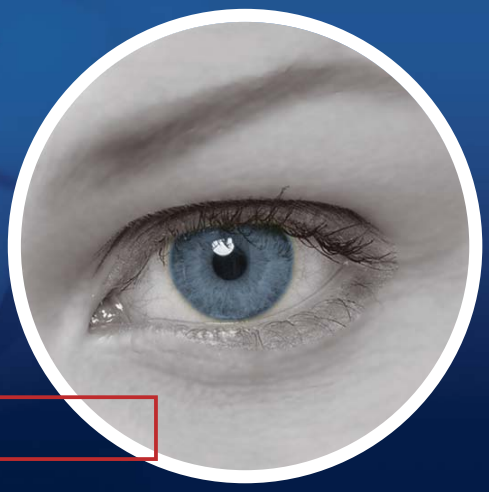
GeoVision inc
The Vision of Security

Surveillance System

New Feature Guide V8.5.5.0



The Vision of Security

FGV8550-A

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Feature Guide for V8.5.5 GeoVision Surveillance System

This Guide provides an overview of key features in V8.5.5 GV-System. It also includes information about how the features differ from similar features in earlier versions.

Cards Supported

V8.5.5 only supports the following GV video capture cards:

- GV-600(S) V3.20 and later
- GV-650(S) V3.30 and later
- GV-800(S) V3.30 and later
- GV-804A V3.10 and later
- GV-600A
- GV-650A
- GV-800A
- GV-900A
- GV-600B
- GV-650B
- GV-800B
- GV-1120, GV-1120A All Series
- GV-1240, GV-1240A All Series
- GV-1480, GV-1480A All Series
- GV-1008
- GV-3008
- GV-4008, GV-4008A
- GV-5016
- GV-SDI-204

Note that GV-600 (V4), GV-650 (V4) and GV-800 (V4) and GV-804 (V4) Cards are renamed to GV-600A, GV-650A, GV-800A and GV-804A. These V4 and A Cards are the same video capture cards.

Contents

1. New Supports and Specifications

1.1 GV-SDI-204

In V8.5.5, the GV-SDI-204 Video Capture Card is now supported to provide **a tribrid solution that integrates analog, IP and HD-SDI cameras.** The GV-SDI-204 Card supports up to 4 video channels of HD-SDI cameras, recording up to 120 /100 fps (NTSC / PAL) in total at 1080p with H.264 hardware compression.

You can install up to 4 GV-SDI-204 Cards for a total of 16 channels. GV-SDI-204 Cards can also be installed with other types of GV-Video Capture Cards including GV-900A, GV-800B, GV-650B, GV-600B, and GV-1480A / 1240A / 1120A Combo Cards, but the total number of channels cannot exceed 32 channels. Below is a brief specifications chart for GV-SDI-204:

			GV-SDI-204
Input Type			BNC
Video Input			4 Cams
Audio Input			N/A
Recording Rate and Display Rate	**1080p**	**NTSC**	120 fps
		PAL	100 fps
	720p	**NTSC**	240 fps
		PAL	200 fps
	1080i	**NTSC**	120 fps
		PAL	100 fps
Video Resolution	**H/W**	**1080p**	1920 x 1080
		720p	1280 x 720
		1080i	1920 x 1080
	S/W	**1080p**	960 x 540, 480 x 270
		720p	640 x 360
		1080i	960 x 540, 480 x 270
Bit Rate Range			10M ~ 20M

For detailed information on GV-SDI-204, see the installation guide at:
http://www.geovision.com.tw/Install_Products/GV-SDI-204.pdf

1.2 Support for Ivy Bridge GPU Decoding

V8.5.5 now supports GPU decoding by Intel Ivy Bridge chipsets, allowing GV-System to process videos of 1 – 3 MP using less CPU resource.

<table>
<tr><td colspan="2" rowspan="2"></td><td colspan="2">Supported</td><td rowspan="2">Not Supported</td></tr>
<tr><td>Sandy Bridge</td><td>Ivy Bridge</td></tr>
<tr><td rowspan="2">Operating System</td><td>32-Bit</td><td colspan="2">Windows Vista / 7</td><td rowspan="2">Windows 2000 / XP / Server 2008</td></tr>
<tr><td>64-Bit</td><td>Windows 7 / Server 2008 R2</td><td>Windows 7</td></tr>
<tr><td colspan="2">GV-System</td><td>V8.5.0.0 or later</td><td>V8.5.5.0 or later</td><td></td></tr>
<tr><td colspan="2">Resolution</td><td>1 MP / 2 MP</td><td>1 MP / 2 MP / 3 MP</td><td>CIF / VGA / D1 / 4MP / 5MP</td></tr>
<tr><td colspan="2">Codec</td><td colspan="2">H.264</td><td>MPEG4 / MJEPG</td></tr>
<tr><td colspan="2">Stream</td><td colspan="2">Single Stream</td><td>Dual Streams</td></tr>
<tr><td colspan="5">Note: To apply GPU decoding, the recommended memory (RAM) requirements is 8 GB or more for 64-bit OS and 3 GB for 32-bit OS.</td></tr>
</table>

1.3 Support for New IP Devices

The following GeoVision and third-party IP devices will now be supported in V8.5.5.

- **Audio:** A “ ” mark indicates the GV-System supports the two-way audio communication with the device; “N/A” indicates the function is unavailable in the device.
- **Codec:** The video codec supported by GV-System are listed.
- **PTZ:** A “ ” mark indicates the GV-System supports the PTZ function of the device; “N/A” indicates the function is unavailable in the device.

Brand	Model	Audio	Codec	PTZ
ACTi	TCM-5111	N/A	JPEG / MPEG-4 / H.264	N/A
Arecont Vision	AV-20185DN	N/A	JPEG / H.264	N/A
GeoVision	GV-CA120	O	JPEG / MPEG-4 / H.264	N/A
	GV-CA220	O	JPEG / MPEG-4 / H.264	N/A
	GV-CAW120	O	JPEG / MPEG-4 / H.264	N/A
	GV-CAW220	O	JPEG / MPEG-4 / H.264	N/A
	GV-BX1200 Series	O	JPEG / MPEG-4 / H.264	N/A
	GV-BX1300 Series	O	JPEG / MPEG-4 / H.264	N/A
	GV-BX2400 Series	O	JPEG / MPEG-4 / H.264	N/A
	GV-BX3400 Series	O	JPEG / MPEG-4 / H.264	N/A
	GV-BX5300	O	JPEG / MPEG-4 / H.264	N/A
	GV-BL1210	O	JPEG / MPEG-4 / H.264	N/A
	GV-BL2410	O	JPEG / MPEG-4 / H.264	N/A
	GV-BL3410	O	JPEG / MPEG-4 / H.264	N/A
	GV-SD220	O	JPEG / MPEG-4 / H.264	O
	GV-VS14	O	JPEG / MPEG-4 / H.264	O
	GV-Hybrid LPR Cam 10M	O	JPEG / MPEG-4 / H.264	N/A

2. Main System

2.1 Easy Mode to Set Up Panorama View

An easier way to combine videos from multiple cameras into a panoramic view is added in V8.5.5.0. When you have multiple camera views covering areas right next to each other with no overlaps, the Easy Mode allows you to simply place camera views together according to the directions specified.

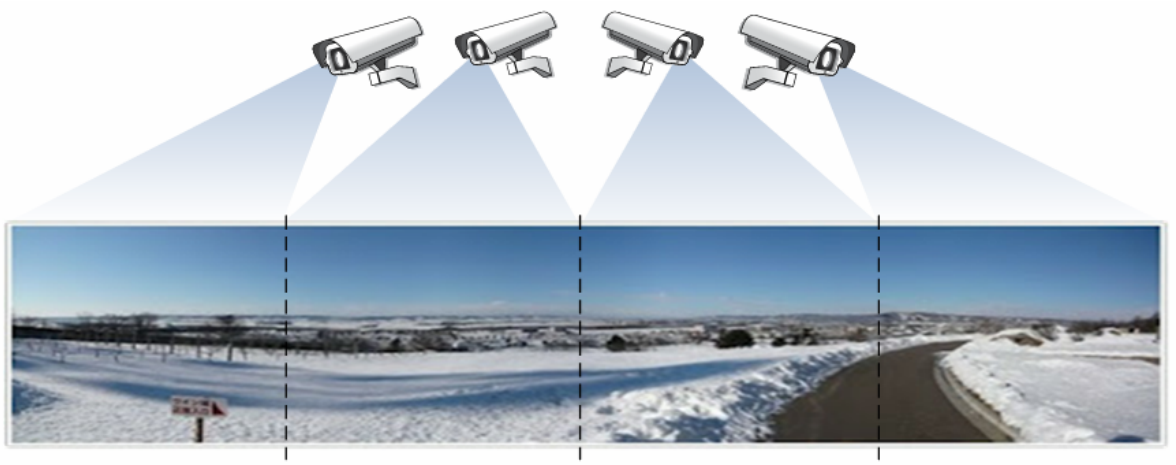

Figure 1

Note:

1. An AVP dongle is required to access the Panorama function.
2. Up to 32 camera views can be stitched together to create a panorama view.

