Smart Managed Solar Industrial PoE Switch

Web User Manual

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Preface

Applicable Models

This manual is applicable to the smart managed solar industrial PoE switch.

About Defaults

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

Note

- The default user name **admin** needs to be activated for first-time login.
- The default IP address of the switch is dynamically assigned. If a DHCP-assigned IP address fails to be obtained, the default IP address of the switch is 192.168.1.64.
- 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.
Note	Provides additional information to emphasize or supplement important points of the main text.

Contents

Chapter 1 Introduction

The smart managed solar industrial PoE switch supports management via web, supporting functions such as activation and login, device overview, network configuration, device configuration, system maintenance, and power saving management.

Note

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

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**.

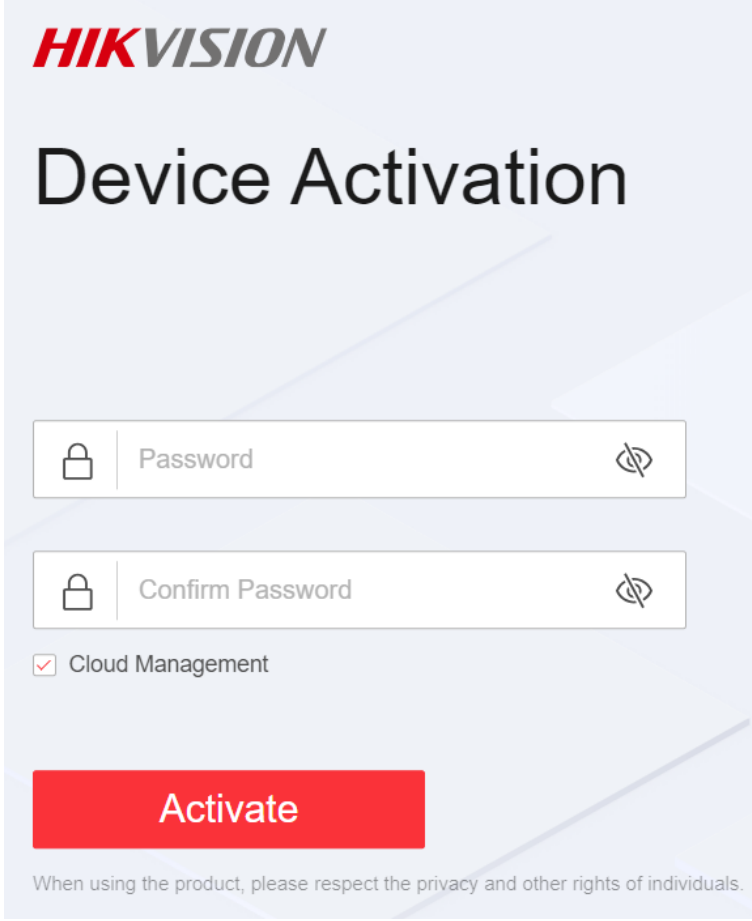


Figure 2-1 Activate Device

Note

- 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.

Note

- 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 contain only 'hik', 'hkws', or 'hikvision' (case insensitive).
- The password cannot be a common risky password.

3. **Optional:** Check **Cloud Management**.

   The Hik-Connect service is enabled.

4. Click **Activate**.

   The network configuration page is displayed.

5. **Optional:** Modify the network configurations.

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

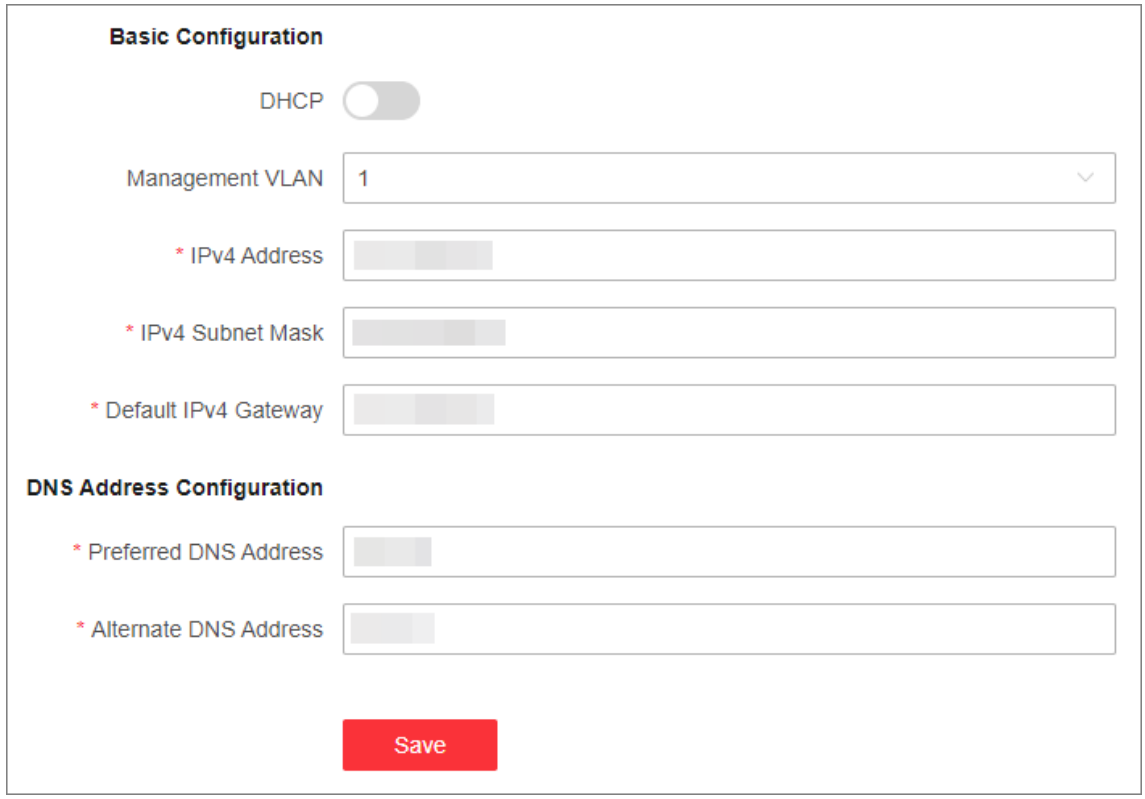


Figure 2-2 Modify Network Parameters

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.

Note

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.

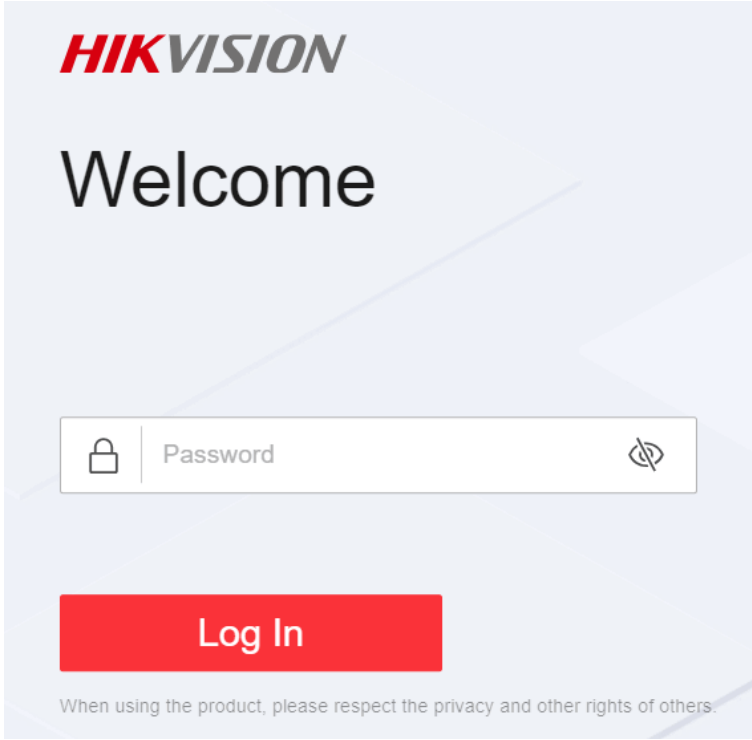


Figure 2-3 Log In

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 hardware information of the switch in the lower right corner of the **Overview** page. For some device models, you can also view CPU usage and memory usage.

