

# PA168V IAX2 FXS Gateway



## Http Setup Guide

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When PA168V IAX2 FXS gateway is properly installed, you can set each parameter through PC and Web browser.

Details please refer to 《PA168 V IAX2 FXS gateway Spec and Install》

### ➤ Configuration with the standard WEB browser

Double click  icon to open the IE. Input the IP address of the PA168V into address bar (e.g.192.168.1.100) , and then input password of the PA168V into the following page. Default ordinary password is 1234 and super password is 12345678. If the default password is invalid, please consult the supplier.

Network Settings					
iptype	<input type="text" value="dhcp"/>	ppp id	<input type="text"/>	ppp pin	<input type="text"/>
local ip	<input type="text" value="192.168.1.205"/>	subnet mask	<input type="text" value="255.255.255.0"/>	router ip	<input type="text" value="192.168.1.254"/>
dns	<input type="text" value="192.168.1.254"/>	dns2	<input type="text" value="0.0.0.0"/>	mac	<input type="text" value="00-09-45-02-05-e3"/>
Audio Settings					
codec1	<input type="text" value="g729"/>	codec2	<input type="text" value="g7231"/>	codec3	<input type="text" value="g711u"/>
codec4	<input type="text" value="g711a"/>	codec5	<input type="text" value="gsm"/>	codec6	<input type="text" value="iLBC"/>
vad	<input type="checkbox"/>	agc	<input type="checkbox"/>	aec	<input checked="" type="checkbox"/>
audio frames	<input type="text" value="2"/>	g.723.1 high rate	<input checked="" type="checkbox"/>	ilbc payload	<input type="text" value="97"/>
jitter size	<input type="text" value="0"/>	handset in(0-15)	<input type="text" value="14"/>	handset out(0-31)	<input type="text" value="20"/>
dual mode	<input type="text" value="disable"/>	dual mode prefix	<input type="text" value="0"/>		
Dial Plan Settings					
use dialplan	<input type="text" value="disable"/>	dial number	<input type="text"/>	ddd code	<input type="text" value="10"/>
idd code	<input type="text" value="86"/>	idd prefix	<input type="text" value="00"/>	ddd prefix	<input type="text" value="0"/>
inner line	<input type="text" value="disable"/>	inner line prefix	<input type="text" value="0"/>	call waiting	<input type="checkbox"/>
forward number	<input type="text" value="82378009"/>	fwd poweroff	<input type="checkbox"/>	fwd noanswer	<input type="checkbox"/>
fwd always	<input type="checkbox"/>	fwd busy	<input type="checkbox"/>	answer	<input type="text" value="30"/>
use digitmap	<input type="checkbox"/>				
IAX2 Protocol Settings					
use service	<input type="checkbox"/>	service addr	<input type="text"/>	register ttl	<input type="text" value="60"/>
phone number	<input type="text" value="208"/>	account	<input type="text"/>	pin	<input type="text"/>
local port	<input type="text" value="4569"/>	dtmf	<input type="text" value="outband signal"/>	tos	<input type="text" value="0"/>
remote dialplan	<input type="checkbox"/>	super password	<input type="text" value="*****"/>	debug	<input type="text" value="output all"/>
Other Settings					
password	<input type="text" value="****"/>	upgrade type	<input type="text" value="disable"/>	upgrade addr	<input type="text"/>
snmp ip	<input type="text" value="0.0.0.0"/>	use daylight	<input type="checkbox"/>		
timezone	<input type="text" value="(GMT+08:00)Beijing,Hong Kong,Urumqi"/>				
<input type="button" value="Save Settings"/>		<input type="button" value="Address Book"/>		<input type="button" value="Upgrade Firmware"/>	

Fig 1.1 Http Setting

With Debug set 0[disable], please input super password; while Debug is not set as 0[disable], please input ordinary password. Then click  button. The following configured page will popup.

