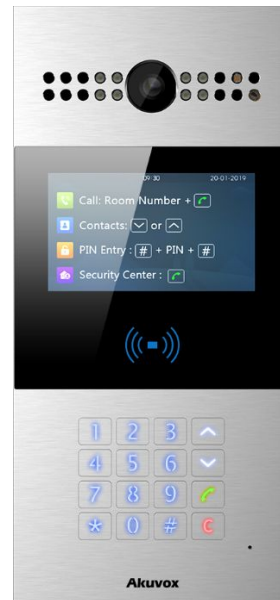
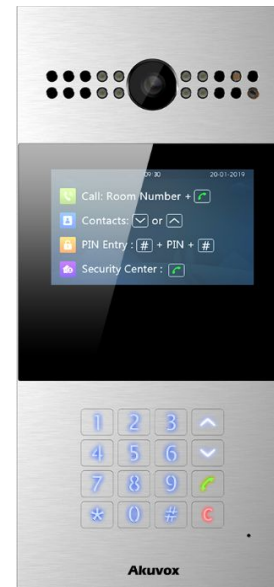


Akuvox Smart
Intercom



R28A



R28V

R28 Series Door Phone Admin Guide

About This Manual

Thank you for choosing Akuvox's R28 series door phone. This manual is intended for end users who need to properly configure the door phone. This manual is applicable to 28.31.1.xx version, and it provides all functions' configurations of R28 series door phone. Please visit Akuvox forum or consult technical support for any new information or latest firmware.

Note: Please refer to universal abbreviation form in the end of manual when meet any abbreviation letter.

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1. Product Overview

1.1. Instruction

R28 series is an Linux-based doorphone and SIP-compliant with a 4.3" screen and a dialpad. It incorporates audio communications, camera capabilities and access control.

It is applicable to multi-storey residential buildings, high-rise office buildings and their complexes.

Occupants can communicate with visitors via audio and video calls, and unlock the door if they need. Visitors can also use PIN codes or RFID cards to unlock the door.

Its multiple ports, Door, Relay(COM), RS485 and Wiegand, can be used to easily integrate external digital systems, such as elevator controller and fire alarm detector, creating a holistic entrance control.

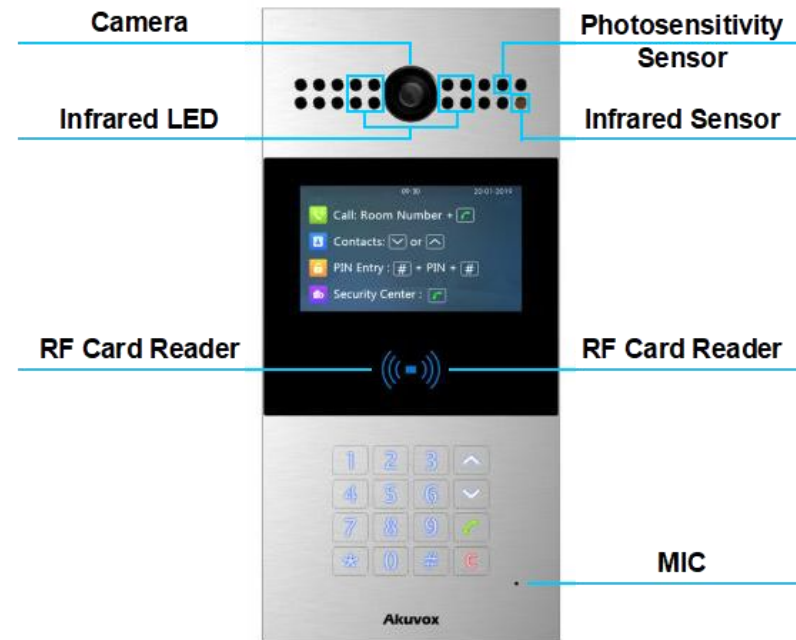


Figure1.1 Product Description

1.2 Connector Introduction

Ethernet (POE): Ethernet (POE) connector which it can provide both power and network connection.

12V/GND: External power supply terminal if POE connector is not available.

WG_D0/WG_D1: Wiegand terminal.

DOORA/B/C: Trigger signal input terminal.

RS485A/B: RS485 terminal.

RelayA/B/C (NO/NC/COM): Relay control terminal.

12V_OUT/GND_OUT: External power output terminal.

Note: The general door phone interface diagram is only for reference.

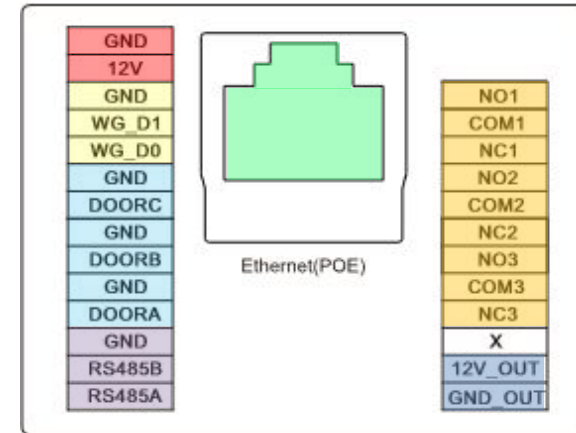


Figure 1.2-1 R28's interface

2. Daily Use

2.1. Make a Call

Visitors can make a call in the main interface.

Call: Users can make a call by entering room number, SIP extension or IP address and then press “Dial key.”

Security center call : Users can make a speed dial to security center by pressing “Dial Key” directly.

Call from contacts: Users can press “Up/Down key” to enter contacts interface, select the contact to dial to by pressing up/down key on contacts interface and press “Dial key” to make a call.

2.2. Receive a Call

It will auto answer the incoming call by default. If users disable auto answer function, they can press “Dial key” to answer the incoming call.

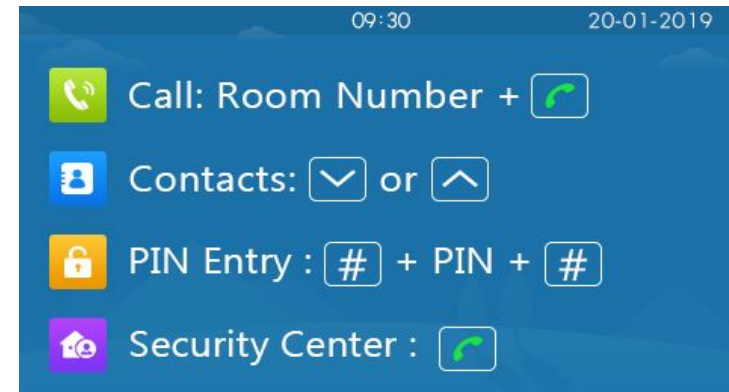


Figure 2.1-1 Idle interface

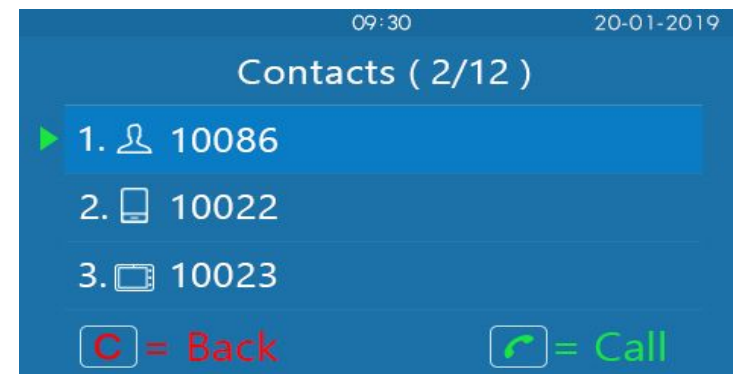


Figure 2.1-2 Contacts interface

2.3. Unlock

2.3.1. Unlock by PIN Codes

Press # PIN Code # to unlock, then visitors will hear “The door is now opened” and the screen will show “Unlock”. If visitors input the wrong PIN code, the screen will show “Incorrect PIN”.

2.3.2. Unlock by RF cards

The Building-in card reader supports 13.56MHz and 125kHz RFID-Card .

Place a registered card on RF area to unlock., then visitors will hear “The door is now opened” and the screen will show “Unlock”. If the card has not been registered, the phone will show “Invalid Card”.

2.3.3. Unlock by DTMF codes

During the calling, the Occupants can press the predefined DTMF codes to remote unlock the door. then visitors will hear “The door is now opened” and the screen will show “Unlock”.

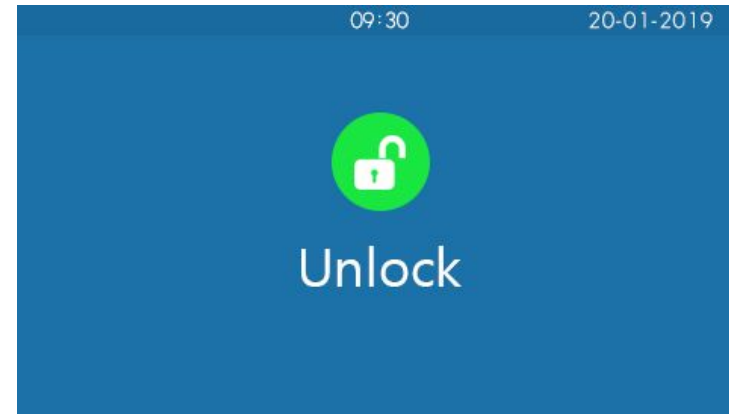


Figure 2.3.1-1 Unlock interface



Figure 2.3.1-2 Unlock failed interface

3. Basic Features

3.1. Access Settings

3.1.1. Administrator Interface

Press “*2396#” to enter administrator interface. Administrator interface provides some advanced permissions to administrators, including “System Information,” “Admin Settings” and “System Settings.”

