



User Manual G504/G508

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About This User Guide

Thanks for choosing G504/G508 router with VoIP. This product will allow you to make ATA call using your broadband connection. This manual provides basic information on how to install and connect G504/G508 router with VoIP to the Internet. It also includes features and functions of router with VoIP components, and how to use it correctly.

Before you can connect G504/G508 to the Internet and use it, you must have a high-speed broadband connection installed. A high-speed connection includes environments such as DSL, cable modem, and a leased line.

G504/G508 router with VoIP is a stand-alone device, which requires no PC to make Internet calls. This product guarantees clear and reliable voice quality on Internet, which is fully compatible with SIP industry standard and able to interoperate with many other SIP devices and software on the market.







This guide contains the following chapters:

- Chapter 1Product description
- Chapter 2 IVR Voice Prompt
- Chapter 3 Basic Settings
- Chapter 4 Web Interface
- Chapter 5Troubleshooting Guide

Contacting FlyingVoice

Main website:	http://www.flyingvoice.com/		
Sales enquiries:	sales@flyingvoice.com		
Support enquiries:	support@flyingvoice.com		
Hotline:	0755-26099365 ext. 0		
Address:	Rm208, Block B52, Zhongchuang Industry Park, Nanshan District, Shenzhen,		
	518000 China		

G504/G508 User Manual

Purpose

The documents are intended to instruct and assist personnel in the operation, installation and maintenance of the FlyingVoice equipment and ancillary devices. It is recommended that all personnel engaged in such activities be properly trained.FlyingVoice disclaims all liability whats oever, implied or express, for any risk of damage, loss or reduction in system performance arising directly or indirectly out of the failure of the customer, or anyone acting on the customer's behalf, to abide by the instructions, system parameters, or recommendations made in this document.

Cross references

References to external publications are shown in italics. Other cross references, emphasized in blue text in electronic versions, are active links to the references.

This document is divided into numbered chapters that are divided into sections. Sections are not numbered, but are individually named at the top of each page, and are listed in the table of contents.

Feedback

We appreciate feedback from the users of our documents. This includes feedback on the structure, content, accuracy, or completeness of our documents. Send feedback to support@flyingvoice.com.

Part 15 FCC Rules

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

Class B Digital Device or Peripheral

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment can generate, use and radiate radio frequency energy. If not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference does not occur in a particular installation.



Note

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interferences by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warnings and Notes

The following describes how warnings and notes are used in this document and in all documents of the FlyingVoice document set.

Warnings

Warnings precede instructions that contain potentially hazardous situations. Warnings are used to alert the reader to possible hazards that could cause loss of life or physical injury. A warning has the following format:



Warning Warning text and consequence for not following the instructions in the warning.

Notes

A note means that there is a possibility of an undesirable situation or provides additional information to help the reader understand a topic or concept. A note has the following format:



Notes

Notes text and consequence for not following the instructions in the Notes.

Chapter 1 Product description

This chapter covers:

- G504/G508
- LED Indicators and Interfaces
- Hardware Installation

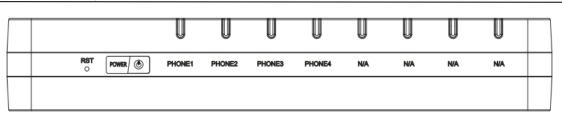
G504/G508

Table 1 Features at-a-glance

Port/Model	G504	G508			
Picture	- transfer	· · · · · · · · · · · · · · · · · · ·			
WAN	1 1				
LAN	1	1			
FXS	4 8				
Ethernet interface	2* RJ45 10/100M 2* RJ45 10/100M				
Fax	T.30, T.38 Fax				
Wire-speed NAT	Support				
Voice Code	G.711 (A-law, U-law), G.729A/B, G.723, G.722 (Wide band)				
Management	Voice menu, Web Management, Provision:TFTP/HTTP/HTTPS, TR069, SNMP				
VLAN	Support				

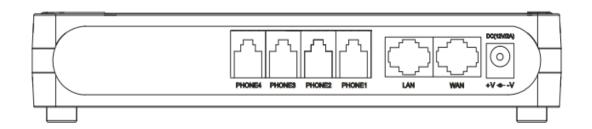
G504

Table 2G504 Front panel



LED/IO	status	Conments		
RST	Press it to restore fa	Press it to restore factory settings above 5S		
DOWED	On(Red)	The router is powered on and running normally.		
POWER	Off	The router is powered off.		
PHONE1-4	Blinking(Green)	Not registered.		
PHONE1-4	On (Green)	Registered		
N/A	Not available			

Table 3 G504 Rear panel



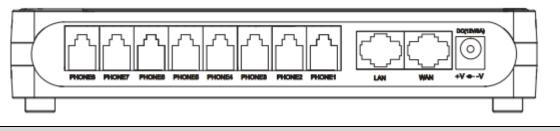
IO interface	Conments	
PHONE1-4	Connect to the phone.	
LAN	Connectors for local networked devices.	
WAN	Connector for accessing the Internet.	
AC 100~220V	Connector for a power adapter.	

Table 4 G508 Front panel

		U	U	U	U	U	U	U	U	
RST O	POWER	PHONE1	PHONE2	PHONES	PHONE4	PHONES	PHONES	PHONE?	PHONES	

LED/IO	Status	Conments			
RST	Press it to restore factory settings above 5S				
	On(Red)	The router is powered on and running normally.			
POWER	Off	The router is powered off.			
PHONE1-8	Blinking(Green)	Not registered.			
	On (Green)	Registered			

Table 5 G508 Front panel



IO interface	Conments		
PHONE1-4	Connect to the phone.		
LAN	Connectors for local networked devices.		
WAN	Connector for accessing the Internet.		
AC 100~220V	Connector for a power adapter.		

Before configuring your router, please see the procedure below for instructions on connecting the device in your network.

Procedure 1 Configuring the Router

- 1. Connect analog phone to ATA Port with an RJ11 cable.
- 2. Connect the WAN port to the Interne your network' s modem/switch/router/ADSL
- 3. equipment using an Ethernet cable.
- 4. Connect one end of the power cord to the power port of the device. Connect the other end to the wall outlet.
- 5. Check the Power, WAN, and LAN LED to confirm network connectivity.



Warning

Please do not attempt to use unsupported power adapters and do not remove power during configuring or updating the device. Using other power adapters may damage

G504/G508 and will void the manufacturer warranty.

Warning



Changes or modifications not expressly approved by the party responsible for

compliance can void the user' s authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency cause harmful interference to radio communications. However, there is no energy and, if not installed and used in accordance with the instructions, may guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Chapter 2 IVR Voice Prompt

This chapter contains:

- Voice Gateway Configuration Method (IVR)
- IVR description

Voice Gateway Configuration Method (IVR)

The device can be configured in two ways, as follows:

(1) Use IVR (Interactive Voice Response)

(2) the use of web pages

This chapter mainly introduces how to configure the voice gateway through IVR.

Start IVR

Users follow these steps to achieve IVR:

(1) Go off-hook and press the "****" key to start the IVR. Then the user will hear the voice prompt "1 WAN port configuration...".

(2) According to different options, press any digit between 0 and 9, the device will broadcast the

corresponding content, the numbers 0 to 9 represent the details as shown in the chart below.

(3) After each setting is successful, the device will play "Please input option, 1 WAN port configuration...".

Note

Before using IVR, please confirm analog phone is connected with ATA correctly.

IVR Description

The following chart lists the IVR requirements and a detailed description:

			1.WAN port configuaration
			2.Phone port
			3.Factory reset
G504/G508	**** → Start IVR →	▶	4.Reboot
			5.WAN port login
			6.WEB access port
			7.Software version

Table 6 IVR Menu Setting Options

Operation	
code	Menu
	1. Pick up phone and press "****" to start IVR
	2. Select "1", then the device will continue to broadcast to remind users to
	choose 1.WAN port connection type; 2.WAN port IP address; 3. WAN subnet mask; 4. Gateway; 5. DNS
	 Choose "1", and The router reports the current WAN port connection type2)
	4. Prompt "Please enter password", user needs to input password and press
1	"#" key, if user wants to configuration WAN port connection type.
(1)	The password in IVR is same as web management interface login, the user may
WAN Port	use phone keypad to enter password directly
Configuration	For example: WEB login password is "admin", so the password in IVR is
	"admin". The user may "23646" to access and then configure the WAN
	connection port. The unit reports "Operation Successful" if the password is correct.
	5. Prompt "Please enter password", user needs to input password and press
	"#" key if user wants to configuration WAN port connection type.
	6. Choose the new WAN port connection type (1) DHCP or (2) Static
	The unit reports "Operation Successful" if the changes are successful. The
	router returns to the prompt "please enter your option $ \cdots $ "
	7. To quit, enter "*"

	1. Pick up phone and press "****" to start IVR
	2. Choose "2", and The router reports current WAN Port IP Address
(2) WAN Port IP	3. Input the new WAN port IP address and press "#" key:
	4. Use "*" to replace ".", for exampleuser can input 192*168*20*168 to set
	the new IP address 192.168.20.168
Address	5. Press # key to indicate that you have finished
	6. Report "operation successful" if user operation is ok.
	7. To quit, enter "**".
	1. Pick up phone and press "****" to start IVR
	2. Choose "3", and router reports current WAN port subnet mask
	3. Input a new WAN port subnet mask and press # key:
(2)	4. Use "*" to replace ".", user can input 255*255*255*0 to set the new
(3)	WAN port subnet mask 255.255.255.0
WAN Port Subnet Mask	5. Press "#" key to indicate that you have finished
	6. Report "operation successful" if user operation is ok.
	7. To quit, enter "**".
	1. Pick up phone and press "****" to start IVR
	2. Choose "4", and the router reports current gateway
(4)	3. Input the new gateway and press "#" key:
Gateway	4. Use "*" to replace ".", user can input 192*168*20*1 to set the new
	gateway 192.168.20.1.
	5. Press "#" key to indicate that you have finished.
	6. Report "operation successful" if user operation is ok.
	7. To quit, press "**".

	1. Pick up phone and press "****" to start IVR
	2. Choose "5", and the router reports current DNS
(5)	 Input the new DNS and press # key:
(5) DNS	
DINS	 Use "*" to replace ".", user can input 192*168*20*1 to set the new gateway 192.168.20.1.
	5. Press "#" key to indicate that you have finished.
2	
phone port	2. Select "2", then the device will continue to broadcast prompts the user to select current phone number; 2. registration server address; 3. registration port; 4. call
configuration	forwarding configuration 5. DNS configuration ;
	3. Continue pressing "1" and the unit will continue to broadcast the phone number
	of the current phone port. The device will then broadcast "1. Phone number"
	again.
	1. Pick up phone and press "****" to start IVR
	2. Choose "6", and the router reports "Factory Reset"
3	3. Prompt "Please enter password", the method of inputting password is the same
Factory Reset	as operation 1.
	4. If you want to quit, press "*".
	5. Prompt "operation successful" if password is right and then the router will be
	1. Pick up phone and press "****" to start IVR
	2. Choose "7", and the router reports "Reboot"
4	3. Prompt "Please enter password", the method of inputting password is same as
Reboot	operation 1.
	4. the router reboots if password is right and operation
	1. Pick up phone and press "****" to start IVR
5	2. Choose "8", and the router reports "WAN Port Login"
WAN Port Login	3. Prompt "Please enter password", the method of inputting password is same as
	operation 1.
	4. If user wants to quit, press "*".

