GeoVision inc
The Vision of Security

Quick Start Guide

GV-VMS V20

Thank you for purchasing GV-VMS V20. This guide is designed to help new users quickly get started with GV-VMS V20. For more advanced information, please refer to the *GV-VMS User's Manual V20* available on the GeoVision website.

VMS20-QG-A

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July 2025

Scan the following QR codes for product warranty and technical support policy:

[Warranty]

[Technical Support Policy]

Licensing for GV-VMS V20 Series

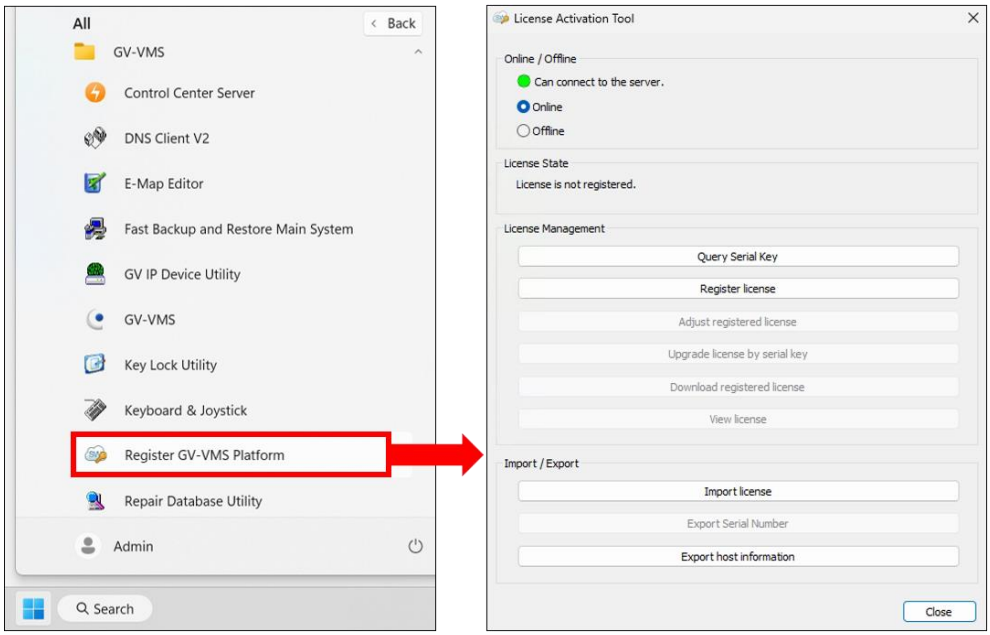
GV-VMS V20 series requires separate licenses for additional channel count, connecting to 3rd-party devices or UA-HD DVRs, and enabling full AI functionality. For details, see *License* in Chapter 1.

Before starting GV-VMS, make sure your purchased dongle or software license is inserted into or activated on the PC.

IMPORTANT: GV-VMS V17/V18 dongles and software licenses can be used with V20 or later without upgrade or re-registration.

For new licenses:

1. New software licenses must be registered using the **License Activation Tool** (**Windows Start** > **All apps** > **GV-VMS folder** > **Register GV-VMS Platform**) and the serial key. For details on software licensing, click here.



2. New dongle licenses require a dongle upgrade. For details on upgrading the GV-USB dongle, see *Chapter 8 Dongle Upgrade* in the *Quick Start Guide*.

Contents

Chapter 1 Introduction

Welcome to the *GV-VMS Quick Start Guide V20.*

This guide covers the basic settings of GV-VMS V20. For complete instructions, refer to *GV-VMS User's Manual V20*.

1.1 License

GV-VMS V20 offers a flexible licensing model based on system size, devices, and features. For details, see the datasheet.

1.2 Minimum System Requirements

For details on the minimum PC requirements, see the datasheet.

1.3 Minimum Network Requirements

For details on the minimum network requirements, see the datasheet.

1.4 Installing GV-VMS

Before You Start

For optimal performance of your system, it is important to follow these recommendations before installing the GV-VMS:

- It is highly recommended to use separate hard disks; one for installing Windows OS and GV-VMS, while the other for storing recorded files and system logs.
- When formatting the hard disks, select NTFS as the file system.
- When GV-VMS is running, it is not recommended to perform disk defragmentation at the same time.
- Since the size of transmitted data from IP cameras may be quite large and reach beyond the transfer rate of a hard disk, you should note the total of recording frame rates that you can assign, as listed below:

Frame Rate Limit in a Single Hard Disk

For details on the frame rate limit in a single hard disk, see the datasheet.

Installing GV-VMS

1. Download GV-VMS by selecting **Primary Applications** from the drop-down list and clicking the **Download** icon next to **GV-VMS** on the GeoVision Website.
2. If you are using a USB dongle, insert the dongle into your computer. See *1.1 License* for connections requiring dongle licenses.
3. To install the USB driver, select **Driver, F/W, Patch** from the drop-down list, and click the **Download** icon next to **GV-Series Card Driver / GV-USB Device Driver**.
    - To verify the driver is installed correctly, go to Windows Device Manager and expand **DVR-Devices**. You should see **GV-Series USB Protector**.

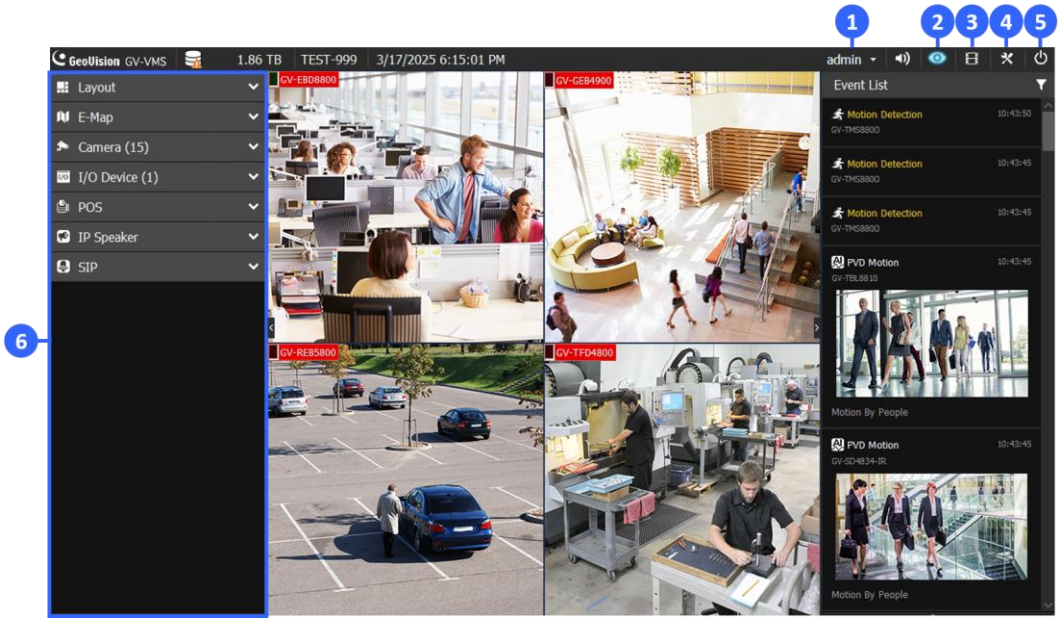
1.5 Running GV-VMS

When you run GV-VMS for the first time, the system will prompt you for a Supervisor ID and Password.

1. Type the desired **ID**, **Password**, and a **Hint** to remind you of the password.
2. Optionally click **E-Mail List** to enter email addresses used to receive the password when forgotten.
3. Click **OK**. The GV-VMS main screen appears, along with a dialog box.
4. To choose how to save your system database, select **Microsoft Office Access Database** or **Microsoft SQL Server** and fill out the required fields.
5. Upon first-time starting of the GV-VMS, you are prompted with the **Automatic Setup** dialog box to assist you in quickly adding IP devices to GV-VMS.

1.6 Main Screen of GV-VMS

In the main screen of GV-VMS, the main setting buttons are located in the top-right corner.



No.	Name	Description
1	Login ID	Click to manage accounts and passwords for accessing GV-VMS.
2	Home	Shows the live view of connected cameras.
3	ViewLog	Shows a timeline of recorded events for playback.
4	Toolbar	Brings up these options when **Home** is selected: • **Monitor:** Start / Stop monitoring, I/O monitoring, and schedule monitoring. • **Network:** Enable Webcam Server and connection to other GV-Software. • **Tools:** Enable audio broadcast, show / hide volume indicator, and open the System Log. • **Configure:** Set up camera, recording, system, schedule, video processing, face manager, and I/O devices. Brings up these options when **ViewLog** is selected: • **Display Play Panel:** Display or hide the ViewLog timeline. This function is grayed out when the **Pinned** button is selected in the bottom-right corner. • **Tools:** Open bookmark, storyline, object search, AI event search, advanced system log, event backup, and event export. • **Configure:** Preview video effects on sample images, and set up text overlay and object detection rectangles for playback.

