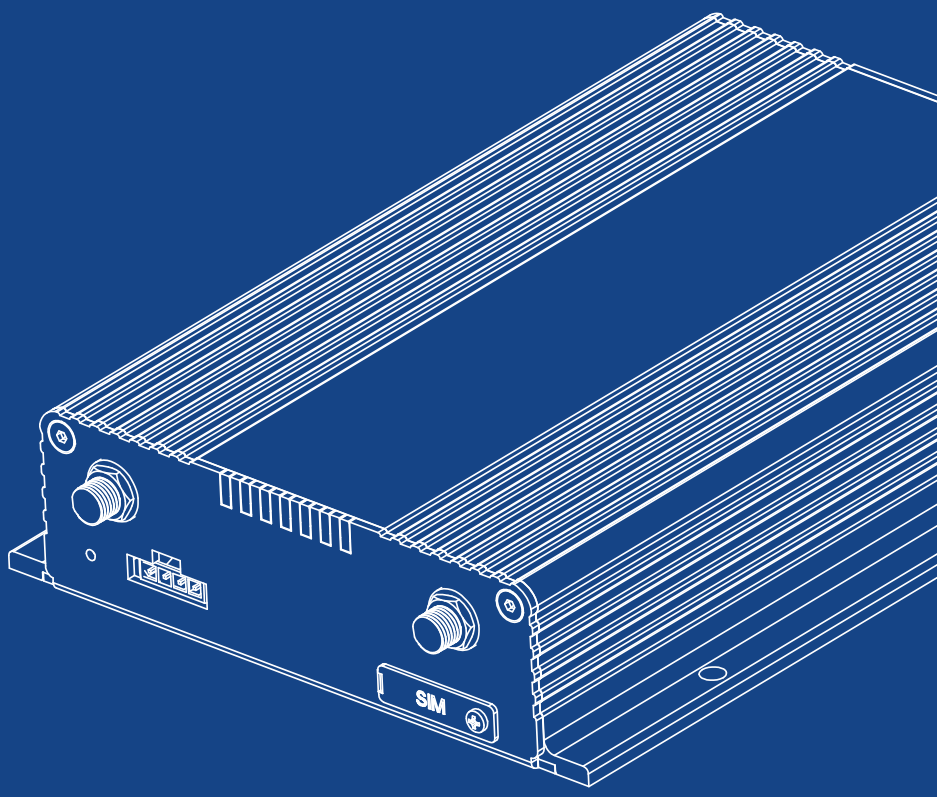
Vola

# Vola PR12

# User Manual

— 4G VoIP ATA with built-in battery




V0.1.3

# Table of Contents

# Revision

| Release Version | Note | Date | Editor |
|---|---|---|---|
| V0.1.0 | Initial Release | 2025.02.01 | Albert Yuan |
| V0.1.1 | Update Reset Button, VoLTE configuration, PIN Check, Connection Management, Device Management and fix some small Issues. | 2025.04.01 | Albert Yuan |
| V0.1.2 | Update Information | 2025.6.12 | Albert Yuan |
| V0.1.3 | Update feature: Contact ID Overwrite, FXS settings, more SIP settings, Configuration File Upload/Download, Dial Rules... | 2025.9.1 | Albert Yuan |

# Statement

## WARRENTY

Product specifications and information in this guide are subject to change without notice. All statements, information and recommendations in this guide are believed to be accurate and are provided without warranty of any kind, either expressed or implied. Users must take full responsibility for their product applications. Do not use the equipment beyond this guide.

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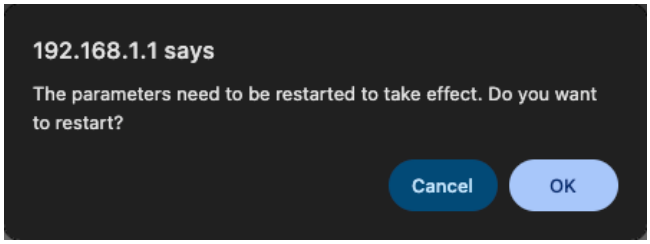
## ATTENTION

The telephone port (RJ11) on this device is only for connecting local analog terminals such as analog telephones, fax machines, alarm panel, etc. Do not connect it to the telephone port on the wall (PSTN line). Do not use the port as FXO port to connect any Telecommunication Network. Incorrect connection may lead to broken device.

## CAUTION

If not handled properly, the battery used in this equipment may present a risk of burnout or chemical burns. Do not replace the battery in the device by yourself, as this may result in a risk of fire or explosion and void the device warranty.
Dispose of used battery promptly in a manner authorized for your region. Do not dispose of the device or the battery in the device.
To replace the battery in the device, contact your dealer or our technical support: support@volanetworks.com.
Avoid using this product in hot environments. The battery charging circuit will stop charging when the temperature of the battery exceeds 60°C.
Do not dismantle, crush, or dispose of it in fire or any hot spot. Keep away from children.

## Important Notice




When you receive this notification during the configuration, you can click the "cancel" and continue to configure other parameters, and reboot after all parameters are changed.

If you only need to change the current parameter, just click "OK" to reboot the device， and the parameter will then take effect.

# Declaration of Conformity

## Part 15 FCC Rules

This device complies with Part 15 of the FCC Rules. Operation is subject to the following three conditions:

• This device may not cause harmful interference

• This device must accept any interference received, including interference that may cause undesired operation.

• The distance between user and products should be no less than 20cm.

**Note:** This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

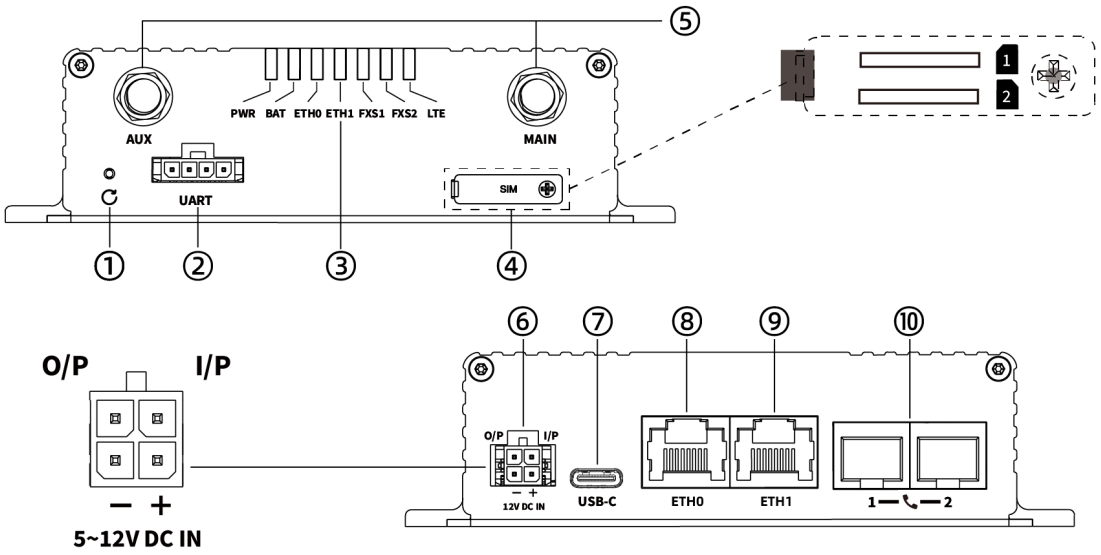
**Note:** The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate this equipment.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

# 1. Hardware & Installation

This chapter describes the physical structure of PR12, and how to connect PR12 to other devices.

## 1.1. Physical Specification



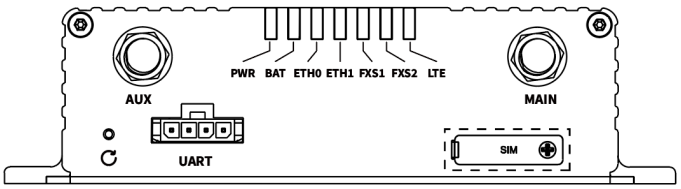

| Number | Name | Interface Description |
|---|---|---|
| ① | **Reset Button** | **Reboot:** click the reset button to reboot the device<br>**Reset:** when device is in **shipping mode***, press the reset button and plug in the adapter while keep pressing, wait for all LED to flash, release the button |
| ② | **UART Port** | Connect to expansion device/configure the device |
| ③ | **Indicators** | See the table below to get the description of indicators |
| ④ | **SIM Card Slots** | Support inserting 2 SIM cards to use cellular or make VoLTE calls |
| ⑤ | **4G Antenna Ports** | Connect to 4G Antennas to receive signal from base station |
| ⑥ | **Power Port** | Connect to 12V DC power adpter included in the package |
| ⑦ | **USB Type-C Port** | Maintenance port for upgrade |
| ⑧ | **Eth0 Port** | Connect to router/switch to connect to Internet (support PoE in) |
| ⑨ | **Eth1 Port** | Connect to other device to provide network/visit web background |
| ⑩ | **FXS Ports** | Connect to analog phone/Fax/modem or other devices |

*Shipping Mode: Refer to the Chapter 1.4 for more details

*Reset operation may take over 30 seconds, please make sure the reset button is pressed during the process.

## 1.2.LED Indicator

This section describes the LED Indicators' status and the meaning of it.




See the table below:

**PWR Indicator**

| Status | Description |
|---|---|
| Steady Red | System Error |
| Steady Green | Working Normal |
| Flashing Red | Upgrade, Reboot<br>Factory Reset, Boot Up |
| Off | Power Off |

**BAT Indicator**

| Status | Description |
|---|---|
| Flashing Green | Battery is Charging |
| Steady Green | Battery is full |
| Steady Blue | Battery is Discharging |
| Flashing Blue | Battery is Low(<20%) |
| Off | No Battery/Battery Error |

**Ethernet Indicator**

| Status | Description |
|---|---|
| Steady Green | Connection Successful |
| Flashing Green | Data Transferring |
| Off | No Connection |

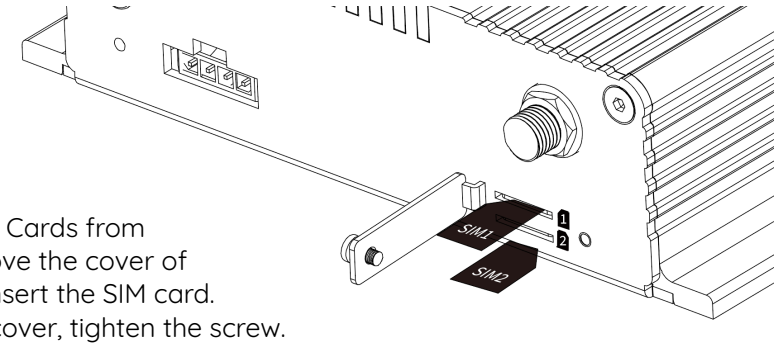
**FXS Indicator**

| Status | Description |
|---|---|
| Steady Green | Registration Successful |
| Flashing Green(1Hz) | In calling, Hook-off |
| Flashing Green(5Hz) | Incomming Call |
| Off | No Registration |

**4G Indicator**

| Status | Description |
|---|---|
| Steady Red | Weak Signal |
| Steady Blue | Medium Signal |
| Steady Green | Strong Signal |
| Flashing Blue | Connecting/Switching |
| Off | No SIM/Unrecognized/SIM Error |

## 1.3. Install the device

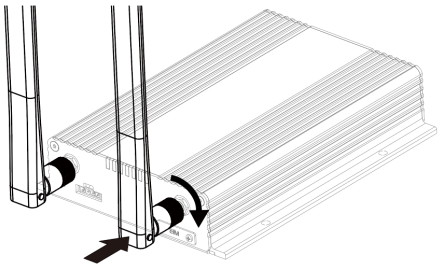



1. Get standard Nano-SIM Cards from supported carrier, remove the cover of the SIM card slot, and insert the SIM card. and then put back the cover, tighten the screw.

   We Recommend to use the first SIM card if you only have one SIM card.

2. Use the 2 antennas included in the package, tighten and fix them on the port of MAIN and AUX of the device respectively.

   Adjust the antenna to the desired angle and direction.

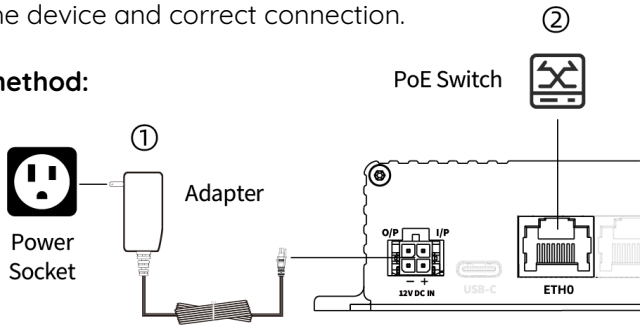


## 1.4. Power up the device

This section describes how to power the device and correct connection.

**PR12 supports the following power method:**

1. **Power adapter**
2. **PoE Input**




If it is powered by PoE:

use the network cable that comes with the device, plug one end into the Eth0 port of the device, and connect one end to a device that supports PoE Out, such as PoE switch or PoE adapter(Only Eth0 support PoE in, working as WAN port).

