GeoVision inc
The Vision of Security

Quick Start Guide

GV-AI Server

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

AIServerV112-QG-A

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Note for Installing GV-IP Cameras

The following are some tips to consider when connecting to and installing GV-IP Cameras for using the various Video Analytic (VA) features of GV-AI Server:

- All cameras connected must be set to a resolution of 12 MP or lower in order to use any VA feature except for Product Attention by motion.
- All cameras to be used for VA should not have Smart Streaming enabled as it may affect the VA's accuracy and results.
- For optimal **Face Detection** and **Face Recognition** performance, the use of Face Detection cameras is recommended.
- For **Product Attention** *by motion*, Fisheye cameras are recommended to be installed at the center of the retail setting covering all merchandise areas.

For the various video analytic functions available on GV-AI Server, see *Chapter 3 Video Analytics*.

Contents

1. Introduction

Welcome to the GV-AI Server Quick Start Guide. This quick guide will guide you through the basic installation of GV-AI Server, connecting to IP cameras and performing various video analyses. For more details, see *GV-AI Server User's Manual*.

Note: To upgrade GV-AI Server, see the instructions in *Note for Upgrading GV-AI Server, GV-AI Server User's Manual*.

1.1 Software License

Free License	N/A
Maximum License	8 Channels
Increment of License	1 Channel
License Type	1. **Video Analytics:** includes Face Attributes, Product Attention, Short Inventory Alert, Queue Management, Suspect & Loitering Detection, Human Counter 2. **Face Recognition + Video Analytics features**
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

		1 – 4 Channels	1 – 8 Channels
OS	**64-Bit**	Windows 10 / Windows 11	
CPU		8th-Generation Intel Core i7 / i9 or above	11th-Generation Intel Core i7 / i9 or above
Memory		16 GB (8 GB x 2) DDR4 RAM	
Remote Access		Microsoft Internet Explorer 11 or later	

Note:

1. It is required to connect a monitor to the onboard GPU to ensure the operation of video analytics. Follow the specifications below for different channel numbers of IP cameras:
   a. For **1 to 4** channels of IP cameras, **8th-gen** Intel Core i7 / i9 or above is required.
   b. For **5 to 8** channels of IP cameras, **11th-gen** Intel Core i7 / i9 or above is required.
2. Only Intel Core processors are compatible with GV-AI Server; other brands of CPU do not work with GV-AI Server
3. For remote access through a browser, Internet Explorer must be used, as some functions will be nonfunctional through non-IE browsers.
4. GV-AI Server does not support virtual machine installation.
5. GV-AI Server may not work properly if the minimum system requirements are not fulfilled.

1.3 Installing GV-AI Server

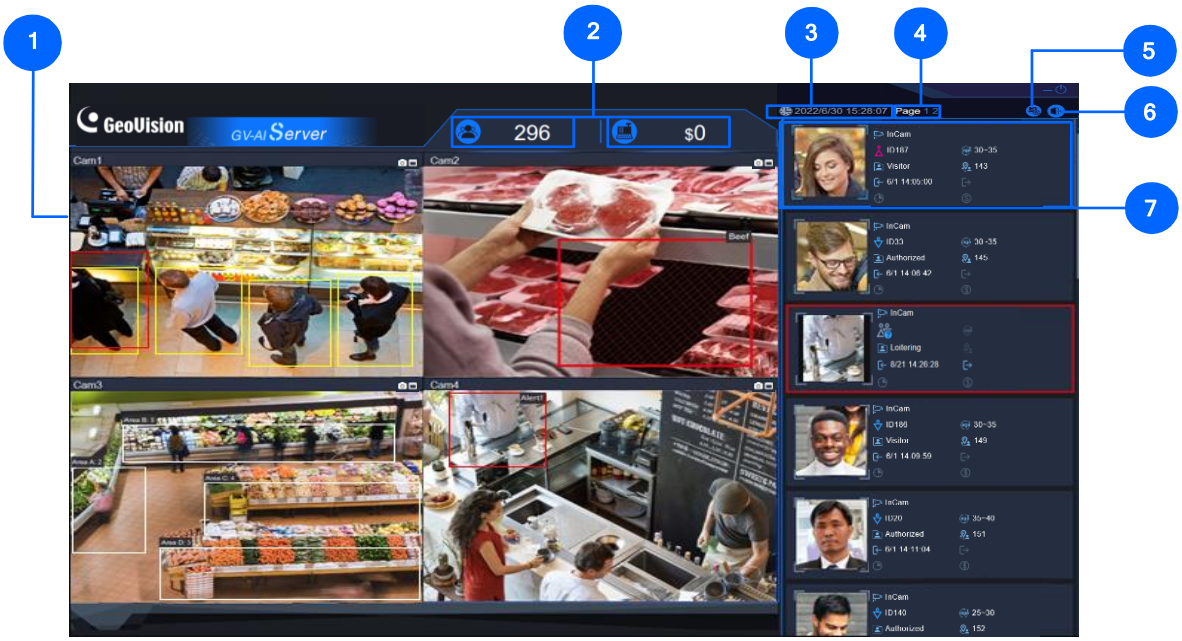
1. Insert GV-USB Dongle to a dedicated computer or server and install the **GV-Series Card Driver / USB Devices Driver** and **GV-AI Server** from GeoVision's website
   - To verify the driver is installed correctly, go to Windows Device Manager and expand **DVR-Devices**. You should see the **GV-Series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

