# FE-IPDS-20
# ADMIN GUIDE

**FREUND ELEKTRONIKA d.o.o**

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# 1. Product Overview

## 1.1 Description

Freund **FE-IPDS-20** is a SIP-Compliant, hands free, one button video door phone. It can be connected with your Freund IP Phone for remote unlock control and with monitor as well. Users can operate the Indoor Monitor to communicate with visitors using audio and video. RF Cards can be used to unlock the door.

## 1.2 Features

### Highlights

- Vandal resistant body, with a flush button
- Wide-angle camera: 116º (H), 60º(V)
- PoE (IEEE802.3af, Power-over-Ethernet)
- Two-way audio communication over IP networks with Echo Cancelation feature
- Complies with ONVIF standard for easy integration with any network surveillance system
- Compiles with SIP standard for easy integration in every SIP capable PBXes

# Specification

| | |
|---|---|
| ***POWER AND PHYSICAL*** | |
| Material | Aluminium |
| Camera | 3 MP, auto-lighting |
| Buttons | 1 Call button |
| Installation | On-wall/In-wall |
| IP Protection | IP65(water and dust proof) |
| Infrared | Yes |
| Light sensor | Yes |
| RF Card Reader | 13.56 MHz, 125 kHz |
| Microphone | 40dB |
| Speaker | 4Ω/3W |
| Ethernet port | RJ45, 10/100Mbps adaptive |
| On-wall dimensions | 189 x 120 x 56.5 mm |
| In-wall dimensions | 145 x 85 x 27.5 mm |
| Working humidity | 10% to 90 % |
| Working temperature | -20°C to 65°C |
| Storage temperature | -40°C to 70°C |
| Relay in/out | 2 input and output relays for door opener |
| ***VIDEO*** | |
| Sensor | 1/3", CMOS |
| Pixels | CIF, QCIF, VGA, 4CIF, 720p |
| Video codec | H.264 |
| Video resolution | Up to 720p |
| Maximum image transfer rate | 720p-30fps |
| Viewing angle | 120°/ 64° (H/V) |
| Lighting | High intensity IR LEDs for picture lighting during dark hours with internal light sensor, compatible with 3rd party components |
| ***NETWORKING*** | |
| Protocol support | IPv4, HTTP, HTTPS, FTP, SNMP, DNS, NTP, RTSP, RTP, TCP, UDP, ICMP, DHCP, ARP |
| ***DOOR ENTRY FEATURE*** | |
| White balance | Auto |
| Minimum illumination | 0.1 LUX |
| Additional information | Relays controlled individually by DTMF tones, camera permanently operational, auto-night mode with LED illumination |
| ***APPLICATION SCENARIOS*** | |
| Office door phone with on-site or hosted IP-PBX | |
| Remote site entry over Internet | |
| Apartment/flat intercom with door access control | |

## 1.3 Daily Use

### 1.3.1 Making a Call

Press the Call Button to make a call out to a predefined number or IP address. When the call is answered, the button LED will change it color to green.

### 1.3.2 Receiving a Call

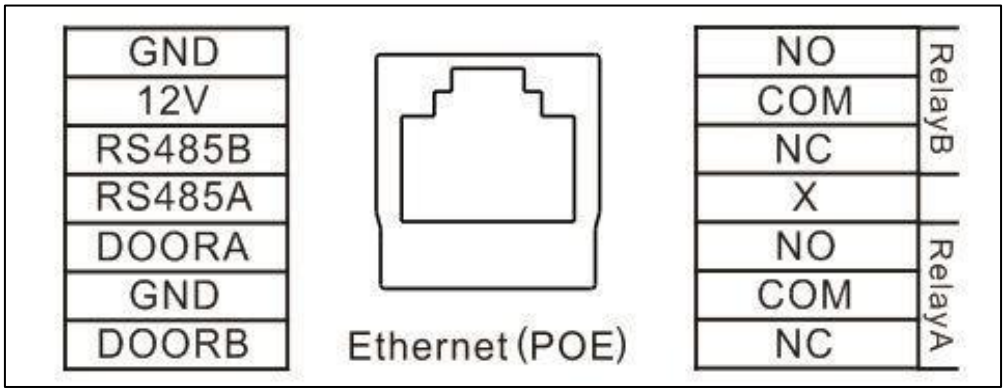
Users can use an IP Phone or Indoor Monitor to make a call to a FE-IPDS-20 and it will answer automatically by default. Auto Answer option can be disabled through devices' Web Interface. The process is described in section **Call Feature** of this manual.

### 1.3.3 Unlocking a door with an RF Card

Place the predefined RF Card on the Card Sensor area. The device will announce the sentence "The door is now open".

FE-IPDS-20 supports 13.56 MHz and 125 kHz RF Cards.

## 1.4 Connector Introduction




PICTURE1

| Connector | Description |
|---|---|
| Ethernet (POE) | Used to provide the device with network connection; Can be used to power the device if it is connected to a switch device |
| 12V/GND | Used to power the device using an external power supply |
| RS485A/B | RS485 terminal for automation system control (e.g. Elevator control). |
| DOORA/B | Trigger signal input terminal (e.g. Press indoor button to open relay). |
| Relay A/B | NO/NC Relay control terminal. |

# 2. Basic Settings

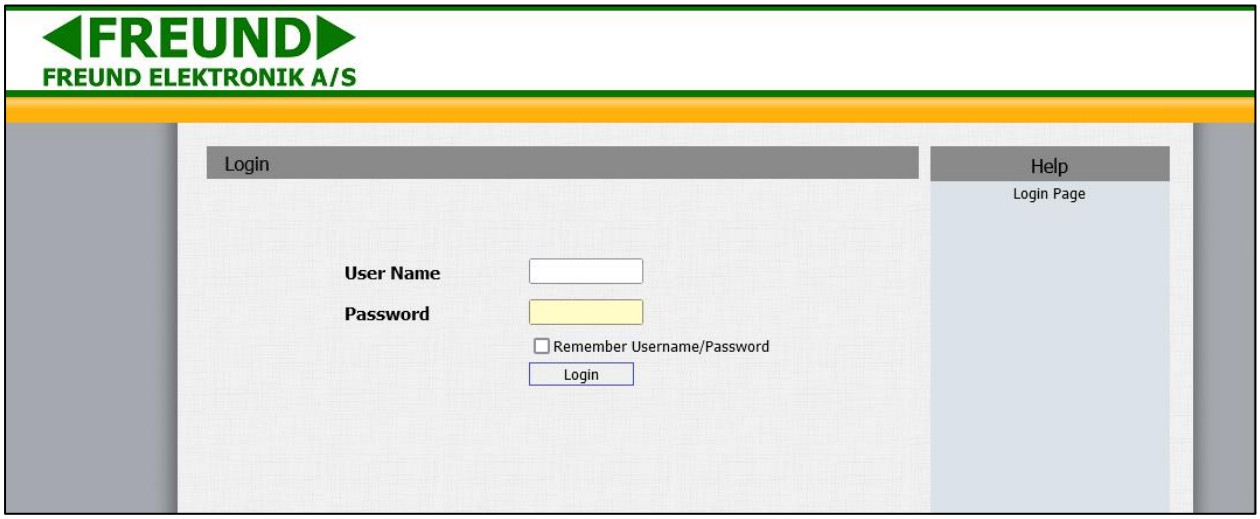
## 2.1 Getting Started

### 2.1.1 IP Announcement

When the device is powered on (continuous blue LED), press and hold the Call button for 5 seconds. Device will enter the IP Announcement mode and will read out the current IP address in the next format: “IP: X.X.X.X”. To stop the device from reading out the IP address, press the Call Button again.

### 2.1.2 Access the device through Web Interface

On your PC, start a web browser and enter the devices’ IP address. Following screen will show:




PICTURE 2

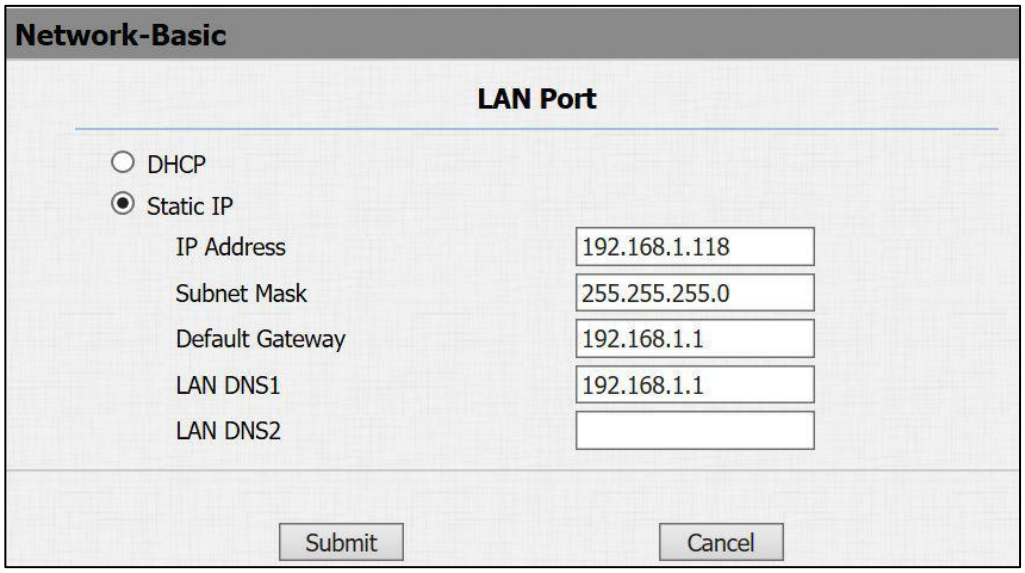
Type in username and password and click on “Login”.

