

# **Smart Managed Switch Web**

**User Manual** 

# Legal Information

## About this Document

- This Document includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only.
- The information contained in the Document is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of the Document at the Hikvision website (<u>https://www.hikvision.com</u>). Unless otherwise agreed, Hangzhou Hikvision Digital Technology Co., Ltd. or its affiliates (hereinafter referred to as "Hikvision") makes no warranties, express or implied.
- Please use the Document with the guidance and assistance of professionals trained in supporting the Product.

## **About this Product**

This product can only enjoy the after-sales service support in the country or region where the purchase is made.

## Acknowledgment of Intellectual Property Rights

- Hikvision owns the copyrights and/or patents related to the technology embodied in the Products described in this Document, which may include licenses obtained from third parties.
- Any part of the Document, including text, pictures, graphics, etc., belongs to Hikvision. No part of this Document may be excerpted, copied, translated, or modified in whole or in part by any means without written permission.
- **HIKVISION** and other Hikvision's trademarks and logos are the properties of Hikvision in various jurisdictions.
- Other trademarks and logos mentioned are the properties of their respective owners.

## LEGAL DISCLAIMER

 TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS DOCUMENT AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKVISION BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.

- YOU ACKNOWLEDGE THAT THE NATURE OF THE INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKVISION SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INFECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.
- YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE, FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.
- IN THE EVENT OF ANY CONFLICTS BETWEEN THIS DOCUMENT AND THE APPLICABLE LAW, THE LATTER PREVAILS.

## © Hangzhou Hikvision Digital Technology Co., Ltd. All rights reserved.

# Preface

## **Applicable Models**

This manual is applicable to smart managed switches.

## **About Defaults**

- Default administrator account: admin
- Super IP address: 10.180.190.200

# **i**Note

- The default user name **admin** needs to be activated for first-time login.
- The default IP address of the switch is dynamically assigned.
- The super IP address cannot be modified. If the switch is directly connected to a PC, the super IP address can be used to access the switch for device management.

# **Symbol Conventions**

The symbols that may be found in this document are defined as follows.

Symbol	Description
Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
<b>i</b> Note	Provides additional information to emphasize or supplement important points of the main text.

# Contents

Chapter 1 Introduction 1
Chapter 2 Activation and Login 2
Chapter 3 Device Information 5
3.1 Device Overview
3.2 Port Status
3.3 Network Status 10
Chapter 4 Device Configuration 13
4.1 Port Configuration
4.1.1 Configure Port Attributes 13
4.1.2 Configure Link Aggregation14
4.1.3 Configure Port Isolation 15
4.1.4 Configure Port Mirroring15
4.1.5 Configure Long-Range Mode 17
4.1.6 Configure High-Priority Port 17
4.2 PoE Configuration 18
4.3 VLAN Configuration 19
4.3.1 Add VLAN 19
4.3.2 Configure Port VLAN 20
4.4 STP Configuration 21
4.5 LLDP Configuration 22
Chapter 5 System Management 24
5.1 Network Configuration 24
5.2 Time Synchronization 27
5.3 System Maintenance 28
5.4 Log Management 30

# **Chapter 1 Introduction**

Smart managed switches support management via web, supporting functions such as activation and login, device overview, network configuration, device configuration, and system maintenance.



The functions supported vary with device models. If there are differences between the figures shown in this manual and the actual interfaces of your device, the latter prevails.

# **Chapter 2 Activation and Login**

If you use the switch for the first time, you need to activate it and configure the password.

### **Before You Start**

Ensure that your computer and switch are on the same network segment.

#### Steps

# **i**Note

All figures in this manual are for illustration purpose only.

1. Enter the default IP address of the switch in the address bar of a web browser, and press Enter.



Figure 2-1 Activate Device

- You can obtain the default IP address of the switch using the SADP tool.
- You are recommended to use the following web browsers: Microsoft Edge 89 or later, Google Chrome 89 or later, and Firefox 78 or later.
- 2. Set a password and confirm the password.

# iNote

- The password should contain 8 to 16 characters, including at least two types of the following categories: uppercase letters, lowercase letters, digits, and special characters.
- The password cannot contain user name, '123', or 'admin' (case-insensitive), 4 or more consecutively increasing or decreasing digits (such as '1234' and '4321'), or 4 or more identical characters (such as '1111' and 'aaaa').
- The password cannot be a common risky password.

## 3. Optional: Check Cloud Management.

The Hik-Connect service is enabled.

- 4. Click OK.
  - The network configuration page is displayed.
- **5. Optional:** Modify the network configurations.