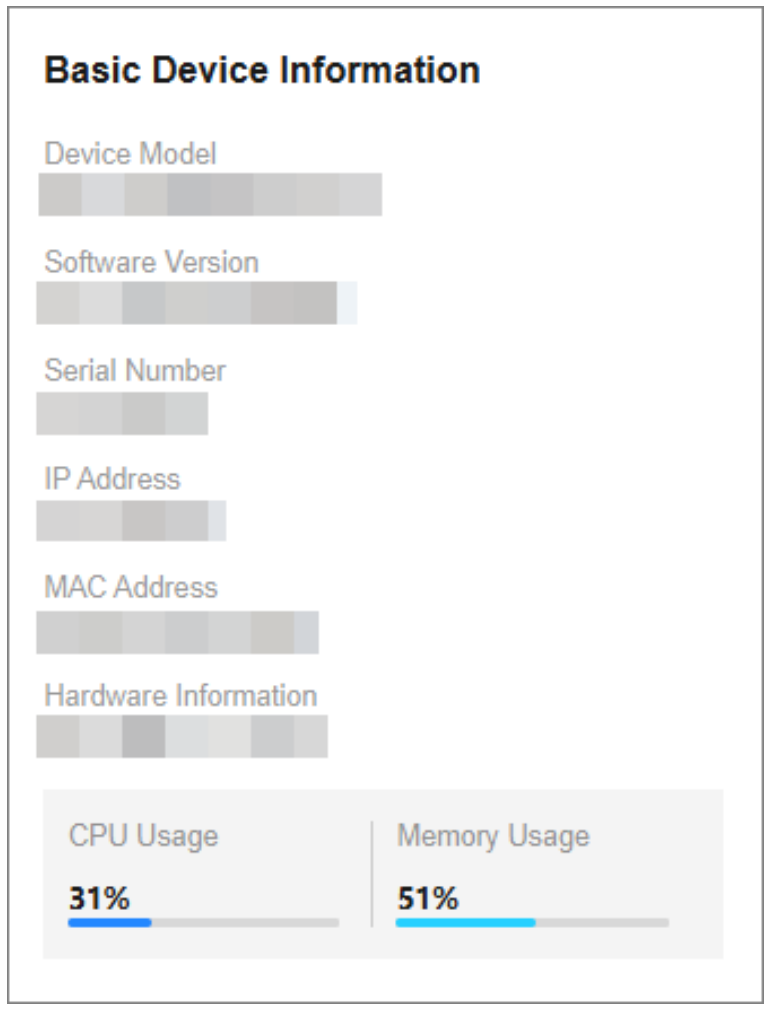


Figure 3-1 View Basic Device Information

Device Name

You can view the current device name or click next to it to customize the device name on the **Overview** page. The default device name is the device model.

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.

Figure 3-3 View System Uptime

VLANs Added

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

Figure 3-4 View Number of VLANs Added

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.

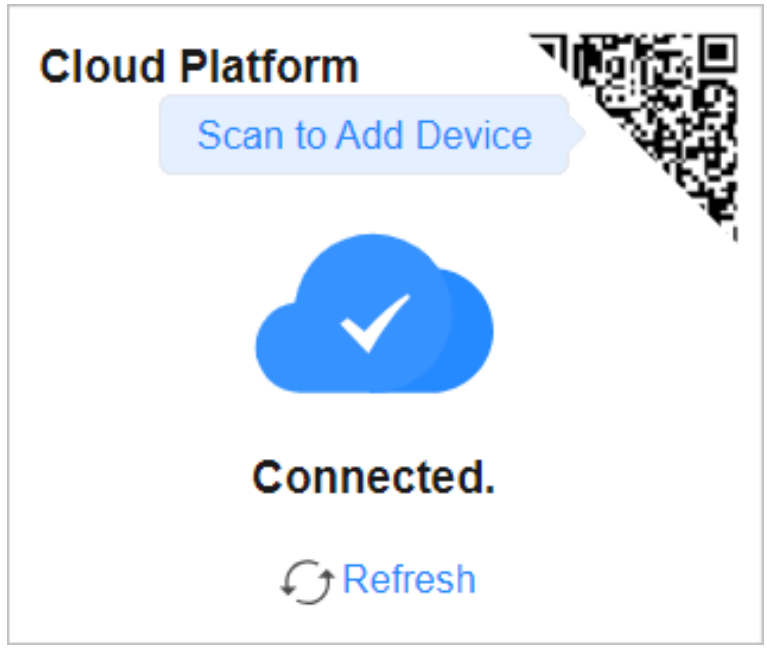


Figure 3-5 View Cloud Platform Connection Status (Connected)

- 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.

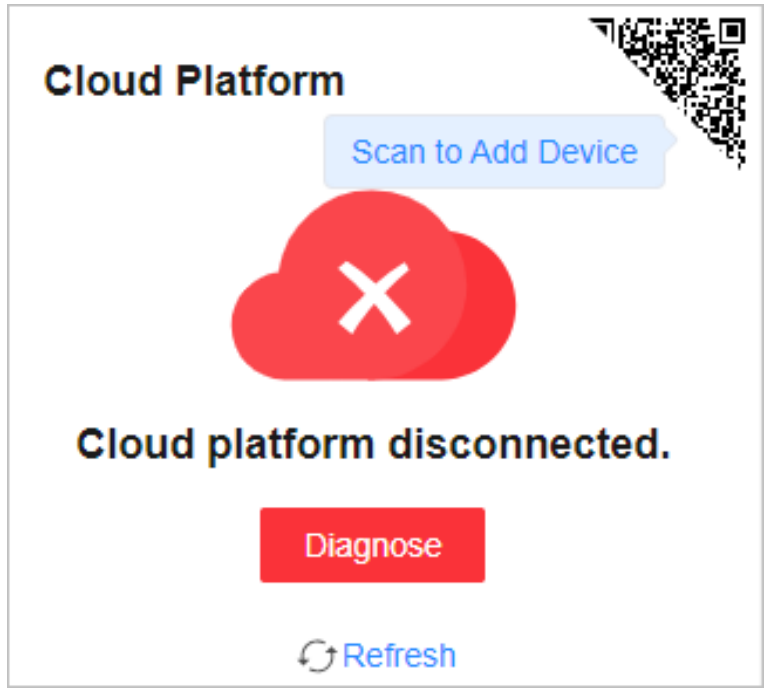


Figure 3-6 View Cloud Platform Connection Status (Disconnected)

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.

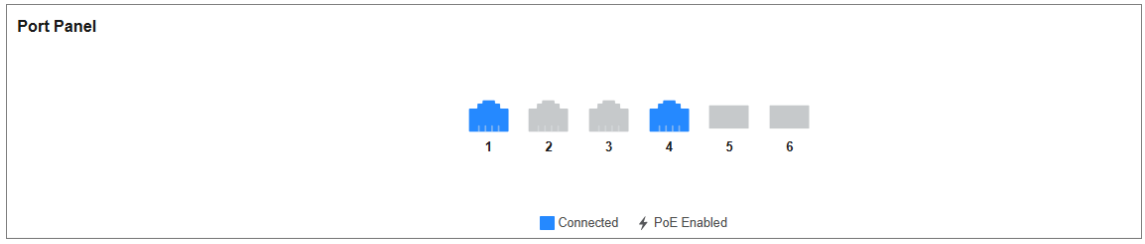


Figure 3-7 View Port Panel

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.

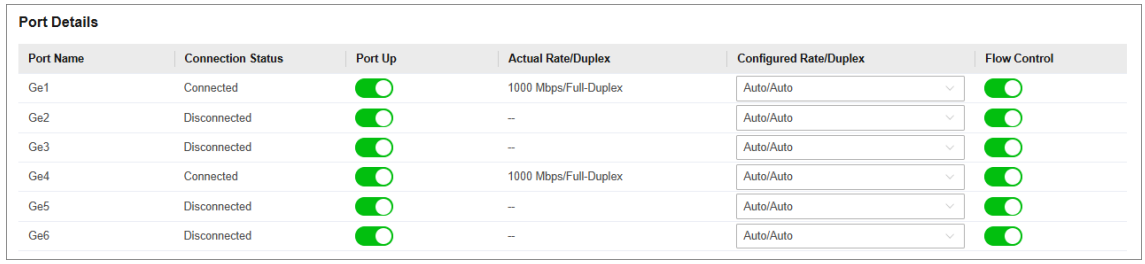


Figure 3-8 View Port Details

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 → 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 ⚙ in the **Operation** column to go to the web configuration page of the device.

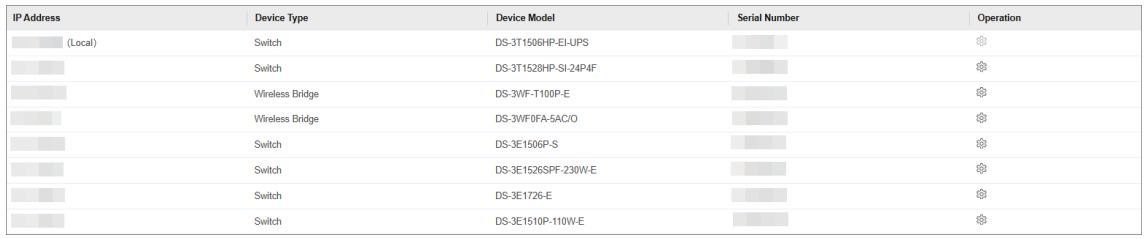


Figure 3-10 Find Network Devices

Query Port MAC Address

You can query the MAC address(es) learned by each port. Go to **Network Monitoring → 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.

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 → Port Statistics** , and you can view the current connection status of each port and the data transmitted by each port in the statistics list.

