CYGNUS electronics

24 Ports PoE Gigabit

L3 Managed Ethernet Switch

Quick setup wizard

S8024

Content

1 Product Introduction

1.1 Overview

The switch series contain 24 ports switch(PoE and no PoE) and 16 ports switch(PoE and no PoE).

The 24 ports PoE Gigabit managed Ethernet switch(abbreviated to 24P switch), which provide 24* PoE Gigabit downlink Ethernet ports , 4* 10Gigabit uplink SFP ports . The Products support IEEE 802.3 af/at ,support Web layer-3 network management and PoE management. Products are widely used in security surveillance, network engineering projects and so on.

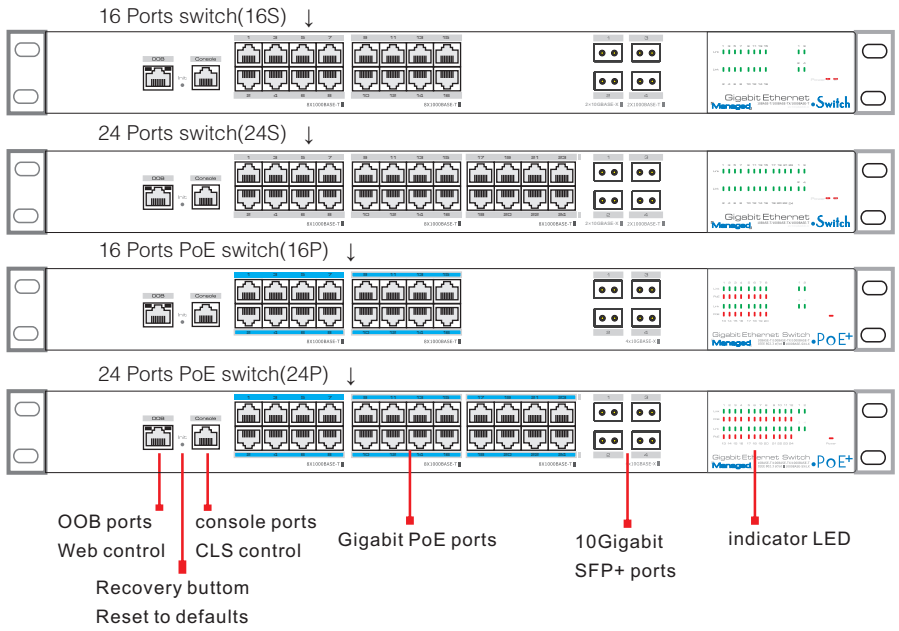
The 16 ports PoE Gigabit managed Ethernet switch(abbreviated to 16P switch),is similar to 24P switch;only the downlink ports quantity is 16,and the power watts is 320W but the 24P switch's is 450W.The 24P switch as an example to introduce below.

1.2 Product Feature

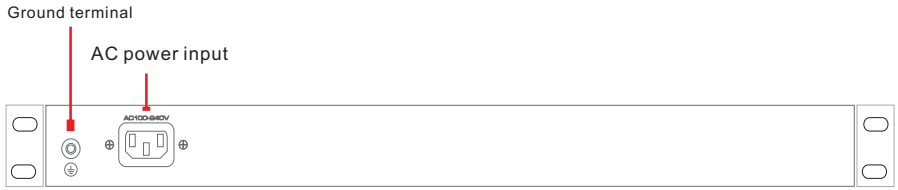
- provide 24* PoE Gigabit downlink Ethernet ports , 4* 10Gigabit uplink SFP ports ;
- Provide web-based layer 3 network management and PoE management by simple operation;
- Support high-speed data forwarding, very suitable for large flow of video data forwarding in security surveillance;
- Support recovery of IP address & user password by one key recovery button;
- Quick Installation, simple operation, convenient for wall/desk/rack installation.

