GV-Cloud Bridge Pro

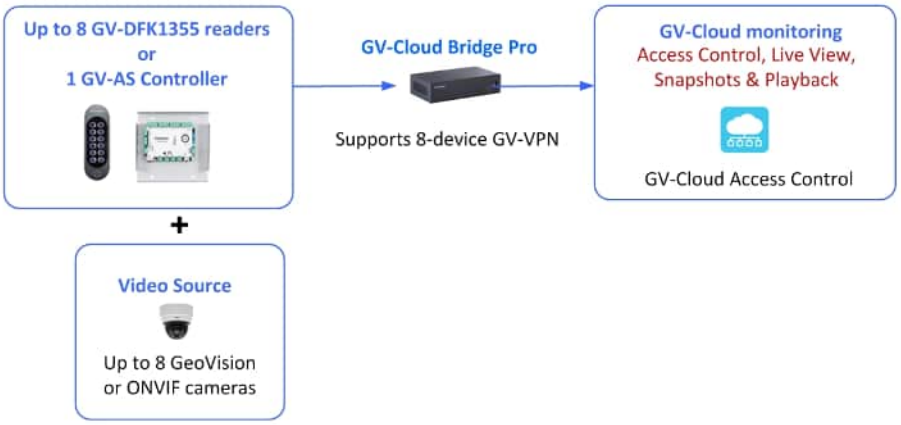
Contents

Topology Diagrams

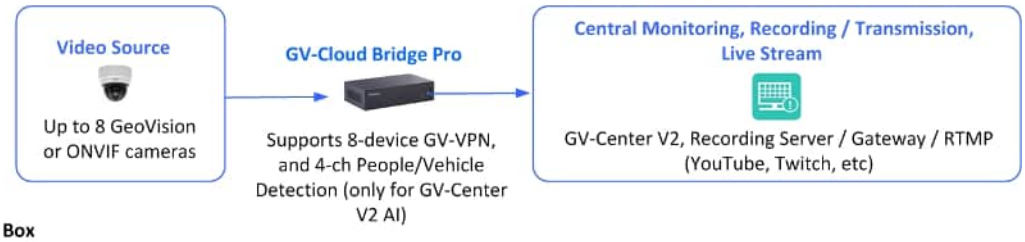
GV-Cloud Bridge Pro supports five major operation modes between cameras, readers, controllers, IP devices, and GeoVision software: GV-Cloud VMS, GV-Cloud Access Control, GV-Center V2 / Recording Server / Video Gateway / RTMP, GV-VPN Box, and GV-Cloud Video Watch. Only one of the operation modes can be enabled at once.

GV-Cloud VMS

GV-Cloud Access Control



GV-Center V2, Recording Server / Video Gateway, RTMP



GV-VPN Box

GV-Cloud Video Watch

1 Compatible Products

- **Camera:** GV-IP cameras or ONVIF cameras
- **Software:**
  - GV-Center V2 V18.4.1 or later
  - GV-Recording Server / Video Gateway (coming soon)
  - GV-Dispatch Server V18.2.0A or later
  - GV-VPN V1.1.0 or later
- **GV-Cloud VMS** (cloud-based software): V1.2.1 or later
- **GV-Cloud Access Control** (cloud-based software): V1.1.0 or later
  - GV-AS Controller (controller): GV-AS210 / 2110 / 2120, GV-AS410 / 4110 / 4111 firmware V2.60 or later
  - GV-DFK1355 (reader)
- **Mobile App:** GV-Eye V3.3.0 or later
- **GV-Cloud Video Watch** (central monitoring center): (coming soon)

Note:

1. To allow GV-IP Cameras without GV-Center V2 settings to connect to GV-Center V2, use GV-Cloud Bridge Pro.
2. To access 3rd party IP cameras using the GV-Eye app, use GV-Cloud Bridge Pro.
3. To allow 3rd party IP cameras to establish passive connections to GV-Recording Server / Video Gateway without port forwarding, use GV-Cloud Bridge Pro.
4. When working with GV-Center V2,
   - GV-Center V2 V18.4.1 and GV-Dispatch Server V18.2.0A do not support AI and PVD events.
   - GV-Center V2 AI version supports AI and PVD events.

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2 Packing List

- GV-Cloud Bridge Pro
- Terminal Block
- Download Guide

3 Overview

No	Name	Description
1.	LED	The Red LED indicates the power is supplied. The Green LED indicates a network is connected.
2.	Memory Card	Insert a Micro SD card (SDHC / SDXC / UHS-I, Class 10, Linux ext4 format). To format a SD card, see *13 Storage*.
3.	RS-485	Connect to up to 8 GV-DFK1355 readers via the RS-485 interface. See *12.5 RS-485* and *11.2 Connecting to GV-Cloud Access Control.*
4.	USB	Not functional
5.	Default	Hold and press the button for 10 ~ 15 seconds to load the default. To restore to default settings using the Web interface, see *12.6 Maintenance.*
6.	LAN/PoE	Connect to a network or power over Ethernet.
7.	DC 12V	Connect to power.

IMPORTANT: The device can only accept one power source, either a PoE power supply or a DC power adapter. Connecting two power sources simultaneously can damage the device.

Note: The device also supports SSD storage. To install a SSD, see *6 Installing a SSD*.

4 GV-Cloud VMS Licenses

To use GV-Cloud Bridge Pro with GV-Cloud VMS, select the license that best meets your surveillance requirements. GV-Cloud VMS provides three license options: **Basic**, **Standard**, and **Premium**. For details on GV-Cloud VMS licenses, see the datasheet.

Basic and Standard Licenses

Camera Resolution	Storage Type	Basic	Standard
8 / 5 / 4 / 2 / 1 MP	SSD	8 CH	
	SD Card	4 CH	

Premium License

As you integrate GV-Cloud Bridge Pro and GV-Cloud VMS, the following GV-Cloud VMS premium licenses are available based on the resolution of recordings to be uploaded to GV-Cloud VMS (SD, 720p, 2M, 2M / 30F, 4M, 4M / 30F) and each license specifies the frame rate and bitrate limit.

Camera Resolution	Storage Type	Maximum Channels supported by GV-Cloud VMS Premium Licenses					
		SD (640*480)	720p	2M	2M / 30F	4M[1]	4M / 30F[1]
		30 FPS + 512 Kbps	30 FPS + 1 Mbps	15 FPS + 1 Mbps	30 FPS + 2 Mbps	15 FPS + 2 Mbps	30 FPS + 3 Mbps
8 MP	SSD	8 CH	8 CH	8 CH	8 CH	8 CH[2]	8 CH[2]
	SD Card	4 CH	4 CH	4 CH	4 CH	4 CH[2]	4 CH[2]
5 / 4 MP	SSD	8 CH	8 CH	8 CH[2]	8 CH[2]	8 CH[1]	8 CH[1]
	SD Card	4 CH	4 CH	4 CH[2]	4 CH[2]	4 CH[1]	4 CH[1]
2 MP	SSD	8 CH	8 CH	8 CH	8 CH	8 CH[3]	8 CH[3]
	SD Card	4 CH	4 CH	4 CH	4 CH	4 CH[3]	4 CH[3]
1 MP	SSD	8 CH	8 CH	8 CH[3]	8 CH[3]	8 CH[3]	8 CH[3]
	SD Card	4 CH	4 CH	4 CH[3]	4 CH[3]	4 CH[3]	4 CH[3]

Note:

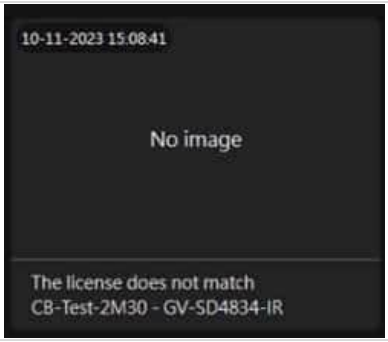
1. **The 4MP GV-Cloud Premium license also support 5MP resolution.** Recordings from 5MP cameras will be uploaded and stored in 5MP quality on GV-Cloud VMS.
2. **Users must manually lower the camera's resolution to match the licensed resolution**; otherwise, the sub stream resolution will be applied.
3. Higher-resolution Premium licenses can be applied to cameras with lower resolution, but this is not recommended for optimal license utilization.

When GV-Cloud Bridge Pro is connected to GV-Cloud VMS, the camera's resolution is constantly monitored and immediately adjusted when it exceeds the limits of the applied licenses by resolution (SD / 720p / 2 MP / 4 MP).

When the camera's main stream / sub stream resolution does not match the applied GV-Cloud VMS license, the following conditions will occur:

1. **When the main stream or sub stream resolution is lower than the applied license:** (1) The recordings will be uploaded to GV-Cloud VMS using the closest resolution; (2) The **Resolution does not match** event will be included in GV-Cloud VMS event log; (3) An alert message will be sent via e-mail.
2. **When both main stream and sub stream resolution exceeds the applied license:** (1) The recordings will only be saved in the SSD or the memory card in GV-Cloud Bridge Pro based on the main stream resolution; (2) The **License does not match** event will be included in GV-Cloud VMS event log; (3) An alert message will be sent via e-mail.

GV-Cloud VMS event logs of License not matched and Resolution not matched

	The License does not match CB.
	The Resolution does not match CB.

5 Connecting to PC

There are two options for powering and connecting GV-Cloud Bridge Pro to a computer. Only one of the two ways can be utilized at once.

1. Connect an optional **GV-PA301 PoE Adapter** to the PC via the LAN port (see No. 7, *3 Overview*) to receive power over Ethernet.
2. Use an optional **power adapter** to power on the device. Connect to network via the LAN port (No. 7, *3 Overview*).

IMPORTANT: GV-Cloud Bridge Pro can only accept one power source, either a PoE power supply or a DC power adapter. Connecting two power sources simultaneously can damage the device.

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6 Installing the SSD

To install an SSD in GV-Cloud Bridge Pro using the optional SSD mounting kit, follow the steps below.

The SSD mounting kit

1. SATA Power Cable 	2. Mounting Plate 
3. SATA Data Cable 	4. Screws  x 4,  x 4

Note: The optional SSD mounting kit is required to install the SSD drive.

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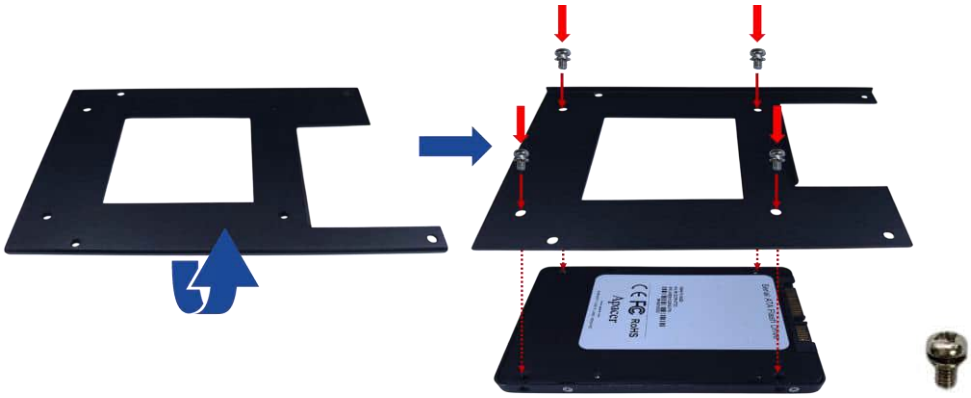
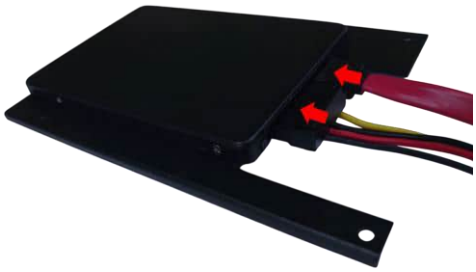
1. Loosen the 4 cover screws and take off the cover of GV-Cloud Bridge Pro.

2. Connect the SATA Power Cable to the GV-Cloud Bridge Pro system board.

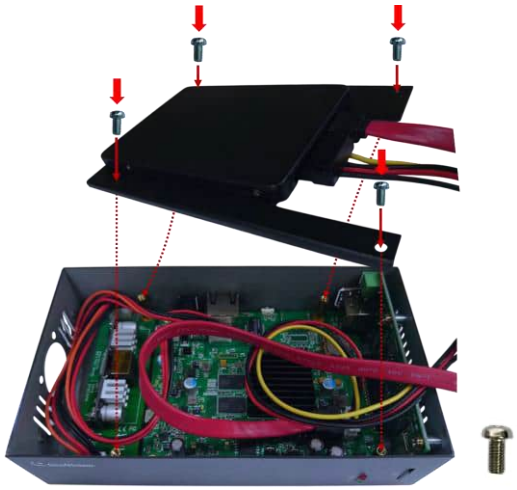
3. Flip the mounting plate and attach it to the self-prepared SSD with 4 of the supplied screws.



4. Turn over the SSD and mounting plate assembly so that the SSD is on top, and connect the SATA Power Cable from the system board to the SSD.



