

# Quick Start Guide

## *GV-Mobile Server V1.4.2.0*



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



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# 1. Introduction

Welcome to the *GV-Mobile Server Quick Start Guide*. In the following sections, you will learn about the basic installations and configurations. For more details, see *GV-Mobile Server User's Manual*.

## 1.1 Packing List

- GV-USB Dongle for connection with GV-Recording Server / GV-Video Gateway, third-party IP devices and GV-IP Devices directly.
- Software DVD

## 1.2 Minimum System Requirements

Depending on the resolution, video compression format and the number of connected channels, **Standard Requirements** or **Advanced Requirements** shall be met.

### Standard Requirements

OS	32-bit	Windows 7 / 8 / 8.1 / Server 2008
	64-bit	Windows 7 / 8 / 8.1 / Server 2008 R2 / Server 2012 R2
CPU	Core i3 4130, 3.4 Ghz	
RAM	4 GB x 2	
Hard Disk	1 GB or more for installation	
Graphic Card	AGP or PCI-Express, 1024 x 768, 32-bit color	
DirectX	9.0c	
LAN	Gigabit Ethernet X 1	
Hardware	Internal or external GV-USB Dongle	

## Advanced Requirements

<b>OS</b>	<b>64-bit</b>	Windows 7 / 8 / 8.1 / Server 2008 R2 / Server 2012 R2
<b>CPU</b>		Core i7 4770, 3.4 Ghz
<b>RAM</b>		4 GB x 2
<b>Hard Disk</b>		1 GB or more for installation
<b>Graphic Card</b>		AGP or PCI-Express, 1024 x 768, 32-bit color
<b>DirectX</b>		9.0c
<b>LAN</b>		Gigabit Ethernet x 2
<b>Hardware</b>		Internal or external GV-USB Dongle

### Note:

1. The memory required may vary depending on the number of channels and resolution of videos received.
2. A GV-USB Dongle is required when you install the GV-Mobile Server in an independent PC without GV-System or GV-VMS.

The **Advanced Requirements** are highly recommended in any of the following conditions:

Resolution	Codec	Bitrate	No. of Connected Channels
CIF (320 x 240)	H.264	0.75 Mbit/s	62 or more
VGA (640 x 480)	H.264	3.59 Mbit/s	16 or more
D1 (704 x 480)	H.264	4.09 Mbit/s	13 or more
1.3 MP (1280 x 1024)	H.264	5.05 Mbit/s	12 or more
2 MP (1920 x 1080)	H.264	7.01 Mbit/s	9 or more
3 MP (2048 x 1536)	H.264	10.48 Mbit/s	9 or more
4 MP (2048 x 1944)	H.264	11.65 Mbit/s	11 or more
5 MP (2596 x 1920)	H.264	16.48 Mbit/s	15 or more
<b>Note:</b> These data may vary in different scenes (different data bitrates).			

## 1.3 Software License

<b>Free License</b>	When installed and executed on the same server with GV-DVR, GV-NVR or GV-VMS
<b>Maximum License</b>	64 channels, 4 Matrix views
<b>Increment for Each License</b>	N/A
<b>Optional Combinations</b>	N/A
<b>Dongle Type</b>	Internal or external
<b>Note:</b> GV-DVR and GV-NVR only support up to 32 channels.	

## 1.4 Compatible GV-IP Device & GV-Software

- **GV-VMS:** V14.10 or later
- **GV-System:** V8.5.3 or later
- **GV-Recording Server / GV-Video Gateway:** V1.1.0.0 or later
- **GV-IP Camera:** V1.09 or later
- **GV-Video Server VS02A / VS04A / VS04H / VS12:** V1.05 or later
- **GV-Video Server VS11:** V1.0 or later
- **GV-Compact DVR V2:** V1.07 or later
- **GV-Compact DVR V3 (4-Channel):** V1.01 or later
- **GV-Compact DVR V3 (8-Channel):** V1.00 or later

## 2. Installation



### 2.1 Installing the GV-Mobile Server

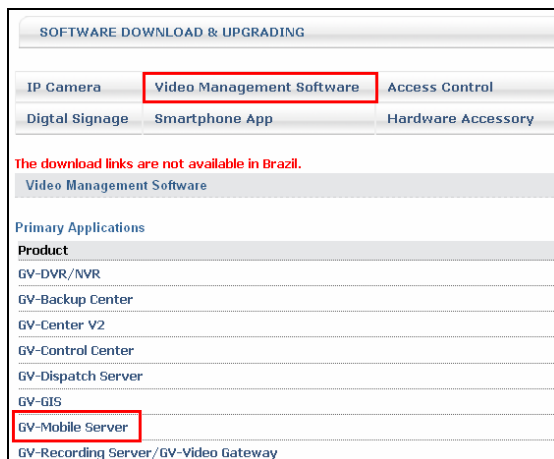
Before installing the GV-Mobile Server, you need to plug the **GV-USB Dongle** to the computer. You can install the USB driver and the GV-Mobile Server from Software DVD or GeoVision Website.

#### Installing from Software DVD

1. Insert Software DVD to the computer. It runs automatically and a window appears.
2. To install USB driver, select **Install or Remove GeoVision GV-Series Driver**.
3. To install .Net Framework 3.5, select **Download Microsoft .NET Framework 3.5**.
4. To install GV-Mobile Server, select **Install GeoVision Primary Applications** and click **GV-Mobile Server**.

#### Downloading from GeoVision Website

1. Go to the Software Download and Upgrading page of GeoVision Website:  
[http://www.geovision.com.tw/english/5\\_8\\_VMS.asp](http://www.geovision.com.tw/english/5_8_VMS.asp).
2. To install USB driver, select the **Video Management Software** tab, find the **Driver** section and click the **Download** icon  of **GV-Series Card Driver / GV-USB Devices Driver**.
3. To install GV-Mobile Server, select the **Video Management Software** tab, find the **Primary Applications** section and click the **Download** icon  of **GV-Mobile Server**.



- To download and install .Net Framework 3.5, go to:  
<http://www.microsoft.com/en-us/download/details.aspx?id=21>.

