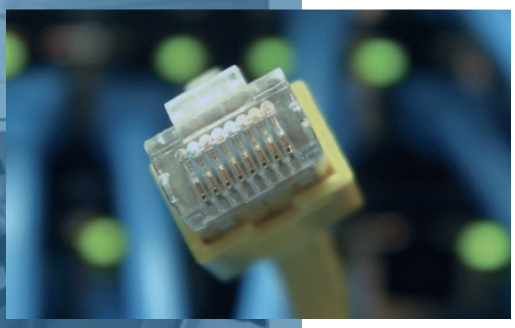
GEUTEBRÜCK

Competence in Video Security



G-Cam/E

IP Aamera Series

Uc``pmuqcp

User Manual

Table of Contents

1. INTRODUCTION 4
1.1. Welcome 4
1.2. Getting Started 4
1.3. IP Address Setting 4
2. USING A WEB BROWSER 5
2.1. ActiveX Installation (AxUMF.cab) 5
2.2. Recommended PC Specification 7
3. LIVE PAGE CONFIGURATION 8
3.1. Log In 8
3.2. Live Page Menus 8
4. STORAGE CONFIGURATION 10
4.1. Storage device settings 10
4.1.1. USB/SD Storage 10
4.1.2. FTP 11
4.2. Recording 12
4.2.1. Recording file format 12
4.2.2. Continuous recording 13
4.2.3. Event recording 14
4.3. Search and Download 15
4.3.1. Continuous recording file download 15
4.3.2. Event recording file download 15
5. SETUP 16
5.1. Video and Audio 16
5.1.1. Camera (channel naming / video format / color control) 17
5.2.2. Repositioning 20
5.2.3. Zoom/Focus 21
5.2.4. Burnt-in Text 22
5.2.5. Encoder profile 23
5.2.6. Stream 26
5.2.7. Privacy Mask (NOT with EPTC-2260!) 27
5.3. Event Configuration 28
5.3.1. Event Rules 28
5.3.2. Motion Detection 32
5.3.3. E-mail recipient 33
5.3.4. FTP Notification 35
5.3.5. HTTP Notification 36
5.3.6. TCP Notification 38

5.3.7. TCP Server 38
5.3.8. Multicast Notification 39
5.3.9. Heart beat 39
5.4. Network Configuration 40
5.4.1. TCP/IP (DHCP, Static IP, DNS setting 40
5.4.2. Web Server 41
5.4.3. NTP Server 42
5.4.4. UPnP 42
5.4.5. RTSP/RTP (multicast or unicast) 43
5.4.6. mDNS (Multicast DNS) 45
5.4.7. SMTP 45
5.4.8. DDNS (Dynamic DNS) 47
5.4.9. SNMP 48
5.6. Peripheral 49
5.6.1. Sensor / Alarm 49
5.6.2. Serial Port (NOT with EPTC-2260!) 50
5.7. PTZ settings 51
5.7.1. Protocols 51
5.8. Maintenance 52
5.8.1. Users 52
5.8.2. Date & Time 54
5.8.3. API 55
5.8.4. Language 56
5.8.5. Firmware Upgrade 56
5.8.6. System Log 57
5.8.7. Event Search 59
5.8.8. Configuration Import / Export 60
5.8.9. Reset All Settings 61
5.8.10. Reboot 61
5.9. About 62
5.9.1. Information 62
5.9.2. License 62

1. INTRODUCTION

1.1. Welcome

This manual explains how to interface with the H.264 codec supporting IP camera series using the Microsoft® Internet Explorer web browser. The Web Page of the product has been implemented with the protocols below:

- HTTP API – Parameter configuration commands
- RTP/RTSP – Video, Audio, and Metadata Streaming
- Active X program – Image display on client PC

