

Grandstream Networks, Inc.

Peering Grandstream Camera & IP Multimedia Phone Configuration Guide



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INTRODUCTION

The purpose of this document is to guide you to configure/monitor Grandstream IP cameras & IP Video Encoders/Decoders and your Grandstream IP Multimedia Phone.

This guide is applicable to the following Grandstream IP cameras (GXV3651_FHD, GXV3662 with firmware 1.0.1.40 or higher; GXV3615, GXV3611_HD, GXV3611_LL, GXV 3601, GXV3601_HD, GXV3601_LL with firmware 1.0.4.27 or higher) and IP Video Encoders/Decoders (GXV3501, GXV3504 with firmware 1.0.4.27 or higher; GXV3500 with firmware 1.0.1.40 or higher (Encoding functionality is used on GXV3500) and GXV3140 (with firmware 1.0.7.50 or higher) and GXV3175 (with firmware 1.0.3.40 or higher).

Be aware that different firmware revisions may have different web interface formats and functionality. For more information about Grandstream IP Cameras and other products capabilities, please visit <http://www.grandstream.com> or contact us at esupport.grandstream.com.

TUTORIAL ENVIRONMENT

For this tutorial, we will be using Grandstream IP Multimedia Phone GXV3175 with firmware 1.0.3.40 and Grandstream IP Camera GXV3651_FHD with firmware 1.0.1.40.

GXV3175 IP is 192.168.50.199

GXV3651_FHD IP is 192.168.50.143

Note: Make sure that both devices are set to use Static IPs; otherwise, the communication cannot be established if one of them changes its IP from original one.

The Camera and the IP Multimedia Phone should be in the same Local Area Network; in the same VPN, behind the same router or each has a public IP when in different networks. In other words; the camera and the IP Multimedia Phone need to be able to reach each other.

This tutorial is separated in 2 parts:

PART 1: MONITOR IP CAMERA FROM IP MULTIMEDIA PHONE CONFIGURATION

STEP 1: CONFIGURE IP MULTIMEDIA PHONE

1. Access to the web interface of your IP Multimedia Phone by entering the IP of the IP Multimedia Phone on your browser.

http://<IP_Multimedia_Phone_IP> (Default; username: admin, password: admin)

(i.e. <http://192.168.50.199>)

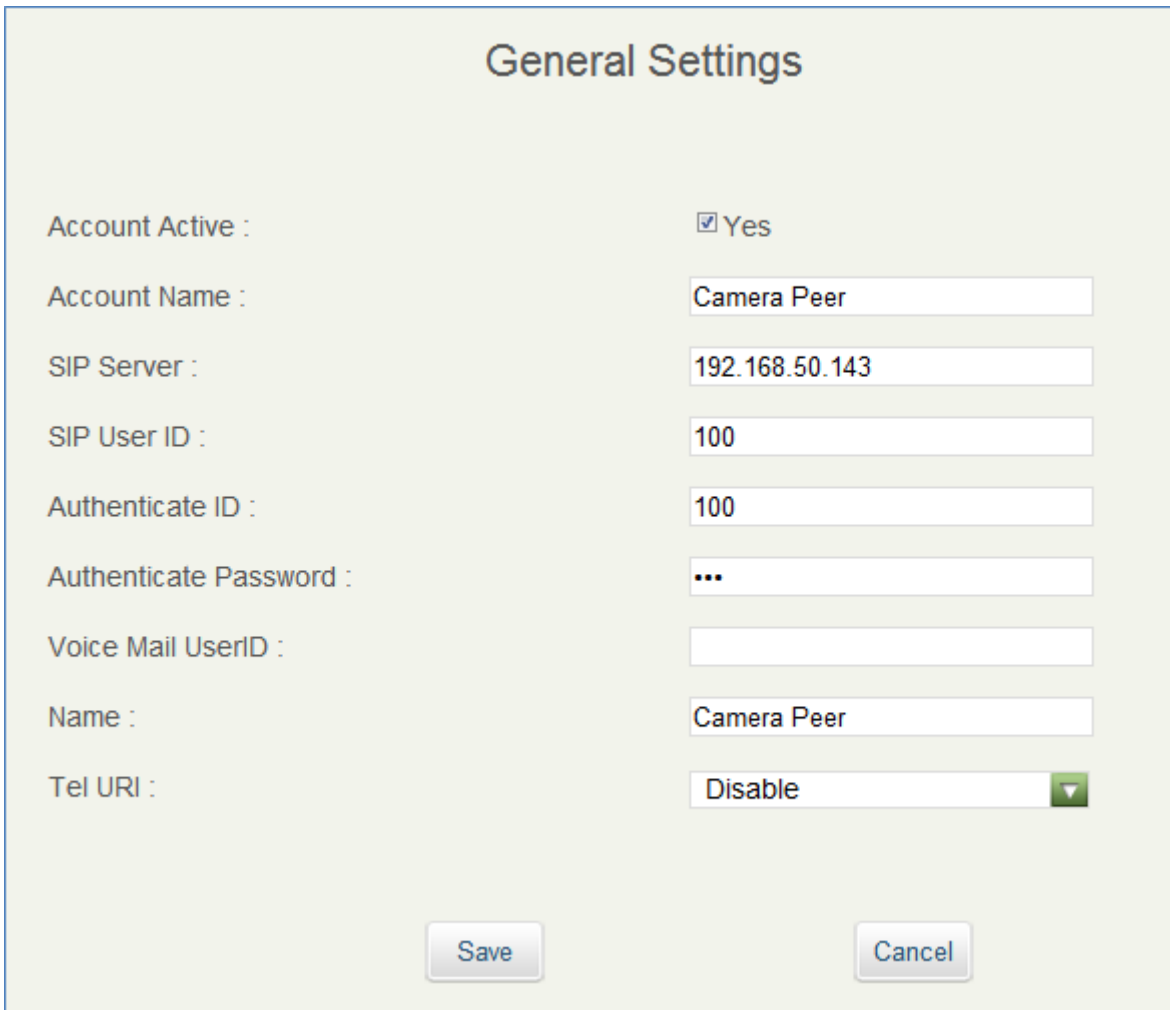
2. Go to **Advanced Settings** > **General Settings** and uncheck **Use Random Port** (Default is Yes).



