EJOIN ACOM5xx VoIP Gateway

User Manual

Shenzhen Ejoin Technology Co.,Ltd.

Address: 3rd Floor, Wanyuan Business Building, Liuxian NO.2 Road, 71 Block, Bao an District. Shenzhen City, P.R China.

Tel: +86-755-85245166

Fax: +86-755-85245122

Email: sales@ejointech.com

Skype: ejointech.v

Website: www.ejointech.com

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Chapter I Equipment Information

1.1 Product Brief

ACOM5xx series VoIP Gateway is a multi-functional and high performance product, which is mainly used for call termination (VoIP to Mobile) and origination (Mobile to VoIP). It can enable to make 16 calls simultaneously. It is based on SIP and compatible with Asterisk, 3CX, Elastix, IPPBX, VOS, VPS operating platform.

ACOM5xx VoIP Gateway also can be used as a Network SMS modem which supports SMS sending and receiving. It has flexible HTTP/SMPP API for SMS service. Customers can develop SMS server easily by the API.

1.2 Product Application

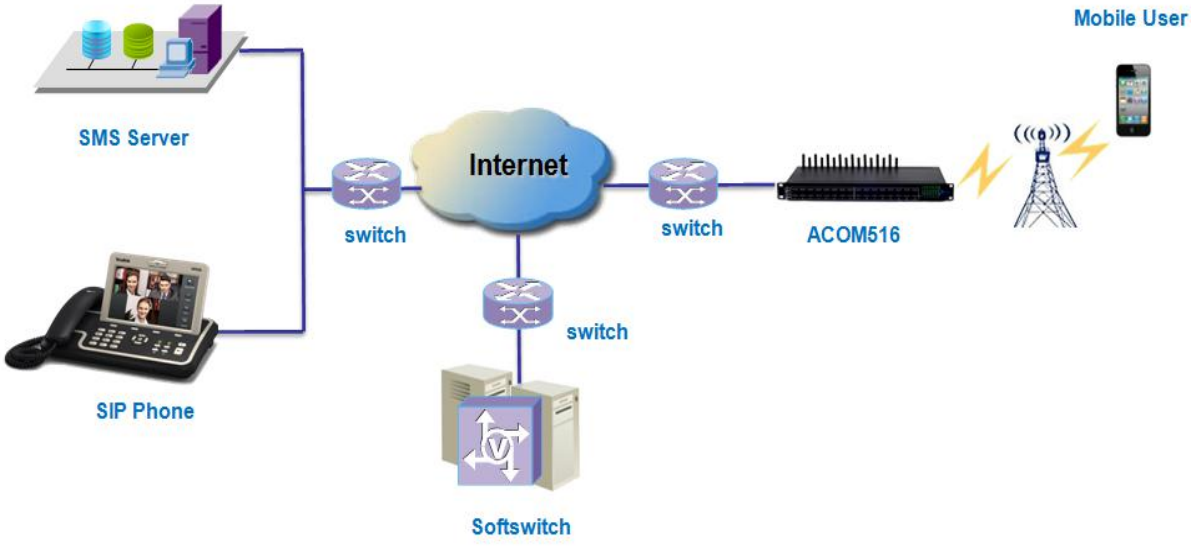


Figure 1.2-1 Product Application

1.3 Product Appearance

Back Panel

Figure 1.3-1 Back Panel

Description of the front panel(from left to right)：

- 1 Ground connection
- 1 reset button (press RST button about 10s will restore to factory settings)
- 1 Power Interface (DC 12V 5A)
- 2 Network Interface (LAN and WAN, RJ45)
- 1 Console Interface (USB to Serial, Baudrate 115200)
- 16 Antenna Connector

Front Panel

Figure 1.3-2 Front Panel

Description of the front panel(from left to right)：

- 64 SIM slots (4 SIM cards per channel)
- 1 Power light (indicate the status of the power connection)
- 64 LED lights (indicate the status of SIM cards)
- 2 fans

1.4 Special Features

- Support G729a/b/e,G723.1,G.711 A/U law, G726, G722, iLBC
- Proxy Encryption Solution for IP Block
- Support SIM Pool
- VPN (PPTP and OPEN-VPN)
- SIM Card Rotating
- Base station intelligent switching/locking
- IMEI modification
- Support SMPP
- SMS and USSD HTTP API
- Support SNMP
- ERMS (Ejoin Remote Management System)
- Port Inter-Calling/SMS sending
- Fake ringback
- Call waiting
- Support call back
- Support consume SIM data
- Auto-recharge
- MNP
- State notification(CDR)
- Call Duration Limitation
- Dial Plan/Prefix Inward Translation/Intelligent Routing

1.5 Specification

Mode	ACOM504	ACOM508	ACOM516	ACOM532
Channels	4	8	16	32
SIM slots	4	8	16/64/128/256/512	32/64/128/256/512
frequency	GSM/CDMA/WCDMA/LTE			
SIP Specification	RFC3261, Session Timer RFC4028, STUN			
codec	G729a/b/e,G723.1,G.711 A/U law, G726, G722, iLBC			
DTMF	RFC2833, SIP info, In-band			
Network protocol	IPv4,TCP, UDP, PPPoE, DHCP, DNS, NAT, Telnet, HTTP, TFTP			
Firmware update	TFTP/HTTP			
ERMS	Ejoin Remote Management System			

Call statistics	ASR, ACD, PDD
Encryption	EJOIN, VOS2000, RC4, BASE64

Table 1.5-1

1.6 Mobile Features

- SMS Send, Receive and Forward (GSM/SIP/HTTP)
- SMS Inbox
- AT Command, USSD
- SMS Format: PDU/TXT
- PIN Code Management
- CDMA Delay Answer
- GSM Polarity Reversal
- Carrier Selection
- Caller ID Hidden (need SIM Card support)

Chapter II Equipment Installation

2.1 SIM Card Placement

Insert SIM cards like the figure 2.1-1. The SIM cards should be mini-SIM (2FF).

Figure 2.1-1 SIM Card Placement

2.2 Antenna Installation

The external antenna should be installed vertically always on a site with a good wireless signal. It is strongly recommend that you choose the long antenna.

Figure 2.2-1 Antenna Installation

2.3 Network Connection

Plug Ethernet line into gateway WAN port, and then connect the other end of the Ethernet line with switch or router. Note: Do not use LAN port, LAN port is useless.

Figure 2.3-1 Network Connection

2.4 Power Connection

Connect the small end of the power cable to the power input on the back panel, and plug the other end of the cable into a 220V power outlet.

Figure 2.4-1 Power Connection

2.5 Serial Connection

Connect one side of serial cable to the console port on the back panel, another side to computer USB port.(Don't need connect it normally)

Figure 2.5-1 Serial Connection

Chapter III Web Settings

3.1 Login

Open the web browser and type the IP address. If it is the first time you login the gateway, please use the default settings below:

IP Address: 192.168.1.67

Account: root

Password: root

Figure 3.1-1 Login web

3.2 Basic Settings

WAN Settings

There are three types of WAN port IP: Static, Dynamic and PPPoE. (Default static IP is 192.168.1.67). You can also change the wan settings when get a new device. If you want to

access in this default IP, your local PC need a same network segment 192.168.1.xxx.

Figure 3.2-1 WAN Settings

Items	Description
WAN Type	Static IP: manually set up gateway IP. Dynamic IP: automatically get IP from local network. PPPoE: need ISP offer the account and password. Use this mode when there is no router in the local network
WAN IP	The WAN IP address of gateway
IP Mask	The subnet mask of gateway
Default Gateway	Default gateway IP address. Example: router IP.
DNS Gateway	Domain name server IP address. Example: 8.8.8.8.

Table 3.2-1

SIP Server Settings

This is the gateway settings for connecting with softswitch or server, such as VOS, VPS, IPPBX and Asterisk.

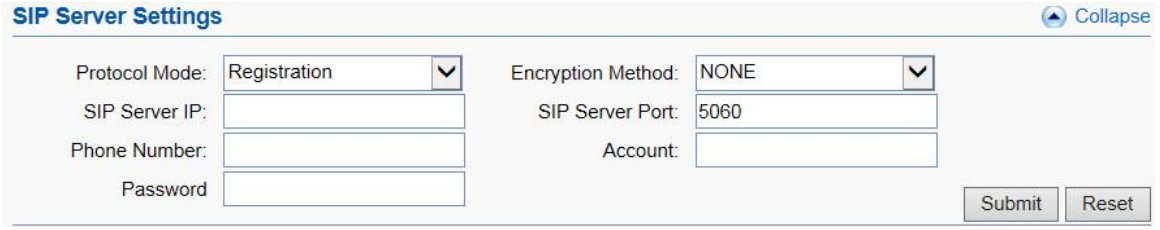


Figure 3.2-2 SIP Server Settings

Items	Description
Protocol Mode	There are two protocol modes: registration and point to point. Note: point to point can be used only when gateway and server in the same LAN or both have public IP.
Encryption Method	There are two encryption methods: EJOIN and VOS2000. (Note: Choose “EJOIN” Encryption need to set proxy server and port first.)
SIP Server IP	The IP or domain name of softswitch which will send traffic to the gateway. For example: VOS IP.
SIP Server Port	SIP port of softswitch, default port is 5060.
Phone Number	The caller phone number for SIP client, it can also be regarded as the SIP port number which can be called.
Account	SIP registration account which is provided by softswitch. For example: the routing gateway ID on VOS.
Password	The password of SIP registration account.

Table 3.2-2

3.3 SIP Settings

3.3.1 Basic Settings

Running Parameters

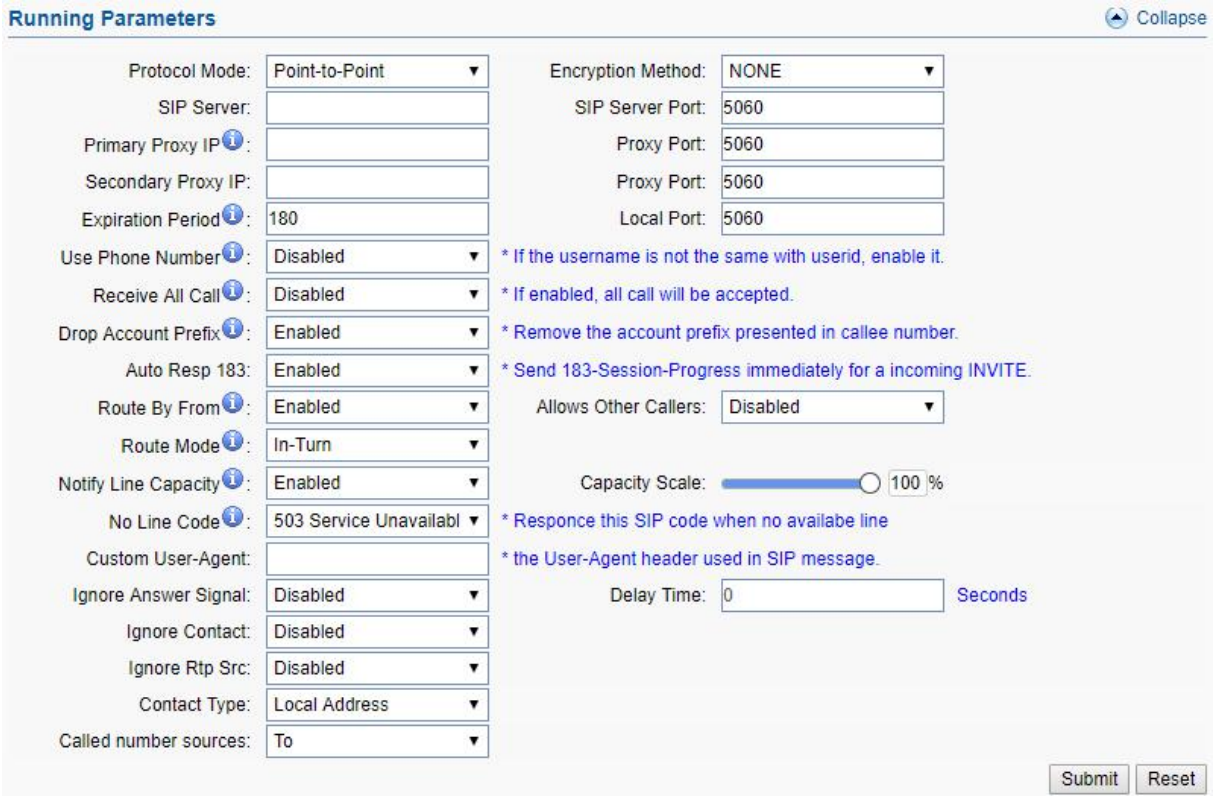


Figure 3.3.1-1 Running Parameters

Items	Description
Protocol Mode	It is the same as that in Basic Settings. The modification here also apply to Basic Settings page.
Encryption Method	It is the same as that in Basic Settings.
SIP Server	It is the same as that in Basic Settings.
SIP Server Port	It is the same as that in Basic Settings.
Primary Proxy IP	Proxy server will receive requests from client, and make the signaling and media streams are able to penetrate the firewall. It is usually used when gateway can't registered with the softswitch because of network blockade.
Proxy Port	The proxy server port. Ejoin default proxy port is 25600.
Secondary Proxy IP	It is the same as primary proxy, don't need to set it.
Expiration Period	Gateway will send a register request to the softswitch during every half time of expiration period.
Local port	Device sip port, default is 5060, if set to 0, means dynamic sip port

Use Phone Number	If the username is not the same with user id, enable it. Keep it dsiabled
Receive All Calls	Disabled: only the SIP server address which is type in basic settings or phone book can send traffic to this gateway. Enabled: traffic from any server can send traffic to this gateway (same LAN or both gateway and server have a public IP). It's dangerous when eabled, hackers may send traffic to the gateway then steal SIM balance.
Drop Account Prefix	If it is enabled, it will remove the account prefix presented in callee number.
Auto Resp 183	If it is enabled, gateway will send 183-Session-Progress immediatey for an incoming INVITE.
Route By From	If it is enabled, gateway will only accept the call whose "From" header(caller ID) is matched. Note: if the gateway is just used as call termination, please disable it.
Allows Other Callers	If it is enabled, gateway will accept the call even incoming call's ID not match.
Route Mode	In-Turn: traffic will be routed to the first released port. Balance: traffic will be routed to the fewest historical calls port. Sequence: traffic will be routed by ascending port. Random: traffic will be routed randomly.
Notify Line Capacity	This function is for VOS3000, Device send the available ports to VOS3000 and VOS3000 send traffic with corresponding ports. VOS3000 version should be no less than 2.1.6.0
Capacity scale	eg: capacity scale 50%, device has 30 available ports, then device will send 30*50%=15 ports to VOS3000.
No Line Code	Gateway will send this SIP code as response to SIP server when no available port.
Custom User Agent	The User Agent header which is used in SIP message.
Ignore Answer Singal	Device will not send connected signaling to the sip server after the call connected, it will send the connected signaling to sip server after the delay time
Delay Time	The time of sending connected signaling

Ignore Contact	Disabled: send reply signaling to contact. Enabled: send reply signaling to request address.
Ignore Rtp Src	If it is enabled, device will send rtp to the sdp address
Conatct type	Local address: the device wan port ip and sip port. Public address: device change the contact to public ip and sip port automatically(NAT traversal) Customize: set the device public ip and sip port manually.
Called number sources	Called number use request url or to, it's same value usually.

Table 3.3.1-1

3.3.2 Channel Settings

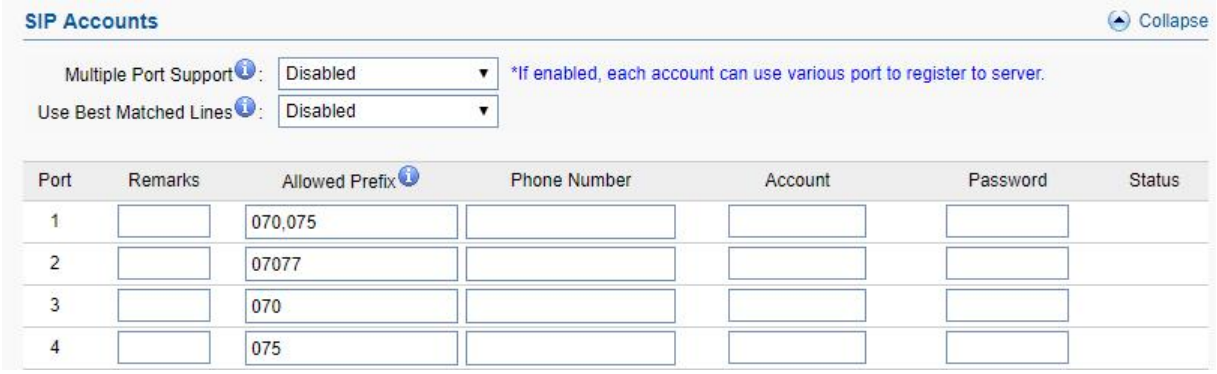


Figure 3.3.2-1 Channel Settings

Items	Description
Multiple Port Support	If enabled, each port can registered a sip account
Dynamic registration	If enabled, the port will send unregistered signaling to sip server when the sim card remove.
Remarks	Note for the port
Allowed Prefix	Intelligent routing, gateway will route calls by the allowed prefix. for example: channel 1 is with prefix 070 and 075, this channel will only accept the calls with prefix 070 and 075, others will not be routed to this channel. If allowed prefix is blank, it can accept any calls. If all prefixes don't match, the

	call will be rejected.
Use Best Matched Lines	Disabled: shorter prefixes will be tried if the port matched by this prefix can't deliver the call. Enabled: no more prefixes will be tried if the port matched by this prefix can't deliver the call.
Local Port	Sip port for each channel.
Sip Server	Sip server ip, if the server port is not 5060, need to put port eg: 1.2.3.4:6070
Phone Number	When enable route by from, the channel will only accept the call which caller ID is input in phone number.
Account	SIP registration account.
Password	The password of SIP registration account.
Status	The status of registration. When gateway is registered with softswitch, it will show ready.

Table 3.3.2-1 Channel Settings

3.3.3 STUN Settings

STUN (Simple Traversal of UDP through NAT) is a protocol for assisting devices behind a NAT firewall or router with their packet routing. If you have the STUN server, enable STUN support, fill the server IP and port (default port is 3478), then it will work.

Figure 3.3.3-1 STUN Settings

3.3.4 MNP Settings

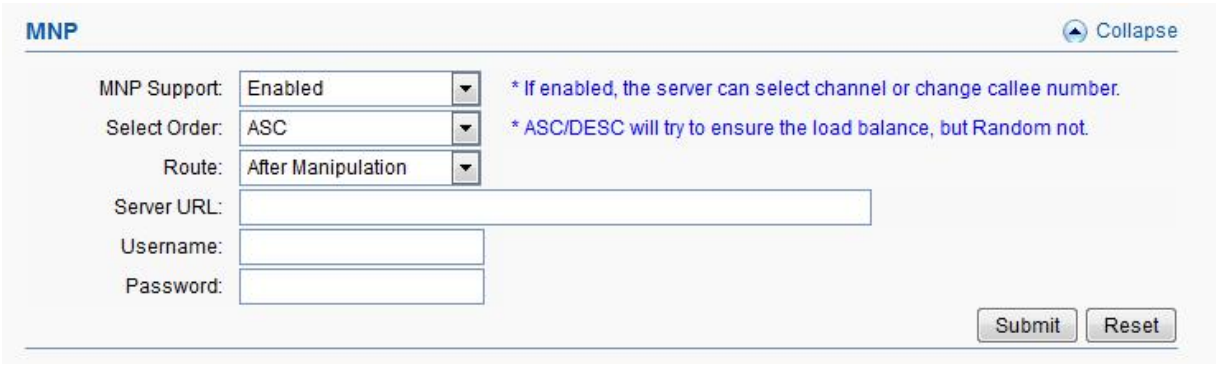


Figure 3.3.4-1 MNP Settings

Items	Description
MNP support	Mobile Number Portability (MNP) enables mobile telephone users to retain their mobile telephone numbers when changing from one mobile network operator to another.
Select Order	When the traffic send to the gateway, it can select ascending order, descending order or random ports.
Route	There are two choices of route: 1. Route calls after manipulation. 2. Route calls before manipulation. Note: route calls by allow prefix, callee number prefix manipulation by inward translation.
Server URL	MNP server address
Username	MNP server username
Password	Password of the username

Table 3.3.4-1 MNP Settings

3.4 Gateway Settings

3.4.1 Port Settings

Basic Settings

Figure 3.4.1-1 Basic Settings

Items	Description
Frequency Band	Choose the module frequency.
Network Type	It's used for 3G or 4G device to change the network type
Register Type	voice or data network for registering
Unnormal SIM supp	It's used for special country, keep it disabled.

Table 3.4.1-1 Basic Settings

Hardware Properties

Figure 3.4.1-2 Hardware Properties

Items	Description
Port NO.	Gateway channel
Enable SIM Card	The SIM is enabled with√, and disabled without √. You can enable or disable SIM by this button.
Lock Operator	Roaming sim card lock operator
Mobile Base	The base station of SIM registered.

Input Vol	Input volume of module, unmodifiable value.
Output Vol	Output volume of module. unmodifiable value.
IMEI	International Mobile Equipment Identity of this module. This gateway support IMEI modification, you can do it on IMEI settings page.

Table 3.4.1-2 Hardware Properties

3.4.2 Base Stations

Basic Settings

Figure 3.4.2-1 Basic Settings

Items	Description
Max Channels	The maximum number of base station
Lowest Valid Signal	The lowest valid signal of base station, the default value is -90 dbm. SIM card will not register in the base station which signal is lower than the value.
Switch Period	Base station switch period, the default value is 60 minutes. Base station will switch automatically by the period (when base selection is “poll”).
Base Balancing	Disable: every channel will select the base station with best signal. We suggest this mode. Enable: every channel will try to select different base station.

Table 3.4.2-1 Basic Settings

The device will change base station when it reaches the value which set in the conditions settings below.

Figure 3.4.2-2 Conditions Settings

Base Stations settings/operations

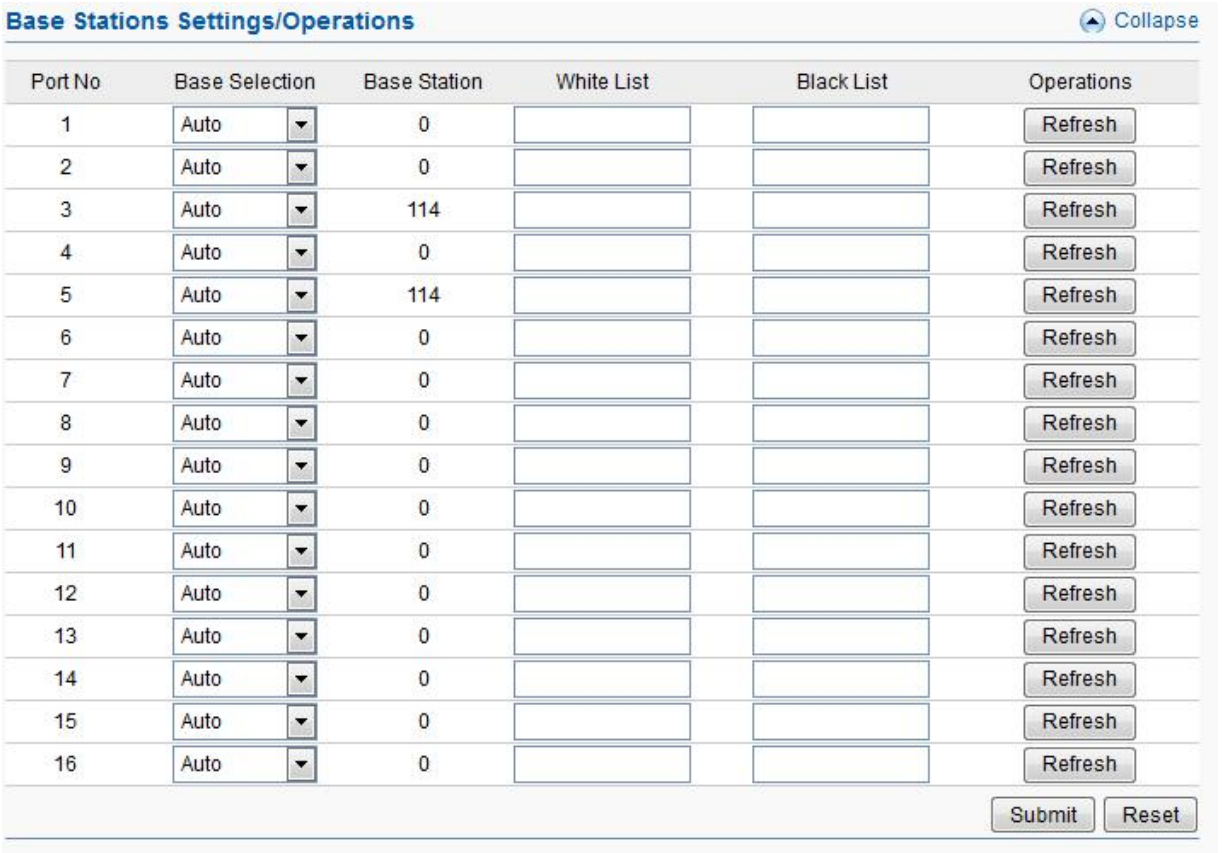


Figure 3.4.2-3 Base Stations Settings

Items	Description
Port NO.	Gateway channel, starts from 1 to 16.
Base Selection	Auto: every channel will select the base station automatically. Poll: base station will switch during every switch period, if set a base station in white list, it will be locked in this channel.

Base station	It will show the base station
White List	The base station white list, if you just put one base here and select "poll", this channel will lock the base station.
Black List	The base station can't be used if put in black list.
Operations	Refresh the base station information.

Table 3.4.2-2

3.4.3 IMEI Settings

IMEI means International Mobile equipment Identity, it is a 15-digit number. The gateway can do IMEI modification, it can protect SIM from blocking. With the function, you can do static IMEI or dynamic IMEI.

