# GSM Gateway User Manual







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#### About this manual

This manual describes the Allo product application and explains how to work and use it major features. It serves as a means to describe the user interface and how to use it to accomplish common tasks. This manual also describes the underlying assumptions and users make the underlying data model.

#### **Document Conventions**

In this manual, certain words are represented in different fonts, typefaces, sizes, and weights. This highlighting is systematic; different words are represented in the same style to indicate their inclusion in a specific category. Additionally, this document has different strategies to draw User attention to certain pieces of information. In order of how critical the information is to your system, these items are marked as a note, tip, important, caution, or warning.



- **Bold** indicates the name of the menu items, options, dialog boxes, windows and functions.
- The color <u>blue</u> with underline is used to indicate cross-references and hyperlinks.
- Numbered Paragraphs Numbered paragraphs are used to indicate tasks that need to be carried out. Text in paragraphs without numbering represents ordinary information.
- The Courier font indicates a command sequence, file type, URL, Folder/File name e.g. www.allo.com

#### **Support Information**

Every effort has been made to ensure the accuracy of the document. If you have comments, questions, or ideas regarding the document contact online support: http://support.allo.com



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## **1. Product Introduction**

#### 1.1 Overview

This 4 Port GSM Gateway is a standalone and fan less, easy to install and sturdy construction. This 4 module GSM gateway will bridge IP calls to GSM and vice versa. Use the web interface for easy and quick configuration.

It is a new type of VoIP gateway that allows call terminations from a VoIP network to a GSM network and vice versa. Call connections between IP networks and GSM networks are now bridged seamlessly to extend the voice communication coverage significantly. As the traditional PSTN lines are starting to disappear in developed countries and are not going to be built extensively in under-developed countries, GSM phones are getting more and more popular all over the world with lower service charges. The emergence of Allo bridges is gap between the traditional telephone networks and VoIP networks. As a result, local and worldwide voice communications are more convenience, lower cost, and broader coverage. Mainly includes the following kind of model: **aGG04** - A typical network diagram as below.



Figure 1: GSM Gateway Overview



## **1.2 Equipment Structure**

#### 1.2.1 Rear View



Figure 2: Rear View

#### 1.2.2 Front View



**Figure 3: Front View** 



#### **1.3 Functions and Features**

- 4 ports for communication over a SIP-to-cellular connection
- SMS Sending and Receiving Support USSD service
- Send Bulk SMS
- SMS to E-mail
- SIM Balance Alarm
- Caller ID Black List
- Call Duration Limitation for particular SIM
- Call Back
- Call Forwarding (unconditional, no reply, busy, not reachable)
- Open API interface (AMI)
- Gateway control via SMS.(Reboot, Reload, Fetching IP)
- Recharge of SIM balance via GUI
- Flexible call routing
- Configuration and management using a Web browser

#### **1.4 General Hardware Specifications**

#### 1.4.1 GSM

- 4 GSM Modules with single SIM card per GSM module.
- Quad-Band GSM 850/900/1800/1900 MHz
- External Antenna
- Echo Cancellation support inbuilt in GSM Module

#### 1.4.2 SIP

- SIP (RFC3261) compliance
- NAT support
- Voice codecs: G729, G.711 A/U law

#### 1.4.3 Network

- Two 10/100 Mbps Ethernet interfaces
- Protocols: DHCP, TCP/UDP, Telnet, HTTP, TFTP



#### 1.5 Warranty

#### Hardware Warranty: 1 year

If the GSM Gateway was purchased from a Distributor/reseller, please contact the company where the device was purchased for replacement, repair or refund. If the device was purchased directly from Allo.com, contact our Technical Support Team for a RMA (Return Materials Authorization) number before the product is returned. Allo.com reserves the right to remedy warranty policy without prior notification.

Use the power adapter provided with the ALLO PRI Gateway. Do not use a different power adapter as this may damage the device. This type of damage is not covered under warranty.



## 2. Getting Started with GSM gateway

#### 2.1 Hardware Installation

1. Unpack the items from the box

2. Plug one end of the RJ45 Ethernet cable to your PC & other end into the Management Port (LAN) of the GSM Gateway.

3. Plug one end of the RJ45 Ethernet cable into your Network Switch & other end into the WAN port of the GSM Gateway.

Use Straight-through Ethernet cable to connect between the unit & Router/Switch/PC

4. Insert the GSM SIM in to the GSM Channels.

5. Plug the power cable to the GSM Gateway; wait until the Gateway boot up completely.

Configure your GSM Gateway according to the instructions below.

## 2.2 Accessing the Web GUI

GSM Gateway WEB GUI can be accessed either through WAN or Management Interface (LAN)

1) Make the setup as described in Hardware setup section, Lets access the WebGUI through Management Interface (LAN)

3) Launch the web browser and enter the URL http://192.168.113.1 which is the default IP address of the Management interface (LAN) of the GSM Gateway.





#### Figure 4: Login Page

4) Login using the default username & password (Default: Username: admin; Password: admin). It takes you to change the password and login again with the new password. Observe the WAN IP address on the dashboard, this will be used to access the GUI from the WAN interface.

5) If you know the SIM No, you can directly manage the GSM Gateway using below comment by sending the SMS.

**ALLOGSM "gateway password" INFO** (Command to fetch the IP address of the gateway and basic status of GSM spans)

For an Example: ALLOGSM admin INFO

6) If your network is not enabled with DHCP server, configure the WAN port IP address manually in the **SETTINGS > Network Settings** section as per your requirement.

Recommended Web Browser to access GUI is Mozilla Firefox.



## 3. Setting up Features

#### 3.1 Dash Board

ALLO GSM Gateway Dash Board summarizes the gateway status with a graphical display. Detailed status of an individual entity is available under the Status Tab or it can be directly accessed by clicking on more.

18-November-14 03:02:55 p	n		Firmware V	/ersion: 2.0.4		Refresh		Welcome Ad	lministrator 🎂
ashboard 🔸 D	ashboard 0								
etup MS	Gateway Status				System	Status			
eatures	SIP Trunks	lore]			U 🕥	p Time	<b>F</b>	Network Info	[More]
ools	Registered:	2			21	1:49		LAN IP: <b>192.168.1</b> WAN IP: <b>192.168.</b> 1	13.1 10.103
itatus .	Total:	2	Reg 100%		C c	all Minute Co	ounters		
	(%) GSM Span					Ports/Options GSM1	Total Consu	ned Duration	
	[More] Span 1	Span 2	Span 3	Span 4		GSM2 GSM3			
	T.	×۳	×۳	×۳		GSM4			
	Call Statistic	\$ [More]			Lis	<u>st of products</u> intact Details			
	Total Active calls	S: 0							

Figure 5: Dashboard

## 4. SETUP



#### 4.1.1 Network

Navigate through Setup > Basic>Network Settings

#### WAN Configuration:

DHCP	When enabled and a DHCP server is available, the GSM Gateway
	will auto configure itself. If DHCP server is not available, select
	"Static", and fill in the Network Configuration.
IP Address	The static IP address corresponding to your WAN configuration.
Net mask	The Net mask corresponding to your WAN configuration.
Gateway	The IP address corresponding to your network Gateway (Router).
DNS	The IP address corresponding to a DNS server.

