GeoVision inc
The Vision of Security

GV-VMS

New Feature Guide V15.10.1.0

VMSV151010-FG-B

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Note: No memory card slot or local storage function for Argentina.

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Contents

1. New Supports and Specifications

This chapter introduces the new specifications supported in version 15.10.1.0

1.1 Support for GPU Decoding with External NVIDIA Graphics Cards

Previously, GV-VMS only supports GPU decoding when using Intel Chipset with onboard VGA. Starting from V15.10.1.0, GPU decoding can be supported using external NVIDIA graphics cards that meet the following criteria.

- Compute capability 3.0 or above
- Graphics card memory 2 GB or above

GV-VMS now supports GPU decoding using the following methods. You can install multiple external graphics cards if needed.

1. **On-board VGA:**
   Intel chipset with onboard VGA
2. **External VGA:**
   NVDIA graphics cards with compute capability 3.0 or above and memory 2 GB or above
3. **On-board VGA + External VGA:**
   The on-board VGA must be connected to a monitor in order to support GPU decoding

To see the software specifications required for GPU decoding, see *GPU Decoding Specifications* in *Important Notes* of the *GV-VMS User Manual*.

To look up the commute capability of the NVIDIA graphics cards, refer to: https://developer.nvidia.com/cuda-gpus.

1.2 Support for H.265 Codec

The latest GV-VMS V15.10.1.0 supports H.265 for live viewing and video playback. Note that only CPU decoding is supported when using H.265 codec.

1.3 Dual Streams for GV-Fisheye IP Cameras

GV-Fisheye IP Cameras (firmware version 3.0 or later) can now support dual streams, where one stream is set to a lower resolution for live viewing and the other to a higher resolution for recording. By default, when a GV-Fisheye IP Camera is added to GV-VMS (V15.10.1.0), it is set to **Dual Streams** with a preview stream of lower resolution and a record stream of higher resolution.

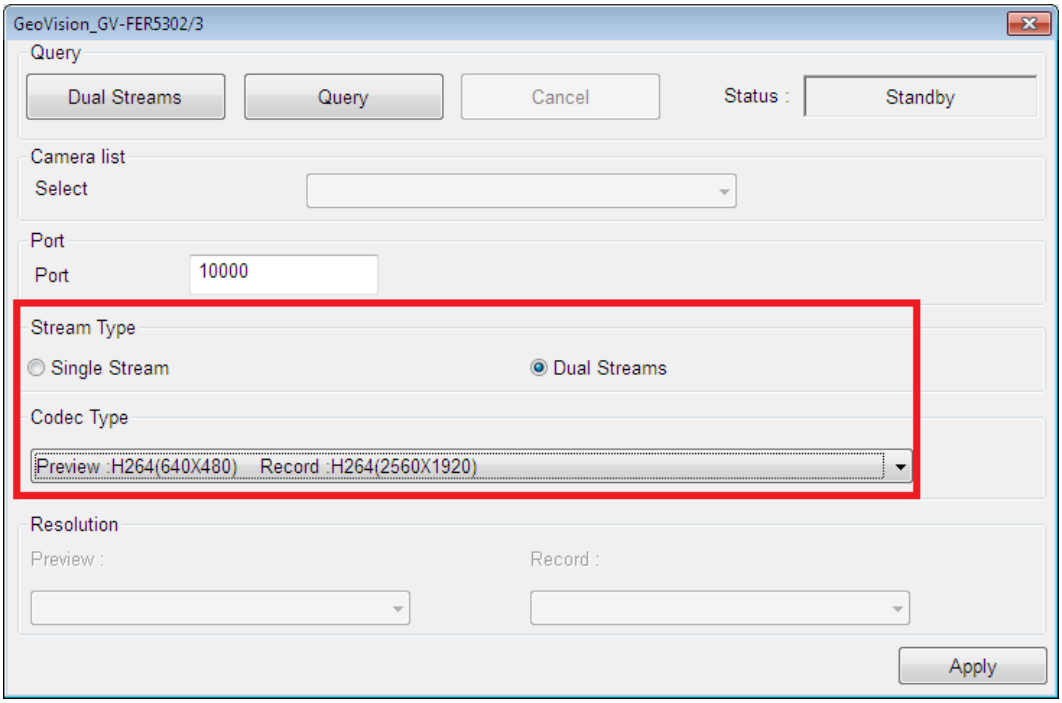


Figure 1-1

2. Main System

This chapter introduces the new features and enhancement of the main system.

2.1 Video Analysis by Cameras

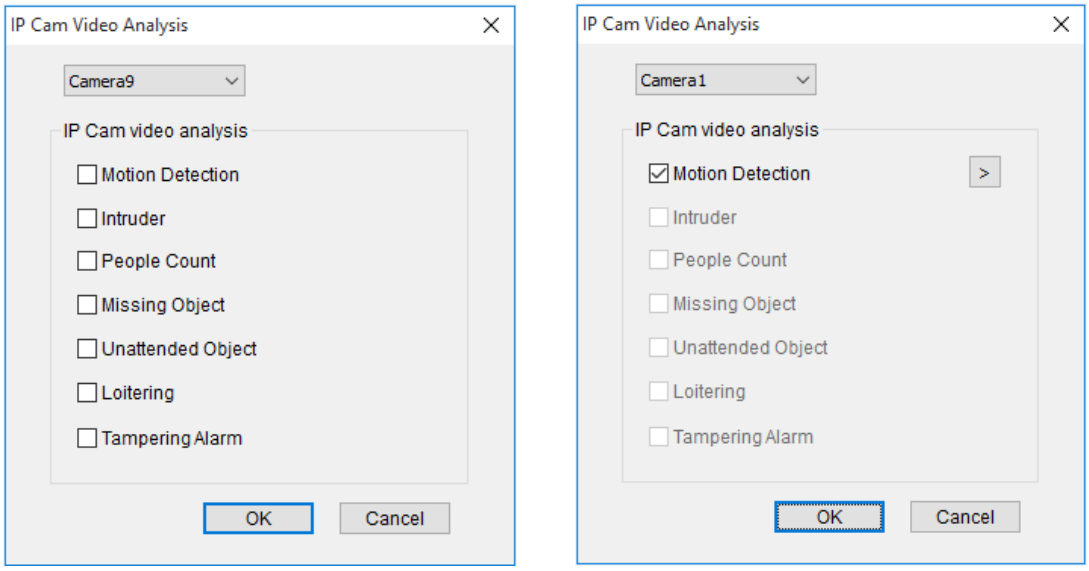
You can now choose to process video analysis on the camera instead of on GV-VMS software.

Currently only GV-BX2600 supports full video analysis functions running on the camera, including Motion Detection, Intruder, People Count, Missing Object, Unattended Object, Loitering, and Tampering Alarm functions. For all other camera models, only Motion Detection can be processed on the camera.

Note: You may only choose either the camera or GV-VMS software to process video analysis.

To access the feature, follow the steps:

1. Click **Home**, click **Toolbar**, click **Configure**, and select **Video Process**.
2. In the Setup dialog box, select **IPCVA**, select the camera(s), and select **Setting**.
3. Select which video analysis to process on the camera.



BX2600 **Other IP cameras**

Figure 2-1

4. For motion detection option, click on the **arrow** > button to activate the following functions:

   A. Adjust the level of sensitivity by moving the slider to the desired value, with 1 being the least sensitive and 10 being the most sensitive.

   B. Select the area of motion detection by drawing an area on the live view. You may draw 8 areas in maximum.

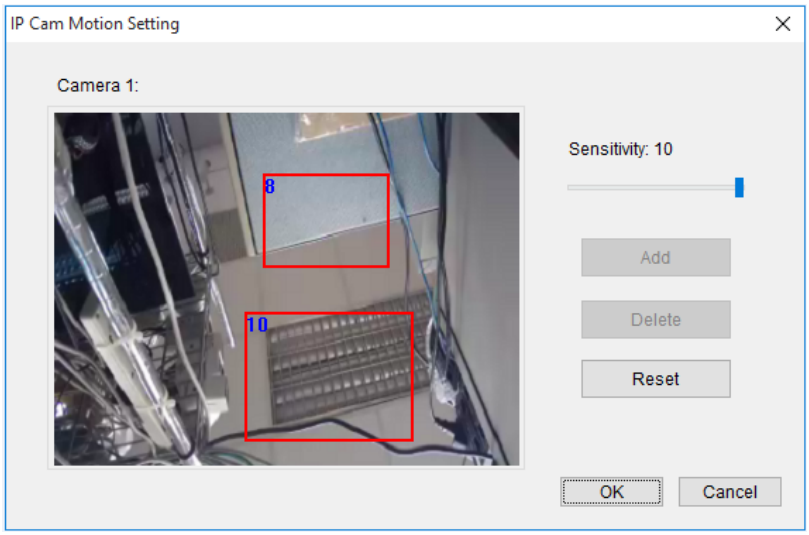


Figure 2-2

Note: The Motion Detection options mentioned in step 4 are supported by the following GV-IP Devices / versions:

GV-IP Devices		Supported Version
GV-IP Camera		V3.00 or later
GV-Target Camera		V1.00 or later
GV-IP Speed Dome	GV-SD220 / SD220-S	V1.08 or later
	GV-SD2300 / 2301	
	GV-SD2411	V1.01 or later
GV-FER12203		V1.01 or later

