

CarpeStar SMG Series Wireless Gateway

SMG4004 SMG4008 SMG4016 SMG4032

Wireless Gateway

User Manual

Version 1.9.0

www.carpestar.com



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Revision History

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Chapter 1 Product Introduction

Thank you for choosing CarpeStar SMG Series Wireless Gateway!

The CarpeStar CMG series wireless gateway products (hereinafter referred to as 'wireless gateway '), as a part of the CarpeStar gatew ay product s, works mainly for connect ing the wireless network with the VoIP network. It adopts an updated VoIP processor and the wireless module, uses the push-pull SIM card socket for easy replacement of the SIM card, quite adanced in techno logy. So far, only CMG4008 is available.

See below table for the modules of CMG series wireless gateway:

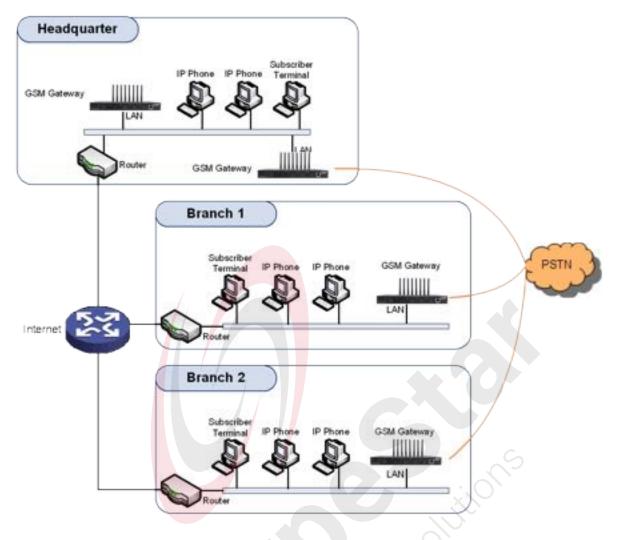
Series	Module & Ports	Supported Frequency Band/Code	
	SMG4032-32G		
GSM Gateway	SMG4016-16G	GSM: 850/900/1800/1900MHz	
	SMG4008-8G	GSM: 650/900/1600/1900MHZ	
	SMG4004-4G		
	SMG4016-16W		
WCDMA Gateway	SMG4008-8W	GSM: 900/1800MHz UMTS: 900/2100MHz	
	SMG4004-4W		
	SMG4032-32WA		
WCDMA-A Gateway	SMG4016-16WA	GSM: 850/900/1800/1900MHz	
WCDINA-A Galeway	SMG4008-8WA	UMTS: 850/1900MHz	
	SMG4004-4WA		
	SMG4016-16WT		
WCDMA-T Gateway	SMG4008-8WT	GSM: 850/900/1800/1900MHz UMTS: 850/2100MHz	
	SMG4004-4WT		
	SMG4016-16WZ	GSM: 850/900/1800/1900MHz	
WCDMA-Z Gateway	SMG4008-8WZ	UMTS: 850/900/1900/2100MHz	

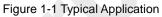


	SMG4004-4WZ	
	SMG4032-32C	
CDMA Gateway	SMG4016-16C	
ODMINGULOWAY	SMG4008-8C	CDMA: CDMA 2000 800MHz
	SMG4004-4C	
	SMG4032-32LE	
	SMG4016-16LE	FDD LTE: B1/B3/B5/B7/B8/B20 TDD LTE: B38/B40/B41
	SMG4008-8LE	WCDMA: B1/B5/B8 GSM: B3/B8
LTE Gateway	SMG4004-4LE	
	SMG4032-32LC	FDD LTE: B1/B3
	SMG4016-16LC	TDD LTE: B38/B39/B40/B41 TDSCDMA: B34/B39
	SMG4008-8LC	WCDMA: B1 CDMA2000 1X/EVDO: BC0 GSM: 900/1800MHz
	SMG4004-4LC	
	Table 1-1 Mc	odel List



1.1 Typical Application





1.2 Feature List

Basic Features	Description
TDM Call	Call initiated from TDM to IP, via routing and number manipulation to obtain the called IP address.
IP Call	Call initiated from IP to TDM, via routing and number manipulation to obtain the call destination.
Number Manipulation	Peels off some digits of a phone number from left/right, or adds a prefix/suffix to a phone number.
Call Forward	Three options available: Unconditional, Busy, No Reply and Unreachable.
CID	Displays the CallerID.
Echo Cancellation	Provides the echo cancellation feature for a call conversation over the wireless port.



TDM/VoIP Routing	Sets a routing path: from IP to TDM or from TDM to IP.
Simultaneous Register to Multiple Servers	Registers the gateway to a master registrar server and a spare registrar server simultaneously.
IMS Network	Registers the gateway to a server under IMS network.
Custom IVR Recording	Provides the interface to customize the IVR Recording.
White/Black List	Allows the setting of the white/black list for WEB access.
Voice Gain Adjust	Supports the gain adjustment for the received or sent voice.
Receive or Send SMS/USSD	Supports the SMS sending and receiving, as well as the USSD request and response.
Auto Select Network	Supports the auto identification and selection of the network operator.
SMS CODEC	Two options available: ASCII and UCS2.
Signaling & Protocol	Description
SIP Signaling	Supported protocol: SIP V1.0/2.0, RFC3261.
Voice	CODEC G.711A, G.711U, G.729A/B, G.723, G.722, AMR, iLBC DTMF Mode RFC2833, SIP INFO, INBAND
Network	Description
Network Protocol	Supported protocol: TCP/UDP, HTTP, ARP/RARP, DNS, NTP, TFTP, TELNET, STUN.
Static IP	IP address modification support.
DHCP	IP address dynamic allocation support.
DNS	Domain Name Service support.
Security	Description
Admin Authentication	Supports admin authentication to guarantee the resource and data security.
System Monitor	Monitors the running status of the system and the server.
Maintain & Upgrade	Description
WEB Configuration	Support of configurations through the WEB user interface.
Language	Chinese, English.
Software Upgrade	Support of user interface, gateway service, kernel and firmware upgrades based on WEB.
Tracking Test	Support of Ping and Tracert tests based on WEB.
SysLog Type	Three options available: ERROR, WARNING, INFO.

1.3 Hardware Description

The wireless gateway supports two LANs and adopts an external 12V power supply. See below



Alarm Indicator

Run Indicator SIM Card Slot

Indicator

for product appearance. LAN1 Indicator Alarm Indicator **Power Indicator Reset Button** LINK COLUMN STATE Run Indicator Console LAN2 Indicator SIM Card Slot **Channel Indicator** Figure 1-2 SMG4008 Front View Power-Network Port Figure 1-3 CMG4008 Rear View



SIM Card Slot

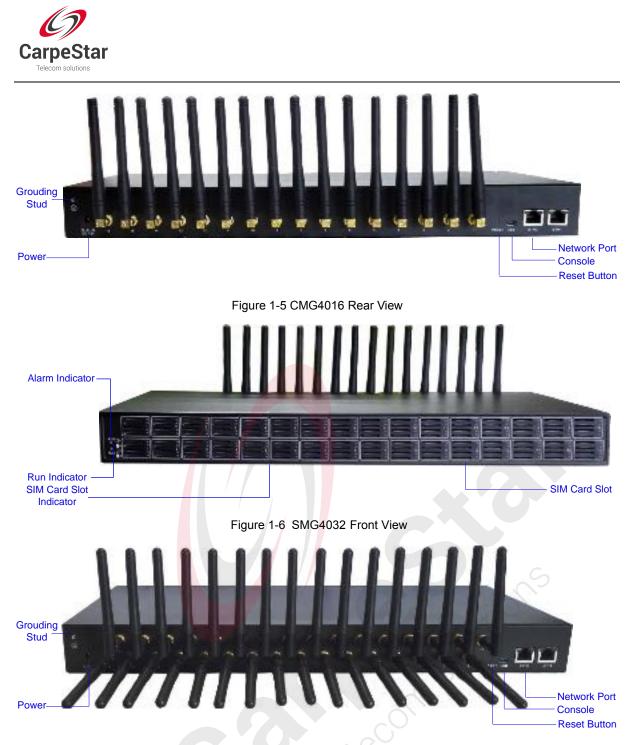


Figure 1-7 SMG4032 Rear View

The table below gives a detailed introduction to the interfaces, buttons and LEDs illustrated above:

Interface	Description
	Amount: 2
LAN	Type: RJ-45
	Bandwidth: 10/100 Mbps
	Self-Adaptive Bandwidth Supported
	Auto MDI/MDIX Supported
	Built-in Link indicator and ACTIVE indicator. For more details, refer to 1.4 Indicator Info
SIM Card Slot	Amount: 4, 8, 16*4, 32*4
	Network Supported: GSM, WCDMA, CDMA, VoLTE



	Amount: 1	
	Type: RS-232	
	Baud Rate: 115200bps	
	Connector: RJ45 to DB-9 Connector (4004, 4008 series), Mini-USB connecting line (4016,	
Console Port	4032 series)	
	Data Bits: 8 bits	
	Stop Bit: 1 bit	
	Parity Unsupported	
Flow Control Unsupported		
External Power	Provide the 12V voltage with positive inside and negative outside, and the current is larger	
Supply Interface	than 3A	
Button	Description	
Reset Button	Restore the gateway to factory settings by pressing this button persistently for 3 seconds	
LED	Description	
Power Indicator	Indicates the power state. It lights up when the gateway starts up with the power cord well	
	connected	
Run Indicator	Indicates the running status. For more details, refer to <u>1.4 Indicator Info</u> .	
Alarm Indicator	Alarms the device malfunction. For more details, refer to <u>1.4 Indicator Info.</u>	
Link Indicator	The green LED on the right of LAN, indicating the network connection status.	
ACT Indicator	The orange LED on the left of LAN, whose flashing tells the data are being transmitted.	
	1. When the port is idle, the LED Lights up in green and keeps on;	
	 When the port is idle, the LED Lights up in green and keeps on; When the port is unavailable, the LED Lights up in red and keeps on; 	
Port Indicator	2. When the port is unavailable, the LED Lights up in red and keeps on;	
Port Indicator	 When the port is unavailable, the LED Lights up in red and keeps on; When the port is in use, the LED flashes in green 	
Port Indicator	 When the port is unavailable, the LED Lights up in red and keeps on; When the port is in use, the LED flashes in green When the port module is disabled, the LED flashes in red 	

For other hardware parameters, refer to Appendix A Technical Specifications.

1.4 Indicator Info

The wireless gateway is equipped with two indicators denoting the system's running status: Run Indicator (green LED) and Alarm Indicator (red LED). The table below explains the states and meanings of the two indicators.

LED	State	Description
	Go out	System is not yet started.
Run Indicator	Light up and flash fast	System is starting.
	Flash slowly	Device is normal.
	Go out	Device is normal.
Alarm Indicator	Light up	Upon startup: Device is normal. In runtime: Device is abnormal.
	Flash	Device is abnormal.

Note:



- The startup process consists of two stages: System Booting and Gateway Service Startup. The system booting costs about 1 minute and once it succeeds, both the run indicator and the alarm indicator light up. Then after the gateway service is successfully started and the device begins to work normally, the run indicator flashes and the alarm indicator goes out.
- During runtime, if the alarm indicator lights up or flashes, it indicates that the device goes abnormal. If you cannot figure out and solve the problem by yourself, please contact our technicians for help. Go to <u>Appendix D Technical/sales Support</u> to find the contact way.





Chapter 2 Quick Guide

This chapter is intended to help you grasp the basic operations of the wireless gateway in the shortest time.

Step 1: Confirm that your packing box contains all the following things.

- Wireless Gateway *1
- External 12V Power Adapter *1
- GSM/WCDMA/CDMA/LTE Rubber Antenna *4/8/16/32
- Standard RJ45 to DB-9 Switcher (4004/4008 series) *1, Mini-USB connecting line (4016/4032 series) *1
- 8mm Antenna Wrench *1
- Rubber Foot Pad *4
- Network Cable *1
- Warranty Card *1
- Installation Manual *1

Step 2: Connect the network cable.

This product provides RJ-45 interfaces.

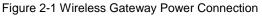
Step 3: Insert the SIM card (standard size) and install the antenna.

The wireless gateway provides a SIM card slot. You are required to insert the SIM card before using it. Take out the rubber antennae from the packing box, install them onto the wireless gateway, screw them up and evenly arrange them.

Step 4: Power on and start the gateway.

To use the wireless gateway, you need an external power supply. Insert it to the power interface of the wireless gateway and power it on with 100~240V AC. See the figure below:







Step 5: Log in the gateway.

Enter the original IP address (192.168.1.101) of the wireless gateway in the browser to go to the WEB interface of the gateway. The original username and password of the gateway are both 'admin'. For detailed instructions about login, refer to 3.1 System Login. We suggest you change the initial username and password via 'System Tools \rightarrow Change Password' on the WEB interface as soon as possible after your first login. For detailed instructions about changing the password, refer to 3.11.6 Change Password. After changing the password, you are required to log in again.

Step 6: Modify IP address of the gateway.

You can modify the IP address of the gateway via 'Advanced Settings \rightarrow Network' on the WEB interface to put it within your company's LAN. Refer to <u>3.5.1 Network</u> for detailed instructions about IP modification. After changing the IP address, you shall log in the gateway again using your new IP address.

Step 7: Make phone calls.

Note: For your easy understanding and manipulation, all examples given in this step do not involve registration, that is, SIP initiates calls in a point-to-point mode.

Situation 1: Call from a station to an IP phone (Tel \rightarrow IP)

Go to 'Advanced Settings → Dialing Rule' on the WEB interface and click the 'Add New' button to add a new dialing rule. Refer to <u>3.5.4 Dialing Rule</u> for detailed instructions. Enter either a particular number or a string of 'x's to represent several random numbers. For example, 'xxx' denotes 3 random numbers. You may use the default value of 'Index' and are required not to leave 'Description' empty.

Example: Set Index to 99, fill in Description with test and configure Dial Rule to 123.

Go to 'Port Settings → Port Group' on the WEB interface and click the 'Add New' button to create a new port group and add the corresponding ports to it. Refer to <u>3.8.2 Port Group</u> for detailed instructions. You may use the default values of other configuration items and are required not to leave 'Description' empty.

Example: Provided the added port is Port1, check the checkbox before **Port1**, set **Index** to **1**, fill in **Description** with **test**, and keep the default values of other configuration items.

3. Go to 'Route Settings → Tel→IP' on the WEB interface and click the 'Add New' button to add a new routing rule. Refer to <u>3.9.3 Tel→IP</u> for detailed instructions. Select the port group created in Step2 as 'Source Port Group' and fill in 'Destination IP' and 'Destination Port' with the IP address and the Port number you plan to call. You may use the default values of other configuration items and are required not to leave 'Description' empty.

Example: Provided the remote IP address intended to call is 192.168.0.111 and the port is 5060. Set **Index** to **63**, **Source Port Group** to **1**, fill in **Description** with **test**, configure **Destination IP** to **192.168.0.111**, **Destination Port** to **5060**, and keep the default values of other configuration items.

4. Use an external phone to call the number of this SIM card, and then follow the cue tone to dial the number set in Step1 to ring the remote IP phone If you have set a particular number in Step 1, only this number you can dial; if you have set a string of 'x's, how many 'x's there are, how many random numbers you can dial.

Example: The external phone dials the number of this SIM card, and then follows the cue tone to dial 123. Then the IP phone with the IP address 192.168.0.111 and the port 5060 will ring.

Situation 2: Call from an IP phone to a station (IP \rightarrow Tel)

 Go to 'Port Settings → Port Group' on the WEB interface and click the 'Add New' button to create a new port group and add the corresponding ports which are connected with stations to it. Refer to <u>3.8.2 Port Group</u> for detailed instructions. You may use the default values of other configuration items and are required not to leave 'Description' empty.



Example: Provided the added port is Port1, check the checkbox before **Port1**, set **Index** to **1**, fill in **Description** with **test**, and keep the default values of other configuration items.

2. Go to 'Route Settings → IP→Tel/IP' on the WEB interface and click the 'Add New' button to add a new routing rule. Refer to <u>3.9.2 IP→Tel/IP</u> for detailed instructions. Fill in 'Source IP' with the IP address which initiates the call and select the port group created in Step1 as 'Destination Port Group'. You may use the default values of other configuration items and required not to leave 'Description' empty.

Example: Provided the IP address of the IP phone which initiates the call is 192.168.0.111. Set **Index** to **63**, **Destination Port Group** to **1**, fill in **Description** with **test**, configure **Source IP** to **192.168.0.111**, and keep the default values of other configuration items.

3. Pick up the IP phone and call the IP address and port of the wireless gateway to make outgoing calls from the wireless channel.

Example: Provided the IP address of the wireless gateway is 192.168.0.101, the port is 5060, use the IP phone to call the IP address 13529101232@192.168.0.101 and then the first idle wireless port in the port group of step 2 will make an outgoing call to 13529101232.

Special Instructions:

- As the device will gradually heat up while being used, please maintain good ventilation to prevent sudden failure, ensuring that the ventilation holes are never jammed.
- During runtime, if the alarm indicator lights up or flashes, it indicates that the device goes abnormal. If you cannot figure out and solve the problem by yourself, please contact our technicians for help. Otherwise it may lead to a drop in performance or unexpected errors.





Chapter 3 WEB Configuration

3.1 System Login

Type the IP address into the browser and enter the login interface. See Figure 3-1.



Figure 3-1 Login Interface

The gateway only serves one user, whose original username and password are both 'admin'. You can change the username and the password via 'System Tools \rightarrow Change Password' on the WEB interface. For detailed instructions, refer to <u>3.11.6 Change Password</u>.

After login, you can see the main interface as below.

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Figure 3-2 Main Interface



3.2 Operation Info

Operation Info includes four parts: *System Info*, *Port State*, *Call Count* and *SIP Message Count*, showing the current running status of the gateway. See Figure 3-3.



Figure 3-3 Operation Info

3.2.1 System Info



Figure 3-4 System Info Interface

See Figure 3-4 for the system info interface. You can click *Refresh* to obtain the latest system information. The table below explains the items shown in Figure 3-4.

Item Description							
MAC Address MAC address of LAN.							
IP Address	The three parameters from left to right are IP address, subnet mask and default gateway of LAN.						
DNS Server	DNS server address of LAN.						



Receive Packets	The amount of receive packets after the gateway's startup, including three options:							
Receive Fackets	All, Error and Drop.							
	The amount of transmit packets after the gateway's startup, including three options:							
Transmit Packets	All, Error and Drop.							
Current Speed	Show the current speed of data receiving and transmitting.							
	Show the work mode of the network, including four modes: 10 Mbps Half Duplex, 10							
Work Mode	Mbps Full Duplex, 100 Mbps Half Duplex, 100 Mbps Full Duplex.							
	Time of the gateway keeping running normally after startup, which will be							
Runtime	automatically updated.							
WEB	Current version of the WEB interface.							
Gateway	Current version of the gateway service.							
Serial Num	Unique serial number of a wireless gateway.							
Authorization Code	The authorization codes vary from different wireless modules.							
FPGA	Current version of FPGA.							
U-boot	Current version of Uboot.							
Kernel	Current version of the system kernel on the gateway.							
Device Type	Type of the wireless gateway.							

3.2	.2 P	ort Stat	e								
	_					Port Sta	te	And the second se			
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Figure 3-5 Channel State Interface

See Figure 3-5 for the channel state interface where shows the channel type, the channel state for each channel on the gateway. The table below explains the items shown in Figure 3-5.

Item	Description
Port	Port number on the device.
Туре	Port type on the device. So far, only GSM, WCDMA, CDMA and LTE types are supported.
State	Displays the port state in real time. You can move the mouse onto the port state icon for detailed state information.



	State	lcon	Description				
	Idle		The port is available.				
	Off-hook	U	The port picks up the call.				
	Wait Answer	6	The port receives the ringback tone and is waiting for the called party to pick up the phone.				
	Ringing		The port is in the ringing state.				
	Talking		The port is in a conversation.				
	Dialing		The port is dialing.				
	Pending		The port is in the pending state.				
	Internal State	6	Internal state of the port.				
	Unusable	6	The port is unavailable.				
Voice Type	Note: For the LTE series gateway, it is Net type and will display the network type of the current call.						
Direction	Displays the dire	ction of	the call on port.				
CallerID	Displays the Call	Displays the CallerID of the call on port.					
CalleelD	Displays the Call	leeID of	the call on port.				
SIM Card	corresponding in card inserted,	on and mea	state of the SIM card. Move the mouse onto the you can find the exact state of the SIM card. means ns no card inserted, means card in use.				
Cell Phone No.	Dis <mark>pla</mark> ys the num	nb <mark>er</mark> of t	he corresponding channel set in Wireless Parameters.				
Connection	Dis <mark>plays</mark> the con	nection	status between the SIM card and the base station.				
Signal	Displays the sign	nal inten	sity of the wireless module.				
SIP Reg Status	Displays the regi	istration	status of the port.				

3.2.3 Call Count

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IN-TH	D	1	-	0 1	0	a	0
M-IP.	D	1	- 1	10	Ų	3	0

Figure 3-6 Call Count 1 Interface



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2	8 · · ·	0	0	0	a i	0	0	a	0
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71	2	0	e	6		0	0	a	0
23	4	0	0	0	5	0	c	0	0
11	80	9	0	Q :	a :	V	0	1	≤ 2
21	6	ñ	¢	6		0	0	a	0
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Figure 3-7 Call Count 2 Interface	(4004/4008 Series)



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Figure 3-8 Call Count 2 Interface (4016/4032 Series)

See Figure 3-6, Figure 3-7 and Figure 3-8 for the call count Interface. The above list shows the detailed information about all the calls counted from the startup of the gateway service to the latest open or refresh of this interface. You can click *Refresh* to obtain the current call count information. The table below explains the items shown in above figures.

Item	Description						
Call Direction	A condition for call count, two options available: $IP \rightarrow Tel$ and $Tel \rightarrow IP$.						
Total Calls	Total number of calls in a specified call direction.						
Successful Calls	Total number of successful calls in conversation.						
	Total number of calls which fail as the called party has been occupied and replies a						
Busy	busy message.						
No. 6	Total number of calls which fail as the called party does not pick up the call in a long						
No Answer	time or the calling party hangs up the call before the called party picks it up.						
Routing Failure	Total number of calls which fail because no routing rules are matched.						
	Total number of calls which fail as the called party number does not conform to the						
Dialing Failure	dialing rule or due to dialing timeout.						
Unknown Failure	Total number of calls which fa <mark>il d</mark> ue to unknown reasons.						
Total Calls	The t <mark>o</mark> tal numbers of the outg <mark>oin</mark> g calls.						
Remote Ringing	The count of the calls which bring the remote terminal into the ringing state.						
Talking Count	The count of the outgoing calls which are answered by remote terminal.						
	The count of the failure calls, i.e. the counts of the calls which cannot be made out						
Failure Count	by the port.						
Continuous Failure	Th <mark>e c</mark> ount of the calls which failed continuously twice or more.						
Call Completion							
Rate	The percentage of successful calls to total calls.						
Accumulated Time	The total time of the calls which are answered by the remote terminal.						
Average Time	The average time length of each call answered by the remote terminal.						

3.2.4 SIP Message Count

Request	1000	AS CR	ENT.	ACK	4.0	842	CANCEL	890-7	01101
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Figure 3-9 SIP Message Count Interface

See Figure 3-9 for the SIP Message Count interface. This is used to record the amount of the normal SIP messages that are sent/received or repeatedly sent/received during the period from the startup of the gateway service to the latest open or refresh of the interface. Click **Refresh** to



refresh the count of SIP messages, or click *Clear* to clear the current count of SIP messages.

3.3 Quick Config

Quick Config	*
Quick Config	

Figure 3-10 Quick Config Interface

See Figure 3-10 for the Quick Config interface. Follow the gateway Quick Configuration wizard and you can easily complete the settings on network, SIP and Port. The gateway can work normally after configuration.

See Figure 3-11 for the Quick Config-Network Settings interface. Refer to <u>3.5.1 Network</u> for detailed settings. After configuration, click **Next** to enter the SIP Settings interface.

Quick Config-I	Network Settings
Network Type:	Static
IP Address (I)	192.168.1.101
Subnet Mask (U)	255.255.255.0
Default Gateway (D)	192 168 1 1
DNS Server (F)	0.0.0.0
Speed and Deplex Mode	Automalic Detection
Ne	et C

Figure 3-11 Quick Config-Network Settings Interface

See Figure 3-12 for the Quick Config-SIP Settings interface. The configuration items on this interface are the same as those on the SIP interface. Refer to <u>3.4.1 SIP</u> for detailed settings. You are required to fill with the information about the registrar if the gateway must be registered. After configuration, click **Back** to go back to the Network Settings interface; click **Next** to enter the Port Settings interface.



Registrar IP Address	
Registrar Port	
Spare Registrar IP Address	
Spare Registrar Port	
Registry Validity Period (s)	600

Figure 3-12 Quick Config-SIP Settings Interface

See Figure 3-13 for the Port Settings interface. The configuration items on this interface are the same as those on the Port interface. Refer to <u>3.8.1 Port</u> for detailed settings. After configuration, click **Back** to go back to the SIP Settings interface; click **Next** to enter the Quick Config-Completion interface.

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Figure 3-13 Port Settings Interface

	Quick Config-Completion
The confi	guration is finished. Please dick 'Finish' to quit the Quick Config!
Note: the IP addres	galeway will restart the system after you dick 'Finish'. Please log in the galeway again using your new as
	Back

Figure 3-14 Quick Config-Completion Interface

Click **Back** to go back to the Port Settings interface; click **Finish** to finish the Quick Config wizard and now the gateway can work normally with basic configuration.