1.3 Board Diagram

The front panel



The back panel



1.4 Specification

Item		24P	16P	24S	16S
Power	Power Supply	Mains on load			
	Voltage Range	AC 100~240V 50/60Hz			
	Consumption	450W	320W	Redundance Power 2*60W	
Network Connector	Ethernet Port	1~16/24 ports: 10/100/1000Mbps RJ45 Auto-MDI/MDI-X ports support IEEE 802.3 af/at		1~16/24 ports: 10/100/1000Mbps RJ45 Auto-MDI/MDI-X ports	
		Uplink: 10GEBase-X SFP+ Module ports support 1000Base-X, setup the "ports settings" on Web management			
	Transmission Distance	Ethernet ports: 100m SFP ports: depend on SFP module			
	PoE	Sigle port<30W Whole<390W	Sigle port<30W Whole<270W	N/A	
Network Switch	Network Standard	IEEE802. 3, IEEE802. 3u, IEEE802. 3ab, IEEE802. 3z, IEEE802. 3X, IEEE 802. 1Q, IEEE 802. 1p, IEEE 802. 3ad,IEEE802.3ae			
	Switch Capacity	24P and 24S 128Gbps;16P and 16S 112Gbps			
	Packet Buffer	12Mb			
	Packet Forwarding Rate	24P and 24S 95.2Mpps;16P and 16S 83.3Mpps			
	MAC Address	16K			
Management	Management	L3			
Protection	ESD	6KV/8KV Per: IEC61000-4-2			
	Lighting Protection	6KV Per: IEC61000-4-5			
Environmental	Working Temperature	-10℃~45℃			
	Storge Temperature	-40℃~85℃			
	Humidity(non-condensing)	0~95%			
Mechanical	Dimension(LxWxH)	442mm×315mm×44mm			
	Material	Sheet Metal			
	Color	Black			
	Weight	4. 5kg			

Products are subject to change without prior notice.

2 Installation

Caution

Anti-counterfeiting label is attached to switch's cover. Product damage caused by unauthorized disassembly is not covered under warranty.

2.1 Shipping List

Please check the following items before installation, if any missing, please contact your local dealer.

Item	Name	Quantity	Unit
1	Switch	1	pc
2	AC Power Line	1*	pc
3	Accessory	1	set
4	Quick setup wizard	1	pc

* the 24S and 16S switch have redundance power module, including 2 AC power lines.

2.2 Installation Precautions

To avoid device damage or personal injury by improper use, please observe the following precautions.

2.2.1 Safety Precautions

Instruction

This is level A product, which may cause radio disturbance in living environment. Users may need to take corresponding and effective measures to solve the problem.

- Pull out the power plug before cleaning the switch. Do not use wet cloth nor liquid to wipe or wash the switch;
- Do not leave the switch close to water or wet place so as to prevent water or dampness from entering into the switch;
- Make sure the switch work in a clean environment. Excessive dust may cause electrostatic adsorption, which will affect the equipment life and cause communication failure;
- The switch will work normally under the correct voltage. Please ensure the voltage indicated on the switch corresponds to the power voltage;
- To avoid the danger of electric shock, please do not open the switch case.
- Do not open the switch case even if the switch is powered off;
- The accessories (including but not limited to power cables, etc.), which can be used for the switch only, is prohibited for other applications.

2.2.2 Installation Requirements

The device should work in indoor environment to avoid thunder stroke. It is important to obey the following requirements no matter you install it in the cabinet or on the workbench directly:

- Enough space (larger than 10cm) for air outlet so as to facilitate the heating dissipation; Good ventilation system for cabinets and workbench is preferred;
- Ensure the Cabinet and workbench is sturdy enough to support the switch and it's accessories's weight;
- Cabinet and workbench with good grounding is preferred.

2.2.3 The Requirements of Electromagnetic Environment

When it is working, the switch may be affected by external interference outside the system through the ways of radiation and conduction. Please pay attention to the followings:

- AC power supply is TN system, so it is necessary to use single phase power socket (PE) which can protect ground wire so that the filter circuit can effectively filter out the power grid disturbances;
- The switch should work far away from high-power radio transmitters, radar transmitters, high-frequency devices;
- Use electromagnetic shielding if necessary, such as shielded cable;
- Interface cables should be arranged indoor rather than outdoor to prevent over-voltage or over-current damage to the signal port.

2.3 Installation Way

There are 3 installation ways: rack, workbench and wall-hung installation.

Caution

Please pull out the power plug before installing or moving the switch. Grounding and anti-lightening can greatly increase the protection level of the switch. please connect the grounding terminal to the earth area by using at least wire 20.

Instruction

The diagram is for reference only, the products are subject to actual product.

