# 16/24 Port Nway switch 

## User's manual

## FCC Certifications

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

This device 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.

## CE Mark Warning

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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## Checklist

Check the contents of your package for following parts:

- 16/24 port 10/100M NWAY Switch
- Power Cord and Accessory
- User's Manual
- Rack-mount brackets (optional for 11-inch model)

If any of these pieces are missing or damaged ,please contact your dealer immediately ,if possible ,retain the carton including the original packing material ,and use them against to repackage the product in case there is a need to return it to us for repair.

## - Introduction

The $16 / 24$ port Ethernet Switch are designed to allow simultaneous transmission of multiple packets via an internal high-speed data channel .This means that it can partition a network more efficiently than bridges or routers in most environments .This 16/24 port Ethernet Switch is a highly reliable network Switch and is the ideal device for bridging Ethernet to Fast Ethernet workgroups or networks .Simple and cost-effective, the 16/24 port Switch Ethernet supports IEEE802.3 10Base-T Ethernet and IEEE802.3u 100Base-TX Fast Ethernet. The $16 / 24$ port Switch is therefore fast being recognized as one of the most important building blocks for today networking technology.

The front panel of the $16 / 24$ port Ethernet Switch provides LEDs for easy recognition of the Switch operation status and for troubleshooting .These LEDs display the power status for the system and link status speed ,collision ,full-duplex and receives status for each port.

With 16/24 port Ethernet Switch designed specifically for connecting workgroup devices and desktops, companies no longer have to invest in expensive and inflexible switches engineered primarily for backbone implementations. Instead, companies can deploy scaleable, affordable Switch that increase the aggregate bandwidth of the network by boosting throughput to the workgroups that need it most.

## - Features and Specifications

## Features

- Complies with the IEEE802.3 10Base-T Ethernet and IEEE802.3u 100Base-TX Fast Ethernet standard
- 16/24 ports 10/100Mbps TX Auto-Negotiation Ethernet Switch
- Full/Half-Duplex capability on every TX port
- Supports TP interface Auto MDIX function for auto TX/RX swap
- Automatic Source MAC Address Learning and Aging
- Supports Store \& Forward architecture and performs forwarding and filtering
- Broadcast Storming Filter function
- IEEE802.3x flow control for Full-duplex operation
- Back Pressure function for Half-duplex operation
- Runt and CRC Filtering eliminates erroneous packets to optimize the network bandwidth
- Support to handle up to 1522 bytes packet
- LED indicators for simple diagnostics and management
- Internal power supply
- Plug and Play


## Specifications

## Standard:

- IEEE802.3 10Base-T Ethernet
- IEEE802.3u 100Base-TX Fast Ethernet

Network Media:

- 100Base-TX - UTP/STP category 5 cable
- 10Base-T - UTP/STP category 3 or 5 cable
- Connector: STP RJ-45 port for $10 / 100 \mathrm{Mbps}$ TX
- LED indicators:
- System - Power LED.
- Individual port - link/activity and speed LEDs


## Dimension:

- $440 \mathrm{~mm}(\mathrm{~L}) \times 202 \mathrm{~mm}(\mathrm{~W}) \times 44 \mathrm{~mm}(\mathrm{H})$
- $280 \mathrm{~mm}(\mathrm{~L}) \times 161 \mathrm{~mm}(\mathrm{~W}) \times 44 \mathrm{~mm}(\mathrm{H})$


## Temperature:

- Operating: $0^{\circ} \mathrm{C}$ to $50^{\circ} \mathrm{C}$
- Storage: $-20^{\circ} \mathrm{C}$ to $70^{\circ} \mathrm{C}$


## Humidity:

- Operating: $10 \%$ to $90 \%$ RH
- Storage: 5\% to $90 \%$ RH

Input Power Requirement:

- 100-240VAC, 50-60Hz, Auto-sensing


## Registrations:

- FCC Part 15 Class A, CE


## Hardware Description

This section describes the hardware features of the 16/24-port Ethernet Switching. For easier management and control of the Switch, familiarize yourself with its display indicators, and ports. Front panel illustrations in this chapter display the unit LED indicators. Before connecting any network device to the Switch, read this chapter carefully.

## Front Panel

The unit front panel provides a simple interface monitoring the Switch. It includes a power indicator for each port.


Figure of 16port Nway Switch Front Panel


Figure of 24port Nway Switch Front Panel

## LED indicators

| LED Function | Color | Description |
| :--- | :--- | :--- |
| PWR | Green | Lit: Power on |
| LNK/ACT | Green | Lit: Indicates the adapter is connected to Switch <br> Flash: indicates data in or out the port |
| $10 / 100$ | Green | Lit: 100 Mbps <br> Unlit: 10 Mbps |

## Rear Panel

The rear panel of the $16 / 24$-port Ethernet Switch indicates a AC inlet, which accepts $100-240 \mathrm{VAC} 50-60 \mathrm{~Hz}$ power input.


Figure of 16/24port Nway Switch Rear Panel

## Hardware Installation

1. Place the $16 / 24$ port Switch on a smooth surface
2. Connect the output of power cord to the AC-inlet of $16 / 24$ port Switch.
3. Connect other IEEE802.3 compatible network device(Hub ,Switch ,PC) to one port of the 16/24 port Switch using Category 3/4/5 UTP/STP cabling.
4. Connect another IEEE802.3 compatible network device (Hub , Switch ,PC) to another port of $16 / 24$ port Switch by following the same process as described in Step3.

## Notice

The cable distance between 16/24 port Switch and other IEEE802.3 compatible network device should not exceed 100 meter.
Make sure the wiring is correct
It can be used Category 3/4/5 cable in 10 Mbps operation. To reliably operate your network at 100 Mbps , you must use an Unshielded/Shielded Twisted-Pair (UTP/STP) Category 5 cable, or better Data Grade cabling. While a Category 3 or 4 cable may initially seem to work, it will soon cause data loss.

All kinds of IEEE802.3 compatible network device (Hub , Switch ,PC)can connect to Switch by using straight-through wires or crossover wires because of Switch's auto MDIX function.

## - Hardware Troubleshooting

This chapter contains information to help you solve problems. If the $16 / 24$ port Switch is not functioning properly, make sure the $16 / 24$ port Switch was set up according to instructions in this manual.

## 1. The Power LED is not lit

## Solution:

a. Check if the AC power cord is well connected. Try to unplug and plug back the power cord to the LAN Switch or try another power cord.
b. Check if the AC power source is in good condition.

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

a. Make sure the Switch configuration is consistent with the connecting device
b. Check the cable connections.
c. Make sure the cable distance between $16 / 24$ port Switch and other IEEE802.3 compatible network device should not exceed 100 meter.

## 3. Performance is bad

## Solution:

a. Check the full duplex status of the Ethernet Switching. If the Ethernet Switching is set to full duplex and the partner is set to half duplex, then the performance will be poor.
b. Make sure the cable between the switch and other IEEE802.3 compatible network device is Category 5 UTP at 100Mbps operation.
4. Some stations can not talk to other stations located on the other port Solution:
a. Check status of the LNK LED to make sure the link is correct.
b. Make sure that the workstation's network configuration is correct, modify the network configuration of workstation if need.
c. Please reset the switch if need.