**Default username**: admin

**Default password**: admin

## 2.2 Network Settings

To choose how device obtains an IP address, click on **Network -> Basic**. Screen as shown in picture below will be displayed.




PICTURE 3

### 2.2.1 DHCP

FE-IPDS-20 is set to **DHCP** option by default. DHCP option means that device will get **IP Address, Subnet Mask, Default Gateway, and DNS Server Address** automatically from DHCP Server.

### 2.2.2 Static IP

If this option is selected, the user can manually set the **IP Address, Subnet Mask, Default Gateway, and DNS Server Address.** Picture 3 shows **Static IP** setting.

## 2.3 Account

Go to **Account -> Basic** to configure **SIP Account** and **SIP Server**.

### 2.3.1 SIP Account

**Status**: Showing the Account status

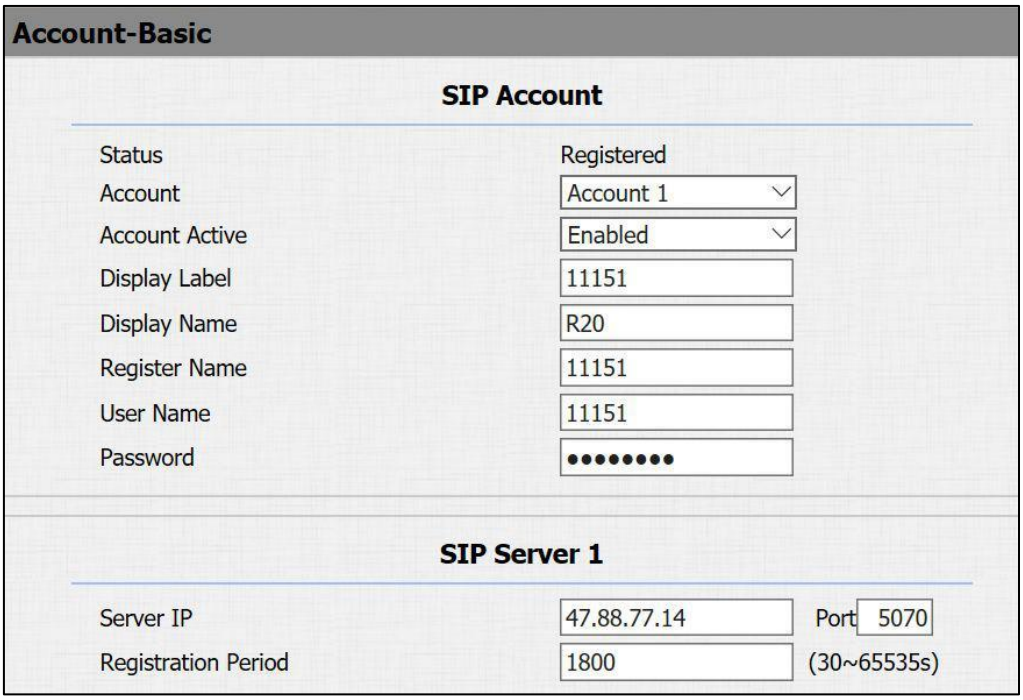
**Display Label**: Configure label displayed on Phones LCD screen

**Display Name**: Name which is displayed to other party call

**Register Name**: Enter extension number you want, and the number is allocated by SIP Server

**Username**: Username of the extension

**Password**: Password for the extension




PICTURE 4

### 2.3.2 SIP Server 1

**Server IP**: Enter SIP Server's IP Address or URL.

## 2.4 Call Setting

Go to **Intercom -> Basic** to configure basic **Call Setting**.

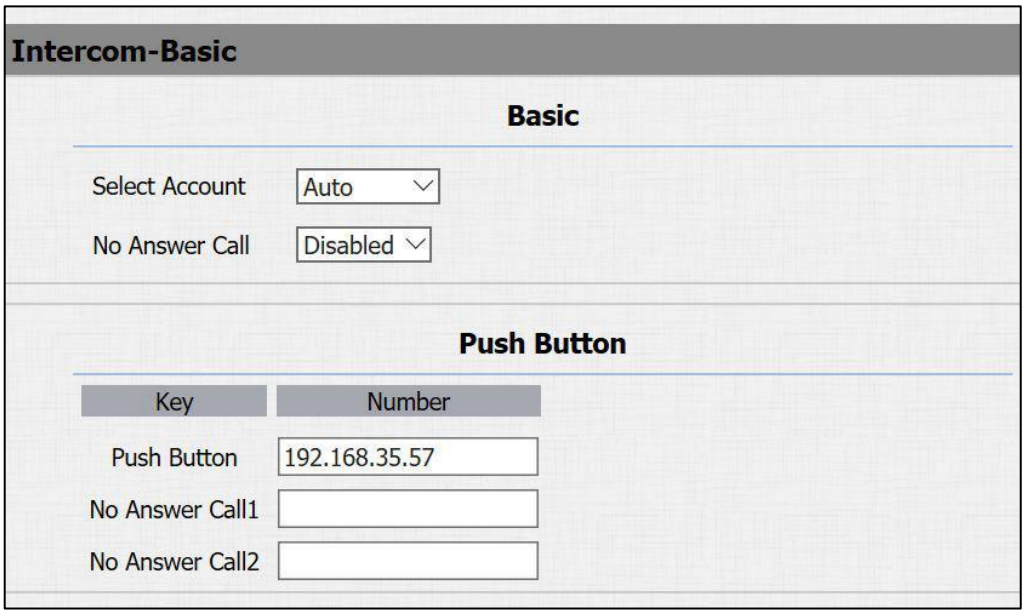
### 2.4.1 No Answer Call

When enabled, if there is no answer from Push Button over 60s (default value), FE-IPDS-20 will call predefined number.

### 2.4.2 Push Button

Used to configure the destination number or IP you want to contact. If you would like to call multiple numbers at the same time, divide them by semicolon.

No Answer Call 1 and 2 is used to set up one or two no answer call number.




PICTURE 5

### 2.4.3 Push Button Action

**Action to execute**: Choose suitable way to receive message or snapshot when pushing a button.

**HTTP URL**: If you tick the HTTP URL option, enter the corresponding HTTP server IP address in the HTTP URL area.

### 2.4.4 Web Call

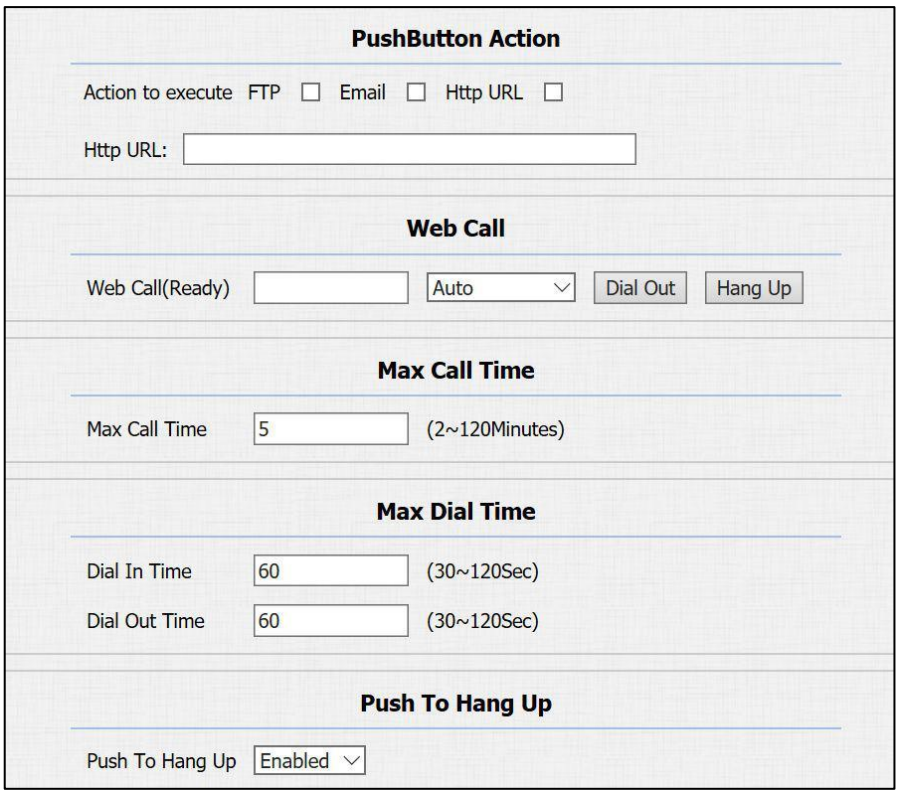
Used to dial out or answer incoming call from the website.