2. Run GV-AI Server 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

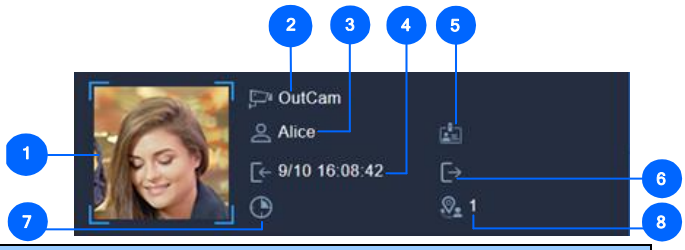
After logging into GV-AI Server, the following main screen appears.



No.	Name	Description
1	Live View	Displays the live view of IP cameras connected.
2	Live Values	Displays the following two **Live Values** by default: • Face Count — Counts the total number of faces detected within the day. • POS Transaction Amount — Adds up the total amount of transactions made within the day. To change the Live Values to be displayed on the Main Screen, see *2.1 Configuring System Settings*.
3	Time	Displays the current system date and time.
4	Page	Switches live view windows between camera 1 – 4 and camera 5 - 8.
5	Dashboard	Accesses the following setting pages: **Welcome**, **Dashboard**, **Analysis**, **General Settings**, **Face Management**, **Notify Settings,** and **Event Query**. For details, see *Chapter 3 & 4* in *GV-AI Server User's Manual*.
6	Logout	Logs out of the system.
7	Face Profile / Loitering Alert	Displays the latest visitor or suspicious / loitering events detected by the connected cameras. See *1.4.1 Face Profile / Loitering Alert*.

1.4.1 Face Profile / Loitering Alert

Next to the live view on the main screen, Face Profiles and/or Loitering Alerts are displayed in chronological order, with the most recent face detection or loitering alert events at the top.



No.	Name	Description
1	Visitor Face / Loitering Snapshot	The face of the visitor captured during face detection/recognition or the snapshot of the suspect / loitering event.
2	Camera Channel	The camera channel where the visitor or suspect / loitering event was captured.
3	Profile ID	For face detection, the automatic-generated, gender-specific ID of the visitor upon his/her first face detection/recognition.

4	Visitor & Event Type	All visitor faces captured are registered as Visitor by default, which can later be found in Auto Enroll Face Group, see *3.2.2 Editing Face Groups* in *GV-AI Server User's Manual*. For any Suspect or Loitering events captured, the text Suspect or Loitering is displayed, respectively. See *3.6 Suspect & Loitering* in *GV-AI Server User's Manual*.
5	Entrance time	The time of the person recognized entering the vicinity, as determined by recognition events at cameras set as *Door(In)*. See *3.2 Face Recognition* in *GV-AI Server User's Manual*.
6	Age Range	For face detection, the age range of the visitor as determined by GV-AI Server, see *3.1 Face Attributes* in *GV-AI Server User's Manual*.
7	Visit Count	For face detection, the number of times the visitor has visited the vicinity.
6	Exit time	The time of the visitor exiting the vicinity, determined by the face recognition of cameras positioned at *Door(Out)*. See *3.1 Face Attributes* in *GV-AI Server User's Manual*.
7	Dwell time	The amount of time the person stayed in the vicinity (from Entrance time to Exit time).
8	Total Transactions	For face detection, the total amount of transactions the visitor has made at the vicinity.

