

GV-VMS

New Feature Guide V18.1





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

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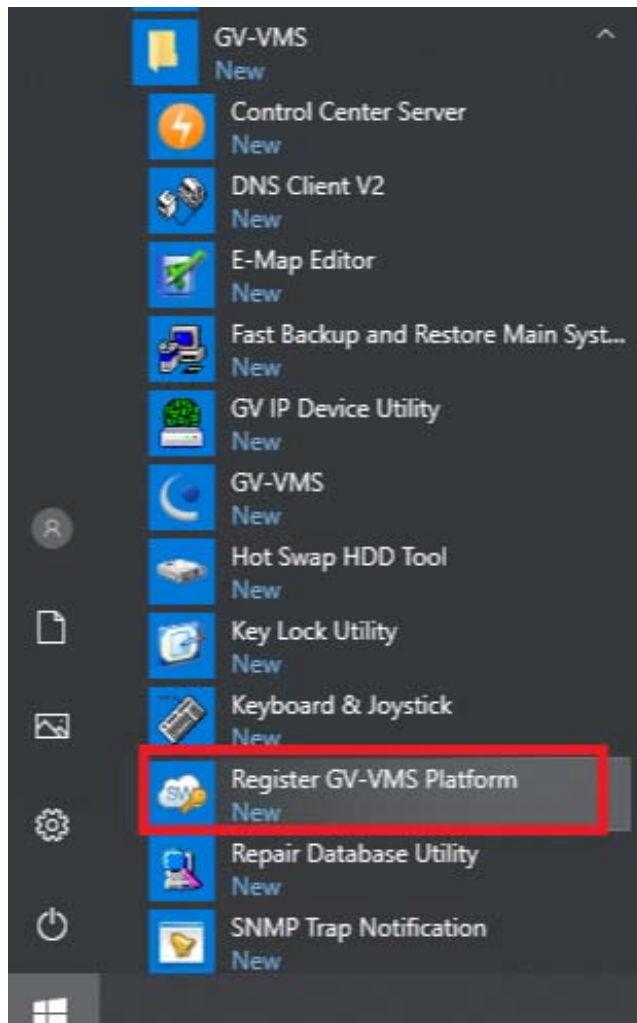
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GV-VMS V18.1 Licensing

Starting from V18.1, GV-VMS requires a purchased license to run. Make sure your purchased GV-Dongle or software license has been inserted into or activated on the PC prior to running GV-VMS.

IMPORTANT: For users who have purchased a software license, it must be registered through the **License Activation Tool** using the corresponding serial key. For details on software licensing, click [here](#).



Note: For users with GV-Dongle of earlier versions of GV-VMS, it must be upgraded to run V18.1 or later. See *Chapter 8 Dongle Upgrade* in [GV-VMS Quick Start Guide](#).

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1. Main System





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

1.1 Camera Setup

GV-VMS V18.1 provides a number of new features for connecting to and/or managing its connected IP devices, as listed below:

- Support for GV-AI FR, an 8-channel video analytic server for face recognition. To connect GV-AI FR to GV-VMS, see *5.1 Connecting to GV-VMS* in [GV-AI FR User's Manual](#).
- Support for GV-Live Streaming for connecting to and streaming from the built-in cameras of Android / iOS mobile devices. See [GV-Live Streaming Installation Guide](#) for details.
- Use the built-in motion detection of the camera connected as opposed to that of the GV-VMS. See *1.1.1 Enabling Camera-built-in Motion Detection*.
- Retrieve and restore recordings from connected camera's SD card upon reconnection after any temporary disconnection. See *1.1.2 Enabling Video Repair from SD Card*.

1.1.1 Enabling Camera-built-in Motion Detection

By default, all cameras connected to GV-VMS use the motion detection function of GV-VMS. To use the built-in motion detection function of the camera instead, click **Setting**  next to the desired camera in **Record Setting (Home**  **> Toolbar**  **> Configure**  **> System Configure > Record Setting**). This dialog box appears.

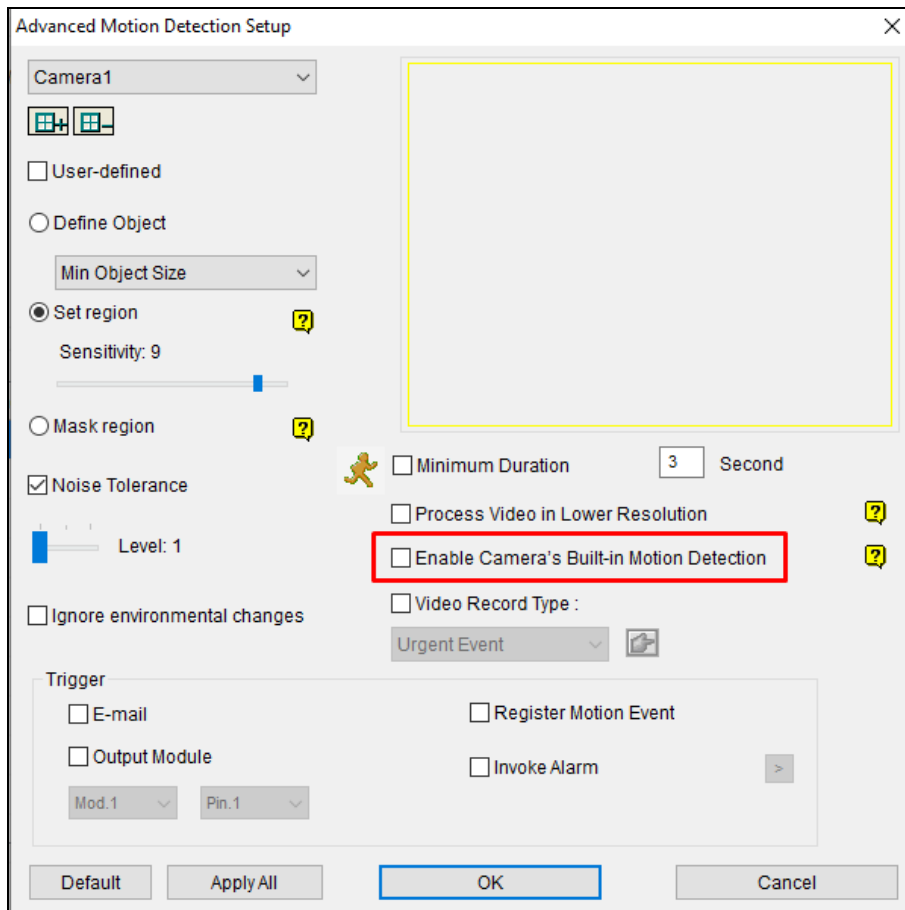


Figure 1-1

Select to **Enable Camera's Built-in Motion Detection**. Click **OK**.

1.1.2 Enabling Video Repair from SD Card

For GV-IP Cameras with SD cards, GV-VMS is able to retrieve and restore recordings from the SD cards after resuming from a temporary disconnection. To do this, click **Home** > **Toolbar** > **Configure** > **System Configure** > **Record Setting**. This dialog box appears.

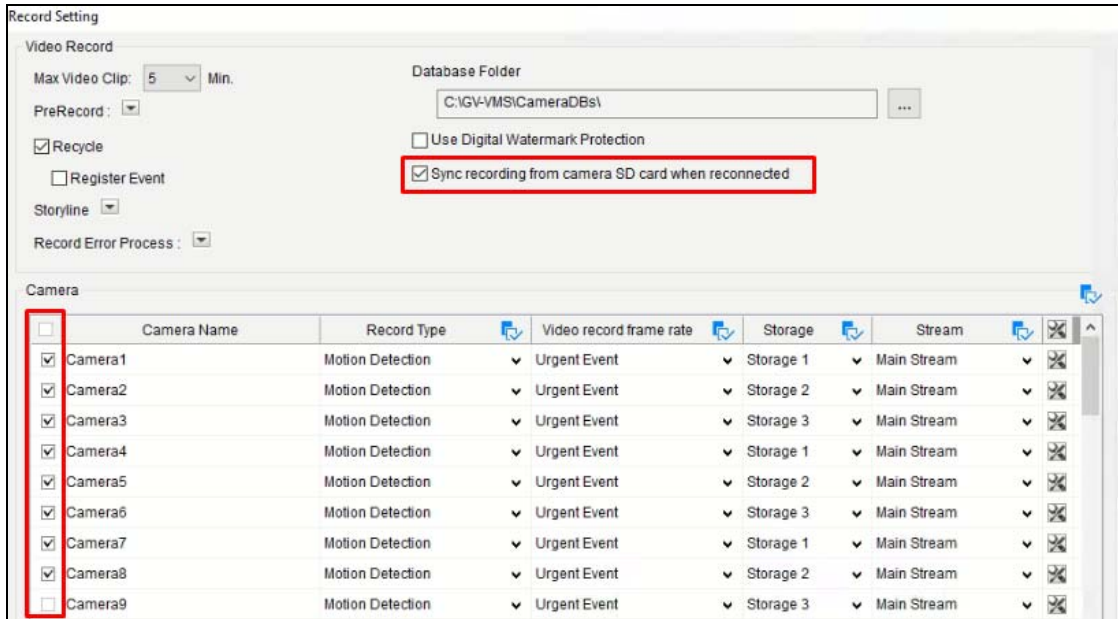


Figure 1-2

Select **Sync recording from camera SD card when reconnected** to enable, and select the cameras to be applied to under **Camera**.