### 2.4.5 Call and Dial Time

**Max Call Time**: Configure the duration of the call time.

**Dial In Time**: Configure the max incoming dial time (available when auto answer is disabled).

**Dial Out Time**: Configure the duration of No Answer Call time.




PICTURE 6

### 2.4.6 Push to Hang up

Used to enable or disable pushing the button to hang up the call.

## 2.5 Action

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

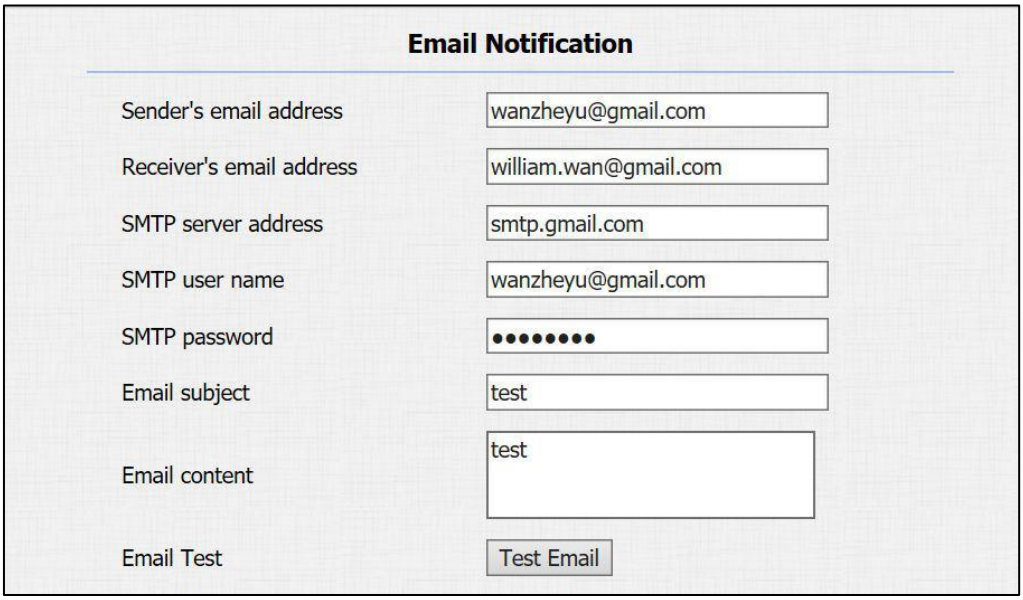
### 2.5.1 E-mail Notification

**Senders e-mail address**: Configure e-mail address of the sender.

**Receiver's e-mail address**: Configure e-mail address of the receiver.

**SMTP** = Simple Mail Transfer Protocol

**SMTP server address**: Configure SMTP server address of the sender (usually it is same with sender's email address).




PICTURE 7

**SMTP username**: Used to configure username of SMTP Service (usually it is same with senders' e-mail address).

**SMTP password**: Used to configure the password of SMTP service (usually it is the same with the password of senders' e-mail).

**E-mail subject**: Used to configure the subject of an e-mail.

**E-mail content**: Field used to type in the content of an e-mail.

**E-mail test**: Ability to test whether the e-mail notification is available.

### 2.5.2 FTP Notification

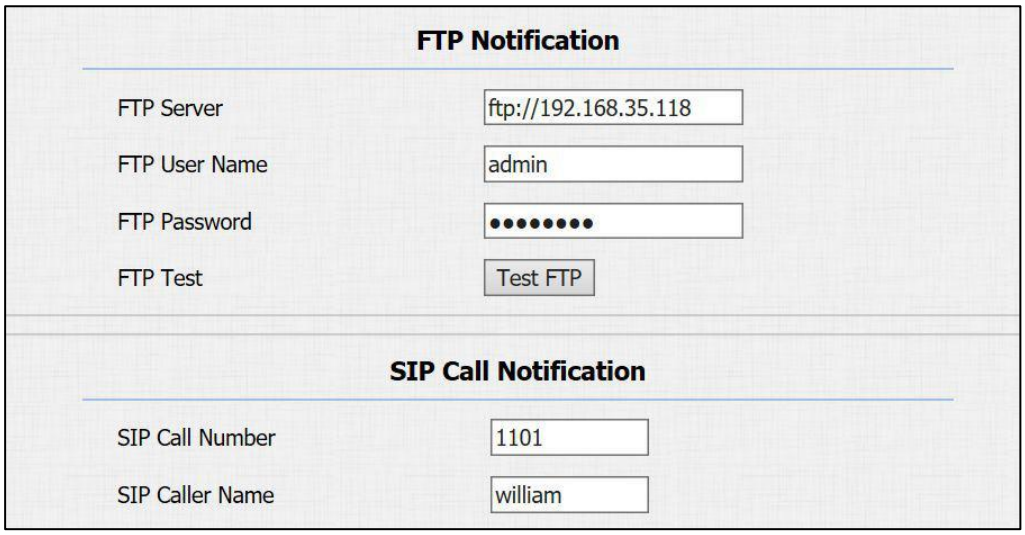
**FTP** = File Transfer Protocol

**FTP Server**: Used to type in the URL of an FTP server.

**FTP Username**: Used to configure the password of an FTP server.

**FTP Password**: Used to configure password of an FTP server.

**FTP Test**: Ability to test whether the FTP notification is available.




PICTURE 8

### 2.5.3 SIP Notification

**SIP Call Number**: Used to configure SIP Call number

**SIP Call Name**: Used to configure display name of the FE-IPDS-20.

## 2.6 Card Setting

In order to manage card access system, go to **Intercom -> Card Setting**.

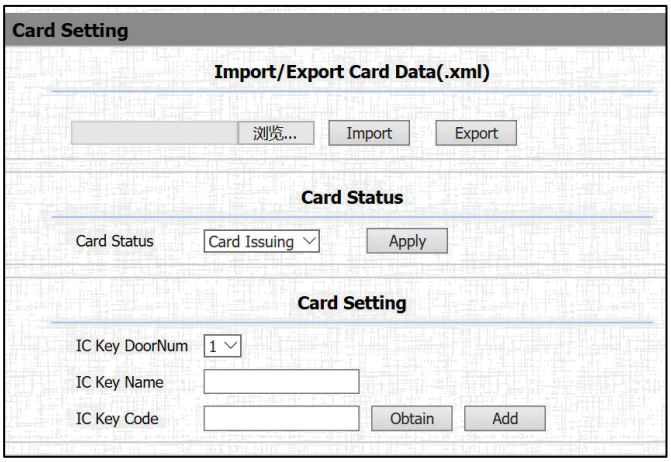
### 2.6.1 Importing/Exporting Card Data

FE-IPDS-20 has ability to import and export the card data file. It is useful when there is a large number of cards which have to be imported.

### 2.6.2 Obtaining and Adding Cards

To add the Card into the system, we need to change the status of the device to “Card issuing”.

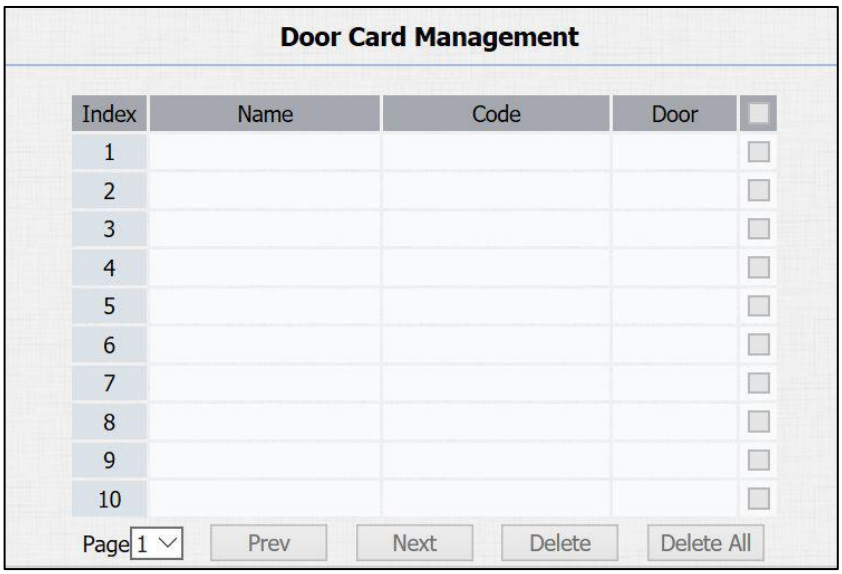
1. Switch Card Status to **Card Issuing** and confirm by clicking “**Apply**”.
2. Click on “**Obtain**” and place the card onto the card reader area.
3. Type in the name of the card and select the door you wish to open.
4. Click “**Add**” to confirm and finish adding the card.
5. When finished adding the cards, switch Card Status to **Normal** and confirm by clicking “**Apply**”.