➤ **Network Setting:**

Network Settings					
iptype	<input type="text" value="static"/>	ppp id	<input type="text"/>	ppp pin	<input type="text"/>
local ip	<input type="text" value="192.168.1.100"/>	subnet mask	<input type="text" value="255.255.255.0"/>	router ip	<input type="text" value="192.168.1.254"/>
dns	<input type="text" value="202.106.46.151"/>	dns2	<input type="text" value="202.96.128.68"/>	mac	<input type="text" value="00-0d-ea-00-00-03"/>

Fig 1.2 Network Setting

- **iptype:** Set how PA168V FXS Gateway gets relevant network parameters by selecting the corresponding item from drop down list.
  - **static ip:** Select this item to authorize users to set IP address, subnet mask, router IP address and dns IP of PA168V FXS gateway manually.
  - **dhcp:** Select this item to enable DHCP mode, and it will assign the IP address and other net parameters automatically.
  - **pppoe:** Those ADSL, Cable Modem and Ether net users who take the way of virtual dial-up please select this item for it is a protocol especially designed for them.
  - **modem:** Users of PA168V FXS gateway attached with modem, please select this item. Then please fill user name and password of dial-up network into **ppp id** and **ppp pin** fields.
- **ppp id:** With **pppoe** selected in **iptype** drop down list, please enter the

ADSL user name here; with **modem** selected in **iptype** drop down list, please enter the modem dial-up user name here. The length of the user name is limited within 40 bytes.

- **ppp pin:** With **pppoe** selected in **iptype** drop down list, please enter the ADSL password here; with **modem** selected in **iptype** drop down list, please enter the modem dial-up password here. The length of the password is limited within 24 bytes.
- **local ip:** With **static ip** selected in **iptype** drop down list, please enter IP address acquired from the administrator or ISP.
- **subnet mask:** With **static ip** selected in **iptype** drop down list, please enter subnet mask acquired from the administrator or ISP.
- **router ip:** With **static ip** selected in **iptype** drop down list, please enter the default Gateway IP address on which the PA168V locates in the network.
- **dns:** With **static ip** selected in **iptype** drop down list, please enter the IP address of the main DNS server .
- **dns (spare):** With **static ip** selected in **iptype** drop down list, please enter IP address of backup DNS server here.
- **mac:** MAC address is the physical address supplied by the Ethernet NIC.

Every PA168V FXS Gateway is preset while shipped from the factory with a unique algorithm MAC address printed on the back of the base.

➤ **Audio settings:**

Audio Settings					
codec1	<input type="text" value="g729"/>	codec2	<input type="text" value="g711a"/>	codec3	<input type="text" value="g711u"/>
codec4	<input type="text" value="gsm"/>	codec5	<input type="text" value="null"/>	codec6	<input type="text" value="null"/>
vad	<input checked="" type="checkbox"/>	agc	<input type="checkbox"/>	aec	<input checked="" type="checkbox"/>
audio frames	<input type="text" value="2"/>	g.723.1 high rate	<input checked="" type="checkbox"/>	ilbc payload	<input type="text" value="98"/>
jitter size	<input type="text" value="0"/>	handset in(0-15)	<input type="text" value="15"/>	handset out (0-31)	<input type="text" value="20"/>
dual mode	<input type="text" value="pstn first"/>	dual mode prefix	<input type="text" value="30"/>		

Fig 1.3Audio Setting

- **codec1:** Set the priority 1 of the audio compression algorithm. The options are **g729**, **g7231**, **g711u**, **g711a**, **gsm**, **ilbc** and **null**.
- **codec2:** Set the priority 2 of the audio compression algorithm. The options are **g729**, **g7231**, **g711u**, **g711a**, **gsm**, **ilbc** and **null**.
- **codec3:** Set the priority 3 of the audio compression algorithm. The options are **g729**, **g7231**, **g711u**, **g711a**, **gsm**, **ilbc** and **null**.
- **codec4:** Set the priority 4 of the audio compression algorithm. The options are **g729**, **g7231**, **g711u**, **g711a**, **gsm**, **ilbc** and **null**.
- **codec5:** Set the priority 5 of the audio compression algorithm. The options are **g729**, **g7231**, **g711u**, **g711a**, **gsm**, **ilbc** and **null**.
- **codec6:** Set the priority 6 of the audio compression algorithm. The

options are **g729**, **g7231**, **g711u**, **g711a** , **gsm**, **ilbc** and **null**.