#### LAN Configuration:

LAN Port is a management port. GSM Gateway can be connected back-to-back to a PC or to a LAN network for configuration. It is always recommended to connect back-to-back to a PC. In case, connected to LAN network & if IP series clash is found, IP series can be changed here.

WAN port IP and LAN port IP address should not be in the same network segment.

asic	WAN Configuration	on	LAN Configurati	on
<ul> <li>Step 1: Network</li> <li>Step 2:</li> <li>Date/Time</li> </ul>	OHCP Client	O Static IP		
Step 3: GSM Settings	IP Address	192 . 168 . 10 . 103	IP Address	192 . 168 . 113 . 1
➡ Step 4: SIP Trunks	Netmask	255 . 255 . 255 . 0		
🕳 Step 5: GSM Lines	Gateway	192 . 168 . 10 . 254	Host Configurati	ion
→ Step 6: Routing Rules	DNS 1	192.168.0.5		
Advanced	DNS 2	192.168.0.254	Hostname	gsm
• SMS				
<ul> <li>Features</li> </ul>				
• Tools	Apply			

#### Figure 6: Network Settings

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## 4.1.2 Date/Time

## Navigate through Setup > Basic> Date/Time

Configuration Type	Date and Time of the GSM Gateway can be either set manually
	(uses RTC) or automatically (through NTP). Default: <b>NTP</b>
NTP Configuration	<b>Time Zone:</b> Select the correct time zone for the location where the
	GSM Gateway is installed using the Time Zone dropdown box.
	Default: Asia/Kolkata
	<b>NTP Server:</b> URI or IP address of the NTP (Network Time Protocol)
	server, which will be used to synchronize the date and time. E.g.:
	3.in.pool.ntp.org

ic	Configuration Type Manual 💙			
Step 1: Network	Manual Manual Configuratic	NTP Confid	puration	
Step 2: .te/Time		Timezone	(GMT-12-00) Enewetak Kwaialein(MHT)	
Step 3: GSM ttings	Date 18 / 11 / 2014 (dd/mm/yyyy)	NTP		Add
Step 4: SIP unks	Time 15 : 07 (hh:mm)	Server	3.in.pool.ntp.org	Delete
Step 5: GSM Lines				_
Step 6: Routing les		_	V	
anced				
SMS	Apply Reset			
Features				
Tools				

#### Figure 7: Date/Time Configuration

#### 4.1.3 GSM Settings

#### Navigate through Setup > Basic> GSM Settings

This section provides the ability to modify the GSM settings depending on the carrier with respect to the service provider



isic	GSM Name	- State	Message Mode	Allow Anonymous Calls	Options
Step 1: Network	GSM1	Enabled	PDU	Disabled	×
Step 2:	GSM2	Enabled	PDU	Disabled	
ate/Time	GSM3	Enabled	PDU	Disabled	Image: A start and a start
Step 3: GSM ettings	GSM4	Enabled	PDU	Disabled	1
Trunks Step 5: GSM Lines Step 6: Routing Rules	Network Mode Selec	tion Call Minu	ite Settings		
Trunks  Step 5: GSM Lines  Step 6: Routing Rules  dvanced	Hetwork Mode Selec	tion Call Minu	ite Settings		
Trunks Step 5: GSM Lines Step 6: Routing Rules dvanced SMS	Network Mode Selec	tion Call Minu	ıte Settings		
Trunks Step 5: GSM Lines Step 6: Routing Rules dvanced SMS Features	lletwork Mode Selec	tion Call Minu	ıte Settings		
Trunks Step 5: GSM Lines Step 6: Routing dvanced SMS Features Tools	lletwork Mode Selec	Call Minu	ıte Settings		

#### Figure 8: GSM Settings

GSM Name	GSM1 💌
Network Mode	Automatic 👻

#### Figure 9: Network Selection Mode

#### **Network Selection Mode**

GSM Name- User can select GSM span for which network mode is to be selected.

Network mode- User can select either automatic or manual network mode from the drop down list.

For Manual mode, we have to fetch available networks and user can choose preferable network.

#### **Call Minute Settings**

Call minutes can be limited for each span individually. Following are the limits.



#### 1. Total minutes:

- a) For every span we can give a limit, i.e. number of minutes. This is the maximum number of minutes a user can make a call on selected span.
- b) User can set alarm over email for the alarm limit.

2. **Call Duration:** Moreover, call duration limiting timer can be selected for the outgoing call. If the call duration feature is enabled, user can't make a single call beyond that limit.

SSM Name	GSM1 💌	
nable Total Minutes		
otal Minutes	3	
consumed Minutes		Reset
nable low remaining minutes alarm		
et Alarm Limit (in mins)	3	
larm to Email	john@gmail.com	
nable Call Duration		
all Duration Limit (in mins)	5	

#### Figure 10: Call Minute Settings

Click GSM Settings Edit button, you will be navigated to Edit GSM Settings screen page. In this page you can edit the GSM name.



×

In the second second			
Edit	COM	Sotting:	COM1
Luit	Gom	ocumy.	COMP

e La en lla re	Disabled 💙	
Band Selection	Auto	*
Sho Note: Please configure incorrect update	e the	de advanced options se settings after contacting s ay lead the system being fau
Message Mode	PDU 💌	
Anonymous Calls		
orward SMS to E-mail		
MS Center		
SIM PIN		
GSM Extension	GSM1	
Port State	Enabled 💌	

Figure 11: Edit GSM Settings

GSM name	GSM name is the name for your in identification
Port State	Enable/ Disable option allow user to change the state as per requirement
SIM PIN	SIM PIN will be given by the provider
SMS Center	A short message service center (SMSC) is a network element in the mobile telephone network
Forward SMS to E-	Configure email address where the SMS need to be forwarded
mail	
Band Selection	Band selection can be done in Auto, Mono Band mode (850,900E, 1800,
	1900 MHz) and Dual band mode (900E/1800 and 900E/1900).
	Default is <b>AUTO</b>
Echo Cancellation	Enable /Disable option allows user to configure according to the
	requirement



DTMF Detection	DTMF detection in the device controlled be DSP and GSM engine
DTMF Out dialing	DTMF out dialing can be configured in INBAND or USING AT commands
DTMF Duration	The duration in millisecond of DTMF transmission.
(msec)	Default is : 80
Allow Anonymous	IF this option enabled ,the calls with out caller ID will be allowed
Calls	

Please configure these settings after contacting support as incorrect updates may lead the system being faulty.

#### 4.1.4 SIP Trunks

#### Navigate through Setup > Basic > SIP Trunks

SIP Trunks provides the interface to any SIP companion such as VoIP service provider, any SIP server or SIP clients. Add different types of interfaces, and configure the signaling & media settings for each trunk. SIP trunk registration is limited to 10 SIP trunks.

