

# Grandstream Networks, Inc.

Connecting GDS37xx with WP820 Configuration Guide





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### **INTRODUCTION**

GDS3710 HD IP Video Door System is a hemispheric IP video door phone and a high-definition IP surveillance. 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 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 GDS3710 on associated SIP phones when doorbell is pressed, opening door from the SIP phone, initiate calls from the phone to GDS3710 and get real time audio/video stream.

The GDS3705 Audio Door Access System, an innovative IP based powerful door system. The GDS3705 Audio Door Access system features industry-leading SIP/VoIP for 2- way audio to SIP phones. It contains integrated PoE, HD loudspeaker, RFID card reader, and more

The GDS37xx can be connected with a Wireless Wi-Fi phones in 2 different ways, either using peering mode (without a SIP server) or through a SIP server.

This guide describes needed configuration for both peering and using SIP server scenarios. In this guide, WP820 will be used as Portable Wi-Fi phone and UCM6XXX as SIP server.





### **PEERING SCENARIO**

We assume that the GDS37xx is installed on a small warehouse at front door and WP820 is connected to the same network via Wi-Fi using an access point (GWN7610 for instance). Employees can swipe the RFID card to get in, while visitors need to press the Door Bell to initial video call and the related person at the WP820 side need to type the key PIN to open the door remotely to allow the visitors to get in as shown in the figure below.

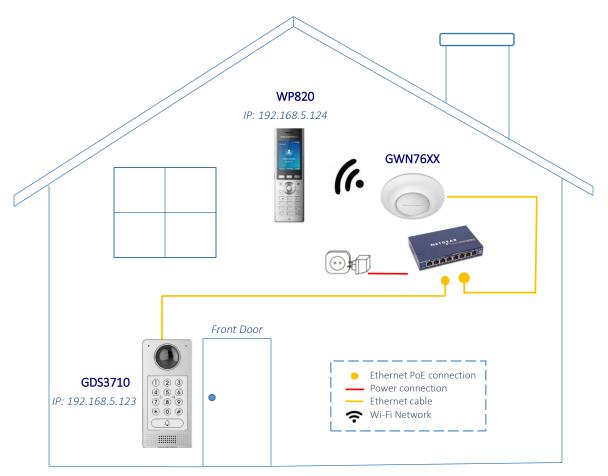


Figure 1: WP820 peered with the GDS3710

- The IP address used by the GDS3710 is 192.168.5.123.
- The IP address used by the WP820 is 192.168.5.124.

#### Settings Configuration on the GDS37xx Side

The GDS37xx needs to be configured with the IP address of the WP820 and related SIP port, and remote PIN for door opening. The first account will be used on the WP820 for this example, so the port number associated to the first port is 5060.

Note: If the second account is used, the port will be 5062.

Access the GDS37xx web GUI and navigate to "Door System Settings  $\rightarrow$  Basic Settings" then set the following as shown on the figure below:





S GDS3710				English ~   Logout 2018-10-01 13:01				
	Door System Settings							
LiveView	Delay before Unlock Action(s)	0						
Basic Settings	Unlock Action Holding Time(s)	5						
Keep Door Open	Minimum Interval of Swiping Card(ms) Snapshot when Door Opened	300						
Card Management Group	Snapshot when Doorbell Pressed	📄 via FTP 📄 via Email						
Schedule			1					
Holiday	Call Mode Doorbell Mode	SIP Number   Call Doorbell Number						
<ul> <li>System Settings</li> <li>SIP Settings</li> </ul>	Door Bell Call Mode	Serial Hunting 🔹						
ulteo & Audio Settings ✓	Number Called When Door Bell Pressed	192.168.5.124:5060	د.					
👃 Alarm Settings 🛛 🗸 🗸	Maximum Number of Dialed Digits	0						
Email & FTP Settings	Press Doorbell Schedule Remote PIN to Open Door	All Day 🔻	Edit Schedule					
A Maintenance ·	Local PIN Type	Unified PIN •		I				
① Status ~	Local PIN to Open Door		۲					

- Figure 2: Door System Settings
- 1. 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".

