

**Adapter
ATA Series
User Manual**

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1. Introduction

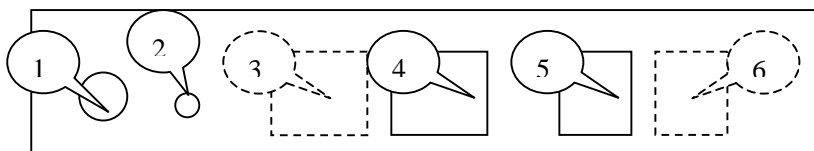
ATA series is one of VoIP terminal products, with one port connecting with regular PSTN terminal devices and one port connecting with Internet. It transfers voice through net. By the management of soft-switch platform and the support of telecom, ATA can communicate with VoIP terminals and dial to regular phone inexpensively.

ATA series' port

- ATA120's port
 - One LAN port (10 Base-T)
 - One PC port (10 Base-T)
 - One PHONE port (FXS)
 - The relation between LAN port and PC port is not router but hub
- ATA110's port
 - One LAN port (10 Base-T)
 - One PHONE port (FXS)
- ATA220's port
 - One LAN port (10 Base-T)
 - One PC port (10 Base-T)
 - One PHONE port (FXS)
 - One LINE port (FXO)
 - ATA220 has HUB function
 - The relation between LAN port and PC port is not router but hub
- ATA210's port
 - One LAN port (10 Base-T)
 - One PHONE port (FXS)
 - One LINE port (FXO)

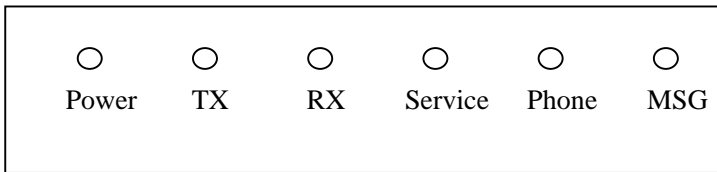
2. Sketch

2.1 Ports figure



- 1—Power Port
- 2—Setup Button
- 3—PC port :(10 Base-T Ethernet) RJ45 port to connect with PC (only for ATA120, ATA220)
- 4—LAN port:(10 Base-T Ethernet) RJ45 port to connect with Internet or Local Network
- 5—PHONE Port (FXS)
- 6—LINE Port (FXO) (only for ATA220,ATA210)