If it is powered by Power adapter: Connect the power adapter to the 4-pin power port. After powering the device, the device will automatically boot up and activate the battery.

**If you need to turn off the battery (Enter Shipping Mode), please follow these steps:**

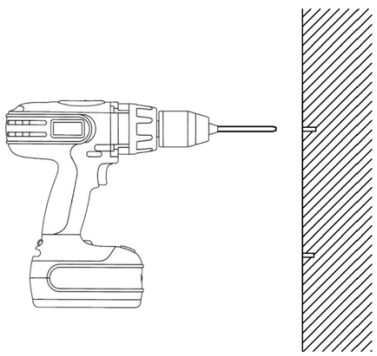
1. Make sure the device is fully boot up, and the power adapter is disconnected;
2. Long press the reset button until all LEDs are turned on;
3. Release the Reset button, all LEDs will be turned off;
4. The device now enter shipping mode.

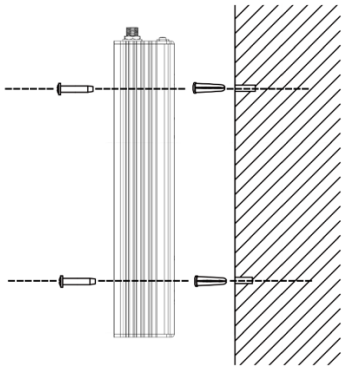
(If it doesn't work, wait for complete startup and perform it again)

## 1.5.Wall Mounting

This section describes how to mount the PR12 at the wall or other vertical surface.

1. Drill 4 holes at the wall according to the installation holes on PR12. The recommended drill size is ⌀=10mm.
2. Insert the expansion tube to the hole of the wall, the expansion tube was included in the package.
3. Fixed the PR12 with the included screw.





# 2. Basic Web Configuration

This chapter describes basic configuration of the PR12, including the SIP registration, VoLTE calls.

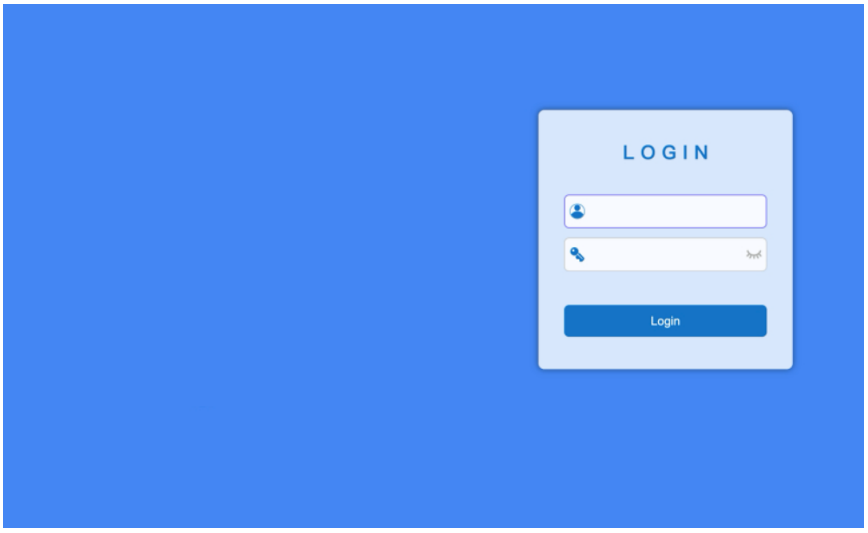
## 2.1. Web Login

This section describes how to enter the web GUI of PR12.

The device can provide a Web browser-based interface that can be used to configure and manage the device. See below for more information.

Use a RJ45 network cable (included in the package) to connect the Eth1 port of PR12 with the WAN port of a PC or laptop.

**TIPS:** The URL format for the login web page is: http://<LAN port IP address>, generally the default LAN port IP address is: 192.168.1.1, please enter the corresponding address in the address blank: http://192.168.1.1, then the page will jump to the login page of the device, as follows:




**Enter the username and password:**

**Administrator level:**
admin/last 6 digits of SN

For remote Login

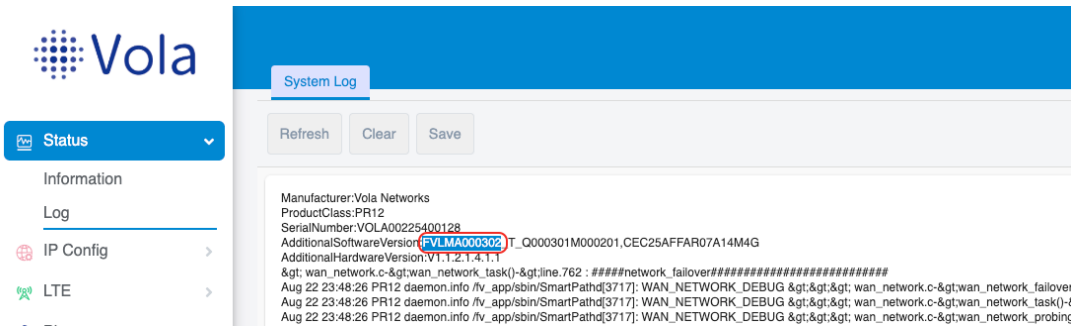
Please refer to section 5.3 in this guide.

## 2.2. Firmware Version Check

Before starting the configuration, please make sure your device is upgraded to the recommend version （Released Package）.Some configuration may differ from different version and some feature may not available in old version. If you have question about this guide and version, please contact us

This User Guide is based on the app version: **FVLMA000304 (APP 0.3.4)**

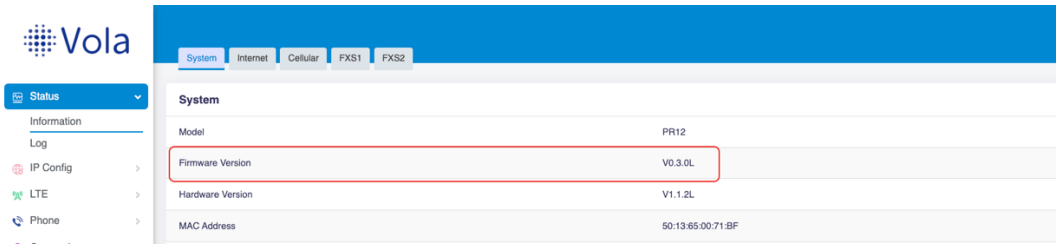
You can check your device's App version in the Log page:




Please contact your reseller/sales or our support team to get the latest version.
Our support team: support@volanetworks.com

You can also connect your device to the VolaCloud to directly upgrade your device, please refer to: https://docs.volanetworks.net/en/User_Manual/VolaCloud_User_Manual

**Before upgrade, please check if your device has 0.3.0L Package. Lower version may not directly upgrade to this version.**



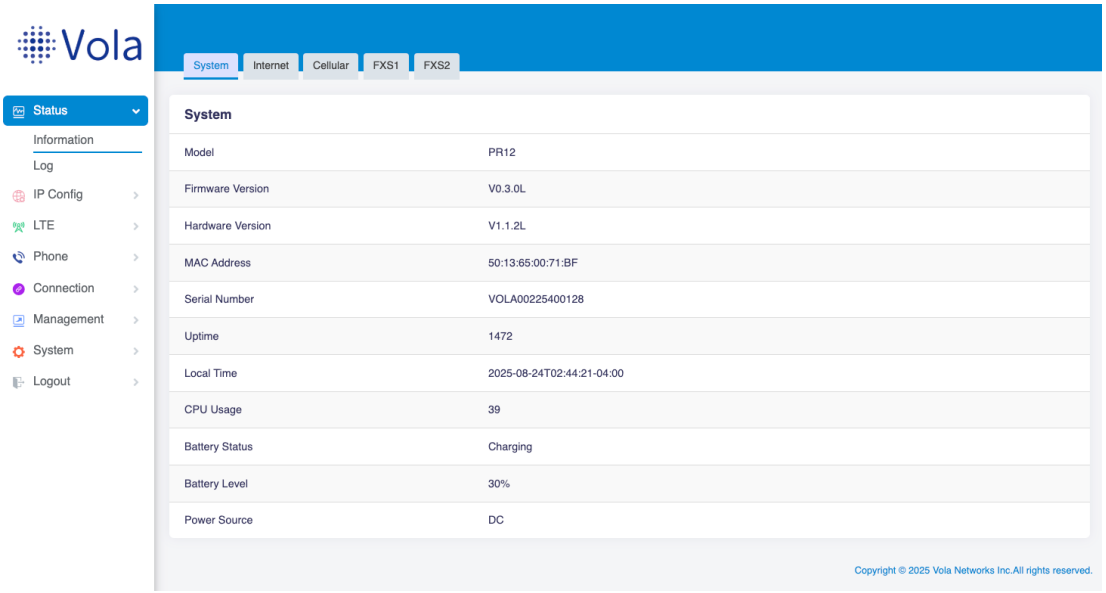

If you're not sure about the version and not clear about the upgrade procedure, please contact your reseller/sales or our support team to help you.

## 2.3. Status

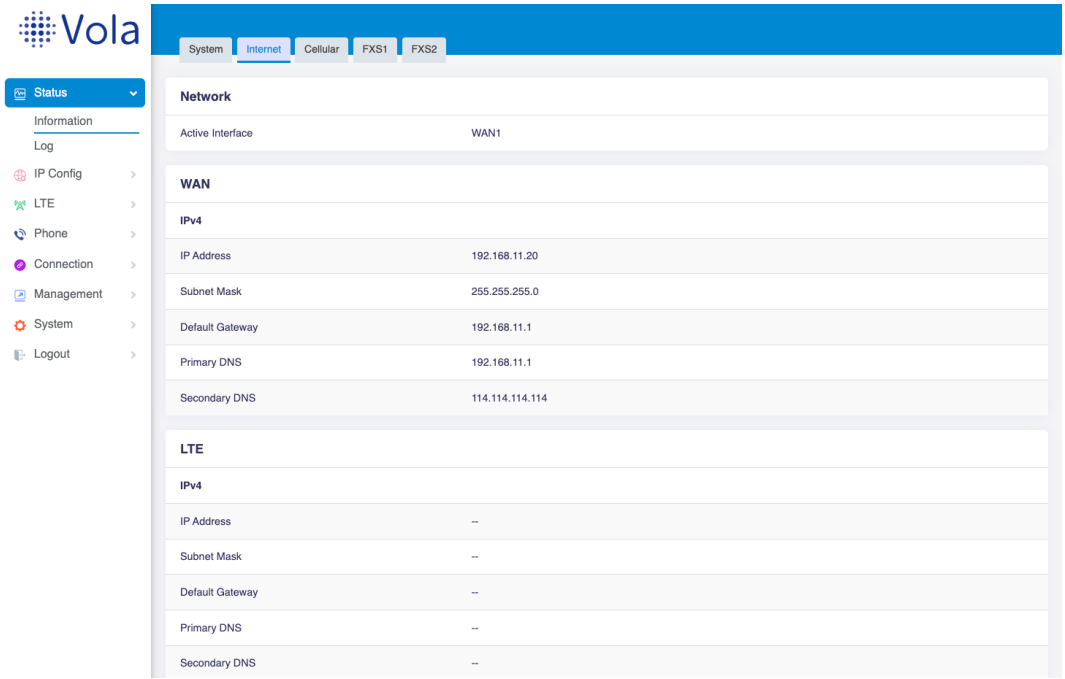
### Navigate to Status -> Information

You can check the device's system information, battery status, FXS status, cellular status and more in this page.

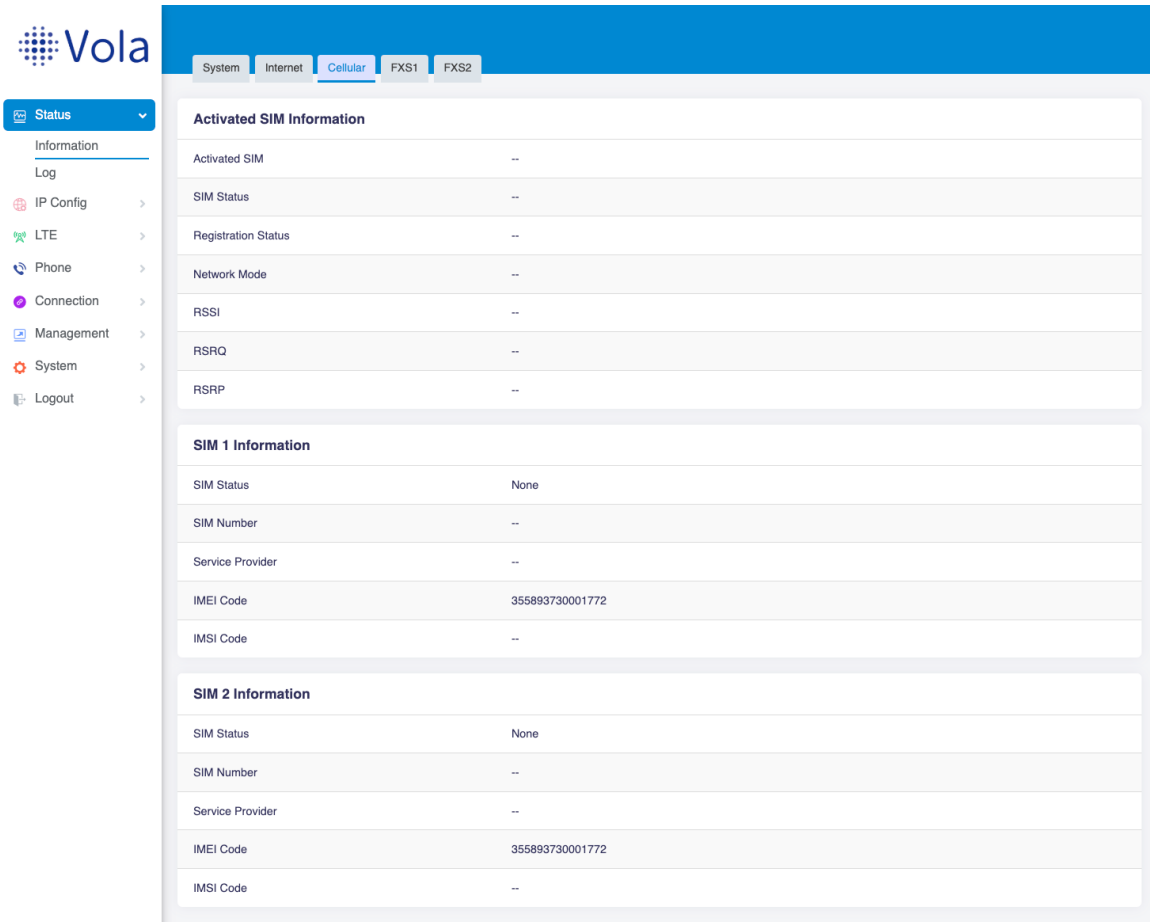
**System:** Check the device information and running status.