### 1) Go to System Management → Network Configuration → Network Configuration .

Basic Configuration	
DHCP	
* IPv4 Address	10.184.
* IPv4 Subnet Mask	255.255.
* Default IPv4 Gateway	10.184.
DNS Address Configuration	
* Preferred DNS Address	8.8.
* Alternate DNS Address	8.8.
	Save

#### Figure 2-2 Modify Network Parameters

2) Modify the IPv4 address, IPv4 subnet mask, default IPv4 gateway, preferred DNS address, and alternate DNS address as required, or enable **DHCP** for automatic IP address assignment.

INote

You are recommended to modify the network configurations to better manage your switch.

3) Log in to the switch web again with the new IP address after modification.



Figure 2-3 Log In

# **Chapter 3 Device Information**

After logging in to the switch web, you can obtain detailed information about the switch, including the device overview information, port status information, and network status information.

## **3.1 Device Overview**

You can view or edit the device overview information on the **Overview** page.

## **Basic Device Information**

You can view the device model, software version, serial number, IP and MAC addresses, as well as CPU and memory usage of the switch in the lower right corner of the **Overview** page.



Figure 3-1 View Basic Device Information

## **Device Name**

You can view the current device name or click  $\mathbb{Z}$  next to it to customize the device name on the **Overview** page.

## DS-3E1106P-EI/M 2

## Figure 3-2 Edit Device Name

## System Uptime

You can also view the device's system uptime in the upper right corner of the **Overview** page.

System Uptime: 0 Week(s) 1 Day(s) 21 h 37 min 55 sec

#### Figure 3-3 View System Uptime

## VLANs Added

You can quickly view the number of VLANs that have been added, or click (a) to go to the **VLAN Management** page for VLAN configuration.



#### Figure 3-4 View Number of VLANs Added

## **i**Note

You can also view the maximum number of VLANs allowed by the device, for example, 4094 in the figure above. The maximum number of VLANs allowed by a device varies with device models.

## **Cloud Platform Connection Status**

The **Cloud Platform** module shows whether the device is connected to Hik-Connect.

• If the cloud platform is connected, scan the QR code to add the device to Hik-Partner Pro app for remote management.



## Figure 3-5 View Cloud Platform Connection Status (Connected)

• If the cloud platform is disconnected, click **Refresh** to reconnect, or click **Diagnose** to find out the cause of the connection failure and go to the cloud platform configuration page as prompted for cloud platform configuration.



Figure 3-6 View Cloud Platform Connection Status (Disconnected)

## 3.2 Port Status

The **Overview** page provides a visual representation of the physical ports and shows the connection or power supply status of each port, making it easier for users to manage switch ports.

## **Port Panel**

The **Port Panel** module displays the connection and power supply status of each port. When you hover the mouse over a port, the port name, connection status, rate/duplex, flow control status, and packet receiving/sending rate are displayed. If the port is a PoE port, you can view the PoE power of the port.



Figure 3-7 View Port Panel

## **Port Details**

The **Port Details** module lists the status parameters of each port. You can also configure the port status, rate/duplex, and flow control of each port, and view the port name, connection status, and actual rate/duplex of each port.

Port Details					
Port Name	Connection Status	Port Up	Actual Rate/Duplex	Configured Rate/Duplex	Flow Control
Eth1	Connected		100 Mbps/Full-Duplex	Auto/Auto 🗸	
Eth2	Disconnected			Auto/Auto 🗸	
Eth3	Disconnected			Auto/Auto 🗸	
Eth4	Disconnected			Auto/Auto 🗸	
Eth5	Disconnected			Auto/Auto 🗸	
Eth6	Disconnected		**	Auto/Auto 🗸	

Figure 3-8 View Port Details

#### **Connection Status**

The connection status of a port: **Connected** or **Disconnected**.

## Port Up

Enable a port (port up) or disable a port (port down). By default, a port is in the up state.

## Actual Rate/Duplex

The actual rate and duplex mode of a port.

## **Configured Rate/Duplex**

Configure the rate and duplex mode of a port. The default value is **Auto/Auto**. You can select different combinations of rates and duplex modes as required.

#### **Flow Control**

Enable or disable flow control of a port. By default, flow control is enabled. Enabling flow control can effectively reduce the impact of large amounts of data on the network and maintain the stability of the network.

## **PoE Power**

You can view the whole device PoE power and peak PoE power in last seven days of the switch. Click in the upper right corner of the module to go to the **PoE Management** page for PoE function configuration.



Figure 3-9 View PoE Power

## ∎Note

PoE power display is only available for switches supporting PoE.

## **3.3 Network Status**

**Network Monitoring** allows you to view the same-LAN network device information, MAC addresses learned by ports, port statistics, and cable status.

## **Find Network Devices**

**Network Device Discovery** is a function that automatically detects transmission devices in the same LAN with the switch and displays information about these devices. Go to **Network Monitoring**  $\rightarrow$  **Network Device Discovery**, and you can view the device IP address, type, model, and serial No. of the network device(s) found. You can also select a device and click  $\otimes$  in the **Operation** column to go to the web configuration page of the device.

