
IAD 2020



User Guide

Contents

Chapter 1 Introduction	2
Chapter 2 Installation	4
Chapter 3 Configuration	5
3.1 Login WEB	5
3.2 Register SIP	6
3.3 Save Configuration	7
Chapter 4 Instruction	8
4.1 IVR Action	8
4.2 How to make a phone call	8
4.3 Enable Multi-way call Transfer	8
Chapter 5 Upgrade	10
Chapter 6 Restore Default Setting	11
Chapter 7 FAQ	12

★ Welcome ★

Firstly welcome to use our Gateway IAD 2020, and thank you for your support and trust.

Gateway IAD 2020 completely keep to VOIP standard put forward by International Organization for Standardization. Our Gateway IAD 2020 supports not only SIP and IAX2 Protocol, but also multiple products integrated with SIP Phone, SIP voice software, SIP equipment, SIP agent, SIP register server and SIP media gateway products like that.

To enjoy more professional after-sale service and enable you best use IAD 2020, please read the User Guide carefully and keep it well for reference.

This text mainly introduces the installation, basic function of Gateway IAD 2020. Hopefully it will help you learn about and use our products quickly and expertly.

PS. Please login our website to get the latest upgrade information of our products. Thank you for understanding our difficulty in informing separately.

Chapter 1 Introduction

一、Technique and protocol of the Gateway IAD 2020

1、Supported Protocol:

- ◆ SIP(RFC3261, RFC2543)
- ◆ IAX2 protocol and SNTP
- ◆ Voice Codec: G711A, G711u, G729, iLBC
- ◆ G.168 96ms echo cancellation
- ◆ Jitter Buffer, VAD, CNG, SIP register by domain name, net-to-net call
- ◆ Voice Communication through RTP and RTCP
- ◆ In-band and out-band DTMF, SIP info, DTMF Relay, RFC2833
- ◆ Support various ring in different countries and areas
- ◆ NAT traversal way such as STUN, CITRON, AVS

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- ◆ SIP Certificate(none, basic, MD5) , interpret domain name
 - ◆ Register two SIP servers and each can make incoming and outgoing calls
 - ◆ SIP application, including SIP Call forward/transfer/holding/waiting
 - ◆ Establish a VPN (L2TP) tunnel by dialing server

2、 Network Characteristics:

- ◆ WAN/LAN support Bridge and Router model, integrated with 2-port Router function
- ◆ Basic NAT and NAT
- ◆ PPPOE for xDSL, auto-redial whenever blackout or off-line happen
- ◆ WAN port for DHCP Client
- ◆ LAN port for DHCP server
- ◆ LAN for DNS relay providing DNS service for the network equipments
- ◆ High-tech Digital Signal Processing technique to ensure the call quality
- ◆ Advanced Buffering Control Technique to avoid information delay and loss
- ◆ Network Tools supported: Including ping, trace route, telnet client
- ◆ Three way for configuring WAN port: Static, DHCP and PPPoE
- ◆ Firewall control for mini-type Local Area Network
- ◆ Optional communication priority for mini-type Local Area Network
- ◆ Layer 2 QoS (802.1p)

3、 Advanced Functions:

- ◆ Two separately SIP can be registered to finish multi-line registrations
- ◆ Enable Call Waiting, Call Transfer, Three-way call and Call Forward
- ◆ Caller Display, Ban Outgoing, No Disturb and auto-dial
- ◆ Black List and restricted number
- ◆ Direct call from net to net
- ◆ Auto-config number-receiving
- ◆ Config in a fixed calling way
- ◆ VAD: voice activity detection
- ◆ CNG: comfortable noise generator
- ◆ LEC and AGC: line echo cancellation and auto gain control

- ◆ Polarity Reversal

4、 Method of config, running and maintaining

- ◆ Support safe model, and update under this model environment
- ◆ Use Web Browser or keyboard to config the gateway, and filtrate clients' IP restriction
- ◆ Config and update the software and files by HTTP, FTP, TFTP
- ◆ Config many administrators, usernames, and passwords; support reversal Telnet traversing firewall

2、 Gateway Technique Parameter:

Item		Standard Information
Main CMOS chip	CPU	IFX5120P-INFINEON , 175M , PEB3332-INFINEON-DSP;
	FLASH	MX29LV160CBTC-70(MACRONIX), 2MBytes
	SDRAM	K4S641632F — TC75 (SAMSUNG) X2 , 16MBytes
Standard of Power Supply	Input Pressure	100-240V AC
	Output Pressure	12V DC 1.5A
Port	WAN	1 10/100 Base T RJ-45
	LAN	1 10/100 Base T RJ-45
	FXS1	1 RJ11 for phone
	FXS2	1 RJ11 for phone
Workable Power		12W
Workable Temperature		0~40°C
Workable Humidity		5~95%

