

GIGABIT ETHERNET LAYER 2 SWITCH, 24 PORT, 2 x RJ45/SFP COMBO + 2 x SFP UPLINK PORTS



User Manual DN-80221-3

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Item Listing

Check the following contents of your package:

- Switch x 1
- User's Manual x 1
- Power Cord x 1
- Accessories (Rack Mount Accessory Kit x2, Rubber Feet x4, Screwx8)

If any part is lost and damaged, please contact your local agent immediately.

CHAPTER 1 Product description

Thank you for purchasing this managed Switch.

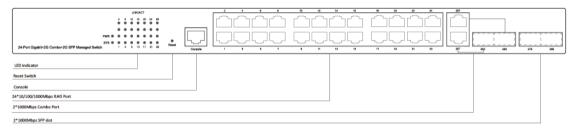
It is composed of excellent design and in general the development of switches.

It provides rich of two layer management function, has excellent of performance and friendly of management interface, can full meet user of need, including system configuration, and port configuration, and MAC bound, and MAC filter, and VLAN configuration, and SNMP configuration, and ACL configuration, and QOS configuration, and IP basic configuration, and AAA configuration, and MSTP configuration, and IGMP SNOOPING configuration, and GVRP configuration, and EAPS configuration, and RMON configuration, and cluster management, and ERPS configuration, and log management.

CHAPTER 2 Appearance description

1 Front panel

Switch front panel:



LED indicator light

LED	Color	Description
PWR	Green	Off: switch does not power on On: the switch is powered on
System	Green	Blinking: the system works Off: the system is starting or has no power
LNK/ACT	Green Orange	Off: not connected to the network equipment Orange light: connected to 10/100Mbps devices Green light: connected to 1000Mbps devices Blinking: connected devices are in data transmission

2 Back panel

Back panel: AC power connector, AC input range 100-240V, 50/60HZ, a grounding screw holes.



Power socket

Connect the female connector of the power cord here, and the male connector to the AC (Alternating Current) power outlet. Please make sure the voltage of the power supply meets the requirement of the input voltage.

Grounding column

The switch already comes with lightning protection mechanism. You can also ground the switch through the PE (Protecting Earth) cable of AC cord or with Ground Cable.

CHAPTER 3 Installation of equipment

Announcements

To prevent equipment damage and personal injury caused by improper use, please observe the following precautions: Before cleaning switch should switch power supply plug pulled out. Do not use wet cloth to wipe the switch; do not use liquid to clean the switch;

Do not switch on the water or wet places, and prevent water or moisture from entering the switch chassis; Do not place the switch box in unstable or table, in case of fall, will cause serious damage to the switch;

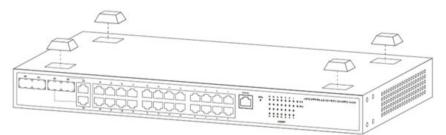
Should maintain good indoor ventilation and keep the ventilation holes of the switch open;

Switch to the proper voltage to work properly, make sure the switch working voltage matches the voltage indicated; To reduce the risk of electric shocks, switches, do not open the enclosure, even in neutral situations or don't turn on the switch chassis.

1 Desktop installation

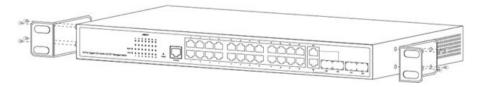
Placed the bottom of the switch on large enough and stable desktop;

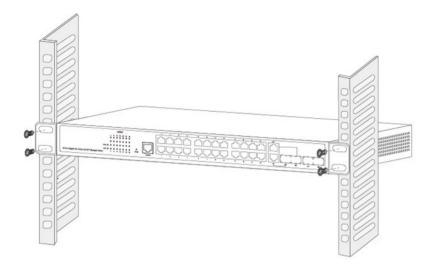
Tear off pad surface of the paste that comes with random paper; paste the pad to switch the Groove at the bottom of the housing to prevent external vibrations; reset the switch on the Workbench cautiously.



2 Rack Installation

Check EIA-19inch machine Cabinet of grounding and stability, first, with screws will installation hanging ear fixed in switch front Panel sides will switch placed in machine Cabinet of a bracket, along machine Cabinet guide slot Mobile switch to right location, then, with screws will installation hanging ear fixed in machine Cabinet ends of fixed guide slot, ensure switch stable to installation in machine Cabinet slot bit of bracket. Equipment mounting brackets are not used for load-bearing; it only plays the regular role. When installing the equipment cabinet, box bottom bracket (fixed on the Cabinet) to support the device.





3 Turn on switch

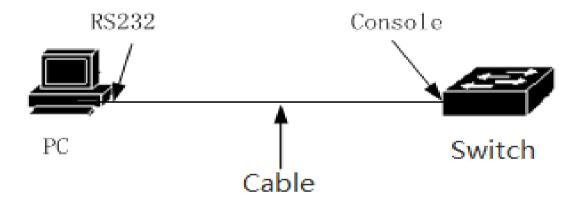
Please connect the AC power cord into the rear of the switch and to an electrical outlet (preferably one that is grounded). When the switch is power on, the LED indicators flash momentarily for one second which represents a resetting of the system. The Power LED indicator turns on green.

Note: Please confirm the voltage is correct before power on; otherwise the switch will be damaged. (The power input is: 100V-240Vac, 50/60Hz.)

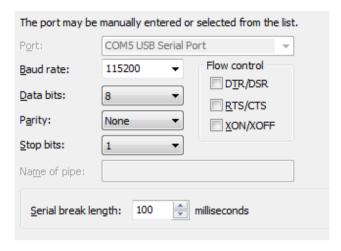
4 Connection Interface

The switch has a monitor port (Console port); this section describes the characteristics of this monitoring port and how to use it

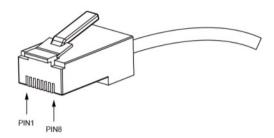
First step: Rate 1200bps-115200bps, standard RJ45 plug. Use a dedicated monitoring cable to lead the port to the PC serial port connection, as follows:



The second step to start the terminal emulation software on the PC (such as: Windows HyperTerminal) can be configured for the switch, monitoring and other operations. The cable is supplied with the host. The terminal serial port communication parameters can be set as right: rate -115200bps, eight bits data bit, one stop bit, no parity bit, no flow control. The communication parameters of HyperTerminal are configured as follows:



The RJ45 connector used by the Console port is shown in the figure below, and the RJ45 plug corresponds to the RJ45 socket, from left to right numbered from 1 to 8.