IP Address	Device Type	Device Model	Serial Number	Operation
10.13. (Local)	Switch	DS-3E1309P-EI/M	AY	۵
10.13.	Switch	DS-3E1326P-EI/M	FC	18
10.13.	Switch	DS-3E1528P-SI-24P4F	FF	\$
10.13.	Switch		CR	ŵ
10.13.	Switch		FE	٢
10.13.	Switch		F	13
10.13.	Switch	DS-3E1528P-S	AK	\$
10.13.	Switch		FE	\$

Figure 3-10 Find Network Devices

## Query Port MAC Address

You can query the MAC address(es) learned by each port. Go to **Network Monitoring**  $\rightarrow$  **MAC Address**, select the desired port from the **Port** drop-down list, and click **Search**. The MAC address(es) learned by the port and type(s) of the MAC address(es) are displayed in the list below.

MAC Address AA 88 CC DD EE FF Port All	~	Search Reset
MAC Address	Туре	Port
e0:ca:	Dynamic	Elh1
te:tb:	Dynamic	Eth1
04:03:	Dynamic	Eth1
bc5e:	Dynamic	Eth1
96./1:	Dynamic	Eth1
b8:3a:	Dynamic	Eth1

### Figure 3-11 Query Port MAC Addresses

## View Port Statistics

You can monitor and collect statistics on the transmitted data of device ports. Go to **Network Monitoring**  $\rightarrow$  **Port Statistics**, and you can view the current connection status of each port and the data transmitted by each port in the statistics list.

Port Statistics			1 2 3	<b>4</b> 5 6	7 8 G1		
				Connected			
Statistics Data	s] ∨						
Port Name	Sending Rate	Receiving Rate	Sent Packets	Received Packets	Inbound Error Packets	Peak Sending Rate	Peak Receiving Rate ①
Eth1	22.4Kbps	784.0Kbps	342,490	14,222,505	0	234.4Kbps	1.5Mbps
Eth2	-	-	-	-	-	-	-
Eth3			-	-	-		
Eth4	-	-	-	-	-	-	-
Eth5	-		-	-	-	**	-
Eth6	-	-	-	-	-	-	-
Eth7			-	-	-		-
Eth8	-	-	-	-	-	-	-
Ge1	-	-		-	-	-	-

## Figure 3-12 View Port Statistics

You can also perform the following operations:

- Clear port statistics: You can click **Clear All** to clear all the port statistics.
- Manually refresh port statistics: You can click o to manually refresh the port statistics.
- Auto refresh port statistics: You can set the interval for automatically refreshing port statistics: 30 seconds or 60 seconds.

## **Detect Cable Status**

**Cable Detection** is a function that detects the statuses of Ethernet port cables, for example, to check whether there is a short circuit or an open circuit in the receiving or sending direction of a cable, and if any, to locate the faulty cable. Go to **Network Monitoring**  $\rightarrow$  **Cable Detection**, select the desired port on the left port panel, and click **Detect** to view the detection result.

Cable Detection	Click on the	port panel to select a port, and click again to cancel selection. Only one port can be selected at a time.	Port(s) Selected Eth1
	1 2 3 4 5 6	7 8 GI	Dated
Detection Result			
Port Name	Cable Status	Cable Length(m)	Description
Eth1	Normal	1	Cable status is normal.

Figure 3-13 Detect Cable Status

## **Diagnose Network**

Ping is a function that helps to diagnose network connectivity and quickly locate network faults.
1. Click Network Monitoring → Ping.

* IPv4 Address	10.13.
	Ping

Figure 3-14 Ping

- 2. Enter a network server address in the IPv4 address field.
- 3. Click Ping.

# iNote

The network diagnosis result is displayed in the **Ping Result** area.

# **Chapter 4 Device Configuration**

## 4.1 Port Configuration

## 4.1.1 Configure Port Attributes

The basic attributes can influence the working status of a port. Set the parameters as required.

## Steps

## **1.** Go to **L2 Configuration** $\rightarrow$ **Port Attributes** .

Port Configuration		rts can be selected at a time.	Port(s) Selected + Add All 📋 Clear All		
					Eth1 ×
	💼 💼 💼		<b>.</b>		Port Up
	1 2 3	4 5 6 7 8	G1		Duplex Mode Half-Duplex Full-Duplex   Auto
					Rate (Mbps) Auto ~
					Flow Control
		Connected			Save
Port Status					
Port Name	Connection Status	Up/Down Status	Actual Rate/Duplex	Configured Rate/Duplex	Flow Control
Eth1	Connected	Up	100 Mbps/Full-Duplex	Auto/Auto	Enabled
Eth2	Disconnected	Up	-	Auto/Auto	Enabled
Eth3	Disconnected	Up	-	Auto/Auto	Enabled
Eth4	Disconnected	Up	-	Auto/Auto	Enabled
Eth5	Disconnected	Up	-	Auto/Auto	Enabled
Eth6	Disconnected	Up	-	Auto/Auto	Enabled
Elh7	Disconnected	Up		Auto/Auto	Enabled

#### **Figure 4-1 Configure Port Attributes**

2. Select the desired port(s) and configure the parameters.

## Port Up

Enable or disable the selected port(s). If a port is enabled, it is in the up state; if a port is disabled, it is in the down state. No data will be transmitted on a "down" port.

