFF button helps reducing the power consumption of switch. This button allows users to keep the best performance without transmission impacted or to have the green support of Energy Efficient Ethernet mode with the simple push of a button.

Rear Panel

The three-pronged power receptacle is located on the rear panel of the switch.
The rear panel of the switch is shown as below.

Power Receptacle

To be compatible with the electric service standards around the world, the switch is designed to afford the power supply in the range from 100 to 240VAC, 50/60Hz. Please make sure that your outlet standard to be within this range.

To power on the switch, connect one end of the supplied power cord to the power receptacle on the back of the switch and the other end to the appropriate power source. After the power cord installation, please check if the power LED is illuminated for a normal power status.

Installation

This switch can be placed on your desktop directly, or mounted in a rack. The installation is a snap. Users can use all the features of the switch with simply attaching the cables and turning the power on.

Before installing the switch, we strongly recommend:

- The switch is placed with appropriate ventilation environment. A minimum 25mm space around the unit is recommended.
- The switch and the relevant components are away from sources of electrical noise such as radios, transmitters and broadband amplifiers.
- The switch is away from environments beyond recommend moisture.

Desktop Installation

- Attach the provided rubber feet to the bottom of the switch to keep the switch from slipping. The recommend position has been square-marked.
- Install the switch on a level surface that can support the weight of the unit and the relevant components.
- Plug the switch with the female end of the provided power cord and plug the male end to the power outlet.

Rack-mount Installation

The switch may standalone, or may be mounted in a standard 19" rack. Rack mounting produces an orderly installation when you have a number of related network devices. The switch is supplied with two optional rack mounting brackets and screws, which are used for rack mounting the unit.
Rack-mount Installation Requirements:

- Two mounting brackets.
- Six M3 flat head screws

Procedures to Rack-Mount the switch in the rack:

- First disconnect all the cables from the switch.
- Place the unit the right way up on a hard, flat surface with the front facing you.
- Locate a mounting bracket over the mounting holes on one side of the unit.
- Insert the screws and fully tighten with a suitable screwdriver.
- Repeat the two previous steps for the other side of the unit.
- Insert the unit into the rack with suitable screws.
- Reconnect all the cables.

Network Cables

- Crossover or straight-through cable: All the ports on the switch support Auto-MDI/MDI-X functionality. Both straight-through or crossover cables can be used to connect the switch with PCs as well as other devices like switches, hubs or router.
- Category 3, 4, 5, 5e, 6 UTP/STP cable: To make a valid connection and obtain the optimal performance. Appropriate cables corresponding to different transmitting/receiving speed is required. To choose a suitable cable, please refer to the following table.

Media	Speed (Mbps)	Wiring
10/100/1000Mbps copper	10	Category 3, 4, 5 UTP/STP
	100	Category 5 UTP/STP
	1000	Category 5e, 6 UTP/STP
1000Mbps Fiber (Mini GBIC required)	1000	The cable type differs from the mini-GBIC you purchase. Please refer to the instruction that came with your mini-GBIC.