



IES5024 series
Managed Industrial Ethernet switches
CLI user manual

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IES5024 series user manual

Statement

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Revision History

Version No.	Date	Reason
V1.0.0	2015-04-01	Creating Documents

Notes

In reading this manual, please pay attention to the following symbols,



Information necessary to explain



Special attention

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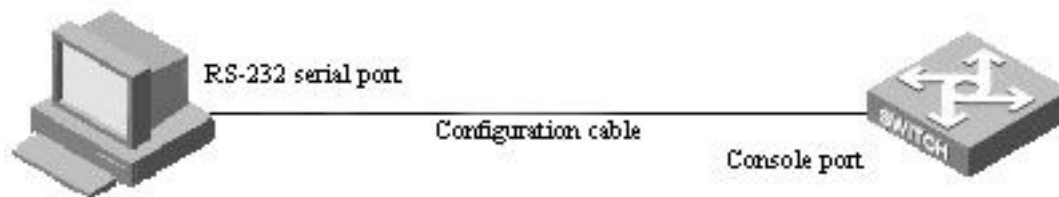
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Chapter 1 Login Ethernet Switch

1.1 Configuration through console port

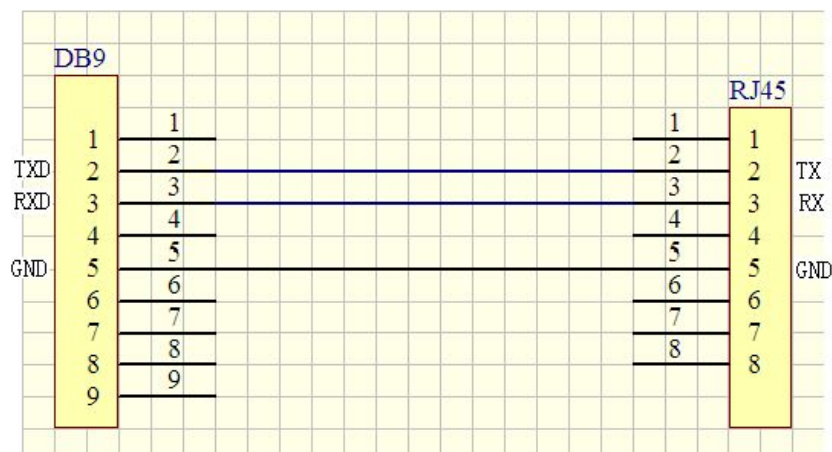
1. Connection switches to configure terminal

As shown in Figure 1.1.1, the establishment of the local configuration environment, only the computer serial cable and connected to the Console port of the Ethernet switch.



(Figure 1.1.1)

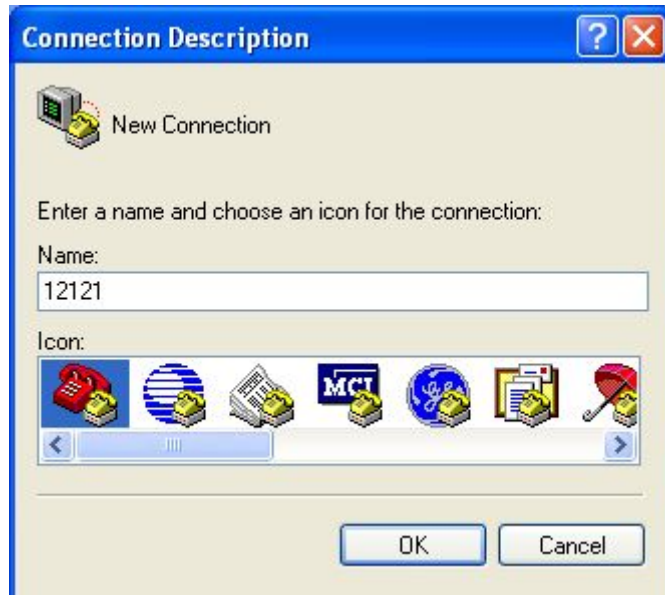
This cable is used for connecting the IES5024 series switch Console port and the external monitoring terminal equipment. One end is RJ45 eight core plug, the other end is the 9 hole plug (DB9). Console RJ45 IES5024 series switch socket head, the cable inner connecting line diagram as shown below.



(Figure 1.1.2)

2. Configure terminal parameters

1) Turn the computer, on the Windows interface, click "Start/All Programs/Accessories/communication", run a terminal emulation program to create a new connection. The RS-232 port is connected to the computer. To take Hyper Terminal in Windows XP for example, as shown in Figure 1.1.3, type in a new name of the connection in a text box named "name", then click "OK" button.



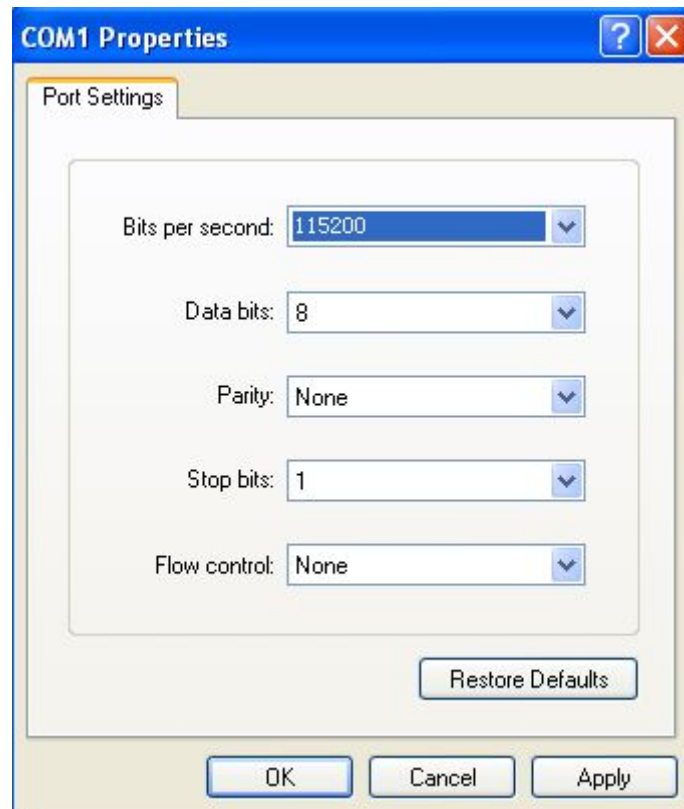
(Figure 1.1.3)

2) Choose connecting serial port. Choose connecting serial port under “Connect using” (pay attention to the chosen serial port is consistent with the port connected with the configuration cable), Click “OK”. As shown in Figure 1.1.4.



(Figure 1.1.4)

3) Set serial port parameters. As shown in Figure 1.1.5, set the “Bits per second” in the “Properties” of serial port is 115200bit/s, “Data bits” is 8, “parity” is None, “Stop Bits” is 1, “Flow Control” is None. Click “OK” button to enter to “Hyper Terminal” Window.



(Figure 1.1.5)

4) Hyper terminal attribute. In the Hyper Terminal window select [document / property / setting] into the attributes settings window. Select the terminal simulation of type VT100 or automatic detection, click < OK > button to return to the hyper terminal window.

5) For IES5024 series switch power, power after the hyper terminal display Ethernet switch self-test information, after the prompt the user to type the carriage return, until the emergence of <user name> command prompt, this time to enter the correct username and password, enter the switch system mode can be configured, the specific configuration commands refer to the later chapters of the contents of the book in.



As the network pipeline connection than COM1, in step two must choose the corresponding COM port. Step three "bits per second" must choose 115200, otherwise cannot be displayed.