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1. Click the **Configure** button, select **Advanced Video Analysis**, and select **Panorama Setting**.
2. Select at least two cameras to be configured and then click the **Configure** button. This dialog box appears.

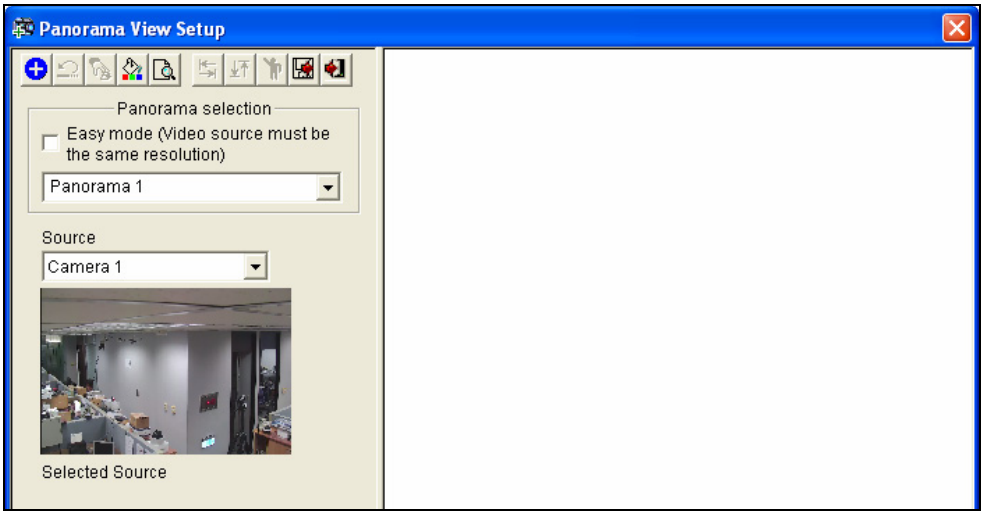

Figure 2

3. Select **Easy Mode (Video source must be the same resolution)**.
4. Use the **Source** drop-down list to select the first camera view to be placed in the panorama and click the **Add** button. The first camera view is added to the Preview Window.

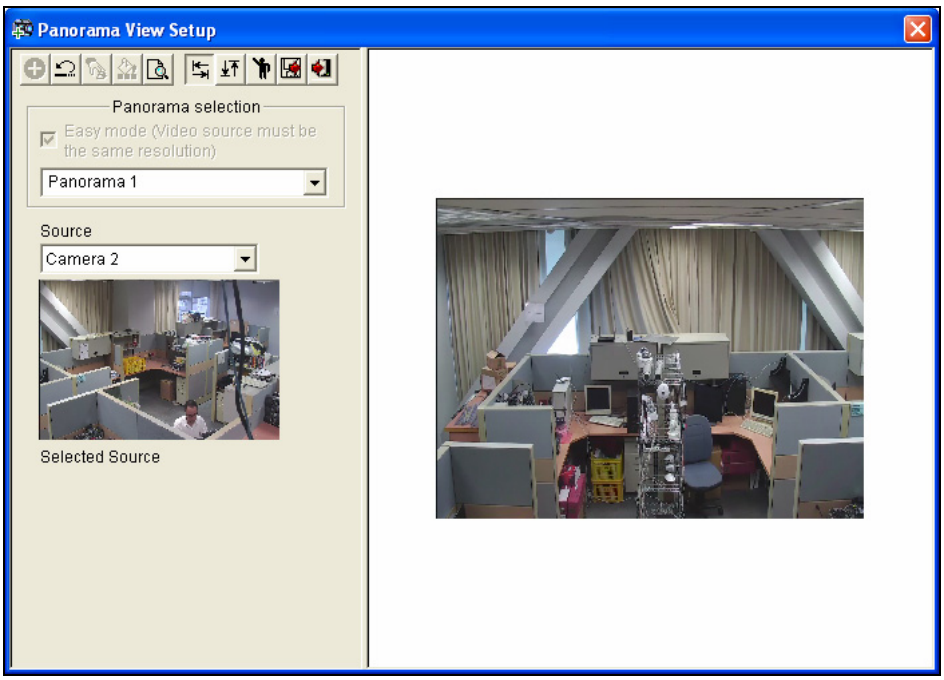

Figure 3

5. To add a second camera view, select the camera from the **Source** drop-down list.

6. To place the camera view on the left or right of the first camera view, click the icon and select to place the second view on the **Left** or **Right** of the first view.

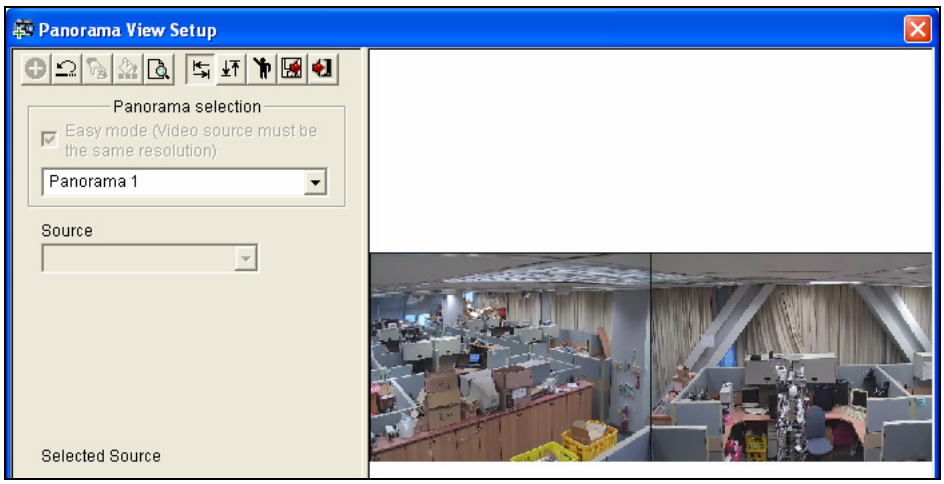

Figure 4

7. To place the camera view above or below the first camera view, click the icon and select to place the second view on the **Top** or **Bottom** of the first view.
8. Repeat the steps for any additional cameras.

Note: You will only be able to add additional cameras next to the last camera view added. For example, when adding a third camera, you can only use the direction buttons in relation to the second camera. You will not be able to go back and select the first camera.

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9. To specify the width and height of the panorama view, click the **Customize Resolution** icon, select **Enable** and type the **Width** and **Height** in pixels.

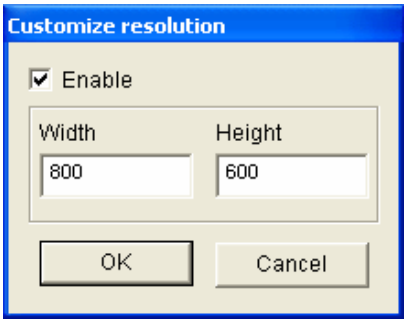

Figure 5

10. When you finish stitching images, click the **Save Before Exit** button before exiting.

For more information, see *Panorama View*, Chapter 1, *DVR User's Manual* on the Surveillance System Software DVD.

2.2 Activating VSM by Schedule

You can set a schedule to activate VSM during the specified time periods only.