3.4 VoIP Settings

VoIP Settings includes six parts: *SIP*, *SIP Compatibility*, *SIP Station*, *SIP Server*, *NAT Setting* and *Media*. See Figure 3-15. *SIP Settings* is used to configure the general SIP parameters, *SIP Compatibility* is used to set which SIP servers and SIP messages will the gateway be compatible with, *SIP Station* is to set the basic information of the SIP station, *SIP Server* is to set the basic information of the SIP server, *NAT Setting* is used to configure the parameters for NAT, and *Media Settings* is to set the RTP port and the payload type.

SIF SIP Compatibility SIP Station NAT Setting Media Figure 3-15 VoIP Settings	Ref VolP	*	
SIP Compatibility SIP Station SIP Server NAT Setting Media	SIP		
SIP Station SIP Server NAT Setting Media		oility	
NAT Setting Media			
Media	SIP Server		
	NAT Setting		
Figure 3-15 VoIP Settings	Media		
	Figure 3-15 VoIP	Settings	



3.4.1 SIP

SIP Settings	
SIP Port	5060
Send 180	🗹 Enable
Called Number Prefix for 180 Reply (separated by ")	
Register Status	Unregistered
Register Gateway	Yes T
SIP Account	
Password	
Authentication Usemame	j j
Registrar IP Address	
Registrar Port	
Spare Registrar Server	✓Enable
Spare Registrar IP Address	
Spare Registrar Port	
Registry Validity Period (s)	600
Multi-Registrar Server Mode	DEnable
SIP Transport Protocol	UDP
Switch Signal Port if SIP Registration Failed	BEnable .
IMS Network	Enable
Externally Bound Address	
Externally Bound Port	5060
movement means r ou	
Save	2

Figure 3-16 SIP Settings Interface

See Figure 3-16 for the SIP settings interface where you can configure the general SIP parameters. After configuration, click **Save** to save your settings into the gateway or click **Reset** to restore the configurations. If a dialog box pops up after you save your settings asking you to restart the system, do it immediately to apply the changes. Refer to <u>3.11.9 Restart</u> for detailed instructions. The table below explains the items shown in Figure 3-16.

Item	Description			
	Monitoring port of SIP signaling. The value range of it must be greater than 1024			
SIP Port	and less than 65535, with the default value of 5060.			
	Sets whether to send the 180 message to respond to the ringing tone when the SIP			
Send 180	end serves as the called party.			
Called Number	Once the feature "Send 180" is enabled, the gateway will reply the 180 message to			



Drofin for 100 Domhi	these calls which have the called D with the designated profine otherwise, it will			
Prefix for 180 Reply	those calls which have the calleeID with the designated prefix; otherwise, it will			
	reply the 183 message. By default, the value is null, that is, replying the 183			
	message to all calls.			
	Registration status of the gateway. When <i>Register Gateway</i> is set to <i>No</i> , the value			
Register Status	of this item is Unregistered; when Register Gateway is set to Yes, the value of this			
	item is either Failed or Registered.			
	Sets whether to register the gateway as a whole. The default value is No. Only			
Register Gateway	when this configuration is set to Yes can you see the configuration items SIP			
	Account and Password.			
	When the gateway initiates a call to SIP, this item corresponds to the username of			
SIP Account	SIP.			
	Registration password of the gateway. To register the gateway to SIP, both			
Password	configuration items <i>SIP Account</i> and <i>Password</i> should be filled in.			
Authentication				
Username	Authentication username for registration.			
Registrar IP Address	Address of the registry server for the gateway to register.			
Registrar Port	Signaling port of the registry server.			
Spare Registrar	Check the enable checkbox to enable the spare registrar server. By default, it is			
Server	disabled.			
	Address of the spare registry server for the gateway to register. The gateway will			
Spare Registrar IP	enable the spare registrar server if the master registrar server has no reply, or the			
Address	master server is detected with no response in case the item Detection Server			
	Cycle is enabled.			
Spare Registrar Port	Signaling port of the spare registry server.			
Registry Validity	Validity period of the SIP registry. Once the registry is overdue, the gateway should			
Period	be registered again. This configuration item is valid only when <i>Register Gateway</i> is			
renou	set to Yes. Range of value: 10~3600, calculated by s, with the default value of 600.			
Multi-Registrar	Tick the checkbox before to enable the multi-registrar server mode. By default, it is			
Server Mode	disabled.			
SIP Transport	There are two modes UDP and TCP available for running the SIP protocol. The			
Protocol	default value is UDP.			
Switch Signal Port if	$\mathcal{X}^{\mathcal{O}}$			
SIP Registration	If the SIP registration fails, the SIP signaling port N will switch to N+1 for a new			
Failed	registration. It will continue until the registration succeeds. By default, it is disabled.			
	Once this feature is enabled, the gateway will send signaling messages to the			
	corresponding externally bound address and port when it registers to the server. By			
IMS Network				
	default, this feature is <i>disabled</i> . Only when this feature is <i>enabled</i> will these items			
	Externally Bound Address, Externally Bound Port and Authentication			
	Username be shown.			
Externally Bound	Externally bound IP address for registration.			
Address	č			
Externally Devend				
Externally Bound	Externally bound port for registration.			



3.4.2 SIP Compatibility

See Figure 3-17 for the SIP Compatibility interface where you can configure the SIP parameters to determine which SIP servers and SIP messages will the gateway be compatible with. After configuration, click **Save** to save your settings into the gateway or click **Reset** to restore the configurations.

Obtain CalleeID from	"Request" Field 🔹
Set CallerID position	Username of From Field 🔻
Obtain CallerID from	Username of From Field 🔻
Use Contact Address	Enable
Reply To Source Address	Enable
Two Stage Dialing for SIP Incoming Call	Enable
Maximum Walt Answer Time (s)	60
SIP Station Supported	Enable
Set SIP Identifying	Gateway
Call Hangup when RTP Timeout(s)	0
Ignore ACK	Enable
Iptable for SIP Calls	DEnable
SIP Encryption	S Fnable
Encrypton Criterion	VOS1.1
Idenlifier	
Key	
RTP Encryption	C Enable X
Abnormal Call Hangup Detection	Enable
Cyde(s)	0
Server Status Detection	Enable
Cyde(s)	0
Available Port Negotiation	Enable
Cyde(s)	0
Address	
Occasion to Reply 183	Immediately
Occasion to Reply 200 ak	After pickup

Figure 3-17 SIP Compatibility Setting Interface

The table below explains the items shown in Figure 3-17.

Item	Description
Obtain CalleelD	There are two optional ways to obtain the called party number: from "To" Field and



from	from "Request" Field. The default value is "Request" Field.
	There are two options to set the position of the calling party number: "Displayname
Set CallerID Position	of From Field" and "Username of From Field". The default value is "Username of
	From Field".
	There are two optional ways to obtain the calling party number: from "Displayname
Obtain CallerID from	of From Field" and from "Username of From Field". The default value is "Username
	of From Field".
	Sets whether to send the request message according to the content of Contact, with
	the default setting of <i>disabled</i> . As it is disabled, if the Contact field indicates an IP
Use Contact	address within the LAN, the request message will be sent according to the source
Address	address; if the Contact field indicates an IP address belonging to the WAN, the
	request message will be sent according to this IP address.
	Once this feature is enabled, the gateway will reply the source address in the invite
Reply To Source	message. As the item Use Contact Address conflicted with this item, you may now
Address	shield the other one while enabling one of them.
Two Stage Dialing	
for SIP Incoming	Once this feature is enabled, the incoming call from SIP should perform the two
Call	stage dialing operation. By default this feature is disabled.
	Sets the maximum time for the SIP channel to wait for the answer from the called
Maximum Wait	party of the outgoing call it initiates. If the call is not answered within the specified
Answer Time	time period, it will be canceled by the channel automatically. The default value is 60,
	calculated by s.
SIP Station	Once this feature is enabled, a SIP terminal can be registered to the gateway to
Supported	become a SIP station. By default this feature is disabled.
	Sets the SIP identifying content in the SIP call message. The default setting is
Set SIP Identifying	Gateway.
	Sets the maximum time for the SIP channel to wait for the RTP packet. If no RTP
Maximum Wait RTP	packet is received within the specified time period, the channel will enter the
Time	pending state automatically and release the call. The default value is 0 (disabled),
	calculated by s.
	Once this feature is enabled, it is not necessary for the gateway to wait for the ACK
Ignore ACK	message after sending the 2000K message to establish a call. By default it is
	disabled.
	Only some special SIP messages, which can be configured by users, are allowed to
Iptable for SIP Calls	send to the gateway.
	Once this feature is enabled, you can encrypt the SIP signal following selecting an
SIP Encryption	encryption criterion and setting a key. By default it is disabled.
Encryption Criterion	The criterion used to encrypt the SIP signal. At present only VOS1.1 is supported.
Identifier	The identifier field of the VOS encryption, which is used to obtain the key of the SIP
Identifier	encryption.
Key	The key to encrypt the SIP signal.
RTP Encryption	Once this feature is enabled, you can encrypt the RTP package. By default it is
	enee the reacted, yet can energy the ren package. By delate it is



Abnormal Call Hangup Detection	Sets the interval between checks of the remote end's abnormal hangup, with the default value of 0 (feature disabled), calculated by s. It is suggested to set to 10s if this feature is necessary to be used.
Server Status Detection	The interval of sending a heartbeat packet to detect the master registrar server status, with the default value of 0 (feature disabled), calculated by s. It is suggested to set to 15s if this feature is necessary to be used.
Available Port Negotiation	When this feature is enabled, the gateway will send messages to the preset negotiation server (e.g. VOS server) to let it know the number of available ports on the gateway. By default this feature is disabled.
Cycle, Address	Cycle means how soon will the gateway send a message; Address indicates the server address (e.g. VOS server).
Occasion to Reply 183	Sets the occasion to reply the 183 message. Two options including: Immediately and After ringing, with the default value of <i>Immediately</i> .
Occasion to Reply 200 Ok	Sets the occasion to reply 200 OK. Two options including: After pickup and After ringing, with the default value of <i>After pickup</i> .

3.4.3 SIP Station

A SIP terminal can be registered to the gateway to become a SIP station. Tick the option of '*SIP Station Supported*' on <u>3.4.2 SIP Compatibility</u> interface, and you will see the item SIP Station on the VoIP Settings menu. Click '*SIP Station*' to go into the SIP Station interface. By default, there is no available SIP station. See Figure 3-18 below.

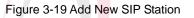
Operation info	8	
🕄 Quick Config	8	
VolP	8	No available SIP Station
3F		Add New
Sp Concentry		and the second
SP Saian		
NAT Setting		
Vecla		

Figure 3-18 SIP Station Setting Interface

Click *Add New* to add SIP stations manually. See Figure 3-19. You can configure basic SIP station information on this interface. The bound port to a SIP station must be a wireless port and unique. The username must be the same as that used to register the SIP terminal to the gateway.



Number:	0	
Usemame		
Password:		
Bound Port:	1	•
Descripti <mark>o</mark> n.	default	
Batch Setting:	Enable	



The table below explains the items shown above:

ltem	Description
Number	The logical number for a SIP station to register to the gateway.
Username	The username used to register a SIP station to the gateway.
Password	The password used to register a SIP station to the gateway.
Bound Port	The wireless port which is bound to the SIP station.
Description	It is user-defined, with the default value of <i>default</i> .
Batch Setting	Used to set multiple SIP stations at the same time.

After configuration, click *Save* to save the above settings into the gateway or click *Close* to cancel the settings. See Figure 3-20 for the applied SIP station information.

	- 11 - Table -	+51	5.5×714	where we have	STP Slaten				and the second second
Cred	Number	Lasiante	- Achieve	Bound Part	Repble Cara	Register Duration (e)	Volce Channel State	Decapitor	Undity
10	- 3	120			UFCOSIZIO	0		debut	3
Check All	Anted			IN E START	10				ANTHER

Figure 3-20 SIP Station Interface

Click *Modify* in the above figure to modify the configuration of the SIP station. See Figure 3-21. The configuration items on this interface are the same as those on the *Add New SIP Station* interface.



Number:	0
Username:	120
Password:	•••
Bound Port:	1
Description.	default
Batch Setting:	Enable

Figure 3-21 SIP Station Modification Interface

To delete a SIP station, check the checkbox before the corresponding index in Figure 3-20 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all SIP stations at a time, click the **Clear All** button in Figure 3-20.

3.4.4 SIP Server

The gateway supports the multi-registrar server feature. Enable the feature of '*Multi-Registrar* **Server Mode**' on the <u>SIP</u> interface (see <u>3.4.1 SIP</u>) and you will see the item SIP Server under the VoIP Settings menu. Click '*SIP Server*' to go into the SIP Server interface. By default, there is no available SIP server. See Figure 3-22 below.



Figure 3-22 SIP Server Interface

Click *Add New* to add SIP servers manually. See Figure 3-23. You can configure basic SIP server information on this interface.



Index	1
Description	default
Registrar IP Address	
Registrar Port	5060
Registry Validity Period (s)	600
IMS Network	Enable
Externally Bound Address	
Externally Bound Port	5060

Figure 3-23 Add New SIP Server

All the items except Index and Description are the same as those on the SIP interface (3.4.1 SIP).

Item	Description
Index	The index of each SIP server. The gateway supports up to 8 SIP servers.
Description	More information about each SIP server, with the default value of <i>default</i> .

After configuration, click **Save** to save the above settings into the gateway or click **Cancel** to cancel the settings. See Figure 3-24 for the SIP server management interface.

						SP Scole Metalgaron	larger and some			
Check	1184	Decapitar	P.Addwaa	Can	IFS Nebeak	Eriamally Dound Address	Edenaly Courte Port	Registry Variatio Period	Pat Pat Group	Updity
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checca		Annubia	-IAME -	SACCE IN	-					ANDAS
an Tob	5.20 Be	raffuge bei i	Tol Produce Red	-10 50	a Page 1 w	Tages Tobl		20		

Figure 3-24 SIP Server Management

Click *Modify* in the above figure to modify the configuration of the SIP server. See Figure 3-25.

The configuration items on this interface are the same as those on the *Add New SIP Server* interface.



Index	1
Description	default
Registrar IP Address	201.123.115.233
Registrar Port	5060
Registry Validity Period (s)	500
IMS Network	Enable

Figure 3-25 SIP Server Modification Interface

To delete a SIP server, check the checkbox before the corresponding index in Figure 3-24 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all SIP servers at a time, click the **Clear All** button in Figure 3-24.

3.4.5 NAT Setting

See Figure 3-26 for the NAT setting interface where you can configure the parameters for NAT. After configuration, click **Save** to save your settings into the gateway or click **Reset** to restore the configurations.

	Enable
STUN Server	ET En able
NAT Type	Unknown
STUN Server Address	127.3.0.1
Mapping Address	
RTP Self-adaption	
Rport	@Enable
Auto Detect NAT IP	Enable
Note:	
Auto Detect NAT IP:This feature only w router.	orks cooperatively with the port mapping setting o

Figure 3-26 NAT Setting Interface

The table below explains the items shown in Figure 3-26.



ltem	Description
STUN Server	Sets whether to enable the STUN server for NAT traversal. By default the STUN
STON Server	server is disabled.
	Detected NAT (Network Address Translation) type. The gateway will return the NAT
	type automatically in case STUN Server is enabled. It includes 9 types: unknown;
NAT Type	no NAT; ConeNat; RestrictedNat; PortRestrictedNat; Symmetric NAT; Symmetric
	NAT with firewall; can't detect over (fail to send detect message) and fail to detect
	(No reply from the stun server).
STUN Server	Address of the server for STUN traversal.
Address	
	It should be filled in when there exists NAT or other mapping relationships which
	leads to the failure of direct communication between the gateway and the
	destination address, so as to ask the remote end to send signaling messages or
Mapping Address	voice data to it during the signaling or voice communication between the gateway
	and the destination.
	Note: Once this item is filled out, it will be used as the first choice even if Rport and
	NAT IP are enabled.
	When this feature is enabled, the RTP reception address or port carried by the
RTP Self-adaption	signaling message from the remote end, if not consistent with the actual state, will
Kir Gen-adaption	be updated to the actual RTP reception address or port. By default, this feature is
	dis <mark>ab</mark> led.
Rport	When this feature is enabled, a corresponding Rport field will be added to the Via
проп	me <mark>ssa</mark> ge of SIP. The default value is <i>enabled</i> .
	When this feature is enabled, the gateway will parse the corresponding address
Auto Detect NAT IP	and port in the message returned by Rport so as to use them for the following
	communication. By default, this feature is <i>disabled</i> .
	Note: This feature gets valid only when Rport is enabled.



3.4.6 Media

		Media Para	meters	
	DTMF Transmit M	ode	RFC2833	×
	RFC2833 Payload	i.	101	
,	RTP Port Range		50000,5075	7
;	Silence Suppress	ion	Disable	*
	JitterBuffer		20	
,	Voice Gain Output	from IP (dB)	0	1
	AGC		Enable	
	larget Energy Thr	eshold (dB)	0	
1	Maximum Gain Th	reshold (dB)	48	
1	Maximum Attenua	tion Threshold (dB)	0	
	Minimum Input En	iergy (dB)	-60	
CODEC Prior Check I I I I I I I I I I I I I I I I I I I	ity Prionty 1 2 3 4 5 6 7	CODEC G711A V G711U V G729 V G723 V G722 V AMR V	Packing Time 20 • 20 • 20 • 20 • 20 • 20 • 20 • 20 •	Bit Rale (kbs) 64 64 64 63 63 64 4.75 4.75
	,	ILBC V	30 V Reset	13.3 💌

Figure 3-27 Media Settings Interface

See Figure 3-27 for the media settings interface where you can configure the RTP port and payload type depending on your requirements. After configuration, click **Save** to save your settings into the gateway or click **Reset** to restore the configurations. If a dialog box pops up after you save your settings asking you to restart the system, do it immediately to apply the changes. Refer to <u>3.11.9 Restart</u> for detailed instructions. The table below explains the items shown in Figure 3-27.

Item	Description
DTMF Transmit	Sets the transmit mode for the IP channel to send DTMF signals. The optional
Mode	values are RFC2833, In-band and Signaling, with the default value of RFC2833.
RFC2833 Payload	Payload of the RFC2833 formatted DTMF signals on the IP channel. Range of
	value: 90~127, with the default value of 101.



	Supported RTP port range for the IP end to establish a call conversation, with the
RTP Port Range	lower limit of 10000 and the upper limit of 60000 and the difference between larger
	than 480. The default value is 50000-50767.
	Sets whether to send comfort noise packets to replace RTP packets or never to
Silence	send RTP packets to reduce the bandwidth usage when there is no voice signal
Suppression	throughout an IP conversation. The optional values are Enable and Disable, with
	the default value of <i>Disable</i> .
	Acceptable jitter for data packets transmission over IP, which indicates the buffering
	capacity. A larger JitterBuffer means a higher jitter processing capability but as well
JitterBuffer	as an increased voice delay, while a smaller JitterBuffer means a lower jitter
	processing capability but as well as a decreased voice delay. Range of value:
	20~200, calculated by ms, with the default value of 20.
Voice Gain Output	Adjusts the gain of the voice output from IP. Range of value: -24~12, calculated by
from IP	dB, with the default value of 0.
	If the AGC (Automatic Gain Control) feature is enabled, the gateway will
AGC	automatically adjust the input signal amplitude, increasing that of small signals and
	decreasing that of large signals.
Target Energy	Set the target energy of the AGC, range of value: -50~0, calculated by dB, with the
Threshold	default value of 0.
Maximum Gain	Set the maximum gain thresh <mark>o</mark> ld that will be applied to the signal. Range of value:
Threshold	0~ <mark>48</mark> , calculated by dB, with the default value of 48.
Maximum	Set the maximum attenuation that will be applied to the signal. Dange of values
Attenuation	Set the maximum attenuation that will be applied to the signal. Range of value:
Threshold	-42~0, calculated by dB, with the default value of 0.
Minimum Innut	Set the minimum threshold for the energy processed by AGC. Signals below this
Minimum Input –	threshold will not be processed by AGC. Range of value: -60~ -25, calculated by
Energy	dB, with the default value of -60.
	Lelecolline



	Supported CO	DECs and their correspondin	g priority for the IP end to establish a	
	call conversation. The table below explains the sub-items:			
	Sub-item	Description		
	Priority	Priority for choosing the or smaller the value is, the hi	CODEC in an SIP conversation. The gher the priority will be.	
	CODEC	Three optional CODEC: G729A/B, G723, G722, AM	s are supported: <i>G711A</i> , <i>G711U</i> , //R and <i>iLBC</i> .	
	Packing Time	Time interval for packing a	n RTP packet, calculated by ms.	
	Bit Rate	The number of thousand bits (excluding the packet header) that are conveyed per second.		
	By default, all of the seven CODECs are supported and ordered G711A, G711U,			
CODEC Priority	G729A/B, G72	G729A/B, G723, G722, AMR and iLBC by priority from high to low.		
-	The packing tin	ne and bit rate supported by c	lifferent CODECs are listed in the table	
	below. Those values in bold face are the default values.			
	COEDC	Packing Time (ms)	Bit Rate (kbps)	
	G711A	10 / 20 / 30 / 40 / 60	64	
	G711U	10 / 20 / 30 <mark>/ 4</mark> 0 / 60	64	
	G7 <mark>2</mark> 9A/B	10 / 20 / 30 <mark>/ 4</mark> 0 / 60	8	
	G7 <mark>2</mark> 3	30 / 60	5.3/6.3	
	G <mark>72</mark> 2	10 / 20 / 30 / 40	64	
	AMR	20 / 40 / 60	4.75	
		20 / 40	15.2	
	iLBC	30 / 60	13.3	

3.5 Advanced Settings

Advanced Settings includes eleven parts: *Network, System Param, Service Config, Dialing Rule, Function Key, Cue Tone, Color Ring, QoS, Tone Generator, CDR Query* and *VPN.* See Figure 3-28. *Network* is used to configure the general properties of the network port; *System Param* is used to configure some properties of the system; *Service Config* is used to configure some properties which corresponds to the service; *Dialing Rule* is used to set the judging conditions for dialing; *Function Key* is used to set a cluster of combination keys for you to query or set the network port; *Cue Tone* is used to set the gateway language for playing voice and the voice file used for the two-stage dialing; *Color Ring* is used to upload the color ring file which can be set as a ringback tone for an incoming call from IP to wireless port; *QoS* uses the differentiated services some properties of tones sent from gateway; *CDR Query* is used to inquire the detailed call record; *VPN* makes use of the tunnel technology to transport the data, and the methods of user authentication and data encryption to prevent the data being read and distorted when they are transported on the public network.





Figure 3-28 Advanced Settings

3.5.1 Network

Netword	s Settings
Network Type:	Stalic
IP Address ()	192.168.1.101
Subnet Mask (U)	255.255.255.0
Default Gateway (D)	192.168.1.1
DNS Server (P)	0.0.0.0
Note: 1. Please log in again using your new IP addre 2. If you select 'DHCP', your IP address will be a and press the corresponding function key to	allocated randomly Please dial the ports number
Save	Reset

Figure 3-29 Network Settings Interface

See Figure 3-29 for the network settings interface. A gateway has two LANs which can be configured with the same network type, IP address, subnet mask, default gateway and DNS server to realize the feature of hot backup. There are three options in type: Static, DHCP and PPPoE.

After configuration, click **Save** to save the above settings into the gateway or click **Reset** to restore the configurations. After changing the IP address, you shall log in the gateway again using your new IP address.



3.5.2 System Param

WEB Manageme	ent	
	WEB Port	80
	Access Setting	Allow All IPs 🔹
SYSLOG Param	eters	
	SYSLOG Enabled	@Yes ONo
	Server Address	201.123.115.138
	SYSLOG Level	INFO .
	AT Debug Enabled	®Yes ⊖No
	Echo Mode Enabled	®Yes ONo
	Port	all ports 🔻
CDR Parameter	9	
	CDR Enabled	⊛Yes ⊖Nn
	Server Address	127.0.0.1
	Server Port	3
	Save CDR	@Yes ONn
	Amount of Saved CDR	5000
API Parameters		
	API Enabled	®Yes ONo
	Remote IP Address Allowed to	
	Invoke API	
		(Separated by "," " denotes all IP addresses)
	Username for API Call	ApiUserAdmin
	Password for API Call	
Time Parameter	9	
	Time Calibration	INTP O Synchronized with Operator O Close
	NTP Server Address	127.0 0.1
	Synchronizing Gyde	3600
	System Time	Modify 2017-10-11 17.28.34
	Time Zone	GMT-8:00 (Beijing, Singapore, Taipei, Kuala Lun +
Restart Paramet	lars	
	Dally Restart	WYes No
	Restart Time	0 • t 0 • m
	Clear Call Count 2 After Restart	OYes BNo

Figure 3-30 System Parameters Setting Interface

See Figure 3-30 for the System Parameters Setting interface. The table below explains the items shown in the above figure.

ltem	Description
WEB Port	The port which is used to access the gateway via WEB. The default value is 80.