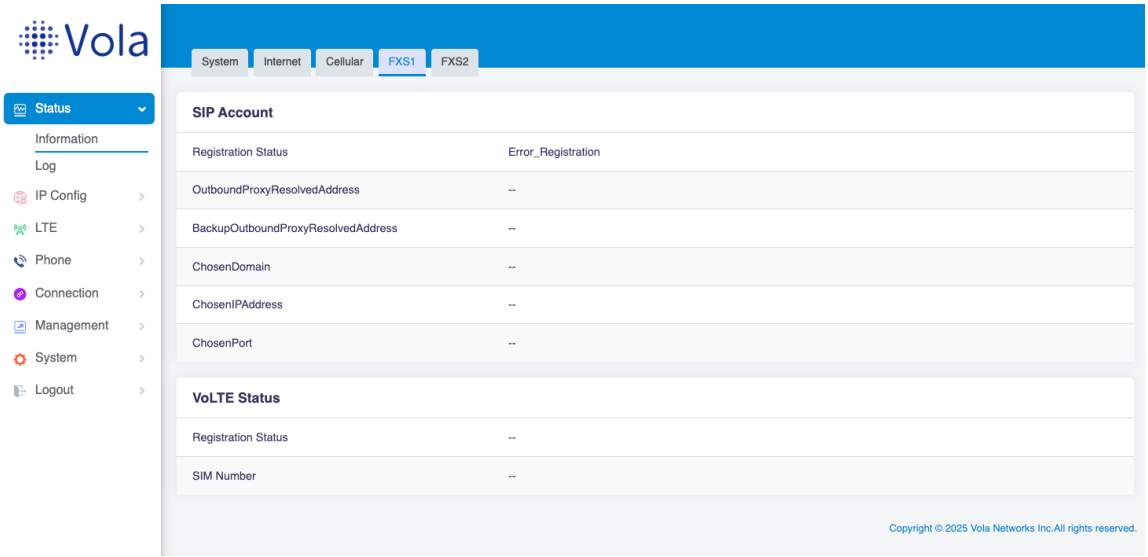

**Internet:** Check the IP information of the current connection, Active Interface is the current uplink interface.



**Cellular:** Check the IP information of your SIM card.




**FXS1:** Check the Registration status of your SIP account, corresponding to FXS1. If enable VoLTE and the SIM card support VoLTE function, you can check in here.

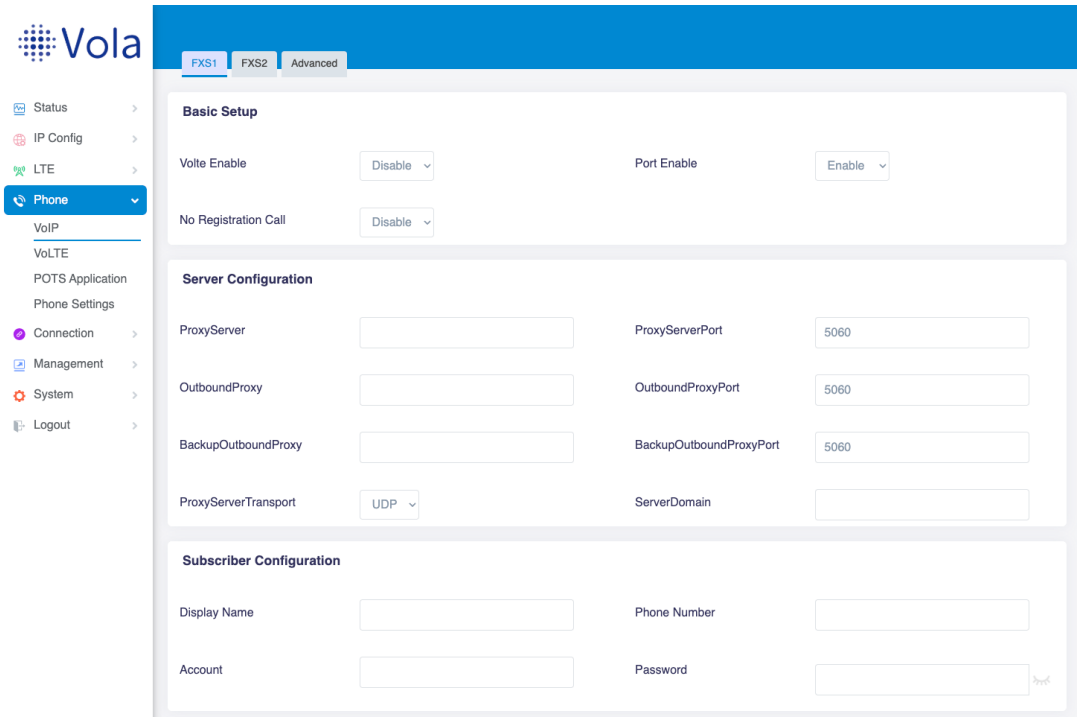



**FXS2:** Check the Registration status of your SIP account, corresponding to FXS2.

## 2.4. SIP Registration

**Navigate to Phone -> VoIP**

Select the FXS port to configure




Fill in the corresponding information for SIP registration

| Parameter Name | Description |
|---|---|
| Proxy Server | Enter the domain name or IP address of the registered SIP server. |
| Proxy Server Port | Enter the port number of the VoIP service supported by the SIP server. The default is 5060. |
| Outbound Proxy | Enter the domain name or IP address of the outbound server. If it's not empty, it will specify the outbound address, all SIP request will be sent to this address. |
| Outbound Proxy Port | Enter the service port of the outbound server. |
| Backup Outbound Proxy | Enter the domain name or IP address of the backup outbound server. When request to the "Outbound Proxy" is failed, it will be retransmitted to this address. |
| Backup Outbound Proxy Port | Enter the service port of the backup outbound server. |
| Proxy Server Transport | This configure the transport Protocol used in SIP. |
| Server Domain | This configure the address for DNS SRV, the result will be added to SIP FQDNServer for SIP server connection.<br><br>Available only when Outbound/Backup Outbound server are both empty. |

| | |
|---|---|
| Display Name | Enter the phone display name of the FXS port. This normally will be used for Caller ID (CID) |
| Phone Number | Enter the phone number registered with the SIP server for the FXS port. Usually, this is used for dialled number. |
| Account | Enter the SIP account name registered with the SIP server for the FXS port. |
| Password | Enter the password registered with the SIP server for the FXS port. |

## 2.5. VoLTE

**Before using the VoLTE call, you may need to switch the firmware version and check you SIM card.**

**DL Version:** Data Only, support all carriers.
**L Version:** Support VoLTE, SIM card with TMO and VZM is not supported.

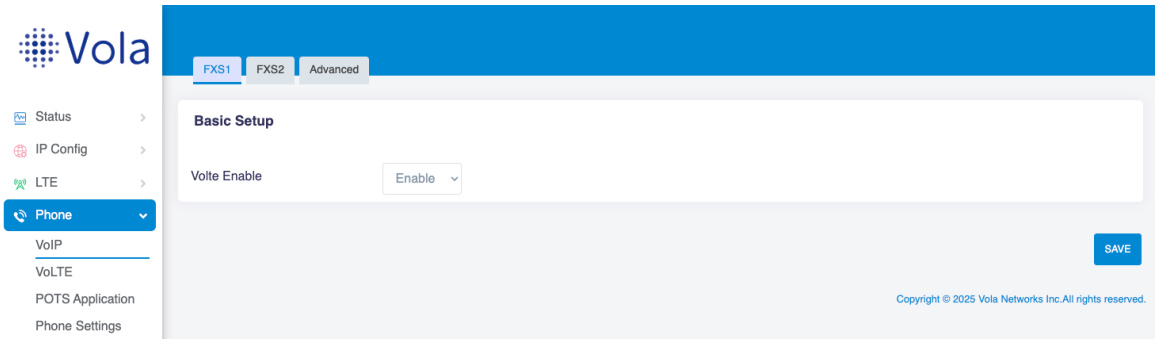
### 2.5.1. Use with VoLTE

VoLTE call is disable for FXS 1 by default.

please refer to the following steps to use VoLTE function:

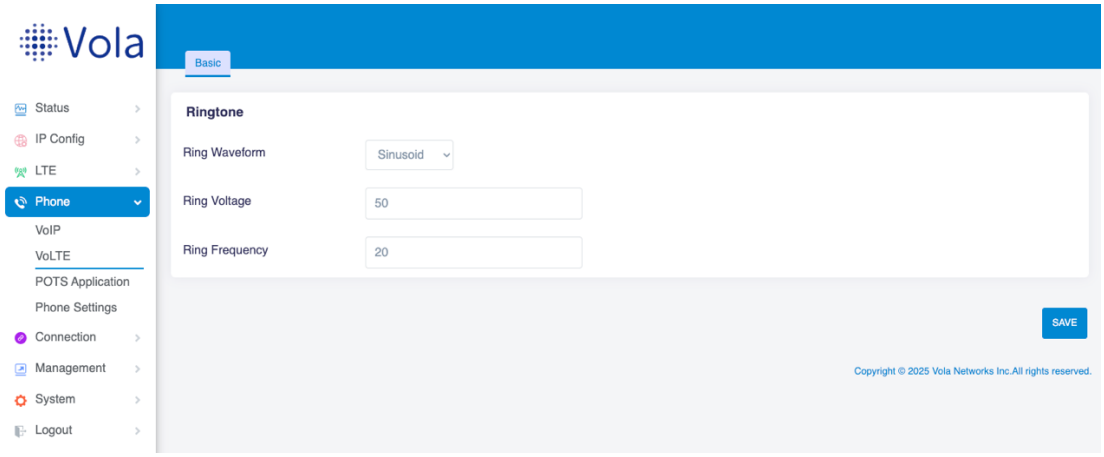
**Procedure**

1. Follow the chapter 1 "Hardware Installation" to install the device correctly, and insert the SIM card that support VoLTE call;
2. Navigate to **Phone -> VoIP -> FXS1**, select "**Enable**" for "Volte Enable";
3. Click SAVE and reboot the Device;
4. Check the FXS1 indicator, the light will be solid green if registration is successful;
5. Use a phone cable (RJ11 cable, comes with the PR12 in the package), connect one end to the FXS 1 port of the PR12, and the other end to an analog phone or other communication terminal;
6. Directly dial a telephone number on the analog phone.



### 2.5.2. VoLTE Ringtone Configuration

**Navigate to Phone-VoLTE**




Fill in the corresponding information for Ringtone configuration.

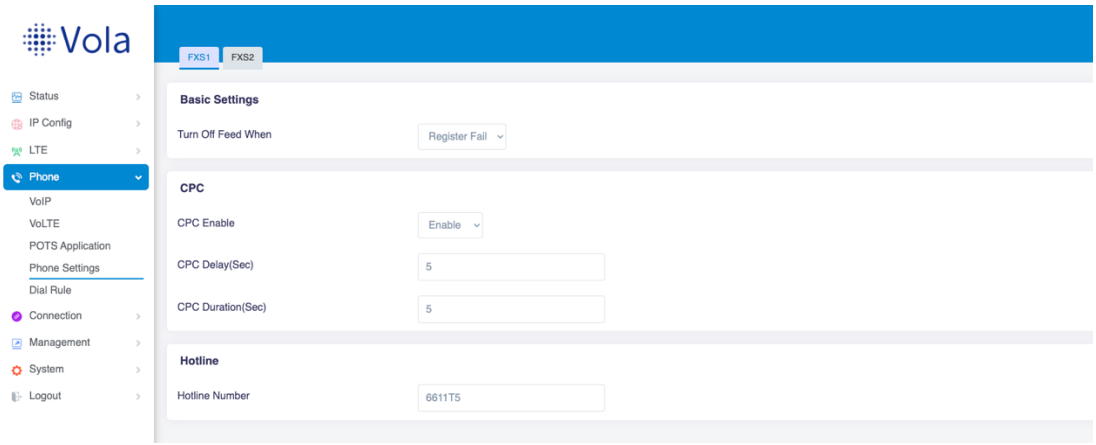
| Parameter Name | Description |
|---|---|
| Ring Waveform | Select the waveform or ringing tone, optional for Sinusoid or Trapezoid. |
| Ring Voltage | Enter the ringing voltage, default is 45Vrms. |
| Ring Frequency | Enter the ringing frequency, default is 25Hz. |

### 2.5.3. VoLTE CPC configuration

**Note:** VoIP and VoLTE share the same configuration on CPC, this configuration description is also applied to SIP registration.