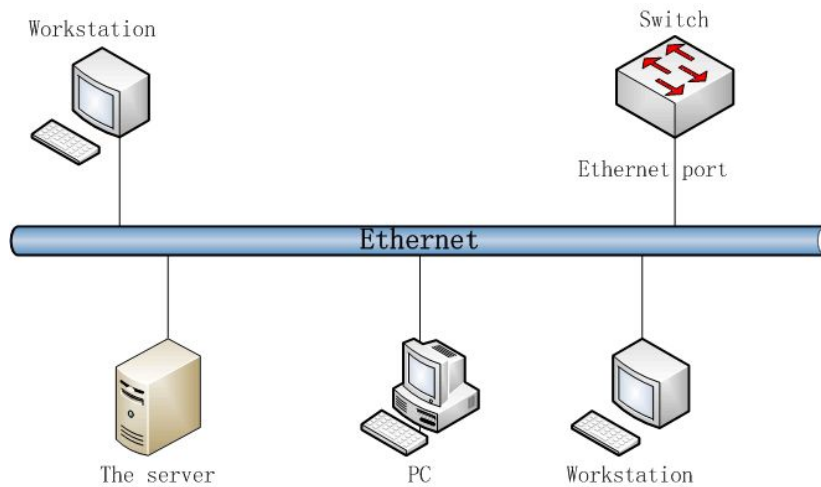
1.2 Configuration through Telnet

Terminal device use telnet connect to IES5024 series through PC, the requirements are as follows:

1. The IP address of IES5024 series can get it by search or modify (Use IP command under the system management view);
2. If PC and IES5024 in the same local area network, the IP address must in a same network segment, otherwise, PC and IES5024 must cross-router.

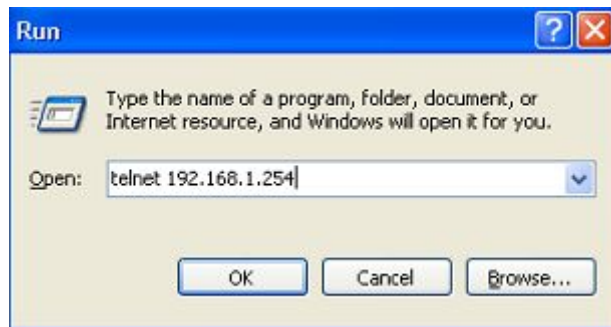
If satisfied these two requirements, can use telnet access to IES5024 series, and then configure the IES5024.

- 1) Establish configuration environment, just connect PC's Ethernet port connect to IES5024's Ethernet port through Local area network.



(Figure 1.2.1)

- 2) Run the Telnet program on the PC, need to input “Telnet+ Space+ IES5024’ s IP address” for checking, Figure 1.2.2 as follows:



(Figure 1.2.2)

- 3) Hit “Enter”, checkout successful and till PC show“Please input hostname and password”, ask user to input user name and password, default is admin, figure 1.2.3 as follows:



(Figure 1.2.3)

- 4) Use command to configure IES5024 series and check the running statues, if need help, please input “?” at any time. Specific configuration command, please reference “IES5024 series CLI user manual” .

1.3 Agreement

1. Command line format agreement table 1.3.1 as follow

Table 1.3.1

Format	Description
Bold	Key words of the command show by bold type.
<i>italic</i>	Parameter of the command show <i>italic type</i> .
[]	It shows part in “[]”is optical when command configuration is need.
{ x y ... }	It shows to pick up one from two or more items.
[x y ...]	It shows to pick up one or no one from two or more items.
{ x y ... }	It shows to pick up one at least, all at most from two or more items.

2. Format agreement of figure interface Table 1.3.2 as follows:

Table 1.3.2

Format	Description
<>	“<>” shows press name, like ”click<OK>”
[]	“[]” shows windows name, menu name and data list. like “eject [create user]window”
/	Multilevel is separated by “/”. Like [file/create/folder] means[create] a [folder] under the menu of [file]

1.4 Command line port

IES5024 series provide command lines port and its configuration for user’s easy configuration and management. Command lines port includes the following features:

1. Local configuration through Console port;
2. Supports history command saving which means it can save 10 pieces. History commands can be selected by up and down key.
3. User can type in “help” or “?” to get some help;
4. Supports intelligent complement with Tab when commands input;
5. Command interpreter take the method of partial matching. User can type in conflict-free key words, such as config command, only need to type in conf.

1.4.1 View of Command Lines

IES5024 series’ view of command lines aim at configuration of different functions. First of all, IES5024 series establish connection, then confirmation of user name and password finished, after enter the correct user name and password, enter “help or ?” in “switch”, enter into system view, Under the view of system, corresponding view appears after typing indifferent command, figure 1.4.1 as follows:

```

Switch# ?
List                --List commands of current menu
Help                --Help commands of current menu
Quit                --Quit from CLI
Exit                --Exit from current menu
Reboot              --Reboot switch
Port                <dir>      --Enter port setting menu
Bandwidth           <dir>      --Enter bandwidth management menu
Storm               <dir>      --Enter Broadcast storm set menu
MultiFilter         <dir>      --Enter Multicast Filtering menu
Multicast           <dir>      --Enter static multicast filters menu
Ulan                <dir>      --Enter vlan menu
QoS                 <dir>      --Enter QoS menu
Ring                <dir>      --Enter Ring menu
Trunk               <dir>      --Enter Trunking setting menu
Access              <dir>      --Enter Access control setting menu
Snmp                <dir>      --Enter SNMP setting menu
Email               <dir>      --Enter email alarm setting menu
Alarm               <dir>      --Enter alarm setting menu
Statistics          <dir>      --Enter statistics menu
Mirror              <dir>      --Enter port mirror menu
Time                <dir>      --Enter time menu
Manage              <dir>      --Enter system manage menu
Information          <dir>      --Enter device information menu
Switch#
    
```

(Figure 1.4.1)

Table 1.4.1 system view command list

View	Function	DOS Prompt	Enter	Quit
System View		Switch#		Quit and return to user login
Information	Show or modify device information, like software version, IP address, etc.	Switch (information)#	Information	Exit and return to the view of system
Port Settings	Show or modify the port information, such as: duplex mode, port enable	Switch (Port)#	Port	
Bandwidth Management	Show or modify the bandwidth information, such as the inlet and outlet bandwidth settings etc.	Switch (Bandwidth)#	Bandwidth	
Storm Suppression	The rate and type of information to view or modify the broadcast storm	Switch (storm)#	Storm	

Dynamic Multicast	View filter information or modify the GMRP enable and port information and IGMP filtering or queries enable etc.	Switch (MultiFilter)#	MultiFilter
Static Multicast	View or modify the static multicast address, such as adding a static multicast address	Switch (Multicast)#	Multicast
VLAN	View or modify the Vlan information, such as the addition of Vlan, PVID, port type etc.	Switch (Vlan)#	Vlan
QoS	View or modify the Qos, Tos value, such as Qos, Tos etc.	Switch (QoS)#	QoS
Rapid Ring	View or modify information such as the net ring, ring ID, ring port, RSTP information etc. View or modify the RSTP information	Switch (Ring)#	Ring
Port Trunking	View or modify the port trunk information, such as the trunk port	Switch (Trunk)#	Trunk
MAC port lock	View or modify the static unicast MAC address and port	Switch (Access)#	Access
SNMP Configuration	SNMP enable configuration	Switch(Snmp)#	Snmp
Email Warning	View or modify the message alarm information, such as mail server address, password, etc.	Switch (Email)#	Email
Relay Warning	View or modify the alarm information, such as power alarm, and port alarm.	Switch (Alarm)#	Alarm
Port Statistics	Port to receive the frame and the total amount of data statistics	Switch(Statistics) #	Statistics
Diagnosis	View or modify the mirror port information	Switch (mirror)#	Mirror

Sntp	View or modify time configuration	Switch (Time)#	Time	
Basic Settings	View or modify the settings information, such as the IP address, subnet mask, default gateway, the user password	Switch (manage)#	Manage	

1.4.2 Command lines Online help

Command lines port provides the following online help:

- ✧ Total help;
- ✧ Partial help;

1. Total help

1) Type in <?> to get all commands and their description.

Example:

Switch# ?