Access Setting	Sets the IP addresses which can access the gateway via WEB. By default, all IPs are allowed. You can set an IP whitelist to allow all IPs within it to access the gateway freely. Also you can set an IP blacklist to forbid all IPs within it to access the gateway.		
SYSLOG Enabled	Sets whether to enable SYSLOG. It is required to fill in SYSLOG Server Address and SYSLOG Level in case SYSLOG is enabled. By default, SYSLOG is disabled.		
Server Address	Sets the SYSLOG server address for log reception.		
SYSLOG Level	Sets the SYSLOG level. There are three options: <i>ERROR</i> , <i>WARNING</i> , <i>INFO</i> and <i>DEBUG</i> . The default value is <i>INFO</i> .		
AT Debug Enabled	Sets whether to enable the AT debug feature, with the default value of <i>No</i> . Once this feature is enabled, the related information about AT will be output to the SYSLOG.		
Echo Mode Enabled	Sets whether to enable the echo mode, with the default value of <i>No</i> . Once this feature is enabled, both the sent and received information will be displayed.		
Port	Select the port to execute the AT debug. It is allowed to choose a port or all ports.		
CDR Enabled	Sets whether to enable the feature of CDR. It is required to fill in <i>Server Address</i> and <i>Server Port</i> in case CDR is enabled. By default, <i>CDR</i> is disabled.		
Server Address	Sets the server address to rec <mark>eiv</mark> e CDR.		
Server Port	Sets the server port to receive CDR.		
Save CDR	Sets whether to save CDR, with the default value of <i>NO</i> .		
Amount of Saved	Set <mark>s</mark> the amount of saved CD <mark>R</mark> . Range of value: 200~10000, with the default value		
CDR	of 5 <mark>00</mark> 0.		
API Enabled	When this feature is enabled, the remote terminal can invoke the API interface. The default value is <i>No</i> .		
Remote IP Address	Set <mark>s the remote IP</mark> addresses which are allowed to invoke the API interface. Up to 5		
allowed to Invoke	addresses can be configured and each of them are separated by ",". "*" denotes all		
API	IP addresses are allowed.		
Username for API	5		
Call, Password for	The authorized username and password for calling the API interface.		
API Call			
Time Calibration	Sets the calibration mode for the time. Three options available: NTP, Synchronized with Operator and Close, with the default value of <i>Synchronized with Operator</i> .		
NTP Server Address	Sets the Server address for NTP time synchronization.		
Synchronizing Cycle	Sets the cycle for NTP time synchronization. The default value is 3600.		
Sustam Tima	The system time. Check the checkbox before <i>Modify</i> and change the time in the edit		
System Time	box if <i>Time Calibration</i> is set to Close.		
Time Zone	The time zone of the gateway.		
Daily Restart	Sets whether to restart the gateway regularly every day at the preset Restart Time . By default, this feature is disabled.		
Restart Time	Sets the time to restart the gateway regularly.		
Clear Call Count 2	When this feature is enabled, the gateway will clear the data of Call Count 2 upon its		
after Restart	restart. By default this feature is disabled.		



3.5.3 Service Config

Servite Terrer and		
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Figure 3-31 Service Config Interface

See Figure 3-31 for the Service Config interface. The table below explains the items shown in the above figure.

Item	Description
Enable Two Stage Dialing Mode for PSTN Outgoing Calls	Sets whether to enable the two stage dialing mode for PSTN outgoing calls. Under this mode, for an outgoing call from a wireless port, the IP side will hear the dial tone. If you fail to input the number during the schedule time, the wireless port will hang up the call automatically; otherwise, it will make an outgoing call to the number. The default value is <i>disabled</i> .
Maximum Wait Time for PSTN Outgoing Calls	Sets the maximum wait time waiting for the called party pickup during an outgoing call. Range of value: 5~120, calculated by s, with the default value of 60.
Dial Interval	Sets the largest interval between two digits of a dialing number. Range of value: 1~10, calculated by s, with the default value of 6. In case your dialing rules do not include ".", the call will fail if there is no digit dialed or no dialing rule matched during this interval; in case your dialing rules include ".", the gateway will wait until this interval ends and match to the dialing rule "." if there is no digit dialed or no other dialing rule matched during this interval.
Waiting for Idle Time	Set the waiting time of the channel before it goes into the idle state after the call finishes. The default value is 1500ms, and the value range is 0~60000.



Busy Tone	Sets the busy tone detection mode, three options available: Common (hangup on
Detection Mode	busy), Delayed (Delayed hangup on busy), Undetected (no busy detection). By
	default it is set to Common.
Auto Hangup upon	This feature is only supported by the GSM module. Note that when it is enabled, you
Ringback	are required to set 'SIP compatibility-Occasion to Reply 183' after ringing.
Communication	Automatically routes a call to the wireless port in case of network failure or call
without Network	timeout. The default value is <i>disabled.</i>
	Sets whether to enable the feature of transferring the call to a designated IP
IP→Tel Call Failure,	automatically when a call from IP to Tel fails, with the default value of <i>disable</i> . If this
Auto Transfer	feature is enabled, you are required to enter Target Number (Registered) or Target
	IP and Target Port (Unregistered).
	Sets whether to enable the feature of automatic SMS reply when a call from Tel to IP
	fails, with the default value of <i>disable</i> . The following four options will be available if
Tel \rightarrow IP Call Failure,	this feature is enabled. They are Unconnected, No Answer, Rejected, Fail to
Auto SMS Reply	Connect. You can select any one of them and define the corresponding content to
	reply.
Auto Disable	Once this feature is enabled, the gateway will automatically close this SIM card
Module if Fail to	module to achieve the feature "Communication without Network" when it failed to
Register to SIP	regi <mark>ste</mark> r to the SIP server. Th <mark>e</mark> default value is <i>disabled</i> . It works with the feature
Server	FW <mark>D</mark> on Unreachable.
	When this feature is enabled, the times of call failure reaching the set value will
	trigger the operation of card locking. Call Failure Mode includes: Busy, No Answer,
Auto Lock SIM Card	Dial Failure. Locking Time means the time of the port being locked: -1 means the
after Consecutive	card is always being locked; 0 means the card is unlocked; other values mean the
Call Failure	exac <mark>t time of the</mark> card being locked. When the feature 'Unlock by Plugging SIM Card
	in and out' is enabled, the port will be unlocked after you plug in and out the SIM
	card.
	When the outgoing calls from a port has failed for several times consecutively: for
Auto Reconnect to	the CMG4004/CMG4008 series, the gateway will automatically reconnect the SIM
BS after	card on this port to the base station; for the CMG4016/CMG4032 series, the
Consecutive Call	gateway will automatically switch to other card slots available for the port and
Failure	reconnect, the SIM card to the base station if there is no available card slot.
	Once this feature is enabled, the number of the SIM card will be recorded when the
Record SIM Number	gateway restarts and this SIM card will recover to work after restarting. The default
at Gateway Restart	value is <i>enabled</i> .
	Sets the work mode for the echo canceller. There are two options: Near-end
Work Mode	cancellation and Both near-end and far-end cancellation, with the default value of
	Near-end cancellation.
Non-linear	Sets whether to enable the mode of non-linear processing. By default, this feature is
Processing	enabled.
Fixed Window Size	Sets the size of the window for the fixed cancellation.
Moving Window	
Size	Sets the size of the window for the moving cancellation.
L	·



3.5.4 Dialing Rule

Considering efficiency, it is not acceptable that the gateway reports to the PBX or relevant devices every time it receives a number. Instead, we hope that the gateway can automatically judge the received number to see if it meets the set rule, if it is complete and if it is qualified to make outgoing calls. Therefore, a whole dialing plan, which consists of multiple dialing rules specifying the auto judging conditions, is required. Each dialing rule has a priority, which is used to restrict the sequence and avoid conflict.

Check	tido	Could g Raik	Description	Host
EI	41	42200000	05221	2
ET.	82	41 pt époree	0172-01	1
0	41	4[4-90xxma	ds/n=1	2
		333ommo	dehult	2
	11	£6]1-6]mass	debut	2
	33	U 1-V, warm	deval	3
	47	[2-3-5-7]000000.	ddauf	14
E	55	T 3 5 ³ 4 00000000	09214	1
EI.	. 85	12200	dwbut	
П	80	Han	- dvhc1	2
	24	425ar.	de's.1	2
	22	11165	dóut	
	22	11(2.2/2)	Itail	1.10
	24	120	diffect	1
E	95	LIS CONTRACT	077-1	2
FI	11	C.Premarroor	dytal.	1
	87.	A+ Anoverna	. deb . I	2
	81	0) 3-5 7-0 onninox	145=1	52
	22		den.1	3

Figure 3-32 Dialing Rule Configuration Interface (Standard)

See Figure 3-32 for the Dialing Rule Configuration interface under the standard mode. The list in the above figure shows the dialing rules with their priorities and description, which can be added by the *Add New* button on the bottom right corner. See Figure 3-33 for the dialing rule adding interface.

ndex:	98 🗸
Description [
Dialing Rule: [
Save	Close

Figure 3-33 Add New Dialing Rule



The table below explains the items shown in Figure 3-33.

ltem		De	escription			
Index	The unique index of each dialing rule, which denotes its priority. A dialing rule with a					
Index	smaller index v	alue has a higher priori	ty and will be checked earlier while matching.			
Description	Remarks for th	e dialing rule. It can be	any information, but not be left empty.			
	Up to 100 dialir	Up to 100 dialing rules can be configured in the gateway, and the maximum length o				
	each dialing ru	le is 127 characters. Se	ee below for the meaning of each character in			
	the dialing rule	. The gateway will do in	stant matching for your dialing number based			
	on the dialing	rule and regard your di	aling as finished upon receiving '#' or dialing			
	timeout.					
	Character		Description			
	"0"~"9"	Digits 0 \sim 9.				
	"A"~"D"	Letters A~D.				
	"x"	A random number. A	A string of 'x's represents several random			
	×	numbers. For examp	le, 'xxx' denotes 3 random numbers.			
	""	':' indicates a rando after it.	m amount (including zero) of characters			
		'[]' is used to define t	he range for a number. Values within it only			
	"[]"	can be digits '0~9', punctuations '-' and ','. For example,				
		[1-3,6,8] indicates any one of the numbers 1, 2, 3, 6, 8.				
		"," '-' is used only in '[]' between two numbers to indicates any				
		number between these two numbers.				
	""	"" '; is used to separate numbers or number ranges, representing				
Dialing Rule	alternatives.					
	"*" Only represents symbol "*".					
	"#" Only set it at the beginning of the string, representing symbol "#".					
	There are 19	dialing rules already co	onfigured on the gateway for easy use. See			
	below for detail	led information.				
	Priority	Dialing Rule	Description			
	99	•	Any number in any length.			
	98	01[3-5,7-8]xxxxxxxx.	Any 12-digit number starting with 013, 014, 015, 017 or 018			
	97	010xxxxxxx	Any 11-digit number starting with 010			
	96	02xxxxxxxx	Any 11-digit number starting with 02			
	95	0[3-9]xxxxxxxxx	Any 12-digit number starting with 03, 04, 05, 06, 07, 08 or 09			
	94	120	Number 120。			
	93	11[0,2-9]	Number 110, 112, 113, 114, 115, 116, 117, 118 or 119			
	92	111xx	Any 5-digit number starting with 111			
	91	123xx	Any 5-digit number starting with 123			



90	95xxx	Any 5-digit number starting with 95
89	100xx	Any 5-digit number starting with 100
88	1[3-5,7-8]xxxxxxxx	Any 11-digit number starting with 13, 14, 15, 17 or 18
87	[2-3,5-7]xxxxxxx	Any 8-digit number starting with 2, 3, 5, 6 or 7
86	8[1-9]xxxxx	Any 8-digit number starting with 81, 82, 83, 84, 85, 86, 87, 88 or 89
85	80[1-9]xxxxx	Any 8-digit number starting with 801, 802, 803, 804, 805, 806, 807, 808 or 809
84	800xxxxxx	Any 10-digit number starting with 800
83	4[1-9]xxxxx	Any 8-digit number starting with 41, 42, 43, 44, 45, 46, 47, 48 or 49.
82	40[1-9]xxxxx	Any 8-digit number starting with 401, 402, 403, 404, 405, 406, 407, 408 or 409
81	400xxxxxx	Any 10-digit number starting with 400

After configuration, click **Save** to save the above settings into the gateway or click **Close** to cancel the settings.

Click *Modify* in Figure 3-32 to modify the dialing rules. See Figure 3-34 for the dialing rule modification interface. The configuration items on this interface are the same as those on the *Add New Dialing Rule* interface.

Diali	ing Rule	
Index:	99 💉	y'x
Description:	test	
Dialing Rule:	XXX	
Save	Close	

Figure 3-34 Modify Dialing Rule

To delete a dialing rule, check the checkbox before the corresponding index in Figure 3-32 and click the '*Delete*' button. *Check All* means to select all available items on the current page; *Uncheck All* means to cancel all selections on the current page; *Inverse* means to uncheck the selected items and check the unselected. To clear all dialing rules at a time, click the *Clear All* button in Figure 3-32.

See Figure 3-35 for the Dialing Rule Configuration interface under the Character mode. You can edit the dialing rule list to add a new one or modify an old one. The exact meaning of each rule element is described on the page.



DOUBLE	
olo, The Dianog Note on Namo and Tarka to Ending Hara and Evapolities he priority description from the locations and contribution the second of the priory Remote Libration any obling an English second he configuration whe year modification.	
400aaaaakk delaut	
10[1 9]passa defeuit	1
4[1 9]seessa default	
BOGAMAREE default	
30[1-9[boxex default	
8 1-8 peepeer default	
(2-3,5-7) www.eee distant	
1[3.5,7.8]eccessos default	
100aa defaal	
Baaa defeuit	
123xx defeult	
Fillio detault	
(1)0.2-9) default	
120 default	
fluation www.cococi.6.K)	
ec"anel	

Figure 3-35 Dialing Rule Configuration Interface (Character)

3.5.5 Function Key

See Figure 3-36 for the function key configuration interface where you can set a cluster of combination keys. An external phone can dial the wireless port and press the combination keys after hearing the speech prompt "Please dial the extension number" to query or set the network port.

Quary LAN	1	1411	Default 🗸
Set LAN	3	*61*	Delault. •

Figure 3-36 Function Key Configuration Interface

Click "Enable" to enable the corresponding function key. The gateway will use the default function keys when the mode is set to default; and it will allow you to set new function keys when the mode is set to user-defined. Click **Save** to save your settings into the gateway.



3.5.6 Cue Tone

beo
Recorder Lipioad
Save

Figure 3-37 Cue Tone Interface

See Figure 3-37 for the Cue Tone interface. The table below explains the items shown in the above figure.

Item	Description		
	Set <mark>s</mark> the language for the gateway to play voice, including two options Chinese and		
Language	English. The default setting is <i>English</i> .		
Upload a file of cue			
tone	Uploads a user-defined cue tone file to the gateway.		
Two Stage Dialing	Sets the cue tone of two stage dialing for the PSTN outgoing calls, including two		
for PSTN Outgoing	option <mark>s: Dial T</mark> one and File Playback. You are required to upload a file for playing if		
Calls Tips	File Playback is selected.		

Click Save to save the above settings into the gateway.

3.5.7 Color Ring

Deration info	*		10	
📕 Quick Config	*			
NoiP	8			No available color r
Advanced	8			Upload
Network				
System Peram				
Service Coolig				
Dialing Rule				
Function Key				
Due Tone				
Color Ring				

Figure 3-38 Color Ring Interface

By default, there is no available color ring on the gateway. See Figure 3-38. Click **Upload** to upload a new color ring manually. Follow Figure 3-39 to upload the required color ring file to the gateway.



Index	1
Description	default
Color Ring	Browse
Note: The file should be	a way file with 8000Hz sampling rate, 16-bit mono, A-law formatted, and less th
200KB in size.	

Figure 3-39 Color Ring Upload Interface

The table below explains the items shown above:

Item	Description	
Index	The unique index of each color ring to be uploaded.	
Description	It is user-defined, with the default value of <i>default</i> .	
Color Ring	The file of the color ring to be uploaded.	

After configuration, click **Upload** to upload the color ring file to the gateway or click **Return** to cancel the upload. See Figure 3-40 for the Color Ring Management interface after the upload.

		Color R	ng Vanage		
Cleak	THE PARTY	CON NEC	Pot	POLICIOUS	40.07
11		tarbul.		-	X .
100 C				· · · · · · · · · · · · · · · · · · ·	
Chees/II = Cheesh /					Unter
lars foal 20 Benoif age	101 First Presizer End Last.	Gold Page 1 - 1 Cages Tobl			

Figure 3-40 Color Ring Management Interface

Click *Modify* in Figure 3-40 to modify the configuration of the color ring. See below for the color ring modification interface. The configuration items on this interface are the same as those on the *Color Ring Upload* interface.

Description	default	
Upload		
	<u> </u>	

Figure 3-41 Color Ring Modification Interface

To delete a color ring, check the checkbox before the corresponding index in Figure 3-40 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck**



All means to cancel all selections on the current page; *Inverse* means to uncheck the selected items and check the unselected. To clear all color rings at a time, click the *Clear All* button in Figure 3-40.

3.5.8 QoS

Gos	
QoS	🗷 Enable
Media Premium QoS	45
Control Premium QoS	25
Save	Report

Figure 3-42 Differentiated Services Setting Interface

See Figure 3-42 for the Differentiated Services setting interface. Using this technology, the gateway can meet various application requirements under a limited bandwidth and ensure neither delay nor discard for important services so as to improve its quality of services.

Item	Description
QoS	Sets whether to enable the OoS differentiated services. By default, it is disabled.
Media Premium QoS	Sets the priority of the media premium for QoS. A media premium QoS with a bigger value has a higher priority. The value range is 0~63, with the default value of 46.
Control Premium QoS	Sets the priority of the control premium for QoS. A control premium QoS with a bigger value has a higher priority. The value range is 0~63, with the default value of 26.



3.5.9 Tone Generator

	đ	one Generator
	Tone Energy (dB)	U
Dial Tona	450(1500	FreqATImeAFreqB+FreqC/TimeB Repeatedly play tones in turn, first, TimeA+, a single tone with FreqA, then, Time B, a dual tone composed of FreqB and FreqC.
Ringback Tone	450/1000.0/4000	FreqA+FreqB+FreqC/TimeA,FreqD/TimeB Repeatedly play tones in turn: first, TimeA, a triple tone composed of FreqA, FreqB and FreqC, then, TimeB, a single tone with FreqD
Busy Tone	450/360 0/350	Note: The play time is calculated by ms and cannot be larger than 16303ms for each toneunit. A tone is allowed to contain at most 5 different toneunits and 4 different frequencies, but the frequency and
		duration of the first toneunit cannot be 0. Frequency being 0 means the toneunit is a piece of silence.
	Save	Resel

Figure 3-43 Tone Generator Setting Interface

See Figure 3-43 for the Tone Generator Setting interface. By default, there are three tones on it: Dial Tone—a single tone with 450HZ frequency, plays continuously; Ringback Tone—a single tone with 450HZ frequency, repeatedly playing in the method of 1s play and 4s pause; Busy Tone—a single tone with 450HZ frequency, repeatedly playing in the method of 350ms play and 350ms pause. You can configure the tone generator manually. The exact explanation about the format and the meaning is described on the right of the interface. The value range of the tone energy herein above is -12~17, calculated by dB, with the default value of 0.



3.5.10 CDR Query

CDF	R Inquire
Starting Data	2015-10-22
Ending Date	2015-10-23
Port	All
Call Direction	All
CallertD	
CalleelD	
Call Duration(s)	
	uer;

Figure 3-44 CDR Query Setting Interface

See Figure 3-44 for the CDR Query Setting interface. The table below explains the items shown in the above figure.

Item	Description	
Starting Date,	Sets the starting and ending dates for CDR query.	
Ending Date	Coto the starting and sharing dates for CDT query.	
Port	Sets the port on which CDR query will proceed.	
Call Direction	Sets the call direction for CDR query.	
CallerID, CalleeID	Sets the CallerID/CalleeID for CDR query.	
Call Duration	Sets the minimum/maximum call duration for CDR query.	

Click **Query** to query the CDR information corresponds to the above settings.

				CORINO		P			GDR Export
i au	Stating Time	AnswerTima	Caribiector	GXNED	CORTE	Carnett	Pargas Side	Penting Reason	Call Duration(s)
2	2015-10-22 10:37:17	2016-15-23 10 37 47	TALOIR	117133951108	K-Q		Cotevoy	WATCH_DIALDIGIT_FAILED	13

Figure 3-45 CDR Information Interface

Note: This page will appear only when the CDR feature is enabled (set in <u>3.5.2 System Param</u>).

3.5.11 VPN

	VPN Settings	
Enable OPENVPN	Oyes OND	Save



Figure 3-46 VPN Settings Interface

Thanks to the embedded VPN Client, the wireless gateway can access the VPN network via OPENVPN directly, not requiring extra VPN client, which simplifies the network deployment. Meanwhile, the design of both SIP signaling messages and voice streams transporting via VPN avoids possible problems induced by the SIP protocol in passing through the firewall and NAT. See Figure 3-46 for the VPN Settings interface. The table below gives the explanation to the items shown in the above figure.

Item	Description		
	Sets whether to enable the VPN feature, with the default value of No. If this		
Enable OPENVPN	feature is enabled, the gateway will work as a VPN client.		

You are required to upload the VPN certificate after enabling the VPN feature. See Figure 3-47.

	VPN Settings	
Enable OPENVPN	BYES OND	Save
Upload VPN Certificate		Browseres
	VPN RaningInto	
	iding static route for defau ing nameserver to 0.0 0.0	

Figure 3-47 VPN Certificate Upload Interface

Note: Refer to Appendix C About VPN for how to make a VPN certificate.

3.6 Wireless Settings

Wireless Settings includes the following parts: **Basic Param**, **Wireless Param**, **Call Forwarding**, **Short Message**, **IMEI (GSM&WCDMA series)**, **USSD (GSM&WCDMA series)**, **Email**, **SIM Card**, **PIN Manage**, **BS Select (GSM series)**, **Networking Setting (WCDMA series)**, **AMD (CDMA series)** and **Hidden CallerID (WCDMA series)**. See Figure 3-48, Figure 3-49 and Figure 3-50.







🙀 Wireless	*		
Basic Param			
Wireless Param			
Call Forwarding			
Short Message			
IMEI			
USSD			
Email			
SIM Card	77		
PIN Manage			
Networking Setting	js		
Hidden CallerID	20		
SIM Mode			
Call Waiting			

Figure 3-49 Wireless Settings for WCDMA



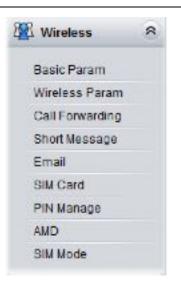


Figure 3-50 Wireless Settings for CDMA

3.6.1 Basic Parameters

Voice		
	GSW Voice Encoding	Automatic
DTME		
	GSM DTMF Send Mode	Voice Playback
	DTMF Transmission Intensity	5
	Duration at ON (ms)	120
	Duration at OFF (ms)	100
	Disconned Voice while Sending DTWF	No
	GSM DTMF Receive Mode	Wireless Module Receive
	DTMF Voltage Detection for CSM	Off Oms . On 40ms .
SMS		
	SMS Sending Interval(s)	
	Maximum Pleces of Saved Logs	100
	SMS Receipt	Disable
Call Forwarding		
	AT Command Mode	CCFC Command Mode 📼
SIP Answer Code	BusyRejected	485
	No Answer	409
	Other Fault	480
	Column a dual	400

Figure 3-51 Basic Parameters Setting Interface for GSM



Voice			
	WCDMA Voice Encoding	AMR	•
Network			
	Network Scan Mode	Automatic	
	Network Scan Sequence	Automatic	
DTMF			
	WCDMA DTMF Send Mode	Voice Playback	-
	DTMF Transmission Intensity	1	-
	Duration at ON (ms)	120	
	Duration at OFF (ms)	100	
	Disconnect Voice while Sending DTMF	No	
	WCDMA DTMF Receive Mode	Wireless Module Rec	elva 💌
SMS			
01410	SMS Sending Interval(s)	1	
	Maxmum Pieces of Saved Logs	100	
	SMS Receipt	Disable	-
Call Forwarding			
	AT Command Mode	CCFC Command Mos	ic 💌
SIP Answer Code			
or summer cause	BusyRejected	408	1
	No Answer	408	- 6
	Other Fault	480	

Figure 3-52 Basic Parameters Setting Interface for WCDMA



DIME				
	CDMA DTMF Send Made	Voice Playback	8	
	Duration at ON (ms)	120		
	Duration at OFF (ms)	100		
	Disconnect Voice while Sending DTMF	No		
	CDMA DTMF Receive Mode	Chip Receive		-
	Minimum Duration at ON	28 ms		
SMS				
	SMS Sending Interval(s)	1		Ū.
	Maximum Pieces of Saved Logs	100		
Call Forwarding				
	AT Command Mode	ATD Command	Mode	-
	Set/Cancel Service Number for FWD	*72		1995 B
	Unconditionally		1 121	
	Set/Cancel Service Number, for FWD on Busy	*90	*900	
	SevCancel Service Number, for FWD on		1000	
	No Reply	'92	*920	
	SeVCancel Service Number, for FWD on Unreachable	*68	*680	
	Gancel All FWD Service Numbers	*730		
	Cancel All Walting Service Numbers	*740		
SIP Answer Code				
	BusyRejected	488		6
	No Answer	408		
	Other Fault	480		

Figure 3-53 Basic Parameters Setting Interface for CDMA



Voice				
	LTE Voice Encoding	AMR		
	Volte	Enable		
Network				
	Network Scan Mode	Automatic		
	Network Scan Sequence	Automatic		
OTMF				
CT W	LTE DTMF Send Mode	Remote Transmis	sion 💌	
	Duration at ON (ms)	120		
	Duration at OFF (ms)	100		
	Disconnect Voice while Sending DTMF	No		
	LTE DTMF Receive Mode	Wireless Module R	eceive .	
10.101				
SMS		0	1.2	
	SMS Sending Interval(s) Maximum Pieces of Saved Logs	1 100		
	SMS Receipt	Disable		
	ono monipi	Disaule		
Call Forwarding				
	AT Command Mode	CCFC Command	Node 📼	
SIP Answer Code	BusyRejected	486		
	No Answer	408		
	Other Fault	480		
		and the second s		
	Save	set		

Figure 3-54 Basic Parameters Setting Interface for LTE

See Figure 3-51, Figure 3-52, Figure 3-53, Figure 3-54 for the basic parameters setting interface. The table below explains the items shown in the above figures.