3.2. Access the Website Setting

3.2.1. Obtain IP Address

R27 use DHCP IP by default. Press “*2396#” to enter administrator interface. Press “1” to enter system Information interface to check the IP address.

3.2.2. Access the Device Website

Open a web browser, and access the corresponding IP address. Enter the default user name and password to login. The default

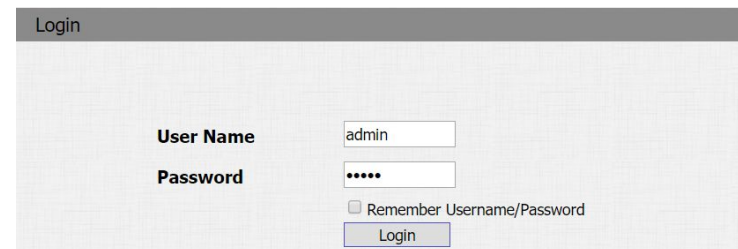


Figure 3.2.2 shows a screenshot of the device website login page. The page has a dark header with the word "Login" in white. Below the header, there are two input fields: "User Name" with the text "admin" and "Password" with masked characters ".....". Below the password field is a checkbox labeled "Remember Username/Password" which is unchecked. At the bottom right is a "Login" button.

Figure 3.2.2 Access the device website

administrator's user name and password are shown below:

User Name: **admin**

Password: **admin**

Note: The recommended browser is Google Chrome.

3.3.Password Modification

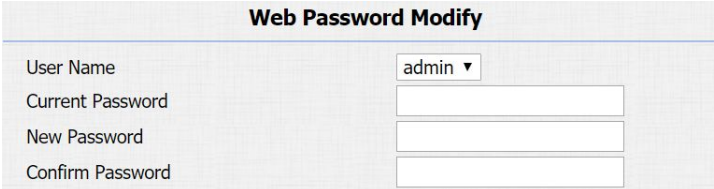
3.3.1.Admin Password Settings on R28

Go to **Settings - Admin Settings - Admin Password Setting** on R28,to modify Admin Password on R28.

3.3.2.Modify the Device Service Code

Service code is used to enter user interface. The default code is 3888.

Press “*2396#” to enter administrator interface. Press “2” and “3” to enter service code setting interface to input a 4-digit new user code, and press “Dial key” to save.



The screenshot shows a web form titled "Web Password Modify". It contains four input fields: "User Name" with a dropdown menu showing "admin", "Current Password", "New Password", and "Confirm Password".

Figure 3.3.3 Web Password Modify

3.3.3. Web Password Modify on Website

Login to the website and go to **Security - Basic**, to modify web password.

3.4. Phone Configuration

3.4.1. Language

Go to **Phone - Time/Lang** to select language for webpage.

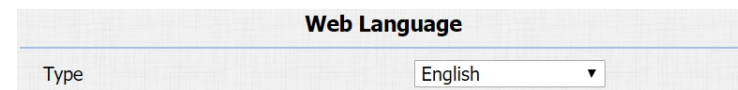
3.4.2. Time

Go to **Phone - Time/Lang** to configure the time related features.

Format Setting: To select time format and date format.

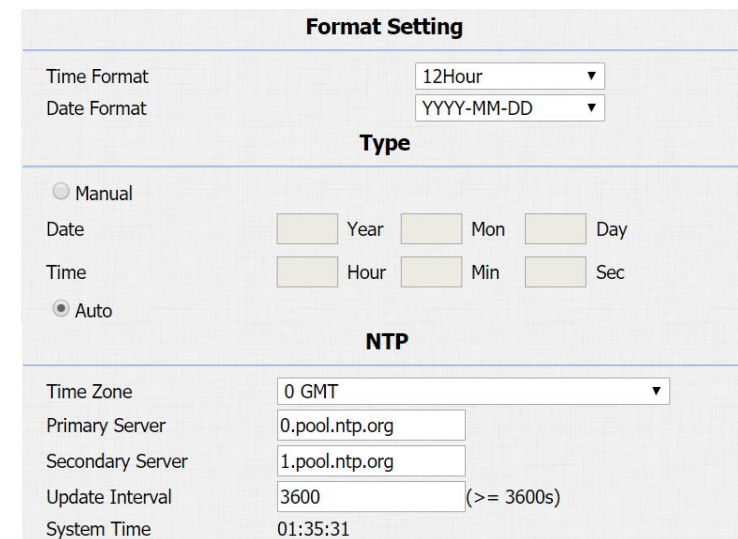
Type: To select configure the time manually or automatically.

NTP: To select local time zone for NTP server.



Web Language	
Type	English

Figure 3.4.1 Language



Format Setting	
Time Format	12Hour
Date Format	YYYY-MM-DD
Type	
<input type="radio"/> Manual	
Date	<input type="text"/> Year <input type="text"/> Mon <input type="text"/> Day
Time	<input type="text"/> Hour <input type="text"/> Min <input type="text"/> Sec
<input checked="" type="radio"/> Auto	
NTP	
Time Zone	0 GMT
Primary Server	0.pool.ntp.org
Secondary Server	1.pool.ntp.org
Update Interval	3600 (>= 3600s)
System Time	01:35:31

Figure 3.4.2 Time

3.4.3. Network

3.4.3.1. DHCP Mode

At device side, press “*2396#” to enter administrator interface. Press “3” to enter system setting interface, and press “1” to enter network setting interface.

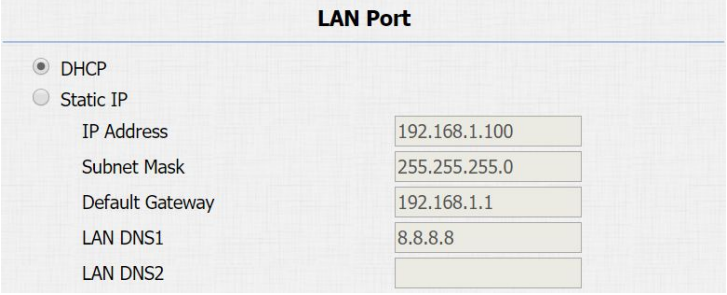
Select DHCP mode, and R28 will access network automatically.

In website, go to **Network - Basic**.

R28 uses DHCP mode by default which will get IP address, subnet mask, default gateway and DNS server address from DHCP server automatically.

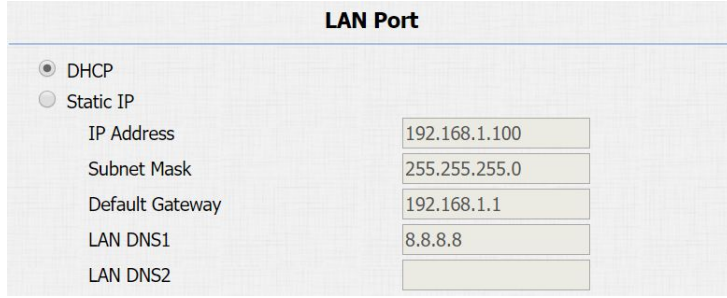
3.4.3.2. Static IP Mode

At device side, press “*2396#” to enter administrator interface. Press “3” to enter system setting interface, and press “1” to enter network setting interface.



The screenshot shows the 'LAN Port' configuration page. At the top, 'LAN Port' is written in bold. Below it, there are two radio buttons: 'DHCP' (which is selected) and 'Static IP'. Underneath, there are five input fields with the following values: IP Address (192.168.1.100), Subnet Mask (255.255.255.0), Default Gateway (192.168.1.1), LAN DNS1 (8.8.8.8), and LAN DNS2 (empty).

Figure 3.4.3.1 DHCP mode



The screenshot shows the 'LAN Port' configuration page. At the top, 'LAN Port' is written in bold. Below it, there are two radio buttons: 'DHCP' and 'Static IP' (which is selected). Underneath, there are five input fields with the following values: IP Address (192.168.1.100), Subnet Mask (255.255.255.0), Default Gateway (192.168.1.1), LAN DNS1 (8.8.8.8), and LAN DNS2 (empty).

Figure 3.4.3.2 Static IP mode

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Select static IP mode, users need to setup IP address, subnet mask, default gateway and DNS server address. Press “Dial key” when finish each step.

In Website, go to **Network - Basic**.

If select static IP, users should manually setup IP address, subnet mask, default gateway and DNS server address. The figure right shows static IP settings.

3.4.3.3. Local RTP

Go to **Network - Advanced** to configure.

Local RTP: To display and configure local RTP settings.

Starting RTP Port: Determine the minimum port that RTP stream can use.

Max RTP Port: Determine the maximum port that RTP stream can use.

3.4.3.4. SNMP

Go to **Network - Advanced** to configure.

Local RTP		
Starting RTP Port	<input type="text" value="11800"/>	(1024~65535)
Max RTP Port	<input type="text" value="12000"/>	(1024~65535)

Figure 3.4.3.3 Local RTP

SNMP		
Active	<input type="text" value="Disabled"/>	
Port	<input type="text"/>	(1024~65535)
Trusted IP	<input type="text"/>	

Figure 3.4.3.4 SNMP

SNMP: To display and configure SNMP settings.

Active: To enable or disable SNMP feature.

Port: To configure SNMP server's port.

Trusted IP: To configure allowed SNMP server address. It could be an IP address or any valid URL domain name.

Note: SNMP is Internet-standard protocol for managing devices on IP networks.

3.4.3.5.VLAN

Go to **Network - Advanced** to configure.

VLAN: To display and configure VLAN settings.

Active: To enable or disable VLAN feature for designated port.

VID: To configure VLAN ID for designated port.

Priority: To select VLAN priority for designated port.

Note: Please consult administrator for specific VLAN settings in the networking environment.

VLAN		
LAN Port	Active	Disabled ▾
	VID	1 (1~4094)
	Priority	0 ▾

Figure 3.4.3.5 VLAN

3.4.3.6.TR069

Go to **Network - Advanced** to configure.