1.4.2 Dashboard

On the **Dashboard** page, the users are also able to see an in-depth analysis of all the visitors that have come into the vicinity within the day. To access, click **Dashboard** (No. 5, *1.4 Main Screen*) on the main screen of GV-AI Server.

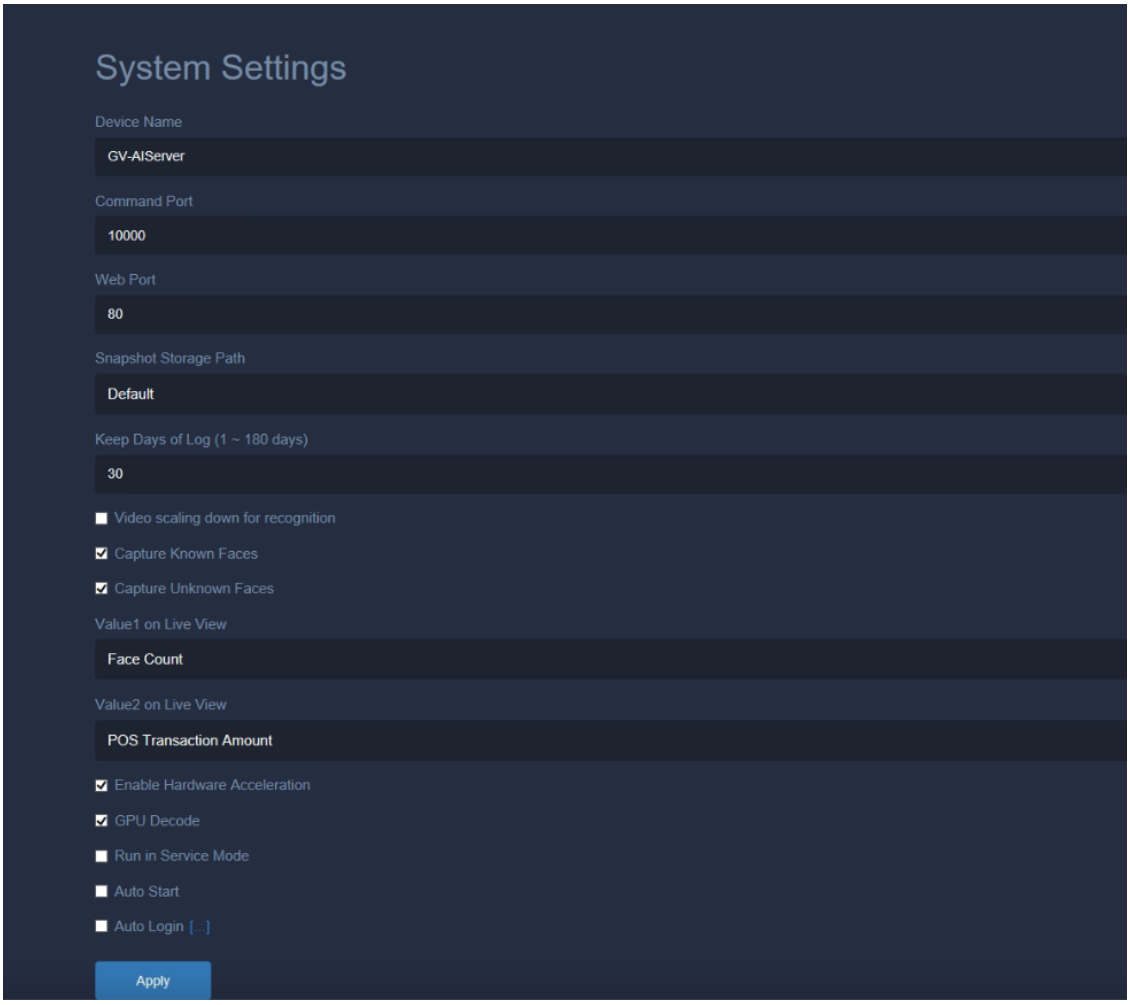
No.	Name	Description
1	Date	Selects the date of the visitor data currently shown.
2	Visitor count	Displays the total number of visitors within the selected date.
3	Day-to-Day Growth	Displays the percentage of visitor growth compared to the previous day.
4	Male / Female count	Displays the total number of male and female visitors within the selected date.
5	Average stay time	Displays the average dwell time per visitor within the selected date.