Item	Description
GSM (WCDMA/LTE) Voice	Sets the mode of the GSM (WCDMA/LTE) voice encoding. By default, the voice
Encoding	encoding for GSM is Automatic and for WCDMA/LTE is AMR.
Volte	Once this feature is enabled, the 4G function will be enabled when there is a call
	ongoing on; Otherwise, only 2G or 3G function is available.
GSM (WCDMA/CDMA/LTE) DTMF Send Mode	Sets the mode to send the GSM (WCDMA/CDMA/LTE) DTMF, three options available for GSM (WCDMA/CDMA): Voice Playback, Remote Transmission and Chip Transmission. The default value is <i>Voice Playback</i> . Two options are
	available for LTE: Remote Transmission and Chip Transmission. The default value is <i>Remote Transmission</i> .
DTMF Transmission Intensity	Sets the transmission intensity of the DTMF. The default values for the GSM gateway and the WCDMA gateway are respectively 6 and 1.



	Note:
	1, This configuration item is unsupported when the DTMF send mode is set to
	Remote Transmission;
	2, This configuration item is unsupported for the CDMA gateway.
	Sets the duration of the DTMF signal at ON state, calculated by ms. The default
Duration at ON	value is 120.
	Sets the duration of the DTMF signal at OFF state, calculated by ms. The
Duration at OFF	default value is 100.
	Sets whether to disconnect the voice channel while sending the DTMF, with the
Disconnect Voice while	default value of <i>No</i> .
Sending DTMF	Note: This configuration item is unsupported when the DTMF send mode is set
	to Remote Transmission;
	Sets the mode to receive the GSM (WCDMA/CDMA/LTE) DTMF, two options
GSM (WCDMA/CDMA/LTE)	available: Chip Receive and Wireless Module Receive. The default values for
DTMF Receive Mode	GSM WCDMA and LTE are Wireless Module Receive; the default value for
	CDMA is Chip Receive.
DTMF Voltage Detection for	
GSM	Set the On and off of the DTMF detection for GSM.
	Sets a network for the call, three options available for the WCDMA gateway:
	Automatic, GSM Only and WCDMA Only. The default value is Automatic. Nine
Network Scan Mode	options are available for the LTE gateway: Automatic, GSM Only, WCDMA Only,
	LTE Only, TD-SCDMA Only, UMTS Only, CDMA Only, HDR Only, CDMA and
	EVDO Only. The default value is <i>Automatic</i>
	Sets the priority of the network, three options available for the WCDMA
	gateway: Automatic, GSM prior to WCDMA and WCDMA prior to GSM. The
Network Scan Sequence	default value is Automatic. Only the option Automatic is available for the LTE
	gateway.
	Sets the interval to send SMS for each port. Range of value: 1~60, with the
SMS Sending Interval	default value of 1.
Maximum Pieces of Saved	Sets the amount of the logs to be saved for each port. Range of value: 50~500,
Logs	with the default value of 100.
	Once this feature is enabled, the gateway will receive a receipt upon the remote
SMS Receipt	side receiving the SMS.
	Note: This configuration item is unsupported for the CDMA gateway.
	Sets the AT command sent with the call forwarding. There are two options
	available: CCFC command mode and ATD command mode. The GSM
AT Command Mode	gateways support both modes, while the WCMDA/LTE gateways only support
	the CCFC command mode and the CDMA gateways only support the ATD
	command mode.
Set/Cancel Service Number for	
FWD Unconditionally,	Sets or Cancels the service No. for FWD unconditionally, FWD on busy, FWD
Set/Cancel Service Number for	on no reply or FWD Unreachable. The former box is used to set the service No,
	while the latter one is to cancel the service No,.



Service Number for FWD on No Reply, Set/Cancel Service Number for FWD on	
Unreachable	
Cancel All FWD Service	Used to cancel all service numbers for FWD unconditional, FWD on busy and
Numbers	FWD on no reply.
Cancel All Waiting Service	Used to cancel the service number for call waiting.
Numbers	osed to barrier the service humber for ear walting.
SIP Answer Code	Sets the SIP answer code for each state of the called party.

Click Save to save the setting into the gateway, click Reset to restore the configurations.

3.6.2 Wireless Param

			in the second second			a maxim	10110444	10.02.001	11-0.421		(DOM: N	100 Apr 11 Apr 100		i ser
		and the second second	COLUMN TRACE	Contractor and the	and the second second		- and the second	and the second sec	in the set		and the second se	and the second		1.0
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3	÷.	100	1	0	1000 101-007-0	-		Tepott March Memory	-	BOAT COMMAND	CINE MONION	were survived a set.	1.44	ED
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н.		1	1							and-1103042121	1		P all.	1
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0	-14	-	1 · · · ·	-1	-		-	-		Book Trains	100.00		1.180	6
0	10	-	1	24		-	-	-	-	most contains	-		1188	10
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а.	D.	-	1	a.		-	-	-		100x 1.0121 -00x			1.44	14
			1							19901101020-01			8.44	14

Figure 3-55 Wireless Parameters Configuration Interface

See Figure 3-55 for the Wireless Parameters Configuration interface. Click *Modify* in Figure 3-55 to modify the properties of the corresponding module. See Figure 3-56 for the Wireless Parameters Modification interface.



Port	1	•
Cell Phone No.	13750845957	
Auto Get Cell Phone No.		
Query Mode	SMS	*
Destination Number	10006	
Content to Send	102	
Keywords to Match	号码	
Bits of Prefix to be Removed from Phone No.	0	
Get Phone No after SIM Card Registration	No	•
IP>GSM Voice Volume	3	(Range:0-15)
GSM	70	(Range:0-100)
Operator	Auto Select	•
Apply to all the modules (Cell Phone No. excluded)	ü	
- SALAD GEOD		-2

Figure 3-56 Wireless Parameters Modification Interface

The table below explains the configuration items on the Wireless Parameters Modification interface.

Item	Description
Port	The number of the port corresponding to the wireless module.
Cell Phone No.	The number of the SIM card corresponding to the wireless module. This number should be configured manually.
Query Mode	It is supported to acquire the SIM card number by two modes SMS and USSD.
Destination Number	Sets the destination number to receive the short message.
Content to Send	Sets the content of the short message.
Keywords to Match	Sets the keywords used to get the cell phone No. from the received SMS.
Bits of Prefix to be Removed from Phone No.	Sets the bits of the prefix to be removed from the cell phone No Up to 4 bits can be removed.
Get Phone No. after SIM Card Registration	Sets whether to get the cell phone No. after the SIM card being registered successfully.
IP->GSM(WCDMA/CDMA) Voice Volume	The volume of the voice from IP to GSM/WCDMA/CDMA. By default, the value for GSM is 3; the value for WCDMA is 10000; the value for CDMA is 1; the value for SIMCOM is 10400.



GSM(WCDMA/CDMA)->IP	Apply to all the modules	Sets whether to apply all the settings except for the cell phone number to all the modules.
GSM(WCDMA/CDMA)->IP Voice VolumeGSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000.IMSIInternational Mobile Subscriber Identification Number, the unique identity of the SIM card.IMSIIntegrate Circuit Card Identity (ICCID) is just the SIM card number which serves as he identification card of a phone number. It is the unique identification number of the IC card, consisting of 20 digits.IMEIInternational Mobile Equipment Identity. Note: This configuration item is unsupported for the CDMA gateway.OperatorThe operator of the wireless module. It is obtained automatically. This configuration is unavailable for CDMA module.Working FrequencyDisplays the working frequency band of the wireless module. This configuration is	Status	Displays the current state of the wireless module.
GSM(WCDMA/CDMA)->IP GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000. IMSI International Mobile Subscriber Identification Number, the unique identity of the SIM card. ICCID Integrate Circuit Card Identity (ICCID) is just the SIM card number which serves as he identification card of a phone number. It is the unique identification number of the IC card, consisting of 20 digits. IMEI International Mobile Equipment Identity. Operator The operator of the wireless module. It is obtained automatically. This configuration is unavailable for CDMA module.	Band unavailable for CDMA module.	
GSM(WCDMA/CDMA)->IP GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000. IMSI International Mobile Subscriber Identification Number, the unique identity of the SIM card. ICCID Integrate Circuit Card Identity (ICCID) is just the SIM card number which serves as he identification card of a phone number. It is the unique identification number of the IC card, consisting of 20 digits. IMEI International Mobile Equipment Identity. Operator The operator of the wireless module. It is obtained automatically. This configuration	Working Frequency	Displays the working frequency band of the wireless module. This configuration is
GSM(WCDMA/CDMA)->IP GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000. IMSI International Mobile Subscriber Identification Number, the unique identity of the SIM card. ICCID Integrate Circuit Card Identity (ICCID) is just the SIM card number which serves as he identification card of a phone number. It is the unique identification number of the IC card, consisting of 20 digits. IMEI International Mobile Equipment Identity.	Operator	
GSM(WCDMA/CDMA)->IP GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000. IMSI International Mobile Subscriber Identification Number, the unique identity of the SIM card. ICCID Integrate Circuit Card Identity (ICCID) is just the SIM card number which serves as he identification card of a phone number. It is the unique identification number of the	IMEI	
GSM(WCDMA/CDMA)->IP GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000. IMSI International Mobile Subscriber Identification Number, the unique identity of the SIM	ICCID	he identification card of a phone number. It is the unique identification number of the
GSM(WCDMA/CDMA)->IP GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for Voice Volume	IMSI	
The evolution of the evolves from CONAN/ODNAN (ODNAN to 10 D to 11 th the start of	. , , , ,	The volume of the voice from GSM/WCDMA/CDMA to IP. By default, the value for GSM is 70; the value for WCDMA is 3; the value for CDMA is 2; the value for SIMCOM is 7000.

Click *Modify* to save the settings into the gateway, click *Reset* to restore the configurations, or click *Back* to cancel the settings.

3.6.3 Call Forwarding

			Contraction of the local division of the loc	and the second	Call Forwarding	and the second	Address Million and an owner of	and the second se	
nece	P37	CRIPHONE NO.	PAD Unconditional	FMD 00 5157	PWG OF NE REBY	HAD DE DEIXOURE	EW LISCHING STOLLS	PWERENTS BUILT	MODU
Ξ	+	-	-	-	/	-	-	(1-	1 4
£	2	15022918945) -	12
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Ξ	4	12022834112		-		10 11	12	6 	Q
	2								
	4	-	-	24.2	(1.H)	-	2 -	() 	14
Ē	3	-		-	-3		-	-	-
						\sim			1

Figure 3-57 Call Forwarding Configuration Interface

See Figure 3-57 for the Call Forwarding Configuration interface. The table below explains the items shown in the above figure.

Item	Description
Port	The number of the port corresponding to the wireless module.
Cell Phone No.	The number of the SIM card corresponding to the wireless module.
FWD	Sets whether to enable the feature of FWD unconditionally and the FWD number if
Unconditionally	it is enabled.
	Sets whether to enable the feature of FWD on busy and the FWD number if it is
FWD on Busy	enabled.
	Note: Be sure to disable the Call Waiting feature before using it.
FWD on No Reply	Sets whether to enable the feature of FWD on no reply and the FWD number if it is



	enabled.
FWD on	Sets whether to enable the feature of FWD on unreachable and the FWD number if
Unreachable	it is enabled.
FWD Setting Status	Displays the setting status of the call forwarding service.
	Displays the query status of the FWD settings. This configuration is unavailable for
FWD Query Status	CDMA module.
	Cancels all the setting on call FWD service. This item will appear if none of the call
Cancel All	FWD is selected.

Click *Modify* in Figure 3-57 to modify the properties of the corresponding port. See Figure 3-58 for the call forwarding modification interface. Then click *Modify* to save the settings into the gateway. It will take some time to apply the settings, and you can check the result in the 'FWD Setting Status' column. Click *Reset* to restore the configurations, or click *Cancel* to cancel the settings.

Call Fo	nvarding-Modify
Pot	1
O FWD Unconditionally 💿	FWID Conditionally O Cancel All
FWD on Busy FWD on No Reply	
FWD on Unreachable	+8613800571176
jlibeM	Reset Cancel

Figure 3-58 Wireless Service Modification Interface

3.6.4 Short Message

Chade	121	Cellificate No.	SIVS Curke	hiss	Culler	Gund CVC
21	1			🛄 🔤 मध्य मध्य सभा सभा 🔿	🛄 मा अग आर लग लग	
23	2	: - 		🔲 শি দেয় নয় পয়	🛄 সা ধরা দার দার দার	-
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8	41			1 00 ANI 100 ANI 100	🛄 🚈 संय चार वार	-
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10	2M			🛄 M. તલ થય લય લય	্রার মহা দার বার দার	-
21	200			🛄 मा सम चय चय	🛄 म, अन्न संग्र वंग वंग	
23	16	(1) - 1 1	-	111 409 010 010 010	্রাস্থ নহা বাধ বাধ বাধ	-



Figure 3-59 Short Message Interface

Check	F\$4.	CellPhone No.	SUS Center	rtes	Oulous	Gand SMS
P1		13/04843611	8015633575500	O H	0.9	Ø
II	2	-	(-)	00	2 24	1.001
0	2			DU	3 31	
F1	4			On I	0.0	
E1	5			00	C M	
10	3			Du	0.4	
FT	7	-		01	(C) YI	-
•	3	14 C C		2 2	2 34	- 21

Figure 3-60 Short Message Interface for CMG4008

See Figure 3-59, Figure 3-60 for the Short Message interface which displays the related information about the received/sent SMS.

Click **SMS Center** to go into the SMS Center Modification interface. See Figure 3-61. Click **Save** to save the settings into the gateway, click **Close** to cancel the settings.

s	MS Center
Port	1
SMS Center	8613800571500
Save	Close

Figure 3-61 SMS Center Modification Interface

Note: The configuration of SMS Center is unavailable for CDMA gateway.

Click *Inbox* in Figure 3-59 to go into the SMS Receiver Details interface. See Figure 3-62. Such information as the remote cell phone number, the time and the content will be displayed on this page.

Check.	he.	Pat	Cell Phone No. R	souther Service	Renote Phone Number	Ter	Content	
н	1	- 4	6	dasw.	100001337/25601003404	2017-01-10-02:55:19	12111	
Check 4		Unchach	AL ENMA	Chot Al	Felan			128 X

Figure 3-62 Inbox Interface

To delete a piece of SMS receiving detail, check the checkbox before the corresponding index in Figure 3-62 and click the *Delete* button.

Click **Outbox** in Figure 3-59 to go into the SMS Sending interface. See Figure 3-63. Such information as the send status of the SMS, the remote cell phone number, the time, and the content will be displayed on this page.

Check	No.	1.54	Cellinone No.	ReceiveSwild	Rende Phone Number	TITIN	Content	Result	SendBacept	fiant
11.	•	16	1 on a start of the start of the	C 8713	15/15/24290	2017-01-00100232	Dever IP 311 128 106 170	🔕 sixizzo		ars H
Cherry	-		dial Del		Allen Detartion			Patt	- A Certy -	-

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Figure 3-63 Outbox Interface

To delete a piece of record, check the checkbox before the corresponding index in Figure 3-63 and click the **Delete** button. To filter the receive/send short messages according to the setting conditions, click the **Filter** button on the bottom right corner in Figure 3-62 or Figure 3-63. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; to clear all records at a time, click the **Clear All** button; to go back to the previous page, click **Return**.

Click Send SMS in Figure 3-59 to go into the Send SMS interface. See Figure 3-64.

	Send SMS
Part	Group Send V 01 02 03 04 05 08 07 08 09 10 11 12 13 14 15 16 Check All Inverse
Number Import	Browse Import
Send to	(Separated by ',')
Encoding Format	GSM 7bil V
Content	
	Note 1.SMS can be sent to 50 numbers at most 2. Number file must be "" bd" number separated by ',' or 'enter' 3. The length of SMS cannot exceed 600 characters.
	Send Clear Result
	Time Port Number Result
Result	
	T
	Reset

Figure 3-64 Send SMS Interface

The table below explains the configuration items on the Send SMS interface.

Item Description



Port	Select a port to send the SMS. There are three options available: Assignation Port,
FOIL	Automatic, Group Send.
	Click Browse to select the required number file and then click Import to import this
Number Import	file.
Send to	Enter the remote number to receive the SMS.
Encoding Format	The encoding format for the SMS, two options available: GSM 7bit and UCS2.
Content	The content of the SMS required to be sent.
Result	Display the send result of the SMS.

Click **Send** to send out the SMS, click **Clear Result** to clear all results. Click **Reset** to restore the configurations, or click **Return** to go back to the previous

3.6.5 IMEI



Figure 3-65 IMEI Interface

See Figure 3-65 for the IMEI interface. Read the agreement carefully and click *Accept* before you go into the IMEI Modification interface. There are two optional modes for IMEI modification: Manual Modify and Auto Modify. Click Manual Modify to go into the IMEI manual modification interface (Figure 3-66).

Port	123456785003126	Port	and the second	
3	123456785003120	2-	123456785003134 123456765003159	-
5	123456785003167	5	123455785003175	-
7	123456785003183	в	123458785003191	-
	LIMELIS a 15-digit number! 2. The digits from the first to the fo	urteenth are v is a check vali		

Figure 3-66 IMEI Manual Modification Interface

The default IMEI information will be displayed after clicking Initial Value in Figure 3-66, you can save and use it according to your requirement.



Mode	Based on Time/Call				
	E Based on Time	(Minute)			
	E Based on Call	(Times)			
	Switch Card per Time	1000 C			
IMEI Generation Mode	Automatic	-			
IMELTAC	-1				
IMEI Serial Number Range	100000 900000				

Click Auto Modify to go into the IMEI auto modification interface (Figure 3-67).

Figure 3-67 IMEI Auto Modification Interface

If the modification mode is set to *Based on Time/Call*, IMEI Generation Mode has only one option Automatic; if the modification mode changes to *Switch Card per Time*, there are four modes available for the IMEI Generation Mode: Automatic, Based on Number (Server), Based on Number (Corresponding table) and Based on IMSI (Corresponding table). You are required to fill in the IMEI TAC and IMEI Serial Number Range. See Figure 3-67 for the detailed generation mode for IMEI. If the Based on Number (Server) mode is selected, the IMEI value will be obtained from the server and you are required to fill in the server address (Example: http: //201.123.115.111); If the Based on Number (Corresponding table) mode is selected, the IMEI value will be obtained from the cell phone number and the corresponding IMEI table, and you can directly fill in the corresponding table on the interface or upload the file. For the format of the corresponding table) mode is selected, the IMEI value will be obtained from the corresponding table on the interface. If the Based on IMSI (Corresponding table) mode is selected, and you can directly fill in the corresponding table on the interface. If the Based on IMSI (Corresponding table) mode is selected, the format of the corresponding table) mode is selected, the IMEI value will be obtained from the corresponding table. For the format of the corresponding table, refer to the notes at the bottom of the interface. If the Based on IMSI (Corresponding table) mode is selected, the IMEI value will be obtained from the corresponding IMSI table of the SIM card, and you can easily import the table file. For the format of the corresponding table, refer to the notes at the bottom of the interface.

After configuration, click **Save** to save the above settings into the gateway or click **Reset** to restore the configurations.

Note: This configuration is unavailable for CDMA module.

3.6.6 USSD

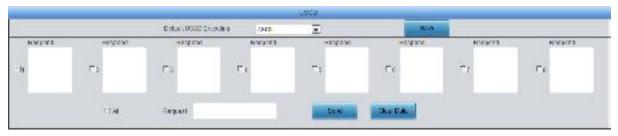


Figure 3-68 USSD Setting Interface

See Figure 3-68 for the USSD Setting interface. The table below explains the items shown in the above figure.



Item	Description				
Default USSD Encoding	Sets the default encoding format for USSD, two options available: ASCII and UCS2.				
Port	Sets the port used to send the USSD request.				
Request	Inputs the content of the USSD request.				
Respond	Displays the result of the USSD respond.				
All	Selects all the available ports to send the same USSD request.				

Click Send in Figure 3-68 to send out the USSD request. Click Clear Data to clear all data.

Note: This configuration is unavailable for CDMA module.

3.6.7 Email

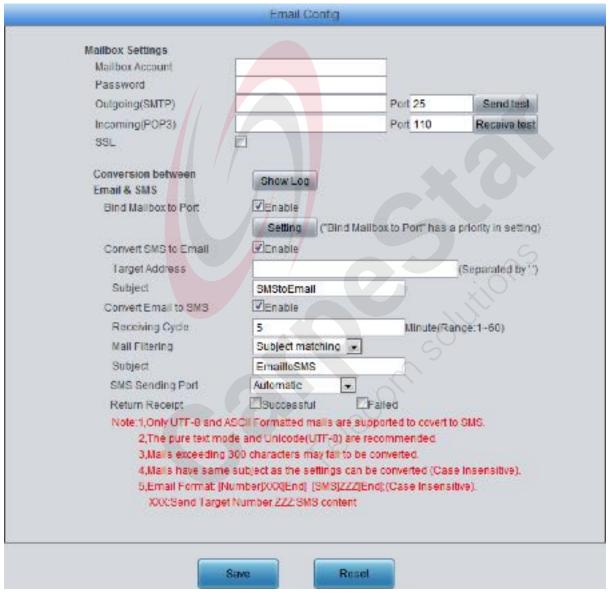


Figure 3-69 Email Setting Interface

See Figure 3-69 for the Email Setting interface. The table below explains the configuration items on the Email Setting interface.

ltem	Description



Mailbox Account,						
Password	Sets the account and password of the mailbox.					
Outgoing (SMTP), Port	Sets the server address and port for Email sending.					
Incoming (POP3), Port	Sets the server address and port for Email receiving.					
SSL	Sets whether to encrypt the sending/receiving mails via SSL.					
Show Log	Click it to display the log which contains the Email to SMS converted information.					
Bind Mailbox to Port	Once this feature is enabled, the mailbox can be bound to the designated port. Click Setting to go into the "Bind Mailbox to Port-Settings" interface.					
Convert SMS to Email	SMS can be converted to Emails if this feature is enabled.					
Target Address	The target address to which the Email converted by SMS will be sent.					
Subject	Sets the subject fo <mark>r the Email c</mark> onverted by SMS.					
Covert Email to SMS	When this feature is enabled, the mails in a designated format (See Note 4 and 5 in Figure 3-69) can be converted to SMS.					
Receiving Cycle	Sets the cycle to receive mails. Range of value: 1~60, calculated by minute, with the default value of <i>5</i> .					
Mail Filtering	Sets the condition to convert the mail to SMS, two options including: Subject matching and Number matching, with the default value of <i>Subject matching</i> . If the Subject matching mode is selected, you can set the subject of your own choice, and the email format is "[Number]XXX[End] [SMS]YYY[End]; (Case Insensitive)"; If the Number matching mode is selected, the mail subject must be numbers, multiple numbers are supported which should be separated by ",", and the email format is "[SMS][end]".					
SMS Sending Port	Sets the port from which the SMS will be sent out. The default value is automatic.					
Return Receipt	Sets whether to receive a return receipt telling the mail is sent successfully or not.					

After configuration, click *Save* to save the settings into the gateway or click *Reset* to reset the settings.



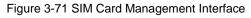
3.6.8 SIM Card

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Ped	TaretA	DOM: NO	Tai-878	1 Table of Alling	20 a 10	THREE REPORT	C+10	THE R AND	Value Participation of a 1974	Surrolling in AMG at	All faire	1 14-14
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1	E Laira	10503277410	E Onen	-	-		mone-	-	Crat +	Dis al: #	Disson	(e
7		100010241	Brett		Bras		EPi etc.		Public	The state	Di alte	12
4	📓. urg	275	EHOP)	100	Brop	100	Brop	100	HARA	100.00 h	11/358	6
5	Multa.	200	TO'S'	244	(Crist)	244		244	Druba	Dits als in	Dission	10
	Butt		Ener.		Briefs		In str		Pauli+	The all re-	Distin	R
1	ELOP.		Binp	-	Binp		Bing	-	LENC N	DUNC N	11/02/0	6
3	TO'er		EC.ch	1	more?		mare -	1+4	Didir	Dita at-a	Distant	64
	Bh +1		Ener.				E 140		Parallel	The dist	Distantion of the	Q.
16	(Lungo		ELDE?		Europ.		Eine?		1210.1	DUINC N	LANSO B	(r
11	ED th		0.ch		田 Dieb	_	BDex		Dikir	Dhater	Di. sole	64
-	2014D		Elevela.		E140		En et		Politic-	In dia	He area	Q.
лè.,	Europ.	100	E uner		Europ.		Europ.		Crick.	Denso e	Direce	6
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	10 H (4)		Brief.		Bergs.		BH 42		Hilli	Inc. al a	He area	Q
16	(Internet)		E unen		Euro.		Bones		Cric +	Dialo a	Distant.	60

Figure 3-70 SIM Card List Interface

See Figure 3-70 for the SIM Card List interface, which displays the states of each SIM card and the strategy to switch the SIM, etc. Click the SIM card in Exist state to set it to Using state, at the same time, the SIM card which is ever in Using state at first will switch to Exist state. Click Modify to modify the parameters. See Figure 3-71.

to Available Card S	Stot ODisable .Enable
egy for SIM Card	O Based on Time (Minutes)
	Based on Call (Times)
	Count Method Call Out CRing Back
	O Based on SMS (Pieces)
	Fixed Time 0 + H 0 + M
	O Disable
	ODisable CEnable
	Group 1. Card A Card B Card C Card D
	Group 2: Card A Card B Card C Card D
igy	Only One Group Group 1 One Groups in Turn Based on Time O (Minu
and Stein During &	
	to Available Card Slot' has priority over the item "SIM Card Group: sem simultaneously.
ing an instantable st	Ten en numer ev u ery
Ports	0
	egy for SIM Card



The table below explains the items shown in the above figure.



