

## 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 and No Reply.

### **Call Waiting**

When an FXS channel receives another call while it is in conversation, it will have the newly received call keep waiting. Once the current call is finished, the new one will ring the FXS channel and wait for its answer.

**Auto Dial** If there is no dialing operation in a designated time period after pickup, the preset auto dial number will be called.

**Do Not Disturb** Rejects all the incoming calls to the channel.

**CID** Displays the CallerID.

**Echo Cancellation** Provides the echo cancellation feature for a call conversation over the FXS/FXO channel.

**TDM/VoIP Routing** Sets a routing path: from IP to TDM or from TDM to IP.

**Fax** Provides multiple fax parameters: fax mode, maximum fax rate, fax train mode, error correction mode, etc.

### **Communication**

#### **without Power**

Provides composite modules to enable a direct connection of the station which is linked with the FXS port and the trunk which is linked with the FXO port to keep the calls between the FXS port and PSTN uninterrupted during power outage.

## **Communication**

**without Network** Automatically routes a call to the FXO port in case of network failure or call timeout.

### **Send Polarity Reversal**

#### **Signal**

Sends the polarity reversal signal to a corresponding FXS channel when the called party pick-up behavior is detected.

#### **Detect Polarity**

#### **Reversal Signal**

Turns a corresponding channel into the talking state when the FXO port detects the polarity reversal signal.

### **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.

**SIP Station** Supports a SIP terminal to be registered to the gateway and become a SIP station.

**Group Ringing** Rings all the idle FXS ports in a port group.

**Ringling by Turns** Rings the FXS ports in a port group by turns according to the *Rule for Ringling by Turns*.

**Preemptive Answer** When a channel in a port group is ringing, another channel in the same port group ringing channel to the current channel.

## **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.

**PPPoE** Virtual dial-up internet access 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** 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**

Front



Rear





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

### **Interface Description**

Amount: 2

Type: RJ-45

Bandwidth: 10/100Mbps

Self-Adaptive Bandwidth Supported

### **LAN**

Auto MDI/MDIX Supported

Amount: 8/16/32

Type: RJ-11, RJ-21, RJ45

Maximum Transmission Distance: 1500m

### **FXS/FXO**

Charge Mode: Negative Anti-billing Supported

Amount: 1

Type: RS-232

Baud Rate: 115200bps

Connector: RJ45 to DB-9 Connector

Data Bits: 8 bits

Stop Bit: 1 bit

Parity Unsupported

### **Console Port**

Flow Control Unsupported

### **Button Description**

**Power Key** Power on/off the SMG analog gateway.

**Reset Button** Restore the gateway to factory settings.

### **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 1.4 Alarm Info.

**Alarm Indicator** Alarms the device malfunction. For more details, refer to 1.4 Alarm Info.

**Link Indicator** The green LED on the left of LAN, indicating the network connection status.

#### **ACT Indicator**

The orange LED on the right of LAN, whose flashing tells data are being transmitted.

#### **Channel Indicator**

FXS and FXO channels are respectively marked by green and red LED after power on.

1. When the channel is idle, the LED Lights up;
2. When the channel is off-hook, the LED flashes slowly;
3. When the channel is ringing, the LED flashes fast.

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

### **1.4 Alarm Info**

The SMG analog 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 System is normal.

Go out System is normal.

Light up

Upon startup: System is normal.

In runtime: System is abnormal.

### ***Alarm Indicator***

Flash System is abnormal.

## **3.2.1 WEB**

The screenshot displays a web interface titled "System Info". It contains the following information:

System Info			
LAN 1			
MAC Address	00:00:E0:10:10:5D		
IP Address	201.123.115.221	255.255.255.0	201.123.115.254
DNS Server	0.0.0.0		
LAN 2			
	Disable		
Runtime	16h 42m 42s		
Current Version			
WEB	1.5.0_2014112611		
Gateway	1.5.0_2014112611		
Serial Num	0x111111		
Authorization Code	0x7		
U-boot	#SMG1032 (Nov 18 2014 - 19:49:43)		
Kernel	#184 PREEMPT Thu Nov 20 10:52:09 CST 2014		
Firmware	104		
Device Type	1a4		

At the bottom of the interface, there is a "Refresh" button.

Channel State							Channel State						
Channel	Type	Voltage(v)	State	Direction	CallerID	CalleeID	Channel	Type	Voltage(v)	State	Direction	CallerID	CalleeID
1	--	0	📞	--	--	--	17	--	0	📞	--	--	--
2	--	0	📞	--	--	--	18	--	0	📞	--	--	--
3	--	0	📞	--	--	--	19	--	0	📞	--	--	--
4	--	0	📞	--	--	--	20	--	0	📞	--	--	--
5	--	0	📞	--	--	--	21	--	0	📞	--	--	--
6	--	0	📞	--	--	--	22	--	0	📞	--	--	--
7	--	0	📞	--	--	--	23	FXS	0	📞	--	--	--
8	--	0	📞	--	--	--	24	FXS	0	📞	--	--	--
9	--	0	📞	--	--	--	25	--	0	📞	--	--	--
10	--	0	📞	--	--	--	26	--	0	📞	--	--	--
11	--	0	📞	--	--	--	27	--	0	📞	--	--	--
12	--	0	📞	--	--	--	28	--	0	📞	--	--	--
13	--	0	📞	--	--	--	29	FXO	0	📞	--	--	--
14	--	0	📞	--	--	--	30	FXO	0	📞	--	--	--
15	--	0	📞	--	--	--	31	--	0	📞	--	--	--
16	--	0	📞	--	--	--	32	--	0	📞	--	--	--

### Sip Compatibility

Obtain CalleeID from	"Request" Field
Set CallerID position	Username of From Field
Obtain CallerID from	Username of From Field
Call Transfer Mode	Internal Handling
Call Flash Mode	Platform to Handle SIP I
Hold Music Source	Remote
Two Stage Dialing for SIP Incoming Call	<input type="checkbox"/> Enable
Maximum Wait Answer Time (s)	60
SIP Station Supported	<input type="checkbox"/> Enable
Set SIP Identifying	Gateway
Call Abnormal Hangup Detection	<input checked="" type="checkbox"/> Enable
Cycle(s)	0
Server Status Detection	<input checked="" type="checkbox"/> Enable
Cycle(s)	5

Save
Reset