Click **OK**.

Recordings that are synced from the SD cards of recorded cameras are displayed in yellow within the Timeline of ViewLog.

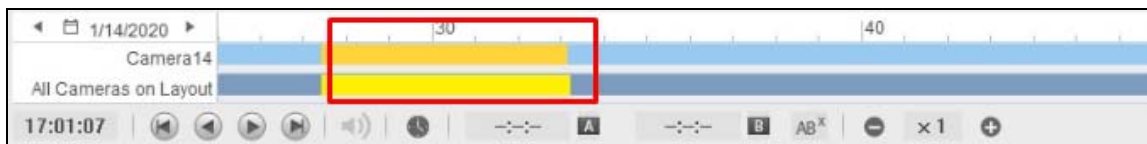



Figure 1-3

Note: This function is not supported by GV-ABL / AVD / EBD / TBL / TDR / TVD series and ONVIF cameras not of Profile G conformant.

1.2 Adding GV-IP Decoder Box for Remote Display

GV-VMS V18.1 is able to connect to GV-IP Decoder Box for assigning the desired camera channels to be displayed on the GV-IP Decoder Box for remote monitor display. To do this, follow the steps below:

Note: This function is only supported by GV-IP Decoder Box Plus / Ultra with firmware version V1.02 or later.

1. In the Content List, (**Home**  > **Toolbar**  > **Content List**), right-click **Decoder Box** within **Layout** and select **Add Decoder Box**.

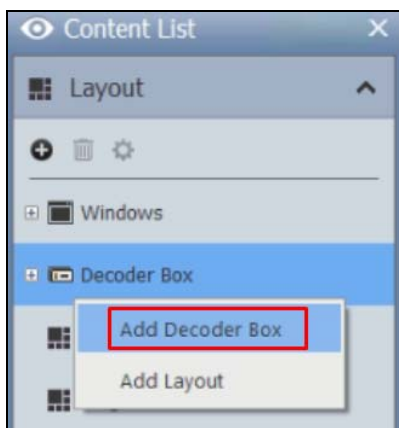


Figure 1-4

2. Type a desired **Name** for the GV-IP Decoder Box you're connecting to, its **IP Address**, **Port**, **ID** and **Password**, and click **OK** to add it to GV-VMS.

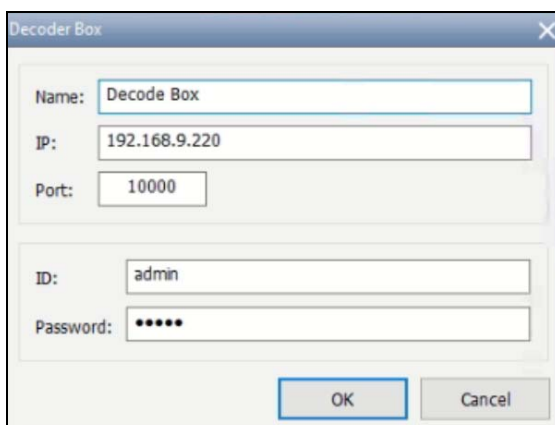


Figure 1-5

3. Once added, you're prompted to set the layout of the GV-IP Decoder Box. Click **OK**. The **Layout Setup** dialog box appears.

4. Select a desired layout at the top, and drag the desired camera channels of GV-VMS to each of the layout divisions. When two or camera channels are assigned to the same division, their live views will be displayed within the division in sequential order.

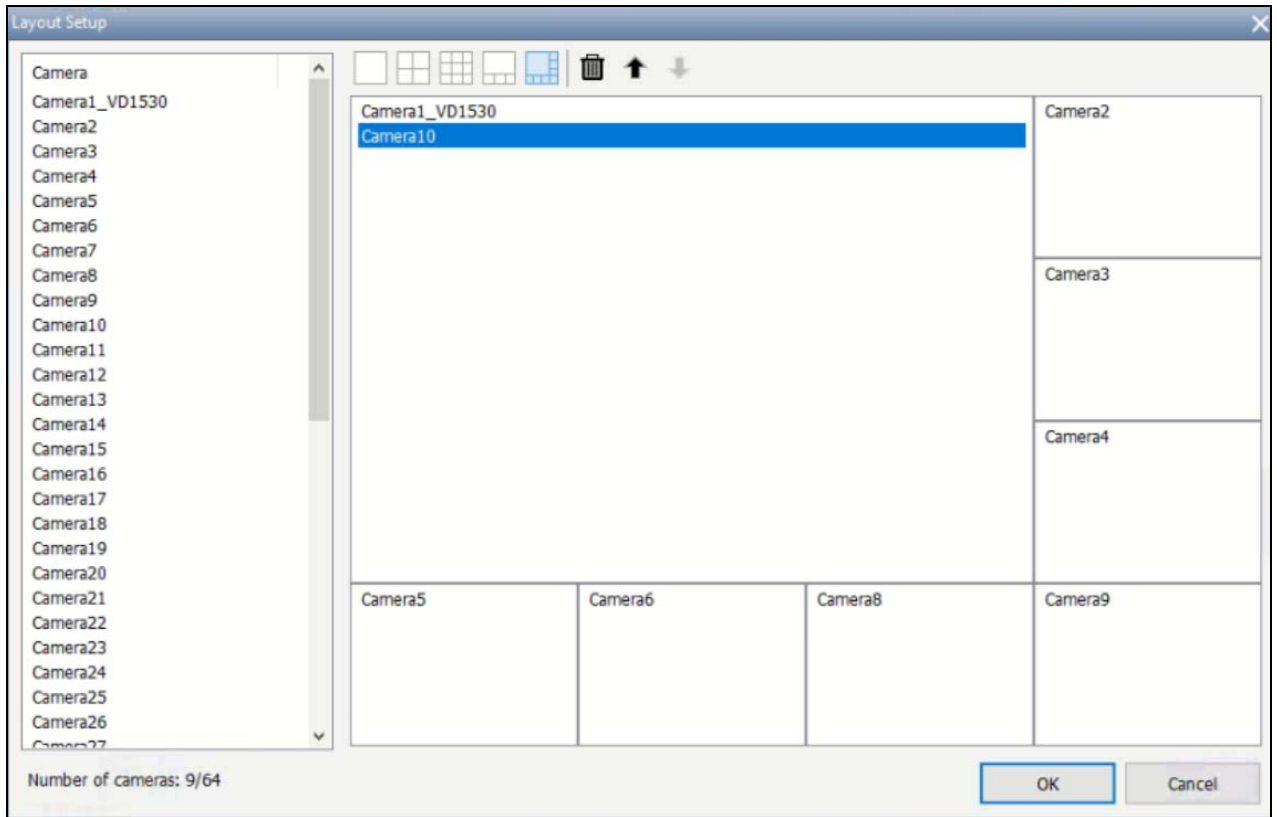


Figure 1-6

5. Optionally select a camera channel within a division to adjust its display order or remove it by using the **Up** ↑, **Down** ↓ or **Delete** 🗑️ buttons.
6. Click **OK**. The GV-IP Decoder Box added will display the camera channels assigned as configured.
7. Users can add more layouts for the GV-IP Decoder Box and alternate between them by right-clicking **Decoder Box** and clicking **Add Layout**, and right-clicking a layout, clicking **Apply to...** and selecting the decoder box, respectively.

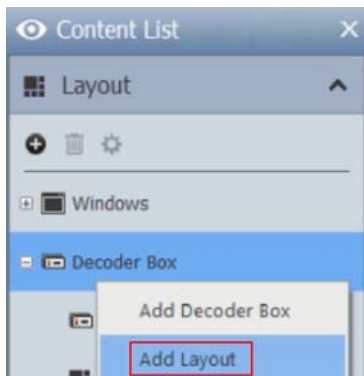


Figure 1-7

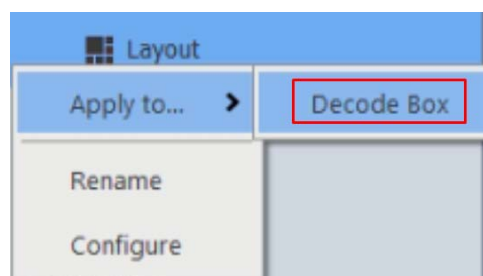


Figure 1-8

2 Video Analysis

This chapter introduces the new features and enhancement of Video Analysis.