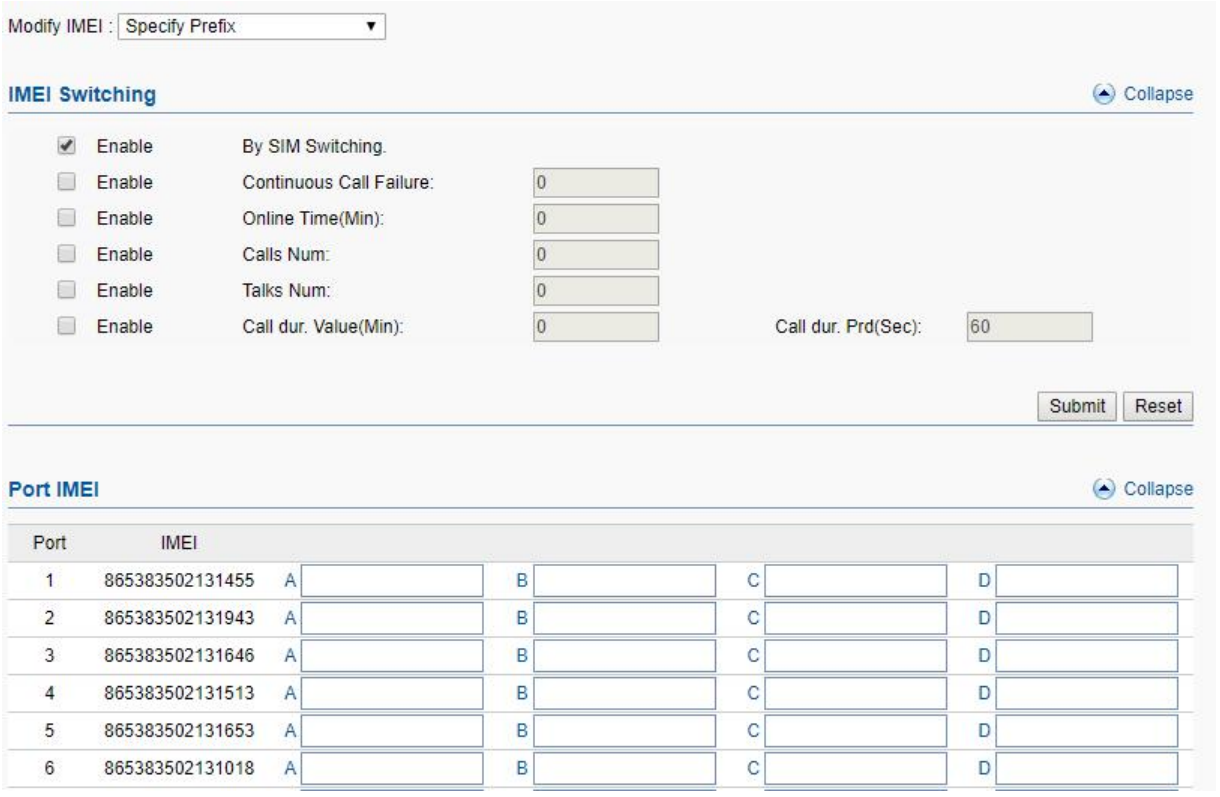


Figure 3.4.3-1 IMEI Settings

You can set any different IMEI for every port, just set 14-digit number, the last digit will generate itself. If you need set with special prefix, just click "copy" , you can see the figure as above: set 865 in port 1A, after click "copy", every port will have a IMEI prefix 865, click "auto complete", the IMEI prefix will generate automatically. If you just put an IMEI prefix

in the blank, the IMEI will changed when SIM switch(default), and also you can change the conditions for changing above.

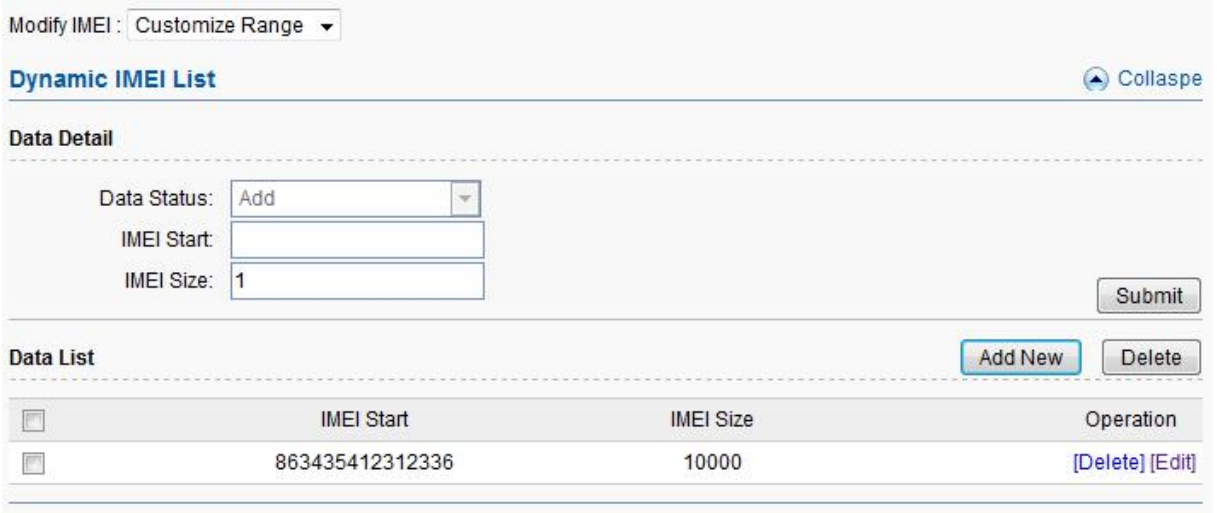


Figure 3.4.3-2 Dynamic IMEI Settings

You can click "Add New" button to add a new dynamic IMEI list, this list includes initial IMEI value of IMEI group and the size of IMEI group. click "Delete" will delete a exist IMEI list, if you want to change the settings of dynamic IMEI list, please click "Edit" button.

3.4.4 PIN Settings

PIN means personal identification number, it just like a password of SIM card, it can help to prevent SIM card from being stolen and improve security. Most SIM cards don't have PIN code. If a SIM card is with PIN, you need input PIN code in corresponding slot and enable "PIN Unblock", then the SIM card will work.

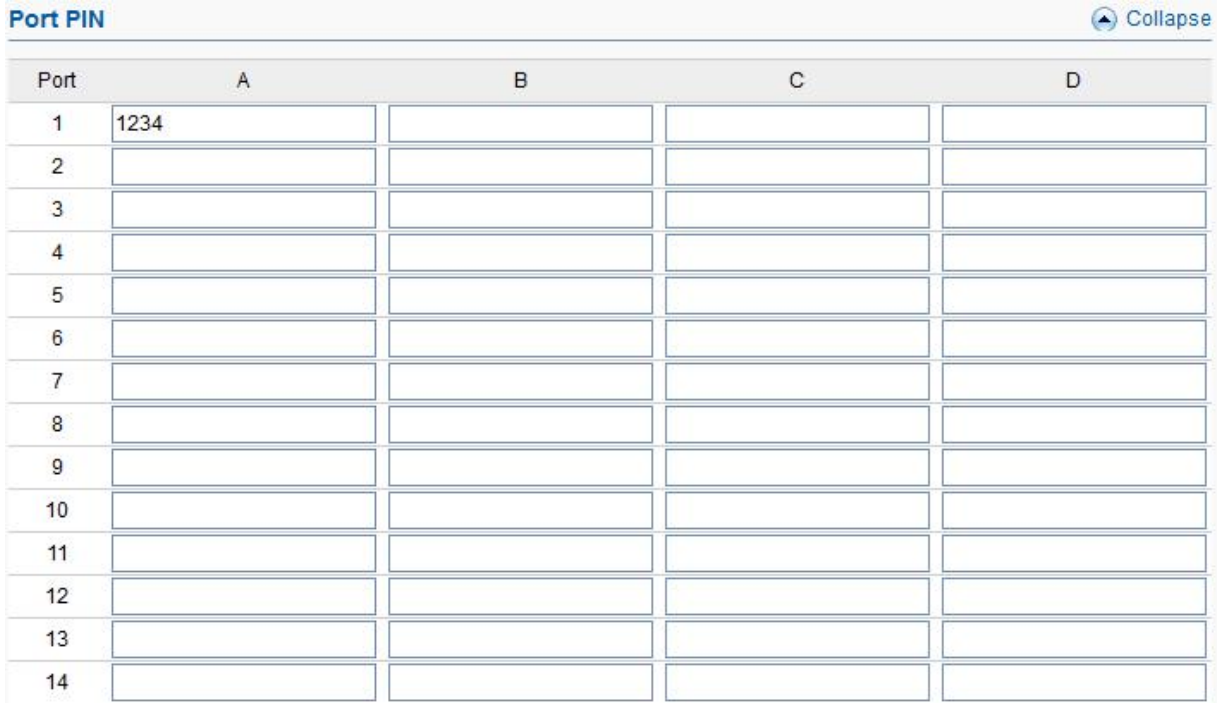


Figure 3.4.4-1 Basic Settings

3.4.5 SIM Settings

SIM Schedule

SIM schedule is a function for multiple slots device, with this function, you can enable different sim cards in different time. As the screenshot below, A slot sim cards enable in time from 00:00 to 6:00, B slot sim cards enable in time from 6:00 to 12:00.

Figure 3.4.5-1 SIM Schedule

3.4.6 Number Settings

You should set the SIM number first before enable the inter port calling/SMS-sending. You can get SIM number by USSD or SMS automatically.

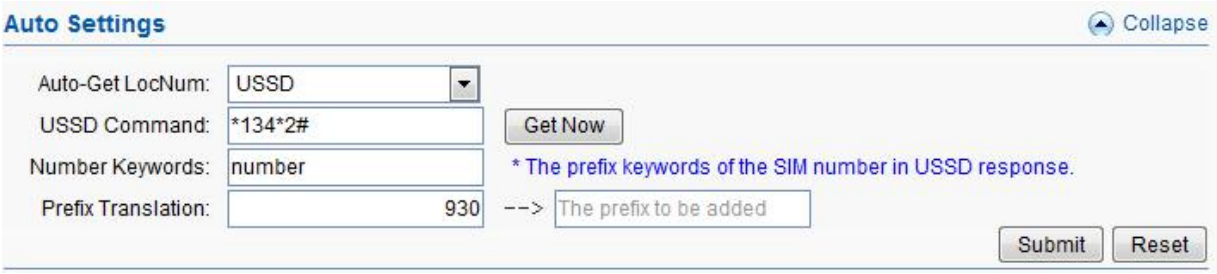


Figure 3.4.6-1 Auto Settings by USSD

Items	Description
Auto-Get LocNum	When choose USSD, the gateway will get the SIM number by USSD
USSD Command	The USSD command for querying SIM number.
Number Keywords	The prefix keywords of the SIM number in USSD response. For example: the USSD response is your SIM number 923345556978, then keyword is number, it is usually the word before SIM number.
Prefix Translation	If you get the number is 923345556978, but you don't need a country code, you can do prefix translation, delete 923 then add 0.

Table 3.4.6-1 Auto Settings by USSD

The page below shows the setting of getting number by SMS, it is same as USSD, you should send the SMS content to the operator to get the SIM number.

Figure 3.4.6-2 Auto Settings by SMS

If you can't get the SIM number by USSD or SMS, you need set the SIM number manually.

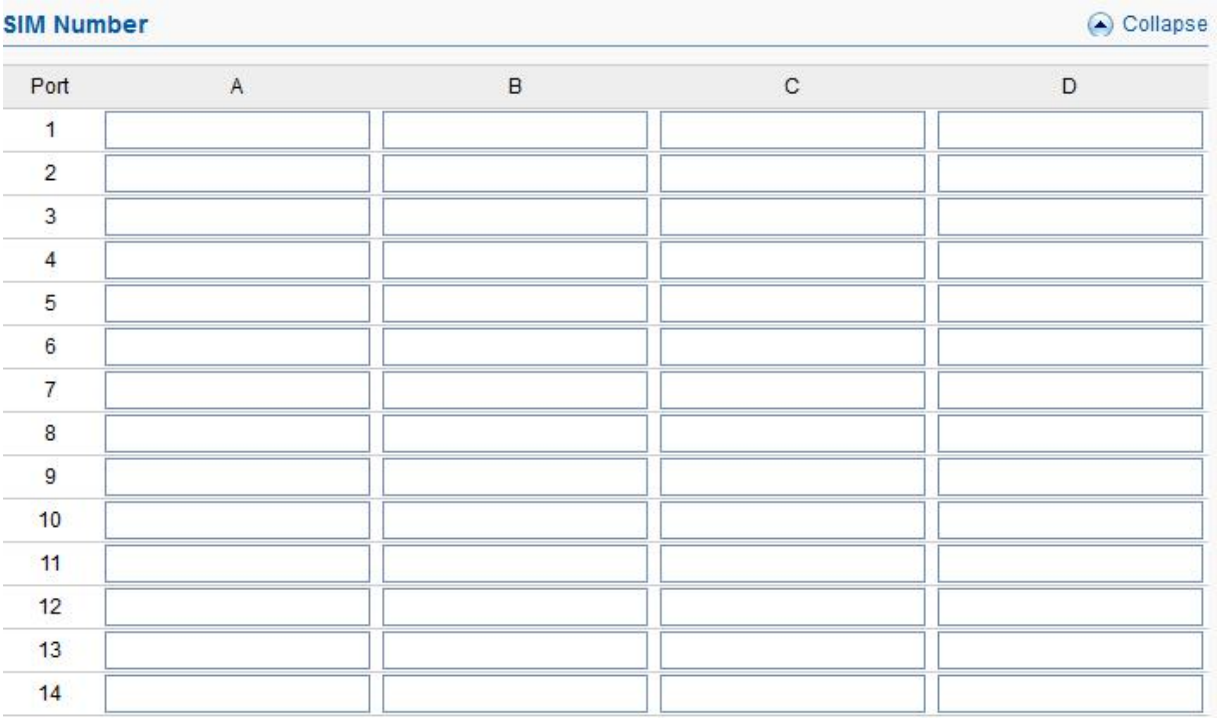


Figure 3.4.6-3 SIM Number

3.4.7 Billing Settings

This is the billing system page, this billing system is widely used in querying balance automatically which can remind customers to recharge or replace the no balance SIM cards. The theory of this billing system: every SIM card will get an accurate balance from USSD or SMS response, then the system will deduct money in every billing period by tariff which you set, so it may take some deviation.

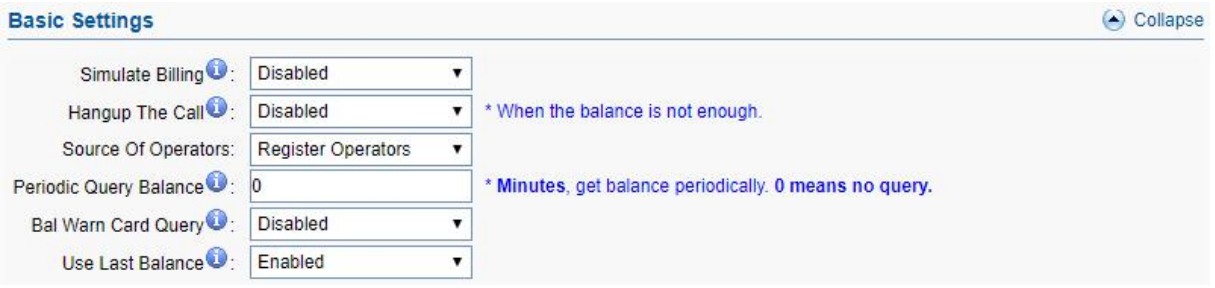


Figure 3.4.7-1 Basic Settings

Items	Description
Billing	Enable it, the billing system will be up.

Hangup The Call	If it is enabled, the call will be hang up when the balance is lower than invalid balance value.
Source of operators	When operator ID and IMSI are different, can use this settings
Periodic query balance	Get balance periodically, it may be more accurate.
Bal Warn Card Query	If it is enabled, it will query the balance when lower than caution balance value.
Use Last Balance	Enable: query balance failed, use last balance Disable: query balance failed, balance show N/A, the sim can't be used if it is lower than invalid balance value and it show yellow sim LED

Table 3.4.7-1

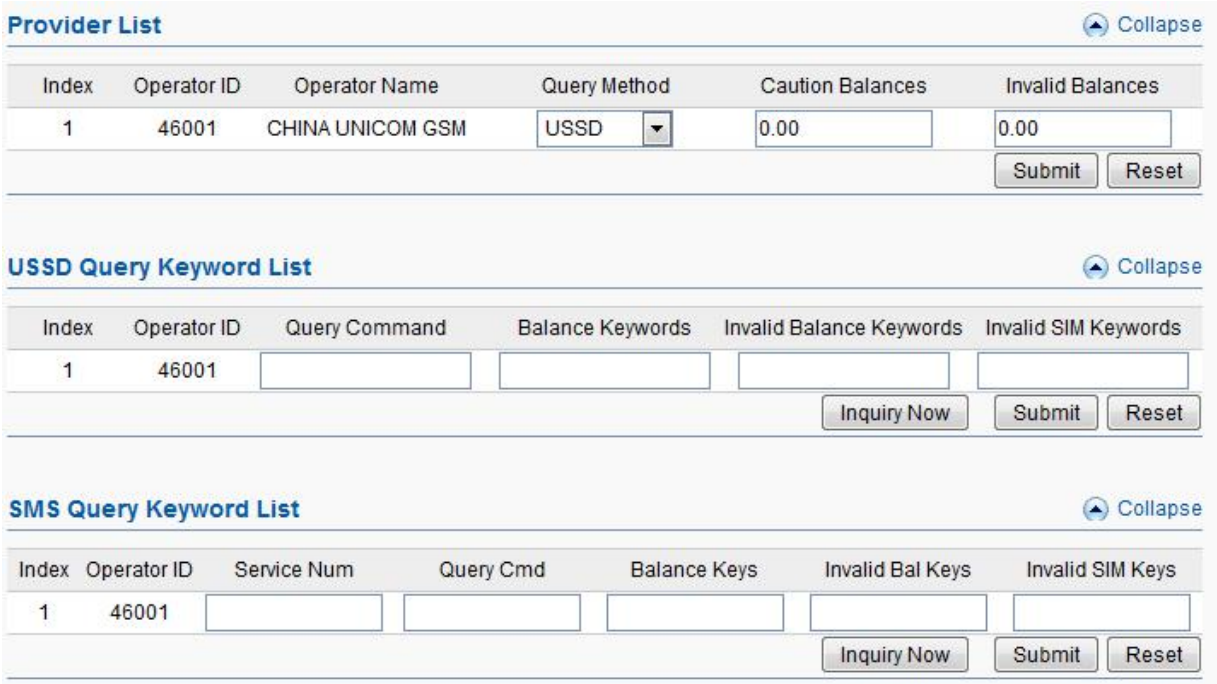


Figure 3.4.7-2 Related Settings

Items	Description
Query Method	USSD or SMS for querying balance

Caution Balances	When the balance is lower than caution balance value, the billing system will send a USSD or SMS to recalibrate balance.
Invalid Balances	The SIM can't be used if it is lower than invalid balance value and it will show No Balance
Query Command	The HTTP or SMS command for querying balance
Balance Keywords	The balance keywords in USSD or SMS response. For example: your credit balance is AED 45.82. then AED can be the keywords
Invalid Balance Keywords	Can't get balance from invalid balance keywords.
Invalid SIM Keywords	If the SIM is blocked by operator, it may get another response like: sorry, your SIM is blocked now. then you can set blocked as a invalid SIM keywords. The card will show
Service Num	The operator number, it will send SMS back to you.
Query Cmd	SMS command for querying balance
Balance Keys	Same as Balance keywords.
Invalid Bal Keys	Same as USSD.
Invalid SIM Keys	Same as USSD.

Table 3.4.7-2 Related Settings

Click"Add New" button, you can set a tariff list with different destination prefix. "x " means for all prefix. You can also do the operations of delete and edit here.

Figure 3.4.7-3 Tariff List

3.4.8 AT Command

Module Operations

You can select different module and do the operations of restart, stop and start.

Figure 3.4.8-1 Module Operations

Command Operation

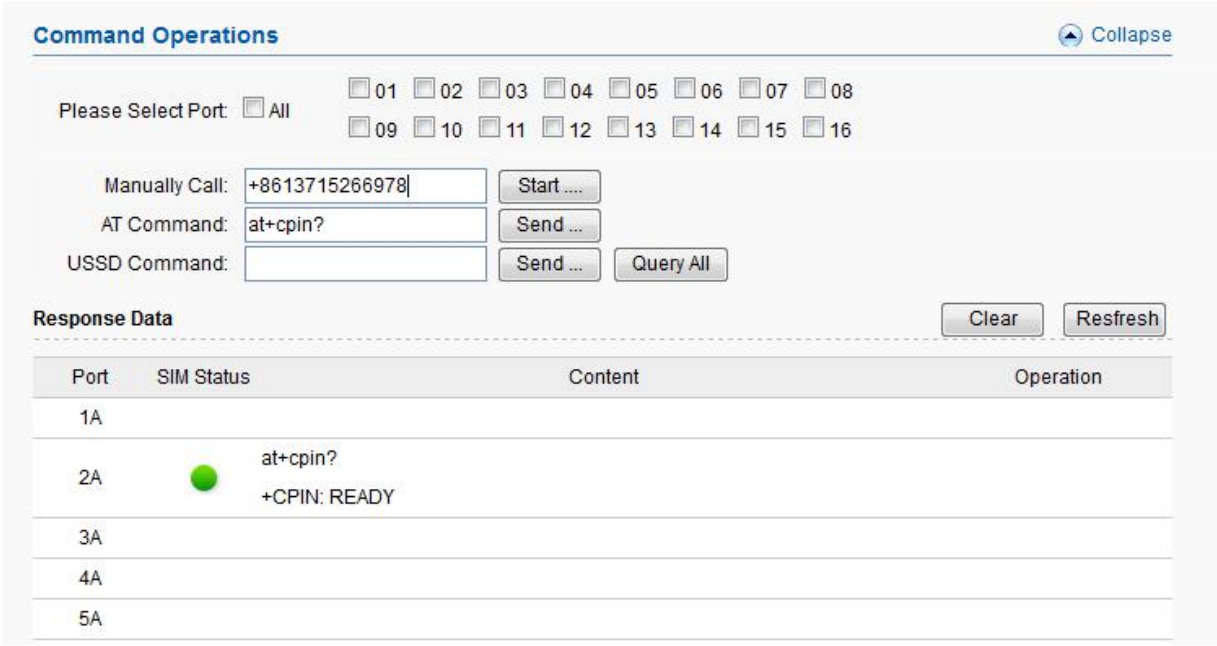


Figure 3.4.8-2 Command Operations

Items	Description
Select port	Select port to do command operations.
Manually call	Check the SIM can send a call or not.
AT Command	AT command to check SIM status.
USSD command	It's for querying balance, number and recharge etc.
SIM status	Display the SIM status.
Content	The response after sending USSD/AT command.

Table 3.4.8-1 Command Operations

3.4.9 USSD Command

USSD Auto Send

USSD command send automatically by the conditions below, Drop means drop the current call after call duration time reached.

Figure 3.4.9-1 USSD Auto Send

On this page, you can send USSD command manually and get USSD response more convenient.

Figure 3.4.9-2 USSD List

Items	Description
Copy	Copy the USSD command to other channel.
Show Current	Display the active SIM cards.
Show ALL SIM	Display all SIM cards.
Clear Data	Clear the USSD response.
Send	Execute the USSD command.

Table 3.4.9-1 USSD list

3.4.10 Switch Card

Basic Settings

Figure 3.4.10-1 Basic Settings

Items	Description
SMS warning	When sim card locked, device will send a sms to destination mobile for warning
SMS Receiver for Warning	The destination mobile which sms send
Restart save current card	Whether to save the current card of each port when restart, so that I can continue to be used after restarting. eg: 1B sim card is active, after restart, the active card will be 1A, but if enable this button, the active card will still be 1B.

Table 3.4.10-1 Basic Settings

Conditions for Locking Card

When the SIM reaches any conditions below, gateway will lock/switch it.

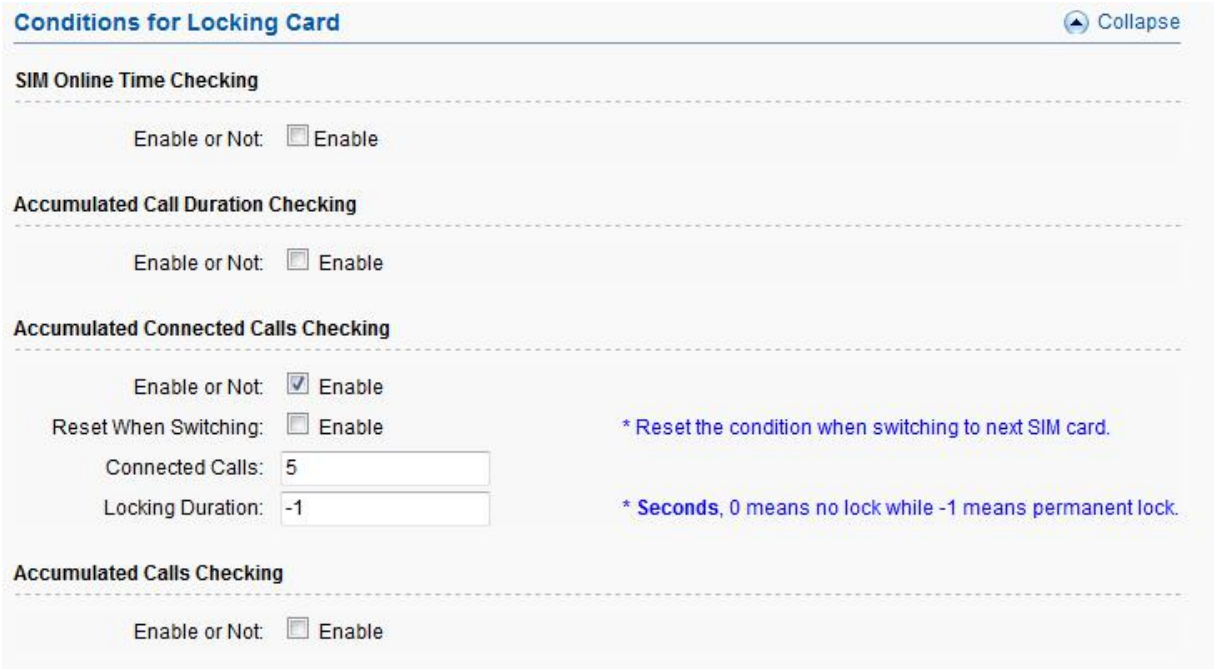


Figure 3.4.10-2 Locking Card Conditions

We take "consecutive failed calls checking" for example to explain the lock/switch function.

Items	Description
Enable or Not	If it is enabled, the consecutive failed calls will be used as a condition for system to check.
Reset When Switching	This condition will be recalculated next time when it is switched by other conditions. For example:
USSD Query	After switch to next SIM, the next SIM will send USSD query command first.
Failed Calls	The maximum number of consecutive failed calls on this SIM card. If the number of consecutive failed calls reaches this value, the card will be locked if this condition is enabled.
Locking duration	The duration of locking. 0 means no lock while -1 means permanent lock.

Table 3.4.10-2 Locking Card Conditions

If the SIM card is locked by gateway, it will show , it means locked by device. And you will also see the Description on running status >> call status page.