All video analysis events detected on the camera will be recorded in GV-VMS System Log. For example, if you set up the People Count function on GV-BX2600, the following analysis results appear:

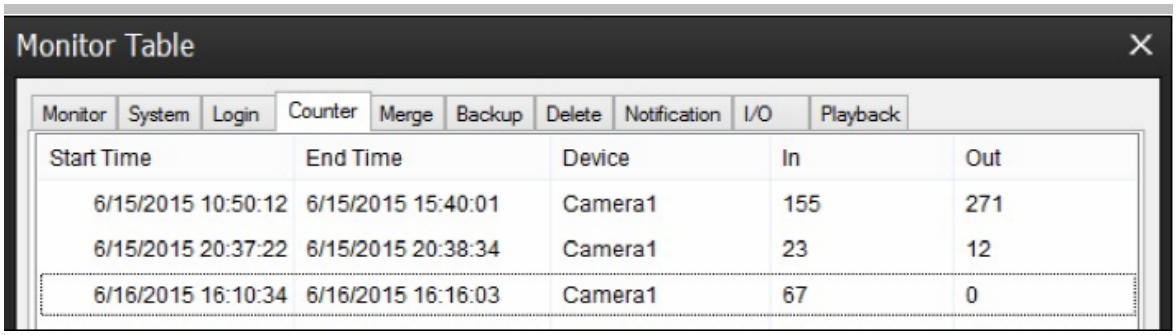


Figure 2-3

For details on Video Analysis, see Chapter 3 in *GV-VMS User's Manual*. For details on GV-BX2600, see *4.2 Video Analysis* in *GV-IPCAM H.264 Firmware User's Manual*.

2.2 Support for Face Count

The GV-VMS V15.10.1.0 supports the face count feature. It allows you to count the number of faces that appear in the image. The number of faces counted will be saved to the GV-Web Report which can analyze counting data from multiple GV-VMS. It is required to use **GV-Web Report V2.2.6 or later** to work with the face count feature.

For details on face count, see *3.5 Face Count*, Chapter 3, in *GV-VMS User's Manual*.

2.3 Viewing Motion Intensity in Heat Map

With the Heat Map feature, you can see the level of motion intensity in a region, which is represented by different shades of colors. This feature is now available in both live view and video playback.

Note: Stabilization and **Defogging** are not supported when **Heat Map** is enabled.

2.3.1 Enabling Heat Map

1. Click **Home** , click **Toolbar** , click **Configure** , and select **Video Process**.
2. Select **Heat Map**, select the camera(s), and click **Setting**.

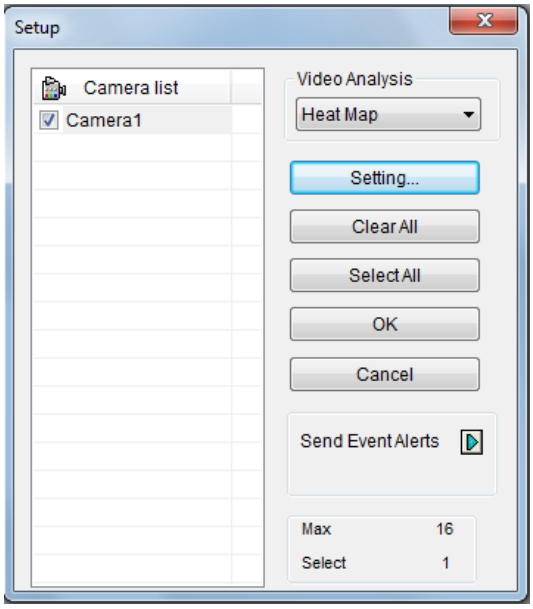


Figure 2-4

3. Click **OK** to activate heat map analysis in monitoring.
4. To configure other advanced settings, click **Setting**.

5. Select a camera from the Camera drop-down list.

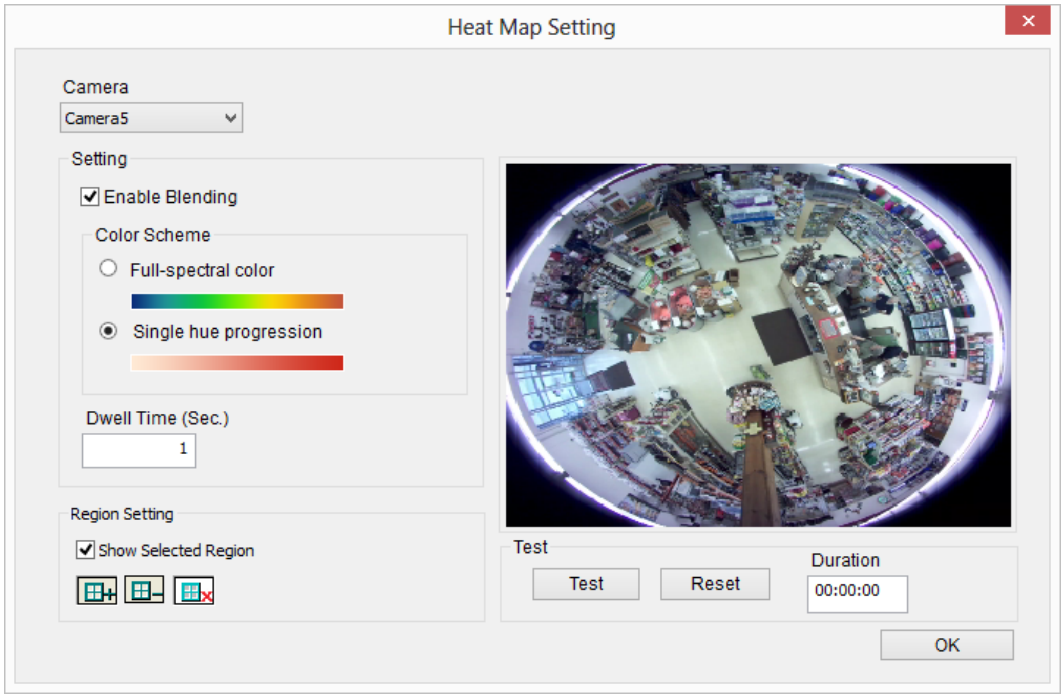


Figure 2-5

6. If you wish to enable heat map on the live view, select **Enable Blending**.

Note: If the Enable Blending option is unselected, heat map will not display on live view, but it will still be active if the function is already activated in the Video Process dialog box (see step 2). Thus, heat map analysis can still be accessed through video playback.

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7. To specify a certain area for Heat Map analysis, click the plus sign , and draw an area on the live view. To exclude a selected area from analysis, click the minus sign , draw and crop the area. To clear the whole selected area, click the X sign .

Note: To draw a shape, click on the live view and draw a line, move the cursor to a different place and click again. To complete the drawing, connect the end of two lines.

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8. You can select from two color modes:

   - **Full-spectral color:** The redder the hue, the higher the motion intensity; the bluer the hue, the less motion intensity.
   - **Single hue progression:** The darker the hue, the higher the motion intensity; the lighter the hue, the less motion intensity.

Figure 2-6: **Full-spectral color mode**

Figure 2-7: **Single hue progression mode**

9. Type the number of seconds under **Dwell Sec** to determine the number of seconds a motion remains at an area before the Heat Map analysis starts.
10. To preview the effects, click the **Test** button. To clear all the preview results, click the **Reset** button. The **Duration** shows how much time has passed since your testing has started.
11. Click **OK**. Heat Map analysis starts regardless of whether or not the GV-VMS is monitoring.
12. To clear the heat map results on the live view window, click the **Tools** button on the live view window with heat map analysis, click **Reset Alert**, and click **Heat Map**.

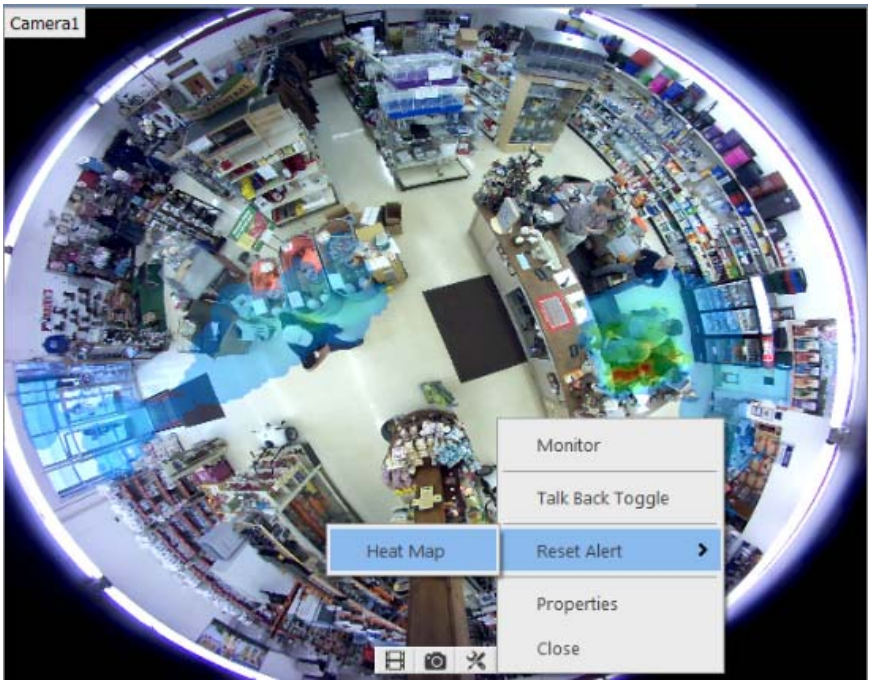

Figure 2-8

2.3.2 Accessing the Heat Map in Recordings

You can freely define a period of time and apply the heat map analysis in recordings.