Item	Description
Port	Serial number of the port on the device.
Auto Switch to Available SIM Card	Once this feature is enabled, it will switch to other available SIM card automatically if the current SIM card is drawn out or the corresponding port is unavailable due to the SIM card is damaged. The default value is <i>enable</i> .
Switch Strategy for SIM Card	Sets the switch strategy for the SIM card. There are five options: <i>Based on Time, Based on Call, Based on SMS, Fixed Time</i> and <i>Disable</i> . Among them, the option <i>Based on Call</i> provides two count methods: <i>Call out</i> and <i>Ring back</i> . The default value is <i>Disable</i> .
SIM Card Grouping	Once this feature is enabled, the SIM cards in the port can be divided into groups, with the default value of <i>disable</i> .
Grouping	Sets the grouping of the SIM cards.
Use Strategy	Sets the strategy to group the SIM cards, including two options: Only One Group and Two Groups in Turn.
Apply to All Ports	Sets whether to apply the above configurations to all ports.

Click **Modify** to save the above settings into the gateway or click **Reset** to restore the configurations. Click **Return** to cancel the modification.

Note:

1, Only the CMG4016 and CMG4032 series gateways support this configuration;

2, The priority of these three switching modes is: Auto Switch to Available Card Slot > SIM Card Grouping > Switch Strategy for SIM Card. It is suggested not to enable them simultaneously.

3.6.9 PIN Manage

		PINNS	nzge		
Port	SID Cont State	Pin Roguros	FUH Recurt	seman simus	Nextery
1	Unicellan	ha	. Va	10^{2}	7
2					
3			-	5 -	
4	Unicolad	- hk	Ne	<u> </u>	3
2					
5	-			-	-
7.	100				~
×					

Figure 3-72 PIN Manage Interface

See Figure 3-72 for the PIN Manage interface, which display the status of the SIM card and the setting status of PIN and PUK. Click Modify to go into the modification interface. See Figure 3-73.

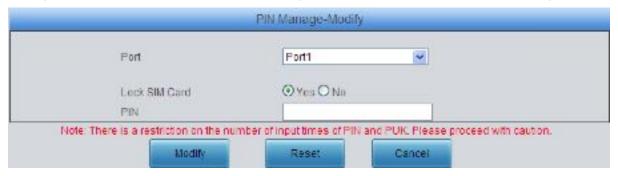


Figure 3-73 PIN Manage Modification Interface



Click "Yes" and input the correct PIN to lock the SIM card. The incoming/outgoing calls will not be initiated once the SIM card is locked. See Figure 3-74.

		115	Matalo		
ML.	SH Catol Sala	ONDestine	PUK Regaried	Gating Cases	licely
+	Locied	795	10		4
2		-	-	-	-
2		1.50			5
4	012303	- 85	ne .		10
5	1002	-			72
6	-		-		
τ					
0	2 <u>1</u> 5	-		2	- 2

Figure 3-74 SIM Card Locked PIN Required

Click Modify in Figure 3-74, you are required to input PIN again. See Figure 3-75.

	PIN Manage-Modify		
Fort	Port1	<u></u>	
PIN			
Note: There is a restriction on the Modify	number of input times of PIN a Reset	and PUK. Please proce Cancel	ed with caution,

Figure 3-75 Input PIN Interface

After the correct PIN is input, the SIM card is still locked but the channel turns idle and allows the initiation of incoming/outgoing calls. See Figure 3-76.

		PIN Mar	wite .			
674	Sile Card Styn	Pits Receipte	P.K 6731251	Series Rever	second,	
1	Locker	Ma	his	Claiment)	2	
2					1	
1			-	0 -	-	
.4	Unioched	(312)	Eş.	5	3	
4						
1		4			-	
τ	-				~	

Figure 3-76 SIM Card Locked without PIN

Click Modify in Figure 3-76 to unlock the SIM card or modify the PIN. See the figure below.

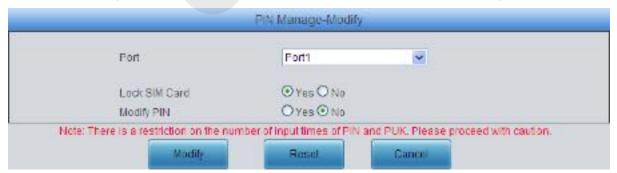


Figure 3-77 Lock SIM Card or Modify PIN Interface

The SIM card will also be locked and cannot make incoming/outgoing calls if you input a wrong



PIN code three times. You are required to input the PUK to reset the PIN. See Figure 3-78.

	14.0.04.04.04.04.04.04.04.04.04.04.04.04.	FR	Matalon		
Pot	Tall Cord State	City Received	P.E.Required	Setting Status	Sector
1	LOAD	10	No.		3
2					
3		-		-	4
4	Universed	(ND)	No.	-	2
5					
	-	2		-	-
4	-	-			-

Figure 3-78 SIM Card Locked Need PIN and PUK

Click Modify in Figure 3-78 to input PUK and reset a new PIN, see Figure 3-79.

Figure 3-79 New PIN setting interface

The SIM card is still locked but do not need PIN and PUK again after inputting the correct PUK and resetting a new PIN. The status of the port displaying in <u>Port State</u> is idle. So the port can make incoming/outgoing calls. Click **Modify** to save the above settings into the gateway or click **Reset** to restore the configurations. Click **Cancel** to cancel the modification.

Note: The SIM card will be locked forever if you input a wrong PUK more than 10 times. You need to insert a new card.

3.6.10 BS Select



Cleas	Det:	051	0.52	053	054	DSS	DESE	Selling State	Signal	VECT
10	1	-	-	-	-			-	at	Úł.
Ш.	.2								all	68
ш.	3								all	Gł
10	- 54		-		-		-		all	Q.
6	1.5	1	-	-	-	1	-	() /	all	Q.
10	e				-				atl	Úł.
<u>11</u>	0								.etf	68
ш.	5								ull.	Gr
Π.	8	10-41	-	-	-	-	-		all	Q.
6	10		-	-	-		-	(1	at	Q.
10	11								at	Úł.
<u>11</u>	12								.etf	68
ш.,	43								. III	Gł.
E.	11		-		-		-		all	Gr
6	15		-	-		3 3.	-	() /	all	Q.
10	12							-	tl	Gł.

Figure 3-80 Base Station Select Interface

See Figure 3-80 for the Base Station Select interface, which displays the information of the base stations which can be searched and connected. The base station has the priority to be connected will be listed on the left according to its comprehensive ability. Click Modify in Figure 3-80 to go into the Lock BS interface. See Figure 3-81.

	L	KR BS		
geti	4			
B8 Dota#s	Secol No 1 2 3 4 3 5 6	05 7 82 72 605 619 -	LAC 1814 6105 5814 5814 5814	CFLUTD. 1677 4 1676 5 5565 574C 450C
Manual Look	TH TH	Th Falls	5 🗖 ६ 📄	Loos
Automatic Look Switching Time DS grass	12		JoRange: 10 1 9 (The) Return	(244) minutes (patemeter should be need after the change of a SM card)

Figure 3-81 Lock BS Interface

The table below explains the items shown in the above figure.

Item	Description
Port	The number of the port corresponding to that on the wireless module.
Serial No.	The serial number of the base station which can be searched.
BS	The frequency point of each base station.
LAC	The location number of each base station. It's a hexadecimal number.
CELLID	The cell number of each base station. It's a hexadecimal number.
Manual Lock	Select the serial number and click the Lock button behind to lock the base station manually. Thus, the SIM card will connect to the locked base station randomly.



Automatic Lock	Select the serial number to lock the base station automatically. The SIM card will connect to the locked base station in a cyclic order according to the set switching time.
Switching Time	Sets the switching time for connecting the base station.
BS in Use	Selects the serial number of the base station to be locked automatically.

Click *Lock* to save the above settings into the gateway or click *Return* to cancel the modification and return back to the previous page.

To cancel the lock, check the checkbox before the corresponding index in Figure 3-80 and click the '*Cancel* button. *Check All* means to select all available items on the current page; *Uncheck All* means to cancel all selections on the current page; *Query* means to query the information of all the base stations which can be connected.

Note: This configuration is only supported by the GSM gateway.

3.6.11 Networking Settings

Chack	1756	Cell Phone Nz	line	Iz Active Melant	Con	armed Flow (KD)	Modily
FI.	- 14 -	15688273487					ie.
•	2	-		10 - 1 0		0	6
8	1	=		1		1	10
EL.	3					0	60
	5			2			Q.
11	- 3					D	14
F1	- (7)	-		1.7.5		D	10
	3	<u> </u>				D	Q.

Figure 3-82 Networking Management Interface

Chiroc	Ppr.	CRUPTOR NO	Time to access stateout	Destanding KR	N108
	14 (m)		-	ADBOGGED	Gr
85	2			хава да цо	12
#1	3	-		Ara Rha chá Trip	. 6
	4	-		AN DO CO D D	G.
FI	3			va Barca n b	12
•	5	-		A0.760.010.0	6
10	3.6	-		A9800390	6
FI.	8		XG	Ara Rea Cra Brb	10
	- 2	-	-	A00.0000	0
11	10			Va 80 G a n p	12
E1	- 11	14) (4)		Ara Rea Cra Di D	Ge.
	12.	-		A3 03 03 0 0 0	G
FE	18			va sa da a a	62
	IN	-	1772	80.000.00	6
13	15			V0 80 0 0 0 0	12
FT	-16	-		Ava Rea cha fa 6	Te.

Figure 3-83 Networking Management Interface for CMG4016

See Figure 3-82, Figure 3-83 for the Networking Management interface, which displays the networking information about the SIM card, such as the time to start accessing the network, the consumed flow, etc. Click Modify in Figure 3-82 to go into the Networking Settings Modification



interface. See Figure 3-84.

Netwo	rking Settings
Port	1 -
Auto Consume Flow	ODisable ØEnable
URL APN Access Times Timing Cycle Time to Access Network Apply to Other Ports Note Flow statistics or from the operator	http://www.sina.com.cn/ Month • 1st • 00 • 00 • @Port OPort Croup ØPort OPort Croup Ø of E o2 = 03 = 04 = 05 = 06 = 07 = 08 ror is approximately 10%. You can get the actual consumption
Sava	Return

Figure 3-84 Networking Settings Modification Interface

The table below explains the items shown in the above figure.

Item	Description
Port	The number of the port corresponding to that on the wireless module.
Auto Consume Flow	Once this feature is enabled, the SIM card will surf the internet and consume the flow automatically. The default value is <i>disabled</i> .
URL	Sets the URL address.
APN	Sets the APN. Please get the detailed information from the operator of the SIM card.
Access Times	Sets the times for the SIM card to surf the internet. Range of value: 1~500.
Timing Cycle	Sets the timing cycle for the SIM card to surf the internet.
Time to Access Network	Sets the start time of the SIM card to surf the internet.
Apply to Other Ports	Sets whether to apply the above configurations to other ports.

Click *Save* to save the above settings into the gateway or click *Reset* to restore the configurations. Click *Cancel* to cancel the modification.

Note: This configuration is only supported by the WCDMA and LTE modules.



3.6.12 AMD

AMD Parameters 30000 Line Silence Overtime after Dial Tone 30000 Silence Overtime after Tone or Color Ring Being Detected 15000 Overtime for a Complete AMD Detecting Process 70000 Upper Limit of Detected Continuous Tones 5 Shorlest Voice Duration at ON State 150 Shorlest Voice Duration at OFF State 0 Maximum Greeting Duration at OFF State 0 Shorlest Silence Duration before Greeting 600 Shorlest Silence Duration 180 Maximum Creeting Duration 1200 Shorlest Silence Duration after Greeting 1200 Shorlest Silence Duration after Greeting 1200	AMD Detection for Outgoing Call	ODisable @Ena	ible
Silence Overtime after Tone or Color Ring Being Detected 15000 Overtime for a Complete AMD Detecting Process 70000 Upper Limit of Detected Continuous Tones 5 Shorlest Voice Duration at ON State 150 Shorlest Voice Duration at OFF State 400 Maximum Greeting Duration at OFF State 0 Shorlest Silence Duration before Greeting 600 Shorlest Greeting Duration 180 Maximum Creeting Duration 1200 Shorlest Silence Duration after Greeting 1200	AMD Parameters		
Overtime for a Complete AMD Detecting Process 70000 Upper Limit of Detected Continuous Tones 5 Shorlest Voice Duration at ON State 150 Shorlest Voice Duration at OFF State 400 Maximum Greeting Duration at OFF State 0 Shorlest Silence Duration before Greeting 600 Shorlest Greeting Duration 180 Maximum Creeting Duration 1200 Shorlest Silence Duration after Greeting 1200	Line Silence Overtime after Dial Tone	30000	ms
Upper Limit of Delected Continuous Tones 5 Shorlest Voice Duration at ON State 150 Shorlest Voice Duration at OFF State 400 Maximum Greeting Duration at OFF State 0 Shorlest Silence Duration before Greeting 600 Shorlest Greeting Duration 180 Maximum Creeting Duration 1200 Shorlest Silence Duration after Greeting 1200	Silence Overtime after Tone or Color Ring Being Detected	15000	ms
Shorlest Voice Duration at ON State 150 Shorlest Voice Duration at OFF State 400 Maximum Greeting Duration at OFF State 0 Shorlest Silence Duration before Greeting 600 Shorlest Greeting Duration 180 Maximum Creeting Duration 1200 Shorlest Silence Duration after Greeting 1200	Overtime for a Complete AMD Detecting Process	70000	ms
Shorlest Voice Duration at OFF State 400 Maximum Greeting Duration at OFF State 0 Shorlest Silence Duration before Greeting 600 Shorlest Greeting Duration 180 Maximum Creeting Duration 1200 Shorlest Silence Duration after Greeting 1200	Upper Limit of Delected Continuous Tones	5	
Maximum Greeting Duration at OFF State 0 Shortest Silence Duration before Greeting 600 Shortest Greeting Duration 180 Maximum Creeting Duration 1200 Shortest Silence Duration after Greeting 1200	Shortest Voice Duration at ON State	150	ms
Shortest Silence Duration before Greeting 600 Shortest Greeting Duration 180 Maximum Creeting Duration 1200 Shortest Silence Duration after Greeting 1200	Shortest Voice Duration at OFF State	400	ms
Shortest Greeting Duration 180 Maximum Creeting Duration 1200 Shortest Silence Duration after Greeting 1200	Maximum Greeting Duration at OFF State	0	ITE
Maximum Crecting Duration 1200 Shortest Silence Duration after Greeting 1200	Shortest Silence Duration before Greeting	600	ms
Shortest Silence Duration after Greeting 1200	Shortest Greeting Duration	180	ms
	Maximum Greeting Duration	1200	ms
Silence Energy Threshold 180	Shortest Silence Duration after Greeting	1200	ms
	Silence Energy Threshold	180	A
Energy Difference Proportion of Tone 30	Energy Difference Proportion of Tone	30	55
AMD Debugging	AMD Debugging		
Output AMD Debugging Info to Syslog		@Disable CEna	ble
Do not Defect Other Pickup Signal @Disable CEnable	Do not Defect Other Pickup Signal	@Disable OEna	ible

Figure 3-85 AMD Configuration Interface

See Figure 3-85 for the AMD Configuration interface. which is to set the parameters for judging whether the phone is picked up by a man or not. The table below explains the items shown in the above figure.

Item	Description
AMD Detection for	Sets whether to enable the AMD detection while making an outgoing call, with the
Outgoing Call	default value of Disabled.
Line Silence Overtime	Judges if the line silence after dial tone lasts overtime or not, calculated by ms,
after Dial Tone	with the default value of 30000.
Silence Overtime after tone or Color Ring Being Detected	Judges if the silence after tone or color ring lasts overtime or not, calculated by ms, with the default value of <i>15000</i> .
Overtime for a Complete AMD Detecting Process	Judges the whole AMD detecting process overtime or not, calculated by ms, with the default value of <i>70000</i> .
Upper Limit of Detected Continuous Tones	Judges if the tone detected time is overtime or not.
Shortest Voice Duration	Sets the shortest duration when the voice goes into the High voltage state,
at ON State	calculated by ms, with the default value of 150.



Shortest Voice Duration Sets the shortest duration when the voice goes into the low v					
at OFF State	calculated by ms, with the default value of 400.				
Maximum Greeting	Sets the longest duration of the greetings at the OFF state after a call is picked up				
Duration at OFF State	by a man, calculated by ms, with the default value of <i>0</i> .				
Shortest Silence					
Duration before	Sets the shortest silence duration before the phone is picked up by a man,				
Greeting	calculated by ms, with the default value of 600.				
Shortest Greeting	Sets the shortest greeting duration in case the phone is picked up by a man,				
Duration	calculated by ms, with the default value of 180.				
Maximum Greeting Sets the longest greeting duration in case the phone is picked up by a					
Duration calculated by ms, with the default value of 1200.					
Shortest Silence	Sets the shortest silence duration after the phone is picked up by a man,				
Duration after Greeting	calculated by ms, with the default value of 1200.				
Silence Energy	Sets an energy value that can judge the voice is silence or not, calculated by ms,				
Threshold	with the default value of 180.				
Energy Difference					
Proportion of Tone	Sets the difference proportion of the high and low energies in the signal.				
Output AMD Debugging					
Info to Syslog	Sets whether to output the AMD debugging information to Syslog.				
Do not Detect Other					
Pickup Signal	Sets whether to detect other pickup signals.				

Click **Save** to save the settings into the gateway, click **Reset** to restore the configurations. **Note:** This configuration is only supported by the CDMA module.

3.6.13 Hidden CallerID

Port	Port 1 Port 5 Port 9 Port 9	Port 2 Port 5 Port 10 Port 14	Port 3 Port 7 Port 11 Port 15	Port 4 Port 8 Port 12 Port 16	
	Nole: The feath operator Check All	re of Hidden Call	effic enound be sur	operied by the	
	Check All	Inverse			

Figure 3-86 Hidden CallerID Setting Interface

See Figure 3-86 for the Hidden Caller Setting interface which sets whether to hide the CallerID to the called party. This feature requires the support of the operator. Select the port and click **Open** to enable the feature, and click **Close** to disable it.

Note: This configuration is only supported by the WCDMA module.



3.6.14 SIM Mode

SIM Fard Meda	Sin3 uab Koda 🔹 💌

Figure 3-87 SIM Mode Setting Interface

See Figure 3-87 for the SIM Mode Setting interface which sets the SIM mode of the SIMBANK, with four options available: Local, SimBank, LAN and MiFi. In the Local mode, the SIMBANK is not connected to other devices; in the SIMBANK mode, you have to ensure the centralized management feature has been enabled, and then the SIMBANK can connect and work with the wireless gateway on the centralized management platform; in the LAN mode, you should configure Gateway IP address herein for the SIMBANK, select the LAN mode and configure SIMBANK IP address for the wireless gateway, and then connect the SIMBANK with the wireless gateway in the LAN; in the MiFi mode, the SIMBANK can connect and work with the MiFi device.

Note: This configuration is only supported by the 16 and 32 ports GSM and CDMA modules.

3.6.15 Call Waiting

				Call Walking Star				
FOT	1	1.2	. *.		1) <u>1</u>	1. 19	3	
9.8.B		270		-	1		207702	
F0.1	9	1250	11	51	18	12	1.154	10
(internet)	-		-	· · · ·	S	-	100	
		all Waring Landle Greek		Hors L Portz Horse L Puesto	Part II Teacil	Port Portu	Paris Paris	
	3		946122 C	Check 4I Inva	-			

Figure 3-88 Call Waiting Setting Interface

See Figure 3-88 for the Call Waiting Setting interface which is used to enable or disable the call waiting feature for corresponding modules. Select one or more ports, click Save to enable the call waiting feature. The state column on the top shows the setting result.

Note: This configuration is only supported by the GSM and WCDMA modules.

3.7 Call Management

Call Management includes eight parts: **Balance**, **Port Timer**, **Name List Timer**, **Tel** \rightarrow **IP Auto Route**, **Blacklist**, **SMS Count**, **Auto Function** and **Port Charge**. See Figure 3-89. **Balance** is used to query the remaining time and balance of a cell phone number; **Port Timer** is used to calculate the call time length of the corresponding number; **Name List Timer** is used to set the timing rule to count and manage the call time of the target number; **Tel** \rightarrow **IP Auto Route** is used to set the route for the remote end to call back; **Blacklist** is used to set a number table to forbid some incoming calls; **SMS Count** is used to calculate the number of short messages from a phone number corresponding to a port; **Auto Function** is used to make calls and send SMS from port to port in a special condition so as not to be blocked by the operator; **Port Charge** is used to count the call fees for a phone number corresponding to a port.



g Call Manage	~
Balance	
Port Timer	
Name List Timer	
Tel->IP Auto Route	
Blacklist	
SMS Count	
Auto Function	
Port Charge	



3.7.1 Balance

Check	Per	Onli Phone bio	Time	Ralance	Balance Alarm secretossage	Falance A tim	Meeth
	1	12533231047	- / /	-	Claw	Ckse	64
EL.	.0	13588977410	- 1		diwa	Circe	(A
	1	12530280240	12 A.	1012X	Clow	Ckas	14
EI.	4				Class	Circe	Q2
	3		-	3 - 13 - 13 - 13 - 13 - 13 - 13 - 13 -	Clave	Chas	Gê
EE.				7-7	(356)	Gree	
	7	-	-		Clave	Ckas	-
ÉT.	8				(3556	Circe	
	2	-	-		Clave	Ckae	-
E1	10				13520	(WA	
	31		-	13 - 42	Close	Ckse	
FT.	12				1992	LIKE	
	13		-	(14)	Clase	Ckas	+
11	14				(1956)	Case	
	15	-		-	Class 5	Ckoe	-
F1 .	15					Close	

Figure 3-90 Balance Query Interface

Via the Balance Query interface, you can query the balance of a designated cell phone number. Click Modify to modify the query mode. See the modification interface below.



Port	1	•
Query Mode	SNS	-
Destination Number	GRO	
Content to Send	·	
Keywords to Match	-	
	-	
Query after SIM Card Registered	No	+
Query Regularly	0	(Minute,0 disabled)
	10.24	
Alarm for Insufficient Balance		
Alarm Threshold		
Alarm via SMS		(Separated by ",")
Alarm via Ernail	1	(Separated by ",")
L Alami via vveb		
Apply to Other Ports	Port OPort	Group
	01 02	03 0 04 0 05 06 07 08
	09 10	11 12 13 14 15 16

Figure 3-91 Query Mode Modification Interface

The table below explains the configuration items on the Query Mode Modification interface.

Item	Description		
Query Mode	Sets the mode to query. There are three options available: SMS, ATD, USSD.		
Destination Number	Sets the destination number to query		
Content to Send	Sets the content to send.		
Keywords to Match	The balance matching the keywords will be displayed.		
Query after SIM	Sets whether to query the balance automatically once the SIM card is registered to		
Card Registered	the base station.		
Query Regularly	Sets the time to query the balance regularly.		
Alarm for	Once this feature is enabled, the gateway will notify the users by sending SMS or		
Insufficient Balance	Email once the balance goes insufficient. The default value is <i>disabled</i> .		
Alarm Threshold	Sets the threshold for the insufficient balance to send the alarm.		
Alarm via SMS,			
Alarm via Email	Sets the addresses to receive the SMS/Email while the balance is insufficient.		
	Once this feature is enabled, the alarm information concerning the Insufficient		
Alarm via Web	Balance will be displayed on the web.		
Apply to Other Ports	Sets whether to apply these query conditions to other ports or port groups.		

Click *Modify* to save the above settings into the gateway or click *Reset* to restore the configurations. Click *Cancel* to cancel the modification. Click *Test* to set a balance query strategy, and then execute it to test the balance query feature. And this can help to set a proper balance



query strategy. See Figure 3-92.

Keywords to Match
SMS Content
Balance

Figure 3-92 Balance Query Strategy Test Interface

Enter the *Keywords to Match* and *SMS Content*, then click *Query* to query the information about the balance.

3.7.2 Port Timer

Cash	Pe4	Call Phone No.	Set.	Van Time Skiple Calls	Ver Time Vingle Dava	Nut The Kit Culls	Und Cr. The Real	Used Call Time	CharGal This	Alum Three ald	Note
EI.	1	12749164.0	1.12	tanimime	tinanana.	titerane.	2 -		P	-	1
0	2	13508242328	80,	U de mije	Unitedate	0.0 0.0		\sim		-	2
UI.	3	12302312404	601	Uslinited	Unitable	Uninhec	SH (P.	(1997)	-	3
U.	4		10.	Red at a	Distance.	Datasa					2
61	3	÷.	:601	Unitative	Uniteduc	Unintee			2.003	3	2
U.			10.	transv	manane	towarde .	0			-	1
n.	.7		802	Uninter	U de altre	UITA	a			E. 1	2
ы.		12.	644	Rolling to 1	transe	Uninted	- V		SH S	() - ()	3
0			80.	Udation	U-de ad.w	Udaria					2
11	10	-	601	Unlinited	Unitabled	Unlinhed	-		(1947) (1947)	S 2	3
U.	11		10.	in the second	to de salva	Diam'r.					2
6	12	- H. 1	.80y	Unitative	Unitrilize	Unlinitize		- 		1000	2
15	14	-	1.11	tentinene	transme	totement.	-	-		-	1
0	14		87.	Uderter	U-da ali e	Udate					2
ы.	45	-	611	Unlimited	Unitation	Unlinited	2H5	-	2.43	240	3
0	11		10.	Distant at	11-de altre	Delivery					2

Figure 3-93 Port Timer Interface

See Figure 3-93 for the Port Timer interface, which displays such information as the call time limit on the number corresponding to the port, the timer clear cycle as well as the alarm for the call time allowance. Click Modify for each port in Figure 3-93 to modify the timer settings. See Figure 3-94.



