# DGW-300X Series Digital Gateway User Manual

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## Welcome

Thank you for choosing the DGW-300X! We hope you can make full use of this feature- rich gateway. If you need any technical support, please contact us at +86-755-66630978.

## About this manual

This manual provides an introduction to the DGW-300X and information on how to configure or use it. Please read this manual carefully before configuring any functions.

## Statement

OpenVox Communication Co., Ltd. hereby declares that the DGW-300X meets the essential requirements of CE and FCC and other relevant provisions. The information contained in this document is subject to change without notice. OpenVox Communication Co., Ltd. makes no warranties regarding this guide, including but not limited to implied warranties of merchantability and fitness for a particular purpose. OpenVox Communication Co., Ltd. assumes no responsibility for errors contained in this guide, nor for incidental or consequential damages related to the provision, performance, or use of this guide.

## Revision Record

| Version Number | Release Date | Description |
|---|---|---|
| V1.0 | 2026/06/12 | First release of English version |

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# 1. Overview

## 1.1 Product Introduction

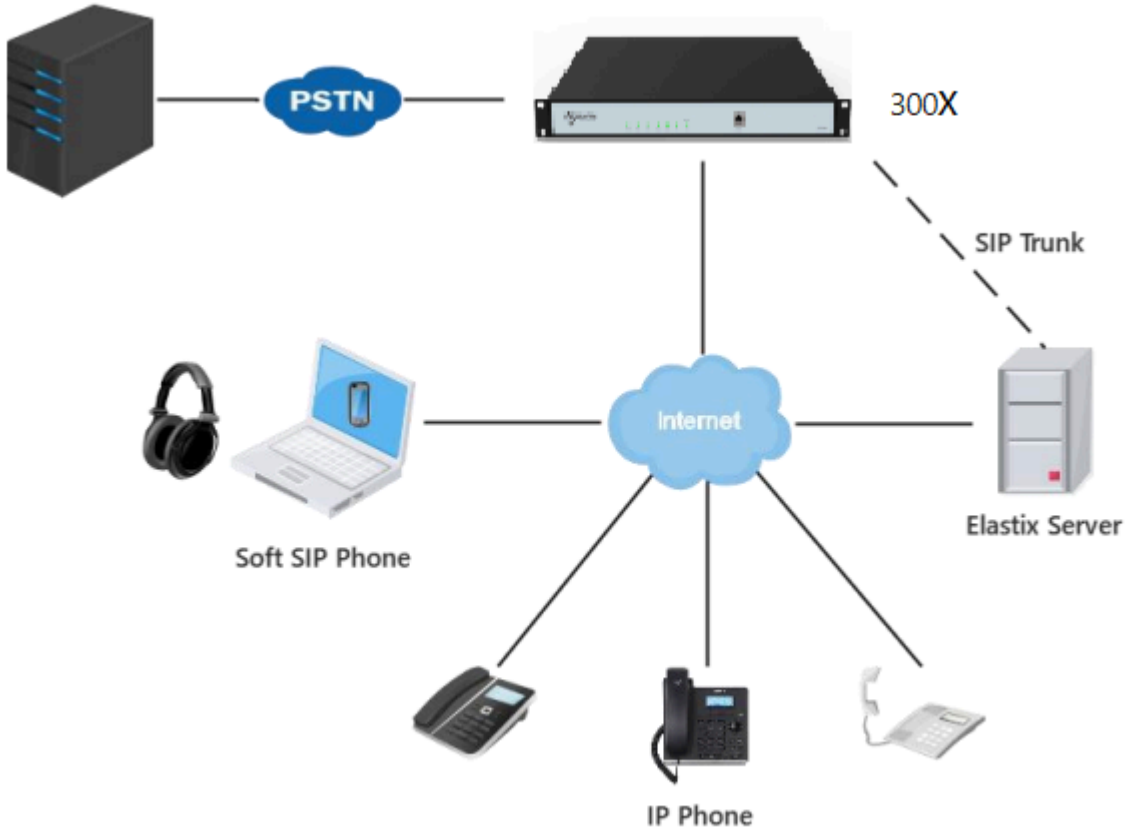
DGW-300X is a digital VoIP voice gateway that supports E1/T1 digital trunk interfaces. It enables interconnection between traditional digital telephony lines (PSTN/ISDN) and VoIP networks, allowing smooth integration of legacy telephone networks with IP voice systems. The device provides an intuitive Web-based graphical management interface, enabling users to quickly complete configuration, maintenance, and service customization. It also supports open API interfaces for secondary development and system integration.

DGW-3001, DGW-3002 and DGW-3004 provide 1, 2 and 4 software-configurable E1/T1 interfaces respectively. They support PRI, SS7 and R2 signaling, with maximum concurrent call capacities of 30, 60 and 120 channels respectively, meeting digital trunk access and VoIP interconnection requirements for deployments of different scales.

## 1.2 Typical Applications

The DGW-300X series typical applications are shown in the diagram, enabling enterprise branch interconnection, smooth transition from traditional PBX to IP, remote voice access, and other applications.

Figure 1-2-1 Application Topology



# 1.3 Product Appearance

The DGW-300X series product front and rear panel design continues the OpenVox industrial style, providing stable and reliable interface layout.
The new RS232 (RJ45) console port makes engineering-level debugging and maintenance easier.

## DGW-3001

Figure 1-3-1 Product Appearance

Figure 1-3-2 Front Panel

## DGW-3002

Figure 1-3-3 Front Panel

Figure 1-3-4 Rear Panel

## DGW-3004

Figure 1-3-5 Front Panel

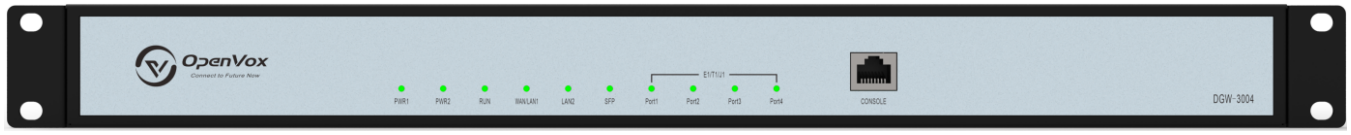



Figure 1-3-6 Rear Panel

# 1.4 Software Features

| | 3001 | 3002 | 3004 |
|---|---|---|---|
| Concurrent Calls | 30 | 60 | 120 |

| | |
|---|---|
| Signaling Support | PRI, R2, SS7, multi-country standards compatible |
| Voice Codecs | Supports G.711A/U, G.723.1, G.729A/B, iLBC, OPUS, ARM, ARM-WB |
| Fax Support | T.38 and G.711 pass-through, compatible with V.17./V.21./V.27./V.29 |
| SIP Standard | RFC3261 compliant, supports TLS/SRTP encryption |
| QoS Policy | Supports ToS/DiffServe/802.1p priority tagging |
| Network Protocols | IPv4/IPv6, TCP/UDP, RTP/RTCP, HTTP/HTTPS, DHCP, NTP, PPPoE, STUN |
| Security | HTTPS, SIPS, 802.1x authentication, whitelist access control |
| System Management | Supports SNMP, cloud management, OpenAPI, SSH remote CLI, scheduled reboot |
| | Compatible platforms: Asterisk, Issabel, 3CX, FreeSWITCH, VOS, BroadSoft |

## 1.5 Hardware Features

| | **DGW-3001** | **DGW-3002** | **DGW-3004** |
|---|---|---|---|
| E1/T1 Ports | 1 | 2 | 4 |
| Failover Ports | 1 | 2 | 4 |
| Console Port | 1 * RS232(RJ45) | | |
| Network Interface | 2 * 1000Mbps RJ45<br>1 * 1000Mbps SFP | | |
| Weight | 5.1Kg | 5.3Kg | 5.5Kg |
| Dimensions | 440mm * 318mm * 44.5mm | | |
| Redundant Power Supply | Supported by default | | |
| Maximum power Consumption | 15W | | |
| Input Voltage（AC power） | 100 V ~ 240 V AC | | |
| Input Voltage（DC power） | -48 V ~ -60 V DC | | |
| Operating Temperature | 0℃ ~ 50℃ | | |
| Storage Temperature | -20℃ ~ 70℃ | | |
| Environmental Humidity | 10% ~ 90% non-condensing | | |

## 1.6 System Login and Initial Configuration

Default IP Address: 192.168.6.65

Username: admin

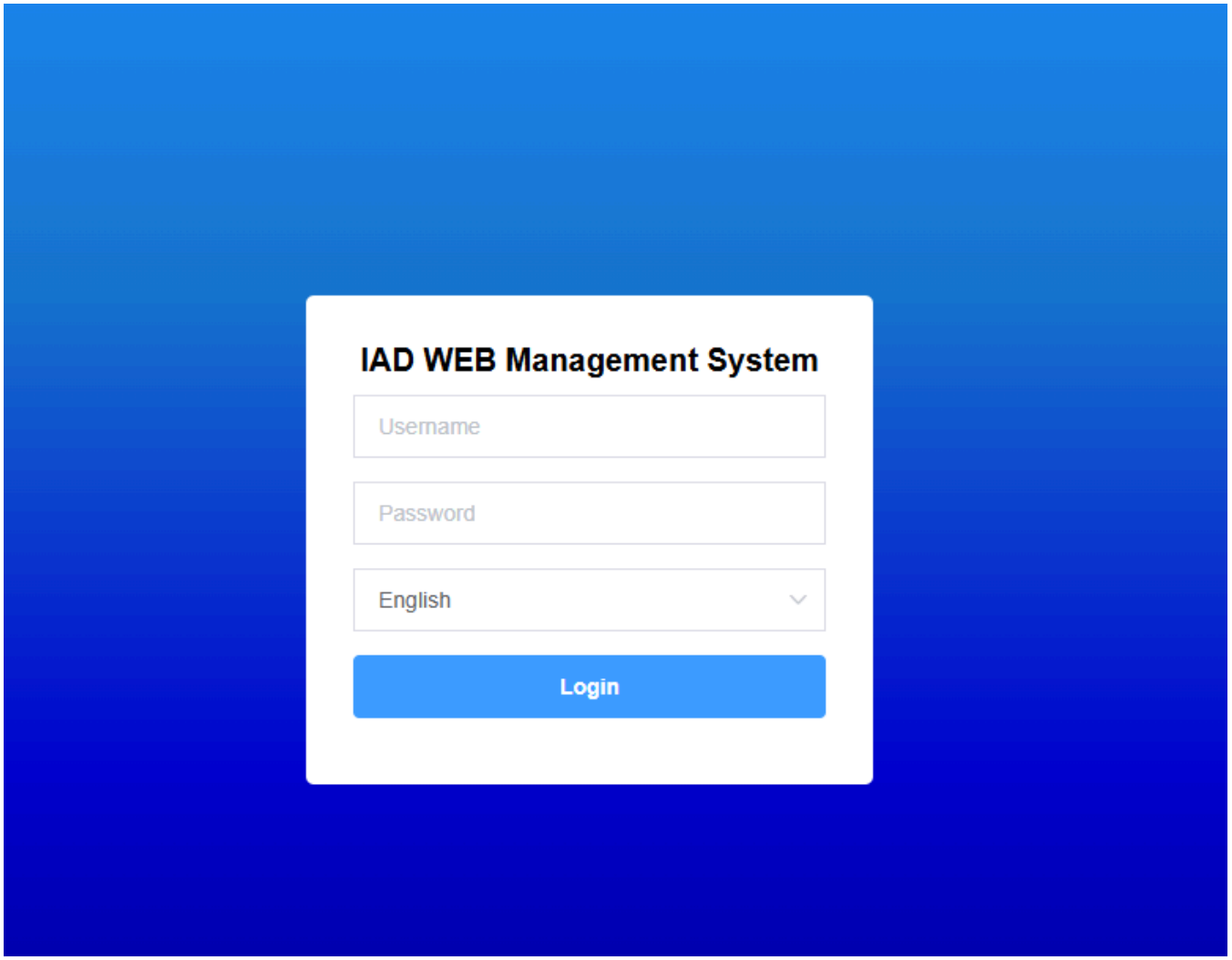
Password: admin

Connect the network cable to LAN1/LAN2, enter the default IP in the browser, and access the gateway for configuration.

Note: The default network mode of this product is bridge mode. Whether the network cable is connected to the WAN port or LAN port, the IP address is the same.

Open the browser, enter the default IP, and access the gateway login interface.

Figure 4-1 Login Interface



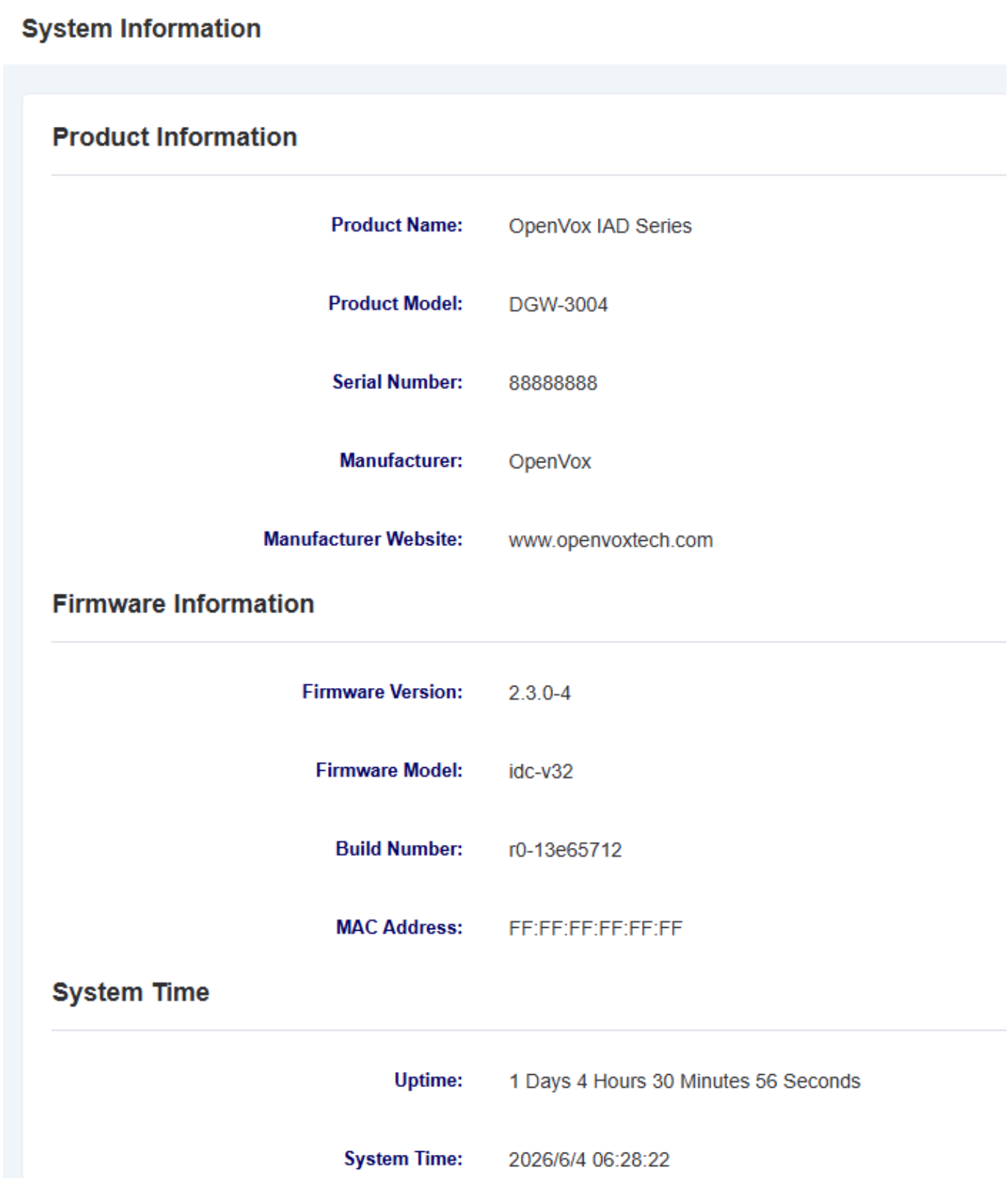

The default network mode is bridge mode, and the management page can be accessed from any interface (WAN/LAN).

# 2. Status

## 2.1 System Status

On the "System Status" page, product information, firmware information, system time, and resource usage are displayed.

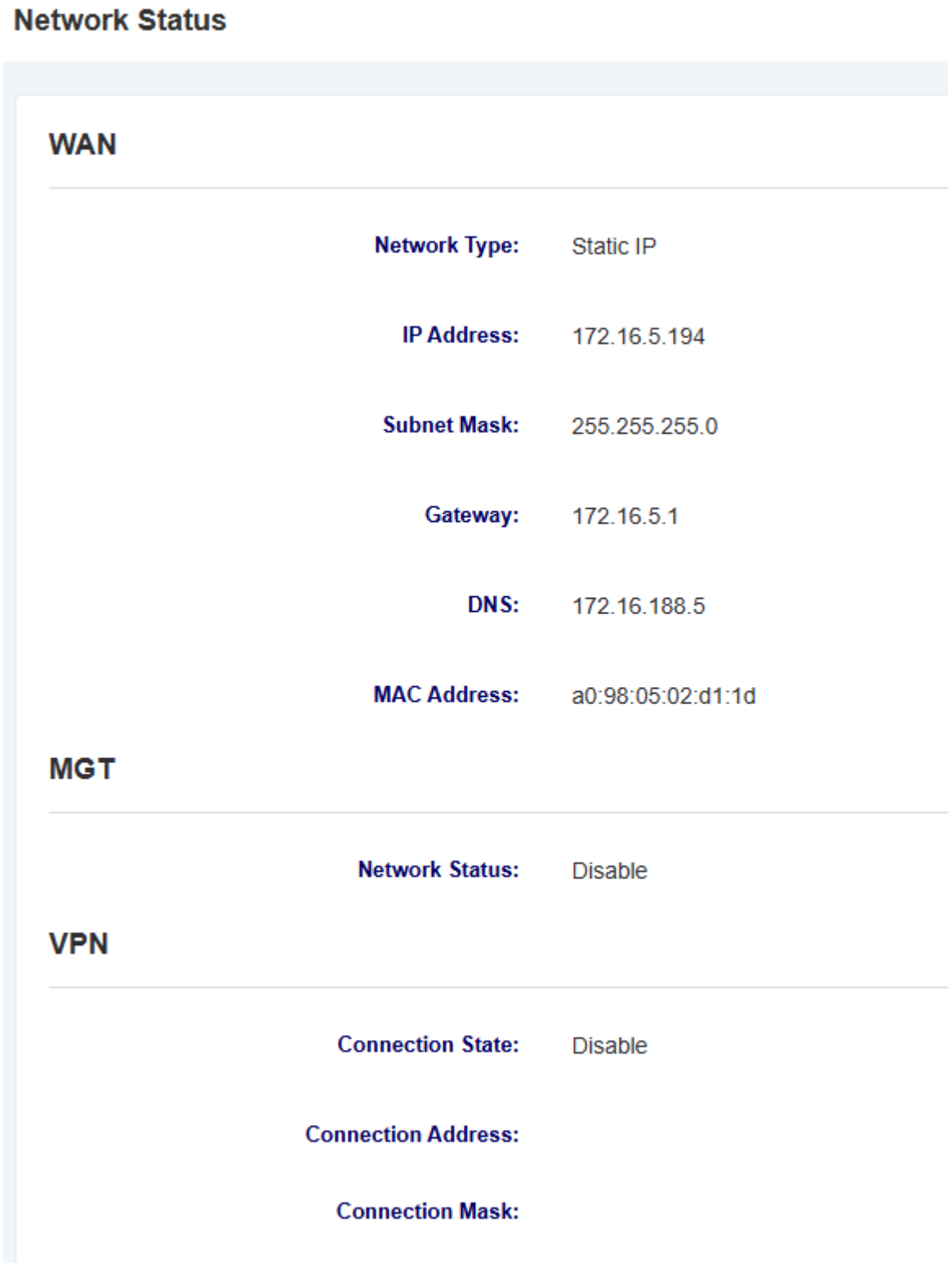
Figure 2-1-1 System Status Display



## 2.2 Network Status

On the "Network Status" page, network status and VPN connection status are displayed.

Network configuration interface is as follows:

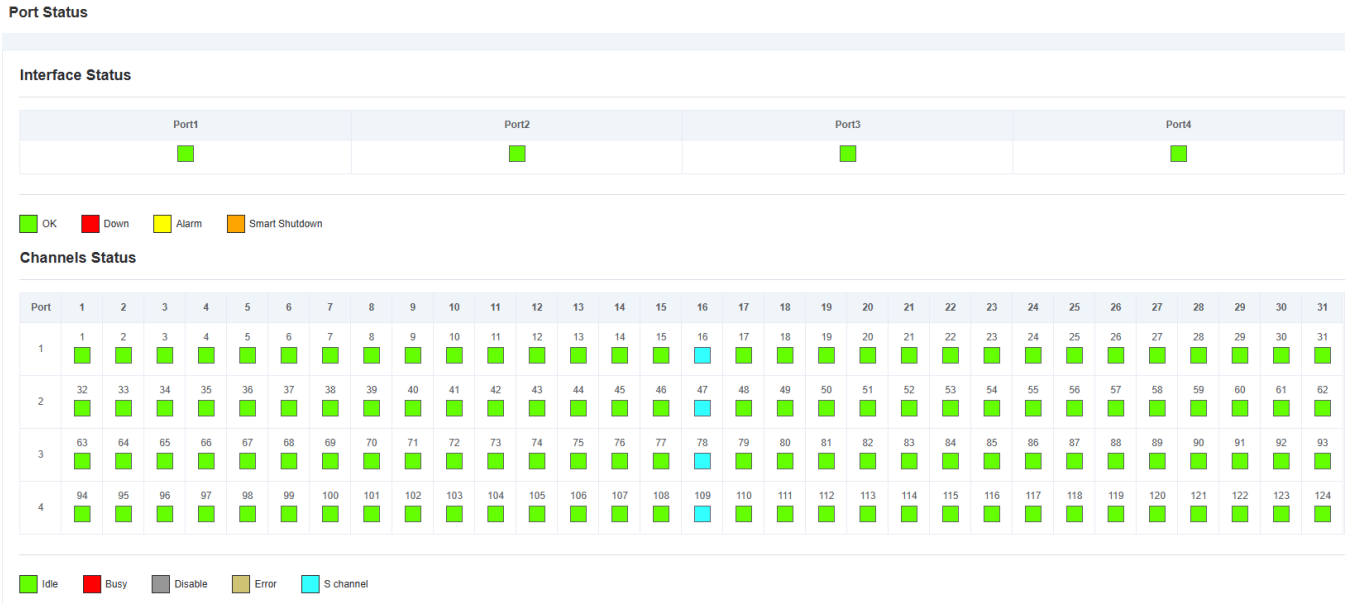



## 2.3 Port Status

On the "Port Status" page, port status and channel status are displayed.