- **vad**: Enable/disable VAD (voice activity detection).
- **agc**: Enable/disable AGC.
- **aec**: Enable/disable VEC.
- **audio frame**: Set audio frames in RTP package. Minimum is 1 and maximum is 8.
- **g.723.1 high rate**: enable/disable g.723.1 high rate. G.723.1 high rate is 6.3kbps, low rate is 5.3kbps.
- **ilbc payload** : Set the payload type of RTP package whne ILBC codec selected to DTMF delay. The value range is 96-255.
- **jitter size** : Set buffer size of RTP package. The value range is 0-32.
- **handset in**: Set the volume of handset input.
- **handset out**: Set the volume of handset output.
- **Dual mode**: Set this item to enable or disable the PSTN line.
  - **Disable**: With this item selected, PSTN line is disabled.
  - **PSTN First**: This item selected, PA168V FXS gateway will choose PSTN calling first.

- **IP First:** This item selected, PA168V FXS gateway will choose IP calling first.
- **dual modes prefix:** When IP first is set in the dual modes setting, setting switches to PSTN prefix such as 9.

➤ **Dial Plan Settings:**

Dial Plan Settings					
use dialplan	disable ▾	dial number		ddd code	10
idd code	86	idd prefix	00	ddd prefix	0
inner line	disable ▾	inner line prefix	0	call waiting	<input type="checkbox"/>
forward number	82378801	fwd poweroff	<input type="checkbox"/>	fwd noanswer	<input type="checkbox"/>
fwd always	<input type="checkbox"/>	fwd busy	<input type="checkbox"/>	answer	30
use digitmap	<input checked="" type="checkbox"/>				


Fig 1.4 Dial Plan Setting

- **use dialplan:** Set whether to use dial plan or to use dial number by selecting the corresponding item in drop down list.
  - **disable:** Select this item if not to use dial plan or dial number.
  - **enable:** Use dial plan by selecting this item.
  - **dialnum:** Use dial number by selecting this item. With this item selected, please enter the dial prefix into **dial number** field.
  - **prefix:** Use 179XX service by selecting this item.
  - **Hotline:** Use Hotline function by selecting this item. With this item selected, please enter the hotline number into **dial number** field.
- **dial number:** With **dialnum** selected in **use dialplan** drop down list, please enter the dial prefix into this field according to requirement of log

in server. For example, with eTalk card used, enter 00 here.

- **ddd code:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set area code according to E.164 dial rule. For example, Beijing is 10; Shanghai is 21.
- **idd code:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set country code according to E.164 dial rule. For example, China is 86; U.S.A is 1.
- **idd prefix:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set international call prefix according to E.164 dial rule, such as 00.
- **ddd prefix:** With **enable** or **dialnum** selected in **use dialplan** drop down list, set long distance call prefix according to E.164 dial rule, such as 0.

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 **Note** With **dialnum** selected in **use dialplan** drop down list, you can also set dddcode, iddcode, iddprefix and dddprefix according to requirement of system.

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- **innerline:** Enable/disable innerline call by selecting corresponding items from dropdown list.
  - **disable:** Disable innerline call by selecting this item.
  - **enable:** enable innerline call by selecting this item.
- **innerlineprefix:** With **enable** selected in **innerline** dropdown list, please



fill the prefix number to pick up innerline , such as 0.

- **Call waiting:** Enable/disable call waiting by checking/unchecking the box.
- **forward number:** Enter receiving forwarded calls phone number into this field; If PA168V FXS gateway used with modem, with **modem** item selected in **iptype** list box, and then fill ISP number into this field.
- **fwd poweroff:** Forward calls if power off by checking this box. Please enter the phone number of receiving forwarded calls into **fwd number** field.
- **fwd noanswer:** Forward calls without replying by checking this box. Please enter the phone number of receiving forwarded calls into **fwd number** field.
- **fwd always:** Forward all calls by checking this box. Please enter the phone number of receiving forwarded calls into **fwd number** field.
- **fwd busy:** Forward calls if busy by checking this box. Please enter the phone number of receiving forwarded calls into **fwd number** field.
- **answer:** Enter a number from 0 through 60 to set the entries of the seconds before the phone answers the call auto or forwards the calls.

- **Use digitmap:** Enable/disable digit map by checking/unchecking the box.