PICTURE 9

### 2.6.3 Door Card Management

Valid card information will be shown in the list. Administrator can select which card permissions to revoke (delete) or delete all.




PICTURE10

## 2.7 Relay Settings

To configure relay, click on **Intercom -> Relay**.

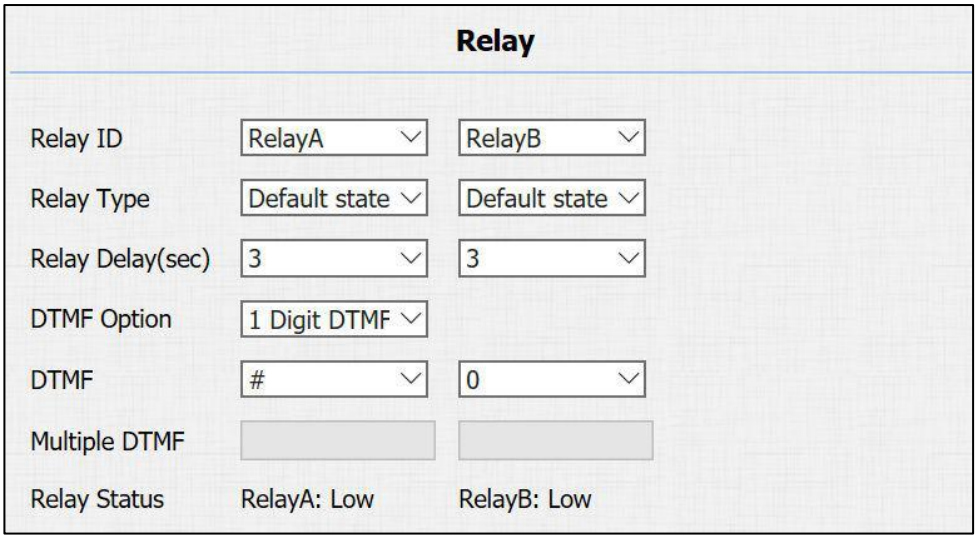
### 2.7.1 Relay

There are three relay terminals: **NO, NC,** and **COM**.

**NO** – Normal Open

**NC** – Normal Closed

**Note: Relay operate a switch and does not deliver power. User should prepare power adapter for external devices which are connected to the relay.**




PICTURE 11

**Relay ID**: FE-IPDS-20 supports two relays, which are user configurable.

**Relay Type**: Default state means NC and COM are normally closed;

Inverted state means NC and COM are normally open.

**Relay Delay**: Used to configure the duration of period in which the relay is open (value is in seconds). After the time has expired, the relay will close again.

**DTMF Option**: Used to select number of digits of DTMF Code. FE-IPDS-20 supports maximum of 4 digits DTMF Code.

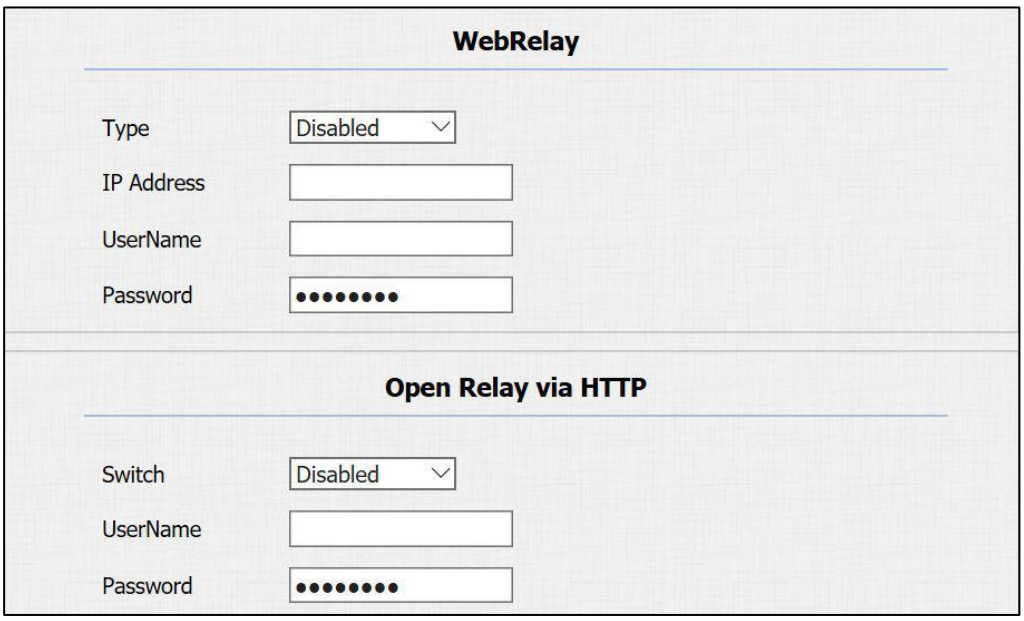
**DTMF**: Used to configure 1-digit FTMF Code for remote unlock.

**Multiple DTMF**: Used to configure multiple digits DTMF code for remote unlocking.

**Relay Status**: Low – COM is connected to the NC;

High – COM is connected to the NO.

### 2.7.2 Web Relay




PICTURE12

FE-IPDS-20 supports an extra Web Relay.

**Type**: Used to select Web Relay type (currently, only 2N Web Relay is supported).

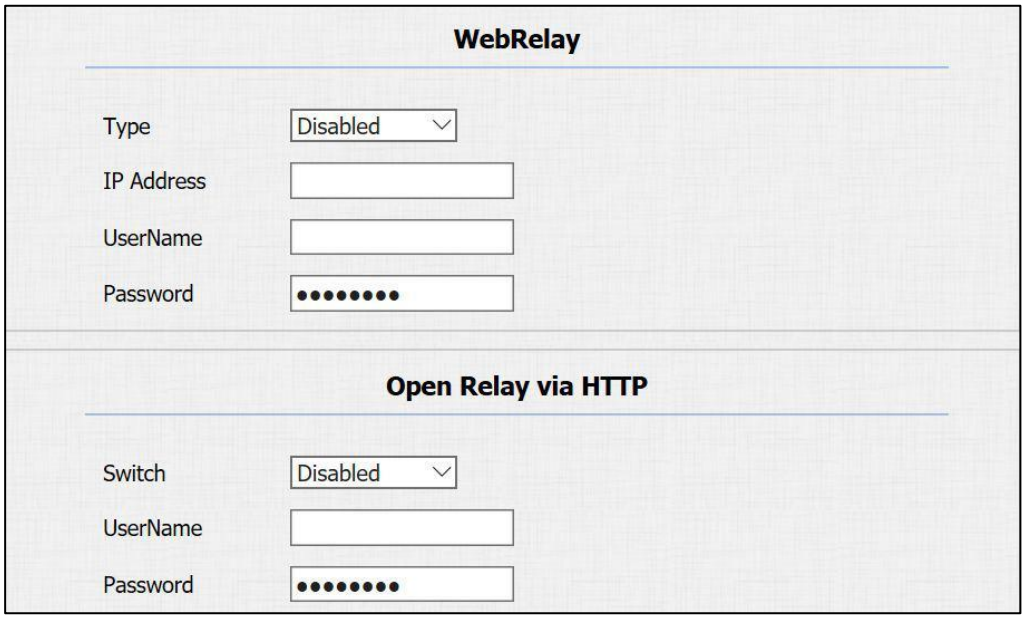
**IP Address**: Used to enter corresponding Web Relay IP Address.

**Username**: Used to enter the correct username of the Web Relay.

**Password**: Used to enter the correct password of the Web Relay.

### 2.7.3 Open Relay via HTTP

Users can use an URL to remotely unlock the doors.