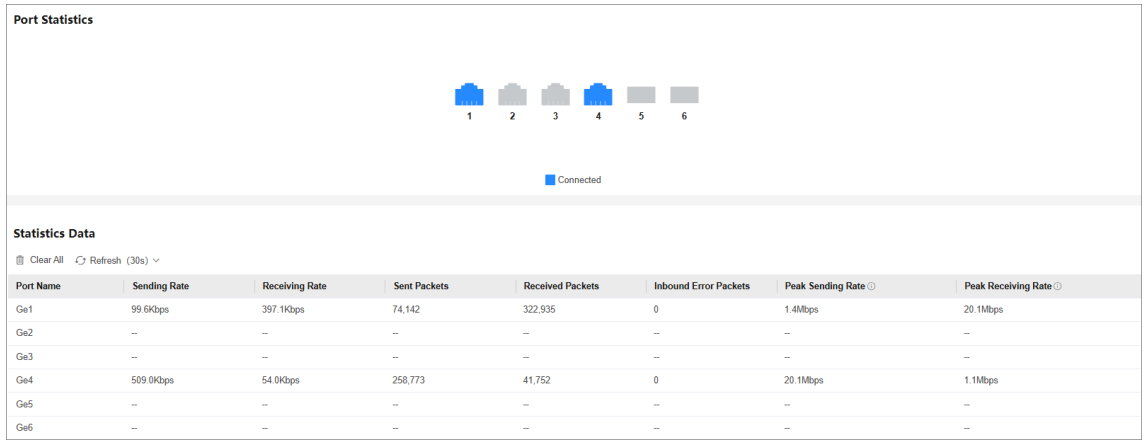


Figure 3-12 View Port Statistics

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 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 → Cable Detection** , select the desired port on the left port panel, and click **Detect** to view the detection result.

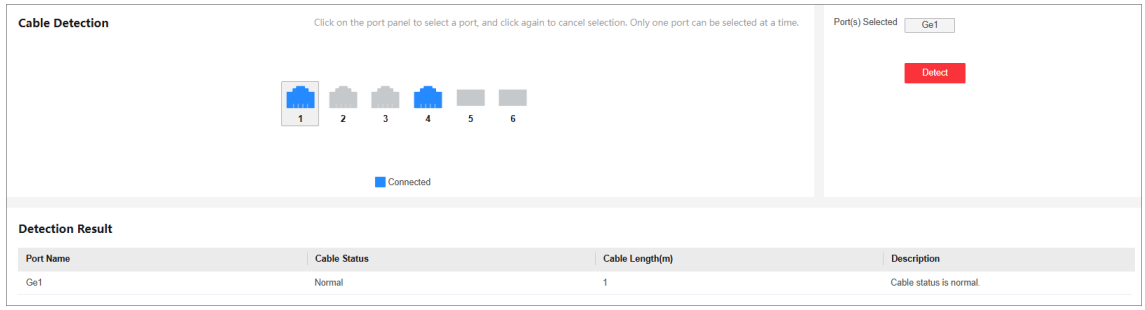


Figure 3-13 Detect Cable Status

Diagnose Optical Module

Digital Diagnostic Monitoring (DDM) is a function used to monitor real-time parameters of an optical module, such as operating temperature, operating voltage, operating current, and Rx and Tx optical power. In addition, the DDM diagnosis result shows an optical module's converter type, interface type, central Tx wavelength, maximum transmission distance, and brand.

1. Go to **Network Monitoring → DDM** .

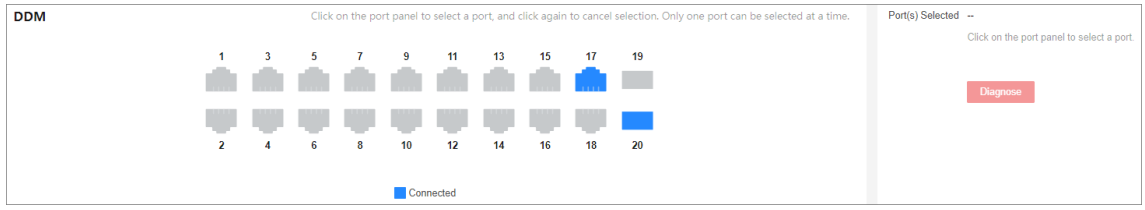


Figure 3-14 Configure Optical Module Diagnosis

2. Select an optical port with an optical module plugged into on the port panel.
3. Click **Diagnose**.

Note

After diagnosis is complete, you can view the DDM diagnosis result in the **Diagnosis Information** area.

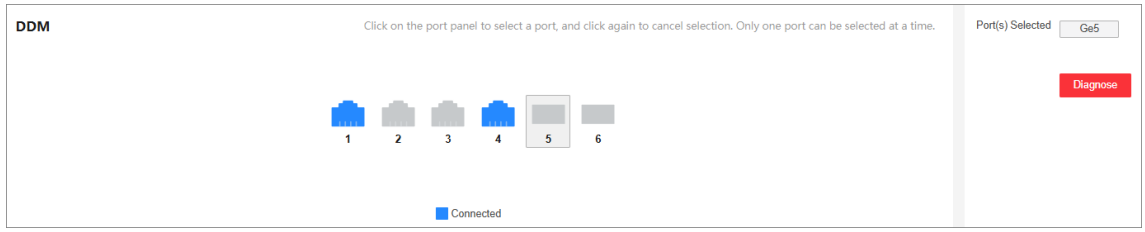


Figure 3-15 View DDM Diagnosis Result

4. Click ⓘ next to **Temperature**, **Voltage**, **Current**, **Rx Power**, or **Tx Power** to check whether the values of these parameters are within the normal range.

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.

Steps

1. Go to **L2 Configuration → Port Attributes** .

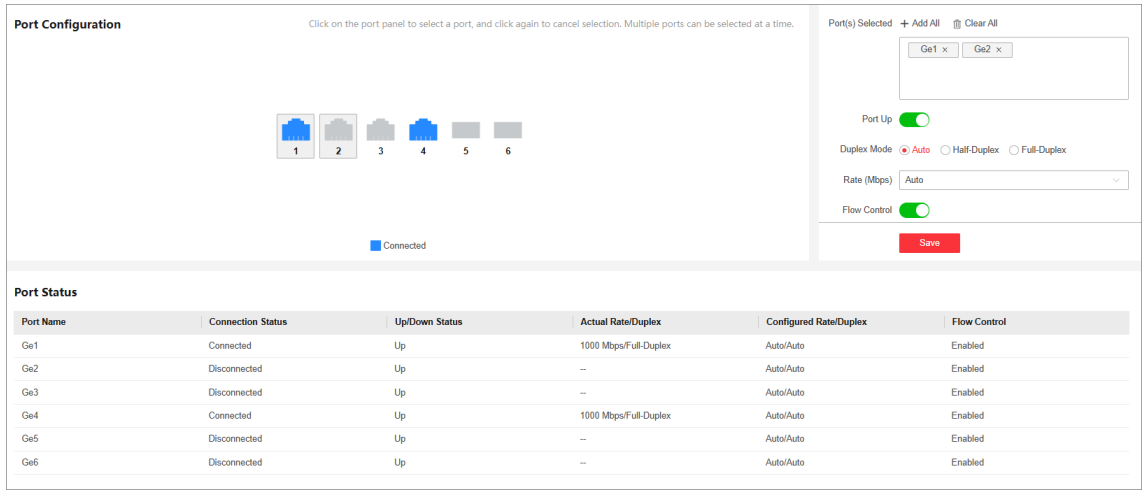


Figure 4-1 Configure Port Attributes

2. Select the desired 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.

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 high-bandwidth data path, which provides a stronger and faster network connection.

Steps

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

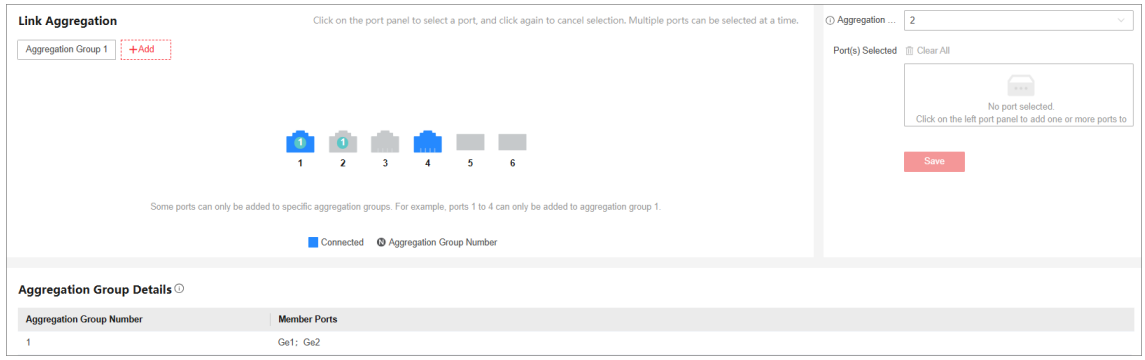


Figure 4-2 Configure Link Aggregation

3. Select at least two desired ports.

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. Click ⓘ next to **Aggregation Port Number** to get detailed tips.
- 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**.

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 → Port Isolation** .

