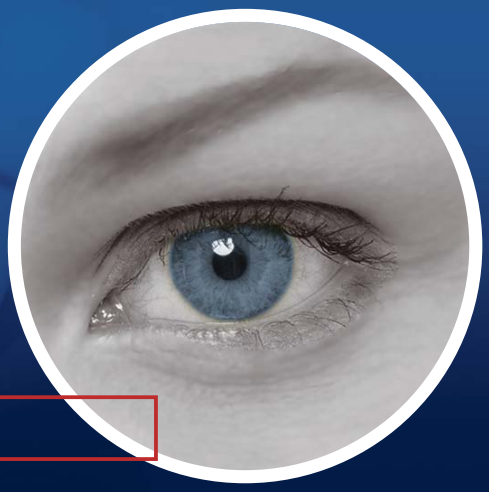
GeoVision inc
The Vision of Security

Surveillance System

New Feature Guide V8.5.6.0



The Vision of Security

FGV8560-A

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Feature Guide for V8.5.6 GeoVision Surveillance System

This Guide provides an overview of key features in V8.5.6 GV-System. It also includes information about how the features differ from similar features in earlier versions.

Cards Supported

V8.5.6 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-600B
- GV-650A, GV-650B
- GV-800A, GV-800B
- GV-1120, GV-1120A, GV-1120B
- GV-1240, GV-1240A, GV-1240B
- GV-1480, GV-1480A, GV-1480B
- 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 Support for New IP Devices

The following GeoVision and third-party IP devices will now be supported in V8.5.6.

- **Audio:** A "O" 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 "O" 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
MESSOA	NCB855PRO *	O	JPEG / MPEG-4 / H.264	N/A
Sony	SNC-EP521	O	JPEG / MPEG-4 / H.264	O
	SNC-ER580	O	JPEG / MPEG-4 / H.264	O
	SNC-ZR550 *	O	JPEG / MPEG-4 / H.264	O
	SNC-ZB550 *	N/A	JPEG / MPEG-4 / H.264	N/A

Note: IP devices marked with * were tested using ONVIF connection.

1.2 Support for AVP Functions without USB Dongle

Starting from V8.5.6, an AVP dongle is no longer required to access advanced video analysis functions. Previously, an AVP dongle is required to access the following functions:

- Digital Object Tracking
- Face Count
- Panorama View
- Video Defogging
- Video Stabilization
- Crowd Detection
- Advanced Scene Change Detection
- Advanced Unattended Object Detection
- Advanced Missing Object Detection

2. Main System

2.1 Enhanced Fisheye Dewarping

In V8.5.6, GPU (Graphics Processing Unit) dewarping is added to enhance fisheye dewarping. With GPU dewarping, dragging and dropping dewarped fisheye view becomes significantly smoother. Also, areas near the edges of the fisheye view are now less distorted.

V8.5.5 CPU Dewarping

V8.5.6 GPU Dewarping

In addition, when fisheye dewarping is processed by GPU instead of CPU, the total frame rate supported for fisheye views is increased due to lower CPU loading. As shown in the table below, the total frame rate supported in V8.5.6 for fisheye views is higher than that in V8.5.5. When the GV-System is using an additional graphics card, its performance of GPU dewarping even surpasses that by an onboard graphics card.

Total FPS Supported by a GV-System:

Fisheye View Modes	V8.5.5 CPU Dewarping	V8.5.6 GPU Dewarping	
		Onboard Graphics Card	Additional Graphics Card
360 Degree Mode	50 fps	70 fps	100 fps
Quad View Mode	60 fps	70 fps	100 fps
180 Degree Mode	40 fps	60 fps	100 fps
Single View Mode	60 fps	70 fps	100 fps

Note:

1. The data above is obtained using GV-FE520 / 521.
2. GPU dewarping is only supported on PCs that are compatible with DirectX 10.0.
3. When multiple monitors are connected to the GV-System, set the monitor with a better graphics card as the main screen for the best fisheye dewarping performance.

By default, GPU dewarping is already enabled in PCs that support this function. To disable or re-enable the function, follow the steps below.

1. Right-click the fisheye live view, select the camera and click **Geo Fisheye**.
2. Right-click the fisheye live view again, select **Fisheye Option** and select **Settings**. This dialog box appears.

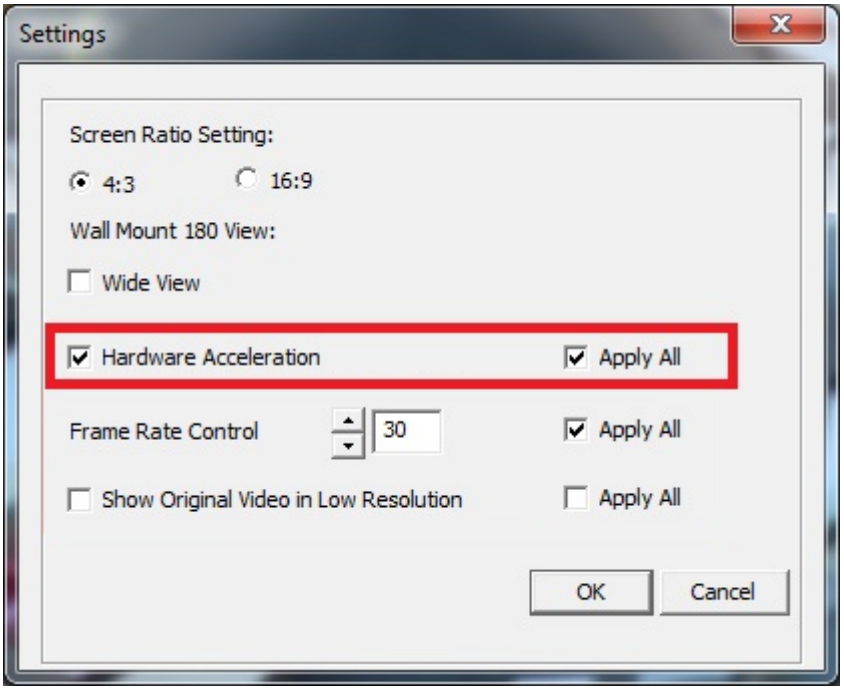

Figure 2-1

3. Select or clear the selection for **Hardware Acceleration**.
4. Click **OK** to apply the setting.

2.2 New Functions in GV-Skype Video Utility

Two functions are added to GV-Skype Video Utility:

- Receiving Quad View upon motion and / or I/O trigger
- Receiving live view upon request.

Setting Up Quad View

In addition to receiving up to the 32 channels of single live view, you can create up to 8 Quad Views in GV-Skype Video Utility.

1. Right-click the GV-Skype Video Utility icon in the system tray and click **Settings**.
2. Click **Quad View** and select a quad view. This dialog box appears.