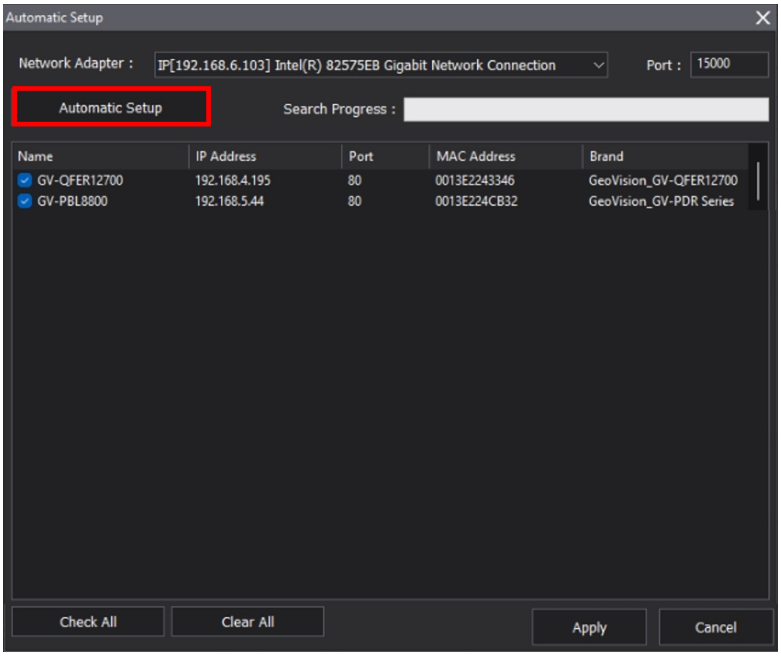
5	Exit	Click to Minimize or Exit GV-VMS.
6	Content List	Access live view layouts, E-Map, and lists of cameras, I/O devices, POS systems, IP speakers, and SIP devices.
7	Event List	Displays monitored general / system events and detected AI / PVD events, including face / people / vehicle attributes. See *Event List* and *Instant Playback* in *Utilizing Live View Functions*, Chapter 1, *GV-VMS User's Manual V20*. ● Use the **Filter**  at the top of the Event List to display specific event types. ● Double-click an event to display its playback video in a 1x1 view and its playback timeline at the bottom of the Main Screen. ◆ If the camera is already displayed in the layout, or if it isn't displayed but an empty channel is available, playback appears on the Home page. If the camera is not displayed and all channels are occupied, playback appears on the Viewlog page.

Chapter 2 Getting Started

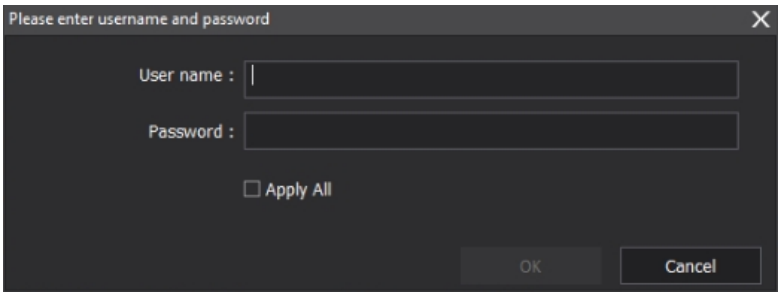
2.1 Adding IP Cameras to GV-VMS

When logging in for the first time after installing GV-VMS, the **Automatic Setup** dialog box appears. Follow the steps below to add IP cameras.

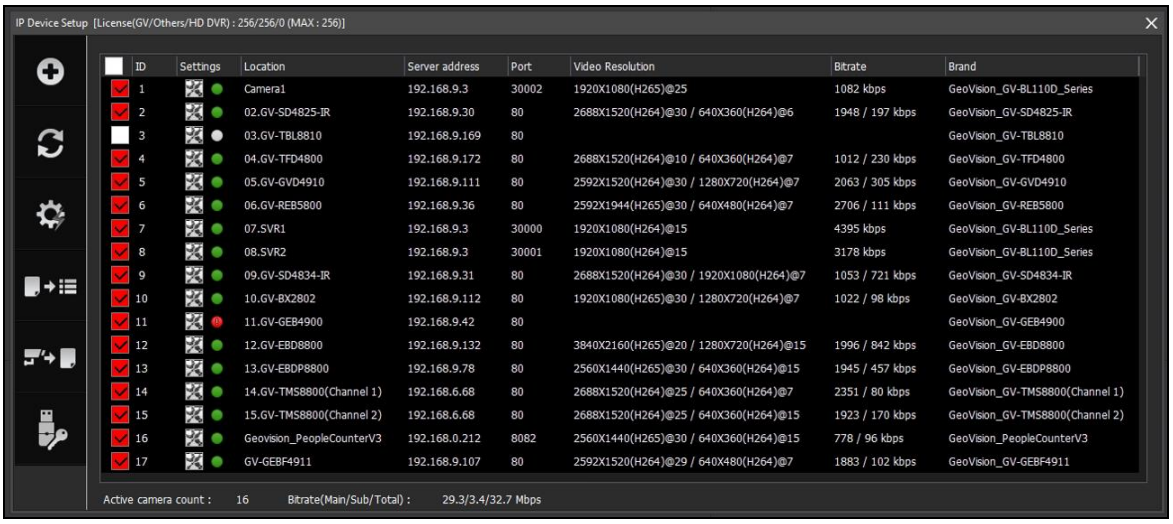
1. Click **Automatic Setup** to search for IP cameras on the LAN. Then select / deselect the desired cameras and click **Apply**.



2. Double-click the camera to specify its login credentials.



3. Cameras added are now listed in the IP Device List.



Status icons illustrated:

	**Connected**	The camera is connected.
	**Connecting**	GV-VMS is trying to connect to the camera.
	**Connection Failed**	Unable to connect to the camera. Move the cursor onto the red icon to see the error message.
	**Inactive Camera**	The camera is inactive. Click the checkbox to connect.
	**Started Monitoring**	The camera is under monitoring.
	**Pre-Rec Enabled**	Pre-recording is enabled.

4. To adjust camera settings, click the **Setup** button  of the connected camera. For details, see *3.2 Configuring Camera Settings*.
5. Close the dialog box. When adding a camera for the first time, the camera is automatically assigned to the live view grid.

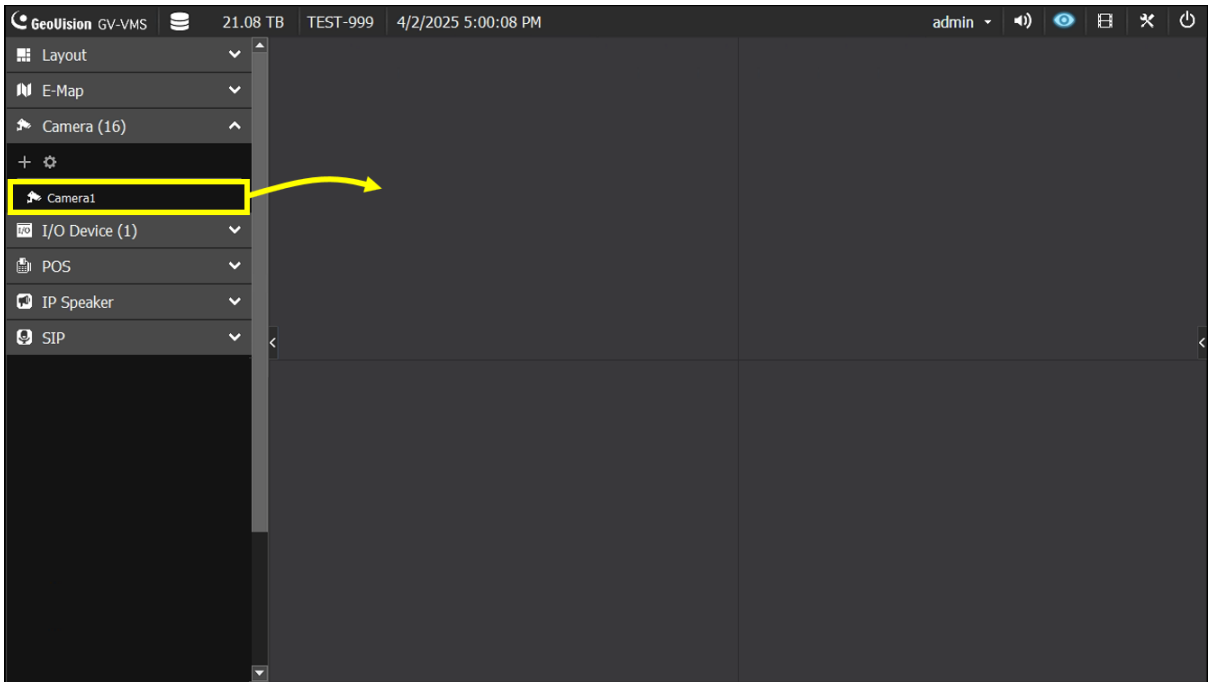
Note:

1. You can also access the IP Device Setup dialog box by clicking **Home**  > **Toolbar**  > **Configure**  > **Camera Install**.
2. If your IP device is not detected during the scan in Automatic Setup, click the **Add Camera** button  to add it manually.