TR069: To display and configure TR069 settings.

Active: To enable or disable TR069 feature.

Version: To select supported TR069 version (version 1.0 or 1.1).

ACS/CPE: ACS is short for auto configuration servers as server side, and CPE is short for customer-premise equipment as client side devices.

URL: To configure URL address for ACS or CPE.

User Name: To configure username for ACS or CPE.

Password: To configure password for ACS or CPE.

Periodic Inform: To enable periodically inform.

Periodic Interval: To configure interval for periodic inform.

Note: TR-069 is a technical specification entitled CPE WAN Management Protocol (CWMP). It defines an application layer protocol for remote management of end-user devices.

TR069		
ACS	Active	Disabled ▾
	Version	1.0 ▾
	URL	<input type="text"/>
	User Name	<input type="text"/>
Periodic Inform	Password	••••••
	Active	Disabled ▾
	Periodic Interval	1800 (3~24×3600s)
CPE	URL	<input type="text"/>
	User Name	<input type="text"/>
	Password	••••••

Figure 3.4.3.6 TR069

3.4.4.Display

Go to **Intercom - Basic** to configure display related features.

Display Number: To enable to display the number in LCD or not.

If disabled, each number will be displayed as a star.

Go to **Intercom - Advanced** to configure display related features.

LCD Text: Users can customize the LCD text during the idle by themselves, such as “Welcome” or something else.

AccountStatus Enabled: The LCD text will only be shown if the the account is valid.

LCD Text Enable: Switch this feature.

LCD Text: Display content.

3.4.5.Voice

Login to the website and go to **Phone - Voice**, to configure voice parameters.

Go to **Phone - Voice** to configure volume and upload tone file.

Mic Volume: To configure microphone volume.

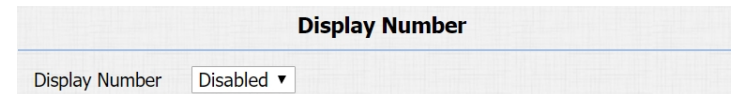


Figure 3.4.4-1 Display number

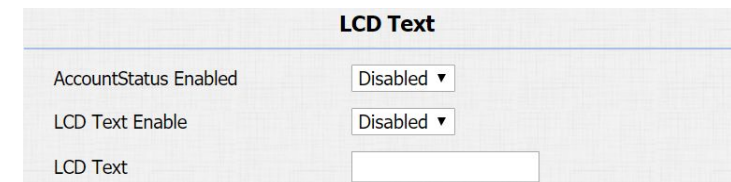


Figure 3.4.4-2 LCD display

Speaker Volume: To configure speaker volume.

Open Door Warning: Disable it, and users will not hear the prompt voice when the door is opened.

RingBack Upload: To upload the ring back tone by users themselves.

Opendoor Tone Upload: To upload the open door tone by users themselves.

3.5. Intercom Call

3.5.1. Direct IP Call

Go to **Phone - Call Feature** to enable the direct IP call for door phones first.

In the idle interface, press the IP address (like IP address 192.168.1.100, users need to press “192*168*1*100”) and “Dial key” to make a direct IP call.

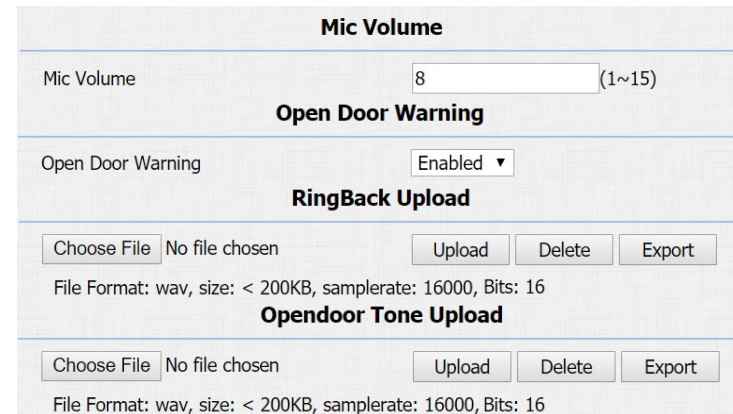


Figure 3.4.5 Voice



Figure 3.5.1 Direct IP call

3.5.2.SIP Call

SIP calls which use SIP numbers to make or receive calls should be supported by SIP server. Users need to register accounts and fill SIP feature parameters before using it.

Go to **Account - Basic** to configure SIP account and SIP server for door phones first.

3.5.3.SIP Account

Status: To display register result.

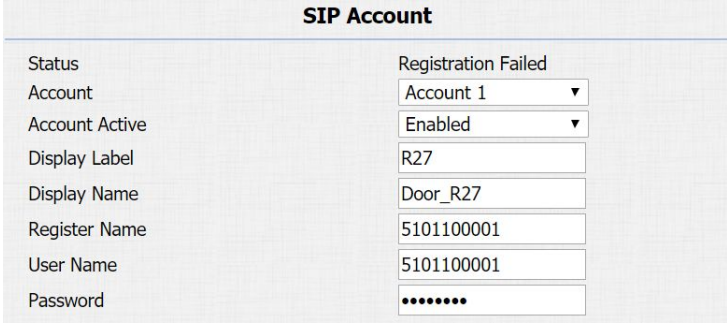
Display Label: To configure label displayed on the phone's LCD screen.

Display Name: To configure name sent to the other call party for displaying.

Register Name: To enter extension number which users want and the number is allocated by SIP server.

User Name: To enter user name of the extension.

Password: To enter password for the extension.



SIP Account	
Status	Registration Failed
Account	Account 1
Account Active	Enabled
Display Label	R27
Display Name	Door_R27
Register Name	5101100001
User Name	5101100001
Password	••••••••

Figure 3.5.3 SIP account

3.5.4.SIP Server 1&2

Server IP 1: To enter SIP server's IP address or URL.

Server IP 2: To display and configure secondary SIP server settings. This is for redundancy, if registering to primary SIP server fails, the phone will go to secondary SIP server for registering.

Registration Period: The registration will expire after registration period, and the phone will re-register automatically within registration period.

3.5.5.Outbound Proxy Server

An outbound proxy server is used to receive all initiating request messages and route them to the designated SIP server.

3.5.6.Transport Type

To display and configure transport type for SIP message.

- UDP: UDP is an unreliable but very efficient transport layer

SIP Server 1		
Server IP	<input type="text" value="120.78.230.239"/>	Port <input type="text" value="5070"/>
Registration Period	<input type="text" value="1800"/>	(30~65535s)
SIP Server 2		
Server IP	<input type="text"/>	Port <input type="text" value="5060"/>
Registration Period	<input type="text" value="1800"/>	(30~65535s)

Figure 3.5.4 SIP server 1&2

Outbound Proxy Server		
Enable Outbound	<input type="text" value="Disabled"/>	
Server IP	<input type="text"/>	Port <input type="text" value="5060"/>
Backup Server IP	<input type="text"/>	Port <input type="text" value="5060"/>

Figure 3.5.5 Outbound proxy server

Transport Type	
Transport Type	<input type="text" value="UDP"/>

Figure 3.5.6 Transport type

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protocol.

- TCP: Reliable but less-efficient transport layer protocol.
- TLS: Secured and reliable transport layer protocol.
- DNS-SRV: DNS record for specifying the location of services.

3.5.7.NAT

To display and configure NAT settings.

- STUN: Short for session traversal utilities for NAT, a solution to solve NAT issues.

Note: By default, NAT is disabled.

In the idle interface, press the a SIP account and “Dial key” to make a SIP call.

3.5.8.Dial Plan

This feature allows users to modify selected rules information.

Once users dial prefix value, it will call out replace number.

Go to **Intercom - Basic** to configure first.

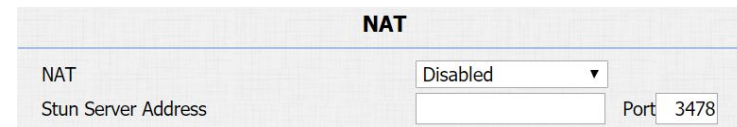


Figure 3.5.7 NAT

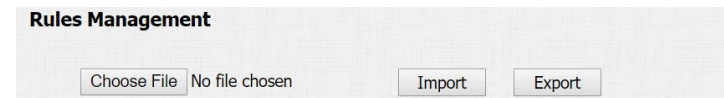


Figure 3.5.8-1 Dial plan rules management

Rules Management

R28 supports to import or export the dial plan rules, which is convenient for administrator to deal with a large number of dial plan. The maximum dial plan is 200.

Note: Please consult administrator for the .xml format dial plan template file.

Edit Dial plan

- Click “Add” to add new replace rules.
- Select account for the replace rule.
- Enter a display name for the prefix value. Input a suitable prefix value. Enter the replace number.
- Click “Submit” to save.

All replace rules will show in the list. Users can edit or delete the existed replace rules.

In the idle interface, press the prefix and “Dial key” to make a call.

Rules Modify >>

Account	Auto
Name	Security
Prefix	1
Replace 1	192.168.1.88
Replace 2	192.168.1.87
Replace 3	192.168.1.86
Replace 4	192.168.1.85
Replace 5	192.168.1.84

Submit Cancel

Figure 3.5.8-2 Dial plan rules

Index	Account	Name	Prefix	Replace 1	Replace 2	Replace 3	Replace 4	Replace 5	
1	Auto	Security	1	192.168.1.88	192.168.1.87	192.168.1.86	192.168.1.85	192.168.1.84	<input type="checkbox"/>
2									<input type="checkbox"/>
3									<input type="checkbox"/>
4									<input type="checkbox"/>
5									<input type="checkbox"/>
6									<input type="checkbox"/>
7									<input type="checkbox"/>
8									<input type="checkbox"/>
9									<input type="checkbox"/>
10									<input type="checkbox"/>

Page 1 ▾ Add Edit Delete Prev Next

Figure 3.5.8-3 Dial plan

3.5.9.Speed Dial

Speed dial feature is used to call out 4 numbers at the same time.