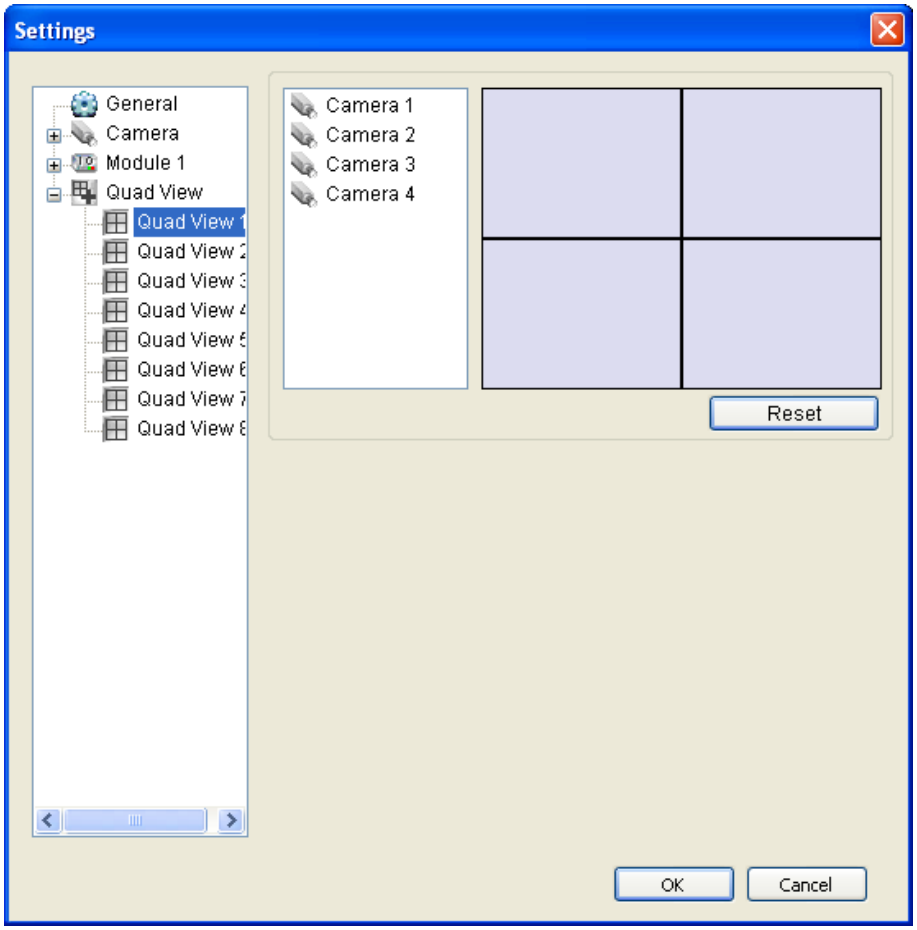

Figure 2-2

3. Drag and drop up to four cameras to the quad view on the right.
4. Click **OK**.

To receive Quad View upon I/O trigger and / or motion detection, follow the steps below.

1. Right-click the GV-Skype Video Utility icon in the system tray and click **Settings**.
2. For motion detection, select a camera and for I/O trigger select an input.
3. Select **Enable**.
4. Modify the **Alert Interval** between each notification if needed and set a Skype user to be the recipient
5. Under **Push Camera**, select the **Quad View** you set up.

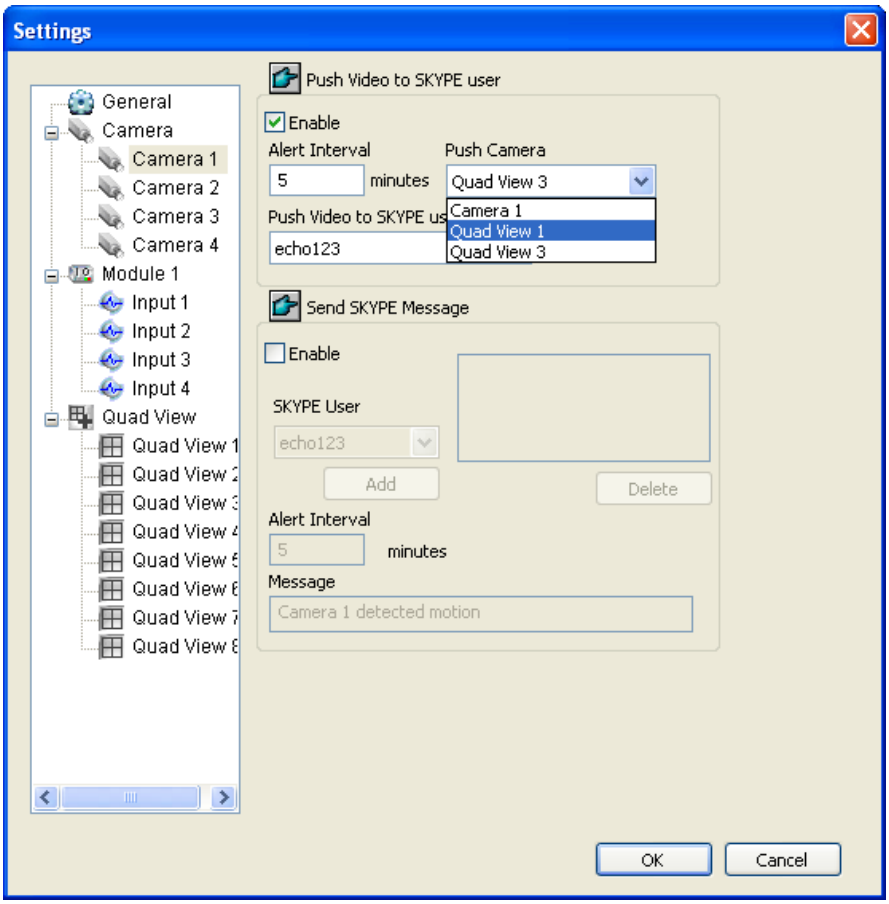

Figure 2-3

6. Click **OK**.

Receiving Live View

There are now two ways to receive live view. Previously, GV-Skype Video Utility can automatically send live view or text message upon motion detection or input trigger. Now, a Skype user on a remote PC or a mobile device can also request the Skype account of the GV-Skype Video Utility to send live view.

To request live view, the Skype user must send a message to the Skype account of the GV-Skype Video Utility:

1. Log in Skype and select the Skype account of the GV-Skype Video Utility from Contact.
2. Click the **IM** button and type **Cam 1** to view the channel 1 or type other channel numbers. To view single channel live view, type channels 1 to 32. To view one of the 8 quad views, use channels 33 to 40.

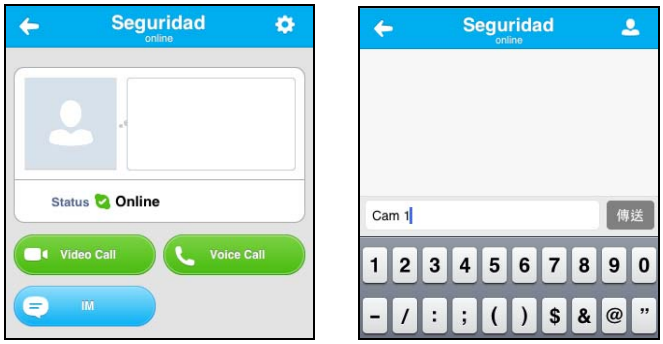

Figure 2-4

3. Click **Send** and an incoming call will appear momentarily.

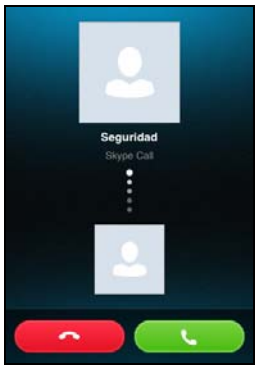

Figure 2-5

4. Click the green **Answer** button to watch the live view.

Figure 2-6

2.3 Minimum Duration for Advanced Motion Detection

In advanced motion detection, you can now set minimum time duration for motions to be counted as motion detection.

1. Click the **Configure** button, select **Video Analysis**, and select **Advanced Motion Detection**. This dialog box appears.