Lock/switch card conditions	Description on call status page
SIM Online Time Checking	Switch timer fired

Accumulated Call Duration Checking	Talk dur expired
Accumulated Connected Calls Checking	Talk num expired
Accumulated Calls Checking	Call num expired
Consecutive Failed Calls Checking	Failed call num expired
Consecutive No-Alert Calls Checking	Noalert num expired
Consecutive No-Answer Calls Checking	Noanswer num expired
Consecutive No Carrier Calls Checking	Nocarrier num expired
Consecutive Short-Duration Calls Checking	Shortdur num expired
Accumulated SMS Count checking	SMS num expired
Accumulated Failed SMS Count Checking	Failed SMS num expired
Consecutive Failed SMS Count Checking	Con-failed SMS num expired

Table 3.4.10-3 Description in call status

Click the top right-hand corner “add port cfg”, can define different ports with different lock/switch cards conditions

3.4.11 Inter-Calling

Port inter-calling is a good solution for protecting SIM from blocking. It’s a human behavior feature.

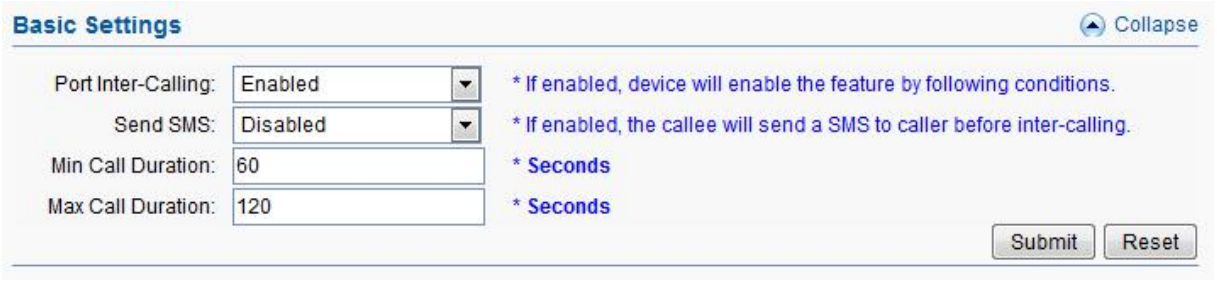


Figure 3.4.11-1 Basic Settings

Items	Description
Port Inter-Calling	The function will work if it is enabled. (need to set SIM number for every port first).
Send SMS	If it is enabled, the callee will send a SMS to caller before inter-calling

Min Call Duration	The minimum call duration when do port inter calling
Max Call Duration	The maximum call duration when do port inter calling. the call duration will between minimum and maximum duration.

Table 3.4.11-1 Basic Settings

When enable this function, after excessing the condition below, the idle port will call each other random (need to set the SIM number for every port first).

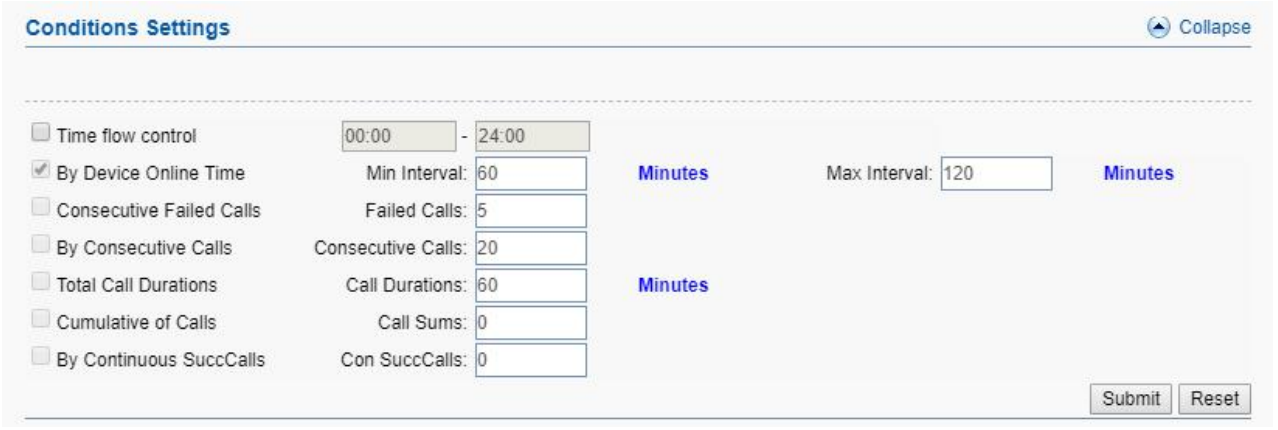


Figure 3.4.11-2 Conditons Settings

If you enable “Send SMS”, you will see the page below.

Figure 3.4.11-3 SMS List

The callee will select a SMS content first, then send to caller before inter calling, you can click “Add New” button to add new SMS content and delete or edit the SMS content.

3.4.12 Internet Settings

SIM cards use data, this settings can protect sim card from blocking.

The screenshot below shows time from 20:00 to 23:00, consume 100MB data.

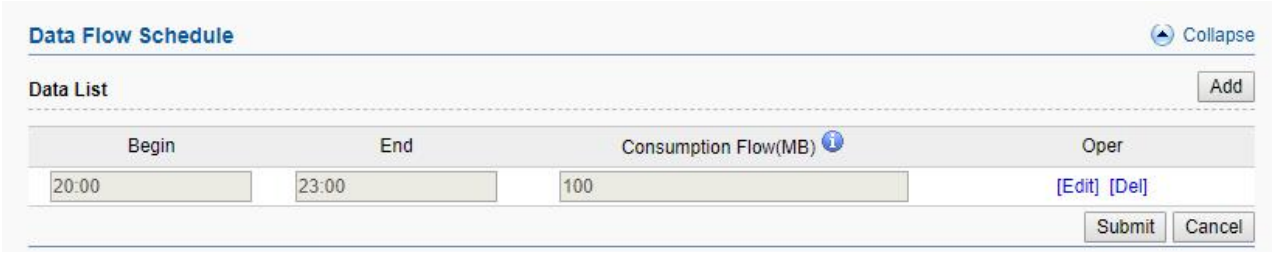


Figure 3.4.12-1 data flow schedule

The screenshot below shows which URL the device will surf for consuming data.

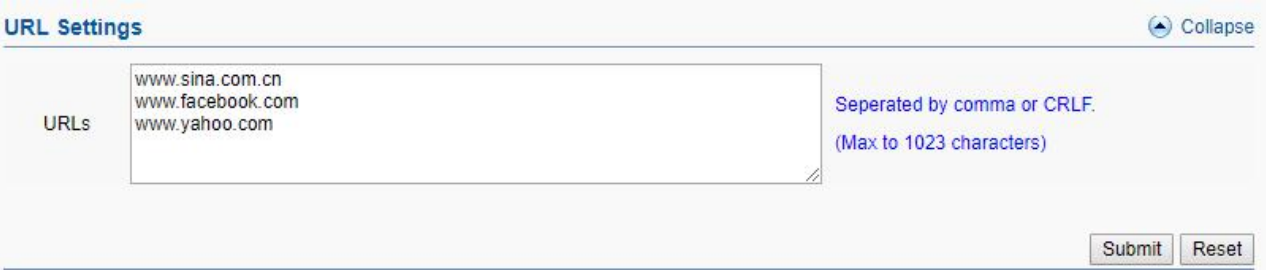


Figure 3.4.12-2 URL Settings

The apn settings for sim card. Note: if APN settings leave blank, can't consume data.

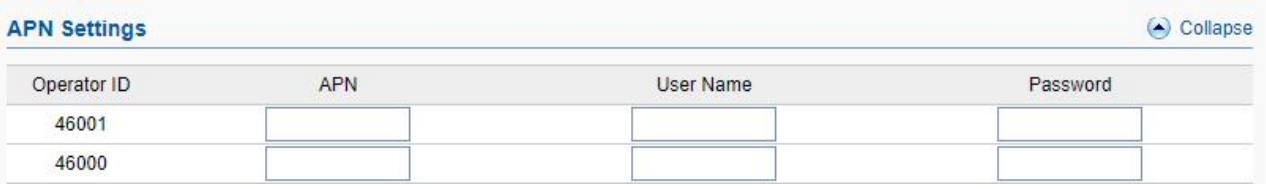


Figure 3.4.12-3 APN Settings

3.4.13 Call Dur. Control

Call duration control is for users to control the SIM using time. And the data will not flush even you restart the device or pull off the SIM.

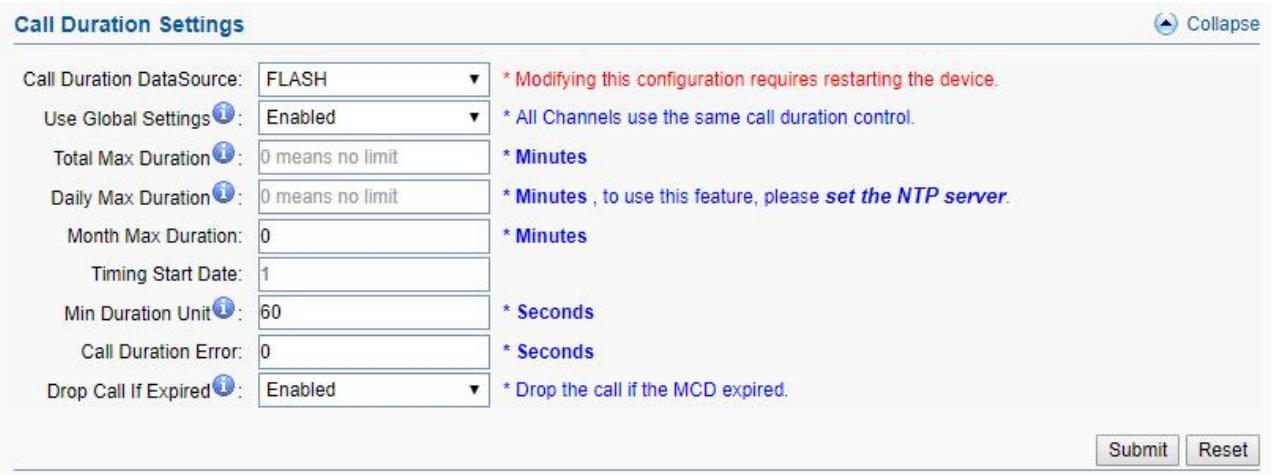


Figure 3.4.13-1 Call Duration Settings

Items	Description
Call Duration DataSource	Falsh : control call duration by local device. ETMS: control call duration by ETMS server. If use simpool, control call duration in sim center.
Use Global Settings	Enable: all channels use same call duration limitation. Disable: you can set different call duration limitation for single channel.
Total Max Duration	The value of limitation. After the call duration reaches this value, the SIM will be locked by device. 0 means no limit.
Daily Max Duration	The value of limitation. After the daily call duration reaches this value, the SIM will be locked by device. 0 means no limit.
Month Max Duration	The value of limitation. After the call duration reaches this value, the SIM will be locked by device. 0 means no limit.
Timing Start Date	Month call duration reset time, default is 1.
Min Duration Unit	Operator charging time, when the call is over this time, operator will collect fees. For example: china mobile charge per minute, the min duration unit will be 60 seconds.
Call Duration Error	If set a value, every call's duration will add that value
Drop Call If Expired	Enabled: calls will be dropped after the SIM reaches call duration time. Disabled: calls will not drop.

Table 3.4.13-1 Call Duration Settings

You can scan more details about the call duration control on the page below. Once the SIM is

used up, it will be locked by gateway. If you still want to use it, you need to click “Reset”.

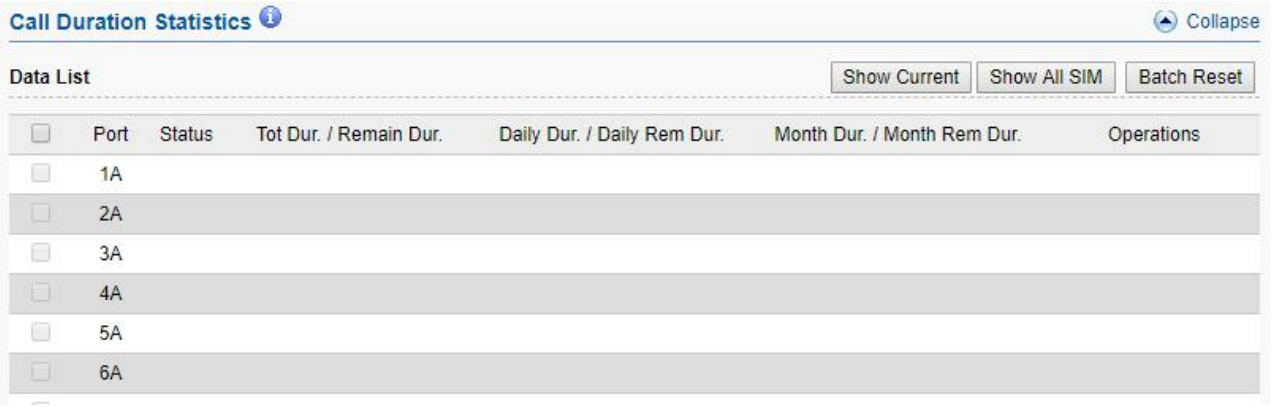


Figure 3.4.13-2 Call Duration Statistics

Items	Description
Total Dur.	The value of total duration
Remain Dur.	Indicates the current SIM remain time.
Daily Dur.	The value of Daily Duration
Daily Rem Dur.	Indicates the current SIM daily remain time
Month Dur.	The value of Month Duration
Month Rem Dur.	Indicates the current SIM Month remain time
Show Current	Show active sim cards duration statistics, default settings
Show ALL SIM	Show all sim cards duration statistics(including offline sim card)
Bath Reset	The call duration will reset to the initial value. (daily cal duration will reset every day)

Table 3.4.13-2 Call Duration Statistics

If you need every channel has different call duration (single call duration control), please disable use global settings, and then you will see the page below.

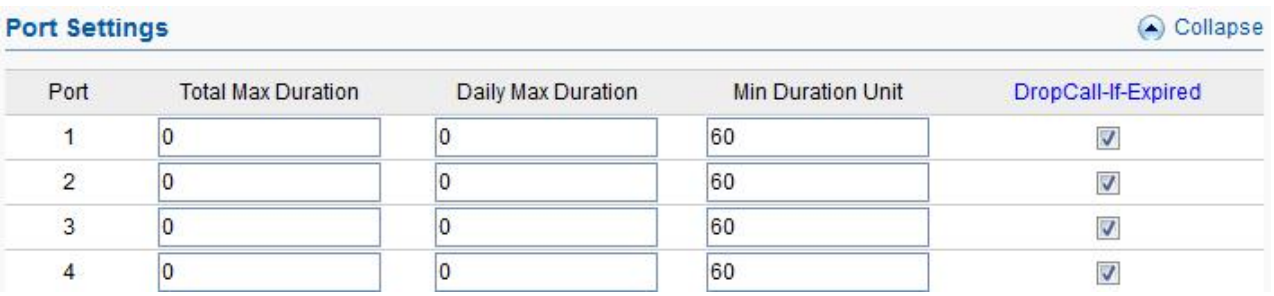


Figure 3.4.13-3 Port Settings

3.4.14 Call Num Control

Call number control is for users to control the call counts. And the data will not flush even you restart the device or pull off the SIM.

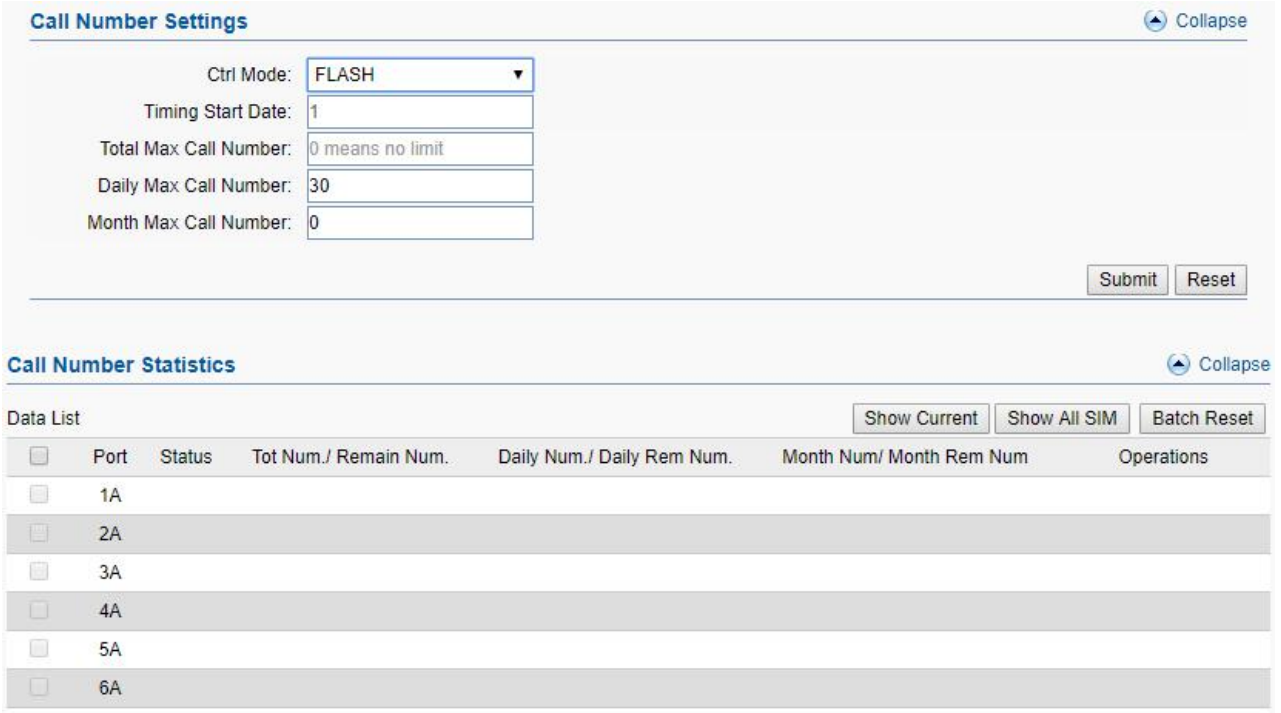


Figure 3.4.14-1 Call Number Settings

3.4.15 Talk Num Control

Talk number control is for users to control the connected call counts. And the data will not flush even you restart the device or pull off the SIM.

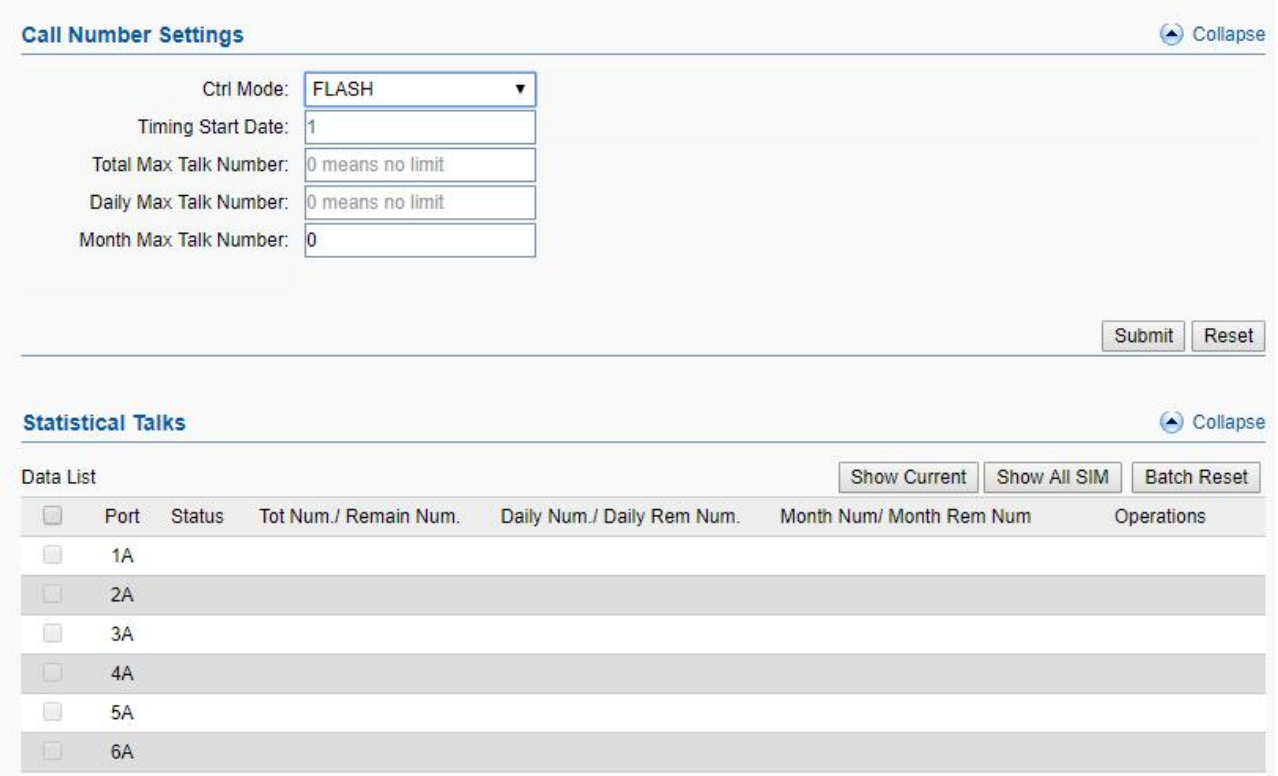


Figure 3.4.15-1 Talk Number Settings

3.4.16 Call ctrl settings

Call control settings is for users to control the call in a short period, for example, 1 hour 50 calls, 30mins 10 connected calls.

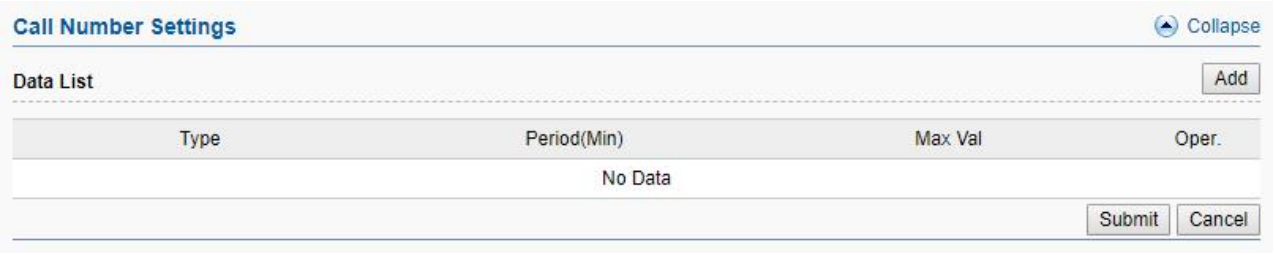


Figure 3.4.16-1 Call ctrl Settings

3.5 SMS Settings

3.5.1 Port Settings

Figure 3.5.1-1 Port Settings

Items	Description
Port	Device channel
Port status	Display the sim status.
SMS Enabled	Enable or disable the sms feature.
SMS center	SMS center number, it is strongly recommended don't change the SMSC number

Table 3.5.1-1 Port Settings

3.5.2 SMS Send

Basic Settings

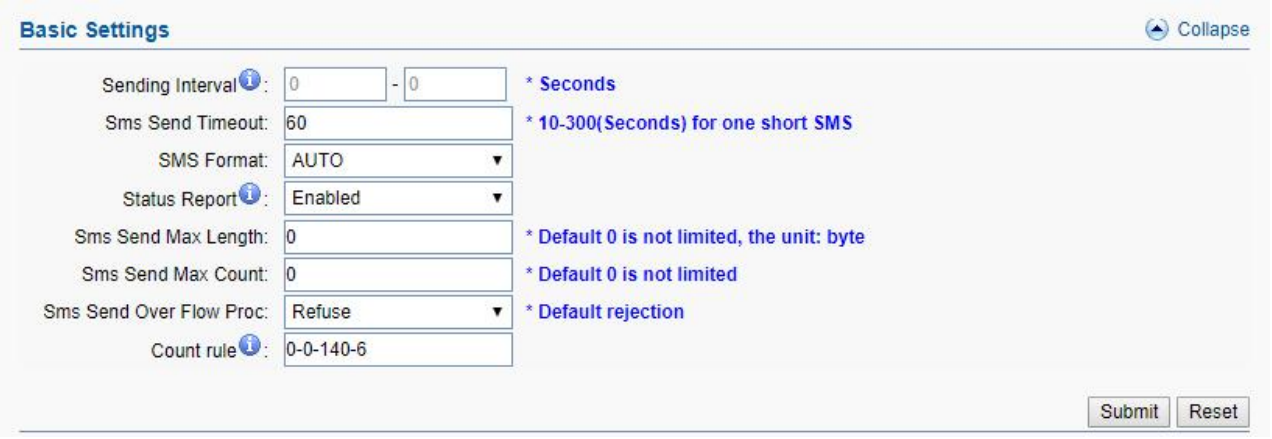


Figure 3.5.2-1 Basic Settings

Items	DesrIPtion
Sending Interval	The sms sending interval for every two sms, if don't set any value, after send a sms, the sim card will send the second

	sms immediately, if set a value, the sim card will send the second sms after interval time.
Sms Send Timeout	The timeout for sending a sms
SMS Format	PDU and TXT.
Status Report	SMS status report. If it is enabled, after sending SMS successfully, it will get a status report from operator such as sending successfully.
Sms Send Max Lenth	Maximum lenth of long sms
Sms Send Max Count	Maximum counts of sms
Sms Send Over Flow Proc	Refuse: refuse to send the sms. Truncated: truncate the long sms if it is over flow
Count rule	Frist place: count type, 0 is Byte, 1 is character. Second place: encoding algorithm, 0 means support 7bit, 1means doesn't support 7 bit. Third place: single limit,maximum number of bytes or maximum number. Fourth place: multiple header lenth,udhi Charging rules: 0-0-140-6 representation: support 7bit, the maximum single 140 bytes, when sending long sms, the udhi header is 6 bytes.

Table 3.5.2-1 Basic Settings

Send SMS

You can select one or more ports to send SMS to different receiver. Successful and failed SMS records will be show below.