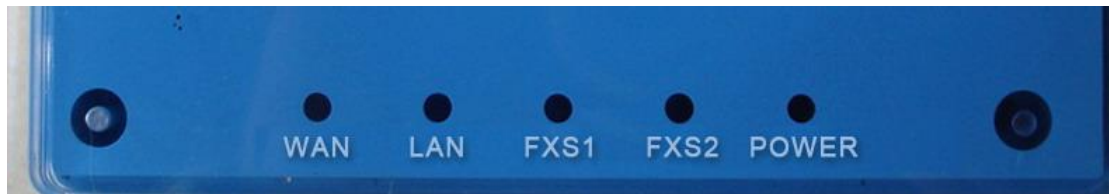
Chapter 2 Installation

1. Method of Installation



- ◆ Connect WAN port with a cable to ensure the connection between Gateway and Internet.
- ◆ Use a RJ11 wire and link FXS1 port to telephone
- ◆ Use a RJ11 wire and link FXS2 port to telephone
- ◆ Plug into the originally-produced power supply 12V/1.5A
- ◆ LAN Port may link to PC

2. LED Display Status of the Gateway



WAN: Have flux and link normally when green light is glittering, in reverse, light is out.

LAN: Have flux and link normally when green light is glittering, in reverse, light is out.

FXS1: Brightened green light means that LINE 1 is in conversation

FXS2: Brightened green light means that LINE 2 is in conversation

POWER: The indicator light brightens when plug in

Chapter 3 Configuration

3.1 Login WEB

1、 Check IP

IAD 2020 has two ports: WAN and LAN. Its default setting is in DHCP status. Users may config gateway according to their own network environment.

◆ If your network environment allows getting IP address by DHCP to link gateway, you can make configuration as follows:

When connect WAN port with cable, please plug normal telephone wire into FXS port and press #*111#. You will hear IP address (http://*.*.*.*) of IAD 2020 over the voice, then input the IP add and login WEB of gateway config page.

◆ If your network environment doesn't allow DHCP, you should link your PC to LAN Port and login (<http://192.168.10.1>) to make configurations.

Login Web

Users may login WEB of gateway config page through following two ways: input IP of WAN (press #*111# on the telephone and check) or IP of LAN (<http://192.168.10.1>) to IE browser. You may select the workable way in conformity to your condition.

Account of administrator: input admin for both username and password

Username:	<input type="text"/>
Password:	<input type="text"/>
<input type="button" value="Logon"/>	

3.2 Register SIP

2 FXS gateway means you can register two separate accounts on FXS1 port and FXS2. LINE 1 and LINE 2 have different ways of register; let's mainly explain the option of register config:

SIP Line Select

SIP 1

Basic Setting

Regist status Registered

Phone Port

Server Name

Server Address

Server Port

Account/User Name

Password

Phone Number

Display Name

Enable Register

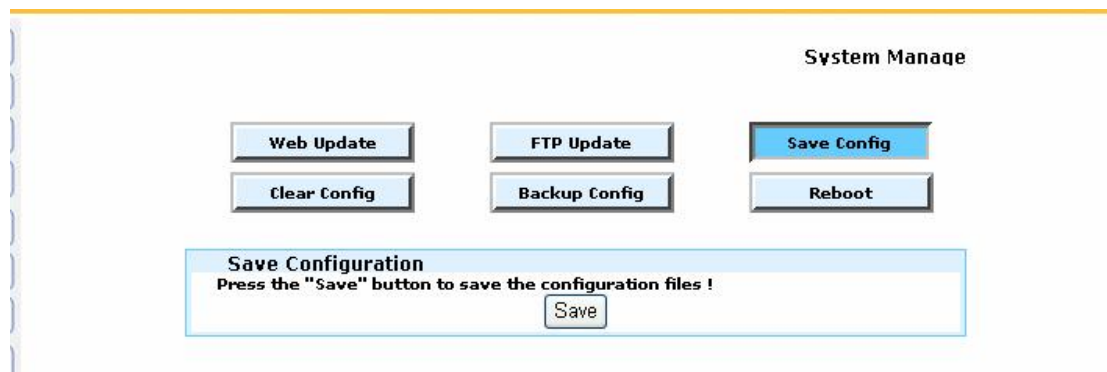
SIP Line Select	Select SIP 1 or SIP 2, press Load
Register status	Registered or Unregistered
Phone Port	Port 1, Port 2 and Any
Server Name	LINE 1 for SIP 1, LINE 2 for SIP 2
Server Address	Either IP address or domain name is available
Server Port	Default port is 5060
Account/User Name	Here means user name of SIP server, and the name can be the same with SIP account. It all depends on users' own decision.
Password	Validating password while registering SIP
Phone Number	Phone number of SIP
Enable Register	Pitch on and hook sign appears, it means successfully registered

Generally speaking, register steps are finished after submitting above information. You can check the register status of LINE 1 and LINE 2 on "Current State". Displaying

“Registered” means successful, and “Unapplied” means quite the reverse. At this moment, Gateway IAD 2020 is activated and the telephone comes into use successfully.

