Synway®

Synway UMG Series Gateway

Uniway2000

Uniway2100

User Manual

Version 1.6.3

Synway Information Engineering Co., Ltd

www.synway.net

Content

Copyright Declaration

Revision History

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Chapter 1 Product Introduction

Thank you for choosing Synway UMG Series Gateway!

The Synway UMG series gateway products (hereinafter referred to as 'UMG gateway') integrate the analog, digital and wireless subboards. It can connect the traditional phone sets, the fax machines, the PSTN and the enterprise PBX as well as the wireless network to implement multiple features of analog, digital and wireless gateways, providing a powerful, reliable and cost-effective VoIP solution for such occasions as IP call centers and multi-branch agencies.

1.1 Typical Application

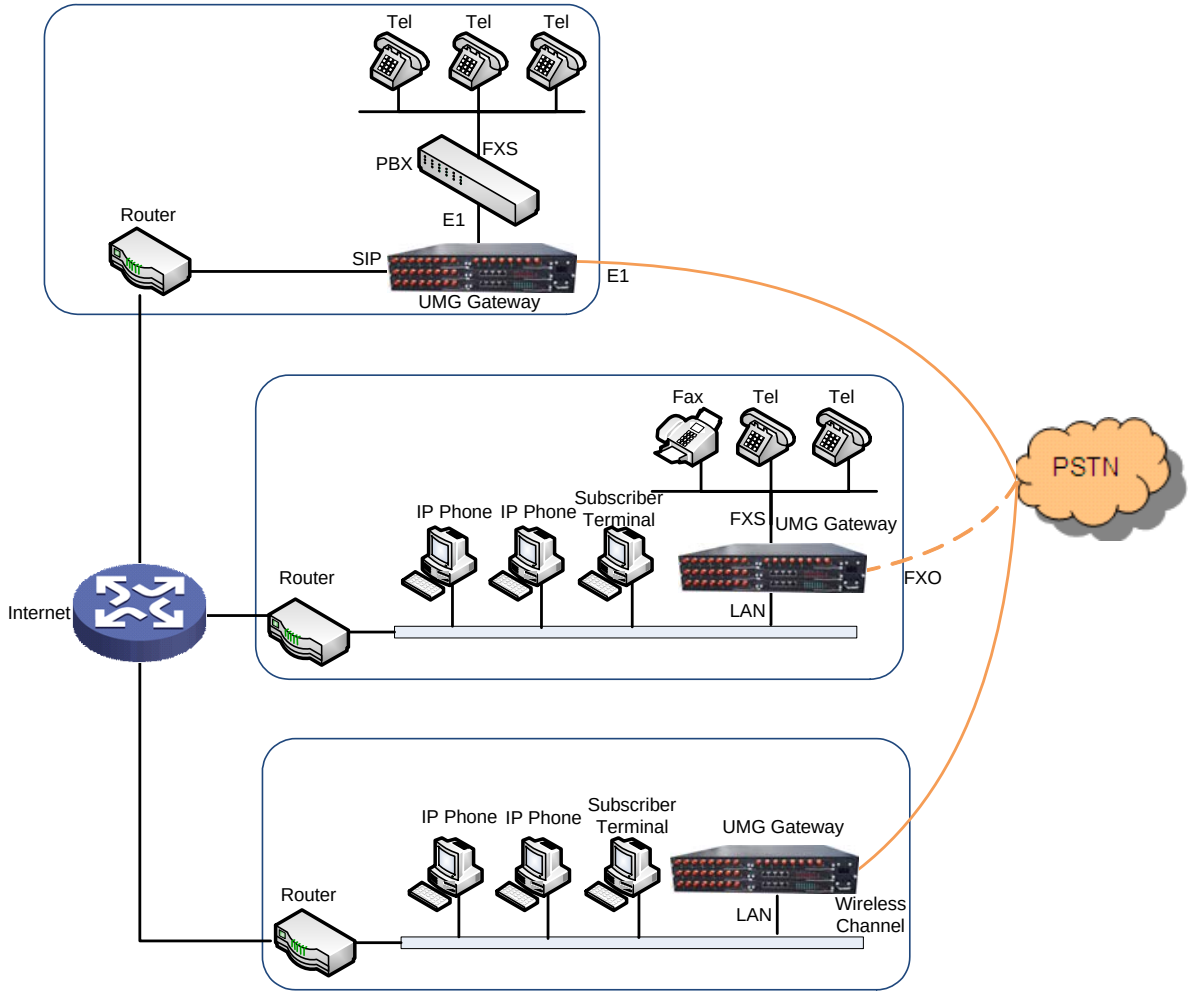


Figure 1-1 Typical Application

1.2 Feature List

Basic Features	Description
IP Call	Call initiated from IP to a designated SIP trunk for voice communication, via routing and number manipulation.
Number Manipulation	Peels off some digits of a phone number from left/right, or adds a prefix/suffix to a phone number.
VoIP Routing	Routing path: from IP to PSTN or from PSTN to IP.
Fax	Multiple fax parameters: fax mode, maximum fax rate, fax train mode, error correction mode, etc.
Echo Cancellation	Provides the echo cancellation feature for a call conversation.
IMS Network	Registers the gateway to a server under IMS network.
Simultaneous Register to Multiple Servers	Registers the gateway to a master registrar server and a spare registrar server simultaneously.
Signaling & Protocol	**Description**
SIP Signaling	Supported protocol: SIP V1.0/2.0, RFC3261
Voice	CODEC: G.711A, G.711U, G.729, G723, G722, AMR, iLBC DTMF Mode: RFC2833, SIP INFO, INBAND, RFC2833+Signaling, In-band+Signaling
Network	**Description**
Network Protocol	Supported protocol: TCP/UDP, HTTP, ARP/RARP, DNS, NTP, TFTP, TELNET, STUN
Static IP	IP address modification support
DNS	Domain Name Service support
Security	**Description**
Admin Authentication	Support admin authentication to guarantee the resource and data security
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 UMG gateway features 2U rackmount design and integrates embedded LINUX system within

the POWERPC+DSP hardware architecture. It has 2 Megabit Ethernet ports (LAN1 and LAN2) on the chassis, two fan boxes with removable fans and independent air passages respectively on the front and back panels.

1.3.1 Appearance & Interface Description

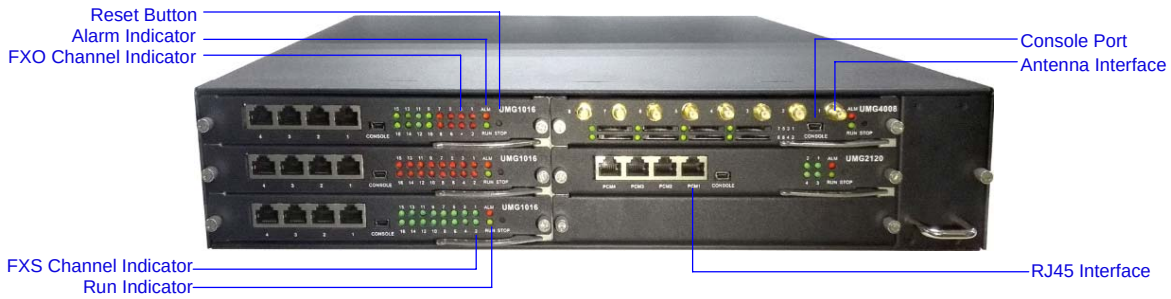
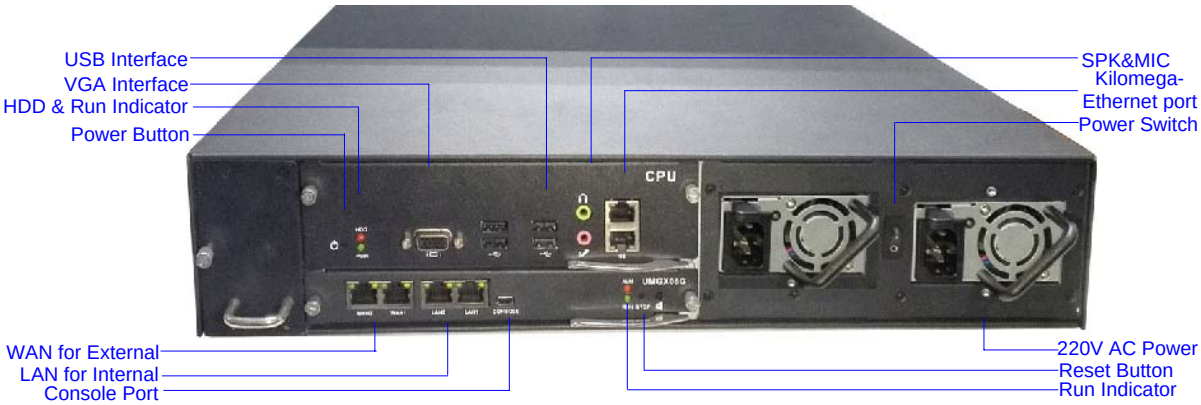


Figure 1-2 Front View for Uniway2000



Note: The Internal LAN is only used to access the inserted subboards.