- 2. The option "Door Bell Call Mode" can be used when multiple phones are configured to be called when pressing the doorbell button. Users can set this option to:
  - Serial Hunting: the configured extensions and/or IP addresses will ring one after one by order.
  - **Parallel Hunting:** The configured extensions and/or IP addresses will ring simultaneously (up to 4 simultaneous SIP calls).
- 3. Enter the IP address and port number of the WP820 which is 192.168.5.124:5060 for the first account on the WP820.
- 4. Enter the "Remote PIN to Open the Door" in order to open the door by sending a SIP message from the phone while in active call with the GDS37xx.

5. Click Save in order to apply changes.

Make sure that the Direct IP Call feature is active from the GDS37xx Web GUI under "SIP Settings  $\rightarrow$  SIP Advanced Settings" then click on "Enable Direct IP Call".





S GDS3710				English ~   Logout 2018-10-01 13:17
□ LiveView	÷	Auto On-Hook Timer(s) Ringing Timeout(s)	300	
Door System Settings	^	SIP Transport	UDP	
System Settings	^	Stream	Stream 2	
SIP Settings	^			
SIP Basic Settings		SIP TLS Certificate		
SIP Advanced Settings				
White List		SIP TLS Private Key		
Video & Audio Settings	~			
Alarm Settings	~	SIP TLS Private Key Password		۲
Email & FTP Settings	~	Enable DTMF	RFC2833 SIP INFO	
A Maintenance	~	Enable Keep Alive		
① Status	~	Enable Direct IP Call		
		Enable two-way SIP Calling		
		SIP Proxy Compatibility Mode		
		Unregister On Reboot		

Figure 3: Enable Direct IP Call

#### Settings Configuration on the WP820 Side

The WP820 related Account need to be set as "Active", and correct "Local SIP Port" need to be configured at the GDS37xx side. These are the basic settings to make the peering scenario work.

 On the WP820 Web GUI navigate under "Account → General Settings" and set "Account Active" to Yes, then click on Save and Apply in order to apply new changes.

S WP820		Q English v	👤 admin v
≔ Status ~	Account Settings		
👤 Account	① Account 1 ① Account 2		
📞 Phone Settings 🛛 🗸			
log Network Settings v	General Settings SIP Settings Codec Settings Call Settings Advanced Settings		
📮 System Settings 🔹 🗸			
🗶 Maintenance 🛛 🗸	Account Registration		
Applications v	Account Active 💿 🔽		
Solution Value-added Service 🗸	Account Name 💿		
	SIP Server 💿		
		Delete Up Down	

Figure 4: WP820 General Settings

2. Navigate to "Account → SIP Settings" and verify that the "Local SIP Port" set on the WP820 side is the same as the one on the GDS37xx.





5	WP820			Q	English v 📔 👔 admin v
≔	Status	*	Account 1     Account 2		
1	Account		General Settings SIP Settings Codec Settings Call Settings Advanced Settings		
٩.		~			
¢	Network Settings	~	Use P-Preferred-Identity Header ⑦ Default	~	
			SIP Transport (2) UDP	~	
-¢		~			
×		~	Local SIP Port ⑦ 5060		
ß	Applications	~	SIP URI Scheme When Using TLS ③   ● sip   ○ sips		
88	Value-added Service	~	Use Actual Ephemeral Port in Contact with TCP/TLS ③		

Figure 5: WP820 SIP Settings





## **CONNECTION USING SIP SERVER**

In case of multiple GDS37xx and WP820 are available, a SIP server needs to be set in order to communicate between different devices.

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

The following shows a sample setup.

