

Hikvision Intercom Video Devices Integration Guide

Yeastar P-Series Appliance Edition

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Integrate Yeastar P-Series PBX System with Hikvision Intercom Video Devices

This guide provides a configuration example to show you how to integrate Hikvision intercom video devices with Yeastar P-Series PBX System to implement functions such as video intercom, access control, and intercom call forwarding.

Restrictions

This solution is tested with Hikvision devices that support SIP protocol.

For Hikvision devices with the same model, SIP protocol may not be supported. For more information, contact your Hikvision account manager.

Supported Hikvision product models

Device	Product Model
Hikvision Door Station	DS-KD8003-IME1 (VIS_OUTDOOR_H11_EN_STD_V2.2.45_210430)
Hikvision Villa Door Station	DS-KV8113-WME1(B), DS-KV8213-WME1(B), DS-KV8413-WME1(B) (VIS_VILLA_H11_EN_STD_V2.2.45_210430)
Hikvision Indoor Station	DS-KH6320-WTE1, DS-KH6320-TE1 (VIS_INDOOR_R0_EN_STD_V2.1.20_build210420)

Highlight features

By registering the Hikvision intercom video devices with Yeastar P-Series PBX System, you can achieve the following features:

Real-time video communication with the visitor

In addition to audio communication, the door station also supports video calls with **Indoor station**, **Linkus Web Client**, **Linkus Desktop Client**, and **Video IP phone**.

Auto-forward visitor calls to Linkus clients

By configuring the call forwarding feature, any unanswered calls will be automatically forwarded to the Linkus clients, preventing any missed calls.

Flexible access control with different endpoints

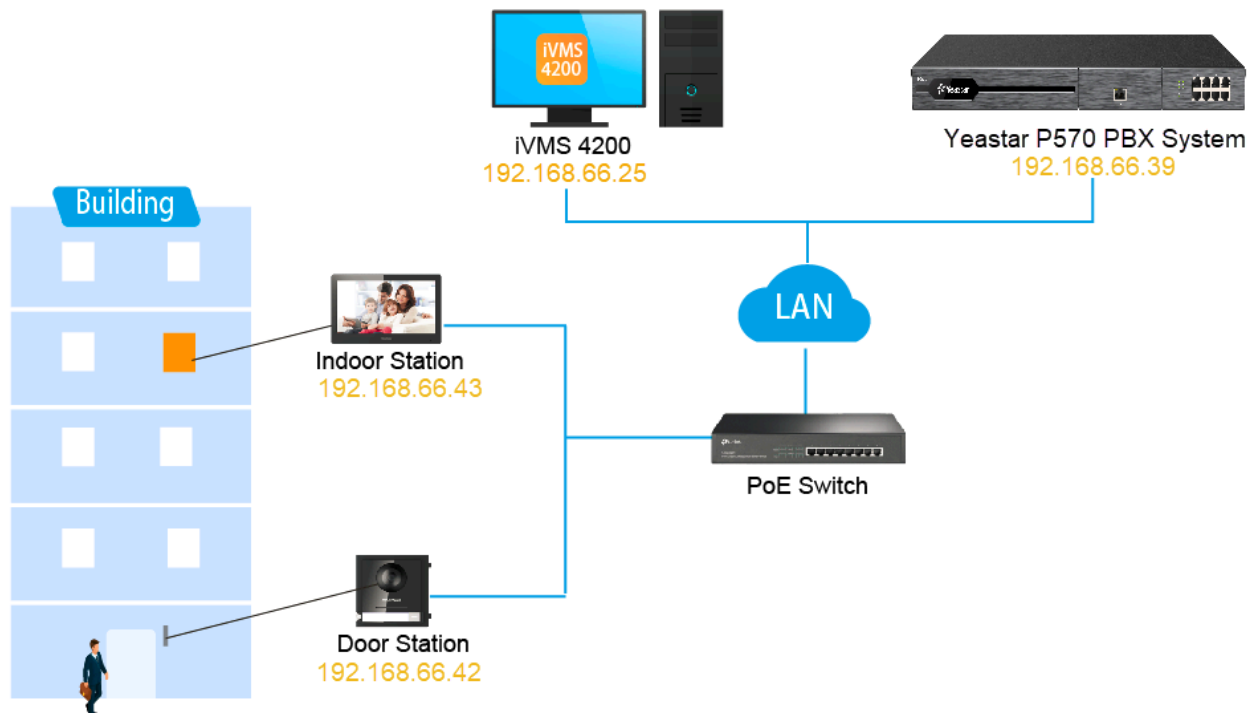
In addition to indoor stations, you can also answer visitor calls and remotely open the door using Yeastar PBX extension endpoints, including the Linkus clients and IP phones.

