

16-Port Gigabit Ethernet Switch

User's Guide

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1 Getting to know the Switch

1.1 Introduction

Easy, Intelligent Migration to Gigabit Ethernet!

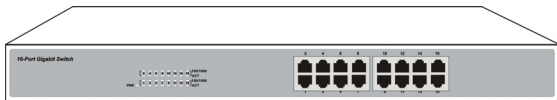
16-Port Gigabit Switch is especially designed for small and medium sized businesses to meet their network's heavy load demands such as graphic or multimedia file transmissions.

1.2 Features

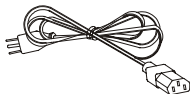
- Supports Auto-Negotiation on each TP port
- Bridging capability for 10, 100 and 1000Mbps segments
- Provides Store-and-Forward switching scheme
- Supports Auto MDI/MDI-X function
- Supports IEEE 802.3x Flow-Control for Full-Duplex operation
- Back-Pressure function supports for Half-Duplex operation
- Non-Blocking Performance Improves Access to Network Resources

1.3 Package Contents

- One Gigabit Ethernet Switch.
- One Power Cord.
- Four Rubber Feet.
- Rackmount Kit
- User's Guide.



Gigabit Ethernet Switch



Power Cord



User's Guide



Rackmount Kit



Four Rubber Feet

1.4 The Front Panel



1.5 Cabling

Speed	Cable Type	Connection Type
1000 Mbps	Category 5 TP or above	RJ-45, UTP 4pairs
100 Mbps	Category 5 TP	RJ-45, UTP 2pairs
10 Mbps	Category 3, 4 or 5 TP	RJ-45, UTP 2pairs

Note: Category 5 TP cable is recommended whenever new cabling is installed.

1.6 Status LEDs

Information about the Switch's activity is displayed through its front panel LEDs, described as below:

Name	Color	Function
Power	Green	Lit: Power "On"
1000/100	Green (1000) Orange (100)	Lit: Link on 1000 or 100 Mbps speed Blink: Sending or receiving packets
10	Green	Lit: Link on 10 Mbps speed Blink: Sending or receiving packets

1.7 The Rear Panel



The Power Socket is designed to be used with the power cord included in the product

package.

- Attach the female end of the power cord to the male power connector on the back panel.
- Attach the male end of the power cord to a grounded power outlet.

2 INSTALLATION

The Gigabit Ethernet Switch is "Plug-&-Play". It does not require software configuration. Users can immediately use any of the features of this product by simply attaching the cables and turning the power ON.

2.1 Installing the Switch on a Rackmount

- Attach the four rubber feet included in the product package to the bottom of the switch, one in each corner.
- Place the switch on a rackmount.
- Plug in all network connections and the power cord.

2.2 Installing mount brackets on the Switch

Place and secure the mounting brackets on the two front sides of the switch. Use a screwdriver to tighten the screws.

3 Useful Tips

3.1 Prior to Installation

Before installing the switch and connecting network devices, it is important to plan the network's layout. Things you should consider include:

- **Dedicated Bandwidth:** File servers and other high-traffic network systems would have an improved performance if they have their own dedicated 10 Mbps, 100 Mbps, or 1000 Mbps bandwidth.
- **Fast Ethernet & Gigabit Ethernet:** Make sure the rules for cable lengths and categories are followed. 100 Base-TX and 1000 Base-T have the same rules for cable and distance.

3.2 Half- and Full-duplex

The switch supports both Half- and Full-duplex modes for 10/100 Base-T. But the 1000 Base-T only supports Full-duplex mode.

- **In Half-duplex mode:** Data cannot be transmitted and received at the same time. Attached devices must finish transmitting data before they can receive data.
- **In Full-duplex mode:** Data can be transmitted and received at the same time.

However:

- Full-duplex transmission is only possible between two devices with a dedicated link (e.g., Switch to Switch, or Switch to PC)
- Both devices must have Full-duplex capability
- Both devices must be manually set to Full-duplex or support Auto-negotiation

3.3 Auto-negotiation

Every 10/100/1000 Mbps port on the switch has a built-in "Auto-negotiation" function. This technology automatically detects and sets the best possible bandwidth as soon as a connection is established with another network device (usually at Power "On" or Reset).

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Auto-negotiation Capability:

Connection Mode	The switch will automatically set its TP ports to operate at:
1000 Mbps with Auto-negotiation	2000 Mbps (1000 Base-T, Full-duplex) Note: Almost all 1000 Mbps devices only operate in Full-duplex mode
100 Mbps without Auto-negotiation	100 Mbps (100 Base-TX, Half-duplex)
100 Mbps with Auto-negotiation	200 Mbps (100 Base-TX, Full-duplex)
10 Mbps without Auto-negotiation	10 Mbps (10 Base-T, Half-duplex)
10 Mbps with Auto-negotiation	20 Mbps (10 Base-T, Full-duplex)

4 SPECIFICATION

Model	16-Port Gigabit Ethernet Switch
Standards	<ul style="list-style-type: none">· IEEE 802.3: 10 Base-T· IEEE 802.3u: 100 Base-TX· IEEE 802.3ab: 1000 Base-T· IEEE 802.3x: Flow-control support
Ports	<ul style="list-style-type: none">· 16 10/100/1000 Base-T TP Copper Ports
Forwarding/Filtering Rate	<ul style="list-style-type: none">· 14880 packets/second per port @ 10Mbps maximum· 148800 packets/second per port @ 100Mbps maximum· 1488000 packets/second per port @ 1000Mbps maximum
Auto-MDIX	<ul style="list-style-type: none">· All TP ports support Auto-MDI/MDI-X Function
LED Indicators	<ul style="list-style-type: none">· One Green LED displays Power status· One Green/Orange LED per port displays 1000/100Mbps Link/Act status· One Green LED per port displays 10Mbps Link/Act status
Power Supply	<ul style="list-style-type: none">· Full Range Auto-switching· Input Voltage: 100 ~ 240 +-10% V AC/ 50 ~ 60Hz
Environment	<ul style="list-style-type: none">· Operating Temperature: 0° ~ 70°C (32° ~ 158°F)· Storage Temperature: -20° ~ 80°C (-4° ~ 176°F)· Humidity: 10% ~ 90% Non-condensing
Certifications	<ul style="list-style-type: none">· CE, FCC
Dimensions	<ul style="list-style-type: none">· 442 x 185 x 44mm (17.40 x 7.28 x 1.73inches)