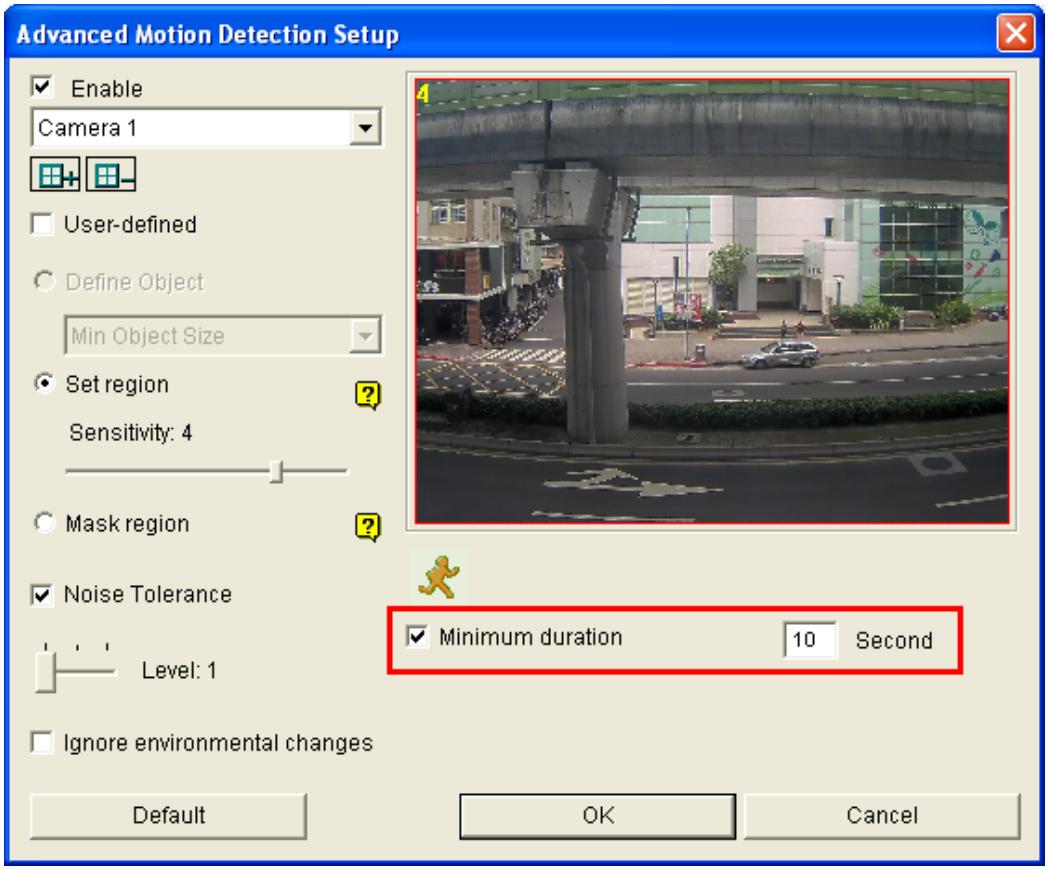

Figure 2-7

2. Select **Minimum Duration** and specify the minimum number of seconds motions must exceed to be counted as motion detection.
3. Click **OK** to apply the settings.

For more information, see *Advanced Motion Detection*, Chapter 3, *GV-DVR User's Manual* on the Software DVD.

2.4 Support for 32 kHz / 16 bit Audio Codec

GV-NVR System and the following GV-Video Capture Cards now support 32 kHz / 16 bit audio codec for better audio quality.

- GV-5016
- GV-4008 / GV-4008A
- GV-900A
- GV-800B / 650B / 600B
- GV-1480A / 1240A / 1120A Combo A Card
- GV-1480B / 1240B / 1120B Combo B Card

The default audio settings are **16 kHz / 16 bit** for the GV-Video Capture Cards above and **16 kHz / 16 bit** for GV-NVR System. To set the audio codec to 32 kHz / 16 bit, follow the steps below:

1. Click the **Configure** button, select **A / V Setting**, and select **Audio Settings**.

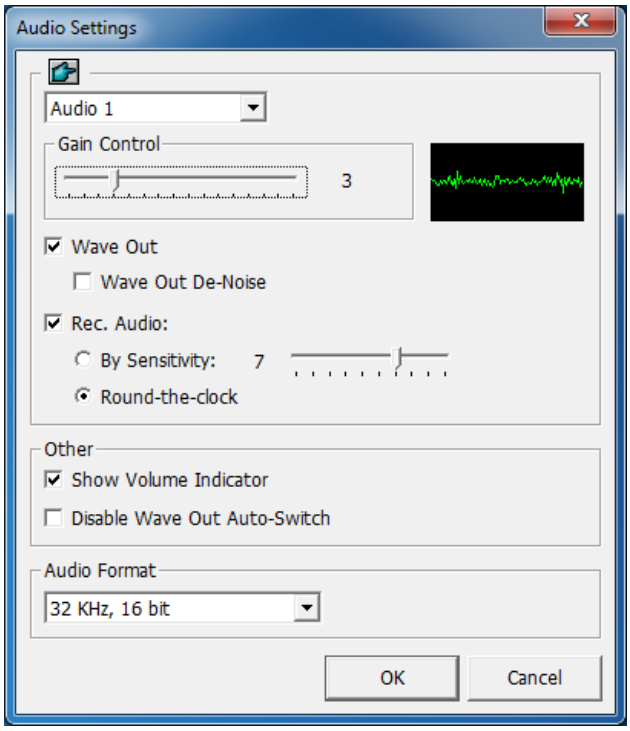

Figure 2-8

2. Under Audio Format, select **32 KHz, 16 bit**.
3. Click **OK** to apply the setting.

2.5 Support for PAP and PIP Function in Panorama View

You can now create one or multiple close-up views on a panorama View using the Picture-and-Picture (PAP) function and Picture-in-Picture (PIP) function.

1. To access a panorama view, click the **ViewLog** button, point to **Live Panorama View** and select a panorama view.
2. Right-click the panorama view and select **PIP View** or **PAP View**.

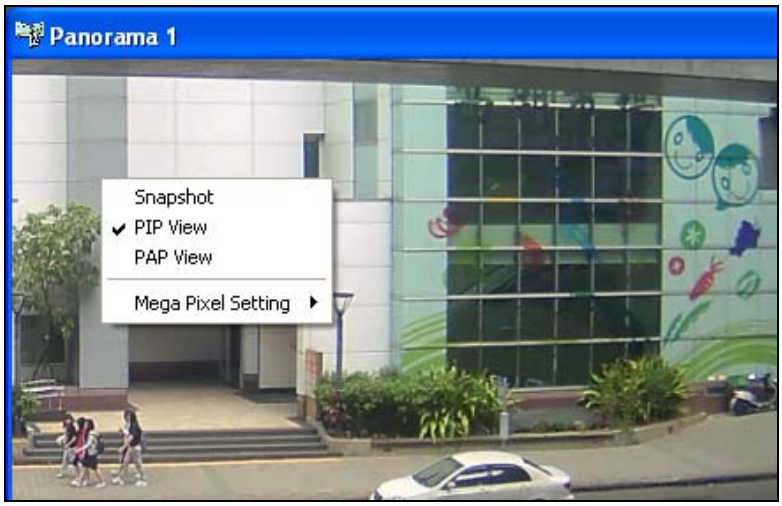

Figure 2-9

- **PIP View:** Move the navigation box around to have a close-up view of the selected area.
- **PAP View:** Specify up to 7 close-up views by drawing navigation boxes on the panorama view.

The PIP and PAP functions are also supported when playing back panorama view with ViewLog.

For more details on PIP and PAP, refer to *Picture-in-Picture View* and *Picture-and-Picture View*, Chapter 1, *GV-DVR User's Manual* on the Software DVD.

3. WebCam Server

3.1 New Features for Non-IE Browsers

The latest non-IE browsers (Chrome, Safari, Firefox) support the following new features:

1. Live view display

Three types of display are available – **MPEG4 Encoder Viewer**, **Motion JPEG** and **JPEG Image Viewer**. You can use MPEG4 Encoder Viewer and JPEG Imager Viewer display live view at CIF. Now you can display live view at VGA using the Motion JPEG mode. For detail, see *8.3 Single View Viewer* and *8.8 JPEG Image Viewer*, *GV-DVR User's Manual* on the Software DVD.

2. PTZ Control

You can move the camera live view, adjust its focus and bring the live view to its home position.

3. Event List Query and Play Back

You can query for events and play back recordings. For detail, see *8.11 Event List Query*, *GV-DVR User's Manual* on the Software DVD.