- List --List commands of current menu
- Help --Help commands of current menu
- Quit --Exit from CLI
- Exit --Exit from current menu
- Reboot --Reboot switch
- Port --Enter port setting menu
- Bandwidth --Enter bandwidth management menu
- MultiFilter --Enter multicast filtering menu
- Multicast --Enter static multicast filters menu
- Vlan --Enter vlan menu
- QoS --Enter QoS menu
- Ring --Enter Ring menu
- Trunk --Enter Trunking setting menu
- Snmp -- Enter Snmp setting menu
- Alarm --Enter alarm setting menu
- Statistics --Enter Statistics menu
- Mirror --Enter port mirror menu
- Time --Ether time menu
- Manage --Enter system manage menu
- Information --Enter device information menu

2) Type in a command and “?”, between there is a space, if key word is in this location, then type in all keywords and descriptions.

Example:

```
Switch (information)# show ?
mac                --show device MAC Address
version            --show device version
others             --show device type、 name、 etc
```

2. Partial help

1) Type in a character string with <?>. It can show all commands beginning with this character string.

Example:

Switch# R?

```
Reboot            --Reboot switch
Ring              --Enter Ring menu
```

2) Type in former letters of some key word of the command, press<Tab> key. If the letters are unique, it can show the completed key word.

Example:

Switch# inf+<Tab>

Switch# information

1.4.3 Frequent Incorrect Information of Command Lines

All commands typed by users, if it is certificated by grammar, it can run correctly, or users will be sent incorrect information. Frequent incorrect information is in table 1.4.3 as below:

Table 1.4.3 Frequent incorrect information

English incorrect information	Reason
Invalid Command	Command cannot be found.
	Key word cannot be found.
	The type of parameter is wrong.
	The parameter is beyond the border.
Incomplete Command	Command is not completed.
Too many parameters	Parameter is too much.

1.4.4 History command

Command lines port can provides the function similar to Dos key. It automatic save command lines that users types in, and users can use these history commands. Detailed operating please check table 1.4.4 as follows:

Table 1.4.4 access history command

Operating	Key	Result
Visit previous history command	Up < ↑ >	If it exists earlier command, it is taken out.
Visit next history command	Down < ↓ >	If it exists later command, it is taken out.

CHAPTER 2 Device system based information configuration

Device information includes Device Type, Hardware Version, Device Name, Software Version, Device Description, Device SN and Contact Way. Among them, Hardware Version and Software Version can be only read, not modified.

2.1 Enter into the view of device information

Please check the view as figure 2.1.1

Table 2.1.1

Operating	Command	Description
Enter into the view of device information	Information	Run in the view of system

2.2 Display device information

Please check the device information command as table 2.2.1

Table 2.2.1

Operating	Command	Description
Show system version	show version	Carry our under the view of device information
Show MAC address of device	show mac	Carry our under the view of device information
Show Device Type, Name, etc.	show others	Carry our under the view of device information
Configure device model, name etc	config	Carry our under the view of device information
Delete device model, name etc	clean	Carry our under the view of device information

Example: Enter into device information view, enter the bold type command as follows and enter return key

Switch# **information**

Switch(information)# ?

```
List                --List commands of current menu
Help                --Help commands of current menu
Quit                --Quit from CLI
Exit                --Exit from current menu
Reboot              --Reboot switch
Show mac            --Show device MAC Address
Show version        --Show device version
Show others         --Show device type,name,etc
Config              --Config device type,name,etc
Clean                --Clean device type,name,etc
```

Example: Check device name and model number etc

Switch (information)# **show others**

```
Device type      Managed Switch
Device name      Industrial Switch
Description      24PORT
Serial number
Contact way
```

Example: Check the MAC address

Switch(information)# **show mac**

```
Device MAC address: 00.22.6F.02.B0.83
```

2.3 Configuration information

Please reference user configuration device information as table 2.3.1:

Table 2.3.1

Operating	Command	Description
Configure Device Type	config -t <i>type</i>	Type: configurable type, the length is between 1~16 characters
Configure Device Name	config -n <i>name</i>	Name: configurable name, the length is between 1~16 characters
Configure Serial Number	config -m <i>number</i>	Number: configurable number, the length is between 1~16 characters
Configure Device Description	config -p <i>description</i>	Description: configurable description, the length is between 1~16 characters
Configure Contact information	config -c <i>contact</i>	Contact: Configure Contact way 1-30 bytes

Example: Configure device name as AB123, enter the bold type command as follows and enter return key:

```
Switch(information)# config -n ABC123
```

```
[OK]
```

Example: Configure device serial number as 201304111, enter the bold type command as follows and enter return key:

```
Switch(information)# config -m 201304111
```

```
[OK]
```

2.4 Delete device information

Please reference table 2.4.1

Table 2.4.1

Operating	Command	Description
Delete Device Type	Clean -t	Carry our under the view of device information
Delete Device Name	Clean -n	Carry our under the view of device information
Delete Serial Number	Clean -m	Carry our under the view of device information
Delete Device Description	Clean -p	Carry our under the view of device information
Delete Contact information	Clean -c	Carry our under the view of device information

Example: Delete device name, enter the bold type command as follows and enter return key:

```
Switch(information)# clean -n
```

```
[OK]
```

Example: Delete Serial Number, enter the bold type command as follows and enter return key:

```
Switch(information)# clean -m
```

```
[OK]
```

Example: Delete Contact information, enter the bold type command as follows and enter return key:

```
Switch(information)# clean -c
```

```
[OK]
```

Chapter 3 Port Configuration

Port information including link state (link or LOS), the port state (full or half), rate mode (automatic negotiation, 10Mbps, 100Mbps), interface type (electric or optical), flow control, port is enabled.

3.1 Port information

The Ethernet port characteristics of IES5024 series switches support:

10/100Base-Tx Ethernet port can operate in half duplex, full duplex, auto negotiation mode. Support MDI/MDIX adaptive, and able to negotiate with other network devices, automatic selection of the most appropriate way of working and rate, which greatly simplifies the configuration and management system; 100Base-FX port, rate of 100Mbps, working in full duplex mode, flow control can be set.

Enter the port configuration view

Table 3.1.1 to enter the port configuration view:

Table 3.1.1

Operating	Command	Description
Enter the port configuration view	port	In view of the system under the

3.2 Display port configuration information

Table 3.2.1 shows the command port configuration information:

Table 3.2.1

Operating	Command	Description
Display port state information	Show state <portlist>	<portlist>: 1,3,5-24 or all
Display port configuration information	Show config <portlist>	<portlist>: 1,3,5-24 or all

Example: display port state information 3, 4

Switch (Port)# **show state 3,4**

port3 Speed: 10M Port status: HALF Link status: LOS Interface type: TX

port4 Speed: 10M Port status: HALF Link status: LOS Interface type: TX

3.3 Port configuration

Port configuration including:

- 1 To enable or disable the port;
- 2 Configure the port speed and duplex mode;
- 3 The allocation of port flow control;
- 4 Remove the statistics information of port frame;

3.4 To enable or disable the port

The user can use the following command to open or close the port. By default, the port is enabled.

Table 3.3.1 to enable or disable the port:

Table 3.3.1

Operating	Command	Description
Enable port	Enable <portlist> {enable disable}	<portlist>: 1, 3, 5-24 or all

Example: 3, 4, 6 closed port
 Switch (Port) # **Enable 3,4,6 disable**
 [OK]

3.5 Configure the port speed and duplex mode

Table 3.4.1 configure the port speed and duplex.