2.2 Accessing Camera Live View

After adding cameras, you can access camera live view by dragging the camera in the Content List to the live view grid.

Select **Home** . In the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), click **Camera** to see the list of cameras added, and drag the desired cameras to the live view grid.



For details, see *Chapter 4 Live View*.

2.3 Start Monitoring

After setting up cameras and the live view, be sure to start monitoring the cameras to activate the following functions.

- Recording (See *3.1 Configuring Recording Settings*)
- Video Analysis (See *Chapter 5 Video Processing*)
- I/O Applications (See *7.1 Setting Up I/O Functions*)

To start the monitoring of connected cameras, click **Home** > **Toolbar** > **Monitor** > **Start All Monitoring** or select individual cameras.

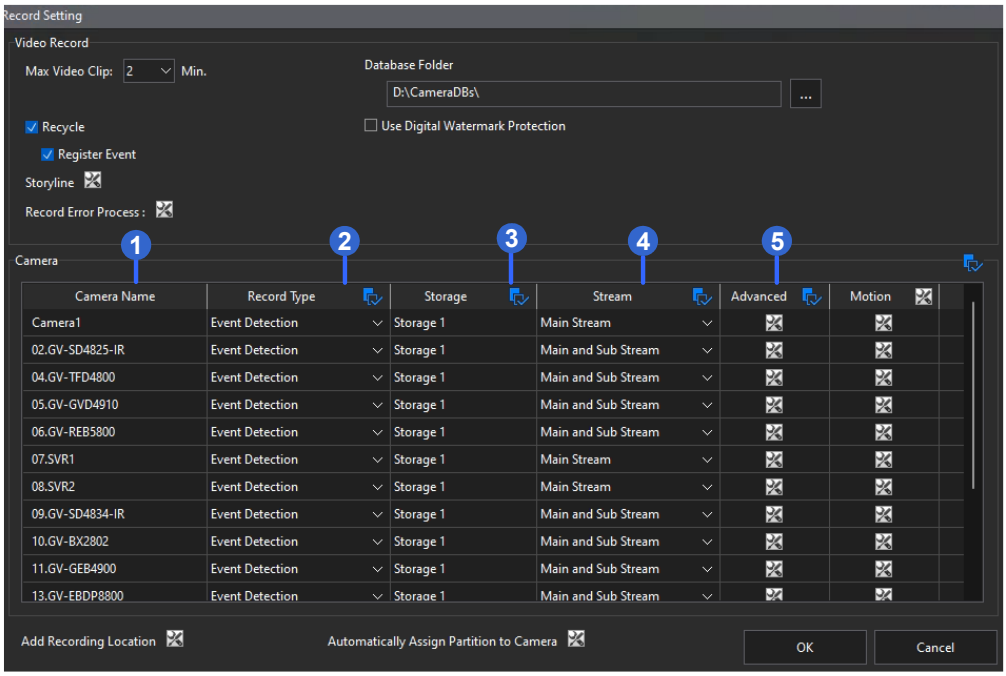
To see how to access recorded videos, refer to *Chapter 6 Video Playback and Backup*.

Note: If you have set a schedule, you can select **Start Schedule Monitoring**. The schedule takes precedence, and the functions listed above will enable and disable accordingly. See *7.2 Setting Up Schedules*.

Chapter 3 Camera Setup

3.1 Configuring Recording Settings

To configure the recording settings of connected cameras, click **Home** > **Toolbar** > **Configure** > **System Configure** > **Record Setting**.



1. Select the camera you want to configure.
2. Under **Record Type**, select **Disable**, **Event Detection**, or **Round-the-Clock**.
3. If there is more than one storage location, select a **Storage** to specify which storage group to store the recordings. To configure storage settings, click **Add Recording Location**.
4. Select the **Stream** you want to record. The default is set to **Main and Sub Stream** to record both streams simultaneously. Select **Main Stream** to record high-resolution videos. Select **Sub Stream** to record lower-resolution videos.
5. Under **Advanced**, you can set different recording frame rates. Select **Urgent Event** to record full frame rates or **General Event** to record key frames only. For details, see *Configuring Individual IP Cameras*, Chapter 2, *GV-VMS User's Manual V20*.

Note: By default, the Record Type is set to Event Detection and the Recycle function is enabled with the Recycle Threshold set to 32 GB.

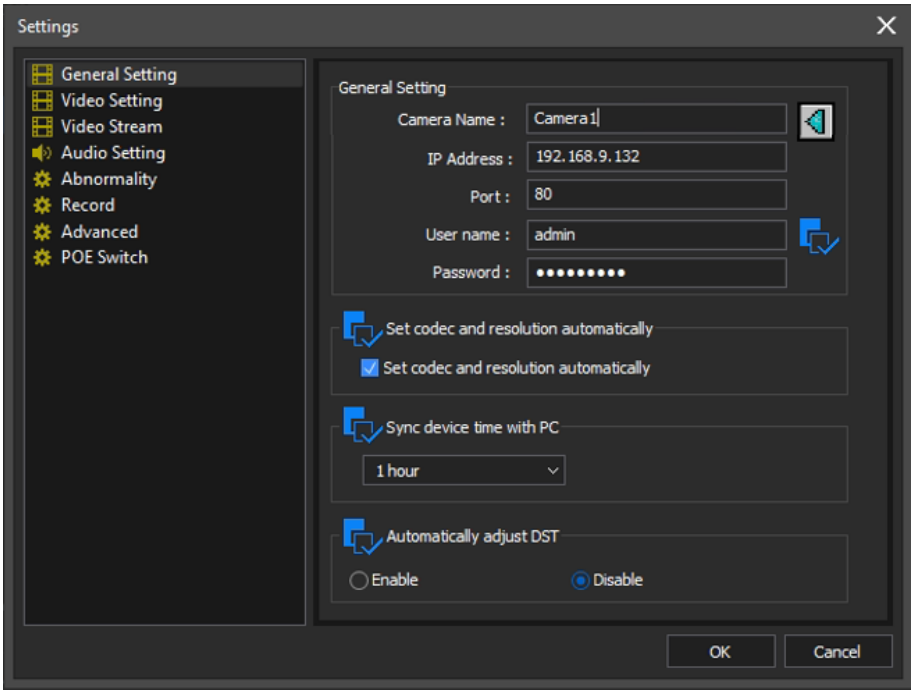
For details on Motion Detection settings, see *Setting Up Motion Detection*, Chapter 1, *GV-VMS User's Manual V20*.

3.2 Configuring Camera Settings

To configure camera settings, click the **Setup** button of an active camera in the IP Device List (**Home** > **Toolbar** > **Configure** > **Camera Install**). The settings available vary depending on the camera's firmware and whether the camera is connected or not.

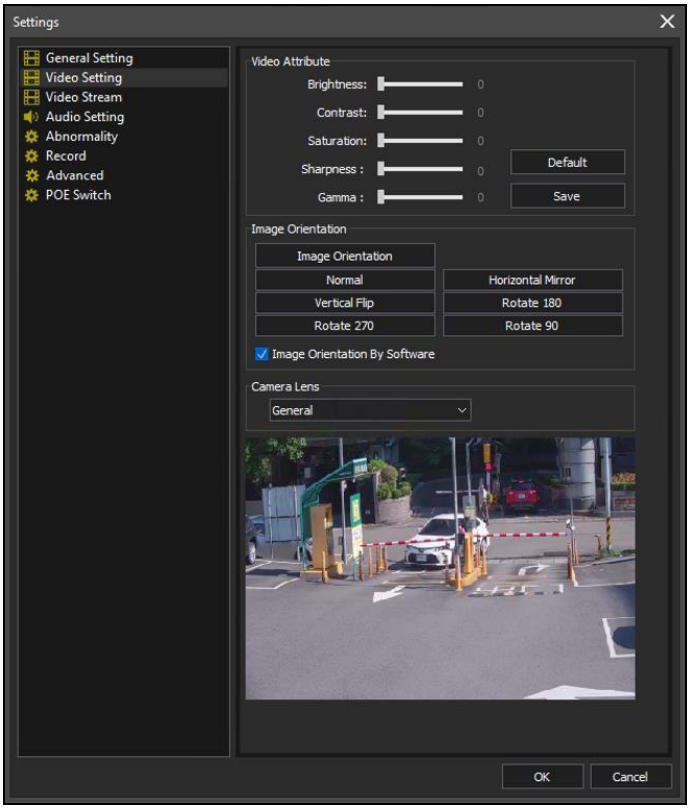
[General Settings]

In the General Settings dialog box, you can configure settings such as the camera name, auto-recovery of codec and resolution, time synchronization, and DST adjustment.