**Navigate to Phone -> Phone Settings**

Fill in the corresponding information for VoLTE configuration.




| Parameter Name | Description |
|---|---|
| CPC Enable | Whether to enable the CPC function.<br><br>CPC (Calling Party Control) is a feature for elevator phone or public phone to hand up automatically. The analog phone under the device FXS port will automatically hangs up after the peer end hang up. The hang up process changes from busy tone to silent tone, and finally to off tone. |
| CPC Delay(Sec) | Enter the busy tone duration before the local device hangs up. The default is 5s. |
| CPC Duration(Sec) | Enter the silence duration before the local device hangs up. The default is 5s. |

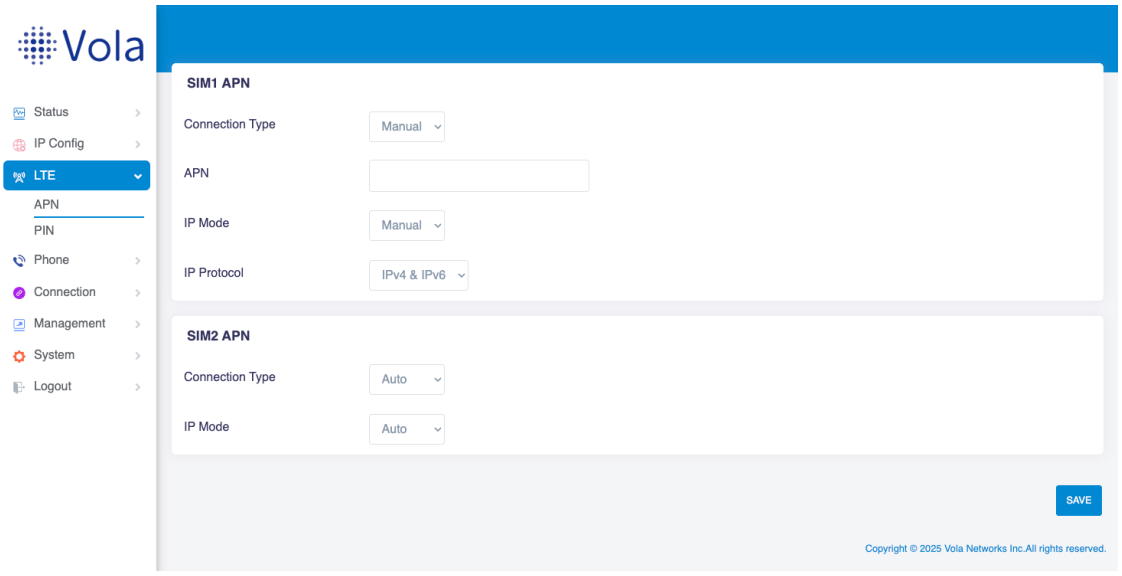
# 3. Networks Configuration

## 3.1. LTE Configuration

### 3.1.1. APN Configuration

This section describes how to configure the SIM cards related parameters, normally, your SIM card can work under auto settings.

**Navigate to LTE -> APN**



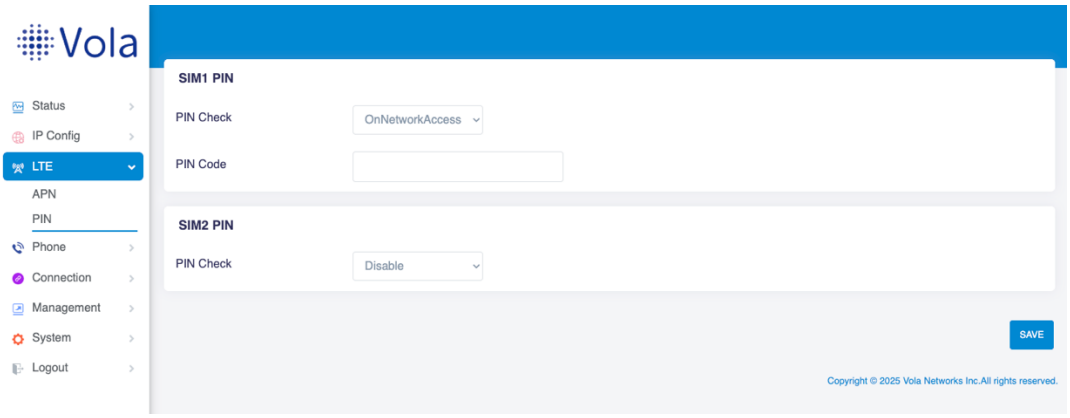

Fill in the corresponding information for LTE connection configuration:

| Parameter Name | Description |
|---|---|
| Connection type | The default is Auto, it will use default settings;<br>Select Manual to enable manual settings. |
| APN | Access Point Name, Fill in the name of Access Point to connect to specific Access Point that you want to connect. |
| IP Mode | Optional for Manual, Auto.<br><br>When Auto is selected, device will search for specific IP Protocol according to the APN in built-in database.<br><br>When manual is selected, device will use IPv4 and IPv6 according to setting or carrier's preference. |
| IP Protocol | IPv4: device will use IPv4 only<br>IPv6: device will use IPv6 only<br>IPv4&IPv6: device will try to get IPv6 and IPv4 at the same time<br><br>Available only when IP Mode is "manual". |

### 3.1.2. PIN Configuration

This section describes how to configure the SIM cards related parameters, normally, your SIM card can work under auto settings.

**Navigate to LTE-PIN**




Fill in the corresponding information for PIN configuration.

| Parameter Name | Description |
|---|---|
| PIN Check | This configure when will the PIN Check be performed.<br><br>**OnNetworkAccess:** Check PIN code when every time the device access to a new network.<br>**Disable**: PIN function will be disable. |
| PIN Code | Enter PIN code value, should match with the SIM card's PIN. |

## 3.2. WAN Configuration

### 3.2.1. Basic WAN configuration

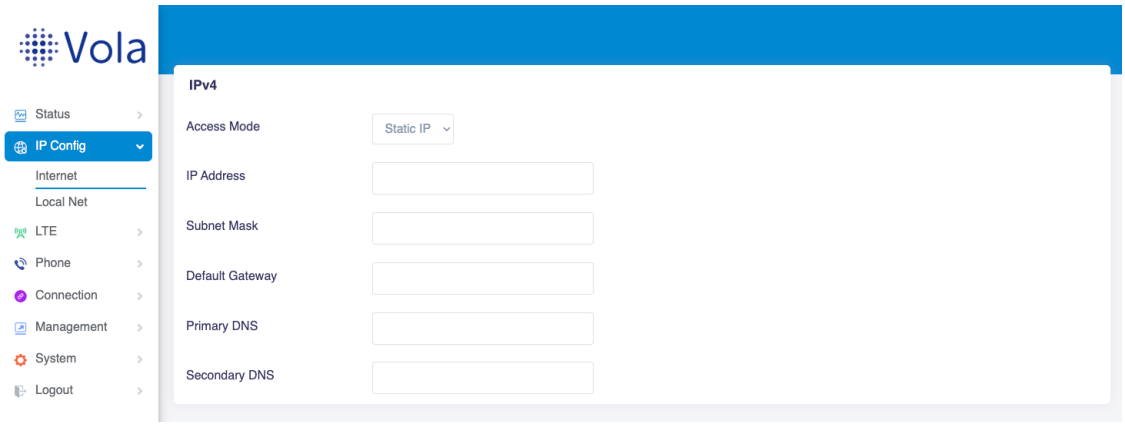
This section describes how to configure the IP address of the WAN port (Eth0 Port)

**Navigate to IP Config -> Internet**

The WAN port support DHCP by default, when DHCP enable, device will automatically require an IP address from the uplink router (If DHCP server support).

If you want manually configure the IP address of the WAN port.

Fill in the corresponding information according to the follow sheet:



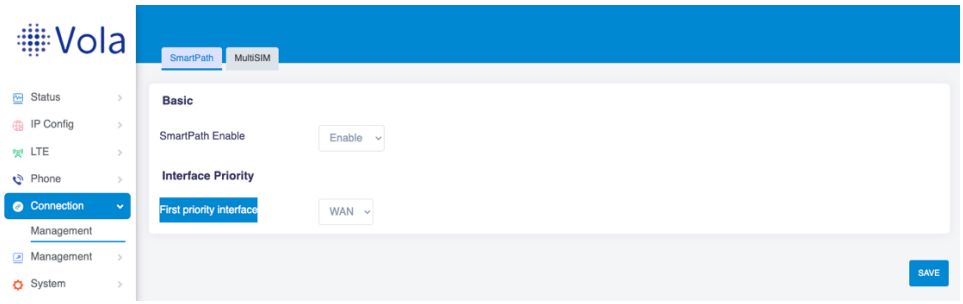

| Parameter Name | Description |
|---|---|
| Access Mode | Select "Static IP" |
| IP Address | Fill in the static IPv4 address |
| Subnet Mask | Fill in the subnet mask of the IPv4 address |
| Default Gateway | Fill in the default gateway of the IPv4 address |
| Primary DNS | Fill in the primary DNS address of the IPv4 address |
| Secondary DNS | Fill in the secondary DNS address of the IPv4 address |

### 3.2.2. SmartPath configuration

SmartPath is mechanism for WAN <-> LTE failover, the device will select available uplink interface according to the detection result.

You can choose LTE or WAN port as primary interface.

The device will try to stay in the primary interface and will automatically fallback to primary interface when it is recovered.



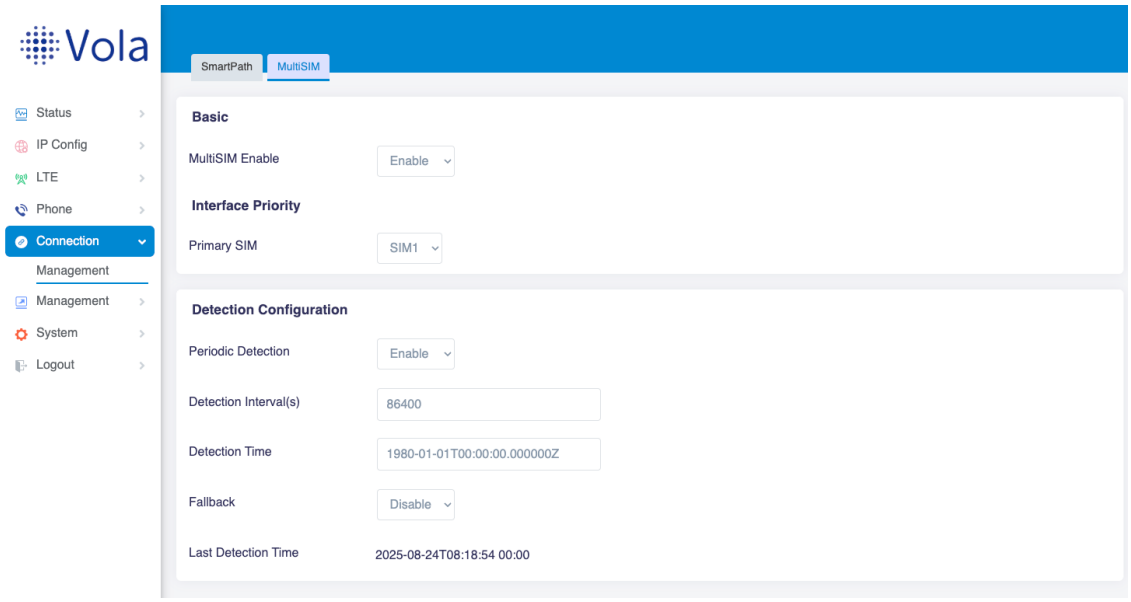

Fill in the corresponding information for SmartPath configuration.

| Parameter Name | Description |
|---|---|
| SmartPath Enable | Default for enable.<br><br>When SmartPath is Disable, the device will not detect another uplink interface and will only stay in the selected "First priority interface" |
| First priority interface | When SmartPath is **Enable**, this configures the first priority interface to use, optional for LTE or WAN<br><br>The device will try to stay in this interface, when network is not available, it will detect another interface and decide whether to switch.<br><br>When the first priority interface is recovered, device will then switch back to first interface.<br><br>When Smart path is **Disable**, this configures the available interface, optional for LTE or WAN<br><br>**Note:** If you only use one type of uplink interface, we recommend you disable the SmartPath and select the correct interface. |

### 3.2.3. MultiSIM Configuration

MultiSIM is a mechanism for SIM card failover and fallback, the device will try to stay in the primary SIM card and switch to another SIM card based on detection status.