## **Duplex Mode**

The duplex mode of a port. The configurable duplex modes of ports include **Half-Duplex**, **Full-Duplex**, and **Auto**, which may vary with device models.

## Rate (Mbps)

The data transmission speed of a port of a port. The configurable rates of ports include **10M**, **100M**, **1000M**, and **Auto**, which may vary with device models.

## **Flow Control**

Enable or disable flow control of a port. Enabling flow control can prevent data loss in data transmission.

#### 3. Click Save.

**4. Optional:** View the port attributes in the port status list.

## 4.1.2 Configure Link Aggregation

Link aggregation is used to combine multiple physical links together to make a logical highbandwidth data path, which provides a stronger and faster network connection.

## Steps

- 1. Go to L2 Configuration → Link Aggregation .
- **2.** Click +Add .

Link Aggregation	Click on the port panel to select a port, and click again to cancel selection. Multiple ports can be selected at a time.	Aggregation	Select V
Aggregation Group 1 + Add			No more aggregation groups are allowed.
		Port(s) Selected	🗎 Clear All
	1 3 5 7 9 11 13 15 G1 G1-F		
			No port selected. Click on the left port panel to add one or more ports to
	2 4 6 8 10 12 14 16 G2		Save
	Some ports can only be added to specific aggregation groups. For example, ports 1 to 4 can only be added to aggregation group 1.		
	Connected Ø Appregation Group Number		
Aggregation Group Details 🛈			
Aggregation Group Number	Member Ports		
1	Ge1; Ge2		

## Figure 4-2 Configure Link Aggregation

**3.** Select at least two desired ports.

# **i**Note

- Only the selectable ports can be added to an aggregation group.
- 2 to 4 ports are allowed for each link aggregation group.
- Some ports can only be added to a specific aggregation group. Please refer to the actual situation.
- The rate, duplex mode, flow control, long-range mode, and VLAN configurations of ports in one aggregation group should be the same.
- 4. Set Aggregation Group Number.

# **i**Note

The number of aggregation groups allowed varies.

- 5. Click Save.
- 6. Optional: Edit the aggregation group.
  - 1) Click an existing aggregation group, for example, "Aggregation Group 1".
  - 2) Select the desired port(s) on the left port panel to add to the group, or deselect the desired port(s) on the right to delete from the group.
  - 3) Click Edit to save the modification.
- 7. Optional: Delete the aggregation group.
  - 1) Click an existing aggregation group, for example, "Aggregation Group 1".
  - 2) Click **Delete** on the right.
- **8. Optional:** View the member ports of each aggregation group in the list below.

## 4.1.3 Configure Port Isolation

Port isolation is a feature to add multiple ports to an isolation group so that ports in the same isolation group cannot communicate with each other. For example, by using port isolation function, you can achieve the goal of preventing PCs under different ports communicating with each other without configuring VLANs.

### Steps

### **1.** Go to Security $\rightarrow$ Port Isolation .

Port Isolation	Click on the port panel to select a port, and click again to cancel selection. Multiple ports can be selected at a time.	Port(s) Selected + Add All 📋 Clear All
	1 3 5 7 9 11 13 15 G1 GF 2 4 6 9 10 12 14 15 G2	Port laciation
Port Isolation Status		
Port Name	Isolation Status	
Eth1	Disabled	
Eth2	Disabled	
Eth3	Disabled	
Eth4	Disabled	
Eth5	Disabled	
Eth6	Disabled	
Eth7	Disabled	

### Figure 4-3 Configure Port Isolation

**2.** Select the desired port(s) on the port panel.

# iNote

You can also click + Add All or Clear All on the right to batch select or deselect all ports.

- 3. Enable or disable Port Isolation as required.
- 4. Click Save.
- 5. Optional: View the port isolation status of each port in the Port Isolation Status list.

## 4.1.4 Configure Port Mirroring

Port mirroring is a feature in network switches that allows administrators to monitor traffic on one port (mirrored port) and replicate this data to another port (mirroring port) for analysis. This replication occurs in real-time, allowing an administrator to view a "mirror" or exact duplicate of the traffic moving on the mirrored port.