Test environment

The instructions provided in this guide are based on the following test environment.

Device	Firmware Version	IP Address
Yeastar P570	37.3.0.40	192.168.66.39
Hikvision DS-KH6320 Indoor Station	V2.1.10	192.168.66.43
Hikvision DS-KD8003 Door Station	V2.2.3	192.168.66.42

The following figure is a schematic of device network connection.



Objectives

This guide provides instructions based on the above scenario to help you achieve the following objectives:

- [Manage Hikvision Devices on iVMS-4200 Client](#)
- [Register Hikvision Door Station to Yeastar P-Series PBX System](#)
- [Register Hikvision Indoor Station to Yeastar P-Series PBX System](#)

- [Set up Communication Between Hikvision Door Station and Indoor Station](#)
- [Forward Hikvision Door Station Calls to Linkus Client](#)

Manage Hikvision Devices on iVMS-4200 Client

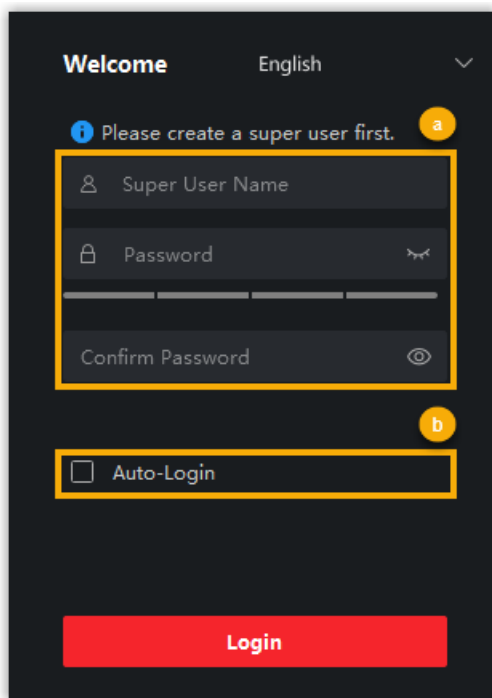
iVMS-4200 Client is a versatile device management software for Hikvision devices, which is designed to configure and manage the devices in a unified and intuitive manner.

Step 1. Install Hikvision iVMS-4200 Client

Download [iVMS-4200 Client Software](#) and install it on your local PC for Hikvision device management.

Step 2. Register and log in to Hikvision iVMS-4200 Client

1. Run iVMS-4200 Client.
2. Create a super user account.



- a. Set the user name and password for the account.
 - b. **Optional:** Select the checkbox of **Auto-Login** if needed.
3. Click **Login**.
The super user account is created and logged in.

**Note:**

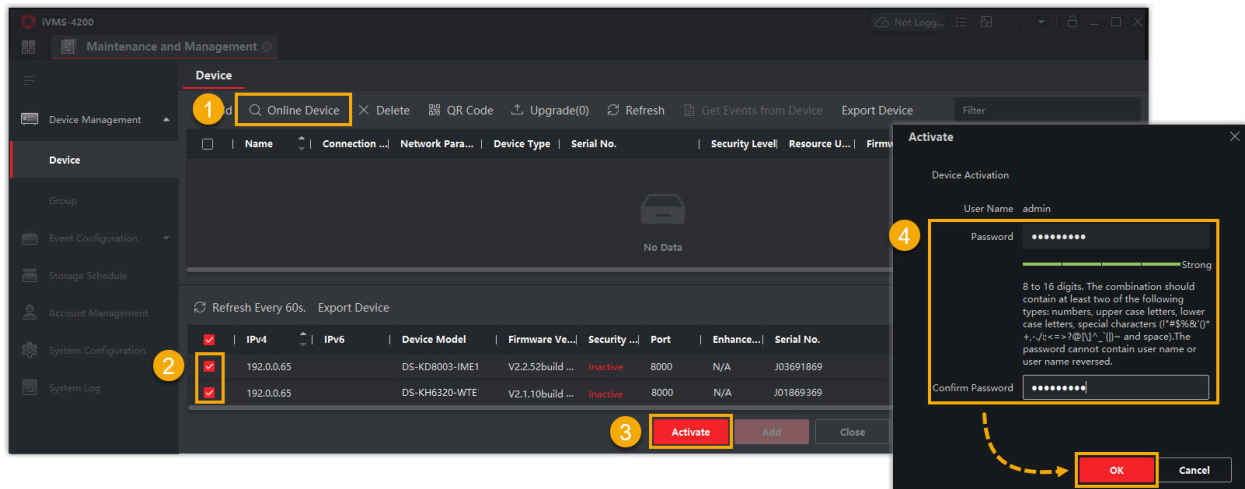
Enter the user name and password next time you want to access iVMS-4200 Client.