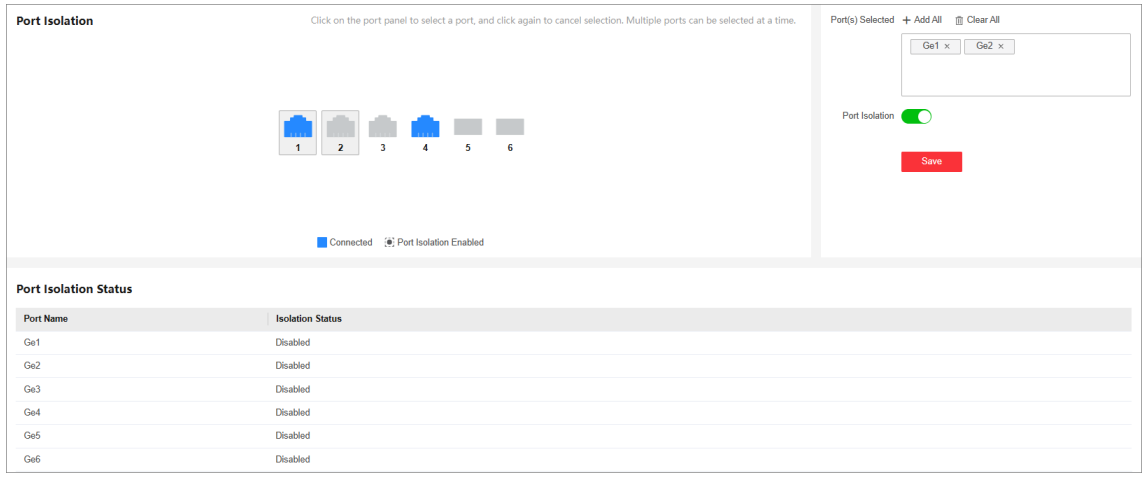


Figure 4-3 Configure Port Isolation

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

Note

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 → Port Mirroring** .

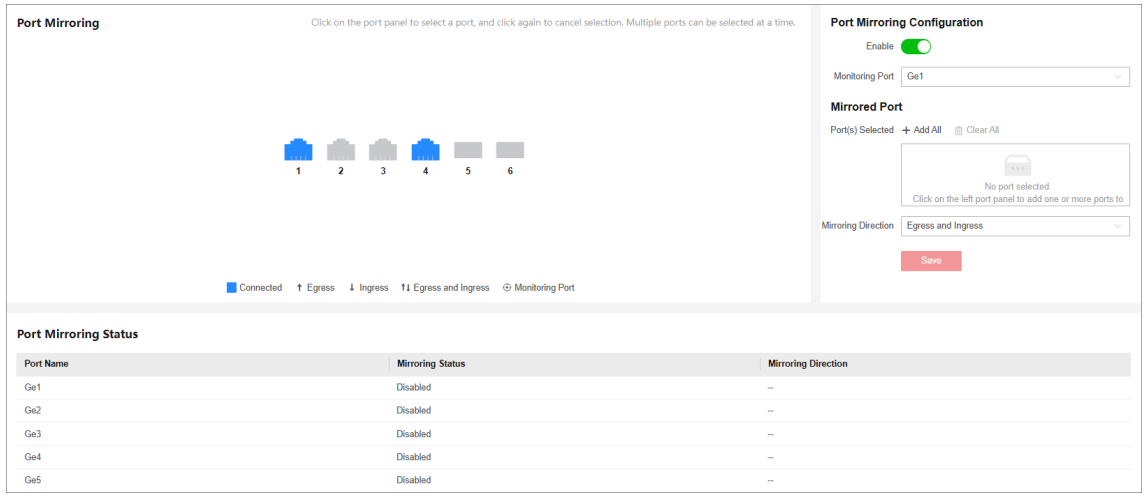


Figure 4-4 Configure Port Mirroring

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**.

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

The transmission distance of a port with long-range mode enabled can reach 300 meters at a rate of 10 Mbps.

Steps

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

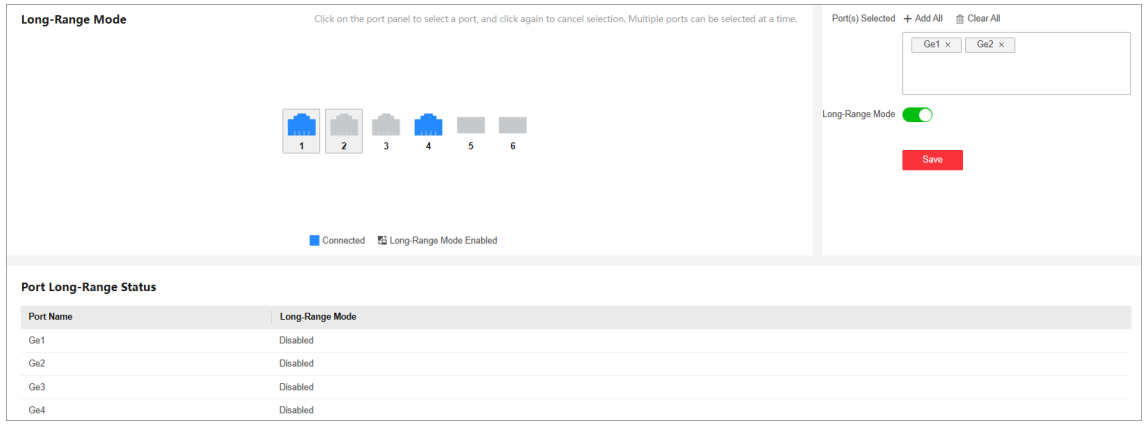


Figure 4-5 Configure Long-Range Mode

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

Note

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.

4.2 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.

4.2.1 Add VLAN

Steps

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

Figure 4-6 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.

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.

Note

- 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.

Note

The default VLAN 1 cannot be deleted.

4.2.2 Configure Port VLAN

Steps

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

Note

- You can also click + Add All or Clear 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.

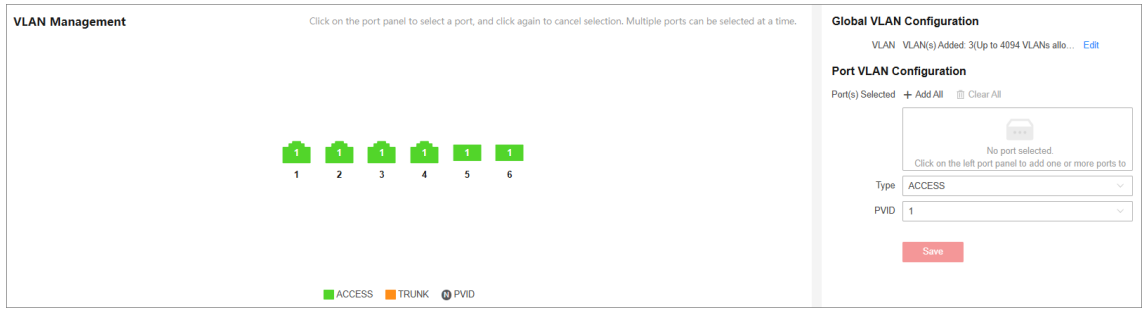


Figure 4-7 Configure Port VLAN

- **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.

Figure 4-8 Port VLAN Details

4.3 PoE Configuration

Note

Only PoE switches support PoE configuration.

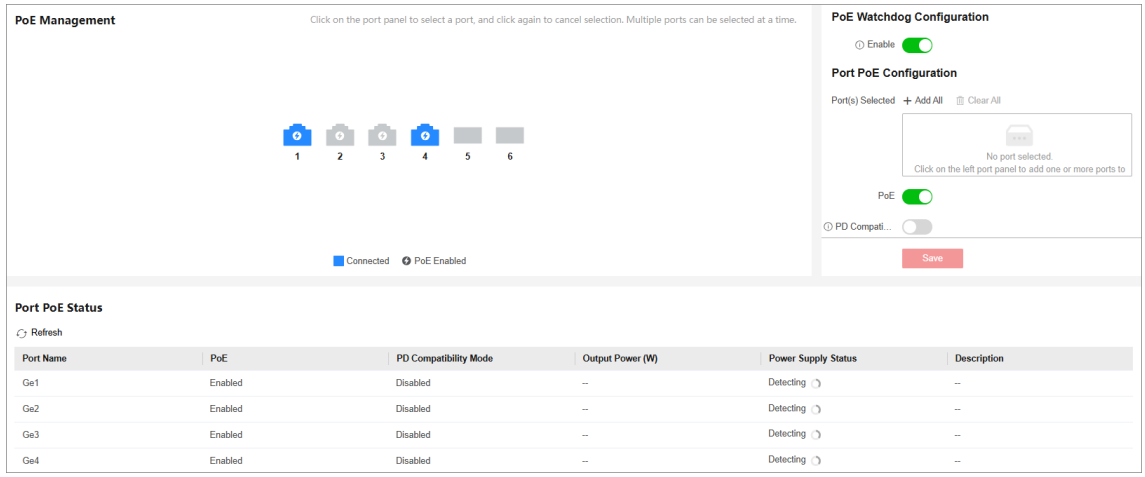


Figure 4-9 Configure PoE

PoE Watchdog Configuration

Click **PoE Management** in the left navigation pane, and enable PoE watchdog to auto-detect and restart IP cameras that do not respond.

