

KTA2110(O) INSTALL GUIDE

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1 Check Items in Box

- KTA2110(O)
- Rj11 cable
- User manual
- One power adapter
- Ethernet (RJ45) cable(Pass through cable)

2 Before Installation

Please check to be sure that you have all of the following components:

- an AC power socket
- Broadband internet access that can reach the VoIP service provider's platform
- PC with network card
- Network connection to the VoIP service provider's platform must have:

Network delay less than 400ms

Jitter less than 100ms

Packet loss less than 10%

Bandwidth more than 30Kbps

3 Picture and connection



Lights:

Power: This light on after the power connected.

FXO: When device is in PSTN mode, this light and Phone light will blink.

Phone: Once the device has reached 'ready for call' status, this light will be ON. When device is in PSTN mode, this light and PSTN light will blink.

LAN: Local network indicator light, it will blink while data passes through this port.

WAN: Internet network indicator light, it will blink while data passes through this port.



POWER:

Connect to power adapter

FXO:

Connect with telecom service provider's wall jack

Phone:

Connect with your phone or FAX

LAN:

Connect to local network e.g. PC.

Default work type: Router.

WAN:

Connect to Internet, may need special RJ45 cable; please ask your network administrator or ISP.

4 Installation

- Power off your network device e.g. ADSL Modem, Cable Modem and PC
- Connect cables as shown in chapter 3, suggestion: do not use KTA2110(O) as the main router of your network
- Power on your KTA2110(O), then power on your network device and PC
- Change your PC's IP to DHCP (server assigned). (Please ask your network administrator how to set your PC)

5 Commands for Setting Parameters

You may configure several aspects of your terminal without the use of a computer simply by using the telephone connected to the Phone (FXS) port. Please pick up handset before you input these commands. If the command is successful you will hear a special sound.

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

Action	IVR Menu Choice	Parameter(s)	Notes:
Reboot	#195#		The system will reboot automatically. System will automatically Reboot. WARNING: ALL 'User-Changeable' NONDEFAULT SETTINGS WILL BE LOST! This will include network and service provider data.
Factory Reset	#198#		IVR will announce the current IP address of the TA
Check LAN Port IP Address	#120#		IVR will announce if DHCP is enabled or disabled.
Check WAN Port IP Type	#121#		IVR will announce current in use VoIP number
Check the Phone Number	#122#		IVR will announce the current network mask of the TA.
Check WAN port Network Mask	#123#		IVR will announce the current gateway IP address of the TA.
Check WAN port Gateway IP Address	#124#		IVR will announce the current setting in the Primary DNS field.
Check WAN port Primary DNS Server Setting	#125#		
Check WAN port IP	#126#		IVR will announce the version of the firmware running on the TA.
Check Firmware Version	#128#		
! Note: Pick up the handset and press #190# then hang up before you do following settings.			
Set DHCP client	#111#		The system will change to DHCP Client type
Set Static IP Address	#112xxx*xxx*xx x*xxx#	Enter IP address using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	DHCP will be disabled and system will change to the Static IP type.
Set Network Mask	#113xxx*xxx*xx x*xxx#	Enter value using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	Must set Static IP first.
Set Gateway IP Address	#114xxx*xxx*xx x*xxx#	Enter IP address using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	Must set Static IP first.

Set Primary DNS Server	#115xxx*xxx*xx x*xxx#	Enter IP address using numbers on the telephone key pad. Use the * (star) key when entering a decimal point. 1:G.711 u-Law, 2: G.711 a-Law, 3: G.723.1, 4: G.729a, 5: G.726 16K, 6: G.726 24K, 7: G.726 32K, 8: G.726 40K,	Must set Static IP first.
Set Codec	#130+[1-8]#		You can set the codec you want to the first priority.
Set Handset Gain	#131+[00~15]#	Handset Gain from 0~15	You can set the Handset gain to proper value, default is 6
Set Handset Volume	#132+[00~12]#	Handset Volume from 0~12	You can set the Handset volume to proper value, default is 10

6 Authentication

For admin user:

Account:root

Password:test

For normal user: (With this account you can not set some parameters, e.g. SIP domain)

Account:user

Password:test

Attention: if your password be changed when you get your device, please contact with the distributor of this device.