Figure 1: Uncheck Use Random Port Option

3. Click **Save** on the bottom of the page and then apply your settings by clicking **Apply** on the top of the page.

4. Go to **Account 2** and enter the following :
 - a. **Account Active:** Yes (by enabling the check box)
 - b. **Account Name:** Any name (for example : Camera Peer)
 - c. **SIP Server:** Enter the IP of the camera to monitor (in our example : 192.168.50.143)
 - d. **SIP User ID:** Any extension number (for example : 100)
 - e. **Authenticate ID:** Same as SIP User ID (for example : 100)
 - f. **Authenticate Password:** Any password, can be same as SIP User ID (for example : 100)
 - g. **Name:** Any name (for example : Camera Peer)



General Settings	
Account Active :	<input checked="" type="checkbox"/> Yes
Account Name :	<input type="text" value="Camera Peer"/>
SIP Server :	<input type="text" value="192.168.50.143"/>
SIP User ID :	<input type="text" value="100"/>
Authenticate ID :	<input type="text" value="100"/>
Authenticate Password :	<input type="password" value="***"/>
Voice Mail UserID :	<input type="text"/>
Name :	<input type="text" value="Camera Peer"/>
Tel URI :	<input type="text" value="Disable"/>
<input type="button" value="Save"/> <input type="button" value="Cancel"/>	

Figure 2: Account 2 General Settings

5. Repeat Step 3 to save and apply your settings.

6. Go to **Account 2 > SIP Settings** and set the following :

Note: We used account 2 in this example to keep Account 1 registered with IPVideoTalk service. Same tutorial applies to other accounts by making sure the correct SIP port depending on the used account.

- a. **SIP Registration:** No (Disable the check box)
- b. **Unregister On Reboot:** Yes (Default is Yes)
- c. **Local SIP port:** 5062 (Default is 5062)

7. Go to **Account 2 > Network Settings**, set **NAT Traversal** to **NAT NO** and click **Save**.



Figure 3: Set NAT Traversal

8. Go to **Account 2 > Call Settings** and set the following:
 - a. **Start Video Automatically:** Yes (Enable check box)
 - b. **Remote Video Request:** Select "Accept" from the dropdown list

STEP 2: CONFIGURE IP CAMERA

1. Access the web interface of your IP camera by entering the IP of the camera on your browser.
http://<Camera_IP> (Default; username: admin, password: admin)

(i.e. <http://192.168.50.143>)
2. Go to **Configuration > SIP** and enter the following:
 - a. **Unregister On Reboot:** No (Disable check box)
 - b. **Account Name:** Enter any name (for example : Phone Peer)
 - c. **SIP Server:** Enter the IP address of your IP Multimedia Phone followed by the SIP port (in this example: 192.168.50.199:5062) **Note:** We specified SIP port 5062, since it's the local SIP port for Account 2 on the IP Multimedia Phone.
 - d. **Outbound Proxy:** Leave it blank
 - e. **SIP User ID:** Enter any extension (for example : 101)
 - f. **Authenticate ID:** Same as SIP User ID (for example : 101)
 - g. **Authenticate Password:** Enter any password (for example : 101)

