Akuvox
Open A Smart World

AKUVOX X916
DOOR PHONE
Administrator Guide

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About This Manual

Thank you for choosing Akuvox X916 series door phone. This manual is intended for the administrators who need to properly configure the door phone. This manual applies to 916.30.1.413 version, and it provides all the configurations for the functions and features of X916 series door phone. Please visit Akuvox forum or consult technical support for any new information or latest firmware.

Introduction of Icons and Symbols

⚠ **Warning:**

- **Always abide by this information in order to prevent the persons from injury.**

⚠ **Caution**:

- **Always abide by this information in order to prevent the damages to the device.**

⚠ **Note:**

- **Informative information and advice from the efficient use of the device.**

✓ **Tip:**

- **Useful information for the quick and efficient use of the device.**

Related Documentation

You are advised to refer to the related documents for more technical information via the link below:

https://knowledge.akuvox.com

Table of Contents

1. Product Overview

X916 series is an Android-based IP video door phone with a large size LCD touch screen. It incorporates audio and video communications, access control and video surveillance.

Its finely-tuned Android OS allows for feature customization to better suit the habit of usage of local people. X916 is with one star light camera and one auxiliary camera. In addition to the multiple ports such as RS485, POE ports, Wiegand ports, the door phone is also designed to include such ports and interfaces as 2 USB(s), HDMI, TF card, SIM, RJ45 ports etc., in order to maximize its connections with external digital systems such as elevator controller,fire alarm detector, LTE wireless connection, as well as data storage. With these integrated features, X916 is built to create a holistic control of building entrance and its surroundings and giving you a greater sense of security and smart living experience.

X916 is applicable to luxurious apartment buildings for intercom cloud application and office buildings and their complexes for visitor management system.

2. Change Log

The change log will be updated here along with the changes in the new software version.

3. Model Specification

	X916S
Model **&** **Feature**	
Display	13 Inch
Touch Screen	√
Button	X
Housing Material	316 grade stainless steel and Aluminum
Relay In	4
Relay Out	4
Alarm In	X
RS485	√
PoE	POE+
Resolution	1920x1080
Brightness	800nits
RAM	2G
ROM	16G
Card Reader	13.56MHZ & 125KHZ
Wi-Fi	X
Bluetooth	√
IP Rating	IP65
IK Rating	IK10
Temperature detection	Optional
Face recognition	√
LTE	√
USB	√
External SD card	√

	X916
Wall Mounting	√
Flush Mounting	√
Desk Mounting	X
Wall Mounting Dimension	383.9x339.15x48.95mm
Flush Mounting Dimension	383.9x339.15x63.7mm
POE+ Standby Power Consumption	10.3W
POE+ Full Load Power Consumption	24W
Power Adapter Standby Power Consumption	11.9W
Power Adapter Full Load Power Consumption	30W

4. Introduction to Configuration Menu

- **Status:** this section gives you basic information such as product information, Network Information, and account information etc.

- **Intercom**: this section covers Intercom call, LED& LCD setting, Relay, input control, Live stream, RTSP, ONVIF, motion detection, card setting, face recognition setting, tab&button display, camera, private PIN code, RS485 connection etc.

- **Account**: this section concerns SIP account, SIP server, proxy server, transport protocol type, audio&video codec, DTMF, session timer etc.,

- **Network**: this section mainly deals with DHCP&Static IP setting, RTP port setting, and device deployment etc.,

- **Phone**: this section includes Time&language, call feature, dial management, data import&export, door log, web relay.

- **Phone book**: this section involves Call log, phone book management.

- **Upgrade**: this section covers Firmware upgrade, device reset&reboot, configuration file auto-provisioning, PCAP.

- **Security**: this section is for Password modification

- **Mode selection:**

1. **Discovery mode**: It is a plug and play configuration mode. Akuvox devices will configure themselves automatically when users power on the devices and connect them to network. It is super time-saving mode, and it will greatly bring users convenience by reducing manual operations. This mode requires no prior configurations previously by the administrator.

2. **Cloud mode:** Akuvox SmartPlus is an all-in-one management system. Akuvox Cloud is the mobile service that allows audio, video, remote access control between smart phones and Akuvox intercoms. All configurations in the device will be issued automatically from cloud. If

users decide to use Akuvox SmartPlus, please contact Akuvox technical support, and they will help you configure the related settings before using.

3. **SDMC mode**: SDMC (**SIP Device Management Controller**) is a simple and comprehensive software for building management. It provides a topography for a community while offering you a graphical configuration interface for the door access, intercom, monitoring, alarm and so on. It is a convenient tool for property manager to manage, operate and maintain the community.

● **Tool selection**

Akuvox has many configuration tools for you to set up devices more conveniently. Here we list some common tools, please contact your administrator to get the tool if you need them.

1. **SDMC**: SDMC is suitable for the management of Akuvox devices large communities, including access control, resident information, remote device control, etc.

2. **Akuvox Upgrade tool**: Upgrade Akuvox devices in batch on a LAN (**Local Area Network**)

3. **Akuvox PC Manager**: Distribute all configuration items in batch on a LAN.

4. **IP scanner**: it is used to search Akuvox device IP addresses on a LAN.

5. **FacePro**: Manage face data in batch for the door phone on a LAN.

5. Access the Device

X916 door phone system setting can be either accessed on the device directly or on the device web interface.

5.1. Access the Device Setting on the device

Before configuring Akuvox X916, please make sure the device is installed correctly and connect a normal network. Using Akuvox IP scanner tool to search the device IP address in the same LAN. Then use the IP address to login in the web browser by user name and password **admin** and **admin**. Or setup some basic settings on device screen by pressing **9999 + Dial** key + **3888**(password) on **Dial** screen.
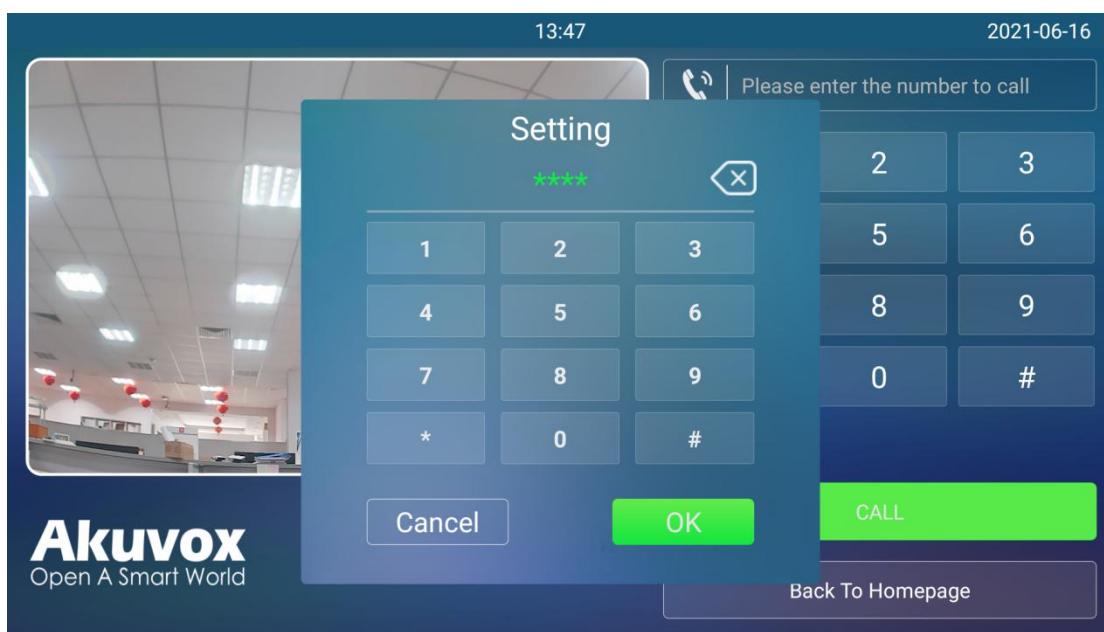
5.2. Access the Device Setting on the Web Interface

You can also enter the device IP address on the web browser in order to log in the device web interface where you can configure and adjust parameters,

etc. The Initial user name and password are **admin.**
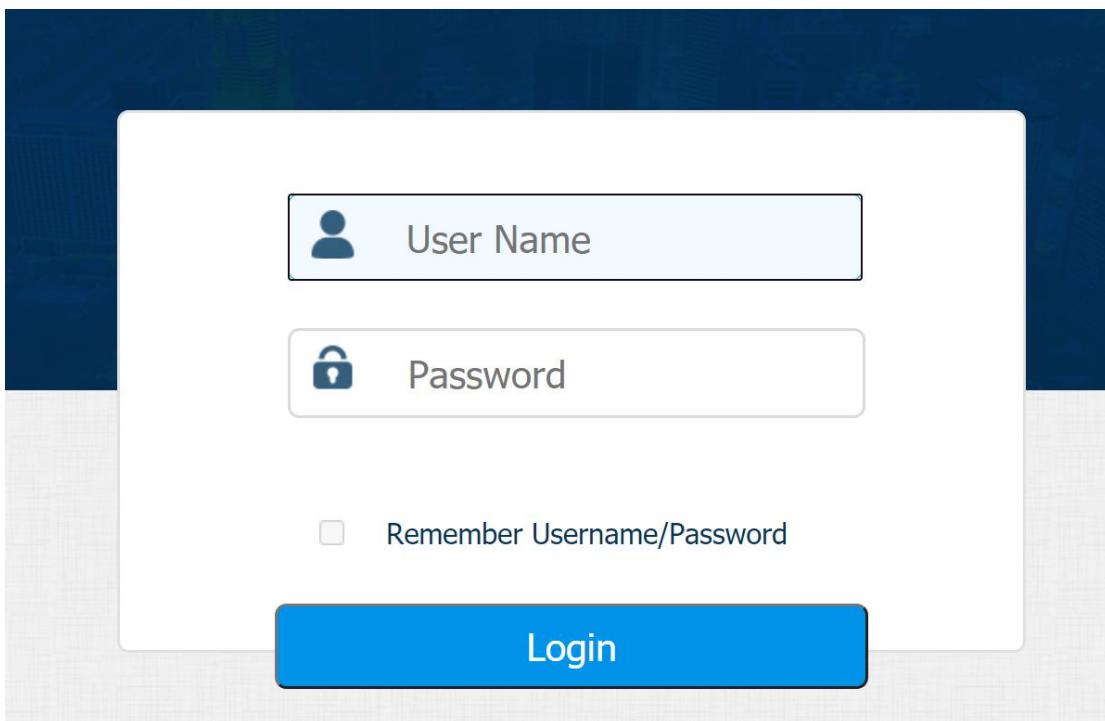
 ✓ **Tip:**

- You can also obtain the device IP address using the Akuvox IP scanner to log in the device web interface. Please refer to the URL below for the IP scanner application:
  http://wiki.akuvox.com/doku.php?id=tool:ip_scanner&s[]=ip&s[]= scanner

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 ⚠ **Note:**

- Google Chrome browser is strongly recommended.
- Please be case-sensitive to the user names and passwords entered.

6. Language and Time Setting

6.1. Language Setting

When you first set up the device, you might need to set the language to your needs, or you can do it later if needed. And the language can either be set up directly on the device or on the device web interface according to your preference.

6.1.1. Language Setting on the Device

Language setting can be configured on the device and on the device web interface that allows you to select or change the language for screen display to your preference. To configure the language display on the device **Setting > Language** interface.
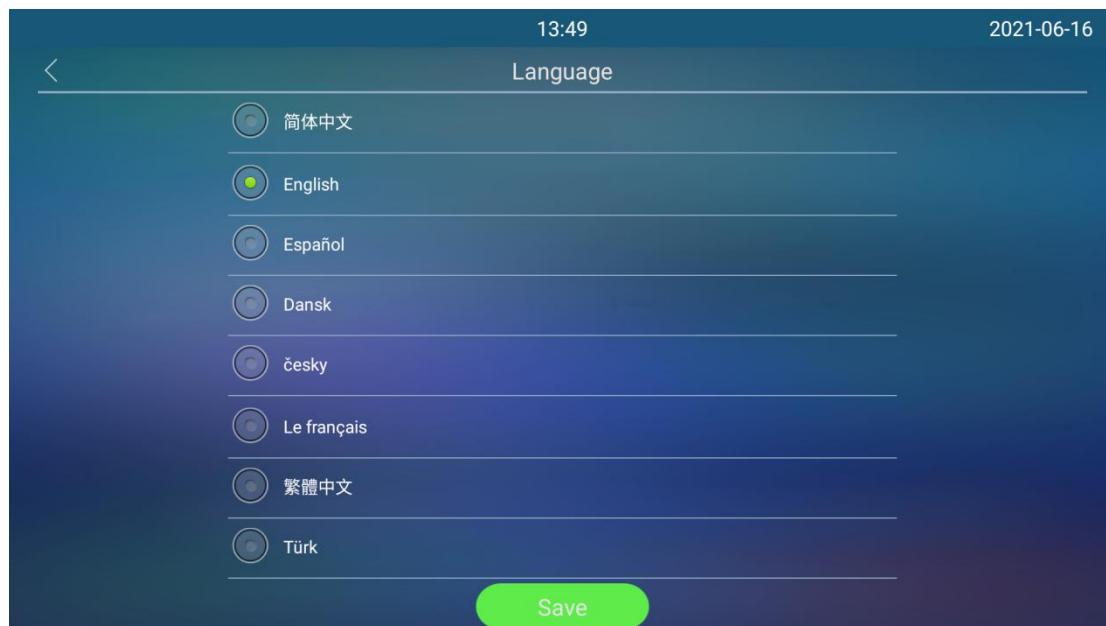
6.1.2. Language Setting on the Device Web Interface.

To configure the configuration on the web **Setting >Time/Lang > Web/LCD Language** interface.

Web Language

Type	English ▼

LCD Language

Type	English ▼
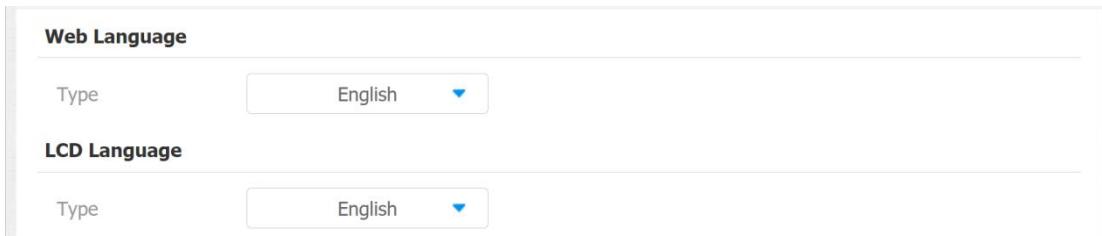
6.2. Time Setting

Time setting can be set up on the device and on the device web interface in terms of time zone, date, and time format etc.

6.2.1. Time Setting on the Device

To configure the language display on the device **Setting > Time** interface.
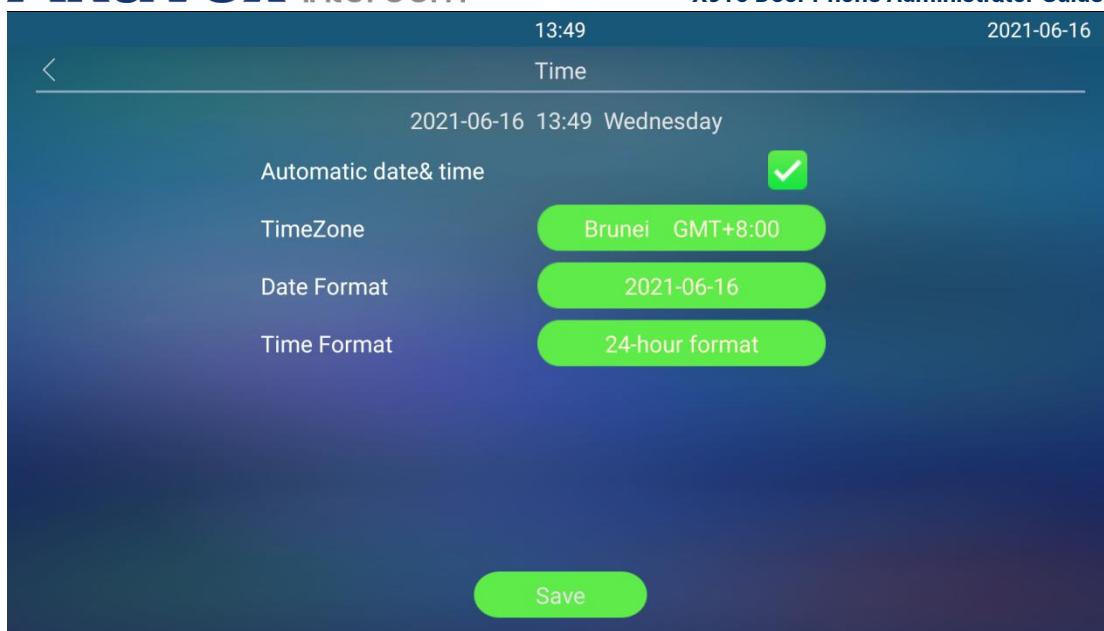
Parameter Set-up:

- **Automatic Date&Time**: Automatic Date is toggled on by default, which allows the date& time to be automatically set up and synchronized with the default time zone and the NTP server (**Network Time Protocol**). You can also set it up manually by toggling off the switch first then enter the time and date you want before pressing the **Save** tab for the validation.

- **Date**: click on **Date** to set the date.

- **Time**: click on **Time** to set the time.

- **Time Zone**: select the specific time zone depending on where the device is used and then press **Confirm** tab for the confirmation. The default time zone is **GMT GMT+0.00**.

- **Date Format**: select the date format as you like among three format options: "**M-D-Y**"; "**D-M-Y**"; "**Y-M-D**" and then press the **Confirm** tab for the confirmation.

- **Time Format**: you can either select 12 hour or 24-hour time format as you like, and then press the Confirm tab for the confirmation.

> **Note:**
>
> ● When the **Automatic Date&Time** toggle switch is toggled off then parameters related to NTP server will become not editable. And when the switch is toggled on, then time and date will be denied editing.

6.2.2. Time Setting on the Device Web Interface

Time setting on the web interface also allows you to set up the NTP server address that you obtained to automatically synchronize your time and date. And when your time zone is selected, the device will automatically notify the NTP server of its time zone so that the NTP server can synchronize the time zone setting in your device. To configure the configuration on the web **Setting >Time/Lang > Time** interface.

Time	
Automatic Date&Time ☑	Auto
TimeZone	GMT+8:00 Shanghai ▼
Date Format	06/15/2021 ▼
Time Format	24-hour format ▼
NTP Server	pool.ntp.org

Parameter Set-up:

● **NTP Server**: enter the NTP server you obtained in the **NTP server** field.