	1. Pick up phone and press "****" to start IVR
6	2. Choose "9", and the router reports "WEB Access Port"
WEB Access Port	3. Prompt "Please enter password", the method of inputting password is same as operation 1.
	4. Report "operation successful" if user operation is ok.
7	1. Pick up phone and press "****" to start IVR
Firmware Version	2. Choose "0" and the router reports the current Firmware version



Note

1. While using Voice menu, press * (star) to return to main menu.

- 2.If any changes made in the IP assignment mode, the router must be rebooted in order for the settings to take effect.
- 3. While entering an IP address or subnet mask, use "*" (star) to enter "." (Dot) and use "#" (hash) key to finish entering IP address or subnet mask:
- 4.For example, to enter the IP address 192.168.20.159 by keypad, press these keys: 192*168*20*159, use the #(hash) key to indicate that you have finished entering the IP address.
- 5.Use the # (hash) key to indicate that you have finish entering the IP address or subnet mask
- 6.While assigning an IP address in Static IP mode, setting the IP address, subnet mask and default gateway is required to complete the configuration. If in DHCP mode, please make sure that a DHCP server is available in your existing broadband connection to which WAN port of G504/G508 is connected.
- 7.The default LAN port IP address of G504/G508 is 192.168.11.1 and this address should not be assigned to the WAN port IP address of G504/G508 in the same network segment of LAN port.
- 8. The password can be entered using phone keypad, the mapping table between number and letters as follows:

To input: D, E, F, d, e, f -- press '3'

To input: G, H, I, g, h, i -- press '4'

To input: J, K, L, j, k, I -- press '5'

To input: M, N, O, m, n, o -- press '6'

To input: P, Q, R, S, p, q, r, s -- press '7'

To input: T, U, V, t, u, v -- press '8'

To input: W, X, Y, Z, w, x, y, z -- press '9'

To input all other characters in the administrator password-----press '0'.

Chapter 3 Basic Settings

This chapter covers:

- WEB Page
- SIP Account Register
- Basic Function

WEB Page

About Password

Our device supports two levels of management: administrators and users.

(1) Administrator mode can browse and set all configuration parameters.

(2) User mode can set all configuration parameters except SIP1/2 that some parameters can not be changed, such as server address and port.

- Default user with administrator mode: Username: admin, Password: admin
- Default user with user mode: Username: admin, Password: user

URL Format

G504/G508 has a built-in web server in response to HTTP get / post requests. Users can use a web browser, such as Microsoft's IE, to log in to the G504/G508 page and configure the G504/G508

LAN port Login

1.Ensure your PC is connected to the router' s LAN port correctly.



Note

You may either set up your PC to get an IP dynamically from the router or set up the IP address of the PC to be the same subnet as the default IP address of router is 192.168.1.1. For detailed information, see Chapter 5: Troubleshooting Guide.

2.Open a web browser on your PC and input "http://192.168.1.1".

3. The following window appears and prompts for username, password.

VoIP	control panel	
Usernam Password		ogin

- 4.For administrator mode operation, please type admin/admin on Username/Password and click Login to begin configuration.
- 5.For user mode operation, please type user/user on Username/Password and click Login to begin configuration.

Note

If you are unable to access the web configuration, please see Chapter 5: Troubleshooting Guide for more information.

6. The web management interface automatically logs out the user after 5 minutes of inactivity.

WAN port Login

1.Ensure your PC is connected to the router's WAN port correctly.

Password

2.Obtain the IP addresses of WAN port using Voice prompt or by logging into the device web management

interface via a LAN port and navigating to Network > WAN.

3.Open a web browser on your PC and input http://<IP address of WAN port>. The following login page

will be opened to enter username and password.

VoIP	control panel	
Userna	ame	

4.For administrator mode operation, type admin/admin on Username/Password and click Login to begin configuration.

5.For user mode operation, type user/user on Username/Password and click Login to begin configuration.



Note

If you fail to access to the web configuration, see Chapter 6: Troubleshooting Guide for more information.

Login

6. The web management interface automatically logs out the user after 5 minutes of inactivity.

WEB Interface Introduction

Table 9 WEB Interface Introduction

VoIP	control pane	el	Firmware Version V3. Current Time 2017-11-10 16:38: Admin Mode [Loqout] [Reboot
Status Network SIP	Account Phone Administration	n 1	5
Basic LAN Host Syslog	2		
Product Information		6	Неір
oduct Information		L	Product Information:
Product Name	G508		It shows the basic information of the product.
Internet(WAN) MAC Address	00:21:F2:12:34:59		Line Status:
PC(LAN) MAC Address	00:21:F2:12:34:58		It shows the registration state of each
Hardware Version	V1.1		line.
Loader Version	V3.11(Jan 27 2015 13:22:24)		Network Status:
Firmware Version	V3.10(201609120213)		It shows the information of Internet Port,WIFI and PC port.
Serial Number	123346457567		-
			System Status: It shows the current time and the
			Te shows the current time and the
Serial number	Name	Desc	ription
Postition 1	navigation bar	Click navigation bar, ma appear in the place 2	ny sub-navigation bar wil
Postition 2	sub-navigation bar	Click sub-navigation bar page	to enter to configuratior
Postition 3	configuration title	The configuration title	
Postition 4	configuration bars	The configuration bars	
		-	
Postition 5	main information	• •	nge login level (mode) to
Postition 5 Postition 6	main information Help	Time, and user can char return to login page by pro- Display the main informa	nge login level (mode) to ess blue Switch button. tion for configuration; use
		Time, and user can char return to login page by pro- Display the main informar can get help from it direct After changing the parameter	nge login level (mode) to ess blue Switch button. tion for configuration; use ly. eters, you need to click this
	Help	Time, and user can char return to login page by pro- Display the main informar can get help from it direct After changing the paramar button to save. After you	tion for configuration; user ly. eters, you need to click this click Save, there is a need to
	Help	Time, and user can char return to login page by pro- Display the main informar can get help from it direct After changing the parame button to save. After you restart the device.	nge login level (mode) to ess blue Switch button. tion for configuration; use ly. eters, you need to click this click Save, there is a need to

SIP Account Register

G504/G508 have 4/8 Lines to make SIP (Session Initiation Protocol) calls. Before registering, the device user should have SIP accounts configured by the system administrator or provider. See the section below for more information.

Register one by one

Table 10 Config SIP the Web Management Interface

Status I	Network	SIP Account	Phone	Administration	
Account	FXS Settings	SIP Settings	VoIP QoS		
Port		FXS 1 V		Batch Settings	
Basic					
Basic Setup					
Port Enable		Enable 🔻		Outgoing Call without Registration	Disable v
Proxy and Re	gistration				
Proxy Serve	r	192.168.10.88		Proxy Port	5060
Outbound S	erver			Outbound Port	5060
Backup Out	bound Server			Backup Outbound Port	5060
Subscriber In	formation				
Display Nan	ne	601		Phone Number	601
Account		601		Password	•••••

Steps:

- Step 1. The account enable is set to "On" and the line can be used after opening.
- Step 2. The registration server fills in the IP address of the SIP server.
- Step 3. Display Name Fill in the content is the name of the number displayed on the LCD.
- Step 4. The registration account is filled with the account provided by the SIP server.
- Step 5. The name of the authentication is the SIP account provided by the SIP server.
- Step 6. The password is filled with the password provided by the SIP server registration account.
- Step 7. When you are finished, click the Save button at the bottom of the page to make the configuration take effect.
- Step 8. Check the registration of the corresponding line on the display / web status page.



Notes

Step 3-9 is to fill in the required content, other parameters fill in the required

Procedure

To view the SIP account status of device, open the **Status** web page and view the value of registration status.

Batch Registration

There are many FXS ports on the G504/G508. One by one, configuration is very

troublesome. Therefore, we support batch configuration of SIP accounts.

Taking G504as an example, batch configuration of SIP account steps:

- 1. Log in to the web page, switch to the SIP Account FXS Settings page, check the "Batch Settings", and select the need to set the batch FXS port.
- 2. Fill in the "Proxy Server", other parameters on request.

Status	Network	SIP Account	Phone	Ad	ministration			
Account	FXS Settings	SIP Settings	VoIP Qo	S				
Start Po	rt	FXS 1 🔻			Batch Settings	;		
End Por	t	FXS 8 V						
Basic								
Basic Setu	р ———							
Port Ena	ble	Enable 🔻			Outgoing Call Registration	without	Disable 🔻	
Proxy and	Registration							
Proxy Se	erver	192.168.10.87	7		Proxy Port		5060	
Outbour	nd Server				Outbound Por	t	5060	
Backup	Outbound Serve	r			Backup Outbo	und Port	5060	

3.Switch to SIP Account - Account page, fill in the batch configuration of FXS port account as required.

Status	Network	SIP Account	Phone Admini	stration		
Account	FXS Settings	SIP Settings	VoIP QoS			
Account	t					
Port	Display Name	Phone Number	Account	Password	Enable	
FXS 1	601	601	601	•••••		Other settings
FXS 2	602	602	602	•••••		Other settings
FXS 3	603	603	603	••••		Other settings
FXS 4						Other settings
FXS 5						Other settings
FXS 6						Other settings

- 4. Click "Save" button
- 5. Status page can view the registration status information.

Basic Function

Calling phone or extension numbers

To make a phone or extension number call:

- Both ATA and the other VoIP device (i.e., another ATA or other SIP products) must have public IP addresses, or
- Both ATA and the other VoIP device (i.e., another ATA or other SIP products) are on the same LAN using private or public IP addresses, or
- Both ATA and the other VoIP device (i.e., another ATA or other SIP products) can be connected through a router using a public or private IP addresses.

To make a call, first pick up the analog phone or turn on the speakerphone on the analog phone, input the IP address directly, end with #.

Direct IP calls

Direct IP calling allows two phones, that is, an ATA with an analog phone and another VoIP Device, to talk to each other without a SIP proxy. VoIP calls can be made between two phones if:

- Both ATA and the other VoIP device (i.e., another ATA or other SIP products) have public IP addresses, or
- Both ATA and the other VoIP device (i.e., another ATA or other SIP products) are on the same LAN using private or public IP addresses, or
- Both ATA and the other VoIP device (i.e., another ATA or other SIP products) can be connected through a router using public or private IP addresses.

To make a direct IP call, first pick up the analog phone or turn on the speakerphone on the analog phone, Input the IP address directly, with the end "#".

Call Hold

While in conversation, pressing the "*77" to put the remote end on hold, then you will hear the dial tone and the remote party will hear hold tone at the same time.

Pressing the "*77" again to release the previously hold state and resume the bi-directional media.

Call transfer

1.Blind Transfer

Assume that call party A and party B are in conversation. Party A wants to Blind Transfer B to C: Party A dials "*78" to get a dial tone, then dials party C's number, and then press immediately key # (or wait for 4 seconds) to dial out. A can hang up.

2.Attended Transfer

Assume that call party A and B are in a conversation. A wants to Attend Transfer B to C:

Party A dials "*77" to hold the party B, when hear the dial tone, A dials C's number, then party A and party C are in conversation.

Party A dials "*78" to transfer to C, then B and C now in conversation.

If the transfer is not completed successfully, then A and B are in conversation again.

Conference

Assume that call party A and B are in a conversation. A wants to add C to the conference:

Party A dials "*77" to hold the party B, when hear the dial tone, A dial C's number, then party A and party C are in conversation.

Party A dials "*88" to add C, then A and B, for conference.

Chapter 4 Web Interface

This chapter guides users to execute advanced (full) configuration through admin mode operation. This chapter covers:

- Login
- Status
- Network
- SIP Account
- Phone
- Administration

Table 11 Login details

Va	VoIP control panel		
	Username admin		
	Password Login		
Procedure			
1. Connect the LAN port of the router to your PC an Ethernet cable			
2. Open a web browser on your PC and type http://192.168.1.1.			
3. Enter Username admin and Password admin.			
4. Click Login			

Status

This webpage shows the status information about the Product, Network, SIP Account Status, FXS Port Status,

Network Status, Wireless Info and System Status

Status Network SIP Ac	count Phone Administration	
Basic LAN Host Syslog		
Product Information		Неір
	Product Information:	
roduct Information	It shows the basic information of the	
Product Name	G508	product.
Internet(WAN) MAC Address	00:21:F2:12:34:59	Line Status:
PC(LAN) MAC Address	00:21:F2:12:34:58	It shows the registration state of each line.
Hardware Version	V1.1	
Loader Version	V3.11(Jan 27 2015 13:22:24)	Network Status:
Firmware Version	V3.10(201609120213)	It shows the information of Internet Port,WIFI and PC port.
Serial Number	123346457567	System Status:
		It shows the current time and the

Network

You can configure the WAN port, LAN port, DDNS, Multi WAN, DMZ, MAC Clone, Port Forward and other parameters in this section of the web management interface.