➤ **IAX2 Protocol Settings:**

IAX2 Protocol Settings					
use service	<input type="checkbox"/>	service addr	<input type="text"/>	register ttl	<input type="text" value="60"/>
phone number	<input type="text" value="200"/>	account	<input type="text"/>	pin	<input type="text"/>
local port	<input type="text" value="4569"/>	dtmf	<input type="text" value="outband signal"/>	tos	<input type="text" value="0"/>
remote dialplan	<input type="checkbox"/>	super password	<input type="text" value="••••••••"/>	debug	<input type="text" value="output"/>

Fig 1.5 IAX2 Protocol Settings

- **use service** : Enable/disable service by checking/clearing this box. To make calls through Asterisk server, please check this box; otherwise, phone can only make IP-to IP calls.
- **service addr:** Please set the URI (domain name/IP address : service port) of the asterisk server into “**service addr**”. When the default service port 4569 is used, “: service port” can be omitted.
- **register ttl** : IP phone will send a keep-alive registration message to the asterisk server every “**register ttl**” seconds. The minimum value is 10, maximum value is 65535. Default is 60.
- **phone number:** The local phone number or username of this phone, usually is allocated by system.
- **account:** With the asterisk server which requires authentication, please put the username/account into this field.

- **pin:** With the asterisk server which requires authentication, please put the password into this field.
  
- **local port:** The local UDP port registered with the asterisk server to accept incoming handshaking messages. The default port number is 4569.
  
- **dtmf:** Set DTMF signal sending way by selecting **inband audio**, **outband audio** from list box.
  
- **tos:** Set the TOS field of the IP header of the RTP packets. The bigger this value is 0, the higher priority the packet is 224.
  
- **remote dialplan:** Enable/disable support for DPREQ/DPREP command. When this box is checked, the called number will be sent to Asterisk server one by one through DPREQ command when you press the keypad. And it's the Asterisk server's responsibility to decide if it has collected enough digits to make a call.
  
- **super password:** Set the super password of the phone.(Default super password is 12345678).
  
- **debug:** Set the debug level of the phone.
  - **disable:** Disable output the debug message by selecting this item.
  - **output:** Output the operation information to the window, such as register, input by selecting this item.

- **output all:** Output all debug information and data in test window by selecting this item.
- **remote debug:** Save the debug information in SDRAM of IP phone by selecting this item.
- **no check:** Disable checking firmware tags when upgrading. This is not suggested, because it will increase the risk of upgrading the wrong firmware into the phone.

➤ **Other settings:**

Other Settings			
password	<input type="text" value="1234"/>	upgrade type	<input type="text" value="disable"/>
sntp ip	<input type="text" value="0.0.0.0"/>	use daylight	<input type="checkbox"/>
timezone	<input type="text" value="(GMT+08:00)Beijing, Hong Kong, Urumqi"/>		
<input type="button" value="Save Settings"/>		<input type="button" value="Address Book"/>	
<input type="button" value="Upgrade Firmware"/>			

Fig 1.6 Other Setting

- **password:** Set the ordinary password of the phone. (Default is 1234).
- **upgradetype:** Set the auto-upgrade type of the PA168V FXS gateway.
  - **disable** : Disable auto-upgrade .
  - **all:** pa168V will find the matching firmware binary file and configuration file of the hardware type only at the FTP server specified by **upgradeaddr** item .
  - **mac:** pa168V will find the matching firmware binary file and configuration file of the MAC address only at the upgrade server specified by **upgradeaddr** item .

- **ppp id:** pa168V will find the matching firmware binary file and configuration file of the ppp id only at the upgrade server specified by **upgradeaddr** item .
- **account:** pa168V will find the matching firmware binary file and configuration file of the account only at the upgrade server specified by **upgradeaddr** item .
- **phonenumber:** pa168V will find the matching firmware binary file and configuration file of the phone only at the upgrade server specified by **upgradeaddr** item .
- **upgrade addr:** Put URL of upgrade server supplying upgrade program and configurations into this field , URL rules is below:

HTTP://IP address or domain name: port number

FTP: //IP address or domain name: port number

TFTP: //IP address or domain name: port number

- **sntp ip:** Fill IP address of time server here. When network works without Internet, Fill special address IP 255.255.255.255 here.
- **use daylight:** Enable/disable daylight.
- **timezone:** Select correct time zone in list box.