PICTURE13

**Switch**: Enables the function; Disabled by default.

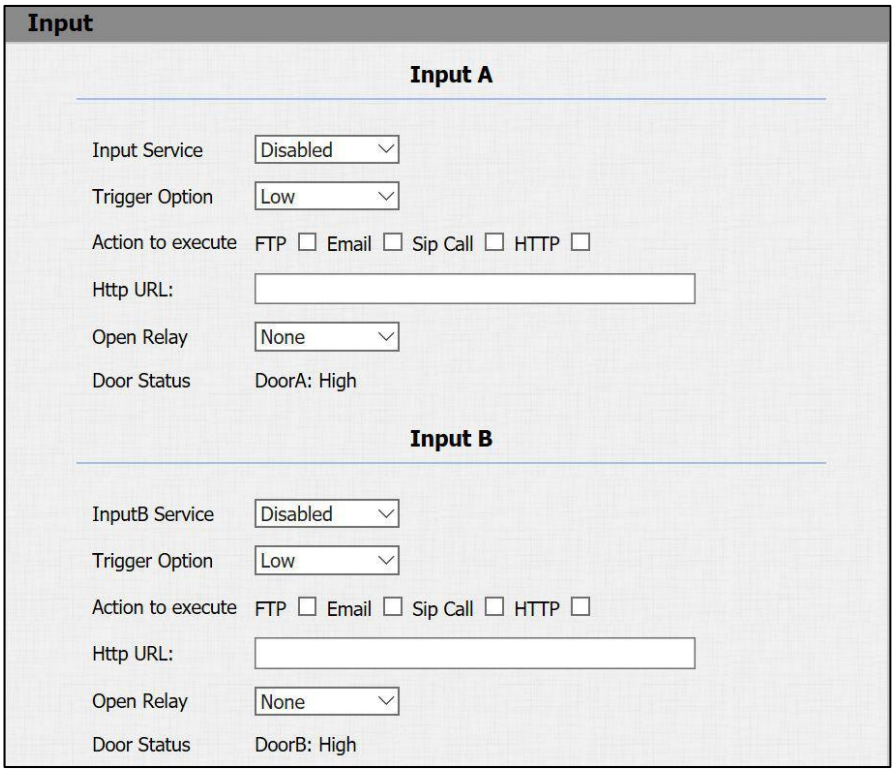
Username & Password: Used to allow users to set up the username and the password for the HTTP unlock.

**URL format used is:**

**“http://IP_address/fcgi/do?action=OpenDoor&UserName=&Passowrd=&DoorNum=”**

## 2.8 Input

FE-IPDS-20 supports two input triggers, Input A and B. To configure them, go to **Intercom -> Input**.




PICTURE14

**Input Service**: Used to enable/disable input trigger service.

**Trigger Option**: Used to select Open-circuit trigger or Closed-circuit trigger.

Low – Connection between Door Terminal and GND is closed;

High – Connection between Door Terminal and GND is open.

**Action to execute**: Used to choose which action to execute after triggering.

**HTTP URL**: Used to configure URL if the HTTP option is chosen.

**Open Relay**: Used to configure which Relay to open.

**Door Status**: Used to show the status of input signal.

# 3. Advanced Settings

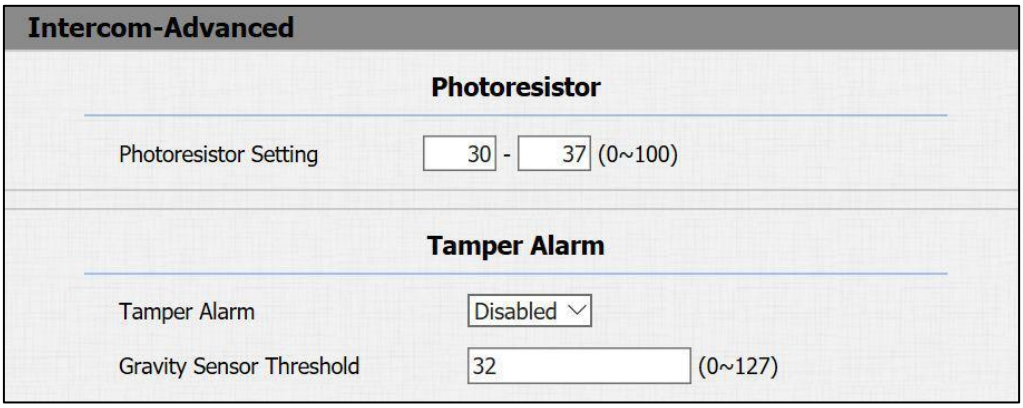
## 3.1 Intercom – Advanced

Photoresistor: If the environment lighting is poor, infrared LED on FE-IPDS-20 will turn on and the device will go into the night mode.

Photoresistor value relates to light intensity. If the value is larger, the light intensity is smaller. Users can configure the upper and lower limit. When the photoresistor value is larger than the upper limit, IR LED will turn on. In contrast, when photoresistor value is smaller than the lower limit, IR LED will turn off and device will change to normal mode.

Tamper Alarm: FE-IPDS-20 incorporates internal gravity sensor for its own security. After the Tamper Alarm is enabled, if the gravity of the device changes to certain point, the alarm will go off.

Gravity Sensor Threshold determines the sensitivity of the sensor.

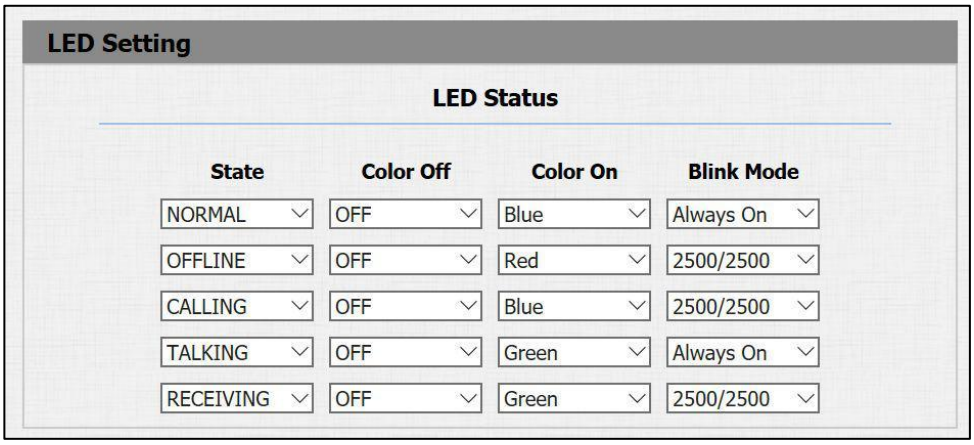



PICTURE15

## 3.2 LED Setting

There are five LED statuses for 20A: Normal, Offline, Calling, Talking and Receiving.

Go to **Intercom->Led Setting**, to configure corresponding LED response.




PICTURE16

## 3.3 Live Stream

Go to **Intercom -> Live Stream** to check the real-time video from an FE-IPDS-20A.

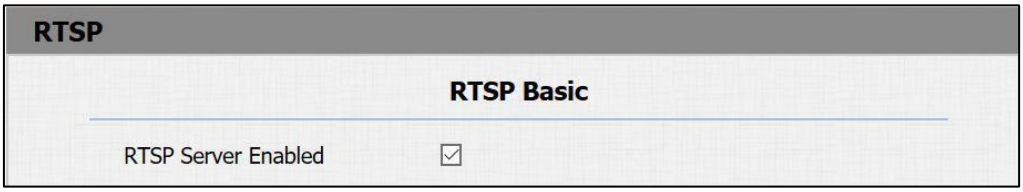
In addition, User can also take a picture by accessing this URL:

"**http://IP_address:8080/picture.jpg**"

## 3.4 RTSP

FE-IPDS-20A 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”**




PICTURE17

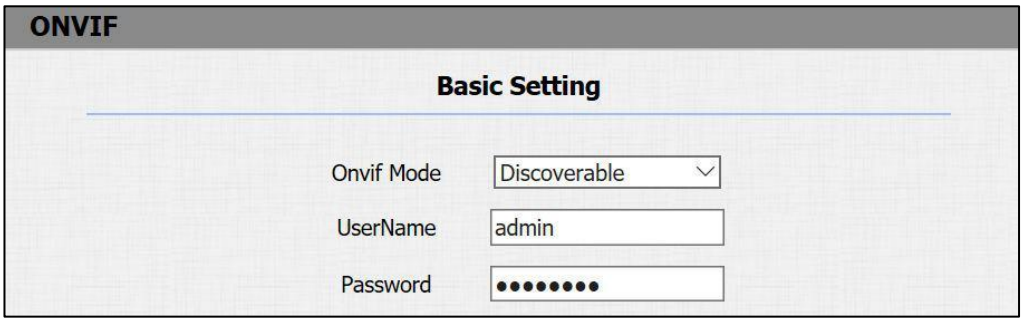
## 3.5 ONVIF

FE-IPDS-20A supports the ONVIF protocol. It means that 20A’s camera can be searched by other devices (i.e NVR) that also support ONVIF protocol.

Go to **Intercom -> ONVIF** to configure ONVIF mode and its username/password. Switching ONVIF mode to “Undiscoverable” means that User must program ONVIF’s URL manually.

ONVIF’s URL is:

**“http://ip_address:8090/onvif/device_service”**




PICTURE18

## 3.6 Motion

FE-IPDS-20A supports motion detection. Go to Intercom -> Motion to configure detection parameter.