5. Install the mounting plate to the mounting standoffs using 4 of the supplied screws.



6. Fasten the cover back onto the housing to complete the SSD installation.

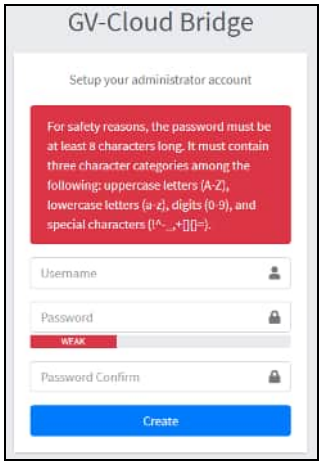
7 Accessing GV-Cloud Bridge Pro

When GV-Cloud Bridge Pro connects to a network with a DHCP server, it is allocated a dynamic IP address. To access your device, follow the steps below.

Note:

1. The PC used to access the Web interface must be on the same LAN as the GV-Cloud Bridge Pro.
2. If the network does not have a DHCP server or is disabled, GV-Cloud Bridge Pro can be reached using its default IP address 192.168.0.10, see *7.1 Assigning a Static IP Address*.

1. Download and install the GV-IP Device Utility program.
2. Locate your GV-Cloud Bridge Pro on the GV-IP Device Utility window, click its IP address, and select **Web Page**. This webpage appears.

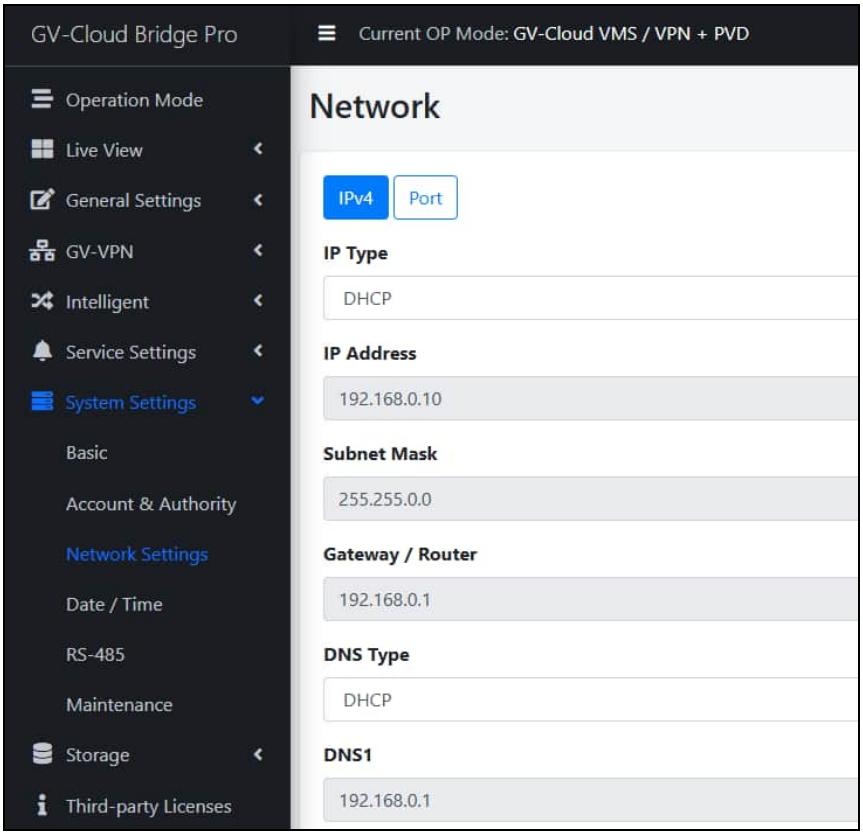


3. Type the necessary information to create a user account and click **Create**.

7.1 Assigning a Static IP Address

When GV-Cloud Bridge Pro connects to LAN without a DHCP server, it is assigned a static IP address of **192.168.0.10**. To avoid IP conflicts with other GeoVision devices, follow the steps below to assign a new IP address.

1. Open your Web browser, and type the default IP address **192.168.0.10**.
2. Type your username and password. Click **Login**.
3. In the left menu, click **System Settings** > **Network Settings**.



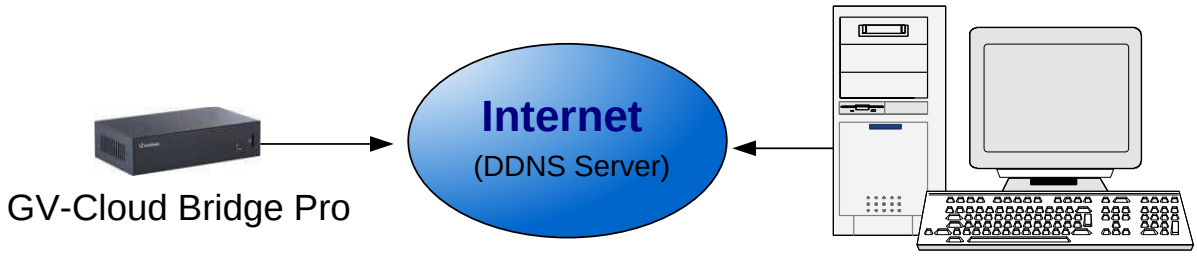
4. Select **Static IP address** as **IP Type**. Type the static IP address information, including IP Address, Subnet Mask, Default Gateway and Domain Name Server.
5. Click **Apply**. The GV-Cloud Bridge Pro can now be reached using the static IP address configured.

Note: This page is unavailable in the **VPN Box** mode. For details on different operation modes, see *8 Operation Mode.*

7.2 Configuring the DDNS Domain Name

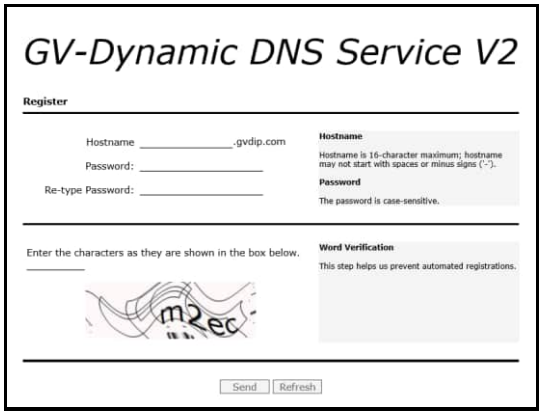
DDNS (Dynamic Domain Name System) provides another way of accessing GV-Cloud Bridge Pro when using a dynamic IP from a DHCP server. DDNS assigns a domain name to GV-Cloud Bridge Pro so that it can always be accessed using the domain name.

Follow the steps below to apply for a domain name from **GeoVision DDNS Server** and enable the DDNS function.



1. In the left menu, select **Service Settings** > **DDNS**.
2. Enable the connection, and click **Register**. You are directed to GV-Dynamic DNS Service V2.

3. Type a **Hostname** of up to 16 characters, including "a ~ z", "0 ~ 9", and "-". A space or "-" cannot be used as the first character.



4. Type a **Password** that is case-sensitive and at least 6 characters long. Type the password again in the Re-type Password field to confirm.
5. Type the characters or numbers displayed in the **Word Verification** box. In this example, type *m2ec*. Word Verification is not case-sensitive.
6. Click **Send**. This page shows after the registration process is complete. The **Hostname** displayed is the domain name, consisting of the registered username and “gvdip.com”, e.g. somerset01.gvdip.com.

Note: The registered username expires after three months of inactivity.

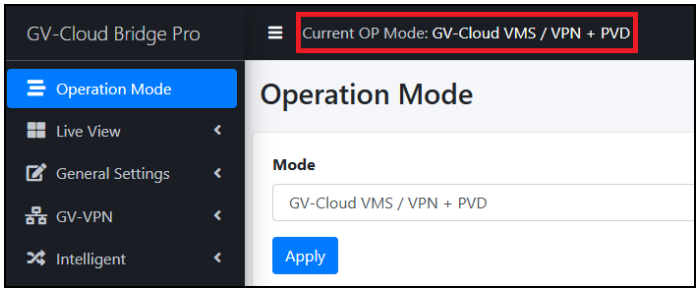
7. Return to the GV-Cloud Bridge Pro Web interface and type the **Hostname** and **Password** registered on the DDNS Server.
8. Click **Apply**. The GV-Cloud Bridge Pro can now be accessed using the domain name.

8 Operation Mode

Once logged in, select **Operation Mode** from the left menu. You can connect to GeoVision software or services using one of four major operation modes. After selecting the desired mode, GV-Cloud Bridge Pro will reboot for the changes to take effect. You can only choose one operation mode at a time.

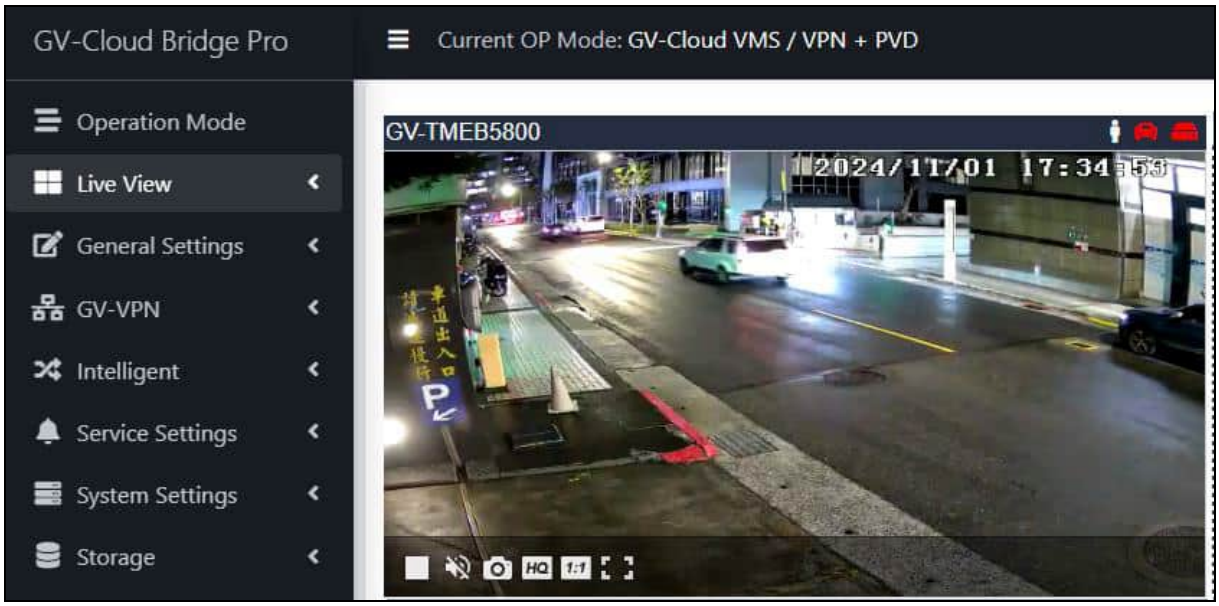
Operation Mode	Function
1. GV-Cloud VMS	
GV-Cloud VMS / VPN	Connection to GV-Cloud VMS, GV-VPN (up to 8 IP devices), GV-Eye
GV-Cloud VMS / VPN + PVD	Connection to GV-Cloud VMS, GV-VPN (up to 8 IP devices), GV-Eye; PVD (People and Vehicle Detection)
2. GV-Cloud Access Control	
GV-Cloud Access / VPN	Connection to GV-Cloud VMS, GV-Cloud Access Control, GV-VPN (up to 8 IP devices), GV-Eye
3. GV-Center V2 / Recording Server / Video Gateway / RTMP	
CV2 / Video Gateway / RTMP / VPN	Connection to GV-Center V2, GV-Dispatch Server, GV-Recording Server / Video Gateway, GV-VPN (up to 8 IP devices), GV-Eye; RTMP livestream
CV2 / Video Gateway / RTMP / VPN + PVD	Connection to GV-Center V2, GV-Dispatch Server, GV-Recording Server / Video Gateway, GV-VPN (up to 8 IP devices), GV-Eye; RTMP livestream; PVD (People and Vehicle Detection)
4. GV-VPN Box	
VPN Box (16 IP devices)	GV-VPN (up to 16 IP devices)
5. GV-CVW (GV-Cloud Video Watch)	
GV-CVW + PVD	Connection to GV-Cloud Video Watch, GV-Eye; PVD (People and Vehicle Detection)

The current operation mode is shown on the top of the Web interface.



9 Live View

Once a camera is connected to GV-Cloud Bridge Pro, you can see its live view and use the following functions for monitoring. For how to connect a camera, see *10.1 Connecting to IP Cameras*.



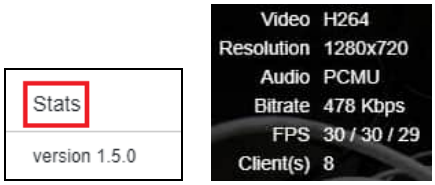
When you move the cursor over a channel, the following controls are available:

Icon	Function
	The live view is enabled by default. Click to disable the live view.
	The audio is disabled by default. Click to enable the audio.
	Click to take a snapshot. The snapshot is saved immediately to your PC's Downloads folder in .png format.
	The video resolution is set to the sub stream by default. Click to set the video resolution to the main stream of high quality.
	Picture-in-Picture (PIP) is disabled by default. Click to enable.
	Screen is disabled by default. Click to view in full screen.

The indicators on a channel:

	• **People icon:** Turn red when a person is detected. For the indicator to work, it is required to enable People detection. See *15 Intelligent Detection*. • **Vehicle icon:** Turn red when a vehicle is detected. For the indicator to work, it is required to enable Vehicle detection. See *15 Intelligent Detection*. • **Recording:** Turn red when the recording is active.