When debug set as 0[disable], and if input ordinary password (default one is 1234), the following page will pop up after clicking . And only those parameters can be modified.

Network Settings					
iptype	<input type="text" value="static"/>	ppp id	<input type="text"/>	ppp pin	<input type="text"/>
local ip	<input type="text" value="192.168.1.100"/>	subnet mask	<input type="text" value="255.255.255.0"/>	router ip	<input type="text" value="192.168.1.254"/>
dns	<input type="text" value="202.106.46.151"/>	dns2	<input type="text" value="202.96.128.68"/>	mac	<input type="text" value="00-09-45-0a-45-2e"/>
Audio Settings					
codec1	<input type="text" value="g729"/>	codec2	<input type="text" value="g711a"/>	codec3	<input type="text" value="g711u"/>
codec4	<input type="text" value="gsm"/>	codec5	<input type="text" value="null"/>	codec6	<input type="text" value="null"/>
vad	<input checked="" type="checkbox"/>	agc	<input type="checkbox"/>	aec	<input checked="" type="checkbox"/>
audio frames	<input type="text" value="2"/>	g.723.1 high rate	<input checked="" type="checkbox"/>	ilbc payload	<input type="text" value="98"/>
jitter size	<input type="text" value="0"/>	handset in(0-15)	<input type="text" value="15"/>	handset out(0-31)	<input type="text" value="20"/>
dual mode	<input type="text" value="pstn first"/>	dual mode prefix	<input type="text" value="30"/>		
Dial Plan Settings					
use dialplan	<input type="text" value="enable"/>	dial number	<input type="text" value="16900"/>	ddd code	<input type="text" value="10"/>
idd code	<input type="text" value="86"/>	idd prefix	<input type="text" value="00"/>	ddd prefix	<input type="text" value="0"/>
inner line	<input type="text" value="enable"/>	inner line prefix	<input type="text" value="0"/>	call waiting	<input checked="" type="checkbox"/>
forward number	<input type="text" value="95963"/>	fwd poweroff	<input type="checkbox"/>	fwd noanswer	<input checked="" type="checkbox"/>
fwd always	<input checked="" type="checkbox"/>	fwd busy	<input type="checkbox"/>	answer	<input type="text" value="30"/>
use digitmap	<input type="checkbox"/>				
Other Settings					
password	<input type="text" value="1234"/>	upgrade type	<input type="text" value="disable"/>	upgrade addr	<input type="text"/>
sntp ip	<input type="text" value="255.255.255.255"/>	use daylight	<input type="checkbox"/>		
timezone	<input type="text" value="(GMT+08:00)Beijing, Hong Kong, Urumqi"/>				
<input type="button" value="Save Settings"/>		<input type="button" value="Address Book"/>		<input type="button" value="Upgrade Firmware"/>	

Fig 1.7 Setting Page using ordinary pin with Debug set as 0 [disable]

- **Save Settings:** Click this button to save the configuration and the phone will reboot. Once the phone reboots successfully, the new configuration is effective.

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**Note** After entering set page, if **save settings** button is not clicked within 10 minutes, then when you click it again, the index page asking for pin will pop up again. Please input the password again to enter the set page and then click **save settings** button to confirm the modification.

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- **Adress Book:** Click this button to open the speed dial settings page. In

this page, you can set and save the speed dial number by typing the name into the **Name** field and then entering the corresponding number following the name. For example, input Jack in Name field following 001, and then input 5989426454 into Phone number field. Then Jack's number 5989426454 is saved in phone book. Then please click **Save/Back** button. In normal state, you can use speed dial to call numbers saved in the phone book.

Phone Book					
No.	Name	Phone Number	No.	Name	Phone Number
001	Jack	5989426454	002	Allen	192.168.1.56
003			004		
005			006		
007			008		
009			010		

Fig 1.8 Phone Book Illustration

- **Upgrade Firmware:** Click this button to update the program , the settings and the digitmap of the PA168V FXS gateway.

*Reserves the right to make changes in technical and product specification  
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*PA168V IAX2 FXS Gateway Http Setup Guide (V1.60)*

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