Port PoE Configuration

Enable PoE to provide power supply for powered devices (PDs).

1. Click **PoE Management** in the left navigation pane.
2. Select the desired port(s) on the port panel.

Note

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

3. Enable **PoE** to supply power to the PD(s) connected to the port(s)
4. Enable **PD Compatibility Mode** as required.

Note

Enabling this mode can improve compatibility for unsupported IPC(s) and AP(s), but may decrease PD detection sensitivity of PoE ports. You can enable this mode if some PD(s) fail to be powered by the switch so that PD(s) not compliant with normal PoE standards can also be detected by PoE port(s).

5. Click **Save**.

PoE Status

View the PoE enabling status, PD compatibility mode enabling status, output power, power supply status, etc. of PoE ports(s) in the **Port PoE Status** list.

4.4 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 → LLDP** .
2. Enable or disable LLDP.

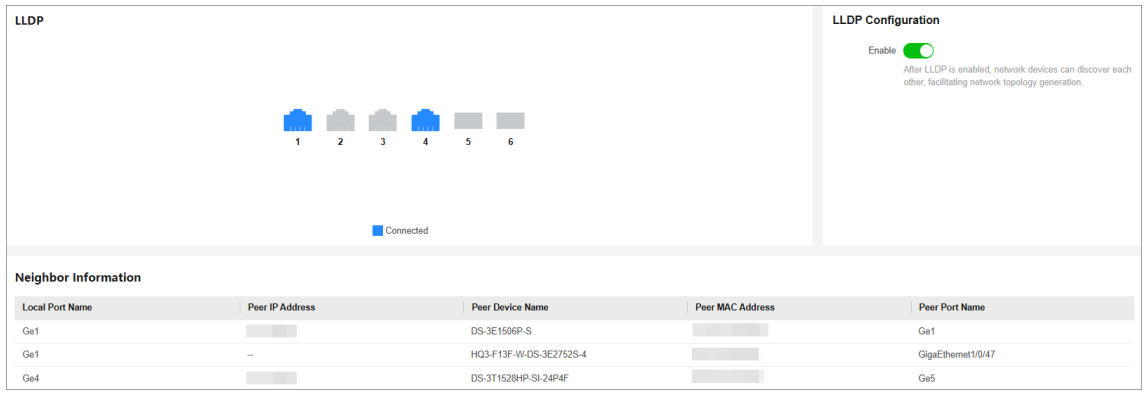


Figure 4-10 Configure LLDP

Note

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

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

4.5 Loop Prevention Configuration

4.5.1 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 → STP** .

Figure 4-11 Configure STP

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

Table 4-1 STP Parameters

Parameter	Description
Bridge Priority	• 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. • 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.
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. **Note** The Max. aging time must meet the following conditions: 2 × (Hello Time + 1) ≤ Max. Aging Time ≤ 2 × (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.

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

Note

- 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.

4.5.2 ERPS Configuration

By selectively blocking redundant links, Ethernet Ring Protection Switching (ERPS) is a protocol used to prevent broadcast storms and implement fast switchover on a network where loops occur, which effectively ensures uninterrupted communication and network reliability.

Steps

1. Go to **L2 Configuration → ERPS** .

Figure 4-12 Configure ERPS

2. In **Global ERPS Configuration**, enable ERPS.

   ERPS and STP cannot be configured simultaneously.
3. In **Port ERPS Configuration**, set **Port 1**, **Port 2**, and their roles respectively.

Note

By default, **Port 1** and **Port 2** are the two ports with the largest port numbers on the device and their roles are both **Normal**.

Owner

The primary node in an ERPS ring. An owner port is responsible for blocking and unblocking traffic over the Ring Protection Link (RPL) to prevent loops. An ERPS ring has only one owner port.

Neighbor

The neighbor node in an ERPS ring. A neighbor port is directly connected to an owner port. Both the owner port and neighbor port(s) are blocked in normal situations to prevent loops.

Normal

Normal ports refer to ring ports other than the owner and neighbor ports. A normal port monitors the status of a directly-connected ERPS link and sends RAPS PDUs to notify the other ports of its link status changes.

Note

- Port 1 and port 2 should be different ports.
- ERPS configuration is not supported by member ports in an aggregation group.
- The roles of port 1 and port 2 cannot all be owner or neighbor, or cannot be owner and neighbor simultaneously.

4. Set other parameters as required.

Table 4-2 ERPS Parameters

Parameter	Description
Control VLAN	A control VLAN is configured in an ERPS ring to transmit RAPS PDUs. After a port is added to an ERPS ring configured with a control VLAN, the port is automatically added to this control VLAN. Different ERPS rings must use different control VLANs. The value ranges from 2 to 4094, and the default value is 4094.
Packet Level	Level of RAPS PDUs. The value ranges from 0 to 7, and the default value is 7. **Note** A node does not process RAPS PDUs with a higher level than its own.
Guard Timer	This timer is started after the port detects that a faulty link is recovered to prevent unnecessary network flapping caused by message residue due to network forwarding delay. The value ranges from 10 to 2000 milliseconds, and the default value is 500 milliseconds.
Hold-off Timer	This timer is started after the port detects a faulty link. If a fault persists after the Hold-off timer expires, this fault will be reported. The Hold-off timer affects fault reporting speed and link switchover performance when a fault occurs. The value ranges from 0 to 10000 milliseconds, and the default value is 0 milliseconds.
WTR Timer	If the RPL owner port is blocked due to a link fault, the port may not be Up immediately after the link is recovered. Blocking the RPL owner port may cause network flapping. To prevent this problem, the node where the RPL owner port is located starts the Wait to

Parameter	Description
	Restore (WTR) timer after receiving RAPS PDUs to avoid frequent network flapping caused by intermittent faulty links on the ring network. The value ranges from 1 to 12 minutes, and the default value is 5 minutes.

5. Click **Save**.
6. **Optional:** View the ERPS node status and port status in the **ERPS Status** list.

4.6 Power Saving Configuration

For the solar industrial PoE switch powered by a solar power system (solar panel + battery), you can view the battery information and configure power saving plans via web browser.

4.6.1 View Battery Information

Click **Power Saving Management → Battery** to view or export the basic and real-time information of the battery that powers the switch.

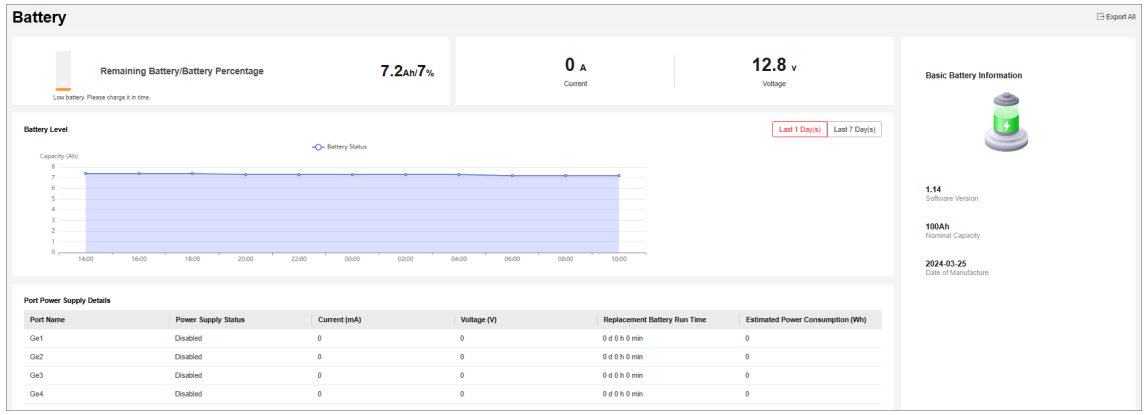


Figure 4-13 View Battery Information

- The basic information includes the battery's software version, nominal capacity, and date of manufacture.
- The real-time information includes the remaining battery/battery percentage (that is, relative state of charge (RSOC)), current and voltage, and the battery level over the last 24 hours or 7 days, as well as the power supply details of each PoE port, such as the power supply status, elapsed duration of power supply, and estimated power consumption.
- Alternatively, you can click **Export All** in the upper right corner of the **Battery** page to export the latest battery information in a "Battery_Information.txt" file. The exported information includes basic information such as the number of battery charge-discharge cycles, protection status,

number of battery strings, and number of NTCs, as well as real-time information like the battery capacity and power consumption of each PoE port over a certain period of time.

Note

- If battery information fails to be obtained, please check whether the battery is properly installed.
- The real-time information is updated every 60 seconds, while the basic information is updated once when the device starts.

4.6.2 Configure Power Saving Plan

Set basic or advanced power-saving rules, or enable low power mode for your power saving plan.

Before You Start

- The battery is properly installed.
- Set system date and time in **System Management → Time Configuration** first for basic power-saving rules to take effect.

Steps

1. Click **Power Saving Management → Power Saving Plan** .

   Note

   By default, no power saving plan is configured.

2. Configure basic mode, advanced mode, or low power mode for your power saving plan as required.
   - **Basic Mode**: In basic mode, you can add basic power-saving rules for cutting off PoE power supply of the selected ports within specified time periods. For example, you can customize daytime and nighttime power-saving rules.

