## **Quick Installation Guide**

☑ DAG1000-1S10
 ☑ DAG1000-2S20
 ☑ DAG1000-2O

### **THANKS FOR CHOOSING DINSTAR'S VOIP GATEWAY!**

Please read this guide carefully before installing the gateway. If you need any technical support, please contact us. Tel: +86 755 61919966 Email: support@dinstar.com Web: www.dinstar.com

#### 1 Models and Ports

Port Type Model	WAN	LAN	FXS	FXO
DAG1000-1S1O	1	1	1	1
DAG1000-2S2O	1	1	2	2
DAG1000-20	1	1	/	2

Please confirm your product model before installation and follow the installation guideline for the model.

#### 2 Description of Indicators

Indicator	Definition	Status	Description
PWR	Power Indicator	On	The gateway is powered on.
		Off	The gateway is powered off or there is no power supply.
	Bunning	Slow Flashing	The gateway is running properly.
RUN	Indicator	Fast Flashing	If there is a SIP account registered successfully, the indicator is fast flashing.
		Off	The gateway is running improperly.
FXS Tele In-use	Telephone	On	FXS port is currently occupied by a call.
	In-use Indicator	Off	FXS port is idle or faulty.
FVO	FXO	On	FXO port is currently occupied.
FAU	In-use Indicator	Off	FXO Port is idle or faulty.
	Network Link	Green Flashing	The gateway is properly connected to network
WAN/LAN	Indicator	Off	The gateway is not connected to network or network connection is improper way.
	Network Speed	On	Work at 100Mbps.
Indicator	Off	Work at 10Mbps.	

#### 3 Indicators and Ports

▶ DAG1000-1S10



/	_		
	O DC12V	FISS FX01	O RST
ower Jack WAN Por LAN Por		FXS FXO Port Port	▼ Reset Button

#### DAG1000-2S2O



# Power Jack + FXS FXO Pot Reset Button

#### ► DAG1000-20





#### 4 Installation Attentions

- Anti-jamming: to reduce the interference with telephone calls, it's highly recommended that telephone lines connected to the gateway should be placed away from power cables.
- Power supply: DAG1000-1S10, DAG1000-2S20 and DAG1000-2O are equipped with 12VDC power adapter. Please ensure safe and stable power supply.
- Network bandwidth: please ensure there is enough network bandwidth so as to guarantee stabilized running of the gateway.
- Temperature and humidity: to avoid any accident that might cause malfunction, it's advised to install the gateway
  in an equipment room where temperature and humidity are appropriate.
- Ventilation: to avoid overheating, please do not pile up the gateway with other devices and make sure the
  gateway has good ventilation around.
- Mechanical load: please make sure the gateway is placed steadily to avoid damage. It's highly advised to
  horizontally place the gateway on a flat surface or a cabinet.

#### 5 Installation Instructions

- Connection Diagram for DAG1000
- Network Connection



• Telephone Connection



PSTN Connection



Power Connection



#### 6 Modify PC's IP Address

To log in the Web Management System of the gateway, firstly, you need to modify the IP address of PC which is used to access the gateway and to make it at the same network segment with the gateway.

 $\blacksquare$  On the PC, click 'Network (or Ethernet)  ${\rightarrow} \mathsf{Properties'}.$ 

Ether	rnet	
Realt	🗧 👎 Disable	
	Status	
	Diagnose	
	Bridge Connections	
	Create Shortcut	
	😔 Delete	
	💎 Rename	
	Properties	

Double-click 'Internet Protocol Version 4 (TCP/IPv4)'.

This connection uses the following items:



Select 'Use the following IP address', and then enter an available IP address '192.168.11.XXX' which is at the same network segment with '192.168.11.1'.

Internet Protocol Version 4 (TCP/IPv4)	Properties	×
General		
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	natically if your network supports ask your network administrator	
Use the following IP address:		
IP address:	192 . 168 . 11 . 20	
Subnet mask:	255 . 255 . 255 . 0	
Default gateway:	192 . 168 . 11 . 1	

#### 7 Log in Web Management System

Open a web browser and enter the gateway's IP address (default IP is 192.168.11.1). Then, input username and password in the displayed login GUI. Both the default username and password are admin.