6	Transaction count	Displays the number of transactions made within the selected date.
7	Average sales amount	Displays the average value of sales per transaction within the selected date.
8	Total sales	Displays the total amount of sales within the selected date.
9	Conversion rate	Displays the percentage of visitors who made transactions.
10	Visitor by time	Displays the number of male and female visitors (y-axis) by time (x-axis) within the selected date.
11	Gender by age group	Displays the number of male and female visitors (y-axis) by age group (x-axis) within the selected date.
12	Visitor Ratio pie charts	Displays the ratio of visitors within the selected date, by *gender*, *age*, *age of male* and *age of female*, respectively.
13	Top 5 Stores	Displays the top 5 stores by the total number of visitors, among all interconnected GV-AI Servers. For details on interconnecting, see *4.1.7 Master / Slave Sync* in *GV-AI Server User's Manual*.

2. Getting Started

2.1 Configuring System Settings

To configure the system settings of GV-AI Server, click **Dashboard** (No. 5, *1.4 Main Screen*) > **General Settings** > **System Settings**.



1. Under **Device Name**, type a desired name for the GV-AI Server.
2. Optionally modify the **Command** and **Web Ports** of the GV-AI Server if necessary.
3. Select the path for captured snapshots under **Snapshot Storage Path**.
4. Under **Keep days of Log (1 ~ 180 days)**, Define the number of days event logs are kept for.
5. Only for 4 MP and 5 MP cameras, optionally enable **Video scaling down for recognition** if you want to reduce the system loading.
6. Optionally disable **Capture Known Faces** if you don't want to record and display faces that are recognized by the face database.
7. Optionally enable **Capture Unknown Faces** if you want to record unrecognizable faces.

8. Under **Value 1 / 2 on Live View**, select the types of Live Values to be displayed on the main screen (No. 2, 1.4 Main Screen) for Value 1 / 2 from the following:
   - **Face Count:** Displays the total number of faces detected within the day.
   - **Pos Transaction Amount:** Displays the total amount of transactions made within the day.

Note: For POS data collecting, GV-AI Server supports API for 3rd-party POS system integration.