Additionally, you can right-click the live view image, and select **Stats** to see the current **Video** (codec), **Resolution**, **Audio** (codec), **Bitrate**, **FPS**, and **Client** (the number of current connections to the camera) in use.



10 General Settings

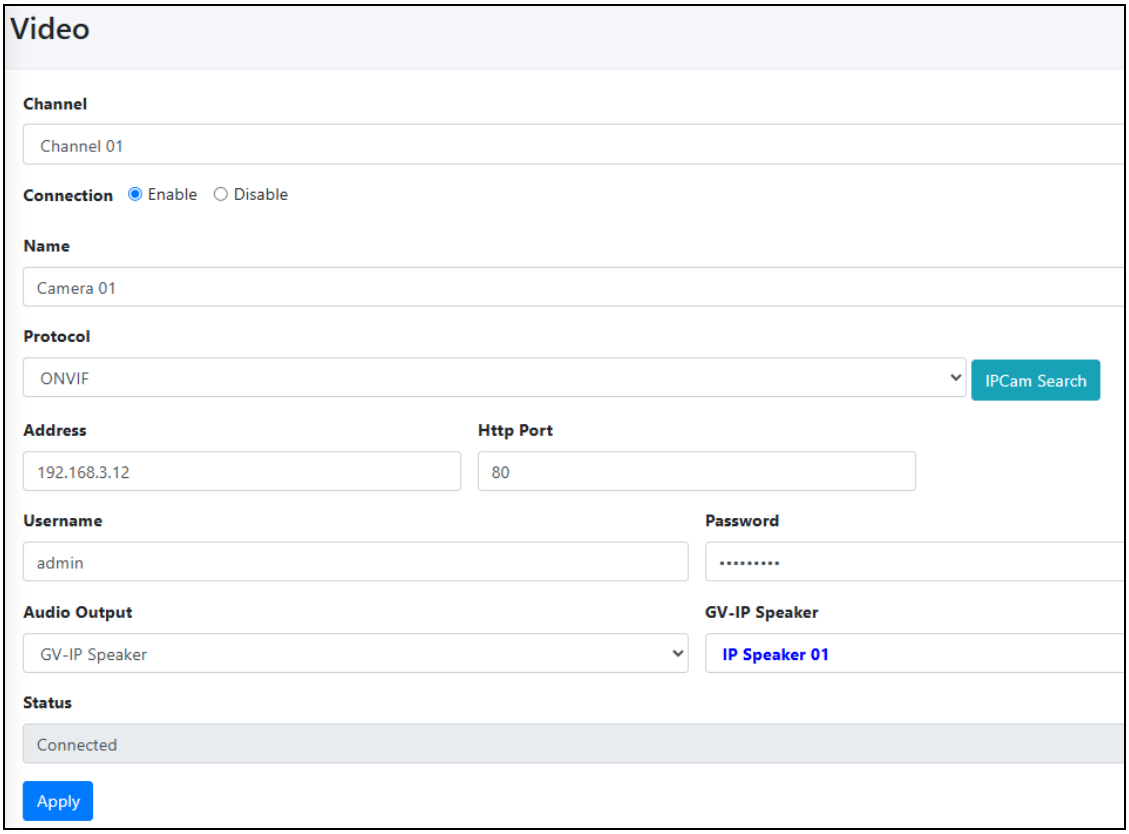
The following options are available under General Settings of the left menu. Procedures are detailed in the following sections:

- **Video Settings**: See *10.1 Connecting to IP Cameras*.
- **IO Settings**: See *10.2 Configuring Input / Output Settings.*
- **IO Box Settings:** See *10.3 Connecting to I/O Box*.

10.1 Connecting to IP Cameras

To set up connections to cameras, follow the steps below.

1. In the left menu, select **General Settings** > **Video Setting**.
2. For **Channel**, select one from Channel 01 to Channel 08 and enable the connection.



3. Type the connection information of the camera to be added. Optionally, click **IPCam Search** to detect cameras on the same LAN, and then select a camera to automatically import its connection information to this Video page.
4. Optionally select the **Camera** or a **GV-IP Speaker** to be the audio output.

5. Click **Apply**. Once connected, the Status field will display “Connected”.

10.2 Configuring Input / Output Settings

GV-Cloud Bridge Pro can manage up to eight input and eight output devices from cameras and GV-IO Boxes.

The virtual inputs can be used to enable event alerts and start recordings when an input trigger is detected. The virtual outputs can be triggered remotely via the GV-Center V2 central monitoring station and the GV-Eye mobile app.

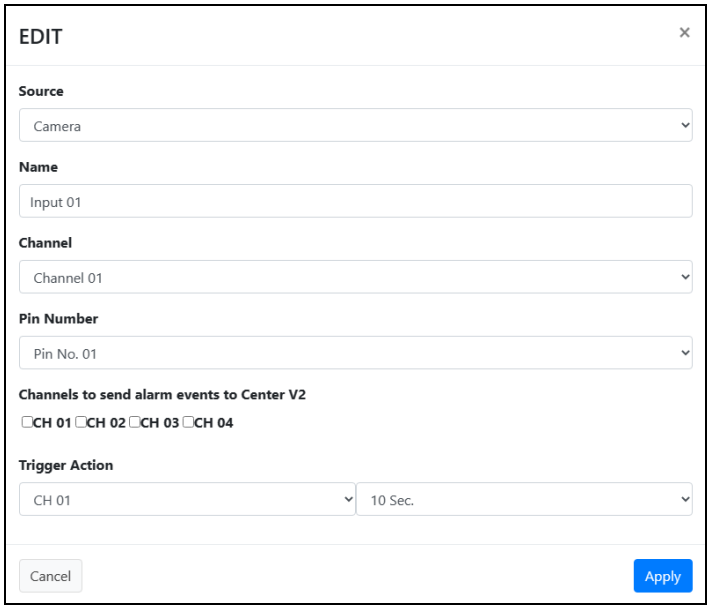
To set up I/O devices from the GV-IO Box, see *10.3 Connecting to I/O Box* to set up GV-IO Box in advance.

10.2.1 Input Settings

To configure an input device, follow the steps below.

1. In the left menu, select **General Settings** > **IO Settings**. This page appears.

2. To configure an input device, click **Edit**.
3. Select **Camera** or **IO Box** for **Source**. The edit page appears based on the selected source.



- **Name:** Type a desired name for the input settings.
- **Channel / IO Box:** Specify the camera channel or IO Box number based on the selected source.
- **Pin Number / IO Box Pin Number:** Select the desired pin number for the input device based on the selected source.
- **Channels to send alarm events to Center V2:** Select the desired cameras to send event alerts to the GV-Center V2 central monitoring software when the input trigger is detected.
- **Trigger Action:** Only available in the GV-Cloud VMS operation mode. Select the recording channel and duration (up to 60 seconds) to start recording and notify GV-Cloud VMS when the input trigger is detected. To trigger more than one channel recording, configure another input trigger settings.

4. Click **Apply**.

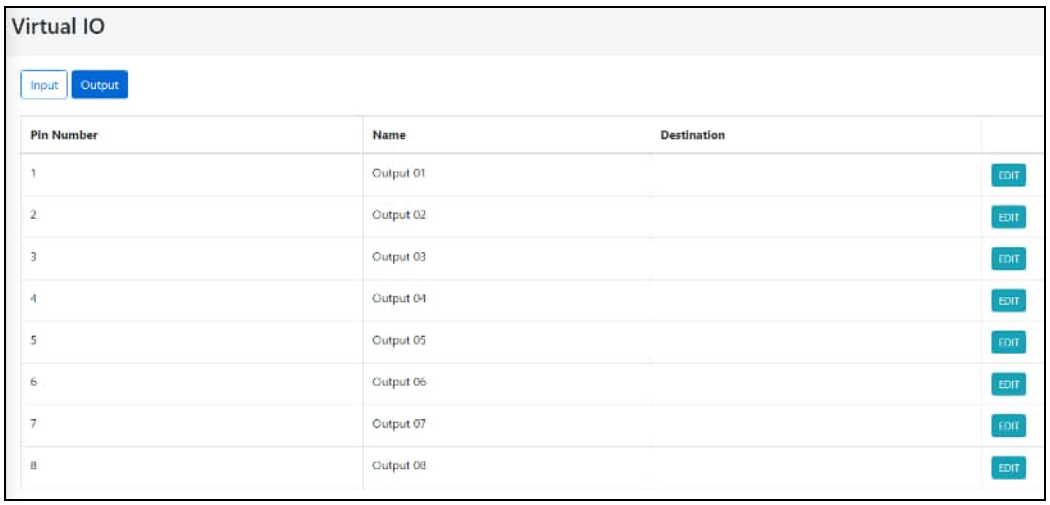
Note:

1. To send event alerts and recordings to GV-Cloud VMS upon input triggers, ensure to connect to GV-Cloud VMS. See *11.1 Connecting to GV-Cloud VMS* for details.
2. Enable **Attachment Mode** under **Subscriber Settings** on GV-Center V2 to activate the video attachment function. The Attachment Mode enabled on GV-Center V2 allows recording of up to 60 seconds (30 seconds by default). See *1.4.2 Subscriber Settings* of *GV-CMS Series User's Manual* for details.

10.2.2 Output Settings

To configure an output device, follow the steps below.

1. Select **Output** on the Virtual IO page. This page appears.



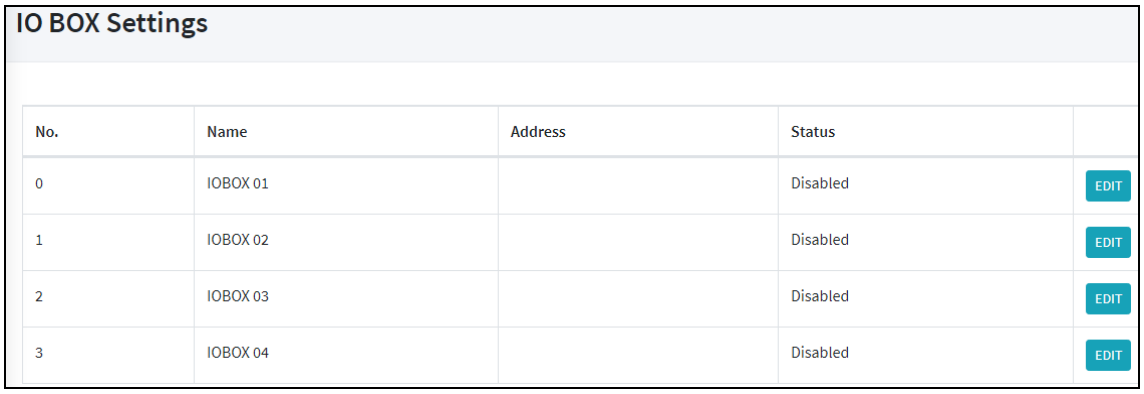
2. To configure an output device, click **Edit**.
3. Follow Steps 3 ~ 4 in *1.9.2.1 Input Settings*.

Note: To force a camera output to be triggered using the GV-Eye mobile app. See *8. Live View* in *GV-Eye Installation Guide*.

10.3 Connecting to I/O Boxes

GV-Cloud Bridge Pro can connect up to four GV-I/O Boxes. To connect to a GV-I/O Box, follow the steps below.

1. In the left menu, click **General Settings** > **IO BOX Settings**. This page appears.



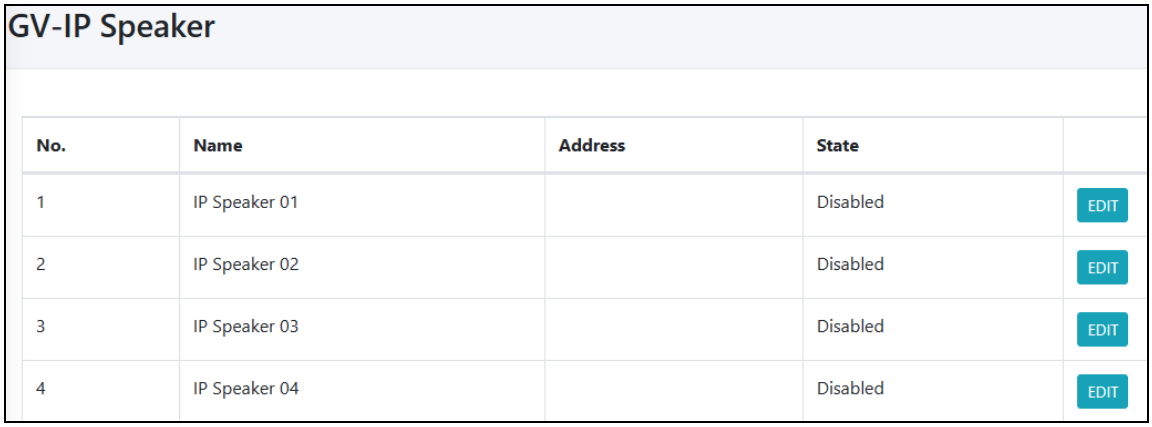
2. To configure a GV-I/O Box, click **Edit**.
3. Enable the connection and type the necessary information to connect the GV-I/O Box.