Step 3. Activate intercom video devices

You need to activate Hikvision door station and indoor station first by setting a strong password for them to ensure the devices can work properly.

**Note:**

Make sure the devices to be activated is in the same network as the PC running the client.



1. On **Device Management > Device**, click **Online Device**.

The detected online devices are displayed at the bottom of the page.

2. Check device status (shown on **Security Level** column) and select **Inactive** devices.


3. Click **Activate**.



4. In the activation window, set a password for the device and click **OK** to activate it.

Step 4. Add devices to iVMS-4200 Client

After the devices are activated, you can add them to the client for device management.

1. Configure the IP addresses for Hikvision devices.

- a. Click  on the **Operation** column beside the detected devices.

<input type="checkbox"/>	IPv4	IPv6	Device Model	Firmware Ve...	Security ...	Port	Enhance...	Serial No.	Support ...	Hik-Con...	Operation
<input type="checkbox"/>	192.0.0.65		DS-KD8003-IME1	V2.2.52build ...	Inactive	8000	N/A	J03691869	N/A	N/A	
<input type="checkbox"/>	192.0.0.65		DS-KH6320-WTE	V2.1.10build ...	Inactive	8000	N/A	J01869369	N/A	N/A	



- b. Configure the IP address and gateway of the devices to ensure they are on the same network segment as the PC running the iVMS-4200 client.

In this example, the PC's IP address is **192.168.66.25**, and the devices' IP addresses are set as follows:

- Door station: 192.168.66.42
- Indoor station: 192.168.66.43

- c. Click **OK**.

2. Select the activated devices and click **Add** on the bottom right.

Refresh Every 60s.											Total (2)	Filter
<input checked="" type="checkbox"/>	IPv4	IPv6	Device Model	Firmware Version	Security...	Port	Serial No.	Boot...	Added	Support...	Hik-Con...	Oper...
<input checked="" type="checkbox"/>	192.168.66.43		DS-KH6320-...	V2.1.10build 200713	Active	8000	DS-KH6320-WTE10...	2021...	Yes	Yes	Enable	
<input checked="" type="checkbox"/>	192.168.66.42		DS-KD8003-...	V2.2.3build 200805	Active	8000	DS-KD8003-IME101...	2021...	Yes	N/A	N/A	

3. In the pop-up window, fill in the required information.

Add

User Name


Password

Synchronize Time

☒

Import to Group

☒


 Set the device name as the group name and add all the channels connected to the device to the group.

- **User Name:** Enter the user name of your account. In this example, enter `admin`.
- **Password:** Enter the [device password](#).
- **Synchronize Time:** Check the option to synchronize the device time with the PC running the client.

- **Import to Group:** Check the option to create a group by the device name, and import all the channels of the device to this group.
4. Click **Add**.

What to do next

Register Hikvision devices to Yeastar P-Series PBX System.

- [Register Hikvision Door Station to Yeastar P-Series PBX System](#)
- [Register Hikvision Indoor Station to Yeastar P-Series PBX System](#)

Related information

[iVMS-4200 Client User Manual](#)

Register Hikvision Door Station to Yeastar P-Series PBX System

This topic takes Hikvision DS-KD8003 as an example to demonstrate how to register Hikvision door stations to Yeastar P-Series PBX System.

Prerequisites

Before you start, make sure:




- The door station supports SIP protocol.
- The door station has been activated and added to iVMS-4200 Client.

For more information, see [Activate intercom video devices](#) and [Add devices to iVMS-4200 Client](#).