Go to **Intercom - Basic** to configure first.

After setup the number which users need to call, in the idle interface, press “Manage center key” (Manager Dial) or “Dial key” (Speed Dial) to call.

3.5.10.Auto Answer

Go to **Account - Advanced** to enable auto answer feature for SIP calls.

Go to **Phone - Call Feature** to enable auto answer feature for direct IP calls.

Auto Answer Delay: To configure delay time before an incoming call is automatically answered.

Auto Answer Mode: To set video or audio mode for auto answer feature. It is video by default.

Then incoming calls will be answered automatically.

Manager Dial	
Key	Number
Manager Dial	5100100052
Manager Dial2	192.168.1.33
Manager Dial3	5100100053
Manager Dial4	5100100054

Speed Dial	
Key	Number
Speed Dial	5100100055
Speed Dial2	5100100056
Speed Dial3	192.168.1.57
Speed Dial4	5100100057

Figure 3.5.9 Speed dial

Auto Answer	Enabled ▼
-------------	-----------

Figure 3.5.10-1 Auto answer for sip calls

Direct IP AutoAnswer	Enabled ▼
----------------------	-----------

Figure 3.5.10-2 Auto answer for direct IP calls

Auto Answer Delay	0 (0~5s)
Auto Answer Mode	Video ▼

Figure 3.5.10-3 Auto answer options' parameters

3.5.11 Web Call

Go to **Intercom - Basic** to dial out or hang up incoming calls

3.5.12 Multicast

Go to **Intercom - Multicast** to configure.

Paging Barge: Choose the multicast number, and the range is from 1 to 10.

Paging priority Active: Enable or disable the multicast.

Listening Address: Enter IP address which users need to listen.

Label: Input the label for each listening address.

The screenshot shows the 'Web Call' configuration page. It features a 'Web Call(Ready)' label, an empty text input field, a dropdown menu set to 'Auto', and two buttons: 'Dial Out' and 'Hang Up'.

Figure 3.5.11 Web call

The screenshot shows the 'Multicast Setting' configuration page. It includes two dropdown menus: 'Paging Barge' set to '1' and 'Paging Priority Active' set to 'Enabled'. Below these is a 'Priority List' table with five rows.

IP Address	Listening Address	Label	Priority
1 IP Address	224.1.6.11:1200	Test	1
2 IP Address			2
3 IP Address			3
4 IP Address			4
5 IP Address			5

Figure 3.5.12 Multicast

3.6.Security

2.6.1.Live view

Go to **Intercom - Live Stream** to check the real-time video from R28.

2.6.2.RTSP

R28 supports RTSP stream, go to **Intercom - RTSP** to enable or disable RTSP server. The URL for RTSP stream is:

rtsp://IP_address/live/ch00_0.

RTSP Stream: To enable RTSP video and select the video codec. R28 supports H.264 video codec by default.

H.264 Video Parameters: H.264 is a video stream compression standard. Different from H.263, it provides an approximately identical level of video stream quality but a half bit rate. This type of compression is sometimes called MPEG-4 part 10. To modify the resolution, framerate and bitrate of H.264.

MPEG4 Video Parameters: MPEG4 is one of the network video



Figure 3.6.1 Live view

RTSP Basic	
RTSP Server Enabled	<input checked="" type="checkbox"/>
RTSP Stream	
RTSP Video Enabled	<input checked="" type="checkbox"/>
RTSP Video Codec	H.264
H.264 Video Parameters	
Video Resolution	VGA
Video Framerate	30 fps
Video Bitrate	2048 kbps
MPEG4 Video Parameters	
Video Resolution	VGA
Video Framerate	30 fps
Video Bitrate	2048 kbps

Figure 3.6.2 RTSP

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image compression standard. It supports the maximum compression ratio 4000:1. It is an important and common video function with great communication application integration ability and less core program space. To modify the resolution, framerate and bitrate of MPEG4.

2.6.3.ONVIF

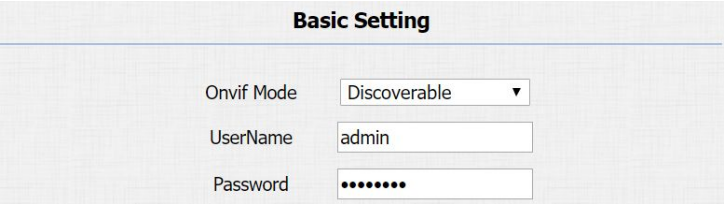
R28 supports ONVIF protocol, which means R28's camera can be searched by other devices, like NVR which supports ONVIF protocol as well.

Go to **Intercom - ONVIF** to configure ONVIF mode, its username and password.

Switching ONVIF mode to "Undiscoverable," and it means users must program ONVIF's URL manually.

The ONVIF's URL is:

http://IP_address:8090/onvif/device_service.



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

Figure 3.6.3 ONVIF

3.7. Access Control

Login to the website and go to Phone - Time/Lang, to configure time and language

3.7.1. Relay

Go to **Intercom - Relay** to configure relay settings.

There are three terminals of relay: NO, NC and COM. NO stands for normally open contact. NC stands for normally closed contact.

Relay ID: R28 supports three relays. Users can configure them respectively.

Relay Type: Default state means NC and COM are normally closed, while Invert state means NC and COM are normally opened.

Relay Delay: To configure the duration of opened relay. Over the value, the relay would be closed again.

Relay Status: While the relay is triggered, the statues will be switched. When COM connects to NC, the status is low.

Note: Relay does not deliver power. users should prepare power

Relay			
Relay ID	RelayA ▼	RelayB ▼	RelayC ▼
Relay Type	Default state ▼	Default state ▼	Default state ▼
Relay Delay(sec)	3 ▼	3 ▼	3 ▼
DTMF Option	1 Digit DTMF ▼		
DTMF	0 ▼	0 ▼	0 ▼
Multiple DTMF			
Relay Status	RelayA: Low	RelayB: Low	RelayC: Low

Figure 3.7.1 Relay

adapter for external devices which connects to relay.

3.7.2.DTMF Code

Users can unlock via a DTMF code when in a call.

Go to **Intercom - Relay** to configure DTMF code parameters.

DTMF Option: To select digit of DTMF code.

DTMF&Multiple DTMF: To configure DTMF code for remote unlocking.

3.7.3.HTTP Command

Users can use a URL to remote unlock the door.

Go to **Intercom - Relay** to configure.

Switch: Enable this function. Disable by default.

UserName&Password: Users can setup the username and password for HTTP unlock.

URL format:

http://IP_address/fcgi/do?action=OpenDoor&UserName=&Password=&DoorNum=1.

The screenshot shows the 'Relay' configuration page. It has a table-like structure with three columns for RelayA, RelayB, and RelayC. The rows are: Relay ID (RelayA, RelayB, RelayC), Relay Type (Default state), Relay Delay(sec) (3), DTMF Option (1 Digit DTMF), DTMF (0), Multiple DTMF (empty), and Relay Status (RelayA: Low, RelayB: Low, RelayC: Low).

Figure 3.7.2 DTMF Code

The screenshot shows the 'Open Relay via HTTP' configuration page. It has three rows: Switch (Disabled), UserName (empty), and Password (masked with dots).

Figure 3.7.3 HTTP Command

3.7.4.RF Card

Go to **Intercom - Card setting** to manage card access system.

1.Import/Export Card Data

R28 supports import or export card data, which is convenient for administrator to deal with a large number of cards.

The maximum card data file is 200K which is around 500 cards.

2.Obtain and Add Card

- Switch card status to “Card Issuing” and click “Apply”;
- Place card on the card reader area and click “Obtain”;
- Name card, choose which door users want to open and the valid day and time;
- Click “Add” to add it into list.

Valid card information will be shown in the list. Administrator could delete one card’s access permission or empty all the list.

Note: Remember to set Card Status back to “Normal” after adding cards.

Import/Export Card Data(.xml)

Choose File No file chosen Import Export

Card Status

Card Status Card Issuing Apply

Card Setting

IC Key DoorNum RelayA RelayB RelayC

IC Key Day Mon Tue Wed Thur

Fri Sat Sun Check All

IC Key Time 06 : 00 - 12 : 00

IC Key Name Courier

IC Key Code FFB59828 Obtain Add

Door Card Management

Index	Name	Code	Relay	
1	Courier	FFB59828	1	<input checked="" type="checkbox"/>
2				<input type="checkbox"/>
3				<input type="checkbox"/>
4				<input type="checkbox"/>
5				<input type="checkbox"/>
6				<input type="checkbox"/>
7				<input type="checkbox"/>
8				<input type="checkbox"/>
9				<input type="checkbox"/>
10				<input type="checkbox"/>

Page 1 Prev Next Delete Delete All

Figure 3.7.4 RF cards

3.7.5.Public Key

Go to Intercom - Basic - Public Key, to setup public key for PIN Entry

Key Switch: Enable or Disable the public key.

Key Value: Type in a PIN code as public key.

3.7.6.Private Key

Go to **Intercom - PrivateKey** to configure private pin code.

Import /Export Private Key

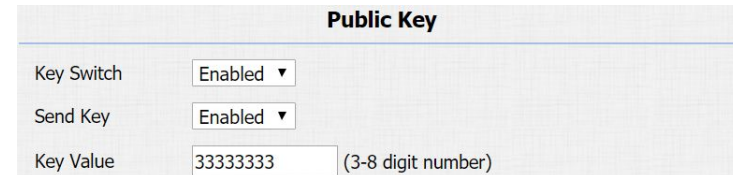
R28 supports import or export the private key file, which is convenient for administrator to deal with a large number of private keys.

The maximum private key is 500.