1. Click the **Schedule** button, select **Schedule Center** and select **VSM Schedule Setting**.

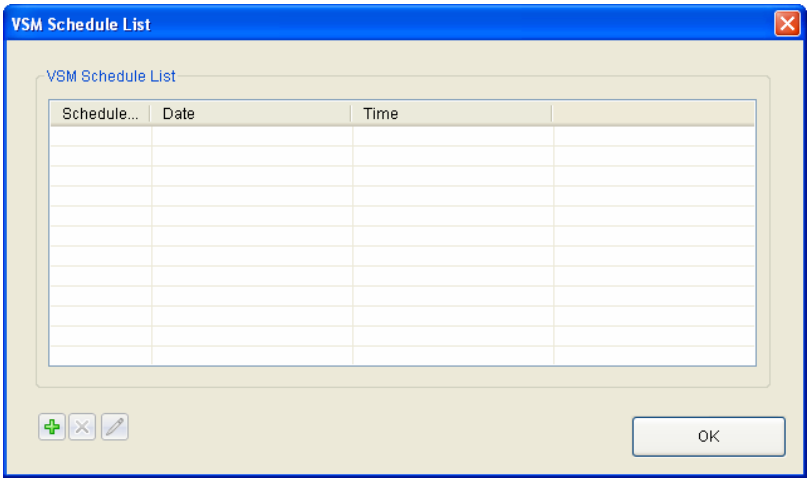

Figure 6

2. To add a new schedule, click the **Add** button  . This dialog box appears.

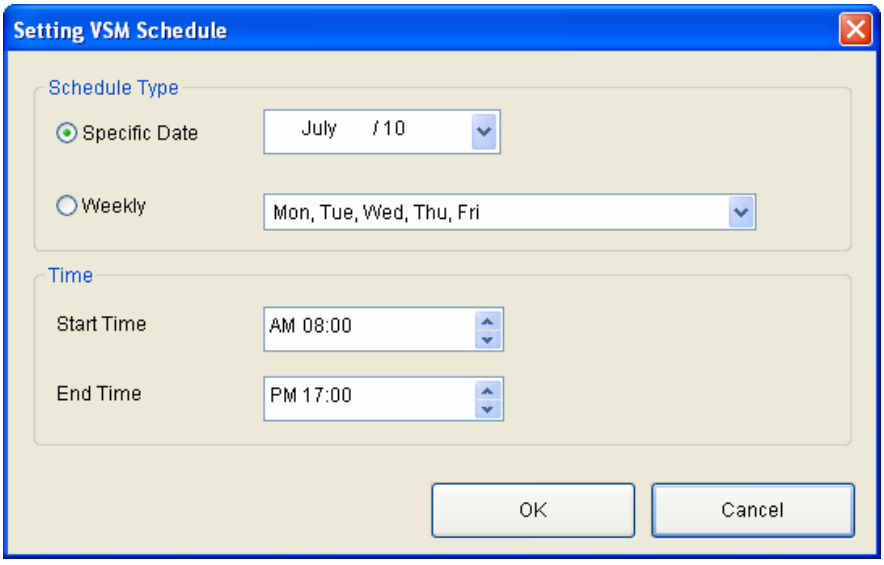

Figure 7

3. Select to activate VSM on a **Specific Date** or select **Weekly** to set up a weekly schedule.
4. Set a **Start Time** and an **End Time**, and they will be applied to the Specific Date or Weekly schedule.
5. Click **OK** to add the schedule.

You can add multiple schedules by clicking the **Add** button and repeating the steps above.

2.3 Backing Up Recorded Files to GV-Backup Center

You can now automatically save a copy of recorded files and system log from GV-System to an offsite location using GV-Backup Center.

Note: This function is only supported in GV-Backup Center V1.1.0.0 or later.

Follow the steps below to connect GV-System to GV-Backup Center:

1. Click the **Network** button and select **Connect to Backup Center**. This dialog box appears.

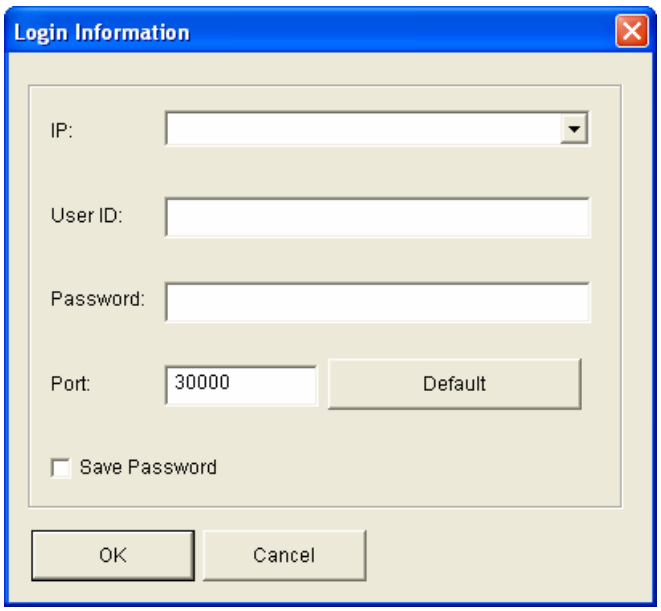

Figure 8

2. Type the **IP** address, **User ID** and **Password** of the GV-Backup Center.
3. Modify the default **Port** 30000 if necessary and click **OK**. The login information is added.

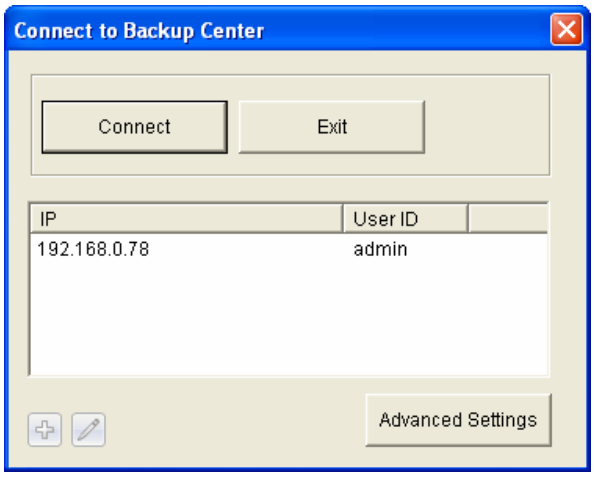

Figure 9

4. Click **Advanced Settings** to specify the interval between each connection retry when connection is interrupted.

Figure 10

5. Click **OK** and click the **Connect** button to connect to GV-Backup Center.

For details on setting up GV-Backup Center, refer to the *GV-Backup Center User's Manual*.

2.4 Support for Dewarping of 3rd Party Fisheye Cameras

You can now enable dewarping for 3rd party fisheye cameras and access fisheye related functions.

1. Click the **Configure** button, point to **System Configure** and select **Camera Configure**.

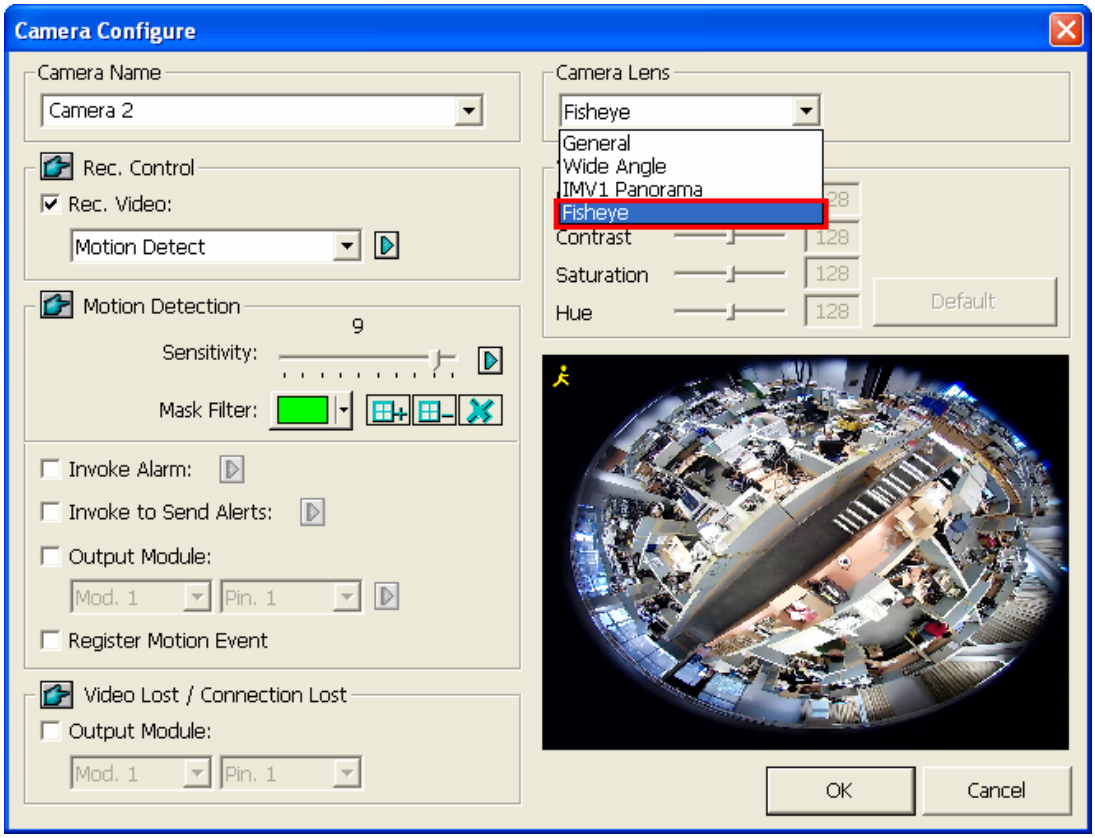

Figure 11

2. Under the **Camera Lens** drop-down list, select **Fisheye** and click **OK**.
3. To dewarp the live view of the 3rd party fisheye camera, right-click the live view, select the camera number and click **Fisheye**.