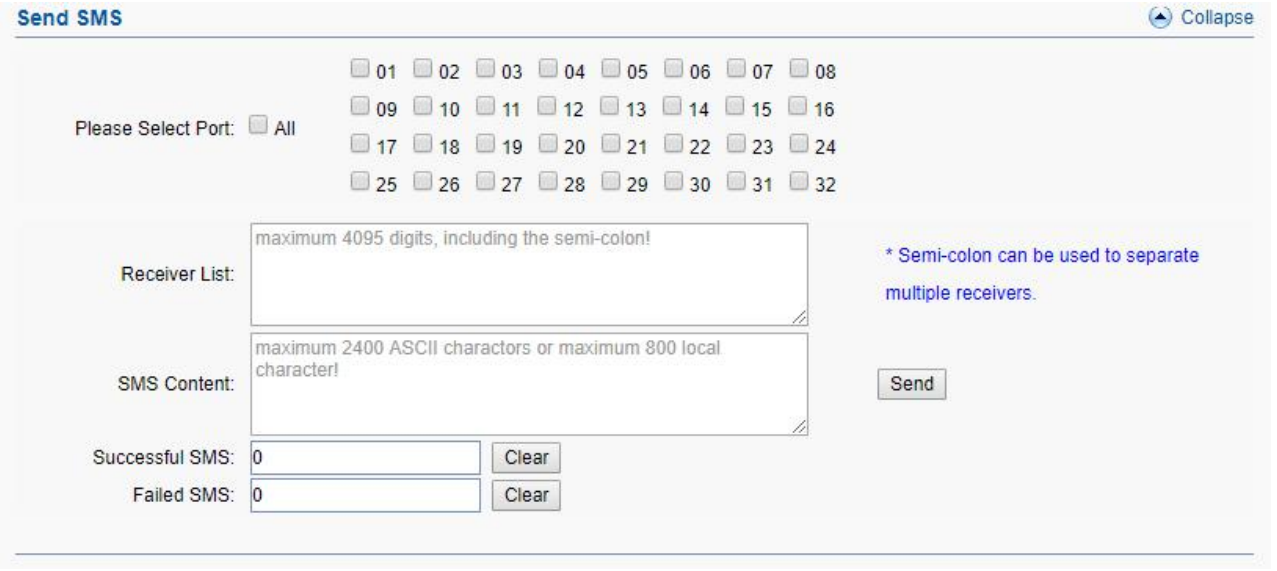


Figure 3.5.2-2 Send SMS

3.5.3 SMS Receive

You can check the latest SMS content and clean up all the SMS content on this page.

Figure 3.5.3-1 SMS Content

If you want to check more SIM content of this SIM, please click “Details” button.

Then you will see the page below. You can know the SMS details in different port and SIM, reply and delete SMS here.

Figure 3.5.3-2 SMS Details

3.5.4 SMS Forward

Emai to message

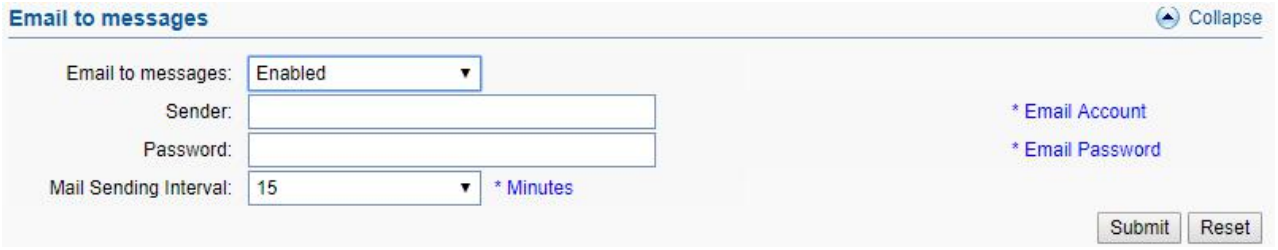


Figure 3.5.4-1 Email to message

Items	Description
Email to messages	Enabled, use email send to the email address which configured, the content will send by device sim card to destination mobile
Sender	Email address which device receive email
Password	Email password
Mail sending Interval	The device read email period.

Table 3.5.4-1 Email to message

Forward protocol: GSM

When sim card receive sms, will forward the sms to the destination mobile which is set in "forward number"

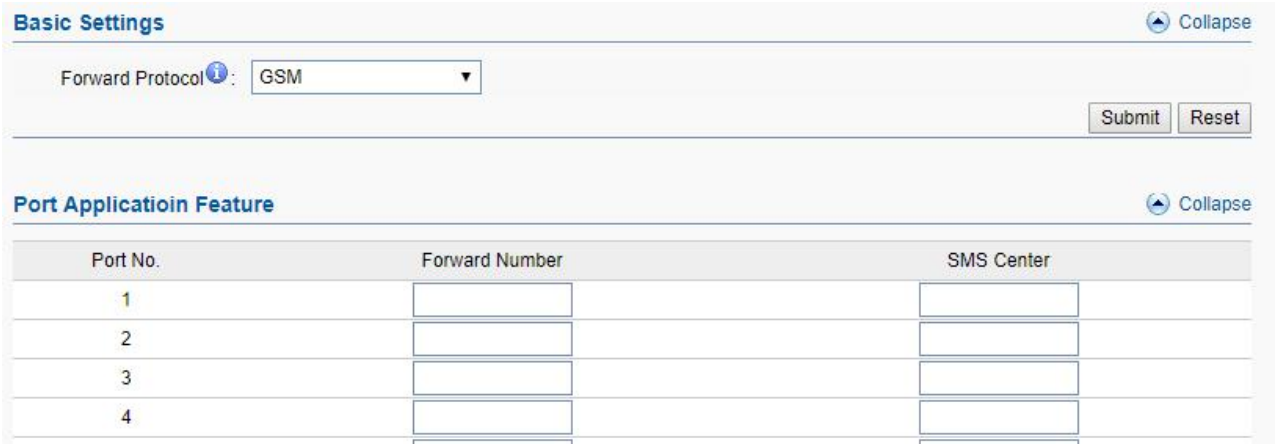


Figure 3.5.4-2 forward by GSM

Forward protocol: SIP

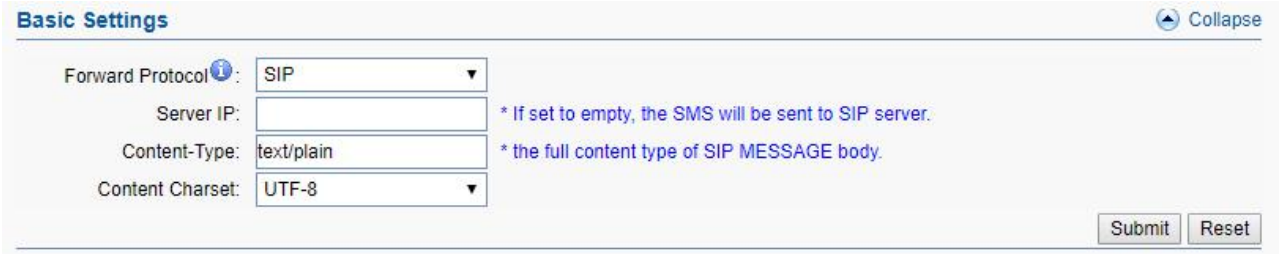


Figure 3.5.4-3 forward by SIP

Items	Description
Server ip	Sip server ip, If leave blank, sms will sent to sip server which set in sip settings.
Content-type	sip header, default is text/plain
Content Charset	utf-8 or Base64

Table 3.5.4-2 forward by SIP

Forward protocol: HTTP POST and GET

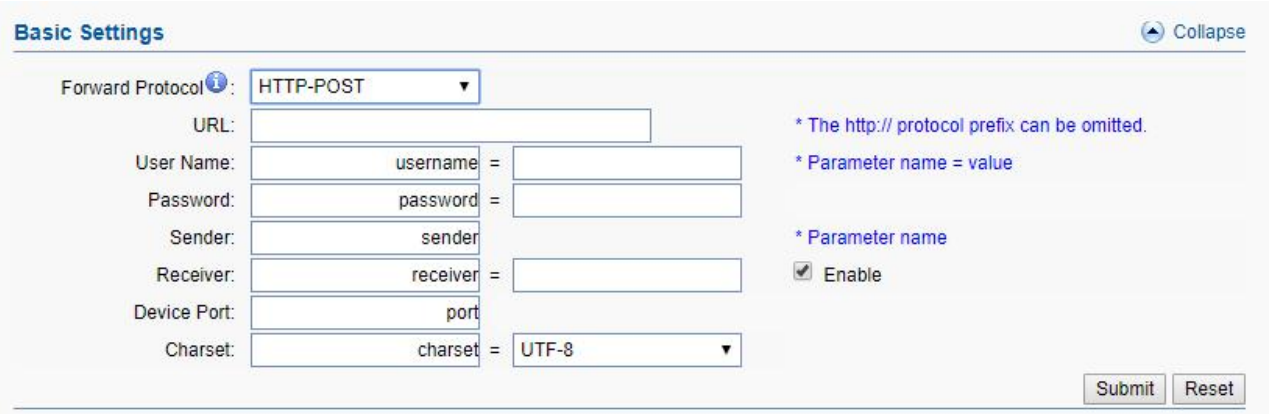


Figure 3.5.4-4 forward by HTTP

Items	Description
Forward protocol	GET: the sms content will be in request line POST: the sms content will be in request body
URL	The URL which the sms forward to.
User name	If destination url need username, can set here.
Password	If destination url need password, can set here.
Sender	The mobile number which send sms to sim card in gateway.
Receiver	If set value, the receiver will be this value, if leave blank and number settings has number, receiver will be sim card number, if leave blank and number settings no number, will don't have parameter recevier
Device Port	The device port
Charset	UTF-8 or BASE64

Table 3.5.4-3 forward by HTTP

Forward protocol: email

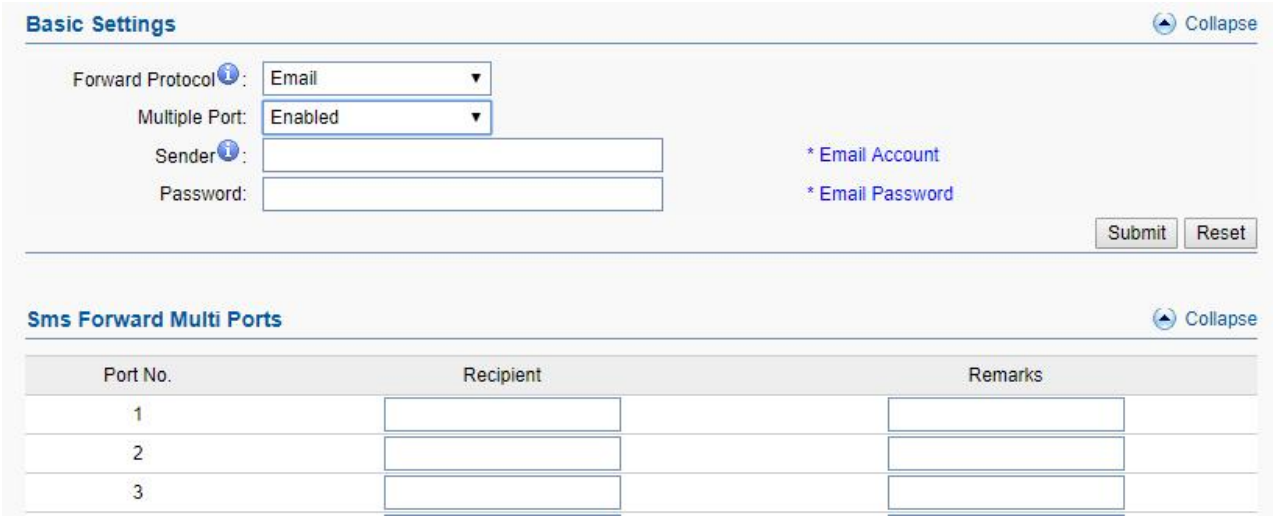


Figure 3.5.4-5 forward by Email

Items	Description
Forward protocol	Email: when sim card receive sms, device will use sender email address send email to recipient.
Multiple Port	Disable: all sms send to one email address. Enabled: different port send to different email address.
Sender	Device use this email address send email.
Password	Email password
Recipient	The destination email address

Table 3.5.4-4 forward by Email

3.5.5 SMS Inter-Sending

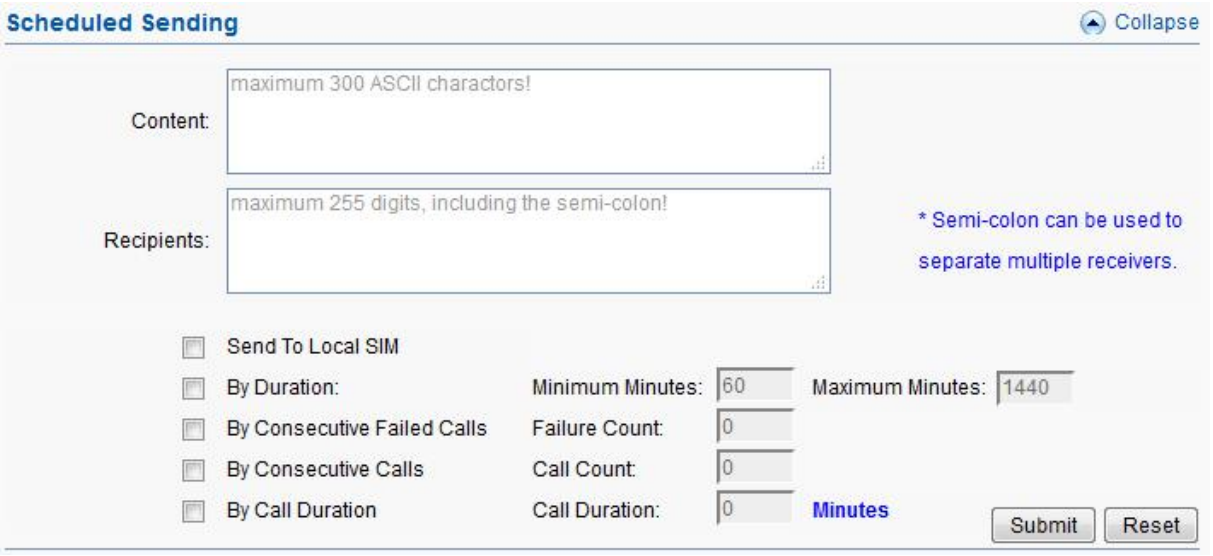


Figure 3.5.5-1 Scheduled Sending

Items	Description
Content	SMS content. The length is limited to 300 ASCII characters.
Recipients	The phone number of receiver. Semi-colon can be used to separate multiple receivers.
Send To Local SIM	Enable this button. Gateway will do inter-port SMS sending (need set SIM number in every channel first), it's random and by the condition below. For example: channel 1 sends SMS to port 3.
By Duration	SMS sending by device online time, and the time between minimum minutes and maximum minutes.
By Consecutive Failed Calls	SMS sending by consecutive failed calls.
By Consecutive Calls	SMS sending by consecutive calls.
By Call Duration	SMS sending by SIM call duration.

Table 3.5.5-1 Scheduled Sending

3.5.6 SMS Control

SMS control is for users to control the SIM card SMS counts. And the data will not flush even you restart the device or pull off the SIM.

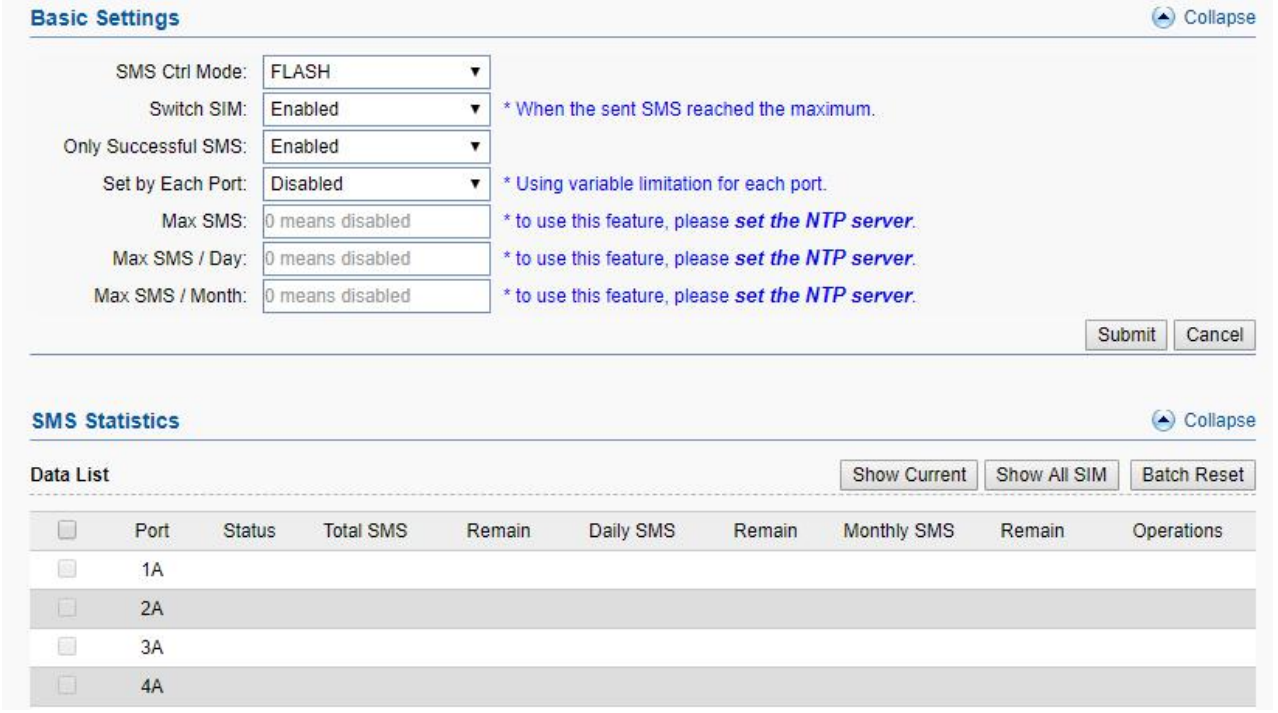


Figure 3.5.6-1 Basic Settings

Items	Description
SMS ctrl Mode	Enable by flash
Switch SIM	Switch sim card or not when one sim card reaches the value which set
Only Successfully SMS	Enabled: the failed sms will not count Disabled: count failed sms
Set by Each Port	Enable: different port use different sms limit value. Disable: all ports use same sms limit value.
Max SMS	The maximum sms which sim card can send.
Max SMS/Day	The maximum sms which sim card can send every day.
Max SMS/Month	The maximum sms which simcard can send every month.
Show current	Show active sim cards, default
Show ALL SIM	Show all sim cards(including unactive sim cards)
Batch Reset	Reset the sms count manually.

Table 3.5.6-1 Basic Settings

3.5.7 SMPP Settings

The Short Message Peer-to-Peer (SMPP) is a protocol used by the telecommunications industry for exchanging SMS messages between Short Message Service Centers (SMSC) and/or External Short Messaging Entities (ESME). The protocol is a level-7 TCP/IP protocol, which allows fast delivery of SMS messages.

EJOIN device support SMPP V3.4, it can works as SMPP client and server, but we usually used it as a SMPP server

BASIC settings

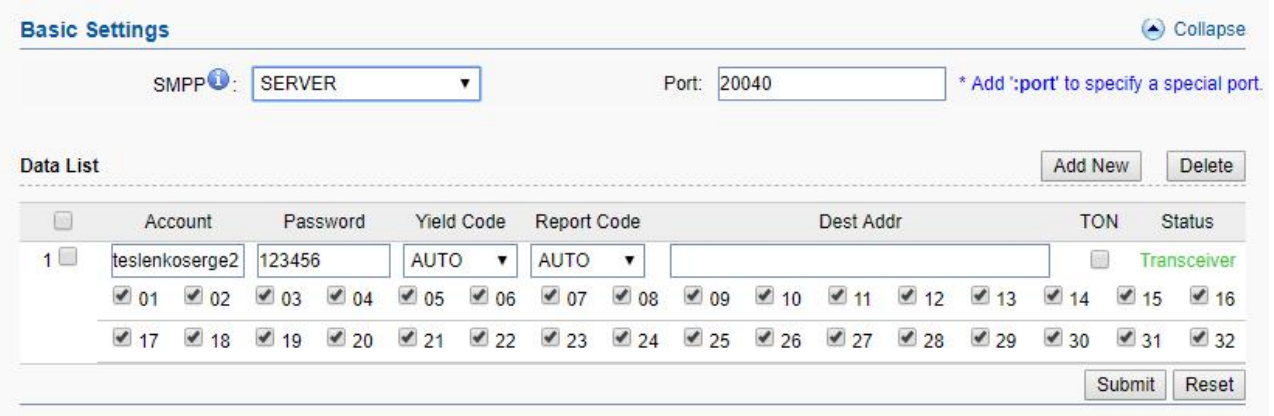


Figure 3.5.7-1 Basic Settings

Items	Description
SMPP	client: device work as smpp client server: device work as smpp server, if device is in NAT, need to forward the device smpp port first.
Port	Device smpp port
Account	Smpp account for smpp client register.
Password	Smpp account password
Yield Code	Device receive sms, will encoding by the code.
Report code	The code of delivery report.
Dest Addr	Destination address, when device receive sms, will send the sms to smpp client and the recipient address will be the dest addr.
TON	NPI and TON set to 0X01 if enabled.
Status	Smpp client registered in device, will show transceiver
Select ports	Select all ports means all ports with one smpp account.

Figure 3.5.7-1 Basic Settings

Advanced settings

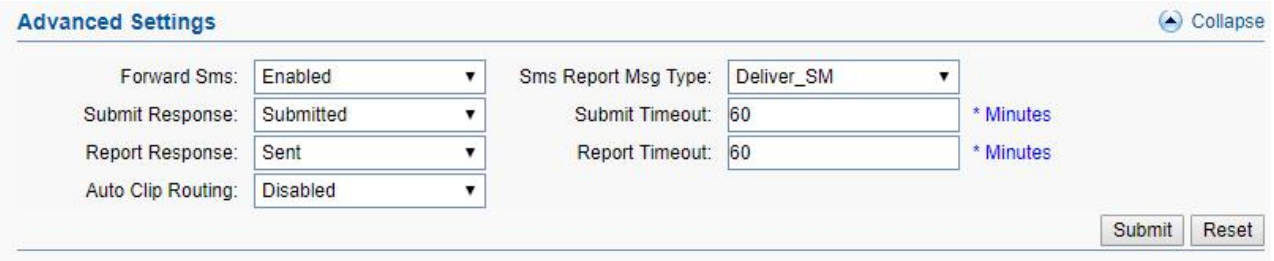


Figure 3.5.7-2 Advanced Settings

Items	Description
Forward sms	Enabled: forward sms to smpp client. Disabled: don't forward sms to smpp client.
Sms Report Msg Type	Sms report message type, default is Deliver_SM.
Submit response	Submitted: when device receive request, send back submit ok. Sent: when device send sms to smsc successfully, send back submit

	ok. Delivered: when destination mobile receive sms, send back submit ok
Submit timeout	Submit ok timeout value, after 60mins, will timeout.
Report response	Sent: when device send sms to smsc successfully, send back delivery report. Delivered: when destination mobile receive sms, send back delivery report. No respond: don't send delivery report
Report Timeout	Report timeout value, default is 60mins.
Auto Clip routing	Send: the sms send from one port, next time, the same recipient number will also use that port Receive: smpp send a sms from device port, next time, this port receive the sms will forward to the destination address use the original address at the first time
Cache time	The auto clip routing cache time

Table 3.5.7-2 Advanced Settings

Translation list

This settings is used for remove country code, some country, sending sms with country will be failed

Figure 3.5.7-3 Translation List

3.5.8 EIMS Settings

EIMS is a SMS server which connect with Ejoin device by private protocol. It also support HTTP, SMPP to connect the third-party SMS system to send and receive SMS.

Basic Settings

Figure 3.5.8-1 Basic Settings

Items	Description
Server Type	EIMS: connect with EIMS server EMDA: this is for virtual COM port to send sms.
Server address	EIMS server ip, default port 20002
UDP/TCP	Connect protocol, we suggest TCP
User Name	The device account in EIMS
Password	Account's password
Registeration status	OK means register successfully

Table 3.5.8-1 Basic Settings

3.5.9 Prefix route

The SMS will be routed to the ports which match the prefix specified here. It's used for saving communication expense. There are two modes for prefix settings. One is operator prefix, the other one is port prefix.

The screenshot below shows operator prefix, one device insert different operator sim cards, just configure the operator prefix, when sms traffic send to this device, device will use same operator to send the sms.

Figure 3.5.9-1 operator prefix

The screenshot below shows port prefix, when sms traffic send to this device, device will route the sms by port prefix.

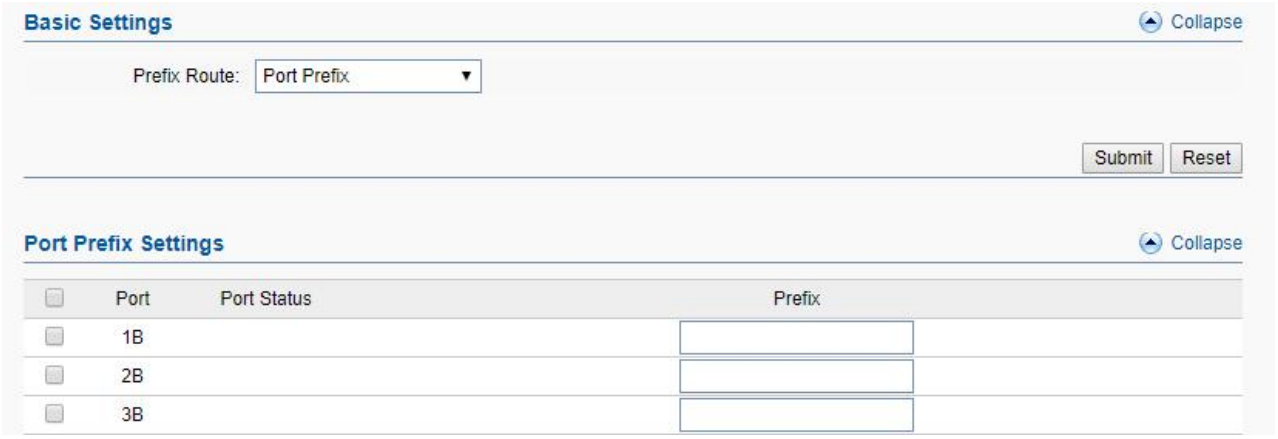


Figure 3.5.9-2 port prefix

3.5.10 SMS Filter

SMS filter is used for filtering the spam message, configure the sender number or sensitive word. When the receive sms match with sender or sensitive word, the receive sms will not show in page “SMS receive”, it will shows in SMS Trash Box, and also these sms will not forward to third-party system.

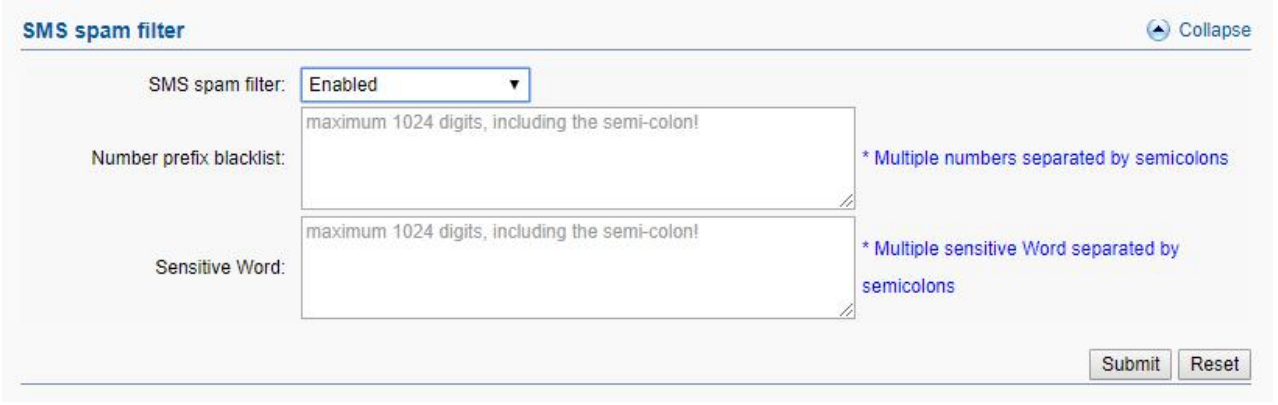


Figure 3.5.10-1 SMS spam filter

Figure 3.5.10-2 SMS trash box

3.5.11 MMS Settings

The settings for sending MMS, need to setup MMSC, MMS proxy and port first.