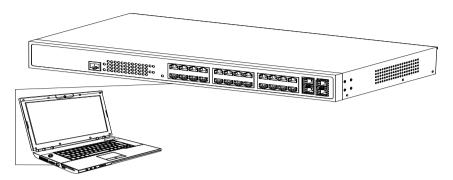
NOTE: The switch console port does not support the flow control function, so when the switch is configured with HyperTerminal, the data flow control should be set to "none", otherwise the problem of HyperTerminal single pass will occur. This cable is used to connect the console port of the switch to the external monitoring terminal. One end of the RJ45 eight-pin plug, the other end is a 25-hole plug (DB25) and 9-hole plug (DB9), RJ45 head into the switch's console port socket, DB25 and DB9 can be used according to the requirements of the terminal serial port, the cable internal connection schematic as follows:

	RJ45 <===> DB9	
[RTS 1~~~8 CTS]
[DTR 2~~~6 DSR]
]	TXD 3~~~2 RXD]
[GND 4~~~5 GND]
]	GND 5~~~5 GND]
]	RXD 6~~~3 TXD]
[DSR 7~~~4 DTR]
[CTS 8~~~7 RTS]

NOTE: Enter "?" in the console Port command line interface Command action tips to see what features are available in pre-mode

CHAPTER 4 LOGIN WEB

1 Connect the power of the switch and connect the control host (PC) to the switch with a network cable.



2 This switch provides web login management. The default login information is as follows:

Туре	Default parameter
IP address	192.168.2.1
Username	admin
Password	admin

3 Open the browser, enter http://192.168.2.1 in the address bar, press the Enter key to open the web login interface. (Please make sure the browser version is up to date)



In the web login interface of the switch, enter the login user name, login password, and click login to enter the switch web control interface. The language column English and Simplified Chinese is available for users to choose.



After logging in, you can see the switch web control interface.

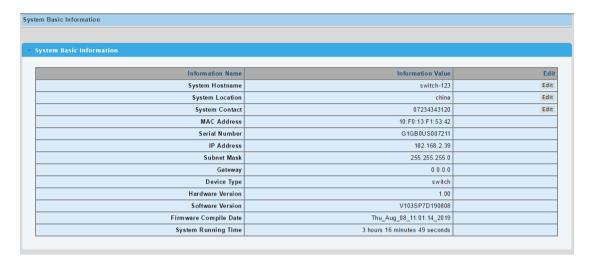


CHAPTER 5 Switch management configuration

1 System Status

1.1 system information

The system basic information provides information about the device name, device location, contact information, MAC address, serial number, IP address, subnet mask, gateway, device model, hardware version, software version, firmware compilation, and system running time.



The web interface provides editing of three pieces of information such as device name, device location, and contact information

• System hostname: Click the Edit button, the following pop-up window appears, enter the device name you want to set in the box, click Save to complete the configuration.



To save, click the Save button in the upper left menu bar. (All configuration saves need to click the save button, and will not be described later)



• System location: Click the Edit button, the following pop-up window appears, enter the device location you want to set in the box, click Save to complete the configuration.



• System Contact: Click the Edit button, the following pop-up window appears, enter the contact information you want to set in the box, click Save to complete the configuration.



1.2 IP configuration

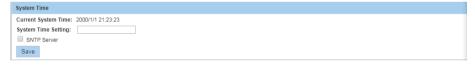
IP configuration function allows users to configure the IP address of the target VLAN. First, you need to create a VLAN in the VLAN function module, and then configure and manage the IP of the corresponding VLAN in the IP configuration function module. The system creates VLAN1 by default.



- Save: Change the configuration of the VLAN with the configured IP address under the IP configuration function. Click save when the change is complete.
- Delete: For the VLAN with the configured IP address, click the Delete button to clear the IP configuration information of the current VLAN.
- Set Management VLAN: Click Set Management VLAN to configure IP for the created VLAN. Enter the VLAN ID to be configured in the Management VLAN box. Optional DHCP or static acquisition. DHCP does not need to fill in the IP address and other information. The static IP address and subnet mask must be filled in for static access. The gateway allows not to fill. After the configuration information is filled out, if it is determined that the configuration, click save to save configuration, or click cancel to abandon.

1.3 system time

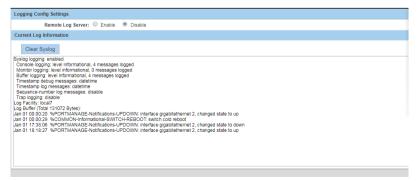
 $System\ time\ mainly\ displays\ the\ current\ system\ time,\ system\ time\ settings,\ and\ SNTP\ server\ settings.$



- SNTP server: Select the SNTP server IP, management VLAN, daylight saving time, time zone
- Save: For the configured system time, click the save button to save the current system time.

1.4 system logging

 $\label{thm:configuration} \textbf{System log is including log configuration and current log information.}$

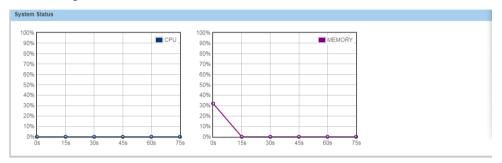


• Remote log server: The user selects whether to enable or disable the remote log server. You need to configure the server IP, send the log level, and click Save Settings to complete the configuration.



1.5 system status

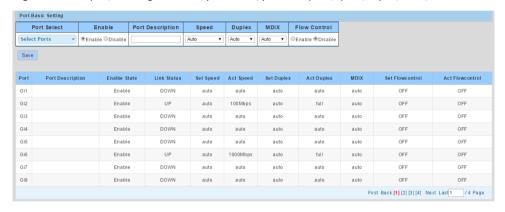
System status, including status of CPU and MEMORY.



2 Port configuration

2.1 basic setting

Basic configuration of the port, including Port select, port enable, port description, speed, duplex, MDIX, and flow control.

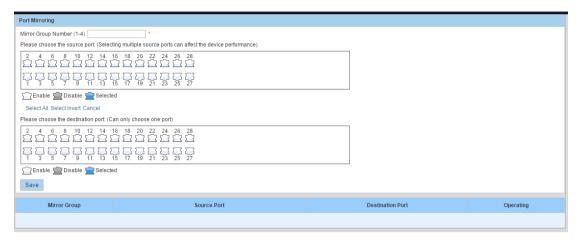


- Port select: Select the destination port to configure the port. Click the drop-down menu of the selected port and select the corresponding port to perform subsequent configuration on the port.
- Port enable: Enable or disable this port, the default state is enabled.
- Port description: The user can add a description to the port so that the user can mark the port accordingly.
- Speed: Click the drop-down menu in the box below the speed, there are 10Mbps, 100Mbps, 1000Mbps, auto-negotiation port rate to choose from, the default state is auto-negotiation.
- Duplex: Click the drop-down menu to select the port duplex mode. There are duplex, half-duplex, and auto-negotiation to choose from. The default state is auto-negotiation.
- MDIX: Click the drop-down menu to select the port MDIX mode There are MDI, MDIX, and auto-negotiation to choose from.
- Flow control: You can choose to enable or disable flow control, the default state is disabled.