1. Click **ViewLog** , click the **Tools** button on the ViewLog window of your choice, and click **Heat Map**. This dialogue box appears.

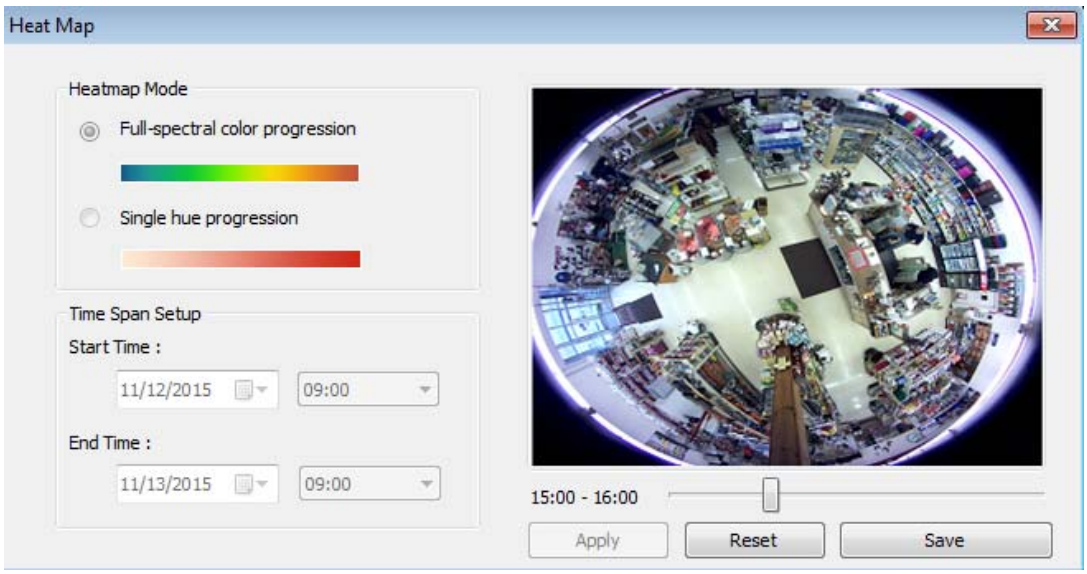

Figure 2-9

2. Select the color mode for the Heat Map analysis under **Color Scheme**.
3. Select the Start Time and End Time under **Time Span Setup**. You may move the slider under the playback to see the heat map analysis of each hour.
4. Click **Apply** to see the preview. To clear all the preview results, click the **Reset** button.
5. Click **Save** to save an image of the Heat Map analysis.

Note: The time interval for the Time Span Setup must be less than 24 hours.

2.4 New Image Orientation Options for Corridor Scenes

The latest GV-VMS V15.10.1.0 supports two new image orientation options, **Rotate 90** and **Rotate 270**, to increase the versatility of a live view especially in corridor scenes. In this example below, set the Image Orientation to **Rotate 270** so that the length, instead of the width of the corridor is shown. To access this feature, open the Settings dialog box, and then configure the Image Orientation setting.

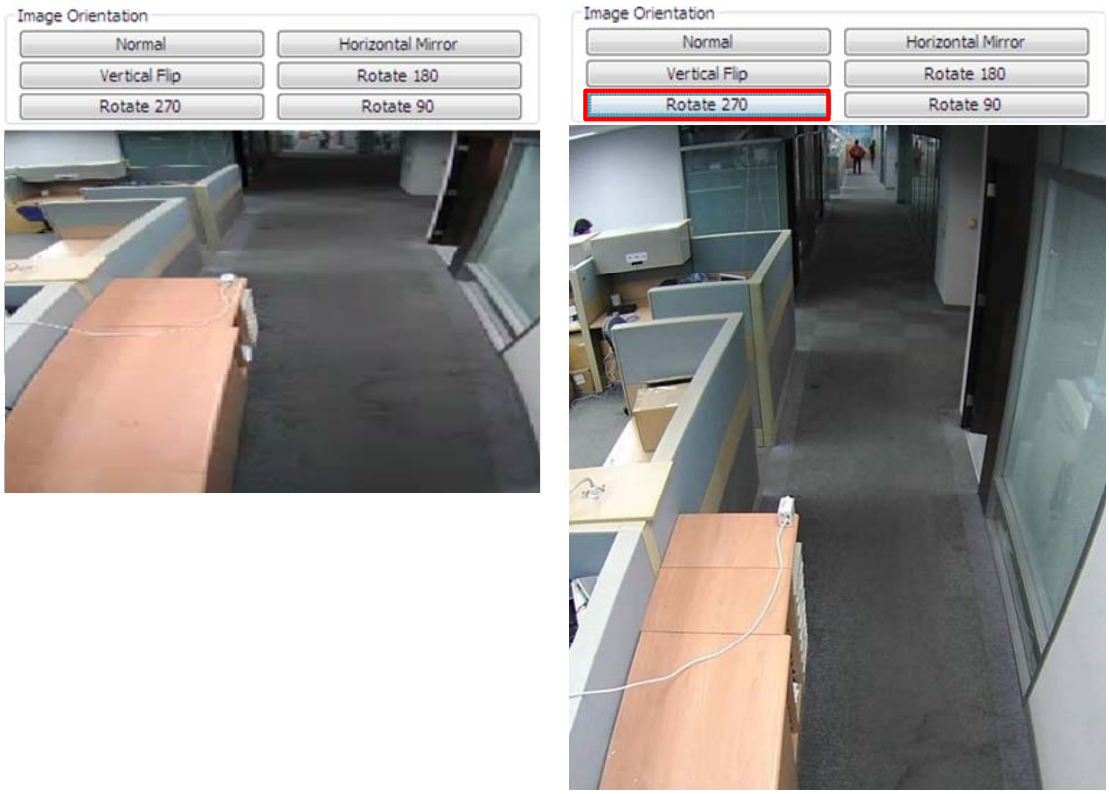

Figure 2-10

Note: The Image Orientation options for Rotate 90 and Rotate 270 are only available for the GeoVision IP cameras supporting the function.

2.4 Sending Alert Notifications Through SNMP Protocol

In V15.10.1.0, you can send alert notifications to SNMP-compatible software by using the SNMP Trap Notification utility.

1. Click Windows' **Start** button, click **All Programs**, select the **GV-VMS** folder, and select **SNMPTrapNotification.exe**. This dialog box appears.

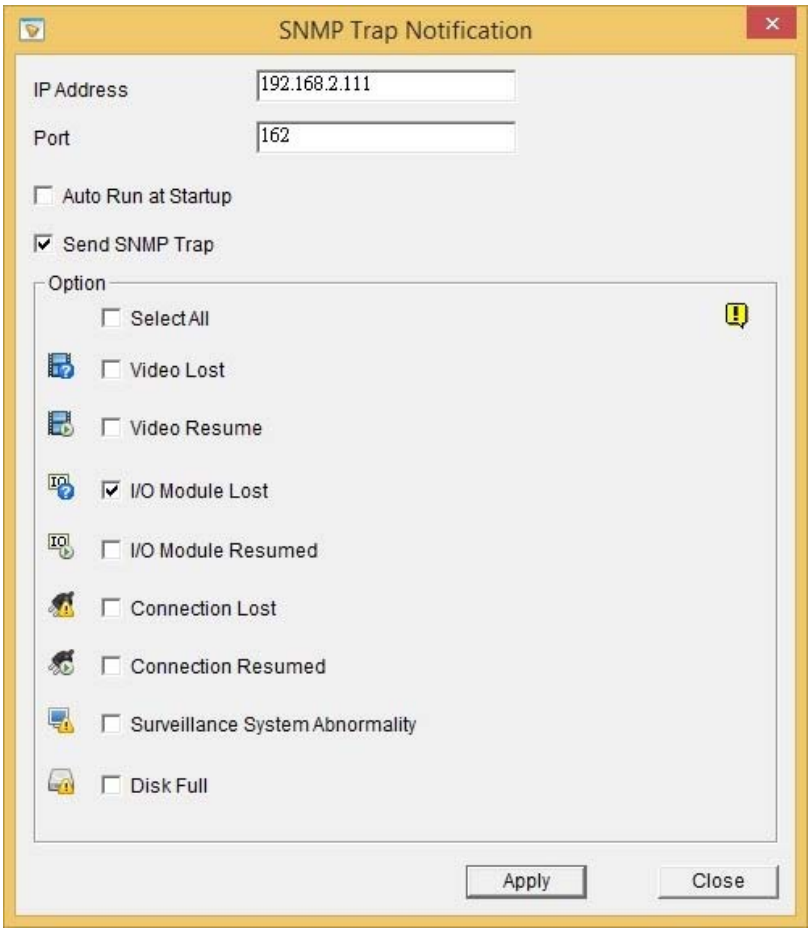

Figure 2-11

2. Type the **IP address** of the software that will be receiving the alert notification, and modify the **Port** if needed.
3. To run SNMP Trap Notification upon system startup, select **Auto Run at Startup**.
4. Select **Send SNMP Trap** to enable the function.
5. Under Option, select the types of notifications you want to send to the software.
6. Click **Apply**.