Table 3.4.1

Operating	Command	Description
Configure the port speed and duplex mode	Mode <portlist> {10h 10f 100h 100f 1000h auto}	<portlist>: 1,3,5-24 or all mode: 10h, 10Mbps Half duplex 10f, 10Mbps Full duplex 100h, 100Mbps Half duplex 100f, 100Mbps Full duplex 1000h, 1000 Mbps Half duplex Auto: Automated negotiation

Example: Rate of 3, 4, 5 100Mbps full duplex port configuration
 Switch (Port) # **Mode 3-5 100f**
 [OK]

3.6 Configure the port flow control

Table 3.5.1 to enable or disable the port flow control:

Table 3.5.1

Operating	Command	Description
Enable port flow control	Flow-con <portlist> enable	<portlist>: 1,3,5-24 or all
Disable port flow control	Flow-con <portlist> disable	<portlist>: 1,3,5-24 or all

Example: open port 3, 4, 5 flow control
 Switch (Port) # **flow-con 3,4,5 enable**
 [OK]

Chapter 4 Bandwidth Management

4.1 Enter rate management view

Bandwidth allocation including:

1. Entrance velocity distribution;
2. The outlet velocity distribution;
3. Check the entrance rate configuration information;
4. Check the export rate of configuration information;

Table 4.1.1 in bandwidth management view:

Operating	Command	Description
bandwidth management	Bandwidth	In view of the system under

4.2 Egress bandwidth configuration

By default, the egress bandwidths not limit.

Table 4.2.1 Egress bandwidth configuration:

Table 4.2.1

Operating	Command	Description
Egress bandwidth	Config egrate <portlist> < Bandwidth >	<portlist>: 1,3,5-24 or all <Bandwidth>: (64k, 128k, 256k, 512k, 1M, 2M, 3M, 4M, 5M, 6M, 7M, 8M, 9M, 10M, 20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M, 200M, 300M, 400M, 500M, 600M, 700M, 800M, 900M, 1000M) 0: unlimited

Example: set the 1 port of egress bandwidth is 8M

```
Switch (Bandwidth) # config egrate 1 8M
```

```
[OK]
```

Example: set port egress bandwidth limit 0

```
Switch (Bandwidth) # config egrate 1 0
```

```
[OK]
```

4.3 Ingress bandwidth configuration

By default, Ingress bandwidth does not limit.

Table 4.3.1 Ingress bandwidth configuration:

Table 4.3.1

Operating	Command	Description
Ingress bandwidth	Config inrate <portlist> < Bandwidth >	<portlist>: 1,3,5-24 or all <Bandwidth>: (64k, 128k, 256k, 512k, 1M, 2M, 3M, 4M, 5M, 6M, 7M, 8M, 9M, 10M, 20M, 30M, 40M, 50M, 60M, 70M, 80M, 90M, 100M, 200M, 300M, 400M, 500M, 600M, 700M, 800M, 900M, 1000M) 0: unlimited

Example: set the 1 port of Ingress bandwidth is 8M

```
Switch (Bandwidth)# config inrate 1 8M
```

[OK]

4.4 Displays the bandwidth configuration information

Table 4.4.1 shows the bandwidth allocation information command:

Table 4.4.1

Operating	Command	Description
Display Ingress bandwidth information	Show inrate <portlist>	<portlist>: 1,3,5-24 or all
Display Egress bandwidth information	Show egrate <portlist>	<portlist>: 1,3,5-24 or all

Example: display port Ingress bandwidth information 1

```
Switch (Bandwidth)# show inrate 1
```

```
port 1 egress bandwidth: unlimited
```

Chapter 5 Broadcast Storm Set

5.1 Set the view into the broadcast storm

The broadcast storm including:

1. Show broadcast storm set
2. Close broadcast storm inhibition
3. Set broadcast storm set

Table 5.1.1 into the broadcast storm view command:

Table 5.1.1

Operating	Command	Description
In view of the broadcast storm	Storm	To perform the operation in the system.

5.2 Show broadcast storm set

By default, the broadcast storm set off.

Table 5.2.1 broadcast storm set configuration:

Table 5.2.1

Operating	Command	Description
Show broadcast storm set	Show storm	

5.3 Close broadcast storm inhibition

Table 5.3.1 Close broadcast storm inhibition:

Table 5.3.1

Operating	Command	Description
Close broadcast storm inhibition	Close storm	

5.4 Set broadcast storm inhibition

Table 5.4.1 set broadcast storm set:

Table 5.4.1

Operating	Command	Description
Set broadcast storm	Config {0 1} <Maximum rate>	{0 1} --Limited type 0 --Broadcast, Multicast and flood frames 1 --Broadcast Only <Maximum rate> 3 --3% 5 --5% 10 --10% 20 --20% 30 --30%

Example: the configured limit packet type is only broadcast packets, the maximum rate of 5%

Switch (Storm)#Config 1 5

Maximum rate: 5%

Limited type: Broadcast Only

[OK]

Chapter 6 VLAN

6.1 Introduction to VLAN

VLAN (Virtual Local Area Network) is a virtual local area network, is a kind of device by LAN logical rather than physical division into a network, in order to achieve the virtual group technology.

VLAN technology allows network administrators to one physical LAN logic into different broadcast domains (or virtual LAN, VLAN), each VLAN contains a set of computer workstations have the same needs, have the same properties and physical form on LAN. But because it is logical rather than physical partition, so each workstation with a VLAN does not need to be placed in the same physical space, namely the workstation does not necessarily belong to the same physical LAN segment. Within a VLAN broadcast and unicast traffic will not be forwarded to the other VLAN, helps to control the flow, reduce equipment investment, simplifying the management of network, improve network security.

IES5024 supports 802.1Q VLAN and port based VLAN (Port-based VLAN).

6.2 The contents of VLAN configuration

The VLAN configuration including:

- 1, show current VLAN type
- 2, VLAN Enable
- 3, configure the ports of Vlan information
- 4, the configuration of 802.1Q Vlan information

First of all to enter the Vlan configuration views.

Table 6.2.1 to enter the VLAN configuration view:

Table 6.2.1

Operating	Command	Description
In view of the VLAN	Vlan	To perform the operation in the system.

6.3 Vlan information view

Table 6.3.1 into the VLAN information view:

Operating	Command	Description
Enter the Vlan information view	Show vlantype	To perform the operation in the system.
Select the Vlan type	Enable {0 1}	0: Port based on VLAN 1: 802.1Q based on VLAN
Select the port based Vlan	PVLANSetting	
Based on the 802.1Q Vlan	QVLANSetting	

Example: Vlan type: 802.1Q Vlan

Switch (VLAN) # enable 1

802.1Q VLAN is enable!

[OK]

Tip: This configuration will be validated after restarting

6.4 Enter the port configuration view based on Vlan

Table 6.4.1 to enter the port configuration view based on vlan:

Operating	Command	Description
Add Vlan	Add <vid> <portlist>	<vid>: VLAN ID:1-4094 <portlist>: 1,3,5-24 or all
Delete Vlan	Delete <vidlist>	<vidlist>: 1,4,5-4094 or all
To view the Vlan information	Show vlan <vidlist>	<vidlist>: 1,4,5-4094 or all

Example: add VLAN of 2, a member of the port in 2, 3, 4, 5, 6

Switch(PortVlan)# show vlan all

```

VID    PORT
1      1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
2      2 3 4 5 6
    
```

6.5 Enter configuration view based on 802.1QVlan

Table 6.5.1 into the 802.1Q Vlan configuration based view:

Operating	Command	Description
Pvid setting	config pvid <portlist> <pvid>	<portlist>: 1,3,5-24 or all <pvid>: 1,4,5-4094
Set the VLAN logo to replace the configuration	config replace {0 1}	0 VID is unchanged 1 Use the default VID port to replace the logo VID
The establishment and management of VID	config manage	<vid> 1,4,5-4094
Add Vlan	Add <vid> <portlist> <typelist>	<vid> 1,4,5-4094 <portlist> 1,3,5-24 or all <typelist> m UnModified u UnTagged
Delete Vlan	Delete <vidlist>	<vidlist> 1,4,5-4094 or all
To view the VLAN information	Show vlan <vidlist>	<vidlist>: 1,4,5-4094 or all
View port PVID	Show pvid <portlist>	<portlist>: 1,3,5-24 or all

Operating	Command	Description
To view the VLAN logo to replace the configuration	Show replace	
View management VID	Show manage	

Example: add type Vlan2 port 4 for U

Switch (VLAN) # **add 2 4 u**

[OK]

Tip: This configuration will be validated after restarting

Example: see VLAN 1 information

Switch (VLAN)# **show vlan 1**

```

VID  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 . . . 21 22 23 24
    1  U  U  U  U  U  U  U  U  U  U  U  U  U  U  U  . . .  U  U  U  U
    
```

Chapter 7 Multicast filtering view

7.1 Enter the multicast filtering view

Multicast filtering configuration includes:

1. types of configuration, multicast filtering
2. listen to the IGMP
3. the IGMP query
4. the IGMP query interval configuration
5. display the IGMP sensing information
6. the configuration of GMRP enable
7. configure the GMRP port
8. display the GMRP information

Table 7.1.1 into multicast filtering view configuration commands:

Operating	Command	Description
In view of the configuration of multicast filtering	Multicast	To perform the operation in the system.