7. LED&LCD Setting

7.1. Infrared LED Setting

Infrared LED is mainly designed to reinforce the light for the facial recognition in the night or in the dark environment, you can configure the infrared LED in device and on the web interface.

7.1.1. Infrared LED Setting on the Device

To configure the language display on the device **Setting > LED**   interface.
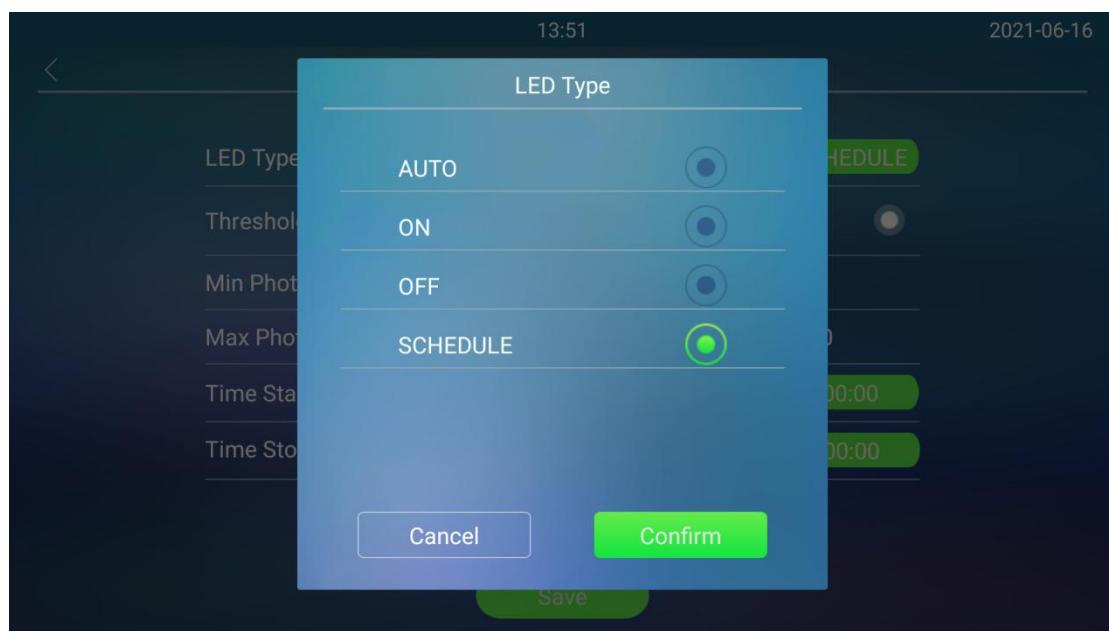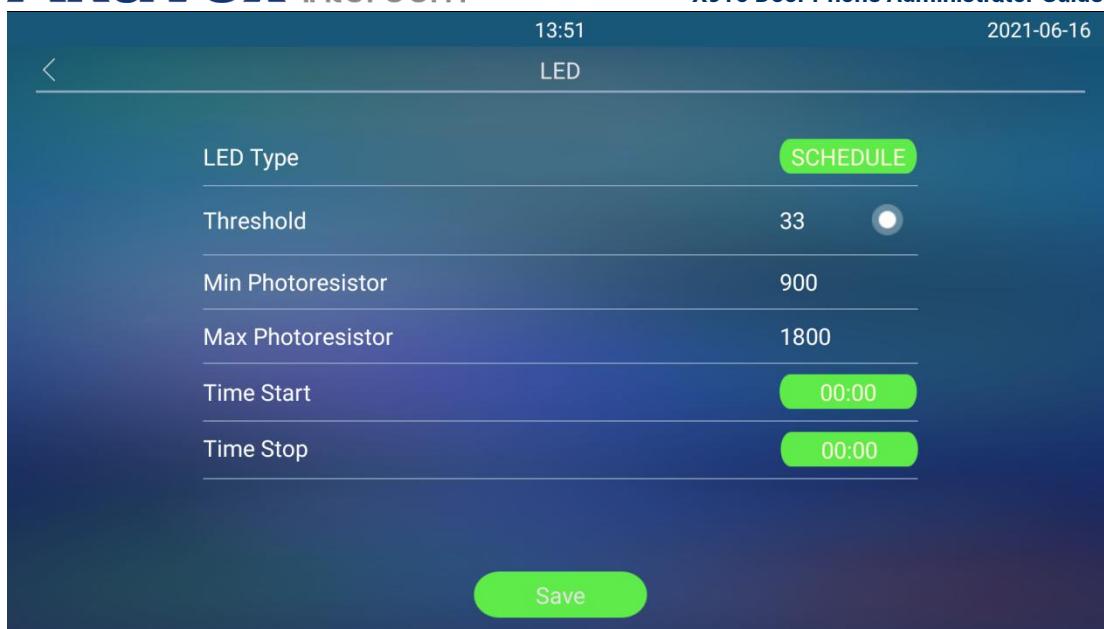
Parameter Set-up:

- **Auto**: select "**Auto**" if you want the Infrared LED light to be turned on automatically according to the setting.

- **Always ON**: select "**Always ON**" to enable the Infrared LED light to stay on permanently.

- **Always OFF**: select "**Always OFF**" to turn off the Infrared LED light. LED mode is set "**Always OFF**" by default.

- **Schedule:** select "**Specific Time**" to turn on the infrared LED according to the time schedule.

- **LED Type**: you can see the LED type "**Auto**" "**Always ON**" "**Always OFF**" "**Specific Time**" you selected.

- **Threshold**: refers to the current light intensity indicated by the photo-resistor value. The higher photo-resistor values correspond conversely to the lower light intensity and vice versa. The default photo-resistor value **(Threshold)** is "**33**", however you can tap the [icon] icon several times in order to obtain the actual photo-resistor value in a specific environment (the value fluctuation is about 5), and the value is what you based on to configure the minimum and maximum photo-resistor values.

- **Min/Max Photoresistor**：set the minimum and maximum photoresistor

value based on the current actual photo-resistor value detected to control the **ON-OFF** of the LED light. You can set the maximum photoresistor value for the IR LED to be turned on and the minimum value for it to be turned off. While the default Minimum and maximum photoresistor value is from "**0**" minimum to "**1000**" maximum respectively.

- **Start Time**: set the start time for the infrared LED to be turned on.

- **End Time**: set the end time for the infrared LED to be turned off.

> ⓘ **Note:**
>
> - **Start Time** and **End Time** will not be displayed unless you select **Specific Time** for your LED mode.

7.1.2. Infrared LED Setting on the Web Interface

You can also select the LED type on the device web interface if needed. To configure the configuration on the web **Intercom > Advance > LED** interface.

LED

LED Type   Always OFF ▼

> ⓘ **Note:**
>
> - Please refer to the infrared LED parameter setting on the device.

7.2. LED Setting on Card Reader Area

You can enable or disable the LED lighting on the card reader area as needed on the web interface. Meanwhile, If you do not want to have the LED light on

the card reader area to stay on, you can also set the timing for the exact time span during which the LED light can be disabled in order to reduce the electrical power consumption. To configure the configuration on the web **Intercom > LED Setting > LED Control** interface.

Parameter set-up:

- **Enabled**: Tick the check box if want to enable the card reader LED lighting and vice versa.

- **Start Time- End Time (H)**: enter the time span for the LED lighting to be valid, e.g., if the time span is set from **8-0 (Start time- End time)** it means LED light will stay on during the time span from **8:00** am to **12:00** pm during one day (24 hours).

7.3. LCD Screen Brightness Setting

If you want to brighten up the screen in order to see the screen at greater ease in an environment with higher light intensity, you need to set up the related parameters.

7.3.1. LCD Screen Brightness Setting on the Web Interface

on the web interface, you can set and adjust backlight brightness for the screen and screen saver. To configure the configuration on the web **Intercom > Advanced > LCD** interface.

Backlight Mode	Auto ▼	
Backlight (day)	60	(0~255)
Backlight (day) Stan...	10	(0~255)
Backlight (night)	10	(0~255)
Backlight (night) Sta...	3	(0~255)
Deep Sleep Enable	Enabled ▼	Deep Sleep Interval 30 min ▼

Parameter Set-up:

- **Mode**: click to select "**Manual**" or "**Auto**" mode for the backlight. Backlight will be adjusted automatically for the screen back light brightness when "**Auto**" is selected and vice versa.

- **Backlight (day)**: set the screen backlight brightness during the daytime with the value ranging from (**0-255**).

- **Backlight (day) Standby**: set the screen backlight brightness for the screen saver during the day time with the value ranging from (**0-255**).

- **Backlight (night)**: set the screen backlight brightness in the night with the value ranging from (**0-255**).

- **Backlight (night) Standby**: set the screen backlight brightness for the screen saver during the day time with the value ranging from (**0-255**).

- **Deep Sleep Enable**：whether the door phone enter deep sleep mode when idle.(deep sleep means the device screen will be dark)

- **Deep Sleep Interval**：the time from screensaver to enter deep sleep. The interval can be setup as **5Minutes, 10Minutes, 15Minutes, 20Minutes, 30Minutes.**

7.3.2. LCD Screen Brightness Setting on the Device

On the device, you can set and adjust the screen backlight brightness. To configure the brightness on the device **Setting > LCD Backlight** interface.
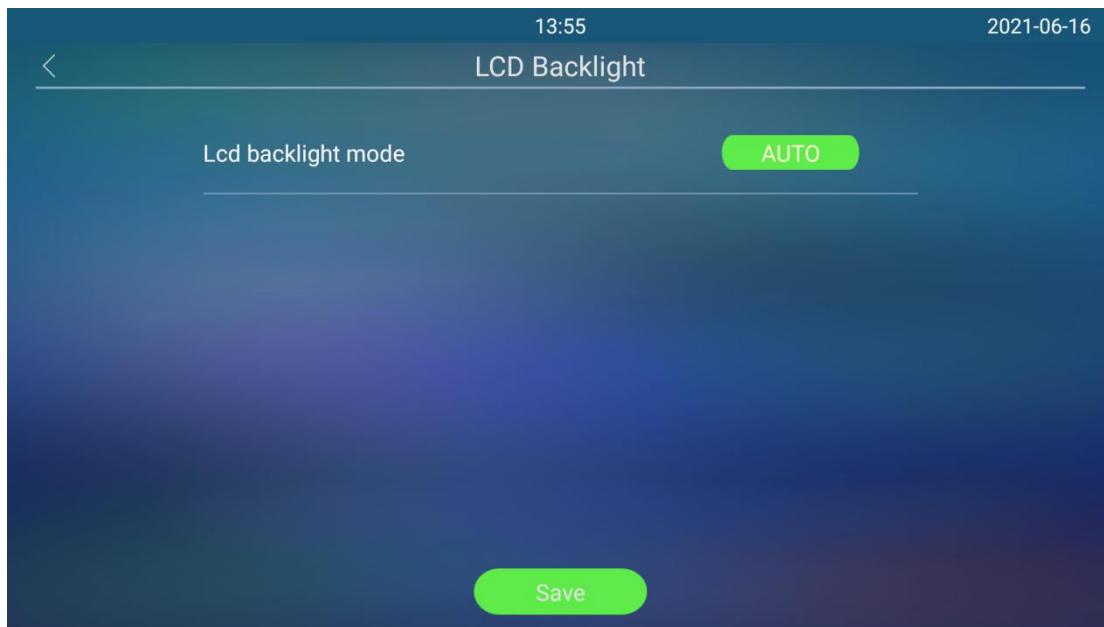
7.4. LED White Light Setting

White light LED is mainly used to reinforce the lighting for the greater visibility of the visitors when see their images from indoors in the dark environment. You can set the white light function properly on the device web interface. To configure the configuration on the Intercom **> Advanced > White Light** interface.

Parameter Set-up:

● **Mode**: select "**Auto**" or "**OFF**". If you select "**Auto**" then the white light will turn on for 10 seconds within three conditions - Staying Home Page; the photosensitive detection and the IR detection are triggered.

7.5. QR Code With Light Setting

White light LED is mainly used to reinforce the lighting for the QR code access in the dark environment. You can set the white light function properly on the device web interface. To configure the configuration on the Intercom **> Advanced > QR Code White Light** interface.
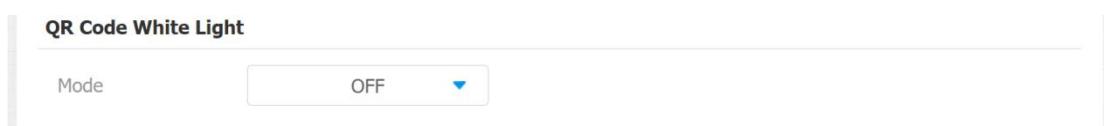
QR Code White Light

Mode   OFF

Parameter Set-up:

- **Mode**: select "**Auto**" or "**OFF**". If you select "**Auto**" then the white light will turn on for 10 seconds within two conditions - Staying Temp Key Page; the photosensitive detection is triggered.

8. Screen Display Configuration

X916 series door phone allows you to enjoy a variety of screen displays to enrich your visual and operational experience through the customized setting to your preference.

8.1. Screensaver Configuration

8.1.1. Configure Screensaver on the Device

Await screen is mainly a function for the screen protection. You can make the device to go into idle status for a predefined time span when there is no operation on the device, or no one is detected approaching. To configure the language display on the device **Basic Setting > Await** interface.
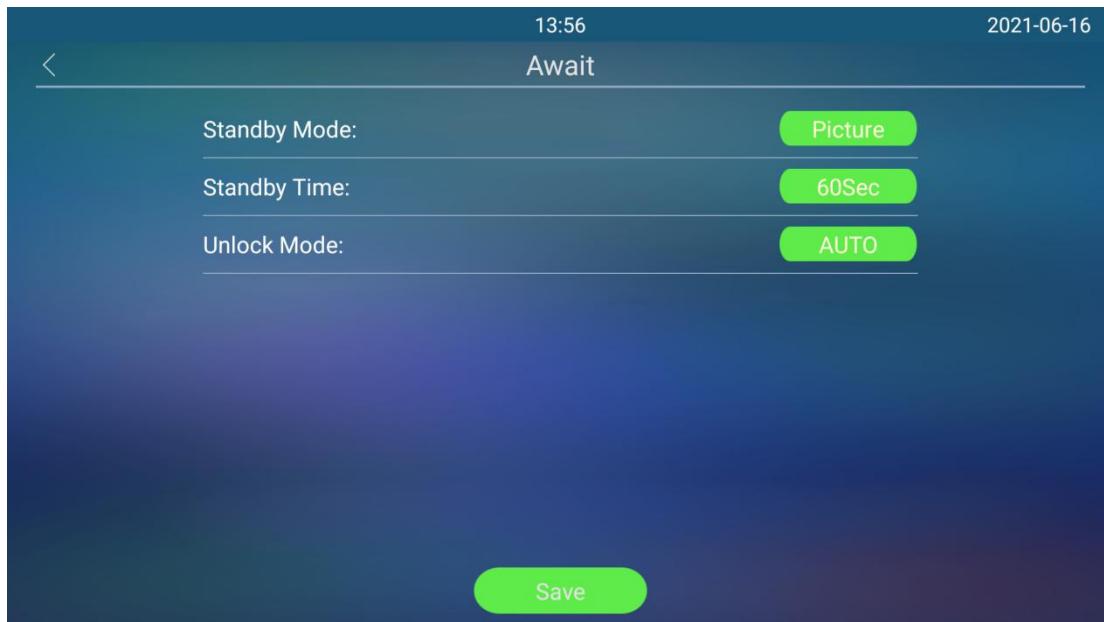
Parameter Set-up:

- **Standby Mode**: select among three options **"NO"**, **"Blank Screen"**, and **Picture**". **"NO"** is selected when you want the screen to stay on without

going in to screen saver mode; if "**Blank Screen**" is selected, the screen will go black. If "**Picture**" is selected, then the picture you uploaded will be shown as the screen saver.

● **Standby Time** set the screen saver start time from 30 seconds up to 180 seconds. Screen saver starts when the device detects no operation, or no one is approaching.

● **Unlock Mode**: select the screen wake-up mode. If you select "**Auto**" mode then the screen will be awakened when someone approaches without its being touched upon, and if "**Manual**" mode is selected, then you have to touch and wake up the screen.

> ⓘ **Note:**
>
> ● **Unlock Mode** cannot be changed from "**Auto**" to "**Manual**" when the **Lock mode** is set as "**Blank Screen**".

8.1.2. Configure Screensaver on the Web Interface

You can also conduct the await screen configuration on the web interface where you can set the screen saver duration as well as the timing for the screen to be turn off for both screen protection and power reduction. To configure the configuration on the web **Intercom > Advanced > StandBy** interface.

StandBy			
StandBy Mode	Image ▼	StandBy Time	60 ▼
Unlocked Mode	Auto ▼		

Parameter Set-up:

● **Standby Mode**: select among three options "**NONE**", "**Blank**", and "**Image**". "**NONE**" is selected when you want the screen to stay on without going in to screen saver mode; if "**Blank**" is selected, the screen will go black. If

"**Image**" is selected, then the picture you uploaded will be shown as the screen saver.

● **Standby Time (Sec)**: set the screen saver start time from 30 seconds up to 180 seconds. Screen saver starts when the device detects no operation, or no one is approaching.

● **Unlock Mode:** select the screen wake-up mode. If you select "**Auto**" mode then the screen will be awakened when someone approaches without its being touched upon, and if "Manual" mode is selected, then you have to touch and wake up the screen.

> ⓘ **Note:**
>
> ● **Unlock Mode** cannot be changed from **Auto** to **Manual** when the **Screensaver Mode** is set as **Blank Screen**.

8.1.3. Upload Screensaver

You can upload screen saver pictures separately or in batch to the device and to the device web interface for publicity purpose or for a greater visual experience. To configure the configuration on the web **Phone > Import/Export > Upload ScreenSaver Picture** interface.

Upload ScreenSaver Picture

ID	File Status	Interval	Submit	Delete
1	File Exists	5	Submit	Delete 🗑
2	File Exists	5	Submit	Delete 🗑
3	File Exists	5	Submit	Delete 🗑
4	File Exists	5	Submit	Delete 🗑
5	File Exists	5	Submit	Delete 🗑

Please Choose ScreenSaver ID for upload Image1 ▼

Screensaver1 Not selected any files Select File ⬆ Upload

Parameters Set-up:

- **Interval** the time for playing the screensaver picture. The time range from 0 to 120 seconds. The picture will not be shown if the time is 0.

> **Note:**
>
> - The pictures uploaded should be in **JPG format** with 2M pixels maximum.