4. Click **Apply**.
5. To configure the input / output devices connected from the GV-I/O Box, see *10.2 Configuring Input / Output Settings.*

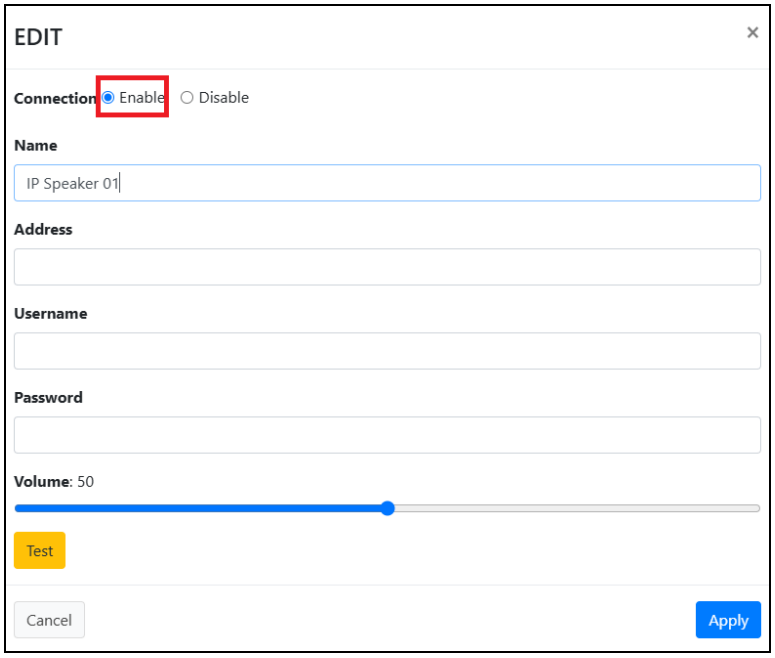
10.4 Connecting to IP Speakers

GV-Cloud Bridge Pro can connect up to eight GV-IP Speakers. The IP speaker can be configured as the audio output of a camera channel, allowing the operator to talk to the surveillance site via the speaker. To connect to a GV-IP Speaker, follow the steps below.

1. In the left menu, click **General Settings** > **IP Speaker**. This page appears.



2. To configure a GV-IP Speaker, click **Edit**.
3. Enable the connection and type the necessary information to connect the GV-IP Speaker.



4. Click **Test**. Once connected, a success message will appear.
5. Click **Apply**.

6. To assign a GV-IP Speaker as a camera's audio output, go to **General Settings** > **Video Setting**. See Step 4 in *10.1 Connecting to IP Cameras*.

Note: To talk to the surveillance site via a speaker, use the Microphone function in the WS Player of GV-Cloud VMS, GV-Center V2, GV-Eye app, or GV-Cloud Video Watch.

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11 Service Settings

The following options are available under Service Settings of the left menu. Procedures are outlined in their respective sections:

- **GV-Cloud VMS:** See *11.1 Connecting to GV-Cloud VMS*.
- **GV-Cloud Access Control:** See *11.2 Connecting to GV-Cloud Access Control*.
- **GV-Center V2:** See *11.3 Connecting to GV-Center V2 / Dispatch Server.*
- **GV-Video Gateway:** See *11.4 Connecting to GV-Recording Server / Video Gateway*.
- **GV-Relay:** See *11.5 Connecting to GV-Relay (GV-Eye app).*
- **GV-CVW:** See *11.6 Connecting to GV-CVW*.
- **Live Broadcast / RTMP:** See *11.7 Live Broadcasting*.
- **DDNS:** See *7.2 Configuring the DDNS Domain Name*.

11.1 Connecting to GV-Cloud VMS

Cameras connected via GV-Cloud Bridge Pro can connect to GV-Cloud VMS, allowing for cloud-based monitoring.

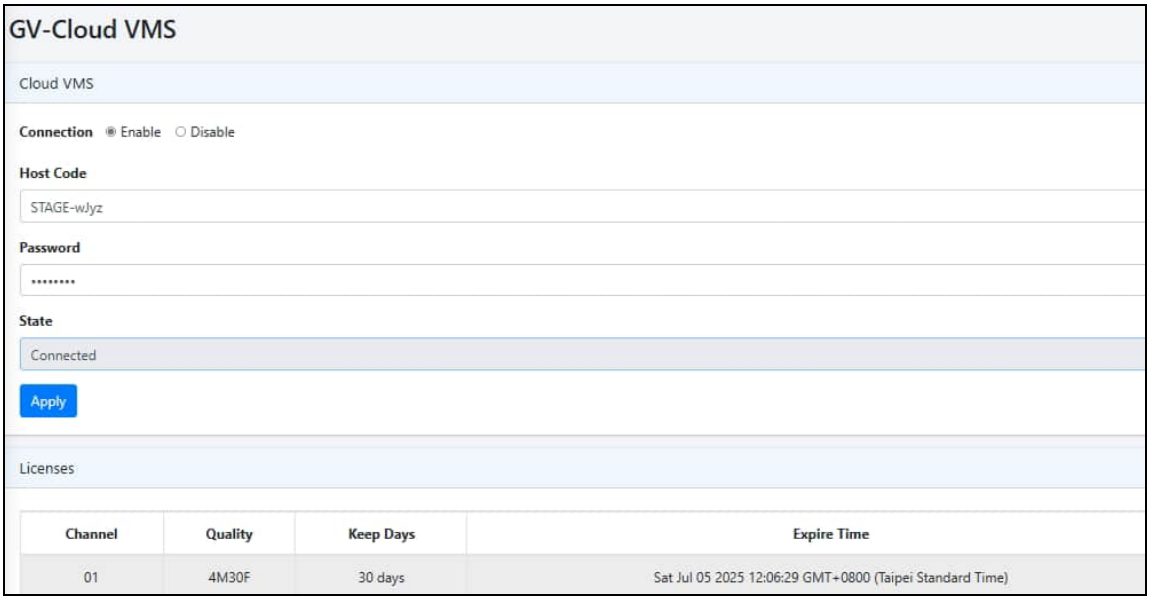
On GV-Cloud VMS

1. Add your GV-Cloud Bridge Pro to the host list on GV-Cloud VMS first. For details, see *2.3 Creating Hosts* in *GV-Cloud VMS User's Manual*.

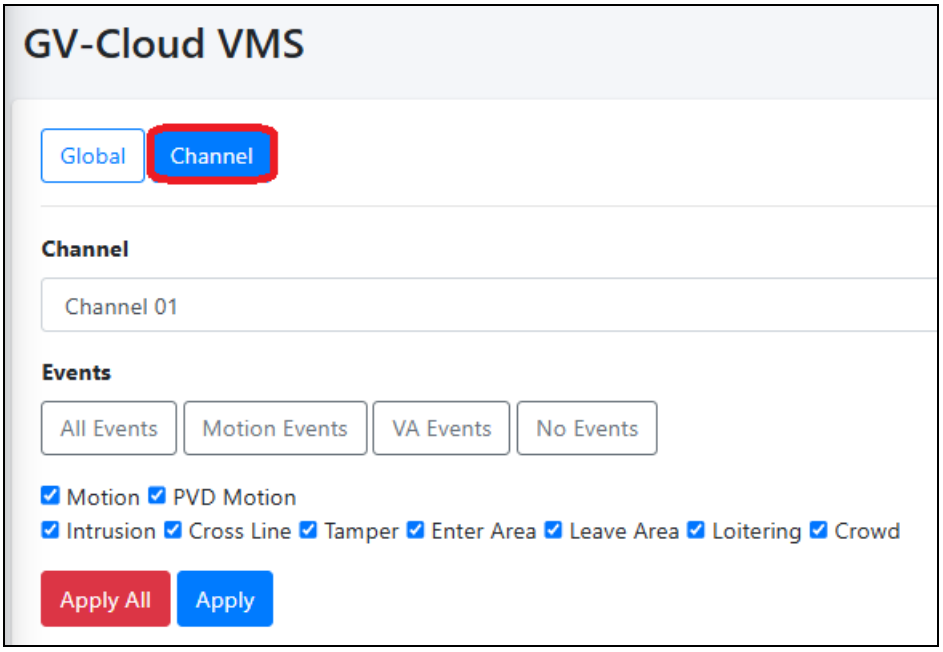
On GV-Cloud Bridge Pro

2. In the left menu, select **Operation Mode** > **GV-Cloud VMS / VPN, GV-Cloud VMS / VPN + PVD**, or **GV-Cloud Access Control / VPN.**
3. Click **Apply**. When the device is rebooted, the mode will be applied.
4. In the left menu, click **Service Settings** > **GV-Cloud VMS**.

5. Enable the connection, and type the **Host Code** and **Password** created on GV-Cloud VMS (Step 1).



6. Click **Apply.** Once connected, the State will display “Connected”.
7. To select event types for transmission to GV-Cloud VMS, click the **Channel** tab.



8. Select a channel, and choose from **All Events**, **Motion Events**, **VA Events**, or **No Events**. You can also check and uncheck a desired event. Click **Apply**.

Note:

1. When motion occurs, GV-Cloud Bridge Pro can send snapshots and video recordings (up to 30 seconds, set to sub stream by default) to GV-Cloud VMS. It also transmits the following AI events from AI-capable GV/UA-IP cameras, varying by model: PVD Motion / Intrusion / Cross Line / Enter Area / Leave Area / Loitering. For details, see *4.5.1 Compatible GV-IP Cameras for AI Search: GV-Cloud IP Cameras / Connected via GV-Cloud Bridge / Cloud Bridge Pro* in *GV-Cloud VMS User's Manual*.
2. GV-Cloud Bridge Pro requires a memory card or SSD to record and notify GV-Cloud VMS of events. To ensure that a storage device is operational, go to **Storage** > **Disk** in the left menu and make sure the Status is OK.
3. When GV-Cloud Bridge Pro disconnects from GV-Cloud VMS over the Internet, videos are stored on the Pro's storage device. Once connected, the videos will be sent to GV-Cloud VMS.
4. When video playback lags, GV-Cloud VMS (Event Query) will display a "System Overload" warning message. To resolve the issue, do one of the following measures:
   i. Lower camera bitrate.
   ii. Disable specific functions on part of connected cameras: **GV/UA-IP and ONVIF cameras** (Motion detection); **AI-capable GV/UA-IP cameras** (AI functions: Intrusion / PVD Motion / Cross Line / Enter Area / Leave Area).
5. When connecting to GV-Cloud VMS, make sure to enable ICMP Protocol from the router for external communication.

11.2 Connecting to GV-Cloud Access Control

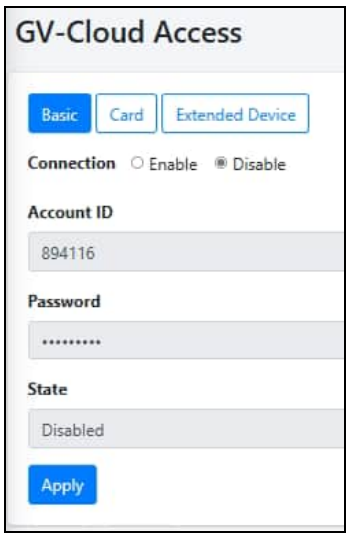
The controller and reader connected via GV-Cloud Bridge Pro can connect to GV-Cloud Access Control, allowing for cloud-based monitoring.

The procedures are as the following:

- **Step 1:** Connect GV-Cloud Bridge Pro to GV-Cloud Access Control. See *11.2.1 Connecting to GV-Cloud Access Control.*
- **Step 2:** Connect the **GV-AS21xx / AS41xx** controller or the **GV-DFK1355** reader, via GV-Cloud Bridge Pro, to GV-Cloud Access Control. See *11.2.2 Connecting the Controller or Reader*.
- **Step 3:** Only for the GV-DFK1355 reader to set the identification type. See *11.2.3 Setting the Card Identifier*.

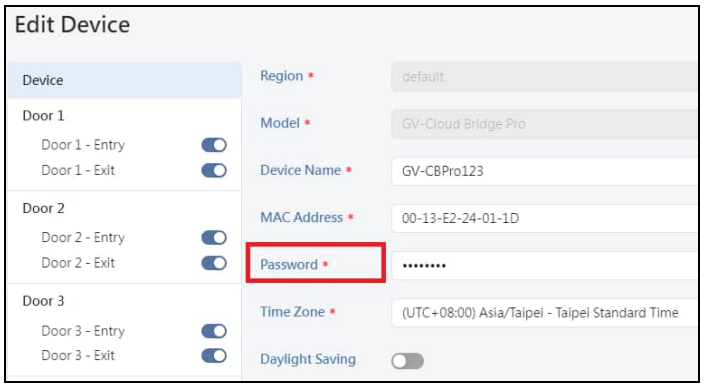
11.2.1 Connecting to GV-Cloud Access Control

1. In the left menu, select **Operation Mode** > **GV-Cloud Access Control / VPN**.
2. Click **Apply.** When the device is rebooted, the mode will be applied.
3. In the left menu, click **Service Settings** > **GV-Cloud Access Control**.



- **Account ID:** Type your GV-Cloud account ID.
- **Password:** Create a password for the GV-Cloud Bridge Pro.