2.1 Face Recognition

GV-VMS V18.1 further empowers its Face Recognition mechanism for supporting **GV-AI FR** and by introducing a number of new features, as follows:

- Integrate Face Manager tool for managing face data for all GV-Face Recognition Cameras and/or GV-AI FRs connected. See *2.1.1 Accessing Face Manager*.
- Enroll faces directly from the live and/or recorded images of connected cameras (**not limited to GV-Face Recognition Cameras / GV-AI FR**). See *2.1.2 Enrolling Faces from Live View / ViewLog*.
- Synchronize selective Face IDs from and to the desired GV-Face Recognition Cameras / GV-AI FR. See *2.1.3 Synchronizing Selective Face IDs*.
- Display live recognition profiles upon face recognition events, which can be color-coded by group. See *2.1.5 Face ID — Live Recognition Profiles*.
- Filter and search for face recognition events. See *2.1.6 Searching for Recognition Events*.
- Pair Face IDs with access cards for controller-regulated access control. See *2.2 Integrating Face Recognition to Access Control*.
- Batch face and access data enrollment through Face Config Tool. See *2.3 Batch Enrolling Faces and Access Data*.

2.1.1 Accessing Face Manager

Face Manager is a convenient tool built into GV-VMS for managing face data for all GeoVision face recognition devices connected, without the need of additional installation.

To access Face Manager, click **Home**  > **Toolbar**  > **Configure**  and select **Face Manager**. The Face Manager window appears.

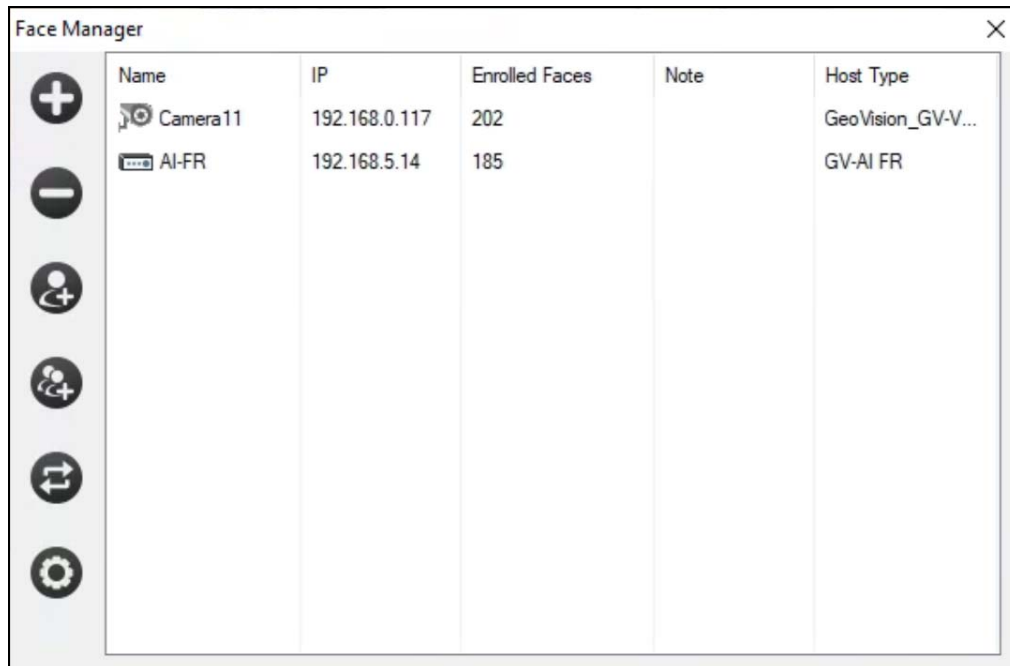





Figure 2-1

All GV-Face Recognition Cameras connected to the GV-VMS are automatically added into Face Manager with the corresponding camera channels as their host names, while GV-AI FR can be added manually.

For details, see *Chapter 5 GV-VMS Integration* in [GV-AI FR User's Manual](#).

2.1.2 Enrolling Faces from Live View / ViewLog

1. In Live View / ViewLog, click **Snapshot**  at the bottom of a desired channel, select **Face Enroll** , select a desired resolution and click . The Quick Enroll window appears.

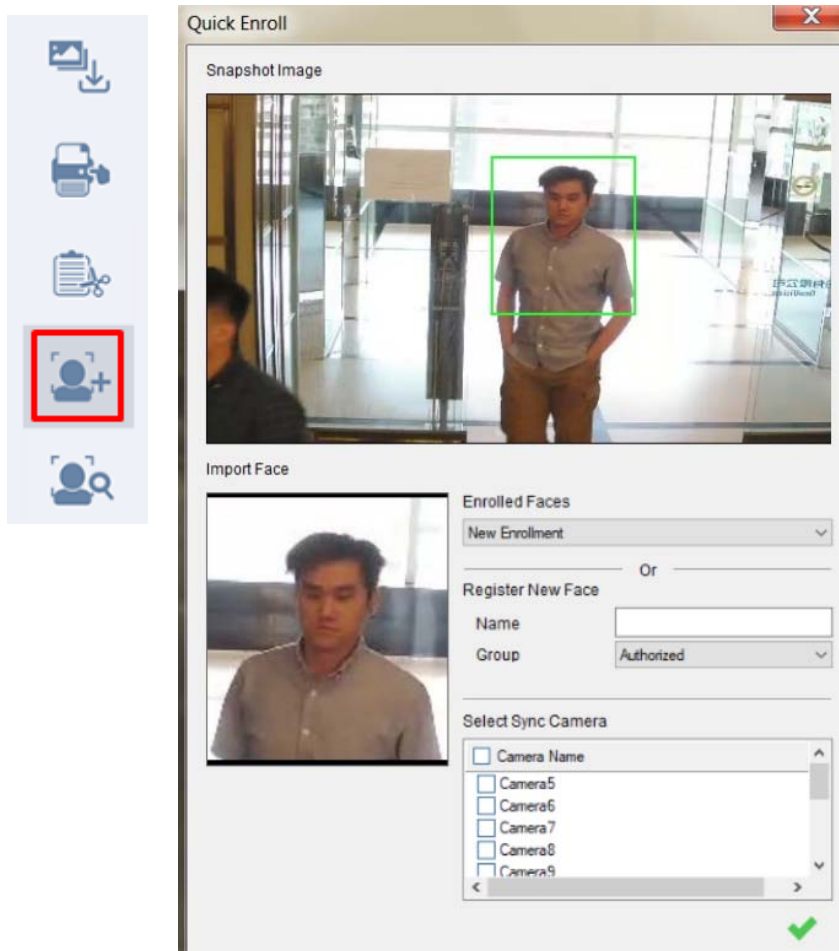







Figure 2-2

2. Click and drag on the image to highlight the face you want to enroll as a **snapshot**.
3. Select **New Enrollment**, type the desired name under **Register New Face** to create a new Face ID and select a **Face Group** to add it under. Otherwise select an existing one for the face image to be added to.
4. Select the desired GV-Face Recognition Camera / GV-AI FR for the face enrollment under **Select Sync Camera**.
5. Click  to save.

2.1.3 Synchronizing Selective Face IDs

When synchronizing the Face Databases of multiple GV-Face Recognition Camera / GV-AI FR, you can now specify the Face IDs to be synchronized, instead of the whole database, after selecting the cameras under **Face Database Synchronization (Home  > Toolbar  > Configure  > Face Manager > Face Database Synchronization ).**

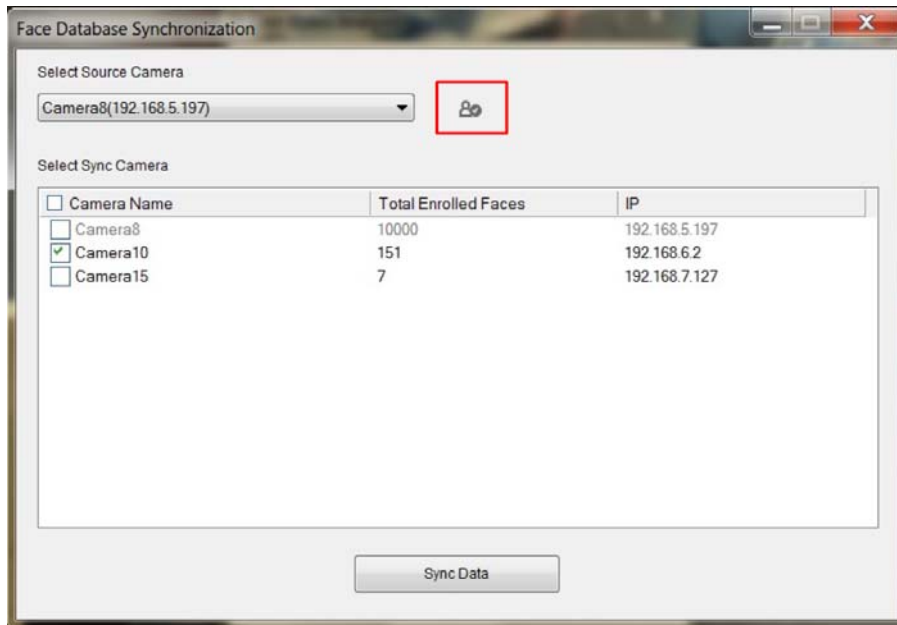



Figure 2-3

- **Select Sync Faces **: Optionally select the desired Face IDs and/or the desired Face Groups to be synchronized from the source camera.