Account Name	IPPBX		
Username	3001		
Registration Mode	From Gateway 😪		
Proxy Address	192.168.0.222	: 5060	
Outbound Proxy Address	192.168.0.222		
Authentication			
Auth. Username	3001		
Password	••••		
Register			
Registrar Address	192.168.0.10		
Bridge Pin			
Show/	Hide advanced option	<u>5</u>	
DTMF	AUTO 🔽		
Nat			

#### Figure 12: Create SIP Trunk



Account Name	Descriptive name for the SIP Trunk for user's reference.
Username	Username of endpoint (e.g.: IPPBX) will use to authenticate with
	the gateway.
Registration Mode	Whether the endpoint will register to this gateway or this
	gateway will register to the endpoint.
	a. None: No Registration, IP Address peering of the
	Gateway & Endpoint
	b. To Gateway: Endpoint (IPPBX or VoIP Service Provider)
	register with the Gateway
	c. c) From Gateway: Gateway register to the End point
	(IPPBX or the VoIP Service Provider)
Authentication	Enable, if Authentication is required by the End point (VOIP
	Service Provider or IPPBX)
Auth. Username	A username to use only for registration.
Password	Password to authenticate inbound or outbound registrations or
	calls.
Proxy Address	IP address or hostname with port of the endpoint (VOIP Service
	Provider or IPPBX) where the calls will be diverted. Default port
	no.: <b>5060</b>
Outbound Proxy Address	IP address or hostname with port of the outbound proxy server.
	This ensures that all the SIP packets are sent via specified proxy.
	Specifying the port is not mandatory. Default port no.: 5060
	e.g.: 192.168.0.222:5062 OR 192.168.0.222
Register	Enable, if Registration to the End point (VOIP Service Provider or
	IPPBX) is required.
Registrar Address	IP address or hostname with port of the Registrar server where
	gateway must register to. Specifying the port is not mandatory.
	Default port no.: 5060
	e.g.: 192.168.0.222:5062 OR 192.168.0.222
Bridge PIN	You can set a PIN for outgoing calls on SIP trunk, thus you will
	set one more level of security. Leave it blank for unsecured



mode.

Advanced Options	
DTMF	Set default DTMF mode for sending DTMF digits. Options:
	<ul> <li>INBAND – sent along with audio (requires 64 kbit codec -</li> </ul>
	alaw, ulaw)
	<ul> <li>INFO – sent as SIP INFO messages</li> </ul>
	<ul> <li>RFC2833 – sent as RTP packets</li> </ul>
	<ul> <li>AUTO – System automatic selects the mode. Uses</li> </ul>
	RFC2833 if offered, inband otherwise.
	Default: AUTO
NAT	Enable it, to address NAT-related issue for SIP & media sessions
	for this trunk.
	Configuring NAT settings under SIP Global Settings is
	required) Default: <b>disabled</b>
Codec Configuration	Choose the available Codecs and set GSMority in the order in
	which gateway should prefer to send and receive audio.
	Supported codecs are alaw, ulaw, G.729, G.722

Basic	Show	All ⊻ entries					Search:	
🕳 Step 1: Network		Account Name	0	Username	0	Registration	0	Options
Step 2: Date/Time		Nanopbx		7898		To Gateway		× ×
♦ Step 3: GSM		IPPHONE		3001		To Gateway		💉 🗙
Settings		IPPBX		3001		From Gateway		🖉 🗙
Trunks  Step 5: GSM Lines  Step 6: Routing Rules								
dvanced								
SMS	Showir	ng 1 to 3 of 3 entries					First Previo	ous 1 Next La
	-							
Features								

Figure 13: SIP Trunks

#### 4.1.5 GSM Lines

#### Navigate through Setup > Basic > GSM Lines

GSM Trunks provides the interface to any GSM companion such as GSM service provider. Create an interface for each span.

Span Name	GSM2 🚩	
Line Name	Span2	
Bridge Pin		
Bridge Pin		

#### Figure 14: Create GSM Line

Span Name	Select the appropriate GSM Spans.
Trunk Name	Descriptive name for the GSM Trunk for user's reference.
Bridge PIN	You can set a PIN for outgoing call on GSM trunks, thus you can
	set one level of security. Leave it blank for unsecured mode.

Dashboard	GSM Line	s 🛛		
- Setup				
Basic		Span Name	Line Name	Options
🕳 Step 1: Network		GSM1	Span1	× ×
🛥 Step 2: Date/Time		GSM2	Span2	
→ Step 3: GSM Settings	Add New	Delete Selected		
🛥 Step 4: SIP Trunks	Community			
🛥 Step 5: GSM Lines				
<ul> <li>Step 6: Routing Rules</li> </ul>				
Advanced				
• SMS				
Features				
• Tools				
<ul> <li>Status</li> </ul>				

#### Figure 15: GSM Lines

If you delete GSM lines and already route is present which is using particular GSM lines, you will get the below error message.



Line name is dependency with Calling Groups, Call Routing Rules, & Time Route Groups.

#### 4.1.6 Routing Rules

#### Navigate through Setup > Basic > Routing Rules

A routing rule determines how a call is handled based upon certain characteristics such as dialed number, inbound trunk, DID, etc.

Name	Incoming	-
Description	Incall	
Incoming Type	SIP Trunk 🛛 💌	
Incoming From	test 💌	
Pattern	Χ.	
Trim Digits	2	
Prepend Digits	2	
DISA		
Outbound Call	Route	
GSM Lines 💉 Available Iolo gsa2	Selected	
~		

#### Figure 16: Create Call Routing Rule

Name	Descriptive name for the Call routing rule for user's reference.
Description	Provide the description for the Call routing rule. (Optional)
Incoming Type	Specify how the gateway should match incoming calls. The gateway can match on GSM Trunk, SIP Trunk or Calling Group.
Incoming From	Specify the available trunk or calling group for the selected



	Incoming Type.
Pattern	Specify the pattern to match the dialed string of the incoming
	call.
	Pattern:
	X: Any Digit from 0-9.
	Z: Any Digit from 1-9.
	[12345-9]: Any digit from 1 to 9.
	N: Any Digit from 2-9.
	".": Wildcard. Match one or more characters.
	"!": Wildcard. Match zero or more characters immediately.
	e.g.: X. – match at least one digit
	988XXXX – match 988 followed by 4 digits
Trim Digits	Allows you to specify the number of digits that will be stripped
	from the beginning of the dialed string before the call is placed
	via the selected trunk.
	e.g.: If you configure the pattern as 9X. and you want to strip 9
	then you should mention Trim Digits field as 1
Prepend Digits	Specify the digits to be prepended before the call is placed via the
	selected trunk. Those digits will be prepended after the dialing
	number is stripped.
	e.g.: If dialed number is 8789763010 and if you want to prepend
	44 as a country code then mention in Prepend digits field as 44
DISA	Available for GSM Incoming routing rule which allow us to receive
	Dialout number in GSM Gateway. The received number is dialed
	afterwards.
Outbound Call Routes	Select the preferred trunks or time route groups where calls are
	to be routed for this Routing rule. Ordering of the trunks in the
	"Selected" column indicates the order in which call flows on
	failure.

c	Show	/ All 🚩 entries						Search:		
Step 1: Network		Name 🌣	Description	٥	Pattern	\$ Incoming	٥	Outbound	٥	Options
Step 2: e/Time		OUtgoing	outgoing through nanopbx		х.	Nanopbx		Span1		💉 🗙
Step 3: GSM		Incoming	in call			Span1		Nanopbx		💉 🗙
tings		Incoming1	Incall		х.	Nanopbx		Span1		× 🗴
Step 5: GSM Lines Step 6: Routing es nced										
sms	Show	ring 1 to 3 of 3 e	ntries				F	rst Previous	1	Next Last
Features										

Figure 17: Call Routing Rules

## 4.2 Advanced

#### 4.2.1 Calling Groups

Navigate through Setup > Advanced > Calling Groups

A calling group allows a group of trunks to be addressed when creating a call routing rule. Multiple groups can be created with different combination of trunks, but of the same type (SIP or GSM).