Figure 2-3-1 Port Status

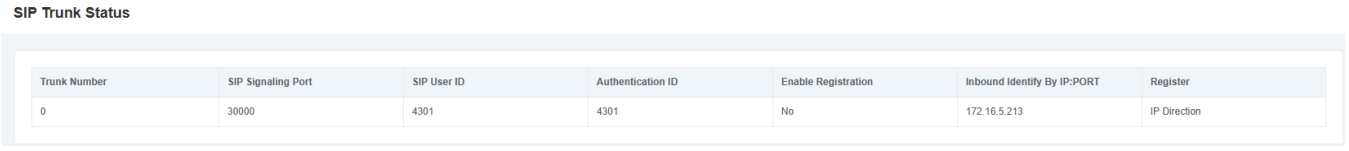
On the "Network Status" page, network status and VPN connection status are displayed.




# 2.4 SIP Trunk Status

On the SIP trunk status page, you can view the SIP trunk number, SIP signaling port, SIP user ID, authentication ID, registration status, IP direct sending table, and whether registered.

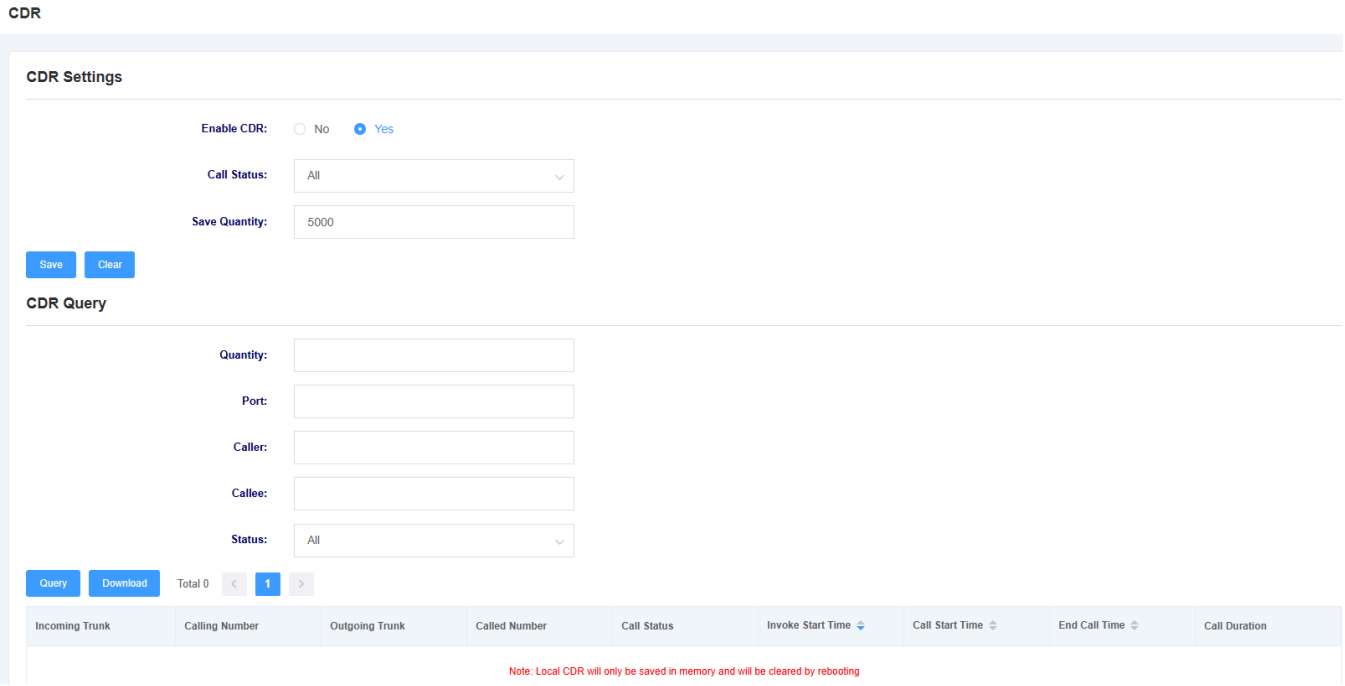
Figure 2-4-1 SIP Trunk Status Page




# 2.5 CDR

On the CDR page, users can configure CDR and query CDR

Figure 2-5-1 CDR




Note: CDR is only saved in memory and will be cleared upon reboot.

Table 2-5-1 CDR Options

| Option | Description |
|---|---|
| Enable CDR | This option selects whether to enable CDR |
| Call Status | Select the call status saved by CDR |
| Save Quantity | Set the number of CDR entries saved |
| Quantity | Select the number of CDR queries |
| Port | Select the port for CDR query |
| Caller | Filter CDR query items by caller number |
| Callee | Filter CDR query items by callee number |

# 3. Network Configuration

## 3.1 Local Network

Figure 3-1-1 Local Network Interface

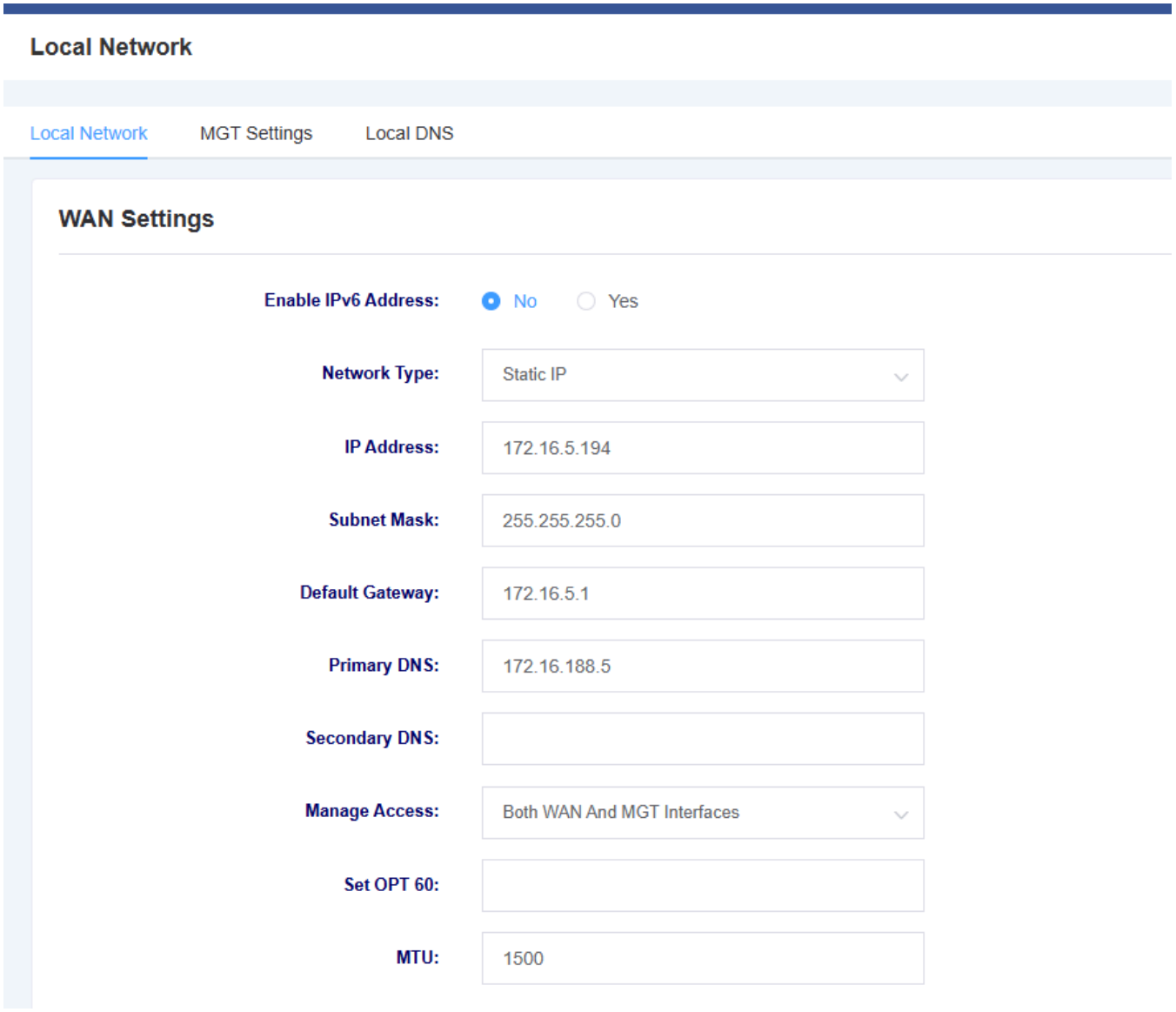



Table 3-1-1 WAN Settings Interface Parameter Description

| Option | Description |
|---|---|
| Network Mode | Select device network mode |
| Network Type | Select network type: DHCP, Static IP, PPPoE |
| IP Address | Set the device's IP address |
| Subnet Mask | Set the device's subnet mask |
| Default Gateway | Set the device's default gateway |
| Primary DNS | Set the device's primary DNS |

| Option | Description |
| --- | --- |
| Backup DNS | Set the device's backup DNS |
| Management Access Option | Set web login restrictions |
| Set OPT 60 | Set OPT 60 |
| Option | Description |
| IP Address | Set the IP address of the LAN port |
| Subnet Mask | Set the subnet mask of the LAN port |

Figure 3-1-2 Management Port Settings Interface

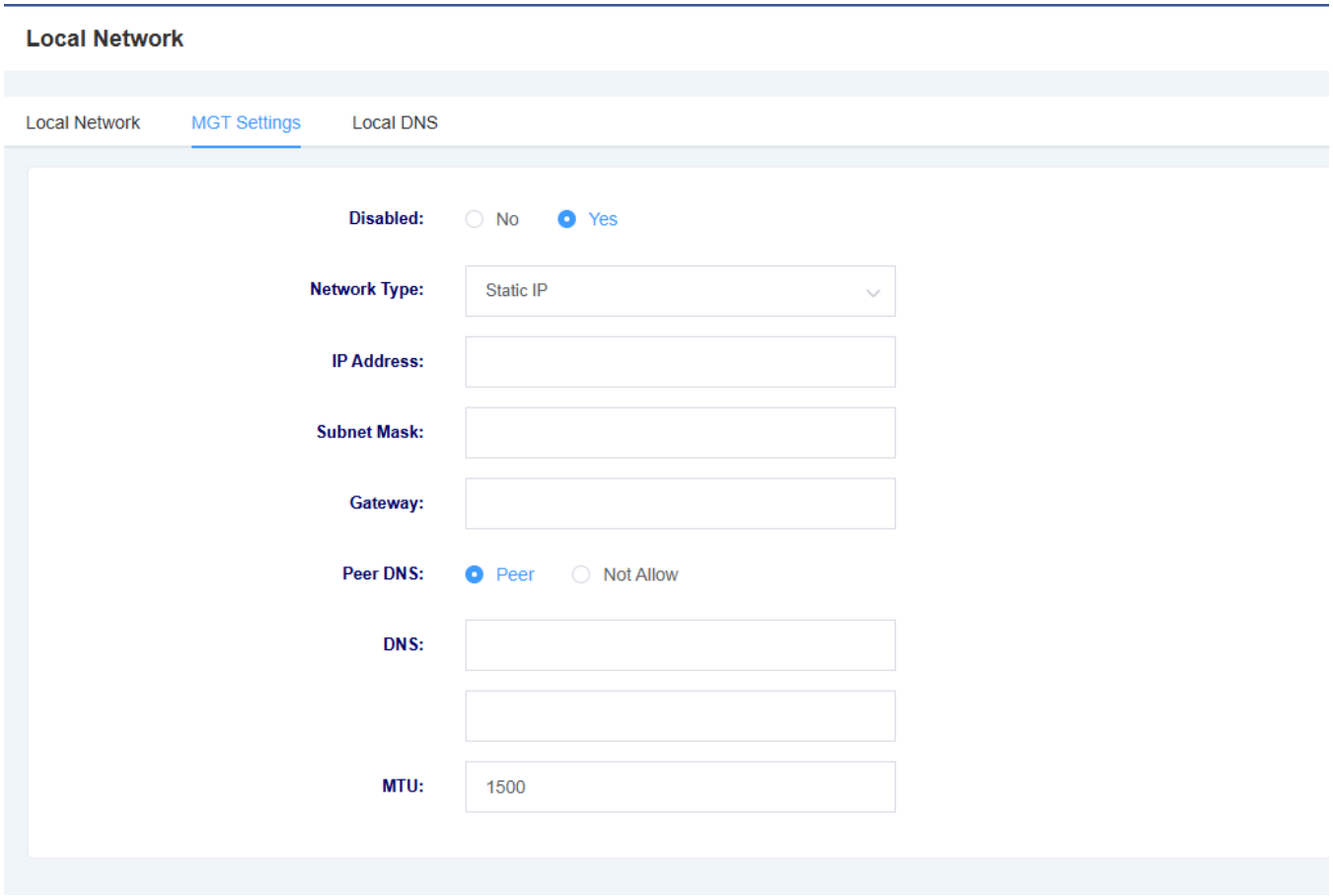



Table 3-1-2 Management Port Settings Interface Parameter Description

| Option | Description |
| --- | --- |
| Disable | Whether to enable the management port |
| Network Type | Select network type: DHCP, Static IP, PPPoE |
| IP Address | Set the device's IP address |
| Subnet Mask | Set the device's subnet mask |
| Gateway | Set the device's gateway |

| Option | Description |
| --- | --- |
| Remote DNS | Select whether to allow remote DNS |
| DNS | Set the device's DNS |

Figure 3-1-3 VLAN Settings Interface

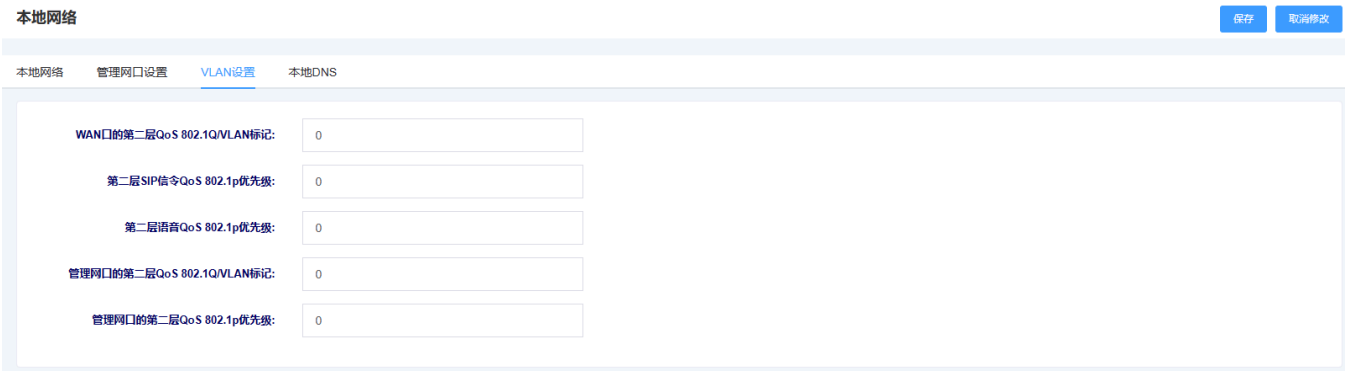



Table 3-1-3 VLAN Settings Interface Parameter Description

| Option | Description |
| --- | --- |
| WAN Port Layer 2 QoS 802.1Q./VLAN Tag | Set WAN port tag |
| Layer 2 SIP Signaling QoS 802.1p Priority | Set SIP signaling priority |
| Layer 2 Voice QoS 802.1p Priority | Set voice priority |
| Management Port Layer 2 QoS 802.1Q./VLAN Tag | Set management port tag |
| Management Port Layer 2 QoS 802.1p Priority | Set management port priority |

Figure 3-1-4 Local DNS Settings Interface

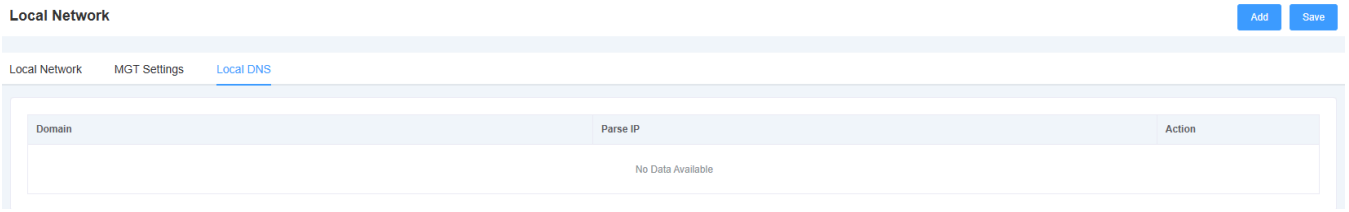



Figure 3-1-5 Add Local DNS Settings Interface

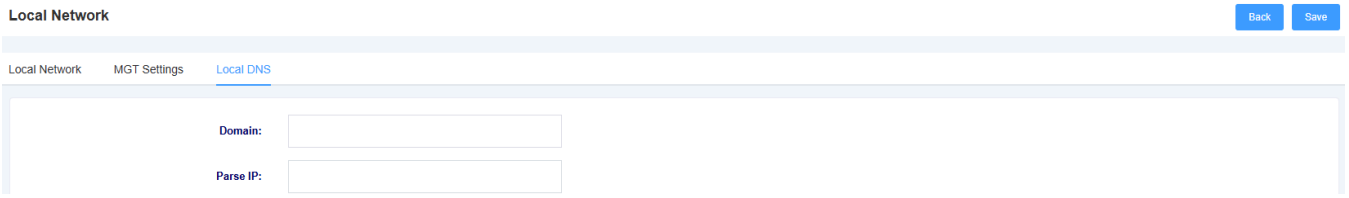



Table 3-1-4 Local DNS Interface Parameter Description

| Option | Description |
| --- | --- |
| Domain Name | Set device domain name |

| Option | Description |
| --- | --- |
| Resolution IP | Set the IP to be resolved |

# 3.2 Static Routes

On the "Static Routes" page, the network interface, destination IP address, subnet mask, gateway, hop count, and operations of static routes are displayed. Static routes can be added here. Click the Add button to add static routes.

Figure 3-2-1 Static Routes Interface

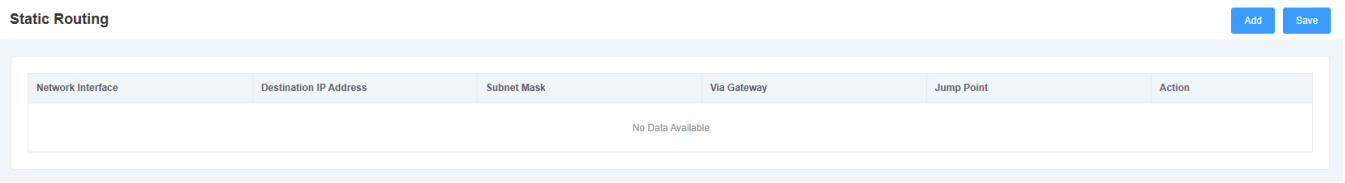
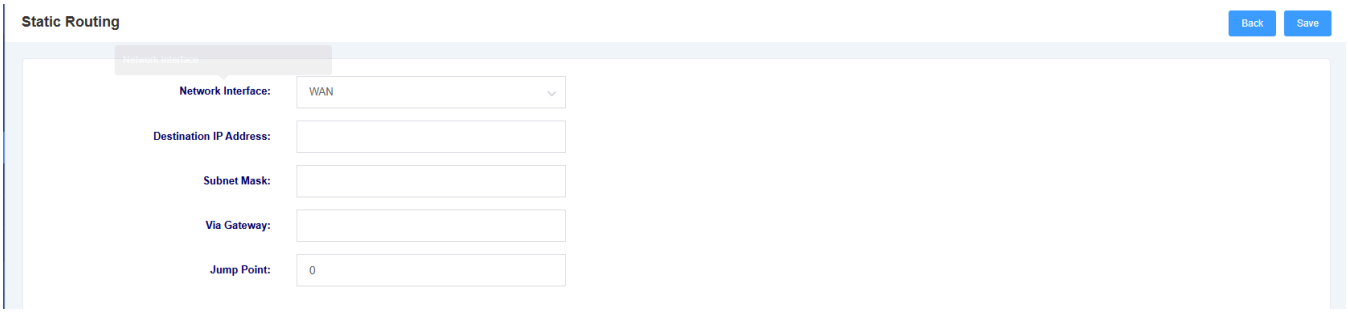



Figure 3-2-2 Add Static Route Interface




# 3.3 Firewall

On the "Firewall" page, the firewall rule name, protocol, source network domain, source IP, source port, destination network domain, destination IP, destination port, and rule action are displayed. Firewall rules can be added here to ensure device security. Click the Delete button to delete firewall rules, and click the Add button to add firewall rules.

