GeoVision inc
The Vision of Security

Quick Start Guide

GV-AI FR



Thank you for purchasing GV-AI FR. This guide is designed to assist new users in getting immediate results from GV-AI FR. For advanced information on how to use GV-AI FR, please refer to *GV-AI FR User's Manual*.

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August 2023

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

[Warranty]

[Technical Support Policy]

Note for Installing GV-IP Cameras

The following are some tips to consider when connecting to and installing GV-IP Cameras for face recognition:

- All cameras to be used for VA should not have Smart Streaming enabled as it may affect the VA's accuracy and results.
- Face Detection models are recommended as the ideal cameras to be connected to GV-AI FR for optimal face detection and recognition results.
- When connecting to 5 or more channels of IP cameras, it is recommended that they are installed at sites where the recognition targets are relatively stationary or moving directly toward the cameras for optimal recognition results.
- The feature of Liveness Detection works best when the recognition targets are relatively stationary and facing directly at the cameras in environments with stable lighting conditions.

Contents

Note for Installing GV-IP Cameras i

1. Introduction 1

1.1 Software License 1

1.2 Minimum System Requirements 2

1.3 Installing GV-AI FR 2

1.4 Main Screen 3

1.4.1 FR Events 4

2. Getting Started 5

2.1 Adding IP Cameras 5

2.2 Configuring Recognition Settings 6

2.3 Viewing Face Recognition Events 8

3. Face Enrollment 10

3.1 Photo Requirements 10

3.2 Creating Face Profiles 11

3.3 Enrolling via Query 12

1. Introduction

Welcome to the GV-AI FR Quick Start Guide. This quick guide will guide you through the basic installation of GV-AI FR, connecting to IP cameras and performing face recognition. For the detailed user manual, see *GV-AI FR User's Manual*.

Note: To upgrade GV-AI FR, run the **Installer** (setup.exe) included in the latest software downloads from our website, and select **Reinstall / Upgrade**. to start. For details, see *Note for Upgrading GV-AI FR* in User's Manual.

1.1 Software License

GV-AI FR is a paid video analytic software designed to provide Face Recognition (FR) ability for up to 8 channels of IP cameras.

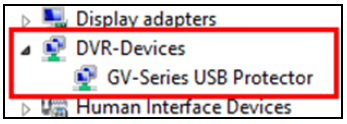
Free License	N/A
Maximum License	8 Channels
Increment of License	1 Channel
Dongle Type	Internal / External
Note: GV-USB Dongle comes in internal and external dongles. Internal dongle is recommended for its Hardware Watchdog function, which automatically restarts the PC when Windows crashes or freezes.	

1.2 Minimum System Requirements

For the minimum PC requirements for connecting and performing face recognition with up to 4 and 8 channels of IP cameras., see the datasheet.

1.3 Installing GV-AI FR

1. Insert GV-USB Dongle to a dedicated computer or server and install the **GV-Series Card Driver / USB Devices Driver** and **GV-AI FR** from GeoVision website
   - To verify the driver is installed correctly, go to Windows Device Manager and expand **DVR-Devices**. You should see the **GV-Series USB Protector**.



2. Run GV-AI FR and set a new **Username** and **Password** for the administrator account after logging in with their default values of *admin*, *admin*.

Note: Upon first-time login, users are required to perform a one-time installation of the Windows OCX plugin in order to run the program.

1.4 Main Screen

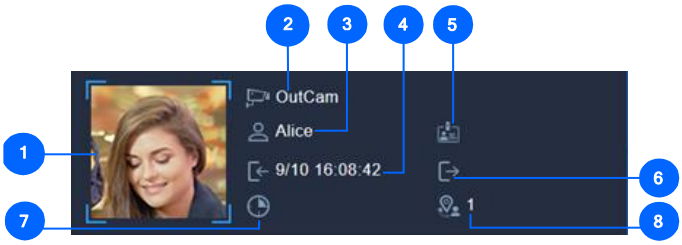
After logging into GV-AI FR, the following main screen appears.