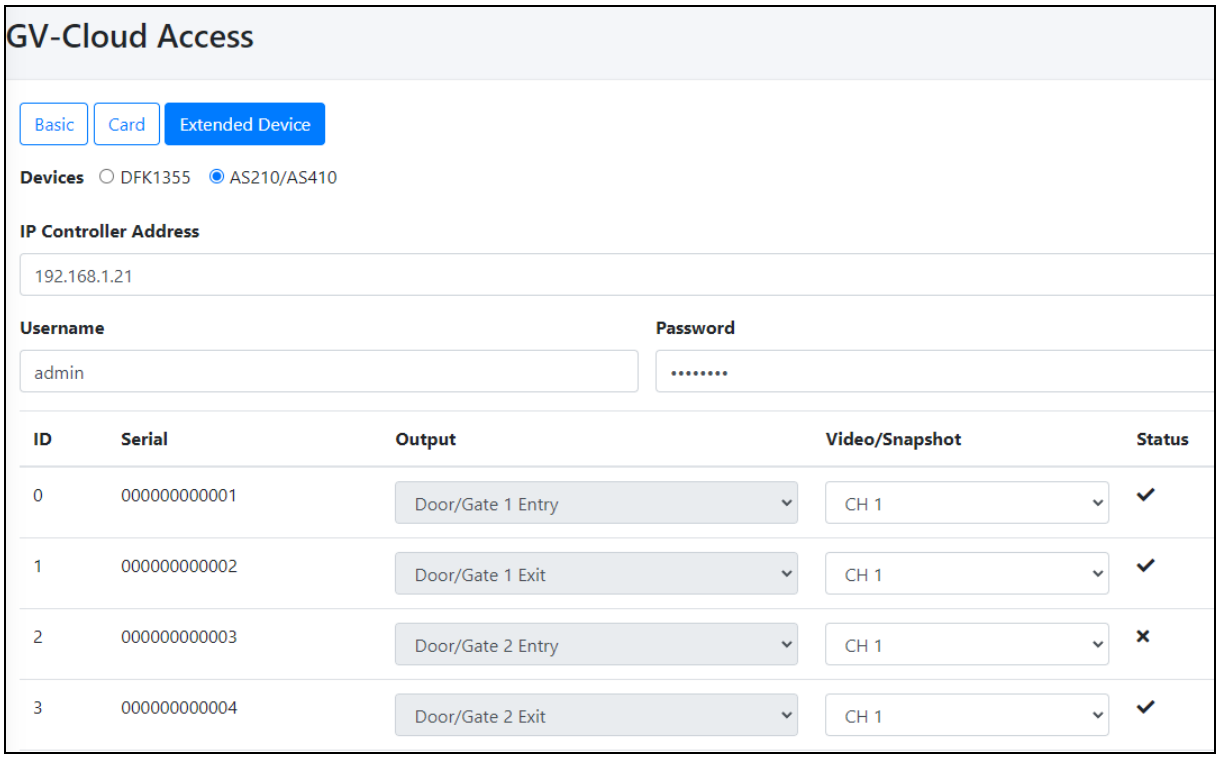
4. Click **Apply.** When the device is added to GV-Cloud Access Control, the State will display “Connected”.
5. Add the GV-Cloud Bridge Pro to GV-Cloud Access Control. See *4.2.1 Adding a Device* in GV-Cloud Access Control User’s Manual. Note that the password entered on GV-Cloud Access Control must match that created on the GV-Cloud Bridge Pro (Step 3).



11.2.2 Connecting the Controller or Reader

GV-Cloud Bridge Pro allows you to connect the GV-AS21xx or GV-AS41xx controller or the GV-DFK1355 reader to the GV-Cloud Access Controller. On the GV-Cloud Access Control page, click the **Extended Device** tab.

To connect the GV-AS21xx / AS41 xx controller:



1. In the left menu, click **Service Settings** > **GV-Cloud Access Control**, and select the **Extended Device** tab.
2. Select **AS210/410** as Devices.
3. Type the controller's IP address under **IP Controller Address**.
4. Type the login **Username** and **Password** of the controller.
5. Click **Apply**. When the controller is connected to GV-Cloud Access Control, the Status for each ID will display a checkmark.
6. Assign a channel number from the **Video/Snapshot** dropdown list to its relevant door number. The ID# and Output# (door number/function) are fixed.
7. Click **Apply** again.

You can now swipe a card on any reader connected on the controller. A "Invalid Card" message should appear on GV-Cloud Access Control.

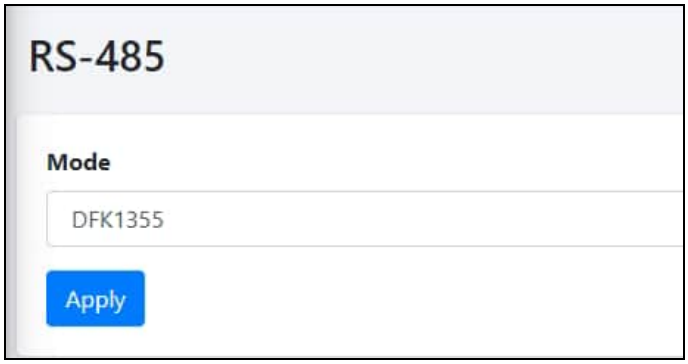
To connect the GV-DFK1355 reader:

Using the RS-485 interface of GV-Cloud Bridge Pro, you can connect up to 8 GV-DFK1355 readers to GV-Cloud Access Control.

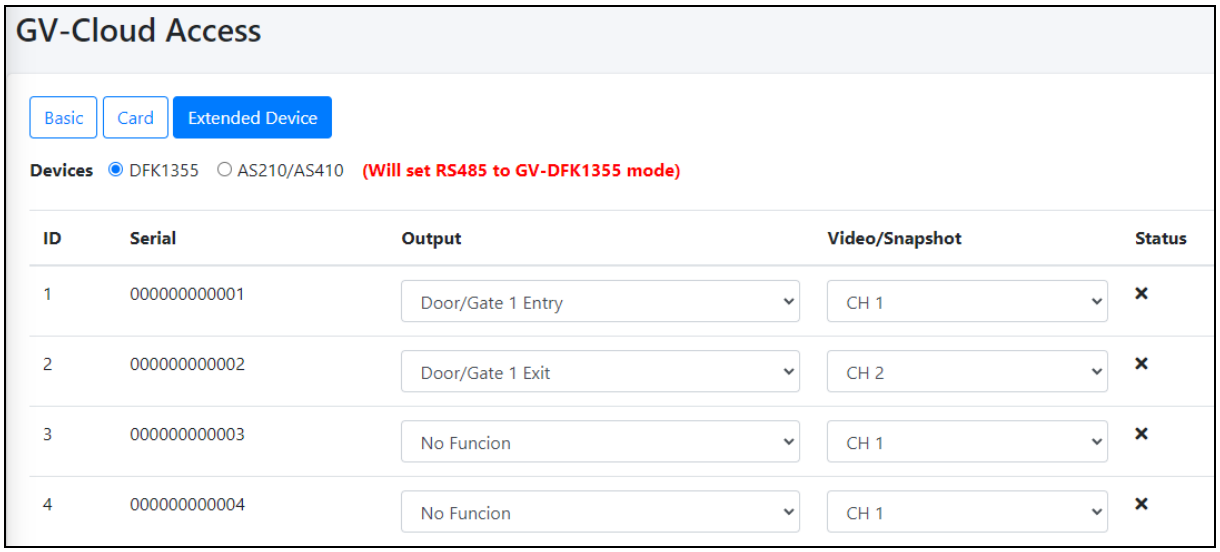
Note: To define the sequence of multiple readers when connected to a single RS-485 interface, use the **DFK1355 Setup AP**. See *8.7 ID and Card Identifier Settings* in *GV-Card Reader User's Manual*.

---

1. Connect the GV-DFK1355 reader to the RS-485 interface of GV-Cloud Bridge Pro.
2. In the left menu, select **System Settings** > **RS-485**, and select **DFK1355** as Mode. Click **Apply**.



3. In the left menu, click **Service Settings** > **GV-Cloud Access Control**, and select the **Extended Device** tab.



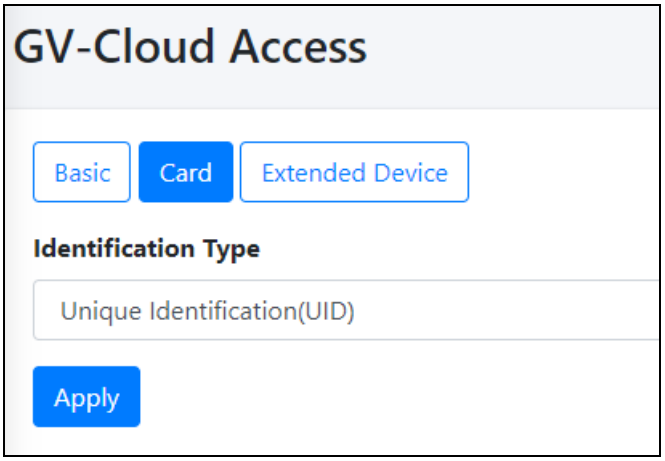
4. Select **DFK1355** as Devices.

5. For each reader, specify the door number/function from the **Output** dropdown list, as well as the channel number for video streams and snapshots from the **Video/Snapshot** dropdown list.
6. Click **Apply**. When the reader is connected to GV-Cloud Access Control, the Status for each ID will display a checkmark.

You can now swipe a card on the reader. A “Invalid Card” message should appear on GV-Cloud Access Control.

11.2.3 Setting the Card Identifier

To set the GV-DFK1355 reader to reader **Unique Identification (UID)** or **GeoVision Identification (GID)**, click the Card tab on the GV-Cloud Access page.



11.3 Connecting to GV-Center V2 / Dispatch Server

Cameras connected via GV-Cloud Bridge Pro can connect to GV-Center V2 or GV-Dispatch Server, allowing for centralized monitoring.

1. In the left menu, select **Operation Mode** > **CV2 / Video Gateway / RTMP** or **CV2 / Video Gateway / RTMP + PVD**.
2. Click **Apply**. When the device is rebooted, the mode will be applied.
3. In the left menu, click **Service Settings** > **GV-Center V2**.
4. Enable the connection, and type the necessary information for GV-Center V2 / Dispatch Server to connect.

5. Click **Apply**. Once connected, the State field will display “Connected”.

When working with GV-Center V2 and GV-Dispatch Server, note the following:

- **GV-Center V2 V18.4.1 and GV-Dispatch Server V18.2.0A** do not support AI and PVD events from GV-Cloud Bridge Pro. The following events are supported: motion, input trigger, output trigger, video lost, video resumed, tampering, and scene change.

- **GV-Center V2 AI version** supports AI and PVD events. The following events are supported, varying by camera model: PVD Motion, Intrusion, Cross Line, Enter Area, Leave Area, Loitering, and regular events (e.g. motion). For details, see *Appendix K. Compatible GV-IP Cameras for Events in V20: GV-IP Cameras Connected via GV-Cloud Bridge / Cloud Bridge Pro* in *GV-CMS Series User’s Manual*.

Enable **Attachment Mode** under **Subscriber Settings** on GV-Center V2 to activate the video attachment function. The Attachment Mode enabled on GV-Center V2 allows recording of up to 60 seconds (30 seconds by default). See *1.4.2 Subscriber Settings* of *GV-Center V2 User's Manual* for details.

Note: GV-Center GV-Cloud Bridge Pro requires a memory card or SSD to record and notify GV-Center V2 of events. To ensure that a storage device is working properly, go to **Storage** > **Disk** in the left menu and make sure the Status is OK.

11.4 Connecting to GV-Recording Server / Video Gateway

Cameras connected via GV-Cloud Bridge Pro can make a passive connection to the GV-Recording Server / Video Gateway, allowing for large-scale video recording and transmitting.

Note:

1. The support for GV-Recording Server / Video Gateway is coming soon.
2. GV-Cloud Bridge Pro allows 3rd party IP cameras to establish passive connections to GV-Recording Server / Video Gateway without port forwarding.

On GV-Recording Server

1. To create passive connection, first follow the instructions in *4.2 Passive Connection* of *GV-Recording Server User's Manual*.

On GV-Cloud Bridge Pro

2. In the left menu, select **Operation Mode** > **CV2 / Video Gateway / RTMP** or **CV2 / Video Gateway / RTMP + PVD**.
3. Click **Apply**. When the device is rebooted, the mode will be applied.
4. In the left menu, click **Service Settings** > **GV-Video Gateway**.
5. Enable the connection, and type the necessary information for GV-Recording Server / Video Gateway to connect.

6. Click **Apply**. Once connected, the State field will display "Connected".

11.5 Connecting to GV-Relay (GV-Eye App)

Cameras connected via GV-Cloud Bridge Pro can be monitored using the GV-Eye mobile app. Follow the steps below to enable the connection to GV-Eye.

The GV-Relay QR code service on this page allows you to connect to the GV-Eye mobile app by scanning the QR code displayed.

Note: Connecting GV-Eye by GV-Relay QR code is a paid service. Each GV-Relay account receives 10 GB of free data every month, with more data available for purchase using the GV-Eye mobile app. For details, refer to Chapter *5. GV-Relay QR Code* in *GV-Eye Installation Guide*.

On GV-Cloud Bridge Pro

1. In the left menu, select an **Operation Mode**, except VPN Box.
2. Click **Apply**. When the device is rebooted, the mode will be applied.
3. In the left menu, click **Service Settings** > **GV-Relay**.
4. Select **On** to enable the service. If the operation mode you selected includes GV-Cloud VMS, the GV-Relay function is enabled automatically.