Figure 3-3-1 Firewall Interface

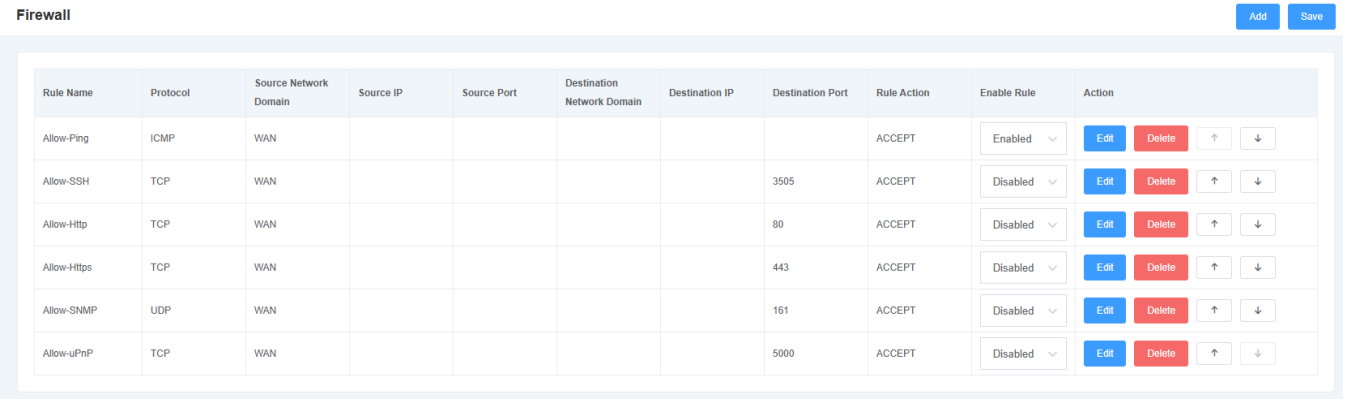



Figure 3-3-2 Add Firewall Rule Interface

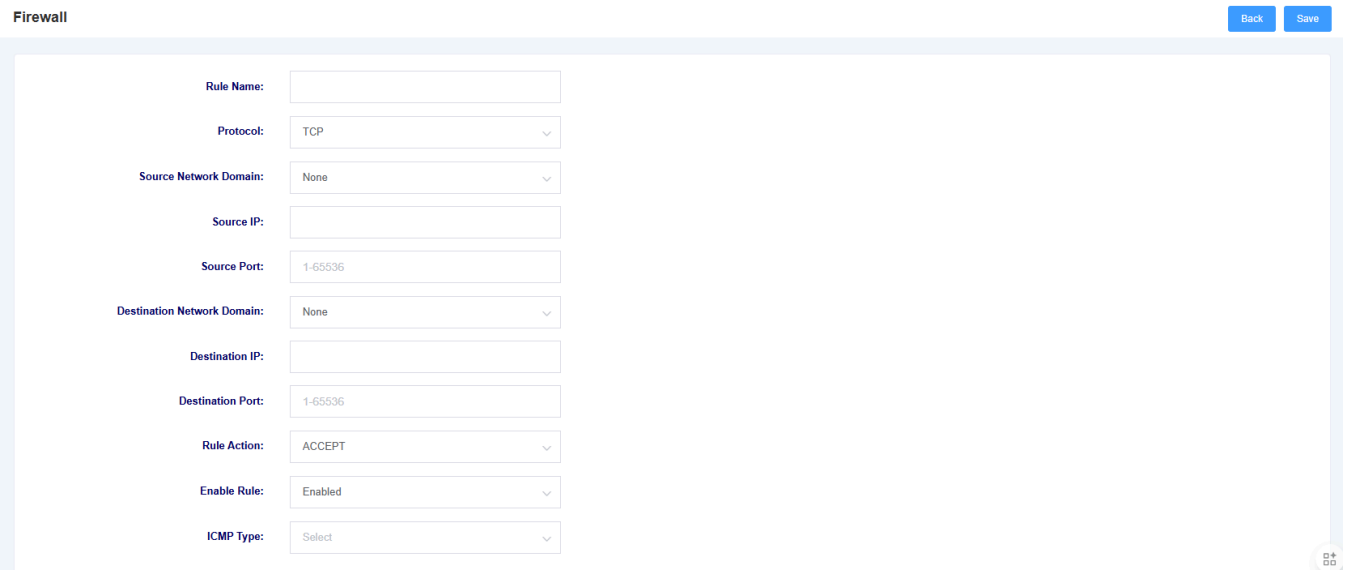


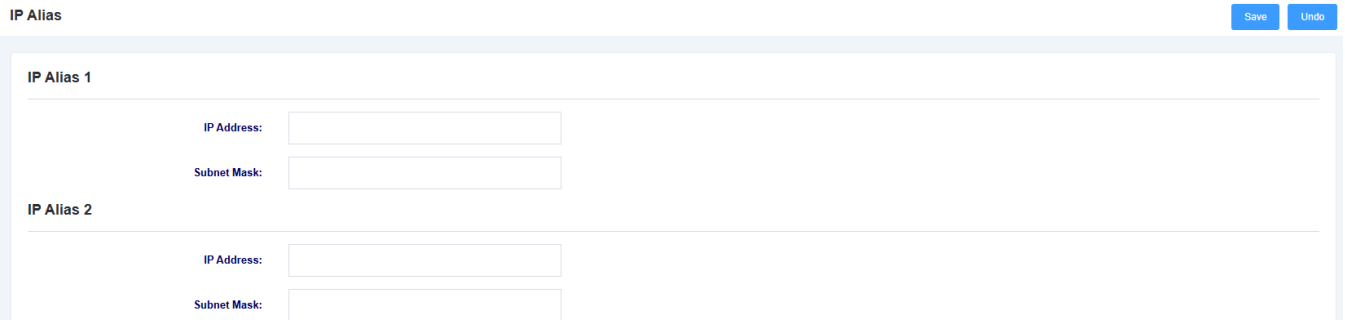

Table 3-3-1 Add Firewall Rule Parameter Description

| Option | Description |
|---|---|
| Name | Firewall rule name |
| Protocol | Protocol restricted by the firewall rule |
| Source Network Domain | Source network domain of the firewall rule |
| Option | Description |
| Source IP | Source IP defined by the firewall rule, leave empty for all IPs |
| Source Port | Define source port, range is 1-65535 |
| Destination Network Domain | Destination network domain of the firewall rule |
| Destination IP | Destination IP defined by the firewall rule, leave empty for all IPs |
| Destination Port | Define destination port, range is 1-65535 |
| Rule Action | Define rule action, options are ACCEPT, REJECT, DROP |

# 3.4 IP Alias

L30X supports setting multiple IP addresses, which can be set in the IP Alias interface.

Figure 3-4-1 IP Alias Interface



# 3.5 VPN Settings

Figure 3-5-1 OpenVPN Settings Interface

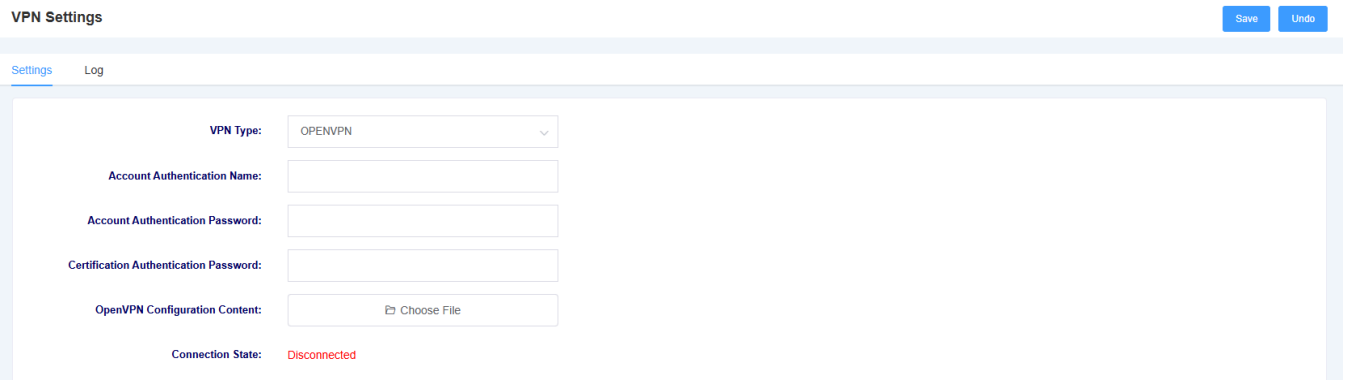



Table 3-5-1 VPN Settings Description

| Option | Description |
| --- | --- |
| VPN Type | Can select to close VPN or use OpenVPN/SoftEther VPN |
| Account Authentication Name | Authentication name used by OpenVPN |
| Account Authentication Password | Authentication password used by OpenVPN |
| Cert Authentication Password | Cert authentication password |
| ovpn Configuration Content | Upload OpenVPN configuration file |
| Connection Status | Display VPN connection status |
| On the log page, you can select the number of log lines to display, then click the Query button. The log will be displayed in the "Log Result" box. | |

Figure 3-5-2 SoftEther VPN Settings Interface

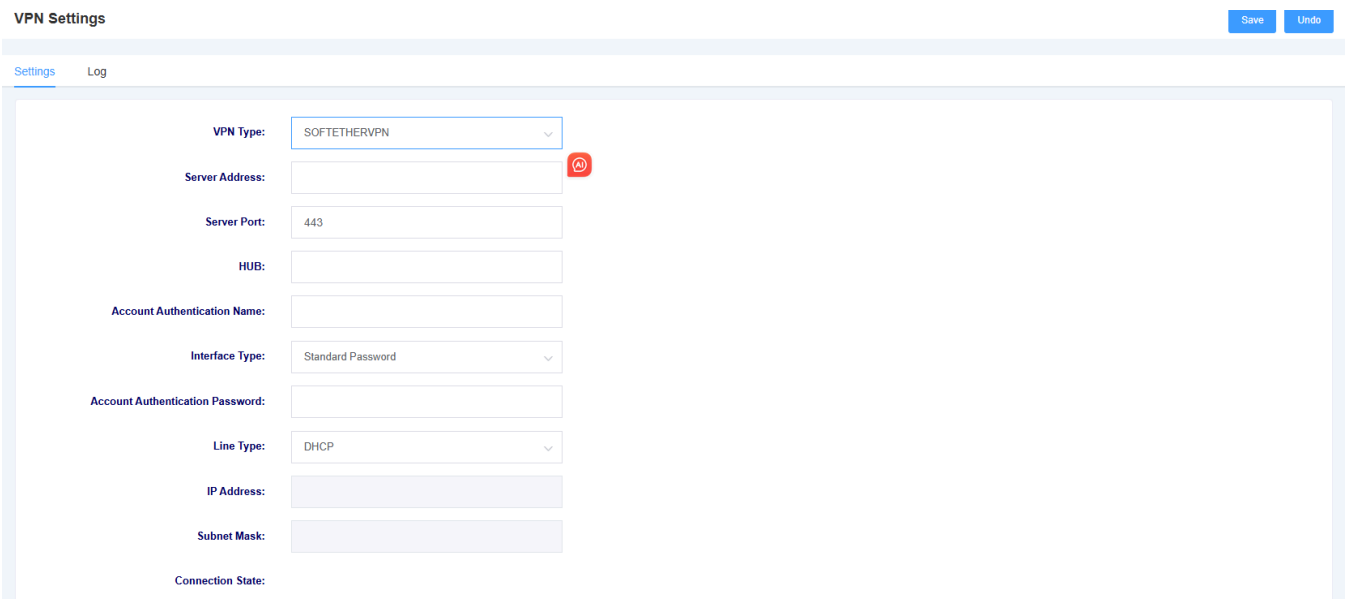
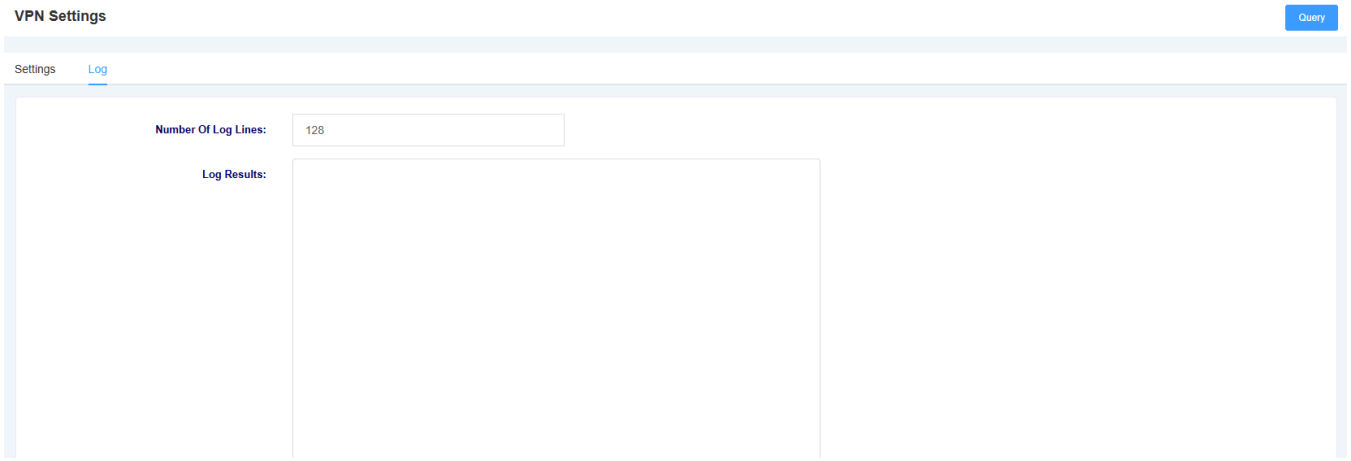



Table 3-5-2 SoftEther VPN Settings Description

| Option | Description |
|---|---|
| VPN Type | Can select to close VPN or use OpenVPN/SoftEther VPN |
| Server Address | Server address used by SoftEther VPN |
| Server Port | Server port used by SoftEther VPN |
| Hub | Hub name |
| Interface Type | Select standard password or signature certificate |
| Account Authentication Password | Enter password |
| Certificate Cert | Authentication file |
| Certificate Key | Certificate Key |
| Connection Type | Select DHCP or Static IP |
| IP Address | Configure IP |
| Subnet Mask | Configure subnet mask |
| Connection Status | Display VPN connection status |
| Figure 3-5-3 VPN Log Interface | |


VPN Settings
Query
Settings
Log
Number Of Log Lines:
128
Log Results:

# 4. Template

DGW-300X  provides a convenient SIP registration method. Users can conveniently apply preset templates to SIP trunks. A total of four templates are available for setting.

## 4.1 SIP Settings

Figure 4-1-1 SIP Settings

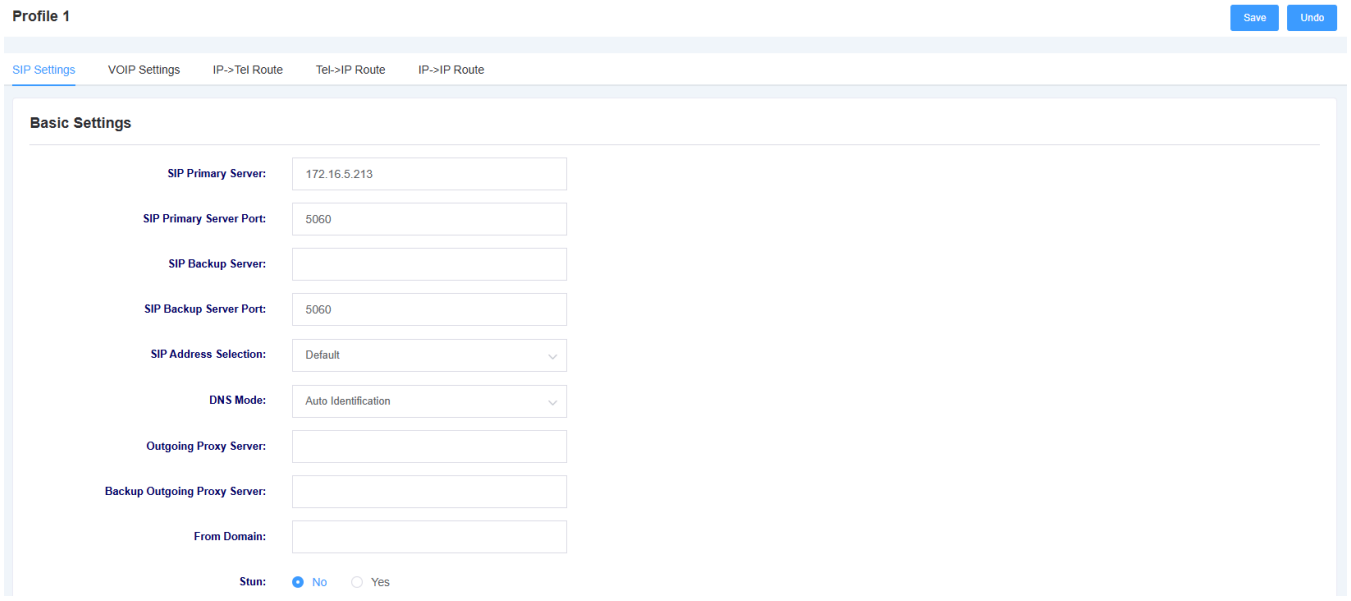



Table 4-1-1 SIP Settings Parameter Description

| Option | Description |
|---|---|
| SIP Primary Server | Set SIP primary server |
| SIP Primary Server Port | Set SIP primary server port |
| SIP Backup Server | Set SIP backup server |
| Option | Description |
| SIP Backup Server Port | Set SIP backup server port |
| SIP Address Selection | Select which network port SIP registers on |
| DNS Mode | Set DNS mode, can select automatic or use DNSSRV |
| Outbound Proxy Server | Set outbound proxy server, the gateway will send signaling to this external proxy instead of directly to the peer. |
| From Domain | Set the domain name used to authenticate the peer |
| STUN | Select whether to enable STUN service |

| Option | Description |
| --- | --- |
| Compatibility Mode | Select whether to enable compatibility mode |
| Figure 4-1-2 SIP Settings | |

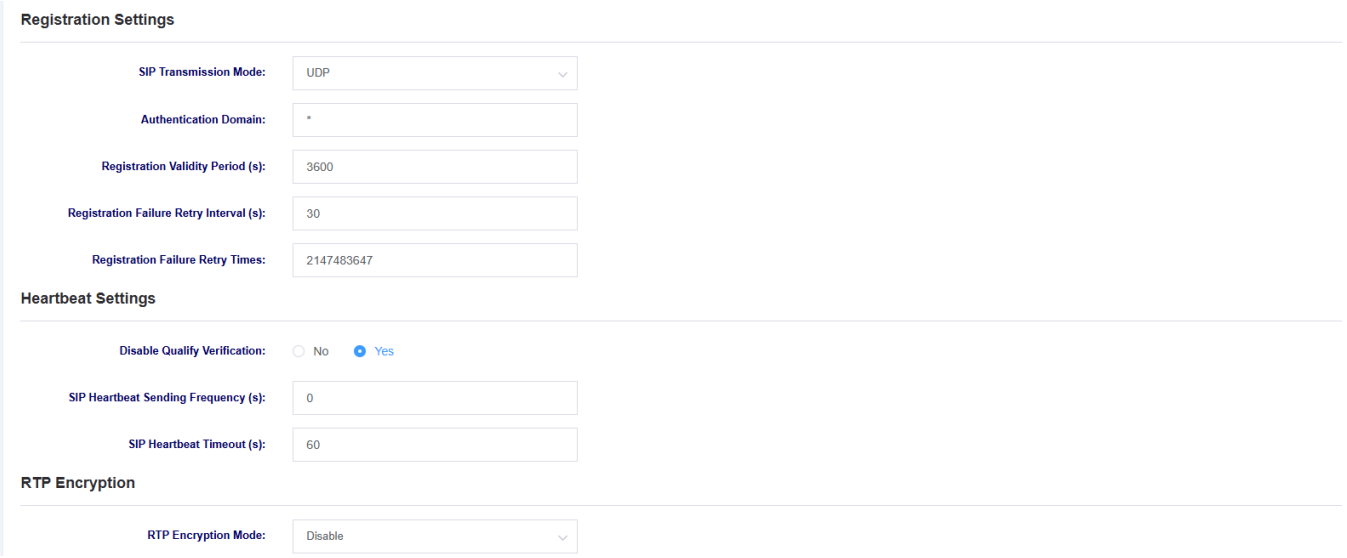
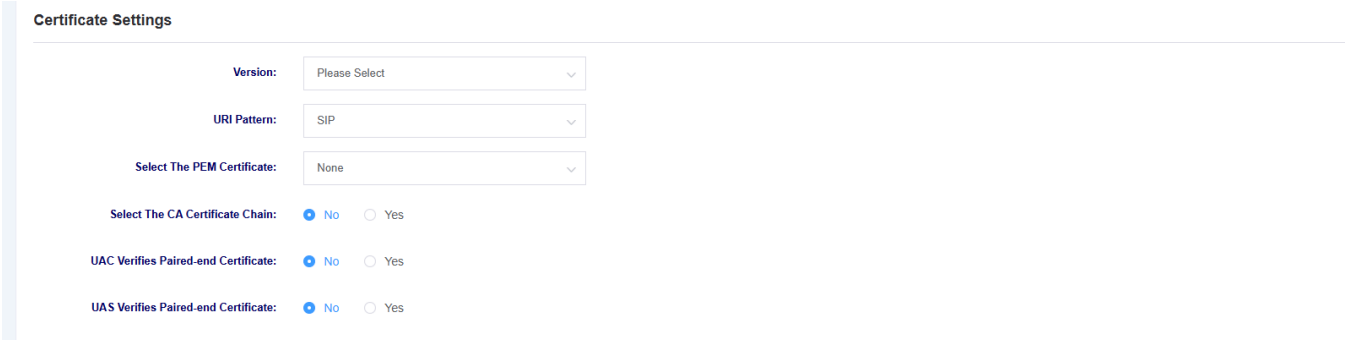



Table 4-1-2 SIP Settings Parameter Description

| Option | Description |
| --- | --- |
| SIP Transport Method | Set SIP transport method, can select UDP, TCP, and TLS |
| Authentication Domain | Set SIP registration authentication domain |
| Option | Description |
| Registration Validity Period | Set registration validity period, default value is 3600 seconds |
| Registration Failure Retry Interval | Set registration failure retry interval, default value is 30 seconds |
| Registration Failure Retry Times | Set registration failure retry times, default value is 10 times |
| Qualify Verification | Whether to enable qualify verification |
| SIP Heartbeat Send Frequency | Set SIP heartbeat packet send frequency |
| SIP Heartbeat Timeout | Set SIP heartbeat packet timeout |
| RTP Encryption Mode | Whether to enable RTP encryption |
| Figure 4-1-3 SIP Settings | |




| Option | Description |
|---|---|
| Version | Select the certificate version, the device supports different versions of TLS, SSL, SS certificates |
| URI Mode | Select URI mode, supports SIP and SIPS |
| Select Device PEM Certificate | Select device PEM certificate |
| Select CA Certificate Chain | Select whether to enable CA certificate chain |
| Option | Description |
| UAC Verify Peer Certificate | As the calling party, select UAC to use the phone as the refresher. Or select UAS to use the called party or proxy server as the refresher. |
| UAS Verify Peer Certificate | As the called party, select UAC to use the called party or proxy server as the refresher, or select UAS to use the phone as the refresher. |

# 4.2 VOIP Settings

On this interface, users can set VOIP related parameters.