Note: The port information table below the configuration area displays 8 ports of information on each page. When there are multiple pages, you can click the next to view the port information in the remaining tables.

2.2 Port mirroring

The port mirroring function module allows the user to configure one port as a mirror of one or more other ports. On the port mirroring configuration page, fill in the mirroring group number (1-4), select one or more source ports, and select the destination port (only one destination port can be selected in one configuration). Click save to complete the configuration of the mirrored port group.

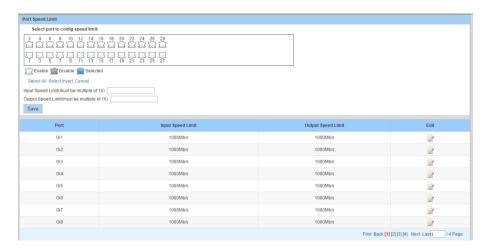


- Mirror Group Number: Must be filled in and needs to be in the range of 1-4.
- Source Port: The source port of the mirroring group, can select one or more as the source port of the mirroring group. Although multiple ports can be selected as the source port, too many source ports can affect device performance. The port selected as the source port is not selectable in the destination port selection.
- Destination Port: The mirroring group destination port is the mirroring of the source port. Only one port can be selected as the destination port, and ports that are already the source port in any mirror group cannot be selected.
- Save: to save the mirroring group configuration.

Note: The mirroring group information table below the configuration area can view the information of the currently configured mirroring group and mirroring group port.

2.3 Port limit

Port speed limit function module, which can configure the input rate limit and output rate limit of each port. Select one or more ports in the configuration area, fill in the input rate limit, output rate limit, and click save to complete the current port rate limit configuration. (The rate range is 64-1000000Kbps)



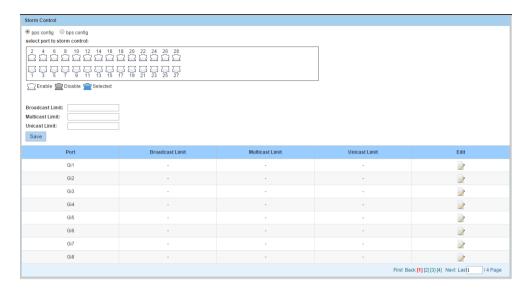
- Select port to config speed limit: Select the port for which you want to configure the rate limit. You can select one or more ports for configuration.
- Input speed limit: Configure the input rate limit upper limit, and the port input rate is limited to this rate.
- Output speed limit: Configure the output rate limit upper limit, and the port output rate is limited to this rate.
- Port speed limit configuration table: Below the configuration area is a port rate limit configuration information table, each
 page can display 8 port rate limit information, click the next page to view the next page port rate limit configuration
 information. When the rate limit is not configured, the default input and output rate of each port is limited to 1000 Mb/s.

rk the icon

) to edit and modify individual configured port configuration information

2.4 Storm control

Storm control module, where the user configures broadcast, multicast, and unicast storm restrictions. Configure storm control to respond when the packet rate reaches the upper limit of the configuration. This prevents port storms.

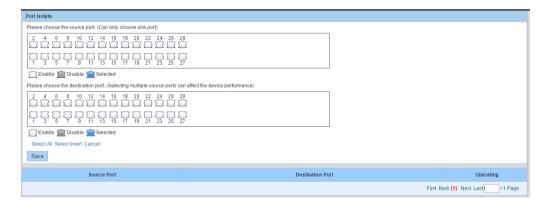


- · Mode-based selection: Rate limiting provides two options for configuration. The pps-based configuration is based on the rate of packets sent per second. The bps-based configuration is based on the rate of bit sent per second.
- Select port: You can select one or more ports to configure as required.
- Limit packet type: You can select broadcast, multicast, or unknown unicast type packets at the same time or separately. Each type rate is 0-262143pps based on pps configuration. Each type is 0 or 16-4194288Kbps based on bps configuration. Where 0 means off. When the system reaches the rate limit by default, the corresponding port is downed.
- · Save: save the current configuration and take effect. After the configuration is complete, the configuration information table below the configuration area can view the configuration information of the configured ports.

Note: When configuring multiple groups, you need to choose the same rate unit calculation method.

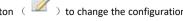
2.5 Port isolate

Port isolate module, where the user configures port isolation. Each port isolation group allows one source port and one or more destination ports to be configured. The purpose is to prevent the source port from forwarding information to the destination port. Each isolation group simply isolates the source port from the destination port, also known as unidirectional isolation. If you need to form a two-way isolation, you need to configure an isolation group with the source port and destination port interchangeable.



- · Select Port: Allows you to select one port as the source port and one or more ports as the destination port. After selecting the port, click Submit to complete the configuration of an isolation group.
- Port isolation configuration information table: After the configuration is complete, you can view the configured isolation

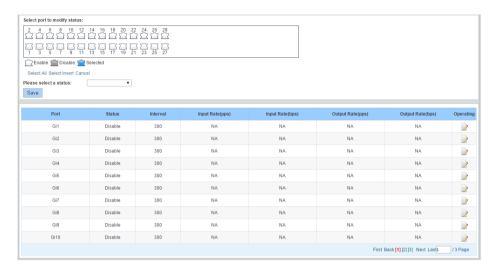
group information in the table below the configuration area. Click the Edit button () to change the configuration



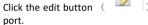
group configuration.

2.6 Port statistics

Port statistics module, where the user enables or disables port statistics. After the port statistics are configured, you can view the port input/output rate of the configured port in the current module. The port statistics table calculates the port rate in pps and bps and displays it to the user.



- Port select: Select the corresponding port and choose whether to enable port statistics configuration.
- Select status: After selecting the port, In the drop-down menu after selecting the status prompt, select whether to enable the port statistics status of the corresponding port, and click save to complete the configuration. The default state of each port is to disable port statistics.
- Port information statistics table: The port information statistics table below the configuration area shows the port statistics status, statistics interval, input rate (pps), input rate (bps), output rate (pps), and output rate (bps) of each port.

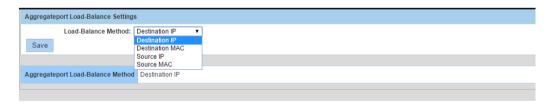


) after each port information to edit and modify the port statistics enable status of the

3 Link Aggregation

3.1 load-balance setting

The load balancing mode is configured on the aggregation port, including static aggregation and LACP.



 Load-balance method: In the drop-down menu of the box, there are destination IP, destination MAC, source IP, and source MAC load balancing modes to choose from. Users can select the corresponding mode according to their needs. After selected, click Save to complete the configuration.