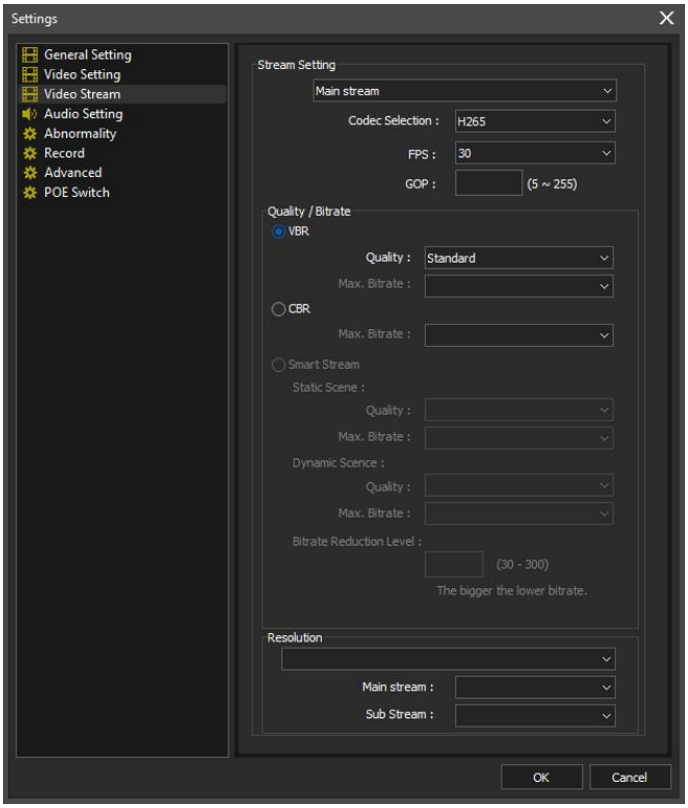
[Video Settings]

In the Video Settings dialog box, you can configure settings such as image attributes, orientation, and lens options. Note that changes made to the Video Settings dialog box will change the settings on the IP camera.



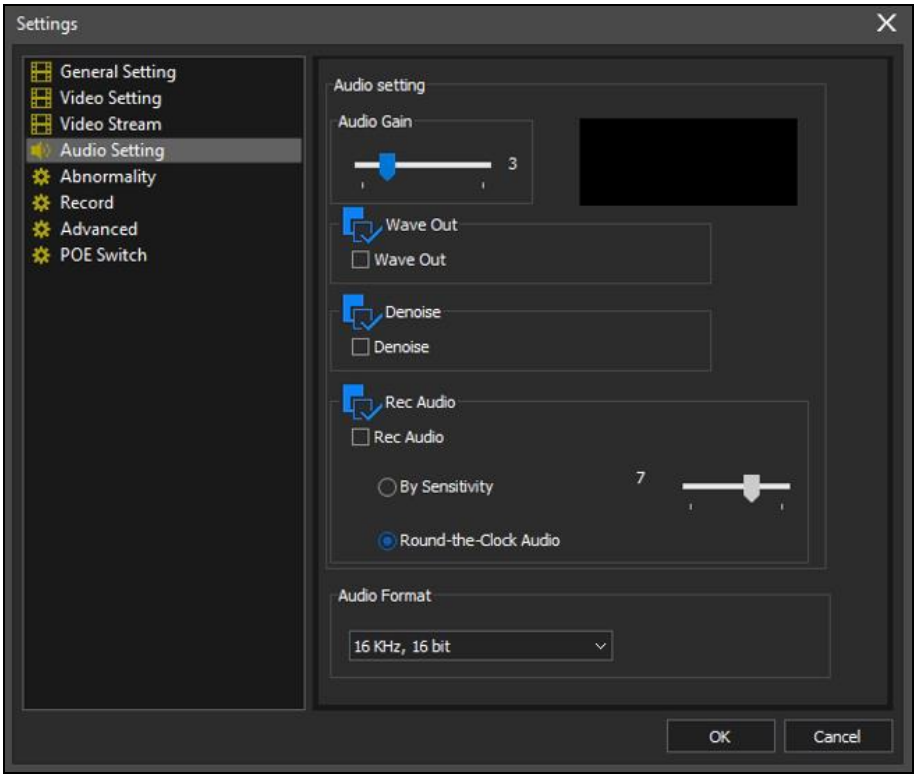
[Video Stream Settings]

In the Video Stream dialog box, you can configure settings such as codec type, frame rate, and camera resolution. Note that changes made to the Video Stream dialog box will change the settings on the IP camera.



[Audio Settings]

In the Audio Settings dialog box, you can adjust audio devices and listen to live sound.



1. To listen to the audio around the camera, enable **Wave Out**.
2. To record the audio around the camera, enable **Rec Audio** and select **By Sensitivity** or **Round-the-Clock Audio**.

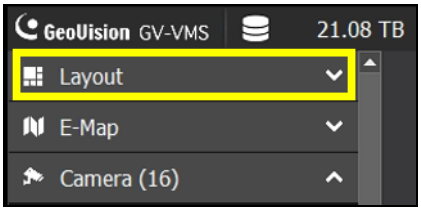
Note: After Wave Out is enabled here, you can enable audio by clicking the **Wave Out** icon  on the live view of the camera, or by right-clicking a camera in the Content List (No. 6 in *1.6 Main Screen of GV-VMS*) and selecting **Wave Out**.

For details on configuring camera settings, see *Configuring Individual IP Cameras*, Chapter 2, *GV-VMS User's Manual V20*.

Chapter 4 Live View

4.1 Arranging Live View Layouts

1. In the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), click **Layout**.



2. Under **Layout**, click **Add** ⊕, and select **Add Layout**. The Add New Layout dialog box appears.
3. Name the new layout and select one of the three available methods under Layout Setup to define a layout, and click **OK**.
4. If you select **Customize** in the step above, the Customize Layout dialog box appears.
   a. Click **Reset** to specify a dimension for the grid if needed.
   b. Select multiple squares and click **Merge** to create a larger square.
   c. Click **OK** when you are done.
5. A message appears. Click **Yes** if you want to automatically assign the cameras to the new layout.

4.2 Functions on the Live View

Place the mouse cursor on the camera live view to see the icons below.

Icons	Functions
Instant Play	Plays back the video recorded.
Snapshot	Captures a snapshot of the current live view.
Wave Out	Enables live view audio. See *Audio Settings* in Chapter 2.
Talk Back Toggle / Push-to-Talk	Talk to the surveillance site. For details, see [The behavior of the talk back button] in *Configuring General Settings*, Chapter 1, *GV-VMS User's Manual V20*.
Tools	Includes the following options: ■ **Monitor:** Starts monitoring the camera. ■ **Properties:** ◆ **Show Caption:** Shows camera name on live view. ◆ **Keep Image Ratio:** Locks the aspect ratio of the camera image. ■ **Close:** Removes the camera from the layout grid. The following options are available when the related function is enabled or supported: ■ **Storyline:** Records a sequence of short video clips of a specific incident. ■ **Add to Bookmark:** Bookmarks a scene to watch later in ViewLog player. The function is only available when the channel is recording. ■ **PTZ Control:** Enables PTZ functions. See *4.4 Setting Up PTZ Cameras*.

	■ **Measure Temperature:** For GV-TMEB5800 only. After the thermography rules are set up on the camera Web interface, select this option to trigger the alarms when the detected temperature exceeds the pre-defined threshold.
Zoom	Switches the live view to full screen. If there is a designated Zoom window, clicking the **Zoom** button will display the live view in the zoom window instead.
Volume Indicator	Display an audio volume indicator on the top-left corner of the camera live view. Click **Home** > **Toolbar** > **Tools** > **Audio** > **Show Volume Indicator**.
Note: When PTZ Control is enabled on a PTZ camera, double-clicking the live view will make the camera zoom in instead of switching to full screen.	

The live view screen can be controlled using the actions below.