2.2 LED Indicators



Power—Power On LED

TX—Network data being transmitted

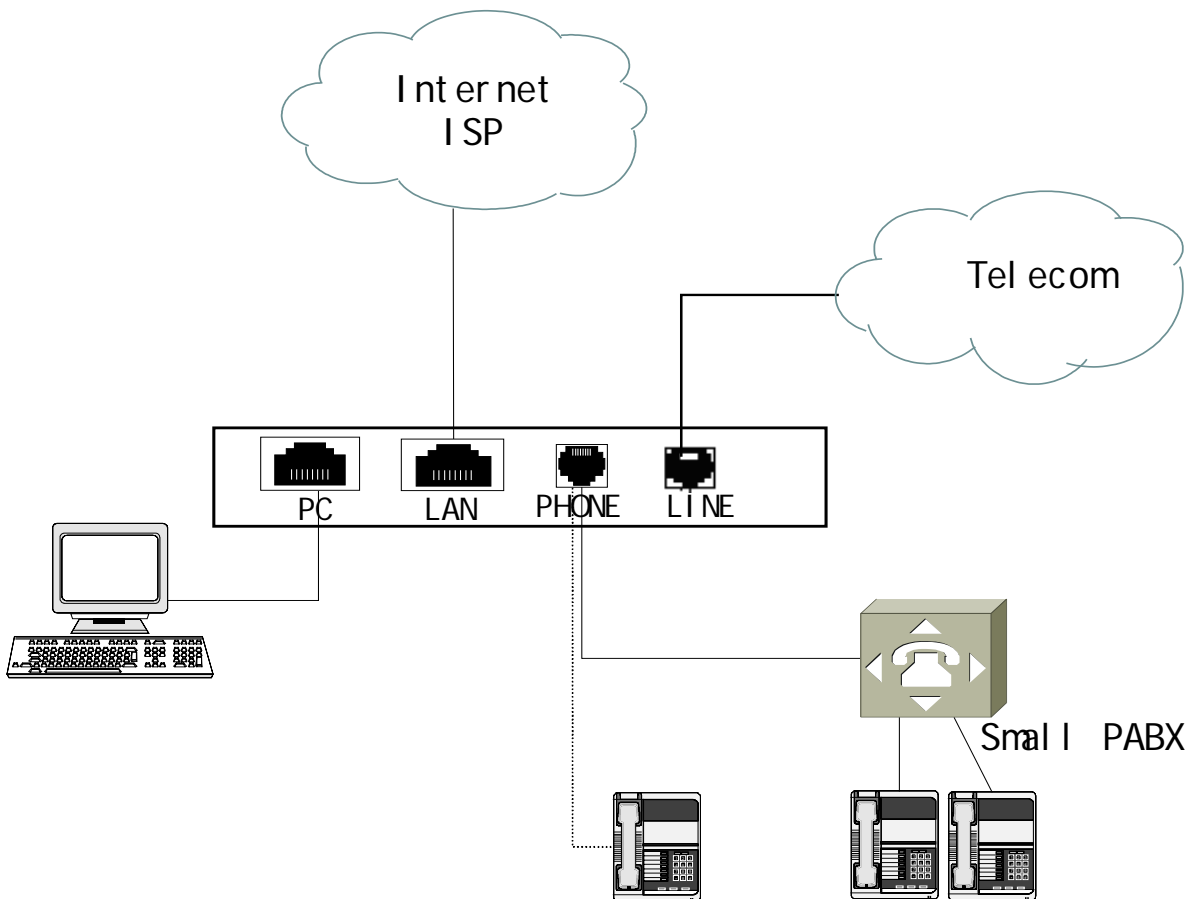
RX—Network data being received

Service—Service connected (Remains illuminated when successfully logged-on to server)

Phone—phone in operation (phone in-used when light on means working under VoIP, when light off means working under PSTN)

MSG—unanswered call LED (unanswered call appeared if light on)

2.3 Application figure



Instruction:ATA 120,ATA110 without LINE port,ATA110,ATA210 without PC port

3. Installation and Setting

3.1 Installation

- (1) Locate your ATA close to your Internet connection and a power outlet.
- (2) Plug the RJ-45 connector of the Ethernet 10/100Base-T cable into the ATA's side input port ④, and plug the other side into a hub or switch, or wall/ground socket of the structuring cable.

- (3) Plug one side of the RJ-11 of phone line to the PHONE Port(FXS) ⑤of ATA, plug another side of the phone line into user terminal (phone, line entrance to PABX, etc.).
- (4) If you are the ATA220,ATA210's user, put the phone line to the LINE Port(FXO) ⑥of ATA, you will have the both function of VoIP and PSTN.
- (5) Plug the accessory power-adapter into the power outlet, then connect the output-plug to power-port ① of the ATA.
- (6) Then waiting for ATA's startup, after hearing short phone ring, ATA is now working.

Notice: Please select different type of Ethernet Cable according to the network devices (devices connecting to LAN). Select Straight-through Ethernet Cable for network equipments (router, hub, etc.); Select Cross-over Ethernet Cable for the PC of ISP server; Select the corresponding Ethernet Cable according to the instructions of XDSL and Cable Modem (using Straight-through Ethernet Cable in most casts).

3.2 Configuration

3.2.1 Configuring Network Parameters from Telephone Handset

Without PC,users and network technician can set parameter through ordinary phone and ATA,all those operations can be finished under VoIP model.