Note: There is a load balancing mode currently in use under the configuration area. After the configuration is complete, you can check whether the configuration takes effect in the table.

3.2 static setting

Static aggregation function module, where users can manually configure static aggregation ports. Select one or more ports to be added to the aggregation group, select the aggregation port number, and click Save to complete the configuration of a static aggregation port.



- Select Ports join the aggregate: Add the corresponding ports to the aggregation group. The ports in each aggregation group are logically aggregated into one port, that is, the aggregation port.
- Aggregate Port ID: Select the aggregation port number of the aggregation port from the drop-down menu. Note that the
 port and aggregation port number that have been used cannot be selected.
- · Link aggregation information table: Below the configuration area, you can view the configured aggregation port

information. Click the button (



) to delete the corresponding aggregation port configuration.

3.3 LACP

3.3.1 LACP global setting

This is LACP Global Setting function module. The user can enable or disable the LACP global state, and configure the LACP system priority and LACP interval. After the configuration is completed, click Save to complete the configuration.



- LACP global status: You can enable or disable LACP here. After you enable the LACP port configuration, you can complete LACP configuration.
- LACP system priority: Fill in the LACP system priority in the box, the data range is 1-65535.
- LACP tick interval time: Fill in the LACP interval in the box, the data range is 50-5000.

3.3.2 LACP Port setting

The LACP port setting module allows the user to add ports to the aggregation port group and set the port priority and set port mode of the aggregation port. The configured aggregate port information can be viewed under the configuration area.



- Select Ports to join the aggregate: Add the corresponding ports to the aggregation group. The ports in each aggregation group are logically aggregated into one port, that is, the aggregation port. Note that you cannot select a port that has joined an aggregation group.
- Aggregate Port ID: Select the port number of the current aggregation port from the drop-down menu. Note that you cannot select a port number that has already been used.
- LACP Port Priority: Configure the port priority of the aggregation port. The data range is 0-65535.
- Aggregate Port Mode: The drop-down menu selects the mode of the port and has an active or passive state to choose from.
- Link aggregation information table: Displays information about the configured aggregation port, including the member

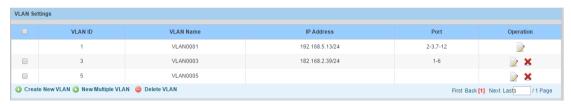
port ID, port status flag, port state, port priority, and port operation key. Click the button port in the aggregation port.



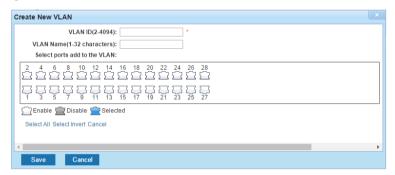
4 VLAN configuration

4.1 VLAN setting

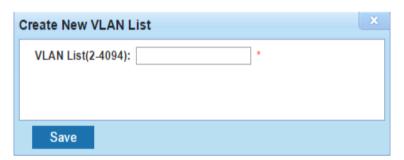
The VLAN configuration function module allows users to add or delete VLANs and manage port configurations in a VLAN.



Create New VLAN: to Create a new VLAN, click to enter the creation of the new VLAN. Note that the VLAN ID (2-4094)
must be filled in. By default, the VLAN name defaults to the VLAN ID. You can choose the ports to add to the VLAN. When
creating a VLAN, only the VLAN ID must be filled in, and the name and port can be defaulted. Click the Cancel button to
abandon this configuration.

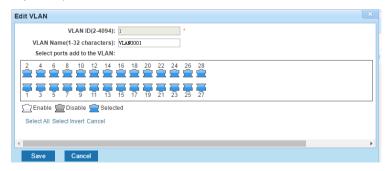


• New multiple VLAN: Create new VLANs in batches.



- Delete VLAN: In the VLAN configuration information table, select the VLAN to be deleted. Click this to delete the VLAN
 option to complete the batch deletion of the VLAN.
- VLAN configuration information table: The table shows the information of the created VLAN, such as VLAN ID, name, IP

address, port . Click the Edit button () to edit and modify the VLAN name and VLAN port member of the currently configured VLAN. Click button () on each VLAN to delete this VLAN information. (VLAN 1 is the default VLAN and no deletion option is provided).



4.2 interface setting

4.2.1 access Port settings

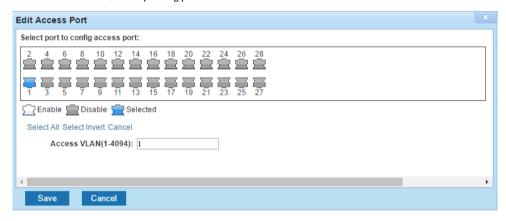
Access port settings module, where the user configures the port as an access port. The default port mode of the system is the access port.



- Add access Port: If the port is configured as a port of another type, you can select the port to add the access port and
 configure the port as the access port mode.
- Access Port settings information table: View the port information currently configured as the access port mode. The
 information includes the access port ID, port description, and access VLAN. Edit the port configuration by clicking the Edit

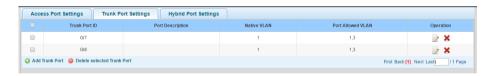


) after the corresponding port information.

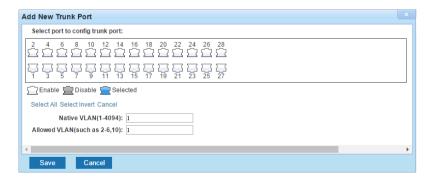


4.2.2 Trunk Port settings

Trunk port configuration module. The user manages and configures the trunk port in this module.

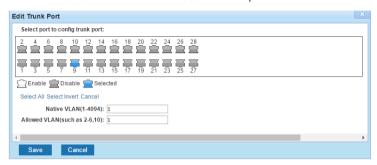


• Add Trunk Port: Add one or more trunk ports, select the port to be configured as a trunk, fill in the Native VLAN (1-4094), fill in the allowed VLANs, and click Save to complete the addition of the new trunk port. Click Cancel to abandon this new trunk port to add configuration. (The VLAN used in the configuration must be the created VLAN)



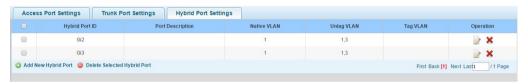
- Delete selected Trunk Port: Delete the trunk port in batches. After checking the corresponding port in the Trunk port configuration information table, click Delete the selected Trunk port to complete the batch deletion of the Trunk port.
- Trunk Port configuration information table: The configured trunk port includes the trunk port number, port description,

native VLAN, and port allowed VLAN information. Click the edit button () after each trunk information to edit the current trunk port. Click the Delete button () to delete the trunk port.