Actions	Functions
Double-click	Toggles full-screen mode for the live view.
Mouse scroll	Zooms in or out on the live view.

4.2.1 Zoom Window

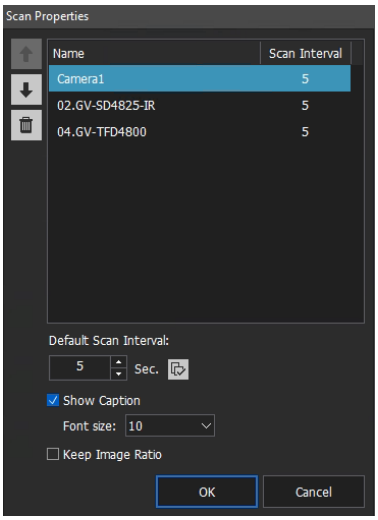
1. To designate a Zoom Window to see a close-up view of the camera without changing the live view layout, click **Layout** in the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), double-click **Windows**, and drag **Zoom Window** to a live view grid.
2. Move the mouse cursor to a camera live view and click **Zoom** in the top-right corner. The camera live view is displayed in the Zoom Window.
3. To remove the camera from the Zoom window, place the cursor on the live view, click **Tools** and select **Close**. To change the live view grid back to a normal window, repeat this step again to close the Zoom Window.

4.2.2 Scan Window

1. To assign multiple cameras to a Scan Window for sequential display, click **Layout** in the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), double-click **Windows**, and drag **Scan Window** to a live view grid.

2. Drag multiple cameras into the Scan Window.

3. Move the cursor to the Scan Window, click **Tools**, and select **Properties**. This dialog box appears.



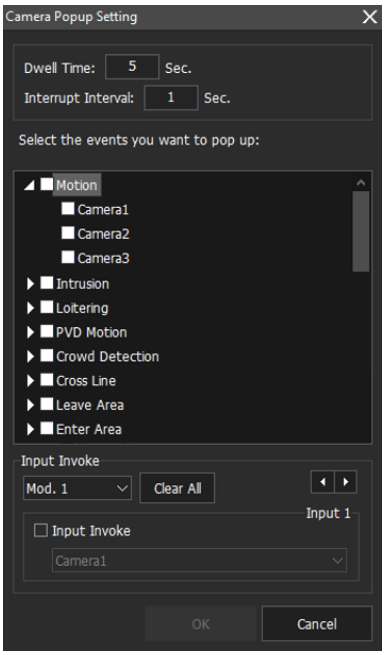
4. To adjust the order of a camera, select a camera and click **Up** and **Down**.

5. To specify how many seconds each camera is shown in the live view, select a camera and adjust its **Scan Interval**. Optionally click **Apply all** to apply this Scan Interval to all cameras.

4.2.3 Popup Window

You can designate a Popup Window to display live images of cameras, upon events, on a separate monitor. For this function to work, you must first create a live view layout on another monitor.

1. In the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), click **Layout** > **Add** + > **Add Layout** to create a new layout.
2. After clicking **OK**, optionally select a desired monitor from the **Apply to…** list to activate the layout on the designated monitor.
3. In the Content List, click **Layout**, right-click **Windows**, and click **Add camera popup window** to select the cameras to be displayed in the Popup Window.

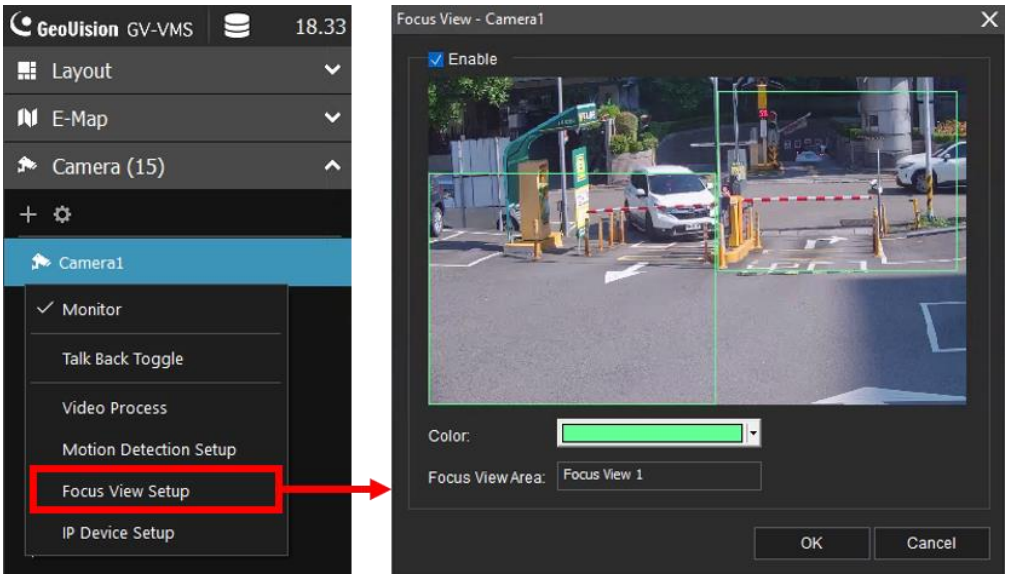


4. Rename the Popup Window if necessary, and drag the Popup Window from the Content List to the layout created.

4.2.4 Focus View

You can create up to 7 close-up views per camera and place these created close-up views inside the live view grid. This function is not supported for Fisheye and PTZ Cameras.

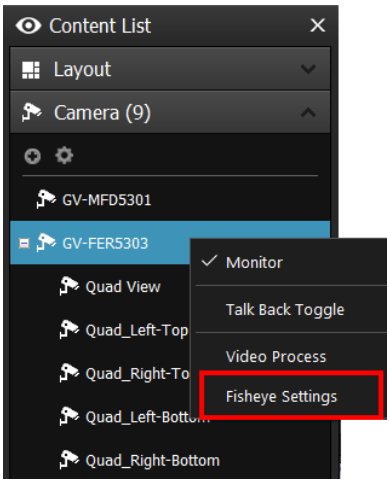
1. In the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), right-click a camera and select **Focus View Setup**. This dialog box appears.



2. Click **Enable** and draw a box on the camera view to create a focus view. You can create multiple focus views if needed.
3. Optionally click the **Color** drop-down list to change the color of the box.
4. Click **OK**. The created focus views are listed under the camera.
5. You can now drag the focus views to live view grids.

4.3 Setting Up Fisheye Cameras

1. To display the dewarped view, from the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), drag the fisheye camera (circular source image) or one of the dewarped fisheye images (e.g., Quad View) to the live view grid.
2. To change the fisheye settings, right-click the fisheye camera from the Content List, and then select **Fisheye Settings**. The Fisheye Setting dialog box appears.

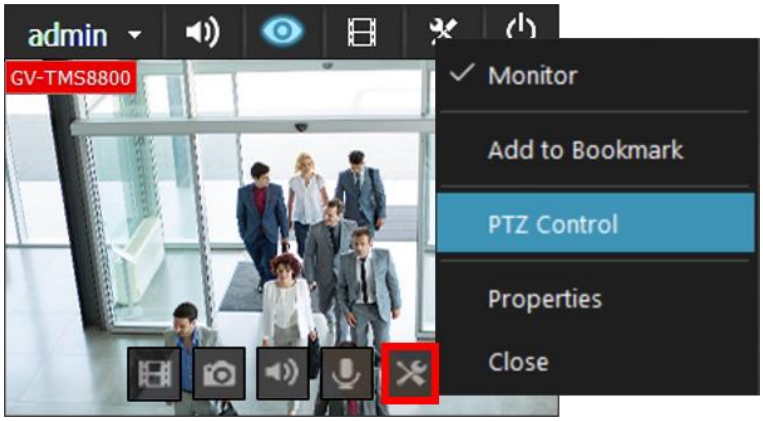


3. Right-click on the Fisheye Settings dialog box > **Fisheye Option** to access settings.

For details on the fisheye functions, see *Fisheye View*, Chapter 2, *GV-VMS User's Manual V20*.