If you don't use multiple SIM cards, we recommend **disable** the MultiSIM and insert the SIM card to **slot 1**, otherwise the SIM card may not work properly.



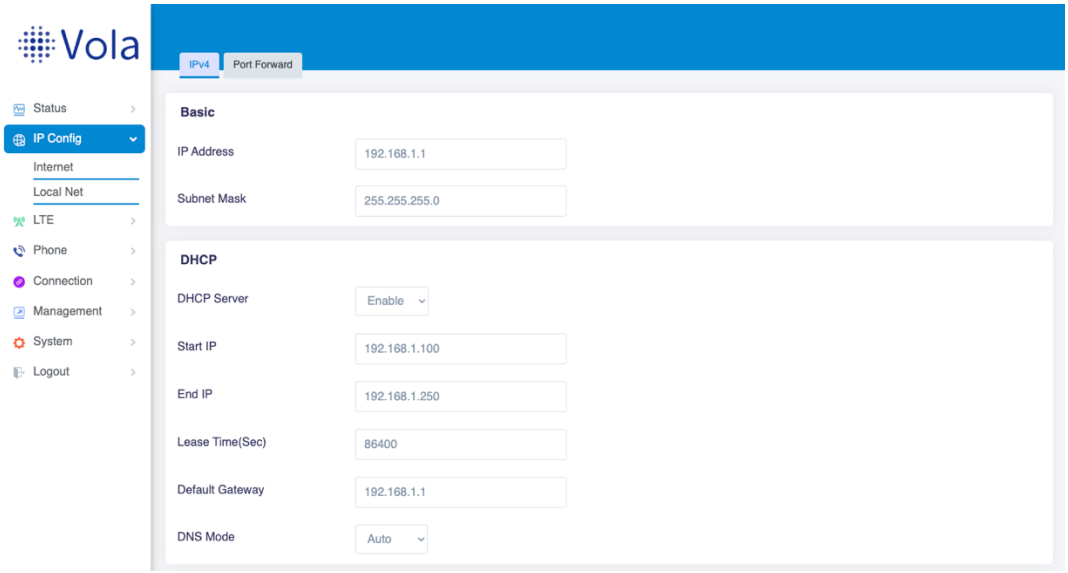

| Parameter Name | Description |
|---|---|
| MultiSIM Enable | Multisim enable switch.<br><br>1. Enable to open SIM auto switch.<br>2. when Disable, only SIM1 can be used, SIM2 will not be used.<br><br>**Note: The following configuration and status have no effect on Multisim after it is Disable.** |
| Primary SIM | Set the primary card, the primary card can be USIM1 or USIM2. The device will try to stay in the Primary SIM card if possible. |
| Periodic Detection | This enable the periodic detection.<br><br>**Note: Due to the single modem in device, periodic detection may lead to network interruption.**<br><br>1. On: when timer is up, and one card enters the WORK state, the device will immediately switch to another USIM to update the information of another card (and display on web), and then switch back to the current WORK SIM card after the update is completed.<br>2. Off: the device will not switch to another SIM to update the information when a card is in WORK state.<br>The device will switch to another SIM card only when the current SIM card is in "NOWORK" status. |

| | |
|---|---|
| Detection Interval(s) | This configure the interval of periodic detection.<br><br>1. Before successful NTP synchronisation: After a card enters the WORK state, it switches to another USIM to query the necessary information of the USIM according to the Interval Time.<br>2. After successful NTP synchronisation: After a card enters the WORK state, take Detection Time as the base time, when the UTC time of the device minus the base time is an integer multiple of Interval, switch to another USIM to query the necessary information of another USIM.<br><br>**Note: Smaller interval may result in frequent network interruption.** |
| Detection Time | The base time for Periodic detection in the format dateTime (ISO8601), UTC+0 time<br><br>Example:<br>2025-06-13T15:50:00.000+00:00<br>2025-06-13T15:50:00.000000Z<br>2025-06-13T15:50:00.0Z<br><br>1. if the device's current UTC time is <= base time, the device will perform the Periodic detection action at the next base time.<br>2. if the device's current UTC time is > the base time, the device will perform the Periodic detection action at the base time + Interval*N. |
| FallBack | This enable the FallBack feature.<br><br>1. On: If the current working card is a backup card, it will switch to the main card if the main card detection returns a successful result when the periodic detection timer is up.<br>2. Off: Fallback not available, the device will only switch when current SIM card is "WORK" and another SIM card is "NOWORK".<br>3. Fallback only takes effect when Periodic detection is enabled (since fallback is performed by the result of the Periodic detection, so there will be no fallback action if Periodic detection is not enabled). |
| Last Detection Time | Status showing the UTC-0 time of the most recent SIM card detection completed |

## 3.3. LAN Configuration

### 3.3.1. Basic LAN setting

This section describes how to configure the IP address of the devices connected to the PR12.




**Navigate to IP config -> Local Net -> IPv4**

Fill in the corresponding information for LAN configuration

| Parameter Name | Description |
|---|---|
| IP Address | Enter the local IP address of the device on the LAN. The IP addresses of all devices on the LAN must be in the same network segment as this IP address. The default gateway address is 192.168.255.1 |
| Subnet Mask | Enter the subnet mask to determine the network size (default: 255.255.255.0) |
| DHCP Server | Whether to enable the DHCP server |
| Start IP | After the DHCP server is enabled, this is needed to be filled. Enter a valid IP address as the start IP address sent by the DHCP server to the DHCP client.<br><br>If the IP address of the LAN port is 192.168.255.1, the start IP address must be greater than or equal to 192.168.255.2 but smaller than the end IP address |
| End IP | After the DHCP server is enabled, this is needed to be filled.<br><br>Enter a valid IP address as the end IP address sent by the DHCP server to the DHCP client. This IP address should be greater than "Start IP" |
| Lease Time (Sec) | The validity period of the IP address assigned by the DHCP server to the device. During this time, the server will not assign the IP address to other devices. |

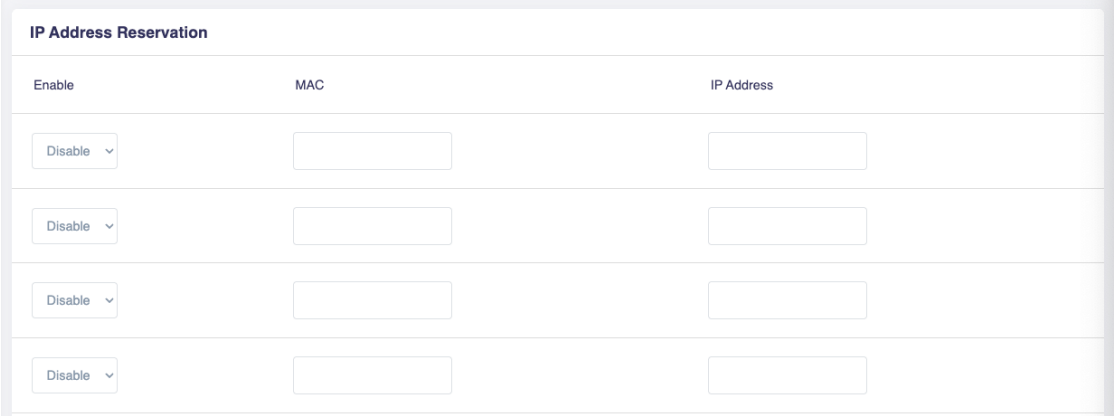
| | |
|---|---|
| | Default for 86400s |
| Default Gateway | Default gateway for devices in LAN network, this should normally remain the same with LAN IP address of device |
| DNS Mode | If "Auto" is selected, devices on the LAN port automatically obtain the primary DNS and secondary DNS.<br>If "Manual" is selected, you need to manually enter the primary DNS and secondary DNS. |
| Primary DNS | The value of primary DNS server address |
| Secondary DNS | The value of secondary DNS server address |

### 3.3.2. IP Address Reservation

This section describes how to configure IP address reservation, this allows you to set a static rule to distribute specific IP address to device according to MAC address.

**Navigate to IP config -> Local Net -> IPv4**

Fill in the corresponding information for IP address reservation



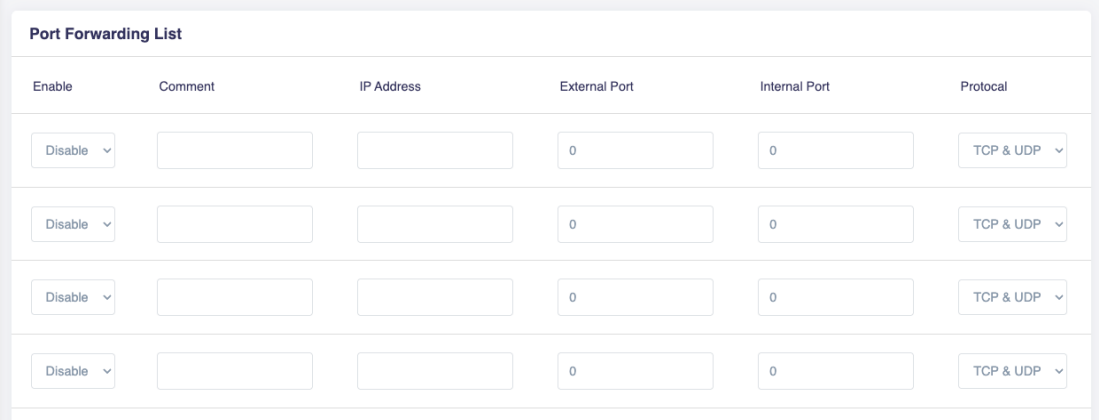

| Parameter Name | Description |
|---|---|
| Enable | Whether to enable this IP-MAC binding rules |
| MAC | Fill in the MAC address of the device that you want to set a specific IP address for |
| IP Address | Fill in the IP address to set, this should be in the same network segment of the LAN address of the device. |

### 3.3.3. Port Forward

This section describes how to configure Port Forward, this allows you to set a rule to forward the external packets from WAN to a specific IP address and port combination under LAN network by using specific external Port.

**Navigate to IP config -> Local Net -> IPv4**

Fill in the corresponding information for Port Forward




| Parameter Name | Description |
|---|---|
| Enable | Whether to enable this port forward rule |
| Comment | Comment to identify this rule |
| IP Address | Internal IP address to forward the packets |
| External Port | External port number (on WAN side) |
| Internal Port | Internal port number (on LAN side) |
| Protocol | Applied protocol for this rule of port forward |

# 4. VoIP Configuration

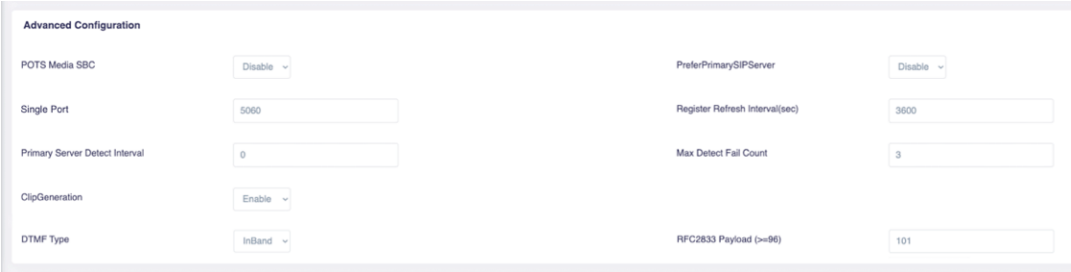
This chapter describes how to configure the VoIP configuration, before change these setting, please make sure that it's compatible with the SIP Server (IP PBX, UC Cloud) you are using.

## 4.1. SIP Configuration

**Navigate to Phone -> VoIP**

Select the FXS port to configure, each FXS port is corresponding to different SIP account, the registration parameters are described in Chapter 2.4.