4. To access fisheye related functions, right-click the live view and select **Fisheye Option**.

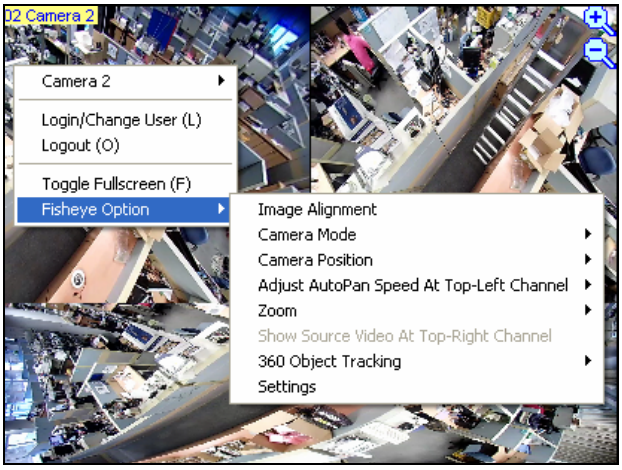

Figure 12

For details, see *Fisheye View,* Chapter 3, *DVR User's Manual* on the Surveillance System Software DVD.

2.5 Support for Advanced Single Camera Tracking with GV-SD200

GV-SD200 now supports the Advanced Single Camera Tracking function, which can track a moving object using only one PTZ camera.

Note: The Advanced Single Camera Tracking function can only be enabled for one GV-SD200 at a time and cannot be applied to other PTZ cameras.

Before setting up the Advanced Single Camera Tracking function, you must first enable the PTZ function.

1. Click the **Configure** button, point to **Accessories**, select **PTZ Device** and select **PTZ Device** Setup.

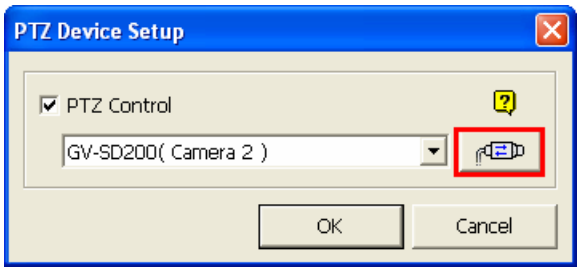

Figure 13

2. Click the  button and select **Enable Object Tracking**.

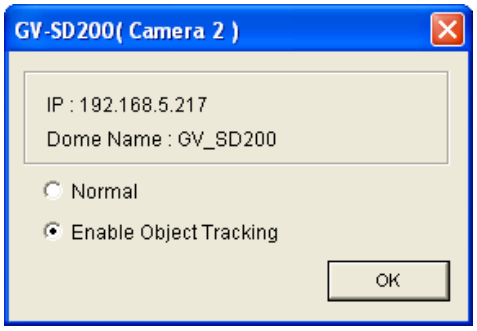

Figure 14

3. To set up the Advanced Single Camera Tracking function, click the **Configure** button, point to **Video Analysis**, select **Object Tracking Application**, and select **Object Tracking Setup**.

For details, see *Advanced Single Camera Tracking,* Chapter 3, *DVR User's Manual* on the Surveillance System Software DVD.

3. ViewLog

3.1 Idle Protection in ViewLog

You can enable the Idle Protection function in ViewLog and the system will exit ViewLog after the user remains inactive over the specified time period.

Note: The Idle Protection function in ViewLog is disabled by default.

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1. In ViewLog, click the **Setting** button.

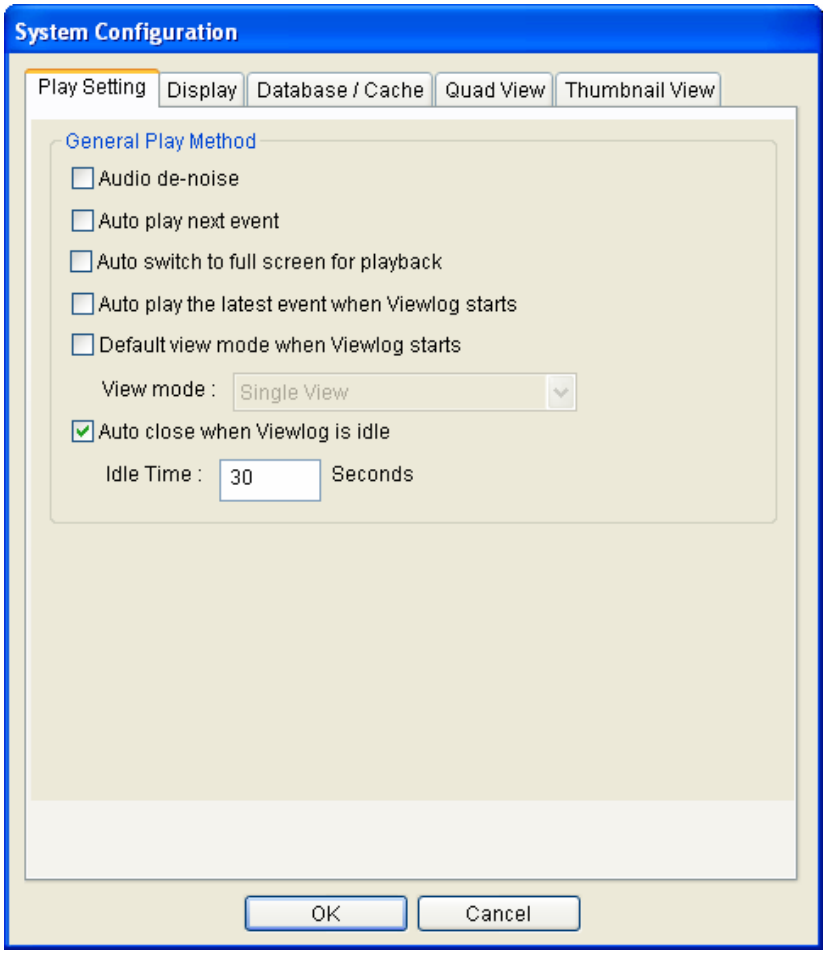

Figure 15

2. Select **Auto close when ViewLog is idle** to enable the function, and specify an **Idle Time** between 10 and 300 seconds. ViewLog will be closed when the user remains idle longer than the idle time.
3. Click **OK** to apply the settings.

3.2 Smooth Playback in ViewLog

Previously, video recorded with 30 frames per second may still appear choppy because the 30 frames are not evenly distributed during one second. To enhance smoothness in ViewLog playback, the **Smooth playback** function is added to place each frame evenly apart.

Note: When Smooth playback is enabled, ViewLog will always play 30 frames in each second regardless of the actual frame rate of the recorded video. As a result, videos with frame rate under 30 fps will appear to be fast forwarded and videos above 30 fps will appear to play back in slow motion.

To enable Smooth playback in ViewLog, click the button in the bottom-right corner and select **Smooth playback**.

Figure 16

3.3 New Maps Added for GPS Tracks Playback

In additional to the existing maps, you can now play back GPS tracks from devices in two new maps: **Google Map V3** and **OpenStreetMap**.

To access the new maps:

1. In ViewLog, click the **Tools** button and click **Select MAP API**. This dialog box appears.

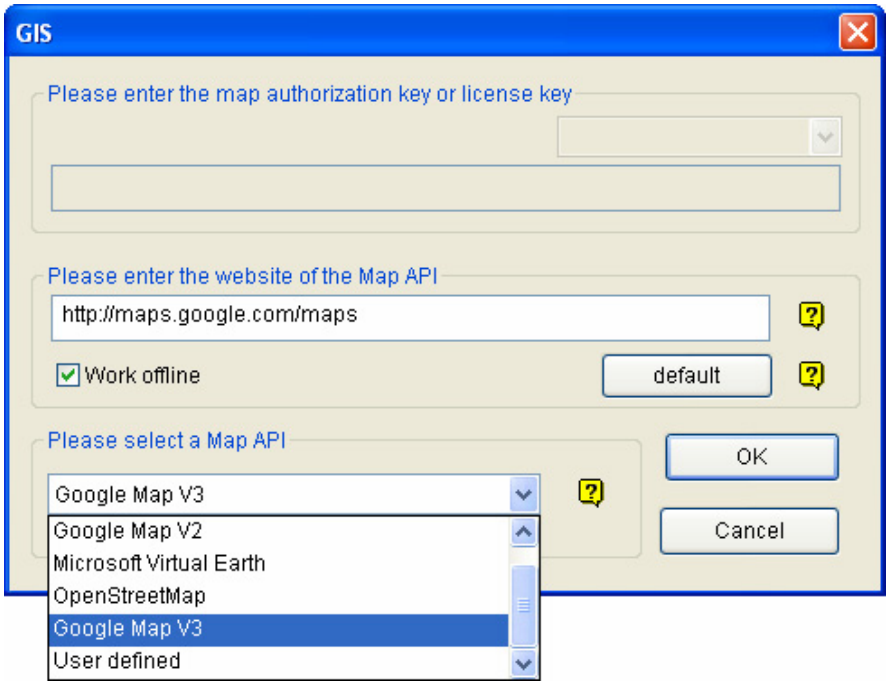

Figure 17

2. In the **Please select a Map API** drop-down list to access the two new maps, **Google Map V3** or **OpenStreetMap**.
3. Click **OK**.