2.5. New Layout Functions

2.5.1 Automatic Switch among Different Live View Layouts

You can have different (live view) layouts automatically switched at a specified interval. To set up this feature, create and group several layout templates under the Content List (Figure 2-12) and right-click the group to configure its **Scan Setting** to specify the scan interval (Figure 2-13). To start the automatic switch, right-click the group and select **Scan Start**. In the example below, Layout 1, Layout 2, and Layout 3 are automatically switched among each other every 10 seconds, with the currently displayed layout highlighted in orange.

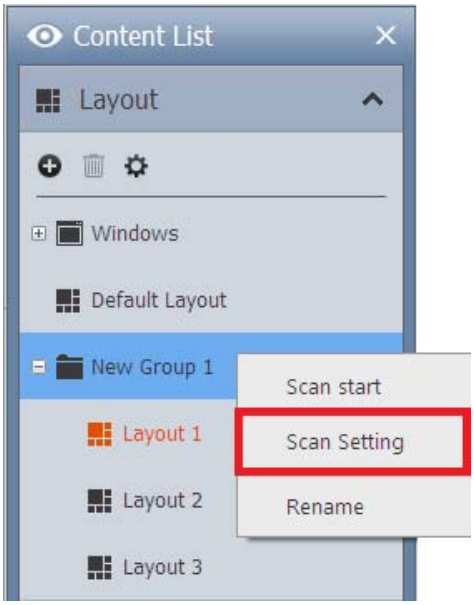

Figure 2-12

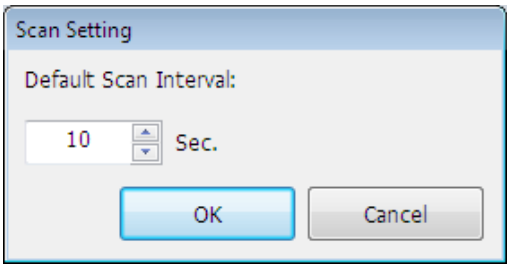

Figure 2-13

2.5.2 Duplicating a Layout

You can duplicate a layout without going through all the setup steps. Right-click a layout from the Content List, select **Duplicate**, and a layout of the same division is immediately created. Rename the new layout as required.

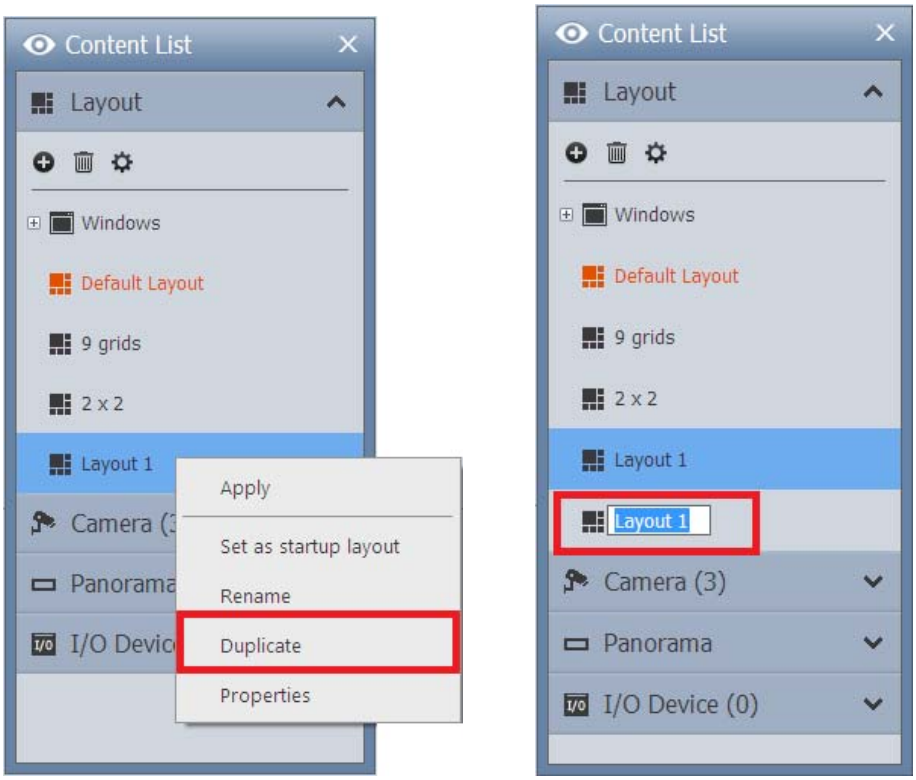

Figure 2-14

2.6 Making Video Bookmarks in Live View

When a camera is recording, you can bookmark a scene with its date and time from the live view window, and review them in ViewLog player later.

1. Click the **Tools** button on the live view window you wish to bookmark, and select **Add to bookmark**.
2. In the Bookmark Description dialog box, type a description to identify the bookmark.
3. To see the bookmarked scenes, click **ViewLog**, click **Toolbar**, select **Tools**, and select **Bookmark**.

Note: The bookmarked video events will be marked as Never Recyle in ViewLog.

2.7 Scheduling Configuration Backup

You can now set up a regular schedule with password protection to back up the GV-VMS configurations you made. Follow the steps below to access the function.

1. Go to **Windows Start**, select **Programs**, select **GV-VMS**, and click **Fast Backup & Restore Main System**. Type a valid ID and Password of GV-VMS as prompted.
2. Click **Backup GV-VMS Settings or Restore Defaults** and select **Schedule Setup**.
3. Select **Active Schedule**.

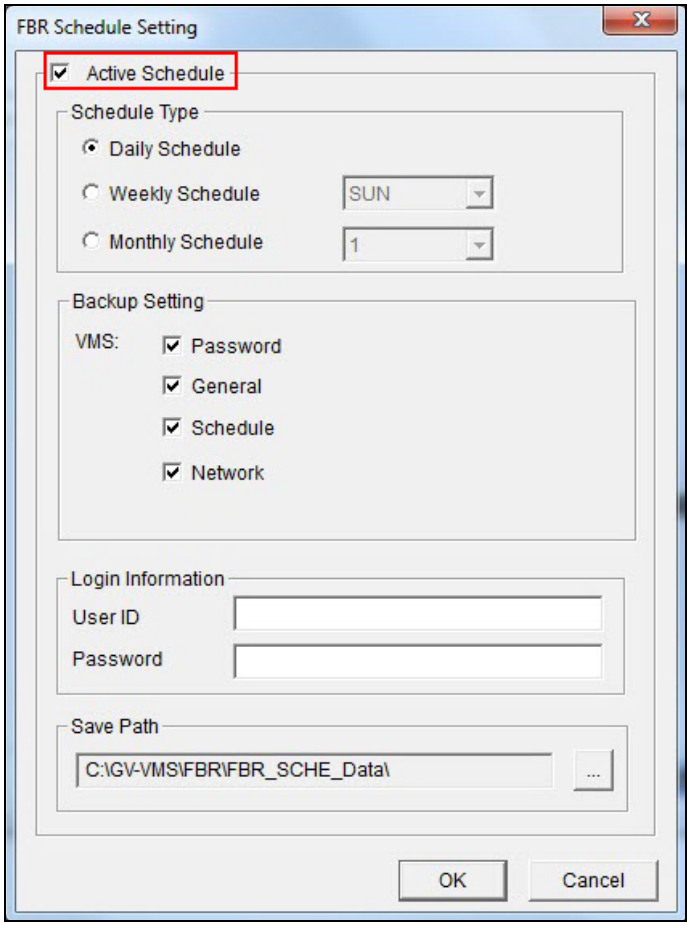

Figure 2-15

4. Select a desired schedule type.
5. Select desired options for backup.
   - **Password:** Back up all the user accounts and password settings of GV-VMS.
   - **General:** Back up all the settings of video analysis, IP devices, system configurations, Content List, E-Map, GV-Keyboard / GV-Joystick, and System Log.
   - **Schedule:** Back up the recording schedule configuration.

- **Network:** Back up the network configuration of connection to VSM (Vital Sign Monitor) and to Center V2.

6. Type a user ID and password in the Login Information section. The ID and password must be identical with that of a user account created in GV-VMS. You will need to use this ID and password to restore the backup file.
7. Locate a path to save the backup contents.

For details on backing up settings and restoring, see *9.5 Fast Backup and Restore,* Chapter 9, in *GV-VMS User's Manual*.

3. ViewLog

This chapter introduces the new features and enhancement of the ViewLog.

3.1 Displaying Audio Events on the Timeline

Recorded audio events are now recognizable and shown as orange on the recording timeline whereas Round-the-Clock events are shown as blue and alarm events are shown as red.

Figure 3-1

Note: The audio recording is disabled by default. For details on enabling audio recording, see *2.2.2 Configuring Audio Setting*, Chapter 2, in *GV-VMS User's Manual*.

For details on video playback, see *4.1 Playing Back on ViewLog*, Chapter 4, in *GV-VMS User's Manual*.

