



# Grandstream Networks, Inc.

---

Connecting GDS37XX with GXP Phone

Configuration Guide



# Table of Contents

<b>SUPPORTED DEVICES .....</b>	<b>3</b>
<b>INTRODUCTION.....</b>	<b>4</b>
<b>PEERING SCENARIO .....</b>	<b>5</b>
GDS37XX Configuration Settings.....	5
GXP IP Phones Configuration .....	7
<b>CONNECTION USING SIP SERVER .....</b>	<b>10</b>
GDS37XX Configuration Settings.....	10
GXP IP Phone Configuration Settings .....	12
<b>OPEN DOOR FEATURE.....</b>	<b>15</b>
GXP21xx IP Phones .....	15
GXP17xx IP Phones .....	16
GXP16xx IP Phones .....	16

# Table of Figures

Figure 1: GXP IP Phones peered with the GDS3710 .....	5
Figure 2: Door System Settings .....	6
Figure 3: Enable Direct IP Call.....	7
Figure 4: GXP2170 Account(x) Settings .....	7
Figure 5: Account(x) SIP Settings .....	8
Figure 6: GDS37xx Configuration Settings on GXP IP Phone .....	9
Figure 7: GXP2170 Connected to GDS3710 through UCM6XXX .....	10
Figure 8: SIP Basic Settings .....	11
Figure 9: Door System Settings .....	12
Figure 10: General Settings .....	13
Figure 11: GDS Settings .....	14
Figure 12: GDS3710 Video Call on GXP2160 .....	15
Figure 13: GDS3705 audio call on GXP2160 .....	16
Figure 14: GDS37xx Audio Call on GXP1760 (Using SIP Server Scenario) .....	16
Figure 15: GDS37xx Audio Call on GXP1630 in Peering Scenario .....	16



## SUPPORTED DEVICES

Following table shows Grandstream products supporting GDS37XX integration:

Model	Supported		Firmware
	Audio	Video (JPEG)	
<b>GXP16XX Series</b>	Yes	No	1.0.4.65 or higher
<b>GXP17XX Series</b>	Yes	No	1.0.1.28 or higher
<b>GXP21XX Series</b>	Yes	Yes	1.0.8.49 or higher



## INTRODUCTION

GDS3705 is an audio door access system, an innovative IP based powerful door system. The GDS3705 was built for users looking for a strong audio-only facility access and security monitoring solution that can be deployed in environments of all sizes. This audio door system features dual microphones and HD loudspeaker with advanced AEC to offer intercom functionality, can support SIP calls to IP phones and has a built-in RFID chip reader and keypad for secured keyless or key entry.

GDS3710 HD is an IP video door system with a built-in hemispheric camera and some high-definition video capabilities. GDS3710 is ideal for monitoring from wall to wall without blind spots. Powered by an advanced Image Sensor Processor (ISP) and state of the art image algorithms, it delivers exceptional performance in all lighting conditions. It contains integrated PoE, LEDs, HD loudspeaker, RFID card reader, motion detector, lighting control switch, Alarm Input/output and more.

The GDS3705 audio door access system features industry-leading SIP/VoIP for 2- way audio to smart phones and SIP phones, and the GDS3710 IP video door system features industry-leading SIP/VoIP for 2- way audio and video streaming to smart phones and SIP phones, allowing to receive calls from GDS37XX on associated SIP phones when doorbell is pressed, opening door from the SIP phone, initiate calls from the phone to GDS3705 to get real time audio stream, and GDS3710 to get real time Video/Audio stream with GXP21xx IP Phones and only Audio stream with GXP17xx and GXP16xx IP Phones.