> **Note:**
>
> - The previous pictures with a specific ID order will be overwritten when repetitive designation of pictures to the same ID order occurred.

8.2. Upload Device Booting Image

You can upload the booting image to be displayed during the device's

booting process if needed. To configure the configuration on the web **Phone > Import/Export > Boot Animation** interface.

> (!) **Note:**
>
> ● The pictures uploaded should be in **.png or .zip format**

8.3. Home Screen Configuration

You can change the home screen display through the configuration of tab name and tab arrangement on the device web **Intercom > Key/Display > Key In Homepage Of The Building Theme** interface.

Parameter Set-up:

- **Type**: select the tab type corresponding to the index number which indicates the tab position. For example, if you want to make **Speed Dial** tab to be displayed in position one, you can change the type in index number 1 to **Speed Dial**. And you can change another tab position accordingly.

- **Name**: enter a new name to replace the original type of name, but it does not change the attribute of the type.

> **Note:**
>
> - Currently, tab icon selection can only be applicable to the **Speed Dial Type**.

8.4. Configuration for Scenario-based Screen Display Mode

X916 series door phones offer you two types of screen display modes for the application scenarios: **Intercom** mode**, VMS** mode. You can make the configuration on the device web **Intercom > Key/Display >Theme** interface to select the specific mode based on actual application scenarios.

Parameters Set-up：

- **Theme:** There are two themes can be chosen - **Intercom** and **VMS**. Intercom theme is default theme which including six parts - **Delivery, Temp Key, PIN, Dial, Tenants** and **Reception**. Intercom theme is more suitable for the residential scenario. VMS theme includes two parts - **I have an appointment, No appointment** which need to be used with Akuvox SmartPlus. VMS is more suitable for office scenario.

8.5. Upload VMS Theme Home Screen Background Pictures

X916 door phones allow you to customize the home screen background picture display in the VMS mode on the device web **Intercom > Key/Display > Import Customization(VMS Theme)** interface.

Parameters Set-up:

- **Background Image:** you can customize the picture in the left of home page.

- **Logo:** you can customize the logo in the left side.

- **Address Line:** display the current community address of the device, the default is blank in non-cloud mode, display the address issued by the cloud, support customization, and support input of up to 255 characters.

- **Welcome Message:** "Welcome!" is by default. It supports up to 255 characters.

9. Volume and Tone Configuration

Volume and tone configuration in X916 refers to the microphone volume, the AD volume, keypad volume, speaker volume, temper alarm volume and open-door tone configuration. Moreover, you can upload the tone you like to enrich your personalized user experience.

9.1. Volume Configuration

9.1.1. Configure Volume on the Device

You can adjust the microphone volume, speaker volume, keypad volume, and AD volume on the device. To configure the language display on the device **Basic Setting > Volume** interface.
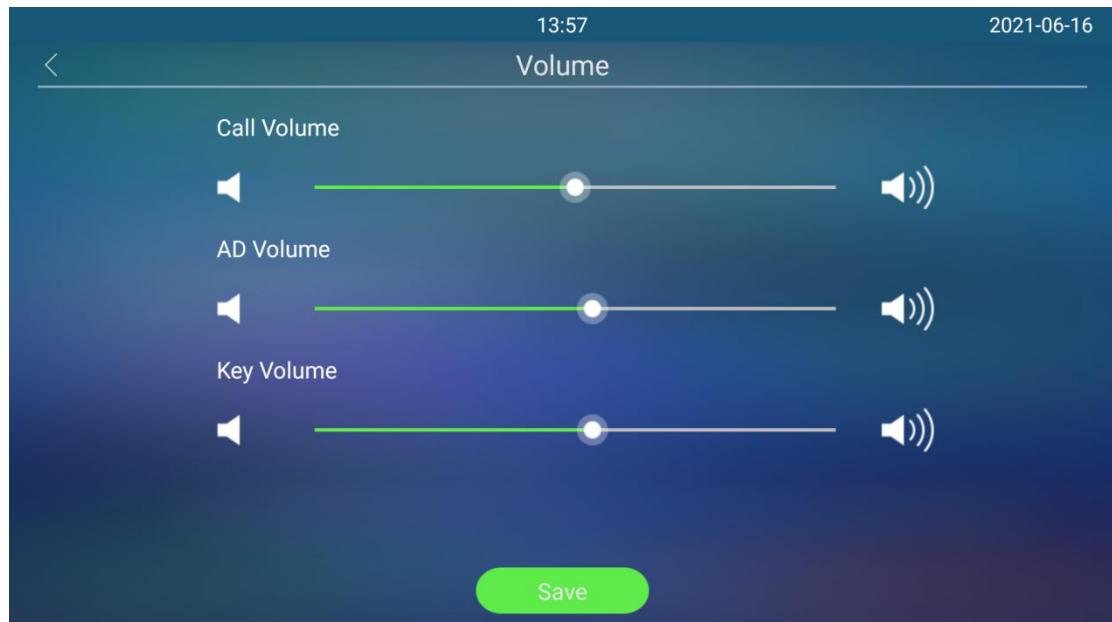
Parameter Set-up:

- **Mic Volume**: adjust the microphone volume according to your need.

- **Speaker volume**: adjust the loudspeaker volume according to your need.

- **Keypad Volume**: adjust the keypad volume for the button touch sound.

- **AD Volume**: adjust the announcement volume. Announcement can be, for example the open-door success announcement, ring-back sound, and other prompt sounds.

- **Key Volume:** adjust the volume for the button touch sound.

9.1.2. Upload Open-door Tone

You can not only enable or disable the Open-Door Tone but also upload the open-door tones in batch that you favored on the web **Phone > Import/Export > Open Door Tone** interface.
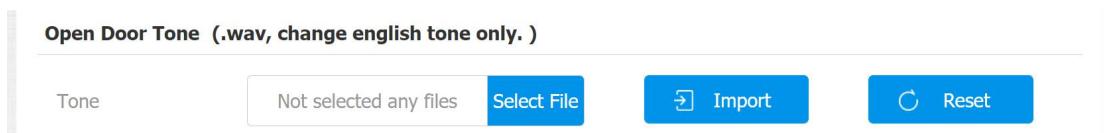
10. Network Setting

10.1.Device Network Configuration

You can check for the door phone's network connection info and configure the default DHCP mode (**Dynamic Host Configuration Protocol**) and static IP connection for the device either on the device or on the device web interface. To configure the language display on the device **Basic Setting > Address** interface.
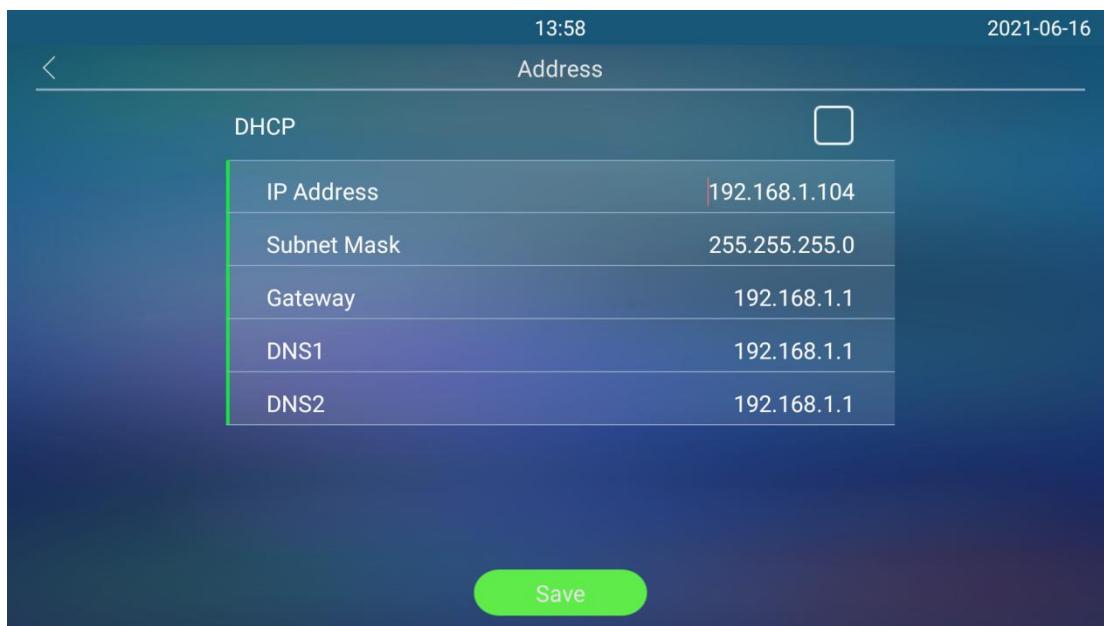
Parameter Set-up:

- **DHCP**: select the **DHCP** mode by moving the toggle switch to the right. DHCP mode is the default network connection. If the DHCP mode is turned on, then the door phone will be assigned by the DHCP server with IP address, subnet mask, default gateway, and DNS server address automatically.

- **Static IP**: select the static IP mode by checking off the DHCP check box. When static IP mode is selected, then the IP address, subnet mask, default gateway, and DNS servers address have to be manually configured according to your actual network environment.

- **IP Address**: set up the IP Address if the static IP mode is selected.

- **Subnet Mask**: set up the subnet Mask according to your actual network environment.

- **Default Gateway**: set up the correct gateway default gateway according to the IP address of the default gateway.

- **Preferred&Alternate DNS Server**: set up preferred or alternate DNS Server (**Domain Name Serve**r) according to your actual network environment. Preferred DNS server is the primary DNS server address while the alternate DNS server is the secondary server address, and the door phone will connect to the alternate server when the primary DNS server is unavailable.

To configure the configuration on the web **Network > Basic > LAN Port** interface.

10.2. Device Local RTP configuration

For the device network data transmission purpose, device needs to be set up with a range of RTP port (**Real-time Transport Protocol**) for establishing an exclusive range of data transmission in the network. To configure the configuration on the web **Network > Advanced > Local RTP** interface.

Parameter set-up:

- **Starting RTP Port**: enter the Port value in order to establish the start point for the exclusive data transmission range.

- **Max RTP port**: enter the Port value in order to establish the end point for the exclusive data transmission range.

10.3. Device Deployment in Network

Door phones should be deployed before they can be properly configured in the network environment in terms of their location, operation mode, address and extension numbers as opposed to other devices for the device control and the convenience of the management. To configure the configuration on the web **Network > Advanced > Connect Setting** interface.
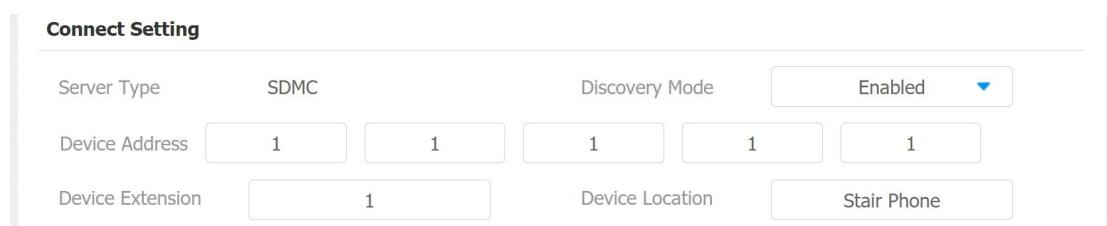
Connect Setting						
Server Type	SDMC		Discovery Mode		Enabled ▼	
Device Address	1	1	1	1	1	
Device Extension	1		Device Location		Stair Phone	

Parameter Set-up:

- **Server Type:** It is automatically set up according to the actual device connection with a specific server in the network such as **SDMC** or **Cloud and None. None** is the default factory setting indicating the device is not in any server type, therefore you are allowed to choose Cloud, SMDC in discovery mode.

- **Discovery Mode:** click **Enable** to turn on the discovery mode of the device so that it can be discovered by other devices in the network and click **Disable** if you want to conceal the device so as not to be discovered by other devices.

- **Device Address:** specify the device address by entering device location information from the left to the right: **Community, Unit, Stair, Floor, Room**

in sequence.

- **Device extension**: enter the device extension number for the device you installed.

- **Device Location**: enter the location in which the device is installed and used.

10.4.NAT Setting

NAT (**Network Address Translation**) allows hosts in an organization's private intranet to transparently connect to hosts in the public domain. There is no need for internal hosts to have registered Internet addresses. It is a way to translate the internal private network IP address into a legal network IP address technology. The NAT in the device web is limited to maintaining a connection with the remote SIP server. The principle is to send a heartbeat message to the remote SIP server at a set interval after the function is turned on. Otherwise, the server may judge that the device is offline and allocate the SIP assigned to other devices, resulting in failure to connect to it in the future. To do the configuration on the web **Account > Advanced > NAT** interface.

NAT

UDP Keep Alive Mes...	Enabled ▼	
UDP Alive Msg Inter...	30	(5~60s)
RPort	Disabled ▼	
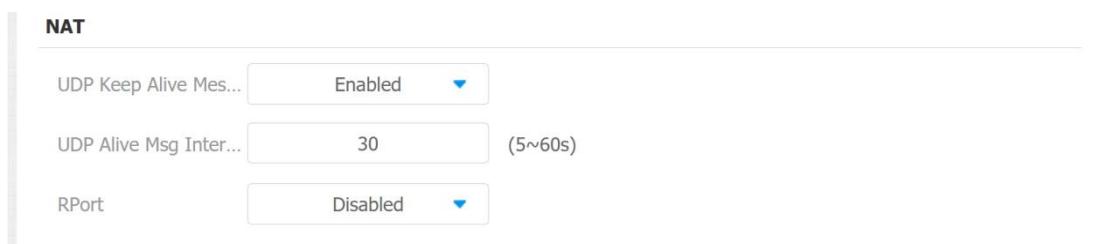
Parameter Set-up:

- **UDP Keep Alive Messages**: If enabled, the device will send out the massage to the SIP server so that SIP server will recognize that if the device is in online status.

- **UDP Alive Msg Interval**: set the message sending time interval from 5-60 seconds, the default is 30 seconds.

- **RPort**: enable the Rport when the SIP server is in WAN (**Wide Area Network**).

11. Intercom Call Configuration

Intercom call in the device can be configured to allow you to perform a variety of customized intercom calls such as IP call and SIP call for different application scenarios.

11.1. IP call & IP Call Configuration

IP calls and SIP calls can be made directly on the intercom device by entering the IP number on the device. And you can also disable the direct IP call if you allow no IP call to be made on the device.

11.1.1. Make IP Calls

To make SIP calls or IP calls on the device by clicking on dial on home screen.
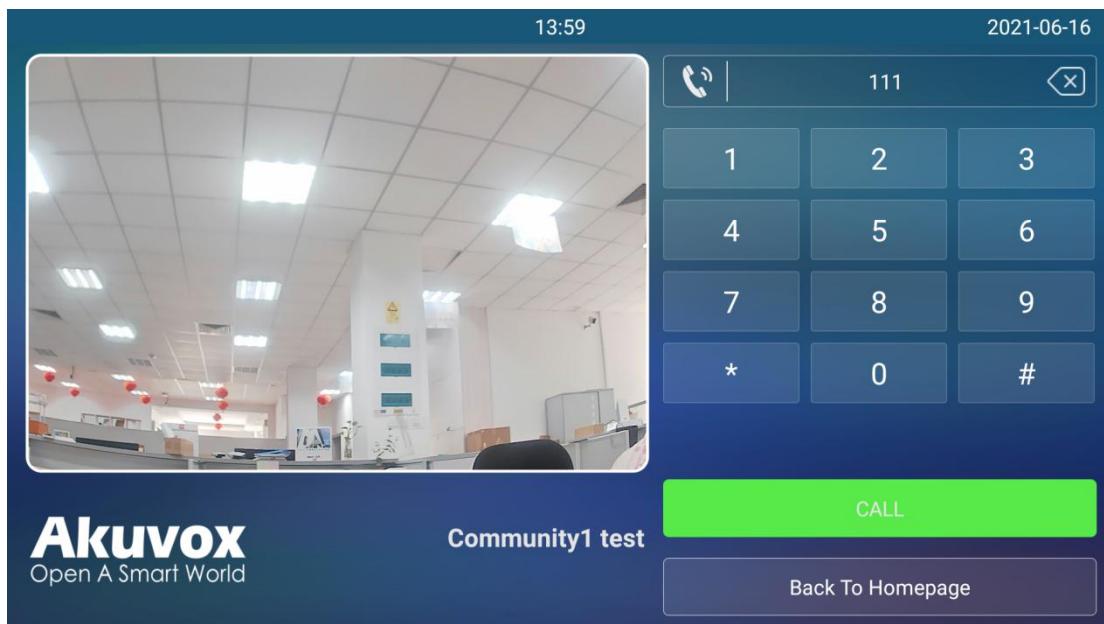
11.1.2. IP Call Configuration

To configure the IP direct call on the device **Phone > Call Feature > Others** interface.

Parameter Set-up:

- **Direct IP :** tick the check box if you want to enable the IP call.

- **Direct IP Port:** the direct IP Port is "**5060**" by default with the port range from **1-65535**. And you enter any values within the range other than the 5060, you are required to check if the value entered is consistent with the corresponding value on the device you wish to establish a data transmission with.

11.2. SIP Call &SIP Call Configuration

You can make SIP call (**Session Initiation Protocol**) in the same way as you do for making the IP calls on the device. However, SIP call parameters related to its account, server, and transport type need to configured first before you can make calls on the device.

11.2.1. SIP Account Registration

X916 door phones support two SIP accounts that can all be registered according to your applications. You can for example, switch between them if

any one of the accounts failed and become invalid. The SIP account can be configured on the device and on the device interface.