### 4.1.1. Advanced SIP Configuration




| Parameter Name | Description |
|---|---|
| POTS Media SBC | Enable/Disable the function of POTS Media SBC.<br><br>POTS Media SBC is a dedicated Media SBC server for voice transmission in POTS replacement. It help cloud-based voice system reducing the impact on Fax, Contact ID and Modem transmission lead by latency and packet loss. |
| SBC Address<br>(Available only when POTS Media SBC is Enabled) | This configure the IP address of the POTS Media SBC.<br>This value is normally set by the server, please do not modify if you don't know the value. |
| Prefer Primary SIP Server<br>(Available only when "Primary Server Detect Interval" is not 0.) | The device will send option detect packets to the destination server to check the availability.<br><br>When this is enabled, the device will switch back to Primary SIP Server when it's detected as available in option detect. |
| Signal Port | This configure the local SIP port, for FXS 1 default is 5060; for FXS 2 default is 5061. |
| Register Refresh Interval | Refresh interval between two registration messages. The default is 3600s. |
| Primary Server Detect Interval | This configure the interval of the detection packets sent to the primary server, the default is 0s. which means no detection. The device will switch only when current SIP server is not available. |
| Max Detect Fail Count | This configure the maximum fail count of detection, after maximum times of detection, device will consider the server is down. |
| Clip Generation | Whether to enable the CID and CWCID |

| | |
|---|---|
| DTMF Type | This configure the type of DTMF, optional for SIP Info, Inband and RFC4733. |
| Telephone Event Payload Type (DTMF Payload) | This configure the payload type of the DTMF, available only in RFC4733. |

### 4.1.2. Regional Settings

This section describes how to configure parameters that vary by country or region to meet the requirements of different systems.

| Parameter Name | Description |
|---|---|
| Flash Time Min | This configure the maximum detection time of two flapping spring, when the time is longer than this, it will not be recognized as Flash. |
| Flash Time Max | This configure the minimum detection time of two flapping spring, when the time is shorter than this, it will not be recognized as Flash. |
| Tone Type | This configure the tone standard, select the corresponding country/region according to your actual scene. |

### 4.1.3. Feature Code

This section describes how to configure the feature code of the analog phone. Please check if your phone support R key.

| Parameter Name | Description |
|---|---|
| Enable R Key | Whether to enable the R key feature |
| R Key Cancel Code | After the R key is enabled, the R key can be combined with numeric keys to cancel the key function. The value ranges from R+1 to R+9. |
| R Key Hold Code | After the R key is enabled, the R key can be combined with numeric keys to hold a call. The value ranges from R+1 to R+9. |
| R Key Transfer Code | After the R key is enabled, the R key can be combined with numeric keys to transfer calls. The value ranges from R+1 to R+9. |
| R Key Conference Code | After the R key is enabled, the R key can be combined with numeric keys to complete the conference function. The value ranges from R+1 to R+9. |

### 4.1.4. Audio Codec Configuration

This section describes how to configure the codec of the SIP call and part of the DSP configuration.

| Parameter Name | Description |
|---|---|
| Audio Codec Type 1 | This configure the first priority Codec. Optional for G.711A, G.711U and G.729 |
| Audio Codec Type 2 | This configure the second priority Codec. Optional for G.711A, G.711U and G.729 |
| Audio Codec Type 3 | This configure the third priority Codec. Optional for G.711A, G.711U and G.729 |
| Packets Cycle | Set the RTP packaging period.<br>Option: 10, 30, 40, 50, or 60ms. The default is 20ms. |
| Echo Cancel | Whether to enable Echo Cancel. |
| Codec Priority | This configuration controls whether the device uses the remote Codec settings or the local settings first during a call.<br><br>Optional for remote or local. |

### 4.1.5. Supplementary Service

This section describes how to configure the supplementary service, it include a series configuration related to the SIP Server. Please check if your SIP server supports these features.

| Parameter Name | Description |
|---|---|
| Call Waiting | Whether to enable call waiting. After enable the function, a special pause tone is heard when another call comes in during the call.<br>You can press *77 to hold a call to connect to a new call. You can switch between two calls by pressing *77. |
| Enable MWI | Whether to enable MWI (message waiting instruction). If you need to use voice mailbox, please enable it.<br><br>When a voice message or text message is received, MWI will be displayed in the screen or the LED on the phone.<br>The actual methods will vary on different terminal. |
| MWI Subscribe Enable | Whether to enable MWI subscription function. After enable the function, the phone will resend the MWI subscription request before the MWI subscription period expires. |
| VMWI Serv | Whether to enable VMWI server function. |
| Disable MWI Tone | Whether to disable the MWI's message prompt tone |
| DND | Whether to enable the DND function. After this function is enabled, all the incoming calls can be rejected. |

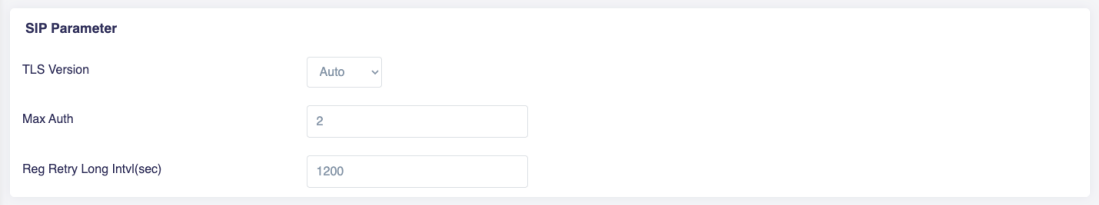
### 4.1.6. Call Preference

This section describe how to configure call forward feature.

| Parameter Name | Description |
|---|---|
| All Forward | Whether to enable unconditional call transfer. After it is enabled, you need to enter the destination extension number.<br><br>When the peer end calls the original extension, the call is automatically transferred to the specified destination extension. |
| Busy Forward | Whether to enable transfer on busy. After this is enabled, you need to enter the destination extension number.<br><br>When the peer end calls the original extension, but the original extension is in a call, then the call is automatically transferred to the destination extension. |
| No answer Forward | Whether to enable the call transfer without answer function. After it is enabled, you need to enter the destination extension number and timeout period of no answer.<br><br>When the peer end calls the original extension, but the original extension does not answer, the call is automatically transferred to the destination extension after the timeout period lasts. |
| All Forward (Blank) | This configures the destination number of All forward |
| Busy Forward (Blank) | This configures the destination number of Busy forward |
| No answer Forward (Blank) | This configures the destination number of No answer forward |

### 4.1.7. General Configuration

**Navigate to Phone -> VoIP -> General (Advanced)**



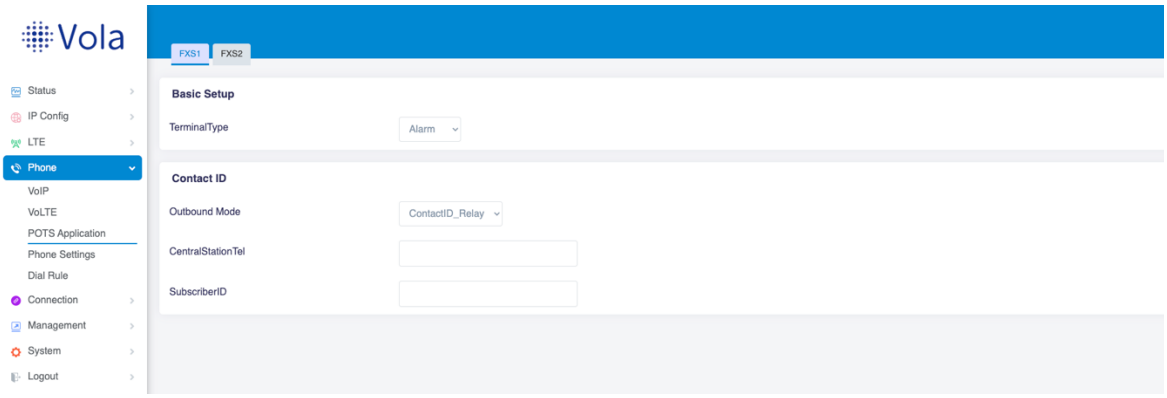

These parameters are applied to all lines of the device.

| Parameter Name | Description |
|---|---|
| TLS Version | Optional for version V1_0, V1_2 and Auto.<br><br>When auto is selected, the TLS version is decided by the server. |
| Max Auth | Enter the maximum number of authentication failures. The default is 2. |
| Reg Retry Long Intvl | Enter the long interval for sending registration requests again after registration fails. The default is 1200s. |

## 4.2. POTS Application Configuration

This chapter describe the configuration items for POTS replacement application.

**Navigate to Phone -> POTS Application**




Select the corresponding FXS port to configure the terminal type of the line.

Refer to the following description:

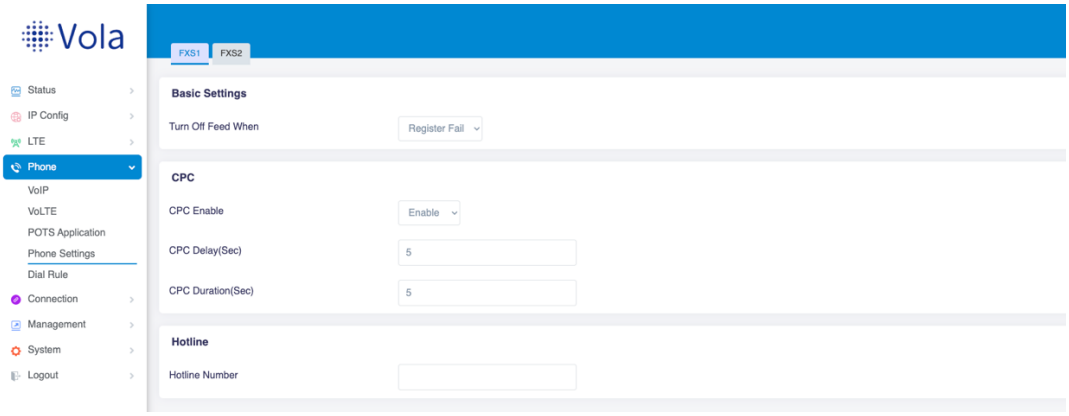
| Parameter Name | Description |
|---|---|
| Terminal Type | Optional for Alarm, Modem, Audio and Fax<br><br>Alarm: optimized for contact ID transmission<br>Modem: optimized for Modem transmission, the device will auto switch the protocol<br>Audio: for normal voice application only, if you use the line just for voice communication, please select this.<br>Fax: optimized for Fax transmission, the device will auto switch the protocol |
| Outbound Mode | Current version only support the relay mode |
| Central Station Tel (support up to 11 digits) | This configure the destination number of the overwrite function of the contact ID.<br><br>When this blank is filled with number, it will overwrite the dialed number. For example, if the Contact ID Panel is programmed with number "12345678", "Central Station Tel" is 87654321, the device will make call to 87654321 when receive dial DTMF from the terminal.<br><br>Left empty to disable this feature |
| Subscriber ID | This configure the Subscriber ID to replace the account number in Contact ID.<br><br>When this blank is filled with number, it will replace the number in account number of Contact ID.(Normally 4 digits)<br><br>For example, if the Contact ID Panel is programmed with "1234" as account number, and the "Subscriber ID" is set to "4321", the actual account number sent to the central station will be 4321. |

## 4.3. Phone Settings

This chapter describe the configuration items for FXS port.

**Navigate to Phone -> Phone Settings**

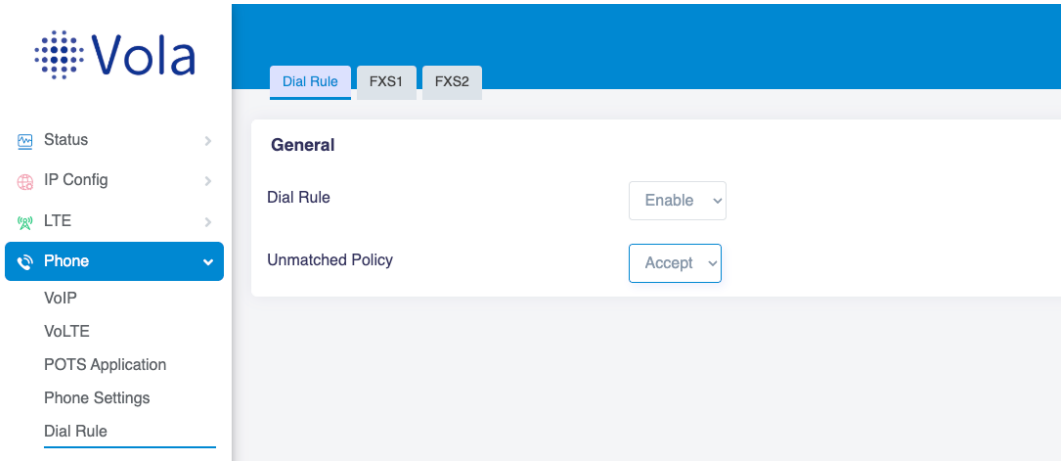
Select the corresponding FXS port:




| Parameter Name | Description |
|---|---|
| Turn Off Feed When | This configure the auto shut down feature of the SLIC Feed.<br><br>Register Fail: when the line is not registered, the SLIC feed will turn off power output.<br><br>Never: the power output of the SLIC feed is always on. |
| CPC Enable | Whether to enable the CPC function.<br><br>CPC (Calling Party Control) is a feature for elevator phone or public phone to hand up automatically. The analog phone under the device FXS port will automatically hangs up after the peer end hang up. The hang up process changes from busy tone to silent tone, and finally to off tone. |
| CPC Delay | Enter the silence duration before the local device hangs up. The default is 5s. |
| CPC Duration | Enter the busy tone duration before the local device hangs up. The default is 5s. |
| Hotline Number | When this is filled with valid number, after the phone is hook off, it will automatically make phone call to the number you filled. Support setting delay of the call.<br><br>Format "Number" + "T" + "seconds"<br><br>For example:<br><br>123456T5 means: after 5 seconds delay, make call to 123456.<br>123456 means: Immediately call to 123456 |

## 4.4. Dial Rule

This chapter describe how to configure the digit map, you can set the digit map function and define call rules for FXS accounts.