3.2 Changing the Displayed Date on the Recording Timeline

In addition to searching video events by date on a calendar, you can now directly drag the timeline to search and view recordings of a previous or next day with recorded events. To access this feature, follow the steps below.

1. Scroll the mouse wheel forth to enlarge the timeline. The default display of the timeline is 24 hours.
2. Click and drag the timeline back and forth. The timeline jumps between the recording days.

Figure 3-2

For details on ViewLog player controls, see *4.1 Playing Back on ViewLog*, Chapter 4, in *GV-VMS User's Manual*.

3.3 Displaying Recording Timelines for All Channels

You can now see the recording timelines of all camera channels. To access the feature, click **Display All Database** in the low right corner of ViewLog player and the timelines are displayed as below. To go back to ViewLog, click **Display Basic Database** .

Figure 3-3

For details on ViewLog player controls, see *4.1.1 ViewLog Control Panel*, Chapter 4, in *GV-VMS User's Manual*.

3.4 Keeping Recordings from Being Recycled

You can now mark the recordings on the timeline as never being recycled. The marked recordings will be shown as red on the timeline and never be deleted or recycled when recycle threshold is reached.

1. To mark recordings to be kept, right-click and drag on the timeline and select **Mark Never Recycle** from the pop-up menu.
   - **Focused Camera**: Mark the recordings of a selected camera as Never Recycle.
   - **All Cameras on Layout**: Mark the recordings of all cameras on the layout as Never Recycle.

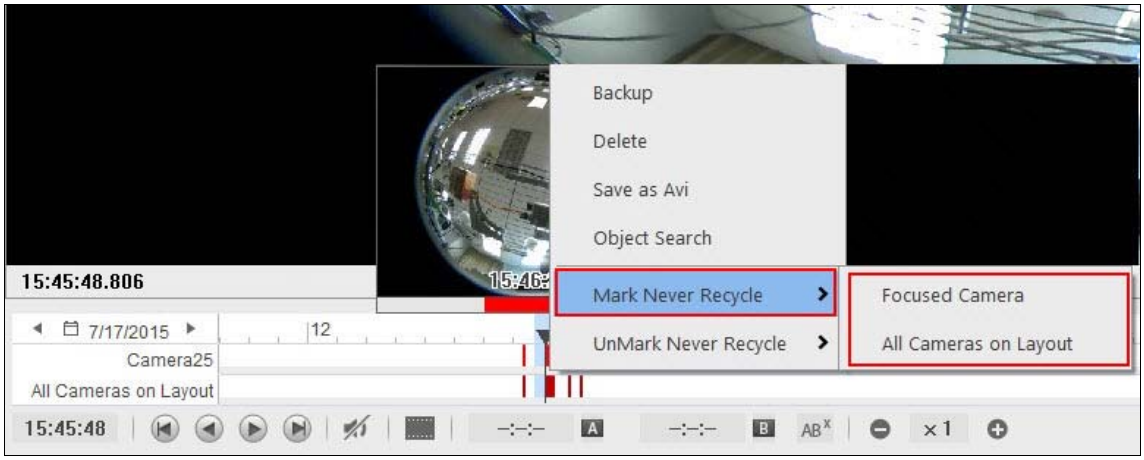

Figure 3-4

2. You will see the Never Recycle Event icon on the preview window.

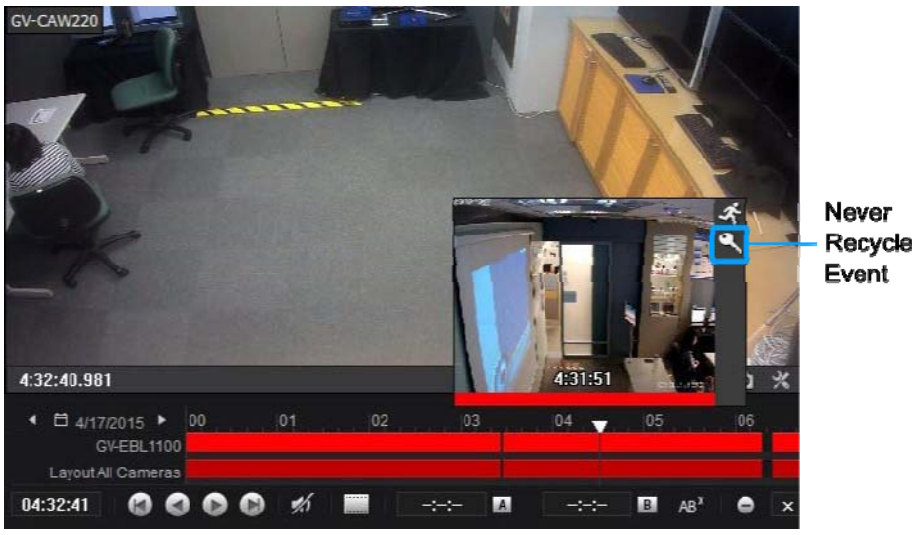

Figure 3-5

3. To unmark the recordings, simply right-click the timeline and select **Unmark Never Recycle**.

3.5 Bookmarking Video Events in ViewLog

You can now bookmark desired recordings on ViewLog player.

1. Right-click a camera view and select **Bookmark**.
2. To access all the bookmarks, click **Toolbar** , select **Tools** and select **Bookmark**. The dialog box appears. Double-click any bookmark for the Playback Scroll to move to the corresponding position on the timeline.

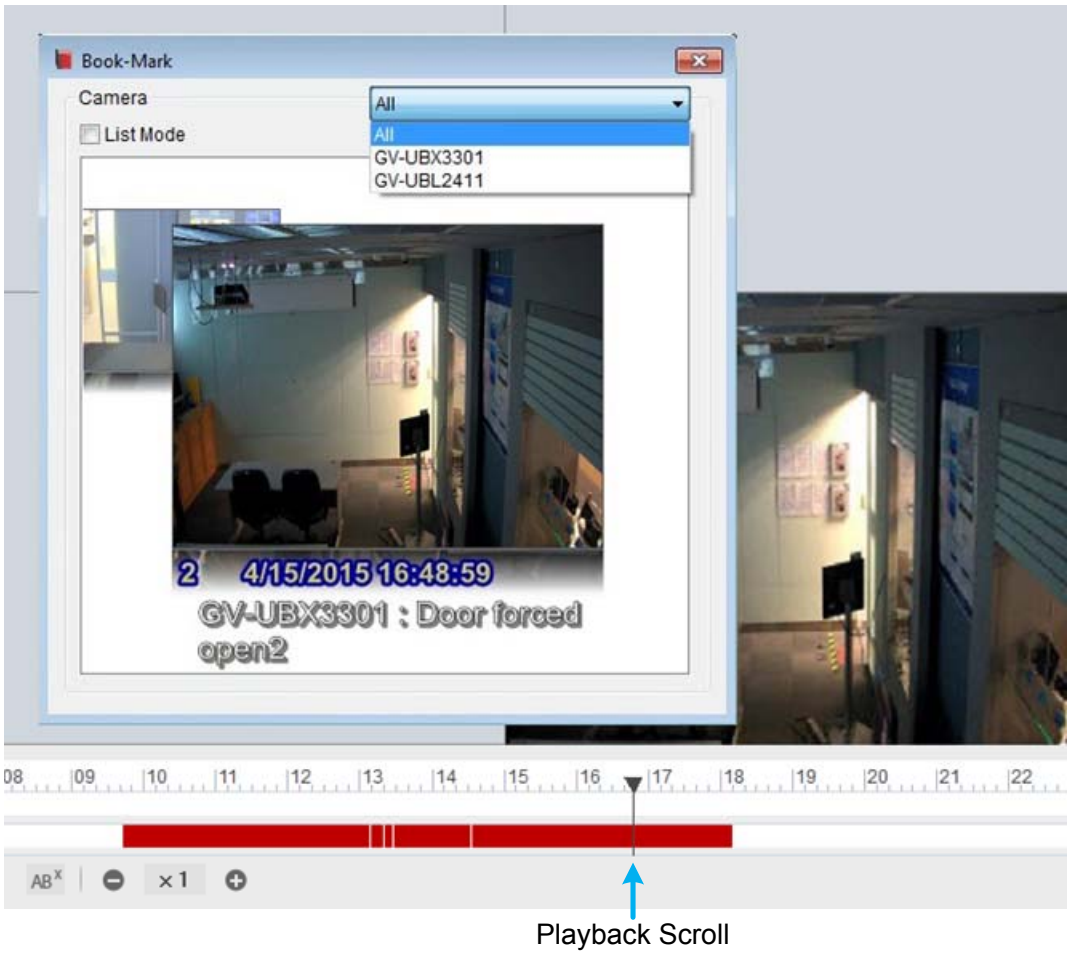

Figure 3-6

3. You can select **List Mode** to present all the bookmarks in a list.

Note: The bookmarked video events will be marked as Never Recyle in ViewLog.

3.6 Displaying Object Search Results in a Timeline

You can now view the object search results displayed in a timeline. Follow the steps below.

1. Click the desired channel, select **Toolbar** , select **Tools** and select **Object Search**. The Object Search window appears.
2. Select an event type from the drop-down list . Take Unattended Object for example.