Step 1. Create an extension for the door station

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, click **Add > Add**.
2. In the **Extension Type** drop-down list, select **SIP Extension**.
3. Change the user information and extension information, or leave the default settings.

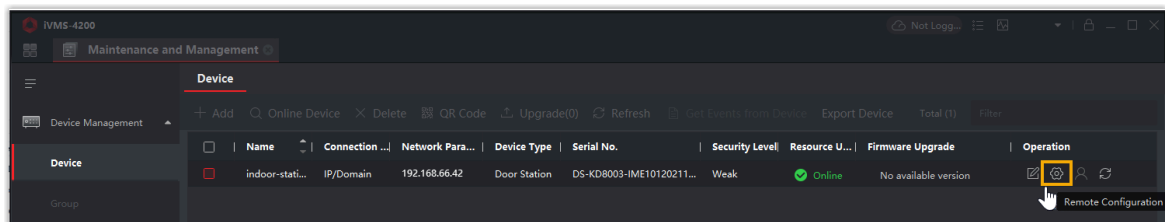
In this example, create a SIP extension 1666 for Hikvision DS-KD8003 door station.

Extension Information	
* Extension Number <input type="text" value="1666"/>	* Caller ID <input type="text" value="1666"/>
* Registration Name <input type="text" value="1666"/>	* Registration Password <input type="text" value="Yeastar123"/>   

4. Click **Save** and **Apply**.

Step 2. Register door station to the PBX

1. Log in to iVMS-4200 Client, go to **Device Management > Device**.
2. Click  beside the DS-KD8003 door station to enter the **Configuration** page.



3. **Optional:** If your PBX is not in the same network as that of Hikvision DS-KD8003 device, set up DNS server.
 - a. Go to **Network > Basic Settings > TCP/IP**.
 - b. In the **DNS Server** section, enter the IP address of DNS server, then click **Save**.

DNS Server	
Preferred DNS Server	<input type="text" value="8.8.8.8"/>
Alternate DNS Server	<input type="text" value="114.114.114.114"/>
<input type="button" value="Save"/>	

4. Register the door station with the PBX extension 1666.
 - a. Go to **Network > Basic Settings > SIP**.
 - b. Select the checkbox of **Enable VOIP Gateway**.
 - c. Enter the credentials of extension 1666.

☒ Enable VOIP Gateway

Register User Name	<input type="text" value="1666"/>
Registration Password	<input type="password" value="••••••••"/> <input checked="" type="checkbox"/>
Server Address	<input type="text" value="192.168.66.39"/>
Server Port	<input type="text" value="5060"/>
Expiry Time	<input type="text" value="60"/> minute(s)
Register Status	<input type="text" value="Not Registered"/>
Number	<input type="text" value="1666"/>
Display User Name	<input type="text" value="1666"/>

- **Register User Name:** Enter the registration name of the extension. In this example, enter 1666.
- **Registration Password:** Enter the registration password of the extension. In this example, enter Yeastar123.
- **Server Address:** Enter the IP address of Yeastar P-Series PBX System. In this example, enter 192.168.66.39.
- **Server Port:** Enter the SIP registration port of Yeastar P-Series PBX System. In this example, enter 5060.
- **Expiry Time:** Retain the default value.
- **Number:** Enter the extension number. In this example, enter 1666.
- **Display User Name:** Enter the name to be displayed when sending calls. In this example, enter 1666.

d. Click **Save**.

The **Register Status** displays "Registered", indicating that the door station is registered to Yeastar P-Series PBX System.

The screenshot shows the 'Enable VOIP Gateway' configuration page in the Yeastar PBX web portal. The page includes several input fields with green checkmarks indicating successful configuration:

- Enable VOIP Gateway:** Checked (indicated by a red checkmark icon).
- Register User Name:** 1666
- Registration Password:** (masked with dots)
- Server Address:** 192.16.66.39
- Server Port:** 5060
- Expiry Time:** 60 minute(s)
- Register Status:** Registered (highlighted with a yellow box)
- Number:** 1666
- Display User Name:** 1666

Register Hikvision Indoor Station to Yeastar P-Series PBX System

This topic takes Hikvision DS-KH6320 as an example to demonstrate how to register Hikvision indoor stations to Yeastar P-Series PBX System.

Prerequisites

Before you start, make sure:




- The indoor station supports SIP protocol.
- The indoor station has been activated and added to iVMS-4200 Client.