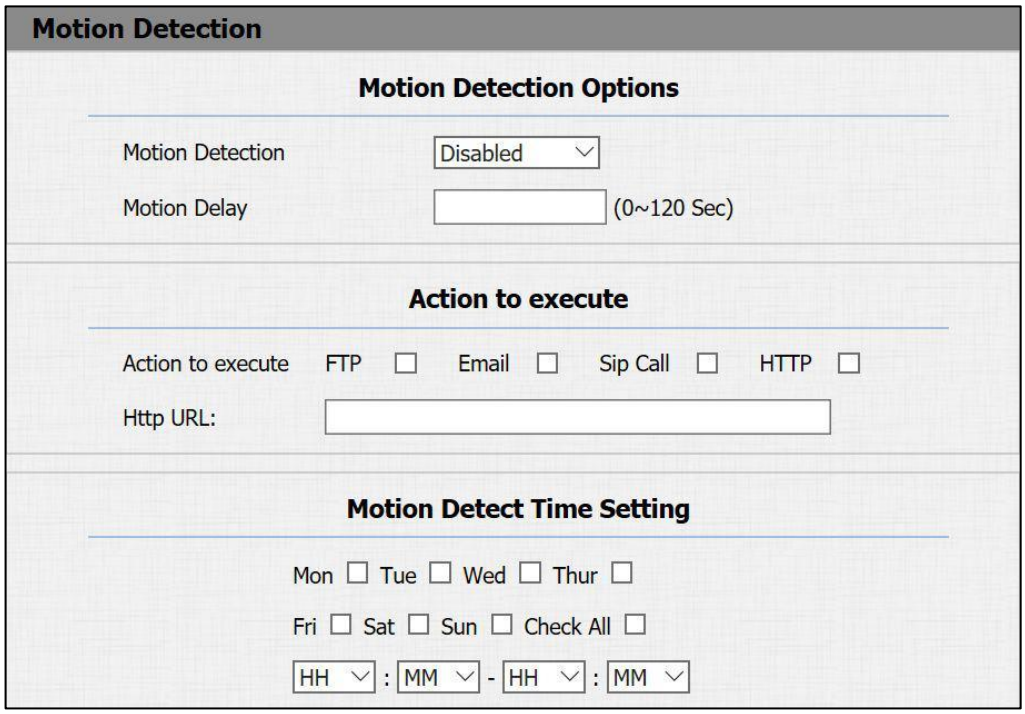
**Motion Detection**: Setting used to enable or disable Motion detection.

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

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

**HTTP URL**: To configure URL if HTTP action is chosen.

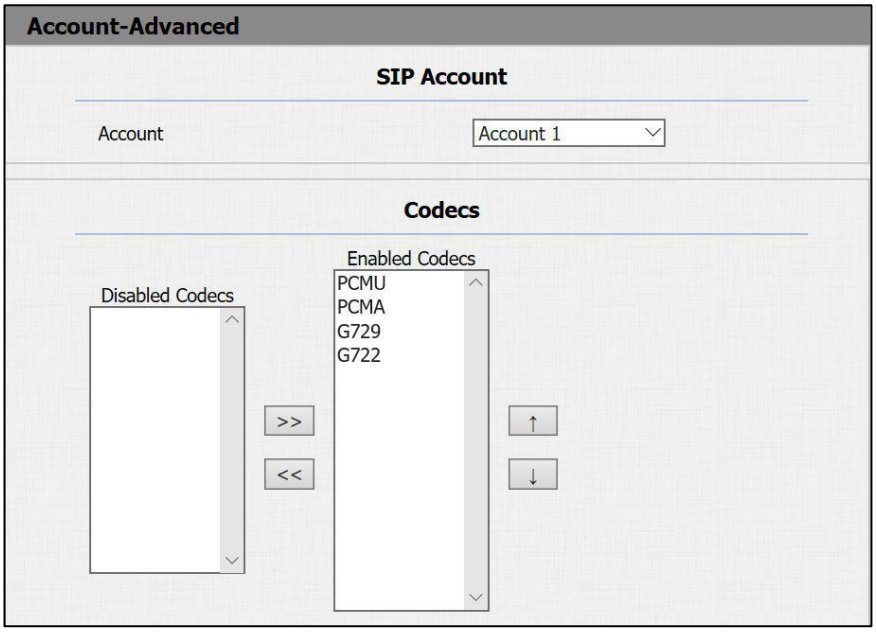
**Motion Detect Time Setting**: To make Motion Detect Time for a whole week.




PICTURE19

## 3.7 Account – Advanced

Go to **Account -> Advanced** to configure advanced settings for account.




PICTURE 20

### 3.7.1 Audio Codec

SIP Account: To choose which account to configure.

Audio Codec: FE-IPDS-20A supports four audio codecs: PCMA, PCMU, G729, G722. Different audio codec requires different bandwidth. User can enable or disable them according to different network environment.

**Bandwidth consumption and sample rates:**

| | | | |
|---|---|---|---|
| PCMA: | 64kbit/s | 8kHz | |
| PCMU: | 64kbit/s | 8kHz | |
| G729: | 8kbit/s | 8kHz | Least consumption |
| G722: | 64kbit/s | 16kHz | Best quality |

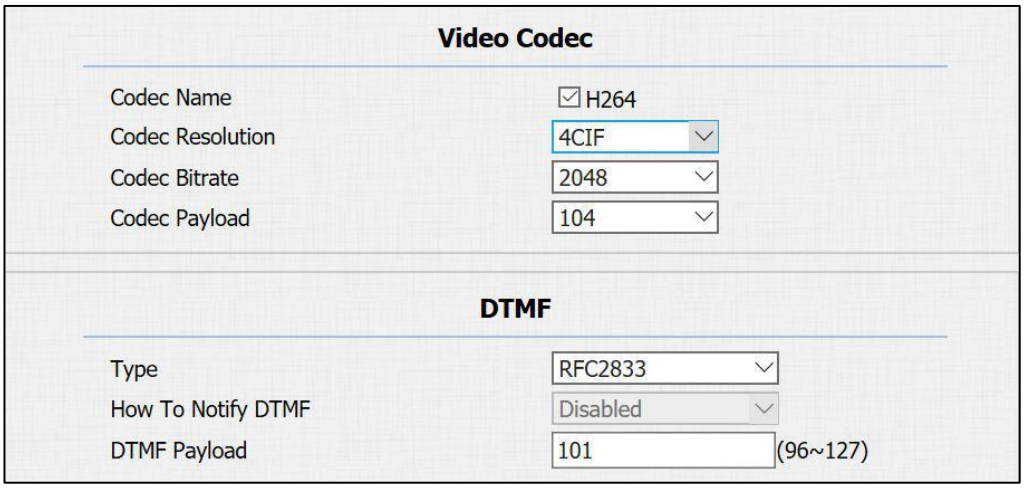
### 3.7.2 Video Codec

FE-IPDS-20A supports H.264 standard, which provides better video quality at substantially lower bit rates than previous standards.

**Codec Resolution**: 20A supports 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.




PICTURE 21

### 3.7.3 DTMF

To configure RTP audio video profile for DTMF and its payload type.

### 3.7.4 Call

**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

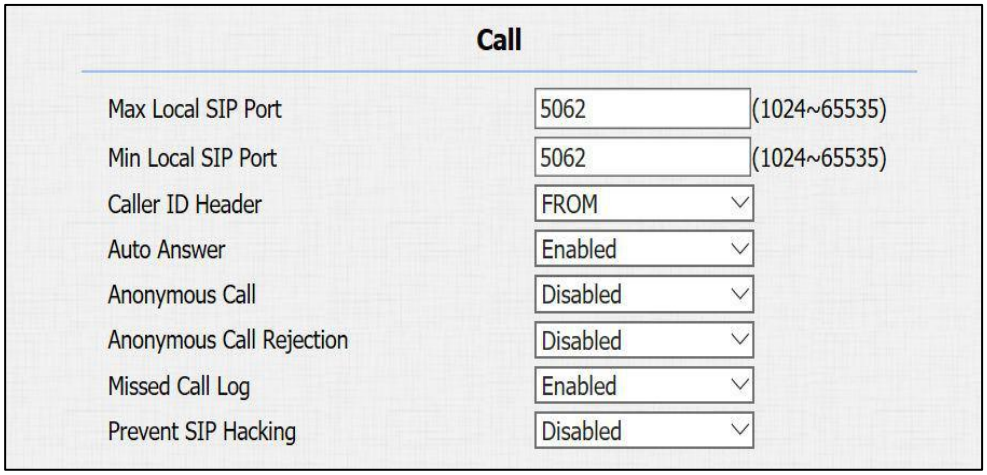
**Auto Answer**: If enabled, incoming call will be answered automatically.