Figure 1-3 Rear View for Uniway2000

Figure 1-4 Left View for Uniway2000

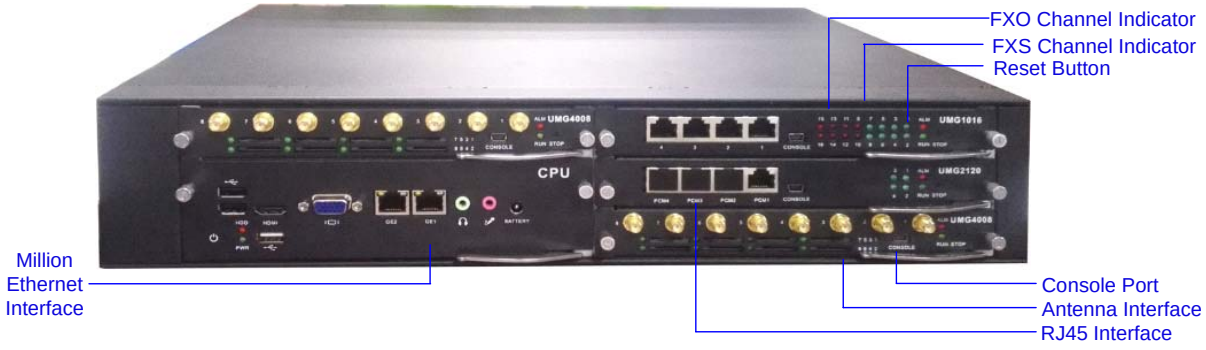


Figure 1-5 Front View for Uniway2100

Figure 1-6 Rear View for Uniway2100

Figure 1-7 Left View for Uniway2100

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

Interface	Description
LAN	Amount: 2
	Type: RJ-45
	Bandwidth: 10/100Mbps
	Self-Adaptive Bandwidth Supported
	Auto MDI/MDIX Supported
Console Port	Amount: 1
	Type: RS-232
	Baud Rate: 115200 bps
	Connector: Mini-USB connecting line
	Data Bits: 8 bits
	Stop Bit: 1 bit
	Parity Unsupported
	Flow Control Unsupported
Button	**Description**
Power Key	The power key for the board power supply
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.

1.3.2 Hardware Structure

The UMG gateway features 2U rackmount design, which can be inserted with the CPU board, the switching board, analog gateway subboards, digital gateway subboards and wireless gateway subboards. For the Uniway2000 gateway, it designs 6 service board slots in the front, 2 service board slots together with 1 switching board slot at the back. The wider one among the 9 slots is only for the switching board, and the other 8 slots are optional; for the Uniway2100 gatewaym ut designs 6 service board slots in the front, 1 switching board slot at the back. The descriptions about the subboards are listed below:

The CPU board (Occupied a height of two service boards) based on the X86 architecture is used to run the IVR and other programs developed by customers.

The switching board (Uniway2000: UMG-X08G) based on the MCU03 processor and the 1.2G quad-core ARM processor, is used to run the front-end gateway service program. The assembled switching board of Uniway2000 has 3 independent Kilomega-Ethernet ports which can be self-adaptive the 10/100M network. It provides a high-performance, embedded CPU to manage all the devices. The switching board for Uniway2100 (UMG-X06) has 2 independent Million-Ethernet ports. The service boards interact with the exterior via the switching board.

The digital gateway subboards (UMG2120) support 1E1, 2E1s and 4E1s, with the type of UMG-2030, UMG-2060 and UMG-2120.

The analog gateway subboards (UMG1016) now support up to 16 analog channels, with the types of UMG1016-16S (16-channels FXS port), UMG1016-8S8O (8-channels FXS port and 8-channels FXO port) and UMG1016-16O (16-channels FXO port).

The wireless gateway subboards (UMG4008) now support up to 8 wireless channels, with the type of UMG-4008_8G, UMG-4008_8C, UMG-4008_8W, UMG-4008_4G, UMG-4008_4C and UMG-4008_4W.

The 8 optional slots can be inserted with any subboards according to your requirement. The ordinary settings are: 1 CPU board + 1 switching board + 6 available service boards; 2 CPU boards + 1 switching board + 4 available service boards; 1 switching board + 8 available service boards.

See the hardware architecture below:

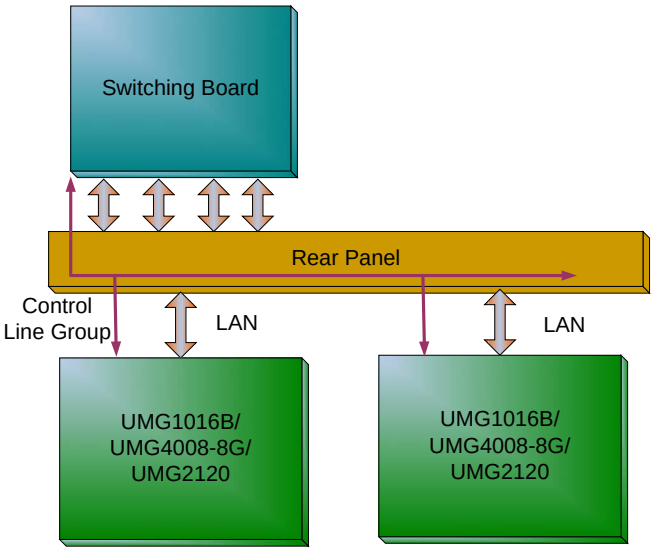


Figure 1-8 UMG Gateway Hardware Architecture

1.4 Alarm Info

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

LED	State	Description
Run Indicator	Go out	System is not yet started.
	Light up and flash fast	System is starting.
	Flash slowly	System is normal.
Alarm Indicator	Go out	System is normal.
	Light up	Upon startup: System is normal. In runtime: System is abnormal.
	Flash	System 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 Appendix C Technical/sales Support to find the contact way.

Chapter 2 Quick Guide

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

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

- UMG Gateway *1
- Angle Bracket *2, Rubber Foot Pad *4, Screw for Angle Bracket *8
- 220V Power Cord *2
- Warranty Card *1
- Installation Manual *1

Step 2: Properly fix the UMG gateway.

If you do not need to place the gateway on the rack, simply fix the 4 rubber foot pads. Otherwise, you should first fix the 2 angle brackets onto the chassis and then place the chassis on the rack.

Step 3: Connect the power cord.

Make sure the device is well grounded before you connect the power cord. Check if the power socket has the ground wire.

Note: Each UMG gateway has two power interfaces to meet the requirement for power supply hot backup. As long as you properly connect and turn on these two power keys, either power supply can guarantee the normal operation of the gateway even if the other fails.

Step 4: Connect the network cable.

Step 5: Log in the gateway.

Enter the original IP address (LAN 1: 192.168.1.101 or LAN 2: 192.168.0.101) of the UMG gateway in the browser to go to the WEB interface. 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 → Change Password’ on the WEB interface as soon as possible after your first login. For detailed instructions about changing the password, refer to 3.6.13 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 ‘System Tools → Network’ on the WEB interface to put it within your company’s LAN. Refer to 3.6.1 Network 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: Check the connection of subboards.

After the gateway starts successfully with the subboards, you can go ‘Gateway→Subboard Gateway’ on the WEB interface to check if all the subboards are well connected.

Step 8: Set routing rules for calls.

Go to the route setting interface of each subboard to set the routing rules. Please refer to the user manual of each gateway for detailed information.

Special Instructions:

- The chassis of the UMG gateway must be grounded for safety reasons, according to standard industry requirements. A simple way is earthing with the third pin on the plug.

No or improper grounding may cause instability in operation as well as decrease in lightning resistance.

- As the device will gradually heat up while being used, please maintain good ventilation to prevent sudden failure, ensuring that the ventilation holes (see Figure 1-4) 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 → Change Password' on the WEB interface. For detailed instructions, refer to 3.6.13 Change Password.

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

Figure 3-2 Main Interface

3.2 Operation Info

Operation Info shows the current running status of the gateway. See Figure 3-3.

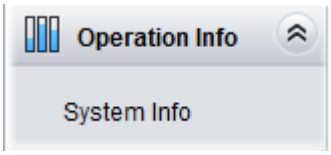


Figure 3-3 Operation Info

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, click ***Version Detail*** to obtain the detailed information of WEB, Gateway, Uboot and Kernel. The table below explains the items shown in Figure 3-4.

Item	Description
MAC Address	MAC address of LAN 1 or LAN 2.

IP Address	The three parameters from left to right are IP address, subnet mask and default gateway of LAN 1 or LAN 2.
DNS Server	DNS server address of LAN 1 or LAN 2.
Receive Packets, Transmit Packets	The amount of receive/transmit packets after the gateway's startup, including three categories: All, Error and Drop.
Current Speed	The current speed of data receiving and transmitting.
Work Mode	The work mode of the network, including six options: 10 Mbps Half Duplex, 10 Mbps Full Duplex, 100 Mbps Half Duplex, 100 Mbps Full Duplex, 1000 Mbps Full Duplex and Disconnected. Note: The mode of 1000 Mbps Full Duplex is unavailable for the Uniway2100 gateway.
Runtime	Time of the gateway keeping running normally after startup. This parameter updates every 2s.
CPU Temperature	Display the real time temperature of the CPU.
Serial Number	Unique serial number of an UMG gateway.
WEB	Current version of the WEB interface.
Gateway	Current version of the gateway service.
Uboot	Current version of Uboot.
Kernel	Current version of the system kernel on the gateway.
Firmware	Current version of the firmware on the gateway.