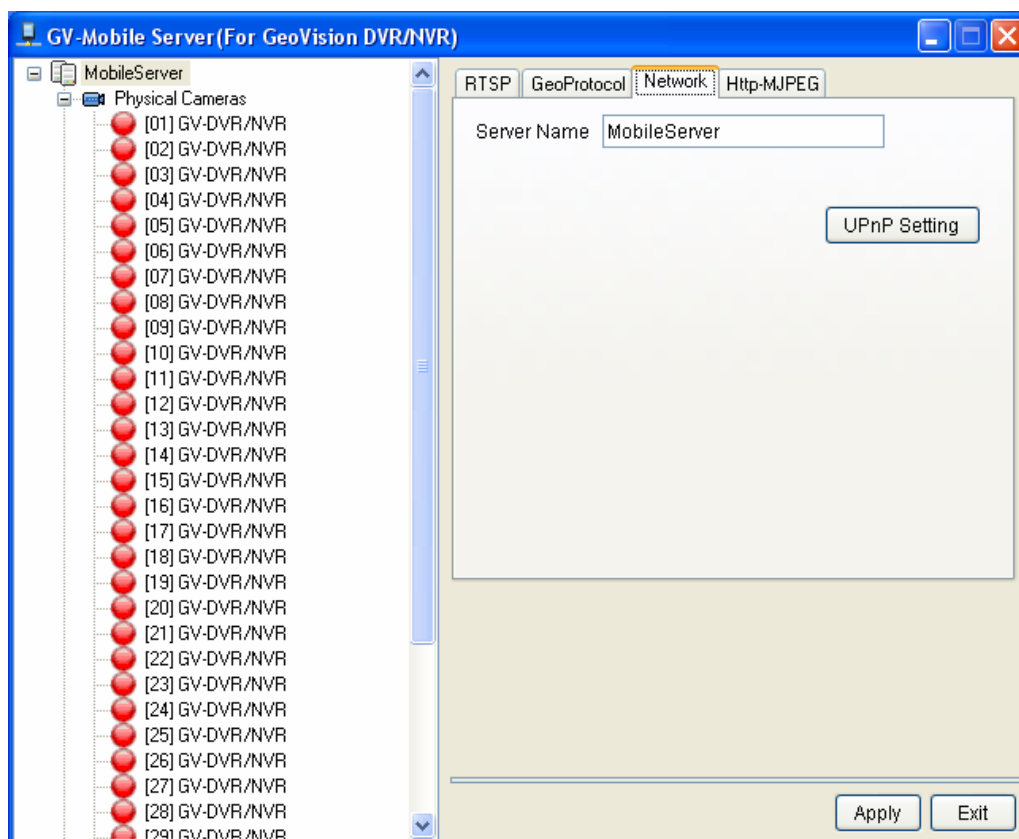
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**Note:** If you are using Window 8 or Windows Server 2012, see *How to install .Net Framework 3.5 for Windows Server 2012 and Windows 8* in Appendix, *GV-Mobile Server User's Manual*.

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## 2.2 Starting the GV-Mobile Server

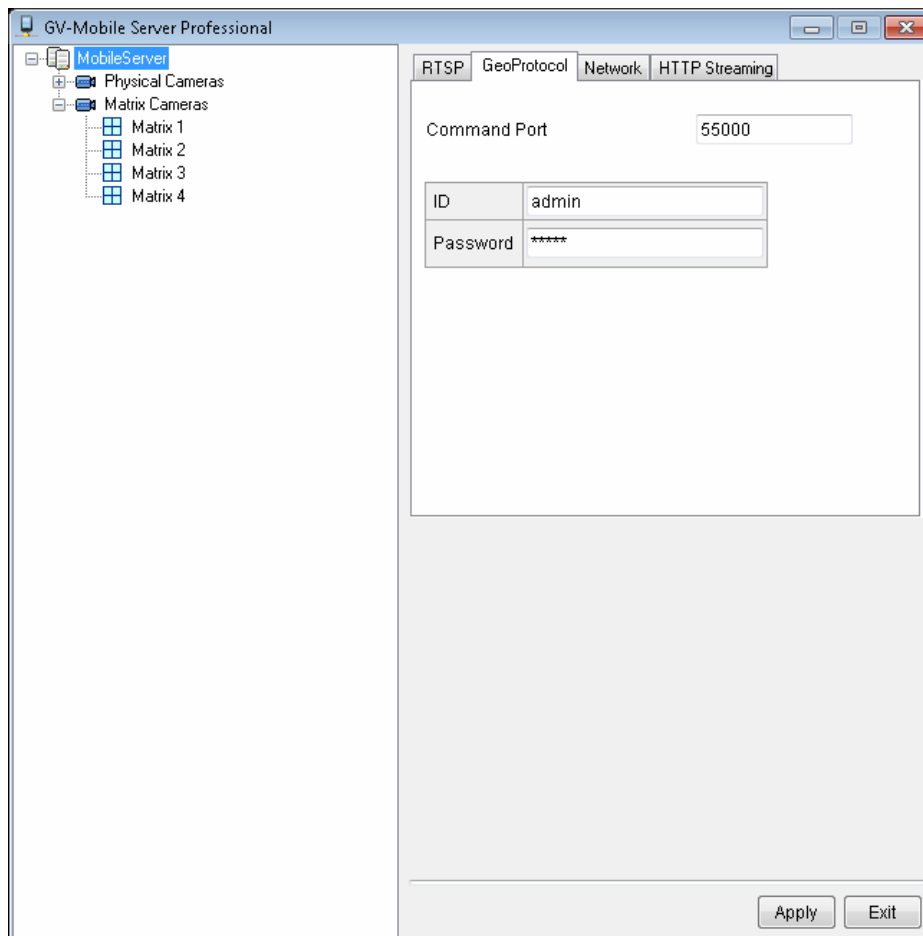
- Go to Windows **Start**, point to **Programs**, select **GV-Mobile Server**, and then run **Mobile Server**. The GV-Mobile Server window appears.
- To change the server name or to configure UPnP settings, click the **Network** tab. This page appears.