## Steps

**1.** Go to **L2 Configuration**  $\rightarrow$  **Port Mirroring** .

Port Mirroring	Click on the port panel to select a port, and click again to cancel selection. Multiple port	rts can be selected at a time. Port Mirroring Configuration Ender Ender Mirrored Port Mirrored Port Ports) Selected + Add Al @ Clear Al  Mirrored Det Mirrored Det Mirrored Det Mirrored Det Egyess and Ingress V
Port Mirroring Status		
Port Name	Mirroring Status	Mirroring Direction
Eth1	Disabled	-
Eth2	Disabled	
Eth3	Disabled	-
Elh4	Disabled	-
Eth5	Disabled	-

#### Figure 4-4 Configure Port Mirroring

**2.** Select the desired port(s) on the port panel as the mirrored port(s), and set the parameters as required.

# ∎Note

You can also click + Add All or Clear All on the right to batch select or deselect all ports.

#### Enable

Enable or disable port mirroring of the selected port(s).

#### **Monitoring Port**

Only one port can be set as the monitoring port (mirroring port).

#### **Mirroring Direction**

#### Ingress

The data received by the source port will be under monitoring.

#### Egress

The data sent by the source port will be under monitoring.

#### **Egress and Ingress**

Both the data received by and the data sent from the source port will be under monitoring.

#### 3. Click Save.

# **i**Note

The latest configuration will overwrite the previous configuration.

4. Optional: View the mirroring status of each port in the Port Mirroring Status list.

## 4.1.5 Configure Long-Range Mode

After the long-range mode is enabled for a port, the transmission distance of the port can reach 300 meters at a rate of 10 Mbps.

### Steps

1. Go to L2 Configuration → Long-Range Mode .

Long-Range Mode Click on t	e port panel to select a port, and click again to cancel selection. Multiple ports can be selected at a time.
	Eth3 × Eth4 ×
	9 TI 10 TO 1/ 19 ZI ZO GI GI+
	Long-Range Mode
2 4 6 8	10 12 14 16 18 20 22 24 G2 Save
	Connected 🚯 Long-Range Mode Enabled
Port Long-Range Status	
Port Name	Long-Range Mode
Eth1	Enabled
Eth2	Enabled
Eth3	Disabled
Eth4	Disabled
Eth5	Disabled
Eth6	Disabled
Eth7	Displad

#### Figure 4-5 Configure Long-Range Mode

**2.** Select the desired port(s) on the port panel.

# iNote

You can also click + Add All or Clear All on the right to batch select or deselect all ports.

- 3. Enable or disable Long-Range Mode as required.
- 4. Click Save.
- 5. Optional: View the long-range status of each port in the Port Long-Range Status list.

## 4.1.6 Configure High-Priority Port

High-priority ports are identified by a red area on the device front panel. In the case of uplink congestion, the data of ports in this area is preferentially transmitted.

## Steps

**1.** Go to Service Quality  $\rightarrow$  High-Priority .

# **i**Note

High-priority port configuration is only supported when the switch has high-priority ports.



### Figure 4-6 Configure High-Priority Port

2. In High-Priority Port Mode, toggle on Enable to batch enable high-priority ports.

## iNote

The number of high-priority ports varies with different device models. Please refer to the actual situation.

All high-priority ports of the switch are enabled, with a higher data transmission priority than common ports.

## **4.2 PoE Configuration**

Click **PoE Management** in the left navigation pane.

PoE Management	Click on the port panel to select a port, and click again to cancel selection. Multiple por	ts can be selected at a time. POE Watchdog Configuration     © Enable     Port POE Configuration  Port(s) Selected     + Add Al      © Casr Al     Port(s)
2 4 4	6 10 12 14 16 G2	Pol.
Port PoE Status		
Port Name	PoE Status	Output Power (W)
Eth1	Enabled	84
Eth2	Enabled	-
Eth3	Enabled	
Eth4	Enabled	-
Eth5	Enabled	
Eth6	Enabled	-

Figure 4-7 Configure PoE

## **PoE Watchdog**

Enable PoE watchdog to auto-detect and restart IP cameras that do not respond.

## **Port PoE Configuration**

Select the desired port(s) on the port panel and enable **PoE** to supply power to the powered device(s) connected to the port(s).

You can click + Add All or Gear All to batch select or deselect all ports.

## **PoE Status**

View the PoE enabling status and output power of PoE ports in the Port PoE Status list.

## 4.3 VLAN Configuration

Virtual Local Area Networks (VLANs) separate an existing physical network into multiple logical networks. Thus, each VLAN creates its own broadcast domain. With VLANs configured on a switch, users in the same VLAN can communicate with each other, while users in different VLANs are isolated. In this way, different broadcast domains are isolated, enhancing network security.

## 4.3.1 Add VLAN

## Steps

- 1. Click VLAN Management in the left navigation pane.
- 2. In Global VLAN Configuration, click Edit.
- 3. Click Add.

VLAN			×
+ Add	🔟 Delete		
	VLAN ID		
	1		

## Figure 4-8 Add VLAN(s)

## **4.** Select an adding mode.

- Single: Only one VLAN is added at a time.
- Batch: Multiple VLANs are added in a batch.