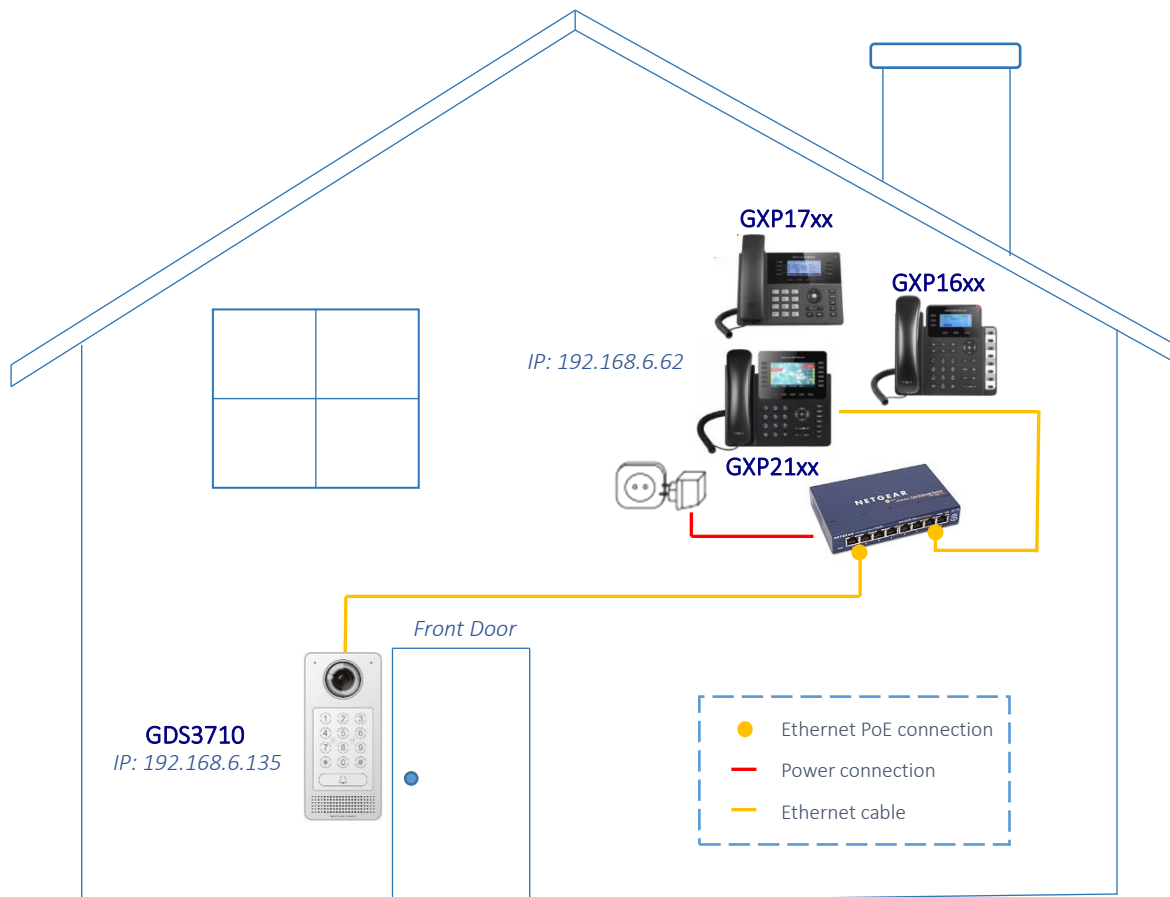
The GDS37XX can be connected with a SIP phone in 2 different ways, either using peering mode (without a SIP server) or through a SIP server/registrar.

This guide illustrates needed configuration for integrating the GDS37XX with GXP Series for both peering and using SIP server scenarios.



## PEERING SCENARIO

In this scenario, we assume that the GDS3710 is installed on a small warehouse at front door and GXP IP Phone inside to monitor and control the access of the premise. Visitors need to press the doorbell button on the GDS3710 to initiate a video/audio call or only an audio call (depending on what the GXP Phone supports), and the related person at the GXP IP Phone side can open the door remotely to allow the visitors to get in as shown in the figure below.



**Figure 1: GXP IP Phones peered with the GDS3710**


- The IP address used by the GDS3710 is 192.168.6.135.
- The IP address used by the GXP IP Phone is 192.168.6.62.