- Type a new server name.
- Click the **UPnP Setting** button to list the GV-Mobile Server in the network devices table for the operation system. Then you can connect to the GV-Mobile Server directly by clicking on the listed server.



- By default, the ID and password for logging in the GV-Mobile Server are **admin**, and the Command Port for client connection is **55000**. To customize these values, click the **GeoProtocol** tab to modify the Command Port, login ID and password.



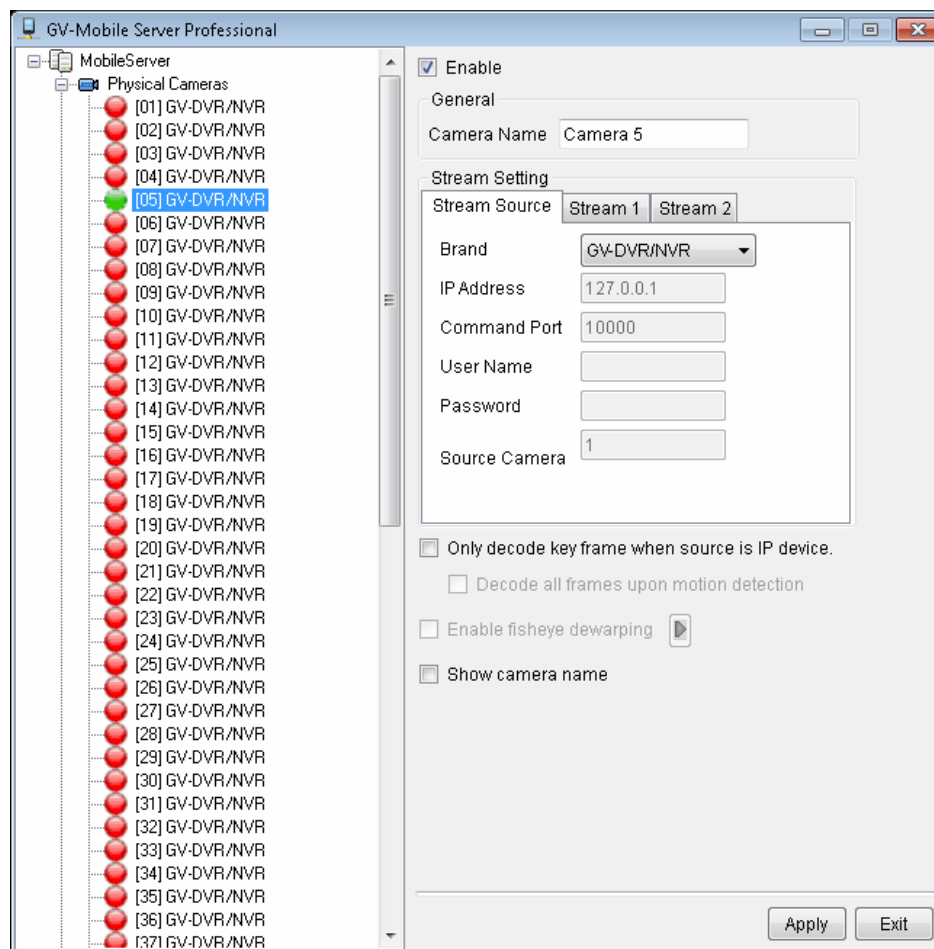
- Click **Apply**.

## 3. Establishing Connections


### 3.1 Connecting to GV-System or GV-VMS

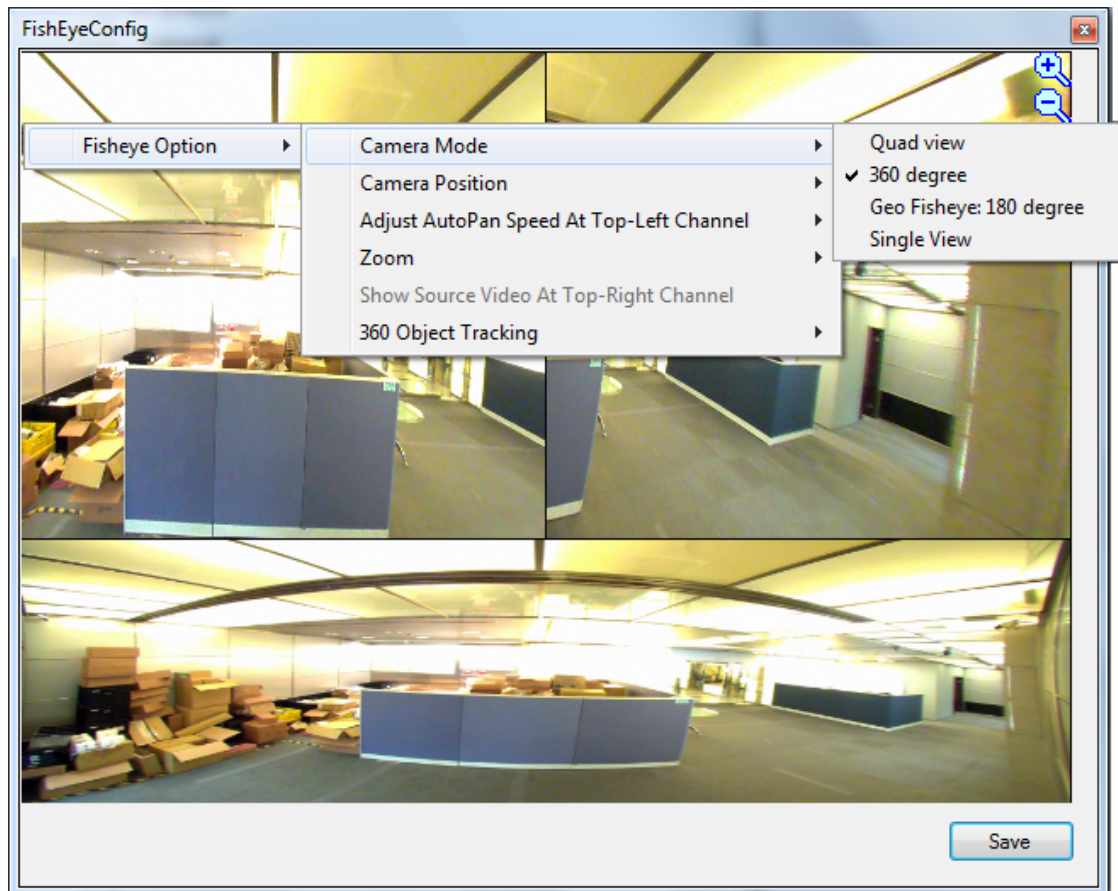
The GV-Mobile Server can encode up to 32 channels from GV-System or up to 64 channels from GV-VMS. To configure connection to GV-System or GV-VMS:

1. Select a camera from the left menu and click the **Stream Source** tab. This window appears.



2. Type a name to describe the camera in the **Camera Name** field (Max. 31 characters).
3. Select **GV-DVR/NVR** for **Brand**.
4. To decode key frames for IP source, select **Only decode key frame when source is IP device**. To decode all frames when a motion is detected and decode key frames when there is no motion, select **Decode all frames upon motion detection**.

- If the camera is a fisheye camera, select **Enable fisheye dewarping**. And click  to open the FisheyeConfig window. Right-click the image to configure the fisheye settings.



- To show the camera name specified in Step 2 on the live view, select **Show camera name**.
- Click **Apply**.

When the camera is connected, the red icon turns green. You can right-click the camera icon to access the live view.

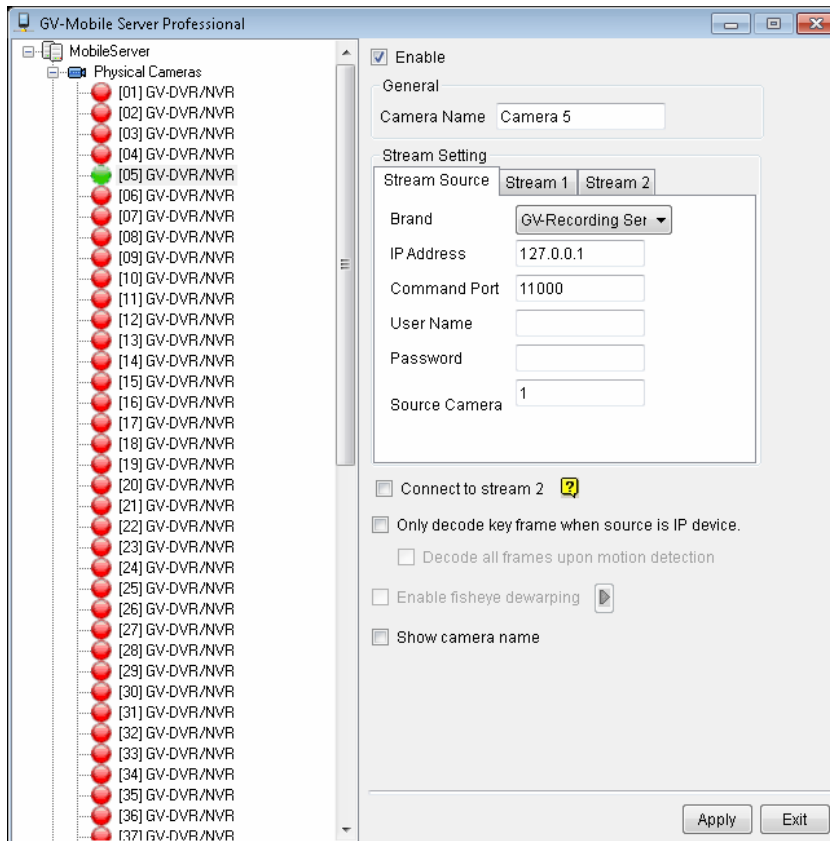
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**Note:** To enable **Decode all frames upon motion detection**, you must enable **Only decode key frame** when source is IP device first.


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### 3.2 Connecting to GV-Recording Server / GV-Video Gateway

1. Select a camera from the left menu and click the **Stream Source** tab. This window appears.



2. Type a name to describe the camera in the **Camera Name** field (Max. 31 characters).
3. Configure the connection settings.
  - A. Select **GV-Recording Server** for **Brand**.
  - B. Type the **Command Port**, **IP Address**, **User Name** and **Password** of the GV-Recording Server / GV-Video Gateway. The default command port for GV-Recording Server / GV-Video Gateway is **11000**.
  - C. Type the camera number for live viewing in **Source Camera**. The default setting is 1.
4. If your GV-IP device supports dual streams, GV-Mobile Server connects to stream 1 by default. To connect to stream 2, select **Connect to stream 2**.
5. To decode key frames for IP source, select **Only decode key frame when source is IP device**. To decode all frames when a motion is detected and decode key frames when there is no motion, select **Decode all frames upon motion detection**.

6. If the camera is a fisheye camera, select **Enable fisheye dewarping**. And click  to open the FisheyeConfig window. To configure dewarping settings, right-click the image in the window.
7. To show the camera name specified in Step 2 on the live view, select **Show camera name**.
8. Click **Apply**.

When the camera is connected, the red icon turns green. You can right-click the camera icon to access the live view.