7.2 Configure multicast filtering type

Table 7.2.1 configuration settings to configure the broadcast storm:

Operating	Command	Description
Configure multicast filtering type	Choice{0 1}	0 IGMP Snooping
		1 GMRP

Example: configure multicast filtering type: GMRP

Switch (**Multicast**)# Choice 1

7.3 IGMP listen and check

Table 7.3.1 configuration IGMP and IGMP query to listen:

Operating	Command	Description
Configure the IGMP to listen	Set IGMP {enable disable}	
Configure the IGMP query	Set query {enable disable}	
Configure the IGMP query interval	Config query <time>	Time (60-1000s)

Example: the configuration of IGMP interception enable: Enable

Switch (**Multicast**)#Set igmp enable

Configure the IGMP query enable: Enable

Switch (**Multicast**)#Set query enable

Configure the IGMP query interval: 60s

Switch (**Multicast**)#Config query 60

7.4 Display IGMP information

Table 7.4.1 shows the IGMP information:

Operating	Command	Description
Display IGMP information	Show IGMP	

7.5 The GMRP configuration

Table 6.5.1 GMRP configuration:

Operating	Command	Description
Configure the GMRP enable	Set GMRP {enable disable}	Enable disable
Configure the GMRP port	Config Query <portlist>	portlist 1,3,5-24 or all
Display GMRP information	Show GMRP	

Example: the configuration of GMRP enable: Enable

Switch (**Multicast**)#Set gmrp enable

GMRP port: the port configuration

Switch (**Multicast**)#Config Query all

Chapter 8 QoS

8.1 Enter the multicast filtering view

The QoS configuration including:

- 1..... Enable
Dscp, Cos
- 2..... Set Qos
(8:4:2:1 high priority queue mechanism, strict priority)
- 3..... The value
of Cos/Dscp mapping
- 4..... The default
port priority
- 5..... To view the
QoS configuration information

Table 8.1.1 to enter the QoS configuration view:

Operating	Command	Description
Enter the QoS configuration view	QoS	To perform the operation in the system.

8.2 Enable Dscp / Cos

The user can use the following command to set the Dscp, Cos enabled.

Table 8.2.1 to DScp/Cos

Operating	Command	Description
Dscp/Cos can set	Enable <portlist> {0 1 2 3}	<portlist>: port 1, 2, 3-24 0: Forbid; 1: use CoS; 2: use Dscp; 3: all use

Example: Open Ports 1, 3, 4, 6, CoS

Switch (QoS) # **Enable 1,3,4,6 2**

[OK]

Example: open ports 2, 3, 5, 6, Dscp

Switch (QoS) # **Enable 2,3,5,6 1**

[OK]

8.3 QoS queue configuration

The user can use the following command to configure the QoS queue mechanism.

Table 8.3.1 QoS queue configuration:

Operating	Command	Description
-----------	---------	-------------

Operating	Command	Description
QoS Queue configuration	Queuingm {0 1}	0: weight ratio (8:4:2:1) 1: high priority priority

Example: set the QoS queue mechanism to weight ratio (8:4:2:1)

Switch (QoS) # **show queuingm 0**

[OK]

8.4 The value of Dscp/Tos mapping

The user can use the following command to configure the Dscp/cos value map

Table 8.4.1 Dscp/cos mapping configuration command:

Operating	Command	Description
The value of Cos mapping	Config cos <coslist> <classlist>	<coslist>: CoS Mapping value, 0, 1, 2-7 <classlist>: The priority queue, low, normal, medium, high
The value of Dscp mapping	Config tos <dscplist> <classlist>	<dscplist>: ToS Mapping value, 1, 2, 3-64 <classlist>: The priority queue, low, normal, medium, high

Example: set the CoS value of 0, 2, 5, 7 respectively corresponding to the priority queue for Low, Normal, Medium, High

SWitch(QoS) # **config cos 0,2,5,7 l,n,m,h**

SWitch(QoS) # value:0 priority:Low

SWitch(QoS) # value:2 priority:Normal

SWitch(QoS) # value:5 priority:Medium

SWitch(QoS) # value:7 priority:High

8.5 The default port priority allocation

The user can configure a default port priority to use the following command.

Table 8.5.1 the default port priority allocation:

Operating	Command	Description
The default port priority allocation	Default priority <portlist> <0-7>	<portlist>: port 1, 2, 3-24 <0-7> : Port priority

Example: set the default priority port 1 was 3

SWitch(QoS) # **default priority 1 3**

port1 default priority : 3

8.6 Qos configuration information

Users can use the following command to view the QoS information.

Table 8.6.1 view the Qos command:

Operating	Command	Description
-----------	---------	-------------

Operating	Command	Description
To view the QoS queue mechanism	Show queuingm	
To view the CoS value map	Show cos <coslist>	<coslist>: CoS Mapping value, 0, 1, 2-7
To view the ToS value map	Show Dscp <dscplist>	<dscplist>: Dscp Mapping value, 1, 2, 3-64
To view the ToS/CoS enabled state	Show state <portlist>	<portlist>: port 1, 2, 3-24
To view the default port priority	Show default <portlist>	<portlist>: port 1, 2, 3-24

Chapter 9 Ring configuration

9.1 Enter the ring network configuration view

The ring network configuration including:

- 1.....The Ring3 configuration;
- 2.....Ring network information view;
- 3.....The RSTP configuration
- 4.....RSTP state information view

Table 9.1.1 into the ring network configuration view:

Operating	Command	Description
Enter the ring network configuration view	ring	To perform the operation in the system.

Example: display the current network information

Switch(Ring)# show ring

Ring III Enable

Ring III Enable

```
Group:1 ID: 1 port: 1, 2 type: Single Hello_time: 0*100ms state:Disable
Group:2 ID: 2 port: 3, 4 type: Single Hello_time: 0*100ms state:Disable
Group:3 ID: 3 port:11,12 type: Single Hello_time: 0*100ms state:Disable
Group:4 ID: 4 port:13,14 type: Single Hello_time: 0*100ms state:Disable
```

9.2 Ring network state information view

Table 9.2.1 into the show ring network state information view:

Operating	Command	Description
Enter the ring network state information view	Show ring	To perform the operation in the system.

9.3 To enable or disable the ring

Users can use the following command to set the ring network enabled, 9.3.1 ring network to set command:

Operating	Command	Description
Ring opening	Open {3 4}	3: open ring3; 4: open RSTP
Ring close	Close {0 3 4}	0: Disable ring; 3: Disable Ring3; 4: Disable RSTP

Example: open RING3

Switch(Ring)# **Open 3**

[OK]

Tip: This configuration will be validated after restarting

9.4 The Ring3 configuration

Ring3 enabled, can use the following command to set the Ring3.