For details, see *GPS Tracks Playback,* Chapter 4, *DVR User's Manual* on the Surveillance System Software DVD.

4. GeoVision Skype Video Utility

The GeoVision Skype Video Utility allows you to receive live view or text notifications through a Skype account using a PC or mobile device upon motion detection or input trigger. You will need to install Skype on the computer of the GV-System, and the notifications can be sent to other Skype accounts.

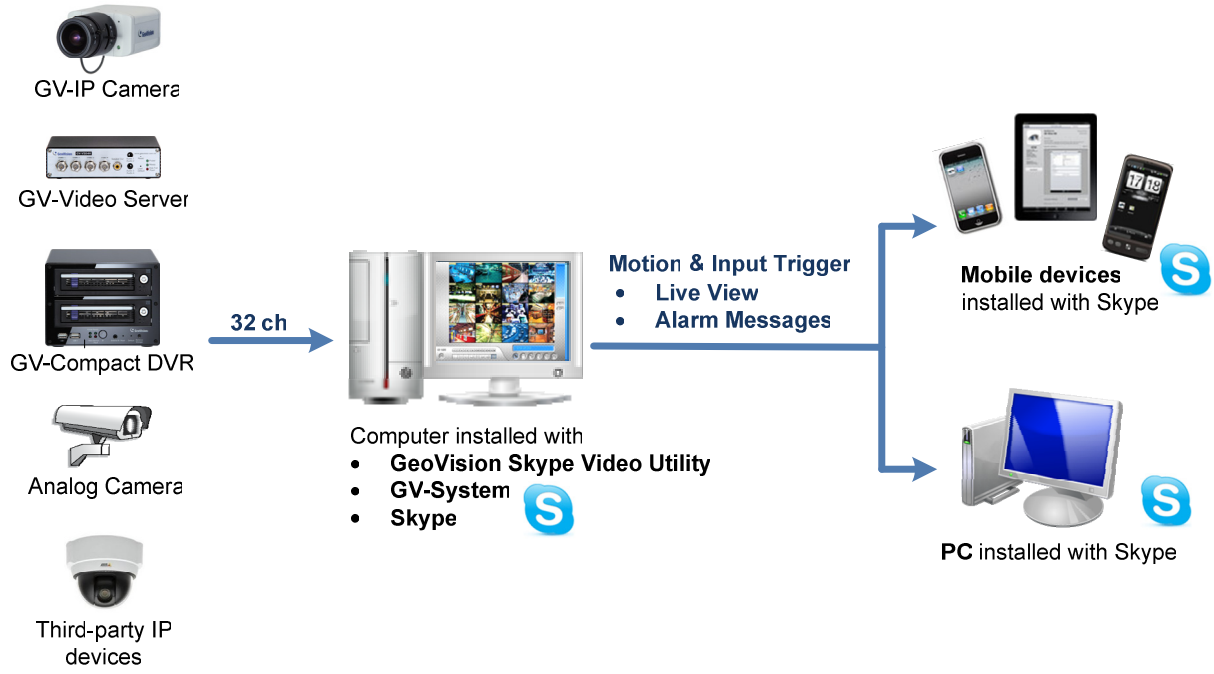

Figure 18

Note: Audio function is not supported in GV-Skype Video Utility.

4.1 Installing GV-Skype Video Utility

1. Insert the Surveillance System Software DVD to your computer. It runs automatically, and a window appears.
2. Click **Install V8.5.5.0 System**.
3. Select **GeoVision Skype Video Utility**, and follow the on-screen instructions.

Note: Before running the utility, log in to your Skype account and GV-System.

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4. Double-click the **GV-Skype Video Utility.exe** icon on the desktop. The utility begins to connect to Skype.
5. A dialog box appears on your Skype. Click **Allow access**.

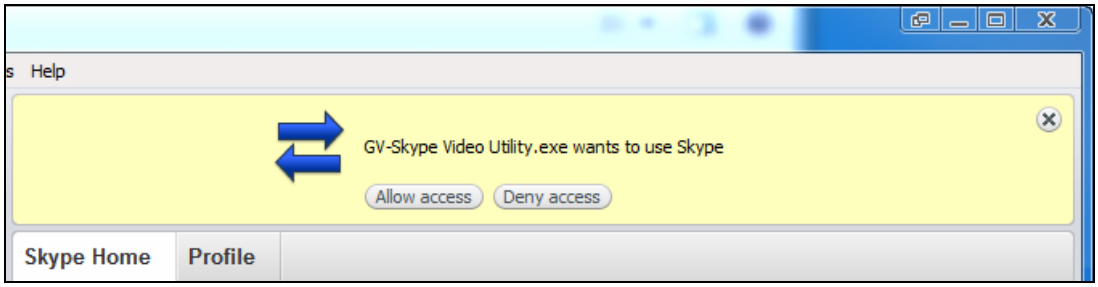

Figure 19

After connected to Skype successfully, the GV-Skype Video Utility will minimize to system tray.

4.2 Setting Up Notifications Upon Motion or I/O Trigger

1. Right-click the GV-Skype Video Utility icon 

in the system tray and click **Settings**. This dialog box appears.

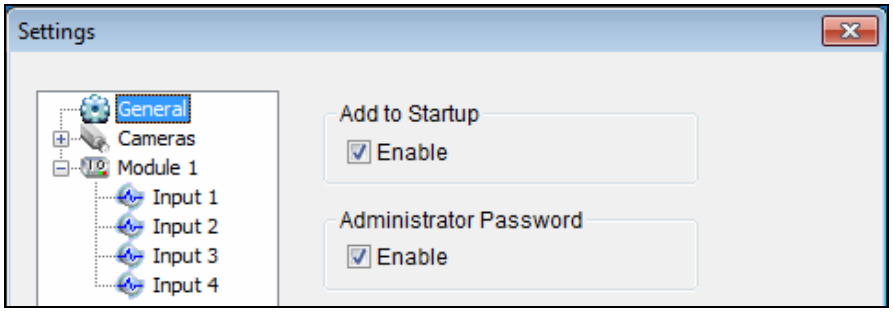

Figure 20

2. The General setting page offers the following options:

   - **Add to Startup:** Click **Enable** to automatically run GV-Skype Video Utility at windows startup.
   - **Administrator Password:** Click **Enable** to require password to log in and out of GV-Skype Video Utility.

3. To send camera live view or notification message to Skype accounts upon motion detection, expand the **Cameras** list and select a camera. This dialog box appears.

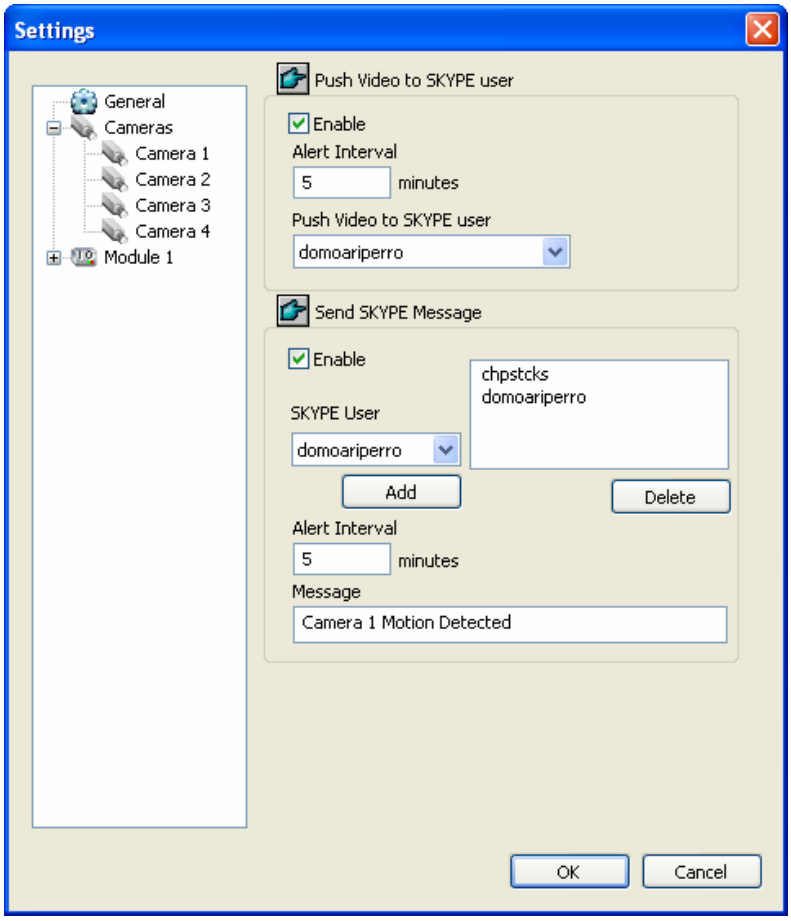

Figure 21

4. To send live view from the selected camera to a Skype account upon motion,

   a. Select **Enable** under Push Video to Skype User.

   b. Set an **Alert Interval** to specify the minimum time between each notification.

   c. Use the drop-down list to select a Skype user to send live view.