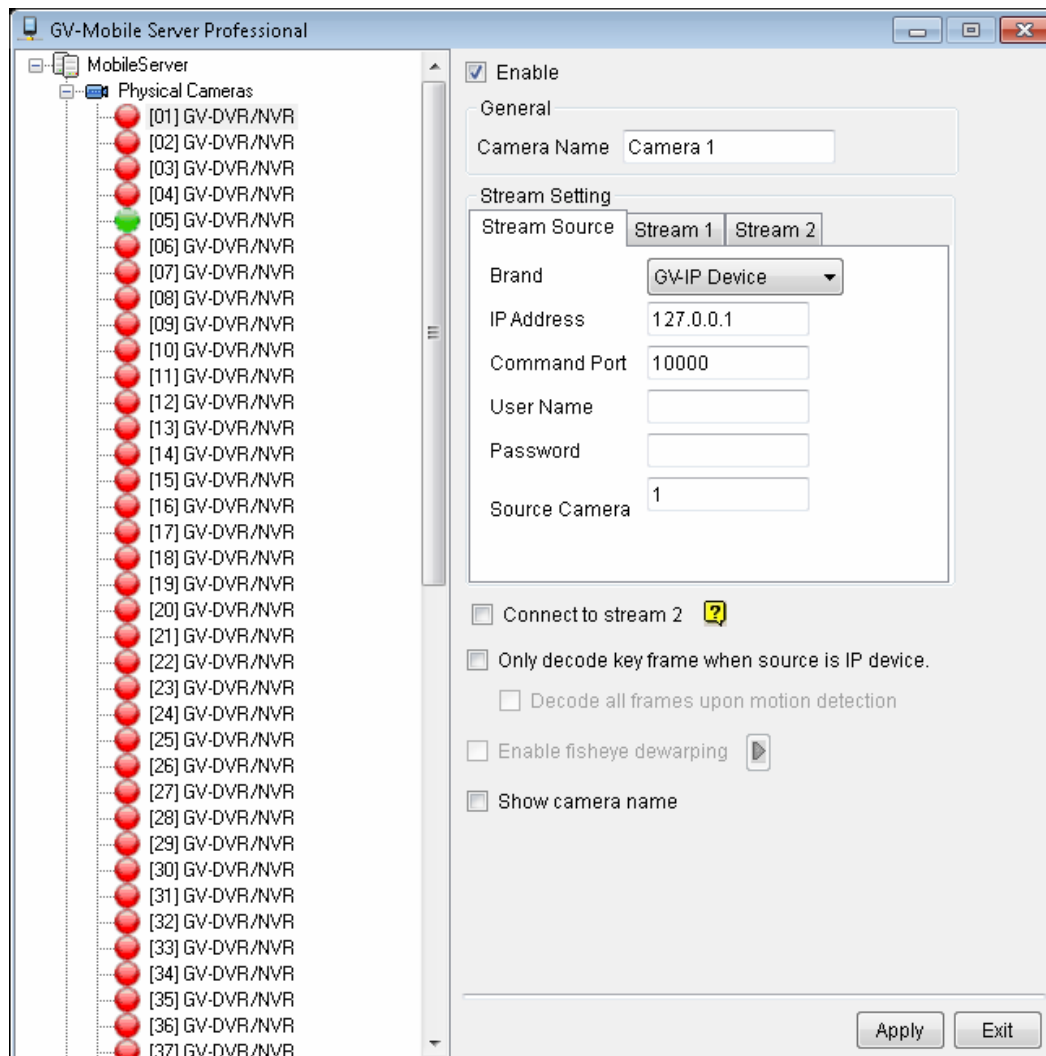
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**Note:**


1. **Connecting to stream 2** is only supported for GV-IP device. Since the stream 2 of GV-IP device is with lower resolution, select stream 2 decreases the loading of your GV-Mobile Server.
  2. To enable **Decode all frames upon motion detection**, you must enable **Only decode key frame when source is IP device** first.
  3. The TCP/IP Connection port (active connection port) on the GV-Recording Server / GV-Video Gateway must match the Command port setting (default 11000) here.
-

### 3.3 Connecting to IP Devices Directly

1. Select a camera from the left menu and click the **Stream Source** tab. This window appears.



2. Type a name to describe the camera in the **Camera Name** field (Max. 31 characters).
3. Configure the connection settings.
  - A. Select **GV-IP Device** for **Brand**. To connect to a third-party IP device, select **ONVIF** or **PSIA** for **Brand**.
  - B. Type the **IP Address**, **User Name** and **Password** of the IP device. The default command port for GeoVision IP device is **10000** and **80** for third-party IP devices connected through ONVIF / PSIA.
  - C. Type the camera number for live viewing in **Source Camera**. The default setting is 1.
4. If your GV-IP device supports dual streams, GV-Mobile Server connects to stream 1 by default. To connect to stream 2, select **Connect to stream 2**.

5. To decode key frames for IP source, select **Only decode key frame when source is IP device**. To decode all frames when a motion is detected and decode key frames when there is no motion, select **Decode all frames upon motion detection**.
6. If the camera is a fisheye camera, select **Enable fisheye dewarping**. And click  to open the FisheyeConfig window. To configure dewarping settings, right-click the image in the window.
7. To show the camera name specified in Step 2 on the live view, select **Show camera name**.
8. Click **Apply**.

When the camera is connected, the red icon turns green. You can right-click the camera icon to access the live view.

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**Note:**

1. **Connecting to stream 2** is only supported for GV-IP device. Since the stream 2 of GV-IP device is with lower resolution, select stream 2 decreases the loading of your GV-Mobile Server.
  2. To enable **Decode all frames upon motion detection**, you must enable **Only decode key frame when source is IP device** first.
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## 4. Configuring the Channel