Note: Please consult administrator for the .xml format private key template file.

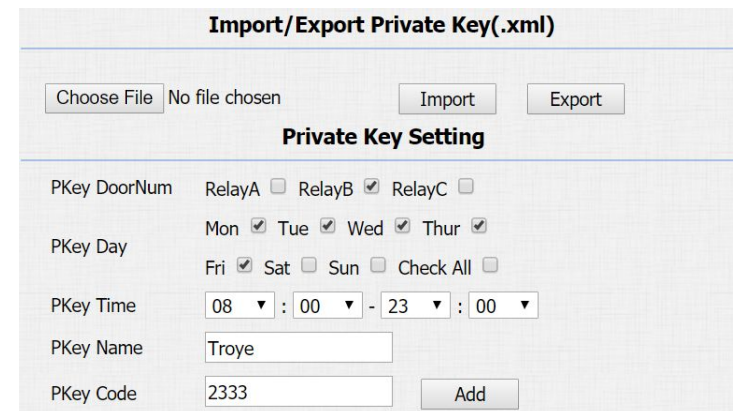
Obtain and Add Private Key

- Enter the “PKey Name” and 3-8 digits “PKey Code”;
- Select the valid day and time;



The screenshot shows the 'Public Key' configuration page. It has a title bar 'Public Key'. Below it, there are three rows of settings: 'Key Switch' with a dropdown menu set to 'Enabled', 'Send Key' with a dropdown menu set to 'Enabled', and 'Key Value' with a text input field containing '33333333' and a label '(3-8 digit number)' to its right.

Figure 3.7.5 Public Key



The screenshot shows two sections of the 'Private Key' configuration page. The top section is titled 'Import/Export Private Key(.xml)' and contains a 'Choose File' button, the text 'No file chosen', and 'Import' and 'Export' buttons. The bottom section is titled 'Private Key Setting' and contains several fields: 'PKey DoorNum' with radio buttons for 'RelayA' (unchecked), 'RelayB' (checked), and 'RelayC' (unchecked); 'PKey Day' with checkboxes for 'Mon' (checked), 'Tue' (checked), 'Wed' (checked), 'Thur' (checked), 'Fri' (checked), 'Sat' (unchecked), 'Sun' (unchecked), and a 'Check All' checkbox (unchecked); 'PKey Time' with two time selection fields showing '08 : 00' and '23 : 00'; 'PKey Name' with a text input field containing 'Troye'; and 'PKey Code' with a text input field containing '2333' and an 'Add' button.

Figure 3.7.6 Private Key

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- Choose which door users want to open;
- Click “Add” to add it into list.

Valid private key information will be shown in the list.
Administrator could delete private key information or empty all the list.

3.7.7.Input

R28 supports three input triggers “Input A/B/C(DOOR A/B/C).

Go to **Intercom - Input** to configure input settings.

Input Service: To enable or disable input trigger service.

Trigger Option: To choose open circuit trigger or closed circuit trigger. “Low” means that connection between door terminal and GND is closed, while “High” means the connection is opened.

Door status: To show the status of input signal.

Input A	
Input Service	Enabled ▼
Trigger Option	Low ▼
Action to execute	FTP <input type="checkbox"/> Email <input type="checkbox"/> Sip Call <input type="checkbox"/> HTTP <input type="checkbox"/>
Http URL:	<input type="text"/>
Action Delay	0 (0~300 Sec)
Open Relay	RelayA ▼
Door Status	DoorA: High
Light Status	LightA: Warning

Figure 3.7.7 Input

3.8.Reboot

Go to **Upgrade - Basic**, users can reboot the phone.



Figure 3.8 Reboot

3.9.Restore

3.9.1.Restore Default on R28

Go to **Settings - System Settings - Restore Default** on R28, to restore R28.

3.9.2.Reset To Factory Setting on Website

Login to the website and go to **Upgrade - Basic**, to restore R28.



Figure 3.9.2 Reset in website

4. Advanced Features

4.1 Advanced Display

4.1.1 LED

Go to **Intercom - LED Setting** to configure.

Users can control three parts' LED, screen, keypad and card area. Users can also setup the valid time. For example, start time from 18 to 23 means the LED will light up from 6pm to 11pm.

4.1.2. IR LED

Go to **Intercom - Advanced** to configure.

Photoresistor: The setting is for night vision, when the surrounding of R28 is very dark, infrared LED will turn on and R28 will turn to night mode.

Photoresistor value relates to light intensity and larger value means that light intensity is smaller.

LED Control	
Screen LED Enable	Disabled ▾
Start Time (H)	18 - 23 (0~23)
KeyPad LED Enable	Disabled ▾
Start Time (H)	18 - 23 (0~23)
Card LED Enable	Disabled ▾
Start Time (H)	18 - 23 (0~23)

Figure 4.1.1 LED

Photoresistor	
Photoresistor Setting	15 - 30 (0~100)

Figure 4.1.2 IR LED

Users can configure the upper and lower bound and when photoresistor value is larger than upper bound, infrared LED will turn on. As contrast, when photoresistor value is smaller than lower bound, infrared LED will turn off and device turns to normal mode.

4.1.3.RFID Card Code Display Related

Go to **Intercom - Advanced** to configure.

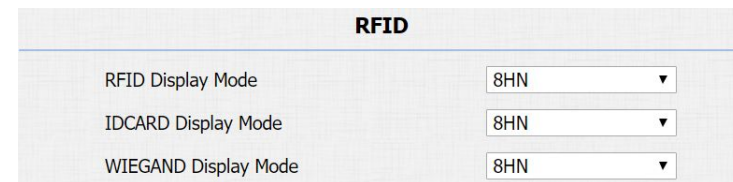
Display mode: To be compatible different card number formats in different systems. The default 8HN means hexadecimal.

4.1.4.Key Display Related

Go to **Intercom - Basic** to configure.

Send Key: Limit to use the “#” key. It will prevent someone to enter the LCD setting illegally.

DialPad Input Number Limit: To limit the input numbers to prevent unnecessary security problems.



The screenshot shows a configuration panel titled "RFID". It contains three rows, each with a label and a dropdown menu. The first row is "RFID Display Mode" with a dropdown set to "8HN". The second row is "IDCARD Display Mode" with a dropdown set to "8HN". The third row is "WIEGAND Display Mode" with a dropdown set to "8HN".

RFID	
RFID Display Mode	8HN ▼
IDCARD Display Mode	8HN ▼
WIEGAND Display Mode	8HN ▼

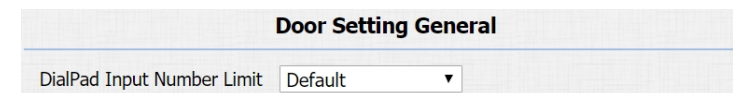
Figure 4.1.3 RFID card code display related



The screenshot shows a configuration panel with a single row. The label is "Send Key" and the dropdown menu is set to "Enabled".

Send Key	Enabled ▼
----------	-----------

Figure 4.1.4-1 Send key



The screenshot shows a configuration panel titled "Door Setting General". It contains one row with the label "DialPad Input Number Limit" and a dropdown menu set to "Default".

Door Setting General	
DialPad Input Number Limit	Default ▼

Figure 4.1.4-2 Dialpad input number limit

4.2. Intercom

4.2.1. Max Call Time

Go to **Intercom - Basic** to configure Max Call time.

Dial In Time: To configure the max incoming dial time, available when auto answer is disabled.

Dial Out Time: To configure the max no answer call time.

4.2.2. AEC Level

Go to **Intercom - Basic** to configure AEC Setting

AEC Level: AEC is used to adjust the echo effect during the communication. The default value is 700. Increase the level, the echo control is better.

4.2.3. Intercom

Go to **Phone - Call Feature** to configure.

Intercom: Intercom allows users to establish a call directly with the callee.

Active: To enable or disable Intercom feature.

Max Dial Time		
Dial In Time	<input type="text" value="60"/>	(30~120Sec)
Dial Out Time	<input type="text" value="60"/>	(30~120Sec)

Figure 4.2.1 Call time related

AEC Setting	
AEC Level	<input type="text" value="700"/>

Figure 4.2.2 AEC level

Intercom	
Active	<input type="text" value="Enabled"/>
Intercom Mute	<input type="text" value="Disabled"/>

Figure 4.2.3 Intercom

Intercom Mute: If enabled, once the call established, the callee will be muted.

4.2.4. Return Code When Refuse

Go to **Phone - Call Feature** to configure.

Return Code When Refuse: Allows users to assign specific code as return code to SIP server when an incoming call is rejected.

4.2.5. SIP Call Related

Go to **Account - Advanced** to configure the SIP call related.

Max Local SIP Port: To configure maximum local SIP port for designated SIP account.

Min Local SIP Port: To configure maximum local SIP port for designated SIP account.

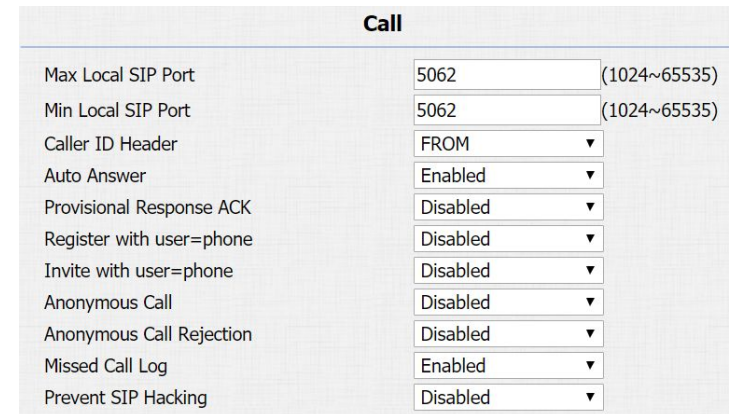
Caller ID Header: To choose caller ID header format.