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	An And	-			
Gr	roup Name	Testing			
Gi	roup Type	SIP 🔽			
т	runks/Lines				
	Available		Selected		
	IPPHONE IPPBX	•	Nanopbx	<u>_</u>	
	-9-04-020-00	•		1000	
				×	
			1	SAVE	CANCEL

#### Figure 18: Create Calling Group

Group Name	Descriptive name for the Calling Groups for user's reference.
Group Type	You can select group type as SIP or GSM Trunk. For e.g.: If you select Group Type as SIP, SIP trunks will be listed in available Table.
Trunks	Depending upon the Group Type you have selected, available trunks can be moved to "Selected" column, to be listed under this Calling Group.

Basic	Show All	💌 entries					Se	arch:	
Advanced		Name	0	Туре	0	Trunks/Lines	\$	Options	
<ul> <li>Calling Groups</li> </ul>		Testing		SIP		Nanopbx		💉 🗙	
<ul> <li>Time-based</li> <li>Routing</li> </ul>		SIP		GSM		Span1		× 🗴	
<ul> <li>SIP Global</li> <li>Settings</li> </ul>									
+ Feature Settings									
🗕 Asterisk API									
• SMS									
Features									
• Tools	Showing	1 to 2 of 2 entries	_		_		First	Previous 1 N	ext Las

Figure 19: Calling groups

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#### 4.2.2 Time-based Routing

#### Navigate through Setup > Advanced > Time-based Routing

Time routing routes calls to different locations based on the time of day and day of week, when a call is made.

Group Name	Descriptive name for the Time Route Group for user's reference.
Description	Provide the proper description for the Time based routing rule.
	(Optional)
Route To Trunk	Select the destination trunk where the call is routed to on matching
	the time. The destination can be any trunks – GSM Trunks/SIP
	Trunks.
Duration	Specify the time range for which this routing rule will apply. Format:
	hh:mm
Days	Select the day/days during which this routing rule will apply.

*Make sure that the current date and time are configured currently under System* **Date/Time** Configuration.

#### 4.2.3 SIP Global Settings

Navigate through Setup>Advanced > SIP Global Settings

SIP Global settings apply to all VoIP traffic.

#### Port Settings

Dashboard	SIP Global S	Settings @		
- Setup	): ₽			· · · · · · · · · · · · · · · · · · ·
Basic	Port Settings	NAT Settings	Registration Timer	QoS Settings
Advanced				
🔶 Calling Groups	SIP Bind	Port	5060	
🞍 Time-based Routing	RTP Port	Range	16001 - 17000	
- SIP Global Settings				
🔶 Feature Settings				
🔶 Asterisk API	Save Reset			
> SMS				
Features				
Tools				
Status				

#### Figure 20: Port Settings

Port Settings	
SIP Bind Port	Choose a port on which to listen for SIP UDP traffic. Default:
	5060
RTP Port Range	Range of port numbers to be used for RTP traffic.
	Default: <b>16001- 17000</b>
	Make sure you configure this dynamic range of ports on your
	NAT Router. When the GSM Gateway is behind a NAT and the
	NAT is configured to do port forwarding with above
	mentioned port range for UDP ports.

#### **NAT Settings**

Navigate through Setup> Advanced> SIP Global Settings

In this NAT Settings, user can select Stun Server IP or External IP function. These functions can help your VoIP device working properly behind NAT.

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rt Settings	NAT Settings	Registration Timer	QoS Settings
Nat			
Туре		Stun Server IP 💌	
Stun/Exte	rnal Server IP	192.168.0.0	
Local Net		192.168.2.0	

Figure 21: NAT Settings

NAT Settings	
NAT	NAT option is checked, when the GSM Gateway is behind the
	Router/Firewall. Select either Stun Server IP or External IP.
	Default: disabled
Stun Server IP	If the GSM Gateway is behind a non-symmetric NAT router, it
	may be necessary to use STUN to allow GSM Gateway to reliably
	communicate via IP through the router. Enter a STUN server IP
	address or domain name in the STUN Server field. For a list of
	public STUN servers, please Refer to: <u>http://www.voip-</u>
	info.org/wiki/view/STUN
External IP	Enter the NAT Traversal IP address i.e. Public IP Address of your
	internet, to communicate with Public Network when GSM
	Gateway is behind the NAT. This IP address will substitute in all
	outgoing SIP messages instead of Local IP address.
Local Net mask	Entering the Net mask of the local network of the GSM gateway
	allows it to identify the hosts falling within the same network.
	E.g.: 192.168.2.0/255.255.255.0



#### **Registration Timer**

Navigate through Setup> Advanced> SIP Global Settings> Registration Timer

When the registration timeout is 0, user cannot register the gateway and it will be connected to the server directly. You can reference the setting parameters of the single server mode to register the gateway.

Basic .	Port Settings NA	T Settings Re	gistration Timer	QoS Settings
Advanced	44 <del>7</del>			
<ul> <li>Calling Groups</li> </ul>	Default Registrat	ion Expiry	120	(sec)
👲 Time-based Routing	Minimum Regist	60	(sec)	
<ul> <li>SIP Global Settings</li> <li>Feature Settings</li> </ul>	Maximum Registration Expire 36			(sec)
🔹 Asterisk API	101020111111111111111111111111111111111	0000	(360)	
• SMS	Outbound Re	egistration Time	1	
Features	Registration Tim	20	(sec)	
Tools	Registration Atte	0		
<ul> <li>Status</li> </ul>				

#### Figure 22: SIP Global Settings

Registration Timer	
Default Registration Expiry	Default duration (in seconds) of incoming/outgoing
	registrations. Default: <b>120 sec</b>
Minimum Registration Expiry	Minimum duration (in seconds) of registrations allowed by
	the Gateway. Default: <b>60 sec</b>
Maximum Registration Expiry	Maximum duration (in seconds) of incoming registrations
	allowed by the Gateway. Default: <b>3600 sec</b>
Registration Timeout	Registration attempt will be retried till this duration (in
	seconds), if no response from the Registrar. (Outbound
	Registrations only). Default: 20 sec
Registration Attempts	Number of registration attempts before giving up with



registrar (Outbound Registrations only). Default: 0 (never
give up)

#### **QOS Settings**

Navigate through Setup> Advanced> SIP Global Settings> QoS Settings

This QoS feature requires your QoS support of your network to improve voice data traffics. Please consult your network administrator for proper setting.

Signaling QoS improves the performance of SIP signaling. If local network device supports QoS, select this field accordingly.

Dashboard	SIP Global S	ettings @		
Setup		U		
isic	Port Settings	NAT Settings	Registration Timer	QoS Settings
anced				
Calling Groups	ToS SIP		CSO 💌	
Time-based	ToS Audio		CSO 💌	
<ul> <li>SIP Global</li> <li>Settings</li> </ul>	CoS SIP		4 🗸	
Feature Settings	C03/A0010		J 🗸	
Asterisk API				
SMS				
Features	Save Reset	)		
• Tools				
Status				

QOS Settings	
ToS SIP	Sets TOS for SIP packets
ToS Audio	Sets TOS for RTP audio packets.
CoS SIP	Sets 802.1p priority for SIP packets.
CoS Audio	Sets 802.1p priority for RTP audio packets.