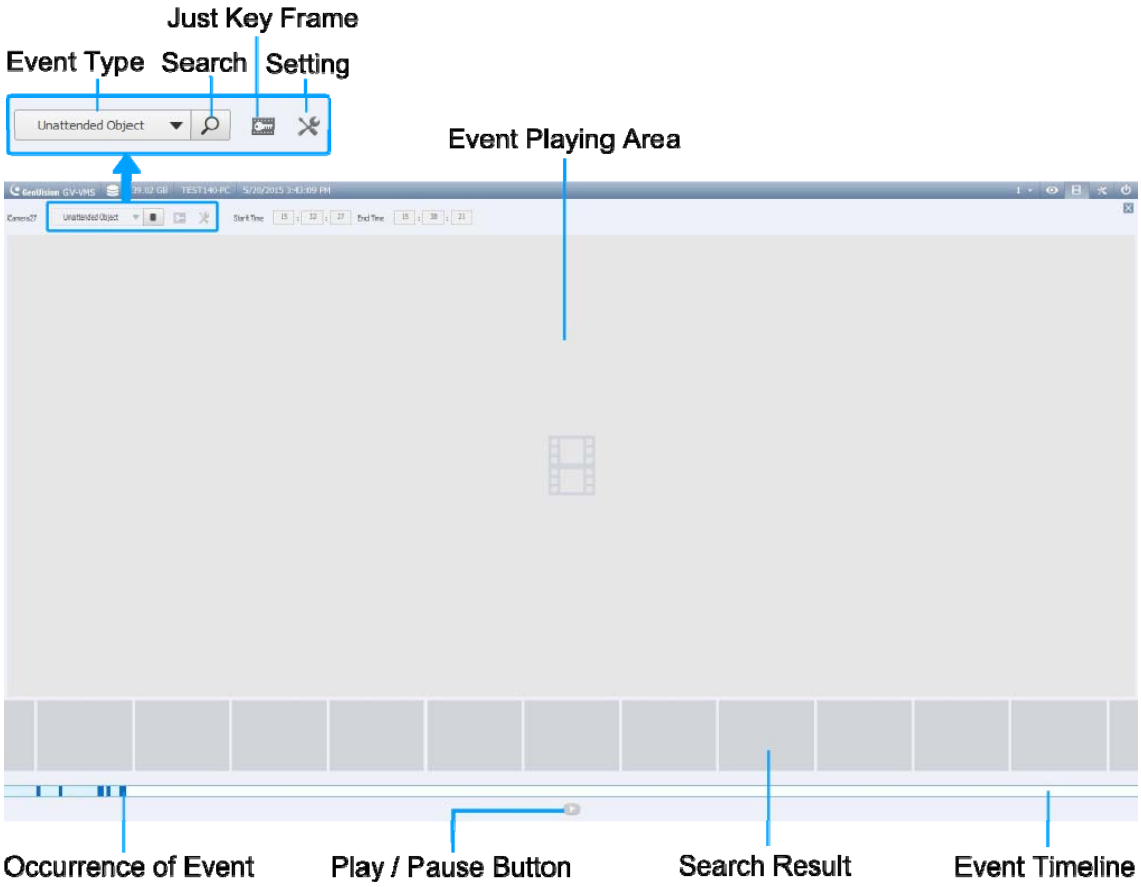

Figure 3-7

3. Click **Setting** and select to detect objects by region and object size. Draw an area on the right image to define the detection zone and object size. Click **OK**.

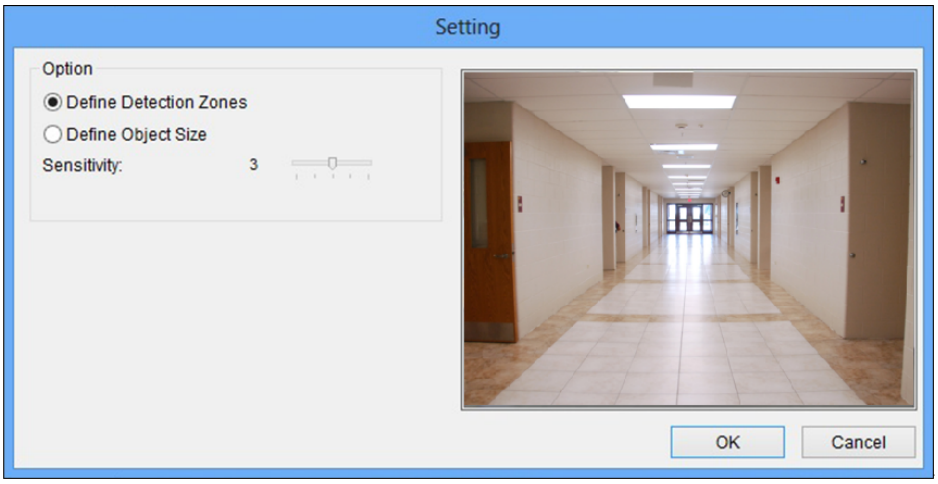

Figure 3-8

4. Click **Just Key Frame** to search only key frames if necessary. Click **Search** and the search results are displayed and shown in blue on the event timeline below.

5. Move the cursor on the event timeline to find a desired result. Double-click the event or click the **Play** button to view the event.

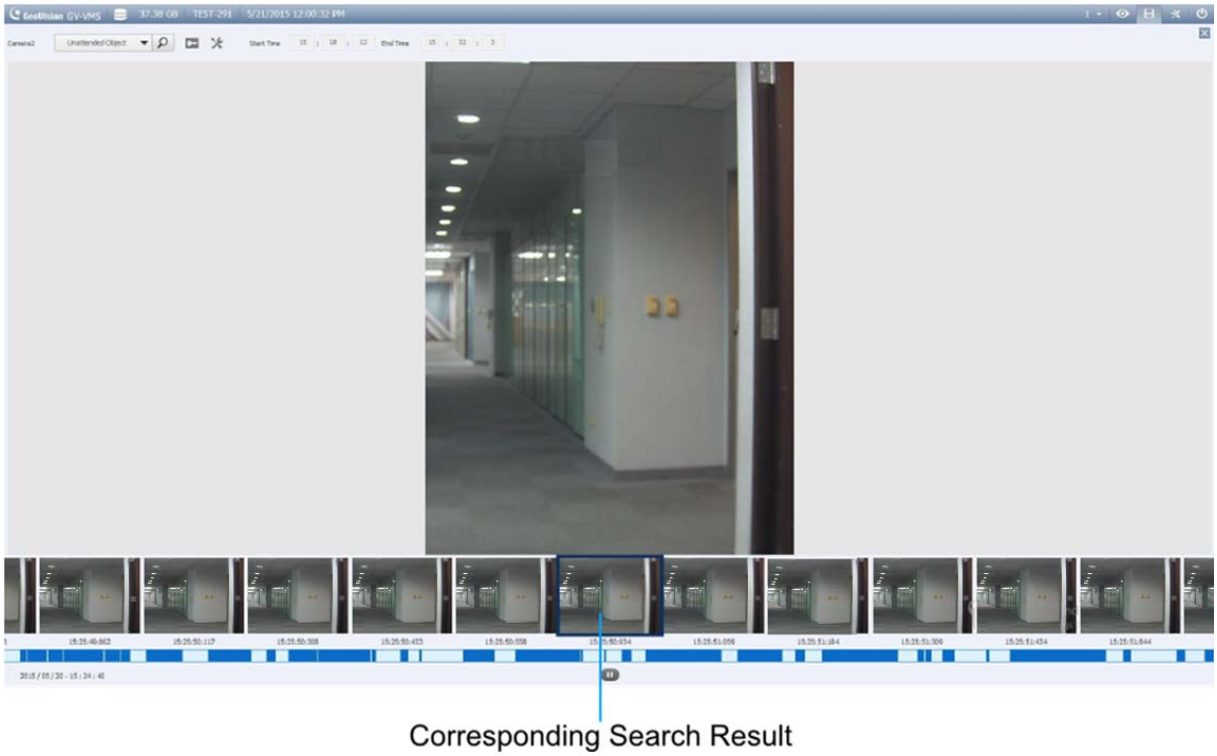

Figure 3-9

For details on searching objects, see *4.2 Object Search,* Chapter 4, in GV-VMS *User's Manual*.

3.7 Compacting Videos by Key Frames

You can now compact video files by only exporting key frames when merging and exporting camera recordings. To access the feature, follow the steps below.

1. To select a period of time for export, right-click and drag on the timeline and select **Save as Avi** from the pop-up menu.
2. In the **Setting** tab, select **Compact Mode (Only for Direct Merge)**, select a camera in the right pane to merge its videos and click **OK**.