Instrucitons for network parameter setting:

Command Format:

Every configuration command from your telephone handset will be similar to the following format: **#*xxxxx#**.Commands are a minimum of 3 digits. If a command is prefixed by "*" then the command is a query. If the command is prefixed by just "#" then it is a programming command. Use "##" to cancel a command.

If the command is successful you will hear "di du". If the command is unsuccessful you will hear "du du du..."

Common commands:

Note: Each Command below is followed by its alphanumeric representation to make it easy to remember.

Query IP Address: pick-up phone handset and key in #*047# or #*0IP#

Set IP address: pick-up handset and key in #73847# xxx*xxx*xxx*xxx# or #SETIP#xxx.xxx.xxx.xxx#

Enable DHCP: pick-up handset, then key in #3427# or #DHCP#

Disable dhcp: pick-up handset, then key in ##3427# or ##DHCP#

Reboot: pick-up handest,then key in #778# or #RST#

Restore default settings: pick-up handset ,then key in #358# or #DLT#

Using H.323:pick-up handset ,then key in #4323# or #H323#

Using SIP:pick-up handset ,then key in #747# or #SIP#

Using adjusting IP:pick-up handset,then key in #3228# or #FACT#.IP type is STATIC IP.IP address:192.168.1.100,Gateway IP:192.168.1.1,Subnet mask:255.255.255.0.

Note: After performing each of the above commands the ATA will reboot. You should wait until your telephone rings once to indicate that the reboot process has been completed.

Notice:DHCP is a default setting of ATA Series.

3.2.2 Configuring Network Parameters from Web Browser

Open your web browser and enter the IP Address that has been assigned to the ATA (if necessary use the "Query IP Address" command in the above section). Log-in page will be displayed. The default password is 1234.

Settings					
Network Settings					
iptype	dhcp	ppp id	pppid	ppp password	*****
local ip	10.167.17.240	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-0a-43-4e
Protocol Settings					
protocol	h323	service addr	10.167.16.8	service port	1719
account	test018	phone number	40018	pin	*****
Audio Settings					
audio type	g729	g7231 highrate	<input checked="" type="checkbox"/>	ring type	pcmring
VAD	<input type="checkbox"/>	AGC	<input checked="" type="checkbox"/>	AEC	<input checked="" type="checkbox"/>
Other Settings					
access code	****	use digitmap	<input type="checkbox"/>	sntp ip	216.53.3.44
Save Settings		Update Firmware		Update Digitmap	
				Restore Defaults	

➤ Network Settings

Depending on the requirement of your ISP or Network you can configure the ATA with a Static IP, DHCP, or PPPoE:

Network Settings					
iptype	dhcp	ppp id		ppp password	
local ip	10.167.17.240	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-0a-43-4e

Static IP: If your ISP / Network requires the use of a Static IP then you will be required to complete all of the parameters listed below:

iptype	static	ppp id		ppp password	
local ip	10.167.17.235	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-0a-43-4e

Callouts:

- Fill in IP (points to local ip field)
- Fill in subnet mask (points to subnet mask field)
- Fill in default gateway ip (points to gateway ip field)
- Fill in DNS (points to DNS field)
- Fill in DNS2 (points to DNS2 field)

DHCP: If your router (or other network device) is configured to allocate an IP address to the ATA

automatically then you can simply set the ATA up for DHCP operation and no other network parameters need to be completed.

iptype	dhcp	ppp id		ppp password	
local ip	10.167.17.235	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-0a-43-4e

PPPoE: If your ADSL modem (or other network device) does not allow you to configure PPPoE then you may need to configure this in the ATA. You will need to enter your PPPoE Username (ID) and Password as follows:

iptype	pppoe	ppp id	pppoeid	ppp password	*****
local ip	10.167.17.235	subnet mask	255.255.254.0	gateway ip	10.167.16.1
DNS	10.167.16.1	DNS2	202.96.199.133	mac	00-09-45-60-60-60