## 4.2.4 Feature Settings

Navigate through Setup > Advanced > Feature Settings

It allows user to configure the call back settings like Max Retries, Retry time and wait time.



#### Figure 23: Feature Settings

#### Call back settings

Max Retries	Number of retries before failing (not including the initial
	attempt, e.g.0=total of 1 attempt to make the call).
Retry time	It specifies the seconds between retries, don't hammer an
	unavailable phone.
Wait time	It specifies the seconds to wait for an answer.

#### 4.2.5 Asterisk API

The Asterisk Manager Interface (AMI) allows a client program to connect to an Asterisk instance and issue commands or read events over a TCP/IP stream. GSM Gateway can be configured for AMI in Setup > Advanced > Asterisk API.

#### General

When you click "Enabled" option, this page is available. It allows users to access the gateway API. And the port number is default: 5038 (fixed).

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#### Figure 24: Asterisk API Interface

#### Asterisk API Interface- Manager

<ul> <li>Setup</li> </ul>			
Basic	General Manager		
Advanced			
➡ Calling Groups	Manager Name	admin	
<ul> <li>Time-based</li> <li>Routing</li> </ul>	Manager Secret	admin	
🛥 SIP Global Settings	Deny	0.0.0.0/0.0.0	
+ Feature Settings	Permit	0.0.0.0/0.0.0.0	
🔸 Asterisk API			
• SMS			
Features	Cave Depat		
• Tools	Save Reset		
Status			

#### Figure 25: Asterisk API Interface-Manager

Manager Name	Enter the name of the manager for Asterisk API Interface manager. E.g.:
	Admin
Manager Secret	Enter the password for the manager. Default Password: Admin
Deny	If you want to deny many hosts or networks, use char & as separator. E.g.:
	0.0.0.0/0.0.0.0 or 192.168.1.0/255.255.255.0&10.0.0/255.0.
Permit	The user wants to permit many hosts or network, use char & as separator.
	E.g.: 0.0.0/0.0.0.0 or 192.168.1.0/255.255.255.0

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## **5. SMS**

#### 5.1 Inbox

Navigate through SMS > Inbox

SMS inbox feature allows you to check the inbox of each SIM cards inbox messages

SMS inbox will provide message details such us date and time, message from field information, message body and span information." Options" tab in the SMS inbox help you to delete / View.

CMC	Inbox	All	*		All Inbox = [ <b>11</b> /14]	Create SMS	Export
	Show	All 🔽 entr	ies			Search:	
oups		S.No. 0	DateTime \$	From \$	Message 🌼	SpanID 🔅	Options
reate/Compose		1	06-Jan-2014 11:58:13 am	AX-ARWALR	Safety alert: P	GSM 1	🖉 🗙 💡
		2	06-Jan-2014 11:58:13 am	AX-ARWALR	Safety alert: P	GSM 2	🗡 🗙
ateway Control		3	06-Jan-2014 10:29:14 am	+918050657038	Allogsm admin1 	GSM 1	🖊 🗙
• Features		4	04-Jan-2000 02:35:04 am	+917022004926	Send USSD faile	GSM 2	🖉 🗙
Tools		5	04-Jan-2000 02:23:32 am	+919900062171	Hi! You have Mi	GSM 2	🖉 🗙
TOUIS		6	04-Jan-2000 12:58:11 am	+917022004926	testttttt	GSM 2	💉 🗙
• Status		7	04-Jan-2000 12:56:56 am	+917022004926	test	GSM 2	<b>X</b>
	Show	ing 1 to 14	of 14 entries		First	Previous 1	Next Last

#### Figure 26: SMS Inbox

Date & Time	Date and time of the INBOX message
From	The source of the INBOX Message
Message	It shows the body of message
Span ID	On which span the message received
Options	Two options are given (View and Delete )
Export	This will allow to export the message in .csv format

Click Edit button, you will be navigated to SMS inbox. In this page you can edit the

Message.



#### 5.1.1 Create SMS

Navigate through **SMS** > **Create/Compose**.

Users can create and send the SMS in this page. And you can import numbers from a .CSV file here.

- SMS >	Create SMS	ustom SMS	
Inbox			
Groups	SMS Group	grp1 💌	
Create/Compose		8050657038	
Outbox	То		Import
Gateway Control			
• Features			
Tools		AlloGSM adminl info	
Status	Message		
	Send	Download Template	

#### Figure 27: Create SMS

Click Download Template button, to download the GSM gateway Custom SMS.

#### 5.1.2 Custom SMS

Navigate through **SMS** > **Create/Compose**.

This Custom SMS feature allows you to assign *custom* text on a group basis. User can choose the SMS group name and .CSV file for sending SMS. E.g.: GSM\_Gateway\_Custom SMS (file name).



Figure 28: Custom SMS

Click Download Template button, to download the GSM gateway Custom SMS.

#### 5.2 Groups

#### Navigate through **SMS** > **Groups**.

For sending sms, User has to make group of spans from which we can send SMS. A group can have minimum 1 and maximum 4 spans (for 4 port gateway). This Gateway will automatically schedule sms sending on free spans.

<sup>y</sup> SMS can only be sent on Groups.

Group Name	Testing1	
GSM Spans		
Available	Selected	
GSM2 GSM3 GSM4	GSM1 A	

Figure 29: Create SMS Group

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MS >	Show A	II ⊻ entries			Se	arch:
		Name	٥	GSM Spans	0	Options
s		Testing1		GSM1		🗡 🗙
e/Compose		Test		GSM1,GSM2,GSM3,GSM4		× ×
×						
ay Control						
eatures						
pols						
tatus						
an a	Showing	1 to 2 of 2 entries			First	Previous 1 Next Last

#### Figure 30: SMS Groups

## 5.3 Create/Compose

#### Navigate through SMS >Create SMS

Create SMS features allow customers to send one to one message and also bulk sms. This feature also allow customer to upload the lists of message recipients *and custom message in .csv format* 

GSM	For selecting the GSM channel
То	Destination number separated by semicolons or custom destination
	number list can be imported using IMPORT button in .csv format
Message	Enter the body of your message.
Custom SMS	Custom messages can be uploaded which is in .csv format. Template is
	available on the same page.

## 5.4 Outbox

Navigate through SMS >Outbox

It shows the status for outgoing SMS and the user can received current message sending status. And also it shows the number of messages sends and failed.

If sending message is failed, user can download the list of filled messages in CSV format.

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>	Show <mark>/</mark>	All 💙 entries								Search:		
	No. *	Timestamp	٥	Message	0	GSM Spans	0	Total Sent	0	Total Failed	¢	Status
	1	20140106102628		<u>Message</u>		GSM1		2		-		Completed
1999, 1999, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 1997, 19	2	20140106102625		<u>Message</u>		GSM1		2		-		Completed
npose	з	20140106101921		<u>Message</u>		GSM1		2		<b>T</b>		Completed
	4	20000104005801		<u>Message</u>		GSM1		1		1 <u>Downlo</u>	ad	Completed
ntrol	5	20000104005713		<u>Message</u>		GSM1				1 <u>Downlo</u>	ad	Completed
es	6	20000104005647		<u>Message</u>		GSM1		1		-		Completed

Figure 31: SMS Outbox

## 5.5 Gateway Control

#### Navigate through SMS >Outbox

The GSM gateway can be controlled via SMS for the following commands.