## GDS37XX Configuration Settings

The GDS37XX needs to be configured with the IP address of the GXP IP Phone, the related SIP port, and remote PIN for door opening. Please refer to following configuration steps:

1. Access the GDS37XX Web GUI and navigate to **“Door System Settings→Basic Settings”**.



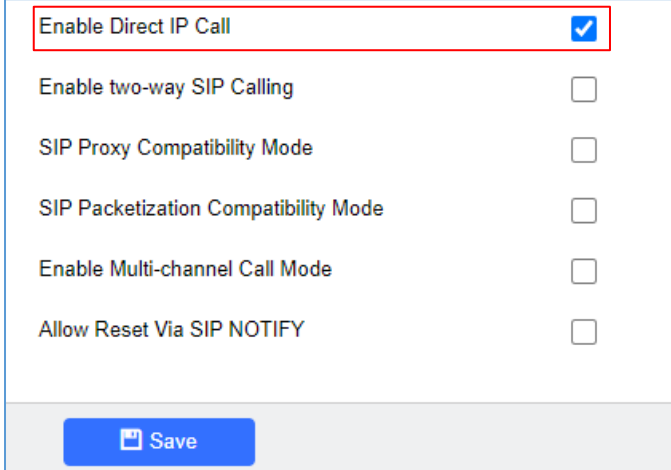
2. Choose the action to be taken when the doorbell is pressed, three options are available:
  - **Call Doorbell Number:** when Doorbell is pressed, a call will be made to the “Number Called When Door Bell Pressed”
  - **Control Doorbell Output (Digital Output 1):** when Door Bell is pressed electronic lock for Output 1 is opened.
  - **Both of Above:** When selected, both Call Doorbell Number and Control Doorbell Output options are enabled. In our case we will choose “**Call Doorbell Number**”.
3. Under **Number Called When Door Bell Pressed** field, enter the GXP IP address and port number which is **192.168.6.62:5060** in our example.
4. Enter the “**Remote PIN to Open the Door**” in order to open the door via DTMF while in active call with the GDS37XX, the remote PIN used in our example is “**123456**”.
5. Click  button to apply changes.

<ul style="list-style-type: none"> <li>LiveView</li> <li>Door System Settings</li> <li style="background-color: #0056b3; color: white;">Basic Settings</li> <li>Keep Door Open</li> <li>Card Management</li> <li>Group</li> <li>Schedule</li> <li>Holiday</li> <li>System Settings</li> <li>Account</li> <li>Phone Settings</li> <li>Video &amp; Audio Settings</li> <li>Alarm Settings</li> <li>Email &amp; FTP Settings</li> <li>Maintenance</li> <li>Status</li> </ul>	Unlock Holding Time(s)	<input type="text" value="5"/>
	Minimum Interval of Swiping Card(ms)	<input type="text" value="300"/>
	Number of Snapshots when Door Opened	<input type="text" value="4"/>
	Snapshot when Door Opened	<input checked="" type="checkbox"/> via FTP <input type="checkbox"/> via Email
	Snapshot when Doorbell Pressed	<input type="checkbox"/> via FTP <input type="checkbox"/> via Email
	Call Mode	<input type="text" value="Virtual Number"/>
	Doorbell Call Out Account	<input type="text" value="Auto"/>
	Doorbell Mode	<input type="text" value="Call Doorbell Number"/>
	Door Bell Call Mode	<input type="text" value="Serial Hunting"/>
	Number Called When Door Bell Pressed	<input type="text" value="192.168.6.62:5060"/>
	Maximum Number of Dialed Digits	<input type="text" value="0"/>
	No Key Input Timeout(s)	<input type="text" value="4"/>
	Press Doorbell Schedule	<input type="text" value="All Day"/> <a href="#">Edit Schedule</a>
	Remote PIN to Open Door	<input type="text" value="....."/>
	Local PIN Type	<input type="text" value="Unified PIN"/>
Local PIN to Open Door	<input type="text"/>	
Local PIN to Open Door Schedule	<input type="text" value="All Day"/> <a href="#">Edit Schedule</a>	
Enable DTMF Open Door	<input checked="" type="checkbox"/>	

**Figure 2: Door System Settings**

6. You need to make sure that the Direct IP Call feature is enabled from the GDS37XX Web GUI under **Phone Settings**→**Phone Settings**→**Enable Direct IP Call**.