WAN

This page allows you to set WAN configuration with different modes. Use the Connection Type drop down list to choose one WAN mode and then the corresponding page will be displayed.

1.Static IP

This configuration may be utilized when a user receives a fixed public IP address or a public subnet, namely multiple public IP addresses from the Internet providers. In most cases, a Cable service provider will offer a fixed public IP, while a DSL service provider will offer a public subnet. If you have a public subnet, you can assign an IP address to the WAN interface.

Table 12 Static IP

11101	
WAN LAN IPv6 Adv	ranced IPv6 WAN IPv6 LAN VPN DMZ MAC Clone Port Setting
INTERNET	
Connect Name	1_MANAGEMENT_VOICE_INTERNET_R_VID ▼ Delete Connect
Service	MANAGEMENT_VOICE_INTERNET
IP Protocol Version	IPv4 V
WAN IP Mode	Static
NAT Enable	Enable V
VLAN Mode	Disable
VLAN ID	1 (1-4094)
Static IP Address	192.168.10.162
Subnet Mask	255.255.255.0
Default Gateway	192.168.10.1
DNS Mode	Manual V
Primary DNS	192.168.10.1
Secondary DNS	192.168.18.1
Port Bind	
Port_1	
Field Name	Descriptio
Field Name	Descriptio The IP address of Internet port
Field Name P Address	·
Field Name P Address Subnet Mask	The IP address of Internet port
Field Name P Address Subnet Mask	The IP address of Internet port The subnet mask of Internet port
Field Name P Address Subnet Mask	The IP address of Internet port The subnet mask of Internet port The default gateway of Internet port Select DNS mode, options are Auto and Manual:
Field Name P Address Subnet Mask Default Gateway	The IP address of Internet port The subnet mask of Internet port The default gateway of Internet port Select DNS mode, options are Auto and Manual: 1. When DNS mode is Auto, the device under LAN port will
_	The IP address of Internet port The subnet mask of Internet port The default gateway of Internet port Select DNS mode, options are Auto and Manual:
Field Name P Address Gubnet Mask Default Gateway	The IP address of Internet port The subnet mask of Internet port The default gateway of Internet port Select DNS mode, options are Auto and Manual: 1. When DNS mode is Auto, the device under LAN port will
Field Name P Address Gubnet Mask Default Gateway	The IP address of Internet port The subnet mask of Internet port The default gateway of Internet port Select DNS mode, options are Auto and Manual: 1. When DNS mode is Auto, the device under LAN port will automatically obtain the preferred DNS and alternate DNS.
Field Name P Address Gubnet Mask Default Gateway	The IP address of Internet port The subnet mask of Internet port The default gateway of Internet port Select DNS mode, options are Auto and Manual: 1. When DNS mode is Auto, the device under LAN port will automatically obtain the preferred DNS and alternate DNS. 2. When DNS mode is Manual, the user manually configures the

2.DHCP

The Router has a built-in DHCP server that assigns private IP address to each local client.

The DHCP feature allows to the router to obtain an IP address automatically from a DHCP server. In this case, it is not necessary to assign an IP address to the client manually.

Table 13	DHCP		_						
Status	Net	work	SIP Acc	ount Phon	e Admin	istration			
WAN	LAN	IPv6	Advanced	IPv6 WAN	IPv6 LAN	VPN	DMZ	MAC Clone	Port Setting
							I		
INTER	RNET								
WAN -									
Connec	ct Name			1_MANAG	EMENT_VOICE	_INTERNE	ET_R_VIC	Del	ete Connect
Service	9			MANAGEM	IENT_VOICE_I	NTERNET	•		
IP Prot	ocol Vers	sion		IPv4 ▼					
WAN I	P Mode			DHCP 🔻					
DHCP	Server								
NAT Er	nable			Enable 🔻					
VLAN M	Mode			Disable 🔻					
VLAN I	D			1		(1-4094))		
DNS M				Manual 🔻		_			
Primar									
Second	lary DNS	5							
DHCP									
DHCP I	Renew			Renew					
DHCP	Vendor(C	Option 6	0)	FLYINGVO	ICE-G508				
Port Bi	nd								
Por Nor	t_1								
Field N	lame			Description					
			Se	lect DNS mode	e, options are	Auto and	Manua	l:	
			14/	han DNS made	ic Auto tho	dovico un	dorIAN	port will outo	matically obtain
DNS Mod	de						ider LAN	port will autor	matically obtain
			th	e preferred DN	is and alterna	të DNS.			
			W	hen DNS mode	e is Manual, tl	ne user sh	nould ma	inually configu	e the preferred
Primary I	DNS Add	dress	Pr	imary DNS of I	nternet port.				
Seconda	ry DNS A	ddress	Se Se	condary DNS o	of Internet poi	rt.			
DHCP Re	new		Re	fresh the DHCI	P IP address				
DHCP Ve	ndor (O	ption60)) Sp	ecify the DHCF	Vendor field	. Display	the venc	lor and product	t name.
				-					

3.PPPoE

PPPoE stands for Point-to-Point Protocol over Ethernet. It relies on two widely accepted standards: PPP and Ethernet. It connects users through an Ethernet to the Internet with a common broadband medium, such as a single DSL line, wireless device or cable modem. All the users over the Ethernet can share a common connection. PPPoE is used for most of DSL modem users. All local users can share one PPPoE connection for accessing the Internet. Your service provider will provide you information about user name, password, and authentication mode.

Table 14	PPPoE											
Status	Netw	ork SIP Acc	ount Pho	ne Admin	istration							
WAN	LAN	IPv6 Advanced	IPv6 WAN	IPv6 LAN	VPN	DMZ	MAC Clone	Port Setting				
INTE	RNET											
WAN												
Conne	ct Name		1_MANAG	SEMENT_VOIC	E_INTERN	ET_R_VID	Del	ete Connect				
Service	e		MANAGE	MENT_VOICE_	INTERNET	¥						
IP Pro	tocol Versio	on	IPv4 ▼									
WAN I	P Mode		PPPoE •									
NAT E	nable		Enable	,								
VLAN	Mode		Disable 1	Disable 🔻								
VLAN I	ID		1	1 (1-4094)								
DNS M	lode		Auto	r								
Primar	y DNS											
Secon	dary DNS											
PPPoE												
PPPoE	Account											
PPPoE	Password		•••••	•								
Confin	m Password	d	••••••	•								
Service	e Name											
			Leave emp	oty to autodete	ct							
Operat	tion Mode		Keep Aliv	e 🔻								
Keep /	Alive Redial	Period(0-3600s)	5									
Port B	ind											
Po	rt_1											

Field Name	Description
PPPoE Account	Enter a valid user name provided by the ISP
	Enter a valid password provided by the ISP. The password can contain special
PPPoE Password	characters and allowed special characters are \$, +, $*$, #, @ and ! For example, the
	password can be entered as #net123@IT!\$+*.

Confirm Password	Enter your PPPoE password again						
Service Name	Enter a service name for PPPoE authentication.						
	If it is left emply, the service name is auto detected.						
Operation Mode	Select the mode of operation, options are Keep Alive, On Demand and Manual: When the mode is Keep Alive, the user sets the 'keep alive redial period' values range from 0 to 3600s, the default setting is 5 minutes; When the mode is On Demand, the user sets the 'on demand idle time' value in the range of 0-60 minutes, the default setting is 5 minutes; Operation Mode On Demand Idle Time(0-60m)						
	When the mode is Manual, there are no additional settings to configure						
Keep Alive Redial	Set the interval to send Keep Alive messaging						
Period							
PPPoE Account	Assign a valid user name provided by the ISP						

4.Bridge Mode

Bridge Mode under Multi WAN is different with traditional bridge setting. Bridge mode employs no IP addressing and the device operates as a bridge between the WAN port and the LAN port. Route Connection has to be built to

give IP address to local service on device.

Table 15Bridge ModeStatusNetwork	SIP Acco	ount Phon	Admin	istration			
	Advanced	IPv6 WAN	IPv6 LAN	VPN	DMZ	MAC Clone	Port Setting
INTERNET							
VAN							
Connect Name			EMENT_VOICE	-		Del	ete Connect
Service			IENT_VOICE_1	NTERNET	¥		
IP Protocol Version WAN IP Mode		IPv4 ▼ Bridge ▼					
Bridge Type		IP Bridge	•				
DHCP Service Type		Pass Thro					
VLAN Mode		Disable 🔻					
VLAN ID		1		(1-4094	ł)		
Port_1 Note : WAN connection bind operation will was				to the por	t binding (nnections
Field Name				Desc	riptio		
Bridge Type							
IP Bridge	Allow all	Ethernet pack	ets to pass. P	C can co	nnect to	upper network	directly.
PPPoE Bridge	Only Allo	w PPPoE pack	ets pass. PC r	needs PP	PoE dial-u	up software.	
Hardware IP Bridge	Packets p	ass through h	ardware swit	ch with v	wired spe	ed. Does not si	upport
	wireless	port binding					
DHCP Service Type							
Pass Through	DHCP pa	ckets can be fo	prwarded bet	ween W	AN and L	AN, DHCP serve	er in gateway
	will not a	llocate IP to cl	lients of LAN	port.			
DHCP Snooping	When ga	teway forward	ls DHCP pack	ets form	LAN to W	/AN it will add	
	option82	to DHCP pack	et, and it will	remove	option82	when forward	ling DHCP
	packet fro	om the WAN i	nterface to th	ne LAN in	terface. I	ocal DHCP server	vice will not
	allocate I	P to clients of	LAN port.				
Local Service	Gateway	will not forwa	rd DHCP pac	kets betv	veen LAN	and WAN, it a	llso blocks
	DHCP pa	ckets from the	WAN port. C	lients co	nnected	to the LAN por	t can get IP
	from DH0	CP server run i	n gateway.				
VLAN Mode							

Disable	The WAN interface is untagged. LAN is untagged.
Enable	The WAN interface is tagged. LAN is untagged.
Trunk	Only valid in bridge mode. All ports, including WAN and LAN, belong to this VLAN
	Id and all ports are tagged with this VLAN id. Tagged packets can pass through
	WAN and LAN.
VLAN ID	Set the VLAN ID.
802.1p	Set the priority of VLAN, Options are 0~7.



Note

Multiple WAN connections may be created with the same VLAN ID

LAN

LAN Port

NAT translates the packets from public IP address to local IP address to forward packets to the proper destination.

Table 16 LAN port

Status	Netv	vork	SIP Acco	unt	Phon	e	Admini	istration			
WAN	LAN	IPv6	Advanced	IPv6	WAN	IF	Pv6 Lan	VPN	DMZ	MAC Clone	Port Setting
PC Por	t(LAN)										
PC Port(LA	(N) —										
Local IP	Address						192.168	.1.1			
Local Su	ibnet Ma	sk					255.255	.255.0			
Local DH	ICP Serv	er					Enable				
DHCP St							192.168				
DHCP Er		SS					192.168	.1.254			
DNS Mo							Auto	▼			
Primary							192.168				
Seconda Client Le	-	0.96	400c)				192.168 86400	.10.1			
Cliencie		e(0-00-	1005)					Client List	1		
DHCP St	tatic Allo	tment									
NO.				MAC					IP Addr	ess	
1											
2											
3											
DNS Pro	ху						Enable	•			
Field N	lame		Desci	riptio	n						
IP Addre	ess		Enter th	e IP ad	dress o	fthe	e router o	on the loo	cal area	network. All the	e IP
			addresse	es of t	of the computers which are in the router's LAN must be in the						
			same ne	twork	segmer	nt w	vith this a	ddress, a	and the d	default gatewa	y of the
			compute	ers mu	ıst be t	his l	IP addres	s. (The de	efault is	192.168.11.1).
Local Su	ubnet M	ask	Enter th	e subn	et masl	< to	determin	e the size	e of the	network (defau	lt is
			255.255	.255.0,	/24).						
Local DI	HCP Ser	ver	Enable/I	Disable	e Local [онс	P Server.				
DHCP St	tart Adc	lress	Enter a v	/alid IP	addres	is as	a startir	ıg IP addı	ress of	the DHCP serve	r, and if the
			router'	s LAN	IP addr	ess	is 192.16	8.11.1, st	tarting IF	address can b	e
			192.168	.11.2 o	or greate	er, b	out should	l be less t	than the	ending IP addr	ess.
DHCP E	nd Addr	ess	Enter a v	/alid IP	addres	s as	an end I	P address	s of the I	DHCP server.	