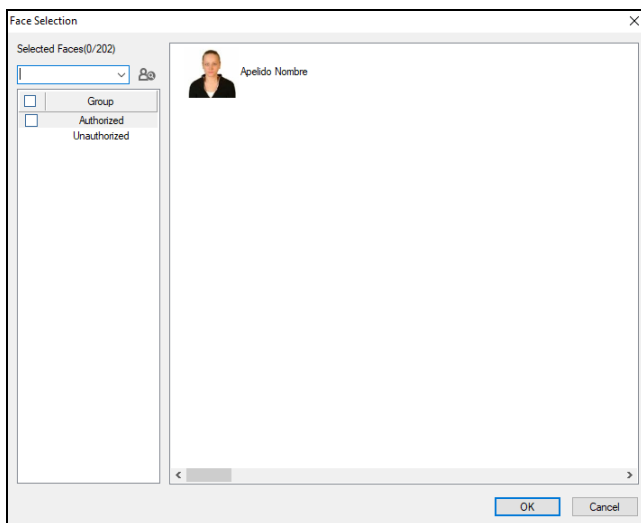





Figure 2-4

For details, see *Synchronizing Face Database*, Chapter 3, in [GV-VMS User's Manual](#).

2.1.4 Triggering Alarms and Running Programs

In addition to the options of sending e-mail alerts and triggering output devices using Face Recognition, you can now also choose to invoke audio alarms on the GV-VMS, send alerts to GV-Notify app or execute a program of .exe or .bat format through **Camera & Alert Settings** on **Face Manager (Home  > Toolbar  > Configure  > Face Manager).**

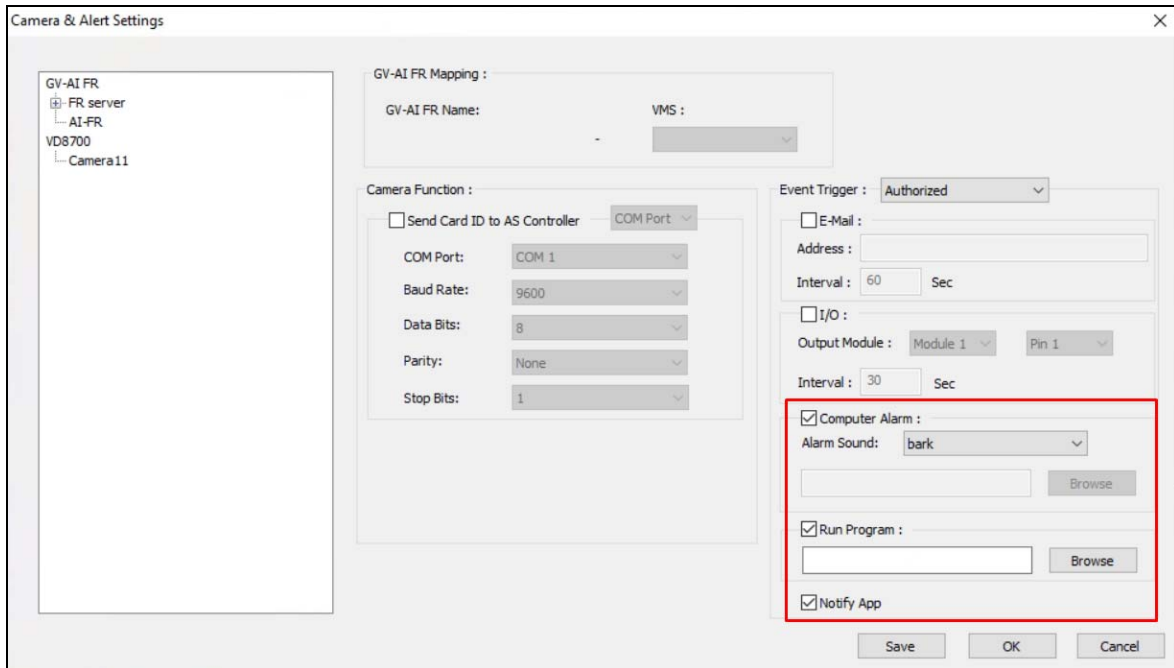


Figure 2-5

Select **Computer Alarm**, **Run Program** and/or **Notify App** to respectively invoke an audio alarm, execute a desired application and/or send an alert to GV-Notify app for Android/iOS upon face recognition events. For details, see *Configuring Face Setting*, Chapter 3, in [GV-VMS User's Manual](#).

2.1.4.1 Triggering by Unknown Faces

You can now use unknown recognition events to send e-mail notifications and/or trigger output / audio alarms by selecting **Unknown Alert** in the **Event Trigger** drop-down list.

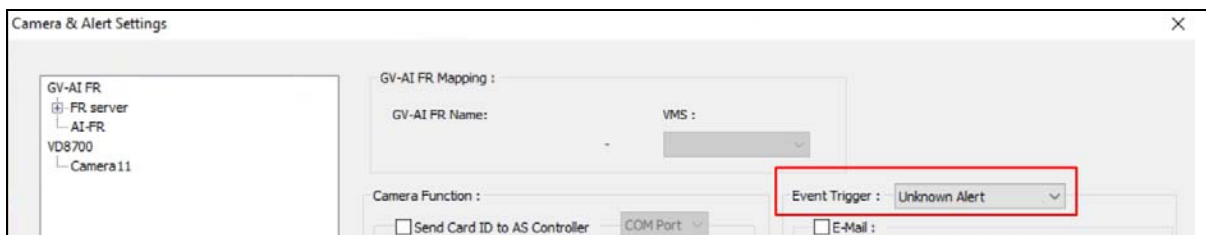


Figure 2-6

For details, see *Configuring Face Setting*, Chapter 3, in [GV-VMS User's Manual](#).

2.1.5 Face ID — Live Recognition Profiles

The Face ID feature allows users to view the simplified info of real-time face recognition events, including the name of the person, his/her face group, camera channel and the time of recognition, on the GV-VMS upon recognition.

Note: This function only works when at least one GV-Face Recognition Camera / GV-AI FR is recording.





To access **Face ID**, click **Home** , **Toolbar** , select **Tools**  and click **Face ID**. The following window appears.



Figure 2-7

Color-coding Face Groups

For quickly identifying certain face groups in the Face ID window upon face recognition, GV-VMS has added a color feature within **Group Setting** for users to assign colors to the desired groups, such as *Authorized*, *Unauthorized* and *Unknown*.

1. In **Face Manager** (**Home**  > **Toolbar**  > **Configure**  > **Face Manager**), click **Face Group** . This dialog box appears.

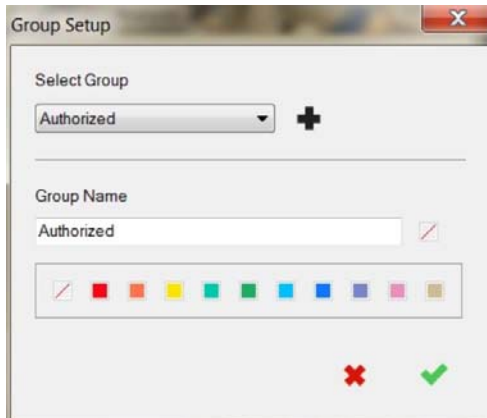






Figure 2-8

2. Select the group of Face IDs you want to configure under **Select Group**.
3. Under **Group Name**, optionally modify the name and select a desired color for the group.

2.1.6 Searching for Recognition Events

When searching for recognition events within the **Face Recognition** window (**ViewLog**  > **Toolbar**  > **Tools**  > **Face Recognition**), users can filter by specific face groups, age range and/or gender for a more precise search result by clicking the **Query** button .