7 Use phone to set network parameters

Please see Chapter 5.

At first, please ask for your network administrator or ISP to know your IP type. The default network setting of this device is DHCP IP type, if your network can not accept DHCP access, please set it as follows:

- Press #190#
- If use static IP address: Dial
#112xxx*xxx*xxx*xxx#,
#113xxx*xxx*xxx*xxx#,
#114xxx*xxx*xxx*xxx#,
#115xxx*xxx*xxx*xxx#

To set WAN IP address, subnet mask gateway address and DNS server address.

- Power off the device and then power on it.

If need use PPPoE (e.g.xDSL), please see chapter 10.

8 Automatically get configuration

If your VoIP service provider has pre-set your device, it should automatically get configuration from the Internet after it is powered on. And then it will reboot automatically and is ready for use.

9 Ready for call

After your device be set as above steps, it should be in 'ready for call status'. Power, Phone light will be ON and WAN light will blink. When you pick up handset, you will hear a dial tone.

Please see chapter 10 and 11, if your device is not in 'ready for call' status.

10 Set though the web based programming page

After your PC getting correct IP, open an Internet Explorer browser on a PC that is connected to

http://192.168.123.1:9999 You will see the login screen. Please read chapter 6 to find the account and password.

10.1 Network Settings

Click and into the menu **Network→ WAN Settings** and **Network→ LAN Settings** to set the network parameters. Please ask your ISP or network administrator about it.

DHCP is the default network type; your terminal will get the required network parameters such as IP, subnet mask automatically. If your network uses static IP, you should set local IP, subnet mask, gateway IP, DNS and DNS2 first. If your network uses PPPoE, you should set PPP ID, PPP password first

10.2 SIP Settings

After you have the IP setting completed as above, you should set these parameters which are required to login SIP server: User Name, Register Name, Register Password, Domain Server, Proxy Server, SIP Port, RTP Port, DTMF setting.

10.3 Other settings

- Impedance settings

Go to web page: Others→ FXO & FXS Port to select your country. And the device will automatically change the impedance settings.

Important: If the one you selected doesn't match your phone, your phone may not operate correctly.

- Caller ID display setting

You need to set the Caller ID type for the type your phone can receive, Please ask your phone provider about how to set it.

Please set it on the WEB page: Phone Setting→ Caller ID Setting.

- Flash time setting

Please set it on the WEB page: Phone Setting→ Flash Time Settings

Important: If the one you selected doesn't match your phone, your phone may not operate Flash and hang up correctly.

10.4 Save Settings and Reboot

Simply click the **Save** button in **Save Changes** and exit the browser after the Configure OK screen appears, and then click **Reboot** button in **Reboot**

11 Web based programming description

1 st layer	2 nd layer	Description
Phone Setting	Call Forward	Set all forward, busy forward and no answer forward here. No answer forward is based on the ring time. You can set duration of a ring tone in: Others → Tones Setting
	SNTP Settings	Use SNTP server to set your time, set SNTP sever and time zone
	Volume Settings	Handset, speaker and ringer volume setting
	DND Settings	VoIP do not disturb setting, if the end time is earlier than the begin time, it means the DO NOT DISTURB duration will from beginning time to next day's end time
	Auto Answer	If a call from PSTN or VoIP haven't been answered more than Auto Answer Counter, it will get into a special mode to let caller input PIN CODE. After identification, caller can make a second dial from KTA2110(O). If the call from PSTN, then caller can make a call from KTA2110(O) to VoIP. If the call from VoIP, then the caller can make a call from KTA2110(O) to PSTN. NOTE: Call Forward is to be operated prior to Auto Answer
	Caller ID	Set the caller ID pass through mode
	Dial Plan Settings	See reference guide chapter 1.5
	Flash Time Settings	
	Call Waiting Settings	Attention: Call waiting function can not work when you use busy forward function
	T.38(FAX) Settings	If T.38 mode be off, the device will use pass through mode to send FAX
Hotline Settings		