Unit 60s Ime Limit on a Single Call Max Call Time Max Call Time Switch to Other Card if no Time Limit on Total Calls Max Call Time Switch to Other Card if no Time Limit on Total Calls Max Call Time Switch to Other Card if no Time Limit on Total Calls Max Call Time Switch to Other Card if no Timing Cycle Clear Set Spent Call Time Alarm via SMS Alarm via SMS Alarm via Email Apply to Other Ports Port Port <td< th=""><th>Port</th><th>1</th><th>•</th><th></th></td<>	Port	1	•	
Max Call Time 0 Time Limit on a Single Day Max Call Time Disable © Enable Switch to Other Card if no Time 0 Time Limit on Total Calls Max Call Time Disable © Enable Max Call Time Switch to Other Card if no Time 0 Timing Cycle Clear Set Spent Call Time Month • 1st • 00 • 00 • Alarm tor Call Time Alarm via SMS Alarm via Enail 0 Apply to Other Parts Port Part Group • Port Cloup • 01 0 2 0 3 0 4 05 06 07 08	Unit	60s	•	
Max Call Time 0 Switch to Other Gard if no □ Time Limit on Total Calls □ Max Call Time □ Switch to Other Card if no □ Timing Cycle □ Clear ○ Set Spent Call Time □ Alarm tor Call Time Allowance □ Alarm via SMS □ Alarm via Email ○ Apply to Other Ports ● Port Part Group ✓ 01 02 03 04 05 06 07 08			Enable]
Time Time Limit on Total Calls Max Call Time Switch to Other Card if no Time Time Timing Cycle Clear Set Spent Call Time Alarm tor Call Time Allowance Alarm via SMS Alarm via SMS Alarm via Email Sply to Other Ports	Max Call Time		Enable]
Max Call Time Switch to Other Card if no Time Timing Cycle Clear Set Spent Call Time Alarm for Call Time Allowance Alowance Alarm Threshold Alarm via SMS Alarm via Email Apply to Other Ports Port Port Group 101 022 03 04 05 06 07 08				
Time Timing Cycle Clear Set Spent Call Time Alarm tor Call Time Allowance Alowance Alarm Threshold Alarm via SMS Alarm via Email Apply to Other Ports Port Port Port O1 02 03 04 05	Max Call Time	122	Enable	1
Clear Set Spent Call Time Alarm for Call Time Allowance Allowance Alarm Threshold Alarm via SMS Alarm via Email Apply to Other Ports Port Port Group ✓ 01 02 03 04 05 06 07 08		0		
Allowance Alarm Threshold 0 Alarm via SMS Alarm via Email Apply to Other Ports Port Port Group 1 01 02 03 04 05 06 07 08	Clear		1.1	
Alarm via Email Apply to Other Ports Port Port Group 01 02 03 04 05 06 07 08	Allowance Alarm Threshold			/Caparated by ""
		1 01 00	03 04	

Figure 3-94 Port Timing Setting Interface

The table below explains the configuration items shown in the above figure:

Item	Description
Port	The number of the port corresponding to the wireless module.
	Sets the timing unit for the call, eight options available: 1s, 5s, 10s, 20s, 30s,
11-16	40s, 50s and 60s. The actual call time will be calculated as the integral multiple
Unit	of the setting time. Take an example: supposed the setting time is 30s and the
	actual call time is 72s, thus, the gateway will consider the call time as 90s.
Time Limit on a Single	Onto wheth an to an able the time limit on a simple call
Call	Sets whether to enable the time limit on a single call.
Max Call Time	Sets the maximum time length of a call.



Time Limit on a Single Day	Sets whether to enable the time limit on calls in a single day.
Switch to Other Card if	Sets whether to switch to other available SIM card if the current SIM card has no available time to make calls.
no Time	Note: This configuration is unavailable for CMG4004 and CMG4008 series gateway.
Time Limit on Total Calls	Sets whether to enable the time limit on all calls at the port.
Timing Cycle	Sets the time count cycle for the port.
Clear	Sets the time node to clear the time count.
Set Spent Call Time	Sets the spent call time length of the port.
Alarm for Call Time	Once this feature is enabled, when the remaining call time of the port is less than
Allowance	the alarm threshold value, the gateway will send the alarm information.
Allowance Alarm Threshold	Sets the threshold value for the remaining call time.
Alarm via SSM, Alarm	Sets the way to send the alarm information. The gateway can send the alarm
via Email	inf <mark>o</mark> rmation via both SMS and Email or either of them.
Apply to Other Ports	Sets whether to apply above settings to other ports or port groups.

Click *Modify* to save the settings into the gateway, click *Reset* to restore the configurations, or click *Return* to cancel the settings.

Note: This feature is unsupported in the SimBank mode.

3.7.3 Name List Timer

				Port	Timing									Betting
2	1.5	4	2	8	1	U	1 2	1 10	2013	12	13	14	.15	18
		1.00	+				-	-	-	4				-
				No avai	lable na	me list	timer ru	100						
						No available na		No available name list timer ru	No available name list timer rule:	No available name list timer rulet	No available name list timer ruled	No available name list timer rulet	No available name list timer rule?	No available name list timer rule?

Figure 3-95 Name List Timer Interface

See Figure 3-95 for the Name List Timer interface, which contains two parts: Port Timing and Name List Timer Rule. You can add the timing rule to count the call time for the port. Click *Add New* in Figure 3-95 to add a timing rule. See Figure 3-96.



Index	
Number	
Import Numbe	(Separated by "." Browse. Import
Number Mald Rule	hing Prefix Matching V
Max Call Time	a (Minute)
Timing Cycle	Year
Clear	Jan V 1st V 00 V 00 V

Figure 3-96 Add Name List Timing Rule Interface

The table below explains the configuration items shown in the above figure:

Item	Description			
Number	Se <mark>ts t</mark> he number to <mark>b</mark> e timed.			
Import Number	Us <mark>ed t</mark> o import the files on which the numbers need to be timed.			
Number Matching	Sets the rule to match the numbers, two options available: Prefix Matching and			
Rule	Whole Words only, with default value of <i>Prefix Matching</i> .			
Max Call Time	Sets the maximum time length for a call.			
Timing Cycle	Sets the timing cycle for the port, four options available: Day, Week, Month, Year.			
Clear	Sets the time node to clear the timing.			

Click **Save** to save the settings into the gateway, click **Reset** to restore the configurations, or click **Return** to cancel the settings. After adding the timing rules, click **Setting** button on the up right corner in Figure 3-95 to set the timing rule for each port. See Figure 3-97 for the setting interface.



Port Rule Index	Port Rule Index	
1 0	2 0	
3 0	4 0	
5 0	6 0	
7 0	8 0	
Time Portl Nolir Up to 5 liming rules are s	apported, separated by ",", 0 means	not to use
our up to pluming rules are s	apponent sebarance ok. ' a useauz	not to us

Figure 3-97 Set Port Timing Rule Interface

The table below explains the configuration items shown in the above figure:

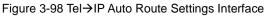
Item	Description
Rule Index	The index number of the timing rule corresponding to the port.
Set Spent Call Time	Set <mark>s</mark> the call time already used by the port.

Click **Save** to save the settings into the gateway, click **Reset** to restore the configurations, or click **Return** to cancel the settings.

3.7.4 Tel to IP Auto Route

The Tel \rightarrow IP Auto Route is used to set routes for the remote phone to call back the gateway. By default, there is no available auto route for a Tel \rightarrow IP call, click the **Setting** button to set it. See Figure 3-98.

Tel->IP Auto I	Route Settings
Tel->IP Auto Route	ODisable ÖEnable
Route Holding Time	1 Hour
Route Calls back to IP Side	YE3
	highest priority, and can only be used once will be valid only when the "Callert® Detection"
Modify	set



The table below explains the configuration items shown in the above figure:

Item	n Description	
Route Holding Time	Sets the valid time of the route.	



	Once this feature is enabled, the calls from the PSTN terminal to the soft terminal
	will be routed to the soft terminal of the original call. That is, when the soft terminal A
	called the PSTN terminal B via our gateway, if B doesn't answer the call or A
Route Calls back to	cancels the call, the later call from B back to the gateway will be routed to the soft
IP Side	terminal A directly.
	Once this feature is disabled, the later call dialed back by the remote terminal B will
	be routed to the original calling party A only if B doesn't answer the first call from A
	to B.

Click *Modify* to save the settings into the gateway, click *Reset* to restore the configurations, or click *Return* to cancel the settings.

3.7.5 Blacklist



Figure 3-99 Incoming Call Blacklist Interface

See Figure 3-99 for the Incoming Call Blacklist interface. You can designate certain numbers to limit corresponding calls to go into the gateway (calls from the gateway out as well as the SMS are unlimited). The table below explains the configuration items shown in the above figure:

Item	Description
Blacklist	Sets the number list to forbid certain calls to go into the gateway.
	Sets the processing mode for the calls from the numbers in the blacklist to the
Processing Mode	gateway, two options available: Hang up directly and Hang up after ringing, with the
	default value of <i>Hang up directly</i> .

Click Save to save the settings into the gateway, click Reset to restore the configurations.



3.7.6 SMS Count

Cteck	Port	Col Phone No	Max Places of SMB in a Cycle	Used Please of SVIS in a Cycle	Clear SMB Count	Nedty
a.:	9	13750845967	Unlimited	-		Q
-	2	13088242026	Unlimited			a
-	3	13082813431	Unlimited			0
-	4		United			0
1	5		Uniimited			i.
聑	6		Unlimited			(A
- 11	7		Unlinited			(A
10	8	_	Unanited			(A
10	9		Unimited			(A
10	10	-	Unimped	-		(A
10			Unimized			64
10	312		Unimited		-	1.8
10	(13		- University			64
10	14	-	Unimied		37	64
12	15	-	Linimited		-	64
	16	-	Unknuled	-	-	62

Figure 3-100 SMS Count Interface

See Figure 3-100 for the SMS Count interface, which displays such information as the maximum pieces of SMS in a cycle, the used pieces of SMS in a cycle as well as the clear operation. Click Modify for each port in Figure 3-100 to modify the SMS count settings. See Figure 3-101.

SMS	Count
Port	
SMS Amount Limit Max Pieces of SMS	Disable Enable
Count Cycle Clear	Month v 1st v 00 v 00 v
Apply to Other Ports	OPort OPort Group O1 0 02 03 04 05 06 07 08 O9 010 11 12 13 14 15 16
Modify Re	set

Figure 3-101 SMS Count Configuration Interface

The table below explains the configuration items shown in the above figure:

Item Description



Port	The number of the port corresponding to the wireless module.
SMS Amount Limit	Sets whether to enable the limit on the amount of SMS on a port.
Max Pieces of SMS	Sets the maximum amount of SMS.
Count Cycle	Sets the SMS counting cycle for the port
Clear	Sets the time node to clear the SMS count.
Apply to Other Ports	Sets whether to apply above settings to other ports or port groups.

Click *Modify* to save the settings into the gateway, click *Reset* to restore the configurations, or click *Return* to cancel the settings.

3.7.7 Auto Function

Set Features		
Port-to-port Call	☑Enable	line.
Min Call Duration		(S)
Max. Call Duration	<u> </u>	(S)
Auto Send SMS	Enable .	
SMS-1 (random)	Sorry, will call you later	
SMS-2 (random)	Tam busy now.	1
SMS-3 (random)	I can not come to the phone.	
SMS-4 (random)		
SfMS-5 (random)		
Set Conditions By Device Runtime	Enable	
Min. Runtime		(Min
Max Runtime	6	(Min
By Accumulated Call Duration	Enable	1
Accumulated Call Duration		(Min
By Amount of Consecutive Calls Out	Enable	-
Amount of Consecutive Calls Out		
Notes:1.When both features are enable 2 While setting conditions, do n well as the amount	led, the call goes first before the s of give a small value to the durat	

Figure 3-102 Auto Function Settings Interface

See Figure 3-102 for the Auto Function Settings interface. You can set via this interface to implement automatic calls and SMS from port to port in some special conditions. The table below explains the configuration items shown in the above figure:

Item Description



Port-to-port Call	When this feature is enabled, the gateway will make calls from port to port once the
	set condition is triggered.
Min. Call Duration	The minimum call time for the port-to-port call.
Max. Call Duration	The maximum call time for the port-to-port call.
	When this feature is enabled, the gateway will send SMS from port to port once the
Auto Send SMS	set condition is triggered.
	Once the feature Auto Send SMS is enabled, the gateway will choose one piece at
SMS-1 (random)	random from the set SMS to send.
	When this feature is enabled, as long as the device runtime reaches the set time,
By Device Runtime	the gateway will automatically enable the feature <i>Port-to-port Call</i> or <i>Auto Send</i>
-	SMS.
Min. Runtime	The minimum runtime of the device.
Max. Runtime	The maximum runtime of the device.
	When this feature is enabled, as long as the accumulated call time of a port reaches
By Accumulated	the set time, the gateway will make calls or send messages between this port and
Call Duration	its bound port.
Accumulated Call	The accumulated call time of a port. When it reaches or gets greater than the set
Duration	valu <mark>e</mark> , the feature <i>Port-to-por<mark>t C</mark>all</i> or <i>Auto Send SMS</i> will be triggered.
By Amount of	Wh <mark>en</mark> this feature is enabled, as long as the amount of consecutive calls out from a
Consecutive Calls	por <mark>t r</mark> eaches the set time, the gateway will make calls or send messages between
Out	this port and its bound port.
Amount of	Th <mark>e a</mark> mount of consecutive calls out from a port. When it reaches or gets greater
Consecutive Calls	than the set value, the feature <i>Port-to-port Call</i> or <i>Auto Send SMS</i> will be
Out	triggered.

Click Save to save the settings into the gateway, click Reset to restore the configurations.

3.7.8 Port Charge

Greck	Pat	Onli Phone No.	Right Rilling Cycle	First Filling Rate	Record Rilling Gyce	Second Rilling Rate	Total Fenerica	Spart Ancom	Gar.	No Release Alerta	Neck
ial .	1	15/5362462	1.6	0	35	i (axiat				14
8	2	10685242828	0.8		9.2	20	adant.				12
8	2	10682010431	6.0		- 97	10	astini.	-		-	0
8	- 4	-	11		0x:	4	fiel.ice		-	-	Q.
ш.,	5		6.6	0.0	0.5		no init	-	-:	-	14
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	(T)	2	£ 3	U	97	j.	ward.				G2
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6	-8	2	8 s	٥	3.5	3	tel.int	-	-	2	Q.
Ξ.	- 19	-	£ 5	.0	4.6	. 4	101 101	- 8	-	-	64
ш.	11	S	8.6	.0	3.5		mount				14
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ш.	-14	-	5.6	0	37	3	101.1011	77		-	14
	1.14		D S	D.	4.5	- 1	incore .				64



Figure 3-103 Port Charge Interface

See Figure 3-103 for the Port Charge interface, which displays such information as the first and second billing cycles and rates, the total expense, the spent amount of the call expense, the clear operation as well as the no balance alarm. Click Modify for each port in Figure 3-103 to modify the SMS count settings. See Figure 3-104.

Part	1	•
Dilling Limit	ODisable IIID	nable
First Billing Cycle	30s	
First Billing Rate	5	
Second Billing Cycle	15s	•
Second Billing Rate	1	
Max Charge	0	
Swhch to Other Card if no balance		
Billing Cycle	Month	•
Clear	1st • 00 •	100 -
Set Spent Amount	1	
No Balance Alarm	14 P	
Alarm Threshold	0	
Nam va SVS	1	(Separated by "/")
Alarm via Email	5	(Separated by "\")
Apply to Other Ports	SPort OPort C	
		03 - 04 - 05 - 08 - 07 - 00
	G-09-G-19-G	11 3 12 13 13 14 3 15 5 15

Figure 3-104 Call Billing Settings Interface

The table below explains the configuration items shown in the above figure:

Item	Description
Port	The number of the port corresponding to the wireless module.
Billing Limit	Sets whether to enable the cost limit on calls for a port.
First Billing Cycle	The first period of a call to charge, e.g. the first 1 minute.
First Billing Rate	The charge for the first period of a call, e.g. 5 yuan for the first 1 minute.
Second Billing	
Cycle	Each period after the first one of a call to charge
Second Billing Rate The charge for each period after the first one of a call	
Max Charge Sets the maximum charge for a call.	
Switch to Other	
Card if No Balance	Sets whether to switch the SIM card to another automatically if it has no balance.
Billing Cycle	Sets the billing cycle for the port.
Clear	Sets the time node to clear the charge.
Set Spent Amount	Sets the spent amount of call fees for the port.



No Balance Alarm	When this feature is enabled, the gateway will send an alarm once the balance in
NO Balance Alarm	the SIM card goes insufficient.
Alarm Threshold	Sets the threshold for the insufficient balance to send the alarm.
Alarm via SMS Alarm via Email	Sets the way to send the alarm information. The gateway can send the alarm information via both SMS and Email or either of them to the corresponding number or mailbox.
Apply to Other Ports	Sets whether to apply above settings to other ports or port groups.

Click *Modify* to save the settings into the gateway, click *Reset* to restore the configurations, or click *Return* to cancel the settings.

3.8 Port Settings

Port Settings includes two parts: *Port* and *Port Group*. See Figure 3-105.



3.8.1 Port

Date Use ly	Dett:				10.14.4 mp								
-Mean	Color 5 replacement	Other Rise	Echi Centralia	(1110300)	Coller 2 Standler	Fortik instantig Geli	Tale / Dulicong Ort	Excellence.	in Minitod	Generatio	teltionilosi comene i	SPAccord	f the T
2		-	Fu ve	Concer 4	The set	15 M	Field A		A 2.4	The Gay - T		901	1
14	D	- de	Fm in	they in A	Parate	0.4k	Trailer /		de Vijelan	Tree Alley 1		Marc	
2	1	(and	Pas ta	stray da d	Pa. 14	12.44	Citer 14		A Note	The Sig. 7		GEC 4.	2
2	5	a stille	Farm	a systemic	74.78	COLUMN .	14wiles		along Proba-	In No.		an /	1
9		-1201	Laite .	Uniqueers	ulite	District.	U 830 B	-	HEOR COMES	INCOME -		10.0	÷.
10		-1101	Laise		LINDA	UTION	1.030.0	-	-	ACCESS -	-	Rec	v.
1	-	0.990.0	Emps		One P	OHM	0.000.0	-	Miles Foote	Designed D	-	2004	1
14		Sall?	Far-r	In standard	Details.	12 Mar -	The state		A.V. etc.	fee day 1		9005	1

Figure 3-106 Port Settings Interface

See Figure 3-106 for the Port Settings interface. The list in the above figure shows the feature and properties of each port. Click *Modify* in Figure 3-106 to modify the properties of the corresponding port. See Figure 3-107 for the Port Modification interface.



Port	1 *
Register Port	Yes
SIP Account	8001
Password	
Connection Method	Static Binding •
Bound Number	9999999999
Echo Canceller	Enable .
Forbid Outgoing Call	DEnable
Forbid Ingoing Cali	DEnable
Caller ID Detection	in Enable €

The table below explains the configuration items on the port modification interface.

ltem	Description			
Port	Serial number of the port on the device.			
	Sets whether to register the port to the SIP server.			
De min (en De m	When this item is set to No, the item Reg Status on the Port Settings interface (Figure			
Register Port	3-106) shows Unregistered; when this item is set to Yes, the item Reg Status shows			
	Failed or Registered.			
	When the port initiates a call to SIP, this item corresponds to the username of SIP. The			
0/0 4	default SIP account is 80XX among which XX represents the corresponding port			
SIP Account	number. For example, the default SIP account corresponding to Port 1 is 8001, and			
	that corresponding to Port 8 is 8008.			
Decement	Registration password of the port. To register a port to the SIP server, both items SIP			
Password	Account and Password must be filled in.			

Figure 3-107 Port Modification



	Port connection	methods include:			
	Option	Description			
	Static Binding	Bind the number to a wireless port. The number will be listed in the Bound Number column.			
Connection Method	Two Stages Dialing Mode (default)	Under this mode, an incoming call from a wireless port will go into the IVR system. Then IVR will play a speech prompt "Please dial the extension number". If you fail to input the correct target number before IVR finishes the third repeat of the prompt, the port will hang up the call automatically; otherwise, the call goes out successfully.			
	Note: Both items Connection Method and Bound Number will be hidden if the SIP				
	Station feature is enabled on the SIP Settings interface.				
Echo Canceller		llation feature for a call conversation over the wireless channel. By ire is enabled and the effect can reach 128ms.			
Forbid Outgoing	If this feature is	enabled, the po <mark>rt will be forbidden to call out. The default setting is</mark>			
Call	disabled.				
Forbid Incoming	If this feature is	enabled, the port will be forbidden to call in. The default setting is			
Call	disabl <mark>e</mark> d.				
Caller ID Detection	If this feature is e default setting is	enabled, the po <mark>rt</mark> will detect the Caller IDs from the incoming calls. The <i>enabled</i> .			

After configuration, click **Modify** to save the settings into the gateway, click **Reset** to restore the configurations, or click **Cancel** to cancel the settings.

Or you can click **Batch Modify** in Figure 3-106 to modify several pieces of port settings at the same time. See Figure 3-108 below for the Port Batch Modification interface.



Starting Port	1	
Ending Port	16	
Register Port	Yes	
Starting SIP Account	(
Starting Authentication Password		
SIP Account Batch Rule	Increase	*
SIP Account Batch Step Size	1	
Authentication Password Batch Rule	Increase	
Authentication Password Batch Step Size	1	
Connection Method	Static Binding	
Bound Number		
Bound Number Step Rule	Increase	
Bound Number Step Size	1	
Echo Canceller	Enable	
Forbid Outgoing Call	Enable	
Forbid ingoing Call	Enable	
Caller ID Detection	Enable	
Echo Canceller Forbid Outgoing Call Forbid Ingoing Call	Enable Enable	

Figure 3-108 Port Batch Modification

Some configuration items on this interface are the same as those on the **Port Modification Interface**. The others are described in the table below.

Item	Description			
Starting Port	The starting serial number of the port on the device in the batch setting.			
Ending Port	The ending serial number of the port on the device in the batch setting.			
Register Port	Sets whether to register the port to the SIP server.			
Starting SIP Account	The starting SIP account in the batch setting.			
Starting Authentication Password	The starting authentication password in the batch setting.			
SIP Account Batch Rule	The rule for batch setting the SIP account, including <i>Increase</i> and <i>Decrease</i> two options.			
SIP Account Batch Step Size	Sets the increase or decrease step size of the SIP account in the batch setting.			
Authentication Password Batch Rule	The rule for batch setting the authentication password, including <i>Increase</i> ,			
	Decrease and All Same three options.			
Authentication Password Batch Step Size	Sets the increase or decrease step size of the authentication password in the batch setting.			



	It appears when the connection method is set to Static Binding, used to configure
Bound Number Step Rule	the step rule of the bound number in the batch setting, three options available:
	Increase, Decrease, Same.
Bound Number Step Size	It appears when the connection method is set to Static Binding, used to configure
Bound Number Step Size	the increase or decrease step size of the bound number in the batch setting,

After configuration, click *Save* to save the settings into the gateway, or click *Cancel* to cancel the settings.

3.8.2 Port Group

the dt	ince:	Description	SIP Account	Adhenication Usemania	Torta	PortSelectMode	Automication Mode	Register Status Server Indiet	Color Ring	Color Ring Index Hodit
1	1	cita I		CHICK HILL DE LA DECEMBRICA DE LA	1234		tio Holiterpoles	Uncyakist	Unite	9
-		(n	(n	24		411				14

Figure 3-109 Port Group Settings Interface

See Figure 3-109 for the port group settings interface. A port group is a set containing single or multiple ports, used to specify such properties as *Port Selection* and *Authentication Mode* for all the ports in it. A new port group can be added by the *Add New* button on the bottom right corner of the above list. See Figure 3-110 for the port group adding interface. Note that a port which has been occupied by one port group cannot be chosen by others.

Index	2
Description	default
Register Port Group	YES
SIP Account	
Password	
Authentication Usemame	
Server Index	1201.123.115.12
Authenflication Mode	Do Not Register
Port Salect Mode	Group Ringing
Color Ring	[☑Enable
Color Ring Index	1
Port	Port 1(WCDMA) Port 2(WCDMA) Port 3(WCDMA) Port 4(WC Port 5(WCDMA) Port 6(WCDMA) Port 7(WCDMA) Port 8(WC
	Check All Inverse

Figure 3-110 Add New Port Group



The table below explains the items in the above figure.

ltem		Description				
Index	The unique index of ea	ach port group, which is mainly used in the configuration of				
mdex	routing rules and numb	er manipulation rules to correspond to port groups.				
Description	More information about	t each port group, with default value of default.				
Pagiatar Part Crown	To register the port grou	up to the SIP server. Only when this configuration item is set				
Register Port Group	to Yes can you see the configuration items <i>SIP Account</i> and <i>Password</i> .					
	When the port group initiates a call to SIP, this item corresponds to the username of					
SIP Account	SIP.					
Decement	Registration password	of the port group. To register the port group to the SIP server,				
Password	both configuration item	s <i>SIP Account</i> and <i>Password</i> should be filled in.				
	Authentication usernam	ne of a port, used to register the port to the SIP server when				
Authentication	IMS network is enabled.					
Username	Note: This item appea	ars only when IMS Network is enabled.				
Server Index	The index of the sip se	rver which will be quoted by the current port.				
	Sets the way for SIP to	make <mark>ou</mark> tgoing calls (Tel→IP) on the gateway.				
	Option	Description				
	Do Not Register	SIP in <mark>iti</mark> ates a call in a point-to-point mode.				
Authentication	(d <mark>e</mark> fault)					
Mode		SIP initiates a call with the registered SIP account and				
	Register Port Group	password of the port group.				
		SIP initiates a call with the registered SIP account and				
	Register Port	password of the port.				
	Registration status of	the port group. See Figure 3-109. When Register Port				
Register Status	Group is set to No, th	ne value of this item is Unregistered; when Register Port				
	Group is set to Yes, the	e value of this item may be Failed or Registered.				