For more information, see [Activate intercom video devices](#) and [Add devices to iVMS-4200 Client](#).

Step 1. Create an extension for the indoor station


1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, click **Add > Add**.
2. In the **Extension Type** drop-down list, select **SIP Extension**.
3. Change the user information and extension information, or leave the default settings.

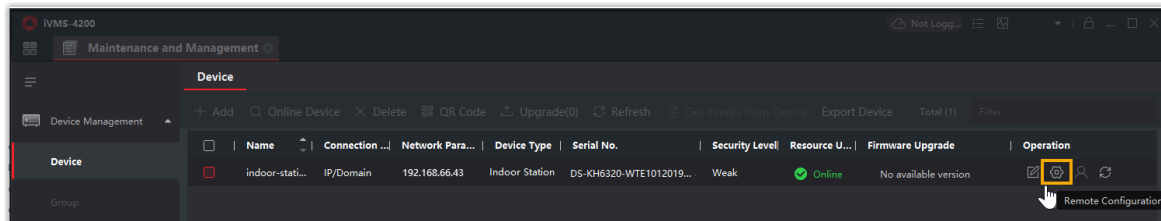
In this example, add a SIP extension 1667 for Hikvision DS-KH6320 indoor station.

Extension Information	
* Extension Number	* Caller ID
1667	1667
* Registration Name	* Registration Password
1667	Yeastar123   

4. Click **Save** and **Apply**.

Step 2. Register indoor station to the PBX

1. Log in to iVMS-4200 Client, go to **Device Management > Device**.
2. Click  beside the DS-KH6320 indoor station to enter the **Remote Configuration** page.



3. **Optional:** If your PBX is not in the same network as that of Hikvision DS-KH6320 device, set up DNS server.
 - a. Go to **Network > Advanced Settings**.
 - b. In the **DNS Server** section, enter the IP address of DNS server, then click **Save**.

Configuring the Advanced Network Settings

DNS1 IP Address

8.8.8.8

DNS2 IP Address

114.114.114.114

Save

4. Register the indoor station with the PBX extension 1667.
 - a. Go to **Network > SIP Server Configuration**.
 - b. Select the checkbox of **Enable**.
 - c. Enter the credentials of extension 1667.

☒ Enable

Registration Status: Registered

Server: Domain Name

Server Domain Name: 192.168.66.39

Server Port: 5060

Register User Name: 1667

Password: ••••••••

Number: 1667

Display User Name: 1667

Registration Period: 60 min

Save

- **Server:** Select Domain Name.
- **Server Domain Name:** Enter the IP address of Yeastar P-Series PBX System. In this example, enter 192.168.66.39.
- **Server Port:** Enter the SIP registration port of Yeastar P-Series PBX System. In this example, enter 5060.
- **Register User Name:** Enter the registration name of the extension. In this example, enter 1667.
- **Password:** Enter the registration password of the extension. In this example, enter Yeastar123.
- **Number:** Enter the extension number. In this example, enter 1667.
- **Display User Name:** Enter the name to be displayed when sending calls. In this example, enter 1667.

d. Click **Save**.

The **Register Status** displays "Registered", indicating that the indoor station is registered to Yeastar P-Series PBX System.

Set up Communication Between Hikvision Door Station and Indoor Station

This topic describes how to set up the communication between Hikvision devices to form an intercom system together with Yeastar P-Series PBX System.


Prerequisites

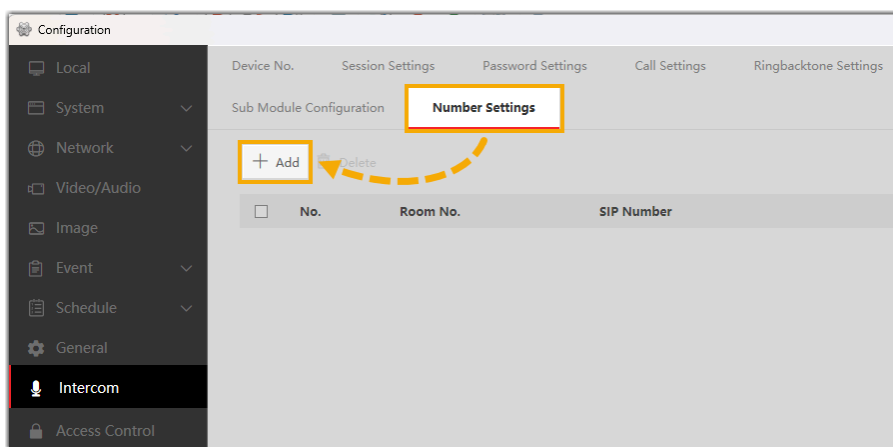
Make sure that you have registered Hikvision door station and indoor station to the PBX. For more information, see the following topics:

- [Register Hikvision Door Station to Yeastar P-Series PBX System](#)
- [Register Hikvision Indoor Station to Yeastar P-Series PBX System](#)

Step 1. Set Hikvision door station to call indoor station

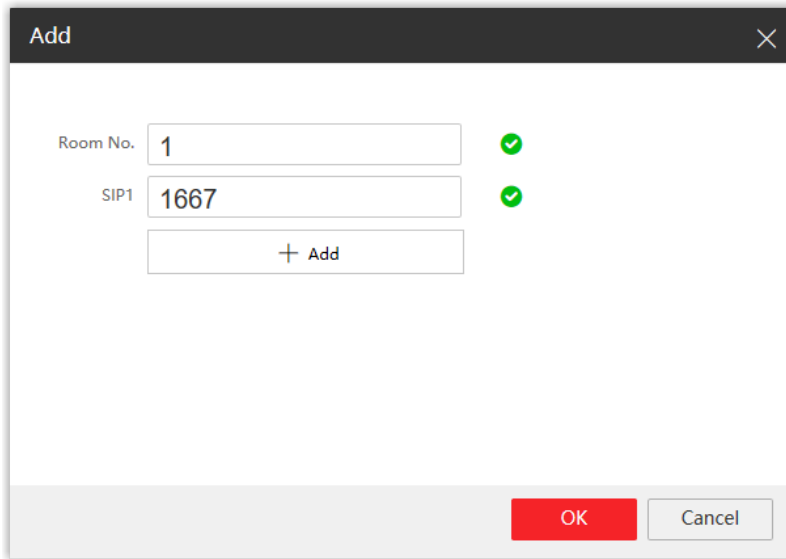
To achieve communication between door station and indoor station, you need to set the dial number(s) for door station's dial button.

1. Log in to iVMS-4200 Client, go to **Device Management > Device**, click  beside the DS-KD8003 door station to enter the **Configuration** page.
2. Go to **Intercom > Number Settings**, click **Add** to add the indoor station as the intercom device.



3. In the pop-up window, configure the intercom device information.
 - **Room No.:** Enter the number of the room where the indoor station is located.
 - **SIP1:** Enter the SIP extension number of DS-KH6320 indoor station.

In this example, enter 1667.



Room No. 1 ✓

SIP1 1667 ✓

+ Add

OK Cancel

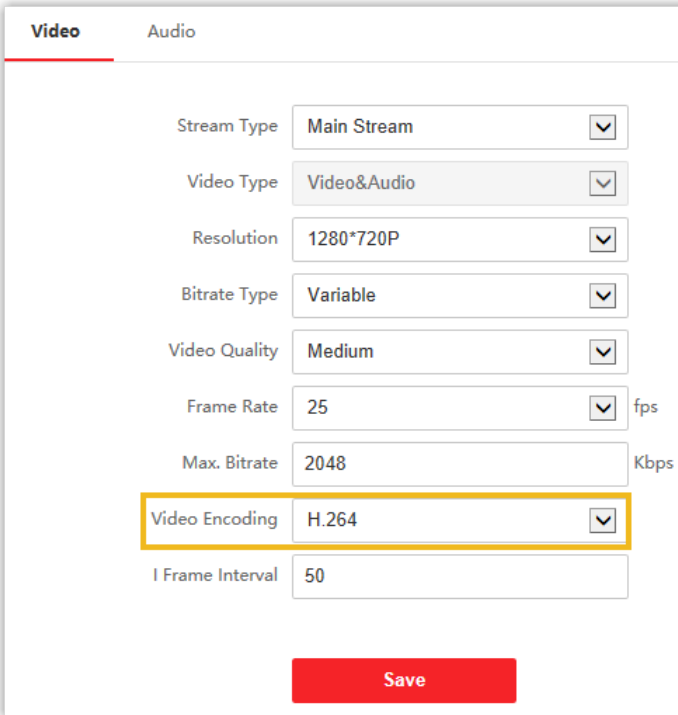
4. Click **OK**.