2.3.1 Rack Installation

Installation process:

(1) Check rack with good grounding and stability;

(2) Use screws to fit hangers at the device board side;

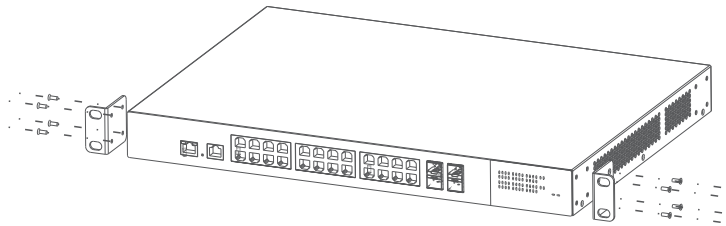


Figure 2-1 Install hangers diagram

(3) Put the device on the rack's bracket and move the rack along the slot to proper position ;

(4) Use screws to fit the installation hanger at rack's fixed slot, make sure the device is installed at rack's bracket steadily.

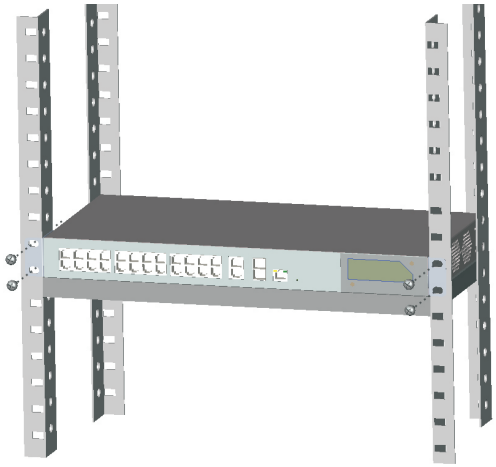


Figure 2-2 Install switch to the rack

Instruction

This product's fixing hangers are just to fix the switch rather than support it. Use brackets under the device (fixed to the rack) to support switch when install the switch to the rack.

2.3.2 Workbench Installation

You can put this product on clean, stable, grounded workbench. The installation procedure as below:

（1）Carefully put the device upside down, clean the grooves on the chassis backplane with soft cloth to make sure there is no oil or dust in it;

（2）Remove the stickers on the foot pad, paste the foot pad in backplane groove;

（3）Carefully put the device upright on the workbench.

2.3.3 Wall-hung Installation

You also can put the product on clean, steady vertical wall. Installation procedure is below:

(1) Use the screws to fix the hangers;

Figure 2-3 Hangers installation diagram

(2) Drill holes on the strong position of wall and then drive the rubber plug into the hole;

(3) Drive these screws into the hole for the rack and fix the product by aiming at the rubber plug .

Figure 2-4 Fix the switch on wall

2.4 Cable Connection

2.4.1 Device Connection

Use cross network cable or cross-over cable to connect PC or other device with switch's Ethernet port;

2.4.2 Configuration Cable Connection

If web management,use a network cable to connect the OOB port and the computer’ RJ45 port;

If CLS management,use a console cable to connect the Console port and the computer’ serial port(DB9);

as the following figure:

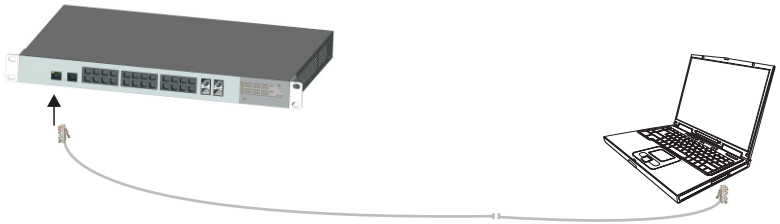


Figure 2-5 Connect configuration cable

2.4.3 Power cable Connection

（1）Connect one side of switch’s power cable with the switch's AC power port, and connect the another side with external AC power socket;

（2）Turn on the power ，check if switch's AC power LED is on, that means power connected correctly;

（3）Use the power plug snap to jammed the AC Power cable.

Figure 2-6 Connect power cable

3 Function Configuration Guide

3.1 Computer Requirements

- Make sure the management PC has already been installed with Ethernet adapter;
- Use network cable connect Ethernet ports with network card of PC(Except the console port).

3.2 Set Up Network Connection

Instruction

(1) You need to set the IP of the PC and the switch in the same network segment. The default IP address of the switch is 192.168.1.200, network gate is 255.255.255.0.

(2) The port to connect management PC for Web setting must be management VLAN. By default, management VLAN is VLAN 1,and each port of the switch is VLAN1.