Enable Direct IP Call	<input checked="" type="checkbox"/>
Enable two-way SIP Calling	<input type="checkbox"/>
SIP Proxy Compatibility Mode	<input type="checkbox"/>
SIP Packetization Compatibility Mode	<input type="checkbox"/>
Enable Multi-channel Call Mode	<input type="checkbox"/>
Allow Reset Via SIP NOTIFY	<input type="checkbox"/>

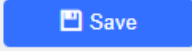

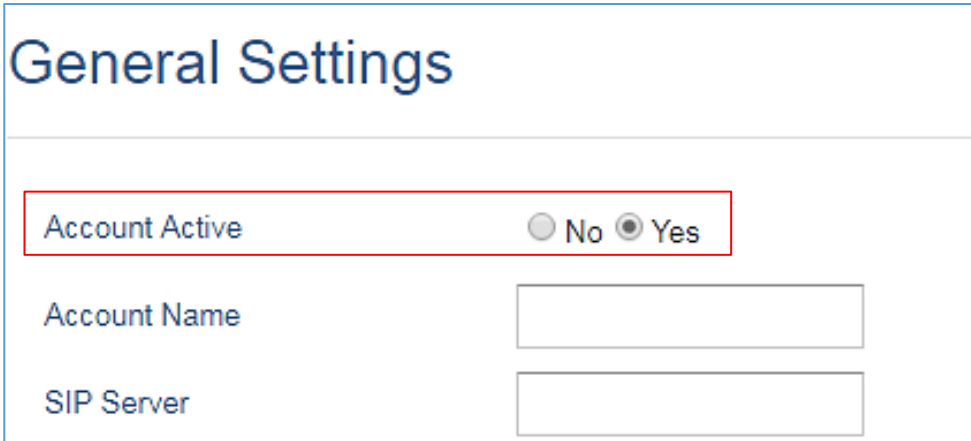


Figure 3: Enable Direct IP Call

## GXP IP Phones Configuration

The GXP IP Phone related account needs to be set as “Active”, and the “Local SIP Port” needs to match the port configured on GDS37XX. Please refer to following steps for configuring the GXP IP Phone in order to interconnect with the GDS37XX.

1. Access GXP IP Phone Web GUI→**Account**→**General Settings** and set “Account Active” to **Yes**, then click on  button to apply the new changes.