	When the port group re	eceives a call, it will choose a port based on the select mode	
	set by this configuration	on item to ring or to connect. The optional values and their	
	corresponding meanin	gs are described in the table below.	
	Option	Description	
		Search for an idle port in the ascending order of the port	
	Increase (default)	number, starting from the minimum. If no match is found,	
		search repeatedly until finding a port which is allowed to	
		enter the call waiting state.	
		Search for an idle port in the descending order of the port	
	Decrease	number, starting from the maximum. If no match is found,	
	Decrease	search repeatedly until finding a port which is allowed to	
Port Select Mode		enter the call waiting state.	
		Provided Port N is the available port found last time.	
		Search for an idle port in the ascending order of the po	
	Cyclic Increase	number, starting from Port N+1. If no match is found,	
		search repeatedly until finding a port which is allowed to	
		enter the call waiting state.	
		Provided Port N is the available port found last time.	
		Searc <mark>h</mark> for an idle port in the descending order of the por	
	C <mark>yc</mark> lic Decrease	number, starting from Port N-1. If no match is found,	
		search repeatedly until finding a port which is allowed to	
		enter the call waiting state.	
	G <mark>rou</mark> p Ringing	Ring all the idle wireless ports in this port group.	
	Sets whether to enable	e the color ring feature or not, with the default setting of being	
Color Ring	disabled.		
	Note: Only when there	e are available color rings and the "Port Select Mode" is set to	
	Grouping Ringing will t	his item appear.	
Color Ring Index	The index of the color	ring which is quoted by the current wireless port.	
	The ports in the port gr	roup. If the checkbox before a port is grey, it indicates that the	
Port	port is not available or	has been occupied. All selected ports for a port group will be	
	displayed in the Ports	column in Figure 3-109. Note: When a port group contains	
	multiple ports, the auto	omatic call forward feature is invalid.	

After configuration, click **Save** to save the settings into the gateway, click **Cancel** to cancel the settings. **Check All** means to select all available ports on the current page; **Inverse** means to uncheck the selected items and check the unselected.

Click *Modify* in Figure 3-109 to modify the properties of a port group. See Figure 3-111 for the Port Group Modification interface. The configuration items on this interface are the same as those on the *Add New Port Group* interface.



Description	default	
Register Port Group	No	~
Authentication Mode	Do Not Register	~
Port Select Mode	Increase	*
Port	Port 1(GSM) Port 2(GSM) Port 3(GS Port 5(GSM) Port 6(GSM) Port 7(GS	
	Check All Inverse	

Figure 3-111 Modify Port Group

To delete a port group, check the checkbox before the corresponding index in Figure 3-109 and click the '*Delete*' button. *Check All* means to select all available items on the current page; *Uncheck All* means to cancel all selections on the current page; *Inverse* means to uncheck the selected items and check the unselected. To clear all port groups at a time, click the *Clear All* button in Figure 3-109.

3.9 Route Settings

Route Settings is used to specify the routing rules for calls on two directions: $IP \rightarrow Tel/IP$ and $Tel \rightarrow IP$. See Figure 3-112.



3.9.1 Routing Parameters

P->TEL/IP	Route before Number Manipulate
EL⇒IP	Roule before Number Manipulate

Figure 3-113 Routing Parameters Configuration Interface



See Figure 3-113 for the routing parameters configuration interface. On this interface, you can set the routing rules for calls respectively on two directions $IP \rightarrow Tel/IP$ and $Tel \rightarrow IP$ to be routing before or after number manipulation. The default value is *Route before Number Manipulate*.

After configuration, click **Save** to save the above settings into the gateway.

3.9.2 IP to Tel/IP

Dperation info	8	Standard Mode Character Node	
📑 Quick Config	×		
式 VaP	\$		
Manced	*		No available routing rule!
Mireless	8		auto file-en
🕐 Port	8		
C Route	8		
Routing Farame	ters		
PereMP	-		
Tal-> P			

Figure 3-114 IP→Tel/IP Routing Rule Configuration Interface (Standard)

See Figure 3-114 for the IP \rightarrow Tel/IP routing rule configuration interface. By default, there is no available routing rule on the gateway. The IP \rightarrow Tel/IP routing rule configuration has two modes: Standard and Character.

Under the Standard mode, click *Add New* to add them manually. See Figure 3-115. You may use the default values of all the configuration items herein.

IP->Tel/IP Rout	ing Rule
Index:	63 🛩
Description	default
Source IP:	
CallerID Prefix.	
CalleeID Prefix	T
Route by Number	Enable
Call Destination:	Fort Group 💌
Destination Port Group	1
Save	Close

Figure 3-115 Add New Routing Rule (IP→Tel/IP)



The table below explains the items shown in the above figure.

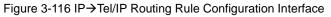
Item	Description
Index	The unique index of each routing rule, which denotes its priority. A routing rule with a smaller index value has a higher priority. If a call matches several routing rules, it
	will be processed according to the one with the highest priority.
Description	More information about each routing rule, with the default value of <i>default</i> .
Source ID	IP address from where the call is initiated. This item can be set to a specific IP
Source IP	address or "*" which indicates any IP address
CallerID Prefix, CalleeID Prefix	A string of characters at the beginning of the caller/called party number. It can be a specific string consisting of digits 0~9, 、 "[*]", "#" or character ranges defined by []. '[]' represents a character within the range it defines. Values in [] only can be characters '0~9', "[*]", "#", punctuations '-' and ','. ('-' is used between two characters to indicates any character between these two characters. ',' is used to separate characters or character ranges, representing alternatives.) For example, 057[1-3,6] represents the string 0571, 0572, 0573 or 0576. Also these items can be set to "*" which indicates any string. These two configuration items together with Source IP specify a routing rule for calls. Note: "[*]" represents TFM symbol *, while "*" represents any string; Multiple CallerID/CalleeID prefixes can be added simultaneously. They are separated by ":".
Route by Number	When this feature is enabled, the gateway will route a call from IP to a corresponding port based on its number. And the number of the port which this call will be routed to can be set via the item <i>SIP Account</i> on the Port Settings interface. In such case, the configuration item <i>Call Destination</i> goes invalid and shows Route by Number on the routing rule configuration interface. The default setting is <i>disabled</i> .
Call Destination	Designate a port group or an IP for the call to route.
Destination Port Group	Port group to which the call will be routed.
Destination IP, Destination Port	The IP address and port to which the call will be routed.

After configuration, click *Save* to save the settings into the gateway or click *Close* to cancel the settings.

See Figure 3-116 for the IP→Tel/IP routing rule configuration interface after your configuration. There is a rule displayed with Index 63 and Call Destination 'Route by Number', having no restriction on Source IP, CallerID Prefix and CalleeID Prefix, which indicates the gateway will route a call from any IP address to a corresponding port based on its number.

Press the *Add New* button on the bottom right corner of the list to add a new routing rule.

				Porter P Routing Rule			
0120	Inter	Source P	CONTROL PIETR	Callero Arpha	Call Destination	Costator on	HOOR
	33	14	÷		Raine by humber	dehut	Q.





Click **Modify** in Figure 3-116 to modify a routing rule. The configuration items on the IP \rightarrow Tel/IP routing rule modification interface are the same as those on the **Add New Routing Rule** (IP \rightarrow Tel/IP) interface. Note that the item **Index** cannot be modified.

To delete a routing rule, check the checkbox before the corresponding index in Figure 3-116 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all routing rules at a time, click the **Clear All** button in Figure 3-116.

See Figure 3-117 for the IP \rightarrow Tel/IP Routing Rule Configuration Interface under the Character mode. You can edit the routing rule list to add a new one or modify an old one. The exact meaning of each element of the rule is described on the page.

Ganda d Hook Ginasolan Node		
and a subscription of the	dis-stant months in	UE CONTRACTOR OF A CONTRACTOR OF
The provide designables from the second seco	some to reaction is enabled, when it is static if and the stream - on a	nter, Ocshawar Pol Group and Ocsenptor. Sorthe to as its Tille Desirrator Pol Group to analysis When the selfs S and State 5 of to 1, the Pile encoded Besides, the Pile decaded the desirrator P and
*** fl O default fl O		
1 ftmTvt		
	Can I	

Figure 3-117 IP→Tel/IP Routing Rule Configuration Interface (Character)

3.9.3 Tel to IP

Operation Info	8	Standard Noce Chara	etter Wode	
😅 Guick Config	*			
NoiP	8			
Advanced				No available routing rul
🔅 Vireless	\$			Apd New
(i) Port	8			
Route	8			

Figure 3-118 Tel→IP Routing Rule Configuration Interface (Standard)

See Figure 3-118 for the Tel \rightarrow IP routing rule configuration interface. By default, there is no available routing rule on the gateway. The Tel \rightarrow IP routing rule configuration has two modes: Standard and Character.

Under the Standard mode, click *Add New* to add them manually. See Figure 3-119. You may use



the default values of all the configuration items herein except for **Destination IP** and **Destination Port**.

Index:	63 💌
Description:	default
Source Port Group:	2
CallerID Prefix:	•
CalleelD Prefix	•)
Destination IP:	
Destination Port	5060
Save	Close

Figure 3-119 Add New Routing Rule (Tel→IP)

The table below explains the items shown in the above figure.

Item	Description
Index	The unique index of each routing rule, which denotes its priority. A routing rule with a smaller index value has a higher priority. If a call matches several routing rules, it will be processed according to the one with the highest priority.
Description	More information about each routing rule, with the default value of <i>default</i> .
Source Port Group (Call Initiator)	Port group from which the call is initiated. This item can be set to a specific port group or '*' which indicates any port group.
CallerID Prefix, CalleeID Prefix	A string of characters at the beginning of the caller/called party number. It can be a specific string consisting of digits 0~9, "[*]", "#" or characters ranges defined by []. '[]' represents a character within the range it defines. Values in [] only can be digits '0~9', "[*]", "#", punctuations '-' and ','. ('-' is used between two characters to indicates any characters between these two characters. ',' is used to separate characters or characters ranges, representing alternatives.) For example, 057[1-3,6] represents the string 0571, 0572, 0573 or 0576. Also these items can be set to "*" which indicates any string. These two configuration items together with Source Port Group (Call Initiator) specify a routing rule for calls. Note: "[*]" represents DTFM symbol *, while "*" represents any string; Multiple CallerID/CalleeID prefixes can be added simultaneously. They are separated by ":".
Destination IP, Destination Port	IP address and port number of the remote end to which the call will be routed.



After configuration, click *Save* to save the settings into the gateway or click *Close* to cancel the settings.

See Figure 3-120 for the Tel \rightarrow IP routing rule configuration interface after your configuration. There is a rule displayed with Index 63, Destination IP '192.168.1.101' and Destination Port '5060' (i.e. default IP address and port of the gateway), having no restriction on Call Initiator, CallerID Prefix and CalleeID Prefix, which indicates all the outgoing calls from Tel which conform to the dialing rule will be routed to the gateway.

steer	Index	Collegary	C31210 F1211	Calcelo State	Decimation IF	Destination For	(Description)	Freeh
П	53		#17	4	192 108 1 101	.5050	delvite	1 02

Figure 3-120 Tel→IP Routing Rule Configuration Interface

Click **Modify** in Figure 3-120 to modify a routing rule. The configuration items on the Tel \rightarrow IP routing rule modification interface are the same as those on the **Add New Routing Rule (Tel\rightarrowIP)** interface. Note that the item **Index** cannot be modified.

To delete a routing rule, check the checkbox before the corresponding index in Figure 3-120 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all routing rules at a time, click the **Clear All** button in Figure 3-120.

See Figure 3-121 for the Tel \rightarrow IP Routing Rule Configuration Interface under the Character mode. You can edit the routing rule list to add a new one or modify an old one. The exact meaning of each element of the rule is described on the page.



Figure 3-121 Tel→IP Routing Rule Configuration Interface (Character)

3.10 Number Manipulation

Number Manipulation includes four parts: $IP \rightarrow Tel/IP$ CallerID, $IP \rightarrow Tel/IP$ CalleeID, $Tel \rightarrow IP$ CallerID and $Tel \rightarrow IP$ CalleeID. See Figure 3-122.





Figure 3-122 Number Manipulation

3.10.1 IP to Tel/IP CallerID

Uperator into	*	Descendilions, Chavers linds
S Caleb Config	*	
🗃 war	8	
Advanced		No available number manipulation rule!
🐮 Wislass	*	- 2000 cm
S Configuration	8	
() Part		
E Sare	×	
Ban Narquistr	*	
PATAPPATAD PATAPPATAD	_	
Tel-IP Calido Tel-IP Calego		

Figure 3-123 IP→Tel/IP CallerID Manipulation Interface (Standard)

See Figure 3-123 for the IP \rightarrow Tel/IP CallerID manipulation interface under the Standard mode. A new number manipulation rule can be added by the *Add New* button on the bottom right corner of the list in the above figure. See Figure 3-124 for the IP \rightarrow Tel/IP CallerID manipulation rule adding interface. You may use the default values of all the configuration items herein.



Index:	63 💌	
Description:	default	
Call Initiator:	•	
CallerID Prefix.		
CalleelD Prefix:	x	
Stripped Digits from Left	0	
Stripped Digits from Right	0	
Reserved Digits from Right	0	
Prefix to Add.		
Suffix to Add:		

Figure 3-124 Add IP→Tel/IP CallerID Manipulation Rule

The table below explains the items shown in the above figure.

ltem	Description
	The unique index of each number manipulation rule, which denotes its priority. A
Index	number manipulation rule with a smaller index value has a higher priority. If a call
Index	matches several number manipulation rules, it will be processed according to the
	one with the highest priority.
Description	More information about each number manipulation rule, with the default value of
Description	default.
Call Initiator	IP address from where the call is initiated. This item can be set to a specific IP
Call Initiator	address or "*" which indicates any IP address.



	A string of characters at the beginning of the caller/called party number. It can be a
	specific string consisting of digits 0~9, "[*]", "#" or character ranges defined by []. '[]'
	represents a character within the range it defines. Values in [] only can be digits
	'0~9', "[*]", "#", punctuations '-' and ','. ('-' is used between two characters to
	indicates any character between these two characters. ',' is used to separate
CallerID Prefix,	characters or character ranges, representing alternatives.) For example, 057[1-3,6]
CalleeID Prefix	represents the string 0571, 0572, 0573 or 0576. Also these items can be set to "*"
	which indicates any string. These two configuration items together with Call
	<i>Initiator</i> specify a number manipulation rule for calls.
	Note: "[*]" represents DTFM symbol *, while "*" represents any string; Multiple
	CallerID/CalleeID prefixes can be added simultaneously. They are separated by ":".
	The amount of digits to be deleted from the left end of the number. If the value of
Stripped Digits from	this item exceeds the length of the current number, the whole number will be
Left	deleted.
	The amount of digits to be deleted from the right end of the number. If the value of
Stripped Digits from	this item exceeds the length of the current number, the whole number will be
Right	deleted.
	The amount of digits to be reserved from the right end of the number. Only when the
Reserved Digits	value of this item is less than the length of the current number will some digits be
from Right	deleted from left; otherwise, the number will not be manipulated.
Prefix to Add	Designated information to be added to the left end of the current number.
Suffix to Add	Designated information to be added to the right end of the current number.

Note: The number manipulation is performed in 5 steps by the order of the following configuration items: *Stripped Digits from Left, Stripped Digits from Right, Reserved Digits from Right, Prefix to Add* and *Suffix to Add*.

After configuration, click **Save** to save the settings into the gateway or click **Close** to cancel the settings. See the figure below.

					PSTHIP Cale1D N III	her Manipulathin Rule				
Cresk	indes	Call Initialize	Called D Profe	Calify D Prefy	Stream Disk from Left	Stripand Tuple from Bight	Researed Dight Item Right	Prefets Add	S Parts Add	, P
12	83		- ÷.	10 e	0	0 _ 0	0		9	Г
-										
Check	1	Unstreck All	inerte	EASTER	Civital				And New	

Figure 3-125 IP→Tel/IP CallerID Manipulation Interface (Standard)

Click **Modify** in Figure 3-125 to modify a number manipulation rule. See Figure 3-126 for the IP \rightarrow Tel/IP CallerID manipulation rule modification interface. The configuration items on this interface are the same as those on the **Add IP\rightarrowTel/IP CallerID Manipulation Rule** interface. Note that the item **Index** cannot be modified.



Index:	63 💌
Description:	default
Call Initiator:	. • :
CallerID Prefix:	*
CalleelD Prefix:	
Stripped Digits from Left	0
Stripped Digits from Right	0
Reserved Digits from Right	0
Prefix to Add.	
Suffix to Add:	

Figure 3-126 Modify IP→Tel/IP CallerID Manipulation Rule

To delete a number manipulation rule, check the checkbox before the corresponding index in Figure 3-125 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all number manipulation rules at a time, click the **Clear All** button in Figure 3-125.

See Figure 3-127 for the IP \rightarrow Tel/IP CallerID Manipulation Interface under the Character mode. You can edit the number manipulation rule list to add a new one or modify an old one. The exact meaning of each element of the rule is described on the page.



Stadawikeen Charadeleeen	
and the second se	P sTetP CalerD Kunter Nongoolan Ride
Galler and Description The prior is described from tag to believe; it, or twell, the re-	en Gallin Bater, Calver D Prels, Calver D Prels, Delan Digits franzi af Delah Digits fran Right, Basew Digits fran Right, Add Prels, Add Linelli De Issachetis fra end after you di ce Valdi Preusevenita increase its proste, substa cape ista fra conceptation por lina In Bater, Calver D Prels and Calver D Prels indicates any story. Symbol 1994: In Add Prels and Add Safe dendae no. Is add t
***UOU-s≹‡4:-<\$\$#-default	
ff2:9(xa	Town

Figure 3-127 IP→Tel/IP CallerID Manipulation Interface (Character)

3.10.2 IP to Tel/IP CalleeID

The number manipulation process for IP \rightarrow Tel/IP CalleeID is almost the same as that for IP \rightarrow Tel/IP CallerID; only the number to be manipulated changes from CallerID to CalleeID. See Figure 3-128, Figure 3-129 for IP \rightarrow Tel/IP CalleeID Manipulation interface. The configuration items on this interface are the same as those on IP \rightarrow Tel/IP CallerID Manipulation Interface (Figure 3-125).

States and Mode	03350771933			P STel P CaleelD hur	ber Marip Jation Rule		3	
Crast Index	On Instator	Collectio Aretha	ON YOU PWEY	Supret Distant At	Surrey Constan Sign	Beenhod Distertory Right	Profile Territory	Sittere Add De
E 15	14	14	2.4	0				
¢)						. lo		>
and the second se			all comments	ukor (8 gel 💌 Theper Tota		CO.		acton.

Figure 3-128 IP→Tel/IP CalleeID Manipulation Interface(Standard)



	IP : TeVP Ostee 0 Number Manipulation Price
ne i the public exception will contain and leads as to Reard Deputylon	tal Indiana Calend Polis, Calend Parth, Dalen Digitations Left Dalen Digitation Right, Sweete Digitation Right, Add Polis, A
	In the inserted table and after real click to dat. In our want to increase its anony, please copy the the corresponding position
	tor, Celler D Preib and Celles D Preiblind balas any sing; Spribal +Qeb is Add Preib and Add Suffic denoise notioned
ontheraphic save the control abor after your modification.	
and the second	
*** 0 0 0 < %4> < %4> default	
INFO LODA	
100 100	
	0.0

Figure 3-129 IP→Tel/IP CalleeID Manipulation Interface (Character)

3.10.3 Tel to IP CallerID

	-				Tel HP Calesto V Imp	er Manipulation Rule			
Cheer	(155)	Catellys:	Calife D PMIN	Colorid Bridg	Stopped Digits from Laft	Stepped Diols from Right	Receives (10), that Fight	Professional	Ratio Add 0
	43				2	a (3		
e		15. 14	NG VI						
Checky	0	Childreester	Incise	- ACCORDE	COLUMN .			6	ACCESS.

Figure 3-130 Tel→IP CallerID Manipulation Interface (Standard)

See Figure 3-130 for the Tel \rightarrow IP CallerID manipulation interface under the Standard mode. A new number manipulation rule can be added by the **Add New** button on the bottom right corner of the list in the above figure. See Figure 3-131 for the Tel \rightarrow IP CallerID manipulation rule adding interface. You may use the default values of all the other configuration items herein.



Index:	63	~
Description	defaul	E.
Source Port Group:	*	~
CallerID Prefix:		
CalleeID Prefix.	.*	
Stripped Digits from Left	0	
Stripped Digits from Right	0	
Reserved Digits from Ri <mark>gh</mark> t	0	
Prefix to Add.		
Suffix to Add:		

Figure 3-131 Add Tel→IP CallerID Manipulation Rule

The table below explains the items shown in the above figure.

ltem	Description
	The unique index of each number manipulation rule, which denotes its priority. A
Indox	number manipulation rule with a smaller index value has a higher priority. If a call
Index	matches several number manipulation rules, it will be processed according to the
	one with the highest priority.
Description	More information about each number manipulation rule, with the default value of
Description	default.
Source Port Group	Port group from which the call is initiated. This item can be set to a specific port
(Call Initiator)	group or '*' which indicates any port group.
	A string of characters at the beginning of the caller/called party number. It can be a
	specific string consisting of digits 0~9, "[*]", "#" or character ranges defined by []. '[]'
CollerID Drefin	represents a character within the range it defines. Values in [] only can be digits
CallerID Prefix,	'0~9', "[*]", "#", punctuations '-' and ','. ('-' is used between two characters to indicate
CalleeID Prefix	any character between these two characters. ',' is used to separate characters or
	character ranges, representing alternatives.) For example, 057[1-3,6] represents
	the string 0571, 0572, 0573 or 0576. Also these items can be set to "*" which



	indicates any string. These two configuration items together with <i>Call Initiator</i> specify a number manipulation rule for calls. Note: "[*]" represents DTFM symbol *, while "*" represents any string; Multiple CallerID/CalleeID prefixes can be added simultaneously. They are separated by ":".
Stripped Digits from Left	The amount of digits to be deleted from the left end of the number. If the value of this item exceeds the length of the current number, the whole number will be deleted.
Stripped Digits from Right	The amount of digits to be deleted from the right end of the number. If the value of this item exceeds the length of the current number, the whole number will be deleted.
Reserved Digits from Right	The amount of digits to be reserved from the right end of the number. Only when the value of this item is less than the length of the current number will some digits be deleted from left; otherwise, the number will not be manipulated.
Prefix to Add Suffix to Add	Designated information to be added to the left end of the current number. Designated information to be added to the right end of the current number.

Note: The number manipulation is performed in 5 steps by the order of the following configuration items: *Stripped Digits from Left, Stripped Digits from Right, Reserved Digits from Right, Prefix to Add* and *Suffix to Add*.

After configuration, click **Save** to save the settings into the gateway or click **Close** to cancel the settings.

Click **Modify** in Figure 3-130 to modify a number manipulation rule. See Figure 3-132 for the Tel \rightarrow IP CallerID manipulation rule modification interface. The configuration items on this interface are the same as those on the **Add Tel** \rightarrow IP CallerID Manipulation Rule interface. Note that the item **Index** cannot be modified.



Index:	63 💌	
Description:	default	
Source Port Group:	*	
CallerID Prefix:	•	
CalleeID Prefix:	8	
Stripped Digits from Left	0	
Stripped Digits from Right	0	
Reserved Digits from Right	0	
Prefix to Add.		
Suffix to Add:		

Figure 3-132 Modify Tel→IP CallerID Manipulation Rule

To delete a number manipulation rule, check the checkbox before the corresponding index in Figure 3-130 and click the **Delete** button. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all number manipulation rules at a time, click the **Clear All** button in Figure 3-130.

See Figure 3-133 for the Tel \rightarrow IP CallerID Manipulation Interface under the Character mode. You can edit the number manipulation rule list to add a new one or modify an old one. The exact meaning of each element of the rule is described on the page.



Standard Mada Constant Month

 The LPL Control Number March I Brow

 Inter The Landson Service Access Services ware both the Reverse Services, Calced Direct, Dates Direct Date, State Reverse Direct Access Technique, Calced Direct Date, Calced Direct Date, State Direct Date, State Reverse Direct Access Technique, Calced Direct Date, Calced Direct Date, State Direct Date, State Reverse Direct Access Technique, Calced Direct Date, State Direct Date, State Reverse Direct Access Technique, Calced Direct Date, State Direct Date, State Reverse Direct Access Technique, Calced Direct Date, State Direct Date, S

Figure 3-133 Tel→IP CallerID Manipulation Interface (Character)

3.10.4 Tel to IP CalleeID

The number manipulation process for Tel \rightarrow IP CalleelD is almost the same as that for Tel \rightarrow IP CallerID; only the number to be manipulated changes from CallerID to CalleeID. See Figure 3-134, Figure 3-135 for the Tel \rightarrow IP CalleeID manipulation interface. The configuration items on this interface are the same as those on **Tel\rightarrowIP CallerID Manipulation Interface** (Figure 3-130).