Note:

1. GV-Skype Video Utility can only send camera live view to one Skype account at a time.
2. The received camera live view will be displayed in Skype's default resolution.

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5. To send a notification message to multiple Skype accounts upon motion,
   a. Select **Enable** under Send Skype Message.
   b. Use the **Skype User** drop-down list to select the recipient of the message and click the **Add** button. Repeat for any additional recipient.
   c. Set an **Alert Interval** to specify the minimum time between each notification.
   d. Type a notification message up to 255 characters.
6. To send camera live view or notification message to Skype accounts upon input trigger, expand the **Module** list and select an input device. This dialog box appears.

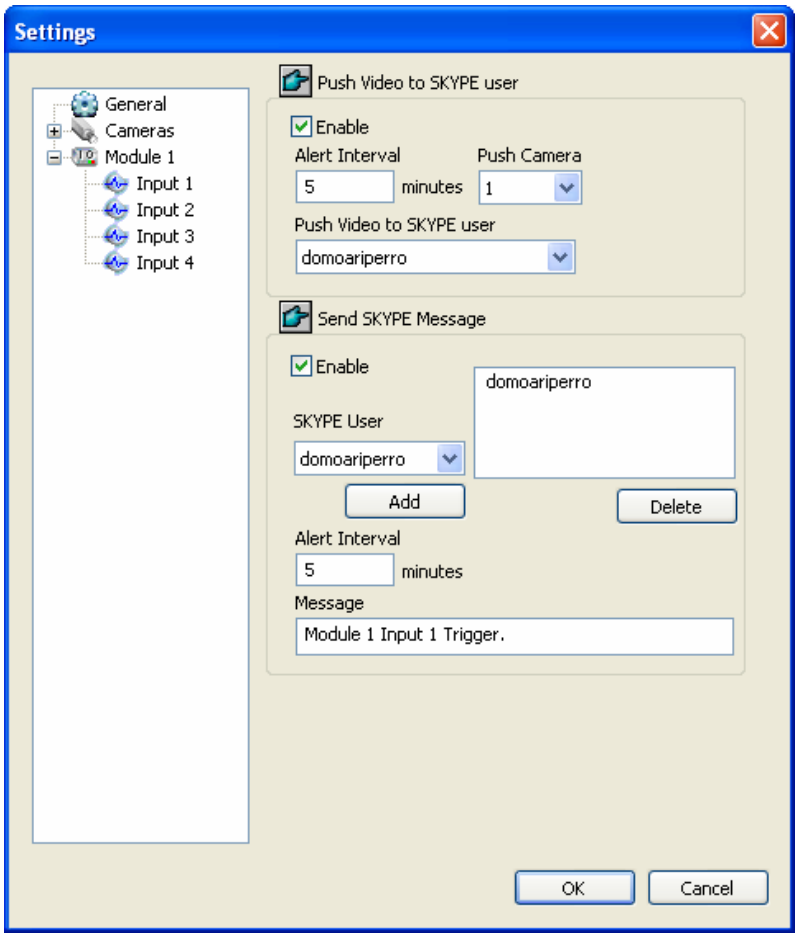

Figure 22

7. To send live view to a Skype account of a camera upon input trigger, follow step 4 and use the **Push Camera** drop-down list to select a camera for sending live view.
8. To send a notification message to multiple Skype accounts upon motion, follow step 5.
9. Click **OK** to apply the setting.

After setup is completed, the designated Skype user will see a notification message, as well as an incoming call to receive live view upon motion detection or input trigger.

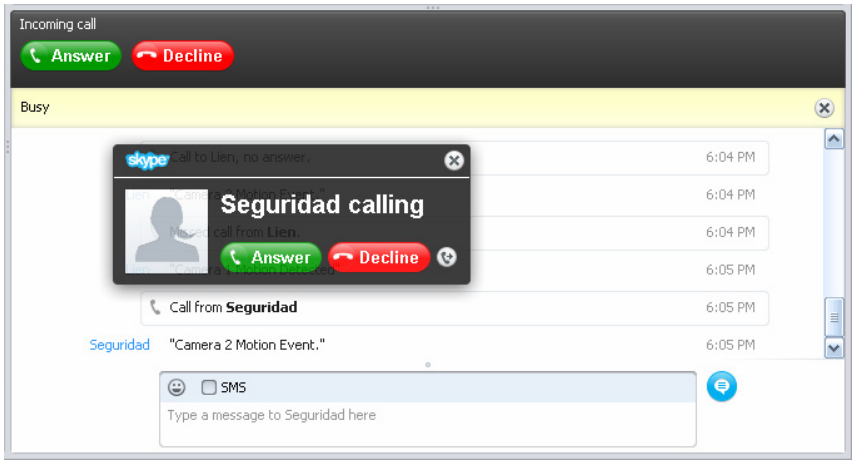

Figure 23

Click the **Answer** button to receive camera live view. When you finish watching the live view, click the red phone button to end the video call.

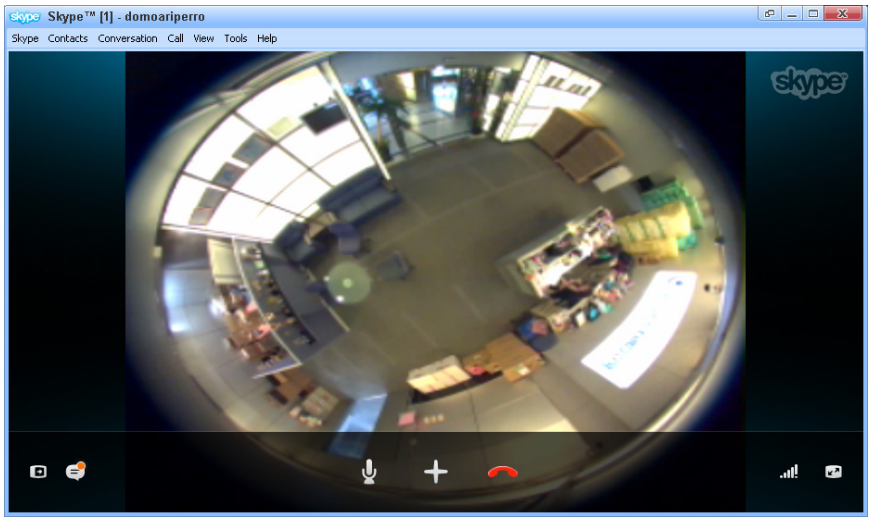

Figure 24

Note: If the incoming call is not picked up, the Skype user will see a missed call record in the call history.

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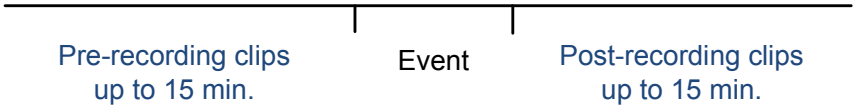
5. Center V2

5.1 Longer Video Attachment from the Subscriber

The Center V2 now can receive up to 15 minutes of pre-event recordings and post-event recordings separately from a subscriber. The longer video attachment provides the Center V2 administrator more information of what happens before and after an event is triggered.



To access this feature:

1. In the Address Book, select a subscriber and click the **Subscriber Setting** icon . The Subscriber Setting dialog box appears.
2. Select **Attachment Mode** and click **Settings**. The Record Settings dialog box appears.
3. In the Subscriber's Recorded Files section, select the desired event type, click the **Pre-Event Attachment** and/or **Post-Event Attachment** column, and select the number of clip files to be attached with a notification message.