3.3 Gateway Setting

SIP Settings includes ***Subboard Gateway*** and ***Subboard Configuration***. See Figure 3-5.

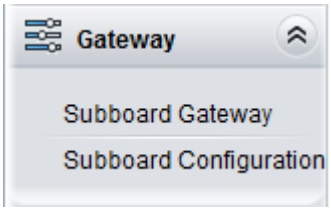


Figure 3-5 Gateway Settings

3.3.1 Subboard Gateway

The subboard gateway interface displays all the subboard types of the UMG gateway. See Figure 3-6. Click ***Configuration*** to go to the configuration interface of each subboard. You can refer to the corresponding gateway's manual for detailed operations.

Subboard Gateway

Slot No.	Gateway Type	Configuration
1	---	--
2	---	--
3	UMG-1016S	
4	---	--
5	UMG-4008G	
6	---	--
7	---	--
8	---	--

Figure 3-6 Subboard Gateway Interface

3.3.2 Subboard Configuration

The subboard configuration interface displays all the route and port information. See Figure 3-7 below.

Figure 3-7 Subboard Configuration Interface

3.4 Subboard Group

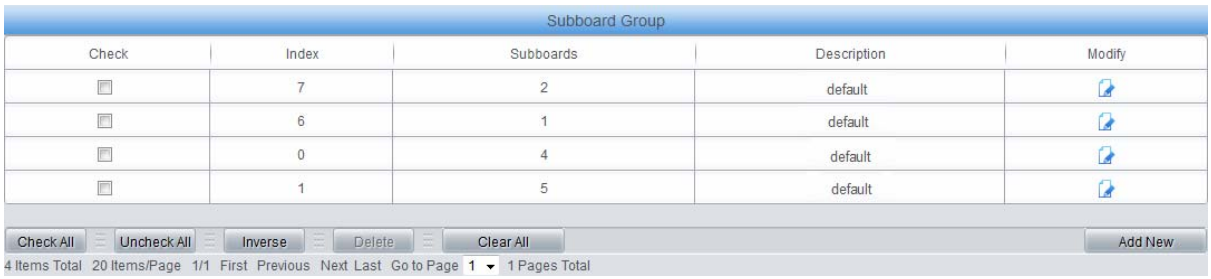


Figure 3-8 Subboard Group Settings

See Figure 3-8 for the subboard group setting interface. A new subboard group can be added by the ***Add New*** button on the bottom right corner of the list in the above figure. See Figure 3-9 for the subboard group adding interface.

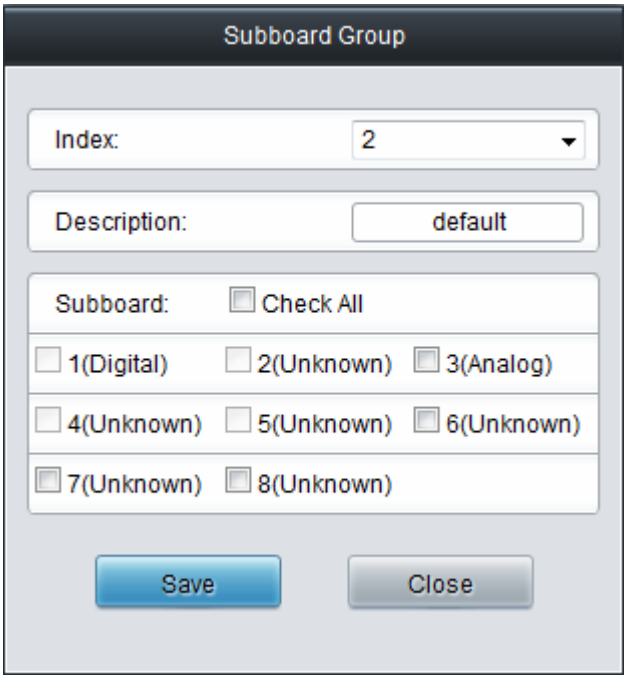


Figure 3-9 Add New Subboard Group

The table below explains the items shown in Figure 3-9.

Item	Description
Index	The unique index of each subboard group, which is mainly used in the configuration of routing rules and number manipulation rules to correspond to subboard groups.
Description	More information about each subboard group.
Subboards	The subboards in the subboard group. If the checkbox before a subboard is grey, it indicates that the subboard has been occupied. The ticked subboards herein will be displayed in the column 'Subboards' in Figure 3-8.

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

Click ***Modify*** in Figure 3-8 to modify a subboard group. See Figure 3-10 for the subboard group modification interface. The configuration items on this interface are the same as those on the ***Add New Subboard Group*** interface.

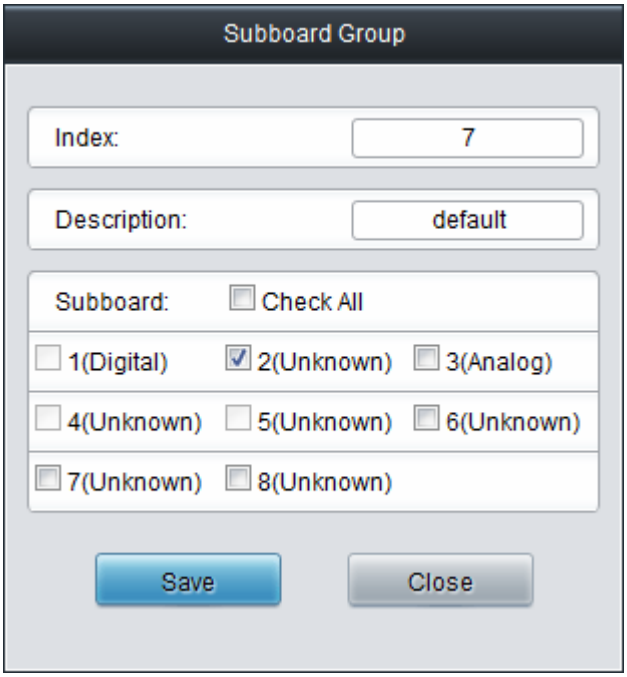


Figure 3-10 Modify Subboard Group

To delete a subboard group, check the checkbox before the corresponding index in Figure 3-8 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 subboard groups at a time, click the ***Clear All*** button in Figure 3-8.

3.5 Route Settings

Route Settings is used to specify the routing rules for calls from IP to TEL/PSTN. See Figure 3-11.

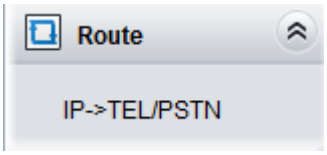


Figure 3-11 Route Settings

3.5.1 IP to TEL/PSTN

By default, there is no IP→TEL/PSTN routing rule available on the gateway. Click ***Add New*** to add some manually. See Figure 3-12 for the IP→TEL/PSTN routing rule adding interface.

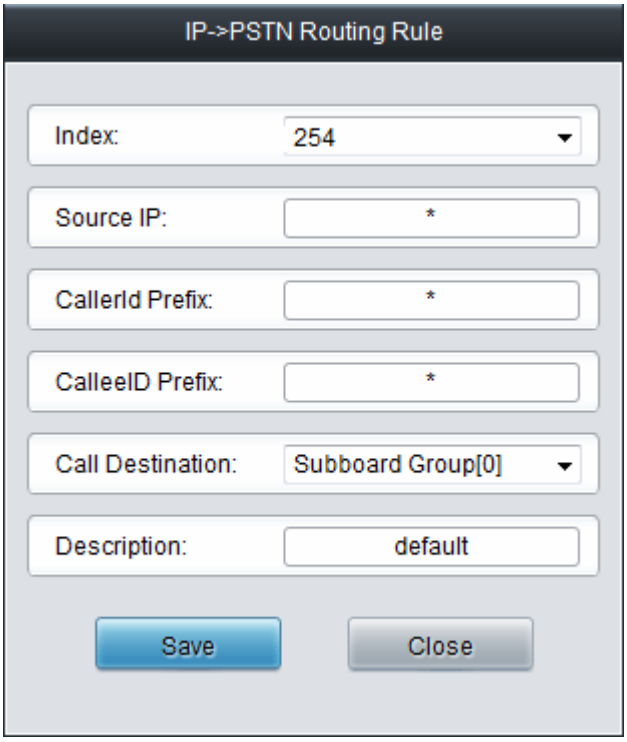


Figure 3-12 Add New Routing Rule (IP→TEL/PSTN)

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.
Source IP	The IP address where the calls come from.

<table>
<tr><td>CallerID Prefix,
CalleeID Prefix</td><td>A string of numbers at the beginning of the calling/called party number. This item can be set to a specific string or “*” which indicates any string. These two configuration items together with Call Initiator can specify the calls which apply to a routing rule.
Rule Explanation:<table><tr><th>Character</th><th>Description</th></tr><tr><td>“0”~”9”</td><td>Digits 0～9.</td></tr><tr><td>“[ ]”</td><td>‘[ ]’ is used to define the 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.</td></tr><tr><td>“-”</td><td>’-’ is used only in ‘[ ]’ between two numbers to indicates any number between these two numbers.</td></tr><tr><td>“,”</td><td>’,’ is used to separate numbers or number ranges, representing alternatives.</td></tr></table>Example: Rule “0[0-3,7][6-9]” denotes the prefix is 006, 016, 026, 036, 007, 017, 027, 037, 008, 018, 028, 038, 009, 019, 029, 039, 076, 077, 078, 079.
Note: Multiple rules are supported for CallerID/CalleeID prefix. They are separated by “:”.</td></tr>
<tr><td>Call Destination</td><td>Subboard group to which the call will be routed.</td></tr>
<tr><td>Description</td><td>More information about each routing rule.</td></tr>
</table>

After configuration, click ***Save*** to save the settings into the gateway or click ***Close*** to cancel the settings. See Figure 3-13 for the IP→TEL/PSTN Routing Rule Configuration Interface.