- 1. ALLOGSM "gateway-password" REBOOT (Command to reboot the gateway)
- 2. ALLOGSM "gateway-password" RESTART ASTERISK (Command to restart asterisk)
- 3. ALLOGSM "gateway-password" RESTORE CONFIG (Command to restore configuration to factory defaults)
- 4. ALLOGSM "gateway-password" INFO (Command to fetch IP and basic status of GSM spans)

SMS >	List of Commands
nbox	
Groups	1. ALLOGSM "gateway-password" REBOOT (Command to reboot the gateway)
Create/Compose	2. ALLOGSM "gateway-password" RESTART ASTERISK (Command to restart asterisk)
- Duthey	3. ALLOGSM "gateway-password" RESTORE CONFIG (Command to restore configuration to factory defaults)
Jacov	4. ALLOGSM "gateway-password" INFO (Command to fetch IP and basic status of GSM spans)
ateway Control	
Features	
Tools	

Figure 32: Gateway Control via SMS

@ allo....

![](_page_38_Picture_1.jpeg)

## 6. Features

## 6.1 Caller List

Navigate through Features >Caller list

It allows user to store numbers in the Caller list to the Direct Dial memory.

SMS	Show A	📶 ⊻ entries				Search:
Features >		Name	© Caller Id	Dest	Callback	Options
ller List		abc	1001	2002	YES	×
-k List		def	1002	3003	NO	× 💉
		xyz	1003	4003	YES	💉 🗙
iergency List		Tesing	1001	2001	YES	
II Forwarding						
Tools						
Status						
1						
	Showing	g 1 to 4 of 4 entr	ries			First Previous 1 Next Last
	Showing	g 1 to 4 of 4 enti	ries			First Previous 1 Next Las

#### Figure 33: Caller List

Click Download Template button, to download the GSM gateway caller list.

## **Create Caller list**

Name	Tesing	
Caller Id	1001	
Destination	2001	
Callback		

#### Figure 34: Create Caller list

Name	User can enter the name for creating caller list.: E.g. John

![](_page_39_Picture_1.jpeg)

Caller Id	User can make a call to GSM gateway from caller id and a call will be made to					
	destination.					
Destination	If the destination does not answer the call, (if call back enabled) a call will be					
	made to Destination.					
Callback	If destination answers the call, a call will be made to caller id.					
	Callback settings are available in Setup> Advanced> Feature Settings>					
	Callback Settings					

Click IMPORT Button, user can import the caller list entries from a .CSV file format.

×
L

Figure 35: Import Caller List

## 6.2 Black List

#### Navigate through Features > Black list

The Blacklist contains a list of caller numbers that are rejected by the device when an incoming call from the caller is received and authentication is set to Blacklist.

![](_page_40_Picture_1.jpeg)

Name	John	
Number	+91-8056721319	
		4.655

#### Figure 36: Create Black List

Name	Enter the name for creating Blacklist. E.g. John
Number	Enter the phone number. E.g.: +91 8056721319

SMS	Show All N	entries		Search:
- Features 🔉		Name	\$ Number	Options
aller List		Tarun	8549816791	
lack List		John	8549816791	
all Forwarding Tools Status				
	Chowing 1	to 2 of 2 entries		First Previous 1 Next Last

![](_page_40_Figure_6.jpeg)

## 6.3 Emergency List

#### Navigate through Features > Emergency list

It allows user to store emergency numbers in the Caller list to the Direct Dial memory.

In an emergency, call 911 or your local emergency number immediately from ALLO GSM Gateway. An emergency is any situation that requires immediate assistance from the police, fire department or ambulance.

![](_page_41_Picture_1.jpeg)

Name	Emergency Ser	vices	
Number	911		
		SAVE	CANCEL
	Name Number	Name Emergency Ser Number 911	Name Emergency Services Number 911

#### Figure 38: Create Emergency List

Name	Enter the name for creating Emergency list. E.g.:
	Emergency Services
Number	Enter the phone number. E.g.: 911 (must be in
	international number format)

## 6.4 Call Forwarding

## Navigate through Features > Call Forwarding

With this service, you can have calls to your mobile phone forwarded to your office, home phone, or other registered number you registered.

Calls can be forwarded even if you turn off your mobile phone or are already on the line, so you will never miss another call.

![](_page_42_Picture_1.jpeg)

SMS	Enable/Disable Call Forwardi	ng		
- Features 🔉				
Caller List	Select GSM Port	GSM1 🔽	Fetch	
Black List				
Emergency List	List of Options			
Call Forwarding	unconditional (disabled)			
Email to SMS	mobile busy (disabled)			
Tools	no reply (disabled)			
Status	not reachable (disabled)			

Figure 39: Call Forwarding

Users have to fetch enable /disable call forwarding and choose the list of options.

## 6.5 Email to SMS

## Navigate through Features > Email to SMS

GSM gateway can receive Email and send content (as mentioned in template) as SMS. To receive Email on gateway, user has to configure an email client. Following are the settings.

Enable	Enabled option.
Mail Server	It specifies Incoming mail Server for POP3 services.
Email ID	Enter the login name of your email account. Note: This option might be different from your email address.
Password	Enter your Password to login your Email.
Username (Optional)	Enter your user name.
Security type	User can choose the security type from the interface.

![](_page_43_Picture_1.jpeg)

## 7. TOOLS

## 7.1 Diagnostics

Navigate through Tools > Diagnostics

Analyze the functionality of the GSM Gateway with some of these diagnostic tools provided.

SMS	Ping Test	Traceroute Test
<ul> <li>Features</li> </ul>		
• Tools >	Host 192.168.10.103	Host 192.168.10.103
Diagnostics	Count 1 💌	Hops 3 💌
Backup/Restore		
Jpgrade Firmware	Ping	Traceroute
Factory Reset		
Balance Inquiry		
Recharge		
Module Diagnostics		
• Ctatuc		

#### Figure 40: Diagnostics

#### **Diagnostics Ping Result**

It is used to check the packet loss and latency time from your SIP end client like IP Phone/ FXS gateways to check the quality of your network connections.

Enter the IP address of the IP Phone in your LAN and enter "PING" Button, it wills displays similar to like this:

![](_page_43_Picture_11.jpeg)

#### Figure 41: Diagnostics Result

![](_page_44_Picture_1.jpeg)

**Diagnostics Trace route Result-** It is used to determine the route taken by packets across an IP network.

192.168.10.103	(192,168.10.103)	0.487 ms	0.451 ms	0.337 ms	

Figure 42: Diagnostics Trace Route Result

## 7.2 Backup/Restore

Navigate through Tools > Backup/Restore

#### Back Up:

Allow you to take the back up of the System configurations & save it to the local PC.

#### **Restore:**

Restoring from a new upload or backup file will destroy all current configurations and require a system reboot. All calls will be dropped and all current configurations will be destroyed.