Figure 4-2-1 VOIP Settings

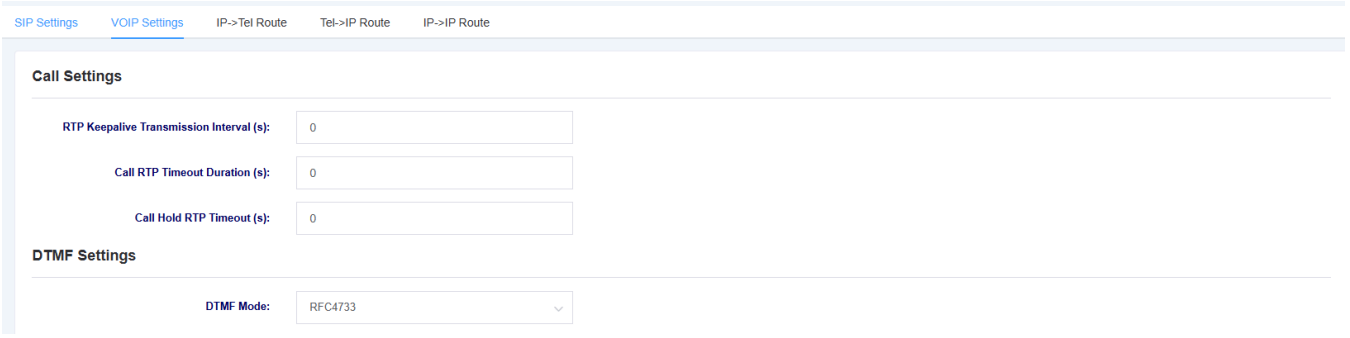



Table 4-2-1 VOIP Settings Parameter Description

| Option | Description |
|---|---|
| Allow Call Transfer | Select whether to enable call transfer |
| RTP Keepalive Send Interval | Set RTP keepalive send interval |

| Option | Description |
| --- | --- |
| Call RTP Timeout | Set call RTP timeout |
| Call Hold RTP Timeout | Set call hold RTP timeout |
| DTMF Mode | Set DTMF mode, can select RFC4733, inband, info, auto, and auto_info |
| Figure 4-2-2 VOIP Settings | |

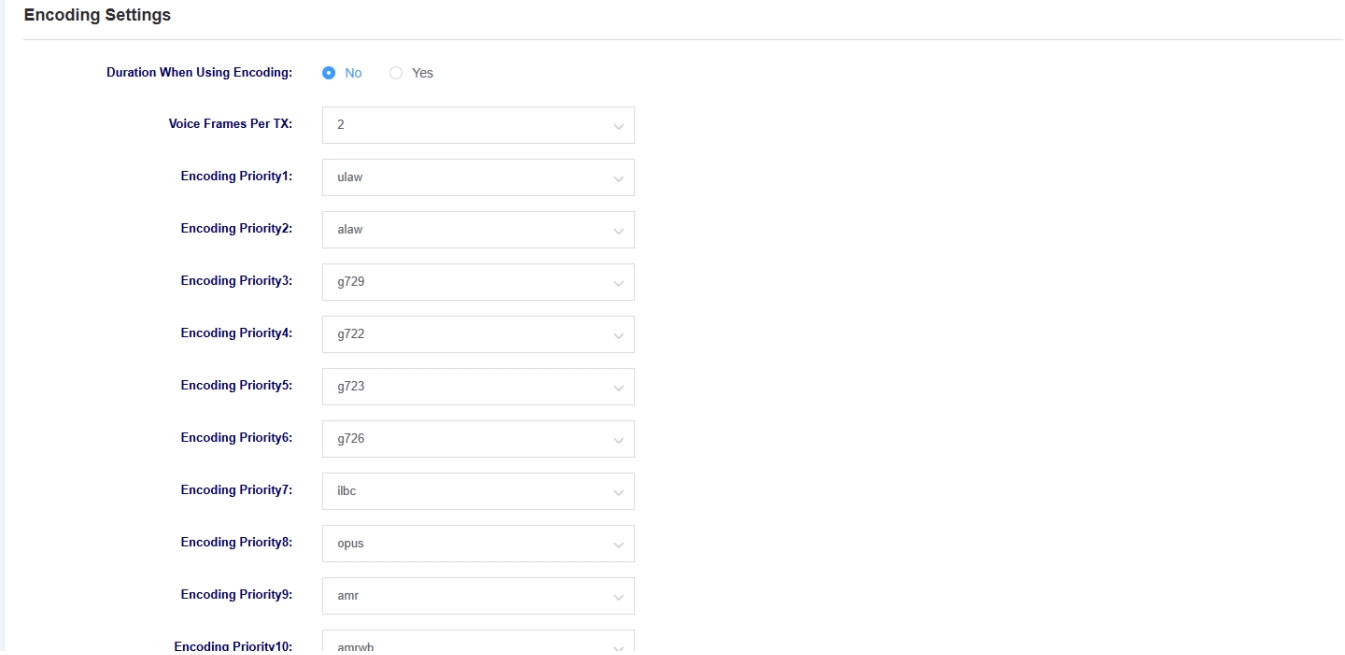



Table 4-2-2 VOIP Settings Parameter Description

| Option | Description |
| --- | --- |
| Use Codec Packing Time | Select whether to use codec packing time for more efficient use of bandwidth and resources in transmission, storage, and processing |
| Codec Priority | Set codec priority |
| Enable UDPTL | Select whether to enable UDPTL |
| UDPTL Error Correction | Select UDPTL error correction method |

# 4.3 IP->Tel Routing

Related routing can be set on this page.

Figure 4-3-1 IP->TEL Routing

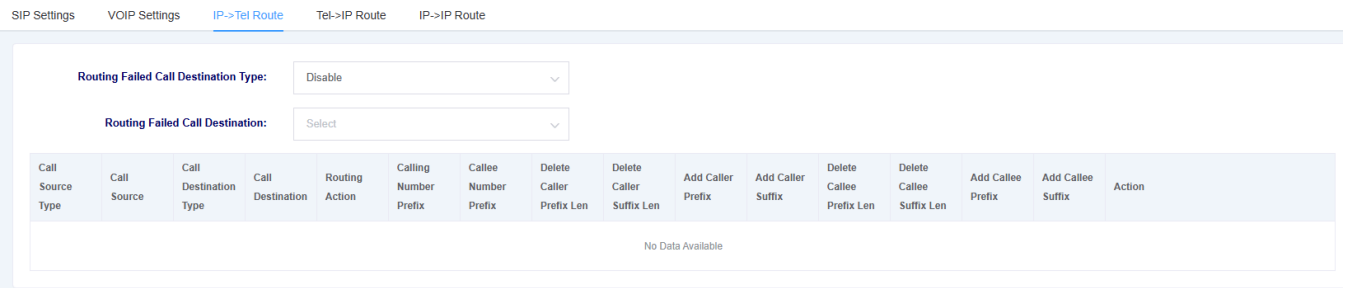



Table 4-3-1 IP->TEL Routing Parameter Description

| Option | Description |
|---|---|
| Failure Backup Line | Send to this destination when call fails |
| Call Source Type | Call source device type |
| Call Source | Call source device |
| Call Destination Type | Destination type |
| Call Destination | Call destination |
| Routing Action | Reject or permit |
| Caller Number Prefix | Set caller number prefix type |
| Callee Number Prefix | Set callee number prefix type |
| Delete Caller Prefix | Delete caller number prefix |
| Delete Callee Prefix | Delete callee number prefix |
| Add Caller Prefix | Add caller number prefix |
| Add Caller Suffix | Add caller number suffix |
| Delete Callee Prefix | Delete callee number prefix |
| Delete Callee Suffix | Delete callee number suffix |
| Add Callee Prefix | Add callee number prefix |
| Add Callee Suffix | Add callee number suffix |

# 4.4 TEL->IP Routing

Related routing can be set on this page.

Figure 4-4-1 TEL->IP Routing

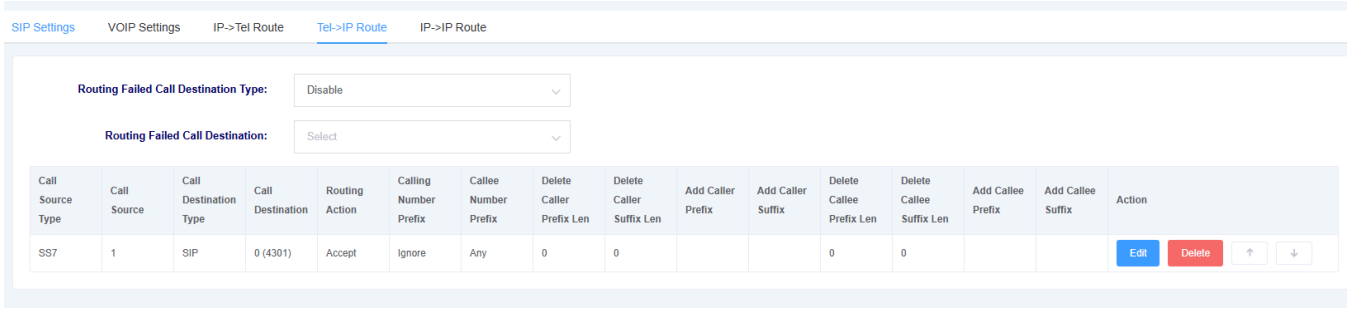



Table 4-4-1 TEL->IP Routing Parameter Description

| Option | Description |
|---|---|
| Failure Backup Line | Send to this destination when call fails |
| Call Source Type | Call source device type |
| Call Source | Call source device |
| Call Destination Type | Destination type |
| Call Destination | Call destination |
| Routing Action | Reject or permit |
| Caller Number Prefix | Set caller number prefix type |
| Callee Number Prefix | Set callee number prefix type |
| Delete Caller Prefix | Delete caller number prefix |
| Delete Callee Prefix | Delete callee number prefix |
| Add Caller Prefix | Add caller number prefix |
| Add Caller Suffix | Add caller number suffix |
| Delete Callee Prefix | Delete callee number prefix |
| Delete Callee Suffix | Delete callee number suffix |
| Add Callee Prefix | Add callee number prefix |
| Add Callee Suffix | Add callee number suffix |

# 4.5 IP->IP Routing

Related routing can be set on this page.

Figure 4-5-1 IP->IP Routing

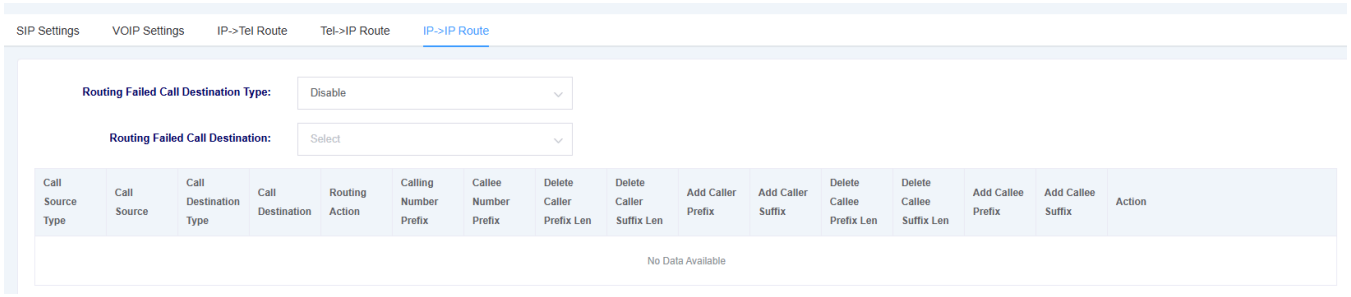



Table 4-5-1 IP->IP Routing Parameter Description

| Option | Description |
|---|---|
| Failure Backup Line | Send to this destination when call fails |
| Call Source Type | Call source device type |
| Call Source | Call source device |
| Call Destination Type | Destination type |
| Call Destination | Call destination |
| Routing Action | Reject or permit |
| Caller Number Prefix | Set caller number prefix type |
| Callee Number Prefix | Set callee number prefix type |
| Delete Caller Prefix | Delete caller number prefix |
| Delete Callee Prefix | Delete callee number prefix |
| Add Caller Prefix | Add caller number prefix |
| Add Caller Suffix | Add caller number suffix |
| Delete Callee Prefix | Delete callee number prefix |
| Delete Callee Suffix | Delete callee number suffix |
| Add Callee Prefix | Add callee number prefix |
| Add Callee Suffix | Add callee number suffix |

# 5. Trunk Settings

On this page, trunk types can be configured.

## 5.1 SIP Trunk

Figure 5-1-1 Add SIP Trunk Page

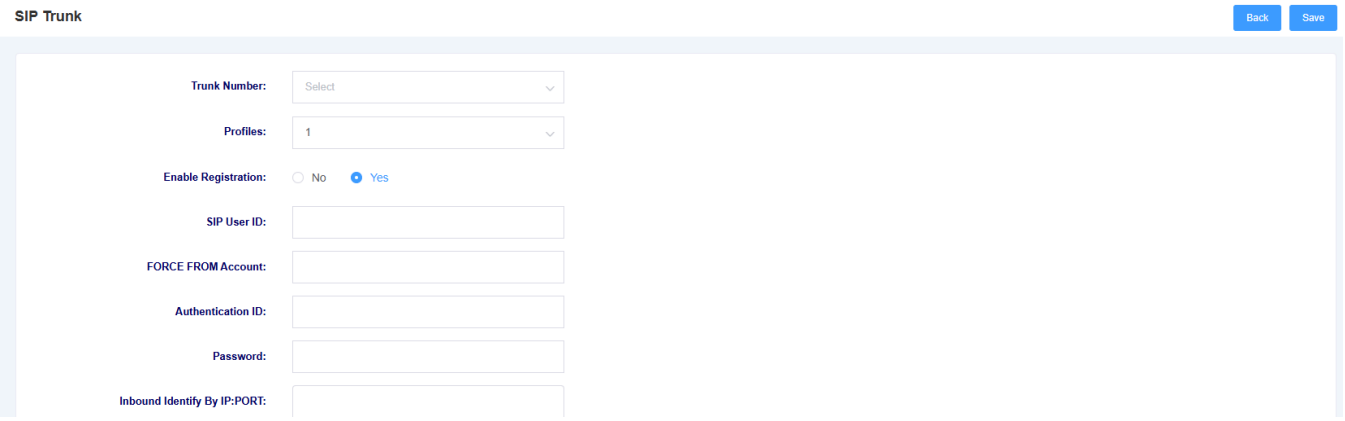



Table 5-1-1 SIP Trunk Page Parameter Description

| Option | Description |
|---|---|
| Trunk Number | Custom trunk number |
| Template | Select the template setting to use |
| Enable Registration | Select whether to enable registration settings |
| SIP User ID | Trunk name setting |
| FROM Force Account | Set FROM force account |
| Authentication ID | Authentication ID corresponding to this SIP user ID |
| Password | Password corresponding to the authentication ID |
| IP Direct Sending Table | Set caller display name |

## 5.2 Port Settings

Figure 5-2-1 Port Settings

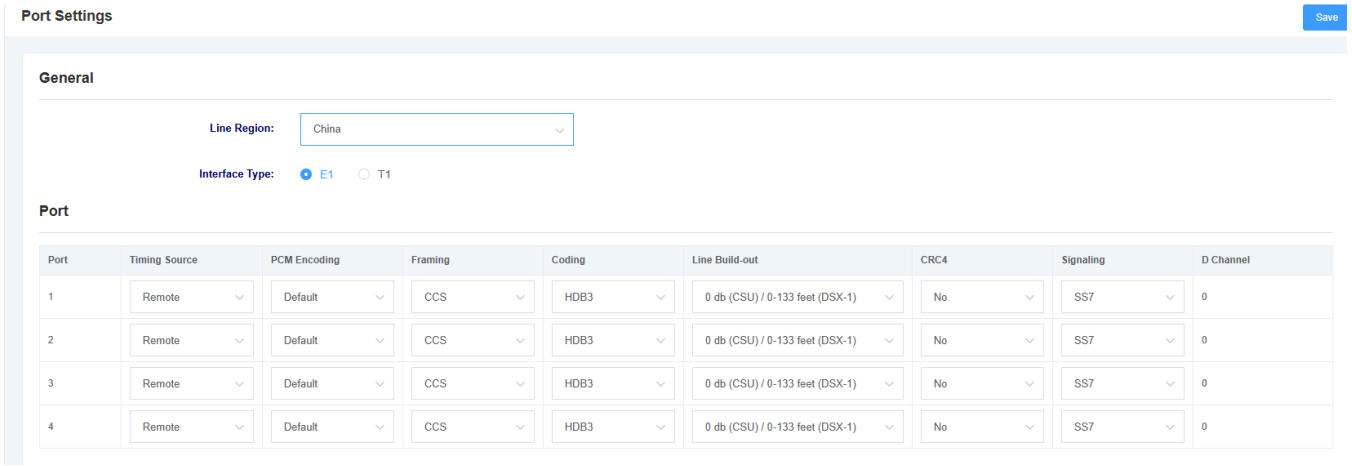
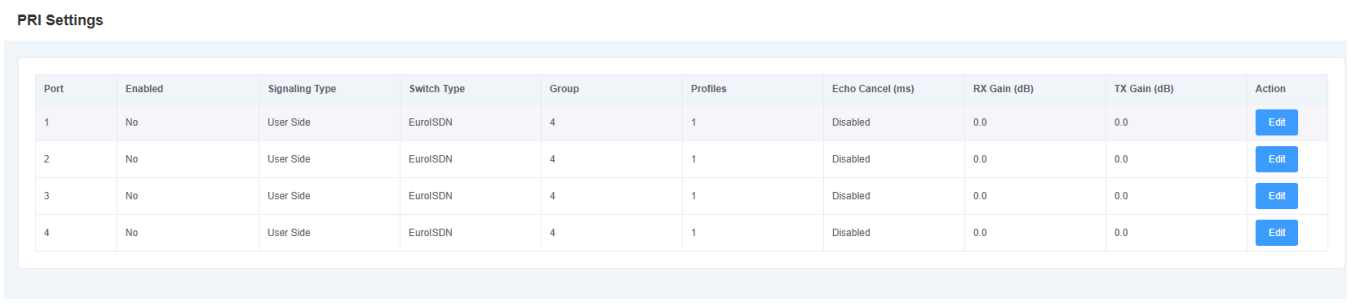


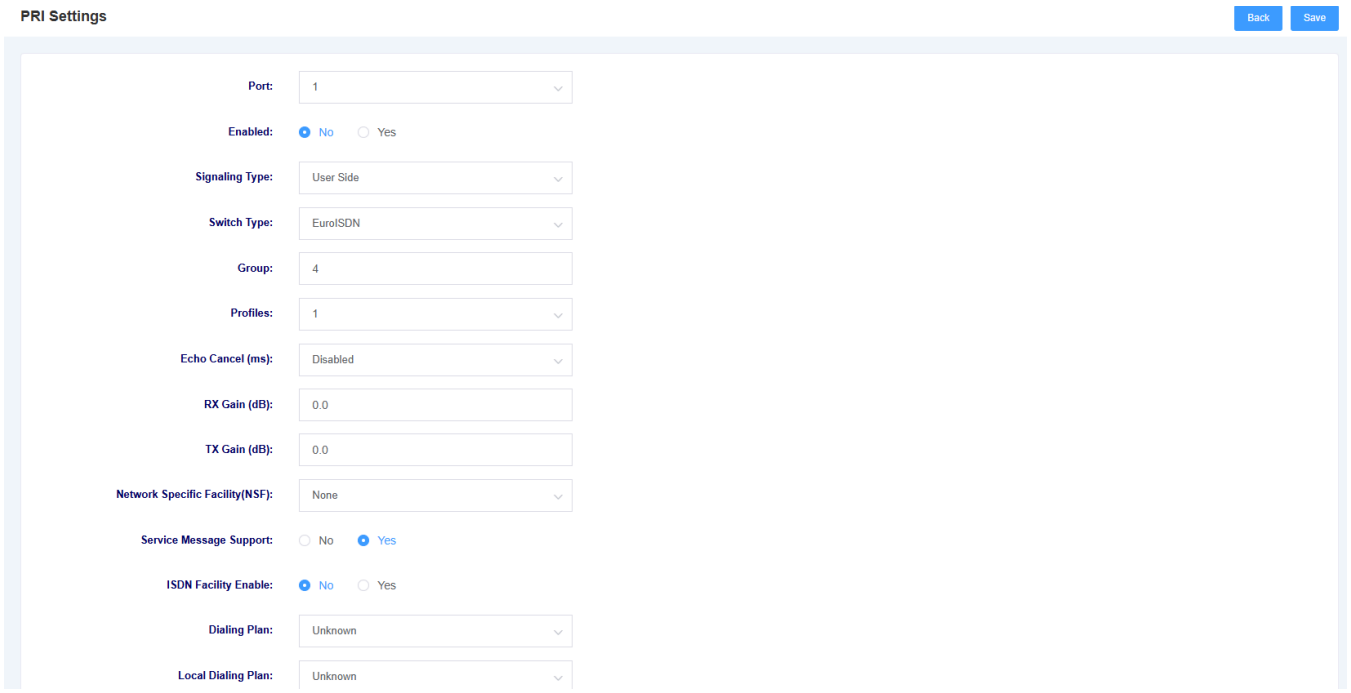

Table 5-2-1 Call Settings Parameter Description

| Option | Description |
|---|---|
| Line Area | Set line area |
| Interface Type | E1 or T1 type |
| Clock Source | Select clock source |
| PCM Coding | Select coding format |
| Frame Structure | Frame structure type |
| Line Coding | Select line coding |
| Line Compensation | External line represents the cable length from this gateway port to the next device. |
| CRC4 | Set verification |
| Signaling | Set signaling type |
| D Channel | Set D channel position |

