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## **HOW TO CONFIGURE GRANDSTREAM VIDEO SURVEILLANCE PRODUCTS TO RECORD VIDEO USING ASTERISK**

Grandstream's video surveillance cameras and encoders feature an option to operate as a SIP end point. This option allows installers to integrate the cameras and encoders with the popular open source Asterisk® softswitch. This allows users to dial from their video phones to their cameras to monitor activity. The cameras and encoders are able to send video in H.264 format.

To do this you will need to register the camera to your SIP compatible softswitch. First you should log into the web GUI of the camera or encoder. To do this simply type the IP address of it on your browser, enter your administrator credentials and then you will be in the main menu; click on the "Basic Settings" menu on the left and then click on the SIP submenu. You should see this screen on your browser:

SIP Settings		Phone List
<b>General Phone Settings</b>		
Registered:	online	<a href="#">Refresh</a>
Unregister On Reboot:	Yes <input type="radio"/>	No <input checked="" type="radio"/>
<b>SIP Settings</b>		
Account Name:	<input type="text" value="Mini Dome HD"/>	(optional, e.g., John Doe)
SIP Server:	<input type="text" value="mypbxip.com"/>	(e.g., sip.mycompany.com, or IP address)
Outbound Proxy:	<input type="text"/>	(e.g., proxy.myprovider.com, or IP address, if any)
SIP User ID:	<input type="text" value="724"/>	(the user part of an SIP address)
Authenticate ID:	<input type="text" value="724"/>	(can be identical to or different from SIP User ID)
Authenticate Password:	<input type="password" value="••••••"/>	(intentionally not displayed for security protection)
STUN Server:	<input type="text"/>	(URI or IP:port)
Preferred Vocoder:	<input type="text" value="PCMU"/>	
Register Expiration:	<input type="text" value="3600"/>	(in seconds. default 3600 seconds, max 45 days)
local SIP Port:	<input type="text" value="5060"/>	(default 5060)
local RTP Port:	<input type="text" value="5004"/>	(1024-30000)
<input type="button" value="Save"/> <input type="button" value="Reset"/> <span style="color: red;">(You must restart the device to apply the changes )</span>		

Fill out the fields for this extension. Remember you have to create an extension on your SIP IPPBX so that it can register to it.

Once you have the extension registered on the IPPBX, you should be able to dial its extension number using a SIP compatible video phone like the Grandstream GXV3140. Remember to always set your video codec to H.264

In order to record in H.264 with the Grandstream products you will need to have at least Asterisk version 1.4.24 installed.

The recording command for Asterisk is very simple. The syntax appears as follows:

```
Record(filename.format[|silence][|maxduration][|option])
```

For example, Record(testvideo.ulaw|20) will record a file named testvideo for 20 seconds in ulaw format and it will also record the H.264 video packets coming from the Grandstream cameras and encoders.

To reproduce the file you can simply use the command Playback(testvideo) and this will reproduce the file saved as testvideo.

These commands will go within a recording context that will trigger the recording of the event based on a sequence, for example:

[record]

exten => 500,1,Festival('The recording has begun')

exten => 500,2,Record(testvideo.ulaw|20)

exten => 500,3,Festival('The recording is complete')

exten => 500,4,Playback(testvideo)