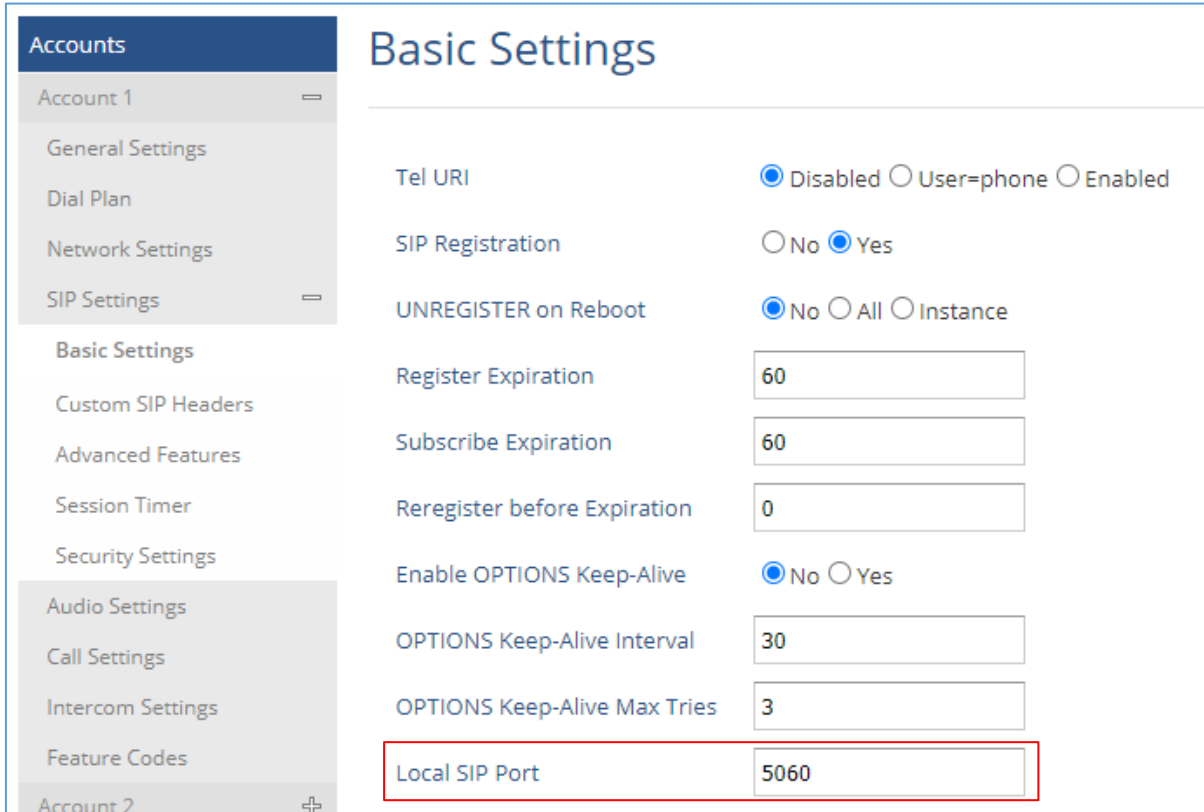


### General Settings

Account Active	<input type="radio"/> No <input checked="" type="radio"/> Yes
Account Name	<input type="text"/>
SIP Server	<input type="text"/>

Figure 4: GXP2170 Account(x) Settings

2. Navigate to **Account**→**SIP Settings** and verify that the **Local SIP Port** configured on the GXP IP Phone is the same as the one on the GDS37XX.



Accounts		Basic Settings	
Account 1		Tel URI	<input checked="" type="radio"/> Disabled <input type="radio"/> User=phone <input type="radio"/> Enabled
General Settings		SIP Registration	<input type="radio"/> No <input checked="" type="radio"/> Yes
Dial Plan		UNREGISTER on Reboot	<input checked="" type="radio"/> No <input type="radio"/> All <input type="radio"/> Instance
Network Settings		Register Expiration	<input type="text" value="60"/>
SIP Settings		Subscribe Expiration	<input type="text" value="60"/>
Basic Settings		Reregister before Expiration	<input type="text" value="0"/>
Custom SIP Headers		Enable OPTIONS Keep-Alive	<input checked="" type="radio"/> No <input type="radio"/> Yes
Advanced Features		OPTIONS Keep-Alive Interval	<input type="text" value="30"/>
Session Timer		OPTIONS Keep-Alive Max Tries	<input type="text" value="3"/>
Security Settings		Local SIP Port	<input type="text" value="5060"/>
Audio Settings			
Call Settings			
Intercom Settings			
Feature Codes			
Account 2			

**Figure 5: Account(x) SIP Settings**

3. Navigate to **Settings**→**External Service** to configure GDS settings as explained on the following:
  - Set the **Service Type** to **GDS**.
  - Select the related account, in our example, the account used is **Account 1**.
  - Specifies the **System Identification**, to identify the GDS37XX, in our example its "**GDS3710\_Front\_Door**".
  - Specifies the **System Number** which is the GDS37XX number, the system number used in our example is **192.168.6.135**.
  - Configures the **Access Password** for opening the door remotely and it should match the password configured under "**Remote PIN to Open the Door**" on the GDS37XX Web GUI settings. The password used in our example is "**123456**".



### Grandstream Door System

Order	Service Type	Account	System Identification	System Number	Access Password
1	GDS ▾	Account 1 ▾	GDS_Front_Door	192.168.6.135	....
2	GDS ▾	Account 1 ▾			
3	GDS ▾	Account 1 ▾			

**Figure 6: GDS37xx Configuration Settings on GXP IP Phone**

- Press Save and Apply button to apply the new settings.

**Notes:**

- The GXP21xx/ GXP17xx/ GXP16xx IP Phones support up to 10 GDS37XX items.
- GXP16xx and GXP17xx series support audio only.
- GXP21xx series support audio and video (JPEG) when integrated with GDS3710.

## CONNECTION USING SIP SERVER

In this scenario, we assume that the GDS3710 is configured with a SIP account and the GXP IP Phone is also configured with a SIP account under the same SIP server.