No.	Name	Description
1	Live View	Displays the live view of IP cameras connected.
2	Unique Face Count	Counts the number of unique face recognition events, the number of individuals recognized, within the day.
No.	**Name**	**Description**
3	Total Face Count	Counts the total number of face recognition events within the day.
4	Time	Displays the current system date and time.
5	Page 1 / 2	Click **Page 1** or **2** to switch between the live views of camera channels 1 ~ 4 and camera channels 5 ~ 8.
6	FR List	Accesses the FR List, which simultaneously displays up to 60 realtime face recognition events. See *2.2.2 FR List* in *GV-AI FR User's Manual*.
7	Dashboard	Accesses the following setting pages: **Welcome**, **Dashboard**, **Analysis**, **General Settings**, **Face Management**, **Notify Settings** and **Event Query**. For details, see *Chapter 4* in *GV-AI FR User's Manual*.
8	Logout	Logs out of the system.
9	Face Profile	Displays the latest faces recognized by the connected cameras, in chronological order. See *1.4.1 FR Events*.

1.4.1 FR Events

Next to the live view on the main screen, Face Recognition (FR) events are displayed in chronological order, with the most recent events at the top.



No.	Name	Description
1	Face Snapshot	The face snapshot captured upon the face recognition event.
2	Camera Channel	The camera channel where the face recognition event occurred.
3	Face Profile Name	The Name of the Face Profile recognized.
4	Entrance time	The time of the person recognized entering the vicinity, as determined by recognition events at cameras set as *Door(In)*. See *2.2 Configuring Recognition Settings*.
5	Face Group	The Face Group in which the Face Profile is categorized under, which is displayed as *Unknown* when unrecognizable.
6	Exit time	The time of the visitor exiting the vicinity, determined by the face recognition of cameras positioned at *Door(Out)*. See *2.2 Configuring Recognition Settings Cameras*.
7	Dwell time	The amount of time the person stayed in the vicinity (from Entrance time to Exit time).
8	Recognition Count	The number of times the person is recognized within the day.