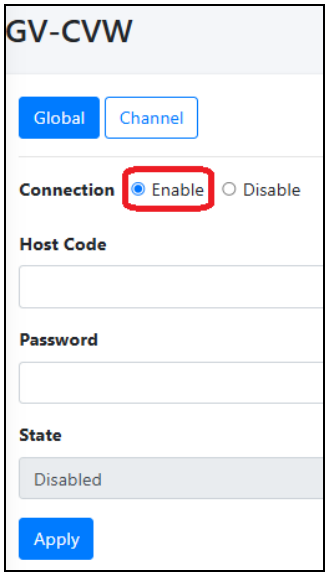
On GV-Eye App

1. Tap **Add** on the Camera / Group List page of GV-Eye to access the **Add Device** page.
2. Tap **QR-code scan**, and hold your mobile device over the QR code on the GV-Relay page.
3. Once the scanning is complete, type the name and login credentials of your GV-Cloud Bridge Pro.
4. Click **Get Information**. All cameras from your GV-Cloud Bridge Pro are displayed.
5. Select the cameras you want to view on GV-Eye and click **Save**. The selected cameras are added to GV-Eye under a Host Group.

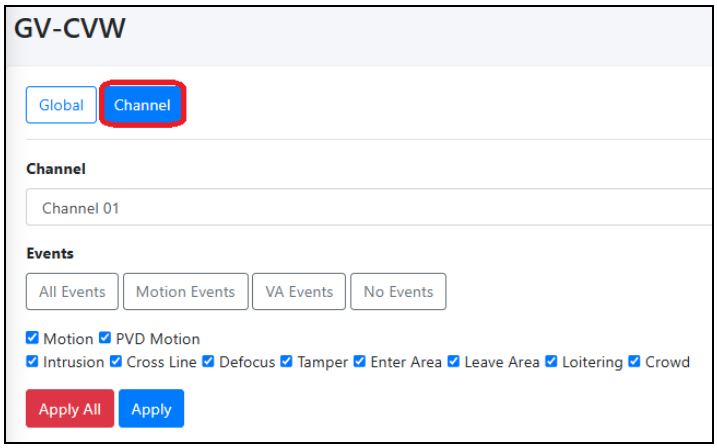
11.6 Connecting to GV-CVW

Cameras connected via GV-Cloud Bridge Pro can connect to GV-CVW (GV-Cloud Video Watch), allowing for centralized monitoring.

1. In the left menu, select **Operation Mode** > **CVW + PVD**.
2. Click **Apply**. When the device is rebooted, the mode will be applied.
3. In the left menu, click **Service Settings** > **GV-CVW**.
4. Enable the connection, and type the connection information **Host Code** and **Password** for GV-Cloud Video Watch to connect.



5. Click **Apply**. Once connected, the State field will display “Connected”.
6. To select event types for transmission to GV-Cloud Video Watch, click the **Channel** tab.



7. Select a channel, and choose from **All Events**, **Motion Events**, **VA Events**, or **No Events**. You can also check and uncheck a desired event. Click **Apply**.

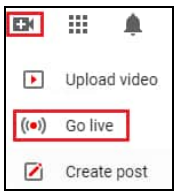
Note: GV-Center GV-Cloud Bridge Pro requires a memory card or SSD to record and notify GV-Cloud Video Watch of events. To ensure that a storage device is working properly, go to **Storage** > **Disk** in the left menu and make sure the Status indicates OK.

11.7 Live Broadcasting

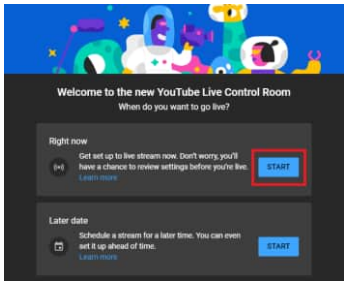
Cameras connected via GV-Cloud Bridge Pro can connect to YouTube or Twitch for live broadcasting. The user interfaces vary per platform. Locate the options specific to your platform. In the following procedures, we use YouTube as an example.

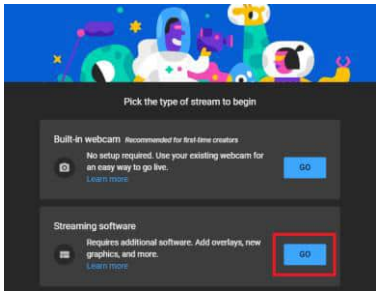
On YouTube

1. Log in to your YouTube account, click the **Create** icon and select **Go live**.

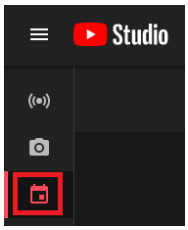


2. On the welcome page to Live control room, select **Start** for **Right now**, and then **GO** for **Streaming software**.

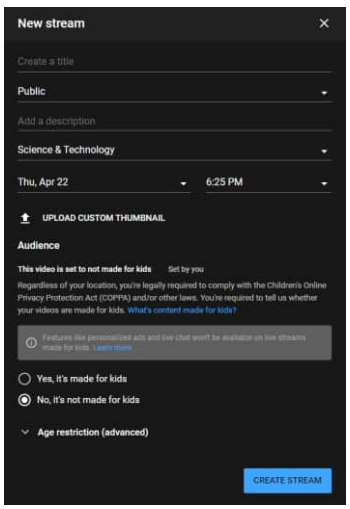




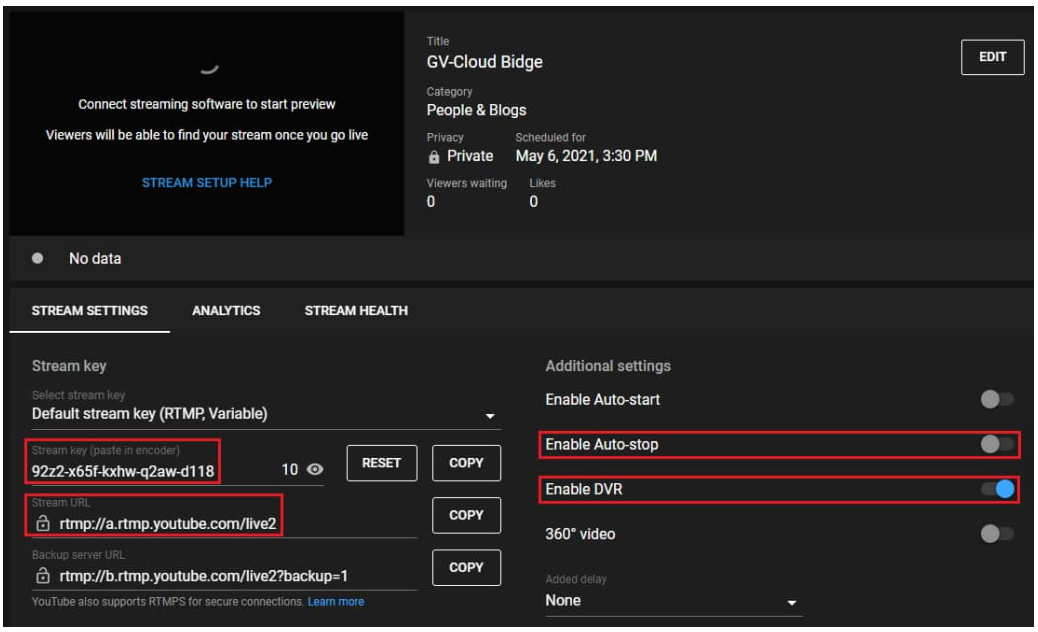
3. Select the **Manage** icon, and then **SCHEDULE STREAM**.



4. Specify the necessary information for your new stream. Click **CREATE STREAM**.

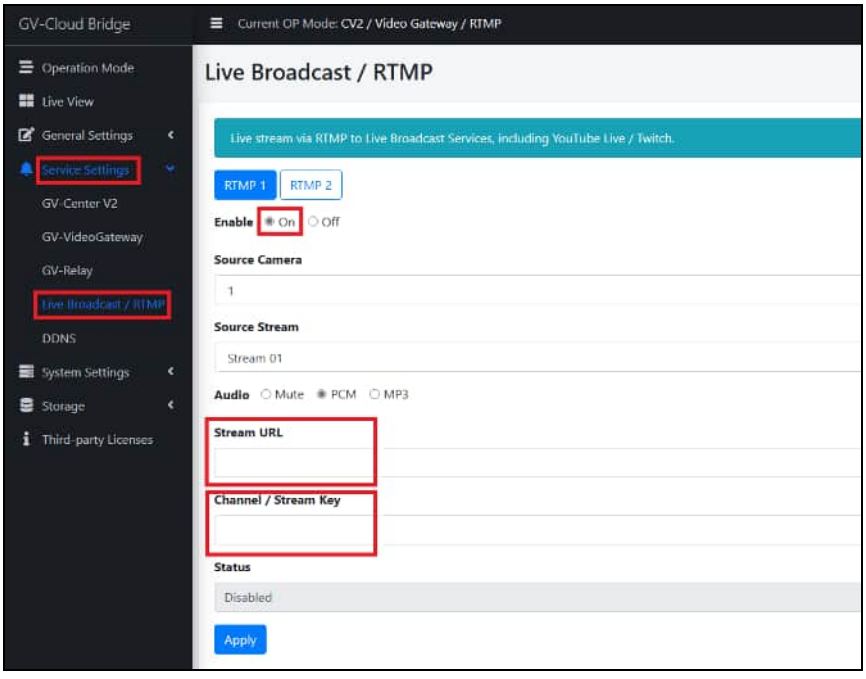


5. Make sure to disable **Enable Auto-stop**, and enable **Enable DVR**. The Stream Key and Stream URL are now available.



On GV-Cloud Bridge Pro

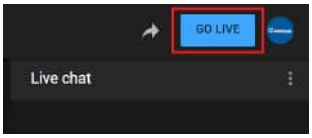
6. In the left menu, select **Operation Mode** > **CV2 / Video Gateway / RTMP / VPN** or **CV2 / Video Gateway / RTMP / VPN + PVD**.
7. Click **Apply**. When the device is rebooted, the mode will be applied.
8. Click **Service Settings** > **Live Broadcast / RTMP**.
9. Enable the connection, and copy and paste the **Stream Key** and **Stream URL** from YouTube to the setting page.

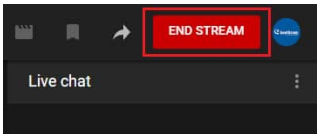


10. Select **PCM** or **MP3** for Audio, or select **Mute** for no sound.
11. Click **Apply**. You can now view the live view broadcast from the GV-Cloud Bridge Pro in the YouTube preview window.

On YouTube

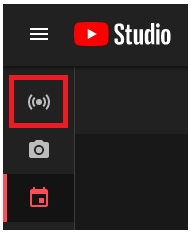
12. Click **GO LIVE** to begin streaming, and **END STREAM** to end streaming.





IMPORTANT:

1. At Step 3, do not select the **Stream** icon to configure the live broadcast. This will enable **Enable Auto-stop** by default, and disconnect from the live broadcast when the Internet connection is unstable.



2. Make sure to set your camera's video compression to **H.264**. If not, the live broadcast will appear as follow:

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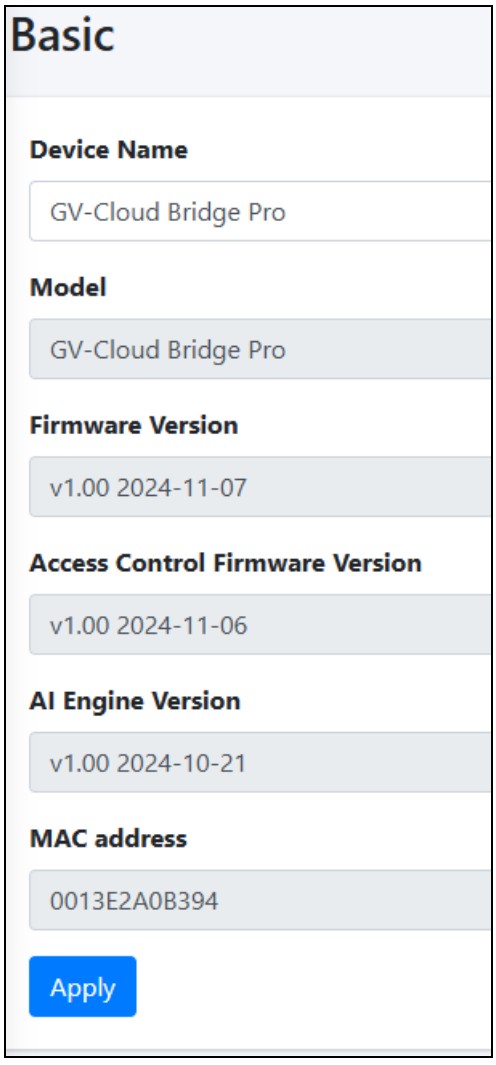
12 System Settings

12.1 Basic

The Baisc page displays the firmware version, engine version, MAC address, and device name. You can also change the device name.

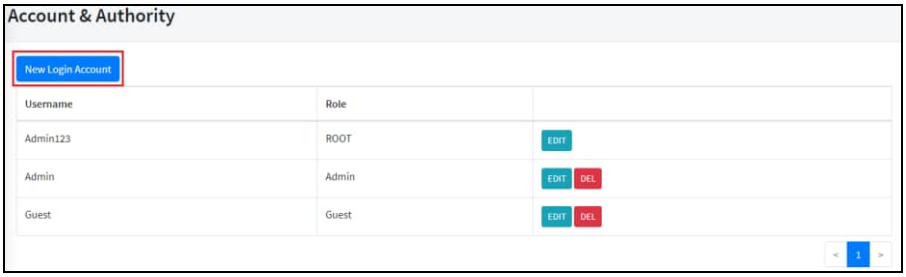


12.2 Account and Authority

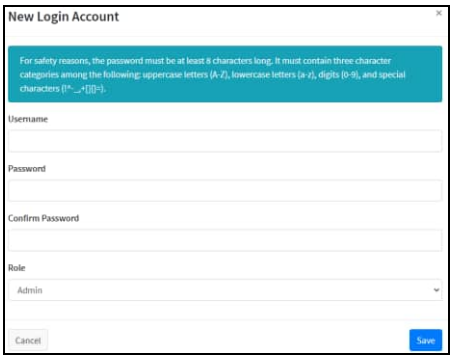
GV-Cloud Bridge Pro supports up to 32 user accounts. To manage user accounts, follow the steps below.