3.3 Save Config

When finish register, be sure that you save all the config. Otherwise, all configurations become invalid after rebooting the equipment.



Select “Save Config” in System Manage Menu and press Save.

Chapter 4 Instruction

4.1 IVR Action

- Input #****# Reboot gateway
- Input #*000# Clear Config
- Input #*100# Static IP add model
- Input #*101# DHCP model
- Input #*102# PPPOE model
- Input #*103# Bridge model
- Input #*104# Router model
- Input #*111# Get IP add of WAN port
- Input #*222# Get IP phone number of gateway

Config Static IP address of WAN port:

- #*50+IP+# Config Static IP

#*51+IP+# Config gateway

#*52+IP+# Config DNS

#*53+netmask+# Config subnet mask

For example, IP (192.168.1.100/255.255.255.0), Default gateway (192.168.1.1), DNS (202.106.196.115), config method is as follows:

#*50192*168*1*100# Config Static IP add of WAN port as 192.168.1.100

#*51192*168*1*1# Config Default Gateway as 192.168.1.1

#*52202*106*196*115# Config DNS as 202.106.196.115 202.96.134.133

#*53255*255*255*0# Config subnet mask as 255.255.255.0

Reboot the gateway after finishing config, and the IP add comes into effect.

4.2 How to make a phone call

Dial IP: In the same Local Area Network, we may dial IP add of the gateway. For example, press #192*168*1*110# if you want to dial gateway IP 192.168.1.110.

Dial Land line: You should firstly know the dial-up rules of the server platform. General rule is :0+mobilephone number, area code+fixed telephone number

4.3 Enable Multi-way call transfer

- ☒ **Blind transfer**
- ☒ **Attend transfer**
- ☒ **Three way call**

Chapter 5 Upgrade

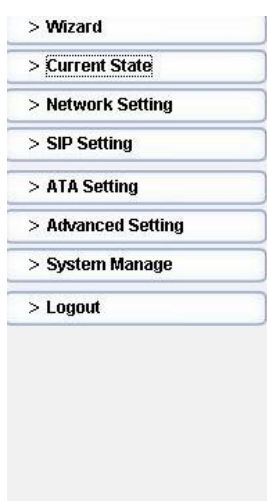
Login IAD 2020 WEB page, find “Web Update” in “System Manage” menu, press

“Browse” to unfold updatable firmware in your PC, and press



Update Setting
 Select file 浏览... (*.dlf,*.txt) Update

Return to "current state" page and check edition of firmware while finishing updating.



Running Status

WAN	
Connect Mode	DHCP
IP Address	192.168.3.112
MAC Address	00:1c:68:00:01:20
Gateway	192.168.3.1

LAN	
IP Address	192.168.10.1
DHCP Server	ON

SIP Phone Number		
SIP LINE 1	643	Registered
SIP LINE 2	645	Registered

Version: ATA FXS2 Gateway V1.5.141.26 Jul 11 2007 15:31:25

Chapter6 Restore Default Setting

You may select "Config Manage->clear config" to restore default setting of the gateway:

- ◆ If IP add of WAN port is set to Static from DHCP, it now becomes 192.168.1.179. And IP add of LAN port is 192.168.10.1. LAN port and NAT DHCP server default to be turned on.
- ◆ Default call protocol is SIP, and SIP port is 5060
- ◆ HTTP port is 80, TENLET port is 23
- ◆ Default number-receiving rule ends with "#" key
- ◆ Default account is admin and guest

Chapter 7 FAQ

7.1 Gateway can not config static IP add of WAN or LAN port

When gateway is in NAT model (non-Bridge model) , please do not set IP of WAN and LAN

into the same net domain. For example: If IP add of LAN port is 192.168.1.X, avoid configing WAN port in 192.168.1.X net domain

7.2 I have already set up Static IP of WAN, press “apply” and finally save config, but it turns out to be a preceding IP. What is the reason?

It is likely that WAN and LAN are in the same net domain, you may change IP of LAN into other net domain and have another try.

7.3 Why can't I login gateway by Telnet?

It is likely that gateway and PC owns private IP, but two IP add are in different net domain. For example, if gateway uses (192.168.1.179), and PC uses (192.168.10.180.), you may try to add another IP (192.168.1.xx) of PC.

7.4 Why does gateway appear an IP add 0.0.0.0?

It might be the function of DHCP is started, but the equipment doesn't obtain any IP add.

There are several possibilities such as: out of connection, lack of DHCP server in LAN etc.

7.5 Why does the gateway take longer time than usual to start the gateway?

Gateway start-up has much to do with the DHCP server. In the process of starting gateway, it will auto-obtain IP add from DHCP server. So, delay and failure of obtaining IP will absolutely affect the start-up time of gateway.