11.2.1.1. Configure SIP Account on the Device

To configure the SIP account on the device **Basic Setting > Account** interface.
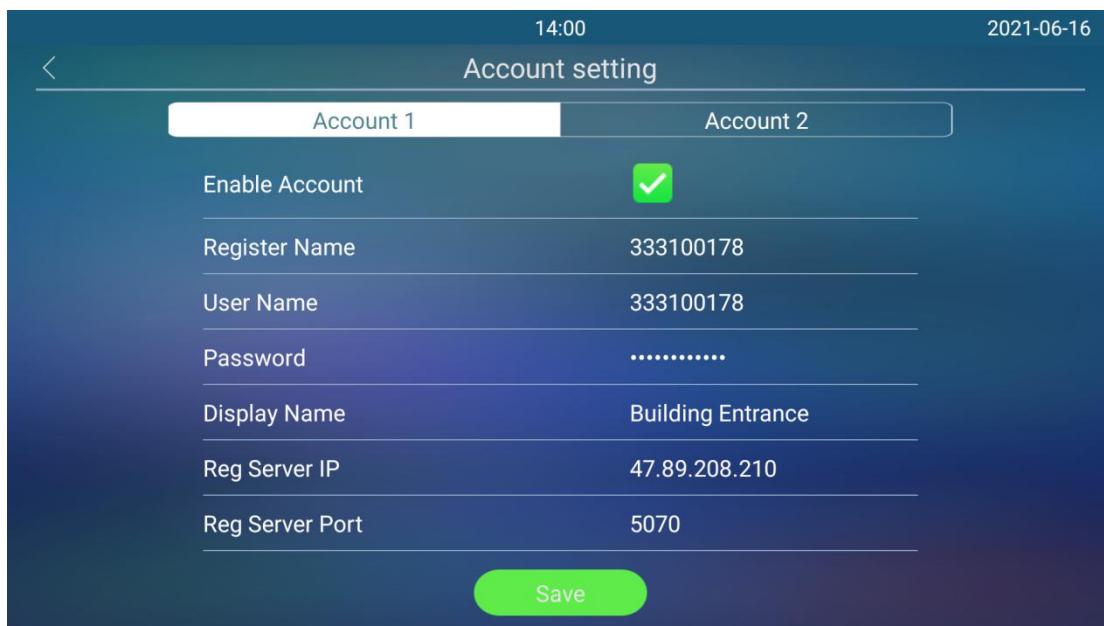
Parameter Set-up:

- **Display Name:** configure the name, for example the device's name to be shown on the device being called to.

- **Register Name:** enter the SIP account register Name obtained from the SIP account administrator.

- **User Name:** enter the user name obtained from SIP account administrator.

- **Password:** enter the password obtained from the SIP account administrator.

- **Server IP**: enter the SIP server address for the SIP account selected.

- **Server port**: enter the SIP server port for communication. The SIP port is "**5060**" by default.

11.2.1.2. Configure SIP Account on the Web Interface

To configure the configuration on the web **Account > Basic > SIP Account** interface.

SIP Account			
Status	UnRegistered	Account	Account 1
Account Active	Disabled	Display Label	
Display Name		Register Name	
User Name		Password	••••••••

Parameter Set-up:

- **Status:** check to see if the SIP account is registered or not.

- **Account Active:** click **Enable** or **Disable** to activate or deactivate the registered SIP account.

- **Display Name:** configure the name, for example the device's name to be shown on the device being called to.

- **User Name:** enter the user name obtained from SIP account administrator.

- **Account:** select the exact account (Account 1&2) to be configured.

- **Display Label:** configure the device label to be shown on the device screen.

- **Register Name:** enter the SIP account register Name obtained from the SIP account administrator.

- **Password:** enter the password obtained from the SIP account administrator.

11.2.1.3. SIP Server Configuration

SIP servers can be set up for device in order to achieve call session through SIP server between intercom devices. To configure the configuration on the web **Account > Basic > Preferred SIP Server** interface.

Parameter Set-up:

- **SIP Server 1:** enter the primary server IP address number or its URL.

- **SIP Server 2 :** enter the backup SIP server IP address or its URL.

- **Port:** set up SIP server port for data transmission.

- **Registration Period:** set up SIP account registration time pan. SIP re-registration will start automatically if the account registration fails during the registration time span. The default registration period is **"1800"**, ranging from **30-65535s**.

11.2.1.4. Configure Outbound Proxy Server

An outbound proxy server is used to receive all initiating request messages and route them to the designated SIP server in order to establish call session via port-based data transmission.To configure the configuration on the web **Account > Basic > Outbound Proxy Server** interface.

Parameter Set-up:

- **Enable Outbound:** click **Enable** and **Disable** to turn on or turn off the outbound proxy server.

- **Preferred Server IP:** enter the SIP address of the primary outbound proxy server.

- **Port:** enter the Port number for establish call session via the primary outbound proxy server

- **Alternate Server IP:** set up Backup Server IP for the backup outbound proxy server.

- **Port:** enter the Port number for establish call session via the backup outbound proxy server.

11.2.1.5. Configure Data Transmission Type

SIP message can be transmitted in three data transmission protocols: **UDP** (**User Datagram Protocol**), **TCP**(**Transmission Control Protocol**), **TLS** (**Transport Layer Security**) and **DNS-SRV.** In the meantime, you can also identify the server from which the data come from. To configure the configuration on the web **Account > Basic > Transport Type** interface.

Parameter Setup:

- **UDP**: select **UDP** for unreliable but very efficient transport layer protocol. UDP is the default transport protocol.

- **TCP.** select **TCP** for Reliable but less-efficient transport layer protocol.

- **TLS**: select **TLS** for Secured and Reliable transport layer protocol.

- **DNS-SRV:** select **DNS-SRV** to obtain DNS record for specifying the location of servers. And **SRV** not only records the server address but also the server port. Moreover, SRV can also be used to configure the priority and the weight of the server address.

11.2.2. Call Session Timer

SIP does not define a survival mechanism for established sessions. Although the user agent can infer whether the session has timed out through a session-specific mechanism, but the proxy server do not have this mechanism. In this way. The proxy server sometimes cannot infer whether the session is still active. For example, when a user agent fails to send a BYE message at the end of the session, or the BYE message is lost due to network problems, the proxy server will not know that the session has ended. In this case, the proxy server will keep the call status and cannot know when the call status information is invalid. To solve the problem, RFC4028 defines a survival mechanism for SIP sessions. The user agent or proxy server periodically sends re-INVITE or UPDATE requests to keep the session active. The interval of session update requests is determined by its defined negotiation mechanism. Assuming that no session update request is received within the interval, the session is deemed to have been terminated. To do the configuration on the web **Account > Advanced > Session Timer** interface.

Session Timer		
Active	Disabled ▼	
Session Expire	1800	(90~7200s)
Session Refresher	UAC ▼	

Parameters Set-up:

- **Active:** click to enable or disable the Call session timer function. Call session timer is "Disabled" be default.

- **Session Expire:** enter the Session call duration before the call expires or ends automatically for refreshment. For example if you set the session expiration as 1800 second (Ranging from 90- 7200 sec) you can have the door phone to terminate the ongoing call with other intercom device in 1800 second.

- **Session Refresher:** select UAC (User Agent Client) or UAS (User Agent Server)for the call session refreshment.

11.3. SIP Call DND&Return Code Configuration

DND (**Do not disturb**) setting allows you not to be disturbed by any unwanted incoming SIP calls. You can set up DND related parameters properly on the device web interface to block SIP calls you do not intend to answer. In the meantime, you can also define the code to be sent to the SIP server when you want to reject the call. To configure the configuration on the web **Phone > Call Feature > DND** interface.

DND			
Account	All Account ▼	DND	Disabled ▼
Return Code When ...	486(Busy Here) ▼	DND On Code	
DND Off Code			

Parameter Set-up:

- **DND**: enable or disable the DND function. DND function is disabled by default.

- **Return Code When DND**: select what code should be sent to the calling device via SIP server. **404 for "Not found"**; **480 for "Temporary unavailable" 486 for "busy here"**.

- **DND On Code:** turn on the DND on server using the Code obtained. The DND on Code is **78** by default.

- **DND Off Code:** turn off the DND on server using the code obtained. The DND off Code is **79** by default.

11.4. Dial Options Configuration

X916 offers a variety of Dial options that allows you to have fast dial experience while relieving you off memory burden due to long and complex dial numbers.

11.4.1. Quick Dial by Number Replacement

If you want to replace the long and complex dial number with a shorter number that can be memorized at greater ease and convenience for making calls, you can configure the dial number replacement on the device and on the device web interface. You can replace a multiple device dial numbers such as IP address or SIP numbers with only one short number.

11.4.1.1. Quick Dial by Number Replacement on the Device

To configure the language display on the device **Basic Setting > Replace Rule** interface.
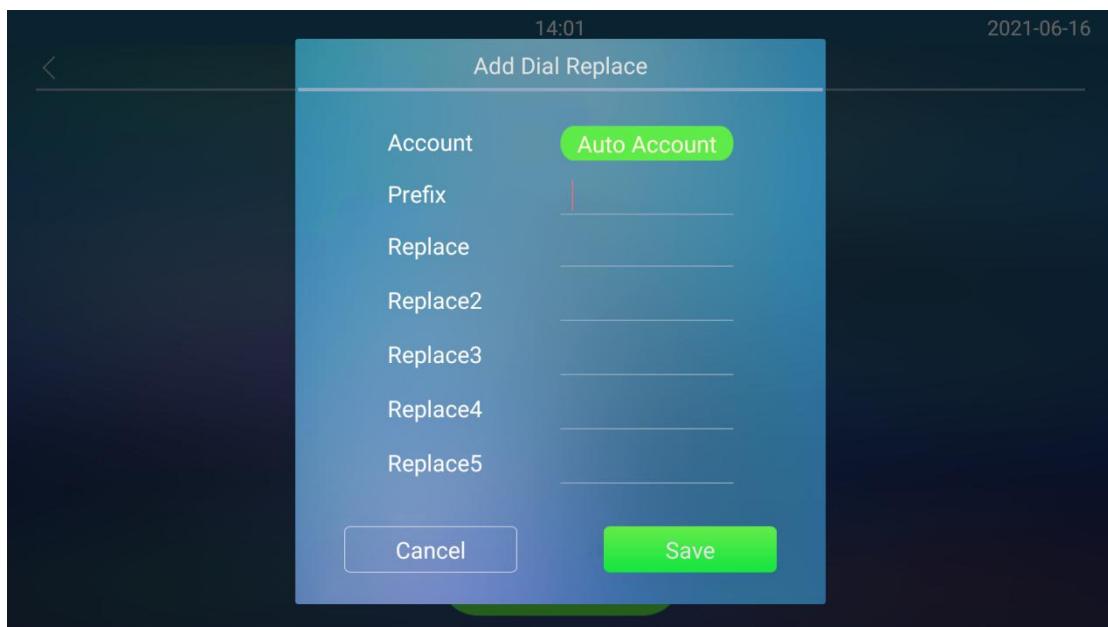
Parameter Set-up:

- **Account:** select the account to which you want to apply dial number replacement. The account is **Auto** by default (to dial out from the account in which the dial number has been registered). You can select either account 1 or account 2 from which the number can be dial out. if you have registered the dial number in both Account 1 and Account 2, then the number will be called out from Account 1 by default.

- **Prefix:** enter the short number to replace the dial number you wish to replace.

- **Replace 1/2/3/4/5:** enter the dial number(s) you wish to replace. It supports up to 5 number maximum for the replacement on the device configuration. For example, if you replace five original dial numbers with a common short number such as **101** then the five intercom devices with the dial number will be called to at the same time when you dial **101**.

11.4.1.2. Quick Dial by Number Replacement on the Web Interface

You can not only add quick dial number separately but also import the quick dial number to the device in batch. Besides, you can edit and delete the numbers if need. To configure the configuration on the web **Phone > Dial Plan > Rules Management** interface.

> ⚠ **Note:**
>
> ● The check box for each line of "**Prefix**" should be checked before you can see the **Edit** tab, which you click to carry out the modification.

11.5. Call Auto-answer Configuration

You can define how quick the door phone should response in answering the incoming SIP/IP call automatically by setting up the time related parameters. In addition, you can also define the mode in which the calls are to be answered (video mode or audio mode). To configure the configuration on the web **Phone > Call Feature > Auto Answer** interface.

Parameter Set-up:

● **Auto Answer Delay:** set up the delay time (from 0-5 Sec.) before the call can be answered automatically. For example, if you set the delay time as 1 second, then the call will be answered in 1 second automatically.

● **Mode:** set up the video or audio mode you preferred for the automatic call answering.

11.6. Robin Call Configuration

Robin Call is a function supported by Akuvox SmartPlus which releases a

group of robin call numbers for the application. You can call the targeted group of robin calls (e.g., your extension numbers in your kitchen, bedroom, etc.) in sequential orders until the call is answered. Robin call sequence will complete as soon as the call is answered by any of the targeted extension device. To configure the configuration on the web **Intercom > Basic > Basic** interface.

Basic			
Robin Call Enable	Disabled ▼	Robin Call Timeout	60 ▼
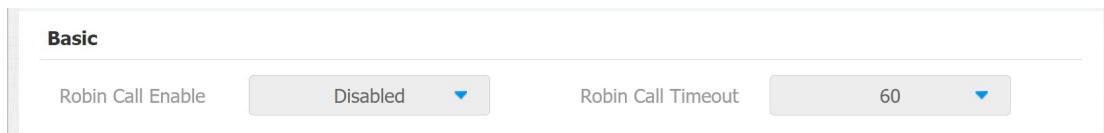
Parameter Set-up:

- **Robin Call Enable**: tick the check box if you want to enable the Robin call function.

- **Timeout (Sec)**: click to select the call time interval in between the Robin call number in a targeted Robin Call group. For example, if you set the time interval as 10 seconds, then the call (if not answered in 10 Sec.) will be terminated automatically and be transferred sequentially to the next robin call number in the targeted robin call group.

> **Note:**
>
> - Robin Call function should be supported by **SmartPlus**, please contact Akuvox technical support for more information.

12. Call Settings

12.1. Maximum Call Duration Setting

X916 door phone allows you to set up the call time duration in receiving the call from the calling device as the caller side might forget to hang up the intercom device. When the call time duration is reached, the door phone will terminate the calling automatically. To configure the configuration on the web **Intercom > Basic > Max Call Time** interface.
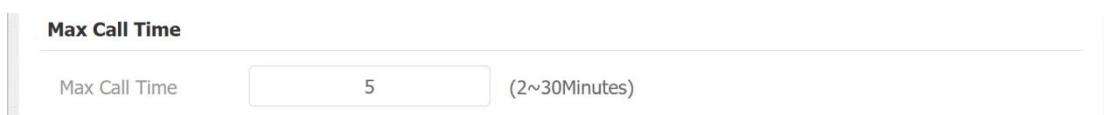
Max Call Time		
Max Call Time	5	(2~30Minutes)

Parameter Set-up:

- **Max Call Time**: enter the call time duration according to your need (Ranging from 2-30 min.). The default call time duration is 5 min.

12.2. Maximum Dial Duration Setting

Maximum Dial duration is consisted of Maximum dial-in time duration and the maximum dial-out time. Maximum dial in time refers to the maximum time duration before the door phone hang up the call if the call is not answered by the door phone. In contrary, Maximum dial-out time refers to the maximum time duration before the door phone hang up itself automatically when the call from the door phone is not answered by the intercom device being called to. To configure the configuration on the web **Intercom > Basic > Max Dial Time** interface.

Max Dial Time		
Dial In Time	60	(30~120Sec)
Dial Out Time	60	(5~120Sec)

Parameter Set-up:

- **Dial In Time:** enter the dial in time duration for you door phone (ranging from 30-120 Sec.) for example, if you set the dial in time duration is 60 seconds in your door phone, then the door phone will hang up the incoming call automatically if the call is not answered by the door phone in 60 seconds. 60 seconds is the dial in time duration by default.

- **Dial Out Time**: enter the dial in time duration for your door phone (ranging from 5-120 Sec.) for example, if you set the dial out time duration is 60 seconds in your door phone, then the door phone will hang out the call it dialed out automatically if the call is not answered by the device being called.

13. Audio& Video Codec Configuration for SIP Calls

13.1.Audio Codec Configuration

X916 supports four types of Codec (PCMU, PCMA, G729, G722) for encoding and decoding the audio data during the call session. Each type of Codec varies in terms of the sound quality. You can select the specific codec with different bandwidth and sample rate flexibly according to the actual network environment. To configure the configuration on the web **Account > Advanced > SIP Account** interface.
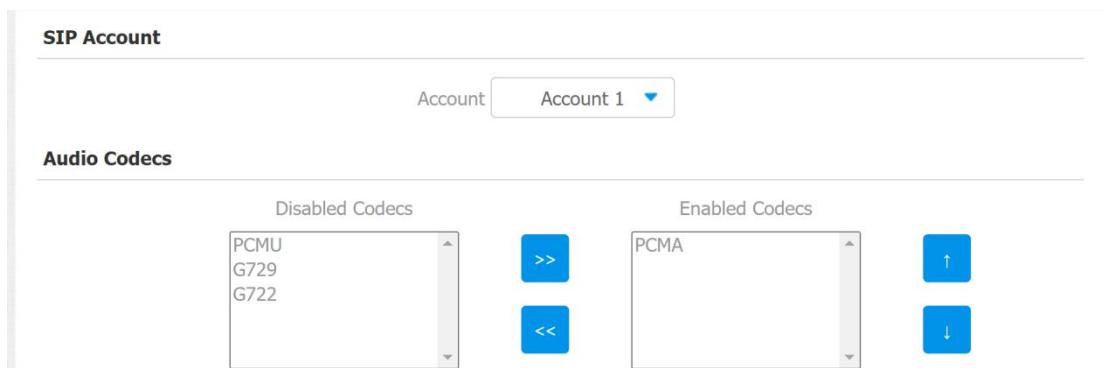
Please refers to the bandwidth consumption and sample rate for the four codecs types below:

Codec Type	Bandwidth Consumption	Sample Rate
PCMA	64 kbit/s	8kHZ
PCMU	64 kbit/s	8kHZ
G729	8 kbit/s	8kHZ
G722	64 kbit/s	16kHZ

13.2. Video Codec Configuration

X916 support H264 codec that provides a better video quality at much lower bit rate with different video quality and payload. To configure the configuration on the web **Account > Advanced >** Video Codec interface.
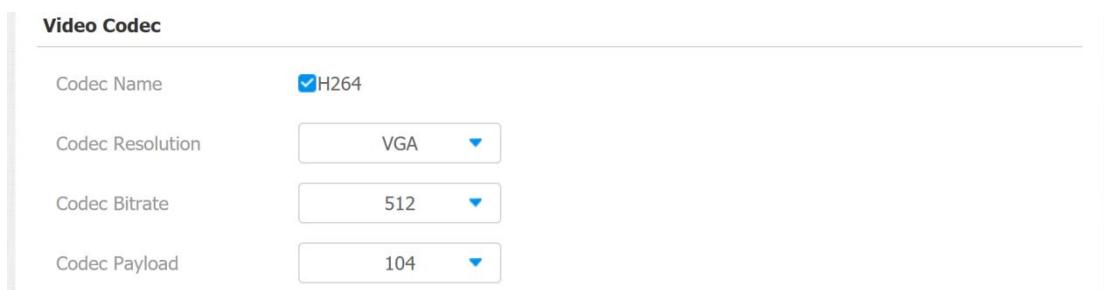
Parameter Set-up:

- **Codec Name**: Check to select the H264 video codec format for the door phone video stream. H264 is the video codec by default.

- **Codec Resolution:** select the code resolution for the video quality among four options: **"QCIF", "CIF", "VGA", "4CIF" and "720P"** according to your actual network environment. The default code resolution is 4CIF.