Figure 3.5.11-1 proxy settings

You can select one or more ports to send MMS to different receiver. Successful and failed SMS records will be show below.

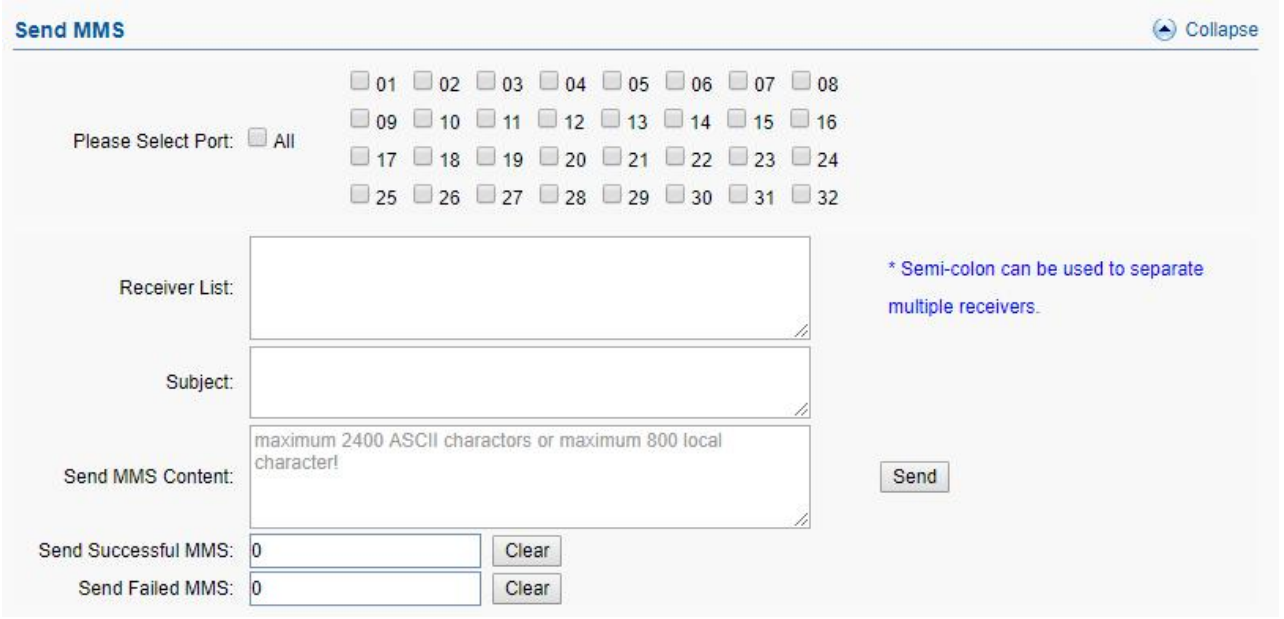


Figure 3.5.11-2 Send MMS

3.6 Application Settings

3.6.1 Phone Book

When you need other SIP server to send traffic to this gateway, you can add server details in phone book. But make sure it's the point to point mode. Click "Add New" button, setting the server details here. You can also delete and edit phone book list.

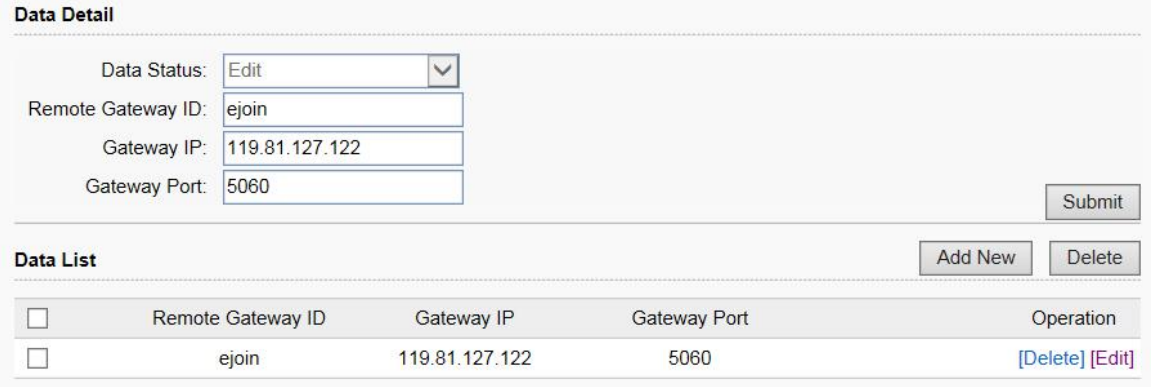


Figure 3.6.1-1 Phone Book List

3.6.2 Dial Plan

The dial pattern string is a normal regular expression. For example: The pattern 90[1-4] means the dialed number start with 90 and end with anyone of 1/2/3/4. So like the input 901,902,903 or 904 all can be accepted.

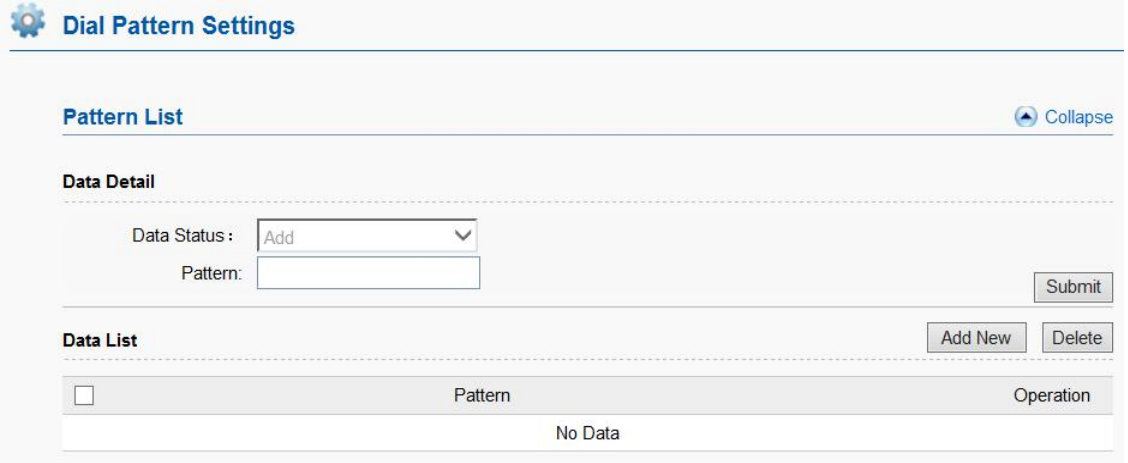


Figure 3.6.2-1 Dial Pattern Settings

3.6.3 Translation settings

SIP->GSM Translation List

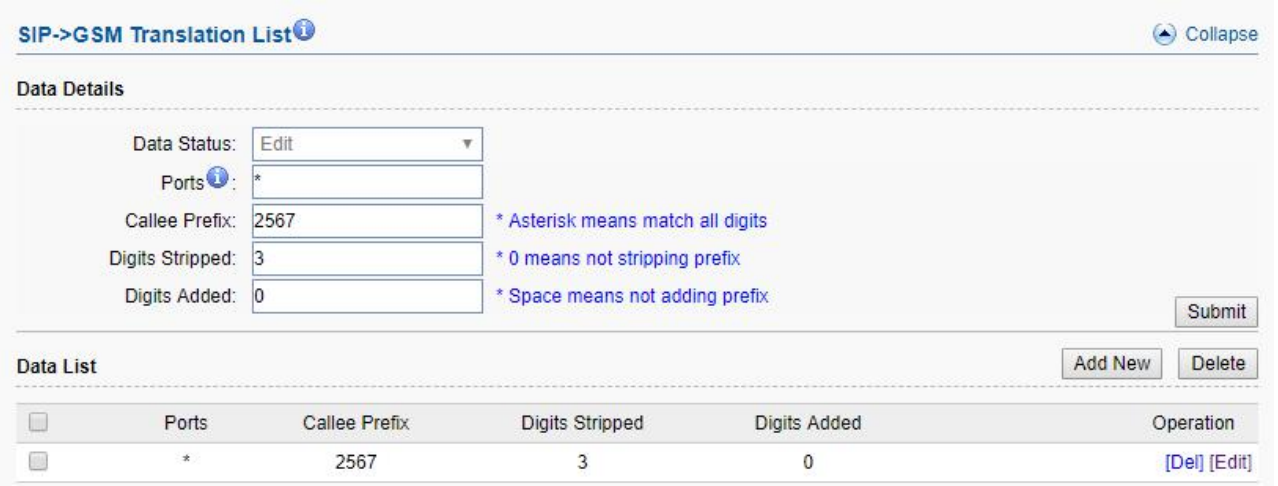


Figure 3.6.3-1 SIP->GSM

Taking the figure above as an example, the callee number is 25670123456, it is with prefix 2567, the system will stripped 3 digits, then add 0, the callee number will be translated to 070123456. Ports set to * means apply for all ports.

GSM->SIP Translation List

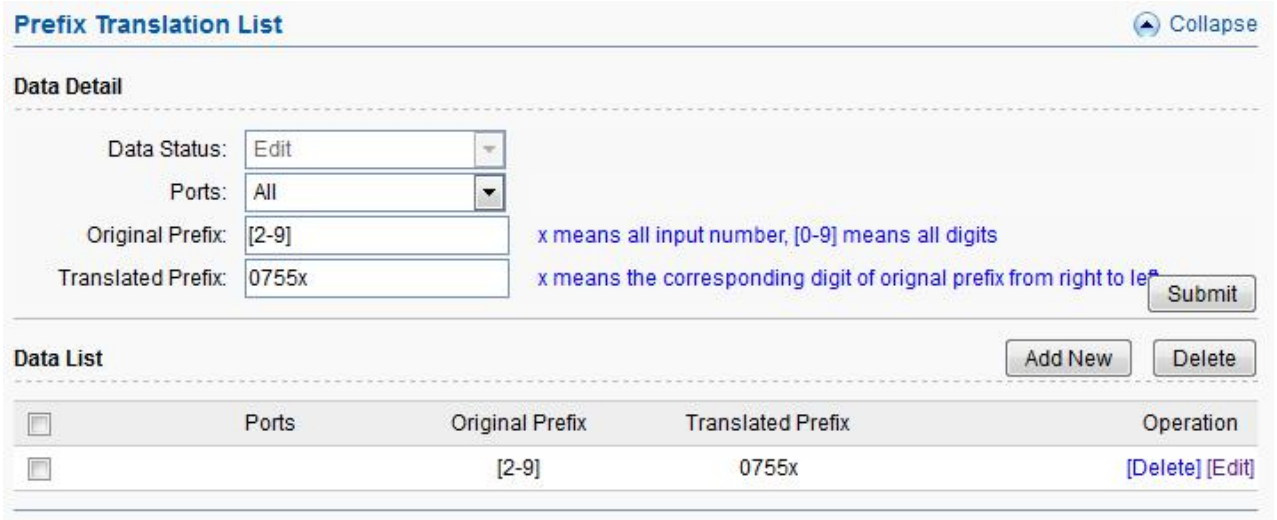


Figure 3.6.3-2 GSM->SIP

Taking the figure above as an example, calling the SIM in gateway, you will hear an IVR: please dial a number, if you dial 85245166, it will be translated to 075585245166.

Caller ID Hidden

If you want to hide caller ID, just enabled caller id hidden. Some operators sim card also can hide caller id by add dial prefix.(Note: Need operators support with this function.)

Figure 3.6.3-3 CallerId Hidden

3.6.4 Inward Black List

You can forbid some calls by incoming black list. Forbid caller number or callee number.

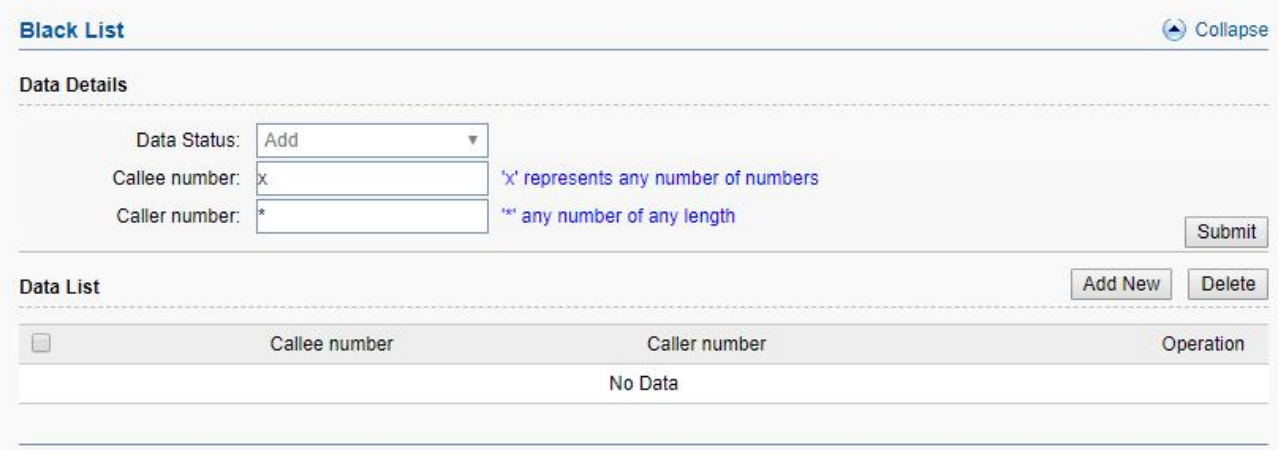


Figure 3.6.4-1 Inward Black List Settings

3.6.5 Inward White List

Inward white list is base on black list.

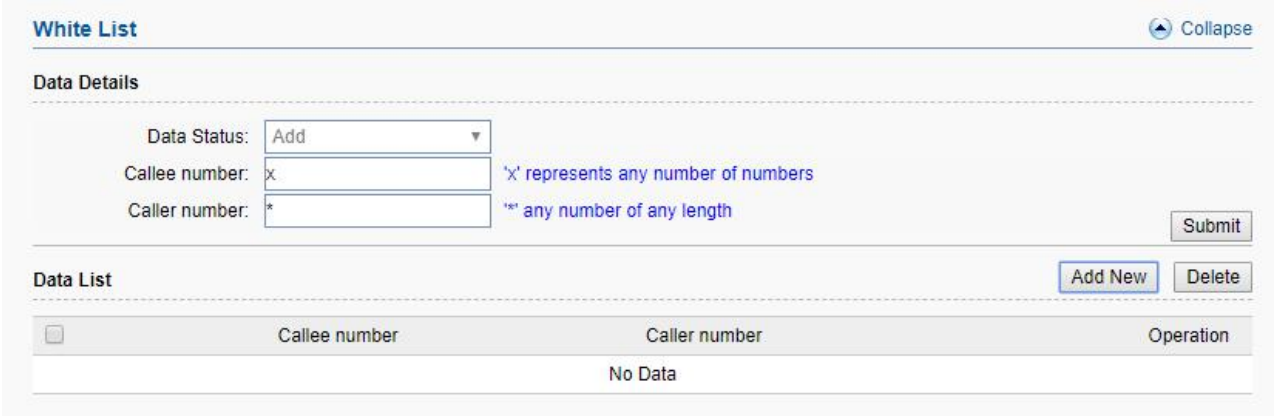


Figure 3.6.5-1 Inward White List Settings

3.6.6 SIM Pool Settings

When you want to manage SIM cards remotely or intensively, you can use this function.

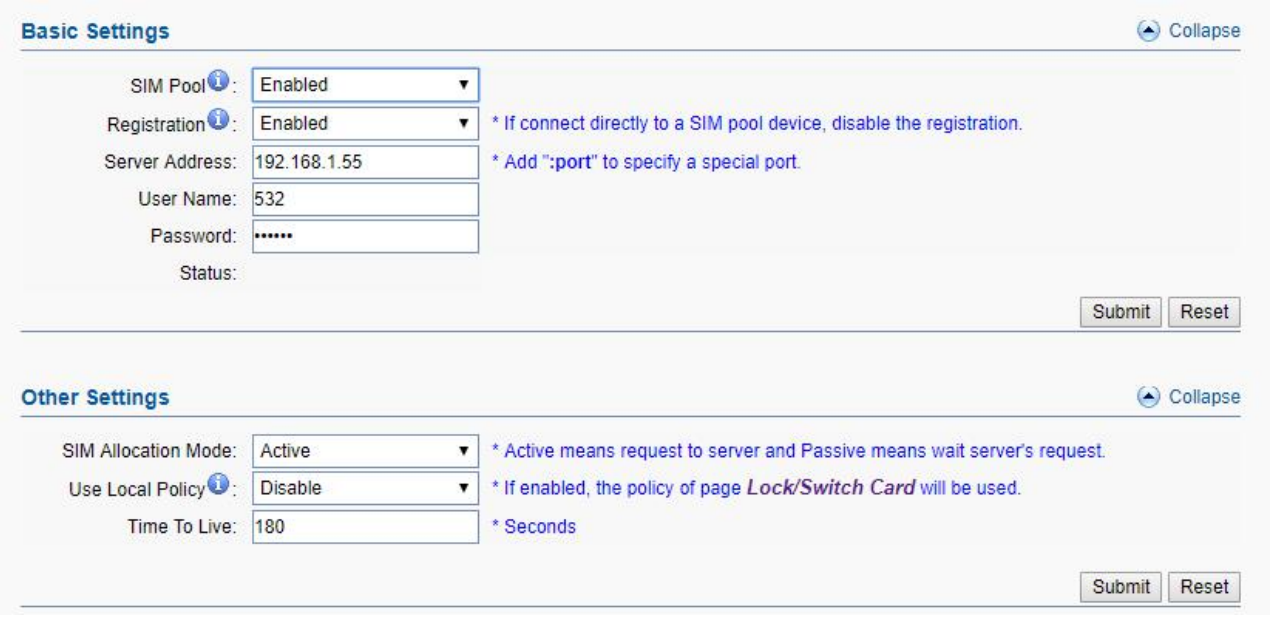


Figure 3.6.6-1 SIM Pool Settings

Items	Description
SIM Pool	When you enable it, cards on gateway will be disabled, it can just use these cards on SIM Pool.
Registration	Registered in sim center.
Server Address	SIM center address.
Username	The gateway account in SIM center
Password	The password of gateway account in SIM center.
Status	Show the gateway registration status.
SIM allocation mode	Active means request to server, passive means wait server reply.
Use Local Policy	If it is enabled, the policy of page lock/switch card can be used in SIM Pool.
Time To Live	Keep alive time

Table 3.6.6-1 SIM Pool Settings

3.6.7 Auto Recharge

Auto recharge is based on billing system, if you want to do auto recharge, please configure billing system first. Recharge template #0 is connect with Ejoin auto recharge system, #1-#4 are third-party recharge system of Bangladesh.

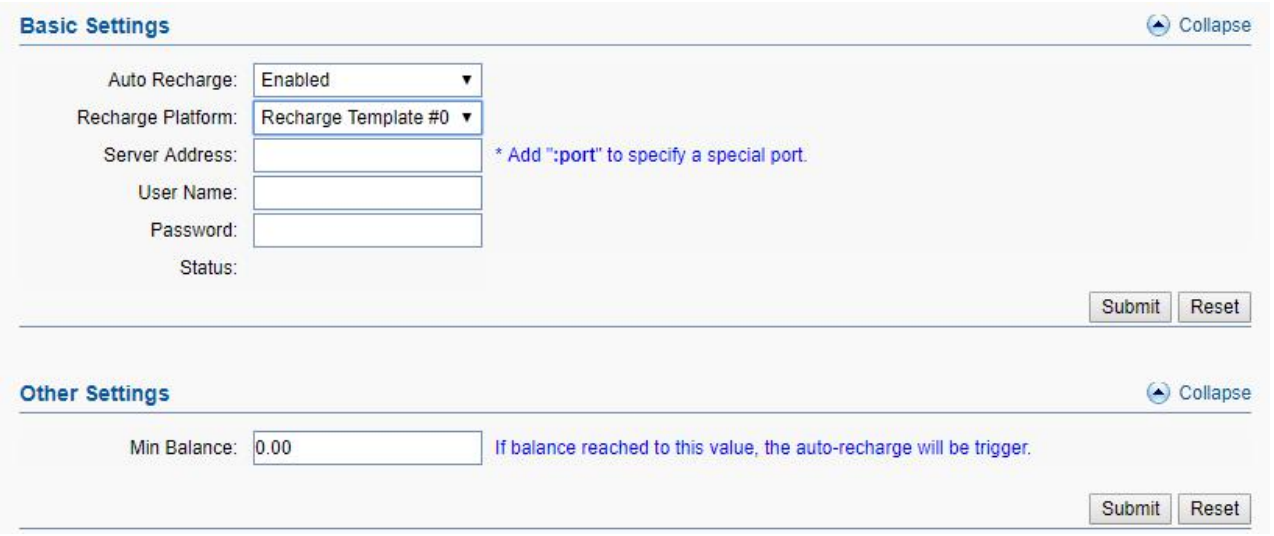


Figure 3.6.7-1 template #0

Items	Description
Server Address	The auto recharge server address. (the server with EJOIN ear system)
Username	It is created in EJOIN ear system.
password	It is created in EJOIN ear system.
status	Show the registration status.
Min balance	If the balance is lower than the value, the ear system will do auto recharge.

Table 3.6.7-1 template #0

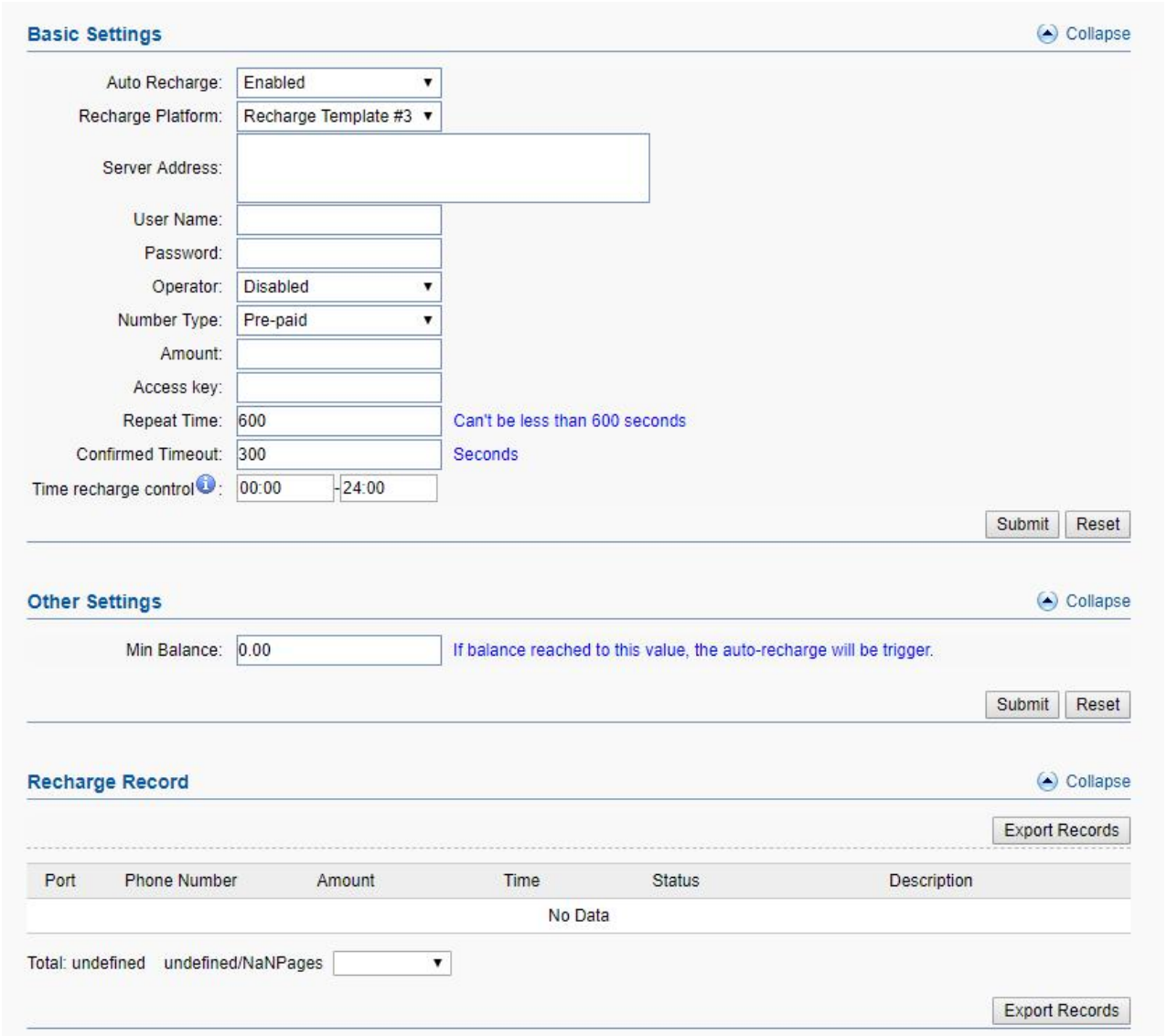


Figure 3.6.7-2 template #1-4

Items	Description
Server Address	The third-party recharge system address
Username	It is created in recharge system
password	It is created in recharge system.
Operator	The operator ID
Number Type	Prepaid or Postpaid sim card
Amount	Amount to be refilled
Access key	It is created in recharge system
Repeat time	If the sim card is recharged, can't recharge again in repeat time
Confirmed timeout	Query balance time
Time recharge control	Recharge is enabled during the time.

Recharge record	It shows the recharge record in this page

Table 3.6.7-2 template #1-4

3.6.8 State Notification

Device send report to the URL which configured, the report include CDR, SMS, call duration data, SMS counts, traffic counts. It's based on HTTP, please check the API document for reference.