DNS Mode	Select DNS mode, options are Auto and Manual:
	When DNS mode is Auto, the device under LAN port will automatically obtains
	the preferred DNS and alternate DNS.
	When DNS mode is Manual, the user should manually configure the preferred
	DNS and alternate DNS.
Primary DNS	Enter the preferred DNS address.
Secondary DNS	Enter the secondary DNS address.
Client Lease Time	This option defines how long the address will be assigned to the computer
	within the network. In that period, the server does not assign the IP address to
	the other computer.
DNS Proxy	Enable or disable; If enabled, the device will forward the DNS request of LAN-
	side network to the WAN side network.

VPN

VPN is a technology that builds a private network on a public network. The connection between any two nodes of the VPN network does not have the end-to-end physical link required by the traditional private network, but rather the network platform provided by the public network service provider, and the user data is transmitted in the logical link. With VPN technology, you can establish private connections and transfer data between any two devices on the public network.

Table 17 PPTP

Stat	atus Network SIP Account		Phone Administration									
WAN	Т	LAN	IPv6	Advanced	nced IPv6		IPv6 LA	N	VPN	DMZ	MAC Clone	Port Setting

VPN Settings	
Administration	
VPN Enable	PPTP ▼
Initial Service IP	
User Name	
Password	•••••
VPN As Default Route	Disable v
MPPE Stateful	Disable 🔻
Require MPPE	Disable 🔻

Parameters name	Description					
VPN Enable	Whether to enable VPN. Select PPTP mode.					
Initial Service IP The IP address of the VPN server.						
User Name	The user name required for authentication.					
Password	The password required for authentication.					
VPN As Default Route	Prohibited or open, the default is prohibited.					
MPPE Stateful	Disable or enable MPPE Stateful.					
Require MPPE Disable or enable Require MPPE.						

Table 18 L2TP

Status Network	k SIP Account Phone Administration								
WAN LAN IPv6	Advanced IPv6 WAN IPv6 LAN VPN DMZ MAC Clone Port Setting								
VPN Settings	VPN Settings								
Administration									
VPN Enable	L2TP 🔻								
Initial Service IP									
User Name									
Password	•••••								
L2TP Tunnel Name									
L2TP Tunnel Password	•••••								
VPN As Default Route	Disable 🔻								
Parameters name	Description								
	Whether to enable VPN.								
VPN Enable	Select PPTP mode.								
Initial Service IP	The IP address of the VPN server.								
User Name	The user name required for authentication.								
Password	The password required for authentication.								
L2TP Tunnel Name	L2TP Tunnel Name								
L2TP Tunnel Password	L2TP Tunnel Password								
VPN As Default Route	Prohibited or open, the default is prohibited.								

Status	Net	work	SIP Acco	ount	Phon	e Admi	dministration			
WAN	LAN	IPv6	Advanced	IPv6	WAN	IPv6 LAN	VPN	DMZ	MAC Clone	Port Setting

VPN Settings		
Administration		
VPN Enable	OpenVPN V	
OpenVPN TLS Auth	Disable 🔻	
VPN As Default Route	Disable 🔻	
Parameters name	Description	
	hother to enable V(D)	

VPN Enable	Select OpenVPN mode.
OpenVPN TLS Auth	Whether OpenVPN TLS authentication is enabled
VPN As Default Route	Prohibited or open, the default is prohibited.

DMZ

Table 20 DMZ

Status	Net	work	SIP Acco	ount	Phon	е	Admini	stration			
WAN	LAN	IPv6	Advanced	IPv6	WAN	IPv	/6 LAN	VPN	DMZ	MAC Clone	Port Setting

Demilitarized Zone (I	DMZ)
DMZ Setting	
DMZ Enable DMZ Host IP Address	Enable
Field Name	Description
	Description
DMZ Enable	Enable/Disable DMZ.

MAC Clone

Some ISPs will require you to register your MAC address. If you do not wish to re-register your MAC address, you can have the router clone the MAC address that is registered with your ISP. To use the Clone Address button, the computer viewing the Web-base utility screen will have the MAC address automatically entered in the Clone WAN MAC field.

Table	Table 21 MAC Clone											
Sta	atus	Net	work	SIP Acco	ount	Phon	e	Admini	istration			
WA	AN	LAN	IPv6	Advanced	IPve	5 WAN	I	Pv6 Lan	VPN	DMZ	MAC Clone	Port Setting
M	AC A	ddres	s Clone	e								
MAC	Addr	ess Clo	ne –									
MAC Address Clone Enable												
м	IAC Ad	Idress									Get Current PC	MAC

Config steps:

- 1. Enabling MAC address cloning
- 2. Press the button Get Current PC MAC gets PC's MAC address
- 3. Press the button Save to save your changes if users don't want to use MAC clone, press the button to cancel the changes
- 4. Press the button Reboot to make the changes effective.

Port Setting

Table 22 Port setting

Status Network SI	Account Phon	e Admini	istration			
WAN LAN IPv6 Advan	ced IPv6 WAN	IPv6 LAN	VPN	DMZ	MAC Clone	Port Setting
Port Setting						
Port Setting						
WANPort Speed Nego		Auto	T			
LAN1Port Speed Nego		Auto	٣			
Field Name	Description					
WAN Port speed Nego	Auto-negotiation	, options are	Auto, 100)M full, :	100M half-dup	lex, 10M half
	and full.					

LAN Port Speed Nego

10M full.

Routing

Table 23 Routing

Status Netwo	rk SIP Acco	ount Phone	e Admin	istration					
WAN LAN	IPv6 Advanced	IPv6 WAN	IPv6 Lan	VPN	DMZ	MAC Clone	Port Setting	Routing	
Static Routing	Settings							Нејр	
Add a routing rule									
Destination								routing rule	
Host/Net			Host V	1					
Gateway									
Interface			LAN	T					
Comment									
		Ap	pply Reset						
Current Routing tab	le in the system	n ———							
No. Des	tination Mask	Gateway	r Flags	Met	ric	Interface	Comment		
		Delete	Selected	leset					
Field Name	Descript	tion							
Destination	Destination a	address							
Host/Net	Both Host an	nd Net selecti	ion						
Gateway	Gateway Gateway IP address								
Interface	LAN/WAN/C	ustom three	options, an	d add th	e corres	sponding add	ress		
Comment	Comment								

SIP Account

Account

You can set each FXS' s display name, phone number, account and password in this page, the corresponding FXS will be enable after checked enable .then save your settings. Click "Other settings" go to the "FXS Settings" web page.

SIP Settings.

Status	Network	SIP Account	Phone	Administration	
Account	FXS Setting	s SIP Settings	VoIP Qo	5	

Account

Port	Display Name	Phone Number	Account	Password	Enable	
FXS 1					√	Other settings
FXS 2					√	Other settings
FXS 3					\$	Other settings
FXS 4					\$	Other settings
FXS 5					\$	Other settings
FXS 6					\$	Other settings
FXS 7					\$	Other settings
FXS 8					√	Other settings

FXS Settings

Basic

Set the basic information provided by your VOIP Service Provider, such as Phone Number, Account, password, SIP Proxy and others.

Table 24 Line									
Status Network S	SIP Account	Phone Admir	nistration						
Account FXS Settings	SIP Settings	VoIP QoS							
Port	FXS 1 V	В	atch Settings						
Basic									
Basic Setup									
Port Enable	Enable 🔻		Outgoing Call without legistration	Disable 🔻					
Proxy and Registration									
Proxy Server		P	roxy Port	5060					
Outbound Server		0	outbound Port	5060					
Backup Outbound Server		В	ackup Outbound Port	5060					
Allow DHCP Option 120 to Override SIP Server	Enable v								
Subscriber Information									
Display Name			hone Number assword						
Account		P	asswulu						

Field Name	Description
Line Enable	Enable/Disable the line.
	Enable/Disable Outgoing Call without Registration
Outgoing Call without	If enabled, SIP-1 will not send register request to SIP server; but in Status/ SIP
Registration	Account Status webpage, Status is Registered; lines 1 can dial out, but the
	external line number cannot dialed line1.
Proxy Server	The IP address or the domain of SIP Server
Outbound Server	The IP address or the domain of Outbound Server
Backup Outbound Server	The IP address or the domain of Backup Outbound Server
Proxy port	SIP Service port, default is 5060
Outbound Port	Outbound Proxy's Service port, default is 5060

Backup Outbound Port	Backup Outbound Proxy's Service port, default is 5060
Display Name	The number will be displayed on LCD
Phone Number	Enter telephone number provided by SIP Proxy
Account	Enter SIP account provided by SIP Proxy
Password	Enter SIP password provided by SIP Proxy

Audio Configuration

Table 25 Audio configuration

Audio Configuration			
Codec Setup			
Audio Codec Type 1	G.711U 🔻	Audio Codec Type 2	G.711A 🔻
Audio Codec Type 3	G.729 T	Audio Codec Type 4	G.722 🔻
Audio Codec Type 5	G.723 T	Audio Codec Type 6	G726-32 🔻
Audio Codec Type 7	iLBC 🔻		
G.723 Coding Speed	5.3k bps 🔻	Packet Cycle (ms)	20 🔻
Silence Supp	Disable 🔻	Echo Cancel	Enable 🔻
Auto Gain Control	Disable 🔻	Use First Matching Vocoder in 2000K SDP	Disable 🔻
Codec Priority	Remote •	Packet Cycle Follows Remote SDP	Disable 🔻

FAX Configuration

FAX Mode	T.30 T.30	Bypass Attribute Value	fax/modem 🔻
Enable T.38 CNG Detect	Disable 🔻	Enable T.38 CED Detect	Enable 🔻
Enable gpmd attribute	Disable 🔻	T.38 Redundancy	Disable 🔻
Max Fax Rate	14400 🔻		

Field Name	Description
Audio Codec Type1	Choose the audio codec type from G.711U, G.711A, G.722, G.729, G.723
Audio Codec Type2	Choose the audio codec type from G.711U, G.711A, G.722, G.729, G.723
Audio Codec Type3	Choose the audio codec type from G.711U, G.711A, G.722, G.729, G.723
Audio Codec Type4	Choose the audio codec type from G.711U, G.711A, G.722, G.729, G.723
Audio Codec Type5	Choose the audio codec type from G.711U, G.711A, G.722, G.729, G.723
G.723 Coding Speed	Choose the speed of G.723 from 5.3kbps and 6.3kbps
Packet Cycle	The RTP packet cycle time, default is 20ms
Silence Supp	Enable/Disable silence support
Echo Cancel	Enable/Disable echo cancel. By default, it is enabled
Auto Gain Control	Enable/Disable auto gain

T.38 Enable	Enable/Disable T.38
T.38 Redundancy	Enable/Disable T.38 Redundancy
T.38 CNG Detect Enable	Enable/Disable T.38 CNG Detect
gpmd attribute Enable	Enable/Disable gpmd attribute

Supplementary Service Subscription

Table 26 Supplementary service Supplementary Service Subscription Supplementary Services Enable 🔻 Call Waiting Hot Line MWI Enable Enable 🔻 Voice Mailbox Numbers Enable 🔻 MWI Subscribe Enable Disable 🔻 VMWI Serv DND Disable 🔻 Speed Dial Speed Dial 2 Speed Dial 3 Speed Dial 4 Speed Dial 5 Speed Dial 6 Speed Dial 7 Speed Dial 8 Speed Dial 9 **Field Name** Description Enable/Disable Call Waiting Call Waiting Fill in the hotline number, Pickup handset or press hands-free or headset button, Hot Line the device will dial out the hotline number automatically **MWI Enable** Enable/Disable MWI (message waiting indicate). If the user needs to user voice

	mail, please enable this feature		
MWI Subscribe Enable	Enable/Disable MWI Subscribe		
Voice Mailbox Numbers	Fill in the voice mailbox phone number, Asterisk platform, for example, its default		
	voice mail is *97		
DND	Enable/Disable DND (do not disturb)		
Speed Dial	Enter the speed dial phone numbers. Dial *74 to active speed dial function Then press the speed dial numbers, for example, press 2, phone dials 075526099365 directly		

