

# Grandstream Networks, Inc.

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## Peering Grandstream Camera & IP Multimedia Phone Configuration Guide



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## Index

|                                                                        |          |
|------------------------------------------------------------------------|----------|
| <b>INTRODUCTION .....</b>                                              | <b>3</b> |
| <b>TUTORIAL ENVIRONMENT .....</b>                                      | <b>4</b> |
| PART 1: MONITOR IP CAMERA FROM IP MULTIMEDIA PHONE CONFIGURATION ..... | 4        |
| STEP 1: CONFIGURE IP MULTIMEDIA PHONE.....                             | 4        |
| STEP 2: CONFIGURE IP CAMERA .....                                      | 6        |
| PART 2: MONITOR DETECTION AND ALARM TO SIP PHONE CONFIGURATION .....   | 9        |
| STEP 1: ENABLE MOTION DETECTION .....                                  | 9        |
| STEP 2: ADD NUMBER TO PHONE LIST .....                                 | 11       |

## **Table of Figures**

### **Peering Grandstream Camera & Phone Configuration Guide**

|                                                |    |
|------------------------------------------------|----|
| Figure 1: Uncheck Use Random Port Option.....  | 4  |
| Figure 2: Account 2 General Settings .....     | 5  |
| Figure 3: Set NAT Traversal.....               | 6  |
| Figure 4: IP Camera SIP Settings .....         | 8  |
| Figure 5: Enable Motion Detection.....         | 10 |
| Figure 6: Alarm Action .....                   | 10 |
| Figure 7: Motion Detection Time Schedule ..... | 11 |
| Figure 8: Phone List .....                     | 11 |

## 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](mailto: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>](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).

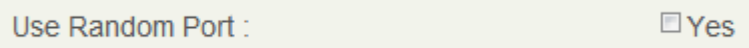
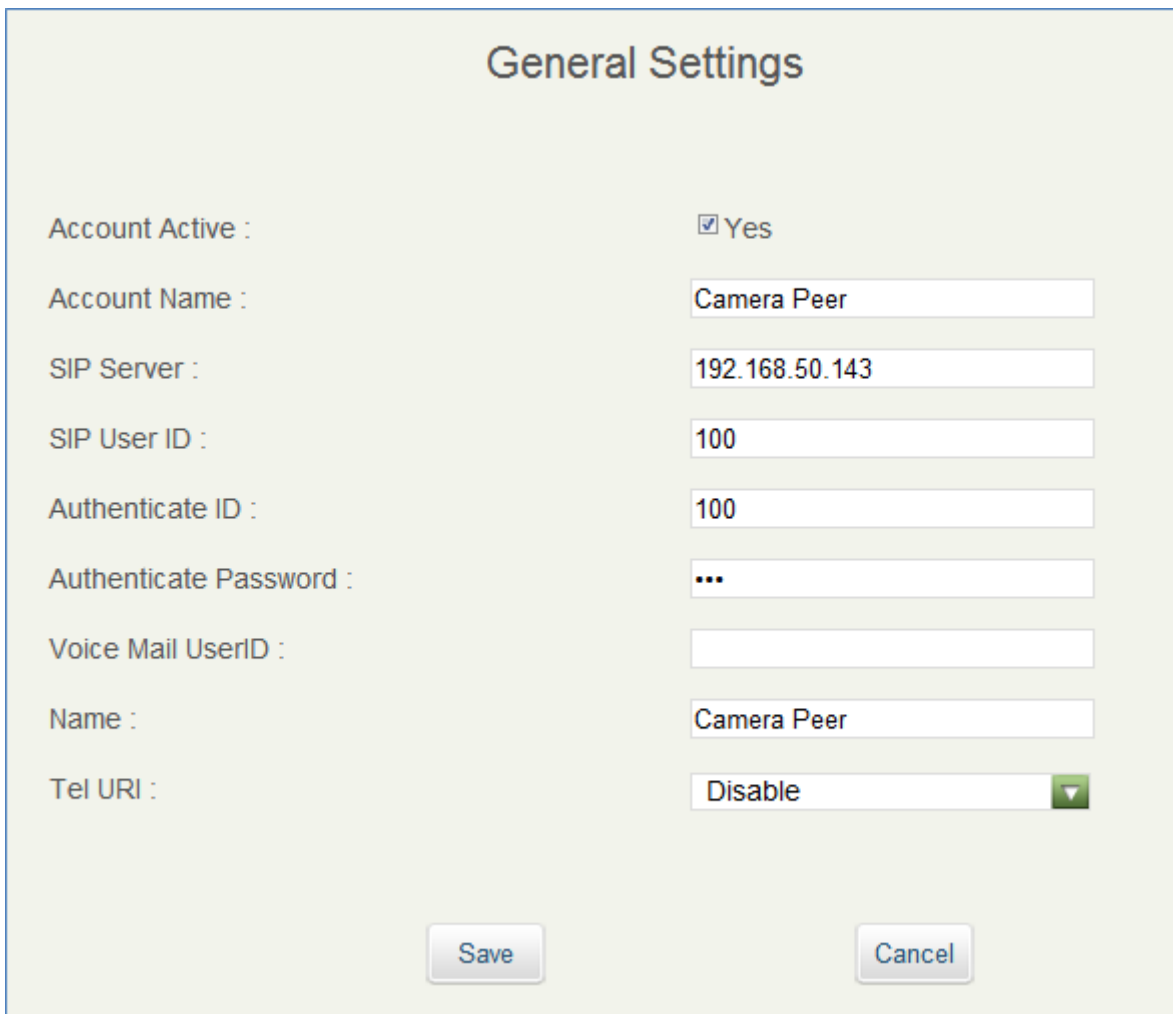