### 4.1 Setting the Individual Channel

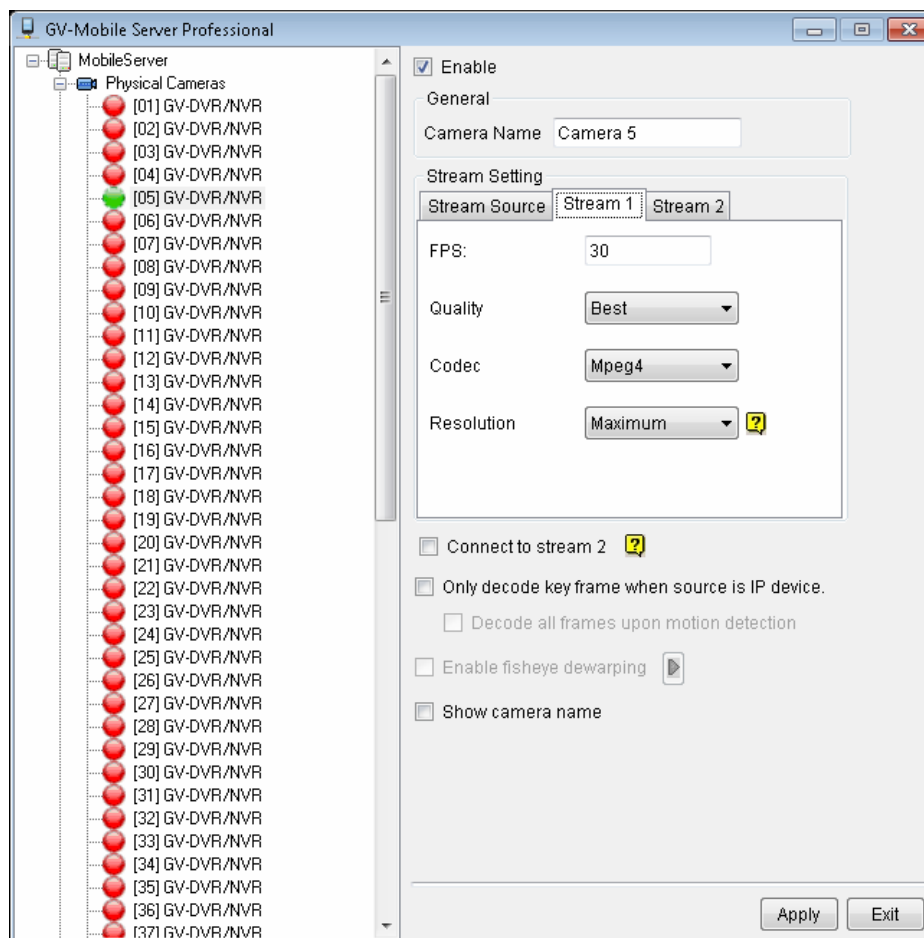
For each individual channel, you can set up two streams, each with different frame rates, video qualities, codec and resolutions. The maximum resolution supported for a stream is D1 (704 x 480).

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**Note:** For **Connecting to stream 2** of GV-IP source, the maximum resolution supported for a stream is VGA (640 x 480)

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1. In the left menu, click a camera channel. The setting page for that camera appears.



2. Type a name to describe the camera in the **Camera Name** field (Max. 31 characters).



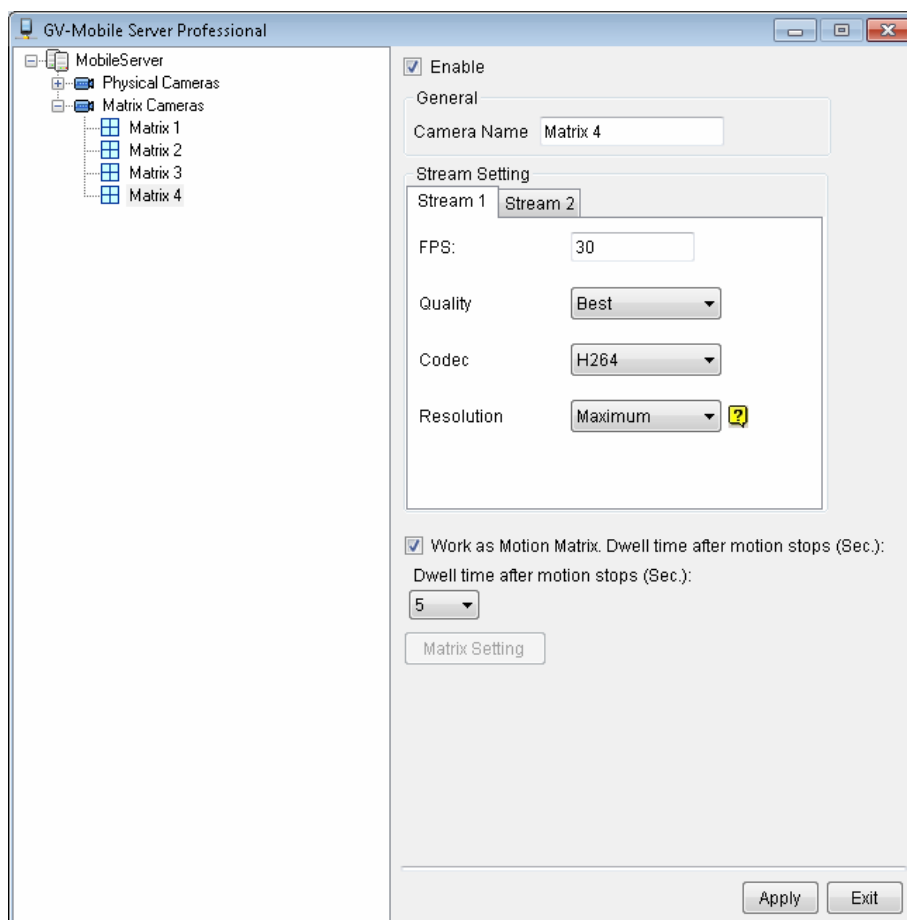
3. Under Stream Setting, the following settings are available for the **Stream 1** and **Stream 2**. When a client connects to any stream of the camera, the settings will be applied to the transmitted camera view.
  - **FPS:** Specifies the frames per second.
  - **Quality:** Set the image quality to **Best**, **Better** or **General**.
  - **Codec:** Select a codec type from **H.264** or **MPEG4**.
  - **Resolution:** Select a resolution.
    - When **Maximum** is selected, the resolution will be D1. When connecting to stream 2 of GV-IP Device, the Maximum will be VGA. If the camera's maximum resolution is lower than D1 or VGA, the maximum resolution will be applied.
    - When **Bypass** is selected, the original resolution and codec received by GV-Mobile Server will be applied. Note that fisheye dewarping is not supported when Bypass is selected. The bypass option is only available for stream 1.
4. Click **Apply**.
5. In the left menu, right-click a camera channel to access the options below:
  - **View Encode Stream 1:** Watch the camera view according to the settings you specify in step 3 for stream 1.
  - **View Encode Stream 2:** Watch the camera view according to the settings you specify in step 3 for stream 2.