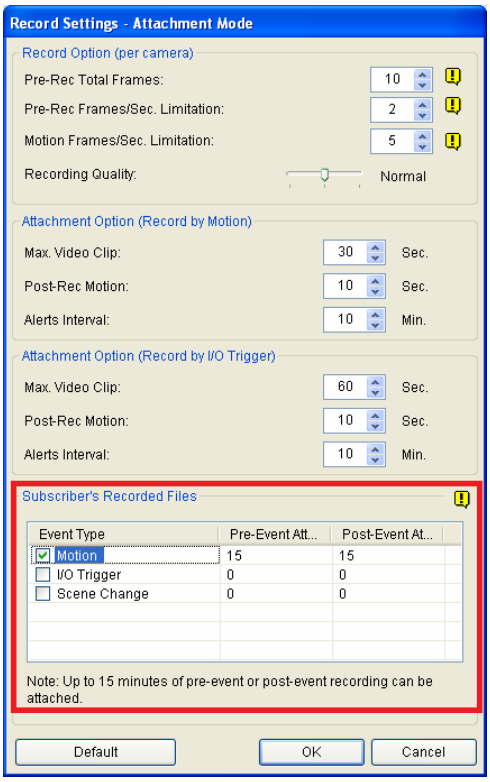
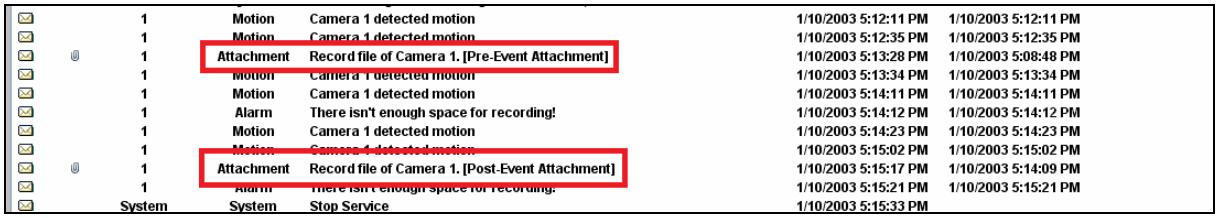


Figure 25

Note: The maximum of 15 minutes of pre-event and post-event recordings can be sent respectively. If the GV-System host records 5 minutes for every file and you set up 15 clip files for pre-event recording, you can only receive 3 clip files instead.

On the Event List, you can see the message **Record file of Camera x. [Pre-Event Attachment]** for pre-event recording and message **Record file of Camera x. [Post-Event Attachment]** for post-event recording. Double-click the message to play back the video instantly.



	1	Motion	Camera 1 detected motion	1/10/2003 5:12:11 PM	1/10/2003 5:12:11 PM
	1	Motion	Camera 1 detected motion	1/10/2003 5:12:35 PM	1/10/2003 5:12:35 PM
	1	Attachment	Record file of Camera 1. [Pre-Event Attachment]	1/10/2003 5:13:28 PM	1/10/2003 5:08:48 PM
	1	Motion	Camera 1 detected motion	1/10/2003 5:13:34 PM	1/10/2003 5:13:34 PM
	1	Motion	Camera 1 detected motion	1/10/2003 5:14:11 PM	1/10/2003 5:14:11 PM
	1	Alarm	There isn't enough space for recording!	1/10/2003 5:14:12 PM	1/10/2003 5:14:12 PM
	1	Motion	Camera 1 detected motion	1/10/2003 5:14:23 PM	1/10/2003 5:14:23 PM
	1	Motion	Camera 1 detected motion	1/10/2003 5:15:02 PM	1/10/2003 5:15:02 PM
	1	Attachment	Record file of Camera 1. [Post-Event Attachment]	1/10/2003 5:15:17 PM	1/10/2003 5:14:09 PM
	1	Alarm	There isn't enough space for recording!	1/10/2003 5:15:21 PM	1/10/2003 5:15:21 PM
	System	System	Stop Service	1/10/2003 5:15:33 PM	

Figure 26

Note: The feature is also supported by Dispatch Server. On the Dispatch Server, the administrator can also set up the maximum of 15 minutes of pre-event and post-event recordings separately for the Center V2's subscribers. The settings on the Dispatch Server will override the settings on the Center V2 servers when the Dispatch Server distributes the subscribers to different Center V2 servers.

5.2 Video Watermarking

The Center V2 now can embed digital watermarks in video streams to prevent the recording from being tampered. The watermarks are encrypted and embedded in video streams during the compression stage, protecting the video from the moment of creation. Using **Watermark Proof**, a watermark-checking program, you can verify the authenticity of the recording before presenting it in the court.

5.2.1 Activating Watermark Protection

On the main screen, click the **Preference Setting** button, select **System Configure**, click the **Record** tab and select **Use Digital Watermark Protection** to enable the function.

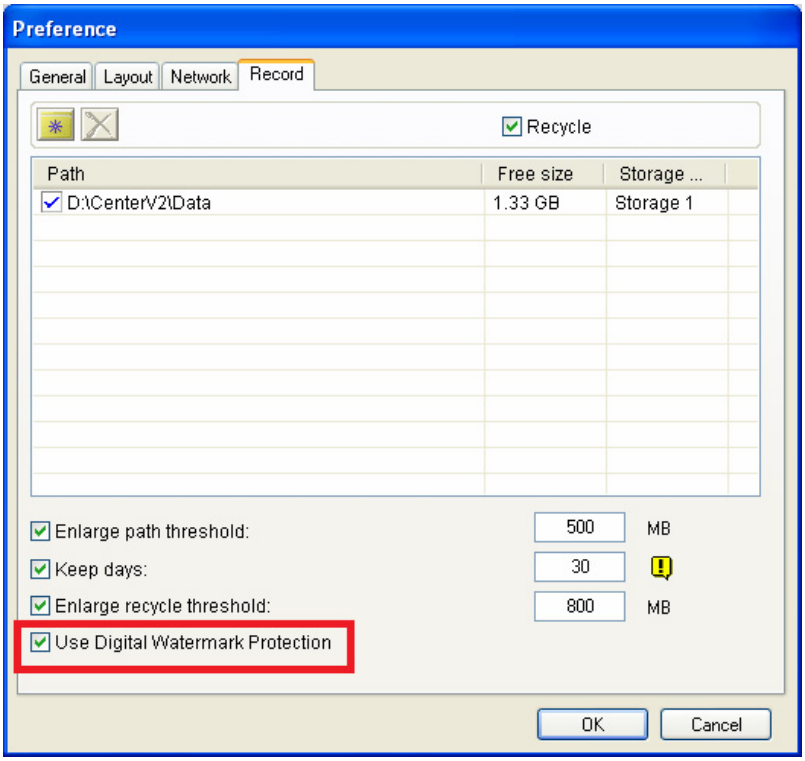


Figure 27

For details on recording, see *1.7 Recording*, and for details on storage settings, see *Recording Setting, 1.15 System Configuration,* Chapter 1, *V8.5.5.0 GV-CMS Series User's Manual* on the Surveillance System Software DVD.

5.2.2 Running Watermark Proof

1. Locate and run **WMProof.exe** in the Center V2 folder.
2. In the Watermark Proof window, click **File** from the menu bar, select **Open** and locate the recorded file (.avi). The selected file is then listed on the window. Alternatively, you can drag the file directly from the storage folder to the window.

Note: The default path of recorded files is :\\Center V2\Data\subscriber\Live

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3. If the recording is unmodified, a check mark will appear in the **Pass** column. On the contrary, if the recording is modified or does not contain watermark during recording, a check mark will appear in the **Failed** column. To play the recording, double-click the listed file on the window.