**Note:** We recommend using Stateless SIP server in this type of installations, Stateful SIP servers may not work.

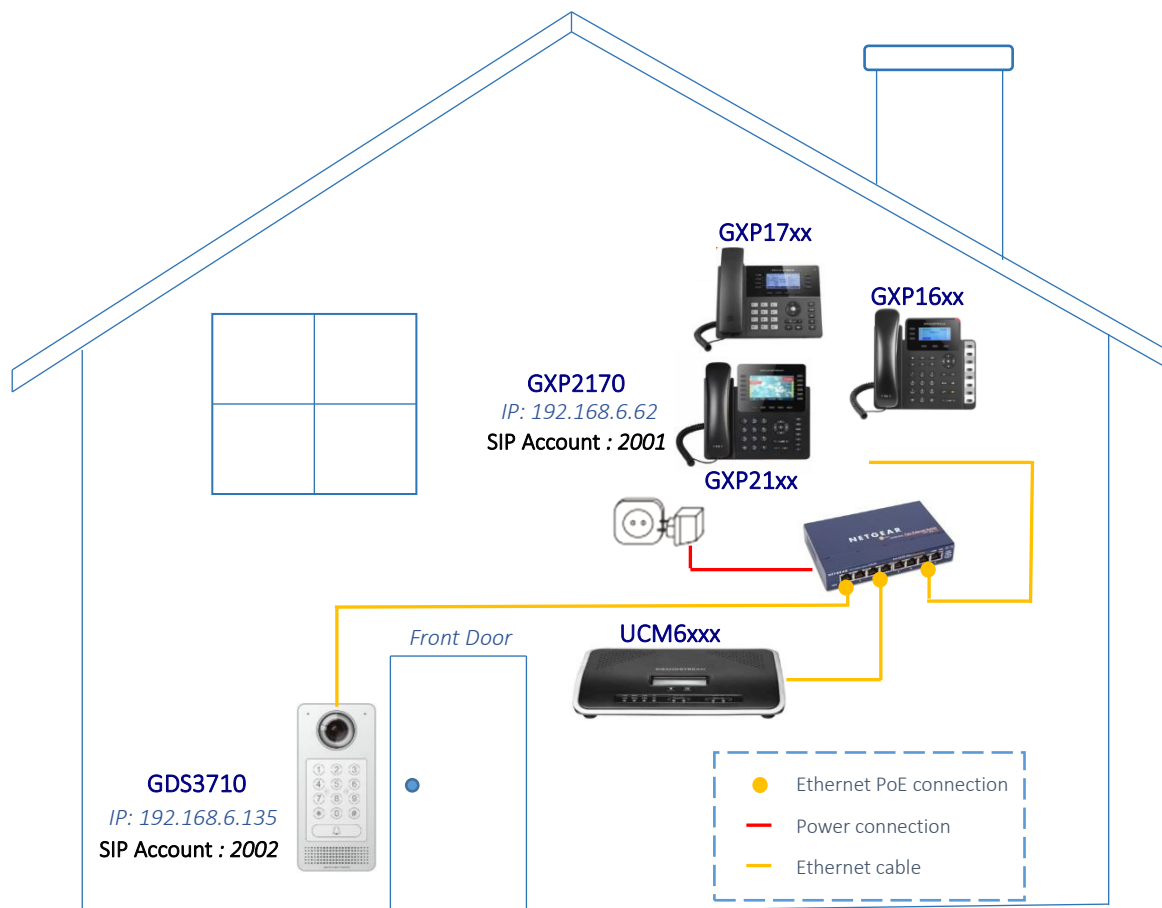


Figure 7: GXP2170 Connected to GDS3710 through UCM6XXX

- The IP address used by the GDS3710 is 192.168.6.135 and it's configured with SIP account **2002**.
- The IP address used by the GXP IP Phone is 192.168.6.62 and it is configured with SIP account **2001**.

### GDS37XX Configuration Settings

As mentioned on the previous diagram, the GDS37XX should be registered with a SIP account in order to interact with the GXP IP Phone through the SIP server.

The GDS3710 SIP settings are available under the Web GUI→**Account**→**Account(x)**.




Account 1	
<b>SIP Basic Settings</b>	
Account Active	<input checked="" type="checkbox"/>
SIP Server	<input type="text" value="192.168.6.94"/>
Outbound Proxy	<input type="text"/>
Backup Outbound Proxy	<input type="text"/>
DNS Mode	<input type="text" value="A Record"/>
SIP User ID	<input type="text" value="2002"/>
Authentication ID	<input type="text" value="2002"/>
Password	<input type="text" value="*****"/>
Display Name	<input type="text" value="GDS_Front_Door"/>
TEL URI	<input type="text" value="Disabled"/>

**Figure 8: SIP Basic Settings**

After configuring the SIP account correctly, user needs to configure the door system settings as detailed on the following steps:

1. Navigate to **Door System Settings**→**Basic Settings** then set the following:
  - **Doorbell Mode:** Call Doorbell Number.
  - **Number Called When Door Bell Pressed:** the GXP IP Phone number which is **2001** in our example.
  - **Remote PIN to Open the Door:** the remote PIN used in our example is “**123456**”.
2. Click  button to apply changes.