Provisional Response ACK: 100% reliability for all provisional messages, this means it will send ACK every time the phone receives a provisional SIP message from SIP server.



Others	
Return Code When Refuse	486(Busy Here) ▼

Figure 4.2.4 Return code when refuse



Call	
Max Local SIP Port	5062 (1024~65535)
Min Local SIP Port	5062 (1024~65535)
Caller ID Header	FROM ▼
Auto Answer	Enabled ▼
Provisional Response ACK	Disabled ▼
Register with user=phone	Disabled ▼
Invite with user=phone	Disabled ▼
Anonymous Call	Disabled ▼
Anonymous Call Rejection	Disabled ▼
Missed Call Log	Enabled ▼
Prevent SIP Hacking	Disabled ▼

Figure 4.2.5 SIP call related

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Register with user=phone: If enabled, the phone will send user=phone within SIP message.

Anonymous Call: If enabled, R28 will block its information when calling out.

Anonymous Call Rejection: If enabled, calls who block their information will be screened out.

Missed Call Log: If enabled, any missed call will be recorded into call log.

Prevent Hacking: If enabled, it will prevent SIP messages from hacking.

4.2.6.Codec

Go to **Account - Advanced** to configure SIP call related codec.

Sip Account: To choose which account to configure.

Audio Codec: R28 support four audio codecs: PCMA, PCMU, G729, G722. Different audio codecs require different bandwidth, users can enable/disable them according to different network environment.

Note: Bandwidth consumption and sample rates are as below:

Codec	Bandwidth	Sample Rates
PCMA	64kbit/s	8kHz
PCMU	64kbit/s	8kHz
G729	8kbit/s	8kHz
G722	64kbit/s	16kHz

Video Codec: R28 support H.264 standard, which provides better video quality at substantially lower bit rates than previous standards.

Codec Resolution: R28 support four resolutions, QCIF, CIF, VGA, 4CIF and 720P.

Codec Bitrate: To configure bit rates of video stream.

Codec Payload: To configure RTP audio video profile.

Go to **Phone - Call Feature** to configure multicast related codec.

4.2.7.Subscribe

Go to **Account - Advanced** to configure.

The screenshot shows the 'SIP Account' configuration interface. At the top, there is a dropdown menu for 'Account' set to 'Account 1'. Below this is the 'Codecs' section, which is divided into 'Disabled Codecs' and 'Enabled Codecs'. The 'Enabled Codecs' list contains PCMU, PCMA, G722, and G729. There are navigation buttons (left and right arrows) between the two lists. Below the codec lists is the 'Video Codec' section, which includes a checked checkbox for 'H264' and three dropdown menus for 'Codec Resolution' (set to 4CIF), 'Codec Bitrate' (set to 2048), and 'Codec Payload' (set to 104).

Figure 4.2.6-1 SIP call related codec

The screenshot shows the 'Multicast Codec' configuration interface, which consists of a single dropdown menu set to 'PCMU'.

Figure 4.2.6-2 Multicast related codec

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MWI: Message waiting indicator which is used to indicate whether there is unread new voice message.

BLF: BLF is short for busy lamp field which is used to monitor the designated extension status.

ACD: Automatic call distribution is often used in offices for customer service, such as call center. The setting here is to negotiate with the server about expire time of ACD subscription.

4.2.8.DTMF

Go to **Account - Advanced** to configure RTP audio video profile for DTMF and its payload type.

Type: Support inband, info, RFC2833 or their combination.

How To Notify DTMF: Only available when DTMF type is info.

DTMF Payload: To configure payload type for DTMF.

4.2.9.Session Timer

Go to **Account - Advanced** to configure.

Subscribe		
MWI Subscribe	<input type="text" value="Disabled"/>	
MWI Subscribe Period	<input type="text" value="1800"/>	(120~65535s)
Voice Mail Number	<input type="text"/>	
BLF Expire	<input type="text" value="1800"/>	(120~65535s)
ACD Expire	<input type="text" value="1800"/>	(120~65535s)

Figure 4.2.7 Subscribe

DTMF		
Type	<input type="text" value="RFC2833"/>	
How To Notify DTMF	<input type="text" value="Disabled"/>	
DTMF Payload	<input type="text" value="101"/>	(96~127)

Figure 4.2.8 DTMF

Session Timer		
Active	<input type="text" value="Disabled"/>	
Session Expire	<input type="text" value="1800"/>	(90~7200s)
Session Refresher	<input type="text" value="UAC"/>	

Figure 4.2.9 Session timer

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If enabled, the on going call will be disconnected automatically once the session expired unless it's been refreshed by UAC or UAS.

4.2.10.Encryption

Go to **Account - Advanced** to configure.

If enabled, voice will be encrypted.

4.2.11.NAT

Go to **Account - Advanced** to display NAT related settings.

UDP Keep Alive message: If enabled, the phone will send UDP keep-alive message periodically to router to keep NAT port alive.

UDP Alive Msg Interval: Keep alive message interval.

Rport: Remote port, if enabled, it will add remote port into outgoing SIP message for designated account.

4.2.12.User Agent

Go to **Account - Advanced** to configure. One can customize user agent field in the SIP message. If user agent is set to specific value, users can see the information from PCAP. If user

Encryption	
Voice Encryption(SRTP)	Disabled ▼

Figure 4.2.10 Encryption

NAT	
UDP Keep Alive Messages	Disabled ▼
UDP Alive Msg Interval	30 (5~60s)
RPort	Disabled ▼

Figure 4.2.11 NAT

User Agent	
User Agent	<input type="text"/>

Figure 4.2.12 User Agent

agent is not set by default, users can see the company name, model number and firmware version from PCAP.

4.3. Access Control

4.3.1. Web Relay

R28 can support to connect to web relay.

Go to **Phone - WebRelay** to configure.

Type: Connect web relay and choose the type.

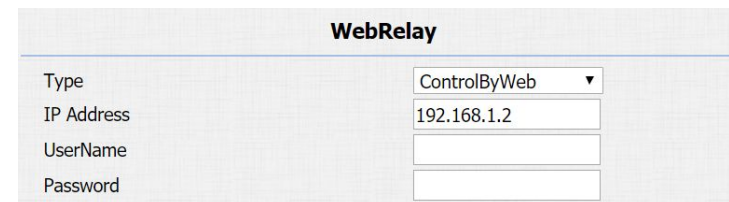
IP Address: Enter web relay's IP address.

User Name: it is an authentication for connecting web relay.

Password: It is an authentication for connecting web relay.

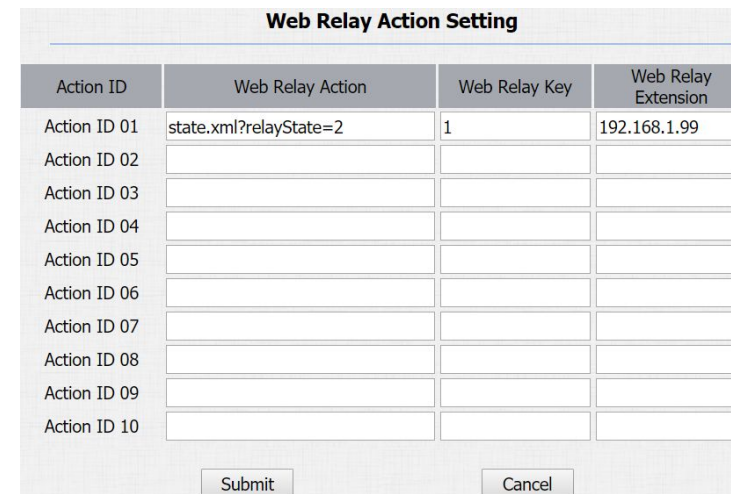
Web Relay Action: Web relay action is used to trigger the web relay. The action URL is provided by web relay vendor.

Web Relay Key: If the DTMF keys are same with the local relay, the web relay will be open with local relay. But if there are different, the web relay is invalid.



The image shows a configuration form titled "WebRelay". It contains four fields: "Type" with a dropdown menu set to "ControlByWeb", "IP Address" with the value "192.168.1.2", "UserName" with an empty text box, and "Password" with an empty text box.

Figure 4.3.1-1 Web relay



The image shows a table titled "Web Relay Action Setting" with four columns: "Action ID", "Web Relay Action", "Web Relay Key", and "Web Relay Extension". The first row is populated with "Action ID 01", "state.xml?relayState=2", "1", and "192.168.1.99". The remaining rows (Action ID 02 to 10) are empty. Below the table are "Submit" and "Cancel" buttons.

Action ID	Web Relay Action	Web Relay Key	Web Relay Extension
Action ID 01	state.xml?relayState=2	1	192.168.1.99
Action ID 02			
Action ID 03			
Action ID 04			
Action ID 05			
Action ID 06			
Action ID 07			
Action ID 08			
Action ID 09			
Action ID 10			

Figure 4.3.1-2 Web relay action settings

Web Relay Extension: The web relay can only receive the DTMF signal from the corresponding extension number.

Note: Users can modify username and password in web relay website.

4.3.2.Wiegand

Using this feature to integrate with some wiegand access control. R28 can be used as wiegand input or output.

Go to **Intercom - Advanced** to configure.

Wiegand Type: Support Wiegand 26 or 34. The different number means different bits.

Wiegand Mode: Input or output. Typically, when users select input, we generally connect the wiegand input device, such as the wiegand card reader. Or R28 can be used as output, it is generally used to connect the third-party access control, and R28 change the card information as wiegand signal, and then transfer to the access control module.



Wiegand	
WiegandType	wiegand-26 ▼
Wiegand Mode	Input ▼

Figure 4.3.2 Wiegand

4.4.Security

4.4.1.Anti-alarm

Go to **Intercom - Advanced** to configure.