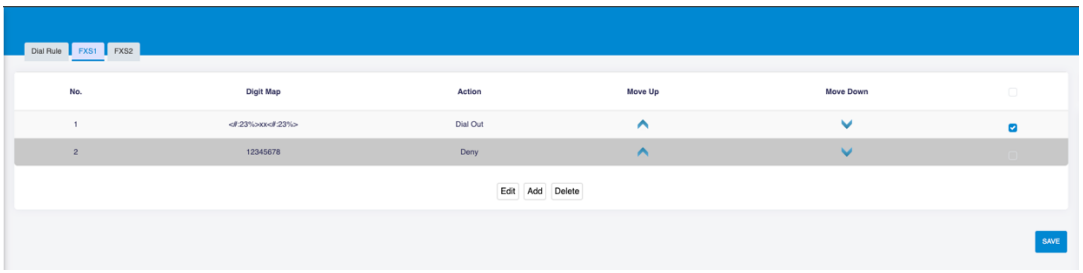



| Parameter Name | Description |
|---|---|
| Dial Rule | Whether to enable Dial Rule for the device, all FXS port is controlled by this parameter. |
| Unmatched Policy | Whether to accept unmatched policies:<br><br>If reject, only the number in the digit map rule can be successfully called.<br><br>If accept, you can successfully call any number, not limited by the dial rule. (Unless denied in the rule) |

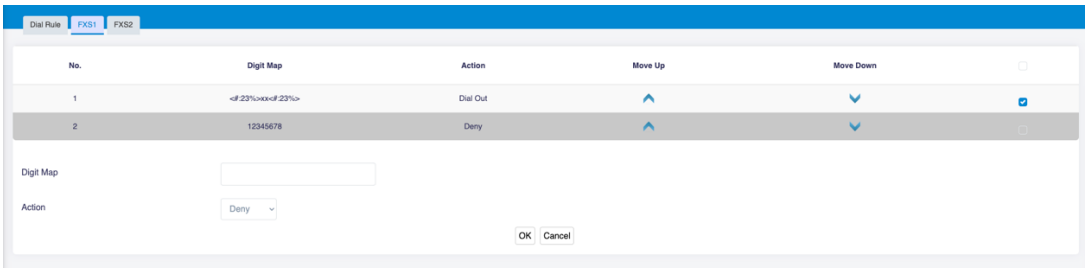
Click the tab of the FXS port to configure:

**Note:**

1. After filling in new rule, please click SAVE and reboot the device after all rules are added;
2. Smaller number means higher priority, you can use the arrow "move up" and "move down" to arrange the order of the rules.



Click Add to create a new rule:




| Parameter Name | Description |
|---|---|
| Digit Map | Set the digit map rule, please refer to the following description to add the digit map record<br><br>1. 'x' can be used to match one legal character, legal character include 0 1 2 3 4 5 6 7 8 9 * #<br>2. '[]' can be used to match a sequence, digits in [] must be concrete characters,<br><br>for example: [0-9] match one character from 0 to 9;<br><br>[23-5*] : match one character from 2 or 3 or 4 or 5 or *<br><br>3. 'x.' can be used to match multiple digits,<br><br>for example, 121. can match to 121, 1211, 121123, 121009900...<br><br>4. '<:>' can be used to replace digits, the previous angle bracket match to dialed numbers, the latter one stands for characters after replace.<br><br>for example: <#:23>xx<#:23>, when '#56#' is dialed, output is '235623'<br><br>5. 'x,y' can be used to generate second Dial Tone, after dealing 'x', Dial Tone will be played, after 'y' is dialed, dial tone will stop.<br><br>for example, 4,5 means dial tone will be played when 4 is dialed, and stop when 5 is dialed<br><br>6. 'Tx', T is used to indicate the delay of call, after x seconds, the call will be sent, x can be any digits from 0 to 9.<br><br>for example, T5 means the call will be sent after 5 seconds delay. x can be left empty, empty is 2 seconds by default |

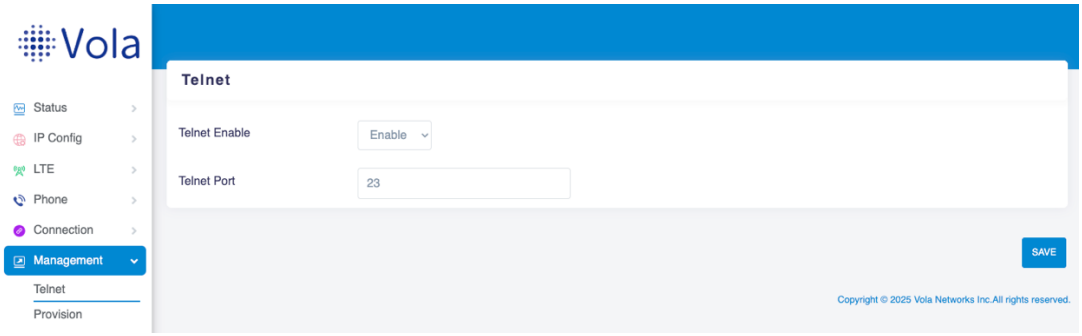
| | |
|---|---|
| Action | Deny: If the dialed number is matched with the record, the call will failed<br><br>Dial Out: The number can be called out normally |

# 5. Device Management Configuration

This chapter describes how to manage the device locally or remotely.

## 5.1. Telnet

**Navigate to Management -> Telnet**



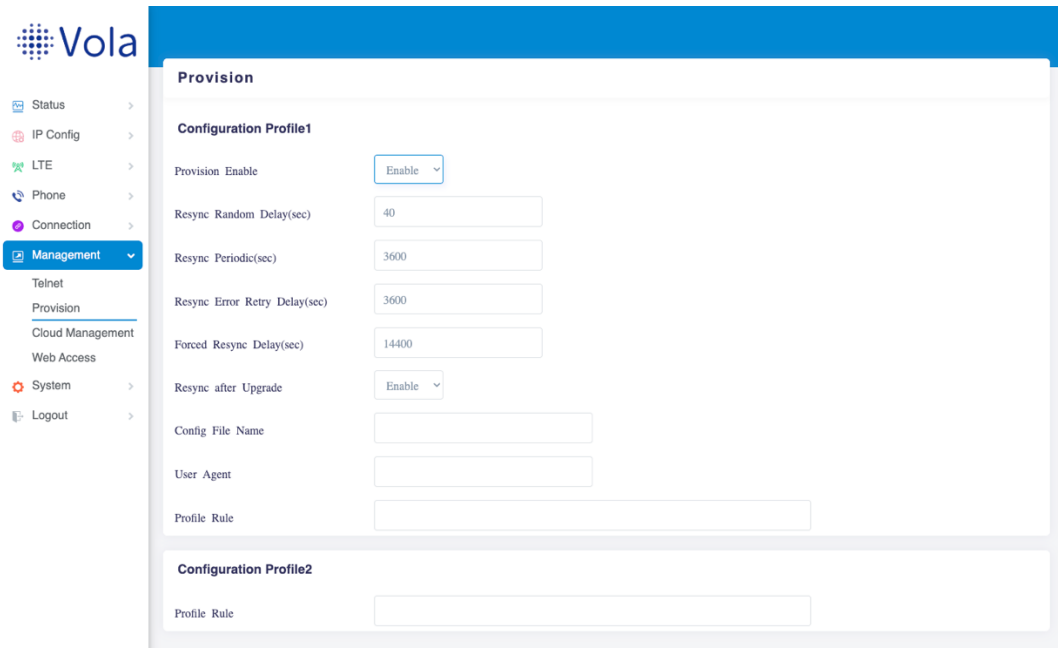

Fill in the corresponding information for SIP registration

| Parameter Name | Description |
|---|---|
| Telnet Enable | Enable the telnet function to locally command the device. |
| Telnet Port | Enter the port to connect to the device with telnet |

## 5.2. Provisioning

**Navigate to Management -> Provision**

On this page, you can configure Provision related parameters. For more details about provisioning template, please contact your reseller/sale or our support team.




| Parameter Name | Description |
|---|---|
| Provision Enable | Whether to enable the Provision. |
| Resync Random Delay | Sets the maximum delay time for requesting file synchronization, default for 40 seconds.<br><br>With the interval from 0 to 40 seconds, a value is generated randomly and the device waits for the interval of this value before requesting the Provision server. When filled in with 0, it indicates that the feature is disabled as a way to prevent a large number of devices from sending too many server requests at the same time. |
| Resync Periodic | Fill in the cycle time for the device to automatically resynchronize with the server, default 3600 seconds. |
| Resync Error Retry Delay | Fill in the interval time for re-synchronization again after synchronization error, default 3600 seconds. |
| Forced Resync Delay | Fill in the forced synchronization time, i.e., if the device is in a busy state such as a call at the specified re-synchronization time, server synchronization is not possible, then define the interval time to guarantee that the device is forced to re-synchronize after being idle, default 14400 seconds. |
| Resync after Upgrade | Whether to trigger resynchronization after each firmware upgrade. |
| Config File Name | Fill in the configuration file name. |

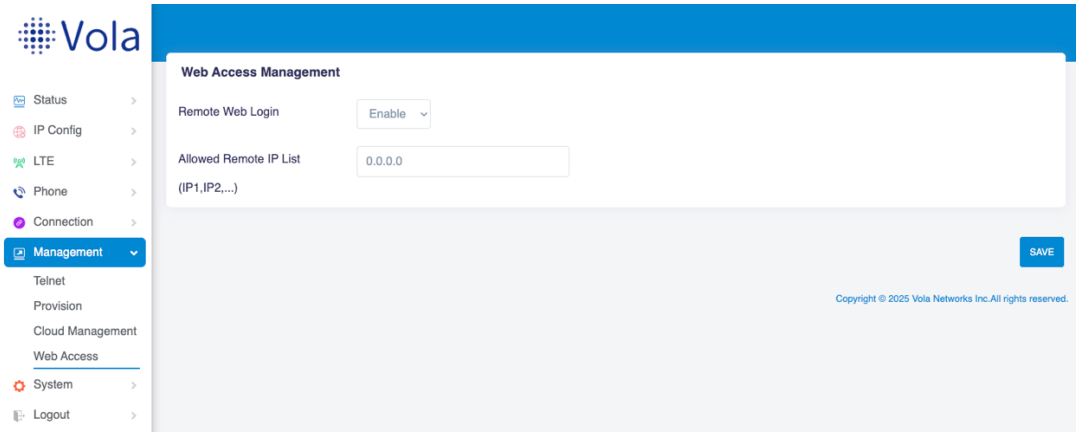
| | |
|---|---|
| User Agent | Fill in the user agent name. |
| Profile Rule | Fill in the path URL of the configuration file to complete the provision, which is a TCP/IP operation and an associated URL. The TCP/IP operation can be TFTP, HTTP, or HTTPS. This is the first priority profile rule. |
| Profile 2/Profile Rule | Second priority Profile Rule. |

## 5.3. Remote Web Access

PR12 support remote web access, you can visit the Web configuration page from its WAN port. Before using this feature, please make sure your PR12 is deployed properly with available uplink.

The format of URL is: **http://WAN Port IP address**

**Navigate to Management -> Web Access**




Fill in the corresponding information for remote web access.

| **Parameter Name** | **Description** |
|---|---|
| Remote Web Login | Enable or disable the remote Web access.<br><br>If disable, you can not access the web page from WAN port..<br><br>If enable, you can enter the web page by the IP address of the device.<br><br>**Note: if you use WAN port and SIM card at the same time, you will need different IP address for WAN Interface and LTE interface. This depends on the active interface.** |
| Allowed Remote IP List | White list for allowed IP address, if multiple IP address is used, divided by **","**<br><br>**For example:** 125.152.115.67,125.152.110.1<br><br>0.0.0.0 stands for "all IP address is allowed" |

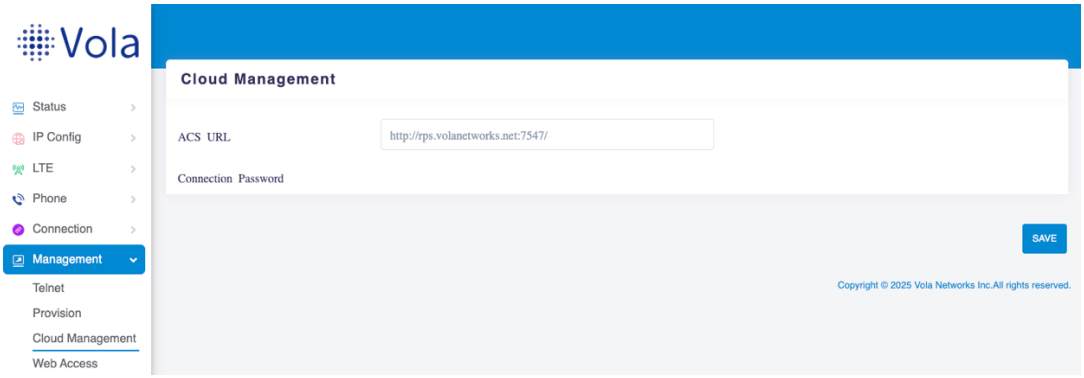
## 5.4. Cloud Management

**Navigate to Management -> Cloud Management**

The device will connect to VolaCloud by default, please refer to this document to use VolaCloud:

https://docs.volanetworks.net/en/User_Manual/VolaCloud_User_Manual

to know more details about VolaCloud, please contact our support: support@volanetworks.com.