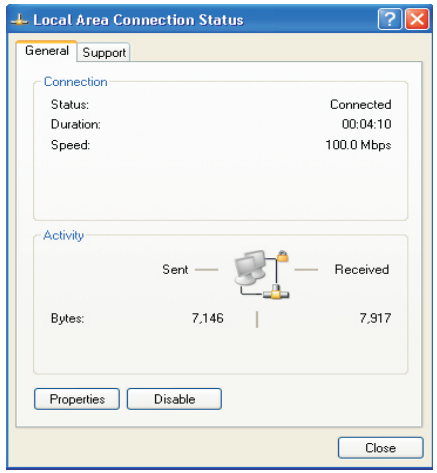
(3) If you need to connect the remote network, please make sure the management PC and the router can do the job above.

(4) This product can't assign the IP address for the management PC, you need to set the management static IP by yourself.

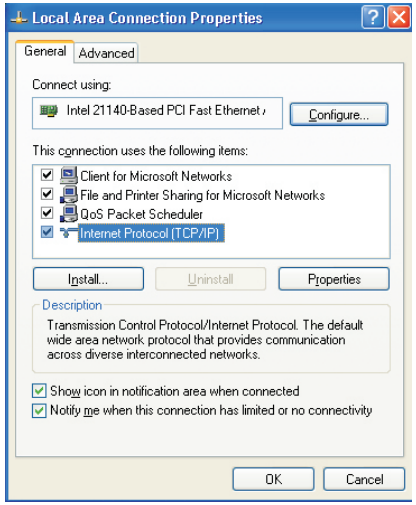
3.2.1 Set Static IP for the Management Computer

Operation steps (take Windows XP as sample)：

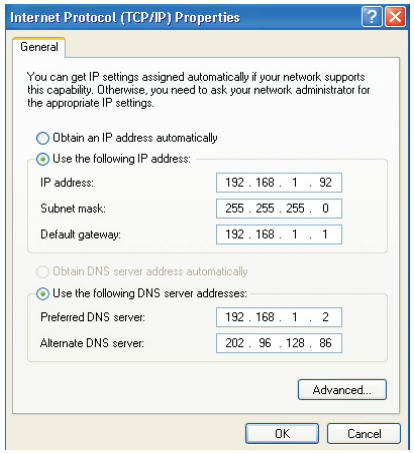
(1) Click <start> to enter the [start] menu, select “control panel”. Double click “network connection” icon, double click the “local connection” icon, pop out “local connection status” window.



(2) Click <property> button, enter "local connection property" window.



(3) Select "Internet protocol (TCP/IP), click <property> button, enter"Internet protocol (TCP/IP) property" window. Select " use the IP address below" button, input IP address (use arbitrary value between 192.168.1.1~ 192.168.1.254, besides 192.168.1.200) and the subnet mask(255.255.255.0). Click "OK" to finish the configuration.



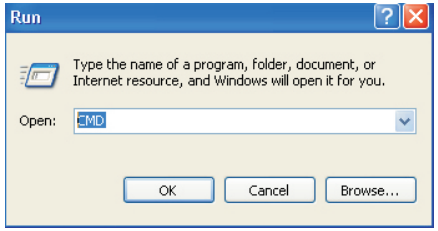
Instruction

DNS server address can be empty or be filled in with the real server address.

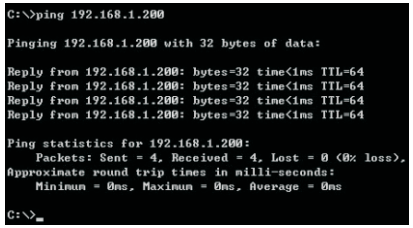
3.2.2 Confirm the Network Connection by Ping Command

Operation Steps below:

(1) Click <Start> button to enter [Start] menu, select [Run], pop out the dialog.



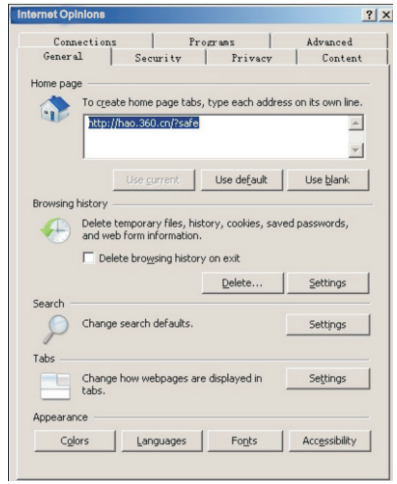
(2) Input "ping 192.168.1.200", click <confirm> button. If there is equipment response show in the pop out dialog, that means network connection succeed, otherwise please check if the network connection is correct.