Note: The ROOT account is created by default and cannot be removed. The account has full access to all functions.

1. In the left menu, click **System Settings** > **Account & Authority**.
2. To add a new account, click **New Login Account**.



3. Type the necessary information and select a role as **Admin** or **Guest**. Click **Save**.



- **Admin:** This role can be added or deleted. The Admin account has full access to all functions.
- **Guest:** This role can be added or deleted. The Guest account can only access the live view.

4. To modify the password or role of an account, click **Edit** for the account and make your changes. Click **Save**.

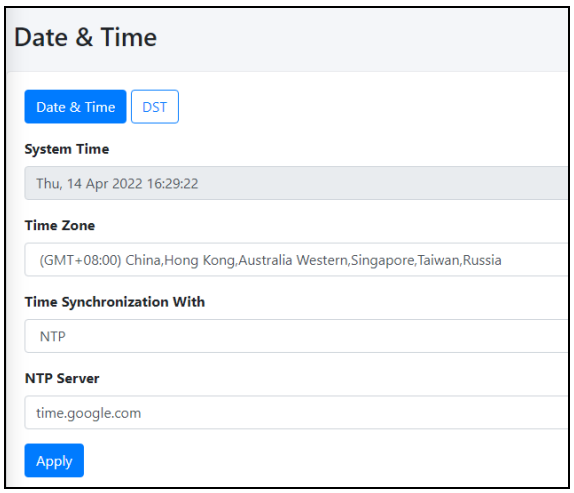
12.3 Network Settings

For details, see *7.1 Assigning a Static IP Address* or *7.2 Configuring the DDNS Domain Name*.

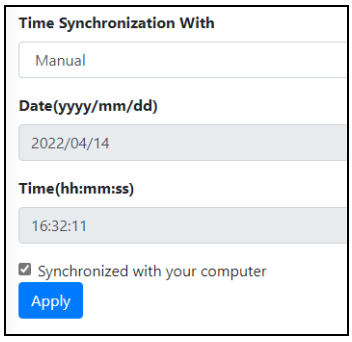
12.4 Date and Time

To configure the date and time of your GV-Cloud Bridge Pro, follow the steps below.

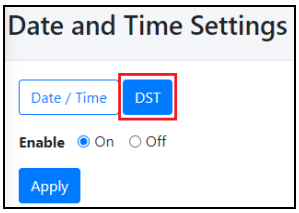
1. In the left menu, click **System Settings** > **Date / Time**. This page appears.



2. Select a desired **Time Zone**.
3. The **Time Synchronization With** is set to **NTP** by default. You can change the NTP server in use by typing another server under **NTP Server**.
4. To manually set the date and time for your device, select **Manual** under **Time Synchronization With**, and type the desired date and time. Or enable **Synchronized with your computer** to sync the device's date and time with those of the local computer.



5. Optionally, you can also enable or disable Daylight Saving Time in the **DST** setting.



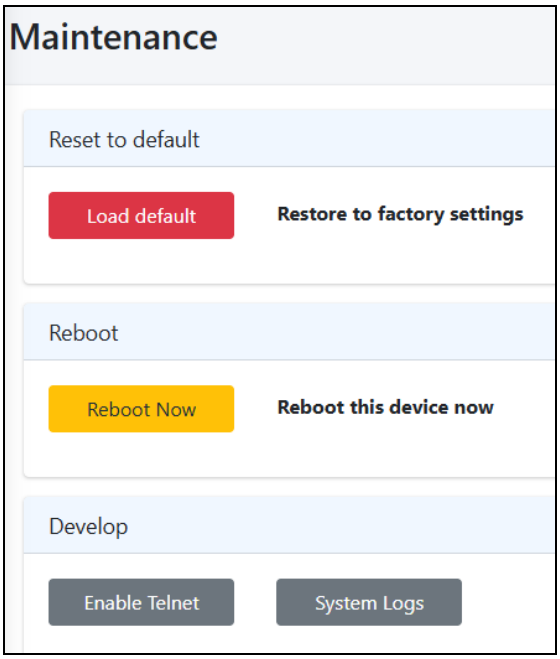
12.5 RS-485

Using the RS-485 interface of GV-Cloud Bridge Pro, you can connect up to 8 GV-DFK1355 readers to GV-Cloud Access Control. In the left menu, select **System Settings** > **RS-485**, and select **DFK1355** as Mode. Click **Apply**.

Note: The MPPT / SRNE mode does not function currently.

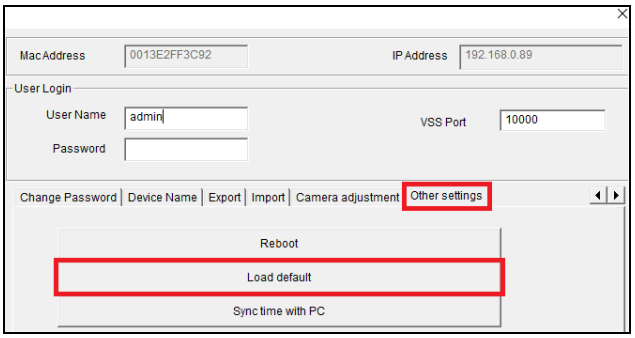
12.6 Maintenance

If GV-Cloud Bridge Pro is not functioning properly, you can reboot it or restore it to factory default settings. The Develop functions allow technicians to fix problems.



You can also use the following two methods to load default settings for GV-Cloud Bridge Pro:

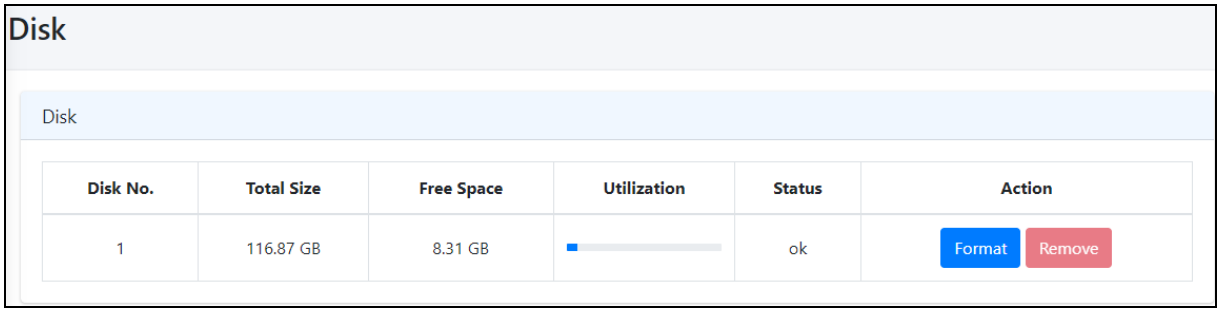
1. **On the device:** Press and hold the **Default** button (No. 5, *1.3 Overview*) for 10 ~ 15 seconds to load the default.
2. **GV-IP Device Utility:** Using the utility to locate your GV-Cloud Bridge Pro, click its IP address, and select **Configure**. On the popup dialog box, click the **Other settings** tab, type the User Name and Password of the GV-Cloud Bridge Pro, and then click **Load default**.



13 Storage

When you insert a memory card or an SSD into GV-Cloud Bridge Pro, utilize the Disk page to format it. The page will display the current storage space status.

To access the page, in the left menu, click **Storage** > **Disk**.

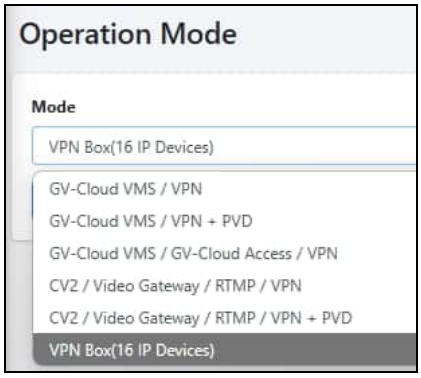


Note: If both a SSD and memory card are attached, the device will only recognize the SSD.

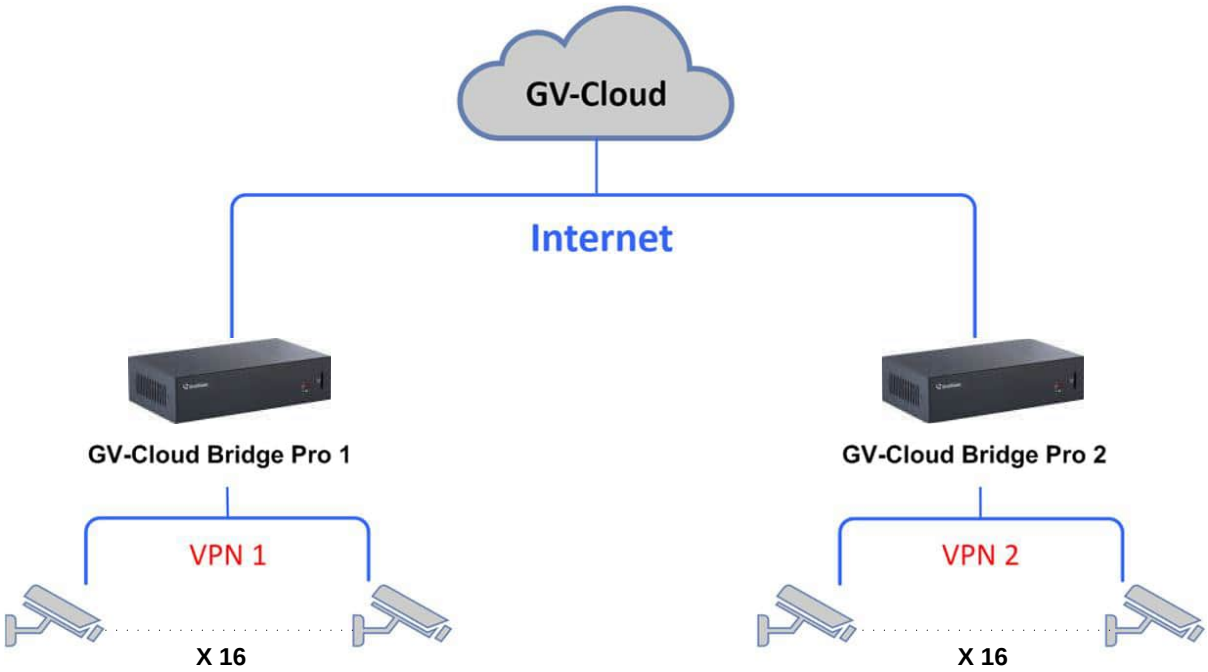
14 VPN

The **VPN** function of GV-Cloud Bridge Pro allows users to create a virtual private network for devices on the same LAN, eliminating the need for port forwarding.

The VPN capability is enabled in all operating modes, and you can select a specific **VPN Box** operation mode. The **VPN function in each operation** mode supports up to 8 IP devices, while the particular **VPN Box** operation mode allows up to 16 IP devices.



The **VPN Box operation mode** topology, which supports up to 16 IP devices, is shown below. IP devices are not restricted to IP cameras. Any network gadget, e.g. GV-IP Decoder Box, GV-I/O Box or IP speaker, can function.



The following sections introduce the VPN setup procedures for enabling the VPN function in GV-Cloud Bridge Pro:

- **Step 1**: Sign up on GV-Cloud
- **Step 2:** Create a VPN account on GV-Cloud
- **Step 3:** Connect GV-Cloud Bridge Pro to the VPN account on GV-Cloud
- **Step 4:** Map the IP addresses from IP devices to VPN IP addresses

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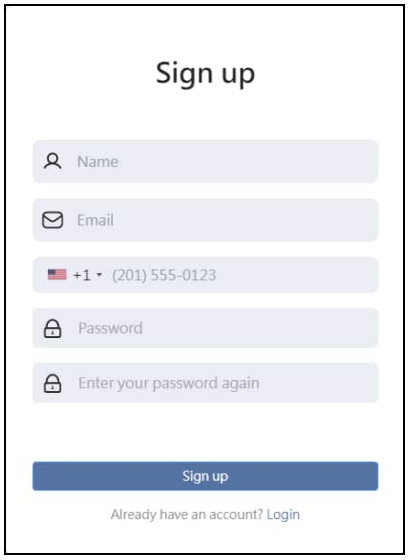
Note:

1. The VPN function is not limited to IP cameras. Any network gadgets can connect.
2. To maintain a steady connection, make sure the total bandwidth of 16 IP devices does not exceed 80 Mbps.
3. The VPN function in the following two operation modes only supports IP device configuration, not video streaming: (1) GV-Cloud VMS / VPN + PVD, (2) GV-Cloud Access Control / VPN.