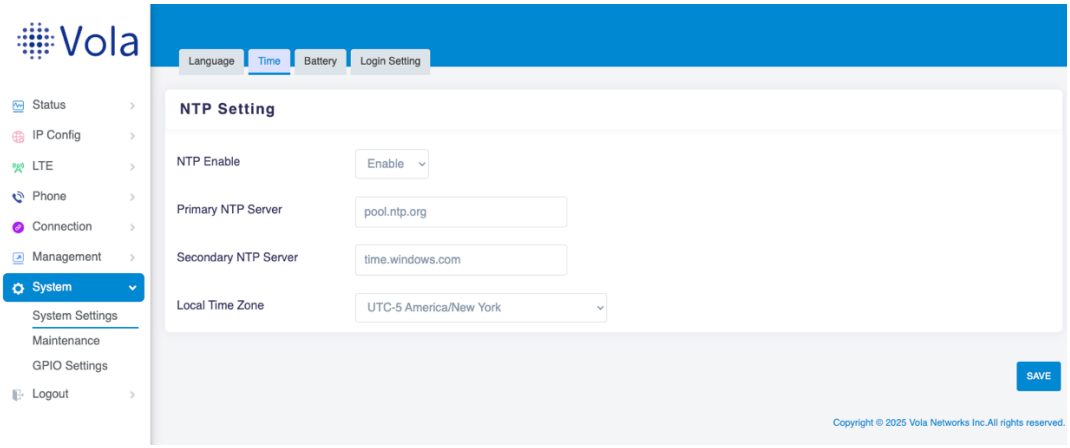
# 6. System Configuration

This chapter describes how to configure the device's system setting, and frequently used maintenance operation.

## 6.1. System Settings

### 6.1.1. Time Settings

**Navigate to System -> System Settings -> Time**

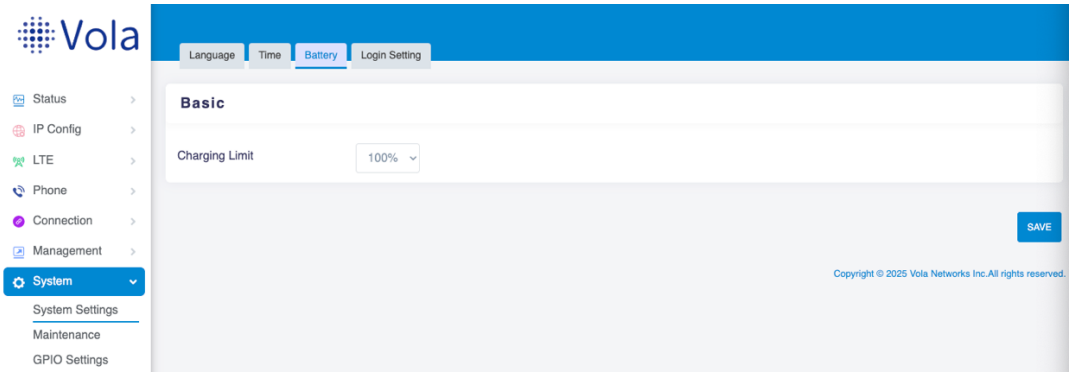



Fill in the corresponding information for time settings

| Parameter Name | Description |
|---|---|
| NTP Enable | Whether to enable the NTP (Network Time Protocol) switch, used to synchronize the time. |
| Primary NTP Server | Fill in the IP address or domain name of the preferred NTP server. |
| Secondary NTP Server | Fill in the IP address or domain name of the alternative NTP server. |
| Local Time Zone | Optional time zone, default is UTC-5 American/New York. |

### 6.1.2. Battery

**Navigate to System -> System Settings -> Battery**




You can configure charging limit of the built-in battery to improve the battery life. This parameter can maintain the battery in 80-90%.

**Note:** PR12 support 24-hour standby with built-in battery, when the PR12 is running on battery, the WAN port will be disable and only use the LTE as uplink connection.

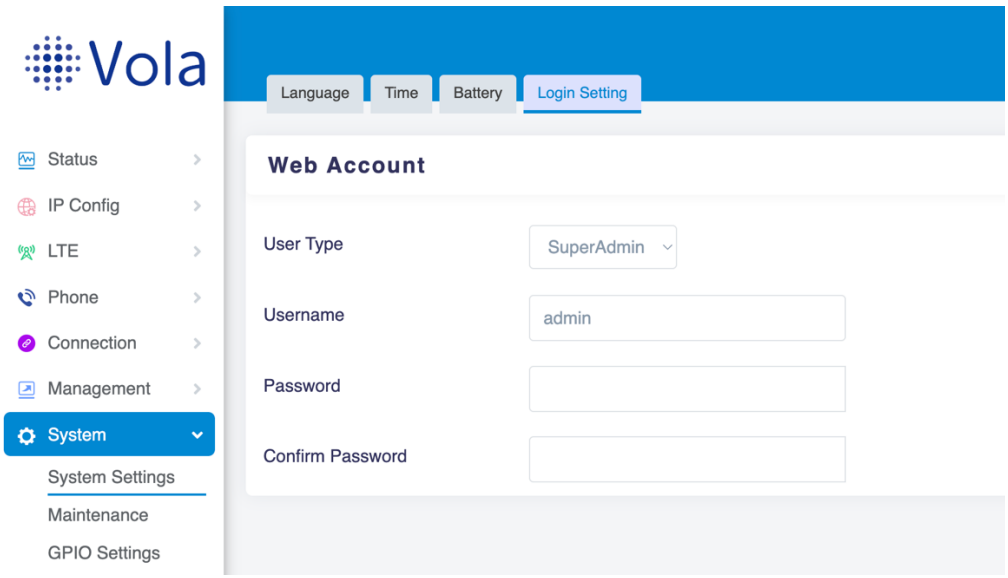
Actual standby time varies depending on operating conditions.

IF you want a longer battery standby time, choose 100% for battery limit.

### 6.1.3. Login Information Setting

**Navigate to System -> System Settings -> Login Setting**

You can configure the login username and password in this page,




Note: currently, only SuperAdmin is supported

## 6.2. System Maintenance

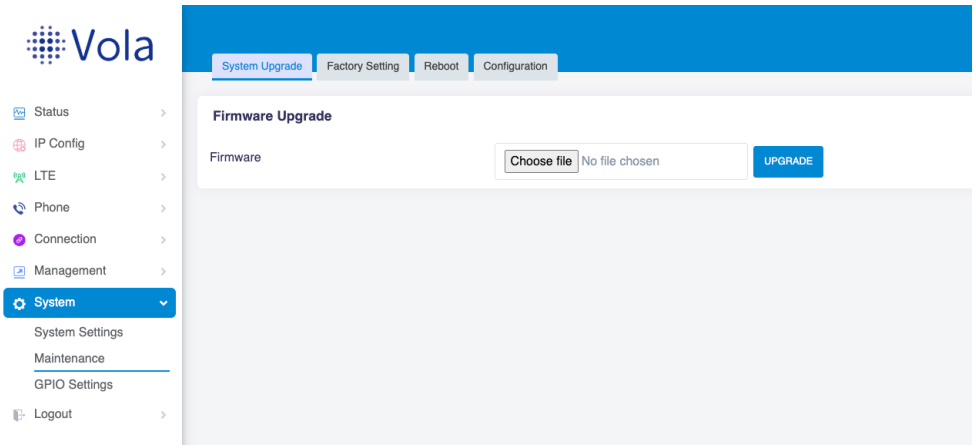
Navigate to System -> Maintenance

### 6.2.1. Firmware Upgrade

The device supports uploading firmware files to update the software version

**Procedure:**

1. Navigate to System -> Maintenance -> System Upgrade;
2. Click Choose File to select your firmware from the laptop/PC;
3. Click UPGRADE to upload the file and wait for the reboot.

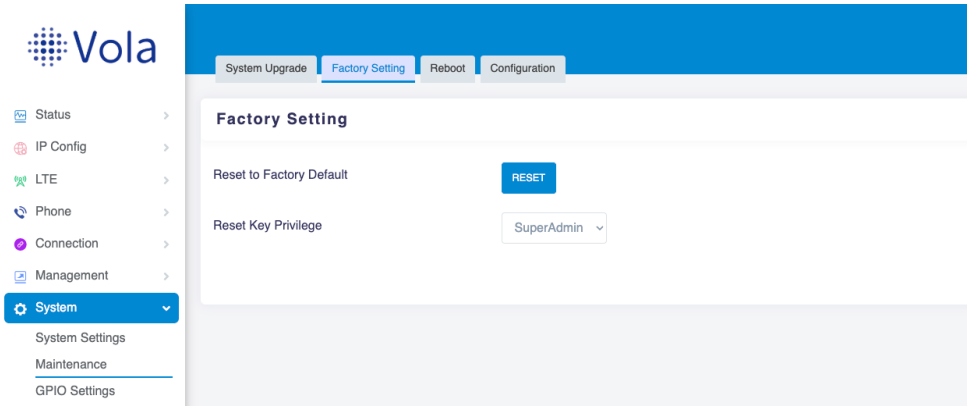


### 6.2.2. Factory Default

You can reset the device to factory default settings here.

**Procedure:**

1. Navigate to System -> Maintenance -> Factory Setting;
2. Click the RESET Button, wait for the system reboot.




**Reset Key Privilege:**

**Super Admin:** The physical reset key **can** factory reset the device.

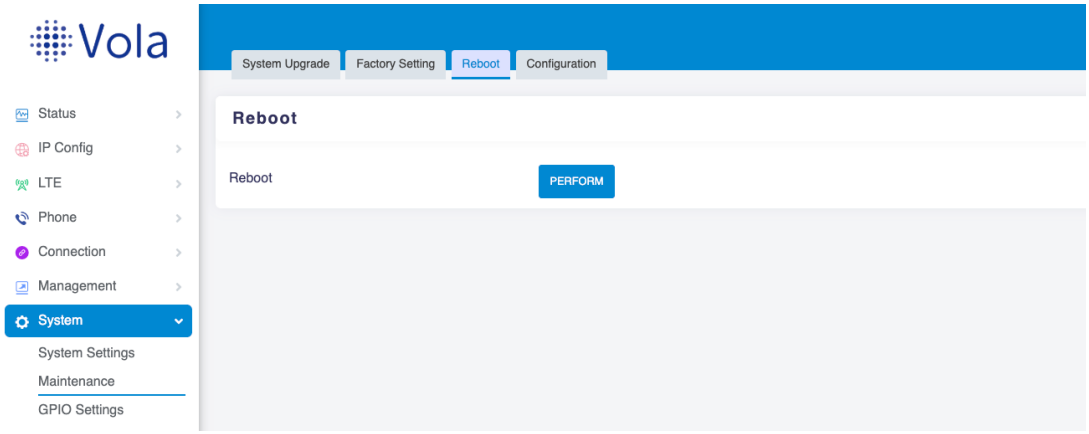
**None:** The physical reset key **cannot** factory reset the device, the device can only be reset by web interface or remote management, this feature can be used to prevent another user to factory reset the device.

### 6.2.3. Reboot

You can reboot the device by clicking Perform button here.

Procedure:

1. Navigate to System -> Maintenance -> Reboot
2. Click PERFORM, confirm and wait for the device to reboot

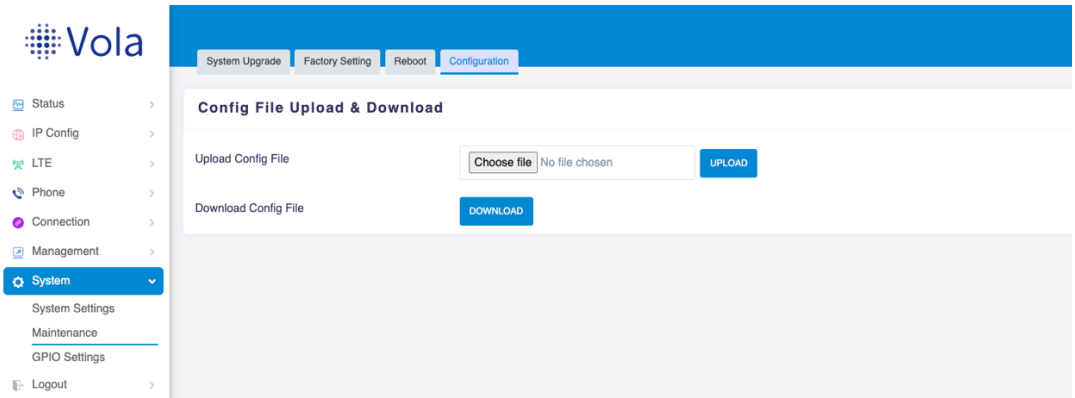



### 6.2.4. Configuration Upload & Download

You can Upload & Download the configuration of the device here.

**Upload:** You can upload a configuration file from other device or manually edit the configuration file which is xml format, parameters in the configuration file are following the TR-069 (CWMP) protocol. To know more details of this, please refer to the administrator guide. The description of each parameters are also inside the template.

**Download:** You can export the current configuration of the device by this button, the downloaded file is xml format. You can edit the downloaded file and upload it to another device. Same configuration will be applied.




For more details about the config file, please find in administrator guide:

docs.volanetworks.net