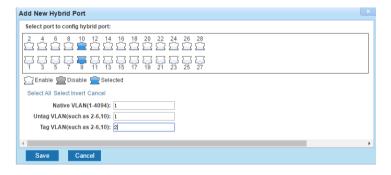


4.2.3 Hybrid Port settings

Hybrid port configuration module. The user configures and manages Hybrid type ports in this module.

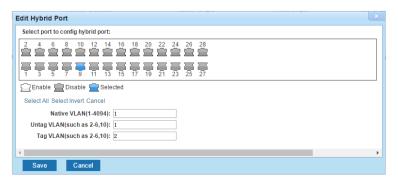


Add new Hybrid Port: Add one or more Hybrid ports, select the port to be configured as Hybrid, fill in the Native VLAN (1-4094), fill in the Untag VLAN, Tag VLAN, and click Save to complete the addition of the new Hybrid port. Click Cancel to abandon this new Hybrid port add configuration. (The VLAN used in the configuration must be the created VLAN)



- Delete selected Hybrid Port: Delete the hybrid port of the Hybrid port in batches. In the Hybrid configuration table, select the port to be deleted. Click to delete the selected hybrid port to delete the hybrid port.
- Hybrid configuration information table: The port number, port description, native VLAN, untagged VLAN, and tag VLAN

information of the Hybrid port are configured. Click the Edit button () to edit and modify the corresponding configured Hybrid port. Click the Delete button () to delete the configured single Hybrid port.

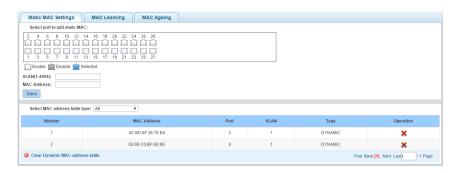


5 MAC address table

5.1 MAC management

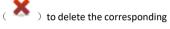
5.1.1 static MAC settings

Static MAC address configuration module. You can configure a static MAC address for a port in this module.



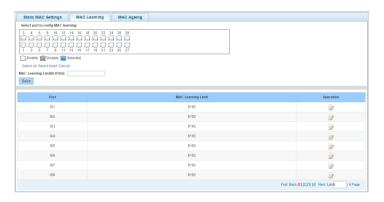
• Select the port to which the static MAC address is added, fill in the VLAN ID (1-4094), MAC address, and click Save to complete the configuration of a static MAC address. After the configuration is complete, in the MAC address information table below the configuration area, you can choose to view all, static or dynamic (select the MAC address table in the drop-

down menu after selecting the type of MAC address table). Click the Delete button (MAC address information.



5.1.2 MAC learning

The MAC learning module allows the user to configure the MAC learning limit of the corresponding port in the module.



• Select the port (one or more) to be configured, fill in the number of MAC learning restrictions (0-8192), and click Save to complete the MAC learning limit configuration. The configured MAC learning information table at the bottom of the

configuration area to view the MAC learning limit information of all ports. Click the Edit button $\,\,$ (



corresponding port to configure the MAC learning limit for the corresponding port. When the edit button appears in the blue box, change the MAC learning limit value in the configuration area and click Save.

5.1.3 MAC ageing

MAC ageing module. You can configure dynamic MAC address learning aging time in this module. The setting range is 0,10-1000000. Where 0 means no aging.



• Fill in the correct aging time in the check box after MAC aging time, and click Save to complete the aging MAC time configuration.

5.2 MAC filter

MAC filter module. Users can configure MAC filtering in this module to filter the configured MAC address in the corresponding VI AN



- Fill in the correct MAC address in the MAC address box, fill in the VLAN ID (1-4094) in the MAC VLAN check box, and click Save to complete the MAC filtering configuration. (Note that the VLAN ID must be the VLAN that has been created)
- MAC filter configuration information table: After the configuration is complete. There is a configured MAC filtering

information table below the configuration area. Click the Delete button () after the corresponding filtering information to delete the corresponding MAC filtering information.

6 spanning tree

6.1 STP Global Setting

STP Global Setting module, The user performs the global configuration of the STP function here.



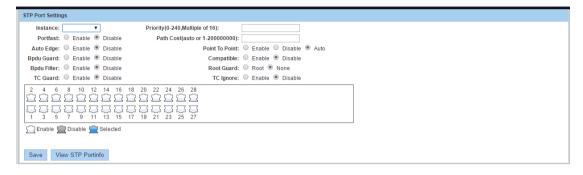
- STP Enable: The user can select enable or disable and decide whether to enable the STP function.
- STP Mode: The mode provides three options: STP, RSTP, and MSTP.
- · Hello Time: The user enters the value in the specified range and configures the interval at which the switch sends BPDUs.
- MAX age: The user inputs the value within the specified range and configures the time. The port does not receive a packet within this event and initiates a topology change.
- Forward delay: The user inputs the value within the specified range and configures the state switching time of the port.
- MAX Hops: You can enter the maximum number of hops in the current MSTPregion to control the network size of the spanning tree. The maximum number of hops supported by the MSTP protocol is 40.
- Click the Save button to save the corresponding configuration.

Note

- 2* (hello time +1) <= maximum aging time <= 2* (forward delay -1).
- When STP is enabled, the web page will wait 2 times for the forwarding delay time.

6.2 STP port setting

STP port setting module, users can configure the STP port in this module.



- Instance ID: The user selects the created instance ID for configuration.
- Priority: The user sets the port instance priority here. The default is 128. You must enter a multiple of 16, ranging from 0 to 240.
- Port fast: Here, the user selects whether to enable the fast port function. The fast port function enables the Layer 2 access port to immediately enter the forwarding state.
- Path Cost: The user selects auto or enters a specific value within the specified range to determine the path cost of each port to the root.
- Auto Edge: Automatic identification of edge ports. An edge port is a port that is not directly connected to any switch or
 indirectly connected to any switch through the network to which the port is connected.
- Point to point: The user can choose to enable, disable, or auto-configure whether the connection type of the interface is "point-to-point connection."
- Bpdu Guard: Enable this function to prevent an attacker from sending Bpdu on the port of the directly connected terminal to cause network flapping.
- Bpdu filter: If the Bpdu filtering function is enabled, the port does not participate in the spanning tree calculation. The port does not receive or send Bpdu packets.
- Compatible: The MSTI information is selectively transmitted according to the interface attribute information of the current port to implement interconnection with other manufacturers.
- Root Guard: Enable the root protection function to prevent the status of the current root bridge from changing due to incorrect configuration or illegal packet attacks.
- TC Guard: Enable TC protection to prevent the spread of TC packets.
- TC ignore: TC filtering is enabled. The TC packets received on the port will not be processed.
- Click the Save button to submit the configuration. After completing this configuration, click the View STPPortinfo button to view the configuration information.