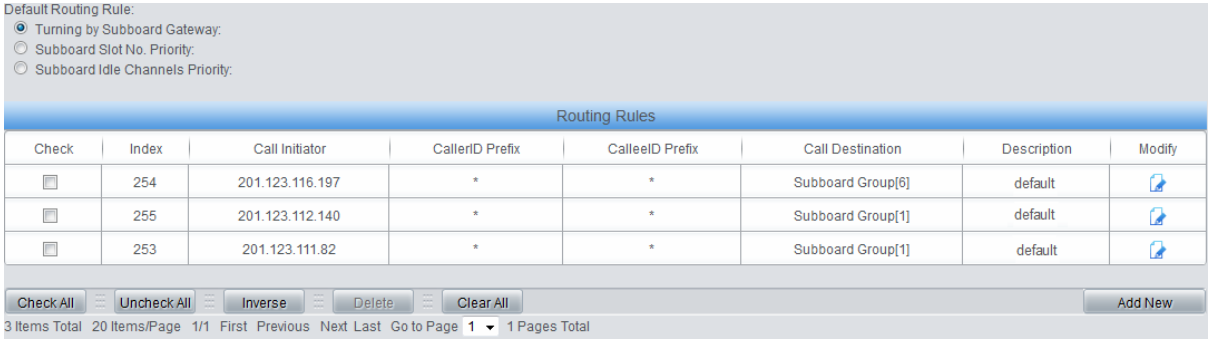


Figure 3-13 IP→TEL/PSTN Routing Rule Configuration Interface

Click ***Modify*** in Figure 3-13 to modify a routing rule. See Figure 3-14 for the IP→TEL/PSTN routing rule modification interface. The configuration items on this interface are the same as those on the ***Add New Routing Rule (IP→TEL/PSTN)*** interface. Note that the item ***Index*** cannot be modified.

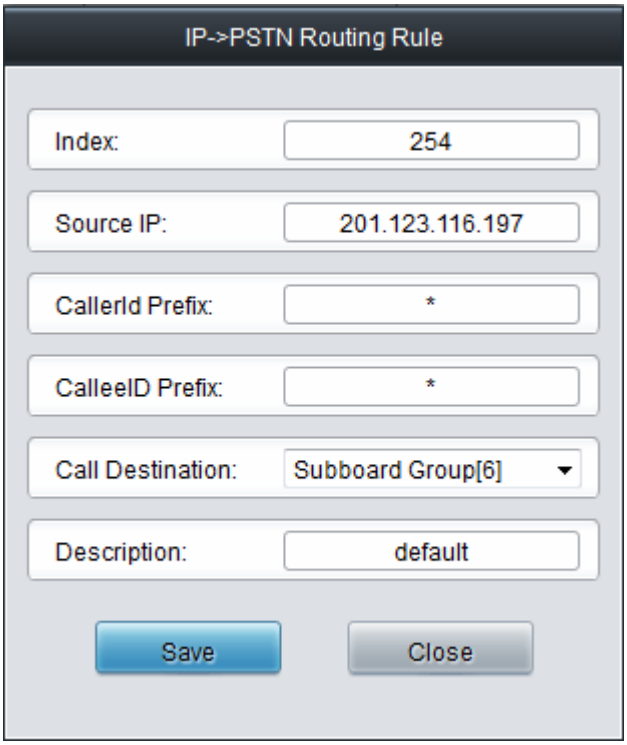


Figure 3-14 Modify Routing Rule (IP→TEL/PSTN)

To delete a routing rule, check the checkbox before the corresponding index in Figure 3-13 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 3-13.

3.6 System Tools

System Tools is mainly for gateway maintenance. It provides such features as IP modification, time synchronization, data backup, log inquiry and connectivity check. See Figure 3-15 for details.

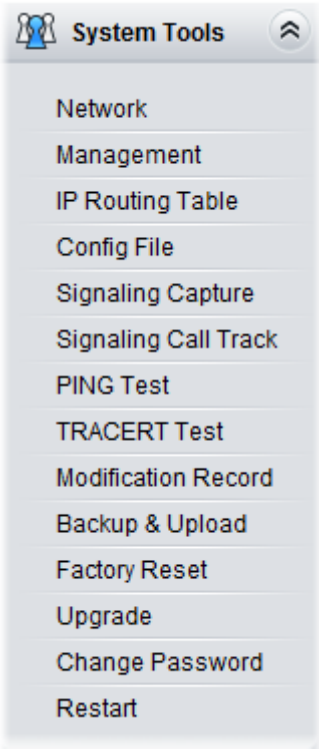


Figure 3-15 System Tools

3.6.1 Network

Figure 3-16 Network Settings Interface

See Figure 3-16 for the network settings interface. A gateway has two LANs, each of which can be configured with independent IP address, subnet mask, default gateway and DNS server. The Bond feature when enabled will make the information of LAN1 and LAN2 duplicated and backed up so as to realize the hot-backup function between LAN1 and LAN2. By default, this feature is *disabled*. On this interface, SIP Address is used to select the IP address for SIP signaling, using LAN 1 by default; SIP Signaling Port is used to set the monitoring port for SIP signaling, with the value range of 5001~65535 and the default value of 5060.

Note: 1. The two configuration items IP Address and Default Gateway cannot be the same for NET 1 and NET 2.

2. By default, *Speed and Duplex Mode* is hidden, set to Automatic Detection, and you can click 'F' to let it display. We suggest you do not modify it because the non-automatic detection may cause abnormity in network interface.

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.

3.6.2 Management

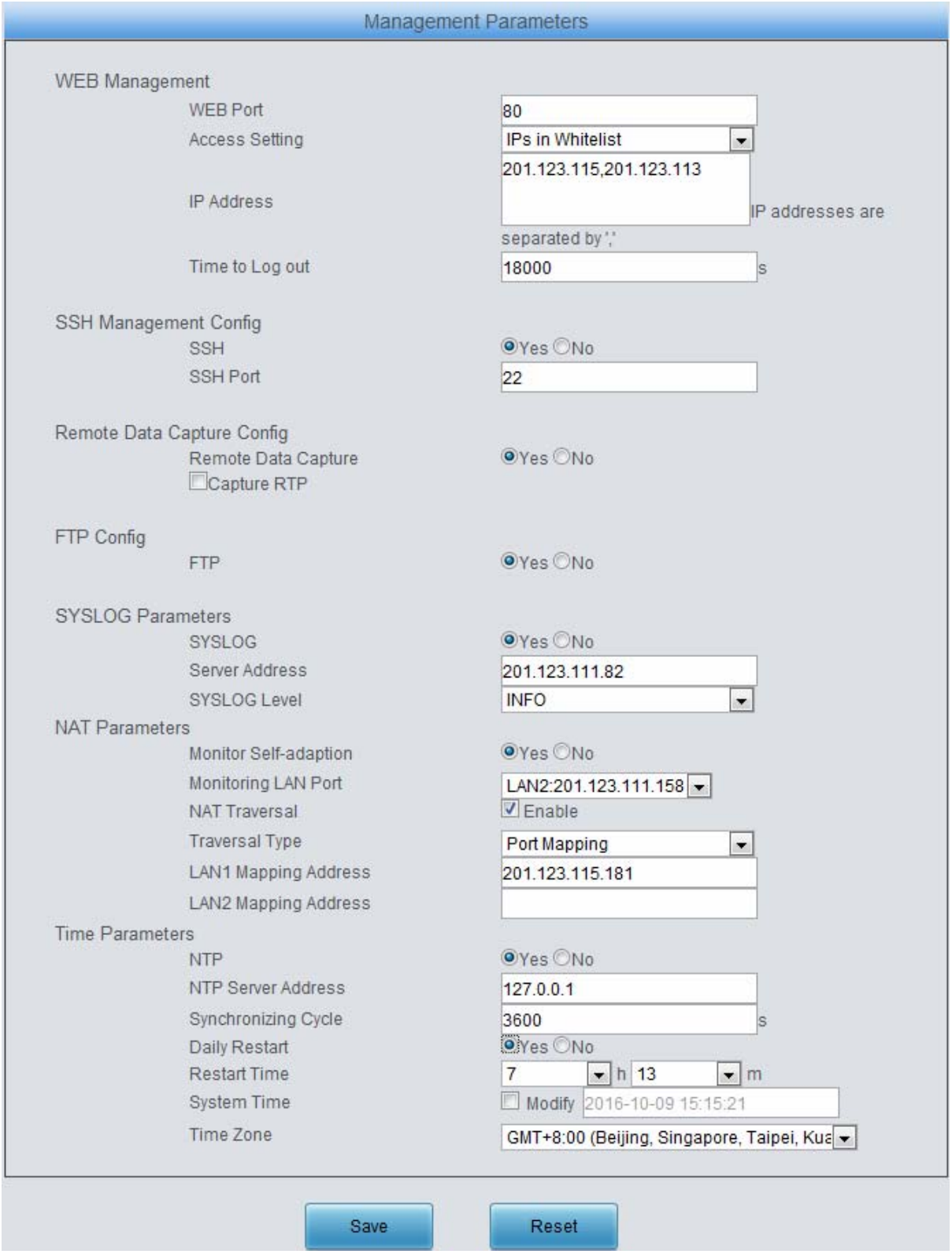


Figure 3-17 Management Parameters Setting Interface

See Figure 3-17 for the Management Parameters Setting interface. The table below explains the items shown in the above figure.