Fill in PPPoE id
Fill in PPPoE psssword

mac	00-09-45-0a-43-4e
-----	-------------------

“mac” :display the ATA’s unique mac address

Instruction:if you can’t choose corresponding net link,please consult to network administrators or ISP,and you may know which method is your network using,and then ,make the right settings

➤ Protocol Settings

Protocol Settings					
protocol	h323	service addr	10.167.16.8	service port	1719
account	test018	phone number	40018	pin	*****

Select protocol: sip or h323
DNS or IP of the servicecarrier’s soft-switch
Service port: H323:1719(default)
Sip:5060(default)

User name with service provider
Phone number
Pin

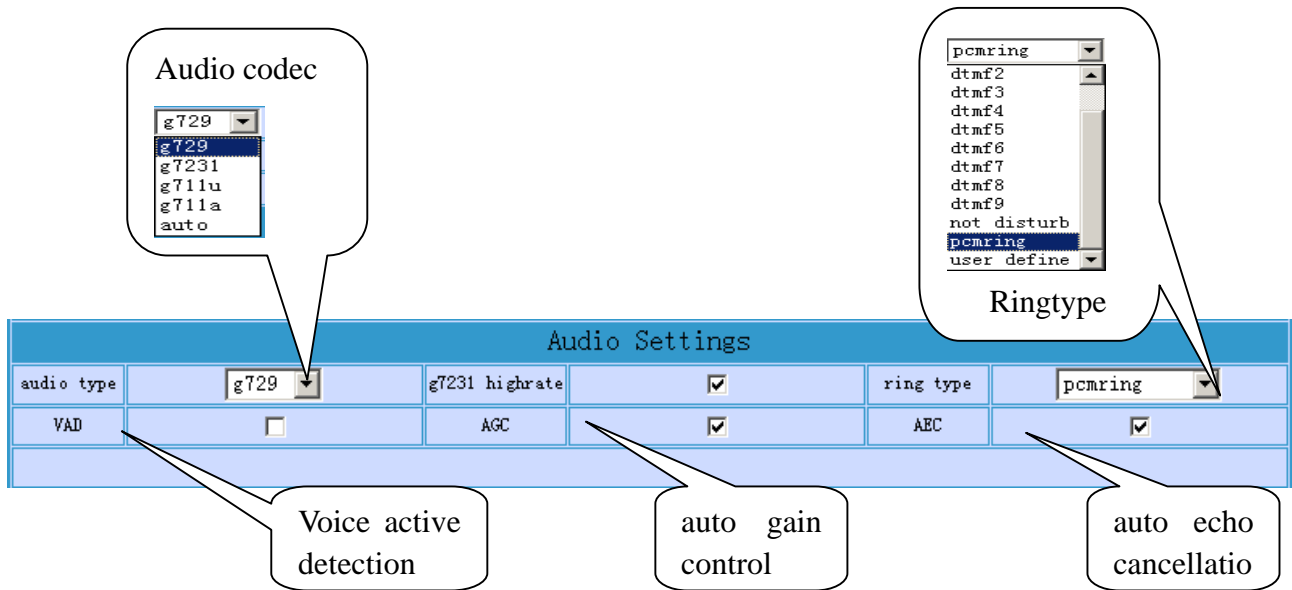
Instruction: Depending on your service provider the ATA may display “gk zone” instead of “service address”.