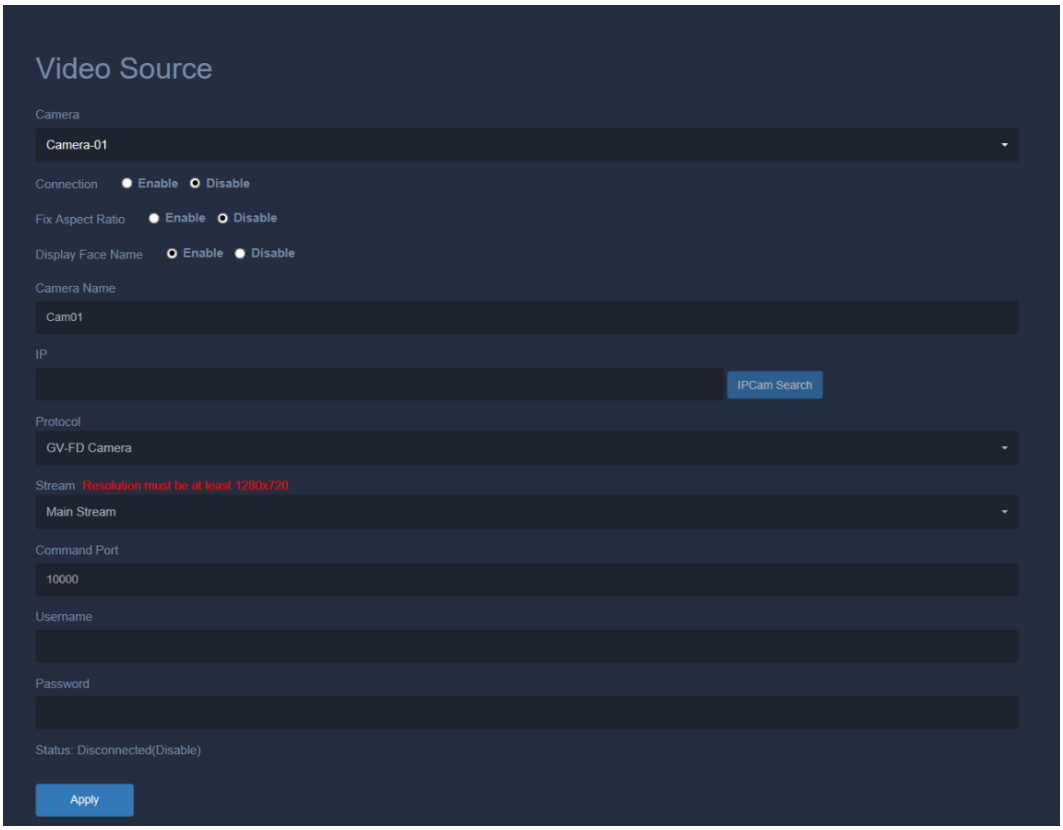
   - **Total In Value of IP Device People Counter:** Displays the total number of persons that have entered the vicinity, as recorded by the connected GV-3D People Counter V2 or AI-capable GV-IP cameras. See *4.1.4 IP Device People Counter* in *GV-AI Server User's Manual*.
   - **Current Stay Value of IP Device People Counter:** Displays the total number of persons currently at the vicinity, as calculated by the connected GV-3D People Counter V2 or AI-capable GV-IP cameras, see *4.1.4 IP Device People Counter* in *GV-AI Server User's Manual*.
   - **Visitor Count of Camera 1 - 8:** Displays the total number of persons detected by Camera Channel 1 - 8.
9. Check **Enable Hardware Acceleration** to enable CPU acceleration or **GPU Decode** to enable graphic card decoding.
10. Optionally enable **Run in Service Mode**, **Auto Start** and/or **Auto Login [...]** to respectively continue running the program after logging out of Windows, automatically run GV-AI Server after the PC is started, and/or automatically log in with the desired user account.

2.2 Adding IP Cameras

Note: Make sure the IP cameras to be added are connected to the same LAN as GV-AI Server.

IMPORTANT: Any IP cameras to be added must first be set to a resolution of 12 MP or less.

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.

3. Video Analytics

There are various Video Analytic functions available on GV-AI Server, as listed below:

List of VA Functions

For the detailed configurations of each VA function, please refer to their respective sections in *GV-AI Server User's Manual*.

Face Attributes	Captures and stores faces detected, along with their attributes including gender and age range.	See *3.1 Face Attributes* in the manual
Face Recognition	Captures and compares faces detected with the face database of GV-AI Server.	See *3.2 Face Recognition* in the manual
Product Attention	Counts the number of people dwelling at up to 10 predefined (product) regions.	See *3.3 Product Attention* in the manual
Short Inventory Alert	Triggers alerts when the inventory diminishes below a specified percentage.	See *3.4 Short Inventory Alert* in the manual
Queue Management	Monitors the queue length and checkout time of the cashier at the vicinity.	See *3.5 Queue Management* in the manual
Suspect & Loitering Detection	Detects for suspicious individuals and/or loitering at the vicinity.	See *3.6 Suspect & Loitering* in the manual
Human Counter	Counts the number of people entering and exiting across up to 10 predefined lines.	See *3.7 Human Counter* in the manual
VA Analysis Charts	Compiles analysis charts for each of the VA functions according to their results.	See *3.8 VA Analysis Charts* in the manual

IMPORTANT: Make sure all IP cameras to be used for Video Analytics do not have Smart Streaming enabled as it may affect the accuracy and results of the Video Analytics.

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