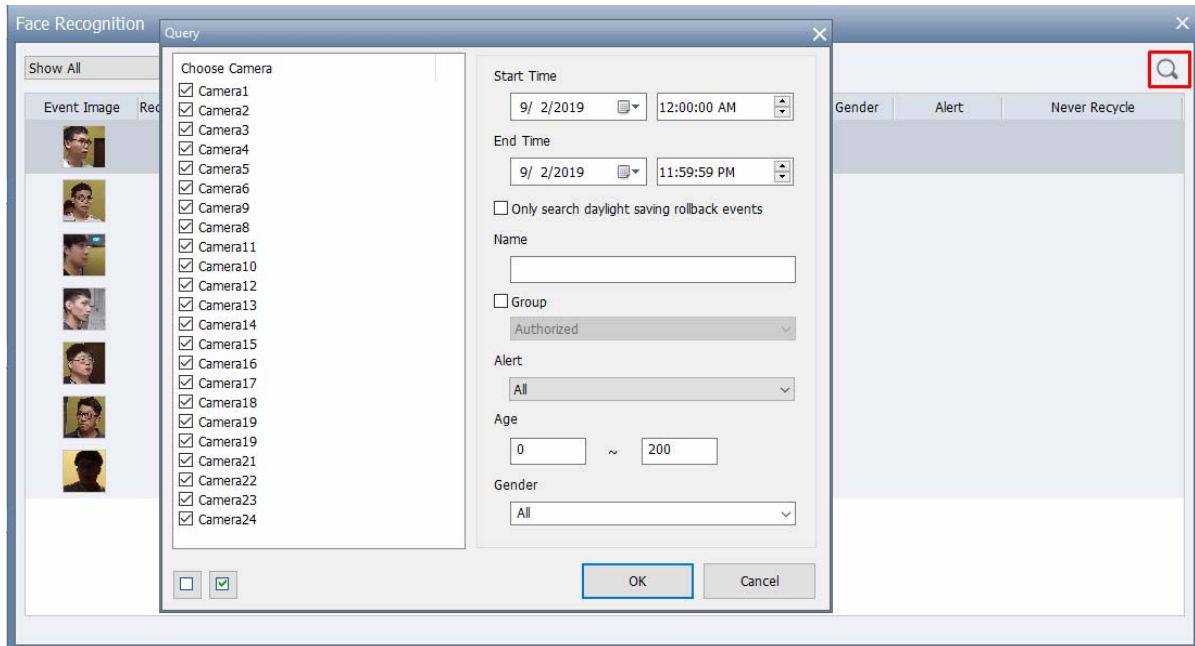






Figure 2-9

Note: All faces recorded by GV-Face Detection (FD) Cameras are displayed as unknown recognition events.

2.1.6.1 Searching by Face Images

With GV-VMS V18.1, users can now search for the desired face recognition events by face images.

Searching with Photos in the PC

To browse for a face image saved in your PC to search for similar recognition events or Face IDs, click **Select a photo from your computer...**  in the Face Recognition window (**Face Recognition** window (**ViewLog**  > **Toolbar**  > **Tools**  > **Face Recognition**), as illustrated below.

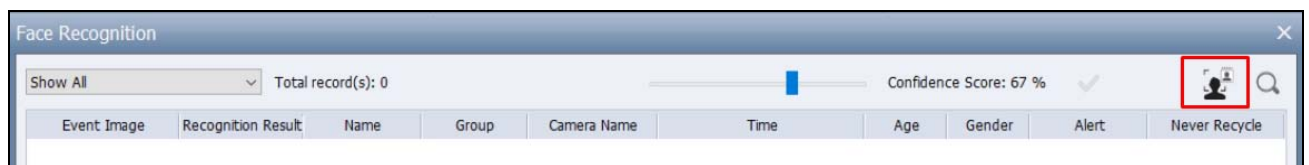


Figure 2-10

Searching with Event Snapshots




To search for recognition events or Face IDs using the snapshot of a recognition, right-click on the **Event Image** of a desired event in the Face Recognition window (**Face Recognition** window (**ViewLog**  > **Toolbar**  > **Tools**  > **Face Recognition**), as illustrated below.



Figure 2-11

Note: Users can drag the confidence level to adjust the level of similarity of the search results as compared to the face image used.

2.2 Integrating Face Recognition to Access Control




GV-VMS V18.1 extends the face recognition feature of connected cameras by converting recognized faces into access card data for access control management. Prior to the integration, make sure the required controller(s) and access cards have both been properly configured on your access control system, e.g. GV-ASManager.

To configure the controller and access cards, to be paired with Face IDs, see *Adding Controllers* and *Setting Cards*, respectively, in Chapter 4 of [GV-ASManager User's Manual](#).

2.2.1 Pairing Face IDs with Access Cards

Face IDs of GV-Face Recognition Cameras / GV-AI FRs can be paired with GV-AS ID Cards / Key Fobs or 3rd-party smart cards to be used for access control regulated by GV-ASManager:

- To pair Face IDs with Access Cards, see the steps below.
- To connect the controller to GV-VMS, see *2.2.2 Connecting Controller to GV-VMS*.
- To send faces recognized as access cards to the controller, see *2.2.2.1 Sending Card Number to Controller by Face ID*.
- To batch enroll a group of access cards already configured on GV-ASManager to be paired with Face IDs, see *2.3 Batch Enrolling Faces and Access Cards*.

1. Click **Home**  > **Toolbar**  > **Configure**  and select **Face Manager**. The Face Manager dialog box appears.
2. Select the desired camera and click **Face Enrollment**.

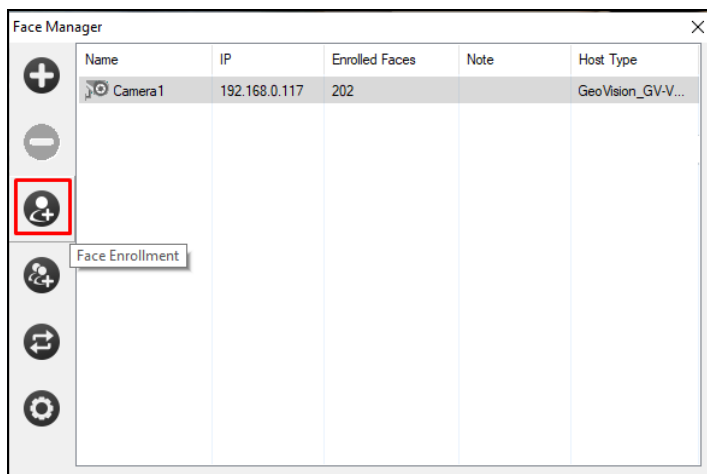


Figure 2-12

3. Select a Face ID from the **Enrolled Face** list, type the **Card Number** to be paired with and select its encoding type from the **Card Encoding** drop-down list.

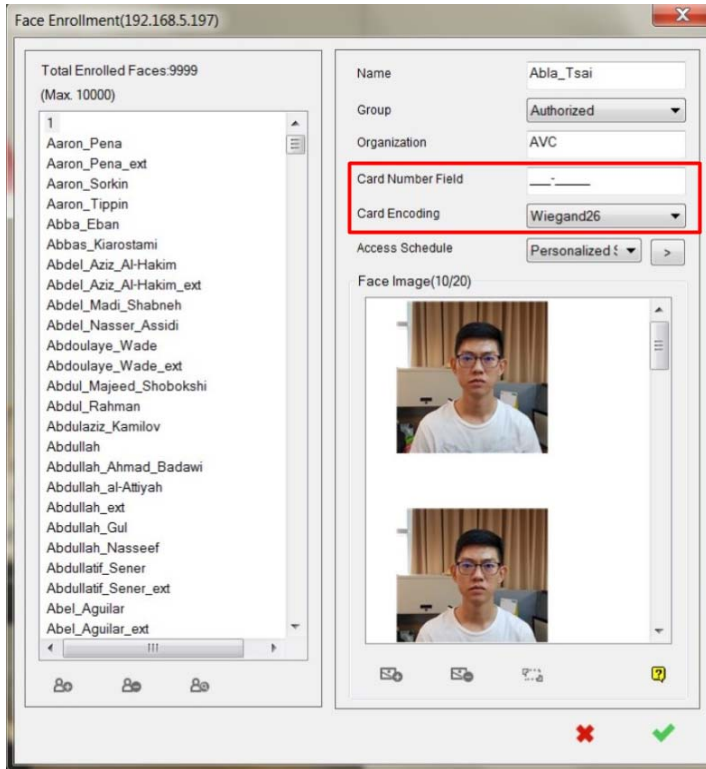


Figure 2-13

4. Click  to save.

2.2.2 Connecting Controller to GV-VMS

For GV-VMS to send the paired card number to the connected controller upon face recognition, the controller must be properly connected, which can be done through one of the following two methods:

- **COM Port**

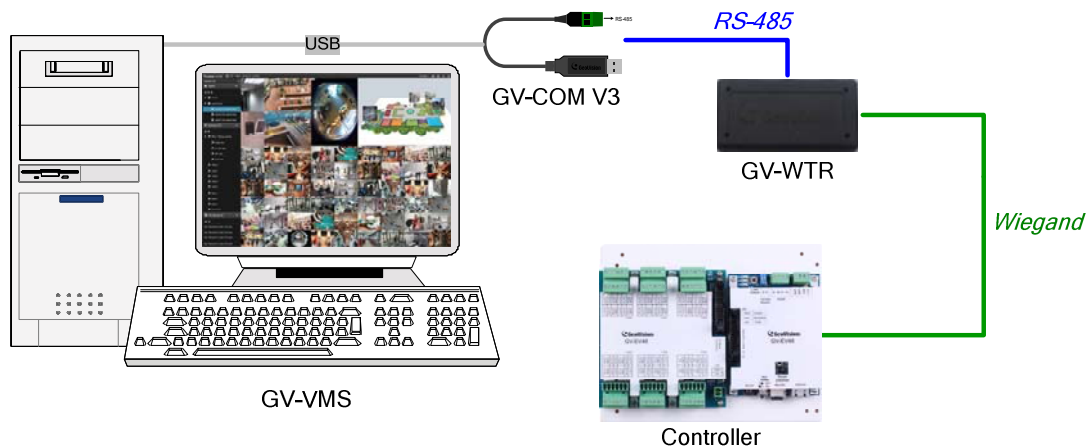


Figure 2-14





1. Connect [GV-COM V3](#) to a USB port of the PC running GV-VMS.
2. Connect [GV-WTR](#) to GV-COM V3 using its RS-485 wires.
3. Connect GV-WTR to the controller using its Wiegand wires.