Step 1. Sign up on GV-Cloud

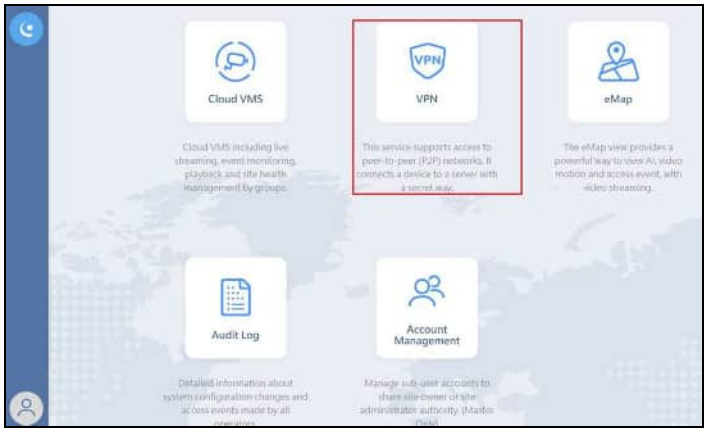
1. Visit GV-Cloud at https://www.gvaicloud.com/ and click **Sign up**.
2. Type the necessary information and complete the sign-up procedure.



3. Confirm the account by clicking the activation link sent via e-mail. Keep the attached registration information for logging in GV-Cloud later. For details, see *Chapter 1* in *GV-VPN Guide*.

Step 2. Create a VPN account on GV-Cloud

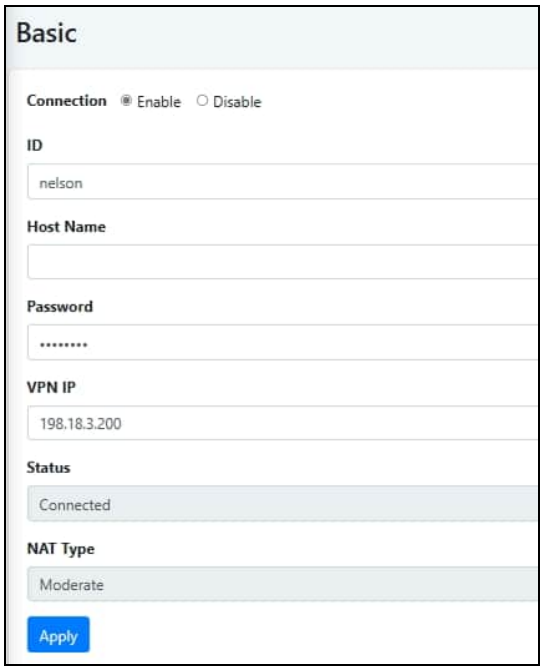
4. Log in GV-Cloud at https://www.gvaicloud.com/ using the information created at *Step 3.*
5. Select **VPN**.



6. On the VPN setup page, click the **Add** button and type the necessary information to create a VPN account.

Step 3. Connect GV-Cloud Bridge Pro to the VPN account on GV-Cloud

7. On the GV-Cloud Bridge Pro Web interface, go to **GV-VPN > Basic**.



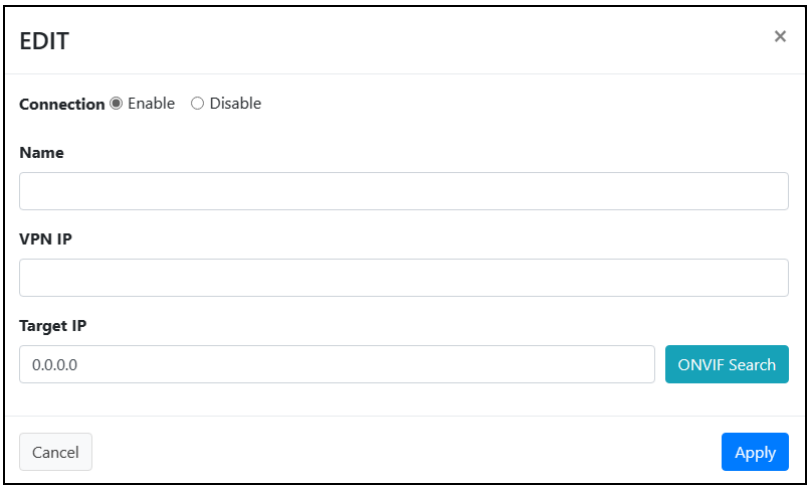
8. Enable the connection and give a **Host Name** to the setting.
9. To connect to the VPN account on GV-Cloud, type the ID and Password created at *Step 6*
10. To configure a VPN IP for your GV-Cloud Bridge Pro, type a VPN IP ranging from 198.18.0.1 to 198.18.255.254.
11. Click **Apply**. Once connected, the Status will display “Connected”.

Note: Depending on your network setup, you will see the following NAT types: **Moderate** / **Restrict** / **Exceed limit** / **Unknown**. For more details, see No.8, *3. Configuring GV-VPN* on *GV-VPN Guide*.

Step 4. Map the IP addresses of IP devices to VPN IP addresses

12. In the left menu, select **GV-VPN** > **IP Mapping**.

13. To map a VPN IP to a device, click **Edit**. This page appears.



14. Enable the connection and give a **Name** to the setting.
15. To configure a VPN IP for the device, type a VPN IP ranging from 198.18.0.1 to 198.18.255.254 and the device's IP (Target IP).
16. For the device's IP, optionally click **ONVIF Search** to search for the device, and click **Import** to automatically fill in the device's IP on the Edit page.
17. Click **Apply**.

The Host Name, VPN IP, and Target IP are displayed on each device entry. Once connected, the Status will display "Connected".

Note: Make sure the VPN IP address for GV-Cloud Bridge Pro and other devices does not repeat.

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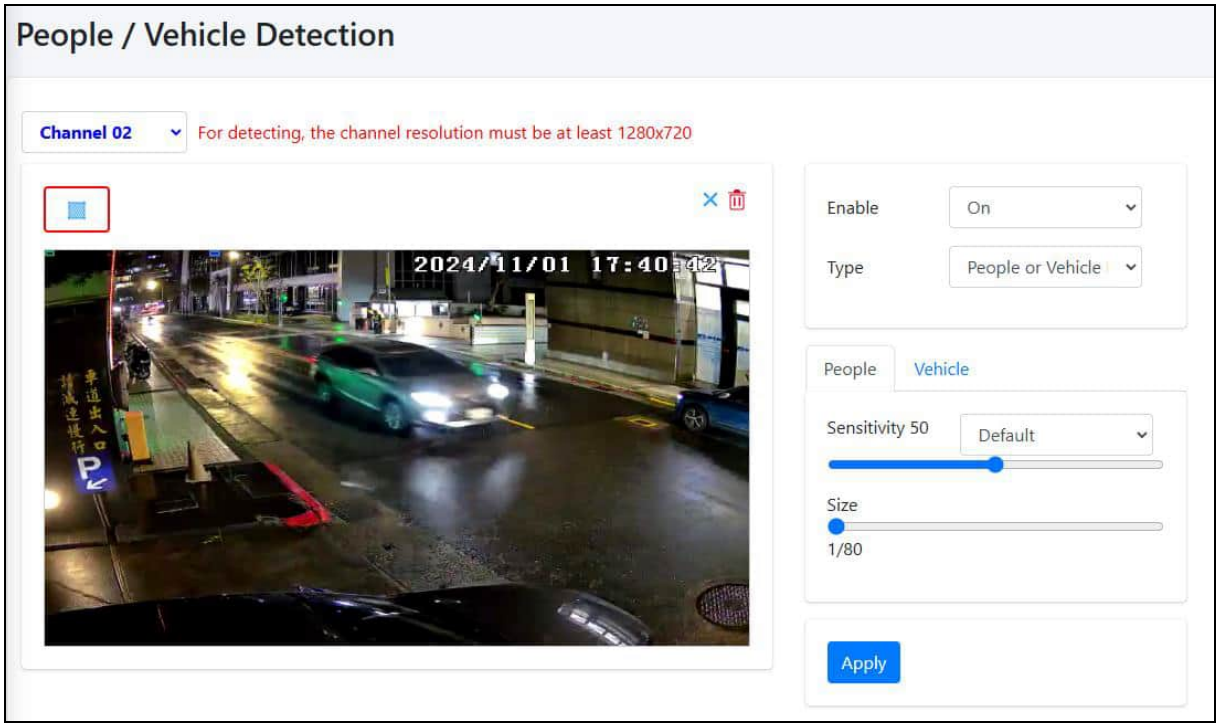
15 People and Vehicle Detection (PVD)

GV-Cloud Bridge Pro can only detect people or vehicle in order to reduce false alarms. Up to 4 channels are supported. To access the page, select **Intelligent** in the left menu.



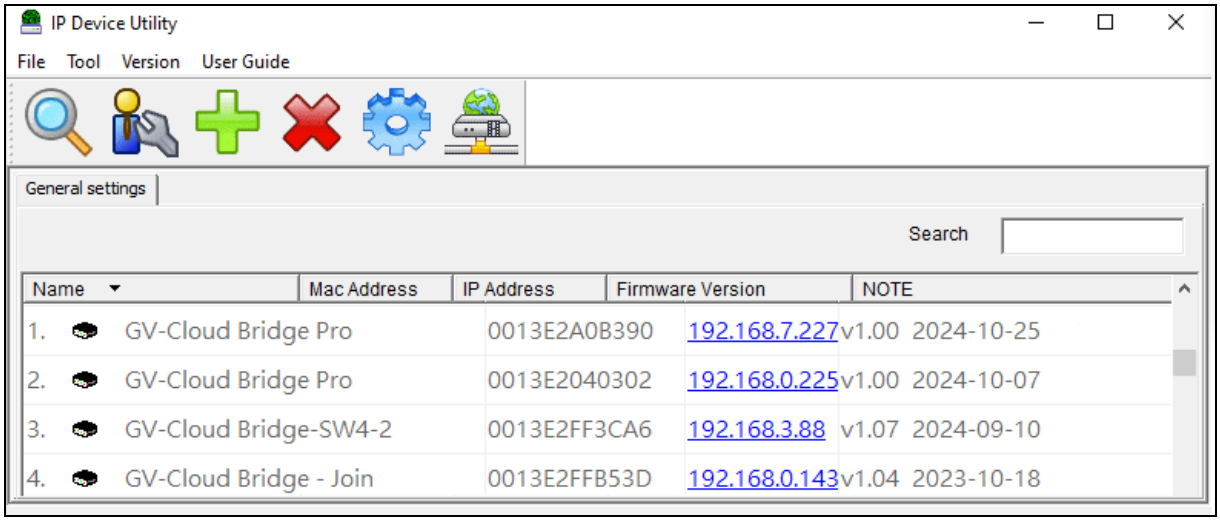
1. On the left menu, select **Intelligent** > **People > Vehicle Detection**.
2. Select a channel number.
3. Complete the following options on the left side of the user interface:
   - **Enable**: Select **On** to enable the detection.
   - **Type**: Select one of the following detection types: **People Detection**, **Vehicle Detection**, **People and/or Vehicle Detection**.
   - **Sensitivity**: Select **Default**, **Low False Alarm** or **Custom** for different sensitivity parameters: Default is 50 and Low False Alarm is 30. A **higher sensitivity parameter** implies that the device is less strict in detecting objects, leading in **more events,** a lower likelihood of persons and vehicles, and **fewer chances of missing detection**, and vice versa. To set different parameters, switch the People and Vehicle tabs.
   - **Size**: Set the detection size for people or vehicles. When the object is smaller than the set size, it will not be detected. You can switch the People and Vehicle tabs to set different parameters.
4. Click the **Mask Region** icon and draw an area on the image where motion will be not be detected.
5. Click **Apply**.

Note: The ratio for the minimum object size to the video image is 1/80 for both People and Vehicle detection. For example, for the video image that is set to 1920 x 1080, the minimum object size should be 24 x 24 pixels.

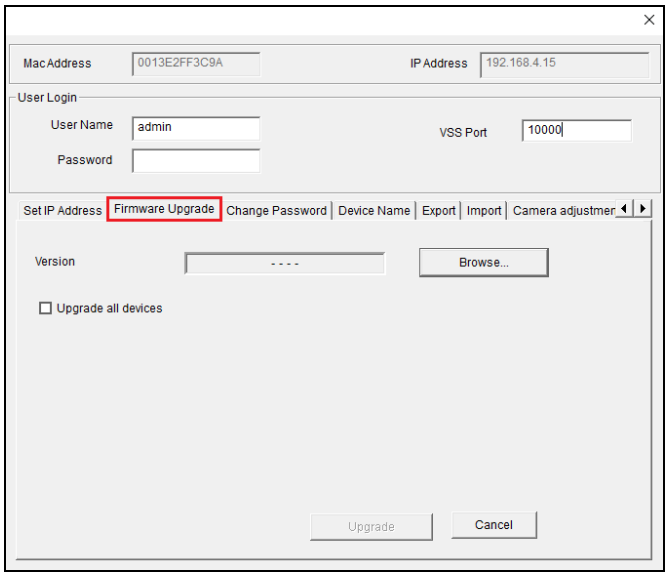
16 Firmware Upgrade

The GV-Cloud Bridge Pro firmware can only be upgraded using GV-IP Device Utility. To upgrade the firmware, follow the steps below.

1. Download and install the GV-IP Device Utility.
2. Locate your GV-Cloud Bridge Pro on the GV-IP Device Utility window, click its IP address, and select **Configure**.



3. On the popup dialog box, click the **Firmware Upgrade** tab, and click **Browse** to locate the firmware file (.img) saved at your local computer.



4. Type the **User Name** and **Password** of the ROOT or Admin account. Click **Upgrade**.

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

[Warranty]

[Technical Support Policy]