The following figure shows an example of the configuration.

<ul style="list-style-type: none"> <li>LiveView</li> <li>Door System Settings           <ul style="list-style-type: none"> <li>Basic Settings</li> <li>Keep Door Open</li> <li>Card Management</li> <li>Group</li> <li>Schedule</li> <li>Holiday</li> </ul> </li> <li>System Settings</li> <li>Account</li> <li>Phone Settings</li> <li>Video &amp; Audio Settings</li> <li>Alarm Settings</li> <li>Email &amp; FTP Settings</li> <li>Maintenance</li> <li>Status</li> </ul>	Unlock Holding Time(s)	<input type="text" value="5"/>	
	Minimum Interval of Swiping Card(ms)	<input type="text" value="300"/>	
	Number of Snapshots when Door Opened	<input type="text" value="4"/>	
	Snapshot when Door Opened	<input checked="" type="checkbox"/> via FTP <input type="checkbox"/> via Email	
	Snapshot when Doorbell Pressed	<input type="checkbox"/> via FTP <input type="checkbox"/> via Email	
	Call Mode	<input type="text" value="Virtual Number"/>	
	Doorbell Call Out Account	<input type="text" value="Auto"/>	
	Doorbell Mode	<input type="text" value="Call Doorbell Number"/>	
	Door Bell Call Mode	<input type="text" value="Serial Hunting"/>	
	Number Called When Door Bell Pressed	<input type="text" value="2001,"/> 	
	Maximum Number of Dialed Digits	<input type="text" value="0"/>	
	No Key Input Timeout(s)	<input type="text" value="4"/>	
	Press Doorbell Schedule	<input type="text" value="All Day"/> <a href="#">Edit Schedule</a>	
	Remote PIN to Open Door	<input type="text" value="*****"/>	
	Local PIN Type	<input type="text" value="Unified PIN"/>	
	Local PIN to Open Door	<input type="text"/>	
	Local PIN to Open Door Schedule	<input type="text" value="All Day"/> <a href="#">Edit Schedule</a>	

**Figure 9: Door System Settings**

## GXP IP Phone Configuration Settings

A SIP account needs to be registered on the GXP IP Phone side as well to interact with the GDS37XX through the same SIP server.

The GXP IP Phone SIP settings are available under the Web GUI → **Accounts** → **Account(x)** → **General Settings**.

## General Settings

Account Active	<input type="radio"/> No <input checked="" type="radio"/> Yes
Account Name	<input type="text" value="2001"/>
SIP Server	<input type="text" value="192.168.6.94"/>
Secondary SIP Server	<input type="text"/>
Outbound Proxy	<input type="text"/>
Secondary Outbound Proxy	<input type="text"/>
BLF Server	<input type="text"/>
SIP User ID	<input type="text" value="2001"/>
SIP Authentication ID	<input type="text" value="2001"/>
SIP Authentication Password	<input type="text"/>
Name	<input type="text" value="2001"/>
Voicemail Access Number	<input type="text"/>
Picture	<input type="button" value="Select"/>
Account Display	<input checked="" type="radio"/> Username <input type="radio"/> User ID

**Figure 10: General Settings**

After configuring the SIP account correctly, users need to configure the door system settings as detailed on the following steps:

1. Navigate to **Settings**→**External Service** and set the following:
  - Set the **Service Type** to **GDS**.
  - Select the related account, in our example, the account used is **Account 1**.
  - Specifies the **System Identification**, to identify the GDS37XX, in our example its "**GDS3710\_Front\_Door**".
  - Specifies the **System Number** which is the GDS37XX number, the system number used in our example is **2002**.
  - Configures the **Access Password** which is the "**Remote PIN to Open the Door**" configured on the GDS37XX Web GUI settings. The password used in our example is "**123456**".