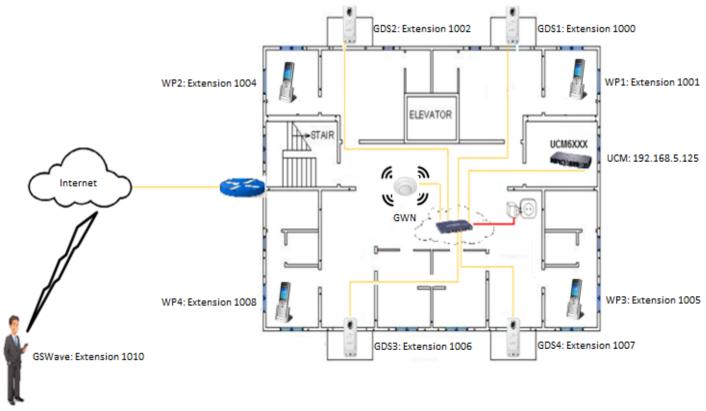


Figure 6: WP820 Connected to GDS3710 through UCM6XXX

#### Settings Configuration on the GDS37xx Side

A SIP account needs to be registered on the GDS37xx to interact with other devices.

This can be done by entering the GDS37xx WebGUI under "Account  $\rightarrow$  Account x", then type the SIP account related information and click on <u>Save</u>.





S GDS3710		
■ LiveView ~	Account 1	
	SIP Basic Settings	
Door System Settings	Account Active	
System Settings *	SIP Server	192.168.5.146
Account ^	Outbound Proxy	
Account 1	Backup Outbound Proxy	
Account 2		
Account 3	DNS Mode	A Record
Account 4	SIP User ID	2001
Phone Settings	Authentication ID	2001
🛎 Video & Audio Settings 🛛 🗸	Password	
Alarm Settings	Display Name	GDS
Email & FTP Settings ×	TEL URI	Disabled
A Maintenance	SIP Advanced Settings	
① Status ^	Registration Expiration(m)	60
C CIURS	Re-register before Expiration(s)	0
	Local SIP Port	5060
	SIP Transport	UDP
	Stream	Stream 2

Figure 7: SIP Basic Settings

Go to **"Door System Settings → Basic Settings**" then set the following:

- 1. Doorbell Mode set to "Call Doorbell Number".
- 2. (optional) Door Bell Call Mode: When using multiple phones. Please, refer to "*Door Bell Call Mode*"
- 3. Number Called When Door Bell Pressed (assuming 1001 is the WP820 number).
- 4. Remote PIN to Open the Door.

The following figure shows an example of the configuration done.





S GDS3710			
	Door System Settings		
<ul> <li>LiveView</li> <li>Door System Settings</li> </ul>	Delay before Unlock Action(s)	0	
Basic Settings	Unlock Action Holding Time(s)	5	
Keep Door Open	Minimum Interval of Swiping Card(ms)	300	
Card Management	Snapshot when Door Opened Snapshot when Doorbell Pressed	via FTP via Email	
Group Schedule	Shapshot when Doolbeit Pressed		
Holiday	Call Mode	SIP Number	]
• System Settings	Doorbell Mode	Call Doorbell Number	
SIP Settings	Door Bell Call Mode Number Called When Door Bell Pressed	Serial Hunting •	e.
🛱 Video & Audio Settings 🛛 🗸	Maximum Number of Dialed Digits	0	•
Alarm Settings	Press Doorbell Schedule	All Day	Edit Schedule
Email & FTP Settings     Maintenance	Remote PIN to Open Door		•
Maintenance	Local PIN Type	Unified PIN T	
	Local PIN to Open Door		۲

Figure 8: Door System Settings

#### White List Settings

Any number calling the GDS37xx extension will have its call auto answered. To restrict allowed numbers to call the GDS37xx, user needs to navigate under "Phone Settings  $\rightarrow$  Account x White List".

- 1. Check Enable White Number List.
- 2. Click on **Add** to add numbers allowed to dial the GDS37xx.