- h. **STUN Server:** Leave it blank
 - i. **Stream:** Select which stream will be used (Primary or Secondary, default secondary)
 - j. **Preferred Vocoder:** Select which vocoder to use for audio (PCMU or PCMA)
 - k. **Register Expiration (Second):** Will not be used (Keep as is it)
 - l. **Local SIP port:** Keep default 5060
 - m. **Local RTP port:** Keep default 5004
 - n. **Auto Hook Timer:** This will let the camera to automatically answer the call (Keep default 300)
 - o. **Disable Audio in SIP call:** Should not be checked
 - p. **Enable Keep-Alive:** Keep it unchecked
3. **Accept Direct IP Call:** Should be checked.
4. Click **Save** then reboot the camera.

General Phone Settings

Registered: **Offline**

Unregister On Reboot:

SIP Settings

Account Name: ⓘ

SIP Server: ⓘ

Outbound Proxy: ⓘ

SIP User ID: ⓘ

Authenticate ID: ⓘ

Authenticate Password: ⓘ

STUN Server: ⓘ

Stream: ⓘ

Preferred Vocoder: ⓘ

Register Expiration(Second): ⓘ

local SIP Port: ⓘ

local RTP Port: ⓘ

Auto on Hook Timer: ⓘ

Disable Audio in SIP Call: ⓘ

Enable Keep Alive:

Accept Direct IP Call:

Enable White List Number Filter: ⓘ

Note: You must restart the device to apply the changes.

Save

Figure 4: IP Camera SIP Settings

Once Step 1 and Step 2 are completed, you will be able to call the IP Camera from your IP Multimedia Phone to monitor it.

1. Use the second account to dial
2. Dial 101 and press Video Call
3. The camera will auto-answer
4. Video and Audio stream will be displayed on your IP Multimedia Phone

Note: If you want to use Primary stream, we recommend these settings on the camera side under **Configuration > Video & Audio > Video Settings > Primary Stream Settings:**

Preferred Video Codec: H.264 (MJPEG Video Codec will not work in this scenario)

Resolution: VGA 640*480 (4:3) or lower

Bit Rate: 1024 kbps or lower

Max Frame Rate: 15 fps or lower

PART 2: MONITOR DETECTION AND ALARM TO SIP PHONE CONFIGURATION

Users could configure Motion Detection on the camera and set the alarm to call the configured IP Multimedia Phone.

STEP 1: ENABLE MOTION DETECTION

1. Access the web interface of your IP camera by entering the IP of the camera on your browser.
http://<Camera_IP> (Default; username: admin, password: admin)

(i.e. <http://192.168.50.143>)
2. Go to Configuration > Advanced Settings > Motion Detection and set the following:
 - a. **Enable Motion Detection:** Yes (Check box needs to be enabled)
 - b. **Show Motion Detection Regions:** Can be enabled depending on your convenience
 - c. **Select a Region:** Select a region from the dropdown list (from 0 to 15)
 - d. **Sensitivity:** Enter sensitivity value depending on your convenience or keep default 50 and **Save**.
 - e. Click **Edit** to specify the motion detection region by selecting on the displayed video and click **Save**.



Figure 5: Enable Motion Detection

3. In **Alarm Action** section, keep **Upload to Alarm Center** checked and check **Voice Alarm to SIP Phone** and click **Save**.

Note: When **Upload to Alarm Center** is checked, the Motion Detection region and icon (in Home page) will blink in red if your camera detects any motion.