# 5.3 PRI Settings

Figure 5-3-1 PRI Settings





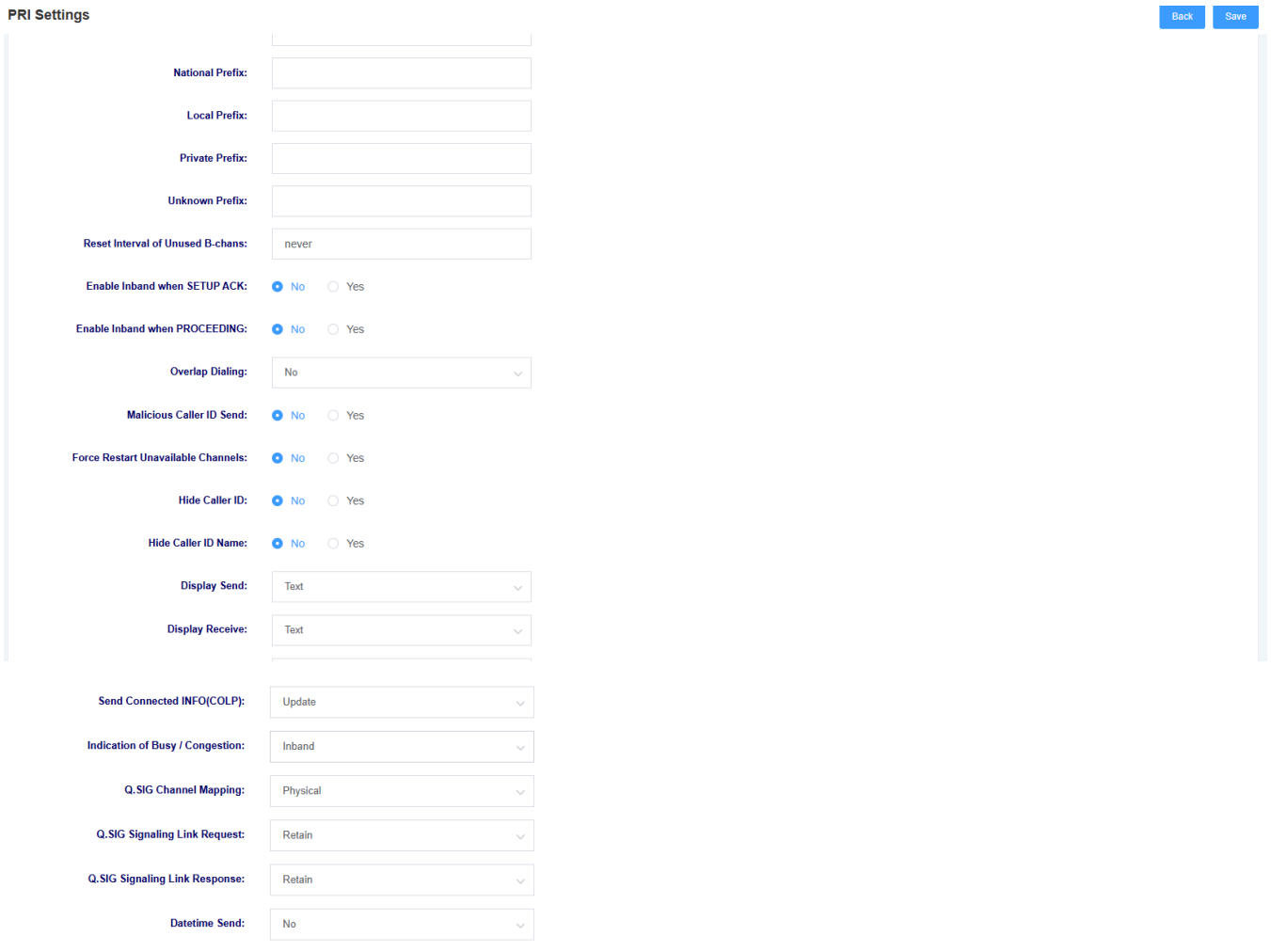







Table 5-3-1 Call Settings Parameter Description

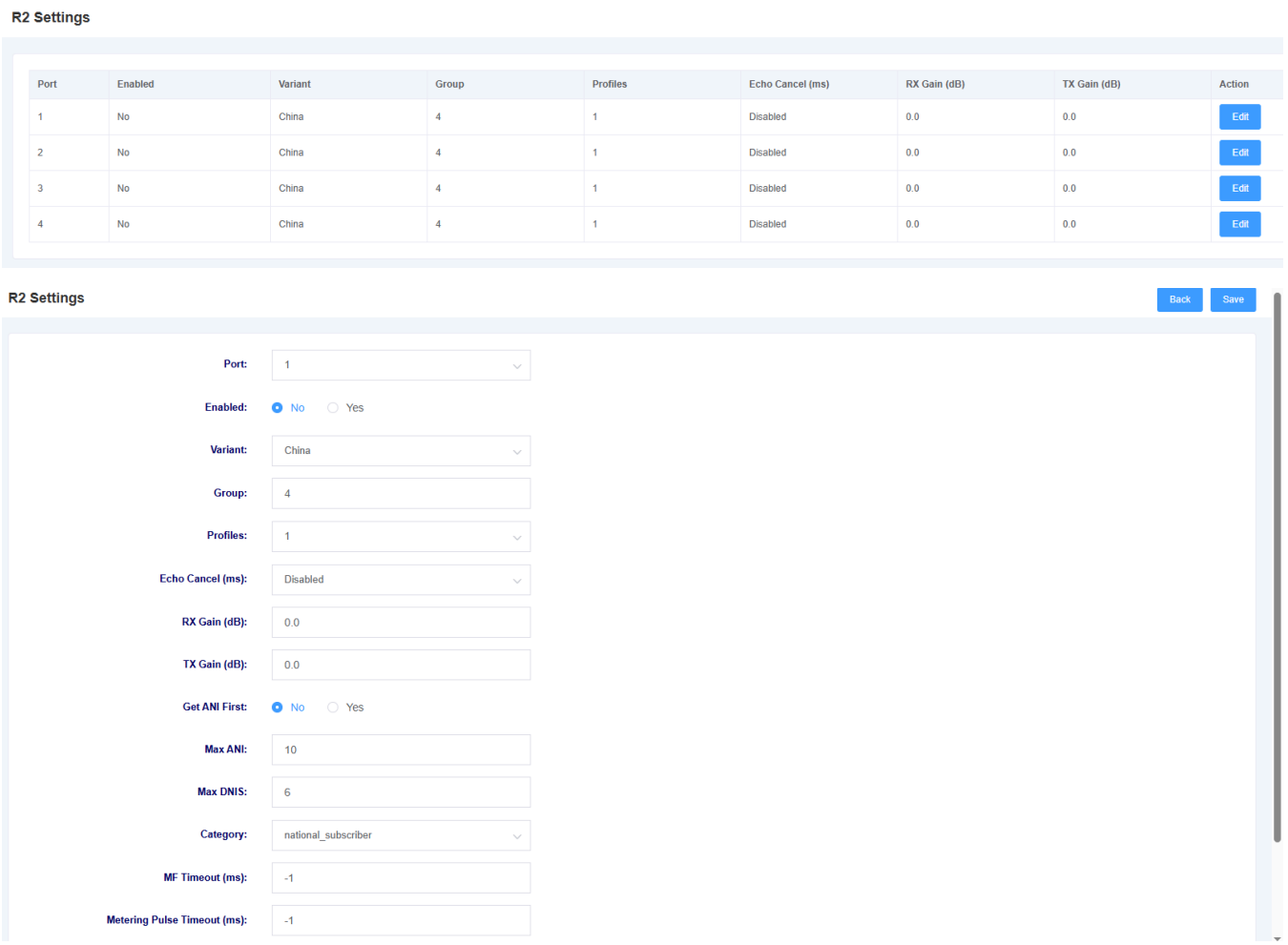
| Option | Description |
| --- | --- |
| Port | Select port |

| Option | Description |
| --- | --- |
| Enable | Whether to enable |
| Signaling Type | Set signaling type |
| Switch Type | Digital signaling switch type |
| Group | Set group number |
| Template | Select the template to use |
| Echo Cancellation | Echo cancellation length |
| RX Gain | Receiving audio energy gain |
| TX Gain | Transmitting audio energy gain |
| ATT Carrier | ATT carrier network special parameters |
| Enable Message Service | Enable message service support |
| Dialing Plan | Dialing plan |
| Local Dialing Plan | Local dialing plan |
| Peer Dialing Plan | Peer dialing plan |
| Number Prefix International | Number prefix International |
| Number Prefix National | Number prefix National |
| Number Prefix Local | Number prefix Local |
| Number Prefix Private | Number prefix Private |
| Number Prefix Unknown | Number prefix Unknown |
| Unused B Channel Restart Cycle | Unused B channel restart cycle |
| SETUP ACK Receive Inband Audio | Receive inband audio at SETUP ACK (Q.SIG must be enabled if overlap is enabled) |
| PROCEEDING Receive Inband Audio | Receive inband audio at PROCEEDING |
| Overlap Dialing | Overlap dialing |
| Send ISDN Request | Send ISDN Malicious Caller ID request on SPAN |
| Auto Restart Unavailable Channels | Whether to automatically restart unavailable channels |
| Hide Caller Number | Whether to hide caller number |
| Hide Caller Name | Whether to hide caller name |

| Option | Description |
| --- | --- |
| Send Display | Send display Note: only NET side supports, CPE and Q.SIG do not support |
| Receive Display | Receive display Note: only NET side supports, CPE and Q.SIG do not support |
| Send Information | Whether to send connect number information when sending connect |
| Busy and Congestion Indication Method | PRI busy and congestion indication method |
| Q.SIG Channel Mapping Method | Set Q.SIG channel mapping method Note: T1 forces physical |
| Q.SIG Calling Signaling Link | Set Q.SIG calling signaling link |
| Q.SIG Responding Signaling Link | Set Q.SIG responding signaling link |
| NET Side Send Datetime to CPE Side | Set NET side send datetime to CPE side |

# 5.4 R2 Settings

Figure 5-4-1 R2 Settings



| Parameter | Description |
|---|---|
| Port | Select port |
| Enable | Whether to enable port |
| Protocol Type | Select protocol type |
| Group | Set group |
| Template | Select the template to use |
| Echo Cancellation | Whether to enable echo cancellation |
| RX Gain | Set receive gain |
| TX Gain | Set transmit gain |
| Get ANI | Get ANI before obtaining DNIS |
| Max ANI Requested | Maximum ANI digits requested |
| Max DNIS Requested | Maximum DNIS digits requested |
| Incoming Subscription | Incoming subscription category |
| MF Timeout | MF timeout |
| Pulse Timeout | Pulse timeout |
| Skip Request Caller Category and ANI | Skip request caller category and ANI |
| Support Double Answer | Whether to support double answer |

# 5.5 SS7 Settings

Figure 5-5-1 SS7 Settings

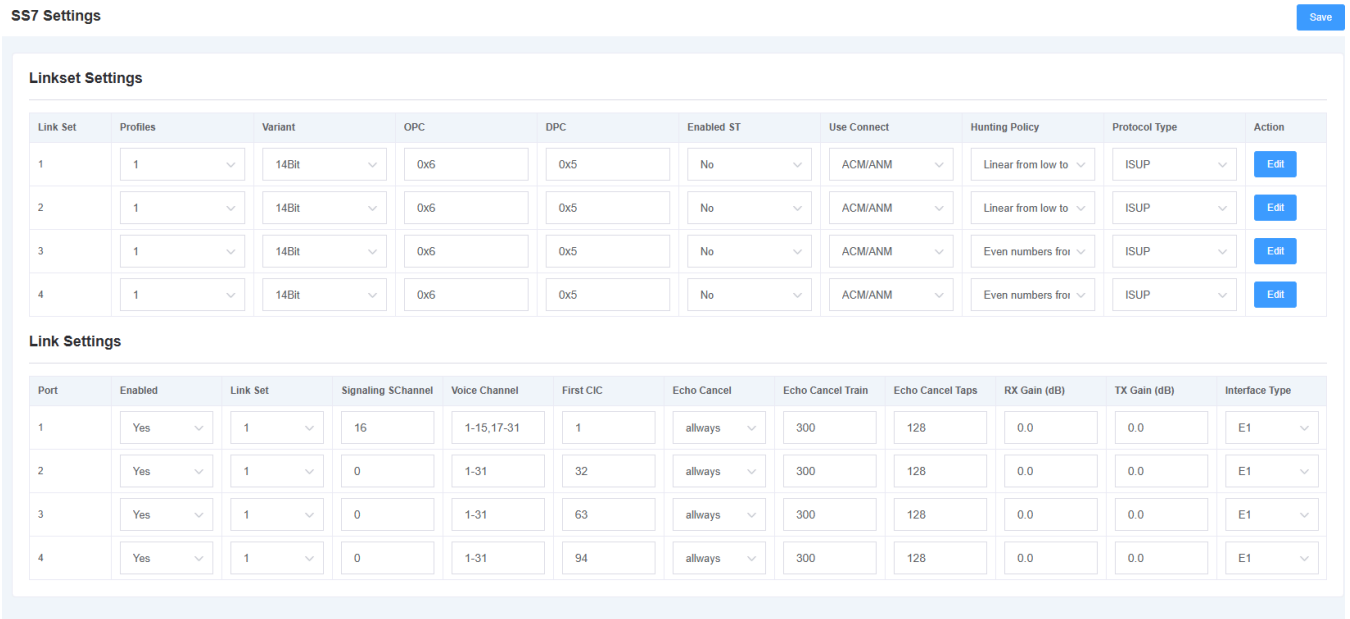


Table 5-5-1 SS7 Parameter Description

| Parameter | Description |
| --- | --- |
| Enable | Whether to enable |
| Link Group | Select link group |
| Signaling Channel | Signaling channel |
| Voice Channel | Audio channel |
| Starting Circuit Identification Code | CIC starting position |
| Echo Cancellation | Echo cancellation switch |
| Echo Cancellation Training | Echo training period |
| Echo Cancellation Taps | Echo cancellation TAPS(ms=taps/8) |
| RX Gain | Receiving audio energy gain |
| TX Gain | Transmitting audio energy gain |

# 6. Advanced Configuration

## 6.1 Fax Parameters

On this page, fax-related parameters can be configured.

Figure 6-1-1 Fax Parameters

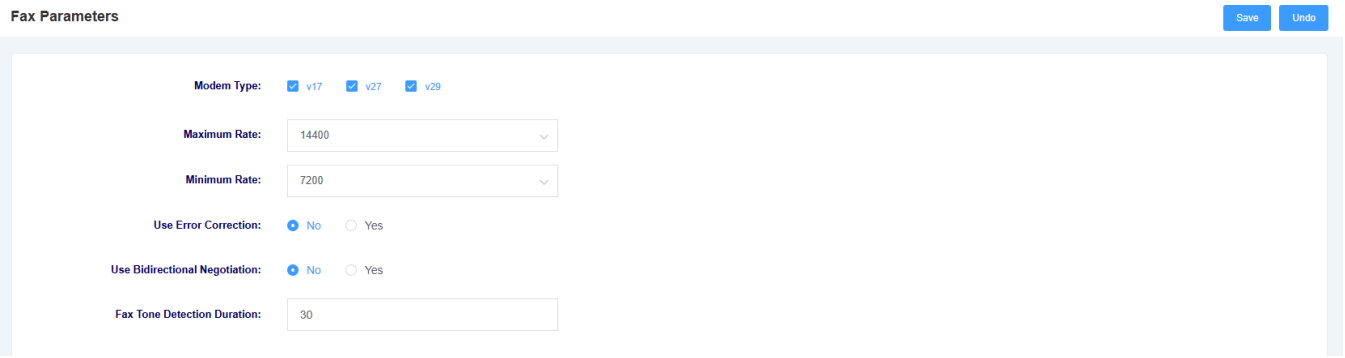


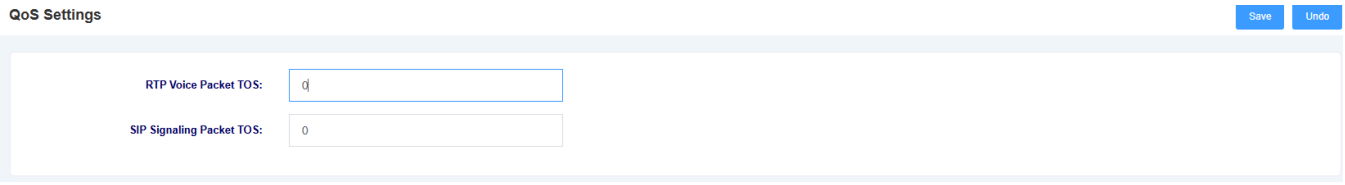

Table 6-1-1 Network Settings Description

| Option | Description |
|---|---|
| Modem Type | Set supported modem types |
| Max Rate | Select the maximum rate supported by fax |
| Min Rate | Select the minimum rate supported by fax |
| Error Verification | Select whether to enable error verification |
| Bidirectional Negotiation | Select whether to enable bidirectional negotiation |
| Fax Tone Detection Duration | Set fax tone detection duration |

## 6.2 QoS Settings

On this interface, RTP voice packet TOS and SIP signaling packet TOS can be set.

Figure 6-2-1 QoS Settings Interface




## 6.3 E1/T1 Settings

On this interface, digital line related parameters can be set, such as DTMF and jitter buffer.