Tamper Alarm: R28 integrates internal gravity sensor for its own security. After enabling tamper alarm, if the gravity of R28 changes dramatically, it will alarm. Gravity sensor threshold stands for sensitivity of sensor. Smaller the value, the more sensitive it is.

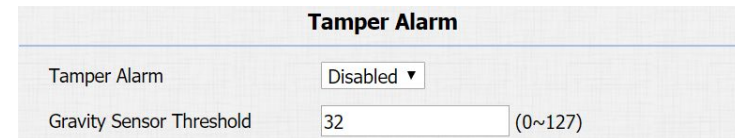
4.4.2.Motion

R28 supports motion detection, go to **Intercom - Motion** to configure detection related parameters.

Motion Detection: To enable or disable motion detection.

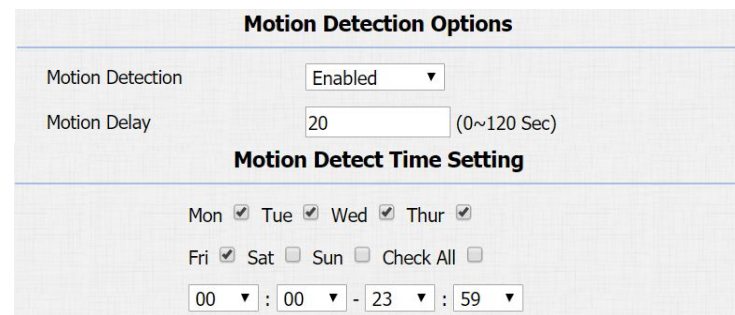
Motion Delay: To configure minimum time gap between two snapshots.

Motion Detect Time Setting: To configure motion detect time schedule.



The screenshot shows the 'Tamper Alarm' configuration section. It contains two settings: 'Tamper Alarm' is set to 'Disabled' via a dropdown menu, and 'Gravity Sensor Threshold' is set to '32' in a text input field, with a range of '(0~127)' indicated to the right.

Figure 4.4.1 Anti-alarm



The screenshot shows the 'Motion Detection Options' configuration section. It contains two settings: 'Motion Detection' is set to 'Enabled' via a dropdown menu, and 'Motion Delay' is set to '20' in a text input field, with a range of '(0~120 Sec)' indicated to the right. Below this is the 'Motion Detect Time Setting' section, which includes a row of checkboxes for days of the week: Mon (checked), Tue (checked), Wed (checked), Thur (checked), Fri (checked), Sat (unchecked), and Sun (unchecked). There is also a 'Check All' checkbox (unchecked). At the bottom, there are four dropdown menus for time selection, showing '00 : 00 - 23 : 59'.

Figure 4.4.2 Motion

4.5.Action

R28 supports to send notifications, snapshots via email and ftp transfer method, or calls via sip call method, when trigger specific actions.

4.5.1.Action Parameters

Go to **Intercom - Action** to set action receiver.

Email Notification

Sender's email address: To configure email address of sender.

Receiver's email address: To configure email address of receiver.

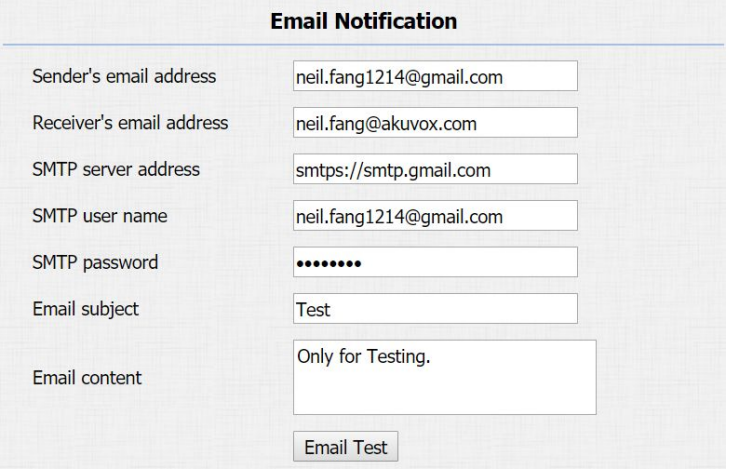
SMTP server address: To configure SMTP server address of sender.

SMTP user name: To configure user namer of SMTP service (usually it is same with sender's email address).

SMTP password: To configure password of SMTP service (usually it is the same with the password of sender's email).

Email subject: To configure subject of email.

Email content: To configure content of email.



The screenshot shows a web form titled "Email Notification" with the following fields and values:

Email Notification	
Sender's email address	neil.fang1214@gmail.com
Receiver's email address	neil.fang@akuvox.com
SMTP server address	smtps://smtp.gmail.com
SMTP user name	neil.fang1214@gmail.com
SMTP password
Email subject	Test
Email content	Only for Testing.
<input type="button" value="Email Test"/>	

Figure 4.5.1 Email notification parameters

Email Test: To test whether email notification is available.

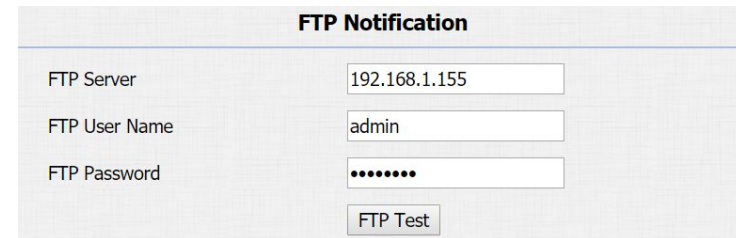
FTP Notification

FTP Server: To configure URL of FTP server.

FTP User Name: To configure user name of FTP server.

FTP Password: To configure password of FTP server.

FTP Test: To test whether FTP notification is available.



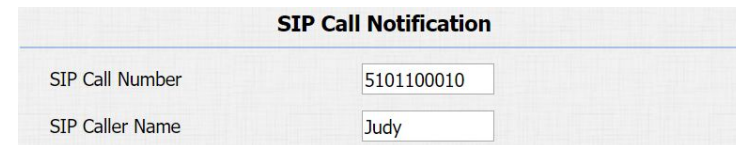
The screenshot shows a configuration form titled "FTP Notification". It contains three input fields: "FTP Server" with the value "192.168.1.155", "FTP User Name" with the value "admin", and "FTP Password" with masked characters "••••••". Below these fields is a button labeled "FTP Test".

Figure 4.5.1-2 FTP notification parameters

SIP Notification

SIP Call Number: To configure sip call number.

SIP Call Name: To configure display name of R28.



The screenshot shows a configuration form titled "SIP Call Notification". It contains two input fields: "SIP Call Number" with the value "5101100010" and "SIP Caller Name" with the value "Judy".

Figure 4.5.1-3 SIP call notification parameters

Five specific actions which will be triggered in R28:

4.5.2.No Answer Action

Go to **Intercom - Basic** to configure.



The screenshot shows a configuration field for "No Answer Action" with a dropdown menu set to "Disabled".

Figure 4.5.2 No answer action

No Answer Action: For sending the notification to specified email if the call is not answered.

4.5.3.Call Event

Go to **Intercom - Basic** to configure.

Action to execute: To choose suitable way to receive message or snapshot when dialing out.

HTTP URL: If users choose HTTP mode, enter the URL format: http://http server IP address/any information.

4.5.4.Input Interface Triggered Action

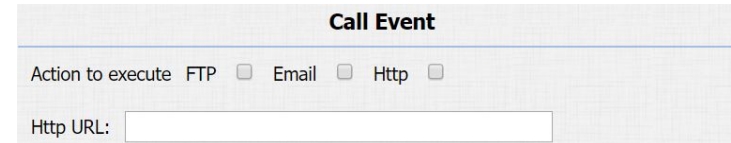
Go to **Intercom - Input** to configure.

Action to execute: To choose which action to execute after triggering.

Http URL: To configure URL, if HTTP action is chosen.

Action Delay: To configure after how long to execute to send out notifications and trigger relay.

Open relay: To configure which relay to trigger.

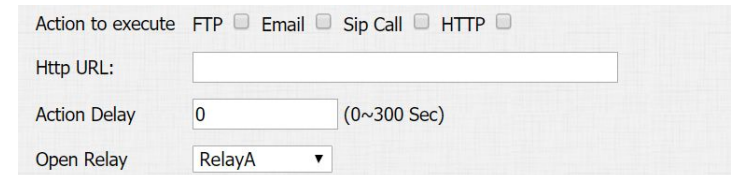


Call Event

Action to execute FTP Email Http

Http URL:

Figure 4.5.3 Call event



Action to execute FTP Email Sip Call HTTP

Http URL:

Action Delay (0~300 Sec)

Open Relay

Figure 4.5.4 Input interface triggered action

4.5.5.Motion Triggered Action

Go to **Intercom - Motion** to configure.

Action to execute: To choose which action to execute after triggering.

Http URL: To configure URL, if HTTP action is chosen.

SDMC Upload: Upload the capture to the SDMC.

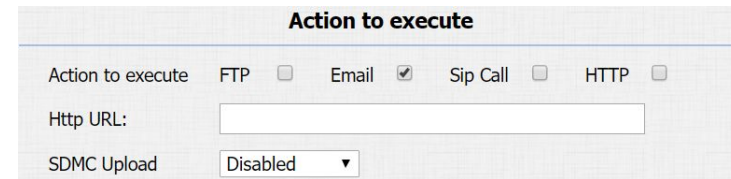


Figure 4.5.5 Motion triggered action

4.5.6.Unlock via RFID Card Action

Go to **Intercom - Card Setting** to configure.

Action to execute: To choose which action to execute after unlocking via a RFID card.

Http URL: To configure URL, if HTTP action is chosen.