4.4 Setting Up PTZ Cameras

1. Move the cursor to the camera live view of a connected PTZ camera and click **Tools** .



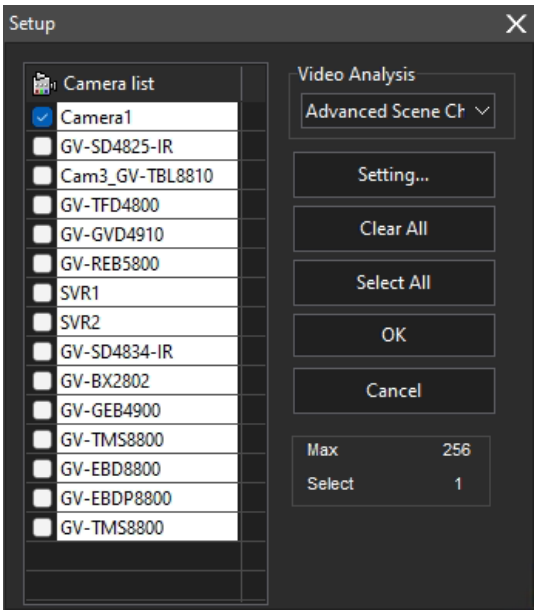
2. Click **PTZ Control** to enable the PTZ function.
3. You can control GV-IP Speed Domes using the following actions:
   - **Double-Click:** The camera will center on the spot you clicked.
   - **Drag:** You can select Random Move or Center Move after right-clicking the live view.
     - **Random Move:** Drag a line on the live view and the camera will move toward the direction you dragged.
     - **Center Move:** Drag a box on the live view and the camera will zoom in on the area you dragged.

For details, see *Accessing PTZ Control Panel and Auto Functions*, Chapter 2, *GV-VMS User's Manual V20*.

Chapter 5 Video Processing

GV-VMS offers a number of video processing functions. To configure video processing functions, follow the steps below.

1. Click **Home** > **Toolbar** > **Configure** > **Video Process**. This dialog box appears.



2. Select a function under **Video Analysis**.
3. In the Camera List, select the camera you want to configure.
4. Click the **Setting** button to access the configuration page.

For details on selecting event types for email notifications, see *Setting Up E-mail Notifications*, Chapter 1, *GV-VMS User's Manual V20*.

The following Video Processing functions are only enabled when you **start monitoring** on the cameras.

- Advanced Scene Change Detection
- Text Overlay Setting
- Privacy Mask Setup
- IPCVA (Video Analysis by Camera)

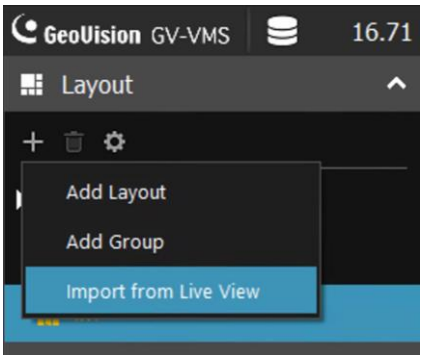
If you have set an AVP schedule, Video Processing functions will be enabled according to the schedule, regardless of monitoring. See *7.2 Setting Up Schedules* on how to set a schedule.

For details on video processing functions, see *Chapter 3 Video Analysis*, *GV-VMS User's Manual V20*.

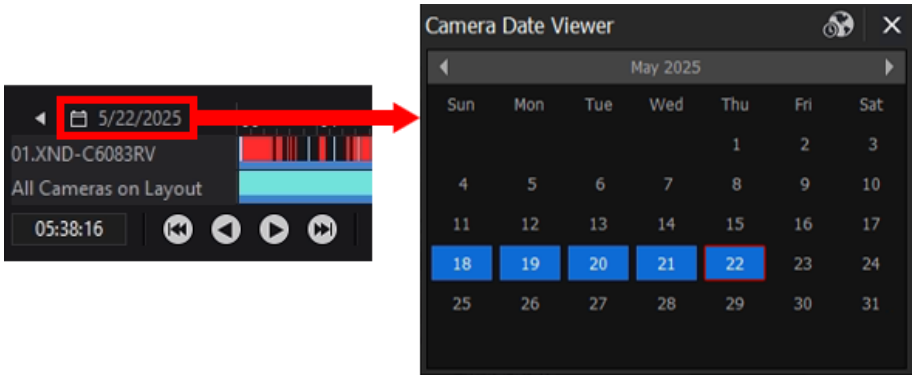
Chapter 6 Video Playback and Backup

6.1 Playing Back Recorded Videos

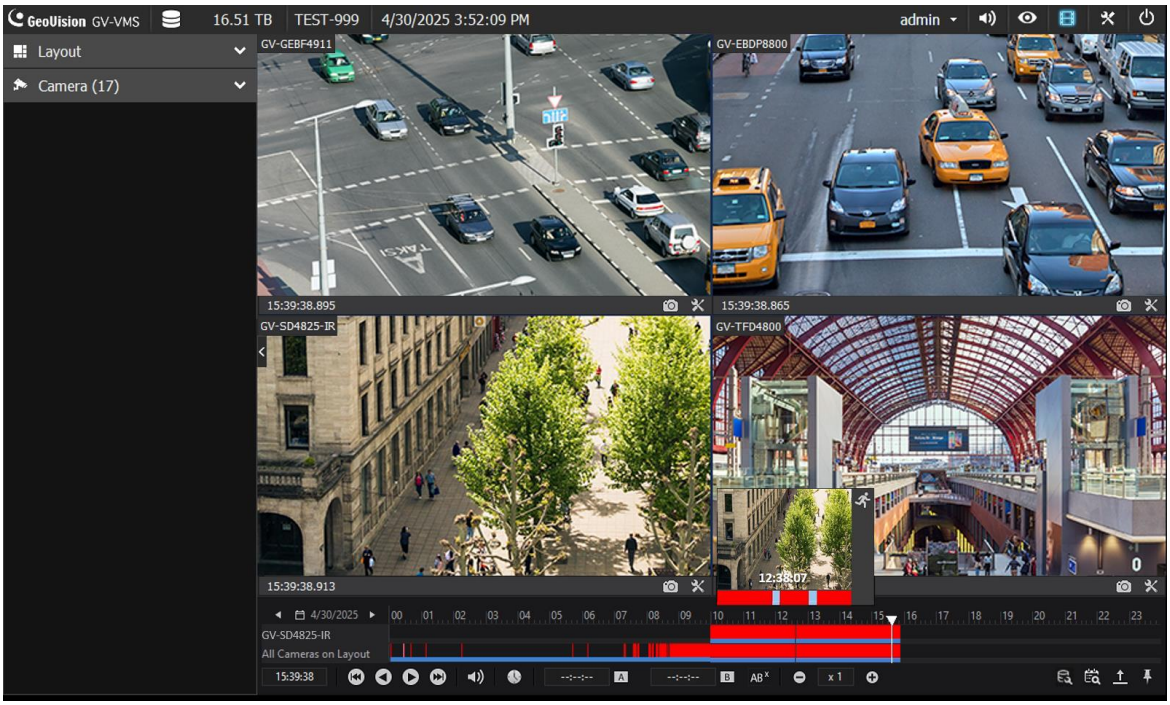
1. Select **ViewLog** .
2. In the Content List (No. 6 in *1.6 Main Screen of GV-VMS*), click **Layout** > **Add** > **Import from Live View** to import current live views to the playback screen.



3. Optionally drag and drop more cameras from the Content List to the playback screen.
4. On the timeline, click the arrows or the date to select a date from a popup calendar.



5. Click on the timeline to select a time with video recordings. You can scroll the mouse to zoom in and out on the timeline.
   - **Blue** areas: Round-the-clock / Audio recordings
   - **Red** areas: Motion / IO event recordings
   - **Green** areas: Never Recycle recordings
   - **Yellow** areas**:** Recordings retrieved from the SD cards of cameras when reconnecting after a temporary disconnection.
   - **Turquoise** areas**:** AI event / PVD Motion event recordings

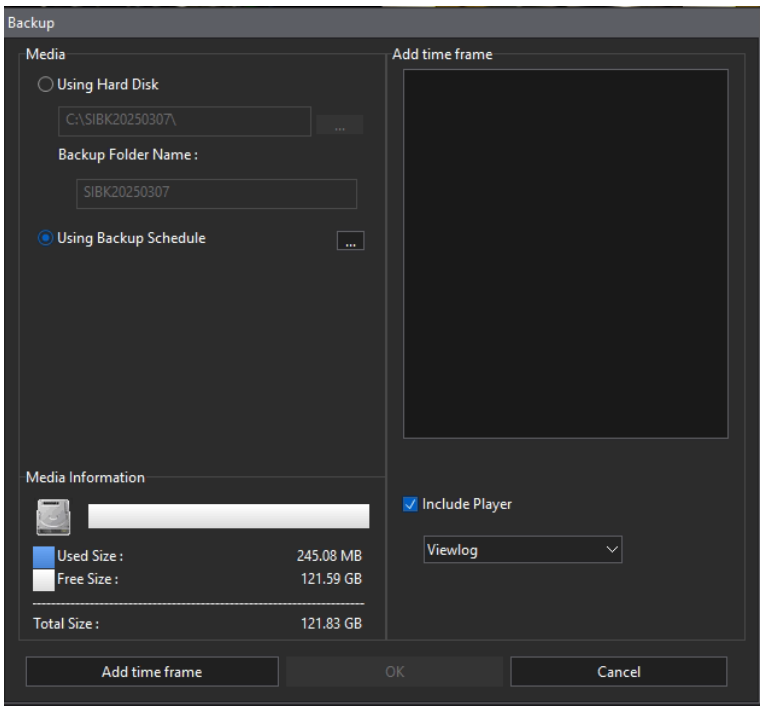


6. Use the playback control buttons to play back recordings. Place the cursor on the buttons to see the name of the function.
7. Click **Play**  to start playback.