## 4.2 Setting the Matrix Channel

You can establish up to 4 matrix channels on GV-Mobile Server, each consisting of up to 36 cameras. You can also set up different settings (frame rates, codec video quality and resolution) for stream 1 and stream 2 of a channel. The maximum resolution supported for a matrix channel is 1.3 MP (1280 x 1024).

### To Set up the Matrix

1. In the left menu, click a matrix channel. This window appears.



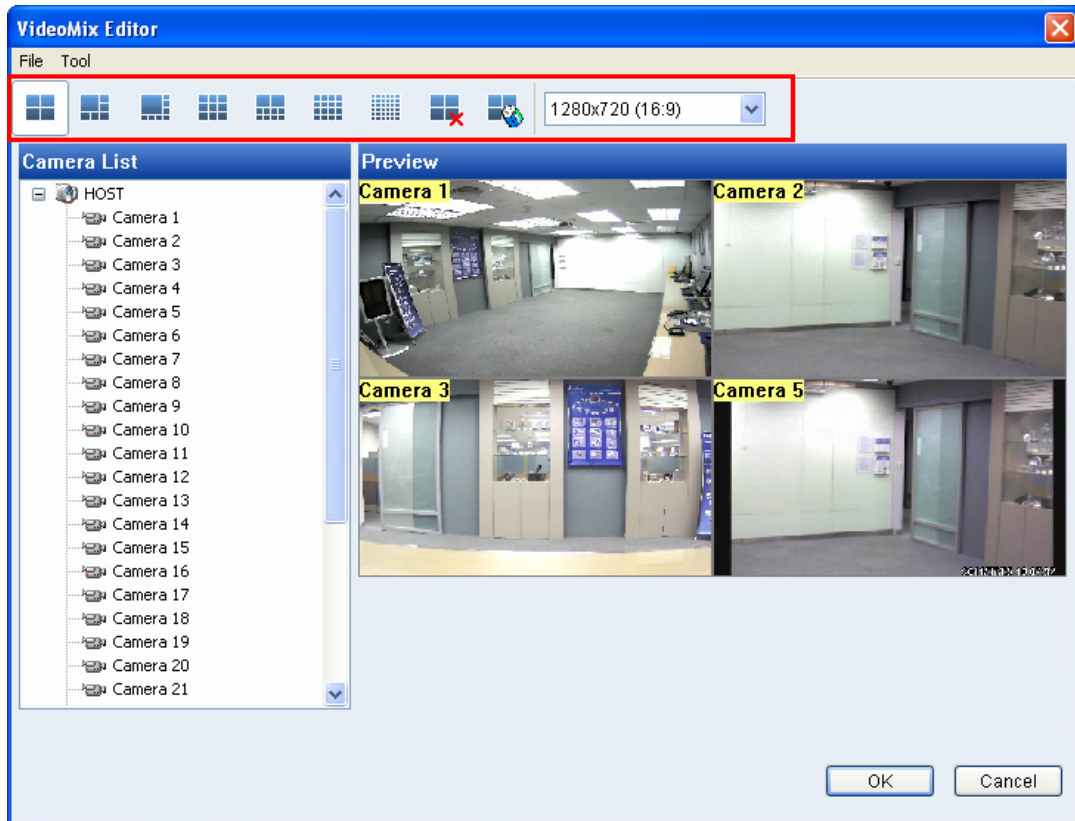
2. Complete the settings for **Stream 1** and **Stream 2** of the matrix channel. When a client connects to any stream of the matrix channel, the settings will be applied to the transmitted matrix view. Refer to *Setting Individual Channel* section above for details.

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**Note:** When Maximum is selected, the resolution of the matrix channel will be 1.3 M.

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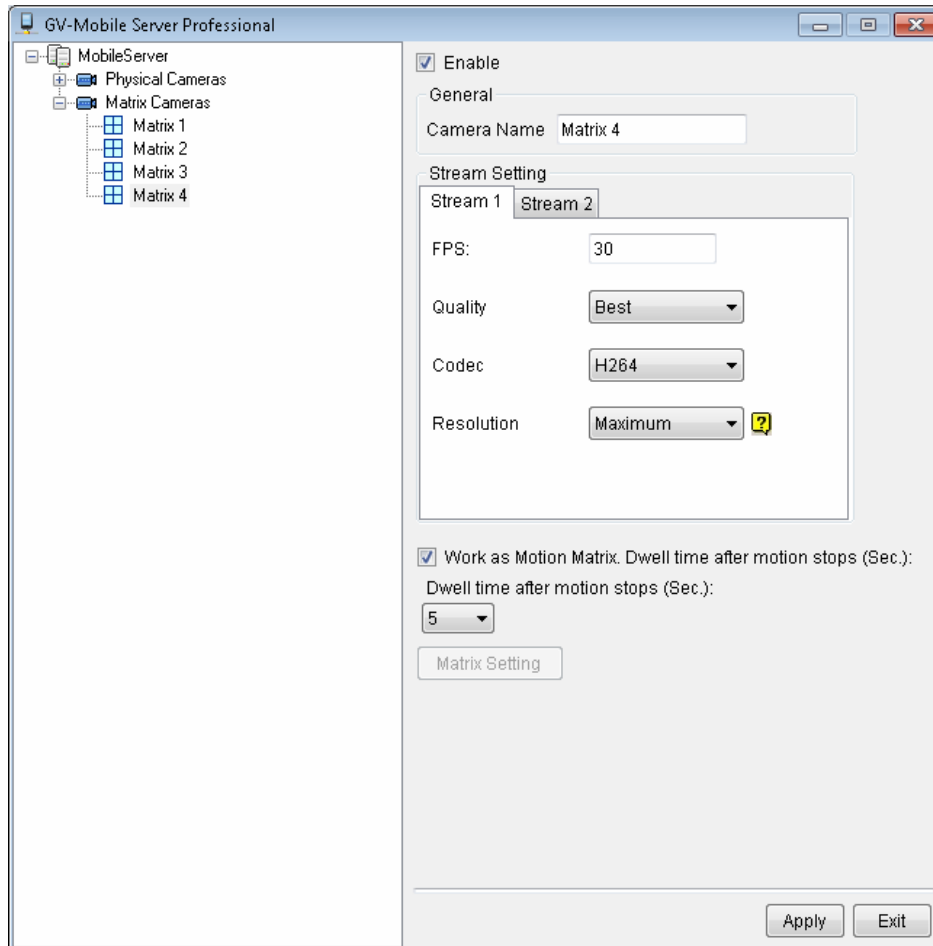
- Click the **Matrix Setting** button to arrange the matrix. This window appears.