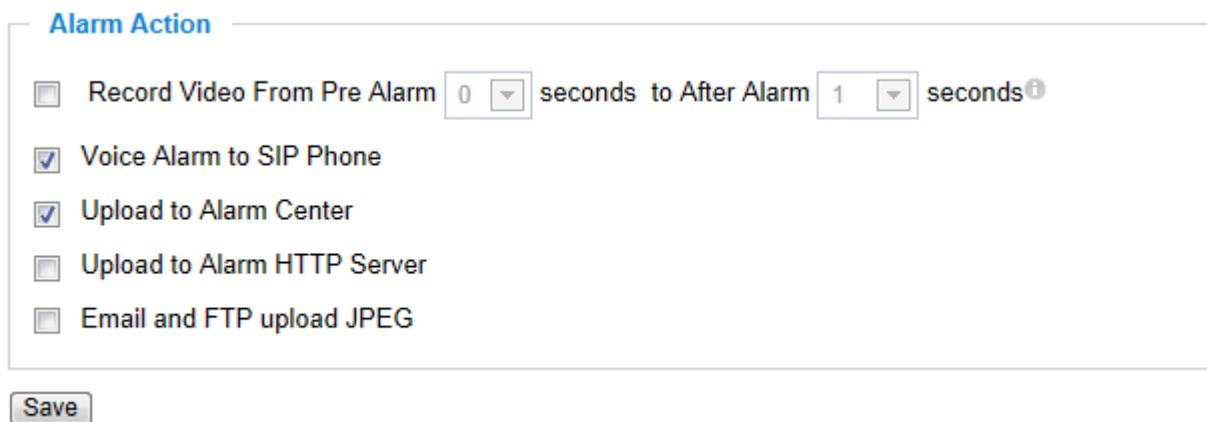
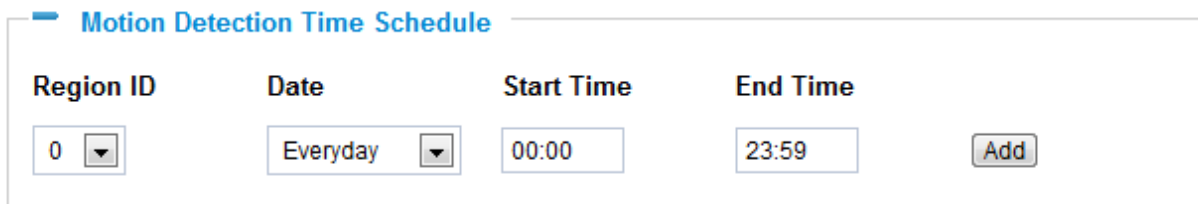


Figure 6: Alarm Action

4. **Motion Detection Time Schedule.** Set the time when the Motion Detection will be enabled as follows and click **Add**:
 - a. **Region ID:** Number of the region configured for Motion Detection
 - b. **Date:** Select in which weekday the alarm will be enabled, you may select *Everyday*
 - c. **Start Time:** Time when Motion Detection will start
 - d. **End Time:** Time when Motion Detection will end



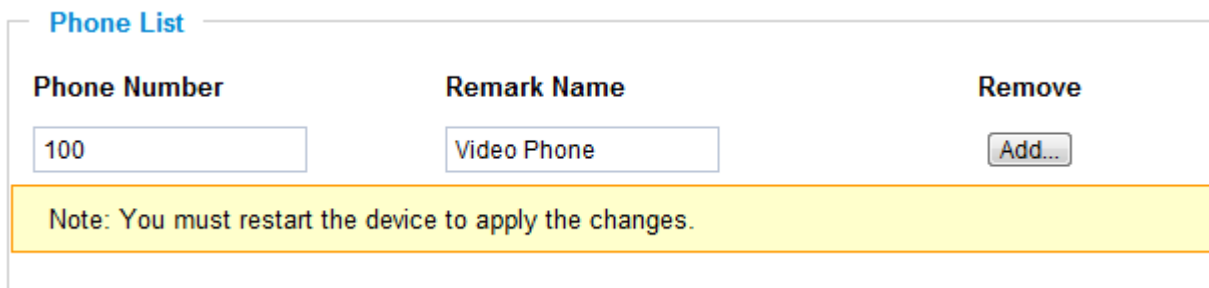
The screenshot shows a configuration panel titled "Motion Detection Time Schedule". It contains four input fields: "Region ID" with a dropdown menu showing "0", "Date" with a dropdown menu showing "Everyday", "Start Time" with a text input field containing "00:00", and "End Time" with a text input field containing "23:59". To the right of these fields is an "Add" button.

Figure 7: Motion Detection Time Schedule

STEP 2: ADD NUMBER TO PHONE LIST

Go to **Configuration > Basic Settings > SIP**, under **Phone List** section, set the following:

- a. **Phone Number:** Enter the extension configured on your IP Multimedia Phone (in our example: 100)
- b. **Remark Name:** Enter any Name (for example: Video phone)
- c. Click **Add** to apply your settings and reboot the camera.



The screenshot shows a configuration panel titled "Phone List". It contains two input fields: "Phone Number" with a text input field containing "100", and "Remark Name" with a text input field containing "Video Phone". To the right of these fields is an "Add..." button. Below the input fields is a yellow highlighted note box that reads: "Note: You must restart the device to apply the changes."

Figure 8: Phone List

A SIP call will be initiated to the configured number (including audio and video) if the camera detects any motion in your configured region.