Step 2. Configure codecs on the Hikvision door station and the PBX

To ensure the normal audio calls and video calls between Hikvision devices, make sure that the same codecs are selected both on Hikvision devices and PBX.

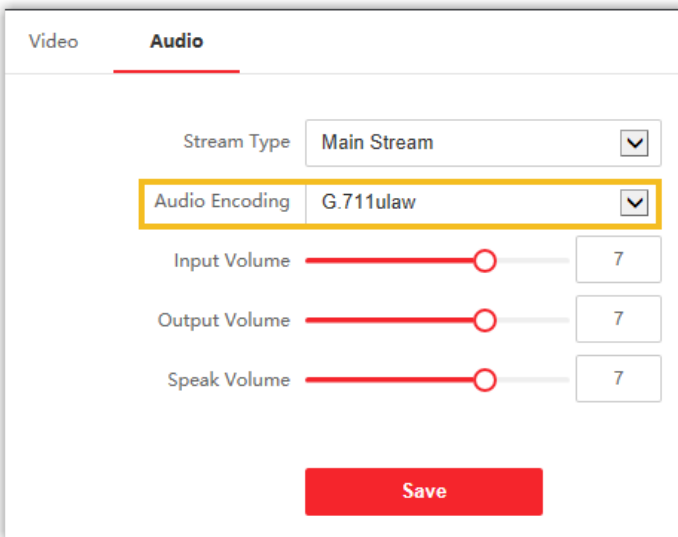
Configure audio codec and video codec on Hikvision door station

1. On the **Configuration** page, go to **Video/Audio**.
2. Set up video codec.
 - a. Click **Video** tab.
 - b. In the drop-down list of **Video Encoding**, select **H.264**.



The screenshot shows the 'Video' configuration tab. The 'Video Encoding' dropdown menu is highlighted with a yellow box and is set to 'H.264'. Other visible settings include Stream Type (Main Stream), Video Type (Video&Audio), Resolution (1280*720P), Bitrate Type (Variable), Video Quality (Medium), Frame Rate (25 fps), Max. Bitrate (2048 Kbps), and I Frame Interval (50). A red 'Save' button is at the bottom.

3. Set up audio codec.
 - a. Click **Audio** tab.
 - b. In the drop-down list of **Audio Encoding**, select **G.711ulaw**.



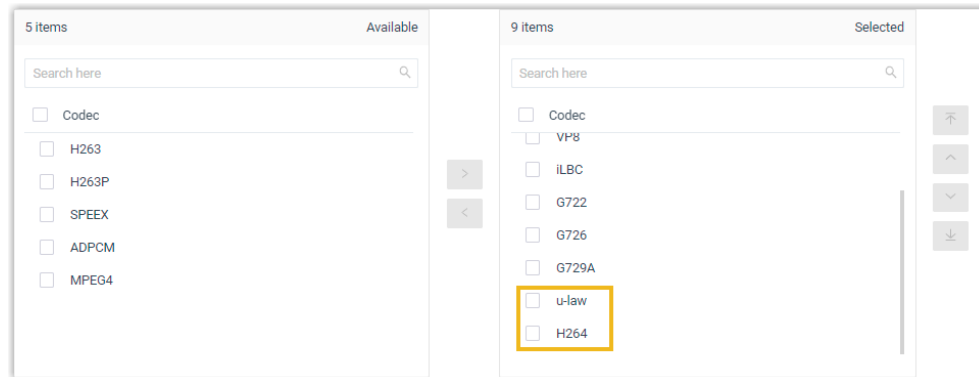
The screenshot shows the 'Audio' configuration tab. The 'Audio Encoding' dropdown menu is highlighted with a yellow box and is set to 'G.711ulaw'. Other visible settings include Stream Type (Main Stream), Input Volume (7), Output Volume (7), and Speak Volume (7). A red 'Save' button is at the bottom.

4. Click **Save**.

Configure audio codec and video codec of PBX

1. Log in to PBX web portal, go to **PBX Settings > SIP Settings > Codec**.

2. Select **u-law** and **H264** from **Available** box to **Selected** box.



3. Click **Save** and **Apply**.

Result

- When a visitor presses the door station call button, you can receive and answer the call on the indoor station, and also conduct a video communication with the visitor through the indoor station.
- During the call, you can open the door by directly tapping the unlock key on the indoor station.