6.3 MSTP setting

6.3.1 MSTP Instance Setting

MSTP instance setting module, Users can configure the MSTP instance in this module.



- Instance ID: The user selects the value from the drop-down menu and selects the configuration instance ID number.
- VLAN ID: The user enters the created VLAN ID and configures the VLAN for the instance mapping.
- Priority:The user selects a value from the drop-down menu and sets the instance priority.

Note: An instance can only be mapped to one VLAN. The instance and VLAN are one-to-one correspondence.

6.3.2 MSTP Region Setting

MSTP Region setting module, Users can configure the MSTP Region in this module.

	MSTP Instance Setting MSTP Region Setting
	Region Name(0 to 32 characters):
	Revision Level(0 to 65535):
L	Save

- Region Name: The user enters the number of characters in the specified range and configures the name of the region.
 (0~32 characters)
- Revision Level: The user enters a value within the specified range and configures the revision level parameter. (0~65535)

7 ACL

7.1 ACL time schedule

ACL time schedule module, Users can configure ACL schedules in this module.



- ACL time schedule configuration: Fill in the correct ACL name with only numbers and letters after the time schedule name, select the weeks period, select the time interval, and click Save to complete the configuration of an ACL schedule.
- The Configured ACL time schedule information table: After the ACL time schedule is configured, the configured ACL time

schedule is displayed at the bottom of the configuration area. Click the Edit button () after the corresponding timetable. When the blue box () appears, you can modify the corresponding schedule configuration in the configuration area. Click the Delete button () to delete the corresponding schedule configuration.

7.2 ACL settings

7.2.1 ACL settings

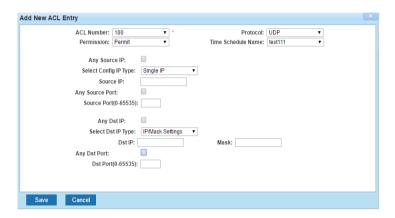
ACL settings module. The user configures an ACL in this module to add new or delete configured ACLs.



Add new ACL: Click to add a new ACL, select the ACL serial number, protocol number, permission, ACL time schedule
name and other information, click Save to complete the configuration. Click Cancel to abandon this configuration. When
the protocol number is IP, remove any source IP or any destination IP. You can select the source IP (or destination IP)
type and fill in the corresponding source IP (or destination IP).



When the protocol number is UDP or TCP, the source (or destination) port number information allows to edit.



ACL settings information table: After the configuration is complete, you can view the configured ACL configuration table
on the current page, including the priority, ACL number, permission, index, protocol, source IP/Mask, source port,

destination IP/Mask, destination port, time name, status. Click deletion button () to delete the corresponding ACL configuration.

7.2.2 ACL apply

 ${\sf ACL\ apply\ module},\ \ {\sf The\ user\ selects\ the\ corresponding\ port\ in\ the\ module\ to\ apply\ the\ ACL\ configuration}.$



- Select the port to apply the ACL rule, select the ACL number in the drop-down menu of the ACL number, and click Save to complete the configuration of the corresponding port ACL settings.
- ACL apply information table: The configuration information of the ACL application can be queried in the table. The

information includes the ACL number, port, filtering direction. Click the corresponding Edit button () . When the blue box () appears, you can modify the configuration information of the ACL application in the configuration area. Click the Delete button () to delete the corresponding configuration information.

8 QoS

8.1 Queue basic setting

Queue basic setting module, The user configures the queue in this module.



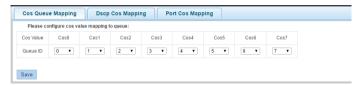
- Qos Queue Algorithm: The user selects the desired configured queue algorithm from the drop-down menu as needed.
 When you need to configure weights, you need to configure the weight values. (4 modes are available: RR cyclic scheduling, SP absolute priority scheduling, WRR weighted cyclic scheduling, WFQ weighted fair scheduling)
- Save: Click the Save button to save the configuration content and complete the configuration to make it effective.

Note: Queue 7 cannot be 0.

8.2 Qos Queue Mapping

8.2.1 COS Queue Mapping

COS Queue Mapping module. Service categories can be mapped to the appropriate queues. The Users configure service category to queue mapping in this module.



- Cos Value: That is, the priority cos field of the VLAN (0~7).
- Queue ID: Set the queue number (0~7) for each cos value mapping. Map the corresponding service to the destination queue. If you need to configure the queue weight, you can go to the queue to set the queue weight.
- Save: Click the Save button to save the current configuration and make it effective. Complete this configuration.

8.2.2 DSCP COS Mapping

DSCP COS Mapping module that maps DSCP value to the COS value. The Users configure DSCP service mapping to COS in this module.



- DSCP Value: The dscp field has 7 bits (0~63) divided into 4 tables.
- COS Value: Map dscp to the cos field (0~7) and map to the queue according to the mapping cos.
- · Save :Click the Save button to save the current configuration and make it effective. Complete this configuration.

Note: The cos priority is greater than dscp and the dscp priority is greater than the port.

8.2.3 Port COS Mapping

Port COS Mapping module, Ports can be mapped to the appropriate service category. The user performs port-to-service class configuration on this module.



- Port: Select the port number to map the port to the appropriate service category.
- Cos value: Map to the cos value and then enter the queue based on the cos value.
- QoS Port Trust Mode: There are three modes of cos, dscp and none for users to choose.
- · Save: Click the Save button to save the current configuration and make it effective. Complete this configuration.

Note: The cos priority is greater than dscp and the dscp priority is greater than the port.

9 security

9.1 loopback detection

9.1.1 loopback detection config

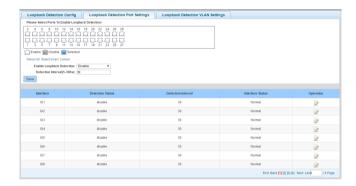
Loopback detection config module, In this module, the user selects the enable or disable of the loopback detection status, selects the enable or disable of loopback recovery status, and the setting of the loopback recovery interval.



- loopback detection status: Global enable or disable loopback detection.
- loopback detection status: Enable or disable the automatic recovery status of the loopback detection link.
- Loopback recovery interval: Set the interval for loopback detection link recovery detection. The time interval ranges from 30 to 86400S.
- Save: saving the loopback detection configuration.

9.1.2 loopback detection Port settings

The loopback detection port settings module allows the user to enable or disable loopback detection on the corresponding port and configure the loopback detection interval.

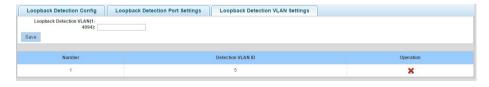


- Loopback detection Port settings: Select the port to be configured for loopback detection, select Enable Loopback Detection Status (enabled or disabled, the default is enabled), set the detection interval (5-300S), and click Save to complete the configuration.
- Loopback detection Port setting information table: You can view the loopback detection settings information of each port on the switch, including interface, detection status, detection interval, and interface status. Each page displays the loopback detection configuration information for eight ports. Click on the next to view subsequent content. Click the Edit

button () of the corresponding port configuration information. When the blue box () appears, you can modify the configuration information of the corresponding port loopback configuration on the configuration area.