Figure 6-3-1 E1/T1 Settings Interface

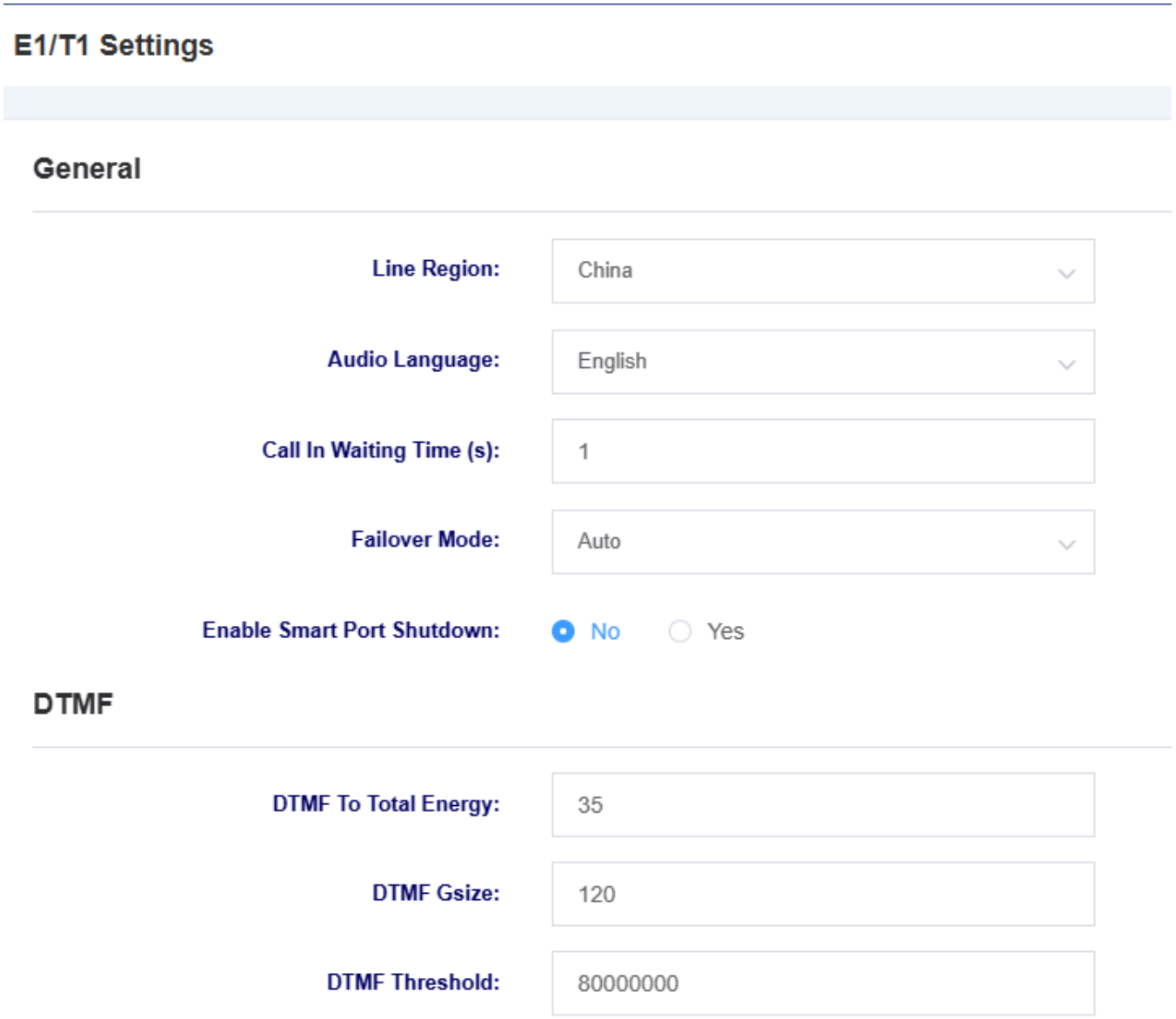



Table 6-3-1 E1/T1 Parameter Description

| Option | Description |
| --- | --- |
| Line Area | Select the area where the line is located |
| Audio Language | Select the language for voice prompts |
| Busy and Congestion Indication Method | Method to generate BUSY and CONGESTION notifications |
| Enable Smart Port Shutdown | After Smart Port Shutdown is enabled, the device detects whether the SIP side is disconnected through a heartbeat mechanism. If a disconnection is detected, the device will close the corresponding port line. |
| Call In Waiting Time | Set waiting time when call comes. default value: 1s |
| DTMF Threshold | Set DTMF threshold |

| Option | Description |
| --- | --- |
| Failover Mode | Configure Failover Mode.<br>Automatic Mode: The device handles calls normally. If the device loses power, undergoes an upgrade, or reboots, the system will automatically activate the standby unit. Once the system recovers, it will automatically switch back to the primary unit.<br>Manual Mode: The device is in manual mode, requiring manual activation or deactivation of the primary unit. After the system starts up, the primary unit remains deactivated until the user manually switches it back on. |

Figure 6-3-2 E1/T1 Settings Interface

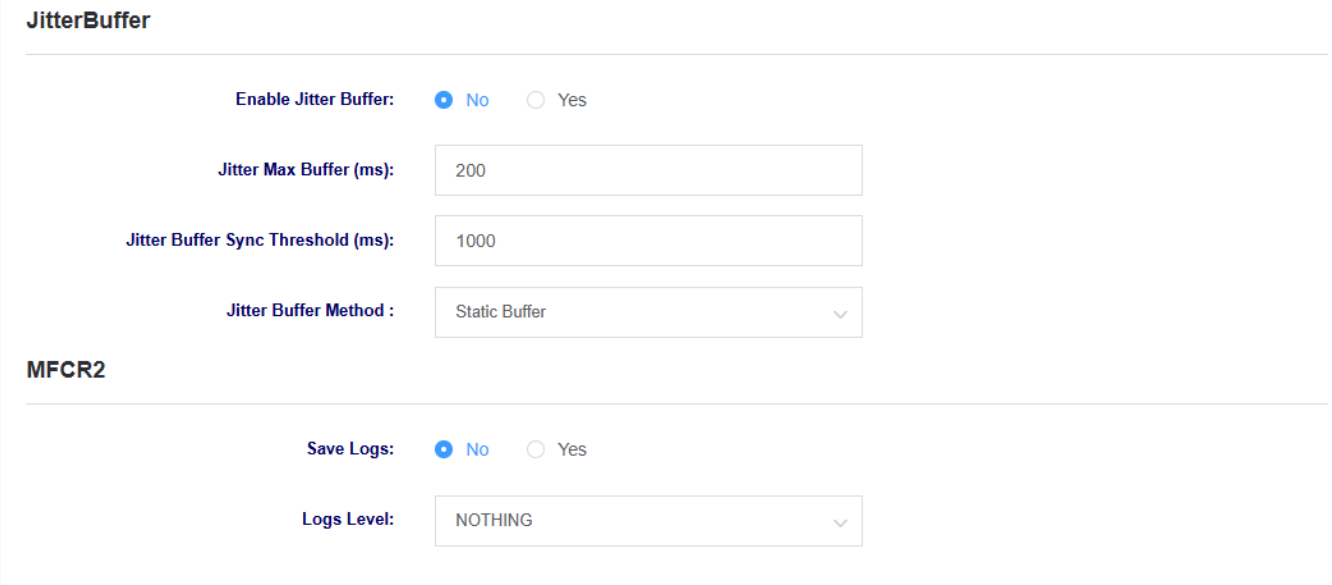



Table 6-3-2 E1/T1 Settings Parameter Description

| Option | Description |
| --- | --- |
| Jitter Buffer | Select whether to enable jitter buffer |
| Jitter Buffer Method | Select jitter buffer method |
| Jitter Sync Timestamp | Set jitter sync timestamp |
| Jitter Max Buffer | Set jitter max buffer |
| Save Log | Whether to save log |
| Log Level | Set log level |

## 6.3.1 Failover

The Bypass Failover interface is not a standalone E1/T1 service port, but rather a bypass interface used for fault protection. When the device is operating normally, E1/T1 signals are processed by the DGW-300X; however, during device reboots, firmware upgrades, or power outages, the corresponding E1/T1 interface automatically switches to the Bypass Failover interface. This allows external lines to bypass the DGW-300X and continue connecting to the standby device, thereby minimizing service downtime.

The DGW-3001 provides 1 E1/T1 bypass failover channel, while the DGW-3002 provides 2 E1/T1 bypass failover channels, The DGW-3004 provides 4 sets of E1/T1 bypass failover channels, each consisting of one E1/T1 RJ45 port and one corresponding bypass failover RJ48 port.

The following example uses the DGW-3004.

Table 6-3-3 E1/T1 Interface and Failover Interface Correspondence

| E1/T1 Interface | Corresponding Bypass Failover Interface | Description | Bypass Trigger Conditions |
|---|---|---|---|
| E1/T1-1 | Bypass-1 | E1/T1 Bypass Protection Channel 1 | device failure/power loss/reboot/firmware upgrade |
| E1/T1-2 | Bypass-2 | E1/T1 Bypass Protection Channel 2 | device failure/power loss/reboot/firmware upgrade |
| E1/T1-3 | Bypass-3 | E1/T1 Bypass Protection Channel 3 | device failure/power loss/reboot/firmware upgrade |
| E1/T1-4 | Bypass-4 | E1/T1 Bypass Protection Channel 4 | device failure/power loss/reboot/firmware upgrade |

Typical wiring configuration: Each E1/T1 bypass protection circuit requires connection to two RJ45 ports simultaneously.

Table 6-3-4 E1/T1 Interface and Failover Interface Connection Objects

| Interface | Recommended connections |
|---|---|
| E1/T1-x | Connect to carrier E1/T1 lines, PBXs, transmission equipment, or upstream equipment |
| Bypass-x | Connect the DGW-300X backup link device |

Table 6-3-5 Failover Mode

| | Description |
|---|---|
| Failover Auto Mode | The device handles calls normally. When the device loses power, is upgraded, or reboots, the system automatically activates the standby unit. After the system recovers, it automatically switches back to the primary unit.<br>Trigger behaviors:<br>Device failure: When a hardware or software failure occurs, the system switches to the standby unit. After the primary unit recovers, the line switches back to the primary unit.<br>System reboot: Failover successfully switches to the standby unit. After the primary unit restarts successfully, the line switches back to the primary unit.<br>Firmware upgrade: During the upgrade process, failover successfully switches to the standby unit. After the primary unit is fully up and running, the line switches back to the primary unit.<br>Power outage: Failover immediately switches to the standby unit. After the primary unit is powered on again, the line switches back to the primary unit. |

| | Description |
|---|---|
| Failover Manual Mode | After the primary unit restarts successfully, the line switches back to the primary unit.The device is in manual mode, so the primary unit must be enabled or disabled manually. After the system starts, the primary unit remains disabled until the user selects **Enable Host** on the page and saves the setting. Only then can the line switch back to the primary unit.<br>Trigger behaviors:<br>Device failure: When a hardware or software failure occurs, the system switches to the standby unit. After the primary unit comes back up, the standby unit continues working.<br>System reboot: After rebooting, the line switches to the standby unit. After the primary unit comes back up, the standby unit continues working.<br>Firmware upgrade: During a configuration-preserving upgrade, the system switches to the standby unit. After the primary unit comes back up, the standby unit continues working.<br>Reboot: The system switches to the standby unit when device is reboot. After the primary unit comes back up, the standby unit continues working. |

Figure 6-3-3 Failover Auto Mode

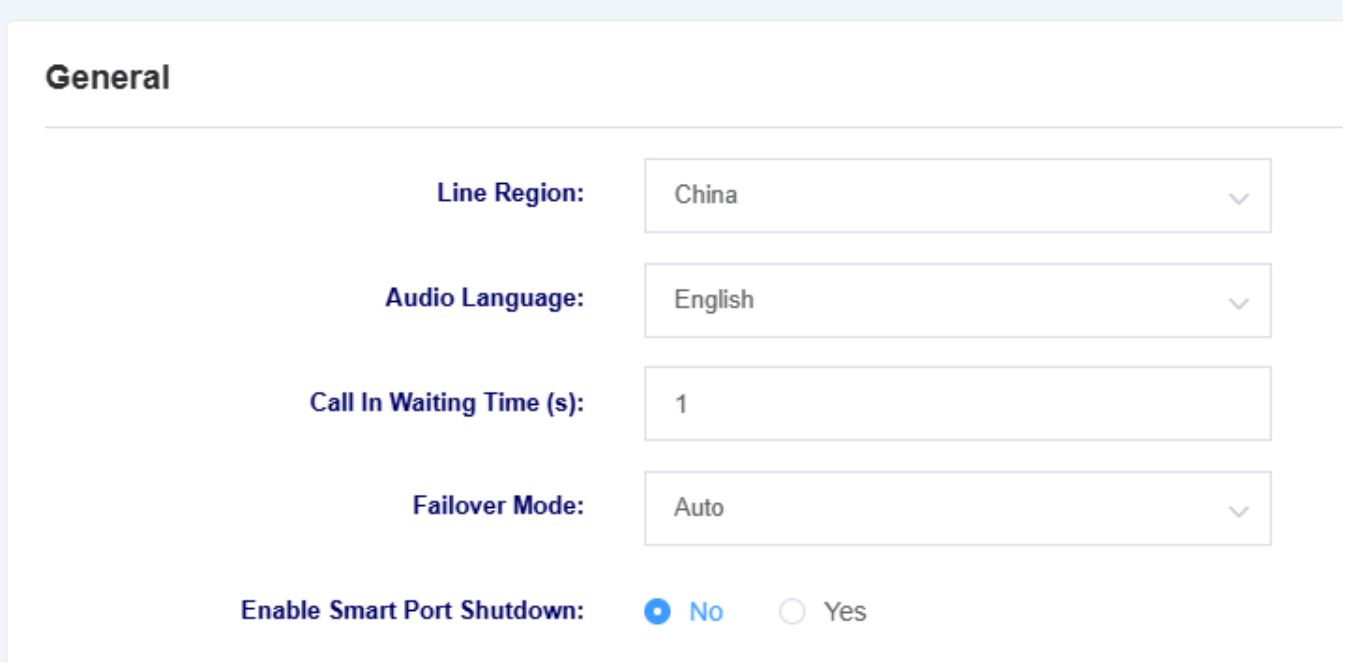
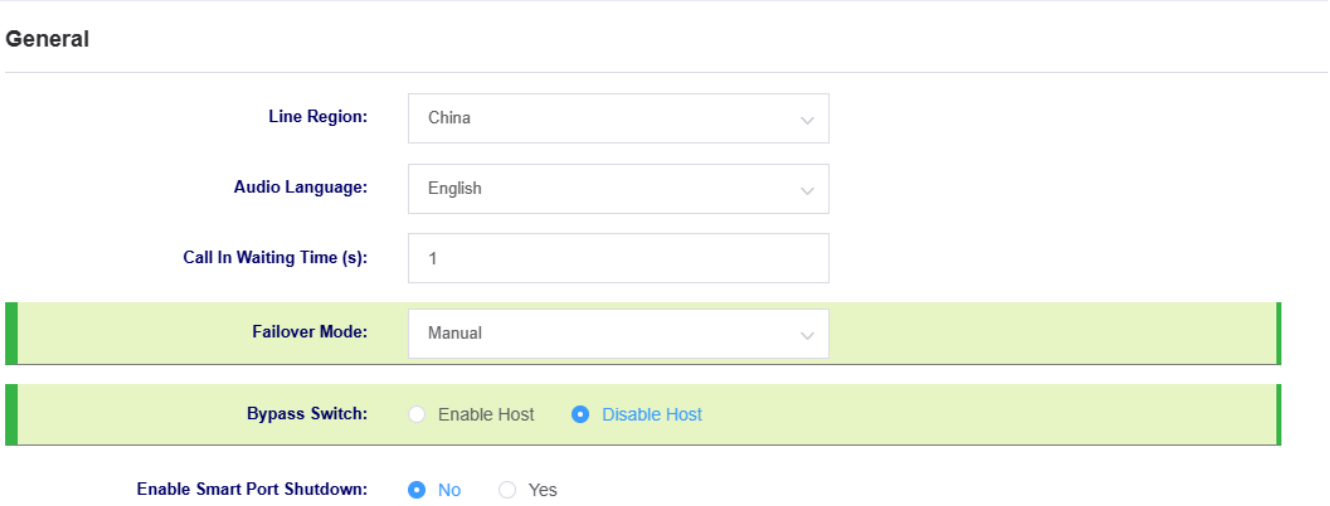



Figure 6-3-4 Failover Manual Mode



# 6.4 VOIP Settings

On this page, VoIP-related settings can be made, such as call settings and session settings.

Figure 6-4-1 VoIP Settings

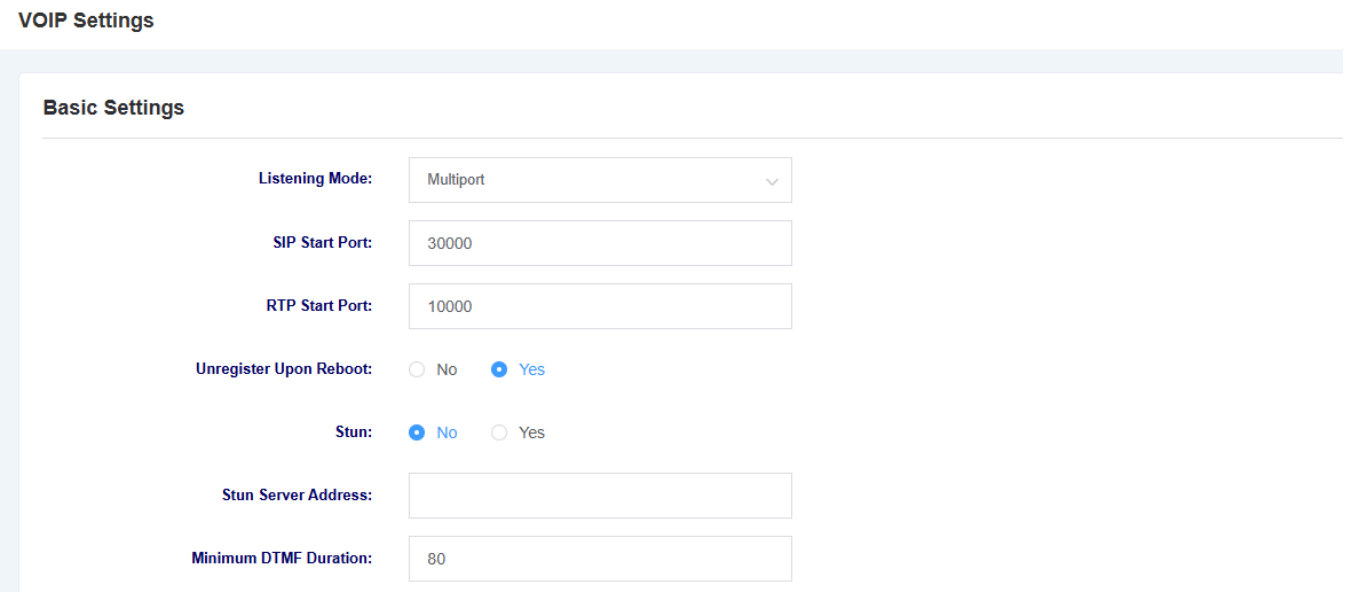



Table 6-4-1 VoIP Settings Parameter Description

| Option | Description |
|---|---|
| Listening Mode | Select listening mode, can select multi-port and single-port |
| SIP Starting Port | Set SIP starting port |
| RTP Starting Port | Set RTP starting port |
| Unregister on Restart | Select whether to unregister on restart |
| STUN | Select whether to enable STUN |
| STUN Server Address | Set STUN server address |
| Min DTMF Duration | Set minimum DTMF duration |
| Figure 6-4-2 VoIP Settings | |

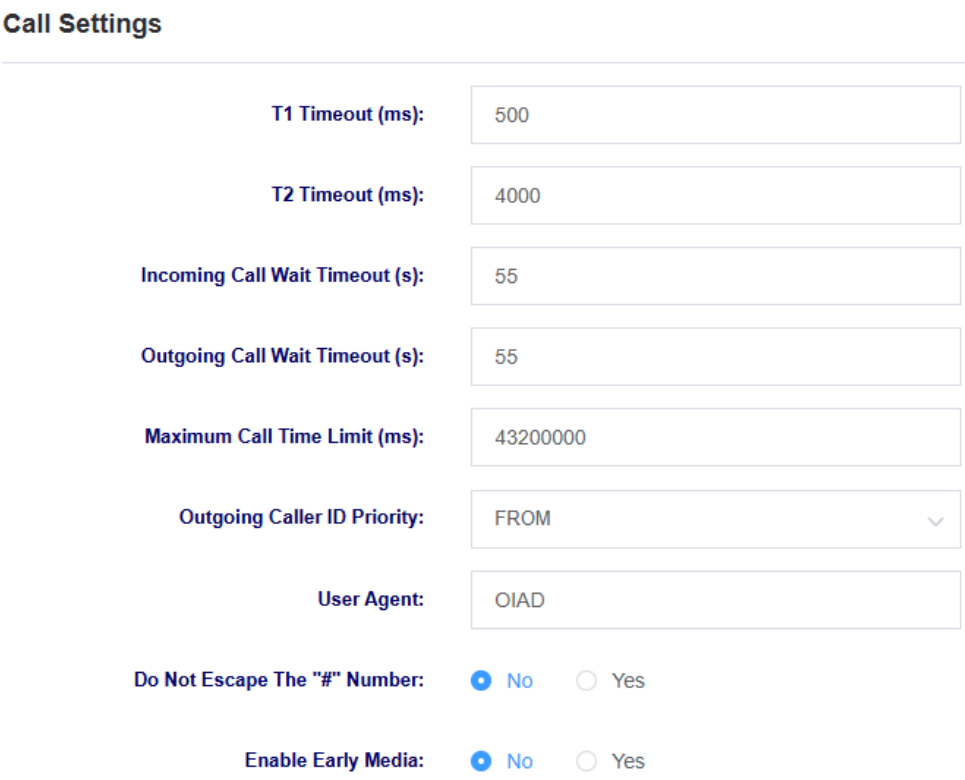



Table 6-4-2 VoIP Settings Parameter Description

| Option | Description |
|---|---|
| T1 Timeout | Set T1 timeout time |
| T2 Timeout | Set T2 timeout time |
| Incoming Wait Timeout | Set incoming wait timeout time |
| Outgoing Wait Timeout | Set outgoing wait timeout time |
| Call Max Duration | Set call maximum duration, call will be hung up after exceeding |
| Caller Number Display Priority | Select caller number priority from FROM field or P-Asserted-Identity field |
| User Agent | Set User Agent |
| Do Not Escape "#" | Whether not to escape # |
| Figure 6-4-3 VoIP Settings | |

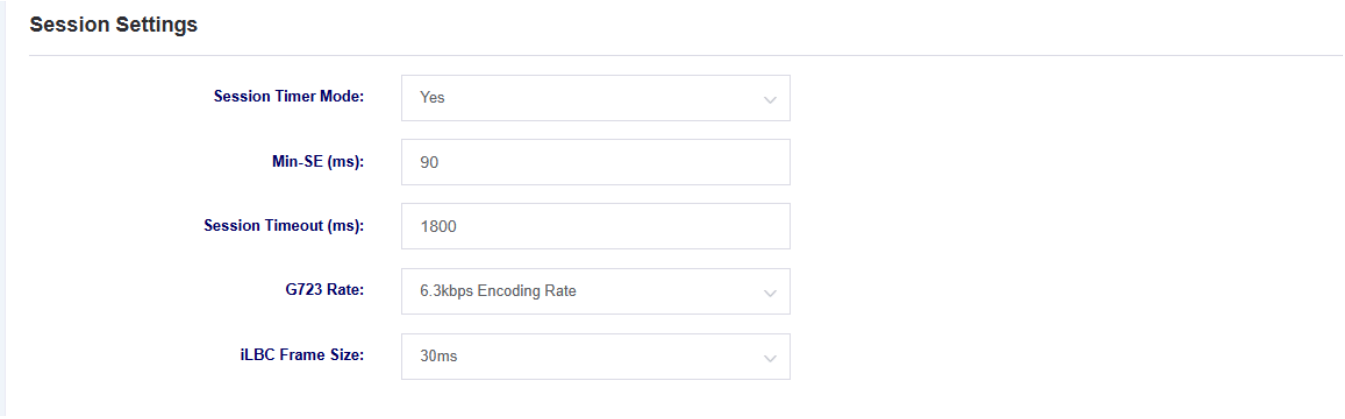


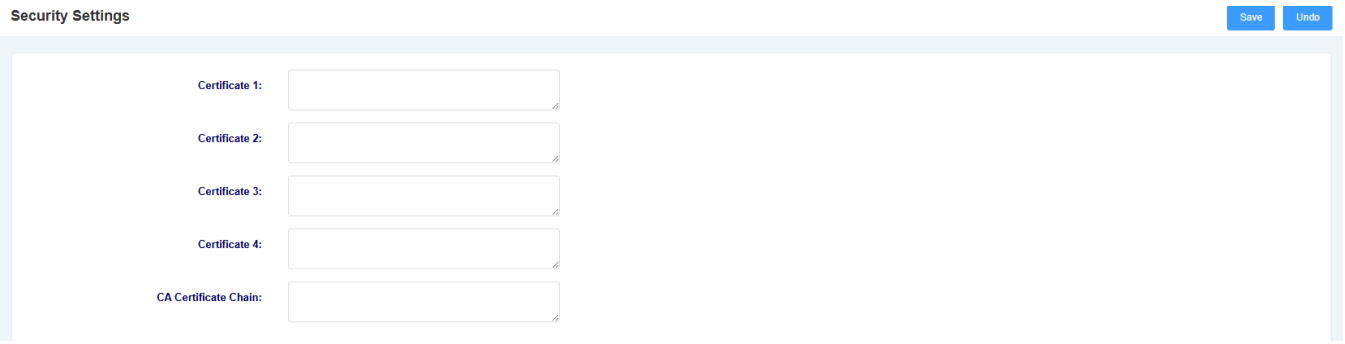

Table 6-4-3 VoIP Settings Parameter Description

| Option | Description |
| --- | --- |
| Session Timer Mode | Select session timer mode |
| Min-SE | Set minimum session timeout duration |
| Session Timeout | Set session timeout time |
| G723 Rate | Set G723 rate |
| iLBC Frame Duration | Set iLBC frame duration |

# 6.5 Security Settings

On this page, certificates can be uploaded.