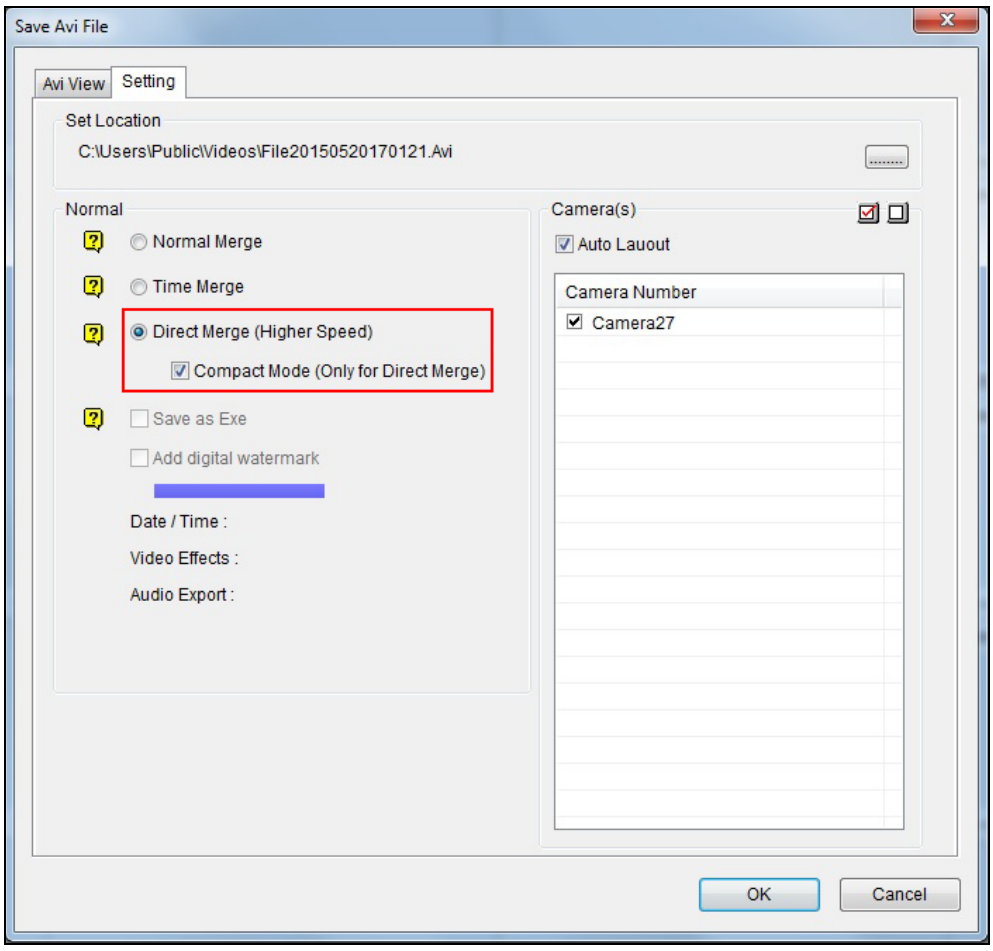

Figure 3-10

For details on merging and exporting videos, see *4.1.4 Merging and Exporting Video,* Chapter 4, in *GV-VMS User's Manual*.

4. Hot-Swap Recording

The program Media Man Tools provides a hot-swap feature, allowing a non-stop recording. You can add and remove a hot-swap or portable hard drive to the GV-VMS without interrupting the monitoring. When the new drive is added, it will be configured to the recording path automatically.

Additionally, you can back up ViewLog player and database files to play back at any computer.

Note: The minimum disk capacity for hot-swap feature is 32 GB.

4.1 The Media Man Tools Window

This program comes with the installation of GV-VMS. Click **Drive C** in My Computer, select the GV-VMS folder, and then select the **Media Man Tools**. This window will appear.

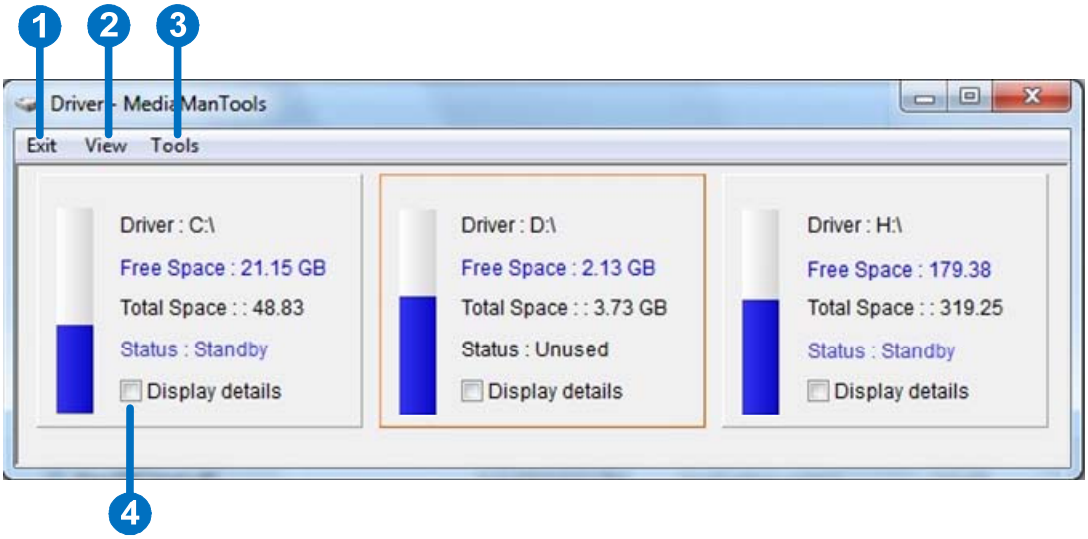

Figure 4-1

The controls on this window:

No.	Name	Description
1	Exit	Closes or minimizes the Media Man Tools window.
2	View	Refreshes the disk drive status shown in this window.
3	Tools	Sets up the LED panel and automatically logs in the Media Man Tools window.
4	Display Details	Select the option to view the status and information of the disk drives. For details, see *Viewing Disk Drive Status* later in this section.

4.2 Viewing Disk Drive Status

To view the detailed information of a drive, check **Display Details** (No. 4, Figure 4-1) in the desired drive section. The status window will appear.

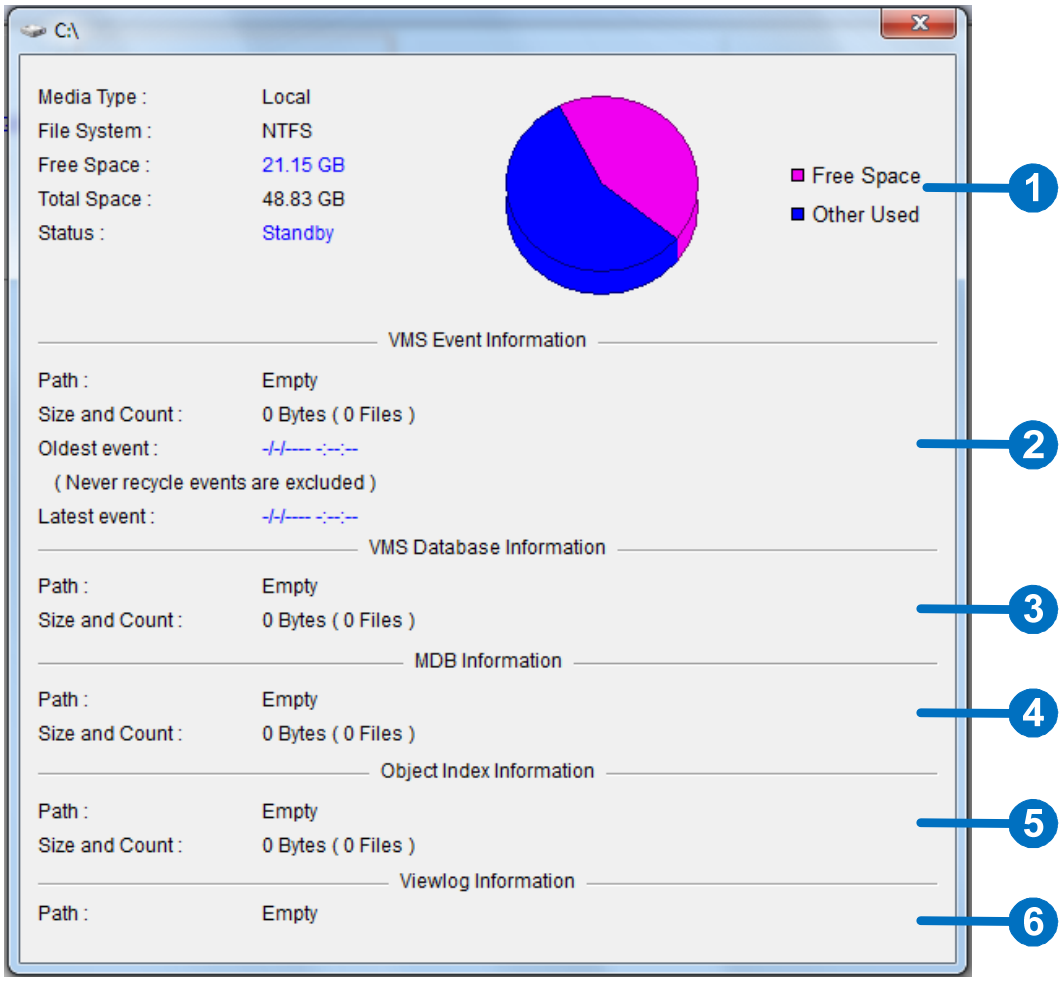

Figure 4-2

The controls on the window:

No.	Name	Description
1	Disk Properties	Indicates disk information. In “Media Type,” two messages may appear: ● **LAN:** indicates a network hard drive is connected. ● **Local:** indicates a local hard drive is connected. In “Status”, three messages may appear: ● **Standby:** indicates the hard drive already specified as the recording path. ● **Unused:** indicates the hard drive not specified as the recording path. ● **Recording:** indicates the files are being recorded to the disk.