- **Codec Bitrate:** select the video stream bit rate (Ranging from 320-2048). The greater the bitrate, the data transmitted in every second is greater in amount therefore the video will be clearer. While the default code bitrate is 2048.

- **Codec Payload:** select the payload type (ranging from 90-118) to configure audio/video configuration file. The default payload is 104.

13.3. Configure DTMF Data Transmission

In order to achieve the door access via DTMF code or some other applications, you are required to properly configure DTMF in order to establish a DTMF-based data transmission between the door phone and other intercom device for the third party integration. To configure the configuration on the web **Account > Advanced > DTMF** interface.

DTMF

| Type | RFC2833 ▼ | How To Notify DTMF | Disabled ▼ |
| DTMF Payload | 101 | (96~127) | |

Parameter Set-up:

- **Mode:** select DTMF mode among five options: "**Inband**", "**RFC2833**", "**Info+Inband**" and "**Info+RFC2833**" based on the specific DTMF transmission type of the third-party device to be matched with as the party for receiving signal data.

- **How to Notify DTMF**：select among four types: "**Disable**" " **DTMF**" "**DTMF-Relay**" "**Telephone-Event**" according to the specific type adopted by the third party device. You are required to set it up only when the third-party device to be matched with adopts "**Info**" mode

- **Payload**: set the payload according the specific data transmission payload agreed on between the sender and receiver during the data transmission.

14. Phone Book Configuration

14.1.Phone Book Configuration on the Device

You can configure the contacts list in terms of adding and modifying contact groups or contacts on the device directly. To configure the phone book on the device **Setting > Tenants** interface.
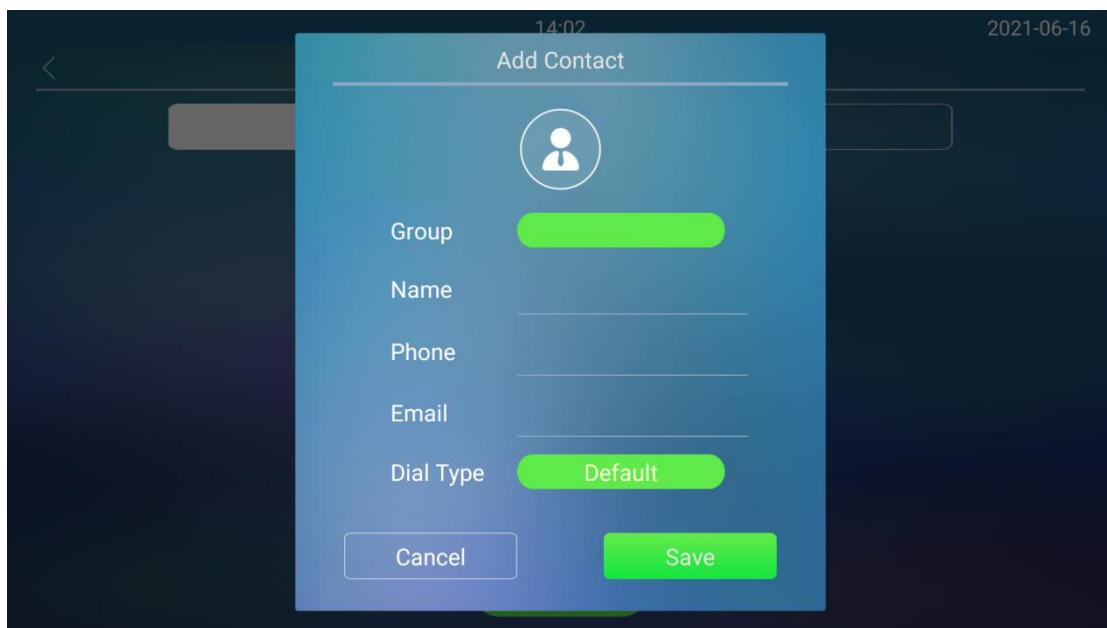
Parameter Set-up:

- **Group:** click the green tab to select the group name you have created. You cannot select the group name If no group name has been created.

- **Name:** enter the contact name, which is required

- **Phone:** enter the phone number of the contact, which is required.

- **Email**: enter the contact's Email, which is optional.

- **Dial Type:** select and assign the group name to an account. If you select default option, then the contact number will be call out from SIP account 1 if the contact number are set up in both SIP Account 1 and 2.

> **Note:**
>
> - Only the SIP numbers of the contacts can be called out through SIP account. IP numbers are not valid for this application.
> - Group must be created first before you can select or change the Group.

14.2. Phone Book Configuration on the Web Interface

14.2.1. Manage Contact Groups on the Web Interface

You can configure contact and contact groups by adding and editing them on the web **PhoneBook > Phonebook > Group** interface.

14.2.2. Contact List Configuration on the Web Interface

Contact can also be configured on the web interface where you can also upload the contact pictures if needed. To configure the configuration on the web **PhoneBook > Phonebook** interface.

Parameter Set-up:

● **Show contacts of local group:** enable it to show the contacts of local group.

● **Show Cloud Contacts:** enable it to show the contacts issued from Akuvox SmartPlus.

● **Contacts short by:** there are three options **ASCII Code**, **Room Number** and **Import.** If **ASCII Code** is selected, sort in ascending ASCII order, for example: 0-9, a-z, numbers take precedence over letters. Not case sensitive, but the same letter, lowercase is sorted before uppercase. If **Room Number** is selected, sort by room name. if there is no room name,

the room number is taken as the room name by default. Room number is available after enable Cloud contact. If **Import** is selected, sort by contacts in the imported file.

- **Contact:** you can choose to show all contacts information or one group contact information.

- **Search:** enter the key number or key letter of the name to quick search the contact.

- **Dial:** enter a phone number then click Dial to initiate the call from the web.

- **Name:** enter the contact name, which is required.

- **Phone:** enter the phone number of the contact, which is required.

- **Email**: enter the email address of the contact.

- **Group:** click the green tab to select the group name you have created. You cannot select the group name If no group name has been created.

- **Dial Type: s**elect which SIP account will used to to call out. If using IP direct call, it is not available.

- **Priority of Call:** set the priority of call among four options: "**Null**", "**Firstly**", "**Secondary**", "**Lastly**". This feature is mainly applicable to the contacts in a specific contact group. For example, if you set the priority of call for one of the contacts in a specific contact group as "**Firstly**" then the contact will be the first to be called to among all the contacts in the same contact group when someone press on the contact group for making a group call.

> ⓘ **Note:**
>
> - Priority of Call of a contact cannot be set when the contact does belong to any contact group.

Note:

- The contact file format for import should be in .vcf, .csv or xml format while the contact file format for export should be .vcf format only. And the maximum contact import size is 3000.

15. Relay Setting

15.1. Relay Switch Setting

You can configure the relay switch(es) and DTMF for the door access on the web **Access Control > Relay** interface.

Parameter Set-up:

- **Trigger Delay (Sec):** set the relay trigger delay timing (Ranging from 1-10 Sec.) For example, if you set the delay time as "**5**" Sec. Then the relay will not be triggered until 5 seconds after you press "**unlock**" tab.

- **Hold Delay (Sec):** set the relay hold delay timing (Ranging from 1-10 Sec.) For example, if you set the hold delay time as "**5**" Sec. Then the relay will be delayed for 5 seconds after the door is unlocked.

- **DTMF Option:** select the number of DTMF digit for the door access control (**Ranging from 1-4 digits**) For example, you can select 1 digit DTMF code or 2-digit DTMF code etc., according to your need.

- **1-digt DTMF:** set the 1-digt DTMF code within range from (**0-9, *, and #**).

- **2~4 Digits DTMF:** set the DTMF code according to the **DMTP Option**

setting. For example, you are required to set the 3-digits DTMF code if **DTMF Mode** is set as 3-digits.

● **Relay Status:** relay status is low by default which means normally closed (NC) If the relay status is high, then it is in Normally Open status (NO).

● **Relay Name:** name the relay switch according to your need. For example, you can name the relay switch according to where the relay switch is located for the convenience.

> ⚠ **Note:**
>
> ● Only the external devices connected to the relay switch needs to be powered by powered adapters as relay switch does not supply power.

> ⚠ **Note:**
>
> ● If DTMF mode is set as "**1 Digit DTMF**" , you cannot edit DTMF code in **2~4 Digits DTMF** field. And if you set DTMF mode from 2-4 in **2~4 Digits DTMF"** field, you can not edit DTMF code in **1 Digit DTMF** field.

15.2. Web Relay Setting

In additional to the relay that is connected to the door phone, you can also control the door access using the network-based web relay on the device web interface.
Web relay needs to set up on the web interface where you are required to fill in such information as relay IP address, password, web relay action etc. Before you can achieve the door access via web relay. To configure the configuration on the web **Phone > WebRelay**.

Web Relay

Type	Disabled ▼	IP Address	
UserName		Password	••••••••

Web Relay Action Setting

Action ID	Web Relay Action	Web Relay Key	Web Relay Extension
Action ID 01			
Action ID 02			

Parameter Set-up:

- **Type:** select among three options **Disabled**, **WebRelay**, and **Both**. Select **Webrelay** to enable the web relay. Select **Disable** to disable the web relay. Select **Both** to enable both local relay and web relay.

- **IP Address:** enter the web relay IP address provided by the web relay manufacturer.

- **User Name**: enter the User name provided by the web relay manufacturer.

- **Password:** enter the password provided by the web relay manufacturer. The password is authenticated via HTTP and you can define the passwords using **http get** in Action.

- **Web Relay Action:** enter the specific web relay action command provided by the web manufacturer for different actions by the web relay.

- **Web Relay Key:** enter the configured DTMF code, when the door is unlocked via DTMF code, the action command will be sent to the web relay automatically.

- **Web Relay Extension:** enter the relay extension information, which can be a SIP Account user name of an intercom device such as an indoor monitor, so that the specific action command will be sent when unlock is performed on the intercom device, while this setting is optional. And please refer to the example below:

  http://admin:admin@192.168.1.2/state.xml?relayState=2.

16. Door Unlock Configuration

X916 door phone offers you three types of door access via PIN code, RF card and Facial recognition. You can configure them on the device and web interface. Moreover, you can import or exporting the configured files to maximize your RF card configuration efficiency.

16.1.Configure PIN Code for Door Unlock

You can create and modify both Public PIN code and private PIN code for the door access on X916 door phones.

16.1.1. Configure Public PIN code

You can configure and modify a total of 3 sets of separate PIN codes on the device web **Intercom > PrivateKey > Password** interface.

Parameter Set-up:

- **PublicKey Enable:** enable the Public PIN code function by click "on" in the field. Public PIN code door access is disabled by default .

- **PublicKey Bits Limit:** set the number of digits for the Public PIN code among 4 options: 4-digit, 5-digits, 6-digit, 7 digit and 8-digit which is number of digit by default.For example "**77777777**"

- **PublicKey_0/1/2:** enter the Public PIN Code to your preference. You can

set up three sets of public PIN code if need.

> **⚠ Note:**
>
> ● Public PIN code will not valid until the function is turned on.

16.1.2. Configure Private PIN Code on the Device

You can configure door access by Private PIN code on the device by entering the user's name and the PIN code for the door access. To configure the language display on the device **Setting >LockPassword** interface.
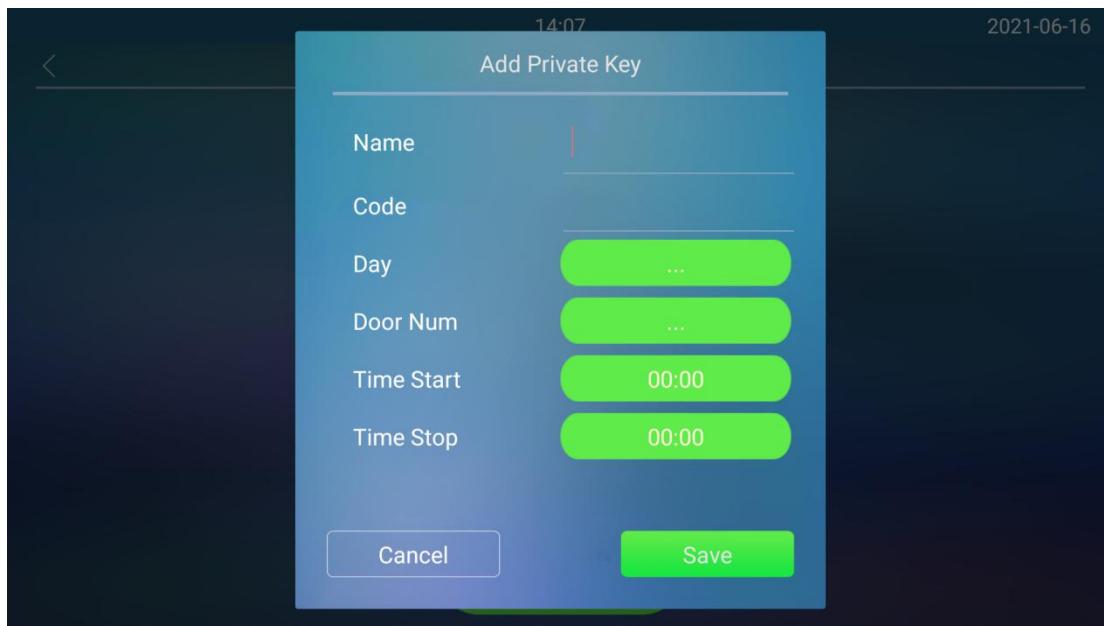
16.1.3. Configure Private PIN Code on the Web Interface

Private PIN code as one type of door access can be configured individually or in batch on the web **Intercom > Privatekey > Private Key Setting** interface where you can create and schedule the validity of Private PIN one by one for

the users or import or export the PIN code files in batch if needed.

Private Key Setting

PKey DoorNum	☑ RelayA ☐ RelayB ☐ RelayC ☐ RelayD
PKey Day	☑ Mon ☑ Tue ☑ Wed ☑ Thur
	☑ Fri ☑ Sat ☑ Sun ☐ Check All
PKey Time	00 ▼ : 00 ▼ - 00 ▼ : 00 ▼
PKey Name	[ ]
PKey Code	[ ] ＋ Add

Parameter Set-up:

- **PKey DoorNum:** select relay switches (**Door A; Door B; Door C**) to be triggered by the PIN Code you created for the door access.

- **PKey Day:** select the day (s) on which private PIN code can be valid for the door access. For example, you select **Check All** if you want PIN code to be valid through out the week, or you can select specific day on which the PIN code can be valid.

- **PKey Time:** select the time span during a day you want the private PIN code to be valid for the door access.

- **PKey Name:** enter the Private PIN code name for identification, for example, you can enter user name as PIN code name indicating the PIN code ownership.

- **PKey Code:** enter the PIN code number to your preference.

16.1.3.1. PIN Code Import & Export on the Web Interface

When the PIN codes becomes so many that you cannot afford to set them up one by one manually, you can manage PIN codes in batch by importing the PIN codes the device. Meanwhile, you can export the existing PIN code file in the device if needed. To do the configuration on device web **Intercom > Privatekey > Import/Export Private Key(.xml)** interface.

However, you are required to set up the parameters properly in the PIN code file by referring to the data format and sequence in .xml PIN code files exported out before the import can be made successfully.

> **Note:**
>
> - PIN code files to be imported should be in .xml format otherwise it will show "**File Format Error**", while the PIN code files to be exported is in .tgz file format.

16.1.3.2. PIN Code Modification on the Web Interface

If you want to modify the PIN code settings such as PIN code name, PIN code validity time schedule, rearrange the relay switches to be triggered by the PIN code or delete the PIN code, you can modify the setting properly according to your need on the web **Intercom > Privatekey > Private Key Management** interface.

16.1.4. Configure Private PIN Access Mode

X916 door phone offers you two types of access modes for private PIN code access, namely "**PIN**" and "**APT#+PIN**". To configure the configuration on the web **Intercom > PrivateKey > Key Type** interface.

Parameter Set-up:

- **PIN Mode:** select access mode between "**PIN**" and "**APT#+PIN**". if you select "**PIN**" then you are only required to enter PIN code directly for the door access, while if you select "**APT#+PIN**", then you are required to enter the Apartment Number first before entering your PIN code for the door access.

> ⓘ **Note:**
>
> - **APT+PIN** can only be applicable when the device is added to the Akuvox SmartPlus.

16.2. Configure RF Card for Door Unlock

16.2.1. Configuring RF Card on the Door Phone

You can configure the RFID card directly on the device **RFID card** screen. for

the door access while setting up the time schedule for the validity of the RFID card access along with the web relay that can be triggered with RIFD card etc.

16.2.2. Configure RF Card on the Web Interface

On the device web **Intercom > Card setting > Card Status** interface, you can not only configure the RF card one by one manually but also import or export the RFID card files to the device in batch in order to maximize card configuration efficiency.

Parameter Set-up:

- **Card Status:** select **"Car Issuing"** in the field before adding the RFID card and change the status back to "**Normal**" after the card is added.

- **IC key DoorNum:** select the relay switch available for the RIFD card door access.

- **IC key Day:** select the day (s) on which RFID card can be valid for the door access.

- **IC Key Time:** select the time span during a day you want the RFID card to be valid for the door access.among three options: **Allow Frequency and Forbidden** For example, if you select **Allowed** then the card is always valid for unlimited door access according to your setting. If you select **Frequency** you are required to set up the number of the RFID card access validity. If you select "**Forbidden**" then the RFID card will never be valid for the door access.

- **IC key Code:** find the RFID card code in the field.

- **IC Key WeRelay:** enter the specific number of web relay from **0-50** so that the relay can be triggered using RFID card for door access. If "**0**" is selected, it means you or visitors are not allowed to be sent to the specific floor using lift.

> ⓘ **Note:**
>
> - Please refer to PIN code access schedule selection for the RF card user(s)-specific door access.

> ⓘ **Note:**
>
> - RF card with 13.56 MHz and 125 KHz can be applicable to the door phone for the door access.

16.2.3. Configure RF Card Code Format

If you want to integrate with the third-party intercom system in terms of RF card door access, you can change the RF card code format to be identical with that applied in the third-party system. To configure the configuration on the web **Intercom > Advanced > RFID** interface.

RFID

RFID Display Mode	8HN ▼	IDCard Display Mode	8HN ▼
Wiegand Display Mo...	8HN ▼		

Parameter Set-up:

- **RFID Display Mode**: select the card format for the **IC Card** for the door access among five format options: **8H10D, 6H3D5D(W26), 6H8D, 8HN, and 8HR.** The card code format is 8HN by default.

- **IDCard Display Mode**: select the card format for the **ID Card** for the door access among five format options: **8H10D, 6H3D5D(W26), 6H8D, 8HN, and 8HR.** The card code format is 8HN by default.