Table 9.4.1 Ring3 to set and modify:

Operating	Command	Description
Configuration Ring3	Config ring3 {1 2 3 4} <id> <LoopType> <port> <hellotime>	{1 2 3 4} : 1 ring group 1, 2 ring group 2 3 ring group 3, 4 ring group 4 <id> : Said the ring network identification, value of [0-255] <LoopType>: Single, Couple, chain, Daul_homing <portlist>: Ring network port <hellotime>: value of [0-300]
Modify ring3	Modify ring3 {1 2 3 4} <options> <parameter>	{1 2 3 4} : 1 ring group 1, 2 ring group 2 3 ring group 3, 4 ring group 4 <options> : -H on behalf of Hellotime, -i ring network identification, -p ring network port <parameter> : And the parameter matching -h -i -p

Example: the allocation of port 7, 8 to first groups in Ring3 ring, ring ID is 1, hellotime is 0, the ring type Couple

Switch(Ring)# **Enable ?**

- ```
{1|2|3|4}
1 --Enable SW-Ring I
2 --Enable SW-Ring II
3 --Enable SW-Ring III
4 -- Enable Rstp
```

Switch(Ring)# **Open 3**

[OK]

Tip: This configuration will be validated after restarting

Switch(Ring)# **config ring3 1 1 1 7,8 0**

[OK]

Tip: This configuration will be validated after restarting

Example: to modify the first groups in SWRing3 ring network ports 5, 6

Switch(Ring)# **modify 1 -p 5,6**

[OK]

Tip: This configuration will be validated after restarting

### 9.5 Ring network configuration information

Allocation of ring network, we can use the following command to view the ring network configuration information.

Table 9.5.1 view the ring network configuration information command:

| Operating                              | Command          | Description                             |
|----------------------------------------|------------------|-----------------------------------------|
| Ring network configuration information | <b>show ring</b> | To perform the operation in the system. |

Example: the ring network configuration information for the current view

Switch(Ring)# show ring

Ring III Enable

Group:1 ID: 1 port: 5, 6 type: Single Hello\_time: 0\*100ms state:Enable

Group:2 ID: 2 port: 3, 4 type: Single Hello\_time: 0\*100ms state:Enable

Group:3 ID: 3 port:11, 12 type: Single Hello\_time: 0\*100ms state:Disable

Group:4 ID: 4 port:13, 14 type: Single Hello\_time: 0\*100ms state:Disable

### 9.6 The RSTP configuration

RSTP enabled, can use the following command to set the RSTP.

Table 9.6.1 RSTP to set and modify.

| Operating                          | Command                                                   | Description                                                                                                                                                                                              |
|------------------------------------|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display current configuration RSTP | <b>Show rstp_p</b> <portlist>                             | <portlist > 1,3,5-24 or all                                                                                                                                                                              |
| Modify the RSTP port               | <b>Modify rstp_p</b> < portlist ><br><options><parameter> | < portlist >: 1,3,5-24 or all<br>Options: -c Path overhead<br>-p Port priority<br>-t Point to point network connection<br>-d Direct connection terminal<br>-e Participate in the spanning tree structure |

| Operating                 | Command                                       | Description                                                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The configuration of RSTP | <b>Modify rstp_s</b> <options><br><parameter> | Options: -p The switch priority (0,4096,8192,12288,16384,20480,24576,28672,32768,36864,40960,45056,49152,53248,57344,61440)<br>-i The polling interval (1~10s)<br>-d Forwarding delay time (4~30s)<br>-s The survival time. (6~40s) |

Example: RSTP port configuration

Switch(Ring)# **Modify rstp\_p 1 20000 224 yes 1 1**

### 9.7 Display the current state of the Rstp information

The configuration of Rstp, can use the following command to view the Rstp current status information.

Table 9.7.1 view the Rstp information about the current configuration command:

| Operating                                         | Command            | Description                             |
|---------------------------------------------------|--------------------|-----------------------------------------|
| Display the current state of the RSTP information | <b>show Status</b> | To perform the operation in the system. |

Example: the ring network configuration information for the current view

Switch(Ring)# **show Status**

**This ID :**

**Root ID :**

**Root Port :**

**Root port path cost :**

| Port | Priority | Path cost | P2P | Edge | Network | Roles    | Forwarding |
|------|----------|-----------|-----|------|---------|----------|------------|
| 1    | 128      | 0         | Y   | Y    | Rapid   | Disabled | Disabled   |
| 2    | 128      | 0         | Y   | Y    | Rapid   | Disabled | Disabled   |
| 3    | 128      | 0         | Y   | N    | Rapid   | Disabled | Disabled   |
| 4    | 128      | 0         | Y   | N    | Rapid   | Disabled | Disabled   |
| 5    | 128      | 0         | Y   | N    | Rapid   | Disabled | Disabled   |
| 6    | 128      | 0         | Y   | N    | Rapid   | Disabled | Disabled   |
| 7    | 128      | 0         | Y   | N    | Rapid   | Disabled | Disabled   |
| 8    | 128      | 0         | Y   | N    | Rapid   | Disabled | Disabled   |

## Chapter 10 Trunk configuration

### 10.1 Enter the port Trunk view

Port Trunk configuration includes:

1. Port trunk configuration;
2. Delete port information fusion;
3. Port trunk information view;

Table 10.1.1 to enter the port trunk view:

| Operating                               | Command      | Description                             |
|-----------------------------------------|--------------|-----------------------------------------|
| Enter the port trunk configuration view | <b>trunk</b> | To perform the operation in the system. |

### 10.2 Port trunk configuration / delete

The user can use the following command to configure / delete the port trunking

Table 10.2.1 trunking configuration / delete command:

| Operating           | Command                        | Description                                                                                |
|---------------------|--------------------------------|--------------------------------------------------------------------------------------------|
| Configuration trunk | <b>Config</b> {1 2} <portlist> | {1 2}: 1, 2 respectively mean trunk group 1, 2<br><portlist>: trunk port 1, 2, 3-24 or all |
| Open trunk          | <b>Open trunk</b>              |                                                                                            |
| Delete trunk        | <b>Clean</b> <trunkgroup>      | <trunkgroup>: 1, 2 respectively mean trunk group 1, 2;<br>all: All trunk group             |

Example: set the port 1, 2 for the trunk group 1

```
Switch (Trunk) # config 1 1,2,
[OK]
```

### 10.3 Display port trunk configuration information

The user can use the following command to view port trunk configuration information.

Table 10.3.1 view port trunk configuration command:

| Operating                                    | Command                  | Description                                                                    |
|----------------------------------------------|--------------------------|--------------------------------------------------------------------------------|
| Display port trunk configuration information | <b>Show</b> <trunkgroup> | <trunkgroup>: 1, 2 respectively mean trunk group 1, 2;<br>all: All trunk group |

## Chapter 11 MAC port lock

### 11.1 Enter the MAC port lock view

MAC port lock includes;

1. MAC port locking information display
2. Add the MAC port locking information
3. Remove the MAC port locking information

Table 11.1.1 into the MAC port to lock the view command:

| Operating                    | Command       | Description                            |
|------------------------------|---------------|----------------------------------------|
| Enter the MAC port lock view | <b>Access</b> | To perform the operation in the system |

### 11.2 MAC port locking information display

Table 11.2.1 shows the MAC port locking information

| Operating                  | Command          | Description                            |
|----------------------------|------------------|----------------------------------------|
| Display MAC port lock view | <b>Show lock</b> | To perform the operation in the system |

### 11.3 Add or remove MAC port locking information

Table 11.3.1 add or delete MAC port locking information

| Operating                               | Command                           | Description                                                     |
|-----------------------------------------|-----------------------------------|-----------------------------------------------------------------|
| Add the MAC port locking information    | <b>Add</b> <macaddress><br><port> | Macaddress      Unicast MAC address<br>Port                1-24 |
| Remove the MAC port locking information | <b>Delete</b> <1-16>              | <1-16>      MAC locked entries in the port                      |

Example: add a MAC port locking information

```
Switch(Access)#add 02-00-00-00-00-00 2
```

To delete a MAC port locking information

```
Switch(Access)# Delete 1
```

## Chapter 12 Email alarm configuration

### 12.1 Enter the Email alarm view

Email alert configuration including:

1. Displays the Email alarm information
2. Email alarm enable
3. To configure the mail server address
4. The allocation of the recipient's address
5. Configure the sender address and password
6. Configure mail time interval
7. Send test e-mail system

Table 12.1.1 to enter the email alarm configuration view

| Operating                                | Command      | Description                            |
|------------------------------------------|--------------|----------------------------------------|
| Enter the email alarm configuration view | <b>Email</b> | To perform the operation in the system |