- **TCP/IP**

Connect the controller to the same network as your GV-VMS.

2.2.2.1 Sending Card Number to Controller by Face ID

After the controller is successfully connected to the GV-VMS, configure the necessary settings according to the type of connection established.

1. In **Face Manager (Home**  **> Toolbar**  **> Configure**  **> Face Manager**), click **Configure**  and select **Camera & Alert Settings**.
2. Select the desired camera and enable **Send Card ID to AS Controller**. Then configure the necessary settings based on the type of connection used.

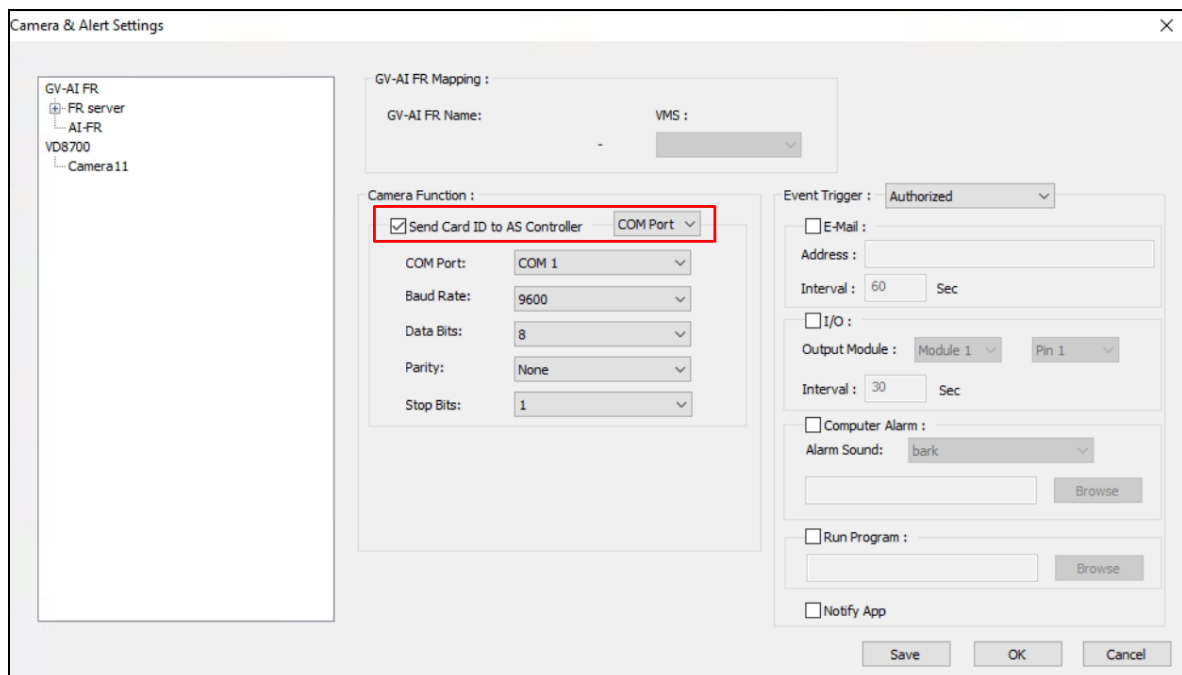


Figure 2-15

[COM Port]

- **COM Port:** Check the COM port number of the GV-COM V3 connected to the GV-VMS in **Device Manager** and select from the drop-down list accordingly. For details, see [GV-COM V3 Installation Guide](#).
- Keep the default values of **Baud Rate**, **Data Bits**, **Parity** and **Stop Bits** unless they've been changed manually.

[TCP/IP]

- **IP:** Type the IP address of the controller under the same LAN as the GV-VMS.

2.3 Batch Enrolling Faces and Access Cards

To batch enroll faces, without access card data or batch enroll both faces and access card data, see *Batch Enrolling Faces and Access Cards*, Chapter 3, in [GV-VMS User's Manual](#).




2.4 Face Detection by Camera

When connected to GV-Face Detection (FD) Cameras, GV-VMS V18.1 offers a set of features for users to easily track, record and search for all of the face detection events by these cameras, within the parameters set. For definition of FD cameras, click [here](#).

- To enable Face Detection, see *2.4.1 Configuring for FD Cameras*.
- To view real-time face detection events, see *2.4.2 Face List — Live Face Detection Events*.
- To search for face detection events recorded, see *2.1.6 Searching for Recognition Events*.

2.4.1 Configuring for FD Cameras

For GV-VMS to track and record faces detected by GV-Face Detection Cameras, follow the steps below.

1. Click **Home**  > **Toolbar**  > **Configure**  and select **Video Process**.
2. In the Setup dialog box, select **IPCVA** in the **Video Analysis** drop-down list, select the channel(s) from which you want to track and record face detection events and click **Setting**.

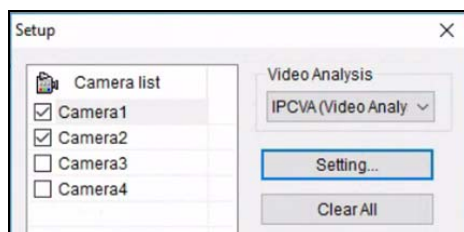


Figure 2-16

3. Select the desired channel from the drop-down list at the top and enable **Face Detection**.

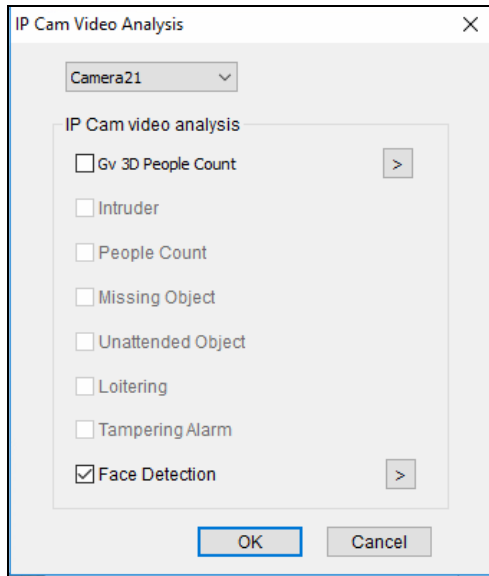


Figure 2-17

4. Optionally click next to **Face Detection** to and enable the following options:

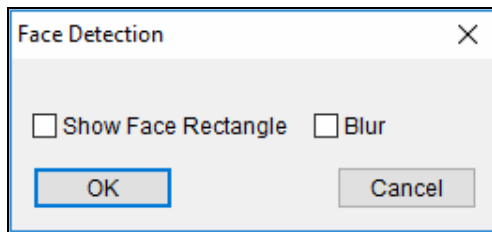





Figure 2-18

- **Show Face Rectangle:** Highlights detected faces upon face detection.
 - **Blur:** Censors all faces tracked and recorded during face detection.
5. Click **OK** and start monitoring for the channels of GV-Face Detection Cameras.
 6. You can also create a schedule for the Face Detection function to be enabled only at the time periods specified. For details, see *Schedule*, Chapter 1, in [GV-VMS User's Manual](#).

2.4.2 Face List — Live Face Detection

To view real-time face detection events tracked and recorded by GV-VMS, click **Home**  > **Toolbar**  > **Tools**  > **Face List**. This window appears.

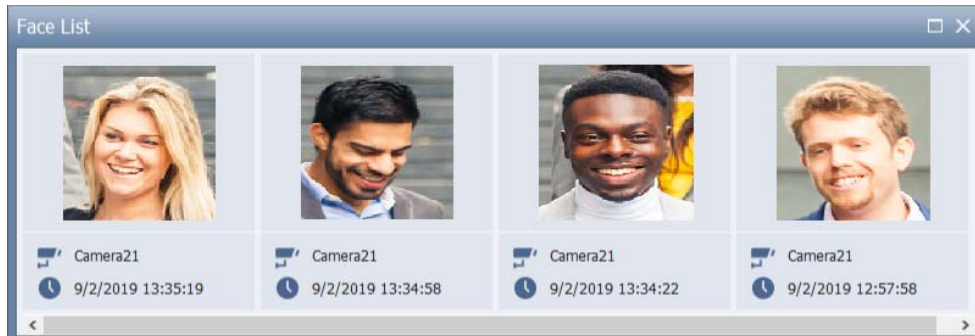


Figure 2-19




Each face detection event is represented by a snapshot image, along with the camera channel and the time in which the event occurred. Double-click on a snapshot to play back the video recording of that particular face detection event.