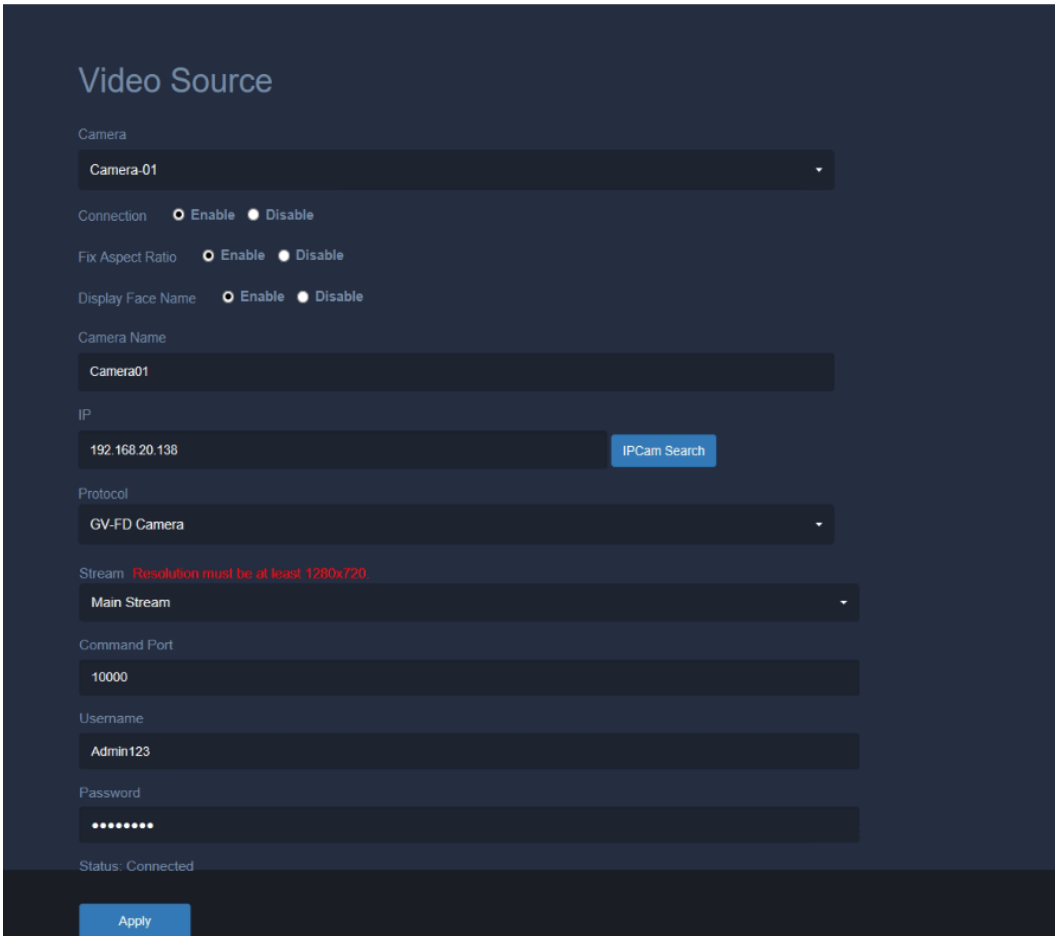
2. Getting Started

2.1 Adding IP Cameras

Note:

1. Make sure the IP cameras to be added are installed within the same LAN as GV-AI FR.
2. Any IP cameras to be added to GV-AI FR must first be set to a resolution of 2 MP or less.
3. Make sure all IP cameras to be used for Video Analytics does not have Smart Streaming enabled as it may affect the accuracy and results of the Video Analytics.

1. From the main screen, click **Dashboard** (No. 5, *1.4 Main Screen*) > **General Settings** > **Video Source**.



2. Select one of the 8 channels for the IP camera to be connected under from the **Camera** dropdown list and enable **Connection**.

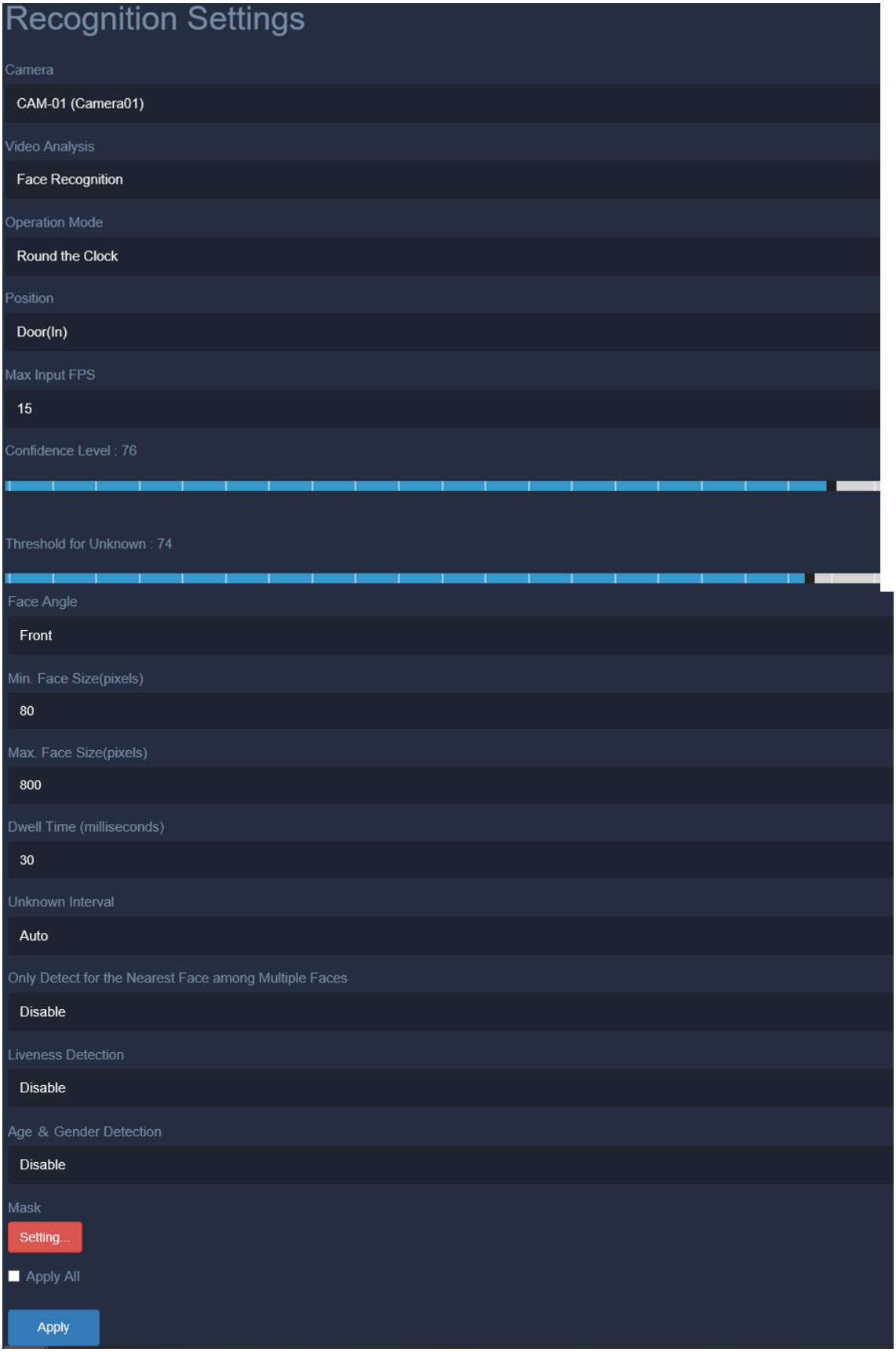
3. Optionally enable **Fix Aspect Ratio** and **Display Face Name** to respectively keep the original aspect ratio of the video source and display the recognition results of the recognition targets on the live view.
4. Type a desired name for the camera channel under **Camera Name**.
5. Select one of the following as the **Camera Type**:
   - **ONVIF**: For all GeoVision and/or 3rd-party IP devices via ONVIF protocol.
   - **RTSP(TCP)** / **RTSP(UDP)**: For all IP devices via RTSP(TCP) / RTSP(UDP).
   - **USB Webcam**: For webcam cameras connected via USB.
   - **GV-FD Camera**: For connecting to GV-Face Detection cameras only. For details on GV-Face Detection Cameras, see Face Detection models.
6. Type the **IP**, **Command Port** and login **Username** and **Password** of the camera to be added.
7. Optionally select **Main Stream** / **Sub Stream** from the **Stream** dropdown list.
8. Click **Apply**. After the camera is successfully connected, a Status of Connected is shown. 