3.	Click	Save	to apply the settings.		
E Door System Settings		Cottings	Account 1 White List		
		-	Enable White Number List	×	
	stem Setting	gs ~	Phone Number 1	1006	્
	count	Ť	Phone Number 2	192.168.5.113:5060	<u>د</u>
	one Setting		Phone Number 3		C.
	hone Settings		Phone Number 4		e.
	ccount 1 Whit		Phone Number 5		e.
	ccount 2 whit		Phone Number 6		c.
	ccount 4 Whit		Phone Number 7		د.

Figure 9: White List



#### Settings Configuration on the WP820 Side

A SIP account needs to be registered on the WP820 side as well to interact with other devices available on the local network.

This can be done by entering the WP820 Web GUI under "**Account**  $\rightarrow$  **General Settings**", then type the SIP account relater information and click on <sup>Save</sup> and <sup>Apply</sup> to apply new changes.

≔ Status	~	Image: Comparison of the second sec	
👤 Account		General Settings SIP Settings Codec Settings Call Settings Advanced Settings	
🌜 Phone Settings	~	Account Active 💿 🔽	
🊱 Network Settings	~	Account Name  WP820	
🗔 System Settings	~	SIP Server ⑦ 192.168.5.125	
🔀 Maintenance	~		
Applications	~	Secondary SIP Server 💿 🗵 Delete	
Solution Value-added Service	~	🖸 Up	
		🗹 Down	
		+ Add	
		SIP User ID 💿 1001	
		SIP Authentication ID 💿 1001	
		SIP Authentication Password 💿 🔤 😽	
		Display Name 💿 1001	

Figure 10: General Settings

Users could configure "Remote PIN to Open the Door" on the WP820 WebGUI to open the door with a single click.

This can be done from the WP820 web UI  $\rightarrow$  Value-added Service  $\rightarrow$  Door System and set the following:

- 1. Click on "Add" (The WP820 supports up to 10 GDS3710 devices).
- 2. Enter the "Door system Name", it can be any name to identify the GDS37xx, in our case its "GDS3710".
- 3. Enter the "System Number", in our case its "1000".
- 4. Enter the "Access Password" which is the password set on "Remote PIN to Open the Door" on the GDS37xx.





💊 WP82	0				Q	DND
i≡ Status		Door System				
👤 Account		1				
🍾 Phone Se		Door System (1/10)				
🚯 Network			Door system Name 📎	Open		
🔓 System Se			System Number 📀	1000		
🗶 Maintena			Access Password 📀			***
Applicatio			System Ringtone 🕐	DingDong		~
<b>Value-ado</b>	led Service ^			Save Cancel		
Door Sys	tem					

Figure 11: GDS Settings on WP820 Web GUI

Once the user presses the ring button on the GDS37xx, an INVITE will be sent to the WP820 phone and the GDS3710 stream will be played on the WP820 phone with the "Open" button that appears in the bottom of the screen. If users press the "open" button, a SIP message will be sent to the GDS3710 in order to open the door as shown below.

A message prompt will appear confirming the opening of the door when the SIP message code sent by the phone matches the "Remote PIN for Open Door".

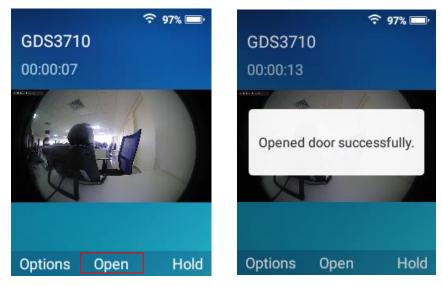


Figure 12: Open Door from WP820

When Call is answered, the user can proceed from **Options**  $\rightarrow$  **Zoom** to enter the zoom interface. This interface allows the user to choose zoom in on certain sections of the image (use the direction arrows to move from sections or use the digits from "0" to "9"). Then you need to click on "Confirm" to view the selected section and to go back to the call screen.







Figure 13: Zoom options from WP820