Note: All face detection events are also recorded as unknown face recognition events on GV-VMS. To search for face detection events, see [2.1.6 Searching for Recognition Events](#).

2.5 Object Index

2.5.1 Applying Filters for Object Index

GV-VMS now provides filters, by device, for users to quickly browse through object index events under the desired devices.

To apply the filters, select the desired device(s) on the **Object Index** window (**ViewLog**  > **Toolbar**  > **Tools**  > **Object Index**). The object index of the device(s) selected are displayed, as illustrated below.

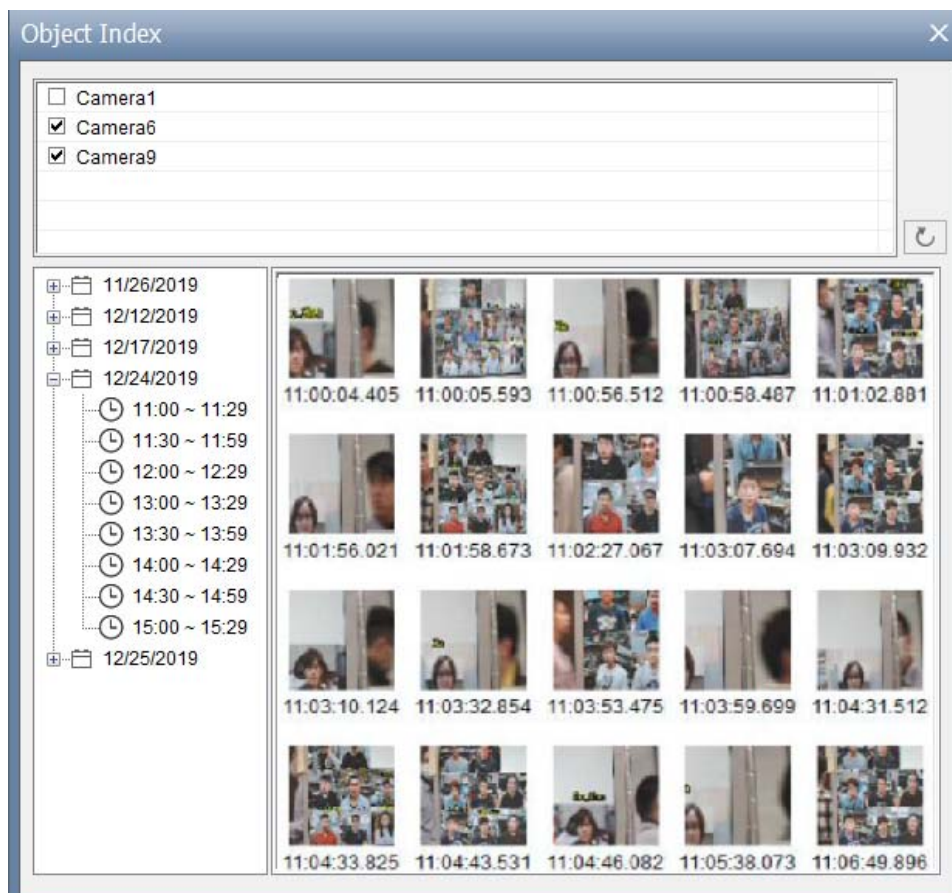


Figure 2-20





For details, see *Object Index*, Chapter 3, in [GV-VMS User's Manual](#).

3 Video Playback

This chapter introduces the new features and enhancements in the ViewLog of GV-VMS V18.1.

3.1 Adding Copyright Text during Video Export

GV-VMS V18.1 is now able to add copyright text to recordings exported through **Save as AVI**.

1. On the **Save as AVI** window (**ViewLog**  > **Toolbar**  > **Tools**  > **Save as AVI**), click **Setting** . This dialog box appears.

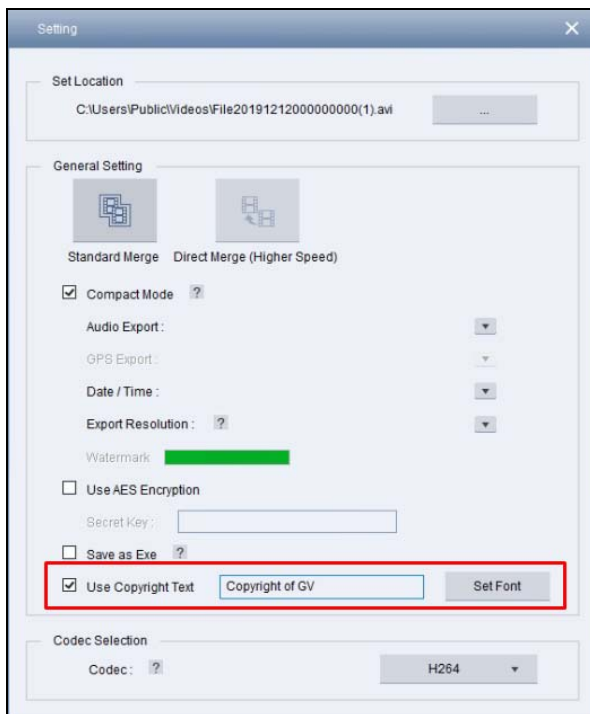


Figure 3-1

2. To apply copyright text to the recording being exported, select **Use Copyright Text**, type the desired text and click **Set Font**.
3. After setting the desired font, click and drag the template of the copyright text shown on the image to place it at a desired position.

For details on Save as AVI, see *Merging and Exporting Video* in Chapter 4, [GV-VMS User's Manual](#).

4 Remote Connection

This chapter introduces the new features and enhancements for remote connection to GV-VMS V18.1.

4.1 GV-Eye Connection via QR Code

GV-VMS V18.1 now supports remote connection from GV-Eye, a mobile VMS, via QR-code scan without requiring additional configurations such as port forwarding.

Click **Home**  > **Toolbar**  > **Network**  > **Mobile Service** and select the **QR Code** tab. This dialog box appears.



Figure 4-1

To enable remote connection via QR-code scan by GV-Eye, select **Enable** and click **Start**.

- **Regenerate:** Refreshes the QR code.
- **Port:** Optionally modify the default port value of 443 if necessary.

Remote connection by GV-Eye via QR code is a paid service and requires a valid GV-Relay account, which can be set up through GV-Eye and is given 10 GB of free data quota every month. For details, see 5. *GV-Relay QR Code* in [GV-Eye Installation Guide](#).

4.2 Selective Scheduled Streaming

GV-VMS V18.1 can selectively grant remote streaming access of certain camera channels to GV-WebCam Server and/or GV-Edge Recording Manager based on the schedules set.

1. In the **Schedule** window (**Home** > **Toolbar** > **Configure** > **Schedule Edit**), click **Plan** and click **Add**. This dialog box appears.

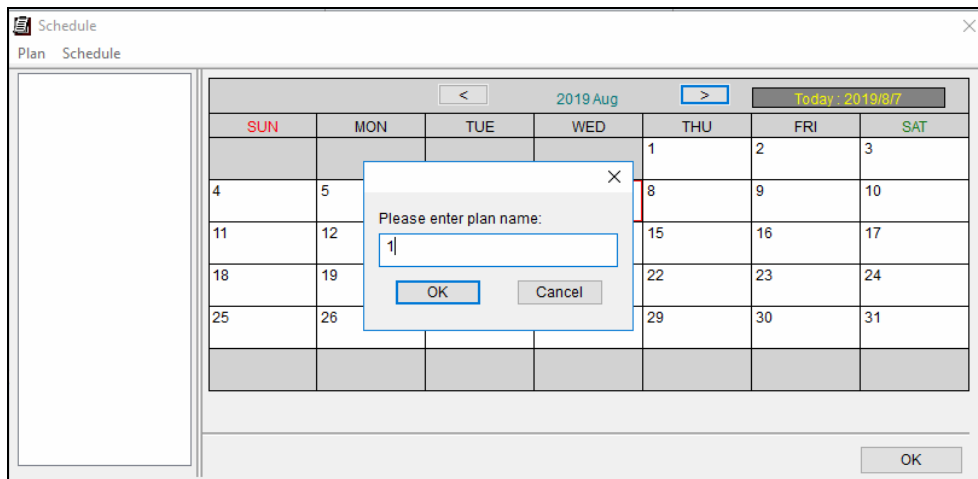


Figure 4-2

2. Type a desired name for the daily plan and click **OK**.
3. Once the plan is created, double-click on it. The following window appears.