# **i**Note

The maximum number of VLANs that can be added in a batch varies with device models. Please refer to the actual situation.

## 5. Set VLAN ID.

- Single: Enter a VLAN ID.
- Batch: Enter the start VLAN ID and end VLAN ID.

- The VLAN ID should be an integer between 1 and the maximum number of VLANs allowed by the device. For example, if the maximum number of VLANs allowed is 4094, the VLAN ID should be integer between 1 and 4094.
- The end VLAN ID should be greater than the start VLAN ID.
- The number of VLANs to be batch added should be no more than the maximum number of VLANs that can be added in a batch. For example, in the case that the maximum number of VLANs that can be added in a batch is 128, if you set the start VLAN ID to 1, the end ID cannot be greater than 128.

6. Click Save.

7. Optional: Select the desired VLAN(s) and click Delete to delete one or more VLANs.

## iNote

The default VLAN 1 cannot be deleted.

## 4.3.2 Configure Port VLAN

#### Steps

1. Select the desired port(s) on the port panel.

## iNote

- You can also click + Add All or Techer All on the right to batch select or deselect all ports.
- VLAN configuration is not allowed for ports in an aggregation group.
- 2. Configure the port VLAN type.

VLAN Management	Click on the port panel to select a port, and click again to cancel selection. Multiple ports can be selected at a time.	Global VLAN Configuration		
		VLAN	VLAN(s) Added: 150(Up to 4094 VLANs al Edit	
		Port VLAN C	onfiguration	
		Port(s) Selected	+ Add All 🛍 Clear All	
	2 0 0 0 0 0 1 2 3 4 61 62	Type PVID	No port selected. Click on the left port panel to add one or more ports to ACCESS × 1 ×	
			Save	
	ACCESS TRUNK OPVID			

**Figure 4-9 Configure Port VLAN** 

- ACCESS: An ACCESS port can have only one VLAN configured on the interface, and it can carry traffic for only one VLAN, usually the default VLAN (VLAN 1). Select Type as ACCESS, and set PVID.
- **TRUNK**: A TRUNK port can have two or more VLANs configured on the interface, and it can carry traffic for several VLANs simultaneously. Select **Type** as **TRUNK**, set **PVID**, and enter **Accessible VLANs**.

3. Click Save.

4. Optional: View the VLAN configuration information of each port in the port VLAN details list.

Port VLAN Details				
Port Name	Туре	PVID	Accessible VLANs	
Eth1	ACCESS	1	1	
Eth2	ACCESS	1	1	
Eth3	ACCESS	2	2	
Eth4	ACCESS	2	2	
Eth5	ACCESS	1	1	
Eth6	ACCESS	1	1	

## Figure 4-10 Port VLAN Details

## 4.4 STP Configuration

Spanning Tree Protocol (STP) is a layer-2 link management protocol that provides path redundancy and prevents loops in a network topology. STP uses a spanning-tree algorithm to select one switch as the root of a spanning tree, and determines the network topology by transmitting Bridge Protocol Data Unit (BPDU) packets between devices, helping to create a stable network.

### Steps

### **1.** Go to **L2 Configuration** $\rightarrow$ **STP** .



## Figure 4-11 Configure STP

- 2. In Global STP Configuration, enable STP.
- **3.** Set STP parameters as required.

Parameter	Description
Bridge Priority	<ul> <li>The value ranges from 0 to 61440, in an increment of 4096. The default value is 32768. Valid values are 0, 4096, 8192, 12288, 16384,, and 61440.</li> <li>The smaller the value, the higher the bridge priority of a switch. A switch with higher bridge priority is more likely to become the root bridge.</li> </ul>
Hello Time	The interval between each BPDU that is sent on a port, which is used for port link diagnosis. The value ranges from 1 to 10 seconds. The default value is 2 seconds.
Max. Aging Time	The maximum length of time interval that a STP-enabled switch port saves its configuration BPDU information. The value ranges from 6 to 40 seconds. The default value is 20 seconds. <b>Note</b> The Max. aging time must meet the following conditions: $2 \times$ (Hello Time + 1) $\leq$ Max. Aging Time $\leq 2 \times$ (Forwarding Delay – 1)
Forwarding Delay	The time interval that is spent in the listening and learning state when the topology changes. The value ranges from 4 to 30 seconds. The default value is 15 seconds.

### Table 4-1 STP Parameters

## 4. Click Save.

**5. Optional:** Click **Port Status** or **STP Status** to view the STP status of each port or global STP configuration.

# iNote

- The **Port Status** information includes the port name, path cost, port role, and port status.
- The **STP Status** information includes the bridge ID, root bridge ID, as well as hello time, Max. aging time, and forwarding delay of the root bridge.