Item	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 the IPs within it to access the gateway freely. Also you can set an IP blacklist to forbid all the IPs within it to access the gateway.
Time to Log Out	The gateway will log out automatically if it is not operated during a time longer than the value of this item, calculated by s, with the default value of 1800ms.
SSH	Sets whether to enable the gateway to be accessed via SSH, with the default value of *No*.
SSH Port	The port which is used to access the gateway via SSH.
Remote Data Capture	After this feature is enabled, you can obtain the gateway data via a remote capture tool. The default value is *No*.
Capture RTP	Sets whether to capture RTP. Once this feature is enabled, the RTP package will also be captured by the selected network.
FTP	Sets whether to enable the FTP server, with the default value of *Yes*.
SYSLOG	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: *ERROR*, *WARNING* and *INFO*.
Monitor Self-adaption	Enable the NAT stun between the gateway and the monitor tool. By default, it is disabled.
Monitoring LAN Port	Sets the LAN port for the monitoring.
NAT Traversal, Traversal Type	Sets whether to enable the NAT traversal. By default this feature is disabled. There is only one traversal type: *Port Mapping*.
LAN1 Mapping Address, LAN2 Mapping Address	The mapping addresses of LAN1 and LAN2 in case the NAT traversal is enabled. If the port mapping is selected as the traversal type, you are required to set the mapping address on the router and fill in the corresponding information here as well. By default, only the IP address need be filled in, and the port value is just the same as the SIP signaling port.
NTP	Sets whether to enable the NTP time synchronization feature. It is required to fill in ***NTP Server Address***, ***Synchronizing Cycle*** and ***Time Zone*** in case NTP is enabled. By default, ***NTP*** is disabled.
NTP Server Address	Sets the Server address for NTP time synchronization.
Synchronizing Cycle	Sets the cycle for NTP time synchronization.
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.
System Time	The system time. Check the checkbox before ***Modify*** and change the time in the edit box.

Time Zone	The time zone of the gateway.

3.6.3 IP Routing Table

IP Routing Table is allowed to be set. The gateway will, according to the IP routing table, send the IP packages via a specified route to the destination network segment. By default, there is no routing information available on the gateway, click ***Add New*** to add manually. See Figure 3-18.

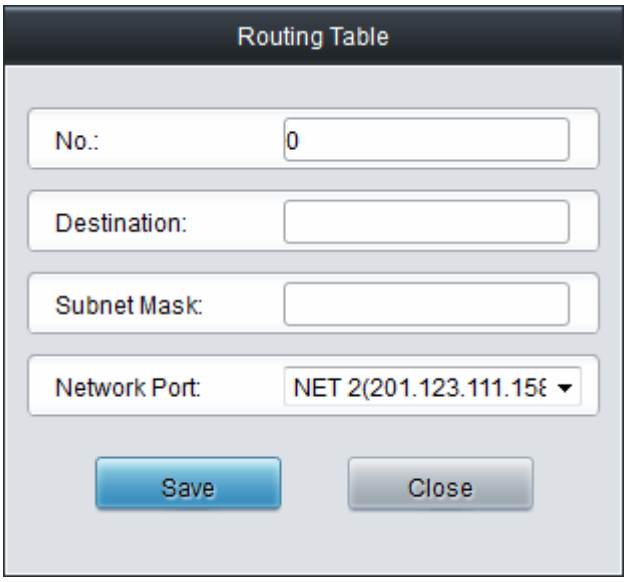


Figure 3-18 Routing Table Adding Interface

The table below explains the items shown in above figures.

Item	Description
No.	The number of the routing for the LAN in routing table.
Destination	The network segment the in which the IP address is accessible for the network port.
Subnet Mask	The subnet mask of the network segment.
Network Port	The corresponding network port of the routing.

After configuration, click ***Save*** to save the settings into the gateway or click ***Close*** to cancel the settings. See Figure 3-19 for the Routing Table List.

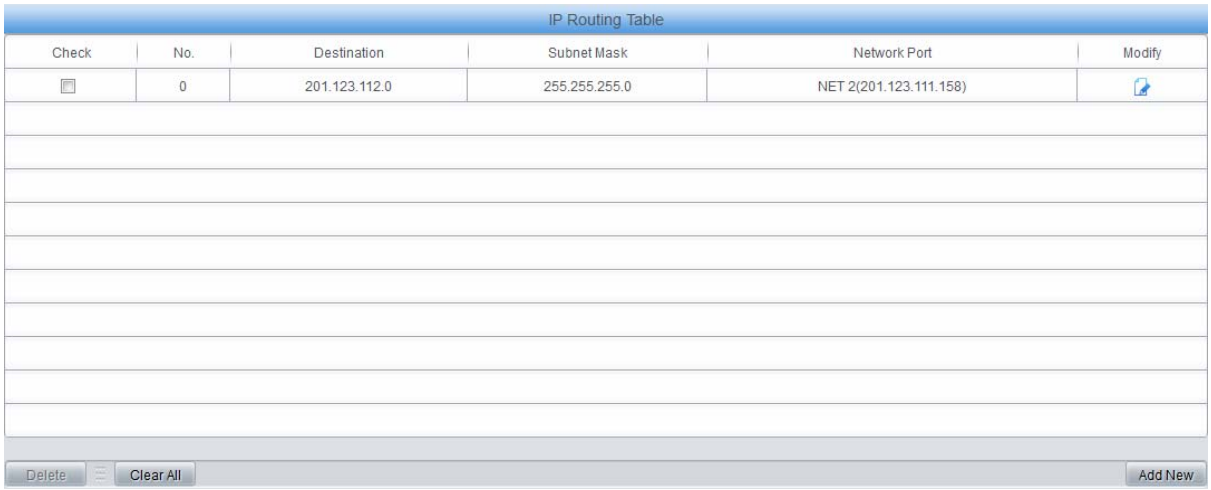


Figure 3-19 Routing Table List

Click ***Modify*** in Figure 3-19 to modify a routing. See Figure 3-20 for the routing table modification

interface. The configuration items on this interface are the same as those on the ***Add Routing Table*** interface. Note that the item ***No.*** cannot be modified.

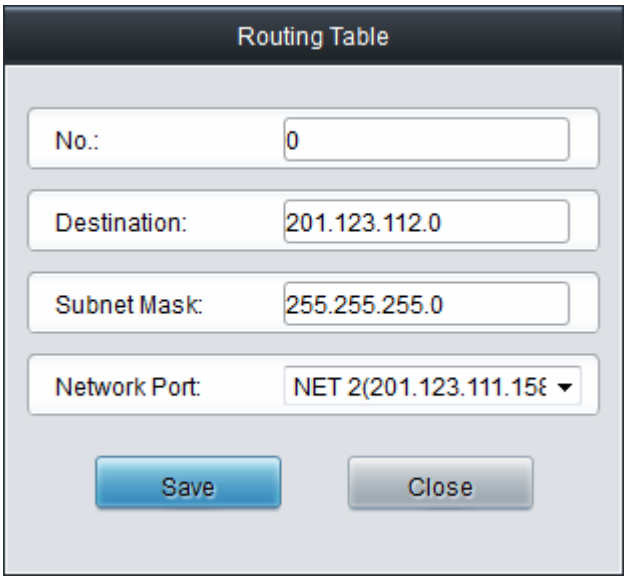


Figure 3-20 Routing Table Modification Interface

To delete a routing, check the checkbox before the corresponding index in Figure 3-19 and click the ***Delete*** button. To clear all number manipulation rules at a time, click the ***Clear All*** button in Figure 3-19.