Figure 6-5-1 Security Settings Interface



# 7 Maintenance

## 7.1 Auto Restart

On this page, the auto restart function can be set, and the device can restart according to the set time.

Figure 7-1-1 Restart Page

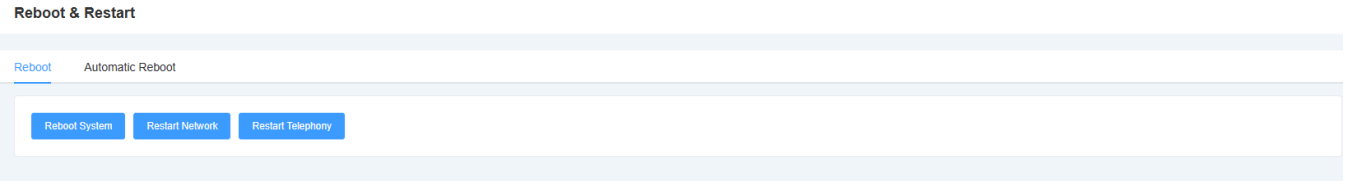
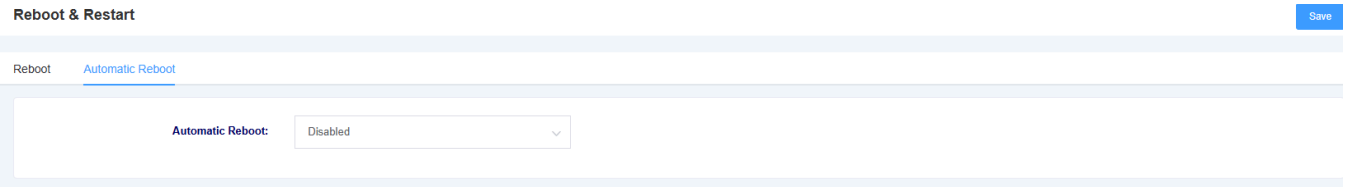


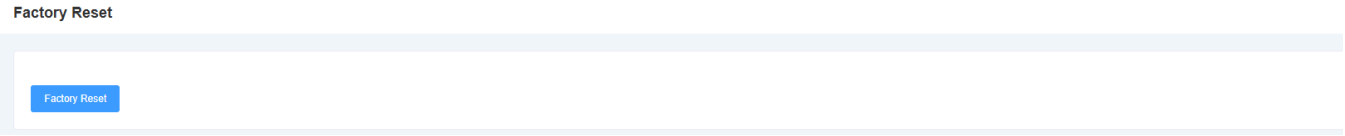

Figure 7-2-1 Auto Restart Page




## 7.2 Factory Reset

After clicking the factory reset button, the device will automatically restart and restore factory settings.

Figure 7-2-1 Factory Reset Interface




## 7.3 Auto Deployment

L30X configuration file and upgrade file function can be set on this page.

Figure 7-3-1 Auto Deployment Interface

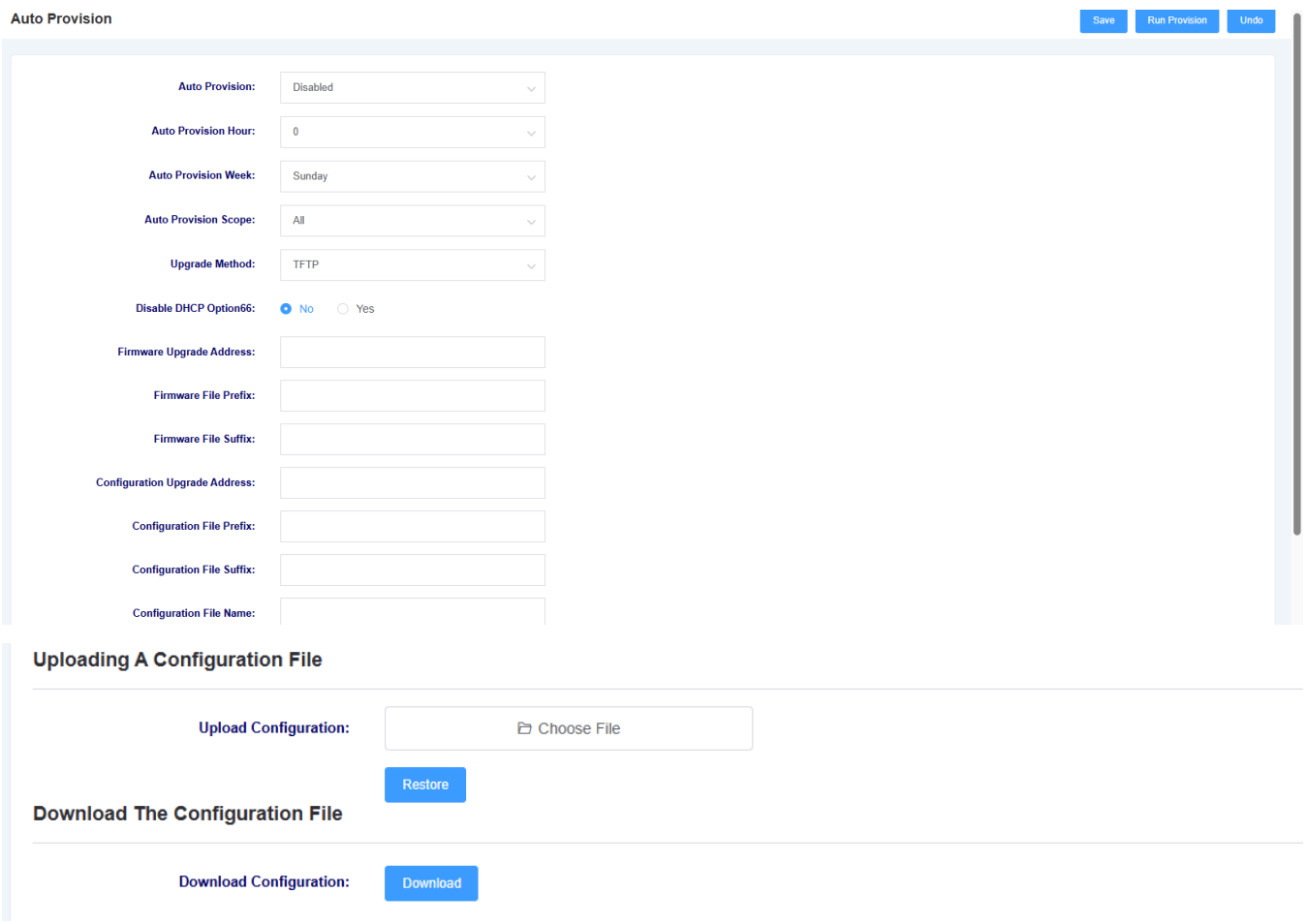



Table 7-3-1 Auto Deployment Parameter Description

| Option | Description |
|---|---|
| Auto Deployment | Set auto deployment mechanism, can select auto deployment after each power-on or deploy at set time intervals |
| Auto Deployment Hour | Set at what time to deploy |
| Auto Deployment Week | Set on which day of the week to deploy |
| Auto Deployment Scope | Select the scope of auto deployment, can select configuration file and upgrade firmware |
| Upgrade Method | Select auto deployment upgrade method, supports TFTP, HTTP, HTTPS |
| Disable DHCP Option 66 | Select whether to enable DHCP option 66 to obtain files |
| Option | Description |
| Firmware Upgrade Address | Set firmware upgrade path |
| Firmware File Prefix | Set firmware file prefix |
| Firmware File Suffix | Set firmware file suffix |

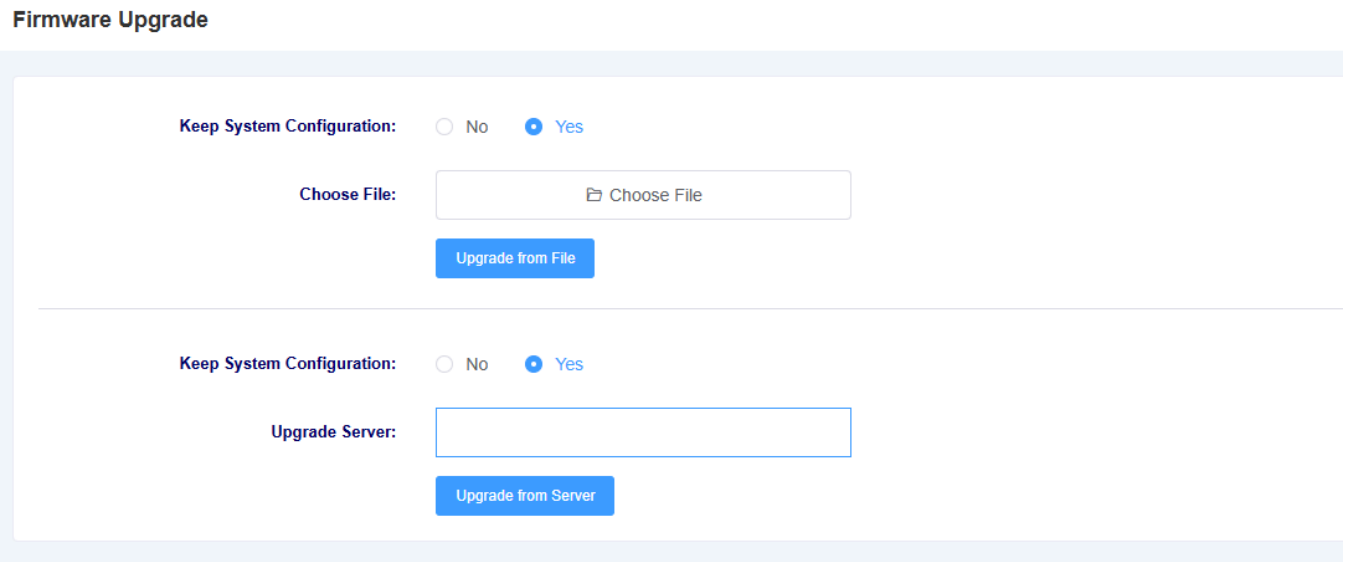
| Option | Description |
| --- | --- |
| Configuration Upgrade Address | Set configuration upgrade path |
| Configuration File Prefix | Set configuration file prefix |
| Configuration File Suffix | Set configuration file suffix |
| Upload Configuration | Upload configuration file |
| Download Configuration | Download device current configuration file |

The file name needs to be modified according to the rules. The main control firmware file name rule is (pre)(firmware model).img(post), the interface board firmware file name rule is (pre)ixu(mac).img(post), the configuration file name rule is (pre)cfg(mac)(post), pre is prefix, post is suffix, prefix and suffix can be left blank.

# 7.4 Firmware Upgrade

On this page, firmware upgrade can be performed. Select the corresponding firmware type and upload the file to upgrade. You can choose whether to retain the system configuration. If the system configuration is not retained, the device will clear the system configuration after upgrading.

Figure 7-4-1 Firmware Upgrade




# 7.5 Time Settings

On this page, the device time settings can be made. Users can set the time zone and set the NTP server address to automatically synchronize time.

Figure 7-5-1 Time Settings

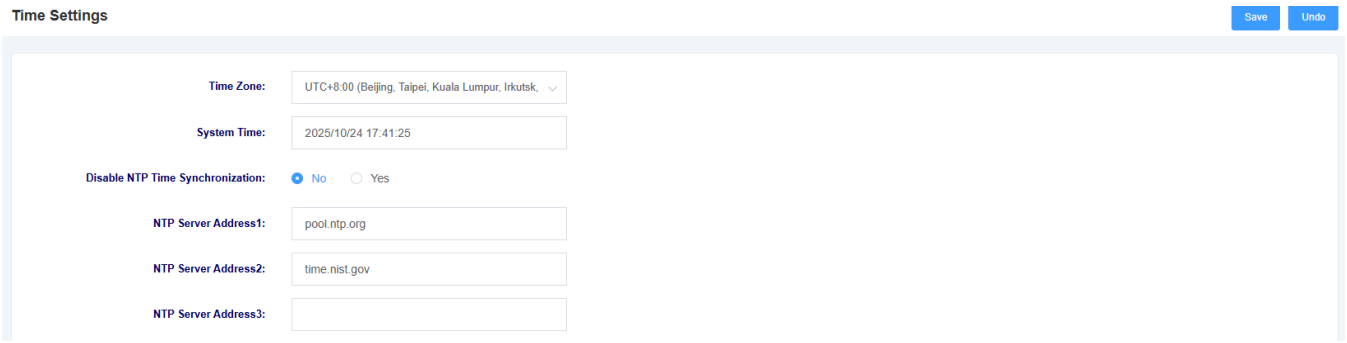


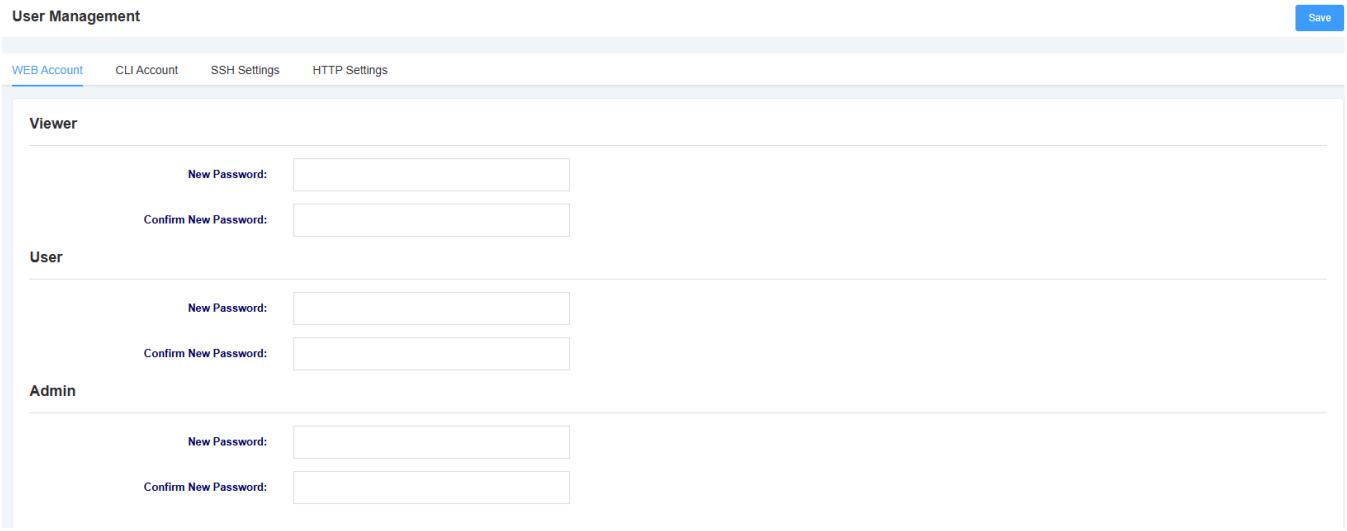

Table 7-5-1 Time Settings Parameter Description

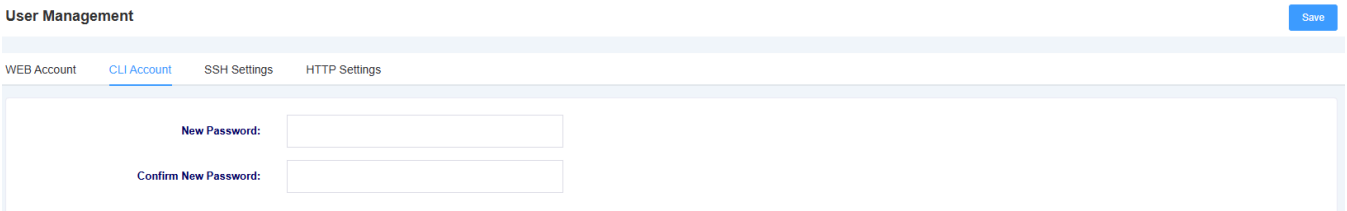
| Option | Description |
| --- | --- |
| Time Zone | Set device time zone |
| System Time | Display system time |
| Enable NTP Time Sync | Select whether to enable NTP time sync |
| NTP Server Address | Set NTP server address |

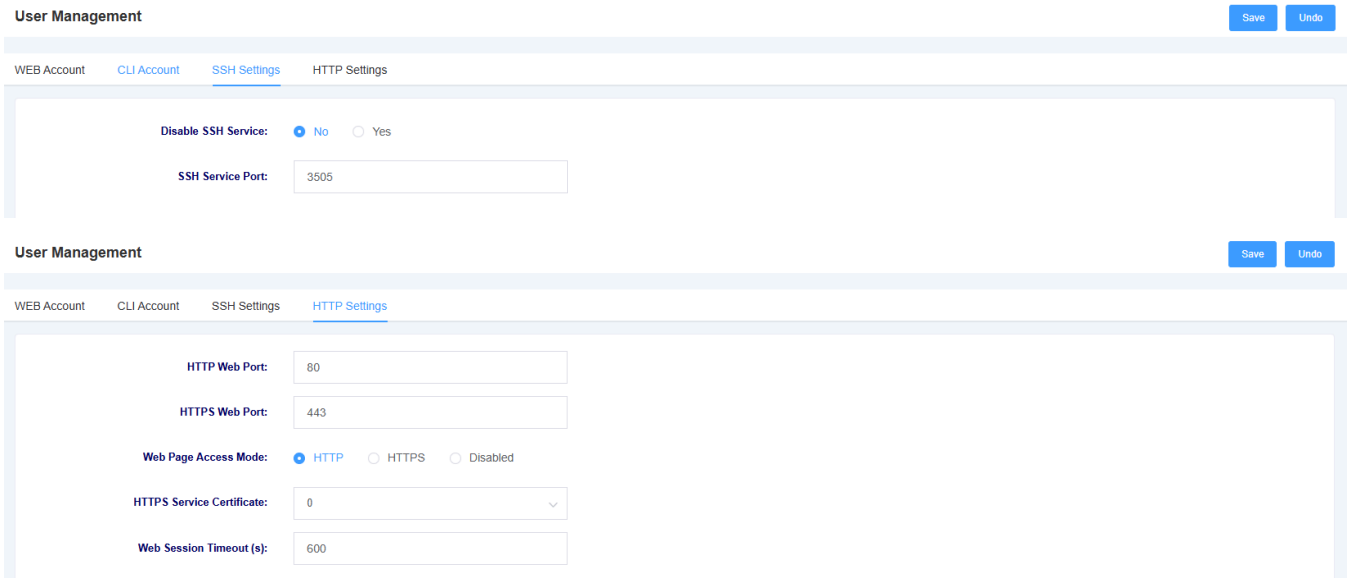
# 7.6 User Management

L30X supports different user roles for login, with different permissions. On the user management page, passwords can be changed for different roles, SSH function can be switched on and off, and HTTP settings can be made.

Figure 7-6-1 User Management



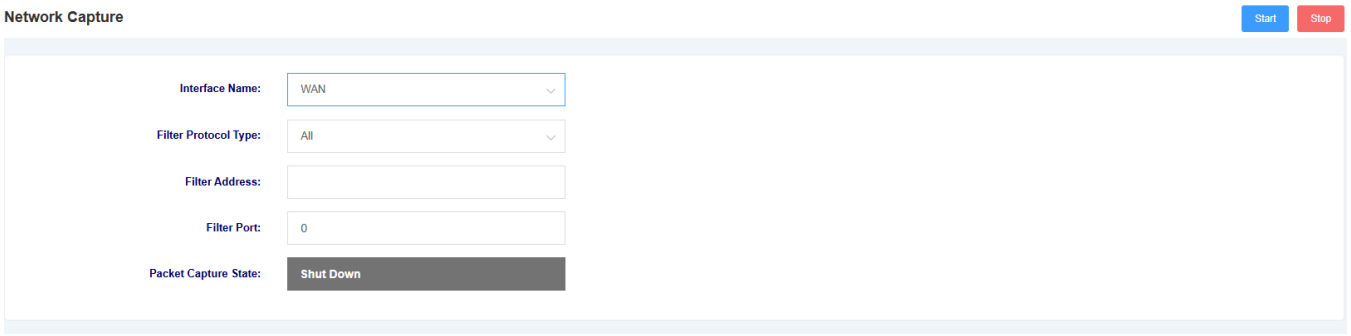






# 7.7 Network Capture

L30X can facilitate network problem location. Users can define the capture interface on this interface and select protocol type, address, and port.