	Alarm Settings	
Network	Status	Check the status of your network connection
	WAN Settings	Select router/ bridge mode and set WAN network parameters
	LAN Settings	Set LAN network parameters if use router mode
	DDNS Settings	Set a DDNS server parameter, please ask your network administrator or your VoIP service provider
	VLAN Settings	Please let your network administrator set it
SIP Settings	Service Domain	Set VoIP service account information and server information. If it request to define a special port on the server, please set it as the following example: xxx.xxxxxx.xxx(server address):xxxxx(port number)
	Port Settings	Set the local SIP port and RTP port of your device
	Codec Settings	Please ask your VoIP service provider
	Codec ID Settings	Please ask your VoIP service provider
	DTMF Settings	Please ask your VoIP service provider Attention: If the setting is not correct, you may not dial a extension number
	Other Settings	Set Call Hold type, SIP and RTP Qos parameters and SIP expire time
NAT	STUN Settings	Please ask your VoIP service provider
Others	Auto Config	Set auto config server and mode
	FXO & FXS Port	Set FXS and FXO's impedance
	Tones Settings	Set ICMP feed back signal on/off, Private call on/off, Flash signal on/off, encrypt type, PPPoE retry period and log parameter
	Advanced Settings	
System Auth.		
Save Change		
Update	New Firmware	Set auto new version check and upgrade parameters
	Auto Update	Attention: You will lose all the settings in the device especially including account and server information
	Default Settings	Set auto config server and mode
Reboot		

12 FAQ

Problem	Possible Cause	Solution
Unacceptable voice quality under VoIP	Your internet connection bandwidth is less than 30Kbps	Please use your phone in a good quality network.
	Unstable network connection: Network delay > 400ms or network trembling > 100ms or network packet loss > 10%	

Problem	Possible Cause	Solution
After powered, the LED of WAN port is neither on nor blinking	The network is blocked or not connected	Please contact network service provider or network administrator to ensure the network and ports are available
After powered, the LED of PHONE port is neither on nor blinking, while LED of Phone port is either on or blinking	You haven't set any account/service information	Please contact network service provider or network administrator to ensure the network and ports are available, and the data is not modified or filtered. If there are problems left, please contact your service provider for technical support.
	The connection to the server's SIP port is modified or filtered	
	Your network has a proxy server which is blocking the terminal's connection to the internet.	
	The data to the terminal's SIP port is modified or filtered	
	Your terminal is configured with incorrect account details.	Please correctly enter account and password. If there are problems left, please contact your service provider for technical support.
	Your terminal is configured with an incorrect server address.	Please contact your service provider for technical support
Login succeeded (service led on), can't use phone: after picking up handset you cannot hear dial tone, or press key without sound	Something is wrong with terminal or its settings. Maybe the impedance of terminal is not match your phone	Please check the phone's impedance, if not match with the terminal, please use another one which can match terminal. Or, set your impedance, please refer to 3.2 Impedance settings

13 Performance and Features

13.1 The Electronic Specifications

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

13.2 Operating/storing Environment

- Operating temperature: 0 to 50° C
- Storing temperature: -10° to 65° C
- Humidity: 10% to 90% no dew

13.3 Dimensions

- 108 x 78 x 26mm (L x W x H)

13.4 Features

- Basic Port—two RJ45 ports compatible with IEEE 802.3 10/100 Base-T, can be use as ROUTER/BRIDGE, one FXS port, one PSTN port.
- Power adapter— AC 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, gateway IP
- Supports PPPoE
- Automatic Gain Control
- Voice Active Detection
- Comfortable Noise Generation
- Echo Cancellation

- Dynamic Buffer Management—minimize effect to voice quality caused by audio delay jitter
- Support NAT Traversal
- Supports SIP
- Supports Remote Upgrade
- Lightning proof
- Support Tos
- Support G.711 fax
- Support caller ID transfer by FSK type

13.5 Standards and Agreements

- IEEE 802.3 10/100 Base-T
- G.711A, G.711 μ , G.723.1 5.3K/6.3 Kbps, G.726 and G.729
- Impedance: Can be Selected
- SIP
- TCP/IP: Internet Transport and Control Protocol
- RTP: Real-time Transport Protocol
- RTCP: Real-time Control Protocol
- AGC: Automatic Gain Control
- VAD/CNG Voice active detection/comfortable noise generation
- G.165 Echo cancellation
- DTMF Tone Generate and Detection: Inbound
- 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
- TFTP
- DDNS
- FSK