Features       (Click the button to download the configuration files)       (Choose the filepath of the restore file )         rgnostics       (Click the button to download the configuration files)       (Choose the filepath of the restore file )         grade Firmware       Backup       Restore         ctory Reset       Restore	Features Tools agnostics ckup/Restore arade Firmware	(Click the button to download the configuration files)	(Choose the filepath of the restore file ) Filename: <b>Browse</b> No file selected (Need Reboot)
ance Induivi	actory Reset	Backup	Restore

#### Figure 43: Backup/Restore

Administrator password will not be restored on restoration. So you should still use same credentials as before restoration

![](_page_45_Picture_1.jpeg)

#### 7.3 Upgrade Firmware

#### Navigate through Tools > Upgrade Firmware

The Firmware Upgrade page allows you to update the GSM Gateway with the latest release available, which can contain key updates, added functionalities and bug fixes. When a new release is available, download it and save to your local PC. Then, browse for the file, and click the Upload button. Now your GSM Gateway will display a Progress Screen and will prompt you when your GSM Gateway is about to reboot. Let your GSM Gateway reboot, and wait for the Blue LED's to come back on.

<ul> <li>Dashboard</li> </ul>	Upgrade Firmware 🛛
• Setup	
• SMS	Current Firmware Version: 2.0.4
<ul> <li>Features</li> </ul>	
• Tools >	(Choose the filepath of the new firmware)
Diagnostics	Filename: Browse No file selected. (Need Reboot)
Backup/Restore	
Upgrade Firmware	
Factory Reset	Upgrade
Balance Inquiry	
Recharge	
Module Diagnostics	
• Status	

![](_page_45_Figure_6.jpeg)

*During firmware upgrade there should not be any power or network disturbances, which may leads to GSM Gateway board faulty. Firmware up-gradation process will take few minutes.* 

#### 7.4 Factory Reset

#### Navigate through Tools > Factory Reset

This feature allows the system admin to erase the user configuration and the device will reset to the Factory Default Settings.

![](_page_46_Picture_1.jpeg)

Dashbuaru	-actory Reset @
• Setup	
• SMS	Factory Reset
Features	
- Tools	<u>CAUTION</u>
Diagnostics	By clicking on "Factory Reset" the device will reset to the Factory Default Settings.
Backup/Restore	
Upgrade Firmware	
Factory Reset	Factory Reset
Balance Inquiry	
Recharge	
Module Diagnostics	
Status	

#### Figure 45: Factory Reset

Hardware Factory Reset will erase the call reports and software Factory Reset shall retain the previous CDR reports.

By clicking on Factory Reset, the device will reset to the Factory Default Settings.

## 7.5 Balance Inquiry

#### Navigate through Tools > Balance Inquiry

This feature allow system admin to get UPTO DATE information regarding the account balance in each SIM ,this information can also send to admin email address. Administrator can monitor the balance history using the Tab "Balance History"

The balance information can be forwarded to a mobile no by selecting (Checking) the option "" Send SMS for every Balance Inquiry ""

SMS	GSM1 GSM2	GSM 3 GSM 4	Balance History		
Features	Balance Inquiry			Balance Inquiry on Scheduled Basis	
Tools >	Number			Frequency	Weekly ⊻
agnostics				Day	Monday 😽
ackup/Restore	USSD Reply			Time	6 : 00
pgrade Firmware			.::	Balance Inquiry on every Power ON of the system	
actory Reset				Send SMS for every Balance Inquiry	
alance Inquiry	Send Request			Enter Mobile Number	
charge					
odule Diagnostics	-			í.	

#### Figure 46: Balance Enquiry

Balance Inquiry Number	This is the number provided by GSM service provider to check
	balance ex : *123# or *141#etc
USSD Reply	Unstructured Supplementary Service Data (USSD) is a protocol
	used by GSM cellular telephones to communicate with the service
	provider's computers. USSD messages are up to 182 alphanumeric
	characters in length.
Balance Inquiry on	Customer can configure the schedule for checking balance by
Scheduled Basis	selecting this option
Frequency	schedule for checking balance –Daily ,weekly, monthly
Day	schedule for checking balance in day (Mon-SUN )
Time	schedule for checking balance in time settings Hours: Minutes
	(HH:MM)
Balance Inquiry on every	This option will check balance inquiry on every power ON
Power ON of the system	
Send SMS for every	This option will send balance information to selected mobile no
Balance Inquiry	after each balance check
Enter Mobile Number	The mobile no to be configured to receive for forwarded balance
	information form the Gateway
Balance history	This will provide the history of balance check

![](_page_48_Picture_1.jpeg)

## 7.6 Recharge

#### Navigate through **Tools** > **Recharge**

This option allow system admin to recharge the pre paid SIM card using the wed GUI

sms	SIM Recharge		
<ul> <li>Features</li> <li>Tools</li> </ul>	GSM	GSM 1 💌	
Diagnostics	Recharge Number		
Backup/Restore			
Upgrade Firmware	USSD Reply		
Factory Reset			
Balance Inquiry	Recharge		
Recharge			
Module Diagnostics			_
• Status			

Figure 47: Recharge

## 7.7 Module Diagnostics

Navigate through Tools > Module Diagnostics

We have manual module resets here in case of failure.

• Setup				
SMS Re	set Individual GSM Module			
Features				
🕈 Tools 💦 🗲 🗲				
Diagnostics	Reset	Reset	Reset	Reset
Backup/Restore	GSM 1	GSM 2	GSM 3	GSM 4
Upgrade Firmware				
Factory Reset				
Balance Inquiry				
Recharge Re	load GSM Driver			
Module Diagnostics				
Status				

Figure 48: Module Diagnostics

![](_page_49_Picture_1.jpeg)

## 8. Status

## 8.1 Call Reports

#### Navigate through Status > Call Reports

Call Reports displays a detailed list of calls pass through the GSM Gateway. The list can be generated on the bases of date range, CDR count, latest 50 entries or all entries. Generated report can also be exported to local PC as *CSV* file.

To create a new report select the Extension Range or Date range and click the "Generate" Report button. A list with call details will display in the Call Reports section. You can either export to your local PC or Print the Call reports.

SMS	Generati	е Туре 🛛 🖸	) efault (La	atest 50 entrie	s) 💌			C	Gei	nerate	×	Export	ð Pri	nt
Features														
Tools	Show	25 🝸 entries								Sear	ch:			_
Status 🔷 🔉	No. *	Start Time	\$	Caller ᅌ	Callee	Duration	٥	Status 🤇	0	Owner	\$	Link ID	0	
l Reports	1	2000-01-01 00:42:24		5001	408067080850	14		NO ANSWER	!	5001 <5001>		94668734	4.16	1
Trunks M Span	2	2000-01-01 00:37:55		5001	408067080850	20		ANSWERED	1	5001 <5001>		94668707	5.14	
rent Calls	з	2000-01-01 00:37:24		5001	408067080850	28		ANSWERED	!	5001 <5001>		94668704	4.12	
vork	4	2000-01-01 00:08:51		5001	408067080850	16		ANSWERED	1	5001 <5001>		94668533	1.10	
	5	2000-01-01		5001	400067000050	-		NO	1	5001		04660522	1.0	

#### Figure 49: Call Reports

Generate Type	Default (last 50 entries)-Show the last 50 calls
	Based on date range- filter the calls according to the FROM and TO date
	entries
	Based on CDR count – Based on CDR entry serial no
	All – Display all
Show entries	How many entries in the single page
NO	Serial no of the CDR entry

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![](_page_50_Picture_1.jpeg)

Start Time	Stating time of the call
Caller	Who originates a call
Callee	The person who is called by the caller
Duration	The duration of the call
Status	NO ANSWER – If the call landing on the Gateway not answered
	Answer –If the call landing on the gateway answered
	<b>Busy</b> – If the call landing on the gateway rejected by the user
Owner	Caller ID of the caller
Link ID	Unique no generated by the Gateway
Generate	This button used when you sort CRD with generate type
Export	To export CDR in .csv format
Print	To Print CDR

## 8.2 SIP Trunk Status

Navigate through Status > SIP Trunks

SIP Trunk Status page displays detailed status of each SIP trunks available on the GSM Gateway.