Protocol Settings					
protocol	h323	gk zone	zone0	service port	1719
account	test018	phone number	4001	pin	*****

Notice: If login failed, contact your service carrier to adjust parameters. Do not ajust default value in most

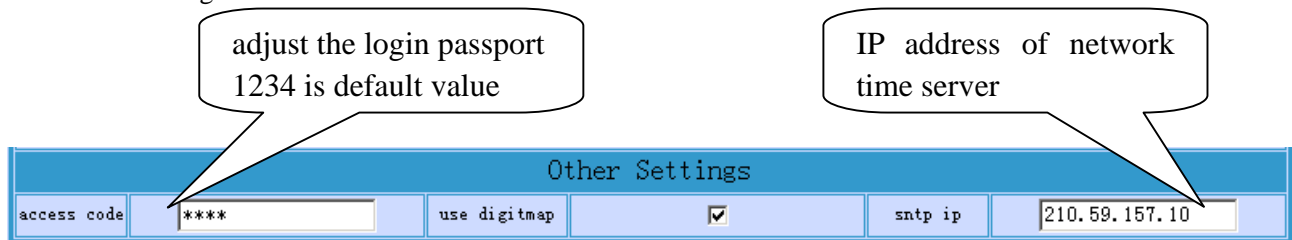
cases.

➤ Audio Settings



Notice: All above audio parameters are default settings. Contact your operator to adjust the corresponding parameters if any problems. Please do not adjust these without the advice of your service provider.

➤ Other Settings



Use Digitmap: Please leave this function turned on. The Digit map enables the ATA to recognize dialing sequences from around the world. If the user dials a recognized dialing sequence then the ATA initiates the call without the user having to press the # key after dialing.

Notice: Enter #358# to restore factory(default value) if forget ATA login password. Password will restore to the default value, 1234.

➤ Upgrade

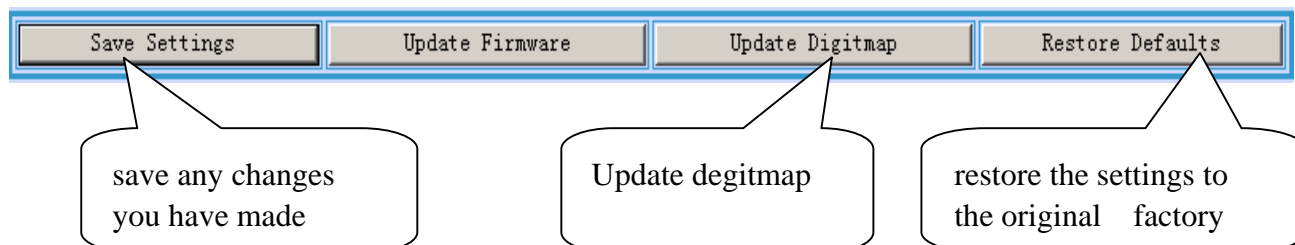
Click "Update Firmware" of the right-bottom of setting page.



ATA would automatically reboot after upgrading, then please press keys on the phone as #358# (#DLT#) to restore default settings and reboot again!

Note: If you have been instructed to use the “Upgrade Tool” to perform the upgrade then you will need to enable “Remote Access Permission”. This is done from your telephone handset by dialing #767#. Please remember that after you have completed the upgrade then you should restore the ATA’s default settings by dialing #358# on your phone handset and then wait for the ATA to reboot.

➤ Other buttons



4. Functions

- Making and Receiving calls
- Use Digitmap
- Call Forwarding

4.1 Making and Receiving calls

4.1.1 Making outgoing calls

A. Calling VoIP

Every VoIP Terminal will be assigned a VoIP number. Users can directly call each other’s number.

Example: A user with the number 6667777 want to call another user with the number 7778888.

User 6667777 simply pick up the phone handset, waits for dial tone and dial 7778888 followed by #

B. Calling a regular phone

a) Calling a regular phone under PSTN

Notice: Before this function can be realized, please plug the phone line into the ATA LINE port (FXO). And now the phone is a VoIP phone. (Only for ATA220, ATA210)

Pick up the handset or press the “handfree” key, then press the key “*” to change into the PSTN model. When you hear the dial tone, key in the PSTN phone number, after finishing calls, put down the handset, it automatically change to the VoIP model.