3.6.4 Configuration File

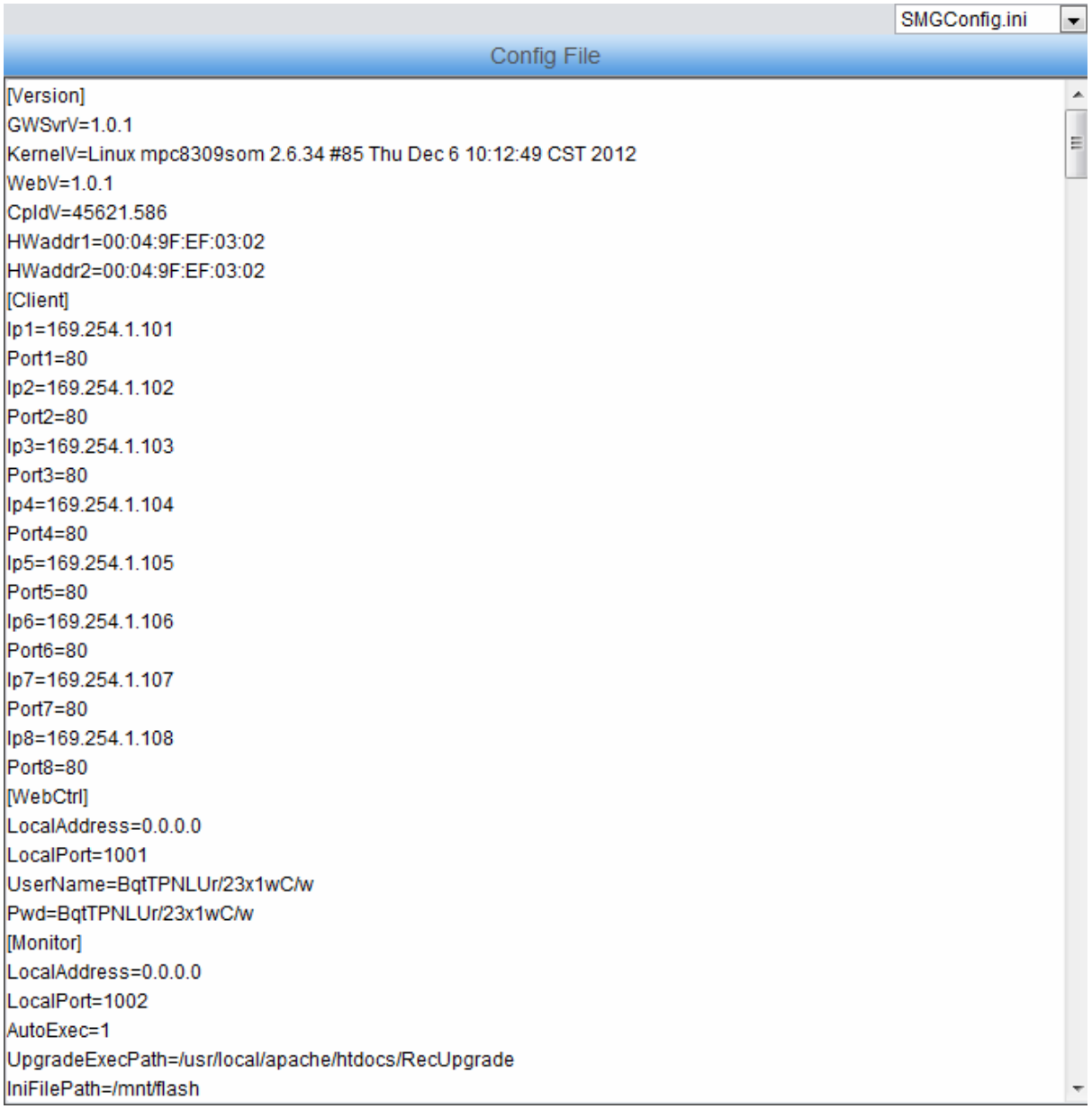


Figure 3-21 Configuration File Interface

See Figure 3-21 for the Configuration File interface where you can check and modify some relative configuration files, including SMGConfig.ini and ShConfig.ini. Configurations about the gateway server, such as route rules, number manipulation, number filter and so on, are included in SMGConfig.ini; Configurations about the board are included in ShConfig.ini. You can modify these configurations on the interface directly, and then click ***Save*** to save the above settings into the gateway or click ***Reset*** to restore the configurations.

3.6.5 Signaling Capture

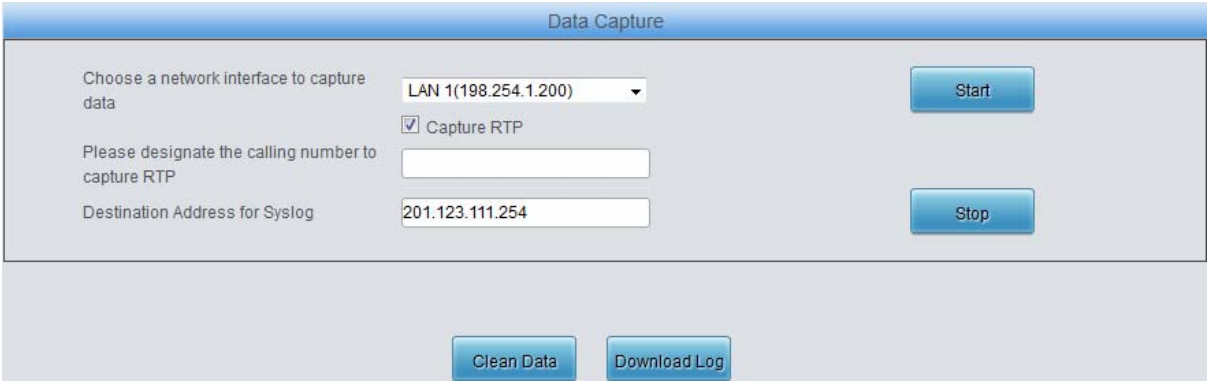


Figure 3-22 Signaling Capture Interface

See Figure 3-22 for the Signaling Capture interface. Data Capture is used to capture data on the network interface you choose. Click ***Start*** to start capturing data (1024000 packets at most) on the corresponding network interface. SIP and SysLog are supported at present. You can enter the Syslog destination address to send Syslog to wherever required. Click ***Stop*** to stop data capture and download the captured packets.

Click ***Clean Data*** to clean all the captured packages. Click ***Download Log*** to download such logs as core files, configuration files, error information and so on.

3.6.6 Signaling Call Track

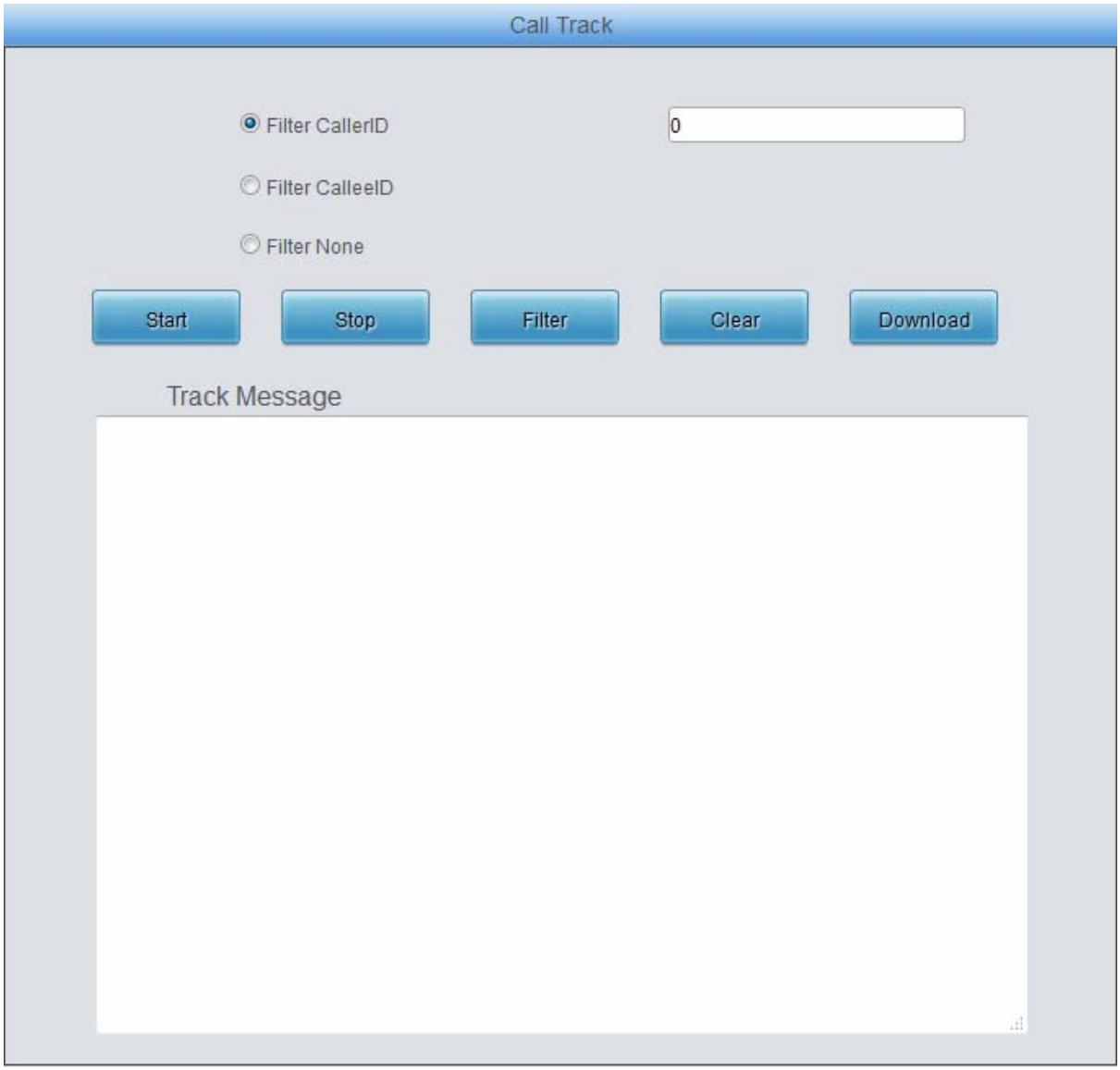


Figure 3-23 Call Track Interface

See Figure 3-23 for the Call Track Interface, providing three modes: Filter CallerID, Filter CalleeID and Filter None. This is mainly used to output and save call information, facilitating call trace and problem debugging. Click ***Start*** to track calls, and the trace logs will be shown in the "Track Message" field; click ***Stop*** to stop the call track; click ***Filter*** to filter the trace logs according to the condition you set; click ***Clear*** to clear all trace logs; click ***download*** to download trace logs.