# 4.5 LLDP Configuration

Link Layer Discovery Protocol (LLDP) is a layer 2 neighbor discovery protocol that allows devices to advertise device information to their directly connected peers/neighbors. With LLDP enabled, network devices can send LLDP data units (LLDPDUs) to inform other devices of their status. LLDP helps to draw network topology and detect improper configurations in a network.

## Steps

```
1. Go to L2 Configuration \rightarrow LLDP.
```

2. Enable or disable LLDP.

LLDP								LLDP Configuration
1 3 2 4	5 7 6 8	9 11 10 12	13 15 17 14 16 18 Connected	19 2 20 2	1 23 2 24	G1 G2	G1.F	Enable After LLDP is enabled, network devices can discover each other, facilitating network topology generation.
Neighbor Information								
Local Port Name			Peer MAC Address					Peer Port Name
Eth23			98:f1:					Ge1

## Figure 4-12 Configure LLDP

# iNote

After LLDP is enabled, network devices can discover each other, facilitating network topology drawing.

**3. Optional:** View the local port(s), MAC address(es) of peer device(s), and peer port(s) in the **Neighbor Information** list.

# **Chapter 5 System Management**

## **5.1 Network Configuration**

You can click *C* on the home page to check Hik-Connect connection status, or go to **System Management** → **Network Configuration** for network configuration, cloud platform configuration, and SADP configuration.

## **Network Configuration**

Basic Configuration	
DHCP	
* IPv4 Address	10.184.
* IPv4 Subnet Mask	255.255.
* Default IPv4 Gateway	10.184.
DNS Address Configuration	
* Preferred DNS Address	8.8.
* Alternate DNS Address	8.8.
	Save

#### Figure 5-1 Configure Network

Set the IPv4 address, IPv4 subnet mask, default IPv4 gateway, preferred DNS address, and alternate DNS address as required, or enable **DHCP** for automatic IP address assignment.

## **Cloud Platform Configuration**

If the device is displayed as offline when you add it to Hik-Partner Pro, you need to modify the DNS server address and configure Hik-Connect parameters.

Go to System Management  $\rightarrow$  Network Configuration  $\rightarrow$  Cloud Platform Configuration , and ensure that Hik-Connect is enabled. You can also check the operation code, and bind the device to your cloud account on Hik-Partner Pro app.

Enable		
* Server Address	litedev.hik-connect.com	Customize
Network Connection Status	Online Refresh	
* Operation Code	····· Ø	
	Save	
Account Binding Settings		
Account Status	Cloud account bound.	
	If required, unbind the cloud account on Hik-Partner Pro app.	
Account Binding Settings		
	Binding via QR Code	
	Scan the device QR code via Hik-Partner Pro app to bind your cloud account.	
	Device QR Code	
	Click to View	

Figure 5-2 Configure Cloud Platform

It takes several minutes for reconnecting to Hik-Connect service.

## **SADP Configuration**



Figure 5-3 Configure SADP

Enable SADP Server or SADP Agent as required.

- After SADP server is enabled, devices supporting SADP can be searched and information about the devices is displayed.
- After SADP agent is enabled, query requests are sent to the LAN periodically (every minute) for network topology drawing.

## **Remote Management**

Go to **System Management**  $\rightarrow$  **Network Configuration**  $\rightarrow$  **Remote Management** for remote device management via HTTP or HTTPS.

нтт	P	
	* Port Number	80
нтт	PS	
	HTTPS	
	* Port Number	443
	Redirect HTTP to HTTPS	
SSH		
	SSH	
		Save

Figure 5-4 Manage Device Remotely

• HTTP: Set Port Number and click Save.

# iNote

The HTTP port number should be an integer between 2000 and 65535, or 80 by default.

• HTTPS: Set the parameters as required and click Save.

## HTTPS

Enable or disable HTTPS.

## Port Number

If HTTPS is enabled, set the HTTPS port number.

iNote

The HTTPS port number should be an integer between 2000 to 65535, or 443 by default.

## **Redirect HTTP to HTTPS**

Enable or disable **Redirect HTTP to HTTPS**.

If **Redirect HTTP to HTTPS** is enabled, traffic accessed through port 80 will be automatically redirected to port 443.

• SSH: SSH is used for fault locating by technical support, and is not available to users.

## 5.2 Time Synchronization

### Steps

- 1. Go to System Management → Time Configuration .
- 2. Set Time Zone.

### 3. Set Time Sync Mode.

- Manually: Manually set the date and time, or check Sync with Computer Time to synchronize the system date and time.

System Date and Time	2024-06-21 07:12:45	
Time Zone	(UTC+00:00) Dublin, Edinburgh, Lisbon, London	/
Time Sync Mode	Manually O With NTP Server O With Hik-Connect Server	
Set Date and Time	© 2024-06-21 07:10:48	Sync with Computer Time
	Save	
Time Sync Mode Set Date and Time	Manually With NTP Server With Hik-Connect Server     2024-06-21 07:10:48  Save	Sync with Computer T

Figure 5-5 Configure Time Manually

- With NTP Server: Enter the NTP server address, port number, and time sync interval for automatic time synchronization.