2	VMS Event Info	Indicates the path, size and number of recorded events; the dates of the oldest and latest events.
3	VMS Database Info	Indicates the path, size and number of the ViewLog Event List log files.
4	MDB Info	Indicates the path, size and number of System Log files.
5	Object Index Info	Indicates the path, size and number of Object Index files.
6	ViewLog Info	Indicates the location you have backed up the EZ ViewLog player.

Note: The VMS Event Info updates every minute. The MDB Info, VMS Database Info, Object Index Info and ViewLog Info update as data changes.

4.3 Adding a Disk Drive

1. Click **Drive C** in My Computer, select the GV-VMS folder, and select the **Media Man Tools**.
2. Insert a hot-swap hard drive or plug a portable hard drive to your computer. This dialog box appears.

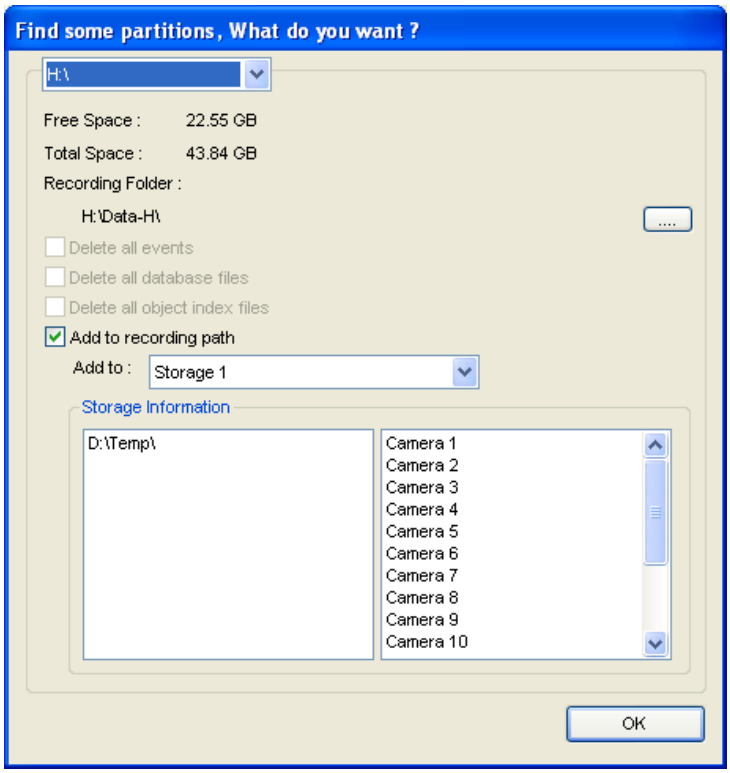

Figure 4-3

3. Select **Add to recording path** and select the storage group from the drop-down list.
4. If there are recording files saved on the hard drive, you may select the options of **Delete all events**, **Delete all database files** or **Delete all object index files**.
5. Click **OK** to automatically configure the hard drive to the recording path.

   To verify the hard drive is added successfully, check if the “Status” of the drive displays *Standby* (see Figure 4-1).

Tip: To add a local drive to the recording path, right-click the desired drive on the Media Man Tools window (Figure 4-1), select **Add for recording** and follow Step 3 to add the drive.

4.4 Removing a Disk Drive

To remove a disk drive from the recording path, right-click the desired drive on the Media Man Tools window (Figure 4-1), and select **Remove from recording path**. This dialog box will appear. You can export related database files with the recordings on the hard drive. You can also export the ViewLog player which allows you to play back the recordings on any computer.

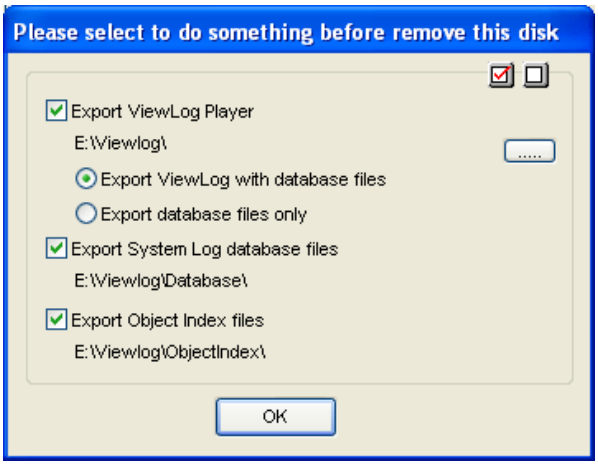

Figure 4-4

- **Export ViewLog Player:**
  - **Export ViewLog with database files:** Exports the ViewLog player together with ViewLog Event List log files (.db files), related to the recordings on the hard drive.
  - **Export database files only:** Exports ViewLog Event List log files (.db files) only if the ViewLog program already exits on the hard drive.
- **Export System Log database files:** Exports the system log files (.mdb files), related to the recordings on the hard drive.
- **Export Object Index files:** Exports the Object Index files, related to the recordings on the hard drive.
- **[…] button:** If you want to change the default folder “Viewlog” created on the hard drive, click the button.

Note: Removing the hard drive will affect ViewLog database. To restore these events, add the hard drive back to the system and run **Repair Database Utility**.

4.5 Logging In Automatically at Startup

To automatically log in and minimize the Media Man Tools window at Windows startup, follow these steps:

1. Click **Tools** on the menu bar, and select **Auto login at Windows startup**. A dialog box appears.
2. Type the ID and password of the GV-VMS for automatic login in the future.
3. If you want to minimize the Media Man Tools window to the system tray at startup, select **Auto minimize at startup**.
4. Click **OK** to apply the settings.

4.6 Setting LED Panel

A LED panel on the screen provides a quick indication of the activity status of hard disk drives.

Figure 4-5

LED Color	Description
Gray	No HDD is assigned to this LED.
Green	A HDD is assigned to this LED.
Red	The HDD is full.
Flashing Green	GV-VMS is recording or the video / audio files are played back in ViewLog.
Flashing Red	The HDD is recycling.

1. Click **Tools** on the menu bar on the Media Man Tools window, and select **Setup LED Panel**. This dialog box appears.

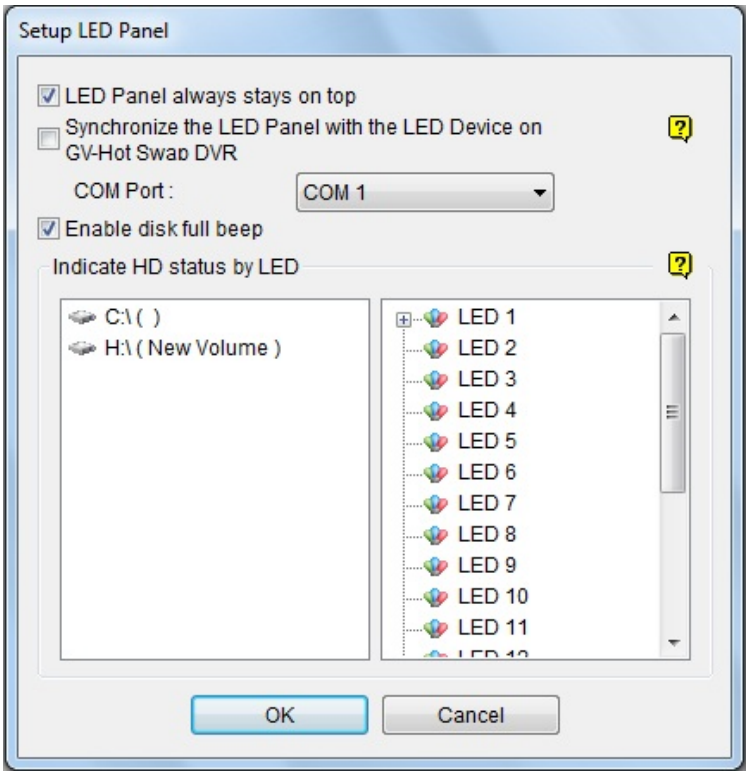

Figure 4-6

- **LED Panel always stays on top:** This option makes the LED panel stay on top of other windows when the Media Man Tools window is minimized.
- **Synchronize the LED Panel with the LED Device on GV-Hot Swap VMS:** This option is designed for the use of the GV-Hot Swap VMS System. When this option is enabled, the LED device installed on the front panel of the GV-Hot Swap VMS System will synchronize with the LED panel on the screen.
- **Enable disk full beep:** When the hard disk drive is full, the system makes the beeping sound. Note this function only works when the motherboard is equipped or installed with a PC speaker.

2. By default, only the hard disk drive that stores video and audio files will be assigned to LED. If you want to re-assign the hard disk drive or assign other drives to LEDs, freely move the hard disk drive to the desired LED on the tree.
3. Click **OK** to apply the settings, and minimize the Media Man Tools window to display the LED panel on the screen.
4. If you want to return to the Media Man Tools window, right-click the LED panel and select **Switch to the setup window**.

Note:

1. Because the LEDs are designed to indicate the video and audio files are being written or read, it is not recommended to assign the HDDs that store log files to the LEDs.
2. If the HDD that stores log files is assigned to a LED and its LED turns red, make sure the log files are not being written before you remove it. Otherwise, the log files might be lost during the removal. The default location for data storage is D:\Record\<camxx or audxx folder> for recorded files, D:\CameraDBs\ for event database files, and C:\GV-VMS\Database for system logs.