2. Press **Save and Apply** button to apply the new settings.

### Grandstream Door System

Order	Service Type	Account	System Identification	System Number	Access Password
1	GDS ▼	Account 1 ▼	GDS3710_Front_Door	2002	*****
2	None ▼	Account 1 ▼			
3	None ▼	Account 1 ▼			
4	None ▼	Account 1 ▼			
5	None ▼	Account 1 ▼			
6	None ▼	Account 1 ▼			
7	None ▼	Account 1 ▼			
8	None ▼	Account 1 ▼			
9	None ▼	Account 1 ▼			
10	None ▼	Account 1 ▼			

Save **Save and Apply** Reset

**Figure 11: GDS Settings**

**Notes:**

- The GXP21xx/ GXP17xx/ GXP16xx IP Phones support up to 10 GDS37XX items.
- GXP16xx and GXP17xx series support audio only.
- GXP21xx series support audio and video (JPEG) when integrated with GDS3710.

## OPEN DOOR FEATURE

GXP IP Phones offer a powerful integration with GDS37XX Door System and allow users to remotely open the door, initiate calls to the GDS37XX and get real time audio/video or only audio stream.

Once someone presses the ring button on the GDS3710, the door system will initiate automatically a call to the configured destination. In both cases, the users will have the ability to either answer the call, reject it or press the **OpenDoor** softkey.

Users can open the door using the following methods:

1. **Pressing the “OpenDoor” Softkey without answering the call:**

Once the users press the “OpenDoor” softkey, a SIP Message containing the code for “Remote PIN for Open the Door” will be sent to the GDS3710 to remotely open the door.

2. **OpenDoor after answering the call:**

- Press the “**OpenDoor**” Softkey, then a SIP Message containing the code for “Remote PIN for Open the Door” will be sent to the GDS3710 to remotely open the door.
- Dial the code for “**Remote PIN for Open the Door**” followed by “#” (for example “**123456#**”), and then DTMF codes will be sent to open the door.

**Note:** Pressing the “**Reject**” Softkey will reject the call received from the GDS3710.

## GXP21xx IP Phones



Figure 12: GDS3710 Video Call on GXP2160

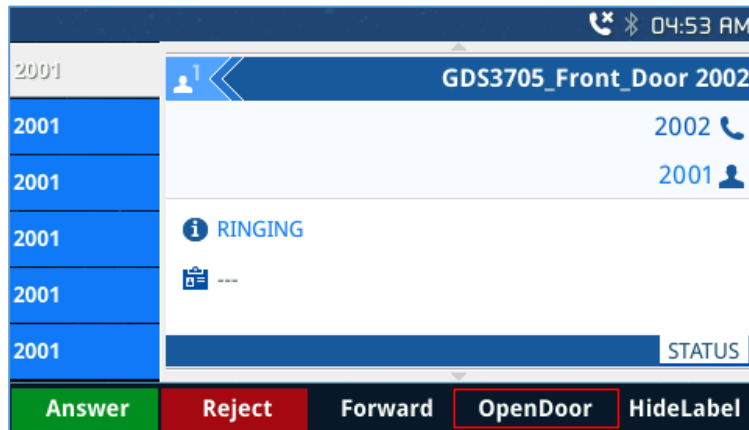


Figure 13: GDS3705 audio call on GXP2160

## GXP17xx IP Phones



Figure 14: GDS37xx Audio Call on GXP1760 (Using SIP Server Scenario)

## GXP16xx IP Phones

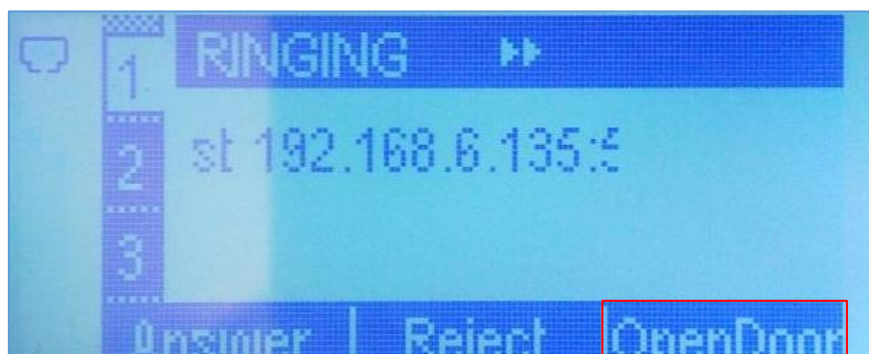


Figure 15: GDS37xx Audio Call on GXP1630 in Peering Scenario