9. To add more cameras, repeat Step 2 – 8 with a different channel selected under the **Camera** dropdown list.

2.2 Configuring Recognition Settings

Note: To use face recognition, make sure there is at least one IP camera connected to GV-AI FR, see *2.1 Adding IP Cameras*.

1. To enable face recognition, click **Dashboard** (No. 5, *1.4 Main Screen*) > **General Settings** > **Recognition Settings**.



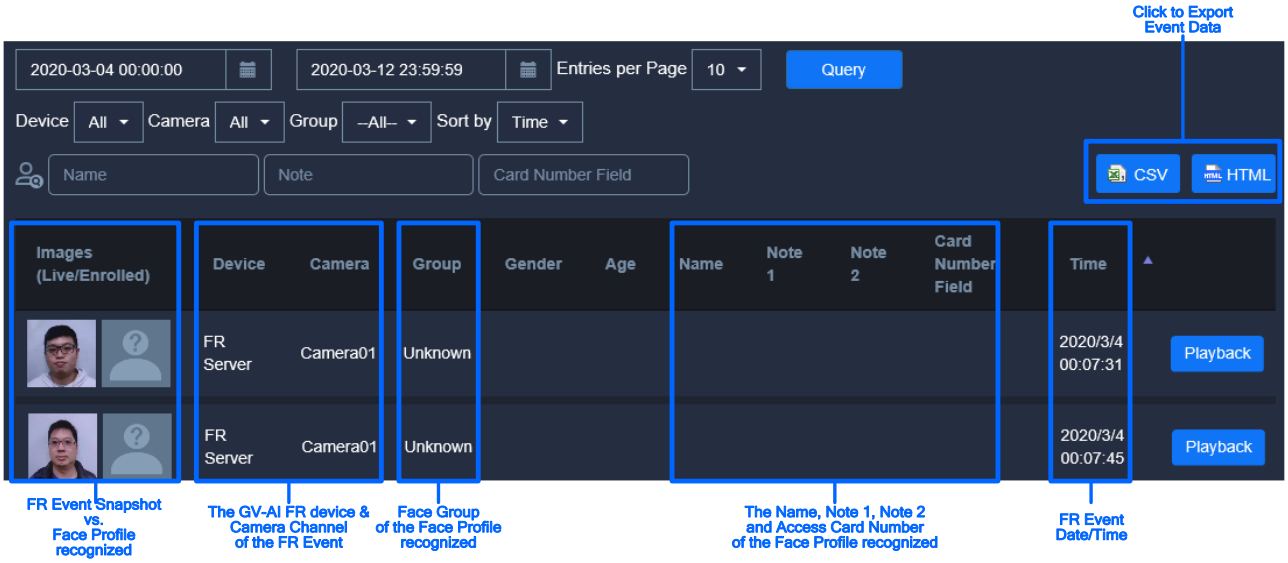
2. Select the camera channel for which to configure face recognition from the **Camera** dropdown list and select *Face Recognition* under **Video Analysis**.
3. Under **Operation** Mode, select **Round the Clock** to always perform face recognition or **Start/Stop by Trigger** to only recognize faces as controlled by event trigger(s).
4. Select one of the following **Position** based on the installation site of the camera.
   - **Door(In):** Faces recognized at this position are recorded as entering the vicinity.
   - **Door(Out):** Faces recognized at this position are recorded as exiting the vicinity.
5. Adjust the **Confidence** level, from 0 to 100. The higher the level, the more definitive the FR function is toward distinguishing between similar faces upon face recognition.
6. Adjust the **Threshold for Unknown**. Recognition events below this value of confidence are recorded as unknown.
7. Optionally select **Apply All** to apply the same recognition settings to all camera channels.
8. Click **Apply**. Face recognition is now enabled for the channel selected and will record face recognition events and recognize Face Profiles enrolled within its database.

For other settings on the Recognition Settings page, see *3.1 Configuring Recognition Settings* in *GV-AI FR User's Manual*.

2.3 Viewing Face Recognition Events

1. To view and search for face recognition events, click **Dashboard** (No. 5, *1.4 Main Screen*) > **Event Query** > **Detail Log**. The Detail Log page appears.
2. Select the start and end dates / times, and optionally select the **Device, Camera** channel and **Face Group** to be searched for.

3. Optionally type the desired keywords within the **Name**, **Note** and/or **Card Number Field** and click **Query** to search for events.



Note: When there are no Face Profiles enrolled within the database, all face recognition events will be recorded as *Unknown*.

- To create Face Profiles using the snapshots of unknown recognition events, see *3.3 Enrolling via Query*.
- To create Face Profiles by uploading face photos, see *3.2 Creating Face Profiles*.

For other features on the Detail Log page or additional log pages, such as Advanced and System Log, see *3.3 Recognition Events* in *GV-AI FR User's Manual*.

3. Face Enrollment

There are 3 ways to enroll face images into GV-AI FR, as listed below:

- **Manual Enrollment:** See *3.2 Creating Face Profiles*.
- **Enrolling Unknown Recognition Events:** See *3.3 Enrolling via Query*.
- **Batch Enrollment:** See *3.2.3 Batch Enrolling Faces* in *GV-AI FR User's Manual*.

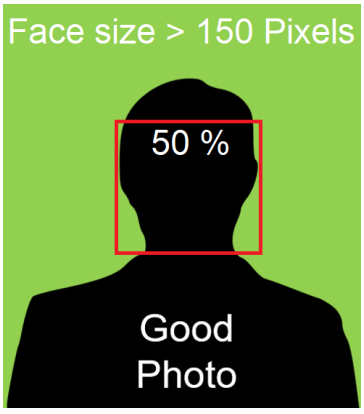
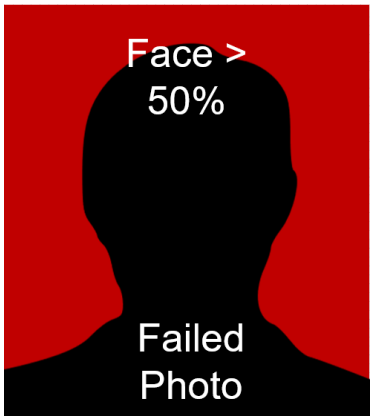
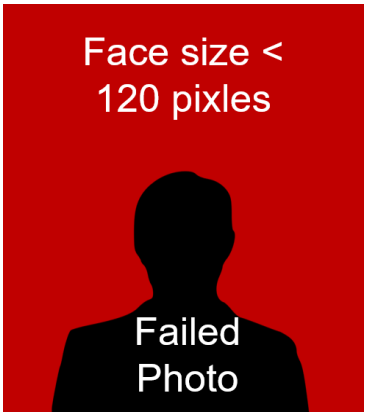
Regardless of the method of enrollment, the face images used must meet the criteria as specified in *3.1 Photo Requirements*.