**Anonymous Call**: If enabled, 20A will lock 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.

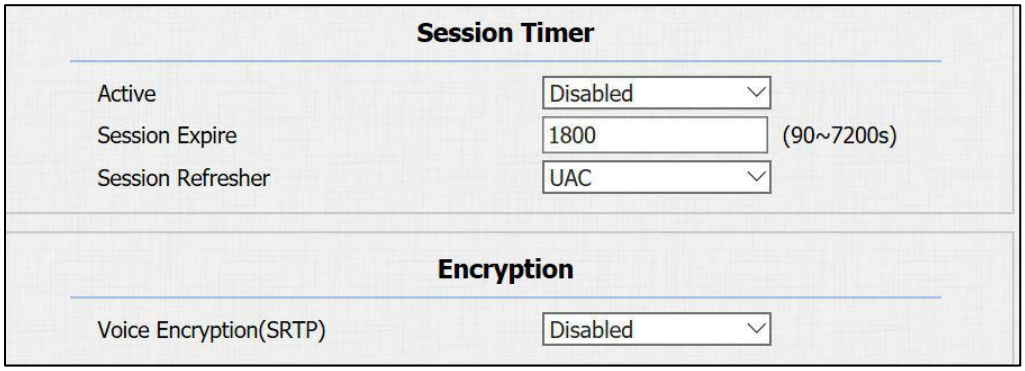
**Prevent Hacking**: If enabled, it will prevent sip message from hacking




PICTURE 22

### 3.7.5 Session Timer

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



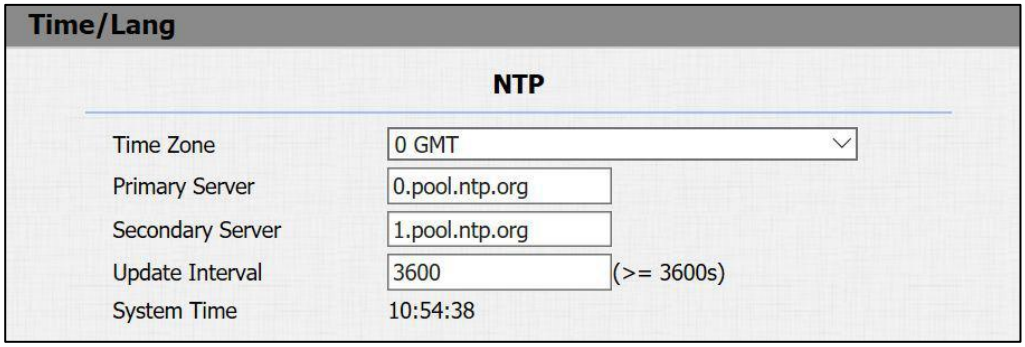

PICTURE 23

### 3.7.6 Encryption

If enabled, voice will get encrypted.

## 3.8 Time/Lang

Go to **Phone -> Time/Lang** to select time zone for NTP server, as well as select the primary and secondary server and update interval.




PICTURE 24

## 3.9 Call Feature

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

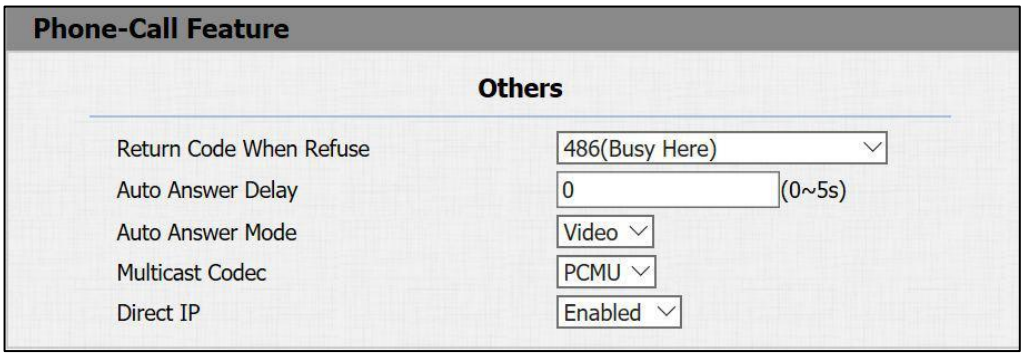
**Return Code When Refuse**: To configure Return SIP status code.

**Auto Answer Delay**: To configure answer delay when receiving a call.

**Auto Answer Mode**: To choose whether to answer with Video or Audio mode.

**Multicast Codec**: To configure video codec for multicast.

**Direct IP:** If disabled, incoming direct IP call will be blocked.




PICTURE 25

## 3.10 Voice

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

**Mic Volume**: To configure Microphone volume.

**Speaker Volume**: To configure Speaker volume.

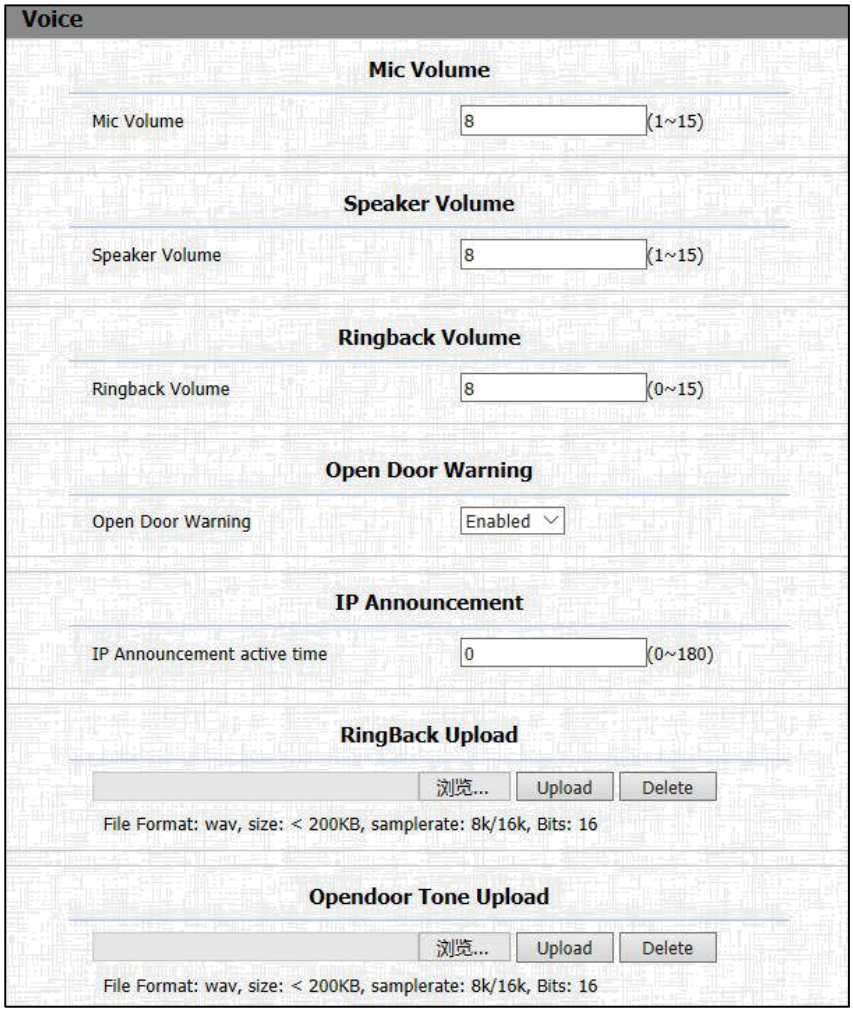
**Open Door Warning**: Disable it, you will not hear the prompt voice when the door is opened.

**IP Announcement**: To setup the IP Announcement active time.

**NOTE: Over the configured value, the phone will not announce its IP address, even you hold the button.**

**RingBack Upload**: To upload the ring back tone by yourself.

**Opendoor Tone Upload**: To upload the Open-door tone by yourself.

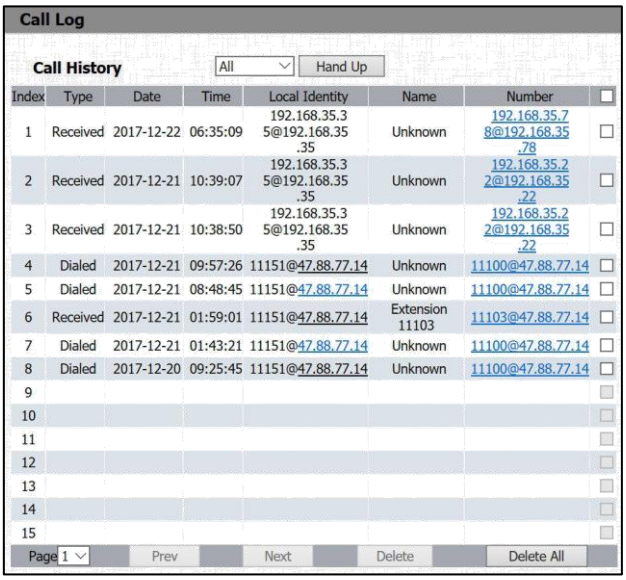



PICTURE 26

## 3.11 Log

### 3.11.1 Call Log

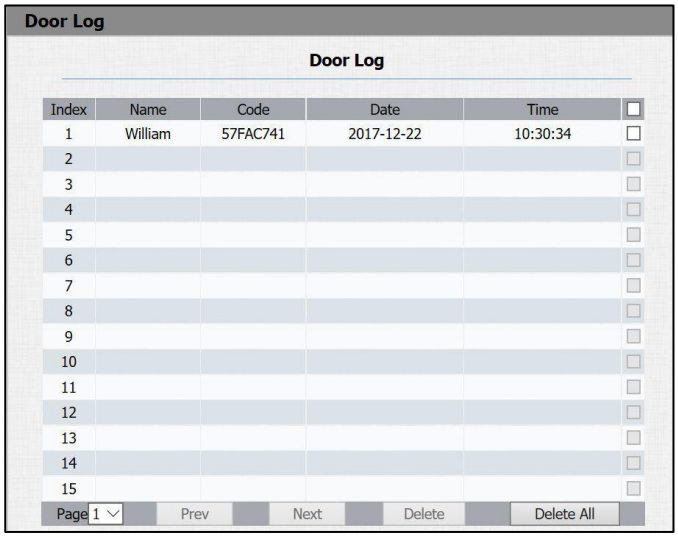
In **Phone -> Call Log**, user can see a list of call which have been dialed, received, or missed. User can delete calls from the list.