Forward Hikvision Door Station Calls to Linkus Client

To prevent from missing any visits, you can configure Hikvision door station to forward calls to Linkus clients by configuring the call forwarding feature on Yeastar P-Series PBX System. In this way, you can receive visitors' calls anywhere on any Linkus clients (Linkus Mobile Client, Linkus Web Client, or Linkus Desktop Client).

Prerequisites

You have [set up communication between Hikvision Door Station and Indoor Station](#).

Step 1. Configure Call Forwarding destination on the PBX

1. Log in to PBX web portal, go to **Extension and Trunk > Extension**, double click the extension you have created for Hikvision indoor station.
2. Click **Presence** tab.
3. In the **Call Forwarding** section, configure Call Forwarding destination for internal calls.

- a. Select the checkbox of **No Answer**.
- b. Set the destination to **Extension**, then select an extension that is registered on Linkus clients.

Call Forwarding

Internal Calls

☐ Always


☒ No Answer Extension 1000-1000

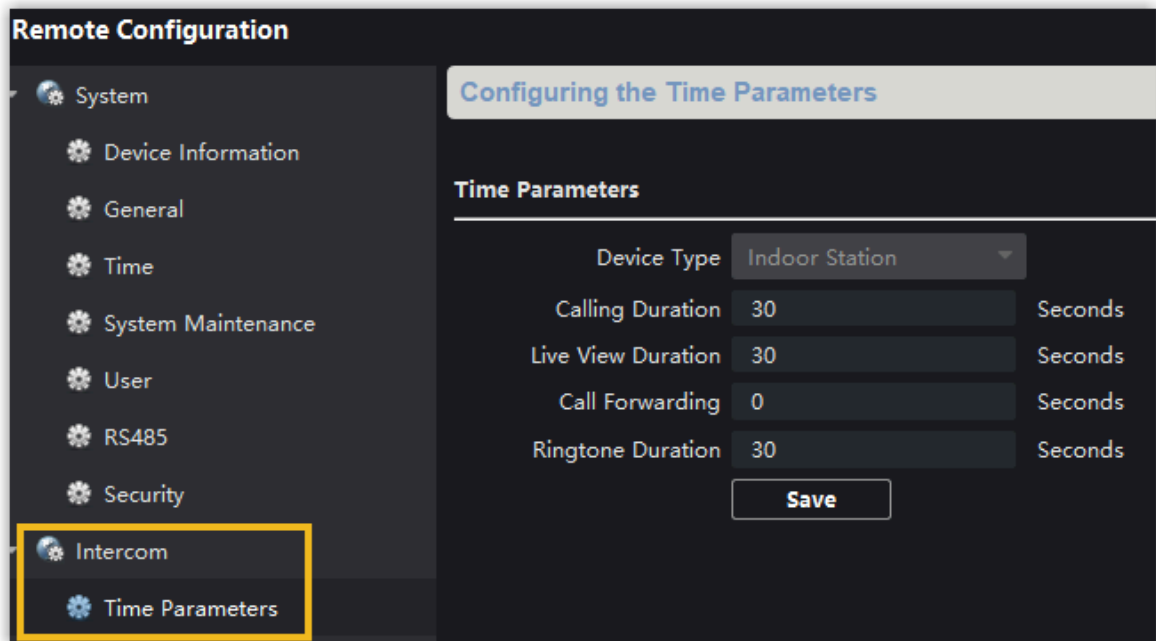
☒ When Busy Voicemail

4. Click **Save** and **Apply**.

Step 2. Configure Calling Duration on Hikvision indoor station

By configuring the Calling Duration, the call will be forwarded to the next destination if there is no answer over the calling duration.

1. Log in to iVMS-4200 client, go to **Device Management > Device**.
2. Click  beside the DS-KH6320 indoor station to enter the **Remote Configuration** page.
3. Go to **Intercom > Time Parameters** to configure the desired duration in **Calling Duration** field.



4. Click **Save**.

Result

- The door station call will be forwarded to your Linkus clients if there is no answer from indoor station over the calling duration.
- During the call, you can open the door by directly pressing a feature code. In this example, the default unlocking button is **1#**.