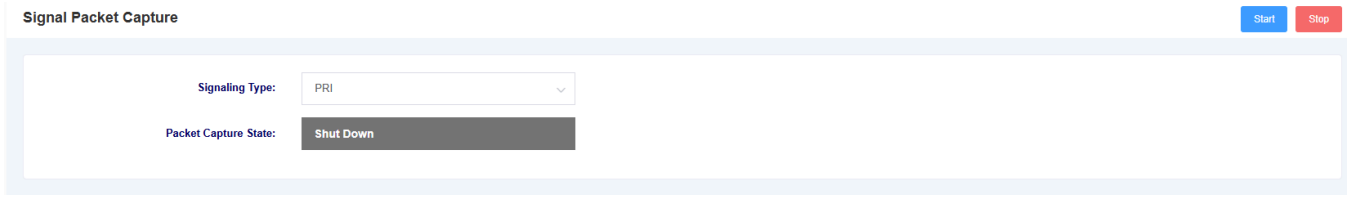
Figure 7-7-1 Network Capture




# 7.8 Signaling Capture

L30X can perform signaling capture.

Figure 7-8-1 Signaling Capture




# 7.9 Log Management

On the log management interface, the log server address and port can be set, and the kernel log level can be selected to facilitate viewing device logs for technical analysis.

Figure 7-9-1 Log Management

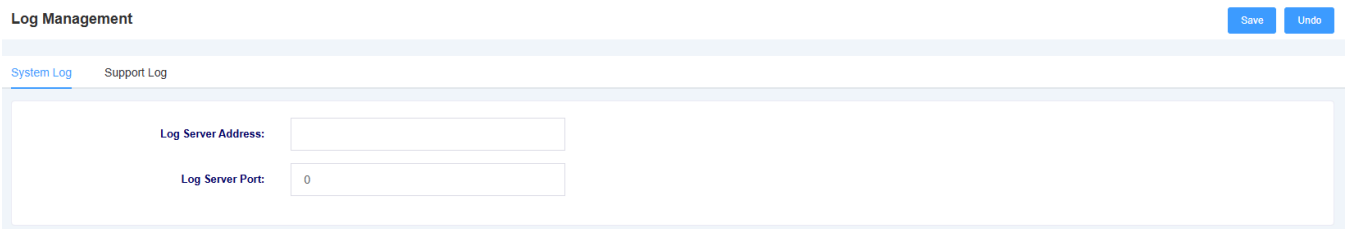
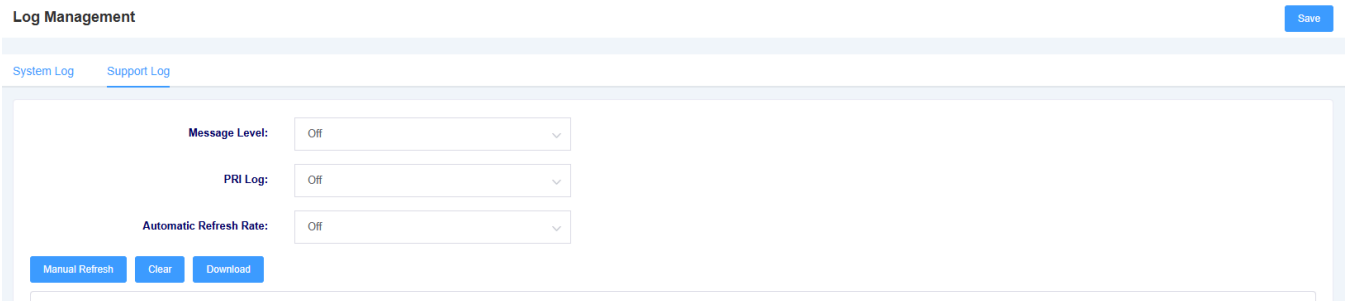



Figure 7-9-2 Log Support Interface




Syslog is often called system log or system record, and is a standard used to transfer record information in Internet Protocol (TCP/IP) networks. This term is often used to refer to the actual syslog protocol, or applications or databases that send syslog messages. The syslog protocol is a client-server protocol: the syslog sender will send a small text message (less than 1024 bytes) to the syslog receiver. The receiver is usually named "syslogd", "syslog daemon", or syslog server. System log messages can be transferred using UDP protocol and/or TCP protocol.

Syslog Level Introduction:

• EMERG Failure

• ALERT Warning

• CRIT Needs to be resolved promptly

• ERROR Error conditions that prevent tools or certain subsystems from achieving some functionality

• WARNING Early warning information

• NOTICE Important common conditions

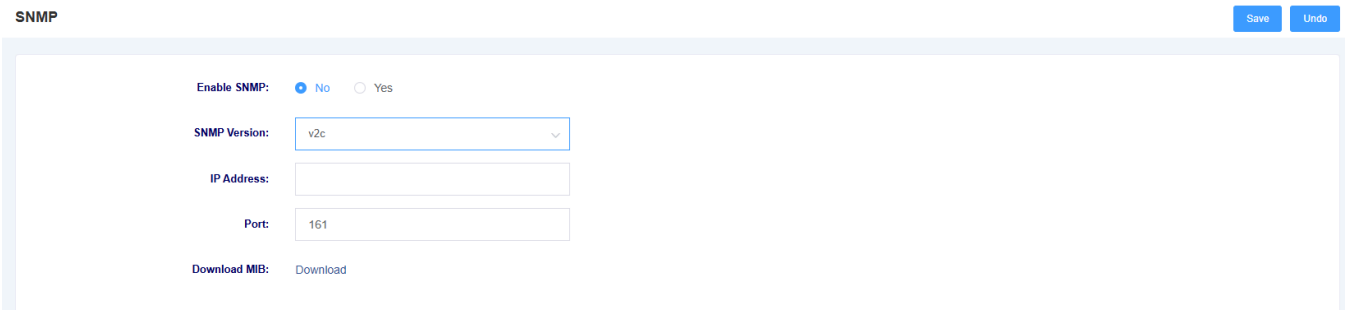
• INFO Information

• DEBUG Other information that does not contain function conditions or problems

# 7.10 SNMP

On this page, SNMP service related information can be set. L30X supports SNMPv1, v2c.

Figure 7-10-1 SNMP




# 7.11 Cloud Management

On this page, cloud management related information can be set. L30X supports OpenVox cloud management function. After entering the server address, port, and binding code, the device can be managed on the cloud management platform.

Figure 7-11-1 Cloud Management Settings

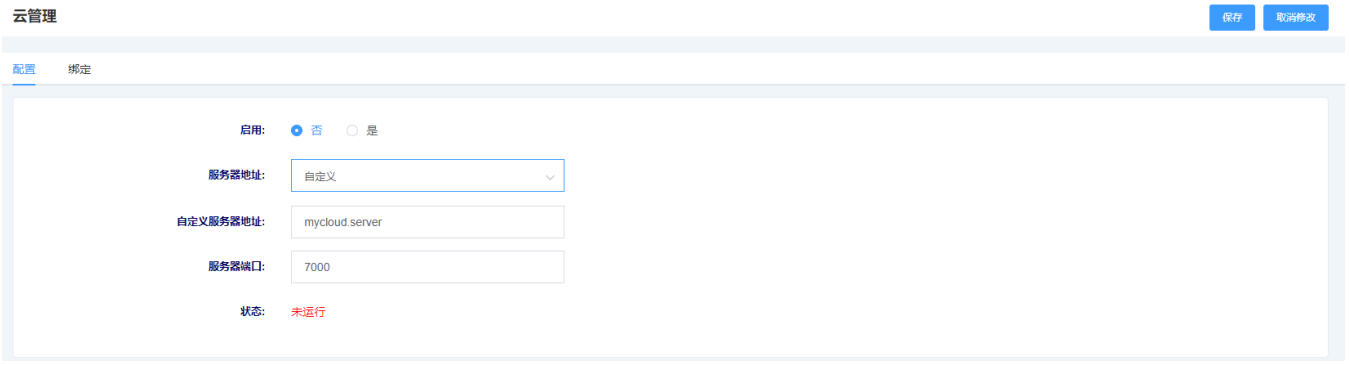
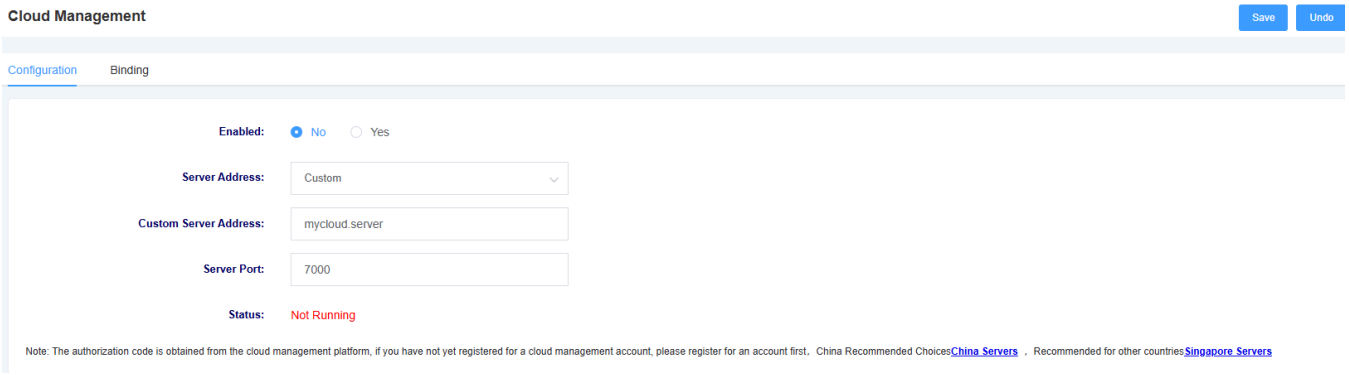


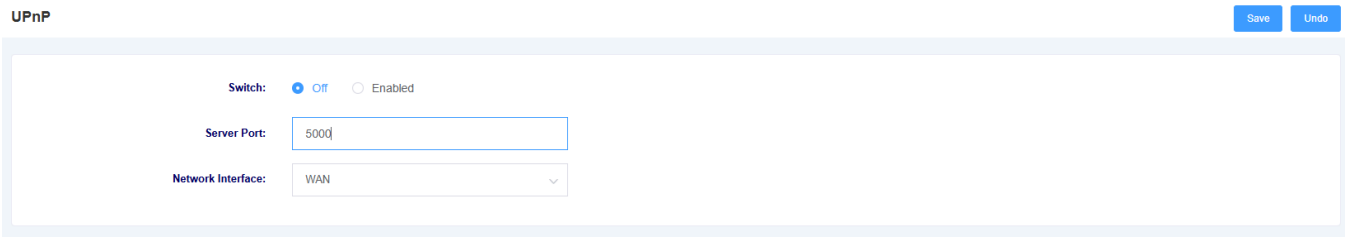

Figure 7-11-2 Cloud Management Binding




# 7.12 UPnP

On this page, you can select whether to enable the UPnP function. After enabling, the local device can be automatically searched on the server for management.

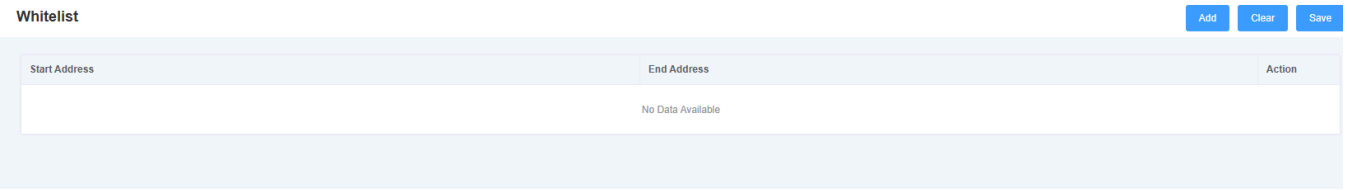
Figure 7-12-1 UPnP Settings



# 7.13 Whitelist

On this page, whitelist related information can be set. After setting, only IPs in the whitelist can access the device.

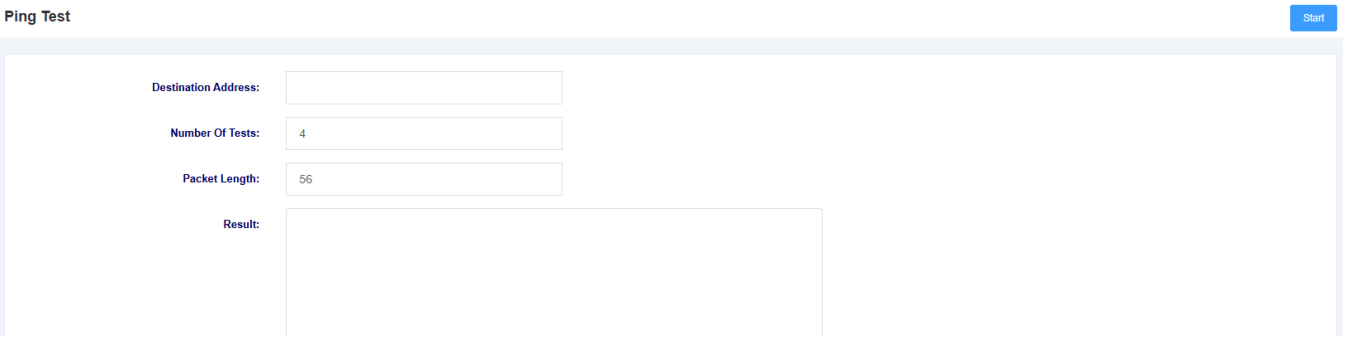
Figure 7-13-1 Whitelist Settings




# 7.14 Ping Test

On this page, the ping command can be used to test network connectivity.

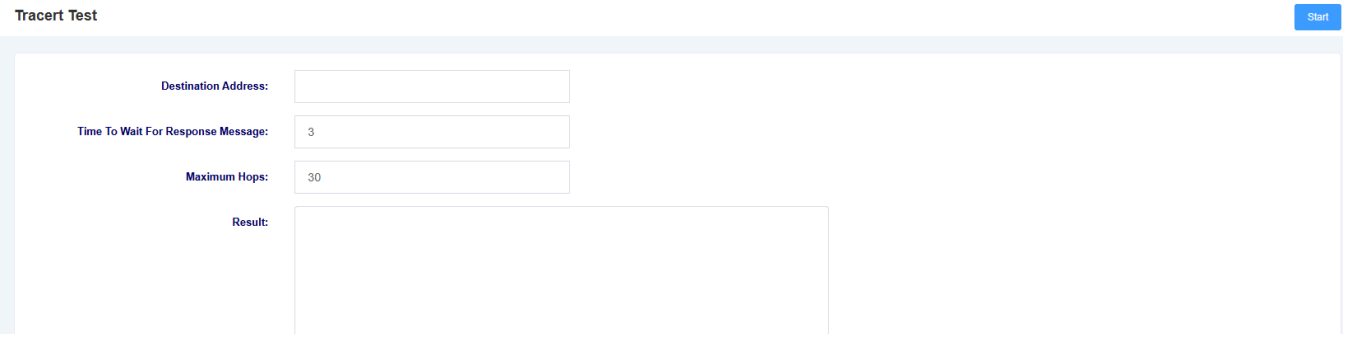
Figure 7-14-1 Ping Test




# 7.15 Tracert Test

On this page, the tracert command can be used to test network connectivity.

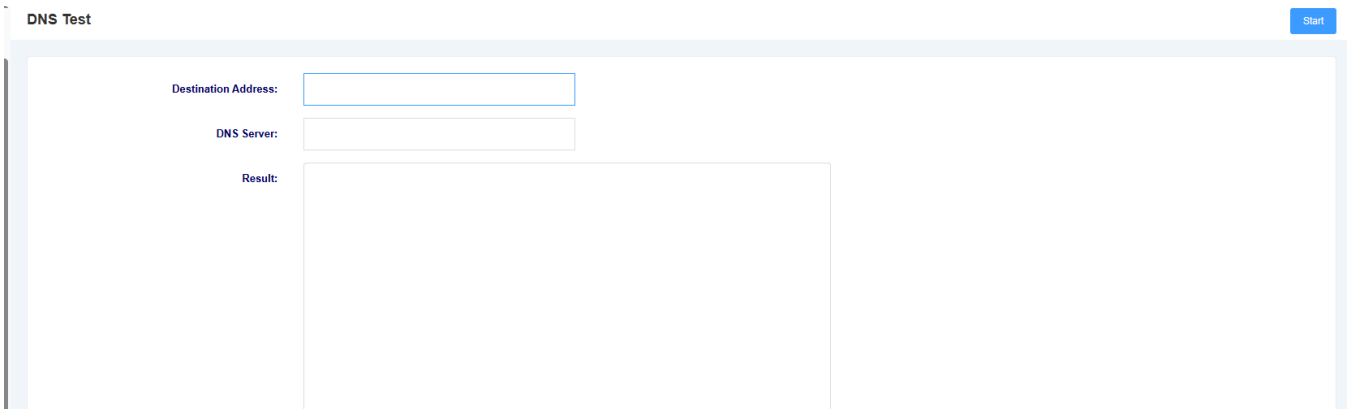
Figure 7-15-1 Tracert Test




# 7.16 DNS Test

On this page, the specified DNS can be tested.

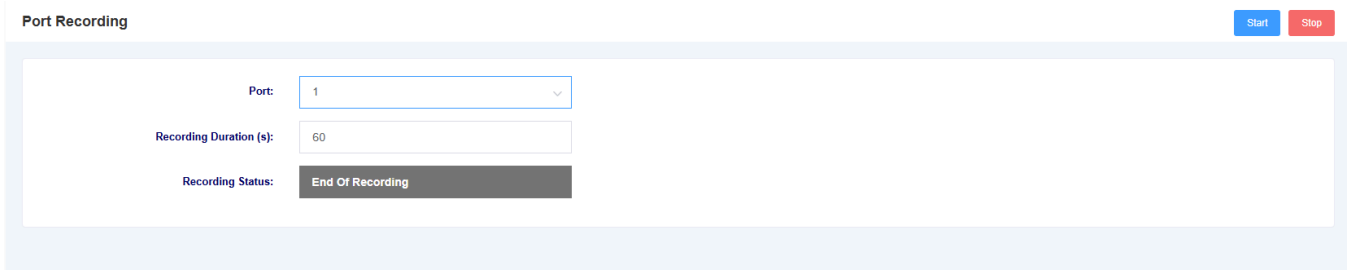
Figure 7-16-1 DNS Test




# 7.17 Port Recording

On this page, you can select a specified port for recording to troubleshoot problems.

Figure 7-17-1 Port Recording




# 7.18 TR-069

On this page, you can open TR-069 and configure values of ACS parameters.

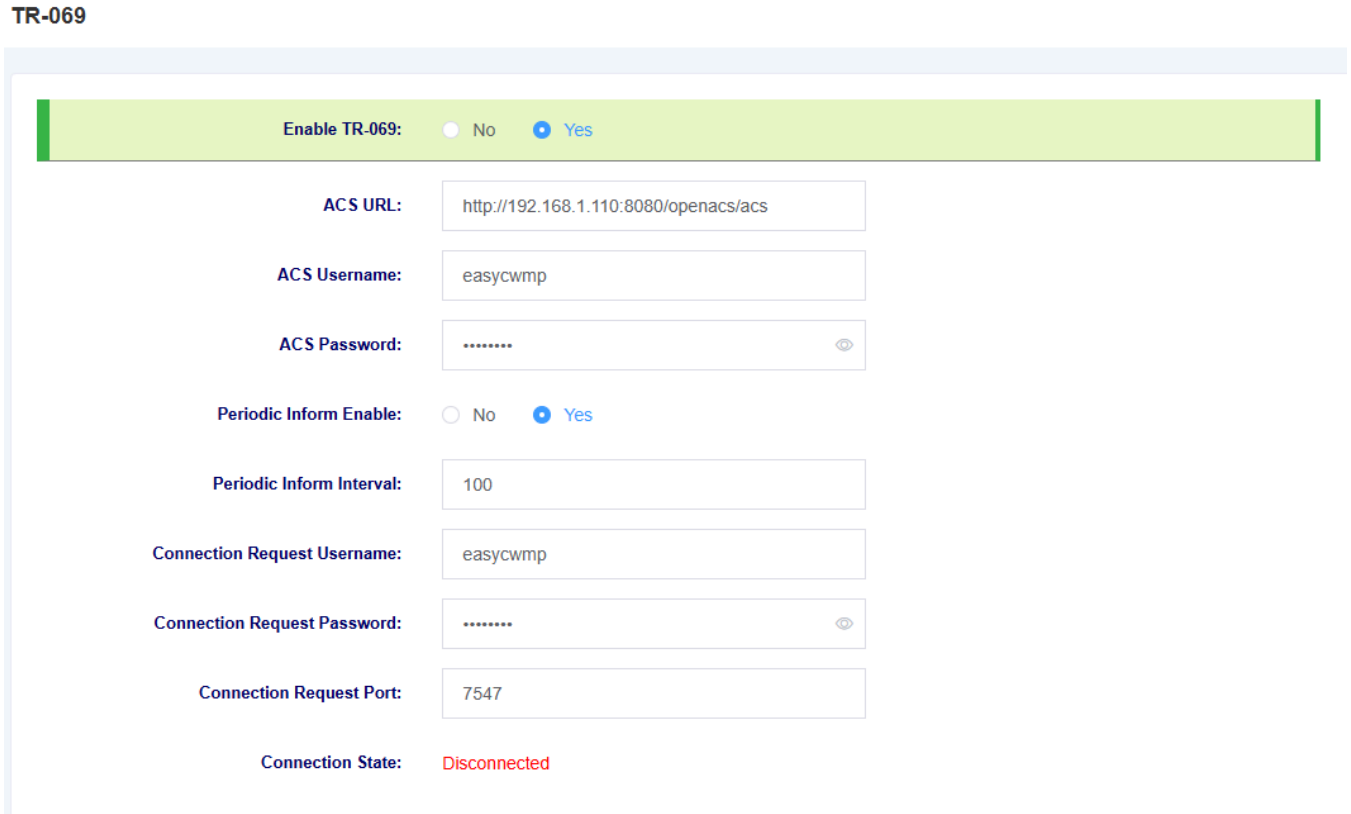



Figure 7-18-1 TR-069