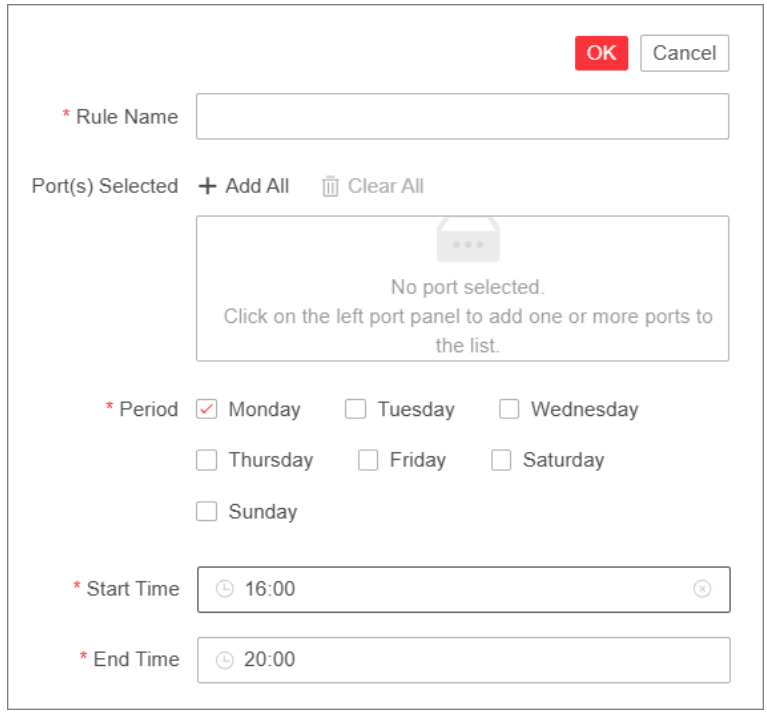


Figure 4-14 Configure Basic Power-Saving Rule

a. Click **Add** to add a basic power-saving rule.
b. Set **Rule Name**, for example, ***Daytime***.
c. Select the desired PoE port(s) on the port panel.

Note

- You can also click + Add All or Clear All to batch select or deselect all PoE ports.
- You can also choose not to select any PoE ports. After the configuration is saved, the rule will not take effect.

d. Set **Period** to specify on which day(s) of the week the newly added rule will take effect.
e. Set **Start Time** and **End Time** to specify the time period during the day when the newly added rule will take effect.

Note

If you need to specify a time period during one day, make sure that the start time is earlier than the end time. When the start time is later than the end time, it indicates a time span across days. For example, setting **Start Time** as 22:00 and **End Time** as 05:00 on Monday means that the rule will take effect from 10:00 p.m. on Monday to 05:00 a.m. on Tuesday.

f. Click **OK**.
g. Repeat the above steps to add multiple basic power-saving rules.

Note

Up to 4 basic power-saving rules can be configured, and the rule configurations will still persist after the device is powered off and restarted.

h. Select a rule, and click **Edit** or **Delete** to edit or delete the rule.

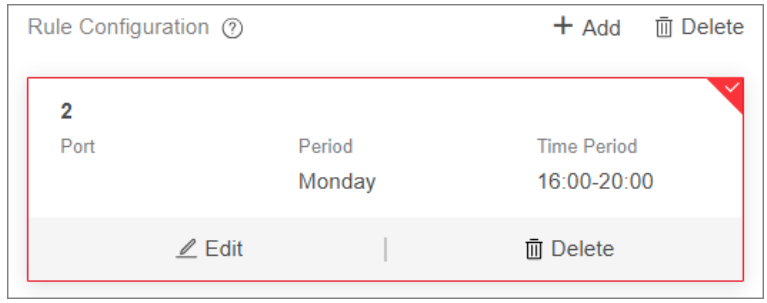


Figure 4-15 Edit/Delete Basic Power-Saving Rule

Note

If you no longer want this rule to be effective for the selected PoE port(s), you can edit the rule and deselect the selected ports. After the modification is saved, the rule will still exist and will not be deleted, but it will no longer take effect. When you want this rule to be effective for the specified port(s) again, you can edit the rule and select the desired port(s).

- **Advanced Mode**: In advanced mode, you can set low-priority ports, high-priority ports, and their respective battery thresholds so that PoE power supply of the ports can be cut off in the order of port priority when specific conditions are met.

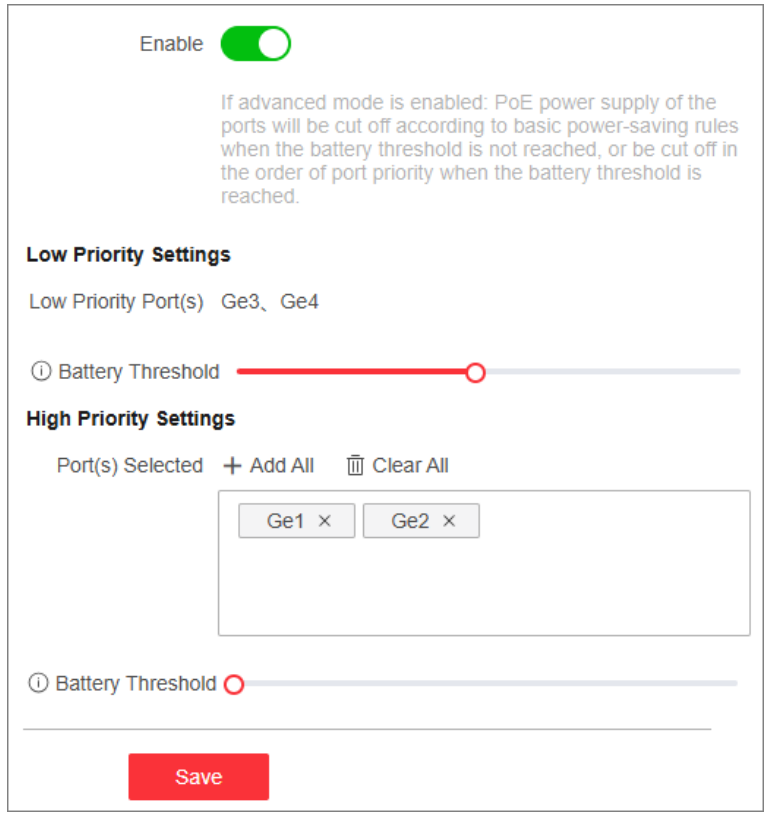


Figure 4-16 Configure Advanced Power Saving Mode

a. Toggle on **Enable** to enable advanced power saving mode.
b. Select the desired PoE port(s) on the port panel as high-priority port(s).

Note

PoE port(s) that are not selected will be automatically classified as low-priority port(s).

c. Set **Battery Threshold** for low-priority ports and high-priority ports respectively.

Note

The battery threshold for low-priority ports ranges from 11% to 30%, with a default value of 20%, and the power threshold for high-priority ports ranges from 5% to 10%, with a default value of 5%.

d. Click **Save**.

Note

- When the battery percentage is higher than both battery thresholds, PoE power supply of the ports will be cut off within specified time periods according to basic power-saving

rules. If no basic power-saving rule has been configured, the PoE ports will supply power normally.

- When the battery percentage is lower than or equal to the battery threshold for low-priority ports but higher than that for high-priority ports, PoE power supply of low-priority ports will be cut off.
- When the battery percentage is lower than or equal to the battery threshold for high-priority ports, PoE power supply of high-priority ports will be cut off.
- When the battery percentage recovers to be higher than the battery threshold for high-priority ports plus 5%, the high-priority ports will resume PoE power supply.
- When the battery percentage recovers to be higher than the battery threshold for low-priority ports plus 5%, the low-priority ports will resume PoE power supply.

- **Low Power Mode**: Toggle on **Enable** to enable low power mode. With low power mode enabled, the device will automatically enter a low-power state when ports are idle (no data transmission) and all indicators except the PWR indicator will be unlit, reducing power consumption.

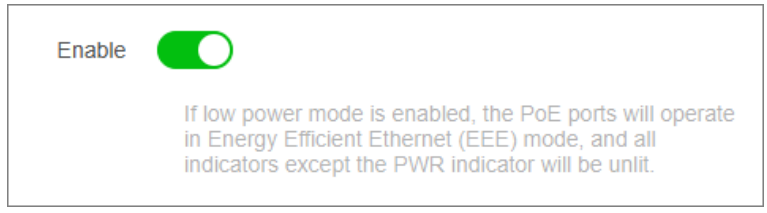


Figure 4-17 Configure Low Power Mode

3. **Optional:** View the power saving configurations of each PoE port in the **Port Power Saving Details** list.

Chapter 5 System Management

5.1 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.