### 12.2 Displays the Email alarm information

Table 12.2.1 shows the email alarm information view

| Operating                             | Command           | Description                            |
|---------------------------------------|-------------------|----------------------------------------|
| show the email alarm information view | <b>Show email</b> | To perform the operation in the system |

### 12.3 Configure email alarm information

Table 12.3.1 to configure mail alarm information

| Operating                       | Command                                                   | Description                                                               |
|---------------------------------|-----------------------------------------------------------|---------------------------------------------------------------------------|
| Email alarm enable              | <b>Set email {enable disable}</b>                         |                                                                           |
| The mail server address         | <b>Set Server&lt;mail-server&gt;</b>                      | <mail-server> The mail server address                                     |
| The address of the addressee    | <b>Set recipient<br/>&lt;mail-address&gt;</b>             | <mail-address> Mail recipient address                                     |
| The sender address and password | <b>Set send &lt;mail-address&gt;<br/>&lt;password&gt;</b> | <mail-address> <password> The sender email address and password           |
| Mail time interval              | <b>Set interval {0 1 2 4 12 24}</b>                       | 0 At any time<br>1 1 hour<br>2 2hour<br>4 4hour<br>12 12hour<br>24 24hour |
| Send test e-mail system         | <b>send email</b>                                         | Show mail sending status information                                      |

## Chapter 13 Alarm configuration

### 13.1 Enter the alarm information view

Alarm configuration including:

1. Power alarm;
2. Port alarm;
3. Delete alarm information;
4. Alarm information view;

Table 13.1.1 enter the alarm configuration view:

| Operating                          | Command      | Description                            |
|------------------------------------|--------------|----------------------------------------|
| Enter the alarm configuration view | <b>Alarm</b> | To perform the operation in the system |

### 13.2 Alarm configuration / delete

The user can use the following command to configure alarm

Table 13.2.1 alarm configuration command:

| Operating                         | Command                                          | Description                                                                                  |
|-----------------------------------|--------------------------------------------------|----------------------------------------------------------------------------------------------|
| Configure port alarm              | <b>Port relay</b> <portlist><br>{enable disable} | <portlist>: Alarm ports 1, 2, 3-24 or all                                                    |
| Configuration power alarm         | <b>Power relay</b> {1 2 all}<br>{enable disable} | {1 2 all}: Show the way power alarm<br>1: The first power supply;<br>2: The second way power |
| To turn off the alarm information | <b>Close alarm</b>                               | In view of the alarm                                                                         |

Example: Open Ports 1, 3, 5, 7 alarm

```
Switch (Alarm) # port relay 1,3,5,7 enable
```

```
port1 Alarm status: Enable
```

```
port3 Alarm status: Enable
```

```
port5 Alarm status: Enable
```

```
port7 Alarm status: Enable
```

Example: power off warning

```
Switch (Alarm) # close alarm
```

```
[OK]
```

### 13.3 Display the alarm information

The user can use the following command to view the alarm information

Table 13.3.1 view the alarm information command:



| Operating                    | Command                     | Description                                                                                  |
|------------------------------|-----------------------------|----------------------------------------------------------------------------------------------|
| Show power alarm information | <b>Show power</b> {1 2 all} | {1 2 all}: Show the way power alarm<br>1: The first power supply;<br>2: The second way power |
| Show port alarm information  | <b>Show port</b> <portlist> | <portlist>: Alarm ports 1, 2, 3-24 or all                                                    |

Example: set the alarm information port

Switch (Alarm) # **show port all**

Port:1 Alarm status: Disable LOS

Port:2 Alarm status: Disable LOS

Port:3 Alarm status: Disable LOS

Port:4 Alarm status: Disable LOS

Port:5 Alarm status: Disable LOS

Port:6 Alarm status: Disable LOS

Port:7 Alarm status: Disable LOS

\*\*\*\*\*

## Chapter 14 Port mirroring

### 14.1 Enter the port mirroring view

Port mirroring configuration includes:

1. Port mirroring configuration;
2. Delete port mirroring;
3. View port mirroring;

Table 14.1.1 to enter the port mirroring configuration view:

| Operating                                   | Command       | Description                            |
|---------------------------------------------|---------------|----------------------------------------|
| Enter the port mirroring configuration view | <b>Mirror</b> | To perform the operation in the system |

### 14.2 Port mirroring configuration / delete

The user can use the following command to port mirroring configuration / delete.

Table 14.2.1 port mirroring configuration / delete command:

| Operating                    | Command                                    | Description                                                                                                                                                                                           |
|------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Port mirroring configuration | <b>Config</b> {0 1 2} <mirror_port> <port> | {0 1 2}: Data type<br>0: Collect all the data representation;<br>1: The export data acquisition;<br>2: Entrance data acquisition<br><mirror_port>: Mirror port 1, 2, 3-24<br><port>: Acquisition port |
| Port mirroring delete        | <b>Close mirror</b>                        | In view of the port mirroring                                                                                                                                                                         |

Example: the allocation of port 3 to collect all the data ports 1 and 2.

```
Switch (mirror) # config 0 1-2 3
```

```
Mirror_portlist:1,2 collect_port:3 all data
```

### 14.3 Display port mirroring information

Table 14.3.1 view port mirroring information command:

| Operating                          | Command            | Description                   |
|------------------------------------|--------------------|-------------------------------|
| Display port mirroring information | <b>Show mirror</b> | In view of the port mirroring |

## Chapter 15 Time configuration

### 15.1 In view of the Time configuration

Time allocation:

1. Time display configuration information
2. Time to enable
3. The world time zone selection
4. The address of the NTP server

Table 15.1.1 into the time allocation view

| Operating                     | Command     | Description                            |
|-------------------------------|-------------|----------------------------------------|
| Into the time allocation view | <b>Time</b> | To perform the operation in the system |

### 15.2 The allocation of time allocation view

Table 15.2.1 into the allocation of time allocation view

| Operating                     | Command                          | Description                     |
|-------------------------------|----------------------------------|---------------------------------|
| Time to enable                | <b>Time {enable disable}</b>     |                                 |
| The world time zone selection | <b>Zone &lt;time-zone&gt;</b>    | [-12 - +12] The world time zone |
| The address of the NTP server | <b>server &lt;ntp-server&gt;</b> | The address of the NTP server   |

## Chapter 16 Static multicast configuration

### 16.1 In the static multicast address filter configuration view

Static multicast configuration includes:

1. Add static multicast address;
2. Remove the multicast address;
3. To view the multicast address;

Table 16.1.1 into the static multicast view command:

| Operating                       | Command          | Description                            |
|---------------------------------|------------------|----------------------------------------|
| In view of the static multicast | <b>Multicast</b> | To perform the operation in the system |

### 16.2 Add / remove static multicast address

Users can use the following command to add / remove static multicast address

Table 16.2.1 multicast address add / delete command:

| Operating                | Command                            | Description                                                                                                                                   |
|--------------------------|------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Add multicast address    | <b>Add</b> <macaddress> <portlist> | <macaddress> : A multicast address, the format of XY-XX-XX-XX-XX-XX, X for any sixteen hexadecimal number<br><portlist>: port 1,2,3-24 or all |
| Delete multicast address | <b>Delete</b> <1-15>               | <1-15> A multicast address entry                                                                                                              |

Example: add a multicast address 01-22-33-44-55-66, members of the port is 1, 2, 3.

```
Switch(Multicast) # add 01-22-33-44-55-66 1,2,3
```

```
MAC: 01-22-33-44-55-66 Port: 1,2,3
```

```
[OK]
```

### 16.3 Static multicast address allocation

The user can view the static multicast address the following command

Table 16.3.1 view static multicast address command:

| Operating                     | Command               | Description                         |
|-------------------------------|-----------------------|-------------------------------------|
| view static multicast address | <b>Show multicast</b> | In the implementation of multicast. |

## Chapter 17 The SNMP configuration

### 17.1 Configure the view into the SNMP

The Snmp configuration including:

