Certification

FCC CE

### **FCC Statement**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -Reorient or relocate the receiving antenna.
- -Increase the separation between the equipment and receiver.
- -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -Consult the dealer or an experienced radio/TV technician for help.

To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example- use only shielded interface cables when connecting to computer or peripheral devices)

### **FCC Radiation Exposure Statement**

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

### Caution!

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment

## **Package Contents**

The following items should be found in your package:

- ➤ 16/24 Port Desk-top& Rack-mountable Giga Ethernet Switch
- Power Adapter
- Quick Installation Guide
- Rack-mount Bracket
- > Screw

Make sure that the packets contains above items. If any of the above items is missing or damaged, please contact your distributor.

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# 1. Introduction

Thank you for choosing the 16/24 Port Desk-top& Rack-mountable Giga Ethernet Switch.

## 1.1. Product Overview

The 16/24 Port Desk-top& Rack-mountable Giga Ethernet Switch provides non-blocking, wire speed switching for your 10, 100, and 1000 megabit network clients. Drop this switch in place of your current work group hub or switch, and you can upgrade your high-requirement workstations to full Gigabit speeds as necessary, while continuing to service other clients at their current speeds, or build your network from the ground up, with appropriate link speeds for each user's requirements. Either way, it's perfect for graphics projects, multimedia, and other applications that need to move large files across the network quickly. With the 16/24 Port Desk-top& Rack-mountable Giga Ethernet Switch, you can connect your existing 10/100 Ethernet network to a Gigabit server backbone without any additional equipment. All ports have automatic MDI/MDIX detection, so installation is worry free. Each port independently and automatically negotiates for best speed and whether to run in half or full-duplex mode.

## 1.2. Main features

- ➤ Compliant with the IEEE802.3 10Base-T Ethernet, IEEE802.3u 100Base-TX, IEEE802.3ab 1000Base-T specifications
- ➤ 32/48Gbps switching fabric capacity
- ➤ 16/24 port 10/100/1000Mbps TX Auto-Negotiation Ethernet Switch
- Full/Half-Duplex capability on each TX port (only support full duplex In1000M)
- > IEEE802.3x standard flow control for Full-duplex, optional Back Pressure function for Half-duplex operation
- ➤ Supports TP interface Auto MDIX function for auto TX/RX swap
- ➤ Support 8K MAC address table
- ➤ LED indicators for simple diagnostics and management
- Plug and Play

# 1.3. Standards

- ➤ IEEE 802.3 10Base-T
- ➤ IEEE 802.3u 100Base-TX
- ➤ IEEE802.3ab 1000Base-T
- ➤ IEEE 802.3x Flow Control

# 1.4. Working environment

### Temperature

- > 0° to 40° C (operating)
- ➤ -20° to 70° C (storage)

### Humidity

- ➤ 10% to 85 % non-condensing (operating)
- > 5% to 90% non-condensing (storage)

### Power

> 100 - 240VAC, 50 - 60Hz

# 2. Hardware Installation

### 2.1. Before installation

The setup of the Switch can be performed using the following steps:

- Install the 16/24 Port Desk-top& Rack-mountable Giga Ethernet Switch in a fairly cool and dry place. See Working environment for the acceptable operation temperature and humidity ranges
- Install the Switch in a site free from strong electromagnetic source, vibration, dust, and direct sunlight.
- Leave at least 10cm of space at the left and right hand side of the Switch for ventilation.
- Visually inspect the AC power jack and make sure that it is fully secured to the power adapter.
- Do not stack any device upon the Switch

# 2.2. Installation

### Desktop or Shelf Installation

When installing the Switch on a desktop or shelf, the rubber feet included with the device must be first attached. Attach these cushioning feet on the bottom at each corner of the device. Allow enough ventilation space between the device and the objects around it.

### Rack Installation

The Switch can be mounted in an EIA standard size, which can be placed in a wiring closet with other equipment. To install, attach the mounting brackets on the switch's front panel (one on each side) and secure them with the screws provided. Then, use the screws provided with the equipment rack to mount the Switch in the rack.

# 2.3. Connecting the 16/24 Port Desk-top& Rack-mountable Giga Ethernet Switch to Your Network

| Description | Function   |
|-------------|--|
| PWR         | Connect to Power adapter, please don't use the unknown power     |
| PWK         | adapter, otherwise your device may be damaged.                   |
|             | These ports support network speeds of 10Mbps, 100Mbps or         |
|             | 1000Mbps, and can operate in half and full duplex transfer       |
|             | modes. These ports also support automatic MDI/MDIX               |
| 1X-16X/24X  | crossover detection, which gives the Switch true 'plug and play' |
|             | capabilities. Just connect any network cable between the Switch  |
|             | and the device, and The Switch will automatically detect the     |
|             | settings of the device and adjust itself accordingly.            |

# 2.4. LED Indicators

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

| LED      |       | Function                               |
|----------|-------|--|
| DWD      | On    | Power on                               |
| PWR      | Off   | Power off                              |
|          | ON    | Corresponding port connection normal   |
| LINK/ACT | Flash | Corresponding port data transmitting   |
|          | Off   | Corresponding port connection abnormal |
| 10001    | ON    | Corresponding port works at 1000Mbps   |
| 1000M    | OFF   | Corresponding port works at 10/100Mbps |

# 3. Troubleshooting

### 1. The Power LED is not lit

Check if the AC power cord is well connected. Try to unplug and plug back in the power cord to the switch or try another power outlet.

#### 2. The Link LED is not lit

- Make sure the network configuration of connecting device is correct, and network card and drivers are installed correctly.
- Check the cable connections.
- Make sure the cable distance between the switch and other IEEE802.3 compatible network device does not exceed 100 meters.

#### 3. Performance is bad

- Check the status of Ethernet switching. If Ethernet switching is set to full-duplex on one device but a partner is set to half-duplex, then performance will be poor.
- ➤ Make sure the cable between the switch and other IEEE802.3 compatible network device is Category 5 UTP or better.

### 4. Some devices can't talk to other devices on the network

- > Check status of the Link LEDs to make sure devices are linked.
- Make sure that the devices' network configurations are correct.
- Reset the switch if needed.