Advanced

Table27 Advanced

Advanced				
SIP Advanced Setup				
Domain Name Type	Enable 🔻	Carry Port Information	Disable 🔻	
Signal Port	53378	DTMF Type	Inband 🔻	
RFC2833 Payload(>=96)	101	Register Refresh Interval(sec)	3600	
Caller ID Header	FROM •	Remove Last Reg	Enable 🔻	
Session Refresh Time(sec)	0	Refresher	UAC 🔻	
SIP 100REL Enable	Disable 🔻	SIP OPTIONS Enable	Disable 🔻	
Initial Reg With Authorization	Disable 🔻	Reply 182 On Call Waiting	Disable •	
Primary Server Detect Interval	0	Max Detect Fail Count	3	
NAT Keep-alive Interval(10- 60s)	15	Anonymous Call	Disable •	
Anonymous Call Block	Disable 🔻	Proxy DNS Type	A Type 🔻	
Use OB Proxy In Dialog	Disable 🔻	Complete Register	Disable 🔻	
Reg Subscribe Enable	Disable 🔻	Reg Subscribe Interval(sec)	0	
Dial Prefix		User Type	Phone *	
Hold Method	ReINVITE T	Request-URI User Check	Enable 🔻	
Only Recv Request From Server	Disable 🔻	Server Address		
SIP Received Detection	Disable 🔻	VPN	Disable 🔻	
SIP Encrypt Type	Disable 🔻	RTP Encrypt Type	Disable 🔻	
Country Code		Remove Country Code	Disable 🔻	
Tel URL	Disable 🔻	Use Random SIP Port	Enable 🔻	
Min Random SIP Port	50000	Max Random SIP Port	60000	
Prefer Primary SIP Server	Disable 🔻			
RTP Advanced Setup				
RTP Port Min	0 (0 means auto select)	RTP Port Max	50000	
Parameter name	Description			
Domain Name Type	Whether to enab	ole domain name recognition i	n SIP URIs	
Carry Port Information	Whether to carry	Whether to carry the SIP URI port information		
Signal Port	The local port nu	The local port number of the SIP protocol		
DTMF Type		Select the second way of dialing, optional items are In-band, RFC2833 and SIP Info.		
RFC2833 Payload(>=96)	The user can use	The user can use the default settings		
Register Refresh Interval(see		The time interval between two normal registration messages. The user can use the default settings.		

Caller ID Header	When enabled, an unregistered message will be sent before the registration is disabled, and no unregistered messages will be sent before registration; should be set according to the different server requirements	
Remove Last Reg	Whether to remove the last registration message	
Session Refresh Time(sec)	The interval between two sessions, the user can use the default settings	
Refresher	Select Refresh from UAC and UAS	
SIP 100REL Enable	If this option is enabled, the IP phone will send SIP-OPTION to the server instead of sending Hello messages on a regular basis. The interval for sending is the parameter set for the "NAT Hold Interval" parameter.	
SIP OPTIONS Enable	Whether to open the SIP OPTION function	
Initial Reg With Authorization	Whether to carry the certification information when registering	
Reply 182 On Call Waiting	Whether or not to send 182 when the call is waiting	
NAT Keep-alive Interval(10-60s)	The time interval for sending empty packets	
Anonymous Call	Whether anonymous calls are enabled	
Anonymous Call Block	Whether to enable anonymous call blocking	
Proxy DNS Type	Set the DNS server type, the optional items are Type A, DNS SRV, and Auto	
Use OB Proxy In Dialog	Whether the OB agent is used in the conversation	
Complete Register	Whether to enable full registration	
Reg Subscribe Enable	When enabled, the subscription message is sent after the registration message; the subscription message is not sent when disabled	
Reg Subscribe Interval(sec)	Disable or enable Reg Subscribe Interval	
Dial Prefix	Dial before prefix	
User Type	Whether the end user is IP or Phone	
Hold Method	Call hold is REINVITE or INFO	
Request-URI User Check	Whether to allow the user to check	
Only Recv Request From Server	If enabled, will only accept requests from the server, do not accept other requests	
Server Address	SIP server address	
SIP Received Detection	Whether to allow SIP receive detection	
VPN	Whether to enable VPN	
SIP Encrypt Type	Whether to allow SIP message encryption	
RTP Encrypt Type	Whether to allow RTP message encryption	
Country Code	Country code	

Remove Country Code	Whether to allow the removal of national codes
Tel URL	Whether to open the Tel URL
Use Random SIP Port	Whether to use the minimum random port
Min Random SIP Port	SIP minimum random port
Max Random SIP Port	SIP maximum random port
Prefer Primary SIP Server	Whether to enable the preferred primary server
Hold SDP Attribute Inactive	Whether to enable the call to keep the inactive attribute
RTP Port Min	RTP minimum port
RTP Port Max	RTP's maximum port

SIP Settings

Table 28 SIP Settings

Status Network S	SIP Account Phone	e Admin	istration		
Account FXS Settings	SIP Settings VoIP	QoS			
SIP Parameters					
SIP Parameters					
SIP T1	500	ms	Max Forward	70	
SIP User Agent Name			Max Auth	2	
Reg Retry Intvl	30 sec		Reg Retry Long Intvl	1200	sec
Mark All AVT Packets	Enable 🔻		RFC 2543 Call Hold	Enable 🔻	
SRTP	Disable 🔻		SRTP Prefer Encryption	AES_CM V	_
Service Type	Common 🔻		DNS Refresh Timer	0	sec

Response Status Code Handl	ing		
Retry Reg RSC			
NAT Traversal			
NAT Traversal			
NAT Traversal	Disable 🔻	STUN Server Address	
NAT Refresh Interval(sec)	60	STUN Server Port	3478

Parameters name	Description	

SIP Parameters	
SIP T1	The default value is 500
SIP User Agent Name	Enter the SIP User Agent header field
Max Forward	Modify the maximum hop value, the default is 70
Max Auth	Change the number of authentication failures, the default value is 2
Reg Retry Intvl	Registration failed again registration interval, default is 30
Reg Retry Long Intvl	Registration failed Register again for the long interval Default 1200
Mark All AVT Packets	The default enable is on
RFC 2543 Call Hold	The default enable is on
SRTP	The default is disabled
SRTP Prefer Encryption	Support for AES_CM and ARIA_CM
Service Type	Default general
DNS Refresh Timer	Modify the DNS refresh time, the default value of 0
Transport	The transmission type defaults to UDP
Response Status Code Handli	ng
Retry Reg RSC	Disable or enable Reg Subscribe Interval
NAT Traversal	
NAT Traversal	Whether to enable NAT mode, or select STUN to penetrate
STUN Server Address	STUN server IP address
NAT Refresh Interval(sec)	Refresh interval
STUN Server Port	STUN port, the default is 3478

VoIP QoS

Table 29 VoIP QoS

Phone

Status Network	SIP Account	Phone Administration
Account FXS Sett	ings SIP Settings	VoIP QoS
QoS Settings		
Layer 3 QoS		
SIP QoS(0-63)	46	
RTP QoS(0-63)	46	
Parameters i	name	Description
SIP QoS(0-63)	Default	ts to 46,you can set a range of values is 0~63
RTP QoS(0-63)	Default	ts to 46,you can set a range of values is 0~63

Configuration can be based on the scene environment to modify the parameters

Preferences

Preferences

Table 30 Preferences

Status Network	SIP Account	Phone Administration	
Preferences Dial Pla	in Call Log		
Port	FXS 1 V	Batch Settings	
Preferences			
Volume Settings			
Handset Input Gain	5 🔻	Handset Volume	5 🔻
Field Name	Description		
Handset Input Gain	Adjust the hand	lset input gain from 0 to 7.	
Handset Volume	Adjust the outp	ut gain from 0 to 7.	

Regional

Regional

Tone Type	Custom •		
Dial Tone	425@-19;30(*/0/1)		
Busy Tone	425@-19,425@-19;3	30(.35/.35/1+2)	
Off Hook Warning Tone	480@-19,620@-19;*	*(.25/.25/1+2)	
Ring Back Tone	425@-19;*(1/4/1)		
Call Waiting Tone	425@-19;*(.2/5/1)		
Min Jitter Delay(0-600ms)	20	Max Jitter Delay(20- 1000ms)	160
Ringing Time(10-300sec)	200]	
Ring Waveform	Sinusoid 🔻	Ring Voltage(40-63 Vrms)	56
Ring Frequency(15-30Hz)	25	VMWI Ring Splash Len(0.1- 10sec)	0.5
Flash Time Max(0.2-1sec)	1.2	Flash Time Min(0.1-0.5sec)	0.04

Field Name	Description
Tone Type	Choose tone type form China, US, Hong Kong and so on.
Dial Tone	Dial Tone
Busy Tone	Busy Tone
Off Hook Warning Tone	Off Hook warning tone
Ring Back Tone	Ring back tone
Call Waiting Tone	Call waiting tone
Min Jitter Delay	The Min value of home gateway's jitter delay, home gateway is an
	adaptive jitter mechanism.
Max Jitter Delay	The Max value of home gateway's jitter delay, home gateway is an
	adaptive jitter mechanism.
Ringing Time	How long CnPilot Home R190/R200x will ring when there is an incoming
Ring Waveform	Select regional ring waveform, options are Sinusoid and Trapezoid, the
	default Sinusoid.
Ring Voltage	Set ringing voltage, the default value is 70
Ring Frequency	Set ring frequency, the default value is 25
VMWI Ring Splash Len(sec)	Set the VMWI ring splash length, default is 0.5s.
Flash Time Max(sec)	Set the Max value of the device's flash time, the default value is 0.9
Flash Time Min(sec)	Set the Min value of the device's flash time, the default value is 0.1

Features and Call Forward

 Table 32
 Features and call forward

All Forward	Disable 🔻	Busy Forward	Disable 🔻
No Answer Forward	Disable 🔻	Transfer On Hook	Enable Image: The second s
l Forward			
All Forward		Busy Forward	
No Answer Forward		No Answer Timeout	20
ature Code		NO Allswei Timeour	20
ature Code	*77		*88
	*77	Conference Key Code IVR Key Code	
ature Code Hold Key Code		Conference Key Code	*88
ature Code Hold Key Code Transfer Key Code	*98	Conference Key Code IVR Key Code	*88

FIEID NAME		Description
Features	All Forward	Enable/Disable forward all calls
	Busy Forward	Enable/Disable busy forward.
	No Answer Forward	Enable/Disable no answer forward.
Call Forward All Forward		Set the target phone number for all forward.
		The device will forward all calls to the phone number immediately
		when there is an incoming call.
	Busy Forward	The phone number which the calls will be forwarded to when line
		is busy.
	No Answer Forward	The phone number which the call will be forwarded to when
		there's no answer.
	No Answer Timeout	The seconds to delay forwarding calls, if there is no answer at your
		phone.
Feature Code	Hold key code	Call hold signatures, default is *77.
	Conference key code	Signature of the tripartite session, default is *88.
	Transfer key code	Call forwarding signatures, default is *98.
	IVR key code	Signatures of the voice menu, default is ****.
	R key enable	Enable/Disable R key way call features.
	R key cancel code	Set the R key cancel code, option are ranged from R1 to R9,
		default value is R1.

R key hold code	Set the R key hold code, options are ranged from R1 to R9, default
	value is R2.
R key transfer code	Set the R key transfer code, options are ranged from R1 to R9, default value is R4.
R key conference code	Set the R key conference code, options are ranged from R1 to R9, default value is R3.
R Key Reject 2nd Call Code	Set the R key Reject 2nd Call code, options are ranged from R1 to R9, default value is R0.
Speed Dial Code	Speed dial code, default is *74.