For details, see *Chapter 4 Video Playback, GV-VMS User's Manual V20*.

6.2 Backing Up Recorded Videos

1. Click **ViewLog** > **Toolbar** > **Tools** > **Backup**. The Backup dialog box appears.



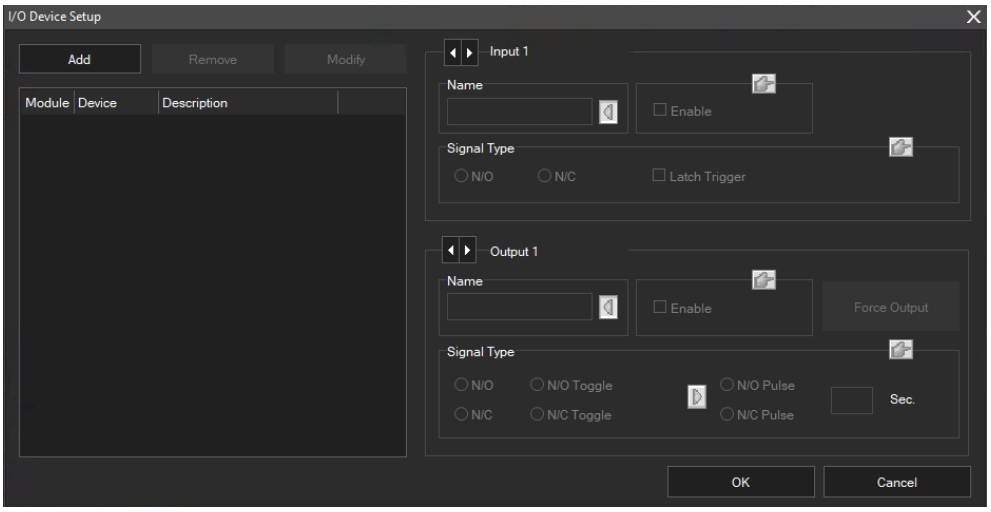
2. Select the destination media to back up files. To schedule backups to the local disk, select **Using Backup Schedule** and specify when the backup should run.
3. Click the **Add Time Frame** button to specify the time range of recorded videos to be backed up and define which files to back up. The Select Backup Time dialog box appears.
4. Click **OK** to add the time frame.
5. To include the player to the backup files, select **Include Player** at the bottom right of the Backup dialog box, and select **ViewLog** or **Single Player**.
6. Click **OK** in the Backup dialog box to start the backup.

For details on backing up files, see *Backing Up Recorded Files*, Chapter 5, *GV-VMS User's Manual V20*.

Chapter 7 Other Important Features

7.1 Setting Up I/O Functions

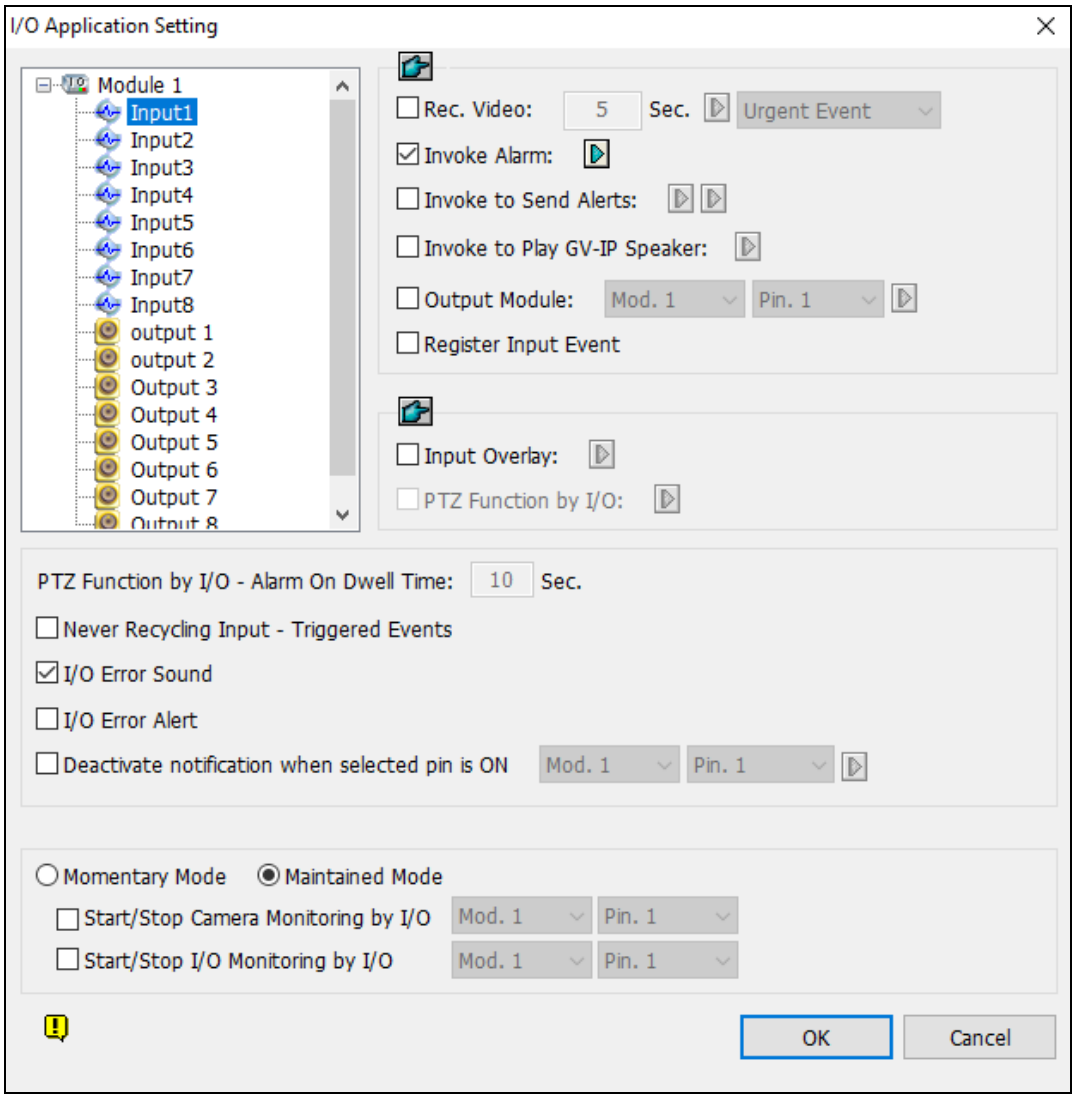
1. To set up I/O devices on GV-VMS, click **Home** > **Toolbar** > **Configure** > **Accessories** > **I/O Device** (if available) > **I/O Device Setup**.



Note: The **I/O Device** option only appears after at least one I/O device has been added.

2. Click **Add**. Then select **I/O Box (USB)**, **IP Device**, **I/O Box (IP)**, or **PLC I/O** and configure its connection settings.
3. For I/O devices connected through USB, you can configure **Signal Type** and **Latch Trigger** on GV-VMS.

4. After the I/O devices are added, click **Home** > **Toolbar** > **Configure** > **Accessories** > **I/O Device** (if available) > **I/O Application Setting**. This dialog box appears.



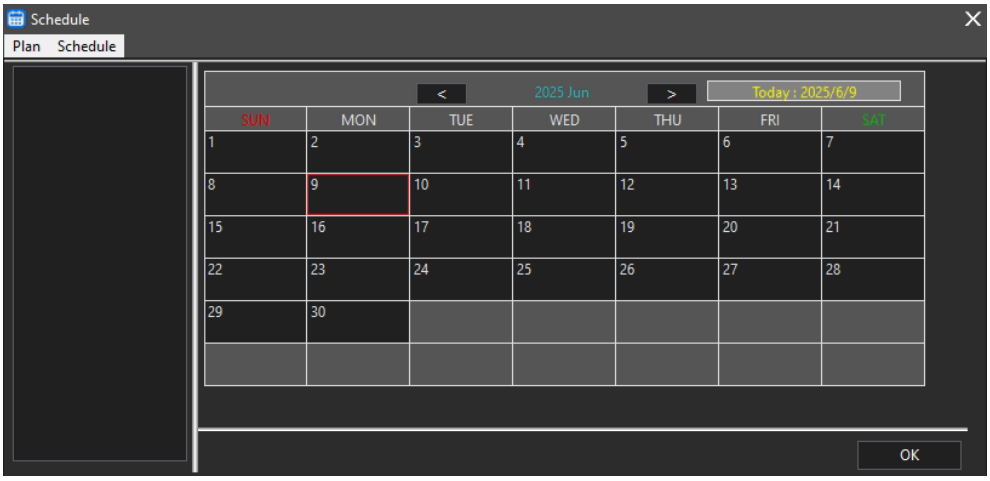
5. Select an I/O device and specify the actions to take when the device is triggered.
6. Click **OK** to apply the settings.
7. To activate I/O functions after applying the settings, click **Home** > **Toolbar** > **Monitor** > **I/O Monitoring** or **Start All Monitoring**.