#### 8 Modify Gateway's IP Address

If you want to modify the IP address of DAG1000-1S/2S/4S, please click 'Network  $\rightarrow$  Local Network' in the navigation tree on the left of the Web Management System, and then input new IP address and DNS server address on the displayed interface.

#### 9 Basic Configurations of FXS

#### (1)Configure SIP Server

Log in the Web Management System of the gateway, and then click SIP Server in the navigation tree and then enter the address of the SIP server which is to be registered. Click Save in the last.

erver	
P Protocol for SIP Stack	IPv4 V
SIP Server	
SIP Server	172.25.200.223
SIP Server Port (Default: 5060)	5060
Registration Expires (Default: 300)	300 s
Heartbeat	Enable
Primary Outbound Proxy	
Primary Outbound Proxy Address	
Primary Outbound Proxy Port	5060
Secondary Outbound Proxy	
Secondary Outbound Proxy Address	
Secondary Outbound Proxy Port	5060
Registration	
Re-registration Percent(Expires)(0: means random, range: 25%-75%)	0
Retry Interval when Registration failed	30 s
Registration Limit (counts/time, time: 0 means	1 / 0 s
Send SIP Unregistration Request when the Device Restart	Enable
мон	Enable
MOH Dial Number	~~mh~u
SIP Transport Type	UDP v
Local SIP Port	
Use Random Port	Enable
SIP UDP/TCP Local Port	5060

Save

(2) Configure SIP Account Information

 ${\sf Click}\ {\sf Port}\ in the navigation tree on the left, and then click \ {\sf Add}. Input the SIP account and authentication password assigned by the SIP server.$ 

Por	Add			
		_		
	Port	0	*	
	Disable Port			
	Registration	✓	Enable	
	IP Profile	0 <	default>	
	Tel Profile	0 <	default> 🗸	
	Display Name	Amy	/	
	SIP User ID	201		
	Authenticate ID	201		
	Authenticate Password	•••••	•••	
	Offhook Auto-Dial			
	Auto-Dial Delay Time		s	
	DND(Do Not Disturb)		Enable	
	Caller-ID	✓	Enable	
	Number for CFU(Call Forwarding Unconditional)			
	Number for CFB(Call Forwarding Busy)			
	Number for CFNRy(Call Forwarding No Reply)			
	Call Waiting		Enable	
	Play Call Waiting Tone		Enable	
	Call Waiting Send CID		Enable	
	Onus		Cancol	
	Save		Galicel	

Click Save and then restart the gateway for the new configurations to take effect.

#### 10 Basic Configurations of FXO

#### (1) Configure Port Group

You are advised to divide PSTN lines into several groups and then distribute them to different port groups. Generally, PSTN lines belonging to a same telecom operator are distributed to a same port group.

Click Call & Routing - Port Group, and then click Add on the displayed interface.

ndex	1	~
Registration	Enable	
P Profile	0 <default></default>	~
Description	TELE	
Display Name	TELECOM	
SIP User ID	10000	
Authenticate ID	10000	
Authenticate Password		
Offhook Auto-Dial		
Auto-Dial Delay Time		s
Port Select	Cyclic Ascending	*
Pick Up on Group	*#	
Call Answer Timeout	15	
Select Port Count	Cyclic Select	*
Port	Select Port for this Group	

When calls come from PSTN to the gateway, the off-hook auto-dial number is generally regarded as the DID (Direct-inward-dial) number or destination number of the SIP server.

Click Select Port for this Group, and the following interface will be displayed.

#### Select Port for this Group

Port 0(FXS)	Port 1(FXO)	
_		
Se	elect All Select Invert Clean Cancel	Save

#### (2)Configure IP Trunk

On the Call & Routing→IP Trunk interface, click Add to create an IP trunk which connects to a peer SIP server.