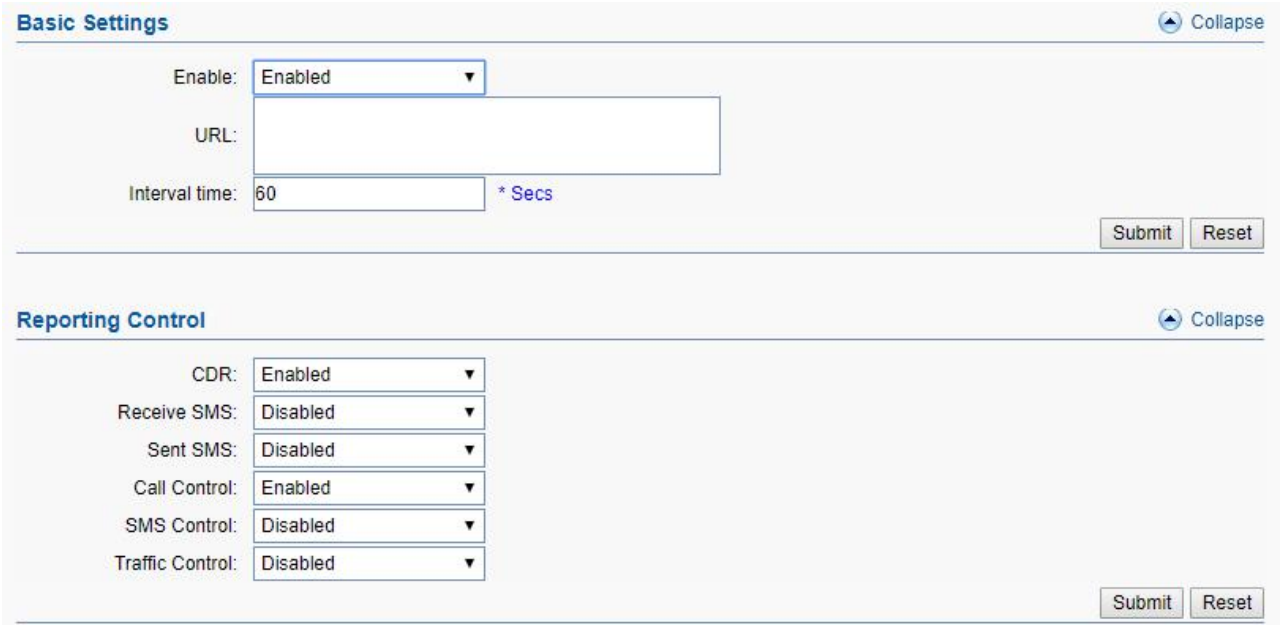


Figure 3.6.8-1 Basic Settings

Items	Description
URL	The http report send to this url
Interval time	The period of sending report
CDR	The call detail records
Receive SMS	The receive sms of device
Sent SMS	The sms which send from device by http, smpp and web
Call control	Call duration data, sim cards' call duration time and remain time
SMS control	SMS counts, sim cards' sms count and remain sms count
Traffic control	The sim card data usage

Table 3.6.8-1 Basic Settings

3.7 Advanced Setting

3.7.1 Network settings

VPN settings

A virtual private network (VPN) extends a private network across a public network, such as the Internet. It enables a computer or network-enabled device to send and receive data across shared or public networks as if it were directly connected to the private network, while benefiting from the functionality, security and management policies of the private network. This device works as VPN(PPTP and openvpn) client mode only, if you want to use VPN function, please input the VPN parameter on the VPN settings page.

Figure 3.7.1-1 VPN Settings

Network Settings

There are three ways to access the device: web, telnet and serial. web default port is 80, telnet is 23 and serial is the com port you insert. Web configuration is widely used in this device.

Figure 3.7.1-2 Network Management Settings

Items	Description
Web Port	Device web management port
Telnet Port	Device telnet port, 0 means disabled
System telnet port	Device system shell by telnet, 0 means disabled

HTTP API port	http api port, default same with web port

Table 3.7.1-1 Network Management Settings

3.7.2 Port Settings

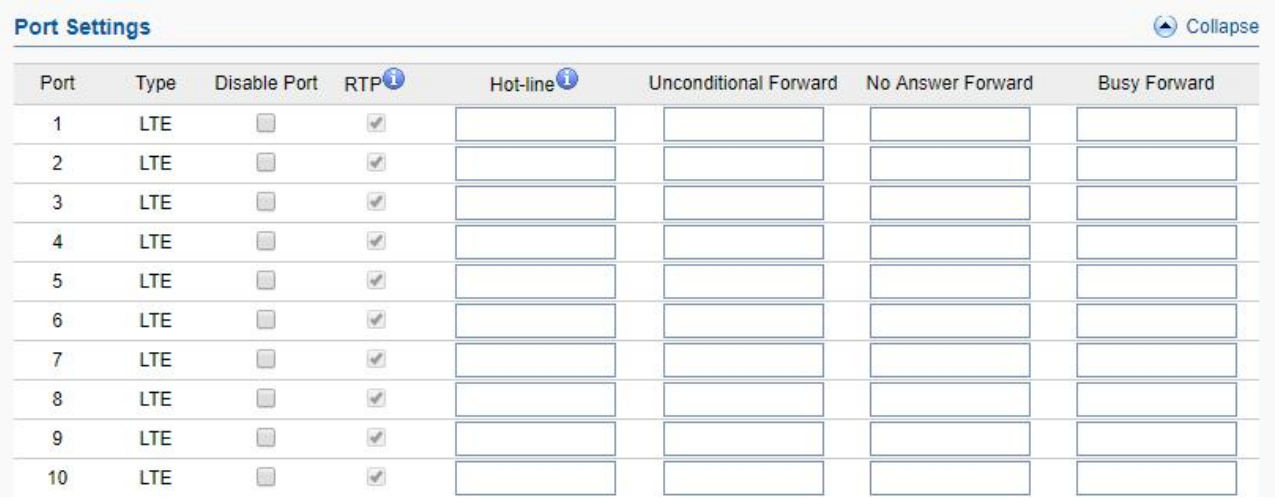


Figure 3.7.2-1 Port Settings

Items	Description
Type	Indicates the current type of network GSM/CDMA/WCDMA/LTE
Disable	If it is disabled, this channel will be locked by gateway.
Hot-line	When GSM part client call to this channel, gateway will auto forward to the hot-line (Mobile to VoIP). Leave it blank if you don't need this function.
Unconditional Forward	When GSM part client call to this channel, gateway will forward the call to another mobile unconditionally.
No Answer Forward	When GSM part client calls to this channel, if this channel is no answer, gateway will forward the call to another mobile.
Busy Forward	When GSM part client call to this channel, if this channel is busy, gateway will forward the call to another mobile.

Table 3.7.2-1 Port Settings

3.7.3 Voice and Codec

Voice and Codec Settings

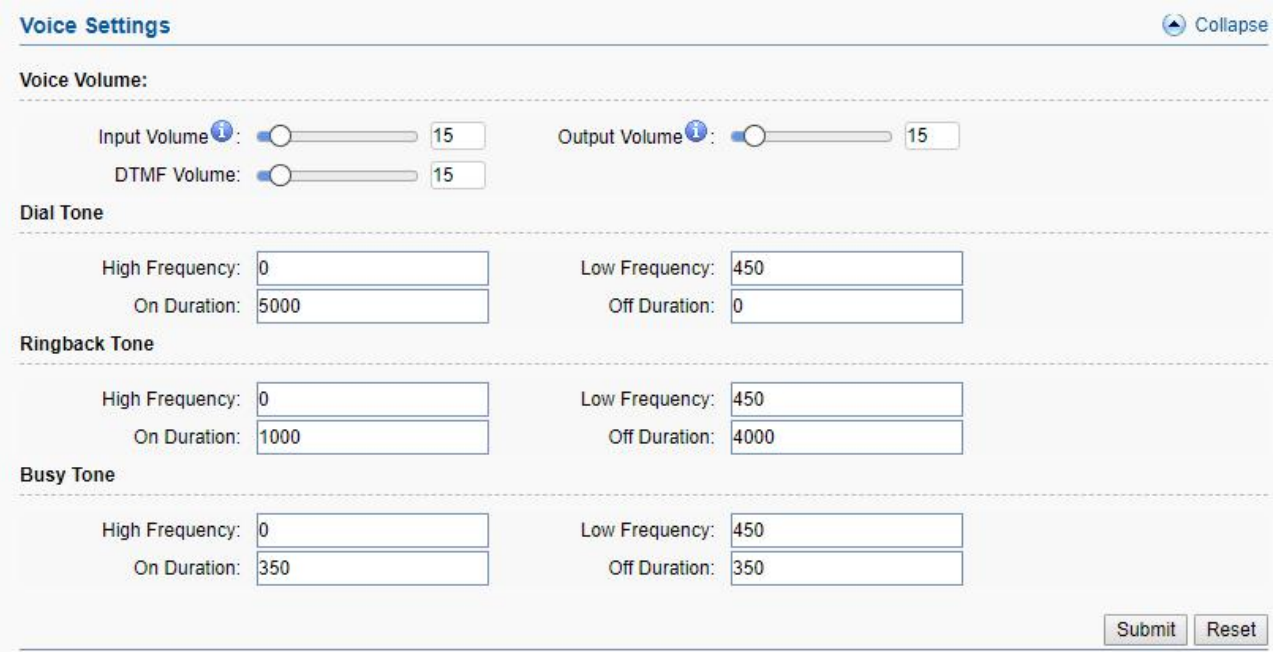


Figure 3.7.3-1 Voice and Codec Settings

Items	Description
Voice Volume	The DSP volume. the value range is 10-40. Input volume is on IP side and output volume is on GSM side. You can adjust volume here.
Dial Tone	The dial tone is sent to a customer or operator to indicate that the receiving end is ready to receive dial pulses or DTMF signals. It is used in all types of dial offices when the customer's or operator's dials produce dial pulses. Usually adopt the default settings.
Ringback Tone	The ring back tone(or ringing tone) is an audible indication that can be heard on caller side while the callee side phone is ringing. Normally, it is a repeated tone, designed to assure the caller that the callee side phone is ringing. Usually adopt the default settings.
Busy Tone	The busy tone indicates that the called customer's line has been reached but that it is busy, being wrong, or on permanent signal. When an operator applies a busy signal, it is sometimes called a busy-back tone. Line Busy Tone is a low tone that is on and off every 0.5 second. Usually adopt the default settings.

Table 3.7.3-1 Voice and Codec Settings

Voice Codec Priority

You can click “Up” or “Down” to adjust the codec priority

Figure 3.7.3-2 Voice Codec Priority

3.7.4 LED Settings

Every sim slot has a led to show the sim card status, if the sim card has issue, led will flash.

Figure 3.7.4-1 LED Settings

Items	Description
Carrier lock Card	The sim card blocked by carrier,
Profile lock Card	The sim card locked by device,
No Balance	Balance lower than invalid balance,
Registered failed	Sim card registered failed,
Port Light Indication	If disabled, the led will not flash even sim card locked or calling

Table 3.7.4-1 LED Settings

3.7.5 Callback Settings

Callback function, when you dial the SIM in gateway with mobile phone, it will hang up soon and send a call back to you, after you pick up the call, you can dial a VoIP extension or another phone number. If you want to use this function, please enable it and set the callback numbers.

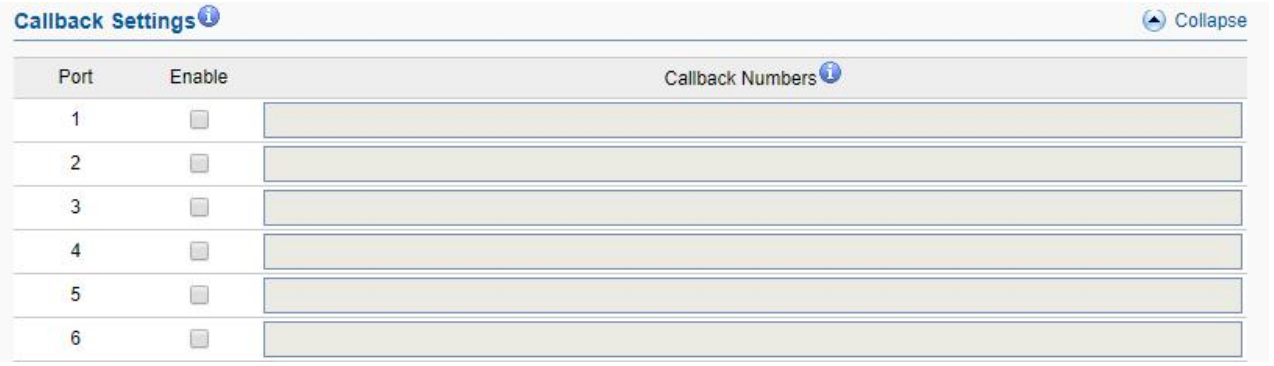


Figure 3.7.5-1 Callback Settings

3.7.6 Callwait Settings

Call waiting is a feature supported by SIM carrier, when there is a second call dialing into this SIM card, there will be waiting tone instead of hang up. You can enable it when you need this feature.

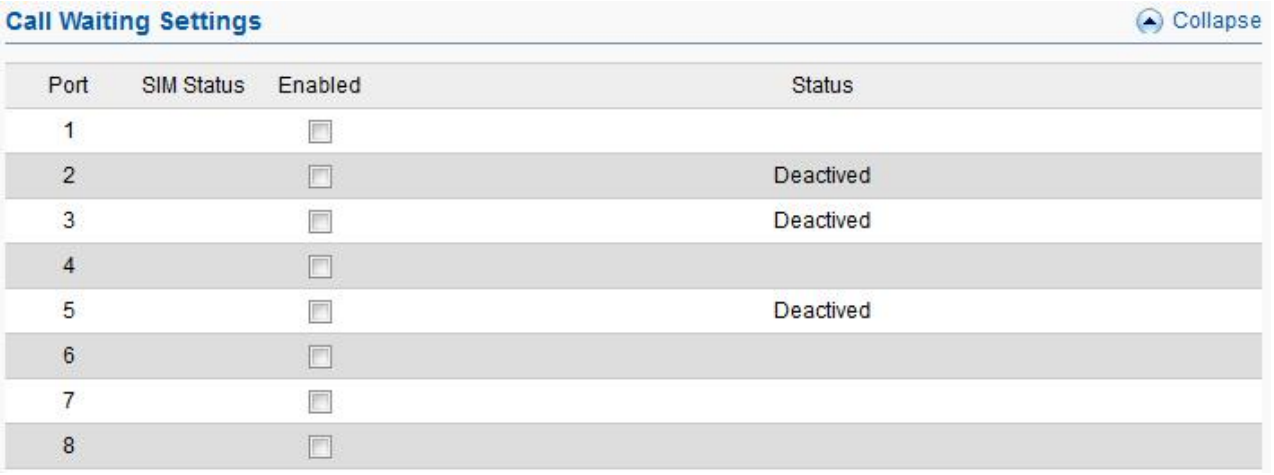


Figure 3.7.6-1 Call Waiting Settings

3.7.7 Other Settings

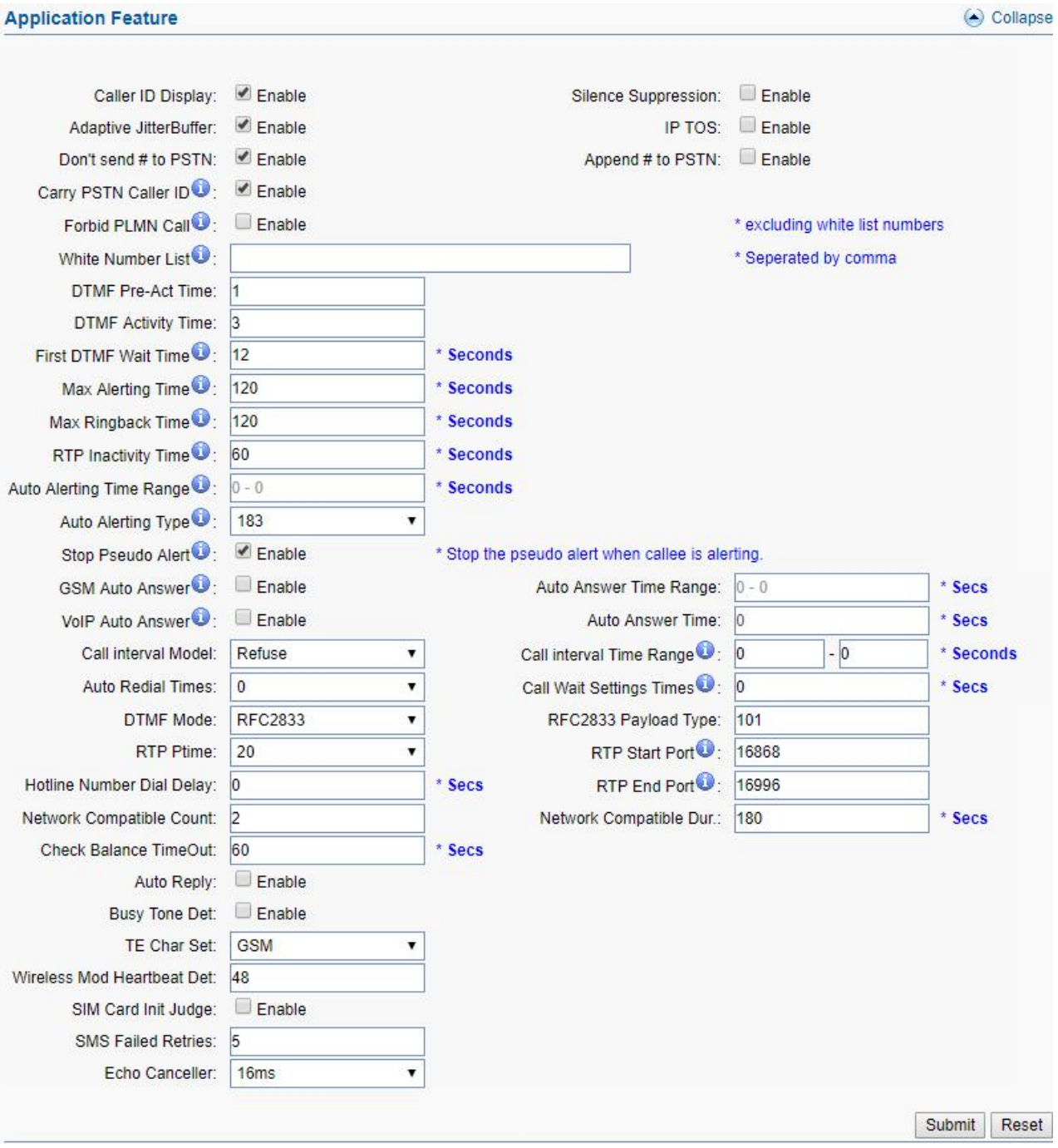


Figure 3.7.7-1 Application Feature

Items	Description
Caller ID Display	If it is disabled, caller ID will not show on “call status” page.
Silence Suppression	If it is enabled, half of the bandwidth will be saved.

Adaptive Jitter Buffer	A jitter buffer is a shared data area where voice packets can be collected, stored, and sent to the voice processor in evenly spaced intervals.
IP TOS	TOS of IP packets.
Don't send # to PSTN	If it is enabled, the last digit # of callee number will be removed.
Append # to PSTN	If it is enabled, # will be appended in the callee number
Carry PSTN Caller ID	SIP extension will show the mobile number when you call the SIM in gateway.
Forbid PLMN call	Calls will be rejected when calling the SIM in gateway.
White Number List	The numbers in white list will not be rejected if forbid GSM call is enabled.
DTMF Pre-Act time	The prepare time until DTMF tone is detected.
DTMF Activity time	The minimum of DTMF activity time.
First DTMF wait time	Send a call to the sim card in device, after the call connected, if don't dial number, the call will be hangup after 12 seconds.
Max Alerting Time	The maximum time of alerting.
Max Ringback Time	The maximum time of ring back.
RTP Inactivity Time	The maximum duration of silence from gateway. System will hang up the call automatically if the silence duration reaches this value
Auto Alerting Time	Fake ring back time, gateway will do fake ring back when reaches this value.
Stop Pseudo Time	Stopping fake ring back when the callee is alerting.
GSM Auto Answer	Applying to calls from GSM network. The gateway will answer the incoming calls automatically when reaches the value.
VoIP Call Auto Answer	Applying to calls from IP network. The gateway will answer the calls automatically when reaches the value.
Call Interval Mode	Refuse: in interval time, the call will be reject by 503 code Keep: in interval time, the call will hold, then send out by this sim.
Call Interval Time Range	The call interval time value, can set time range
Auto Redial Time	GSM redial time
Call Wait Settings Times	Example: if set to 3 seconds, when sim card A in device is calling mobile B, then mobile C call A, A will connected C, and hold the call with B, after 3 seconds, A disconnect C, talk with B again. This settings is used for sim blocking.

DTMF Mode	RFC2833, SIP INFO and IN-BAND. The default one is RFC2833.
RFC2833 Payload Type	RTP Payload for DTMF, the default is 101.
RTP Ptime	The interval of RTP packages.
RTP Start Port	The initial port when RTP voice stream transmit the IP network.
RTP End Port	The maximum rtp port
Hotline Number Dial Delay	Incoming call delay to send to sip server
Network Compatible Count	Sim card registered two times, after failed, shows registered failed
Network Compatible Dur	Sim card registered time period, every time 180s
Check Balance Timeout	The time of query balance
Auto reply	One caller send call from one port to a mobile, next time, this mobile call back, the call will forward to the caller and ignore hotline number settings.
Busy Tone Det	Detect the busy tone, then hangup the call, need to confirm the busy tone frequency first.
TE Char Set	Set character for USSD response.
Wireless mod Heartbeat Det	The module heartbeat detect time
SIM Card Init Judge	If enabled, the sim card need to read phone before registered
SMS failed Retries	Sms send failed, will retry 5 times
Echo Canceller	Echo canceller parameter setting

Table 3.7.7-1 Application Feature

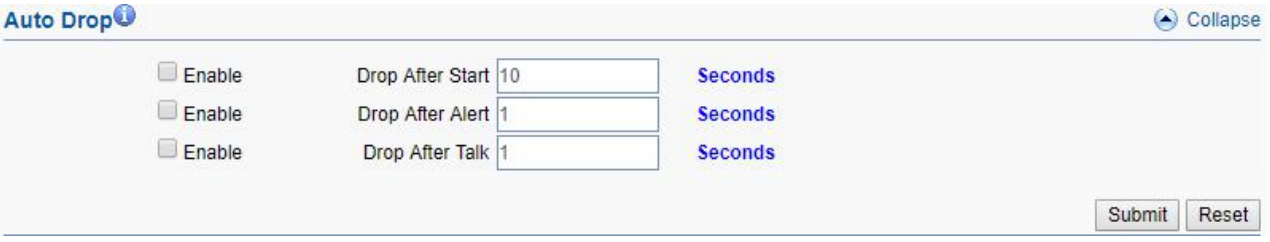


Figure 3.7.7-2 Auto Drop

Items	Description
Drop after start	The call drop automatically after the call start value
Drop after alert	The call drop automatically after the call ringing value
Drop after talk	The call drop automatically after the call connected value

Table 3.7.7-2 Auto Drop

3.8 System Settings

3.8.1 User Mgmt

The default username/password of gateway are root/root. You are allowed to change the password and add new users on this page. Every account has a role, different roles have different right of permissions. Role “admin” has the highest right of permission, role can be added in page “role mgmt”.

Figure 3.8.1-1 User List

Follow the screenshot below, you can set the “allowed IP” or “not allowed IP” for web and telnet access.

Figure 3.8.1-2 Allowed IP settings

3.8.2 Role Mgmt

Add new role here, and choose the page the role need to control.

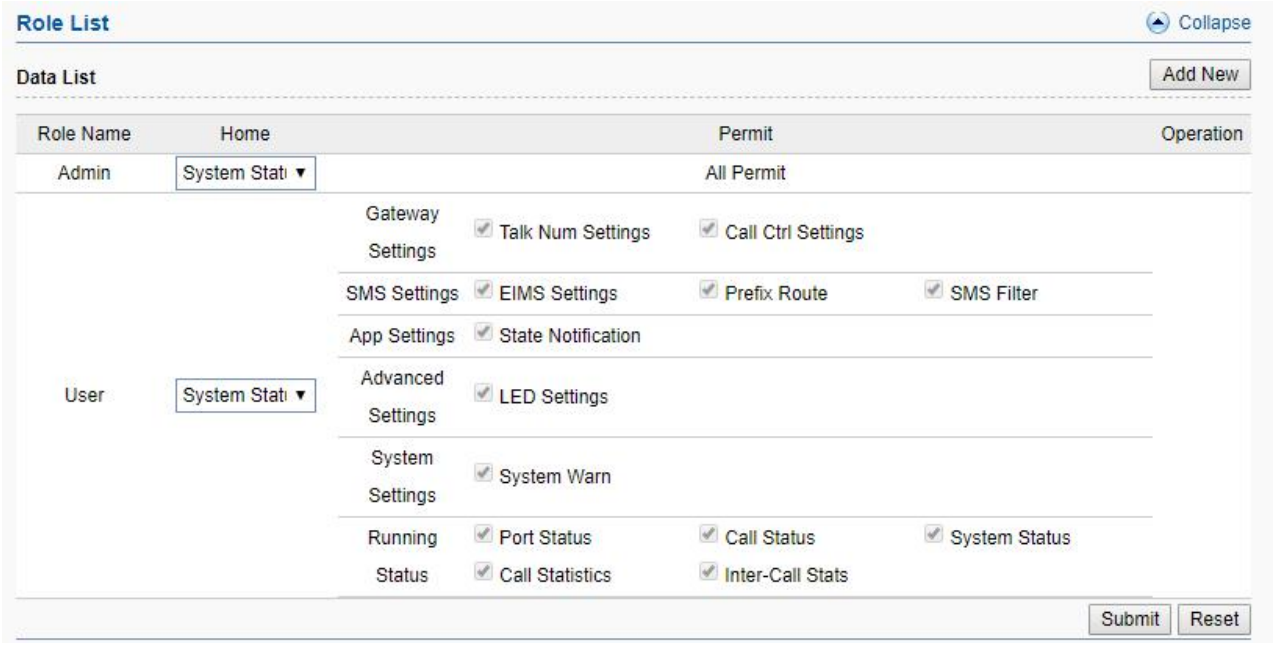


Figure 3.8.2-1 Role List

3.8.3 Device Mgmt

Basic Settings

You are allowed to set an alias for device. You can also manage your gateway to reboot automatically as you like. There are two types for you to choose, one is after gateway running

specified time, and the other one is scheduled reboot.

Figure 3.8.3-1 Basic Settings

Date and Time

You can choose your time zone or change the NTP server address here. There are three method to get time, manual means set the time manually, NTP means get the time from time server, base station means get the time by wireless module.

Figure 3.8.3-2 Date And Time

Temperature Settings

When the temperature lower than the value, Fan stop working. This function need the device has temperature sensor.

Figure 3.8.3-3 Temperature Settings

Network Management System

We can't access in device web interface with other network if the device is behind NAT, ERM and ETMS are the remote system which can help us access in the device with other network.