9.1.3 loopback detection VLAN settings

Loopback detection VLAN settings module. The user configures the VLAN for loopback detection in this module.



- Loopback detection VLAN settings: In the loopback detection VLAN check box, fill in the VLAN ID of the loopback detection VLAN (1-4094), and click Save to complete the configuration. Note that the VLAN must have been created.
- · Loopback detection VLAN settings information table: Displays the configured loopback detection VLAN information,

including number and detection VLAN ID. Click the Delete button () after the corresponding loopback detection VLAN configuration information to delete the corresponding configuration information.

9.2 Network Tool

9.2.1 ping

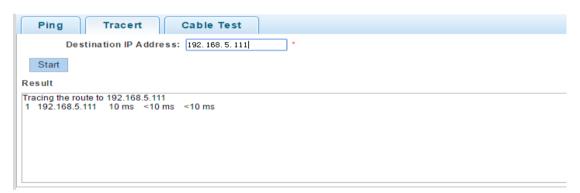
The ping module, where the user pings, uses the PING function to detect network connectivity and clarify network connectivity.



- Destination IP Address: The user inputs the destination IP address to be detected, and detects the network connectivity between the system and the target device.
- Timeout in seconds: User input timeout must be within the valid range (1~10).
- Ping count: Configure the number of detections that need to be repeated, and need to be within the valid range $(1^{\sim}100)$.
- Result: Showing the results of this test, the user judges network connectivity based on the information.

9.2.2 Tracert

Tracert module, where Use the ICMP protocol to locate all routers between your device and the target computer.



• The user inputs the destination IP address to be traced, and then clicks the start button, and waits for the result oftraceroute to be viewed in the result display area.

9.2.3 Cable Test

The cable detection module allows the user to perform cable detection on the module to detect the cable connection status of the port.



• Select the appropriate port and start testing. After the test is completed, the system will display the test information in a table for the user to view.

10 SNMP

10.1 SNMP setting

10.1.1 SNMP setting

SNMP configuration enable module. The user selects whether to enable or disable SNMP configuration in this module, and clicks the submit button to complete the configuration. SNMP stands for Simple Network Management Protocol. When this option is enabled, it is mainly used for network device management.

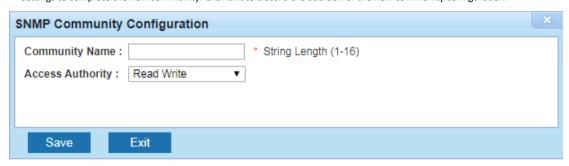


10.1.2 Community setting

Community configuration module. Users configure and manage snmp communities under this module.



 New community: Add an SNMP community, fill in the community name, select the corresponding access right, and click Save Settings to complete the new community. Click Exit to discard the addition of the new community configuration.



- Delete selected communities: delete the configured communities in batches. Select the groups to be deleted in the SNMP community list, and then click Delete selected communities to complete the batch deletion of communities.
- · SNMP community list: It displays the configured SNMP community including the community name and access rights. Click



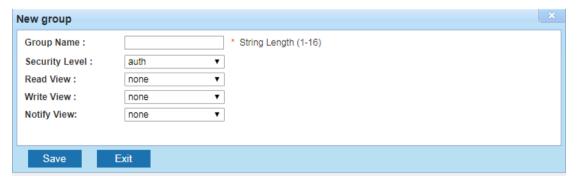
the delete button to delete the community.

10.1.3 Group setting

Group configuration module. Users can configure and manage snmp groups in this mode.



• New group: Add an SNMP group, fill in the new group name, security level, read-only view, write-only view, notification view, and click save settings to complete the new group setting. Click Exit to discard the addition of the new group configuration.



• Delete selected groups: delete the configured groups in batches, select the groups to be deleted in the SNMP group list, and

click Delete Selected Groups to complete the batch deletion of the groups.

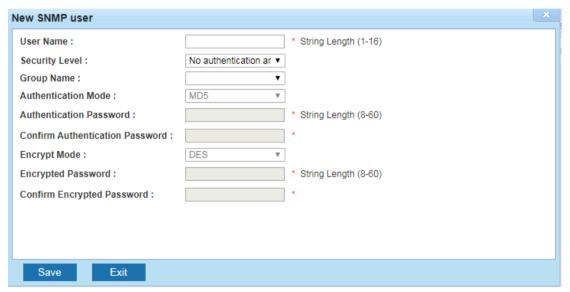
• SNMP group configuration information table: display the configured SNMP group including group name, security level, readonly view, write-only view, notification view, click the edit button after each group information to edit the current group, click the delete button to delete The group.

10.1.4 User setting

User configuration module. Users configure and manage snmp users under this module.



• New user: Add SNMP user, fill in the new SNMP user name, security level, group name, authentication mode, authentication password, confirm authentication password, encryption mode, encryption password, confirm encryption password, and click save settings to complete the new user settings. Click Exit to discard this addition of new user configuration.



- Delete selected users: Delete the configured users in batches. Select the users to be deleted in the SNMP group list and click Delete Selected Groups to complete the batch deletion of users.
- SNMP user configuration information table: display the configured SNMP group including user name, security level, group

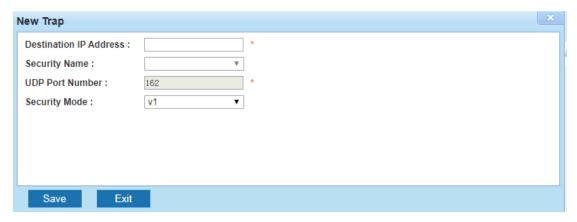
name, authentication mode, authentication password, encryption mode, encryption password, click the edit buttor after each user information to edit the current user Click the delete button to delete the user.

10.1.5 Trap setting

Trap configuration module. Users configure and manage snmp users under this module.



• New Trap: Add Trap target host, fill in the new destination IP address, security name, UDP port number, security mode, and click Save Settings to complete the new user settings. Click Exit to discard this addition of new user configuration.



- Delete and select Trap: Delete the configured Trap target hosts in batches. Select the Trap target hosts to be deleted from the Trap target host list and click Delete selected Trap target hosts to complete the batch deletion of Trap target hosts.
- Trap information table: It displays the configured Trap target host, destination IP address, security name, UDP port number,

and security mode. Click the edit button after each user information to edit the current user, and click the delete button to delete the user.

10.1.6 View setting

View configuration module. Users configure and manage snmp users under this module.