3.1 Photo Requirements

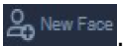
All face images to be enrolled must meet the following criteria:

- Each photo must consist of only one face directly facing the camera.
- Do not use camera filters or wear a face mask.
- Make sure your hat, head covering, or hair does not block your eyebrows.
- Size of the face within the photo is greater than 150 pixels.
- Only JPEG format is supported.
- Make sure the face of the person does not occupy more than 50% of the image.

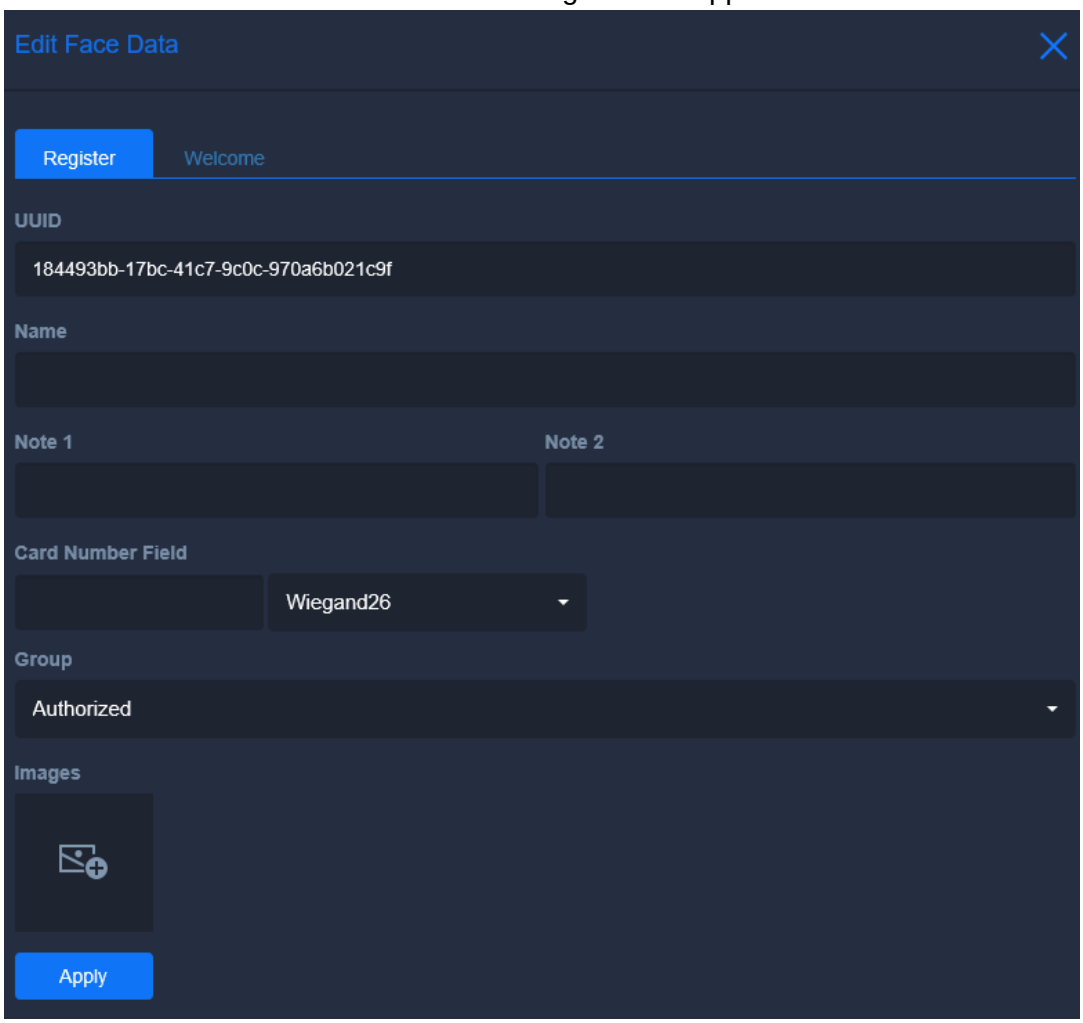
See examples below:

Ideal	Failed to enroll – 1	Failed to enroll – 2
		
The face occupies less than 50% of the image. The size of the person's face is greater than 150 pixels.	The face occupies more than 50% of the image.	The size of the person's face is less than 120 pixels.

3.2 Creating Face Profiles

1. Click **Dashboard** (No. 5, *1.4 Main Screen*), select **Face Management** > **Face Profiles** and click **New Face** 

. The following window appears.



2. Type a desired name for the Face Profile under **Name**.
3. Optionally type notes for the Face Profile under **Note 1** and **Note 2**.
4. For integrating face recognition into access control systems, such as *GV-ASManager*, type a card number in the **Card Number Field** for the Face Profile to be paired with.

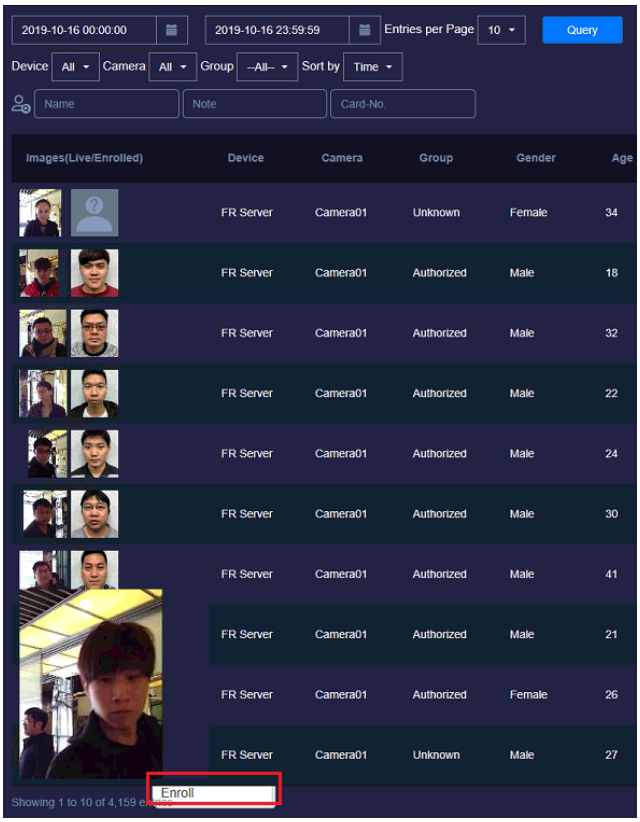
Note: For details on integrating GV-AI FR to access control management, see *Chapter 6* in *GV-AI FR User's Manual*.

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5. Select a **Group** for the Face Profile to be categorized under. To create and/or edit Face Groups, see *3.4 Editing Face Groups* in *GV-AI FR User's Manual*.
6. Click the icon under **Images** to browse for and add face images for the Face Profile. Face images used must follow the criteria as specified in *3.1 Photo Requirements*.
7. Click **Apply**. The Face Profile is created.

3.3 Enrolling via Query

1. Click **Dashboard** (No. 5, *1.4 Main Screen*) > **Event Query** > **Detail Log** and follow Step 1 – 2 in *2.3 Viewing Face Recognition Events* and click **Query**.
2. Right-click on the snapshot of an unknown recognition event and click **Enroll**.



3. Follow Step 2 – 5 in *3.2 Creating Face Profiles* and click **Apply**.

A new Face Profile is created.

For other advanced functions of GV-AI FR, see *GV-AI FR User's Manual*.