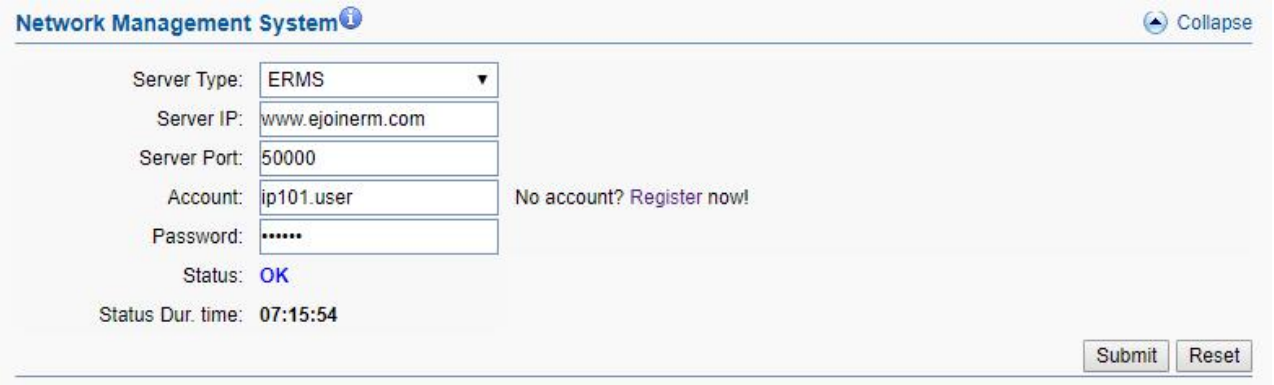


Figure 3.8.3-4 network management system

Items	Description
Server type	ERMS and ETMS, default ERM web http://www.ejoinerm.com:8080/erm
ERM Server IP	ERM or ETMS server ip
ERM Server Port	The port of ERM or ETMS service. Default is 50000
Account	ERM account. You can also click “Register” to create a new account.
Password	Password of ERM account.
status	The Registration status of gateway with ERM or ETMS server.
Status dur. time	The time elapsed since registered.

Table 3.8.3-4 network management system

SNMP

Simple Network Management Protocol (SNMP) is an application–layer protocol defined by the Internet Architecture Board (IAB) in RFC1157 for exchanging management information between network devices. It is a part of Transmission Control Protocol/Internet Protocol (TCP/IP) protocol suite.

Ejoin SNMP management include SIM card ICCID, IMSI, IMEI, Register status, CDR and SMS.

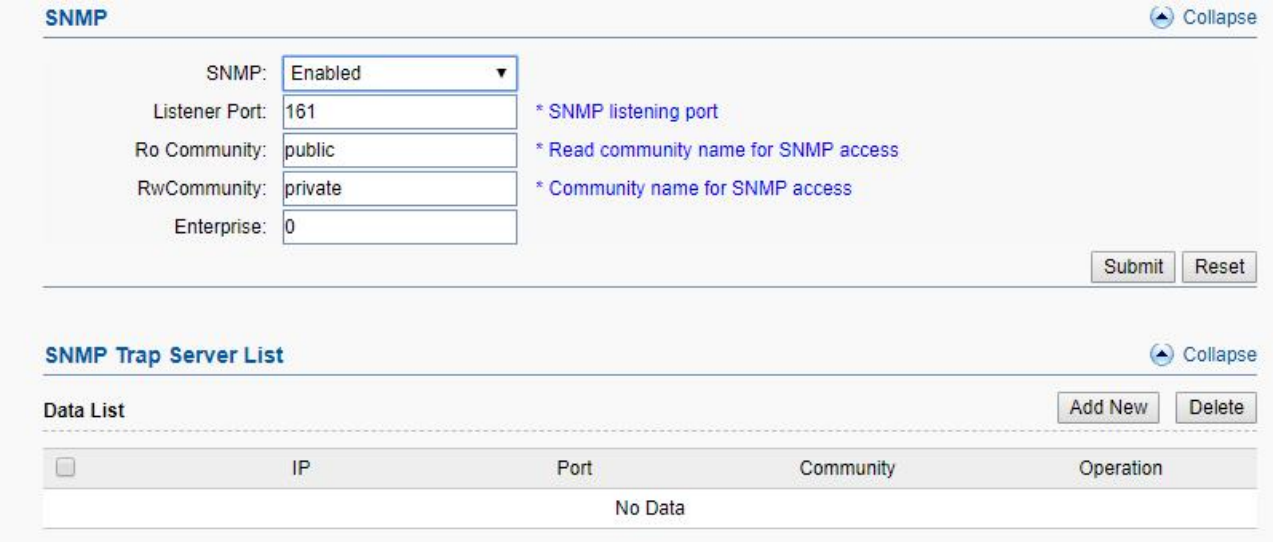


Figure 3.8.3-5 SNMP Settings

3.8.4 File Management

File management is used for debugging the device. It has gdb, dying message and call statistics files. You can export or delete the logs from this page.

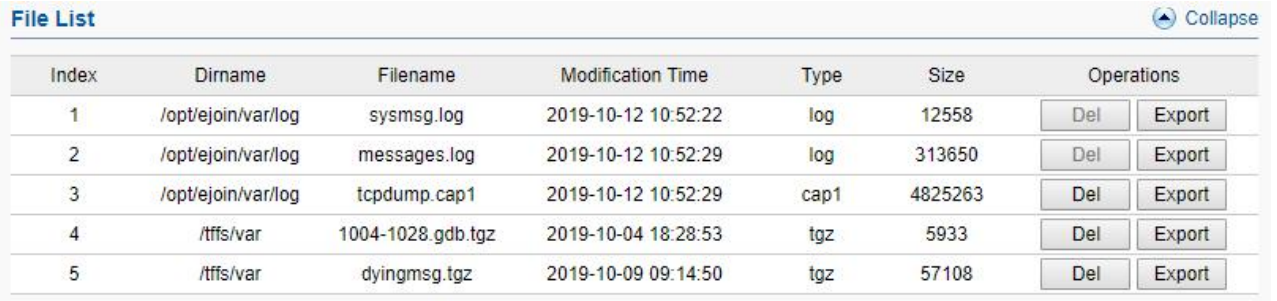


Figure 3.8.4-1 File List

3.8.5 System Update

Import File

On this page, you can update the firmware for device, you can also update other files like kernel, ramfs etc.

Figure 3.8.5-1 Import File

Export Configuration

Click “Export” button to export the configuration files.

Figure 3.8.5-2 Export Configuration

Service Data

Click “Export data” button to export the call duration and sms counts data

Figure 3.8.5-3 Service Data

Restore To Factory

Sometimes there is something wrong with your gateway that you don’t know how to solve it, mostly you will reset it. Just click “restore” button, your gateway will be reset to the factory settings.(IP will not change) .

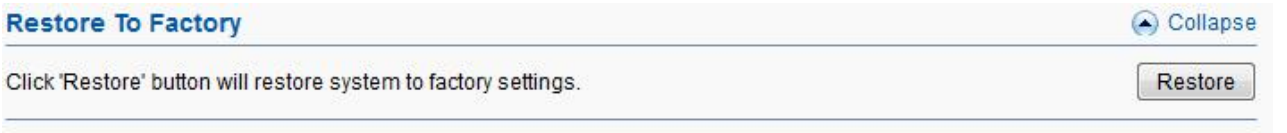


Figure 3.8.5-4 Restore To Factory

3.8.6 Test Network

Maual Ping

It’s used to test the reachability of the destination server

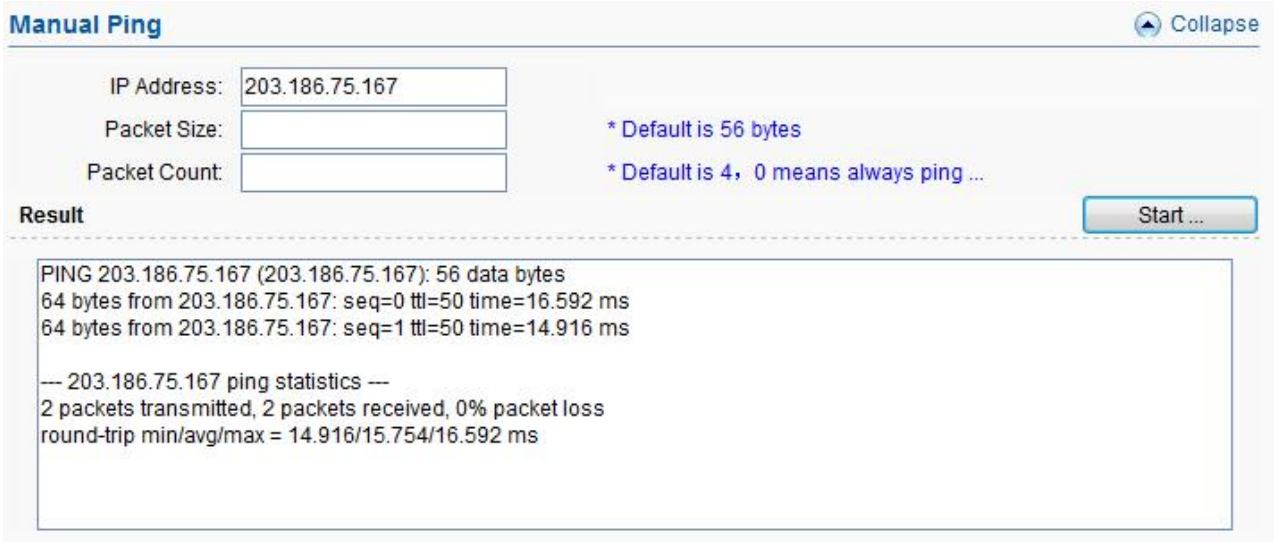


Figure 3.8.6-1 Manual Ping

Capture

Capture the tcpdump log of device, the log will show in “file management”

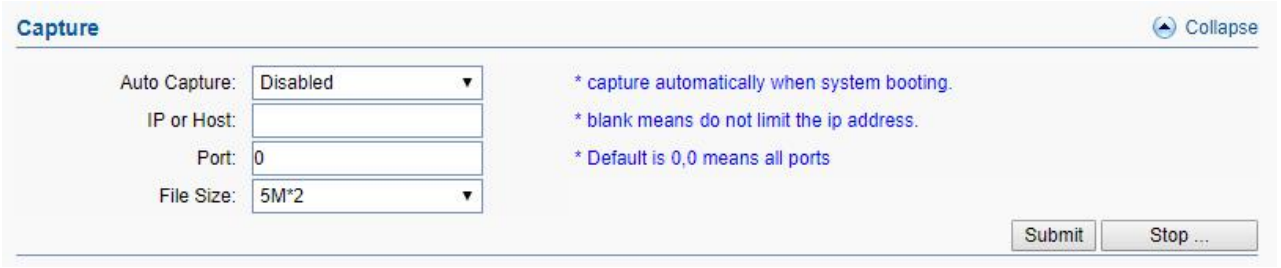


Figure 3.8.6-2 Manual Ping

3.8.7 Monitor System

Log Settings

You can enable the specific progress module running logs to monitor the device working status, and set the log file counts. Device will save 5 logs as default

You can back to File management page to download these log files.

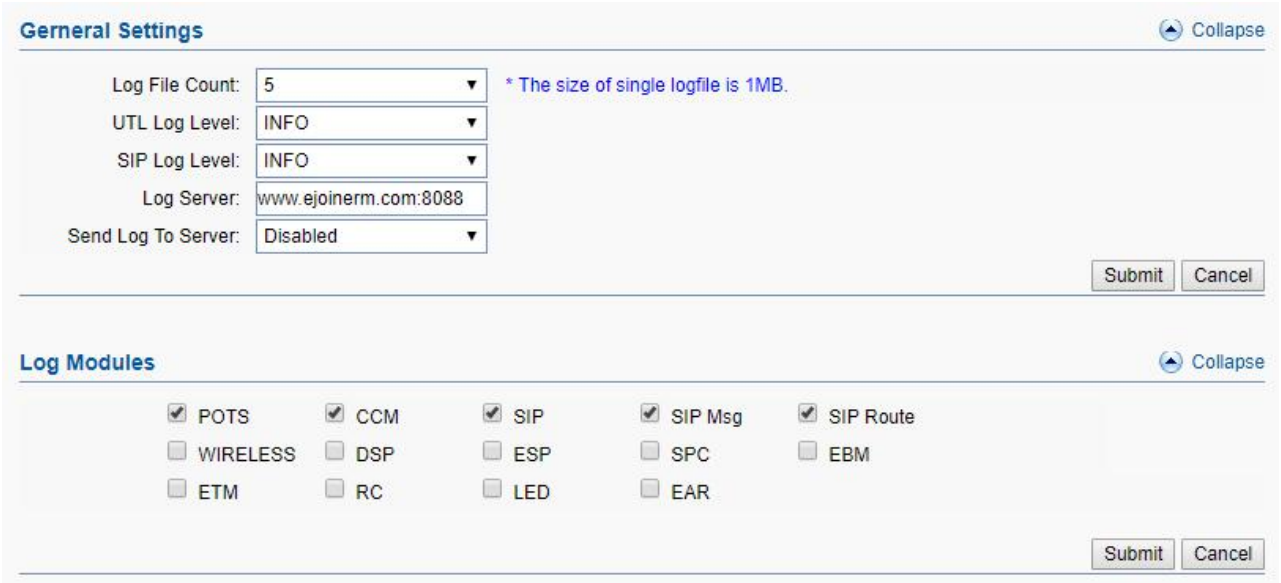


Figure 3.8.7-1 Log System

CPU&Memory

This page is used to show all the running processes of the device, CPU&Memory useage.

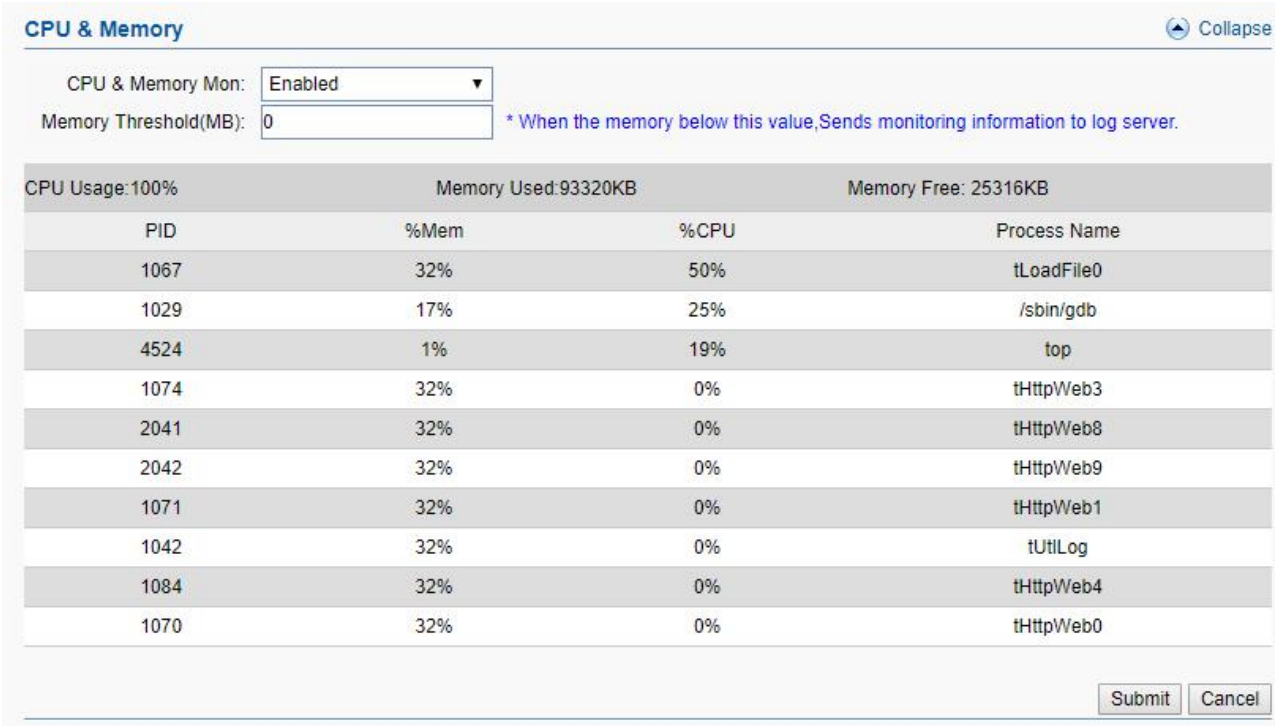


Figure 3.8.7-2 CPU&Memory

3.8.8 System Warn

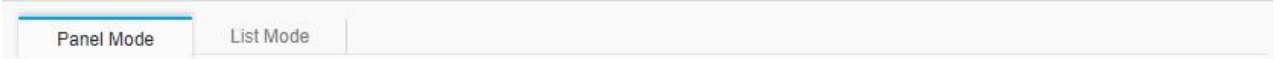
It's used to show the system security tips.

Figure 3.8.8-1 System Warn

3.9 Running Status

3.9.1 Port Status

There are two ways to show port status, panel mode and list mode, click the menu to select the mode.



Panel mode

Port LED display every SIM card status on device. if the sim card is locked, can reset in this page.

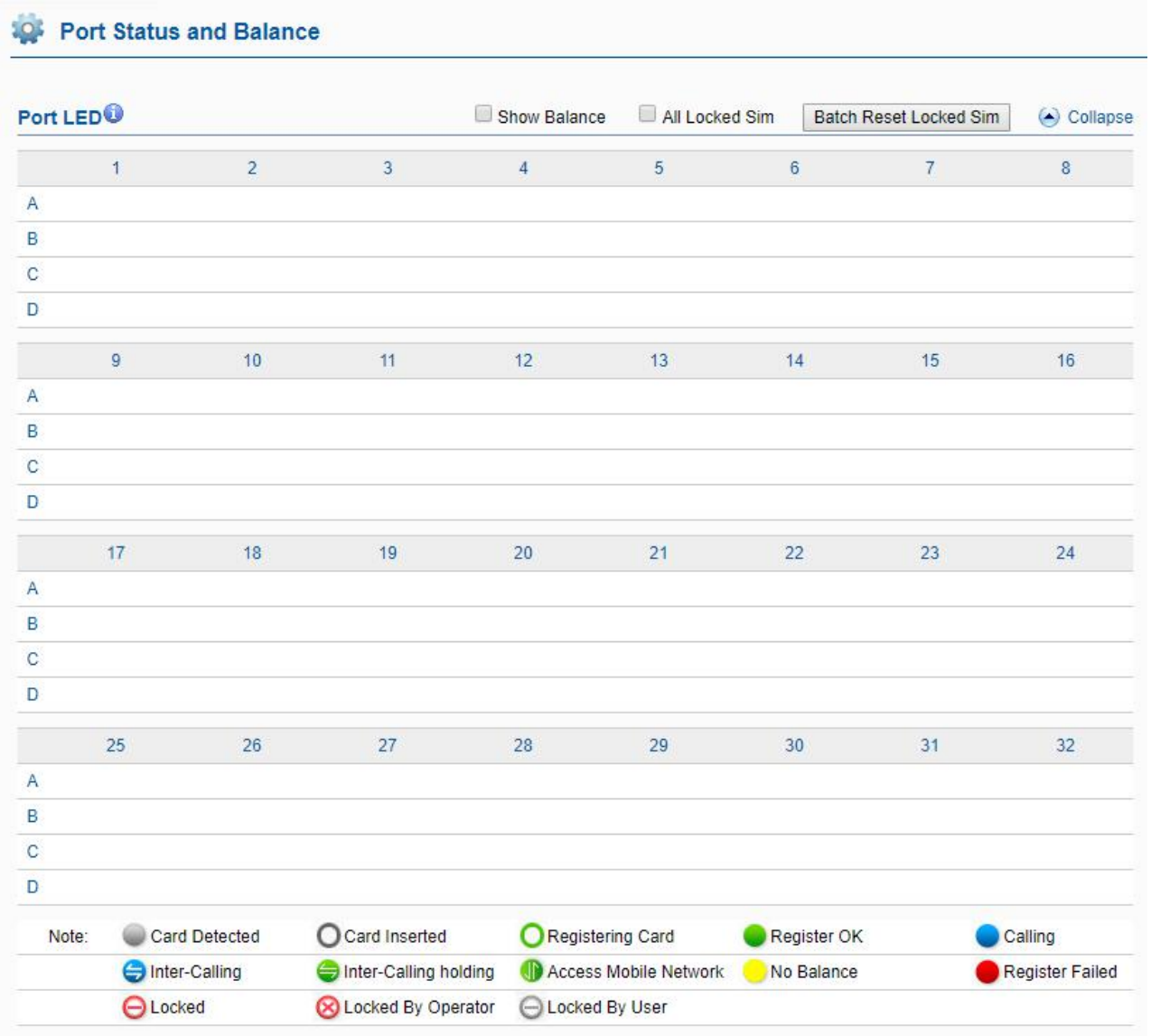


Figure 3.9.1-1 Port LED

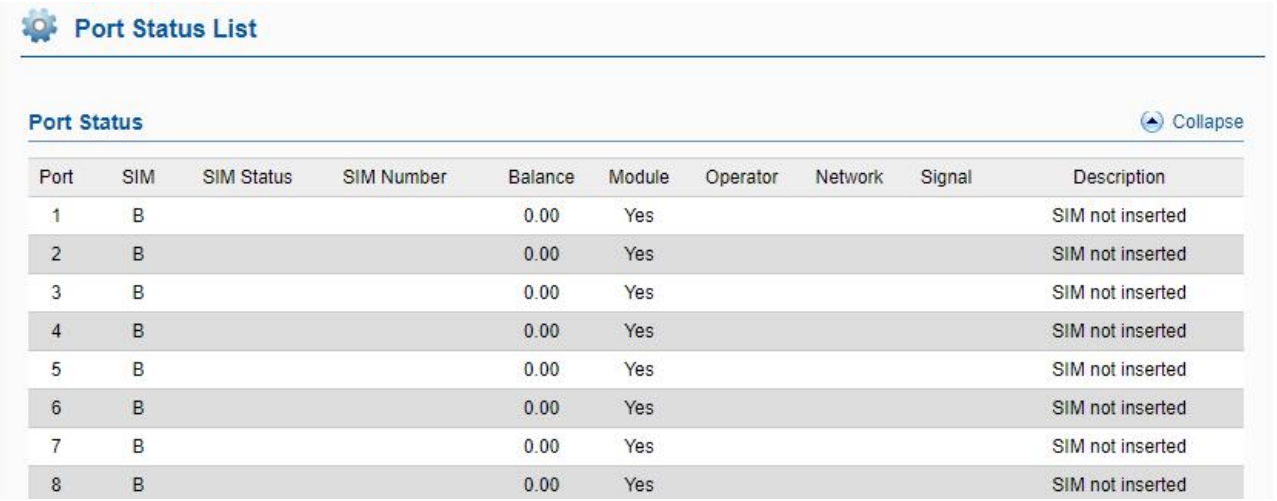
Items	Description
	SIM card is detected, but it is not active.
	SIM card inserted, but the module not read the card.
	SIM card inserted, and module already read the card.
	SIM card is registered.
	SIM card is calling.

	SIM card inter-calling
	SIM card is preparing inter-calling
	SIM card is using data
	Low balance(lower than the invalid balance when enable billing system)
	SIM card register failed
	SIM card is lock by device.
	SIM card is locked by operator.
	SIM card is locked by user

Table 3.9.1-1

Port Status

Port status display every wireless module detect status, and register operator information, signal value for channels.



Port	SIM	SIM Status	SIM Number	Balance	Module	Operator	Network	Signal	Description
1	B			0.00	Yes				SIM not inserted
2	B			0.00	Yes				SIM not inserted
3	B			0.00	Yes				SIM not inserted
4	B			0.00	Yes				SIM not inserted
5	B			0.00	Yes				SIM not inserted
6	B			0.00	Yes				SIM not inserted
7	B			0.00	Yes				SIM not inserted
8	B			0.00	Yes				SIM not inserted

Figure 3.9.1-2 Port Status

Items	Description
Port	Number of GSM/CDMA/WCDMA/LTE ports.
SIM	The SIM slot number

SIM Status	Indicates whether SIM is registered or not
SIM Number	SIM card number
Balance	SIM card balance, need to enable billing settings first.
Module	Indicates whether module is detected or not.
Operator	Displays the sim card operator ID
Network	Displays the network 2G/3G/4G
Signal	Displays the signal strength of current SIM card
Description	Display the SIM card status and caller, callee ID.

Table 3.9.1-2

3.9.2 Call Status

On this page you can monitor every current call on device.

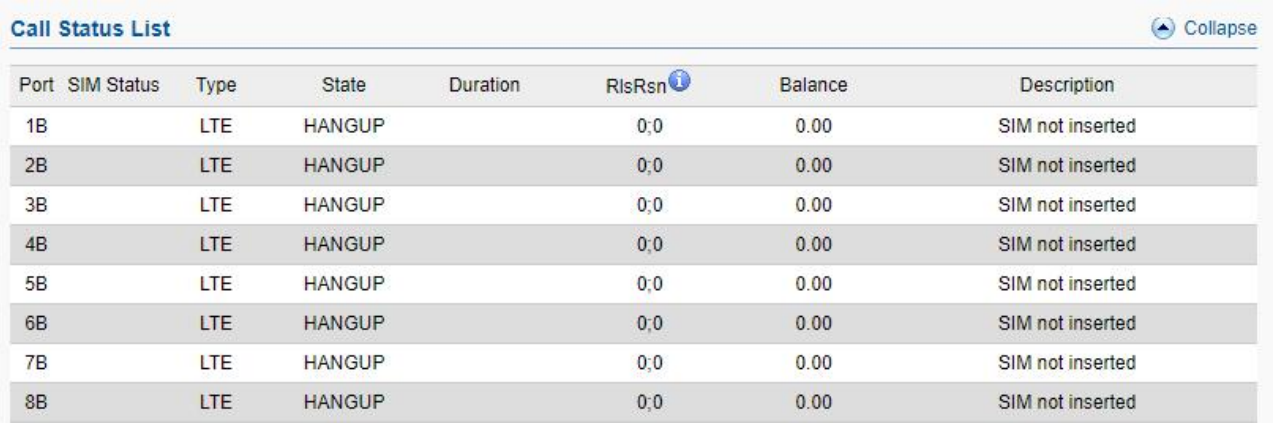


Figure 3.9.2-1 Call Status

Items	Description
Port	Number of GSM/CDMA/WCDMA/LTE ports.
SIM Status	Indicates whether SIM is registered or not
Type	Indicates the current type of network. GSM/CDMA/WCDMA/LTE
State	call status, it can be hangup, dialing, alerting, connected etc.
Duration	The duration this channel stay in current status.
RlsRsn	Sip release cause and module release cause
Balance	The SIM card balance, need to enable billing settings first
Description	Display the SIM card status and caller, callee ID.