- New view: add a view name
- New view regulation: Select the view regulation, fill in the MIB subtree OID, subtree mask, and click Save Settings to complete the new user settings. Click Exit to discard this addition of new user configuration.



• Delete selected view regulations: delete the configured view regulations in batches, select the view regulations to be deleted in the view regulations list, and click delete selected view regulations to complete the batch deletion of view regulations.

11 system tool

11.1 system setting

11.1.1 System Factory Default Setting

System Factory Default Setting module. Click the Factory default button, the user can clear the configuration saved by the user, and the switch configuration is restored to the factory default configuration state.



11.1.2 System Reboot Setting

System Reboot Setting module, Click the system Reboot button, the user restarts the switch from the web interface.



11.1.3 EEE config

EEE config module. The user selects the enable or disable of the EEE configuration in the module, and clicks the save button to complete the configuration. EEE is Energy-efficient Ethernet. When this item is enabled, the switch will automatically turn off some idle circuits to effectively reduce power consumption and save energy.



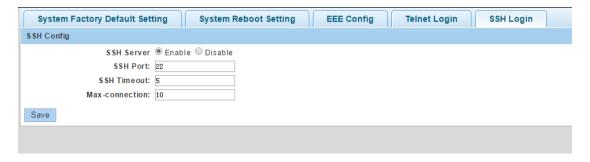
11.1.4 Telnet login

Telnet login module. The user configures the Telnet server on this module. When you need to configure the Telnet server, select Enable, fill in the Telnet port, Telnet timeout, max-connection information, and click save to complete the configuration. When you need to turn off the Telnet server, select Disable and click save. By default, it is enabled, Telnet port 23,Telnet timeout5, max-connection 10.



11.1.5 SSH login

SSH login module. The user configures the SSH server on this module. When you need to configure the SSH server, select Enable, fill in the SSH port, SSH timeout, max-connection information, and click save to complete the configuration. When you need to turn off the SSH server, select Disable and click save. By default, it is enabled, SSH port 22,SSH timeout5, max-connection 10.



11.1.6 Timeout Login

System login timeout module, users configure login timeout service in this module. You can configure the login timeout setting time.



• Save: Save the loopback detection configuration and make the configuration take effect.

11.1.7 Jumbo Frame



• Save: Save the loopback detection configuration and make the configuration take effect.

11.2 system upgrade

11.2.1 system upgrade

System upgrade module. The user upgrades the software version through the web interface in the module. Click the button behind the firmware name to select the upgrade file. click firmware upgrade button to upgrade.



After selecting the upgrade file (file format is .bix), click Open, automatically return to the upgrade interface, click the firmware upgrade button, and confirm that the firmware is to be upgraded. Click OK. Then wait for the upgrade file to upload, the system erase and write the Flash, and the system automatically restarts to complete the software upgrade.

11.2.2 Bootm Partition Setting

Configure the boot partition module. In this module, the user selects the image when the system starts.



• Save: Save the loopback detection configuration and make the configuration take effect.

11.3 configuration menu

11.3.1 save settings

Save settings module. The user clicks the Save Configuration button in this module to save the current configuration of the system.



In addition, if you need to save the system configuration, you can also click the shortcut button "Save" in the web interface to save the current configuration of the system.



11.3.2 configuration management

Configuration management module. The user performs the export of the current configuration and the import of the configuration file in the module.



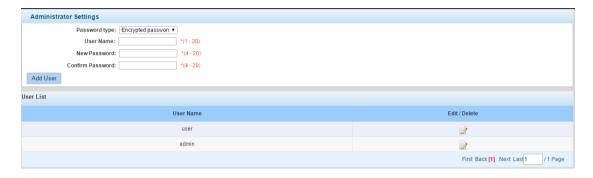
Click the Configuration Export button and pop up the prompt pop-up window according to the browser download settings.
 In the browser download manager, you can view the switch.conf file, which is the file exported by the current switch configuration.



• Select Configuration Import, click the button behind file name to select the file, select the switch.conf file and click Open. After returning to the configuration management interface automatically, click Configuration Import, pop-up prompts the import is successful, click OK. After that, the pop-up window prompts the configuration file imported after the restart to take effect. If it needs to take effect immediately, click OK.

11.4 administrator

Administrator module, The administrator manages the users in the module, that is, adding users or removing existing users



- Password type: This system provides two password types: plaintext password and ciphertext password. Different information can be viewed in the background depending on the type of password selected. The plaintext password is stored in plain text in the background, and the ciphertext password is encrypted in the background.
- User name: It is allowed to use 1-20 characters as the user name. When the limit is exceeded, there is an error message and the submission cannot be successful.
- New password、confirm password: Set the password of the configured user and confirm the password to ensure the password is set correctly. The password allows characters to be entered in the range of 4-20 characters.
- · Add user: Save the current configuration information and take effect, complete the addition of new users.
- User list: View current configured user information and provide editing and deletion capabilities. Click the Edit button

to edit and modify the corresponding user information, and click the Delete button (to delete the corresponding user configuration information.



CHAPTER 6 Specification

Model	DN-80221-3	
Standard	IEEE 802.3、IEEE 802.3u、IEEE 802.3ab、IEEE 802.3z、IEEE 802.3x、IEEE 802.1X、IEEE 802.1q、IEEE 802.1p、IEEE 802.1d、IEEE 802.1w、IEEE 802.3ad	
Interface	24*10/100/1000Mbps RJ45 Port 2*10/100/1000Mbps Combo ports 2* 100/1000Mbps SFP Slots 1 Console Port	
Indicator	PWR、LNK/ACT	
Network media	10BASE-T: UTP category 3,4,5 cable (≤100m) 100BASE-TX: UTP category 5, 5e cable (≤100m) 1000BASE-T: UTP category 5e, 5 cable (≤100m) 100BASE-FX:MMF,SMF 1000BASE-X: MMF, SMF	
MAC Address Table	8K, Auto-learning, Auto-aging	
jumbo frame	9216Bytes	
Transfer Mode	Store-and-forward	
Packet Forward Speed	41.66Mpps	
Switching Capacity	56Gbps	
Dimensions(L*W*H)	440*208*44mm	
Input Power Supply	100~240V AC, 50/60Hz	
Operating Temperature	0°C ~ 40 °C	
Storage Temperature	-40 °C ~ 70 °C	
Operating Humidity	10% ~ 90% non-condensing	
Storage Humidity	5% ~ 90% non-condensing	
Surge Protection	Common mode ±6KV Differential mode ±4KV;	
МТВБ	>50000 hour	
Electrostatic standard	Contact 6KV, Air 8KV	

This is a Class A product. In home environment, this product may cause radio interference. In this case, the user may be required to take appropriate measures.

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