Figure 5-1 Configure Time Manually

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

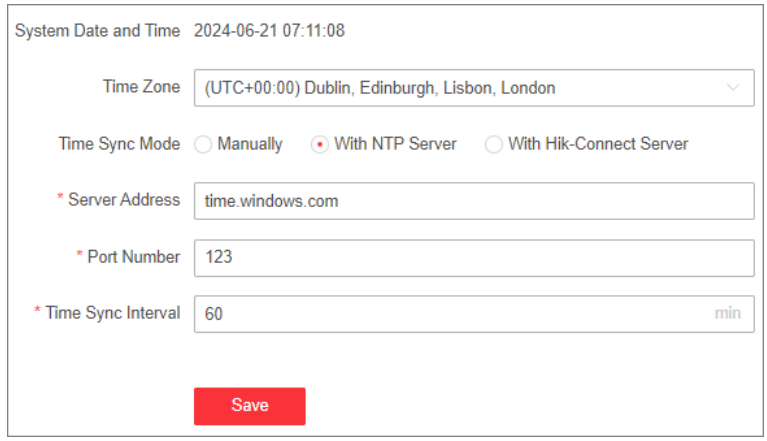


Figure 5-2 Configure Time with NTP Server

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

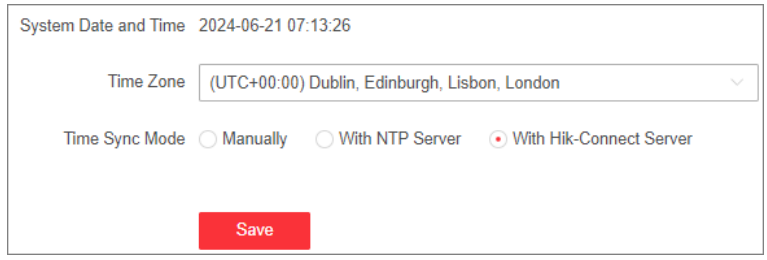


Figure 5-3 Configure Time with Hik-Connect Server

Note

Some device models do not support time synchronization with the NTP server. Please refer to the actual situation.

4. Click **Save**.

5.2 Network Configuration

You can click 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

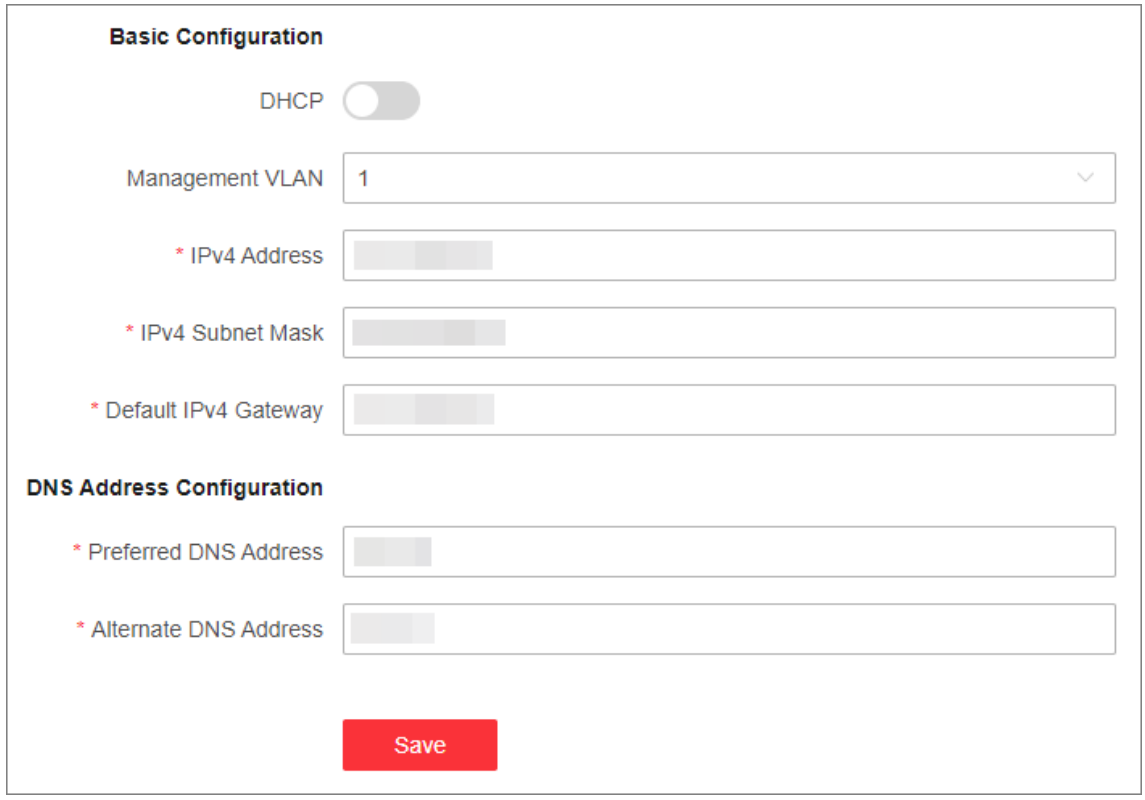


Figure 5-4 Configure Network

Select a management VLAN, and 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 → Network Configuration → 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.

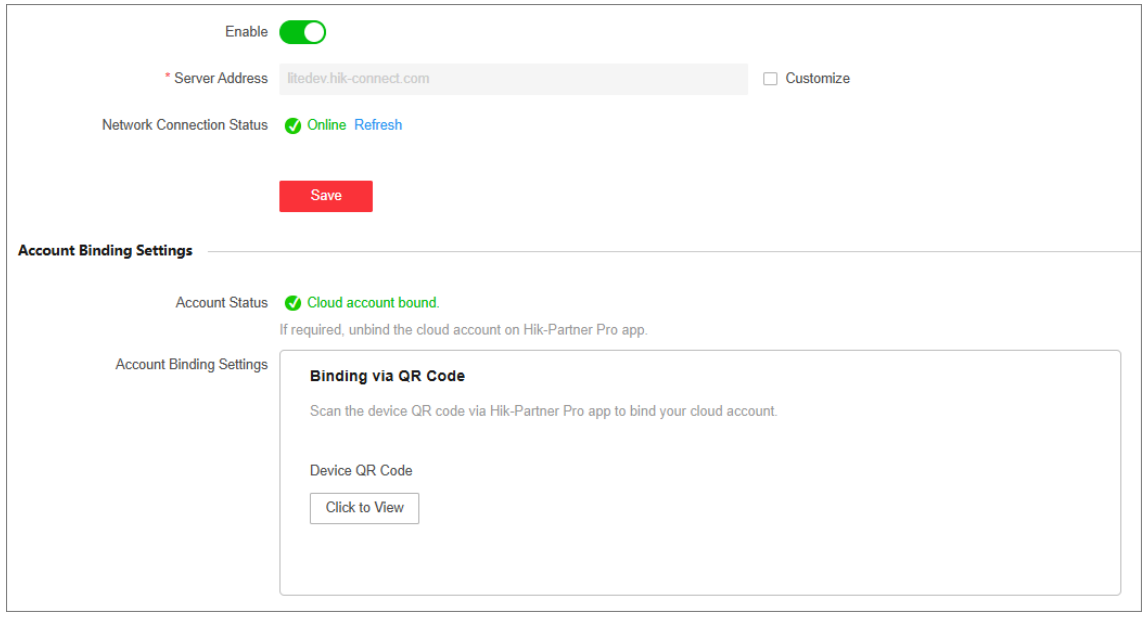


Figure 5-5 Configure Cloud Platform

Note

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

SADP Configuration

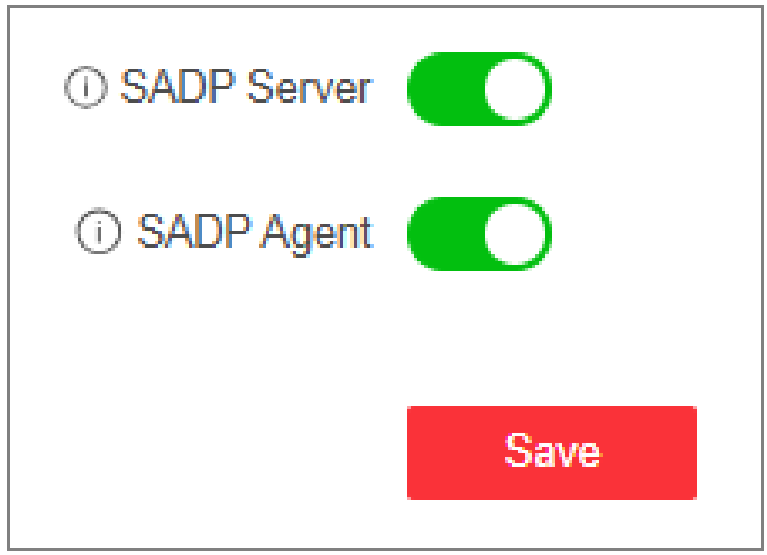


Figure 5-6 Configure SADP

Enable **SADP Server** or **SADP Agent** as required.

Note

- 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 → Network Configuration → Remote Management** for remote device management via HTTP or HTTPS.