16.3. Configure Facial Recognition for Door Unlock

16.3.1. Configure Facial Recognition on the Device

You can configure door access by facial recognition on the device by entering the user's name and register your facial ID on the device for the door access. To configure the language display on the device **Setting > Face** interface.
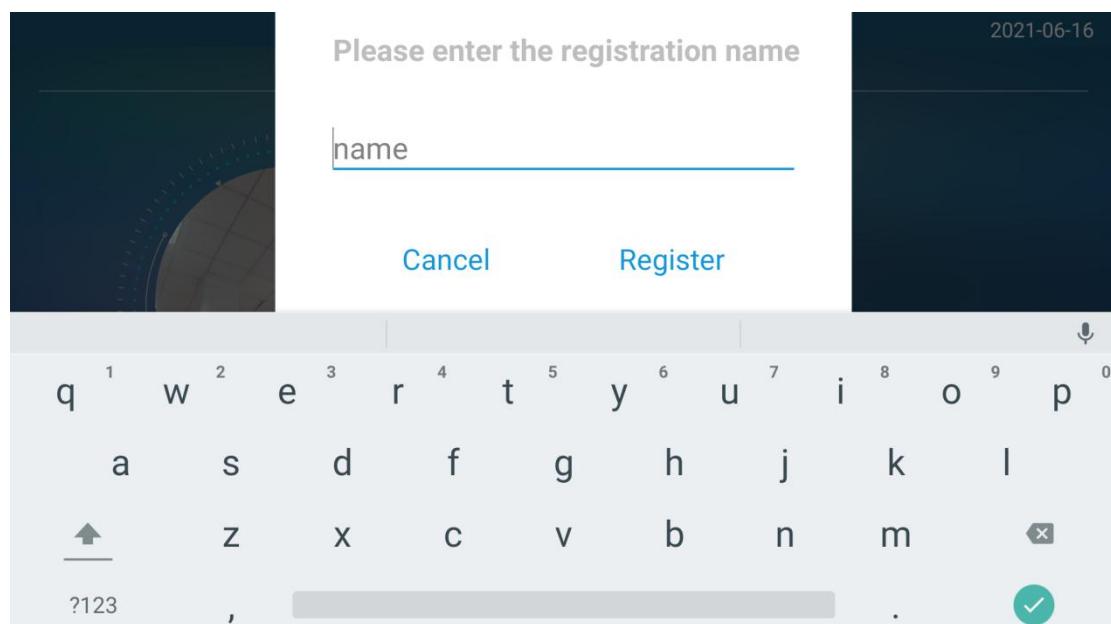
16.3.2. Configure Facial Recognition on Web Interface

X916 door phone allows you to adjust facial recognition accuracy, recognition intervals according to your actual need. And you can also improve the recognition quality and user experience through the basic facial recognition setting. To configure the configuration on the web **Inercom > Face** interface.
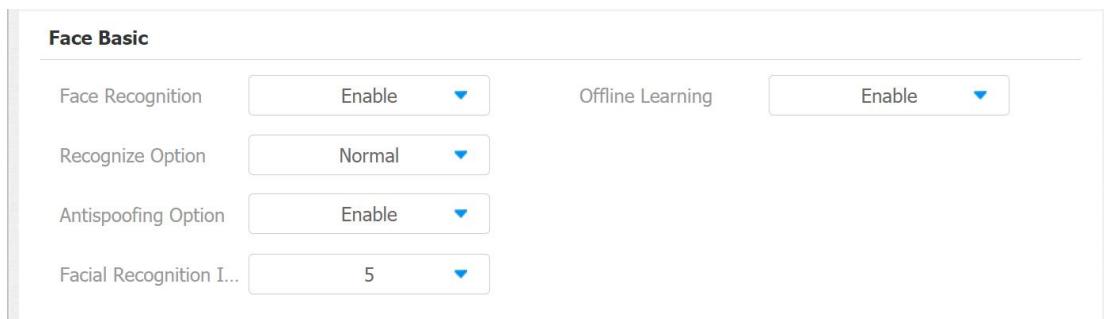
Parameter Set-up:

- **Face Recognition:** click on **Enable** to turn on the facial recognition function. Facial recognition is enabled by default.

- **Offline Learning:** select **Enable** if you want to improve the device recognizing capability, focusing on the major facial characteristics while sidelining the minor changes occurred to your face. Facial recognition accuracy improves as the number of facial recognition increases.

- **Recognize Option:** click to select the facial recognition accuracy level among four options: **Low, Normal, High, Highest.** For example, if you select **Highest** then there will be the least possibility that someone else will be mistaken for you by mistake or in another way round in the facial recognition.

- **Antispoofing Option:** select Anti-spoofing level among four options: **Low, Normal, High, Highest.** For example, if you select **Highest** then there will be the least possibility that the device will be fooled by digital images or the pictures of any kinds.

- **Facial Recognition Interval:** select time interval between every two

facial-recognitions from 1-8 minutes. For example, if you select "**5**" then you have to wait for 5 min. before you are allowed to perform the facial recognition again.

16.3.2.1. Facial Recognition Data Management

You can search and find your facial data collected in the device or you can also delete the data separately or in batch if needed on device web **Intercom > Face > Face Management** interface.

	Index	Name
☐	1	
☐	2	
☐	3	
☐	4	
☐	5	
☐	6	
☐	7	
☐	8	
☐	9	
☐	10	

Face Management

Search [   ] Search   Reset

16.3.2.2. Facial ID data Import&Export

R29 series support facial ID data to shared among Akuvox R29 series door phones through import and export on device web   **Intercom > Face > Face Import/Export** interface while you can also export the facial data out of the door phone and then import to a third party device.

Face Import/Export

Face Data(.tgz) [Not selected any files] Select File   → Import   → Export

16.4. Configure Bluetooth for Door Unlock

You can also gain the door access by mobile phone with Bluetooth which is used together with Akuvox SmartPlus. You can shake the mobile phone closer to the door phone for the door access. To configure the configuration on the web **Intercom > BLE** interface.

BLE Basic

BLE Enable	Disabled ▼	BLE Mode	Central ▼
Rssi Threshold	72	(-85~-50db)	
Delay	5	(Sec)	

Parameter Set-up:

● **BLE Enable:** enable or disable the Bluetooth function. Bluetooth is turned off by default.

● **BLE Mode:** select **"Central"** mode to enable the door phone to able to receive bluetooth signal. BLE mode is " **Central**" by default.

● **RSSI Threshold:** select the signal receiving strength from -85~-50db in absolute terms, The higher value it is , the greater strength it has. The default value is 72db in absolute terms.

● **Delay:** select the time interval between every two Bluetooth door accesses.

16.5. Configure Open Relay via HTTP for Door Unlock

You can unlock the door remotely without approaching the device physically for the door access by typing in the created the HTTP command (URL) on the web browser to trigger the relay when you are not available by the door for the door access. To configure the configuration on the web **Intercom > Relay > Open Relay via HTTP** interface.

Open Relay via HTTP

Enable	OFF ▼	UserName	
Password	••••••••		

Parameter Set-up:

- **Enable:** enable the HTTP command unlock function by clicking on **Enable** field.

- **User Name:** enter the user name of the device web interface, for example "**Admin**".

- **Password**: enter the password for the HTTP command. For example: "**12345**".

Please refer to the following example:

http://192.168.35.127/fcgi/do?action=OpenDoor&UserName=admin&Password=12345&DoorNum=1

> (!) **Note:**
>
> - **DoorNum** in the HTTP command above refers to the relay number #1 to be triggered for the door access.

16.6. Unlock by QR Code

QR code is another option for door access. If you want to apply QR code access, you need to enable the QR code function. To configure the configuration on the web **Intercom > Relay > Open Relay via QR Code** interface.

Open Relay via QR

Enable	ON ▼

> ⓘ **Note:**
>
> - The function should work with Akuvox SmartPlus. For more information, please contact Akuvox technical support.

16.7. Configure Exit Button for Door Unlock

When you need to open the door from inside using the Exit button installed by the door, you can configure the door phone Input to trigger the relay for the door access. To configure the configuration on the web **Intercom > Input** interface.

Parameter Set-up:

- **Input Service**：enable to active Input terminal feature.

- **Trigger Option:** select the trigger electrical level options between "**High**" and "**Low**" according to the actual operation on the exit button.

- **Action to Execute:** select the method to carry out the action among four options: FTP, Email, HTTP, TFTP.

- **Http URL:** enter the URL if you select the HTTP to carry out the action.

- **Action Delay:** set up the delay time when the action is carried out. For example, if you set the action delay time at 5 seconds., then the corresponding actions will be carried out 5 minutes after your press the

button.

- **Open Relay:** set up relays to be triggered by the input.

- **Door Status:** display the status of input signal.

16.8. Configure Reception Tab for Door Unlock

In the device home screen, X916 door phone provide residents and visitors a quick door access by pressing the **Reception** tab on the bottom of the home screen. To configure the configuration on the web **Intercom > Key/Display > Reception Action In Intercom** interface.
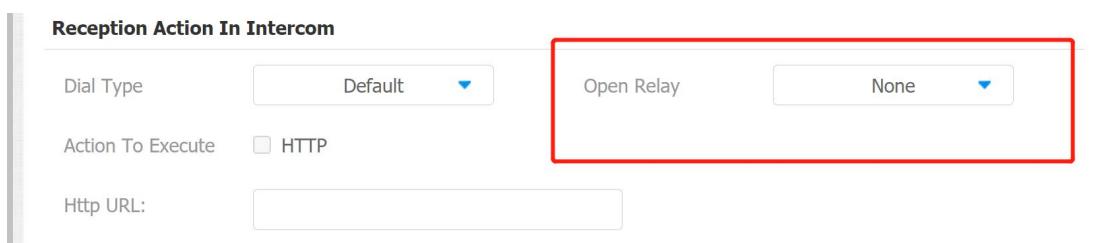
Parameter Set-up:

- **Open Relay:** select the relay(s) to be triggered by pressing the Reception Icon.

- **Action To Execute:** tick the check box to enable HTTP option.

- **HTTP URL:** enter the URL command to be sent for the door access. For example:

http://192.168.35.127/fcgi/do?action=OpenDoor&UserName=admin&Password=12345&DoorNum=1

16.9. Unlock by DTMF code

DTMF codes can be configured on the door phone web interface and set up identical DTMF code on the corresponding intercom devices such as indoor

monitor, which allows residents to enter the DTMF code on the soft keypad or press DTMF code attached unlock tab on the screen to unlock the door for visitors etc., during a call. To configure the configuration on the web **Intercom > Relay** interface.

Parameters Set-up:

- **DTMF Option:** select the number of DTMF digit for the door access control (**Ranging from 1-4 digits**) For example, you can select 1 digit DTMF code or 2-digit DTMF code etc., according to your need.

- **1-digt DTMF:** set the 1-digt DTMF code within range from (**0-9, *, and #**).

- **2~4 Digits DTMF:** set the DTMF code according to the **DMTP Option** setting. For example, you are required to set the 3-digits DTMF code if **DTMF Mode** is set as 3-digits.

17. Security

17.1. Tamper Alarm Setting

Tamper alarm function serves as a protection against any unauthorized removal of the devices by triggering off the temper alarm while sending out calls to the designated location. Tamper alarm will be triggered off when the door phone changes its gravity value as opposed to its original gravity value set up when the device is installed.

17.1.1. Configure Tamper Alarm on the Device

Tamper alarm can be conveniently set up and adjusted directly on the door phone. You can set up the gravity value as well as the adjusting the gravity sensor sensitivity according to your actual need. To configure the language display on the device **Setting > AntiAlarm** interface.
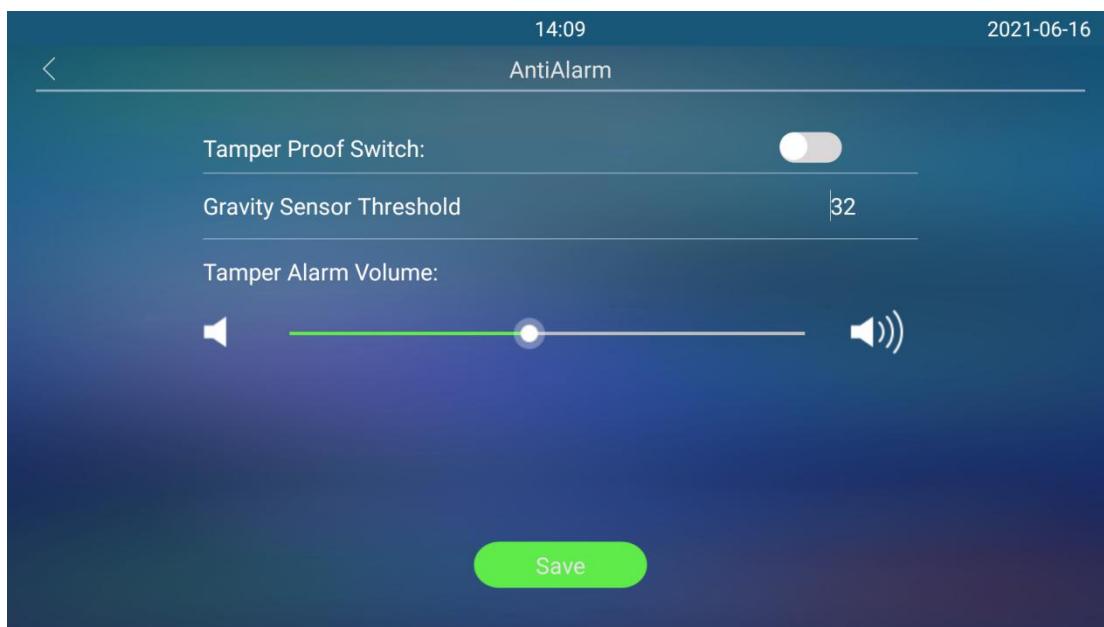
17.1.2. Configure Tamper Alarm on the Web Interface

You can also set up the temper alarm function in terms of switching on the function and setting up the gravity sensor sensitivity to suit your need. To configure the configuration on the web **Intercom > Advanced > Tamper Alarm** interface.

Tamper Alarm

Tamper Alarm	OFF ▼	
Gravity Sensor Thre...	32	(0~127)

Parameter Set-up:

- **Tamper Alarm**: click to select "**ON** " in the Tamper Alarm field in order to enable the anti-theft alarm function.

- **Gravity sensor Threshold**: set the threshold for the gravity sensory sensitivity. The lower threshold is, the higher sensitivity will be. The gravity sensor value is 32 by default.

17.2. Motion Detection

Motion Detection is often used for unattended surveillance video and automatic alarm. The images collected by the camera at different frame rates will be calculated and compared by the CPU according to a certain algorithm. When the picture changes, if someone walks by, the lens is moved, the number obtained by the calculation and comparison result will exceed the threshold and indicate that the system can the corresponding processing is made automatically.

17.2.1. Configure Motion Detection on the Device

You can turn on the motion detection and set up the motion detection interval on the device **Setting > Motion** screen.
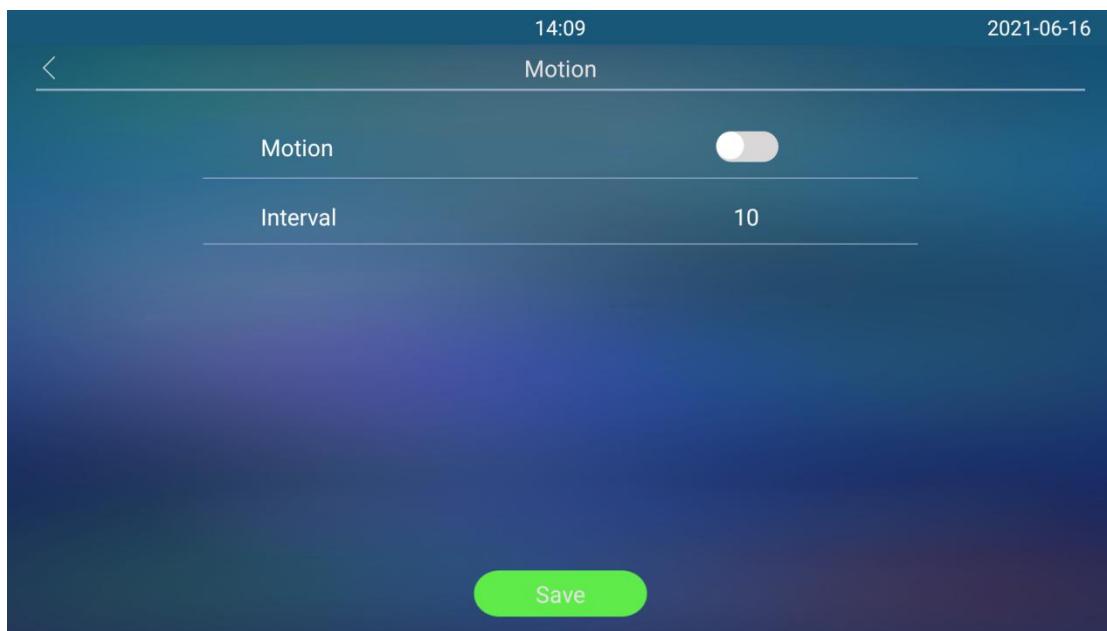
Parameter Set-up

- **Interval**: set the time interval for the motion detection. If you set the default time interval as "**10**" Sec, then the motion detection time span will be 10 seconds. Assuming that we set the time interval as "**10**" then, and the first movement captured can be seen as start point of the motion detection, and if the movement continues through 7 seconds of the 10 second interval, then the alarm will be triggered at 7 seconds (the first trigger point) and motion detection action can be triggered (sending out notification) anywhere between **7-10** seconds once movement is detected."10" Sec interval is a complete cycle of the motion detection before it starts another cycle of the same time interval. To be more specific, the first trigger point can be calculated as the "**Time interval minus three**".

17.2.2. Configure Motion Detection on the Web Interface

On the device web interface, you can not only configure the time interval but also the motion detection sensitivity and notification type when the motion detection action is triggered. To configure the configuration on the web **Intercom > Motion > Motion Detection Options** interface.

Motion Detection Options

Enable	OFF ▼	Notification	FTP ▼
Timing Interval	10	(0~65535 Seconds)	
Detection Accuracy	3		

Parameter Set-up:

- **Enable**: tick the check box to enable the motion detection function.

- **Notification**: select the notification type between FTP and Email. If you select "**FTP**", then the notification will be sent in FTP to a designated serve while if you select "Email" then the notification will be sent in the form of emails when motion detection action is triggered.

- **Time Interval**: set the time interval in the same away as you do on the device.