Index	63 🗸 🗸
Description	eLA
Remote Address	10.10.0.50
Remote Port	5060
Heartbeat	Enable

#### (3) Create Outbound Route

On the **Call & Routing** $\rightarrow$ **CIP** $\rightarrow$ **Tel Routing**> interface, click **Add** to create an outbound route for the IP trunk. As shown in the following figure, Caller/Callee Prefix is set as 'any' and calls from IP

trunk 63<eLA> are routed to port group 1<TELE>.

dex	127	~
Description	outgoing call	
Calls from	IP Trunk	63 <ela> 🗸</ela>
	O SIP Server	
Caller Prefix	any	
Called Prefix	any	
Calls to	O Port	0 🗸
	Port Group	1 <tele> 🗸</tele>

#### (4) Create Inbound Route

. the IP trunk. As shown in the following figure, Caller Prefix is set as any and calls from port group 1<TELE> are routed to IP trunk 63<eLA>.

INGA	127	•
Description	incoming call	
Calls from	O Port	0 🗸
	Port Group	1 <tele> ¥</tele>
Caller Prefix	any	
Called Prefix	any	
Calls to	O Port	0 🗸
	O Port Group	1 <tele> 🗸</tele>
	IP Trunk	63 <ela> 🗸</ela>
	O SIP Server	

#### 11 Configure FXO Parameters

On the Advanced →FXS/FXO interface, configure the gateway to detect CID after ring or before ring, and enable 'Send Original CID when call from PSTN'. Format of "from" field is set as 'CID/CID' when CID is available, while format of "from" field is set as 'Display/User ID' when CID is unavailable.

Parameter		
FXO Concurrent Calls(0 means unlimited)	0	
Incoming Call from PSTN		
Configuration by FXO	Enable	
Detect CID	Before Ring	~
Obtain FSK CID from	Num	~
Send Original CID when Call from PSTN	Enable	
Format of "From" field when CID is Available	CID/CID	~
Format of "From" field when CID is Unavailable	Display/User ID	~
CID : Calling Number		
FXO Keep Onhook until Called Answered(Need Enable Auto-Dial)	Enable	
Interval of Offhook and Onhook When Called Rejected	600	ms
Allow Call to SIP Server without Registration	Enable	
Ignore Call when SIP Unregistered	Enable	

#### 12 Configure Priority of Codecs

On the Advanced—Media Parameter interface, configure the priority of preferred codecs. The gateway supports G.729, G.723, G.711U and G.711A.

_					
Pre	terr	ed	Vo	co	der

	Coder Name	Payload Type	Packetization Tir	me(ms)	Rate(kbps)	Silence Su	ppression
1	G.711U 🗸	0	20	~	64	Disable	*
2	G.711A 🗸	8	20	~	64	Disable	~
3	G.729 🗸	18	20	~	8	Disable	~
4	G.723 🗸	4	30	~	63	Disable	~
5	~			~			~

#### 13 Configure Impedance Value

To improve the compatibility of FXO ports, the gateway provides auto test to get the most matched impedance value.

On the Advanced -- FXS/FXO interface, click Start Test and then the gateway will automatically detect the best impedance for FXO lines. After the test is complete, save the impedance value.

Test Type	Test O Auto-detect Busy Tone
Port	Please select port V
Dial Timeout Time	Dial Test
Acim	
Hybrid	
Match Mode	Simple V
Dial Test Number	

#### 14 Basic Operations

- Dial \*158# to query the IP address of LAN port of the gateway ;
- Dial \*159# to query the IP address of WAN port of the gateway ;
- Dial \*114# to query the telephone number of a FXS port;
  Dial \*165\*00000# to restore default IP address, user name and password;
- Dial 105 00000# to restore default in address.
   Restore factory default settings:
- (1)dial \*166\*000000# ;

(2) press the **RST** button for 7 seconds :

(3)Log in the gateway and then click 'Tools →Factory Reset', then click Apply and restart the gateway.

• Dial \*111# to restart the gateway.

#### 15 More Details

This document only provides instructions for quick installation and basic configuration, for detailed configuration and parameter explanation, please make reference to user manual or ask for online technical support.