Figure 1: Uncheck Use Random Port Option

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 :          | Camera Peer                             |
| SIP Server :            | 192.168.50.143                          |
| SIP User ID :           | 100                                     |
| Authenticate ID :       | 100                                     |
| Authenticate Password : | ...                                     |
| Voice Mail UserID :     |                                         |
| Name :                  | Camera Peer                             |
| Tel URI :               | Disable                                 |
| <div>Save Cancel</div>  |                                         |

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>](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.

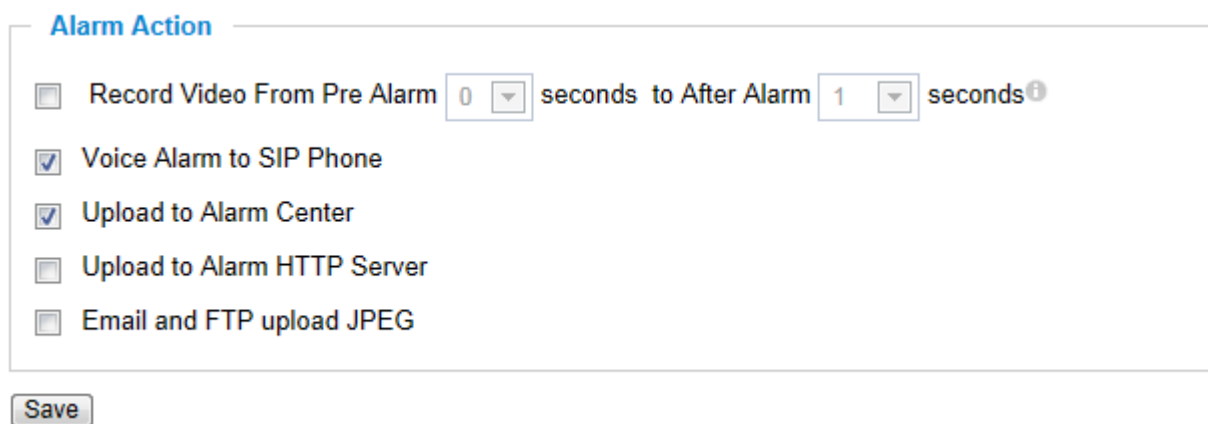


Figure 6: Alarm Action

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

Motion Detection Time Schedule

| Region ID                                                          | Date                                                                      | Start Time                                               | End Time                                                 |                                                                                       |
|--------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|---------------------------------------------------------------------------------------|
| 0 <span style="border: 1px solid #ccc; padding: 2px 5px;">▼</span> | Everyday <span style="border: 1px solid #ccc; padding: 2px 5px;">▼</span> | <input style="width: 100px;" type="text" value="00:00"/> | <input style="width: 100px;" type="text" value="23:59"/> | <input style="border: 1px solid #ccc; padding: 2px 10px;" type="button" value="Add"/> |

**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.

Phone List

| Phone Number                                           | Remark Name                                                    | Remove                                                                                   |
|--------------------------------------------------------|----------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <input style="width: 150px;" type="text" value="100"/> | <input style="width: 150px;" type="text" value="Video Phone"/> | <input style="border: 1px solid #ccc; padding: 2px 10px;" type="button" value="Add..."/> |

**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.