- **Detection Accuracy**: set the detection accuracy for the detection sensitivity. The small value it is, the greater sensitivity. the default detection accuracy value is "**20**".

17.3. Security Notification Setting

17.3.1. Email Notification Setting

If you want to receive the security notification via email, you can configure the Email notification on the web **Intercom > Action > Email Notification** interface properly.

Email Notification

Sender's email addr...		Email SendName	
Receiver's email add...		Email RecvName	
SMTP server address		Port	
SMTP user name		SMTP password	••••••••
Email subject			
Email content			

Parameter Set-up:

● **Sender's email address:** enter the sender's email address from which the email notification will be sent out.

● **Email SendName:** enter the name of the email sender.

● **Receiver's email address:** enter the receiver's email address.

● **Email RevName:** enter the name of the email receiver.

● **SMTP Server Address:** enter the SMTP server address of the sender.

● **SMTP User Name:** enter the SMTP user name, which is usually the same with sender's email address.

● **SMTP Password:** configure the password of SMTP service, which is same with sender's email address.

● **Email Subject:** enter the subject of the email.

● **Email Content:** compile the emails contents according to your need

17.3.2. FTP Notification Setting

If you want to receive the security notification via FTP, you can configure the FTP notification on the web **Intercom > Action > FTP Notification** interface properly.

FTP Notification

FTP Server		FTP User Name	
FTP Password	••••••••	FTP Path	

Parameter Set-up:

- **FTP Server**: enter the address (URL) of the FTP server for the FTP notification.

- **FTP User Name**: enter the FTP server user name.

- **FTP Password**: enter the FTP server password.

- **FTP Path**: enter the folder name you created in FTP server.

17.3.3. TFTP Notification Setting

If you want to receive the security notification via TFTP, you can configure the TFTP notification on the web **Intercom > Action > TFTP Notification** interface properly.

TFTP Notification

TFTP Server	

Parameter set-up:

- **TFTP server**: enter the address (URL) of the TFTP server for the TFTP notification.

18. Monitor and Image

18.1. RTSP Stream Monitoring

X916 door phone support RTSP stream that allows intercom devices such as indoor monitor or the monitoring unit from the third party to monitor or obtain the the real time audio/ video (RTSP stream) from the door phone using the correct URL.

18.1.1. RTSP Basic Setting

To configure the configuration on the web **Intercom > RTSP > RTSP Basic** interface.
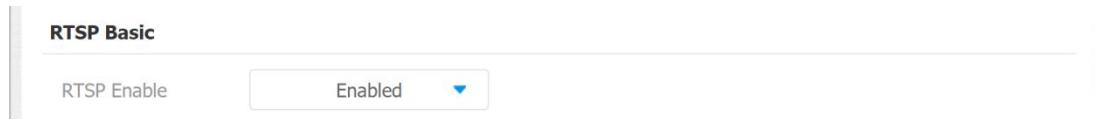
18.1.2. RTSP Stream Setting

You can select the video codec for the RTSP stream. You can also configure video resolution and bitrate etc. for H.264 codec based on your actual network environment on the web **Intercom > RTSP > RTSP Stream** interface.
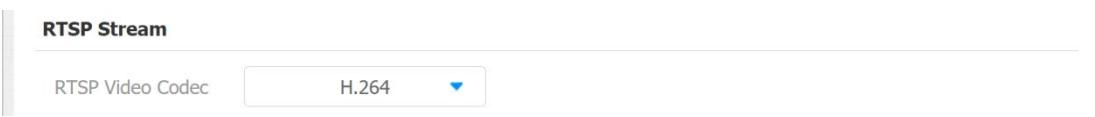
To configure the parameters for H.264 codec on the web **Intercom > RTSP > H.264 Video Parameters** interface.

H.264 Video Parameters

Video Resolution	720P ▼	Video Framerate	25 fps ▼
Video Bitrate	1024 kbps ▼	Video Resolution2	VGA ▼
Video Framerate2	25 fps ▼	Video Bitrate2	512 kbps ▼

Parameter Set-up:

● **Video Resolution**: select video resolutions among seven options: "**QCIF**", "**QVGA**", "**CIF**", "**VGA**", "**4CIF**", "**720P**", and "**1080P**". The default video resolution is "**720P.** and the video from the door phone might not be able to be shown in the indoor monitor if the resolution is set higher than "**720P**".

● **Video Framerate: "25fps"** is the video frame rate by default.

● **Video Bitrate**: select video bitrate among six options: "**128 kbps**", "**256kbps**", "**512 kbps**", "**1024 kbps**", "**2048 kbps**", "**4096 kpbs**" according to your network environment. The default video bitrate is "**2048 kpbs**".

● **Video Resolution2**: select video resolution for the second video stream channel. While the default video solution is "**VGA**".

● **Video Framerate2**: select the video framerate for the second video stream channel. **"25fps"** is the video frame rate by default for the second video stream channel.

● **Video Bitrate2**: select video bitrate among the six options for the second video stream channel. While the second video stream channel is "**512 kpbs**" by default.

18.2. MJPEG Image Capturing

X916 allow you to capture the Mjpeg format monitoring image if needed. You can enable the MJPEG function and set the image quality on the web **Intercom > Advanced > Mjpeg Service** interface.

Mjpeg Service

Mjpeg Service Enable	ON ▼	Image Quality	VGA ▼

Parameter Set-up:

- **Enabled**: tick the check box to enable the Mjpeg service.

- **Image Quality**: select the quality for the image capturing among six options: **QCIF, QVGA, CIF, VGA, 4CIF, 720P,**

After the MJPEG service is enabled, you can capture the image from the door phone using following three types of URL format:

- http:// device ip:8080/picture.cgi
- http://device ip:8080/picture.jpg
- http://device ip:8080/jpeg.cgi

For example, if you want to capture the JPG format image of door phone with the IP address: 192.168.1.104, you can enter "http://192.168.1.104:8080/picture.jpg" on the web browser

18.3. ONVIF

Real-time video from the X916 door phone camera can be searched and obtained by the Akuvox indoor monitor or by the third-party devices such as NVR (**Network Video Recorder**) you can configure the ONVIF function in the door phone so that other device will be able to see the video from the door phone. To configure the configuration on the web **Intercom > ONVIF** interface.

Basic Setting

Onvif Mode	Discoverable ▼	UserName	admin
Password	••••••••		

Parameter Set-up:

- **Discoverable:** tick the check box to enable the Discoverable ONVIF mode.

If you select "**Discoverable**" then the video from the door phone camera can be searched by other devices.

● **User Name:** enter the user name. The user name is "**admin**" by default.

● **Password**: enter the password. The password is "**admin**" by default.

After the setting is complete, you can enter the ONVIF URL on the third-party device to view the video stream.
For example: **http://IP address:80/onvif/device_service**

> ⓘ **Note:**
>
> ● Fill in the specific IP address of the door phone in the URL.

18.4. Live Stream

If you want to check the real-time video from the X916 door phone, you can go to the device web interface to obtain the real-time video or you can also enter the correct URL on the web browser to obtain it directly. To view the real time video on the web **Intercom > Live Stream** interface. You can also enter the correct URL (**http://IP_address:8080/video.cgi**) on the web browser if you want to obtain the real-time video directly with going to the web interface.

Live Stream

19. Logs

19.1. Call Logs

If you want to check on the calls inclusive of the dial-out calls, received calls and missed calls in a certain period of time, you can check and search the call log on the device web interface and export the call log from the device if needed. To check the call log on the web **PhoneBook > Call Log** interface.

Parameter Set-up:

- **Call History**: select call history among four options: "**All**", "**Dialed**", "**Received**", and "**Missed**" for the specific type of call log to be displayed.

- **Active:** tick the check box to enable the call log function.

- **Start Time ~ End Time**: select the specific time span of the call logs you want to search, check, or export.

- **Name/Number**: select the "**Name**" and "**Number**" options to search call log by the name or by the SIP or IP number.

19.2. Door Logs

If you want to search and check on the various types of door access history, you can search and check the door logs on the device web **Phone > DoorLog** interface.
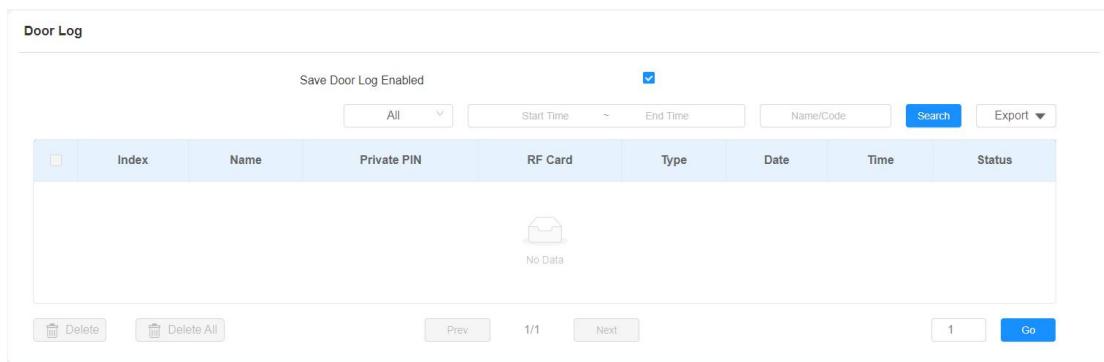
Parameter Set-up:

- **Save Door Log Enabled:** tick the check box to enable the door log function.

- **Status:** select between **"Success" and "Failed"** options to search for successful door accesses or Failed door accesses.

- **Start Time ~ End Time:** select the specific time span of the door logs you want to search, check, or export.

- **Name/Code**: select the "**Name**" and "**Code**" options to search door log by the name or by the PIN code.

20. Debug

20.1. System Log for Debugging

System log in the door phone can be used for debugging purpose. If you want to export the system out to a local PC or to a remote server for debugging, you can set up the function on the web **Upgrade > Advanced > System Log** interface.
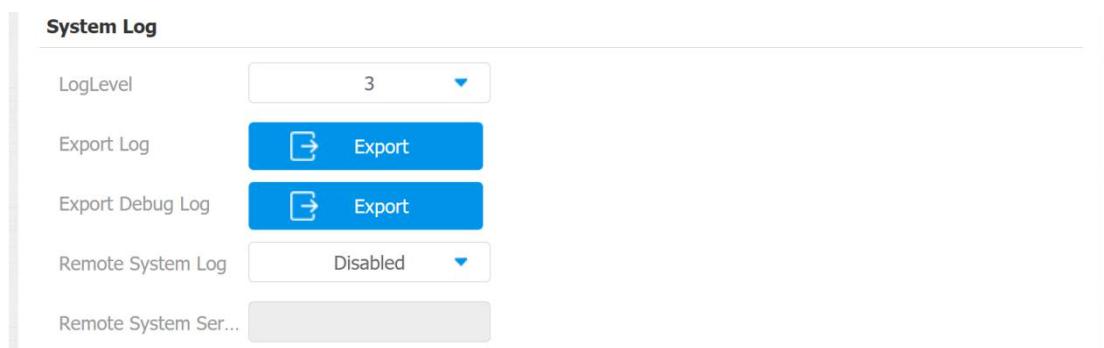
Parameter Set-up:

- **LogLevel**: select log levels from 1 to 7 levels. You will be instructed by Akuvox technical staff about the specific log level to be entered for debugging purpose. The default log level is "**3**".   the higher the level is, the more complete the log is.

- **Export Log**: click th**e Export** tab to export temporary debug log file to a local PC.

- **Export Debug Log**: click th**e Export** tab to export debug log file to a local PC.

- **Remote System Log**: select "**Enable**" or " **Disable**" if you wan to enable or disable the remote system log.

- **Remote System Server**: enter the remote server address to receive the device **log.** And the remote server address will be provided by Akuvox technical support.

20.2. PCAP for Debugging

PCAP in X916 door phone is used to capture the data package going in and out of the devices for debugging and troubleshooting purpose. You can set up the PCAP on the device web **Upgrade > Diagnose > PCAP** interface properly before using it.

PCAP			
Specific Port		(1~65535)	
PCAP	Start	Stop	⤷ Export
PCAP Auto Refresh	Disabled ▼		
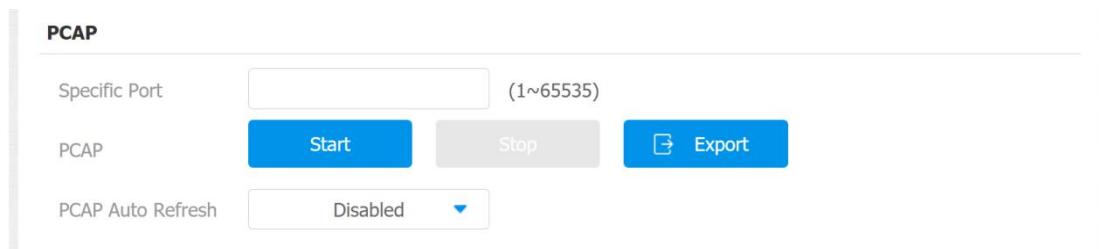
Parameter Set-up:

- **Specific Port**: select the specific ports from 1-65535 so that only the data packet from the specific port can be captured. You can leave the field blank by default.

- **PCAP**: click **Start** tab and **Stop** tab to capture a certain range of data packets before clicking **Export** tab to export the data packets to your Local PC.

- **PCAP Auto Refresh**: select "**Enable**" or "**Disable**" to turn on or turn off the PCAP auto fresh function. If you set it as "Enable" then the PCAP will continue to capture data packet even after the data packets reached its 1M maximum in capacity. If you set it as "**Disable**" the PCAP will stop data packet capturing when the data packet captured reached the maximum capturing capacity of 1MB.

21. Firmware Upgrade

Firmware of different versions for X916 door phone can be upgraded on the device web **Upgrade > Basic** interface.

Firmware Version	916.30.1.405		Hardware Version	916.0	
Upgrade	Not selected any files	Select File		Submit	Cancel

⚠ **Note:**

● Firmware files should be .**zip** format for upgrade.

---

22. Backup

Configuration files can be imported to or exported out of the device to your local PC on the device web **Upgrade > Advanced > Others** interface if needed.
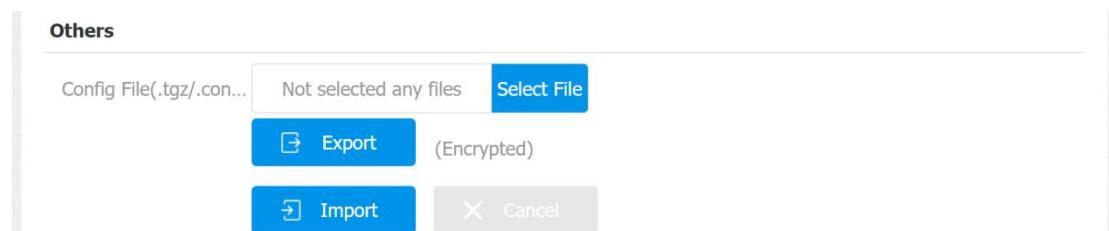
23. Auto Provisioning

Configurations and upgrading on X916 door phone can be done on the web interface via one-time auto-provisioning and scheduled auto- provisioning via configuration files, thus saving you from setting up configuration needed one by one manually on the door phone.

23.1. Provisioning Principle

Auto-provisioning is a feature used to configure or upgrade the devices in batch via third party servers. **DHCP, PNP, TFTP, FTP, HTTPS** are the protocols used by the Akuvox intercom devices to access the URL of the address of the third-party server which stores configuration files and firmware, which will then be used to update the firmware and the corresponding parameters on the door phone.
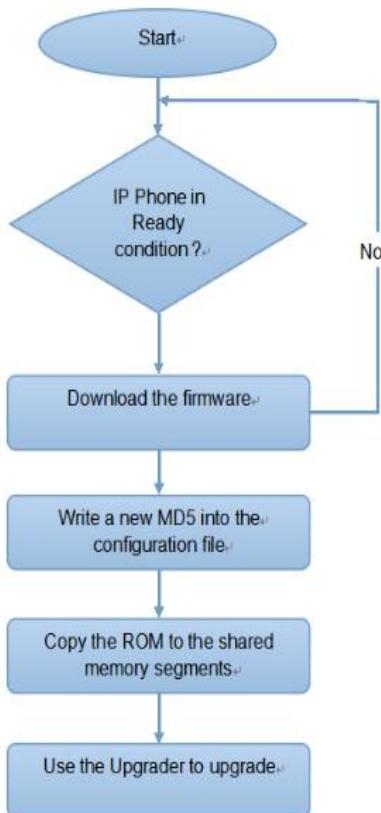
23.2. Configuration Files for Auto-provisioning

Configuration files have two formats for the auto-provisioning. one is the general configuration files used for the general provisioning and other one is the MAC-based configuration provisioning.

The difference between the two types of configuration files is shown as below:

- **General configuration provisioning**: a general file is stored in a server from which all the related devices will be able to download the same configuration file to update parameters on the devices. For example：r000000000916.cfg.

- **MAC-based configuration provisioning**: MAC-based configuration files is used for the auto-provisioning on a specific device as distinguished by its unique MAC number. And the configuration files named with device MAC number will be matched automatically with the device MAC number before being downloaded for the provisioning on the specific device.

> **Note:**
>
> - If a server has these two types of configuration files, then IP devices will first access the general configuration files before accessing the MAC-based configuration files.

23.3. AutoP Schedule

Akuvox provides you with different Autop methods that enable the door phone to perform provisioning for itself in a specific time according to your schedule.

To configure the configuration on the web **Upgrade > Advanced > Automatic Autop** interface.

Automatic Autop

Mode	Power On ▼
Schedule	Sunday ▼
	22 Hour(0~23) 0 Min(0~59)
Clear MD5	Submit
Export Autop Templ...	➔ Export
	Submit Cancel

Parameter Set-up:

● **Mode:** select "**Power on**", "**Repeatedly**", "**Power On + Repeatedly**", and "**Hourly Repeat**" as your Autop schedule.
Select "**Power on**" if you want the device to perform Autop every time it boots up.
Select "**Repeatedly**", if you want the device to perform Autop according to the schedule you set up.
Select "**Power On + Repeatedly**" if you want to combine **Power On Mode** and **Repeatedly mode,** it would enable the device to perform Autop every time it boots up or according to the schedule you set up.
Select "**Hourly Repeat**" if you want the device to perform Autop every hour.