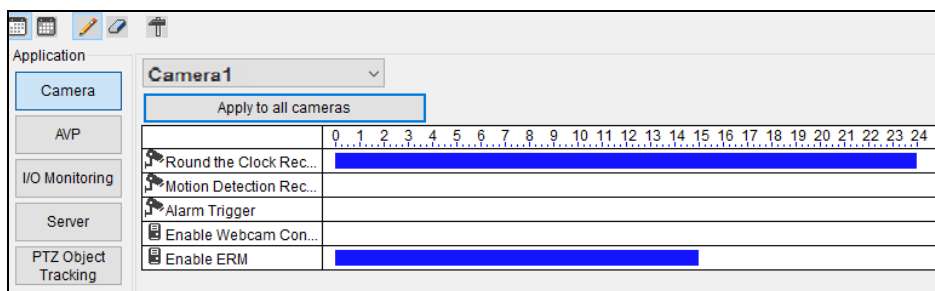


Figure 4-3

4. Select the camera channel you want to set the schedule for from the drop-down list at the top.
5. Click **Add** , in the **Enable Webcam connection** and **ERM connection** fields, drag and draw to specify the time periods you want to grant streaming access for WebCam Server and GV-Edge Recording Manager, respectively, for the channel currently selected.
6. To set schedules for other camera channels, select a different camera channel from the drop-down list and repeat Step 8.
7. Once all the desired camera channels are set, click **OK**.

- Click and drag the daily plan set onto the desired dates on the calendar.

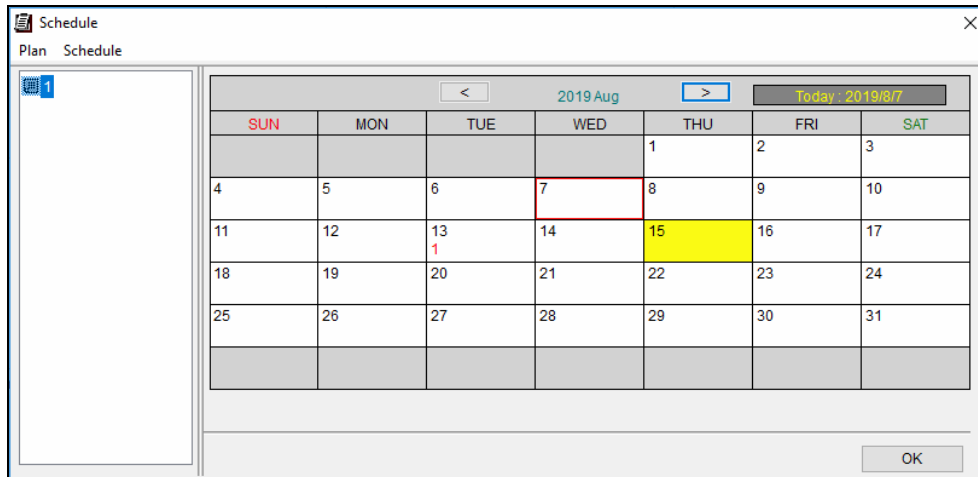


Figure 4-4

- Click **OK**.

For further details, see *Creating Schedules*, Chapter 1, in [GV-VMS User's Manual](#).

5 Useful Utilities

This chapter introduces the new useful utilities included with GV-VMS V18.1.

5.1 Report Generator

Report Generator is a useful utility that allows users to generate daily and/or weekly reports, in MDB or HTML format, for the recording data of GV-VMS without requiring additional installation.

For details, see [Report Generator User's Guide](#).

6 Point-Of-Sale (POS) Application

This chapter introduces the new features of GV-VMS for managing POS devices and data.

6.1 POS Search

The POS Search function allows users to quickly search for and play back specific POS events. To access this function, click **ViewLog** > **Toolbar** > **Tools** > **POS Search**. This window appears.

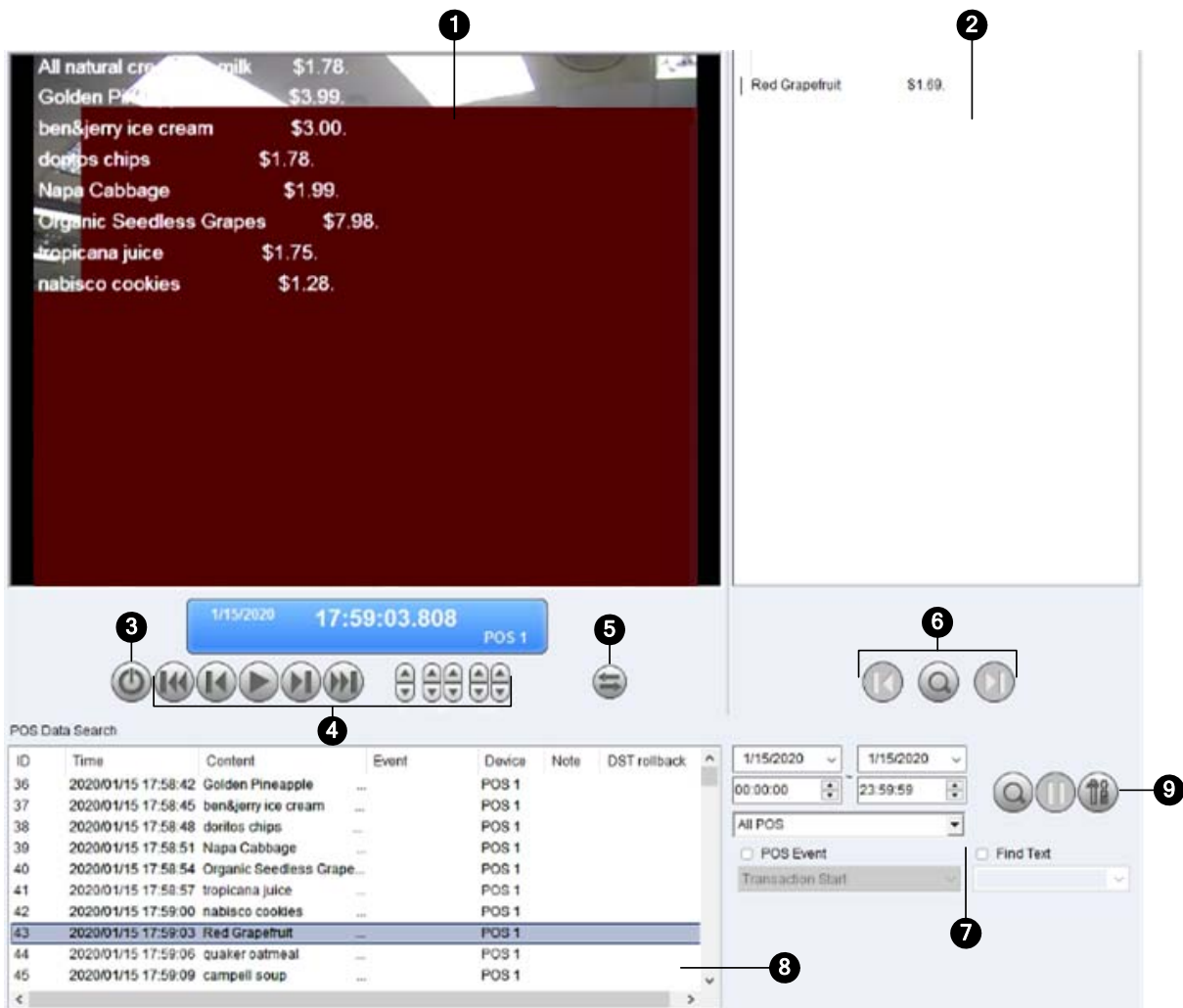







Figure 6-1

| No. | Name | Description |
|-----|--------------------|---|
| 1 | Playback Window | Displays the recording of the POS event or content selected. Right-click on the window to have the options of Play Mode , Render and Tools |
| 2 | Transaction Window | Displays all POS transactions viewed while playing back on the Playback Window. |

| | | |
|---|------------------------|---|
| 3 | Exit | Click to close Quick Search screen |
| 4 | Playback Panel | Includes Play, Pause, Previous 10 frames, Next 10 frames and End buttons, as well as Time Period buttons to jump to 1 second, 10 seconds, 1 minute, 10 minutes and/or 1 hour later or earlier. |
| 5 | Expand / Shrink Dialog | Select Expand/Shrink Dialog to display the Transaction window or select Advanced Search to display the Advanced Search panel. |
| 6 | Find Condition | Click Find Condition  to search for specific keywords and/or a type of POS transaction event forward or backward, starting from a date and time set. Use the Find Previous  and Find Next  buttons to jump from one search result to another. |
| 7 | Advanced Search Panel | See <i>6.1.1 Advanced Search Settings</i> later. |
| 8 | Search Results | Displays the search results by Advanced Search. |
| 9 | 320<->640 | Click to switch between 640 x 480 and 320 x 240 display. |

6.1.1 Using Advanced Search Panel

To search for POS events with detailed criteria, click **Expand / Shrink Dialog**  on the POS Search window and select **Advanced Search**. The Advanced Search Panel appears.

1. Select the **Start / End Dates** and **Start / End Times** from the respective drop-down lists to specify the desired time period of your POS search.
2. Select the POS devices you want to search for in the **POS Device** drop-down list.
3. Optionally select **POS Event** to search for a type POS transaction event.
4. Optionally select **Find Text** to type a keyword you want to search for.
5. After the desired conditions are set, click **Search** . The search results will be displayed at the left of the panel.

For details on POS-related settings or applications, see Chapter 10 of [GV-VMS User's Manual](#).