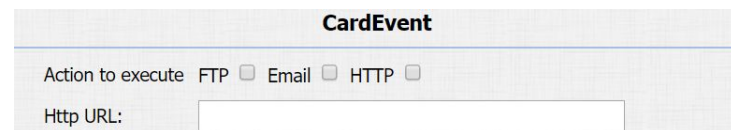


Figure 4.5.6 Unlock via RFID card action

4.6.Upgrade

4.6.1.Web Upgrade

Go to **Upgrade - Basic** to do web upgrade.

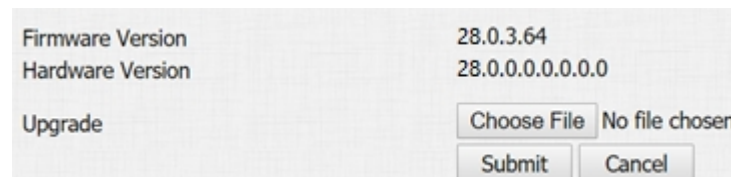


Figure 4.6.1 Web upgrade

Upgrade: Choose .rom firmware from the PC, and then click “Submit” to start update.

4.6.2. Autop Upgrade

Go to **Upgrade - Advanced** to configure automatically update server’s settings.

PNP

Plug and Play, once PNP is enabled, the phone will send SIP subscription message to PNP server automatically to get auto provisioning server’s address.

By default, this SIP message is sent to multicast address 224.0.1.75 (PNP server address by standard).

Manual Autop

Autop is a centralized and unified upgrade for phones. It is also a simple and time-saving configuration for phones. It is mainly used by devices to download corresponding configuration documents from the server which is using TFTP / FTP / HTTP / HTTPS

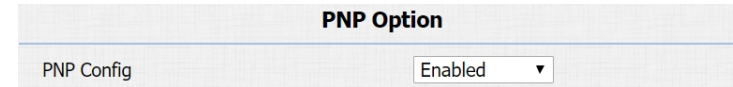


Figure 4.6.2-1 PNP

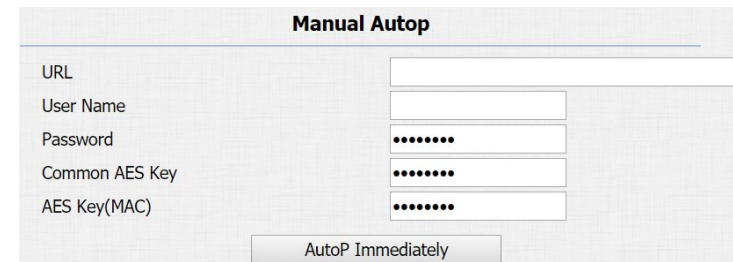


Figure 4.6.2-2 Manual auto provision

R28A/V

Admin Guide

network protocol. Achieving the purpose for updating devices's configurations and making users to change the phone configuration more easily, it is a typical C/S architecture upgrade mode, which is mainly used by the terminal device or PBX server to initiate an upgrade request.

URL: Auto provisioning server address.

User Name: Configure if server needs an username to access, otherwise left blank.

Password: Configure if server needs a password to access, otherwise left blank.

Common AES Key: Used for the phone to decipher common auto provisioning configuration file.

AES Key (MAC): Used for the phone to decipher MAC-oriented auto provisioning configuration file (for example, file name could be 0c1105888888.cfg if phone's MAC address is 0c1105888888).

Note: AES should be configured only when configure file is ciphered with AES, otherwise left blank.

Automatic Autop

To display and configure auto provisioning mode settings.

This auto provisioning mode is actually self-explanatory.

For example, mode “Power on” means the phone will go to do provisioning every time it powers on.

Note: Please refer to the related feature guide from forum.

4.6.3.Backup Config File

Go to **Upgrade - Advanced** to backup the config file.

Export Autop Template: To export current config file.

Others: To export current config file (Encrypted) or import new config file.

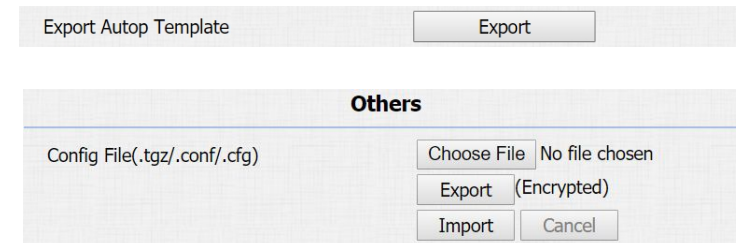
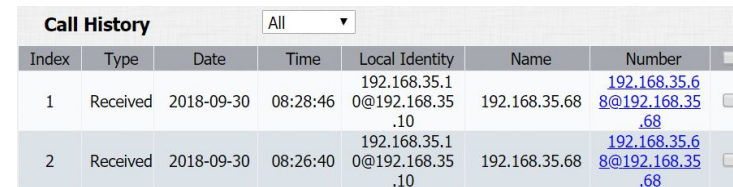


Figure 4.6.3-1 Backup config file

4.7.Log

4.7.1.Call Log

Go to **Phone - Call Log**, users can see a list of call logs which have dialed, received or missed. Users can delete call logs from list.

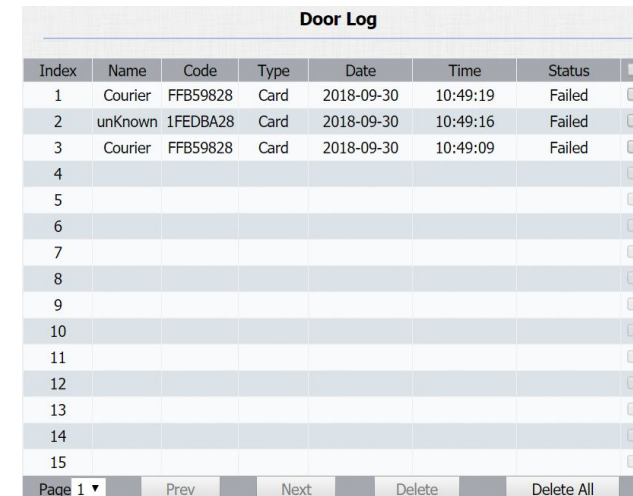


Call History							
Index	Type	Date	Time	Local Identity	Name	Number	
1	Received	2018-09-30	08:28:46	192.168.35.1 0@192.168.35.10	192.168.35.68	192.168.35.68@192.168.35.68	<input type="checkbox"/>
2	Received	2018-09-30	08:26:40	192.168.35.1 0@192.168.35.10	192.168.35.68	192.168.35.68@192.168.35.68	<input type="checkbox"/>

Figure 4.7.1 Call log

4.7.2.Door Log

Go to **Phone - Door Log**, users can see a list of door logs which records card information and date.



Door Log							
Index	Name	Code	Type	Date	Time	Status	
1	Courier	FFB59828	Card	2018-09-30	10:49:19	Failed	<input type="checkbox"/>
2	unKnown	1FEDBA28	Card	2018-09-30	10:49:16	Failed	<input type="checkbox"/>
3	Courier	FFB59828	Card	2018-09-30	10:49:09	Failed	<input type="checkbox"/>
4							<input type="checkbox"/>
5							<input type="checkbox"/>
6							<input type="checkbox"/>
7							<input type="checkbox"/>
8							<input type="checkbox"/>
9							<input type="checkbox"/>
10							<input type="checkbox"/>
11							<input type="checkbox"/>
12							<input type="checkbox"/>
13							<input type="checkbox"/>
14							<input type="checkbox"/>
15							<input type="checkbox"/>

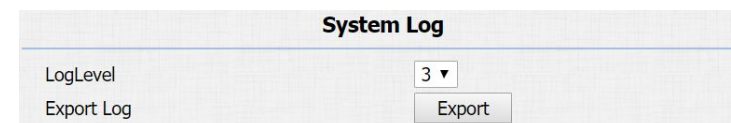
Figure 4.7.2 Door log

4.7.3.System Log

Go to **Upgrade - Advanced** to configure system log level and export system log file.

System log level: From level 0 to 7. The higher level means the more specific system log is saved to a temporary file. It's level 3 by default.

Export Log: Click to export temporary system log file to local PC.



System Log	
LogLevel	3
Export Log	<input type="button" value="Export"/>

Figure 4.7.3 System log

4.7.4.PCAP

Go to **Upgrade - Advanced** to start, stop packets capturing or to export captured packet file.

Start: To start capturing all the packets file sent or received from phone.

Stop: To stop capturing packets.

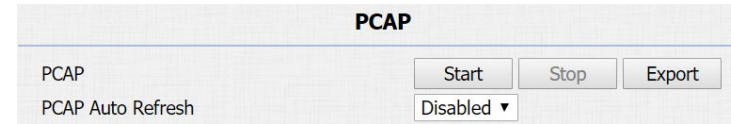


Figure 4.7.4 PCAP

Abbreviations

ACS: Auto Configuration Server

Auto: Automatically

AEC: Configurable Acoustic and Line Echo Cancelers

ACD: Automatic Call Distribution

Autop: Automatical 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

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

RTP: Real-time Transport Protocol

RTSP: Real Time Streaming Protocol

MPEG: Moving Picture Experts Group

MWI: Message Waiting Indicator

NO: Normal Opened

NC: Normal Connected

NTP: Network Time Protocol

NAT: Network Address Translation

NVR: Network Video Recorder

ONVIF: Open Network Video Interface Forum

SIP: Session Initiation Protocol

SNMP: Simple Network Management Protocol

STUN: Session Traversal Utilities for NAT

SMTP: Simple Mail Transfer Protocol

SDMC: SIP Devices Management Center

TR069: Technical Report069

TCP: Transmission Control Protocol

TLS: Transport Layer Security

TFTP: Trivial File Transfer Protocol

UDP: User Datagram Protocol

URL: Uniform Resource Locator

VLAN: Virtual Local Area Network

WG: Wiegand

Contact us

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We highly appreciate your feedback about our products.