Under this situation, functions are carried out through ATA’s LINE port (FXO).

b) Calling regular phone under VoIP

Notice: It is applicable to all ATA users

Every ATA can call any land or mobile phone anywhere in the world. Please dial with the service carrier’s dialing rule. Press “#” after you dial the phone number.

Example 1: If a U.S service carrier’s dialing rule: To call a U.S or Canada number, please first dial 1, then the telephone number.

ATA user calling an U.S/Canada regular number 213-666-8888.

Pick up the handset, when you hear the dial tone key in 12136668888 followed by #.

Example 2: If a U.S service carrier’s dialing rule: To call other countries’ regular numbers, please first dial 011, then the country code (no ‘0’ as prefix), and dial the telephone at last.

ATA user calling a China regular number 0755-88889999.

Pick up the handset, when you hear the dial tone key in 0118675588889999 followed by #

Example 3: If a China service carrier's dialing rule: To call other countries' regular numbers, please dial the district code, and dial the telephone at last.

ATA user calling a China regular number 0755-88889999.

Pick up the handset, when you hear the dial tone key in 075588889999 followed by #. Under this situation, functions are carried out through ATA's LAN port and PHONE port (FXS).

4.1.2 Receiving

A. Receiving VoIP

When there is a call from other VoIP, pick up handset or press "handfree" key.

B. Receiving PSTN

a) Notice: **the function is only for ATA220, ATA210 and please plugs the phone line provided by telecom to the ATA LINE port (FXO)**

Under this situation, when calls from the PSTN phone, the phone then automatically changes to the PSTN model, pick up the handset and the call can be successfully going on. Functions are carried out through ATA's LINE port (FXO).

b) Notice: **it is only for the users except from a)**

This is an optional service. Only areas that are provided access numbers allow calls from a regular phone to ATA. Please refer to 'Access Number List' on the Carrier Service page to see if this service is available in your area.

4.2 Use digitmap

After you choose "use digitmap" through the web, when you call the phone numbers all over the world, after dial the number, ATA can automatically dial out without pressing "#", just as under PSTN model. The rule will be defined by service carrier.

4.3 Call Forwarding

Every ATA has call forwarding feature, when the user is not online, the incoming call can be forwarded to a preset telephone number.

Settings:

Enter my account page on service website to set the forwarded number. The number must accord with service carrier's dialing rule.

User Information

User ID	lyx77
IP Phone Number	7777777
Balance(US\$)	222.00
Status	Normal
Payment Option	Prepay

Company	<input type="text" value="234"/>
Contact Telephone Number	<input type="text" value="132132132"/>
Email	<input type="text" value="65465@ncuid.com"/>
Call forwarding number	<input type="text" value="16664747"/>

Please input the forwarding number

Please type in the target number, which will be forwarded to.

Notice: Call forwarding target number must be a PSTN number, with more than 7 digits.

Example 1: If a U.S service carrier's dialing rule: To forward to a U.S or Canada number, please first dial 1, then the telephone number.

ATA user wants to make a call forward to 213-666-8888, please fill in 12136668888.

Example 2: If a U.S service carrier's dialing rule: To forward to other countries' regular numbers, please first dial 011, then the country code (no '0' as prefix), and dial the telephone at last.

ATA user wants to make a call forward to 0755-88889999, please fill in 0118675588889999.

Example 3: If a China service carrier's dialing rule: To call other countries' regular numbers, please dial the district code, and dial the telephone at last.

ATA user want to make a call forward to 0755-88889999. ATA user can fill in 075588889999.