System Date and Time	2024-06-21 07:11:08		
Time Zone	(UTC+00:00) Dublin, Edinburgh, Lisbon, London		
Time Sync Mode	Manually  • With NTP Server  With Hik-Connect Server		
* Server Address	time.windows.com		
* Port Number	123		
* Time Sync Interval	60	min	
	Save		

#### Figure 5-6 Configure Time with NTP Server

- With Hik-Connect Server: Use the Hik-Connect server for automatic time calibration and synchronization. You do not need to configure any parameters.



Figure 5-7 Configure Time with Hik-Connect Server

4. Click Save.

## **5.3 System Maintenance**

Go to **System Management** → **System Maintenance** to restart, upgrade, back up, or reset the device.

## **Restart Device**

Restart Device Restart	t

#### **Figure 5-8 Restart**

In **Restart**, click **Restart** to remotely restart the switch.

## iNote

You will enter the login page automatically after the device is restarted.

#### **Upgrade Device**

Upload an upgrade file to upgrade the switch.

Upgrade			
- p.g			
The upgrade process takes 1 to 10	minutes. Do not power off the device. After the upgrade, the dev	rice will automat	ically restart.
Current Version	V3.0.5 build 240620		
Upgrade File			Upgrade

Figure 5-9 Upgrade

- 1. In **Upgrade**, click 🛅 to select an upgrade patch file.
- 2. Click Upgrade.

- If upgrading failed or the device cannot function, please contact our technical support engineers.
- The device will restart automatically to enter the login page after upgrade is completed.

## **Back Up Device**

Export the configuration file for local backup.

Backup			
	Export Device Parameters	Export	
			-

Figure 5-10 Back Up

- 1. In **Backup**, click **Export** to export the configuration file containing device parameters.
- 2. Set a password and confirm the password for file encryption.

# **i**Note

Remember the password as it is required when importing device parameters.

3. Click **OK**.

## **Reset Device**

Reset	
Restore to Defaults	Restore
	Restore parameters except network configuration and user configuration parameters to factory defaults
Restore All to Defaults	Restore All
	Restore all parameters to factory defaults.
Import Device Parameters	
Import Device Parameters	Import

#### Figure 5-11 Reset

- **Restore to Defaults**: Click **Restore** to restore parameters except network configuration and user configuration parameters to factory defaults.
- Restore All to Defaults: Click Restore All to restore all parameters to factory defaults.

# ∎Note

- The device parameters cannot be recovered once being restored to factory defaults.
- The device will restart automatically after being restored to factory defaults.
- **Import Device Parameters**: Click b to select the configuration file containing device parameters, click **Import**, enter the password for file decryption, and then click **OK** to import the configuration file for fast device configuration.

## **i**Note

The device will restart automatically to enter the login page after the configuration file is imported.

# 5.4 Log Management

System operation logs can be searched and exported for backup.

## Steps

## **1.** Go to **System Management → System Maintenance → Log Management** .

Major Type Subtype		Date and Time				
All	<ul> <li>✓</li> </ul>		· 2000-01-01 00:00:00 -	2024-06-21 23:59:59		Search Export
No.	Operation Time	Major Type	Subtype	Remote Operator	Remote Host IP Address	Description
01	2024-06-21 16:53:55	Operation	Remote User Login	admin	10.184.	(HTTP)
02	2024-06-21 15:21:47	Operation	Remote User Login	admin	10.184.	(HTTP)
03	2024-06-21 14:52:21	Operation	Remote User Login	admin	10.13.	(HTTP)
04	2024-06-21 14:51:20	Operation	Remote User Login	admin	10.9.	(HTTP)
05	2024-06-21 14:45:58	Operation	Remote User Login	admin	10.9	(HTTP)
06	2024-06-21 14:45:08	Operation	Remote User Login	admin	10.9.	(HTTP)
07	2024-06-21 14:42:22	Operation	Remote User Login	admin	10.9.	(HTTP)
08	2024-06-21 06:36:52	Operation	Remote User Login	admin	10.13.	(HTTP)
09	2024-06-21 06:36:24	Event	Port Link Up	None	None	(Eth2)
10	2024-06-21 06:36:19	Event	Port Link Down	None	None	(Eth1)

## Figure 5-12 Manage Logs

- 2. Set search conditions, including Major Type, Subtype, and Date and Time.
- 3. Click Search.

## **i**Note

A maximum of 1024 search results can be displayed. Please narrow down the search scope if there are too many search results.

4. Optional: Click Export to export all the search results.

## **i**Note

Logs can be exported as a TXT file. A prompt will pop up after logs are exported successfully.