PICTURE 27

### 3.11.2 Door Log

In **Phone -> Door Log**, user can see a list of door logs which records card information and date.

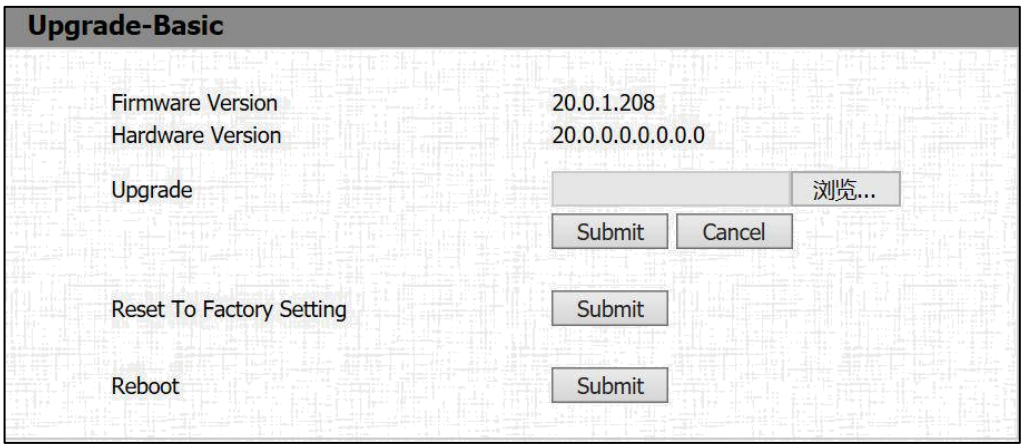



PICTURE 28

## 3.12 Upgrade

### 3.12.1 Upgrade – Basic

In **Upgrade -> Basic**, user can upgrade the firmware, reset device to factory setting or reboot the device.

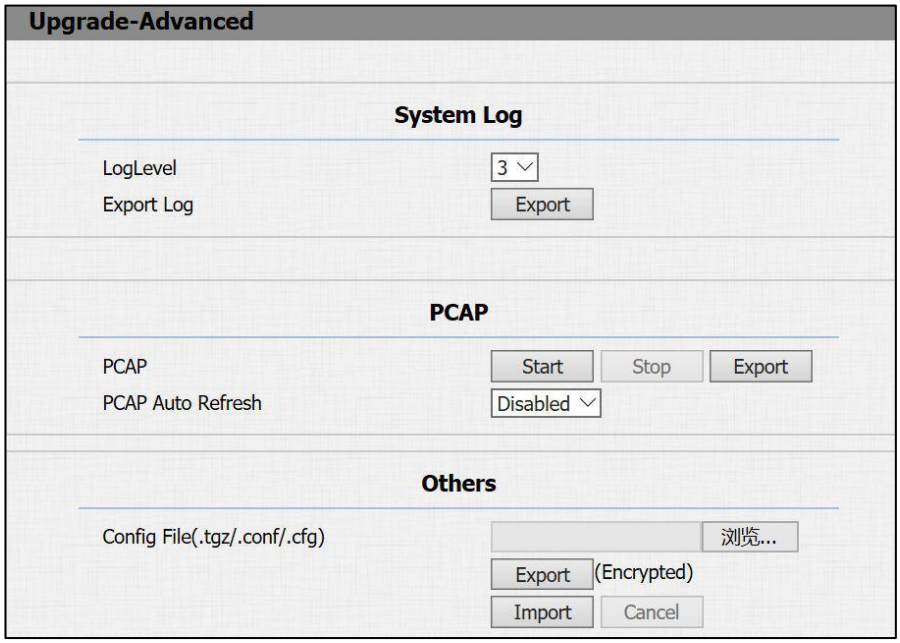



PICTURE 29

### 3.12.2 Upgrade – Advanced

System log: Used for debugging, higher Log Level means more specific system log will be recorded. If device failure occurs, user can export System Log which can be sent to Freund support technicians to attempt to resolve the issue.

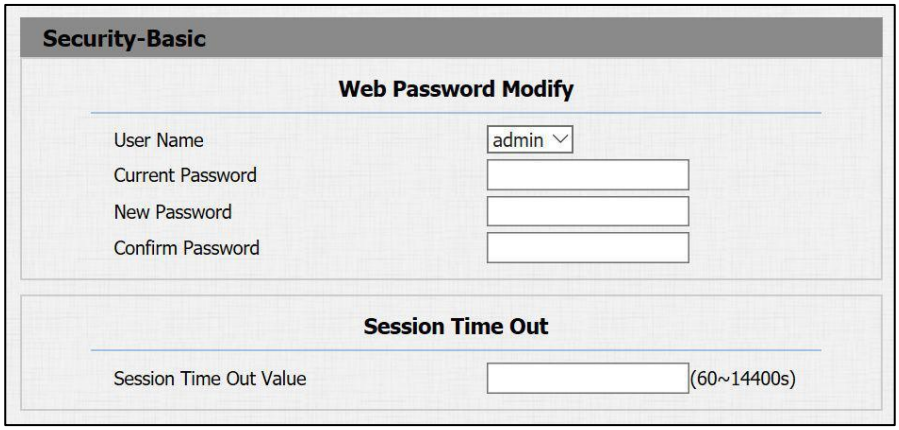
PCAP: To capture packet which is useful for us to address the issue.




PICTURE 30

## 3.13 Security – Basic

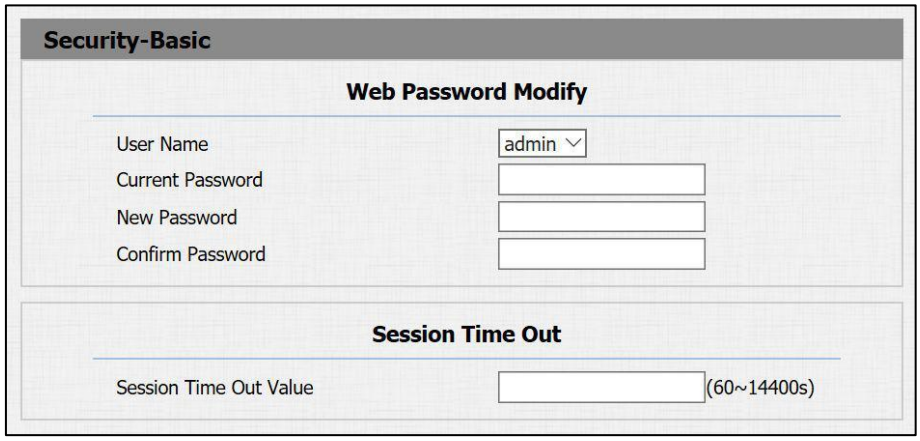
To modify password and session time, go to **Security -> Basic**.




PICTURE 31

### 3.13.1 Web Password Modify

To modify password of **Admin** and **User** accounts.




PICTURE 32

### 3.13.2 Session Timeout

To configure session timeout value. Over the value, user need to log in again to continue the configuration.

**Freund Elektronik A/S, in cooperation with our sister company Freund Elektronika D.O.O. Sarajevo, is developing an IP-Based Intercoms, Audio Systems, Access Control and Smart Home solutions.**

**As a developer, manufacturer, and reseller, we have been self-improving and perfecting ourselves for over 30 years.**

**In the industry, we negotiate the most advanced and innovative solutions regarding the building communication. Our daily focus is on the development and user friendliness of our high quality and pleasantly designed products.**

**As a developer and manufacturer of our own IP-INTEGRA system, we have made a top-of-the-line products for Door Telephony, Public Audio, and Access Control solution.**

**Our development department, together with our partners, has created elegant and robust door phones, SIP-Centrals, Terminals, IP-Speakers, ACC Controllers, and applications with intelligent features using the most advanced technologies when available, and creating new technologies when they are not while keeping it simple for our customers.**