Miscellaneous

Table 33 Miscellaneous

Miscellaneous			
Loop Current 2	6	Impedance Maching	US PBX,Korea,Taiwan(600)
CID Service	Enable 🔻	CWCID Service	Disable 🔻
Caller ID Method	Bellcore 🔻	Polarity Reversal	Disable 🔻
Dial Time Out(IDT)		Call Immediately Key	# ▼
ICMP Ping	Disable 🔻	Escaped char enable	Disable 🔻
Bellcore Style 3- Way Conference	Disable 🔻	On-Hook Voltage	48
Field Name	Description		
Codec Loop Current	Set off-hook loop current,	default is 26	
Impedance Maching	Set impedance matching, c	lefault is US PBX,Ko	prea,Taiwan(600).
CID service	Enable/Disable displaying of	caller ID; If enable,	caller ID is displayed when there is an
	incoming call or it won't	be displayed. Defa	ult is enable.
CWCID Service	Enable/Disable CWCID. If e	nable, the device v	vill display the waiting call's caller ID,
	or it won't display. Defau	lt is disable.	
Dial Time Out	How long device will sound	l dial out tone whe	n device dials a number.
Call Immediately Key	Call Immediately Key Choose call immediately key form * or #.		
ICMP Ping	Enable/Disable ICMP Ping.		
	If enable this option, home	gateway will ping	the SIP Server every interval
	time, otherwise, It will sen	d "hello" empty	packet to the SIP Server.
Escaped char enable	Open special character tran	Open special character translation function; if enable, when you press the # key, it	
	will be translated to 23%, v	vhen disable, it is j	ust #

Dial Rule

Table 34 Dial Plan

Status Networ	k SIP Account Phone Administration
Preferences Dia	I Plan Call Log
Dial Plan	
General	
Dial Plan Enable Unmatched Policy	Disable ▼ Accept ▼
Dial Plan config —	
Field Name	Description
Dial Plan Enable	Enable/Disable dial plan.
Unmatched Policy	

Dial Plan Syntactic

 Table 35 Dial Plan Syntactic

No.	String	Description
1	0123456789* #	Allowed characters
2	Х	Lowercase letter x stands for one legal character
		To match one character form sequence. For example:
		[0-9]: match one digit form 0 to 9
3	[sequence]	[23-5*]: match one character from 2 or 3 or 4 or 5 or
		*
		$x^0 x^1 x^2 x^3 x^n$

4	х.	Match to , , , , For example: "01." :can match "0", "01", "011", " 0111",, "01111"
5	<dialed:substituted></dialed:substituted>	Replace dialed with substituted. For example: <8:1650>123456: input is "85551212", output is "16505551212"
		Make outside dial tone after dialing "x", stop until dialing character "y"
		For example:
6	х,у	"9,1xxxxxxxxx" :the device reports dial tone after inputting "9", stops tone until inputting "1"
7	т	Set the delayed time. For example: "<9:111>T2": The device will dial out the matched number "111" after 2 seconds.

Call Log

To view the call log information such as redial list , answered call and missed call

Table 36 Call log

Redial Calls

Redial List				
Index	NUMBER	Start Time	Duration	<u> </u>
1	123	10/28 10:30	00:00:07	
2	010123	10/28 12:02	00:00:01	
3	010123	10/28 16:16	00:00:00	
4	010123	10/28 16:16	00:00:00	
5	123	10/28 16:20	00:00:13	
6	123	10/28 16:21	00:00:34	
7	123	10/29 10:50	00:00:10	
8	123	10/29 14:36	00:00:01	
9	123	10/29 15:05	00:00:23	
10	123	10/29 15:06	00:00:05	
	100	10/00/15/07	~~~~	- L

Answered Calls

Answei	red Calls			
Index	NUMBER	Start Time	Duration	_
1	22222	10/21 09:56	00:00:40	
2	110	10/21 18:14	00:00:03	
3	110	10/21 18:15	00:00:07	
4	sipp	10/23 13:40	00:00:06	
5	sipp	10/24 18:05	00:00:05	
6	sipp	10/24 18:05	00:00:05	
7	sipp	10/25 15:38	00:00:03	
8	sipp	10/25 15:42	00:00:06	
9	sipp	10/25 15:55	00:00:10	
10	sipp	10/25 16:03	00:00:02	
••			~~~~	

Missed Calls

Missed Calls				
Index	NUMBER	Start Time	Duration	
1	110	10/21 09:50	00:00:03	
2	555	10/22 12:04	00:00:03	

Administration

The user can manage the device in these webpages; you can configure the Time/Date, password, web access, system log and associated configuration TR069.

Management

Save config file

Table 37 Save Config File

Save Config File		
Config File Upload & Download		
Local File 送 Upload Download	E择文件 未选择任何文件	
Field Name	Description	
	Upload: click on browse, select file in the local, press the upload button to	
Config file upload and	begin uploading files	
download	Download: click to download, and then select contains the path to download	
	the configuration file	

Administrator settings

Table 38 Administrator settings

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Administrator Settings			
Password Reset			
User Type		Admin User 🔻	
New User Name		admin	
New Password			(The maximum length is 25)
Confirm Password			
Language			
Language		English 🔻	
VPN Access			
Management Using VPN		Disable 🔻	
Web Access			
Remote Web Login		Enable 🔻	
Local Web Port		80	
Web Port		80	
Web SSL Port		443	
Web Idle Timeout(0 - 60min)		5	
Allowed Remote IP(IP1;IP2;)		0.0.0.0	
Telnet Access			
Remote Telnet		Enable 🔻	
Telnet Port		23	
Allowed Remote IP(IP1;IP2;)		0.0.0.0	
HostName		FWR8102	
Field Name	Description		
Jser type	Choose the user type	from admin user	and normal user and basic user
New User Name	You can modify the us	er name, set up a	new user name
New Password Input the new password			
Confirme Decensional			

Confirm Password	Input the new password again
Language	Select the language for the web, the device support Chinese, English, and Spanish
	and so on
Remote Web Login	Enable/Disable remote Web login
Web Port	Set the port value which is used to login from Internet port and PC port, default is
	80
Web Idle timeout	Set the Web Idle timeout time. The webpage can be logged out after Web Idle
	Timeout without any operation
Allowed Remote	Set the IP from which a user can login the device remotely
IP(IP1,IP2,)	
Telnet Port	Set the port value which is used to telnet to the device

NTP settings

Table 39 NTP settings

P Settings		
NTP Enable	Enable 🔻	
Option 42	Disable 💌	
Current Time	2016 - 01 - 19 . 05 : 55 : 06	
Sync with host	Sync with host	
NTP Settings	(GMT-06:00) Central Time	
Primary NTP Server	pool.ntp.org	
Secondary NTP Server		
NTP synchronization(1 - 1440min)	60	
ylight Saving Time		
Daylight Saving Time	Disable 🔻	

Daylight Saving Time

Field Name	Description
NTP Enable	Enable/Disable NTP
Option 42	Enable/Disable DHCP option 42. This option specifies a list of the NTP servers
	available to the client by IP address
Current Time	Display current time
NTP Settings	Setting the Time Zone
Primary NTP Server	Primary NTP server's IP address or domain name
Secondary NTP Server	Options for NTP server's IP address or domain name
NTP synchronization	NTP synchronization cycle, cycle time can be 1 to 1440 minutes in any one, the
	default setting is 60 minutes

Daylight Saving Time

 Table 40
 Daylight Saving Time

Daylight Saving Time	
Daylight Saving Time	Enable 🔻
Offset	60 Min.
Start Month	April 🔻
Start Day of Week	Sunday 🔻
Start Day of Week Last in Month	First in Month
Start Hour of Day	2
Stop Month	October 🔻
Stop Day of Week	Sunday 🔻
Stop Day of Week Last in Month	Last in Month 🔻
Stop Hour of Day	2

Procedure

Step 1. Enable Daylight Savings Time.

Step 2. Set value of offset for Daylight Savings Time

Step 3: Set starting Month/Week/Day/Hour in Start Month/Start Day of Week Last in Month/Start Day of

Week/Start Hour of Day, analogously set stopping Month/Week/Day/Hour in Stop Month/Stop Day of Week

Last in Month/Stop Day of Week/Stop Hour of Day.

Step 4. Press Saving button to save and press Reboot button to active changes.

System Log Setting

Table 41 System log Setting

og Setting	
Syslog Enable	Enable 🔻
Syslog Level	INFO 🔻
.ogin Syslog Enable	Enable 🔻
Call Syslog Enable	Enable 🔻
Net Syslog Enable	Enable 🔻
Device Management Syslog Enable	Enable 🔻
Device Alarm Syslog Enable	Enable 🔻
Kernel Syslog Enable	Enable 🔻
Remote Syslog Enable	Disable 🔻
Remote Syslog Server	

Field Name	Description
Syslog Enable	Enable/Disable syslog function
Syslog Level	Select the system log, there is INFO and Debug two grades, the Debug INFO can
	provide more information
Remote Syslog Enable	Enable/Disable remote syslog function
Remote Syslog server	Add a remote server IP address
Syslog Enable	Enable/Disable syslog function

Factory Defaults Setting

Table 42 Factory Defaults Setting Factory Defaults Setting Factory Defaults Lock Disable ▼

Description

When enabled, the device may not be reset to factory defaults until this parameter is reset to Disable

Factory Defaults

Table 43 Factory Defaults		
Factory Defaults		
Reset to Factory Defaults	Factory Default	
Description		

Click Factory Default to restore the residential gateway to factory settings

Firmware Upgrade

Table 44 Firmware upgrade

Status Network SIP Account Phone Administration							
Management	Firmwa	are Upgrade	Scheduled Tas	ks Certificates	Provision	SNMP	TR069
Firmware M	1anager	nent					
Firmware Upgr	ade —						
Local Upgrade	į	选择文件 未送	选择任何文件				
Description							
1. Choose up	ograde file	e type from In	nage File and Dia	al Rule			
2. Press "Browse" button to browser file							
3. Press Upgrade to start upgrading							

Scheduled Tasks

Table 45 Scheduled Tasks

Status	Ne	twork	SIP Accour	nt Phone	A	dministration			
Managem	ent	Firmwa	are Upgrade	Scheduled Tas	sks	Certificates	Provision	SNMP	TR069
Schedu	Ied 1	Fasks							
Scheduled	Rebo	ot —							
Schedul	ed Reb	oot	Disable	T					
Schedul	ed Moo	de	EveryDa	у 🔻					
Time			00 ▼ :	00 ▼					
Scheduled	PPPC)E —							
Schedul	ed PPP	OE	Disable	T					
Schedul	ed Moo	de	EveryDa	у 🔻					
Time			00 ▼ :	00 🔻					
Field Na	ne		Description						
Scheduled	l Rebo	ot							
Schedulec	Rebo	ot	Enable/Disabl	e scheduled Reb	oot				
Scheduled	Mode	5	Select schedu	led Mode					

Time	Set the time to restart	
Scheduled PPPoE		
Scheduled PPPoE	Enable/Disable scheduled PPPoE	
Scheduled Mode	Select scheduled Mode	
Time	Set the time to start PPPoE	

Provision

Provisioning allows the router to auto-upgrade and auto-configure devices which support TFTP, HTTP and HTTPs .