3.6.7 PING Test

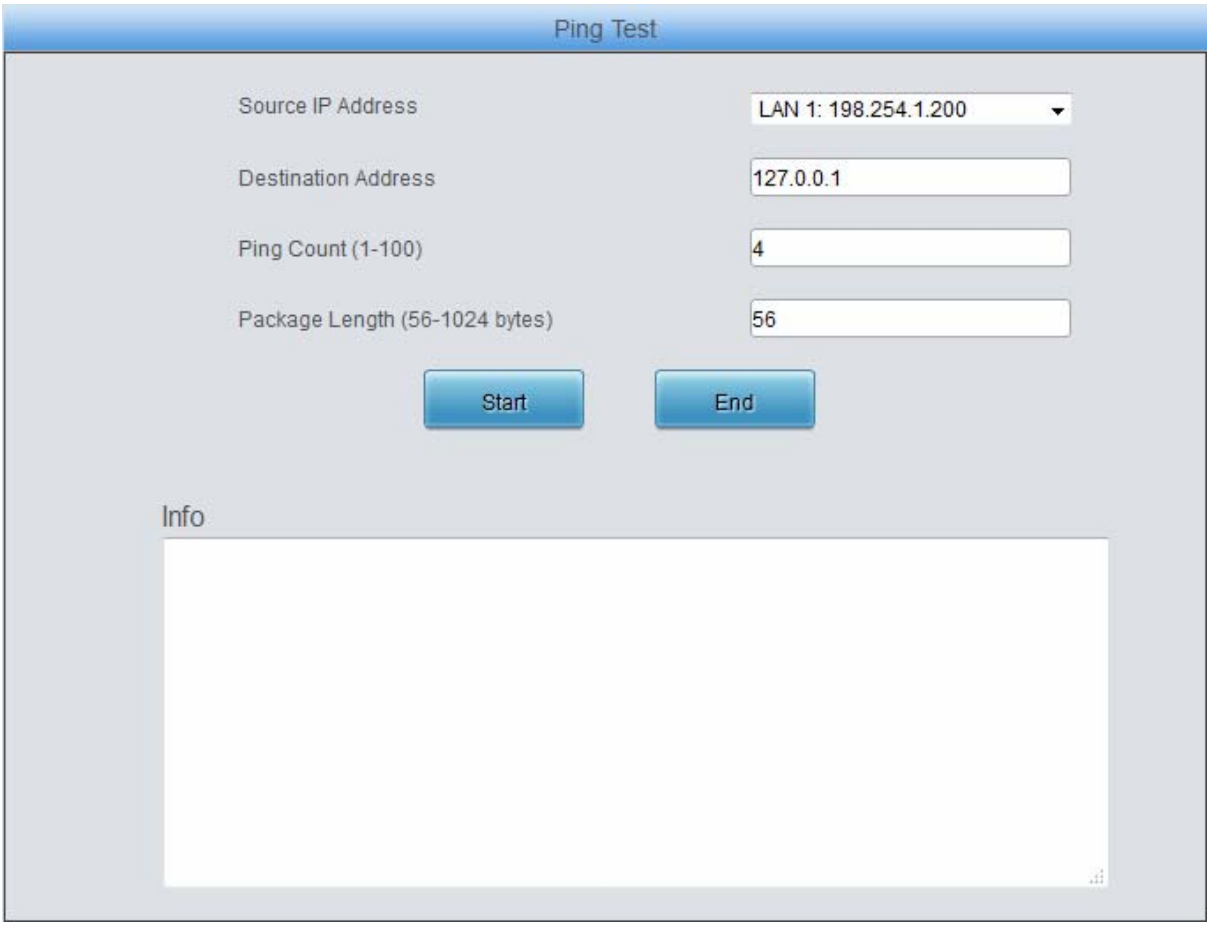


Figure 3-24 Ping Test Interface

See Figure 3-24 for the Ping Test interface. A Ping test can be initiated by 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
Source IP Address	Source IP address where the Ping test is initiated.
Destination Address	Destination IP address 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 a data package used in the Ping test. Range of value: 56~1024 bytes.
Info	The information returned during the Ping test, helping you to learn the network connection status between the gateway and the destination address.

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

3.6.8 TRACERT Test

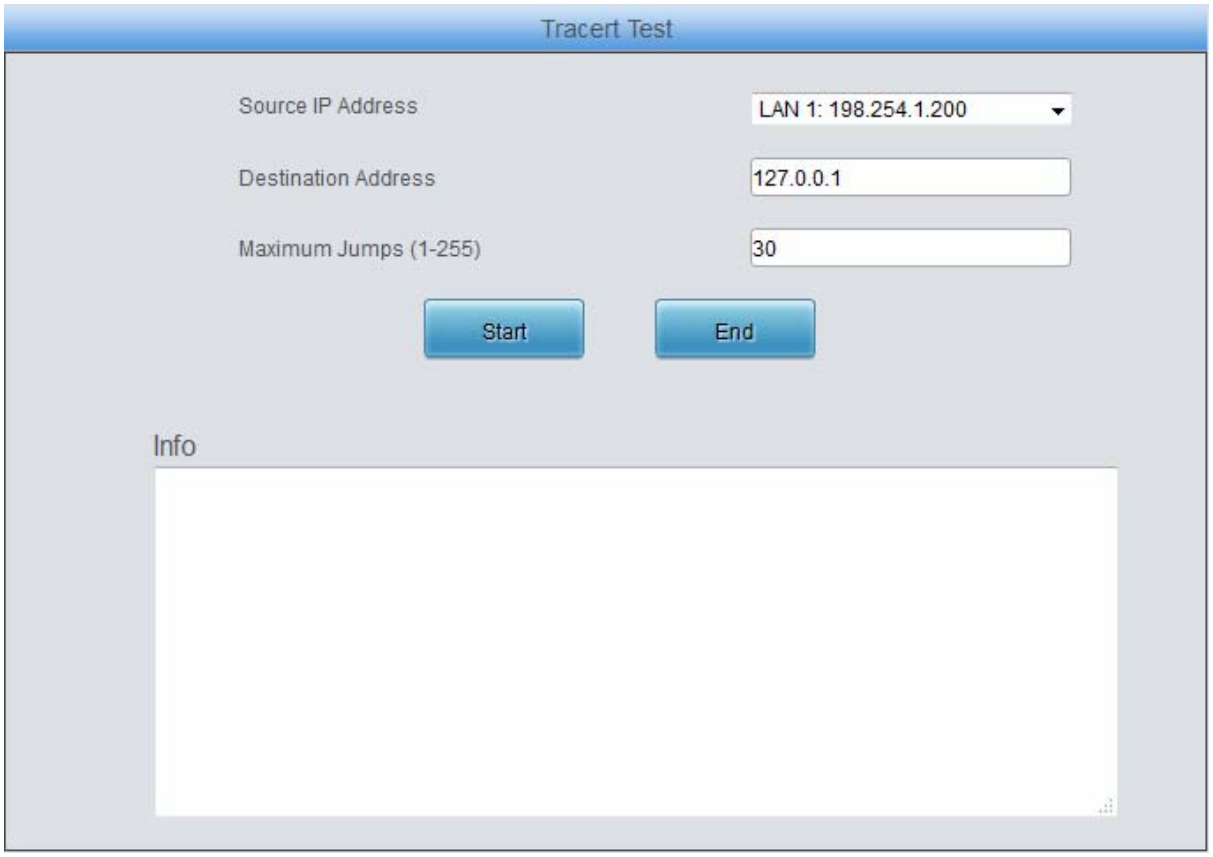


Figure 3-25 Tracert Test Interface

See Figure 3-25 for the Tracert Test interface. A Tracert test can be initiated by 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	Source 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 can be returned in 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.