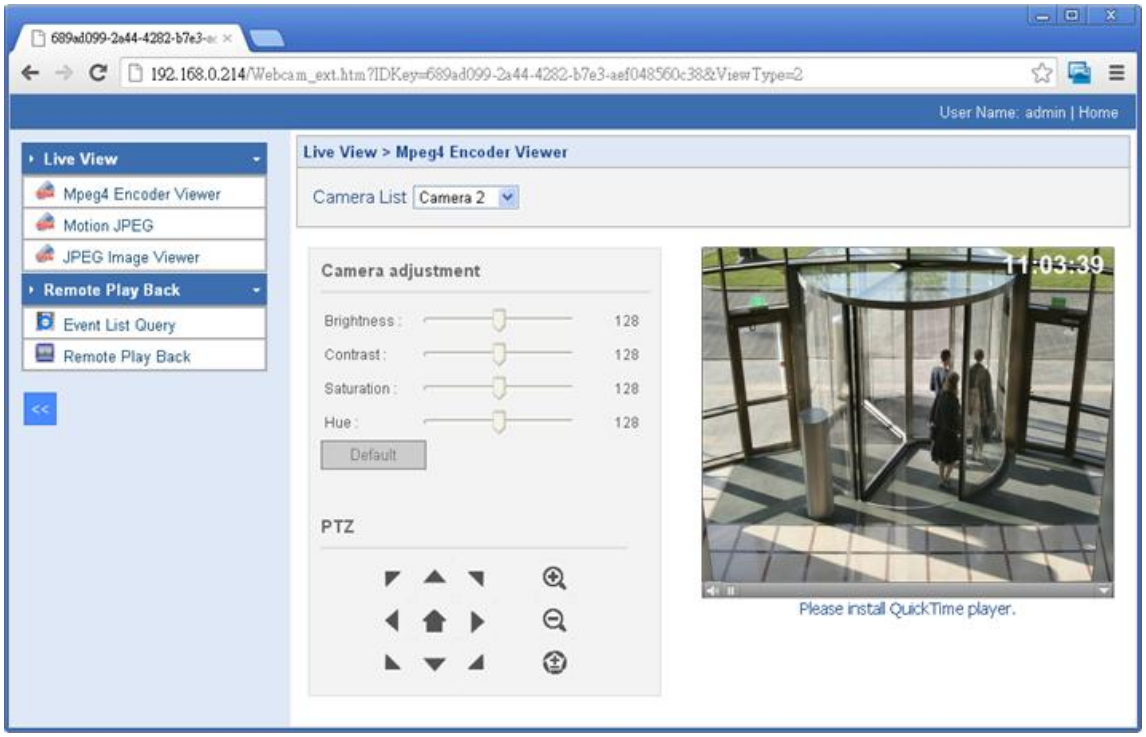

Figure 3-1

Before you start, make sure to:

1. Activate the WebCam server at the GV-System.
   - For live streaming of **Mpeg4 Encoder Viewer** on the non-IE browser, you need to enable **3GPP** settings on the WebCam server.
   - For continuous snapshot view of **Motion JPEG** view on the non-IE browser, you just need to enable the WebCam server.
   - For snapshot view of **JPEG Image Viewer** on the non-IE browser, you need to enable **JPEG** settings on the WebCam server.
2. Log in the WebCam server using Chrome, Safari or Firefox.

For detailed steps of the above settings, see *8.1 Remote Viewing Using a Web Browser*, *GV-DVR User's Manual* on the Software DVD.

3.2 Support for Browsers on Smart Phones

Using the browser on your smart phone, you can now watch live view, control PTZ live views, and play back recordings from a GV-System. By connecting to the WebCam server, no extra application is required.

Note:

1. Make sure the 3GPP function is enabled at the WebCam server.
2. PTZ control is only available for supported PTZ cameras. For the support list, see *Appendix B*, *GV-DVR User's Manual* on the Software DVD.
3. The playback function is only supported by Android devices.

In the following steps, we use the Android smart phone as an example to log in the GV-System:

1. Open the browser on your Android device and type the IP address of the GV-System to log in.

Figure 3-2

2. Click **Login**. The cameras on the GV-System appear.

Figure 3-3

3. To watch live view, tap **Live View** on the top, tap the **H.264** option for **Streaming Type** and then tap a **video** icon . The device connects to the live view shortly.

4. To access the PTZ functions, tap **Live View** on the top and then tap the **JPEG** option for **Streaming Type**. This page appears. You can control the live view with the direction arrows, zoom in/out and home position buttons.

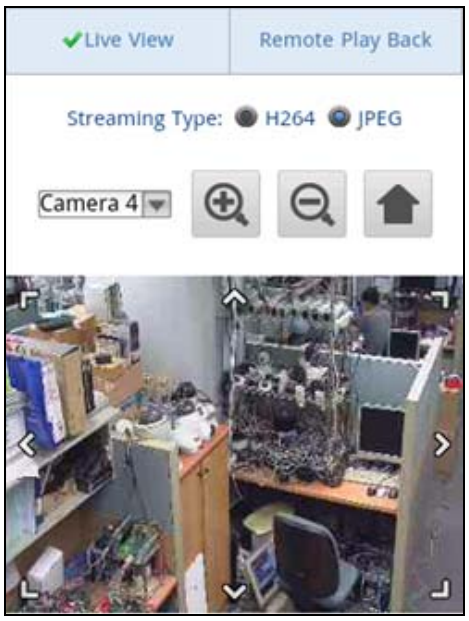

Figure 3-4

5. To play back, tap **Remote Play Back**. This page appears. Search recordings by defining the camera, date and start time. If the video is recorded on a Daylight Saving day, select **Yes** for **DST Rollback**.

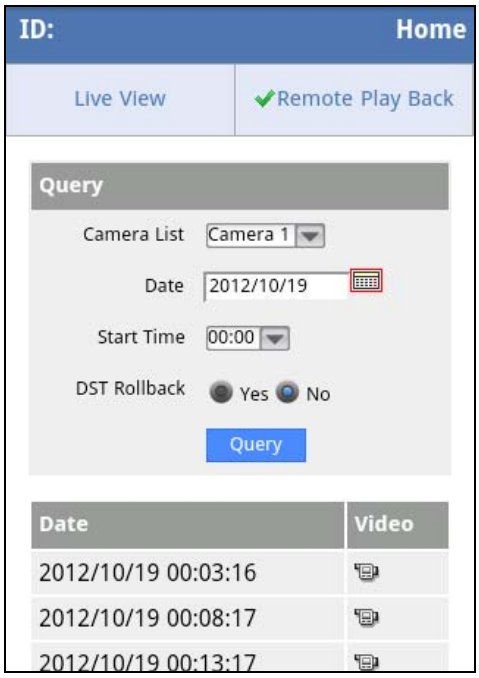

Figure 3-5

6. The matched results are shown. Click the **video** icon  for instant playback.

3.3 Displaying Full-Screen Live View

Using the IE browser, you can now display up to 10 full-screen channels with multiple monitors installed.

Note: The full-screen display closes at the designed monitor if its Web interface window is minimized.

To access this feature:

1. Install at least two monitors to a server and log in the WebCam server. For detail, see *8.1 Remote Viewing Using a Web Browser*, *GV-DVR User's Manual* on the Software DVD. The single live view of the GV-System appears.

Figure 3-6

2. Right-click on the single view and select **Full Screen**. This dialog box appears.

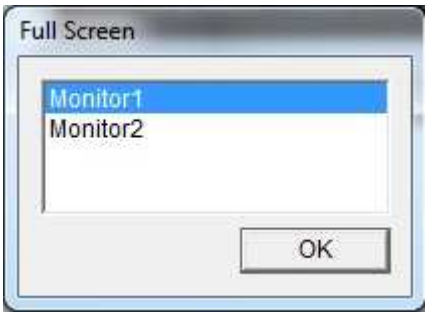

Figure 3-7

3. Select a monitor and click **OK**. The live view immediately appears full-screen on the designated monitor.

4. Center V2

4.1 Scheduling Notifications from Subscribers

As a subscriber of Center V2 server, the GV-System can be scheduled to only send notifications (text notifications and recording) on events that occur during specified time periods. You can customize up to 4 time periods and set up special days.