1. Close the Snmp
2. To view the Snmp configuration information
3. The Snmp configuration

Table 17.1.1 to enter the Snmp configuration view:

| Operating                         | Command     | Description                            |
|-----------------------------------|-------------|----------------------------------------|
| enter the Snmp configuration view | <b>Snmp</b> | To perform the operation in the system |

### 17.2 Enable the SNMP information

Table 17.2.1 to enter the Snmp command information view:

| Operating             | Command           | Description                            |
|-----------------------|-------------------|----------------------------------------|
| Show Snmp information | <b>Show snmp</b>  | To perform the operation in the system |
| Open snmp             | <b>Open snmp</b>  |                                        |
| Close snmp            | <b>Close snmp</b> |                                        |

### 17.3 The SNMP configuration view

The user can configure the SNMP using the following command

Table 17.3.1 SNMP configuration command:

| Operating                                       | Command                                      | Description                                                                             |
|-------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------|
| The configuration read and write Snmp community | <b>Config community {0 1} &lt;string&gt;</b> | 0: Read only community<br>1: Read and write community name<br><b>String :</b> Parameter |
| Configuring the Snmp gateway                    | <b>Config Gateway &lt; Gateway&gt;</b>       | <b>Gateway:</b> The gateway address                                                     |

Example: set the SNMP gateway

```
Switch(Snmp) # config Gateway 192.168.17.1
```

## Chapter 18 Port Statistics

### 18.1 Enter the port statistical configuration view

Port statistics:

1. Statistics port number and type
2. Clean up the count the number of frames
3. Statistics port flow
4. Clean up the total flow
5. The MAC address table

Table 18.1.1 to enter the port statistical configuration view:

| Operating                       | Command           | Description                            |
|---------------------------------|-------------------|----------------------------------------|
| Enter the port statistical view | <b>Statistics</b> | To perform the operation in the system |

### 18.2 Port Statistics configuration view

Table 18.2.1 to enter the port statistical configuration view

| Operating                               | Command                          | Description |
|-----------------------------------------|----------------------------------|-------------|
| Statistics port number and type         | <b>Show frames &lt;port&gt;</b>  | <port> 1-24 |
| Clean up the count the number of frames | <b>Clean frames</b>              |             |
| Statistics port flow                    | <b>Show traffic &lt;port&gt;</b> | <port> 1-24 |
| Clean up the total flow                 | <b>Clean traffic</b>             |             |

Example: the port number and types of statistics 1

```
Switch(Statistics) #show frames 1
```

## Chapter 19 System management

### 19.1 Enter the System management configuration view

System management includes:

1. System timeout;
2. The default gateway, IP address configuration;
3. The user name, password configuration;
4. Device IP, subnet mask, default gateway, see;
5. Restore factory settings;
6. Upload, download the configuration file
7. The system upgrade

Table 19.1.1 into the system management view commands:

| Operating                    | Command       | Description                            |
|------------------------------|---------------|----------------------------------------|
| In view of system management | <b>Manage</b> | To perform the operation in the system |

### 19.2 System timeout

Users can use the following command to set the system time

Table 19.2.1 system timeout command:

| Operating              | Command               | Description                                                                                            |
|------------------------|-----------------------|--------------------------------------------------------------------------------------------------------|
| System timeout setting | <b>Set</b> <time_out> | <time_out>: The system timeout, value of [0-60], the unit minute, a default timeout value of 5 minutes |

#### Example: set the system time is 10 minutes

```
Switch (manage)# set 10
```

```
[OK]
```

The system is used to define the time, when to enter the CLI configuration mode, do not do any operation timeout. The system after a timeout will automatically jump to the user mode, the new username and password authentication.

### 19.3 IP address and default gateway setting

The user can set the following command equipment IP, default gateway address

Table 19.3.1 device IP address, default gateway address setting:

| Operating                           | Command                           | Description                                             |
|-------------------------------------|-----------------------------------|---------------------------------------------------------|
| The device IP address configuration | <b>Ip</b> <A.B.C.D> <A1.B1.C1.D1> | <A.B.C.D>: ip address<br><A1.B1.C1.D1>: The subnet mask |
| The default gateway configuration   | <b>Gateway</b> <A.B.C.D>          | <A.B.C.D>: The gateway address                          |

Example: the equipment configuration for 192.168.254 IP 255.255.255.0, subnet mask, default gateway for 192.168.1.1

```
Switch(Manage)# ip 192.168.1.254 255.255.255.0
```

```
[OK]
```

```
Switch(Manage)# gateway 192.168.1.1
```

```
[OK]
```

### 19.4 User name, password settings

The user can set the user name, password following command

Table 19.4.1 user name, password settings:

| Operating             | Command                               | Description                          |
|-----------------------|---------------------------------------|--------------------------------------|
| User name setting     | <b>Hostname</b> <hostname>            | <hostname>: The user name string     |
| User password setting | <b>Password</b> <password> <password> | <password>: The user password string |

### 19.5 Display device IP, subnet mask, default gateway

The following command to check the equipment available to the user IP, subnet mask, default gateway

Table 19.5.1 devices IP, subnet mask, default gateway.

| Operating                                    | Command                 | Description                                   |
|----------------------------------------------|-------------------------|-----------------------------------------------|
| Show device IP, subnet mask, default gateway | <b>show net_address</b> | To perform the operation in the system manage |

Example: check the equipment IP, subnet mask, default gateway address

```
Switch (manage) # show net_address
```

```
Device gateway : 192.168.1.1
```

```
Device mask address : 255.255.255.0
```

```
Device IP address : 192.168.1.254
```



### 19.6 Restore factory settings

The user can restore to factory settings following command equipment

Table 19.6.1 restores factory settings command:

| Operating                              | Command        | Description                                   |
|----------------------------------------|----------------|-----------------------------------------------|
| Restore the device to factory settings | <b>Restore</b> | To perform the operation in the system manage |

Example: To restore the device to factory settings

Switch (manage) # **restore**

Restore Settings or not ? (yes/no) yes //Y

Wait..

### 19.7 Upload, download the configuration file

Through the super terminal, users can upload and download the configuration file, the following command

Table 19.7.1 upload, download the configuration file.

| Operating                          | Command         | Description        |
|------------------------------------|-----------------|--------------------|
| Upload configuration file          | <b>Upload</b>   | File suffix (.Cfg) |
| To download the configuration file | <b>Download</b> | File suffix (.Cfg) |

To download the configuration file as follows:

1. Enter the command:

**Switch (manage) # download**

**Please select file path and ready to receive file.**

**Or press [Esc] to quit.**

2. Super terminal and to select file folder

[transfer] → [To receive the file] → [browse] → [Select the folder] → [Users want to download folder] → [OK] → [Use receiving protocol] → [Xmodem] → [Receive] → [To receive the file name] → [The user to save the file name, the suffix.Cfg] → [OK]

Upload configuration steps are as follows

1. Enter the command:

**System\_manage# upload**

**Please send configuration file, or press [Esc] to quit .**

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**Explain:** From the input upload command and the emergence of the first C start, no operation in 2 minutes, the system will automatically exit

2. Super terminal and choose to upload the configuration file, the suffix.Cfg

[transfer] → [Send the file] → [browse] → [Select the folder] → [Users to upload the configuration file] → [OPEN] → [Use receiving protocol] → [Xmodem] → [Send]

**19.8 The system upgrade**

Through the super terminal, users can upgrade the following command file system (Before the upgrade, please confirm the correctness of the file)

Table 19.8.1 system upgrade.

| Operating          | Command | Description        |
|--------------------|---------|--------------------|
| The system upgrade | Upgrade | File suffix (.Bin) |

The following steps to upgrade the system file

1. Enter the command:

**Switch(manage)# upgrade**

**Please send upgrade file, or press [Esc] to quit .**

CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC

2. Configure HyperTerminal and choose to upload the file, the suffix (.bin)

[Transfer] → [Send the file] → [browse] → [Select the folder] → [Users want to upgrade the configuration file] → [Open] → [The use of Transfer protocol] → [Xmodem] → [Send]