3.6.9 Modification Record

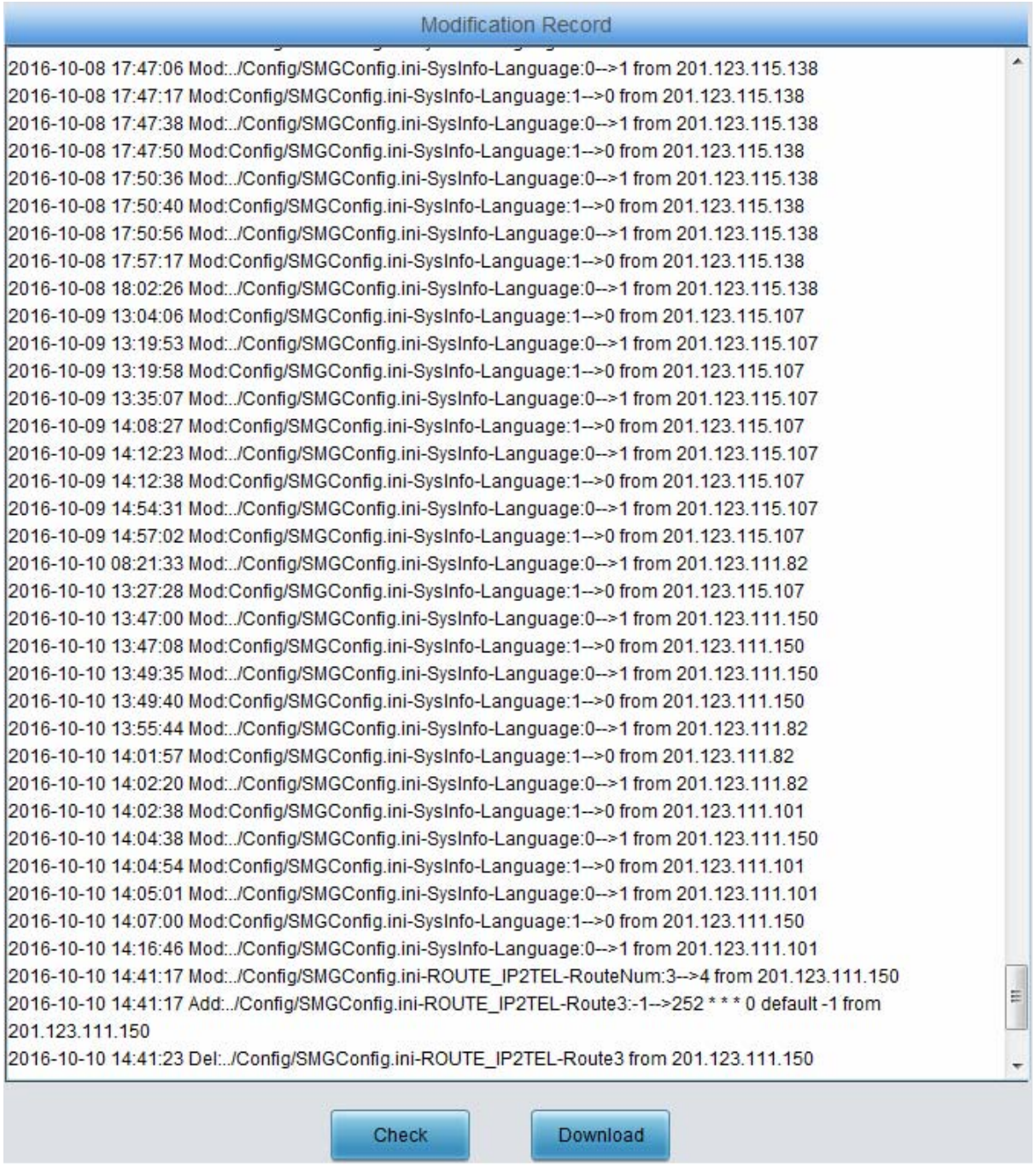


Figure 3-26 Modification Interface

The Modification Record interface is used to check the modification record on the web configuration. Click ***Check*** and the modification record will be shown on the dialog box. See Figure 3-26. Click ***Download*** to download the record file.

3.6.10 Backup & Upload

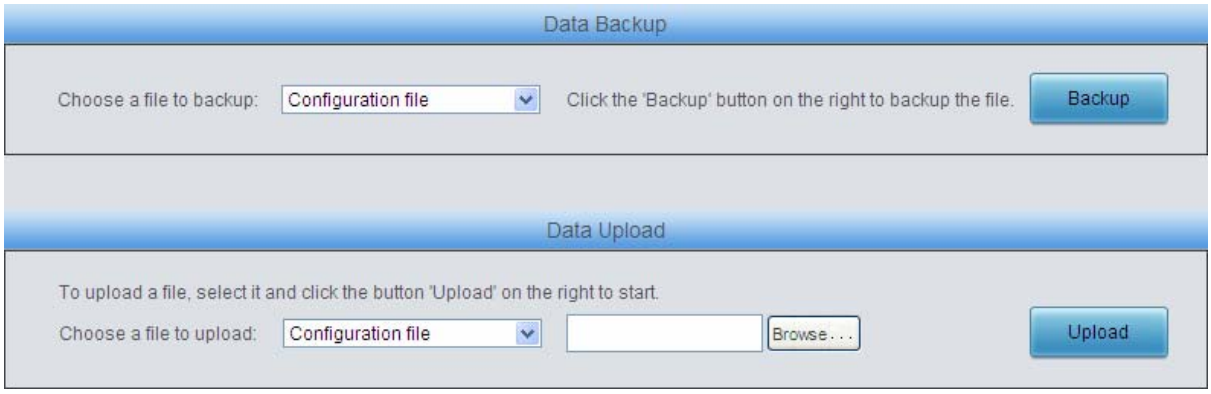


Figure 3-27 Backup & Upload Interface

See Figure 3-27 for the Backup and Upload interface. To back up data to your PC, you shall first choose the file in the pull-down list and then click ***Backup*** to start. To upload a file to the gateway, you shall first choose the file type in the pull-down list, then select it via ***Browse…***, and at last click ***Upload***. The gateway will automatically apply the uploaded data to overwrite the current configurations.

3.6.11 Factory Reset

Figure 3-28 Factory Reset Interface

See Figure 3-28 for the Factory Reset interface. Click ***Reset*** to restore all configurations on the gateway to factory settings.

3.6.12 Upgrade

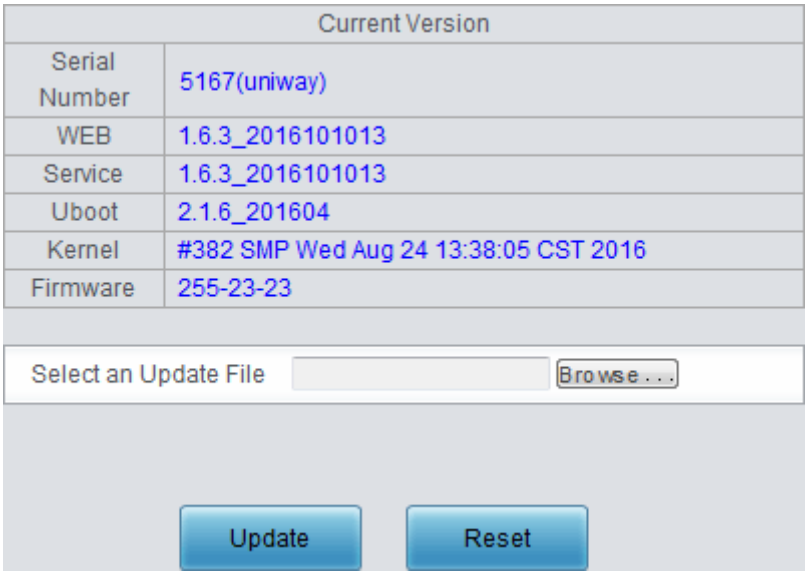


Figure 3-29 Upgrade Interface

See Figure 3-29 for the upgrade interface where you can upgrade the WEB, gateway service, kernel and firmware to new versions. Select the upgrade package "*.tar.gz" via ***Browse…*** and click ***Update*** (The gateway will do MD5 verification before upgrading and will not start to upgrade until it passes the verification). Wait for a while and the gateway will finish the upgrade automatically. Note that clicking ***Reset*** can only delete the selected update file but not cancel the operation of ***Update***.

3.6.13 Change Password

Figure 3-30 Password Changing Interface

See Figure 3-30 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.

3.6.14 Restart

Figure 3-31 Service/System Restart Interface

See Figure 3-31 for the Restart interface. Click ***Restart*** on the service restart interface to restart the gateway service or click ***Restart*** on the system restart interface to restart the whole gateway system.

Appendix A Technical Specifications

Dimensions

Uniway2000: 440×88×470 mm^3

Uniway2100: 440×88×372 mm^3

Weight:

UMG-1016: about 0.5kg

UMG-4008: about 0.5kg

Sucker antenna (singleton): about 0.045kg

Uniway2000 (one switching board included): about 8.5kg

Uniway2100 (one IPPBX board included): about 5.4kg

Environment

Operating temperature: 0℃—40℃

Storage temperature: -20℃—85℃

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: Mini USB connecting line

Data bits: 8 bits

Stop bit: 1 bit

Parity unsupported

Flow control unsupported

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

Power Requirements

Input power: 100~240V AC

Maximum power consumption：≤360W

Signaling & Protocol

SS7: TUP, ISUP

ISDN: ISDN User Side, ISDN Network Side

SS1: SS1 Signaling

SIP signaling: SIP V1.0/2.0, RFC3261

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	*4.75/5.15/5.90/6.70/7.40/7.95/10.20/12.20 kbps*
iLBC	*13.3/15.2 kbps*

Sampling Rate

8kHz

Safety

Lightning resistance: Level 4

Appendix B Troubleshooting

1. What to do if I forget the IP address of the UMG gateway?

Long press the Reset button on the gateway to restore to factory settings. Thus the IP address will be restored to its default value:

LAN1: 192.168.1.101

LAN2: 192.168.0.101

2. In what cases can I conclude that the UMG gateway is abnormal and turn to Synway'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.

Other problem such as failed registrations is probably caused by configuration errors. We suggest you refer to Chapter 3 WEB Configuration for further examination. If you still cannot figure out or solve your problems, please feel free to contact our technicians.

3. What to do if I cannot enter the WEB interface of the UMG 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 change the IP address of the gateway, add your new IP address into the above settings.

Appendix C Technical/sales Support

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

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