- Before testing or using TFTP, user should have tftp server and upgrading file and configuring file.
- Before testing or using HTTP, user should have http server and upgrading file and configuring file.
- Before testing or using HTTPS, user should have https server and upgrading file and configuring file and CA Certificate file (should same as https server's) and Client Certificate file and Private key file

User can upload a CA Certificate file and Client Certificate file and Private Key file in the Security page

tatus Network SIP Accour	nt Phone Ad	ministration			
Aanagement Firmware Upgrade	Scheduled Tasks	Certificates	Provision	SNMP	TR069
Provision					
nfiguration Profile					
Provision Enable	Er	able 🔻			
Resync On Reset	Er	able 🔻			
Resync Random Delay(sec)	40				
Resync Periodic(sec)	36	00			
Resync Error Retry Delay(sec)	36	00			
Forced Resync Delay(sec)	14	400			
Resync After Upgrade	Er	able 🔻			
Resync From SIP	Di	sable 🔻			
Option 66		able 🔻			
Option 67		able 🔻			
Config File Name	\$(1	4A)			
User Agent					
User Name					
Password					
Profile Rule	htt	p://prv1.flyingvo	ice.net:69/co	nfig/\$(MA)?	mac=\$(MA)&

Provision EnableEnable provision or not.Resync on ResetEnable resync after restart or not	Field Name	Description
Resync on Reset Enable resync after restart or not	Provision Enable	Enable provision or not.
	Resync on Reset	Enable resync after restart or not

Resync Random	Set the maximum delay for the request of synchronization file. The default is 40
Resync Periodic(sec)	If the last resync was failure, The router will retry resync after the "Resync Error
Resync Error Retry	Set the periodic time for resync, default is 3600s
Forced Resync	If it's time to resync, but the device is busy now, in this case, the router will wait
Resync After	Enable firmware upgrade after resync or not. The default is Enabled
Resync From SIP	Enable/Disable resync from SIP
Option 66	It is used for In-house provision mode only. When use TFTP with option 66 to
Config File Name	It is used for In-house provision mode only. When use TFTP with option 66 to
Profile Rule	URL of profile provision file

Table 47 Firmware Upgrade

Firmware Upgrade	
Enable Upgrade	Enable 🔻
Upgrade Error Retry Delay (sec)	3600
Upgrade Rule	

Field Name	Description
Upgrade Enable	Enable firmware upgrade via provision or not
Upgrade Error Retry	If the last upgrade fails, the router will try upgrading
Delay(sec)	again after "Upgrade Error Retry Delay" period, default is 3600s
Upgrade Rule	URL of upgrade file

SNMP

Table 48 SNMP

	Phone	Administration							
pgrade Sc	heduled Tasks		Provision	SNMP	TR069				
SNMP Configuration									
	[Disable 🔻							
	[public							
		private							
	trap								
	,	300							
Description	n								
Enable or D	isable the SNI	MP service							
Enter the tra	ap server add	ress for sending S	SNMP traps						
String value	that is used a	is used as a password to request information via SNMP							
from the device									
String value	ng value that is used as a password to write configuration values to the								
device SNM	1P								
String value	used as a pas	sword for retriev	ring traps fro	m the dev	ice				
	Description Enable or D Enter the tr String value from the de String value device SNM	Description Enable or Disable the SNI Enter the trap server add String value that is used a from the device String value that is used a device SNMP	Disable public private trap 300 Description Enable or Disable the SNMP service Enter the trap server address for sending S String value that is used as a password to a from the device String value that is used as a password to a device SNMP	Disable	Disable • public private trap 300 Description Enable or Disable the SNMP service Enter the trap server address for sending SNMP traps String value that is used as a password to request information via from the device String value that is used as a password to write configuration value				

TR-069

Trap period interval(sec)

TR-069 provides the possibility of auto configuration of internet access devices and reduces the cost of management. TR-069 (short for Technical Report 069) is a DSL Forum technical specification entitled CPE WAN Management Protocol (CWMP). It defines an application layer protocol for remote management of end-user devices. Using TR-069, the terminals establish connection with the Auto Configuration Servers (ACS) and get configured automatically.

_

The interval for which traps are sent from the device

Device Configuration using TR-069

The TR-069 configuration page is available under Administration menu.

Status	Network	SIP Account	Phone	Administration						
Managemer	nt Firmwa	are Upgrade	cheduled Task	s Certificates	Provision	SNMP	TR069			
	-	_		-	-					
TR069 Configuration										
ACS										
TR069 Ena	able	Enable 🔻								
CWMP		Enable 🔻								
ACS URL		http://acs1.f	lyingvoice.net:	8080/tr069						
User Name	e									
Password										
	form Enable	Enable 🔻								
Periodic In	form Interval	3600								
Connect Request										
User Name	е	FGW4148-16	iS							
Password		•••••								
Field Name	•	Descriptio	on							
ACS param	eters									
TR069 Enabl	e E	nable or Disable	TR069							
CWMP	E	nable or Disable	CWMP							
ACS URL	A	CS URL address								
User Name	А	CS username								
Password	А	CS password								
Periodic Inform Enable the function of periodic inform or not. By default it is Enabled										
Periodic Info	orm P	eriodic notificat	ion interval w	ith the unit in sec	onds. The de	fault value	is 3600s			
Connect Re	equest para	ameters								
User Name	т	he username us	ed to connec	t the TR069 server	to the DUT.					
Password The password used to connect the TR069 server to the DUT.										

Diagnosis

In this page, user can do packet trace, ping test and traceroute test to diagnose the device's connection status.

Table 50 Diagnosis

Description

1. Packet Trace

Users can use the packet trace feature to intercept packets which traverse the device. Click the Start

button to start home gateway tracking and keep refreshing the page until the message trace shows to

stop, click the Save button to save captured packets.

2. Ping Test

Enter the destination IP or host name, and then click Apply, device will perform ping test.

Ping Test
_ Ping Test
Dest IP/Host Name
WAN Interface 1_TR069_VOICE_INTERNET_R_VID_
PING www.baidu.com (115.239.210.26): 56 data bytes 64 bytes from 115.239.210.26: seq=0 ttl=54 time=43.979 ms 64 bytes from 115.239.210.26: seq=1 ttl=54 time=53.875 ms 64 bytes from 115.239.210.26: seq=2 ttl=54 time=45.226 ms 64 bytes from 115.239.210.26: seq=3 ttl=54 time=49.534 ms 64 bytes from 115.239.210.26: seq=4 ttl=54 time=49.045 ms ••••••••••••••••••••••••••••••••••••
round-trip min/avg/max = 43.979/48.331/53.875 ms
Apply Cancel

3. Traceroute Test

Enter the destination IP or host name, and then click Apply, device will perform traceroute test.

ceroute Test		
Dest IP/Host Name	www.google.com	
WAN Interface	1_MANAGEMENT_VOICE_INTERNET_R_VID_	
traceroute to www.google.co	om (216.58.208.68), 30 hops max, 38 byte packets	1
	134.254) 1.017 ms 9.507 ms 1.419 ms	i i
2 * * *		
3 * * *		
4 * * *		
5 * * *		-
6 * * *		
7 * * *		
8 * * *		
9 * * *		1
10 * * *		
· · · · · · · · · · · · · · · · · · ·		

Operating Mode

Status	Network	SIP Accoun	t Phone	Administration						
Managem	ent Firmw	are Upgrade	Scheduled Tas	ks Certificates	Provision	SNMP	TR069	Diagnosis	Operating Mode	
Operating Mode Settings										
Operating Mode Settings										
Operating Mode Basic Mode										
Description										
Choose	Choose the Operation Mode as Basic Mode or Advanced Mode									

System Log

Table 52 System log

Status Network SIP Account Phon	e Administration	
Basic LAN Host Syslog		
Refresh Clear Save		
Manufacturer:FLYINGVOICE ProductClass:FGW4148-16S SerialNumber: BuildTime:201609181809 IP:192.168.1.1 HWVer:V1.1 SWVer:V3.11 <thu 15:26:56="" 2017="" 9="" nov=""> admin: 5 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 6 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 7 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 7 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 9 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 10 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 10 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 11 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 11 admin <thu 15:26:56="" 2017="" 9="" nov=""> admin: 11 admin</thu></thu></thu></thu></thu></thu></thu></thu></thu></thu>	0 SW [kworker/u:0] 0 SW [migration/0] 0 SW [migration/1] 0 SW [kworker/1:0] 0 SW [ksoftirqd/1] 0 SW< [khelper] 0 SW [sync_supers]	

Description

If you enable the system log in Status/syslog webpage, you can view the system log in this webpage.

Logout

Table 53 Logout

Vo	IP		cont	rol panel	Current Tim <u>e 2017-11-09 1</u>	Finnware Version V5.11 Current Time 2017-11-09 12:08:41 Admin Mode [Loqout] [Reboot]		
Status	Network	SIP Account	Phone	Administration				
Basic LAN Host Syslog								
Description								
Press the logout button to logout, and then the login window will appear.								

Reboot

Press the Reboot button to reboot the device.

Chapter 5 IPv6 address configuration

The router devices support IPv6 addressing. This chapter covers:

- Introduction
- IPv6 Advance
- Configuring IPv6
- Viewing WAN port status
- IPv6 DHCP configuration for LAN/WLAN clients
- LAN DHCPv6

Introduction

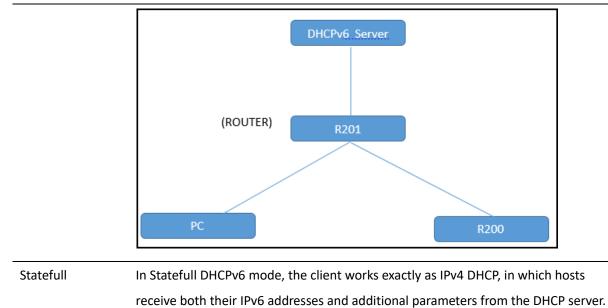
DHCPv6 protocol is used to automatically provision/configure IPv6 capable end points in a local network. In addition to acquiring an IPv6 IP address for the WAN interface and its associated LAN/WLAN clients, the devices are also capable of prefix delegation.

The Routers devices support the following types of modes of IPv6 addresses:

- Stateless DHCPv6
- Statefull DHCPv6

Table 54 IPv6 Modes

Mode	Description
Stateless	In Stateless DHCPv6 mode, the Routers devices listen for ICMPv6 Router
	Advertisements messages which are periodically sent out by the routers on the
	local link or requested by the node using a Router Advertisements solicitation
	message. The device derives a unique IPv6 address using prefix receives from the
	router and its own MAC address.



IPv6 Advance

To enable IPv6 functionality:

Navigate to Network > IPv6 Advanced page.

Select Enable from the IPv6 Enable drop-down list.

Click Save.

Table 55 Enabling IPv6

Status	Net	work	SIP Acco	ount	Phon	e	Admini	stration			
WAN	LAN	IPv6	Advanced	IPv6	IPv6 WAN		V6 LAN	VPN	DMZ	MAC Clone	Port Setting

IPv6 Advanced Settings

IPv6 Enable

IPv6 Enable

Disable 🔻

Type commands, here C can get the default gateway: fe80::221:f2ff:fe02:1a4f%15.

物理地址	
DHCP_已启用 是	
自动配置已启用,,,,,,,,,,,,是	
本地链接 IPv6 地址 fe80::2db3:666d:88d9:d1c2%15<首选>	
IPv4 地址	
- 子网掩码・・・・・・・・・・・ 255.255.255.0	
获得租约的时间2016年2月2日 星期二 上午 10:43:34	
趙约迓期的时间2016年2月3日 星期三 上午 10:43:33	
默认网关	
192.168.11.1	
DHCP 服务器 192.168.11.1	
DHCPv6 IAID	
DHCPv6 客户端 DUID00-01-00-01-1E-0A-7B-28-F0-DE-F1-C8-96-	66
DNS 服务器:192.168.11.1	
192.168.10.1	
TCPIP 上的 NetBIOS:已启用	

We can ping through this address.

```
C: Wsers Administrator>ping fe80::221:f2ff:fe02:1a4fx15
正在 Ping fe80::221:f2ff:fe02:1a4fx15 具有 32 字节的数据:
来自 fe80::221:f2ff:fe02:1a4fx15 的回复: 时间=1ms
来自 fe80::221:f2ff:fe02:1a4fx15 的回复: 时间<1ms
来自 fe80::221:f2ff:fe02:1a4fx15 的回复: 时间<1ms
来自 fe80::221:f2ff:fe02:1a4fx15 的回复: 时间<1ms
年自 fe80::221:f2ff:fe02:1a4fx15 的回复: 时间<1ms
fe80::221:f2ff:fe02:1a4fx15 的 Ping 统计信息:
数据包: 已发送 = 4, 已接收 = 4, 丢失 = 0 (0% 丢失),
往返行程的估计时间<以毫秒为单位>:
最短 = 0ms, 最长 = 1ms, 平均 = 0ms
```

LAN DHCPv6

When IPv6 is enabled, the LAN/WLAN clients of Routers can be configured to receive IPv6 addresses from locally configured IPv6 pool or from an external DHCPv6 server.