To set up the schedule:

1. On the GV-System, select the **Network** button and select **Connect to Center V2**. This dialog box appears.

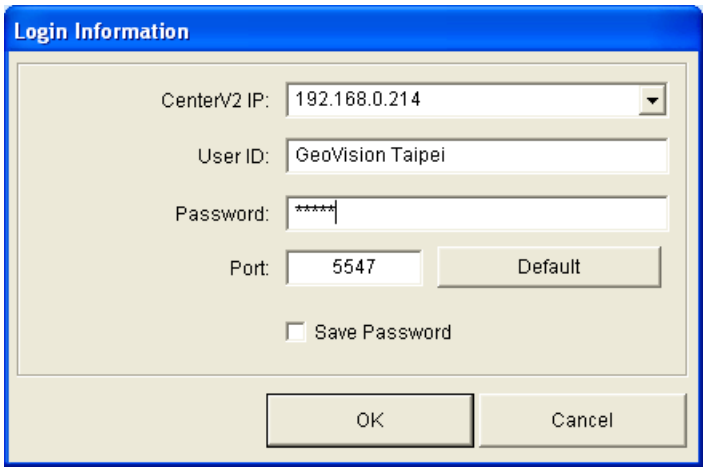

Figure 4-1

2. Type the IP address of the Center V2 server and a User ID and password established at the server. Only modify the default port value if necessary.
3. Click **OK**. This dialog box appears.

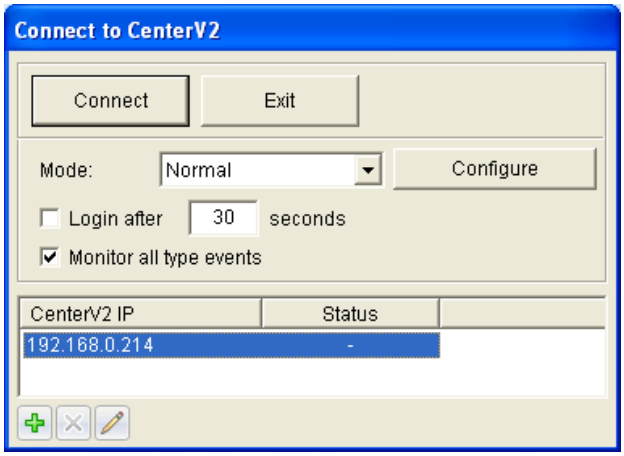

Figure 4-2

4. Unselect the **Monitor all type events** option to allow for schedule setting.
5. On the same dialog box, click **Configure** and select **Advanced Settings**. The Advanced Settings dialog box appears.
6. Specify the time periods.
   A. In the Advanced Settings dialog box, select the **I/O Device** tab. This dialog box appears.

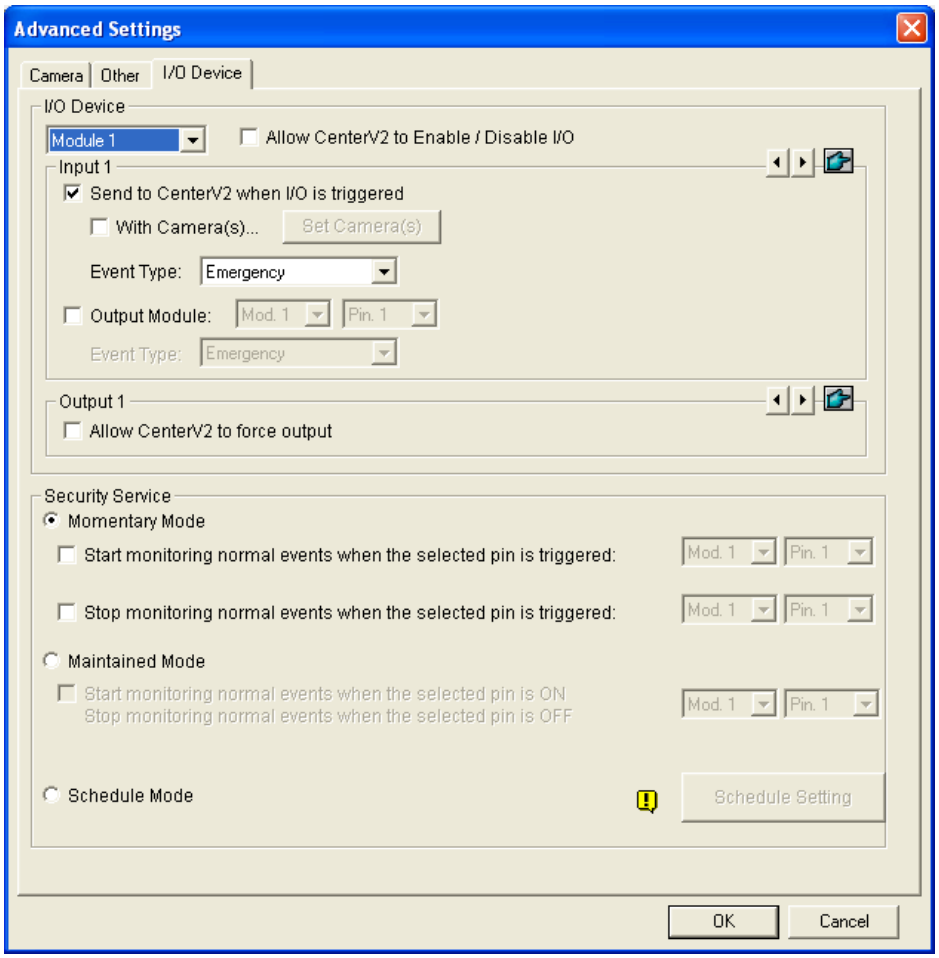

Figure 4-3

Note: The **I/O Device** tab is only available when the GV-System detects at least one I/O device.

B. Select **Schedule Mode** and click **Schedule Setting**. This dialog box appears.

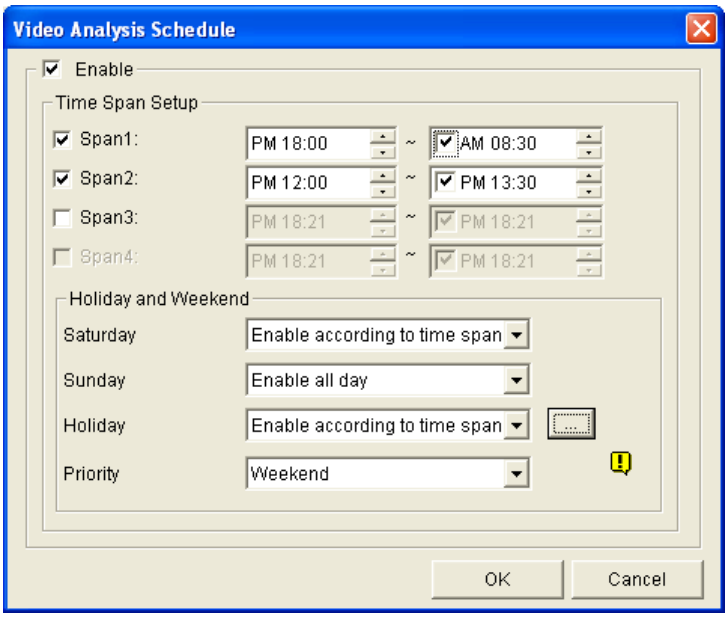

Figure 4-4

C. Select **Enable** to start configuring.

D. To customize a time period, select a **Span** and specify the time period. You can set up to 4 time periods.

E. To set up Saturdays and/or Sundays, select **Enable according to time span**, **Enable all day** or **Disable** in the **Saturday** and/or **Sunday** field.