SMS	Show	All 💌 entries										Search:			
Features	No. •	Ac. Name	0	Username	٥	Host	٢	Dynamic	٥	Port	٥	Status	٥	Reg. State	
Tools	1	5001		5001		(Unspecified)		D		0		UNKNOWN			
Status 🔉															
Reports															
Trunks															
1 Span															
ent Calls															
vork															

Figure 50: SIP Trunk Status

![](_page_51_Picture_1.jpeg)

Status	Reg. State	Description	
ОК	Registered	Configured, Registered &	-
		reachable	
ОК	-	Configured & Reachable, but	-
		no Registration	
ОК	Request	Configured, but Host not	Check Registrar
	Sent	responding or unreachable	Address
ОК	Rejected	Configured & reachable, but	Check
		Registration failure	Authentication
UNREACHABLE	Registered	Configured, Registered, but	Check Proxy Address
		not reachable	
UNREACHABLE	-	Configured, but not reachable	Check Proxy Address
UNKNOWN	-	Not Registered	Client not registered

**Dynamic:** Host IP is obtained dynamically on registration.

## 8.3 GSM Span Status

#### Navigate through Status > GSM Span

GSM Span Status page displays detailed status of each span name, Signal Strength, Service Provider info and channel status available on the GSM Gateway.

SMS	GSM Status			
Features	Span Name	Signal Strength	Service Provider	Channel Status
Tools	GSM 1	Tail	airtel	<b>e</b>
Status 🔉	GSM 2	Tall	airtel	•
ll Reports	GSM 3	×۳	UNKNOWN	(SIM Not Found)
P Trunks	GSM 4	×۳	UNKNOWN	(SIM Not Found)
M Span	😑 Busy 🛛 🤤 Idle	😔 Disabled		

#### Figure 51: GSM Span Status

![](_page_52_Picture_1.jpeg)

Channel Status	Description
-	Channel is Busy
-	Channel is Idle and ready to receive or make calls
	Channel is not active(SIM not found )

## 8.4 Current Calls

## Navigate through **Status** > **Current Calls**

Current Calls page displays detailed status of the real time calls available on GSM Gateway.

SMS	Show	All 🗘 entries			Search:
Features	No.	▲ Caller	Callee / Receiver	≎ Start Time	Duration
Tools	1	SIP/5000	AGSM/g1/8050657038	Mon 06 Jan 2014 04:36:37 PM IST	00:00:29
Status					
I Reports					
Trunks					
SM Span					
irrent Calls					
twork					
	Showin	q 1 to 1 of 1 entries			First Previous 1 Next Last
		•			The second

Figure 52: Current Calls

#### 8.5 Network Status

Navigate through Status > Network

Network Status page displays detailed status of the network configuration on GSM Gateway.

![](_page_53_Picture_1.jpeg)

tup				
MS	LAN Status		WAN Status	
Features				
Tools	IP Address	192.168.113.1	IP Address	192.168.10.103
	MAC Address	00:17:F7:00:98:20	MAC Address	00:17:F7:00:98:21
Status 🔉			Default Gateway	192.168.10.254
Reports				
Trunks				
4 Span				
rrent Calls				
twork				

Figure 53: Network Status

![](_page_54_Picture_1.jpeg)

## 9. Administrator

## 9.1 Reboot

Refer Below screen shot for Reboot, WEB settings, Email Settings and Log out

Dashboard     Dashboard     Net     Step 1: Network     Step 2:      Date/Time     Step 3: GSM     Settings	WOrk Setti AN Configuratio DHCP Client	ngs 🛛	LAN Config	uration	Reboot Web Settings Email Settings Logout
asic WA Step 1: Network Step 2: Obte/Time Step 3: GSM IF Settings	AN Configuratio	n 🔿 Static IP	LAN Config	uration	Logout
Step 1: Network     Step 2:     Oate/Time     Step 3: GSM IF Settings	DHCP Client	O Static IP			
← Step 3: GSM			IP Address	192 169	
N	? Address	192 . 168 . 10 . 8	3	132	
Step 4: SIP  Punks  G  Step 5: GSM Lines	ateway	192 . 168 . 10 . 25	4 Host Config	uration	
Step 6: Routing D	NS 1	192.168.0.5			
lvanced D	NS 2	192.168.0.254	Hostname	gsm	
SMS Features					
Tools App	ly				
Status					

#### Figure 54: Reboot

Reboot option will help customers / Technicians to reboot the device from GUI

## 9.2 Web Settings

Navigate through Administrator > Web Settings

Session Timeout	Duration after which current web login session expires. Default:
	3600 sec
Pagination	Number of entries in a table per page to be displayed.
Change Password	Modify Administrator password here.

## 9.3 Email settings

## Navigate through Administrator > Email Settings

Mail Server	The IP Address or domain name of the SMTP server
Email-ID	Specify the Administrator Email ID.
Username	Authorized username of the Admin Email ID
Password	Authorized password of the Admin Email ID

![](_page_55_Picture_1.jpeg)

TLS Support	TLS setting to require mail to be transmitted via a secure
	connection when users correspond with specific domains and
	email addresses.

![](_page_56_Picture_1.jpeg)

## **10. Appendix**

## **10.1 SMS Sending and Receiving Options in Allo's GSM PCI cards for Asterisk 1. Sending SMS**

There are two modes for sending SMS such as PDU mode and text mode. PDU mode supports a few languages' characters for sending. Text mode currently supports only English characters.

To send SMS, chan\_allogsm provides three methods:

i. Sending SMS on the Asterisk console (only supports English characters).

Usage: allogsm send sms <span> <destination number> <sms contents>

E.g. allogsm send sms 1 135xxxxxxxx "Hello World!"

ii. Sending SMS over Linux Shell.

Usage: asterisk - rx "allogsm send sms <span> <destination number> <sms contents>"

E.g. asterisk - rx "allogsm send sms 1 135xxxxxxxx \"Hello World!

iii. Send SMS over dialplan.

Usage: SendSMS (<span>, destination number, sms content)

E.g. SendSMS (1,135xxxxxxx, "Hello World!")

#### 2. Receiving SMS

The sms will be saved in /var/log/asterisk/sms/receive\_message when system receives. At this moment, it will trigger corresponding contexts and sms priorities over dialplan.

E.g. exten =>sms, 1, xxxxxxxxx (must use sms so that trigger sms receiving). It might be different for each span

#### 3. Additional Variable settings in Dialplan.

#### Sending Side

i. Set (CHAR\_CODING=encoding); set up encoding mode of sending sms. Currently supported GSM for text mode and HEX for PDU.

![](_page_57_Picture_1.jpeg)

#### E.g. Set (CHAR\_CODING=GSM)

- ii. Set (SMSC=sms centre number); set up centre number of sms.
- E.g. Set (SMSC=861380755500)

#### **Receiving Side**

- i. \${SMSSRC}; sms sender number.
- ii. \${SMSTXT}; sms contents.
- iii. \${SMSPDU}; PDU codes of sms.

## Thank you for choosing

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