		Consideration			Te SP Calest Lurb	er Vanpilator Rule		
Cheer	(151)	Calinative	Calife D Prets	Colorid Roots	Strepped Digits from list	Support Distance Roam	Freedowing (Lightschart Flight Productive	A Butto Add 1 O
	41			1.4	, a	3	1 . O	
Galeria A	0 - 1	COLLECTION -	Incise	SHUTTER -	N. KARD			ACCIEN.

Figure 3-134 Tel→IP CalleeID Manipulation Interface (Standard)

Standard Mass Character Mann	
Second	Ter > P Cales D humber Wanpulaton Sule
Traft, Add Sulf's and Description	cindicalas any along figmani egges in Add Trefts and add faill's devolas not in add .
0 * * 0 0 0 ×@#* ×@#* domuit	
1 45X 10X	
	See.



Figure 3-135 Tel→IP CalleeID Manipulation Interface (Character)

3.11 System Tools

System Tools is mainly for gateway maintenance. It provides such features as change password, data backup and connectivity check. See Figure 3-136 for details.





3.11.1 Upgrade

· · · · · ·	1.000	Version
Serial Num	16873	
WEB	Version 1.8.0_201710	1109
Service	Version 1.8.0_201710	01109
FPGA	Version 2.05	
U-boot	Version Aug 18 2016	-06:40:25
Kernel	Version #233 Tue Jar	10 14:45:17 CST 2017
Device Type		
Select an Up	pdate File	Browse
Select an U	poate File	[Diowse]
	e make sure to update	the WEB package before the Fi

Figure 3-137 Upgrade Interface

See Figure 3-137 for the upgrade interface where you can upgrade the WEB, gateway service, kernel and firmware to new versions. Select the upgrade package "*.tar.gz" (The gateway will do MD5 verification before upgrading and will not start to upgrade until it passes the verification.) via **Browse...** and click **Update**. Then the file uploading interface will appear. See Figure 3-138.



1	Current Version
Serial Num	16873
WEB	Version 1.8.0_2017101109
Service	Version 1.8.0_2017101109
FPGA	Version -1
U-boot	Version Aug 18 2016-06:40:25
Kernel	Version #233 Tue Jan 10 14:45:17 CST 2017
Device Type	
	46% 2015kb/s
The file i	s uploading. Please do not leave this pagel Upgrade Information

Figure 3-138 File Uploading Interface

After a successful uploading of the file, the gateway will start to upgrade the system. See Figure 3-139 and you can learn the detailed upgrading information from the upgrade information box at the bottom.



	Current Version
Serial Num	16873
WEB	Version 1.8 0_2017101109
Service	Version 1.8.0_2017101109
FPGA	Version 2.05
U-boot	Version Aug 18 2016-06:40:25
Kemel	Version #233 Tue Jan 10 14:45:17 CST 2017
Device Type	
	Upload completion
	18%
System	18% updating, please do not leave this page! Upgrade Information
System	updating, please do not leave this page! Upgrade Information
250	updating, please do not leave this page! Upgrade Information
3]: kill common	updating, please do not leave this page! Upgrade Information
3]: kill common fonitor pid=	updating, please do not leave this page! Upgrade Information
3]: kill common 1onitor pid= 3vr pid=	updating, please do not leave this page! Upgrade Information
3]: kill common 1onitor pid= 3vr pid=	updating, please do not leave this page! Upgrade Information
3]: kill common fonitor pid= Svr pid= vr pid=966	updating, please do not leave this page! Upgrade Information
3]: kill common Ionitor pid= Svr pid= vr pid=966 all DbgSvr	updating, please do not leave this page! Upgrade Information

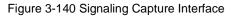
Figure 3-139 System Upgrading Interface

Note that clicking *Reset* can only delete the selected update file but not cancel the operation of *Update*.

Note: Please contact our technicians if you need to downgrade the gateway to an old version. An improper operation may cause unexpected problems.

3.11.2 Signaling Capture

-		Packet Capture		
	Signaling Packet Capture	SP\$Sidog8Cent +		
	R1P Packet Capture	RTP Port Range + 50000 50767	\$960	Download
		Note: Only latest 50M capture data will be se	word.	



See Figure 3-140 for the Signaling Capture interface. Packet capture contains Signaling Packet



Capture, RTP Packet Capture. You can select either of them to start the capture according to your requirement. Click *Start* to start capturing packets. Click *Stop* to stop the capture. Click *Download* to download the captured packets.

3.11.3 Data Recording

Recording Port	Port1	 Start	Download
Recording Pon	Port	 onen	- Dew noes

Figure 3-141 Data Recording Interface

See Figure 3-141 for the Data Recording interface. Click *Start* to start the recording. Click *Stop* to stop the recording. Click *Download* to download the recorded data.

3.11.4 Call Log

Statutes SPire	Elevante Calification	Dentes		(testamentes)
Sal forn P Chanad Mini ord 7 (Con 2792)	P Charge (Quissening call in	m verzie ezz "133867 -egrifeset (533 115 1	179-, willer s77 wirdeste Sebalitigen an Tustt, platest ander a	Ote A
+[
0100600071000037074 0100620171024072021 010062017102407203 010062017102407203 010062017102407205	Analog Channel (20 Calerity Analog Channel (22 Calerity Analog Channel (22 Autgoin Analog Channel (22 Autgoin Analog Channel (22 Author	na záros mineri – veldezi erazár (* 1416) ez Czalogia a sistem 19908– * 10008 mazár (* 1411) * Calmat szályadot ző hecsz	D Hansadas rula	Canval
4 5				

Figure 3-142 Call Log Interface



CN 170 SRIVE	
P Lu	Harester Course
04H06201710-20~6×82 Hexagon sendin: 201123117-206642	4
Bris Sau 100859291 123 115 35 3549 5Hz 0 Ver SINS 0400 201 123 115 175 5553 branch t29554bK1016477573gpcm	
Hone Hars 100696201.122.115.115.115.1154.300-1812/89.020 Ter 1100051 wild 1000689201.120.115.1754 big-16.04.259	1
CONDERVACION CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR C	
Contract - separations generated the net relation- Max Contracts, 70	
Unit Agent Caleway Content Length D	
rident dör 47 mil dörvisintasis – Maanataa tavasi vaai baan 201 ditta dinta 100 ditta.	
GH2292000K My SBRS (ALDP 201122111-175-0000 transf) 2850/tb/1910/1778/typer 1000	
san alexa bisile and iza ni ni anti sea pone anti den den anti en antiper i sua. Contadi, vap.10088gg201122, 115,158,0549- Ter 10081/valerinningg201127,115,758-92, Salthata	
hans, Yua, 10008(201,122,115,172,109,180,112,00,09) CMFD: 54553500:225500(2010) TVSTU(008720872)	
CSAL 2515 User-Agent spelleen AudoOnipreisses 2015 salenp 27100	
Content Landh D	
01/16/2017 16 24 37/212 Heasage reasived from 201 123 115 35 0545	
NATE SID 100-AGENT 122 110 170 SIM2 0 Yaz SID 2 0UDP 201, 123 115 26 0640 branch-2815-106-07543-510(S012)22451-1007543-500	

Figure 3-143 SIP Log Interface

See Figure 3-142, Figure 3-143 for the Call Log interface. Click the checkbox before *Enable Call Log* to enable the call log feature, including *Call Log* and *SIP Log*. *Call from IP Channel* displays the call log information generated on all IP channels, and *Call from Port* displays the call log information generated on the port you select. All the SIP related information will be displayed in *SIP Log*.

3.11.5 Operation Log

Operation Log	2
2017-04-26 18:26 34 IP 201.123.115.138 [SaxeSysConlig] SetTeinet TeinePort SetBysh: SarPort SetByshig 0 APEnable 0	
telever Clear AL Extension	

Figure 3-144 Operation Log Interface



See Figure 3-144 for the Operation Log interface, which is used to check the operation records on WEB. Click **Refresh** to refresh the log; click **Clear All** to clear all the operation logs and click **Download** to download the logs. The operation log will be automatically cleared once the system restarts.

Note: The sign <@#> here means the configuration item is null.

3.11.6 Change Password

Change Pa	ssword
Current Usemame	acimin
Current Password	
New Username	
New Password	
Confirm New password	
Save	Reset

Figure 3-145 Password Changing Interface

See Figure 3-145 for the password changing interface where you can change username and password of the gateway. Enter the current password, the new username and password, and then confirm the new password. After configuration, click **Save** to apply the new username and password or click **Reset** to restore the configurations. After changing the username and password, you are required to log in again.

3.11.7 Backup & Upload

To backup the configuration file, click	Dala B ne 'Backup' button		n's	Backup	
	Data U	pload	/		
To upload a configuration file select it	and dick the buttor	n Upload to start	87		
Configuration File		Brows		Upload	
				-	<i>a</i>

Figure 3-146 Backup & Upload Interface

See Figure 3-146 for the backup and upload interface. To back up the configuration file to your PC, just click *Backup*. To upload a configuration file, select it via *Browse...* and click *Upload*.



	Data Backup		
To backup the	configuration file, click the 'Backup' button to start,		Birdag
To upload a Contiguratio	Are you sure to upload configuration file?	tə start.	United
Not	OK Cancel		estart automatically.

Figure 3-147 Backup & Upload & Prompt Interface

Click **OK** on the prompt box (Figure 3-147) to upload the configuration file to the gateway. Now the prompt information 'System is rebooting, please do not leave this page' appears. See Figure 3-148. The gateway will overwrite the current configurations with the uploaded data after restart. Click **Cancel** to cancel this upload directly.

	Data Backup	
To backup the configura	ation file, click the 'Backup' button to start	Васкир
	Data Upload	50 5
To upload a configurati	on file, select it and click the buffon Upload to sta	n, jo
Configuration File	Lrow	
Note: After you	successfully upload the configuration file, the gat	leway will restart automatically.
	System is reboting. Please do not leav	

Figure 3-148 Configuration File Uploading Interface

3.11.8 Factory Reset





See Figure 3-149 for the factory reset interface. Click *Reset* to restore all configurations on the gateway to factory settings.

3.11.9 Restart

System Restart	
Click the button 'Restart to restart the system.	Generate a Dump File
. Dump File Download	
Click the button 'Download' to download the dump file	

Figure 3-150 System Restart Interface

See Figure 3-150 for the restart interface. Click **Restart** under the service restart interface to restart the gateway service or click **Restart** under the system restart interface to restart the whole gateway system. A dump file will be generated each time you restart the service or the system. Click **Download** and you can download it to help troubleshoot issues.

3.11.10 System Monitor

System Monitor	
Wafchdog.	
Dog Feeding Interval (s)	5
Automatically restart the service if undetected:	Enable
	5
Save	set

Figure 3-151 System Monitor Configuration Interface

See Figure 3-151 for the System Monitor Configuration interface. Watchdog is a timing reset system used to avoid application crash. You can set the dog feeding interval when this feature is enabled. The feeding interval is calculated by s, with the value range of 1~15s. By default, this feature is enabled with the default value of 5s. As the feature 'Automatically restart the service if undetected' is enabled, the service application will restart automatically if it is not detected by the gateway guard application. By default, this feature is enabled.



3.11.11 Centralized Manage

Centralized Manage	V Enable
DCMS Server Address	127.0.0.1
Company Name	
Authorization Code	×
Gateway Description	
Working Status	Disabled

Figure 3-152 Centralized Manage Setting Interface

See Figure 3-152 for the Centralized Manage Setting interface. The gateway can register to a centralized management platform and accept the management of the platform. The table below explains the items shown in above figures.

Item	Description			
	T <mark>he</mark> address of the server in which the DCMS locates, It can be IP or a domain			
DCMS Server	name.			
Address	Note: To configure the domain name, make sure the DNS is already configured			
	and the corresponding domain name is analyzable.			
0	The company name used to register the gateway to DCMS, only valid when			
Company Name	DCMS is selected.			
Authorization Orde	The authorization code is used for the connection verification. A device can			
Authorization Code connect to the DCMS successfully only after it passes the verification.				
Gateway Description	The description displayed on CarpeStar DCMS after the gateway is registered to CarpeStar DCMS, giving an easy identification of the gateway in device grouping. It is valid only when CarpeStar DCMS is selected			
Working Ctatus	The status of the connection between the gateway and the centralized			
Working Status	management server.			



3.11.12 PING Test

 Ping Tes	1
Destination Address	127.0.0.1
Ping Count (1-100)	4
Package Length (56-1024 bytes)	56
Info	End

Figure 3-153 Ping Test Interface

See Figure 3-153 for the Ping test interface. A Ping test can be initiated from the gateway on a designated IP address to check the connection status between them. The table below explains the configuration items shown in the above figure.

Item	Description		
Destination Address	Destination IP address or domain name on which the Ping test is executed.		
Ping Count	The number of times that the Ping test should be executed. Range of value: 1~100.		
Package Length	Length of the data package used in the Ping test. Range of value: 56~1024 bytes.		
	The information returned during the Ping test, helping you to learn the network		
Info	connection status between the gateway and the destination address.		

After configuration, click Start to execute the Ping test; click End to terminate it immediately.



3.11.13 TRACERT Test

Tracert T	est
Destination Address	127.0.0.1
Maximum Jumps (1-255)	30
Start	End
Info	
	*

Figure 3-154 Tracert Test Interface

See Figure 3-154 for the Tracert test interface. A Tracert test can be initiated from the gateway on a designated IP address to check the routing status between them. The table below explains the configuration items shown in the above figure.

Item	Description	
Source IP Address	So <mark>urce</mark> IP address where the Tracert test is initiated.	
Destination Address	Destination IP address on which the Tracert test is executed.	
Maximum Jumps	Maximum number of jumps between the gateway and the destination address which are returned by the Tracert test. Range of value: 1~255.	
Info	The information returned during the Tracert test, helping you to learn the detailed information about the jumps between the gateway and the destination address.	

After configuration, click Start to execute the Tracert test; click End to terminate it immediately.



3.11.14 Wireless Network Test

	Wireless Ne	etwork Test
	Number rsation Time Length (s) mes	1 5 7 1 800
Info		

Figure 3-155 Wireless Network Test Interface

See Figure 3-155 for the Wireless Network Test interface. This test is to check whether the SIM card inserted in the gateway port can make normal calls. The table below gives the explanation to the configuration items shown in the above figure.

Item	Description
Port	The port used for the test
Called Number	The called party number which will be dialed for the test
Conversion Time Length	The time length of the conversion
Call Times	The times of the testing call

After configuration, click *Start* to execute the test; click *Stop* to terminate it immediately.



3.11.15 Module Test

Part	Турн	Steller	Cell Phone No	Connection	Spiel
1	COMA	Sim Deltacted	954641	Connect	di
2	COMA	🔤 Sim Delected	414.680	Canned	Ito
3	CDMA	Sim Detected	884515	Connect	all.
4	CDMA	Sim Detected	475902	Connect	af.
5	COMA	💽 Sim Detected	15314680732	Gamed	in.
6	COMA	🔄 Sim Detected	13306518401	Grmed	lb,
1	COM4	💽 Sim Delected	364201	Connect	at l
в	COMA	Sim Detected	058.05	Ganned	at .
9	CDM/	Sim Detected	15369074652	Connect	al
10	CDM/4	Sim Detected	874252	Connect	at the
11	COMA	🔁 Sim Detected	663429	Corned	h.
12	CDMA	💽 Sim Detected	15372427496	Corned	in,
13	DDMA-	Sim Delacted	10163072903	Connect	al.
14	COMA	Sim Delected	.111	Canned	In
15	CDMA	Sim Detected	18950154830	Cornect	In.
15	CDMA	Sim Detected	894905	Cornect	al.

Figure 3-156 Module Test Interface

See Figure 3-156 for the Wireless Network Test interface. This test is for our manufacturers to check whether a module can detect the SIM card. Two states may appear: **Sim Detected** and **Unusable**.

3.11.16 Access Control

Chack	1	lider		Corman	, X	V.bell
11		4		ITABLE INFIT A 1984517 (DEOP		2
		site	- 44 - 12 -			1
report is	ARTERIOR	DOGE	SUCCESSION IN CONTRACT	CONTRACTOR OF CONT		ALC 1 1024

Figure 3-157 Access Control List Interface

See Figure 3-157 for the Access Control List interface. You can add a piece of command to ACL to restrict the network flow. Thus only the particular devices are allowed to visit the gateway and only the data packages on the designated ports can be forwarded. Click *Add New* to add a new piece of command. See Figure 3-158.

1	
	1

Figure 3-158 Add Access Control Command Interface



Fill in a piece of command to the item Command and click **Save** to save the settings to the gateway. Click **Close** to cancel your settings. Click **Apply** to make the new command valid.

Click *Modify* in Figure 3-157 to modify a command. See Figure 3-159 for the Access Control Command Modification interface. The configuration items on this interface are the same as those on the *Add Access Control Command* interface. Note that the item *Index* cannot be modified.

	Access Control Command
Index	0
Command:	iptables -I INPUT -s 123.45.6.7 -j DROP
	Close

Figure 3-159 Access Control Command Modification Interface

To delete an Access Control Command, check the checkbox before the corresponding index in Figure 3-157 and click the **Delete** button, and then click the **Apply** button to make the deleted command invalid. **Check All** means to select all available items on the current page; **Uncheck All** means to cancel all selections on the current page; **Inverse** means to uncheck the selected items and check the unselected. To clear all access control commands at a time, click the **Clear All** button in Figure 3-157.

Note:

1, Currently, only the command iptables is supported by the gateway.

2, If you add or modify or delete commands manually, don't forget to click the *Apply* button to make your settings valid. However, if the gateway restarts or the configuration is leading-in, you need not click the *Apply* button and the commands will get valid automatically.



3.11.17 Device Lock

Device Lock	Mnable
Lock Parameter	
☑I [™] Address	Bagistrar Server
Primary Password (for disabling	g the lock feature or unlocking the device);
Password	
Confirm Password	
Secondary Password (for mod)	fying the parameters in case the the lock feature is enabledy
Password	
Confirm Password	

Figure 3-160 Device Lock Configuration Interface

See Figure 3-160 for the Device Lock Configuration interface. This feature is unopened. If you need use it, please contact our technicians to apply for a special link to access the gateway again.



Appendix A Technical Specifications

Dimensions

4004/4008 series: 260×30×153mm³ 4016/4032 series: 440×44×200mm³

Weight

4004/4008 series Net: 1.2 kg 4016 series Net: 2.4 kg

4032 series Net: 3.1 kg

Environment

Operating temperature: 0 °C—45 °C Storage temperature: -20 °C—85 °C Humidity: 8%— 90% non-condensing Storage humidity: 8%— 90% non-condensing

LAN

Amount: 2 (10/100 BASE-TX (RJ-45))

Self-adaptive bandwidth supported

Auto MDI/MDIX supported

Console Port

Amount: 1 (RS-232)

Baud rate: 115200bps

Connector: RJ45 to DB-9 Connector (4004/4008 series), Mini-USB connecting line (4016/4032 series)

Data bits: 8 bits

Stop bit: 1 bit

Parity unsupported

Flow control unsupported

Note: Follow the above settings to configure the serial port; or it may work abnormally.

Power Requirements

Input power: 12V DC ±10% Input Current: ≥3A DC

Signaling & Protocol

SIP signaling Supported protocol: SIP V1.0/2.0, RFC3261

Network Protocol

IP v4, UDP/TCP, PPPoE, DHCP, FTP/TFTP ARP, RARP, NTP,

HTTP, Telnet

Audio Encoding & Decoding

G.711A	64 kbps
G.711U	64 kbps
G.729A/B	8 kbps
G723	5.3/6.3 kbps
G722	64 kbps
AMR	4.75 kbps
iLBC	13.3/15.2 kbps

Sampling Rate

8kHz

Wireless Feature

SMS CODEC: ASCII/UCS2

Others

The LTE series gateways support the VoLTE network so that they provide quick call establishment and stay unaffected by the Base Station capacity.



Appendix B Troubleshooting

Q1. What to do if I forget the IP address of the wireless gateway?

There are two ways to get the IP address:

- 1) Long press the Reset button on the gateway to restore to factory settings. The default IP address is 192.168.1.101
- 2) Make a call to any wireless port and press the function key to query the IP address. See <u>3.5.5 Function Key</u> for more details.

Q2. In what cases can I conclude that the wireless gateway is abnormal and turn to CarpeStar's technicians for help?

- a) During runtime, the run indicator does not flash or the alarm indicator lights up or flashes, and such error still exists even after you restart the device or restore it to factory settings.
- b) Voice problems occur during call conversation, such as that one party or both parties cannot hear the voice or the voice quality is unacceptable.
- c) The port of the gateway is well connected with the antenna and has a SIM card properly inserted, but the port indicator never lights up after the gateway startup or the color it lights up does not comply with the actual port state or port type.

Other problems such as inaccessible calls, failed registrations, incorrect numbers are probably caused by configuration errors. We suggest you refer to <u>Chapter 3 WEB</u> <u>Configuration</u> for further examination. If you still cannot figure out or solve your problems, please feel free to contact our technicians.

Q3. What to do if I cannot enter the WEB interface of the gateway after login?

This problem may happen on some browsers. To settle it, follow the instructions here to configure your browser. Enter 'Tools > Internet Options >Security Tab', and add the current IP address of the gateway into 'Trusted Sites'. If you changes the IP address of the gateway, add your new IP address into the above settings too.

Q4. Is there any cell-phone APP can make calls to the gateway?

Yes. Linphone is a soft SIP phone that is supported by multiple platforms, such as Linux, Windows, iOS, Android, etc. It must be registered to the SIP registrar server before dialing to other SIP devices or PSTN telephones,

Q5. Which RTP codecs are supported by the gateway?

At present, the supported RTP codecs are: G.711A, G.711u, G.729, G.723, G.722, AMR and iLBC.



Appendix C About VPN

Part 1: Steps to Enable VPN Feature

Find the VPN Settings interface under Advanced Settings on the web. This featured is disabled by default.



Step 1: Select Yes to enable this feature, click the 'Save' button and the following interface will appear.

///	VPN Settings	
Enable OPENVPN	¥Yes €No	Bave
Upload VPN Certificate		DeolgU
	VPN Runinginia	
		Solution
		<u>,</u>

Step 2: Select a certificate from the client, that is, a configuration file with the suffix of .conf, and then click the 'Upload' button. The following dialog will appear.





Step 3: Now you will get a virtual IP address which is allocated automatically by the VPN server. Note that each upload will lead to a new allocation of the IP address; however, restarting the gateway will not change the virtual IP address.

Then you may use the PING test under System Tool on the web to test if the client connects successfully with the server via IP, by which to check whether the VPN feature is successfully enabled or not.

Part 2: Steps to Make VPN Certificate

- **Step 1:** Get the file of client.ovpn from the VPN server (under the 'sample-config' directory of the installation package) and rename it to "client.conf".
- **Step 2:** Examine or add the following content into the file.

The file should contain the following content, in which the black part is fixed while the red part shall change according to the note.

client

dev tap (Note: Fill in tap or tun according to the VPN server's requirement. Currently, only tap is supported.)

proto tcp (Note: Connect via TCP which should be consistent with that of the server.)

;cipher AES-128-CBC (Note: Select an encryption algorithm which should be consistent with that of the client. It is not necessary to add if there is no algorithm at the client.)

remote 192.168.143.235 1194 udp (Note: Fill in the IP address and the port number of the VPN server, and the protocol can be left empty.)

;remote-random (Note: If there are multiple servers configured, let the client connect at random.)

resolv-retry infinite (Note: Analyze the server's domain name)

nobind (Note: Not to bind any port to the client)

persist-tun

persist-key

mute-replay-warnings (Note: Set as a flag to warn about replayed data packages.)

ns-cert-type server

comp-lzo (Note: Use the Izo compression which is consistent with the server.)

verb 3

;tls-client



;tls-auth ta.key 1 (Note: It is used to enable the feature of TLS encryption, and should be consistent with that of the server.)

<ca>

-----BEGIN CERTIFICATE-----

Note: Fill in the key copied from the file of ca.crt.

-----END CERTIFICATE-----

</ca>

<cert>

-----BEGIN CERTIFICATE-----

Note: Fill in the key copied from the file of client.crt, that is, the content inbetween "----BEGIN CERTIFICATE-----" and "-----ENDCERTIFICATE-----"

-----END CERTIFICATE-----

</cert>

<key>

-----BEGIN RSA PRIVATE KEY-----

Note: Fill in the key copied from the file of client.key

-----END RSA PRIVATE KEY-----

</key>

Note: The following key is not necessary to add if it is never encrypted at the server.

<tls-auth>

Note: Fill in the key copied from the file of ta.key

</tls-auth>

Make sure the three key files ca.crt, client.crt and client.key are of the newest versions.

Step 3: Save the file after your examination or supplement and upload it to the device. Note that the suffix of the file must be .conf.

Part 3: Attentions

a) After the VPN featured is opened at the server, use your PCs to connect as a test. If two PCs can PING through each other, it means the server works normally.



- b) Make sure the server is OK and the configuration file is ready before opening the VPN feature. The system time of the wireless gateway must be consistent with that of the server, or the connection may sometimes fails.
- **c)** After enabling the VPN feature successfully, you can use the virtual IP of the gateway to make calls in both directions IP-->tel and tel-->IP.





Appendix D Technical/sales Support

Thank you for choosing CarpeStar. Please contact us should you have any inquiry regarding our products. We shall do our best to help you.

Headquarters

https://www.carpestar.com/