Table 3.9.2-1 Call status

3.9.3 System Status

Device information shows the hardware, software version and wireless module type etc.

WAN status shows the wan port network parameters and MAC address.

License information shows voice, sms and IMEI modify enable or not and so on.

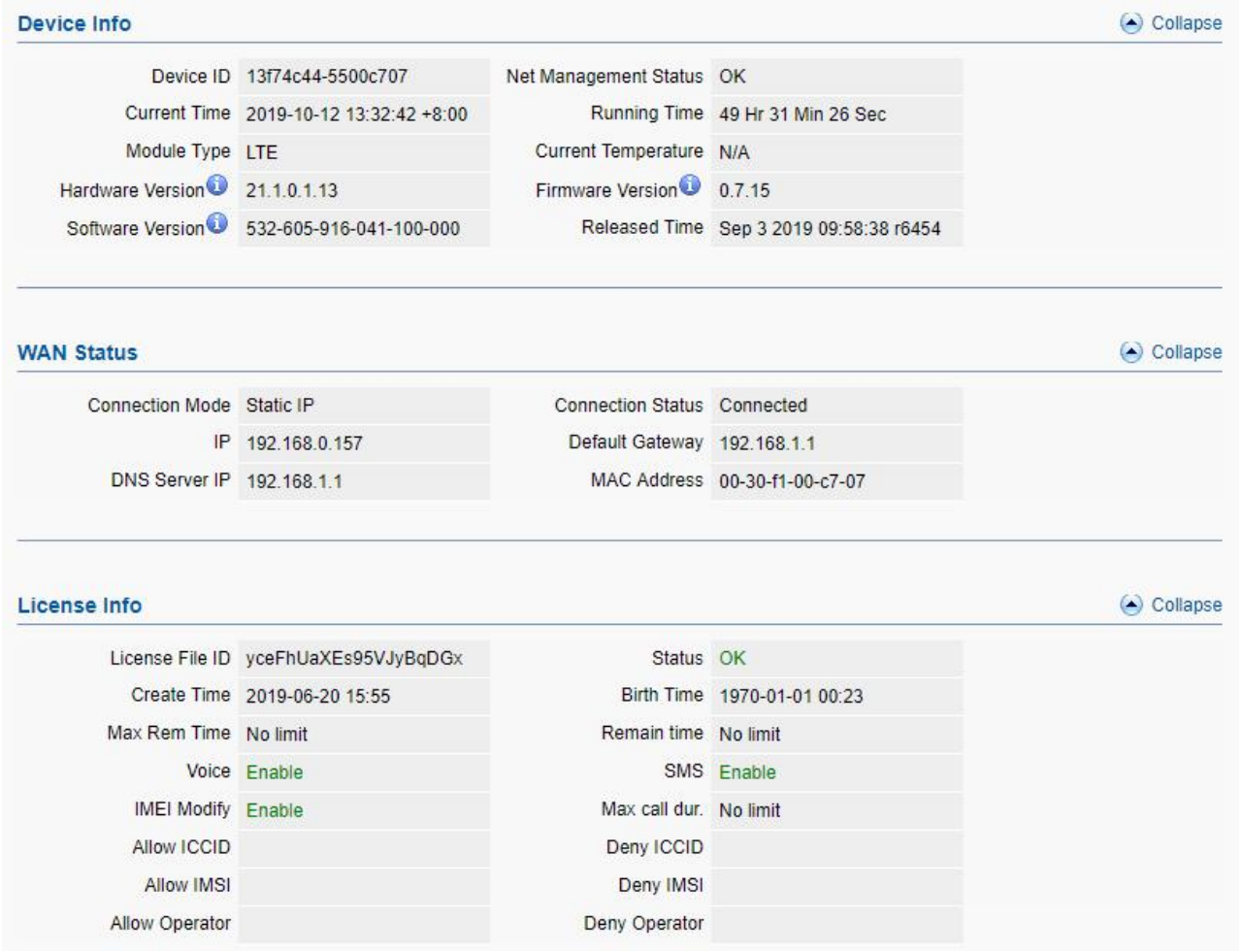
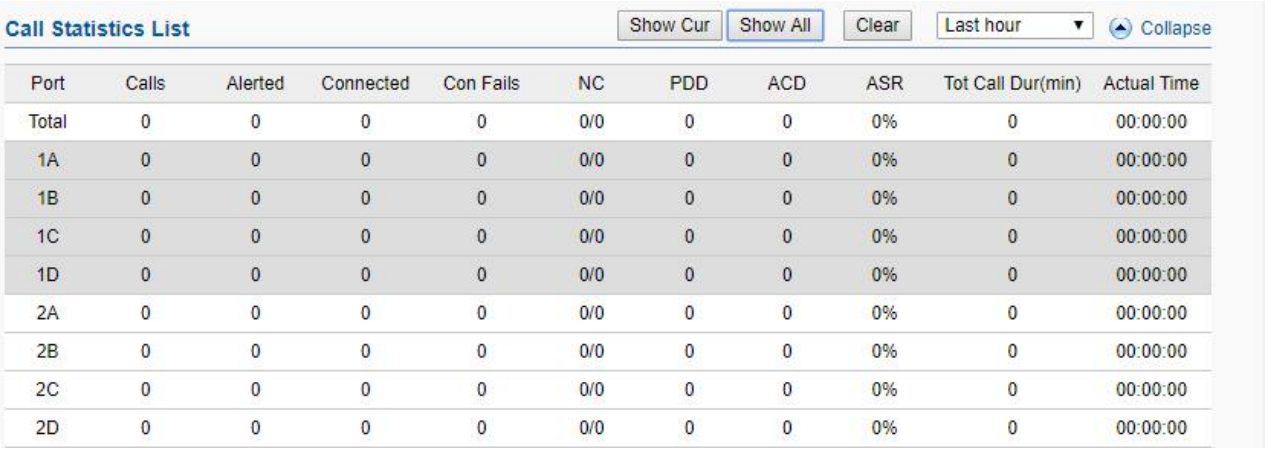


Figure 3.9.3-1 System Status

3.9.4 Call Statistics



Port	Calls	Alerted	Connected	Con Fails	NC	PDD	ACD	ASR	Tot Call Dur(min)	Actual Time
Total	0	0	0	0	0/0	0	0	0%	0	00:00:00
1A	0	0	0	0	0/0	0	0	0%	0	00:00:00
1B	0	0	0	0	0/0	0	0	0%	0	00:00:00
1C	0	0	0	0	0/0	0	0	0%	0	00:00:00
1D	0	0	0	0	0/0	0	0	0%	0	00:00:00
2A	0	0	0	0	0/0	0	0	0%	0	00:00:00
2B	0	0	0	0	0/0	0	0	0%	0	00:00:00
2C	0	0	0	0	0/0	0	0	0%	0	00:00:00
2D	0	0	0	0	0/0	0	0	0%	0	00:00:00

Figure 3.9.4-1 Call Statistics

Items	Description
Show Cur	Shows current active sim cards call statistics.
Show ALL	Shows all sim cards call statistics.
Clear	Clear all ports call statistics. The data will be clear after rebooting.
Time period	Last hour, last two hours, last day and total call statistics for selecting.
Port No.	Number of GSM/CDMA/WCDMA/LTE ports.
Calls	The total number of calls that send out from this SIM card.
Alerted	The total calls which is responded alerting message.
Connected	The total answered calls
Consecutive Fails	The consecutive failed calls.
NC	No Carriers times and trying times.
PDD	Post Dial Delay (PDD) is experienced by the originating customer as the time from the sending of the final dialed digit to the point at which they hear ring tone or other in-band information. Where the originating network is required to play an announcement before completing the call then this definition of PDD excludes the duration of such announcements.
ACD	The Average Call Duration(ACD) is calculated by taking the sum of billable seconds(billsec) of answered calls and dividing it by the number of these answered calls.

ASR	Answer Seizure Ratio is a measure of network quality. It's calculated by taking the number of successfully answered calls and dividing by the total number of calls attempted. Since busy signals and other rejections by the called number count as call failures, the ASR value can vary depending on user behavior.
Tot Call Dur(min)	The sim card call duration, count by minute(60s), that means if it has two calls, one call is 67 seconds, the other call is 10 seconds, the total duration will be 3 mins.
Actual Time	The sim card call duration, count by seconds(1s), that means if it has two calls, one call is 67 seconds, the other call is 10 seconds, the total duration will be 77 seconds, shows 00:01:17

Table 3.9.4-1 Call Statistics

3.9.5 Media Statistics

Media statistics shows the RTP information when send calls.

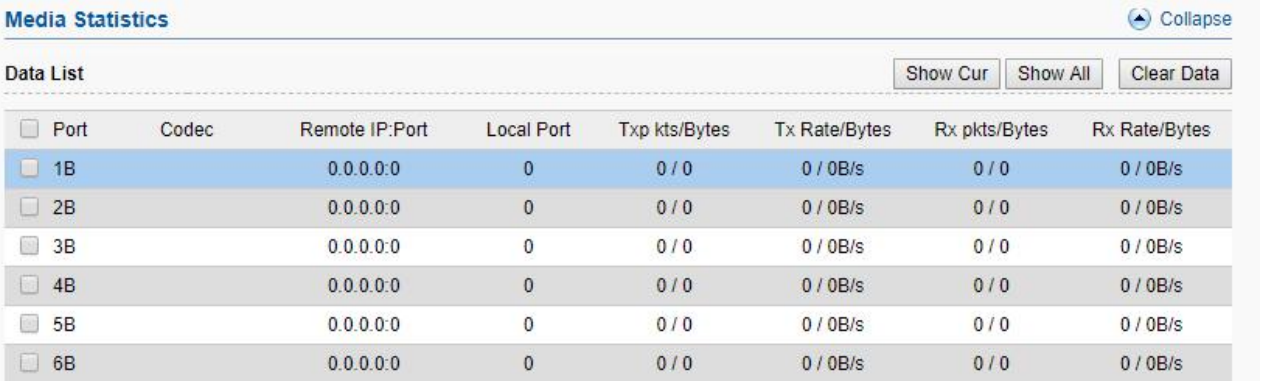


Figure 3.9.5-1 Media Statistics

Items	Description
Port	Number of GSM/CDMA/WCDMA/LTE ports.
Codec	The voice codec of current call use, g729, g723, g711 etc.
Remote IP:Port	The remote server rtp ip and rtp port
Local Port	Device rtp port
Txp kts/Bytes	Device->>server rtp packets
Tx Rate/Bytes	Device->>server rtp sending rate

Rxp kts/Bytes	Server->>device rtp packets
Rx Rate/Bytes	Server->>device rtp sending rate, 0 means mobile side can't hear voice.

Figure 3.9.5-1 Media Statistics

3.9.6 SMS Statistics

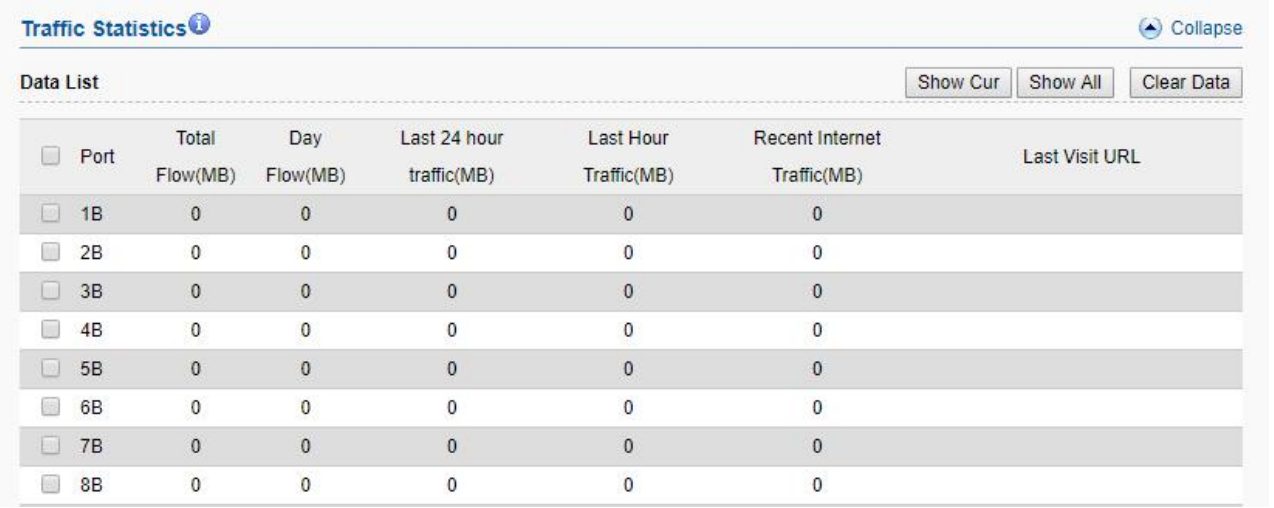
Figure 3.9.5-1 SMS Statistics

Items	Description
Show Cur	Shows current active sim cards sms statistics.
Show ALL	Shows all sim cards sms statistics.
Clear	Clear all ports sms statistics. The data will be clear after rebooting
Time period	Last hour, last two hours, last day and total call statistics for selecting.
Port No.	Number of GSM/CDMA/WCDMA/LTE ports.
SIM status	Indicates whether SIM is registered or not
Received	The sim card received sms counts.
Sent	The sent sms counts.
Sent OK	The successful sms counts.
Sent failed	The failed sms counts.
Con.failed	The consecutive failed sms counts.
Don't send	The cache sms in queue
Sending	The sending sms
Success rate	Success rate

Table 3.9.5-1 SMS Statistics

3.9.6 Traffic Statistics

Traffic statistics shows the sim card data usage, includes total/day/last day/last hour data usage information.

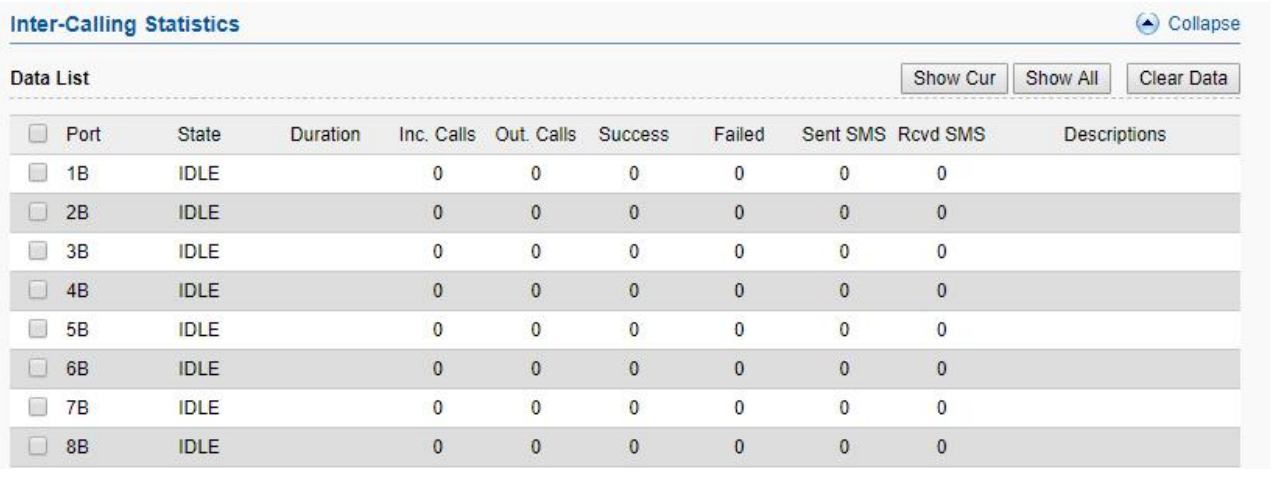


Port	Total Flow(MB)	Day Flow(MB)	Last 24 hour traffic(MB)	Last Hour Traffic(MB)	Recent Internet Traffic(MB)	Last Visit URL
1B	0	0	0	0	0	
2B	0	0	0	0	0	
3B	0	0	0	0	0	
4B	0	0	0	0	0	
5B	0	0	0	0	0	
6B	0	0	0	0	0	
7B	0	0	0	0	0	
8B	0	0	0	0	0	

Figure 3.9.6-1 Traffic Statistics

3.9.7 Inter-Call Status

When you enable the inter-calling or inter-SMS, you can monitor the executing details on this page.



Port	State	Duration	Inc. Calls	Out. Calls	Success	Failed	Sent SMS	Rcvd SMS	Descriptions
1B	IDLE		0	0	0	0	0	0	
2B	IDLE		0	0	0	0	0	0	
3B	IDLE		0	0	0	0	0	0	
4B	IDLE		0	0	0	0	0	0	
5B	IDLE		0	0	0	0	0	0	
6B	IDLE		0	0	0	0	0	0	
7B	IDLE		0	0	0	0	0	0	
8B	IDLE		0	0	0	0	0	0	

Figure 3.9.7-1 Inter-Call Statistics

3.9.8 CDR Query

CDR is call detail record, the device doesn't save cdr data, the data will be saved in etms

server. If you need to query cdr, the first step is connect with etms server.

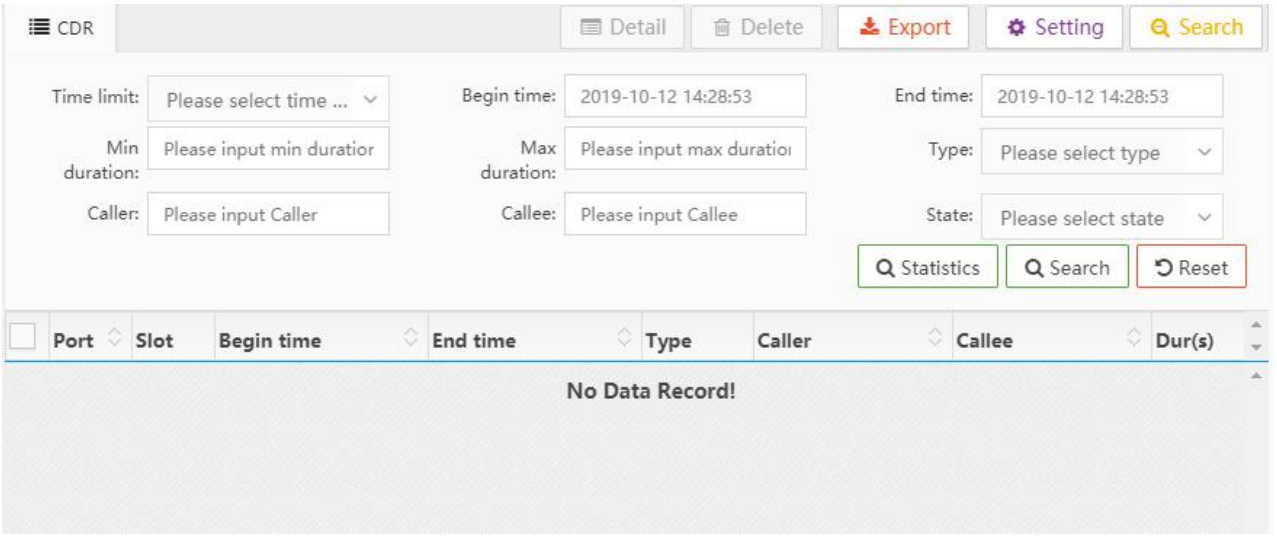


Figure 3.9.8-1 CDR Query

3.9.9 SMS Query

the device only save 50 receive sms for each port and don't save sent sms record. If you need to save all sms records and query the records, need to connect with eims server first.

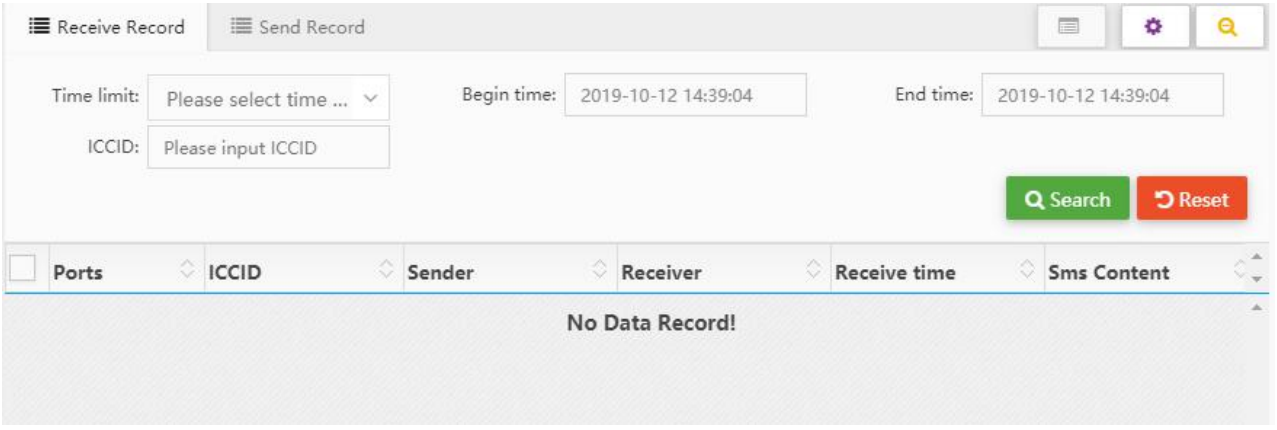


Figure 3.9.5-1 SMS Query

3.10 Save and Reboot

Modification will be applied after you saving and rebooting gateway.(All calls will break off when rebooting.)

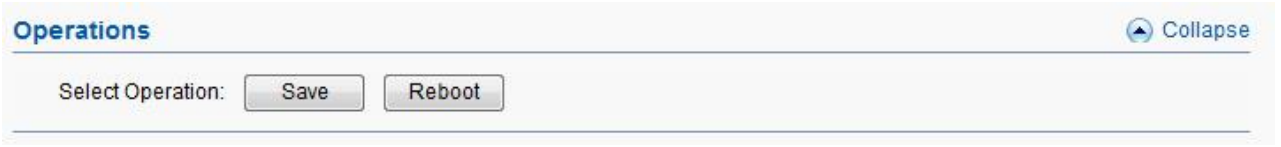


Figure 3.10-1 Save and Reboot

Chapter Ⅳ Typical Used Scenario

4.1 Landing from IP network to Mobile network

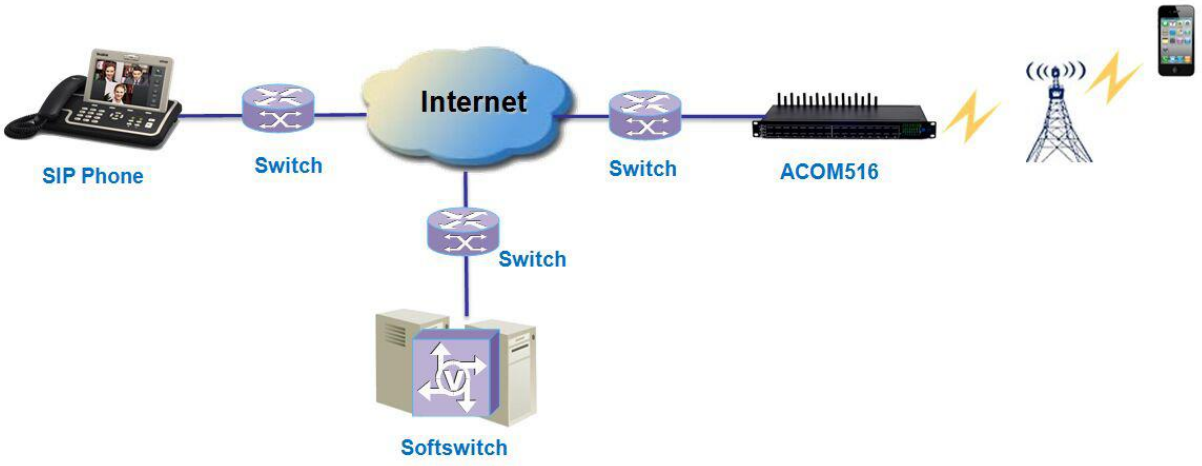


Figure 4.1-1 IP to Mobile

4.2 Accessing from Mobile network to IP network

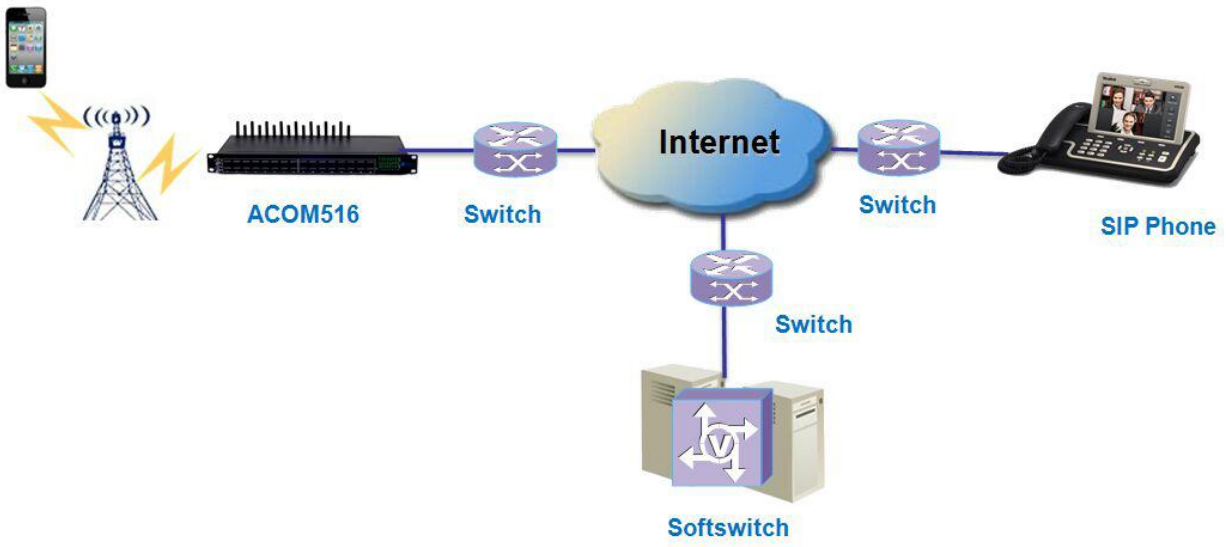


Figure 4.2-2 Mobile to IP

Chapter V FAQ

1. What is the default IP, username and password of the device?

Default IP: 192.168.1.67, both username and password are root.

2. How to reset the device to factory settings?

Push the "RST" button near power button 10s then it will reset to factory settings.

3. SIM card registered failed

1） Check the SIM card in mobile first

2） Check if install the antenna

3） Check if the SIM card insert correctly

4. How to update the new firmware?

System settings>>system update>>import file, just upload the firmware file then submit, the file will upload and save, after that, the device will reboot automatically, 2-3 minutes later, refresh the browser, relogin.

5. How to set call duration time?

Gateway settings>>call duration control

6. Why it doesn’t work when I change the settings?

Please save and reboot the device, then the configuration will work