- Select a type of screen division and select the display ratio. The display ratio selected will be applied to the matrix view in GV-Mobile Server.
- Drag and drop the camera numbers to the desired positions on the divisions.
- Click **OK** and then click **Apply**.
- In the left menu, right-click the Matrix channel to access the options below:
  - **View Encode Stream 1:** Watch the matrix view according to the settings you specify in step 2 for stream 1.
  - **View Encode Stream 2:** Watch the matrix view according to the settings you specify in step 2 for stream 2.

### To Set up Motion Popup for Matrix View

In Matrix 4, a **Matrix Motion** function is supported to pop up live view on matrix view when a motion is detected. Follow the below steps to enable this function:



1. In the left menu, click **Matrix 4**.
2. Complete the settings for **Stream 1** and **Stream 2** of the matrix channel. When a client connects to any stream of the matrix channel, the settings will be applied to the transmitted matrix view. Refer to *4.1 Setting the Individual Channel* section above for details.
3. Select **Work as Matrix Motion** to pop up live view on the matrix view upon motion.
4. Click the **Dwell time after the motion stops** drop-down list to set the time to remain the live view after the motion stops.

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#### Note:

1. When you enable **Work as Matrix Motion**, the **Matrix Setting** button will be grayed out because all the channels are added to the Matrix to detect motion.
  2. Matrix Motion only supports a quad view.
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## 5. Accessing the Live View

### 5.1 Using GV-IP Decoder Box / GV-Pad

To view GV-Mobile Server channels from GV-IP Decoder Box / GV-Pad, see *5.1 Using GV-IP Decoder Box / GV-Pad* in *GV-Mobile Server User's Manual*.

### 5.2 Using Mobile Devices

To view GV-Mobile Server channels from Android or iOS devices, install **GV-Eye** app from Google Play or App Store. For detailed instructions, see the latest document from the GeoVision's website: [http://www.geovision.com.tw/english/5\\_4.asp](http://www.geovision.com.tw/english/5_4.asp)

### 5.3 Using Third-Party Surveillance Software

To allow third-party software to connect to GV-Mobile Server through RTSP protocol:

1. Click the **RTSP** tab in GV-Mobile Server and click **Enable RTSP Streaming**.
2. For a more secure connection, select **ID and Password Required** and type an **RTSP Username** and **RTSP Password**.
3. Modify the default **RTSP Port** 8554 if needed. By default, RTSP data port starts from 45000.
4. Click **Apply**.

Use the RTSP commands below to connect:

- **No ID and password required:**

**rtsp://<IP of GV-Mobile Server>:<Port>/<CamNo\_StreamNo>**

For example, **rtsp:// 192.168.3.111:8554/cam1\_stream2**

- **ID and password required:**

**rtsp://<ID>:<Password>@<IP of GV-Mobile Server>:<Port>/<CamNo\_StreamNo>**

For example, **rtsp://admin:1234@192.168.3.111:8554/cam1\_stream2**

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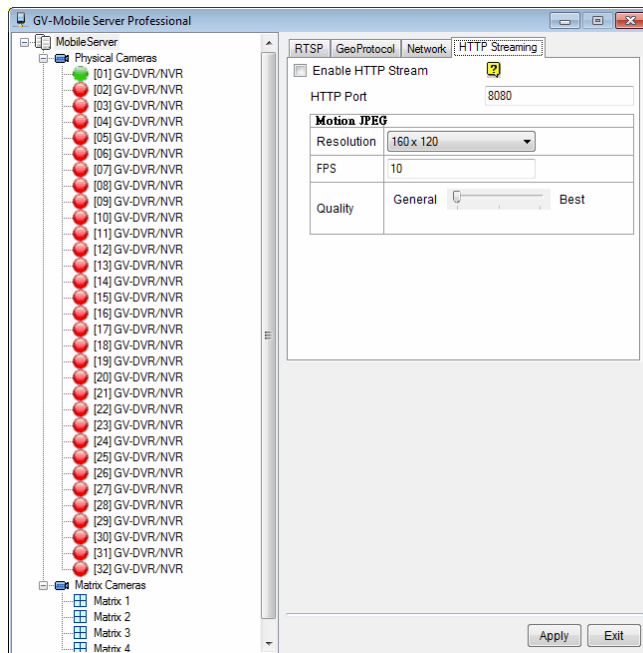
**Note:** The 4 matrix channels can be accessed using camera number 65 to 68. For example, the RTSP command for the second matrix channel may be **rtsp://admin:1234@192.168.3.111:8554/cam65\_stream1**

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## 5.4 Using Non-IE Browsers

You can watch live view in MJPEG codec using non-IE browsers such as Google Chrome, Firefox and Safari.

1. Click the **Http Streaming** tab. This window appears.



2. Select **Enable HTTP Stream**.
3. Modify the default **HTTP Port** 8080 if necessary.
4. Set the **Resolution** using the drop-down list.
5. Set an **FPS** from 1-30 fps and **Quality** to **General**, **Medium** or **Best**.
6. Click **Apply**.

After completing the setting, you can now use the address below to access live view with non-IE browsers:

**http://<GV-Mobile Server IP>:<Http Port>/app/mj.html**

For example, **http://127.0.0.1:8080/app/mj.html**

This function is also supported for accessing live view through iPhone, iPod Touch, or iPad. For details, see *5.4 Using Non-IE Browsers* in *GV-Mobile Server User's Manual*.