To enable LAN DHCPv6 service:

Status	Net	work	SIP Account Pho		Phon	e	Administration				
WAN	LAN	IPv6	Advanced	IPv6	WAN	IF	№6 LAN	VPN	DMZ	MAC Clone	Port Setting

	IPv6 LAN Setting		
IP	v6 LAN Setting		
	IPv6 Address	fec0::1]
	IPv6 Prefix Length	64	(0-128)
	DHCPv6 Server		4
	DHCPv6 Status	Disable 🔻	
	DHCPv6 Mode	Stateless 🔻	
	Domain Name]
	Server Preference	255	(0-255)
	Primary DNS Server]
	Secondary DNS Server]
	Lease Time	86400	(0-86400sec)
	IPv6 Address Pool		-
	Router Advertisement		
	Router Advertisement	Disable 🔻	
	Advertise Interval	30	(10-1800sec)
	RA Managed Flag	Disable 🔻	
	RA Other Flag	Enable 🔻	
	Prefix		
	Prefix Lifetime	3600	(0-3600sec)

Configuring IPv6

Configuring Statefull IPv6

1. Navigate to Network > IPv6WAN page. The following window is displayed:

Stateless mode dhcpv6 client send ipv6 address and DNS request, and the server reply the DNS server and

Domain name, and ipv6 address.

Status Network	Wireless	SIP FX	S1 FXS2	Secu	urity	Applica	tion	Storag
WAN LAN IPv6 A	dvanced	IPv6 WAN	IPv6 LAN	VPN	Port F	orward	DMZ	DDNS
Port Setting Routing	Advanc	e						
IPv6 LAN Setting								
Pv6 LAN Setting								
IPv6 Address		fec0::1		7				
IPv6 Prefix Length		48		(0-128)				
DHCPv6 Server								
DHCPv6 Status		Enable	• •	_				
DHCPv6 Mode		State	full 🔻					
Domain Name		flyingvo	pice.com	4				
Server Preference		255		(0-255)				
Primary DNS Server		fec0::2	2	7				
Secondary DNS Server		fec0::3	}	7				
Lease Time		86400		(0-8640	Osec)			
IPv6 Address Pool		fec0::1	.00	- fec0::2	200	/ 4	8	
Router Advertisement								
Router Advertisement		Enable	• •					
Advertise Interval		30		(10-180	Osec)			
RA Managed Flag		Enable	• •					
RA Other Flag		Disable	e 🔻					
Prefix								
Prefix Lifetime		3600		(0-3600	sec)			

DHCPv6 client configure as this

Table 56 Configuring Statefull IPv6

Status	Net	work	SIP Acco	ount	Phon	e Admin	istration			
WAN	LAN	IPv6	Advanced	IPv6	WAN	IPv6 LAN	VPN	DMZ	MAC Clone	Port Setting

IPv6 WAN Setting			
IPv6 WAN Setting			
Connection Type		DHCPv6 V	
DHCPv6 Address Settings		Stateless V	
Prefix Delegation		Disable 🔻	
Field Name	Description		
Connection Type	Select connection typ	pe	
DHCPv6 Address Settings	Set it to statefull mod	de.	

Prefix Delegation Select Enable.

In this way the Router B can get ipv6 address and DNS address, for more information please check the packets dhcpv6_stateful.pcap.

. _ . .

Also we can check via CLI.

Link encap:Ethernet HWaddr 00:21:F2:08:16:59
inet addr:192.168.11.64 Bcast:192.168.11.255 Mask:255.255.255.0
cinetb addr: fec0::100/128 Scope:Site
inet6 addr: fe80::221:f2ff:fe08:1659/64 Scope:Link
UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1
RX packets:1235 errors:0 dropped:0 overruns:0 frame:0
TX packets:1346 errors:0 dropped:0 overruns:0 carrier:0
collisions:0 txqueuelen:0
RX bytes:103756 (101.3 KiB) TX bytes:1329724 (1.2 MiB)

In this mode ,PC can get ipv6 address too.

" cat /etc/resolv.conf nameserver 192.168.11.1 nameserver 192.168.10.1 nameserver fec0::2 nameserver fec0::3
以太网适配器 本地连接:
连接特定的 DNS 后缀 flyingvoice.com 描述
on 物理地址
DNS 服务器 fec0::2%1 fec0::3%1 192.168.11.1

Configuring Stateless IPv6

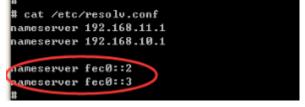
Stateless mode dhcpv6 client only send DNS request, and the server reply the DNS server and Domain name, DHCPv6 server configure as the picture shows, DHCPv6 client configure as this .

Status Network	Wireless 2.4GHz	Wireless 5GH	z See	curity	Applic	ation	Adminis	tration	
WAN LAN IPv6	Advanced IPv6 WA	IPv6 LAN	VPN	Port F	orward	DMZ	VLAN	DDNS	Q
Routing Advance									
IPv6 WAN Setting									
IPv6 WAN Setting									
Connection Type			DHCPv6	•					
DHCPv6 Address Settin	gs		Stateless	•					
Prefix Delegation			Disable 🔻						

After the configuration, we can check the packets about the dhcpv6 client. For more inforation, please check

dhcpv6_stateless.pcap.

In the router we can check via CLI.But you can not see ipv6 address



ping DNS address

When in stateful mode, device can get ipv6 address from dhcpv6 server, in this way we can ping a dns , verify if it can do domain name resolve by ipv6 dns address. Check this we can use the packets to prove. You can find on this packet dns.pcap

WAN DHCPv6 client

As I show you with router B, router B use the WAN DHCPv6 client, you can refer to the part 2 to check the stateful and stateless mode. Another thing I need show you is Prefix distribution.

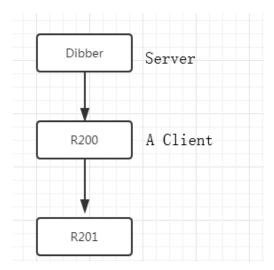
Prefix distribution

1)WAN port DHCPv6 server enable prefix distribution feature.

2)WAN port DHCPv6 client enable prefix distribution

3)LAN port DHCPv6 server disable dhcp service

Topo like this



Dibber dhcpv6 server configuration see the attach. This time I use the stateful mode Router A can get an ipv6 address ,WAN port and LAN port both can get ipv6 address from the dibbler server.

brθ Link encap:Ethernet HWaddr 00:21:F2:02:1A:4F inet addr:192.168.11.1 Bcast:192.168.11.255 Mask:255.255.255.0 inet6 addr: 2001:db8:352e:0:221:f2ff:fe02:1a4f/48 Scope:Global inet6 addr: fe80::221:f2ff:fe02:1a4f/64 Scope:Link inet6 addr: fec0::1/48 Scope:Site UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:1255 errors:0 dropped:0 overruns:0 frame:0 TX packets:1550 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:226565 (221.2 KiB) TX bytes:613327 (598.9 KiB)

The behind router also get an ipv6 address

eth2.1 Link encap:Ethernet HWaddr 00:21:F2:08:16:59 inet addr:192.168.11.64 Bcast:192.168.11.255 Mask:255.255.255.0 inet6 addr: 2001:db8:352e:0:221:f2ff:fe08:1659/64 Scope:Global inet6 addr: fe80::221:f2ff:fe08:1659/64 Scope:Link UP BROADCAST RUNNING MULTICAST MTU:1500 Metric:1 RX packets:693 errors:0 dropped:0 overruns:0 frame:0 TX packets:563 errors:0 dropped:0 overruns:0 carrier:0 collisions:0 txqueuelen:0 RX bytes:58337 (56.9 KiB) TX bytes:375603 (366.7 KiB)

Use this ipv6 address we can ping Router A LAN ipv6 address

C:\Users\Administrator>ping 2001:db8:352e:0:221:f2ff:fe02:1a4f

正在 Ping 2001:db8:352e:0:221:f2ff:fe02:1a4f 具有 32 字节的数据: 来自 2001:db8:352e:0:221:f2ff:fe02:1a4f 的回复: 时间<1ms 来自 2001:db8:352e:0:221:f2ff:fe02:1a4f 的回复: 时间<1ms 来自 2001:db8:352e:0:221:f2ff:fe02:1a4f 的回复: 时间<1ms 来自 2001:db8:352e:0:221:f2ff:fe02:1a4f 的回复: 时间<1ms 来自 2001:db8:352e:0:221:f2ff:fe02:1a4f 的回复: 时间<1ms

Viewing WAN/LAN port status

To view the status of WAN port:

Navigate to Status page.

LAN status

Now only LAN ipv6 dhcpv6 mode is statefull, it can display ipv6 client ipv6 address

Status Network Wi	ireless 2.4GHz Wire	less 5GHz SIP	FXS1	FXS2	Security	Application	Storage	Administratio
Basic LAN Host Syslog	g							
AN Host info								
MAC Address	IP Address	Interface T	VDe	Address So	urce	Expires	Host name	Statı
00:21:F2:AC:BA:19 00:27:19:95:22:FF 18:CF:5E:CB:F9:C9	192.168.11.207 192.168.11.203 192.168.11.66	LAN2 LAN3 FV-TEST		DHCP DHCP DHCP		23:57:23 23:57:41	cnPilot R201 WIN-20151218F MQGAADTGXWBI	Activ RLZ Activ
pv6 LAN Host Info								
			IPv6 Addre	SS				
/AN status			fec0::100 fec0::101					
Network Status								
	DHCP							
ternet Port Status		.11.207 Renew	1		_			
ternet Port Status Connection Type	192.168	.11.207 Renew 1:f2ff:feac:ba19/		0/128	>			
ternet Port Status Connection Type IP Address	192.168	1:f2ff:feac:ba19/		0/128	>			
ternet Port Status Connection Type IP Address Ipv6 Address	192.168 fe80::22	1:f2ff:feac:ba19/ .255.0		0/128	>			
ternet Port Status Connection Type IP Address Ipv6 Address Subnet Mask	192.168 fe80::22 255.255	1:f2ff:feac:ba19/ .255.0 .11.1		0/128	>			
ternet Port Status Connection Type IP Address Ipv6 Address Subnet Mask Default Gateway	192.168 fe80::22 255.255 192.168	1:f2ff:feac:ba19/ .255.0 .11.1 .11.1		0/128	>			
ternet Port Status Connection Type IP Address Ipv6 Address Subnet Mask Default Gateway Primary DNS	192.168 fe80::22 255.255 192.168 192.168	1:f2ff:feac:ba19/ .255.0 .11.1 .11.1		0/128	>			
ternet Port Status Connection Type IP Address Ipv6 Address Subnet Mask Default Gateway Primary DNS Secondary DNS	192.168 fe80::22 255.255 192.168 192.168	1:f2ff:feac:ba19/ .255.0 .11.1 .11.1		0/128	>			

Chapter 6 Troubleshooting Guide

This chapter covers:

- Configuring PC to get IP Address automatically
- Cannot connect to the Web

• Forgotten Password

Configuring PC to get IP Address automatically

Follow the below process to set your PC to get an IP address automatically:

Step 1 : Click the "Start" button

Step 2 : Select "control panel", then double click "network connections" in the "control panel" Step 3 : Right click the "network connection" that your PC uses, select "attribute" and you can see the interface as shown in Figure 3.

Step 4.: Select "Internet Protocol (TCP/IP)", click "attribute" button, then click the "Get IP address automatically".

etwork supports k administrator		
•		
•		
r.		
Advanced		

Cannot connect to the Web

Solution:

- Check if the Ethernet cable is properly connected
- Check if the URL is correct. The format of URL is: http:// the IP address
- Check on any other browser apart from Internet explorer such Google
- Contact your administrator, supplier or ITSP for more information or assistance.

Forgotten Password

If you have forgotten the management password, you cannot access the configuration web GUI. Solution:

To factory default: press and hold reset button for 10 seconds.