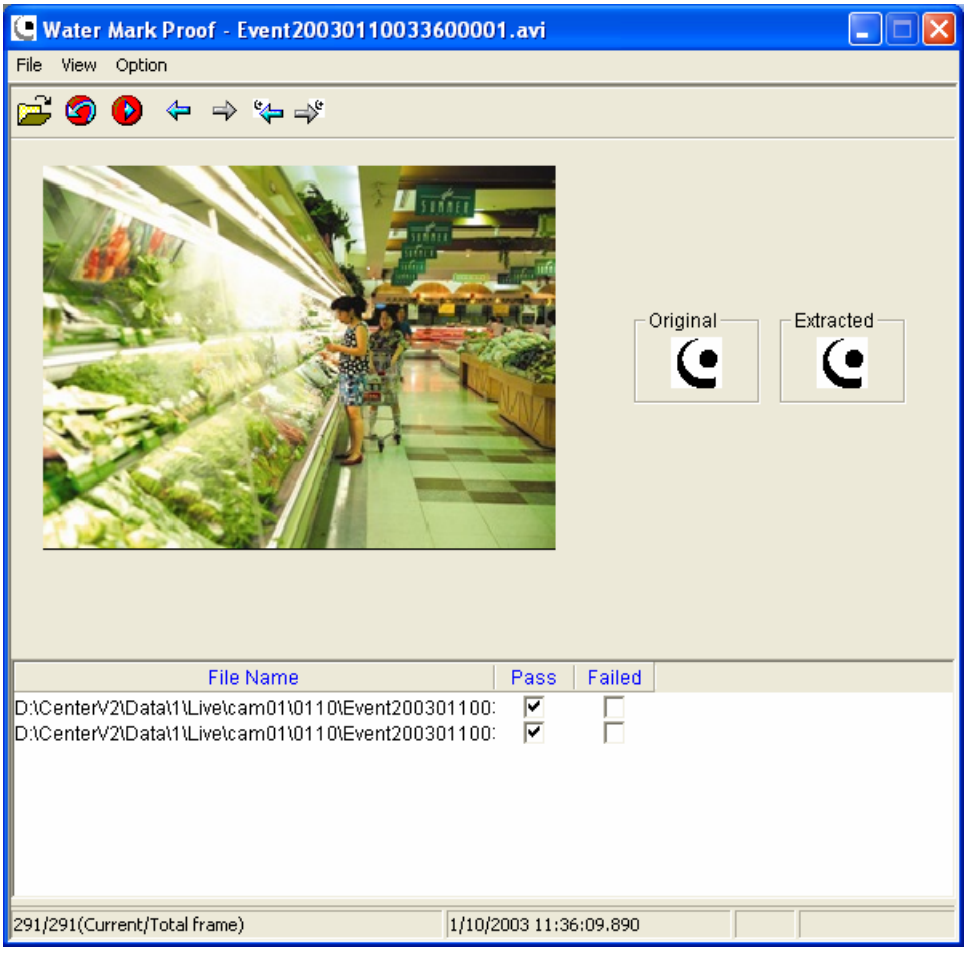

Figure 28

5.3 Displaying Event List on Another Monitor

In the Center V2 Profession version, you can monitor different types of events shown in different tabs. Now, you can even assign a particular event type to display on another monitor screen. Right-click the desired event tab, select **Display on Another Monitor** and select a monitor for immediate display.

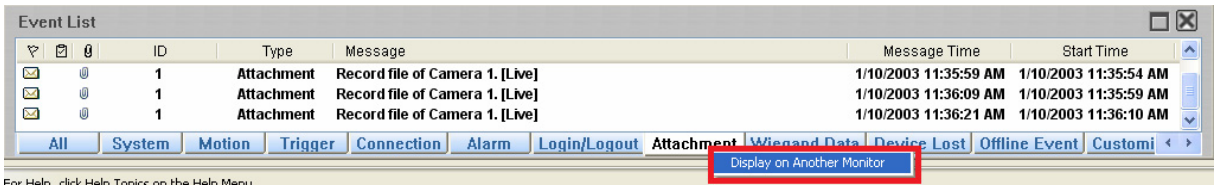

Figure 29

6. VSM

6.1 Minimum Duration for Motion Detection and Video Lost

Now you can minimize the false alert by setting up the minimum duration for **Motion Detection** and **Video Lost** events to persist before an alert is triggered. For example, the outdoor scenes are prone to flying insects. You can set up the minimal time period that a motion must persist before any alert is triggered. Or when any channel on the GV-System host is likely to display “video lost” or “connection lost”, you can set up the minimal duration before any alert is triggered. The alert action includes invoking computer alarm, activating an output device, sending e-mail and/or sending SMS.

Select the option and click the **Edit** button to type the minimum duration. The default is 3 seconds.

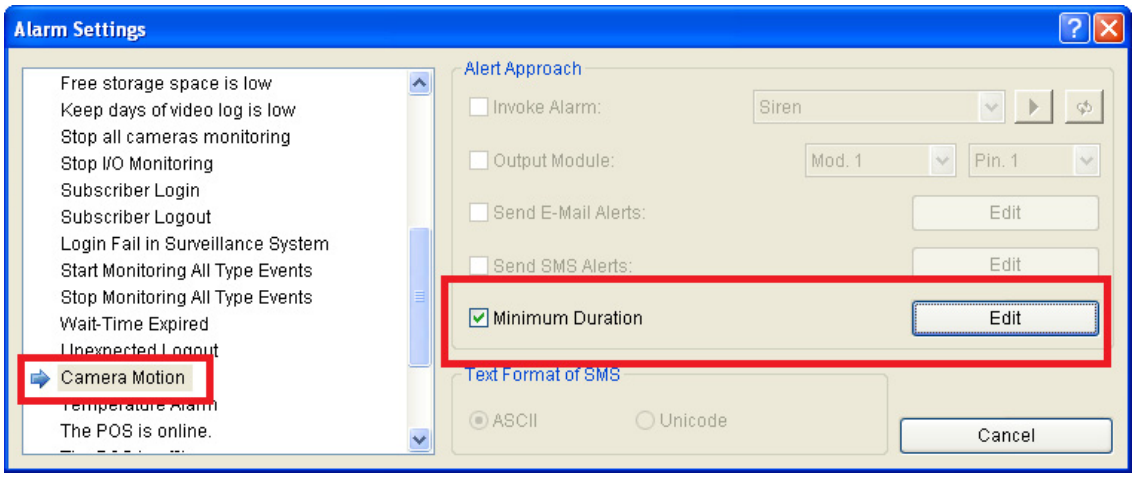

Figure 30

For details on the Alarm Settings, see *1.16 Notification Settings*, Chapter 1, *V8.5.5.0 GV-CMS Series User's Manual* on the Surveillance System Software DVD.

6.2 Counter Alarm

When the GV-System subscriber applies the Object Counting function, the VSM operator now can be notified when the count exceeds your defined number. Select **Counter Alarm** and specify a count result (In number – Out number).

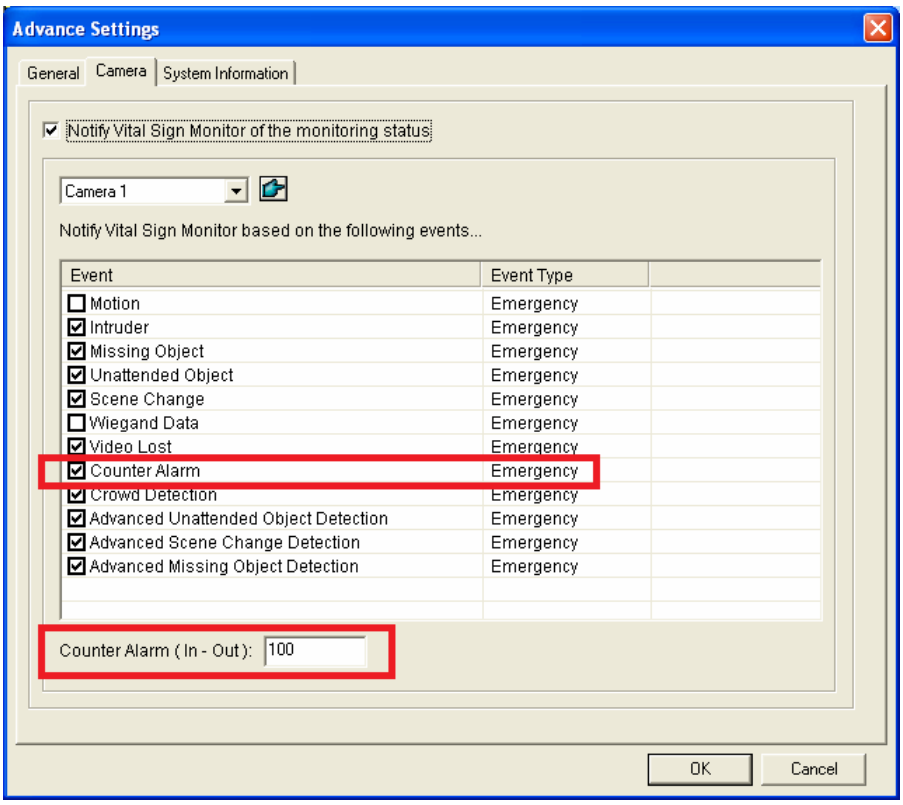

Figure 31

The VSM will be notified when the count result exceeds the defined number.

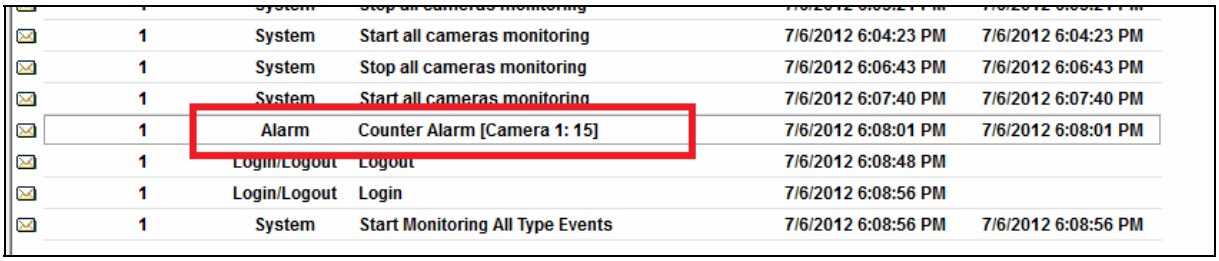

Figure 32

For details on the Advanced Settings, see *3.6.1 Advanced Setting for Subscription,* Chapter 3, *V8.5.5.0 GV-CMS Series User's Manual* on the Surveillance System Software DVD.