23.4. DHCP Provisioning Configuration

Auto-provisioning URL can also be obtained using DHCP option which allows device to send a request to a DHCP server for a specific DHCP option code. If you want to use **Custom Option** as defined by users with option code range from 128-255), you are required to configure DHCP Custom Option on the web interface.
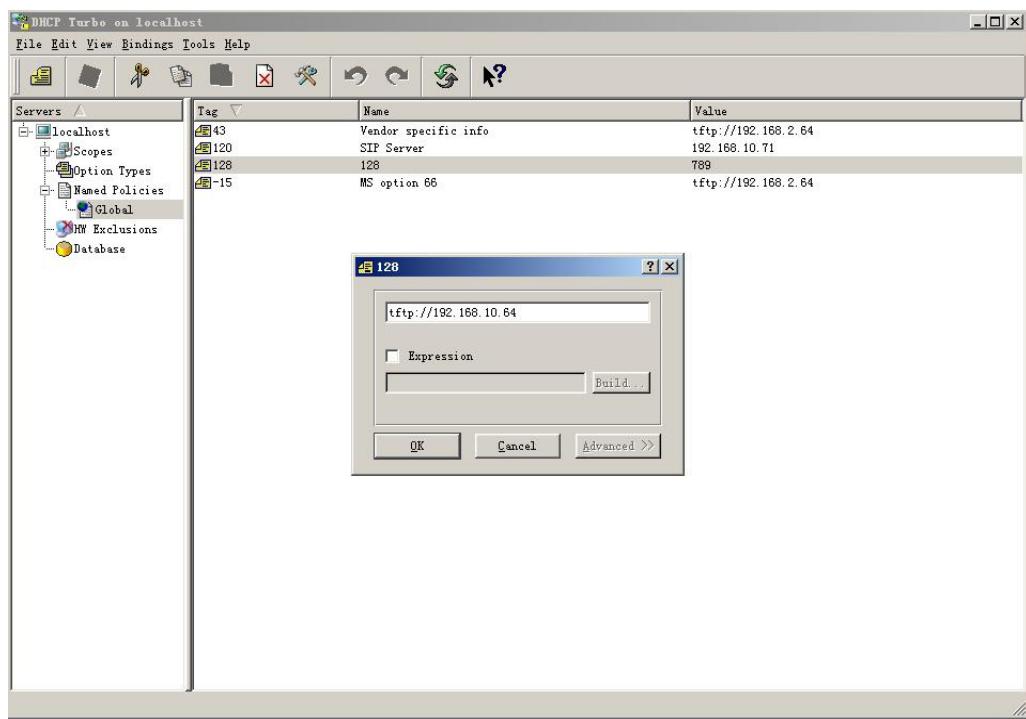
> ⓘ **Note:**
>
> ● The custom Option type must be a string. The value is the URL of TFTP server.

Parameter set-up:

● **Custom Option**: enter the DHCP code that matched with corresponding URL so that device will find the configuration file server for the configuration or upgrading.

● **DHCP Option 66:** If none of the above is set, the device will automatically use DHCP Option 66 for getting the upgrade server URL. This is done within the software and the user does not need to specify this. To make it work, you need to configure the DHCP server for the option 66 with the update server URL in it.

● **DHCP Option 43:** If the device does not get an URL from DHCP Option 66, it will automatically use DHCP Option 43. This is done within the software and the user does not need to specify this. To make it work, you need to configure the DHCP server for the option 43 with the update server URL in it.

> ⚠️ **Note:**
>
> ● The general configuration file for the in-batch provisioning is with the format "r**0000000000xx.cfg**" taking X915 as an example "r000000000915.cfg (10 "zeros" in total while the MAC-based configuration file for the specific device provisioning is with the format" MAC Address of the device.cfg, for example "**0C110504AE5B.cfg.**"

23.5. Static Provisioning Configuration

You can manually set up a specific server URL for downloading the firmware or configuration file. If an autop schedule is set up, the door phone will perform the auto provisioning on a specific timing according to autop schedule you set up. In addition, TFTP, FTP, HTTP, and HTTPS are the protocols that can be used for upgrading the device firmware and configuration.   To download the Autop template on **Upgrade > Advanced > Automatic Autop ,** and setup Autop server on **Upgrade > Advanced > Manual Autop** interface.

Parameter set-up:

- **URL**: set up tftp，http，https，ftp server address for the provisioning

- **User Name**: set up a user name if the server needs an user name to be accessed to otherwise leave it blank.

- **Password**: set up a password if the server needs a password to be accessed to otherwise leave it blank.

- **Common AES Key**: set up AES code for the intercom to decipher general Auto Provisioning configuration file.

- **AES Key (MAC)**: set up AES code for the intercom to decipher the MAC-based auto provisioning configuration file.

> (!) **Note:**
>
> - AES is one type of encryption, it should be configured only when the config file is encrypted with AES, otherwise leave the field blank.

⚠️ **Note:**

Server Address format:

- TFTP: tftp://192.168.0.19/
- FTP: ftp://192.168.0.19/ (allows anonymous login)
- ftp://username:password@192.168.0.19/(requires a user name and password)
- HTTP: http://192.168.0.19/ (use the default port 80)
- http://192.168.0.19:8080/ (use other ports, such as 8080)
- HTTPS: https://192.168.0.19/ (use the default port 443)

✓ **Tip:**

- Akuvox do not provide user specified server.
- Please prepare TFTP/FTP/HTTP/HTTPS server by yourself.

24. Integration with Third Party Device

24.1. Integration via Wiegand

If you want to integrate the X916 door phone with the third-party devices via Wiegand. To configure the configuration on the web **Intercom > Advanced > Wiegand** interface.

Wiegand

Wiegand Type	Wiegand-26 ▼	Wiegand Mode	Input ▼
Wiegand Input Order	Normal ▼	Wiegand Output Or...	Normal ▼
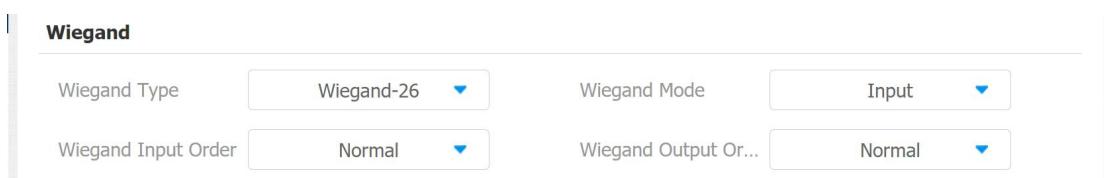
Parameter Set-up:

- **Wiegand Type:** set the Wiegand data transmission format among two options: **Wiegand 26**, **Wiegand 34**. The transmission format should be identical between the door phone and the device to be integrated.

- **WiegandMode:** set the Transfer mode between **Input** or **Output** if the door phone is used as a receiver, then set it as **Input** for the door phone and vice versa.

- **Wiegand Input Order：** set the Wiegand input data sequence between **Normal** and **Reversed** if you select **Reversed** then the input card number will be reversed an vice versa.

- **Wiegand Output Order:** set the Wiegand output data sequence between **Normal** and **Reversed** if you select **Reversed** then the input card number will be reversed an vice versa.

25. System Reboot&Reset

25.1.Reboot

25.1.1. Reboot on the Web

If you want to restart the device system, you can operate it on the device web interface as well. Moreover, you can set up schedule for the device to be restarted. To restart the system setting on the web **Upgrade > Basic** interface.

25.1.2. Reboot on the Device

If you want to restart the system setting of the device, you can operate it directly on the device **Reboot** setting screen or on the device web interface.
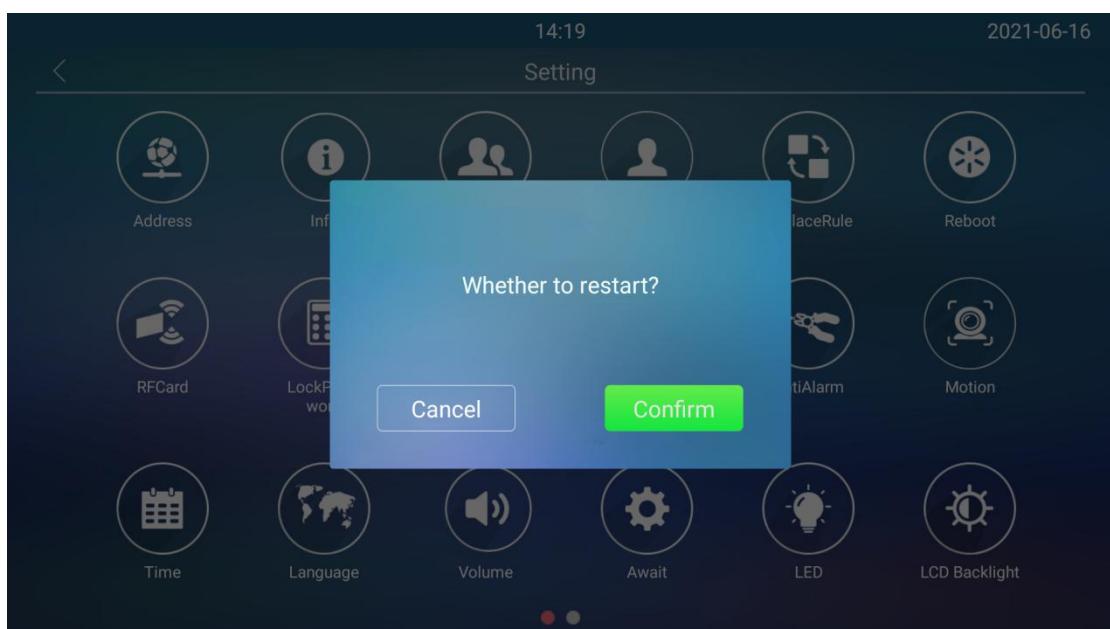
25.2.Reset

25.2.1.   Reset on the Web

If you want to reset the device system to the factory setting, you can it on the web **Upgrade > Basic** interface.

25.2.2.   Reset on the Device

If you want to reset the device system to the factory setting, you can operate it directly on the device **Restore** screen.
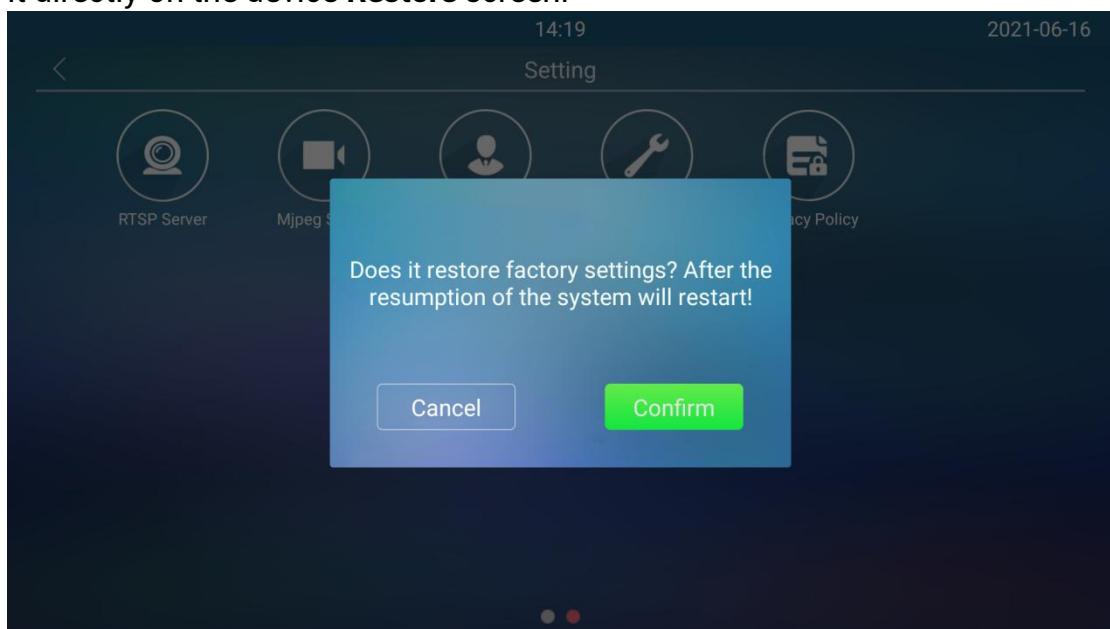
26. Abbreviations

ACS: Auto Configuration Server

Auto: Automatically

AEC: Configurable Acoustic and Line Echo Cancelers

ACD: Automatic Call Distribution

Autop: Automatic Provisioning

AES: Advanced Encryption Standard

BLF: Busy Lamp Field

COM: Common

CPE: Customer Premise Equipment

CWMP: CPE WAN Management Protocol

DTMF: Dual Tone Multi-Frequency

DHCP: Dynamic Host Configuration Protocol

DNS: Domain Name System

DND: Do Not Disturb

DNS-SRV: Service record in the Domain Name System

FTP: File Transfer Protocol

GND: Ground

HTTP: Hypertext Transfer Protocol

HTTPS: Hypertext Transfer Protocol Secure Socket Layer

IP: Internet Protocol

ID: Identification

IR: Infrared

LCD: Liquid Crystal Display

LED: Light Emitting Diode

MAX: Maximum

POE: Power Over Ethernet

PCMA: Pulse Code Modulation A-Law

PCMU: Pulse Code Modulation μ-Law

PCAP: Packet Capture

PNP: Plug and Play

RFID: Radio Frequency Identification

27. FAQ

Q1: How to obtain IP address of R2X

A1: ✔ For devices with single button - E21/ R20/ R23/ R26:

While E21/ R20/ R23/ R26 power up normally, hold the call button for 5 seconds after the statue LED turns blue and it will enter IP announcement mode. In announcement mode, the IP address will be announced repeatedly. Press call button again to quit the announcement mode.

✔ For devices with multiple numeric keyboard - R27:

While R27 power up normally, press "∗2396#" to enter home screen and press "1" to go to system Information screen to check the IP address.

✔ For devices with touch screen - X916:

While X916 power up normally, in the dial interface, press "9999", "Dial key", "3888" and "OK" to enter the system setting screen. Go to info screen to check the IP address.

✔Common method:

Using Akuvox IP Scanner to search Akuvox devices in the same LAN network.

Q2: Do Akuvox devices support opus codec?
A2: For now, only Akuvox Android video IP phone R48G can support Opus audio codec.

Q3: What is the supported temperature range for akuvox doorphone?
A3: R20/E21/R26/R23/Standard R27/Standard X915 -- 14° to 112°F (-10° to 45°C)
R27/X916 with heating supporting --- 40 degrees
R28 -- (-40°C~55°C)
Indoorphone -- 14° to 112°F (-10° to 45°C)
IPPhone -- 32º~104ºF(0~40ºC)

Q4: Do Akuvox devices support Modbus protocol?
A4: No.

Q5：Failure in importing the X915 face data to another X915 using the exported face data .
A5：Please confirm the following steps：
The import format is zip.
1. After you export, you need to unzip the .tgz folder, then make the unziped folrder into .zip again.

Q55: Which version of ONVIF does R20 and X915 support?
A55: Onvif 18.04 profiles

Q6: Do door phones support these card types? Prox, Legacy iClass, iClassSE, HID Mifare, HID DESFire, and HID SEOS

A6: Sorry, they are not supported. They need to be implemented via hardware modifications.

Q7: How to confirm whether my device is hardware version 1 or hardware version 2?

A7: 1. Label

● **Hardware version 1**
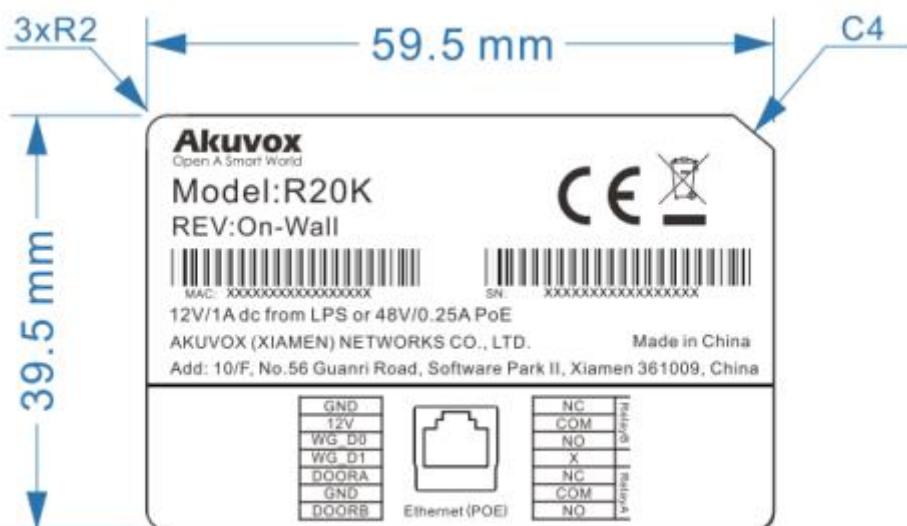
● **Hardware version 2**
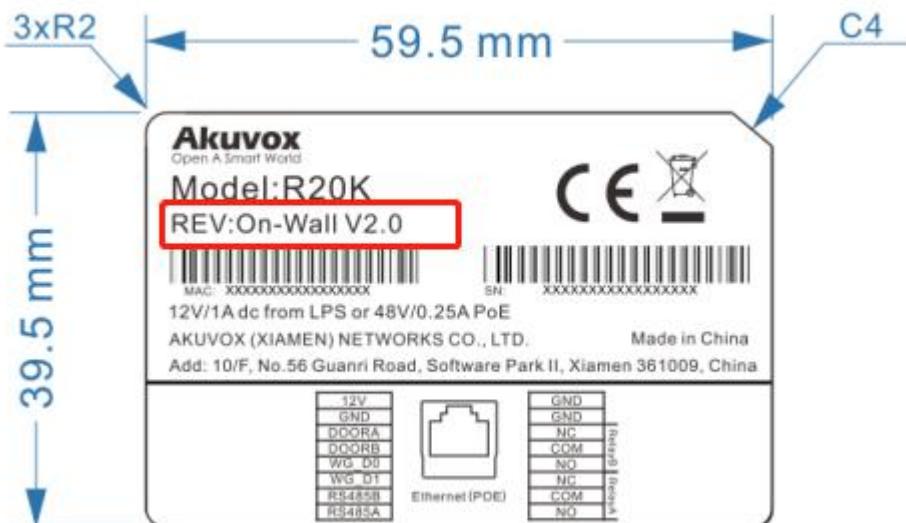
- **Firmware Version**

The firmware is different between hardware version1 and hardware version 2.
Go to Web-Status -Firmware Version.
20.X.X.X is hardware version 1.
220.X.X.X is hardware version 2.

- **Hardware version**

The firmware is different between hardware version1 and hardware version 2.
Go to Web-Status -Firmware Version.
If the hardware version is 220.x, then the device is hardware version 2.

Contact us

For more information about the product, please visit us atwww.akuvox.com or feel free to contact us by
Sales email: sales@akuvox.com
Technical support email: support@akuvox.com
Telephone: +86-592-2133061 ext.7694/8162

We highly appreciate your feedback about our products.