F. To set up for specific days, click the button at the end of the **Holiday** field to add the dates and select **Enable according to time span**, **Enable all day** or **Disable**.

G. Click **OK** to save the settings.

7. Customize the communication modes for the cameras.

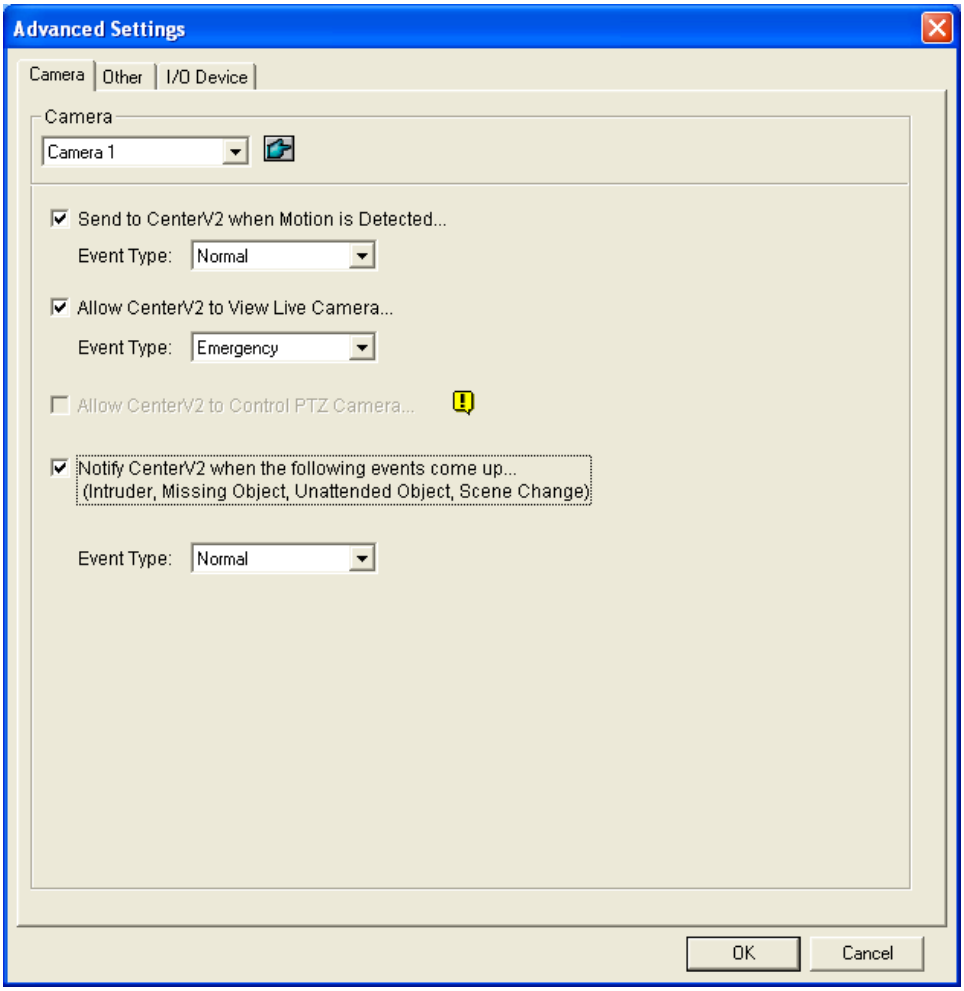

Figure 4-5

A. In the Advanced Settings dialog box, select the **Camera** tab.

B. For different settings among the cameras, select a camera number from the **Camera** drop-down list.

C. To send video and notification messages only when motion and/or Video Analytics events (including Intruder, Missing Object, Unattended Object and Scene Change events) occurred during the specified periods, select the corresponding option and select **Normal** for the Event Type.

8. Click **OK**.

9. Connect the GV-System to Center V2.

Note: Keep the event mode as **Emergency** if you do not want to apply the schedule for video recording and notifications.

4.2 Recording Live View for Video Analytics Events

Not only can Center V2 receive text notifications when Video Analytics events (including Intruder, Missing Object, Unattended Object, Scene Change, Crowd Detection, Advanced Missing Object, Advanced Unattended Object and Advanced Scene Change) occur, it can now record live videos and also record for the specified duration. By default, this function is enabled and the record duration is **30** seconds.

To enable this function:

1. Follow steps 1, 2 and 4 in *4.1 Scheduling Notifications from Subscribers* to access the Advanced Settings dialog box on GV-System.
2. To send text notifications and live videos of Video Analytics events, select the **Notify Center V2 when the following events come up… (Intruder, Missing Object, Unattended Object, Scene Change)** option.

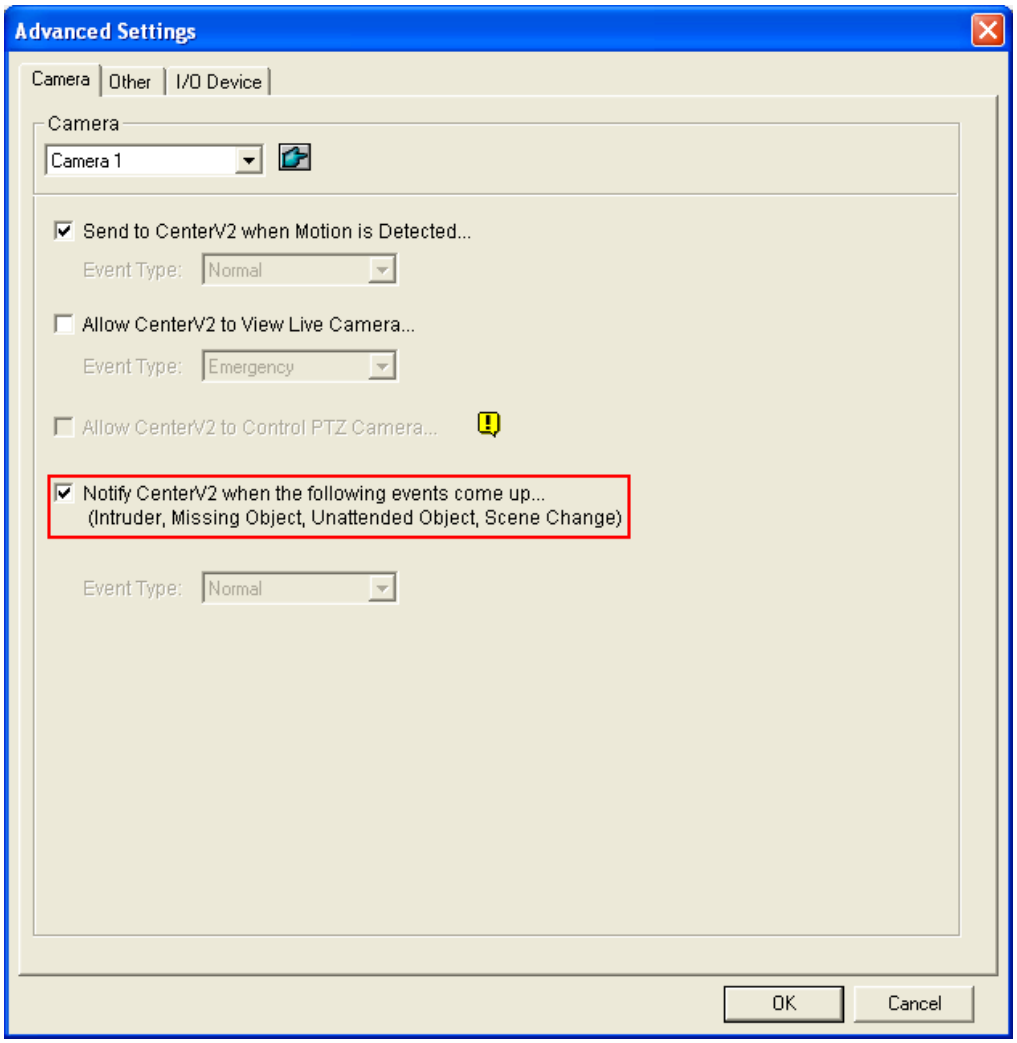

Figure 4-6

3. Click **OK** to save the settings.
4. Connect the GV-System to Center V2.
5. To change the default recording length, on the Center V2 main window, click the **Preference Settings** button and select **System Configuration**. This dialog box appears.