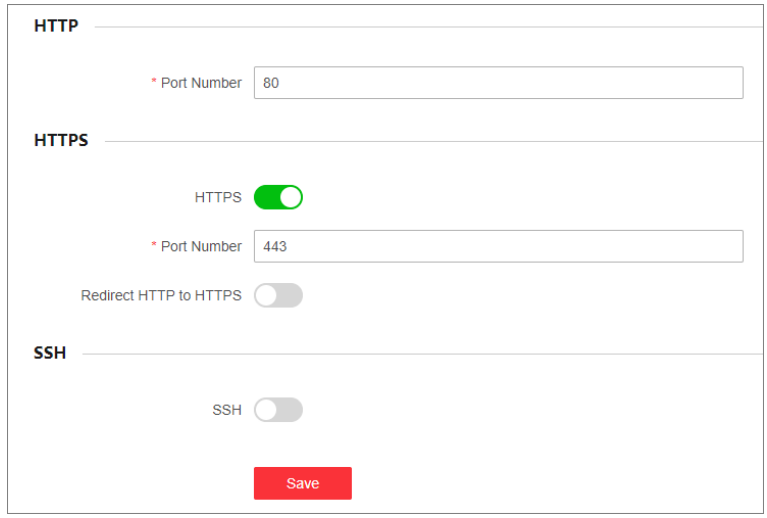


Figure 5-7 Manage Device Remotely

- **HTTP**: Set **Port Number** and click **Save**.

  Note

  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.

  Note

  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**.

Note

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.

Network Service

This function is enabled by default. You can disable it as required. If network service is disabled, the device will automatically restart and function only as an unmanaged switch with its previous configuration cleared.

Figure 5-8 Configure Network Service

Note

An unmanaged switch is also referred to as a plug-and-play switch. As the name "plug-and-play" implies, it requires minimal configuration. Users can simply connect the network cables from different devices to the ports of the switch, and it will automatically start working. There is no need for complex setup processes or detailed network knowledge.

5.3 System Maintenance

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

Restart Device

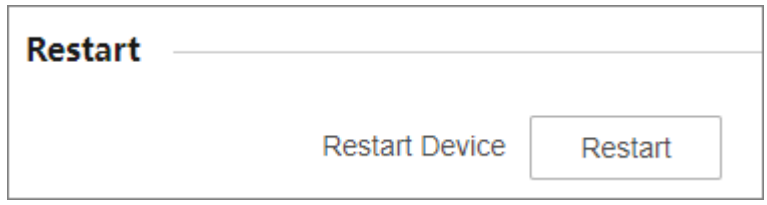


Figure 5-9 Restart

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

Note

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

Upgrade Device

Upload an upgrade file to upgrade the switch.

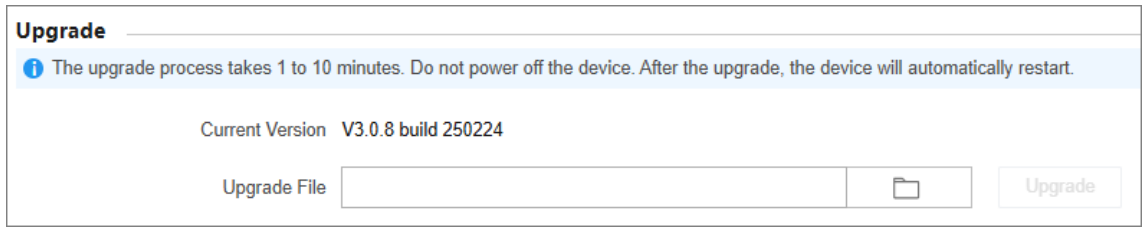


Figure 5-10 Upgrade

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

Note

- 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.

Figure 5-11 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.

Note

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

3. Click **OK**.

Reset Device

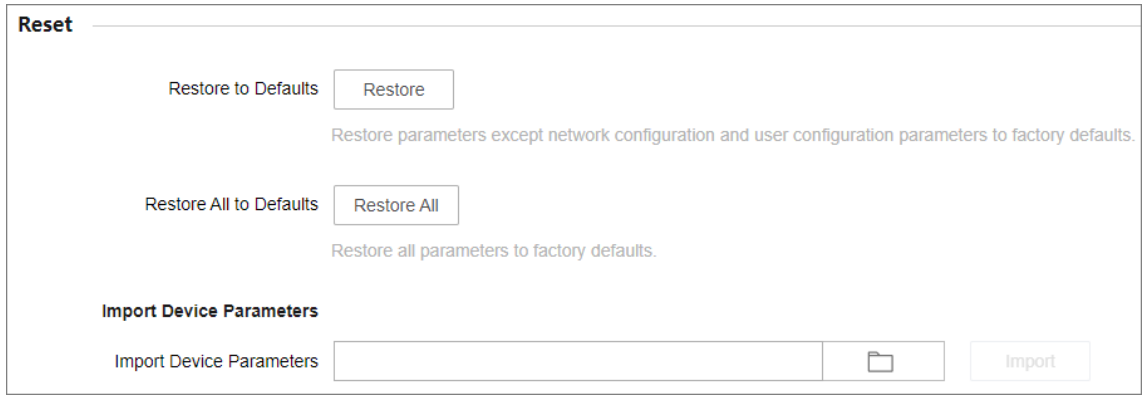


Figure 5-12 Reset

- **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 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.

Note

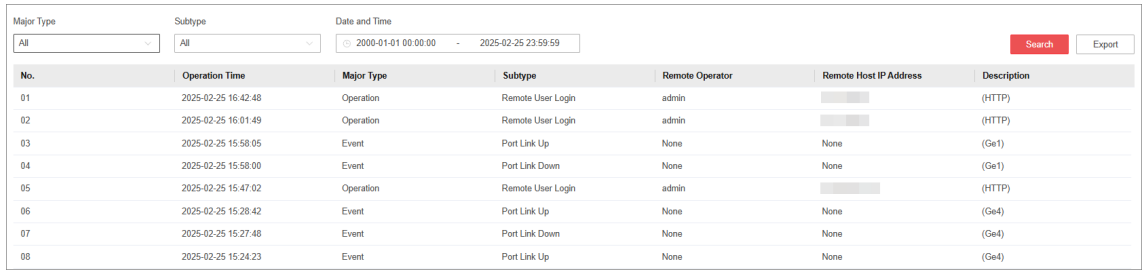
The device will restart automatically to enter the login page after the configuration file is imported.

5.4 Log Management

System operation logs can be searched and exported for backup.

Steps

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



No.	Operation Time	Major Type	Subtype	Remote Operator	Remote Host IP Address	Description
01	2025-02-25 16:42:48	Operation	Remote User Login	admin		(HTTP)
02	2025-02-25 16:01:49	Operation	Remote User Login	admin		(HTTP)
03	2025-02-25 15:58:05	Event	Port Link Up	None	None	(Ge1)
04	2025-02-25 15:58:00	Event	Port Link Down	None	None	(Ge1)
05	2025-02-25 15:47:02	Operation	Remote User Login	admin		(HTTP)
06	2025-02-25 15:28:42	Event	Port Link Up	None	None	(Ge4)
07	2025-02-25 15:27:48	Event	Port Link Down	None	None	(Ge4)
08	2025-02-25 15:24:23	Event	Port Link Up	None	None	(Ge4)

Figure 5-13 Manage Logs

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

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.

Note

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

5.5 Password Modification

Changing password periodically is a crucial step to ensure your device's security.

Steps

1. Click in the upper right corner of the web page.

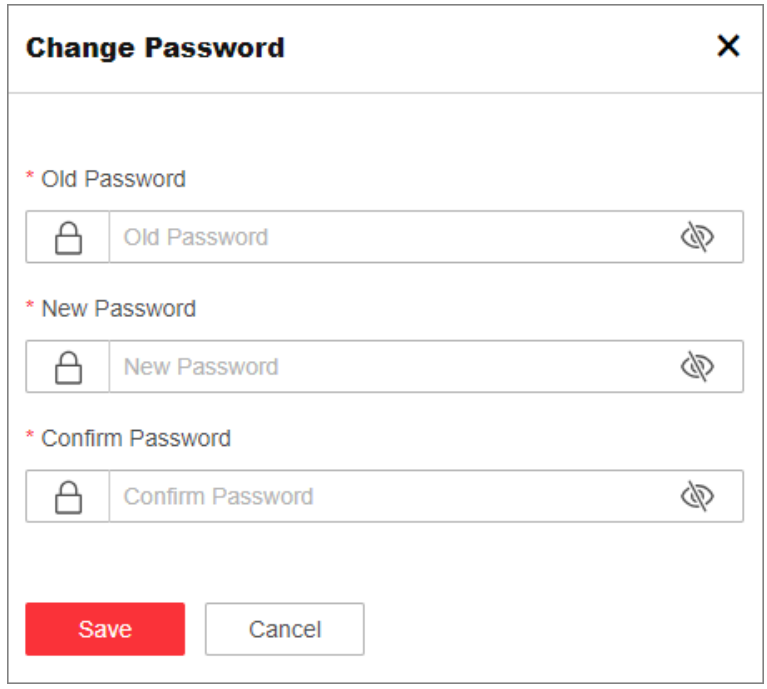


Figure 5-14 Change Password

2. Set **Old Password**, **New Password**, and **Confirm Password** in turn.

Note

- 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 contain only 'hik', 'hkws', or 'hikvision' (case insensitive).
- The password cannot be a common risky password.

3. Click **Save**.


See Far, Go Further