5. Technical Parameter

5.1 The electronic specifications

- Voltage: 12V DC, 500mA
- Power adapter: AD/DC input 100~120V (USA, Japan etc.) or 220~240V (China, Europe etc.) or 100~240V, 47-63Hz
- Network interface: IEEE 802.3 10 Base-T
- EMC: FCC Part15 CLASS B

5.2 Working/storing environment

- Operational temperature: 0 to 50° C (32° to 122° F)
- Storage temperature: -30° to 65° C (-22° to 149° F)

- Humidity: 10% to 90% no dew

5.3 Dimensions

- 166.4x 119x 31.6mm (L x W x H)

6. Frequent Problems and Solutions

Problems	Probably Causes	Solutions
Unacceptable voice quality under VoIP	Bandwidth < 30Kbps	Using in network environment as stable and qualified as you can.
	Unstable network quality: Delay>500ms or jitter>100ms or package loss>10%	
Login server failed (Service LED off)	Login failed by firewall	Check with the service center of service carrier.
	Network provided by ISP and the ISP restricts login	
	Incorrect account information or phone number	Using initial account to reset account number, pin and phone number. If the pin had been changed, asking the service carrier.
	Incorrect server address	If server address had been changed, asking the service carrier.
Failed to receive and dial the PSTN phone through the phone line provided by the Telecom service carrier	Phone line provided by the Telecom service carrier is not be plugged to the ATA LINE port (FXO)	Plug the phone line to the ATA LINE port (FXO)
	Incorrect dialing method	Please dial the “*”key before call, then you can choose the phone line as the dial-out line
Login succeeded (service led on), can't use phone: after picking up handset you cannot hear dial tone, or press key without sound	Some wrong with ATA momentarily	Press “#778#” (#RST#) to restore ATA, then reuse

7. Appendix

7.1 Features

- Basic Port—— One or two RJ45 ports compatible with IEEE 802.3 10 Base-T, one FXS port, one FXO port (ATA220, ATA210)
- AC/DC adapter— input 100~120V (USA, Japan etc.) or 220~240V (China, Europe etc.) or 100~240V, 47-63Hz
- Log-in to specific soft-switch platform
- Automatic searching for soft-switch platform
- Supports DHCP: Automatically obtain local IP, subnet mask, router IP
- Supports PPPoE

- Voice active detection
- Comfortable noise generation
- Echo cancellation
- Dynamic buffer management—minimize effect to voice quality caused by audio delay jitter
- Supports NAT
- Supports H.323/SIP
- Supports Remote Upgrade
- Supports Call Forwarding
- Lightningproof

7.2 Standards and agreements

- IEEE 802.3 10 Base-T
- G.711A, G.711 μ , G.723.1 5.3K/6.3 Kbps and G.729 audio codec
- H.323 v2 and SIP
- TCP/IP: Internet Transport and Control Protocol
- RTP: Real-time Transport Protocol
- RTCP: Real-time Control Protocol
- VAD/CNG Voice active detection/comfortable noise generation
- G.165 Echo cancellation
- DTMF Tone Generate and Detection
- DHCP: Dynamic Host Configuration Protocol
- PPPoE: Point to Point Protocol of Ethernet
- DNS: Domain Name Server
- FTP: File Transfer protocol
- HTTP: Hyper Text Transfer protocol

7.3 Recommend usage net condition

- Delay: Less than 400ms
- Jitter: Less than 100ms
- Package loss: Less than 10%
- Bandwidth: More than 30Kbps

7.4 Commands For Setting Network Parameters

Query IP Address: #*047# or #*0IP#

Set IP address: #73847# xxx*xxx*xxx*xxx# or #SETIP “#xxx.xxx.xxx.xxx#”

Enable DHCP: #3427# or #DHCP#

Disable DHCP: ##3427# or ##DHCP#

Reboot: #778# or #RST#

Restore default settings: #358# or #DLT#

Using H.323: #4323# or #H323#

Using SIP: #747# or #SIP#

Using adjusting IP #3228# or #FACT#.

Safety Warning: Please do not place this product near open flame or high temperature. Avoid heavy

impact, and do not leave the product in damp or highly humid conditions!

Current user manual is made based on the functions of present products, if any content change has made, no further notice.