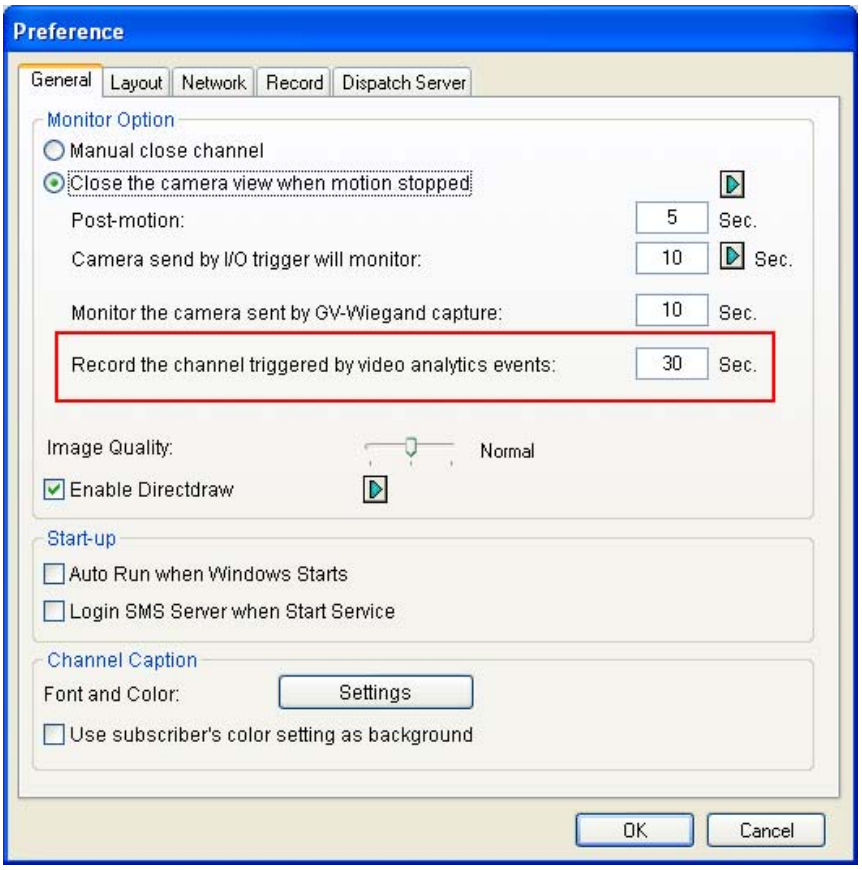

Figure 4-7

6. Modify the **Record the channel triggered by video analytics events** field. The valid length is from **3** to **600** seconds.
7. Click **OK**. This change applies immediately.

4.3 Setting Up a Time Threshold for Connection Lost Notification

The GV-System may lose connection with its cameras under busy and unstable network environments. In this case, this brief connection lost may not require the attention of the Center V2 operators. To reduce the number of such Connection Lost notifications being sent to the Center V2 server, set up a duration which the Connection Lost event must exceed to notify the Center V2 server.

To access this feature:

1. On the Center V2 main window, click the **Preference Settings** button and select **Notification**. This dialog box appears.

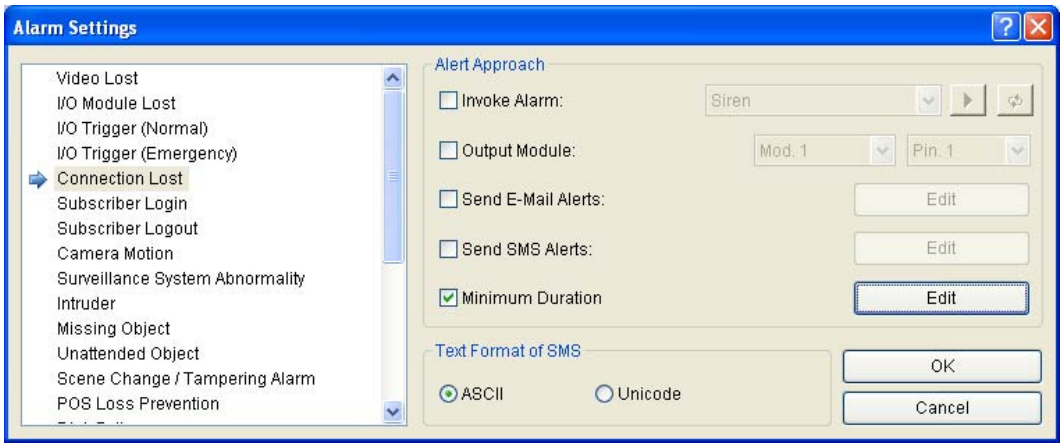

Figure 4-8

2. Select **Connection Lost** from the left column, enable the **Minimum Duration** option and click **Edit**. This dialog box appears.

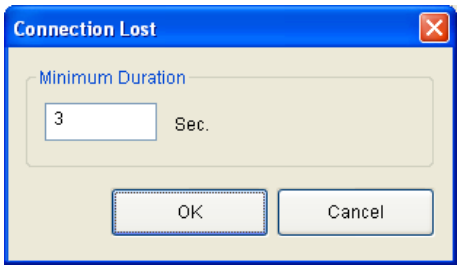

Figure 4-9

3. Type the minimum duration for the Connection Lost to persist before notifying the Center V2 server. The valid range is **1** to **3600** seconds. The default is **3** seconds.
4. Click **OK**. This setting takes effect immediately.

5. VSM

5.1 Scheduling Notifications from Subscribers

As a subscriber of VSM server, the GV-System can be scheduled to only send notifications (texts only) on events that occur during specified time periods. You can customize up to 4 time periods and add special days.

To set up the schedule:

1. On the GV-System, select the **Network** button and select **Connect to VSM**. This dialog box appears.

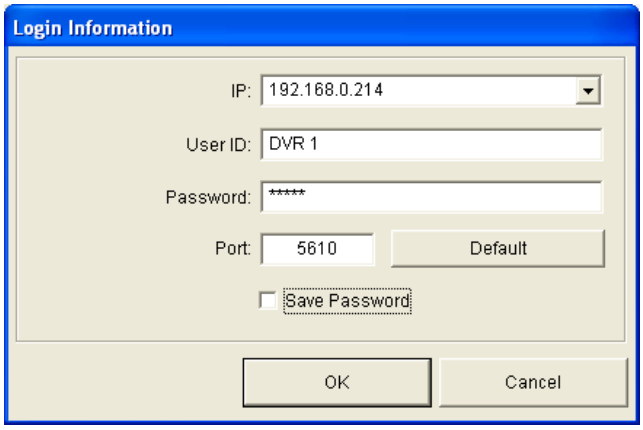

Figure 5-1

2. Type the IP address of the VSM server and a User ID and password established at the server. Only modify the default port value if necessary.
3. Click **OK**. This dialog box appears.