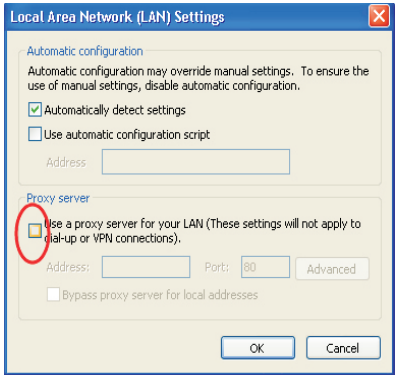
3.2.3 Cancel the Proxy Server

If this management PC use proxy server to visit the internet, then you must prohibit the proxy service, following is the operation:

(1) In browser, select [tool/Internet option] enter [Internet option] window.



(2) Select “connection” tabs in [Internet option] window, and click [LAN Setting] button.



(3) Make sure the “Use proxy server for LAN”option is not selected. If selected, please cancel it and click <yes> button.

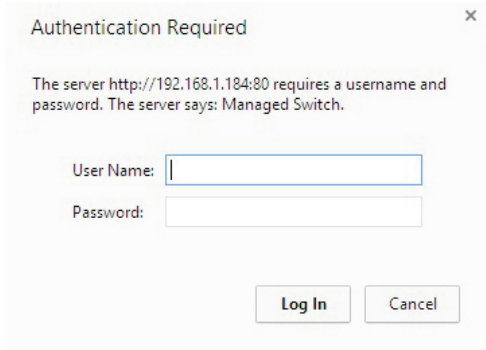
The menu bar has the following options:［System Status], [Port Configuration], [VLAN Settings], [QoS management], [link management], [Port Security], [network management], [Network Statistics], [System management], [Exit] and drop-down menu bar of the ″language switching function". Click a option to make corresponding setting. The following will explain the function of each option.

3.3 Web Page Configuration Guide

The browser version recommend : IE7 and later, Firefox browser, Chrome, 360 browser (IE7 and later).

3.3.1 Start and Login

This product web default IP address: 192.168.1.200, subnet mask: 255.255.255.0, administrator account: admin, password : admin. After installing the equipment correctly and setting up the computer, open the browser, input the switch default address in the browser address bar: http://192.168.1.200, then press the Enter key, the user login page will show in front of you as follows:

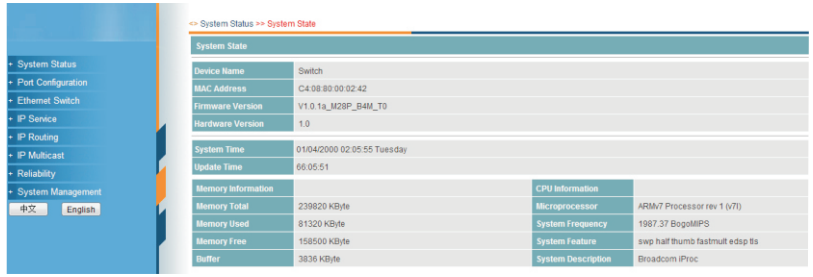


Caution

Please follow the steps to check if the switch is installed correctly:

(1) Whether the physical connection of the equipment is correct?
Use network cable to connect the product’s Ethernet port(except the console port) with managed computer network card, and ensure the link LED of the port is on.
(2) Whether the computer TCP/IP agreement setting is correct?
Your computer's IP address must be 192.168.1.x (x range is 1~254 and x can not be 200, otherwise it will conflict with the product IP address 192.168.1.200), subnet mask: 255.255.255.0.
(3) Whether the computer's port VLAN ID is 1?
By default, the management VLAN is VLAN 1, same as each port of switch.

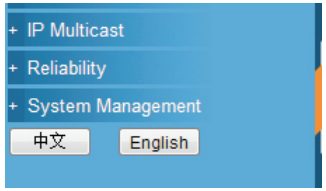
After inputting the correct password, click <Login in>, the browser will display the product Web management page as the picture below:



Web management page diagram

3.3.2 Change Language

As shown below, in the upper right corner of the Web page, click on the drop-down menu bar, select [Chinese] or [English], to complete Web language switching.



Web English language switching page diagram

Environment protection

This product design is environmental friendly and the product should be stored, used and dicarded in accordance with relevant national legal / regulatory requirements.