For details on I/O setup, see *Chapter 6 I/O Applications*, *GV-VMS User's Manual V20*.

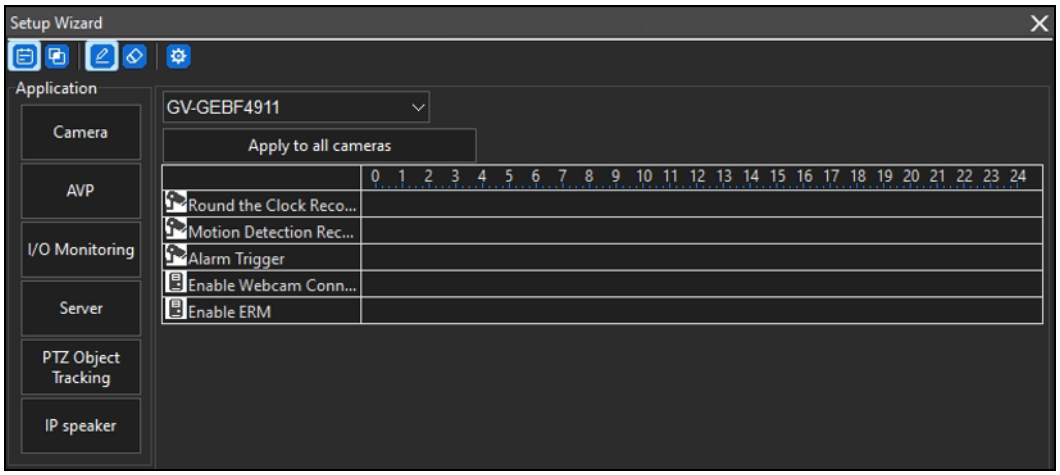
7.2 Setting Up Schedules

You can create schedules to enable and disable the following functions at specific times of a day: Recording, Motion Event Trigger, PTZ Auto Functions, Video Analysis, I/O Monitoring, Network Connections with GV-WebCam Server / Edge Recording Manager / Center V2 / Vital Sign Monitor / Mobile Service, PTZ Object Tracking, and Audio Playback on GV-IP Speakers.

1. Click **Home** > **Toolbar** > **Configure** > **Schedule Edit**. The Schedule dialog box appears.

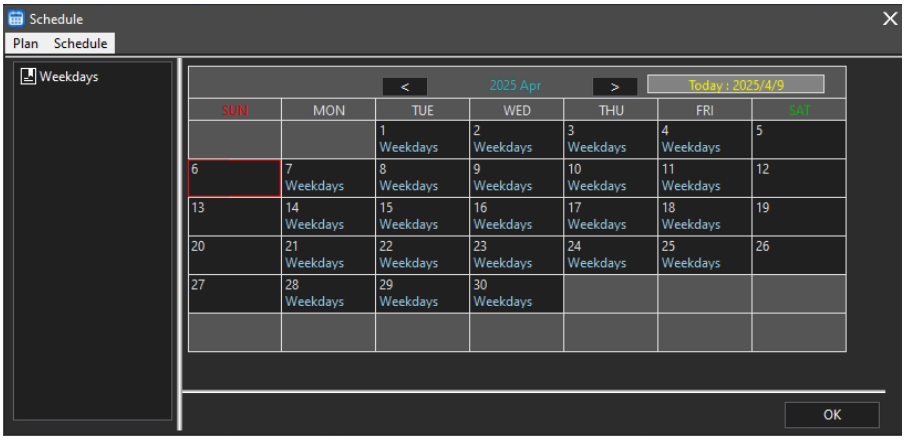


2. Click **Schedule** and select **Setup Wizard**. The Setup Wizard dialog box appears.
3. Specify when to apply the schedule plan and click **Next**.
4. Name the schedule plan and click **Next**.
5. Select a button on the left (**Camera**, **AVP**, **I/O Monitoring**, **Server**, **PTZ Object Tracking**, or **IP Speaker**), and drag across the timeline to enable the function during the specified time.



To set a recording schedule, click **Camera**, select a camera, and drag across the desired time periods to specify how the camera is monitored throughout the day.

6. Click **Next** and **Finish** when you are done. The plan created appears on the calendar.



Tip:

1. You can add multiple plans to the calendar.
2. You can also apply a plan to a date by dragging it from the left panel and dropping it onto the calendar on the right.

7. Click **Home** > **Toolbar** > **Monitor** > **Start Schedule Monitoring**.

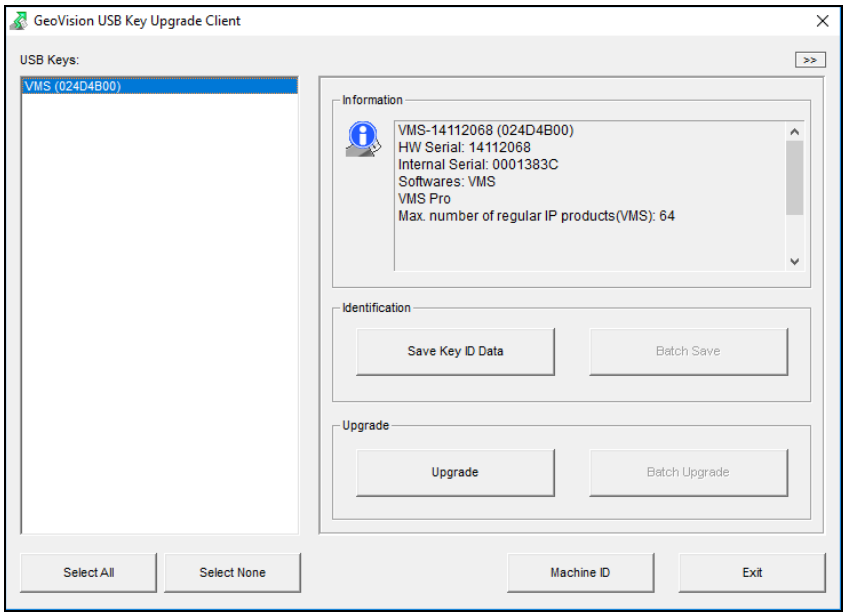
For details on setting the schedule, see *Schedule*, Chapter 1, *GV-VMS User's Manual V20*.

Chapter 8 Dongle Upgrade

GV-USB Dongle can be upgraded to include more functions or enhance the system. You need to collect the data from your dongle and send it back to GeoVision for an upgrade. Note that upgrades are a paid service. To upgrade your dongle, follow these steps:

1. Each dongle has its own serial number. Find it on the side of the dongle. Later, this serial number will be used in naming the files for upgrading.

2. Insert the dongle to the computer.
3. In the software folder, double-click **GVUsbKeyUpClient.exe**. This dialog box appears.



4. To retrieve the data from the dongle, click **Select All**. The information of the dongle will be displayed in the information field. Note that the displayed number of **HW Serial** should be the same as that on the dongle.

5. To save the data to your local computer, click **Save Key ID Data**. If you have more than one dongle to upgrade, click **Batch Save**. Different dongle data will be saved as separate files. The file will be named after the serial number on the dongle and saved as *.out. For example, if a dongle serial number is 7116442, the file is named “VMS-7116442.out”.
6. Send this *.out file to GeoVision at sales@geovision.com.tw. The GeoVision will examine the data file and send a corresponding *.in file back to you. The file name also includes the serial number of that dongle. In this example, the data file to be sent back is named “VMS-7116442.in”.
7. After receiving the updated *.in file, insert the corresponding dongle that matches the file, and then run **GVUsbKeyUpClient.exe**.
8. Click **Select All** to detect the dongle, click **Upgrade**, and then open the updated *.in file to upgrade the dongle. You can also select more than one dongle in the list and click **Batch Upgrade** to upgrade them at the same time. Make sure these dongles match the updated *.in files you received.