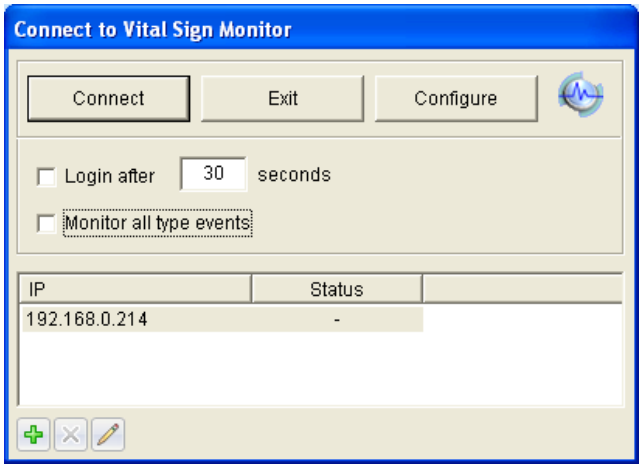

Figure 5-2

4. Click the **Configure** button. The Advanced Settings dialog box appears.

5. Follow step 5 in *4.1 Scheduling Notifications from Subscribers* to set up the times.

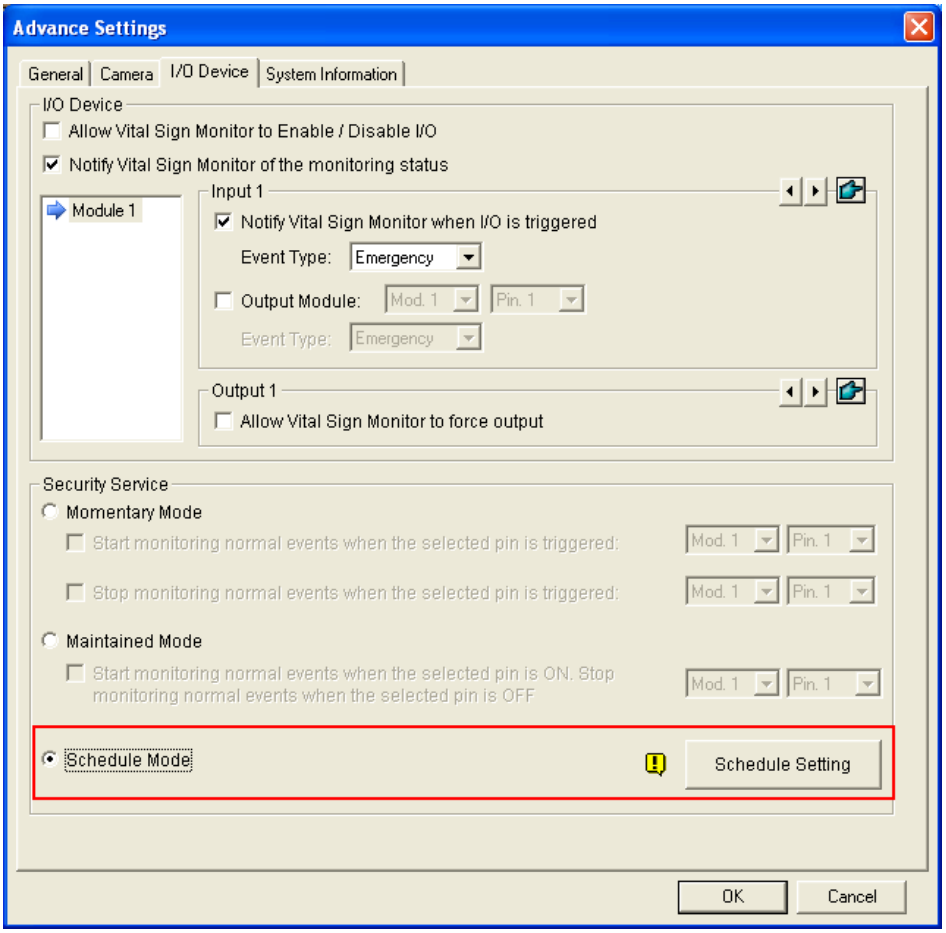

Figure 5-3

Note: The **I/O Device** tab is only available when the GV-System detects at least one I/O device.

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6. Select **Normal** for the **Event Type** field. For detail, see step 6 in *6.1 Scheduling Notifications from Subscribers*.

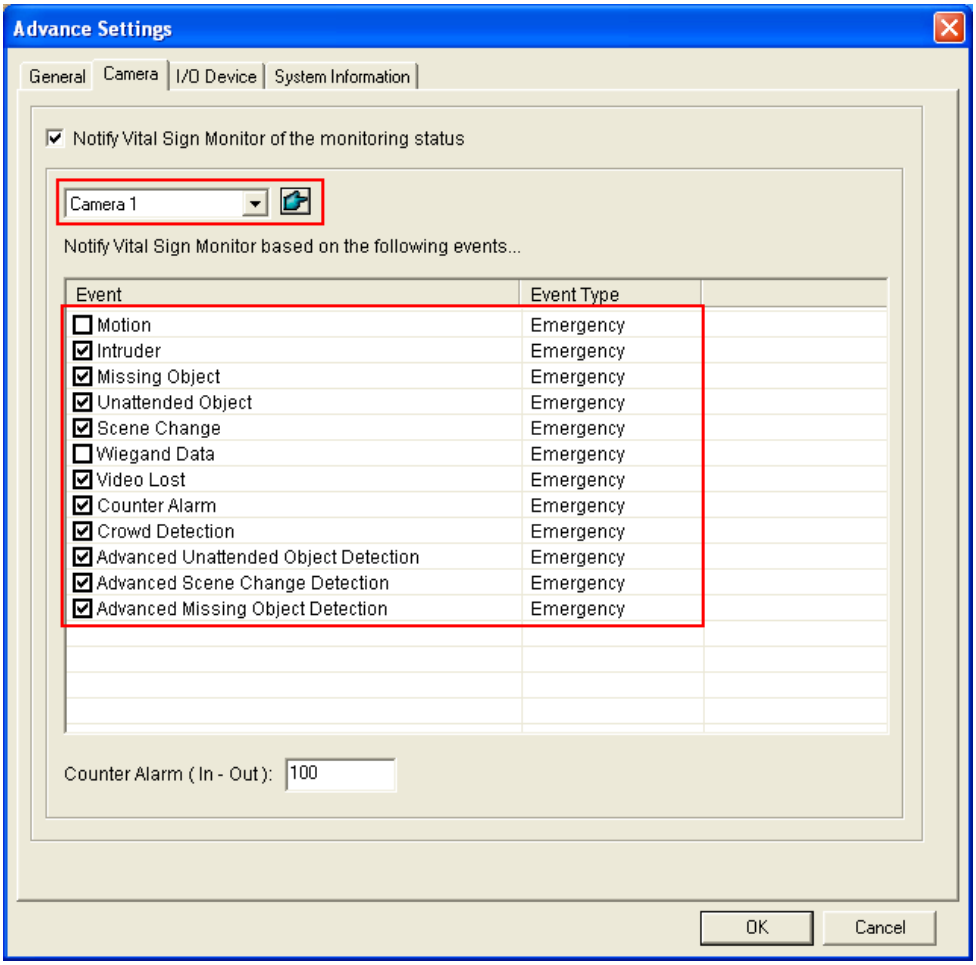

Figure 5-4

7. Click **OK**.
8. Connect the GV-System to VSM.

Note: Keep the event mode as **Emergency** if you do not want to apply the schedule for video recording and notifications.

5.2 Setting Up a Time Threshold for Connection Lost Notification

The GV-System may lose connection with its cameras under busy and unstable network environments. In this case, this brief connection lost may not require the attention of the VSM administrator. To reduce the number of such Connection Lost notifications being sent to the VSM server, set up a duration which the Connection Lost event must exceed to notify the VSM server.

To access this feature:

1. On the VSM main window, select **Configure** and select **Notification**. The Alarm Settings dialog box (Figure 4-8) appears.
2. Follow steps 2 to 4 in *4.3 Setting Up a Time Threshold for Connection Lost Notification* to establish a time threshold.