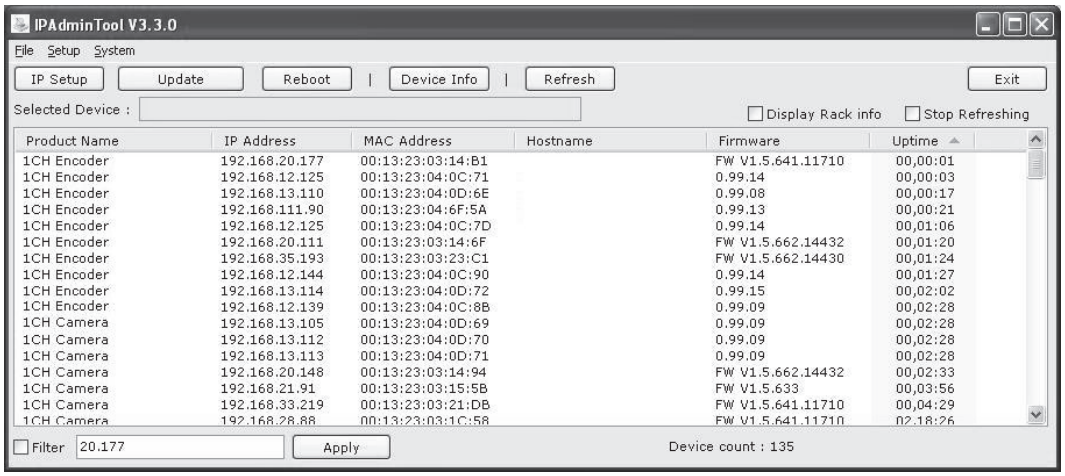
1.2. Getting Started

Before utilizing the web interface, install and connect the camera and other physical devices. Refer to the hardware manual supplied with your SDK for the product installation steps. The installation manual provides detailed information for installation and configuration of the device.

1.3. IP Address Setting

How to find the IP Address of your device:
The product has its unique IP address. *IPAdminTool* software allows users to search the IP address of connected devices.

How to change the default IP address:
IPAdminTool software allows users to search and change the IP address of connected devices. The figure below shows a main UI of the IPAdminTool. The IPAdminTool helps to search multiple devices. Please refer to the '*IPAdminTool User's Manual.pdf*' for the detailed information and its usage.



What is IPAdminTool?
IPAdminTool automatically scans all of the products including encoders and cameras on the network and displays product's information, including product name, IP address, MAC address, firmware information, and devices' uptime. The tool also allows users to change the IP address or update the firmware.

Limitation of the concurrent clients
Depending on streaming configurations and settings, simultaneous connections might reach the limitation due to system maxed-out capability.

- RTSP Streaming, Unicast: Heavily depends on the maximum throughput in a given time.

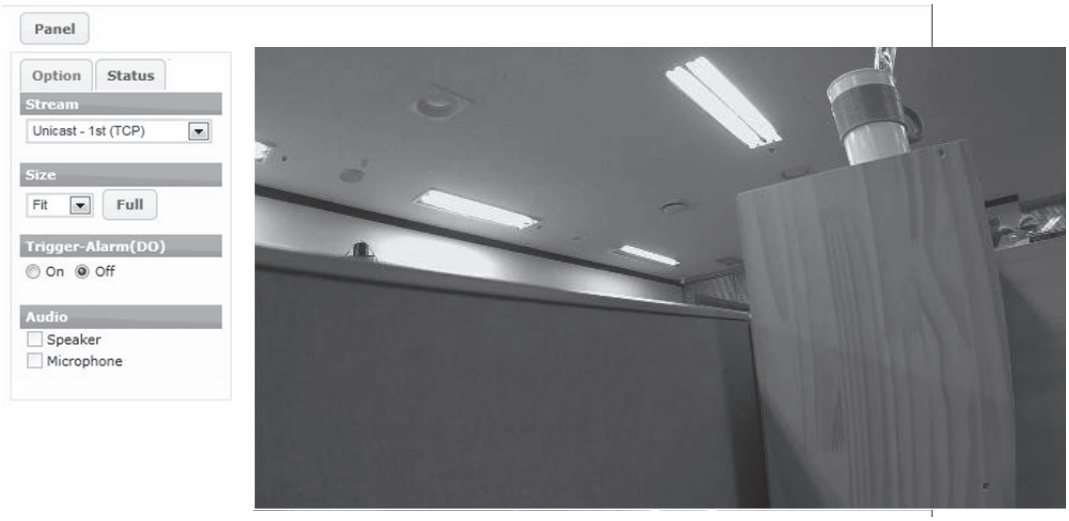
2. USING A WEB BROWSER

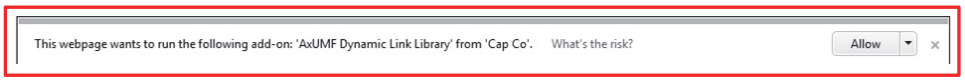
After the network and power connection are established, access the web browser to view the live streaming of the connected device. Installation of ActiveX is required to see the live page and to access full controls in Microsoft® Internet Explorer.

2.1. ActiveX Installation (AxUMF.cab)

For full control of a device through a web browser, installation of the ActiveX control is required. Refer to the following steps to install the ActiveX. Disable the Pop-up blocker or run “Add-on” notice in a browser to install the ActiveX and Installation file.

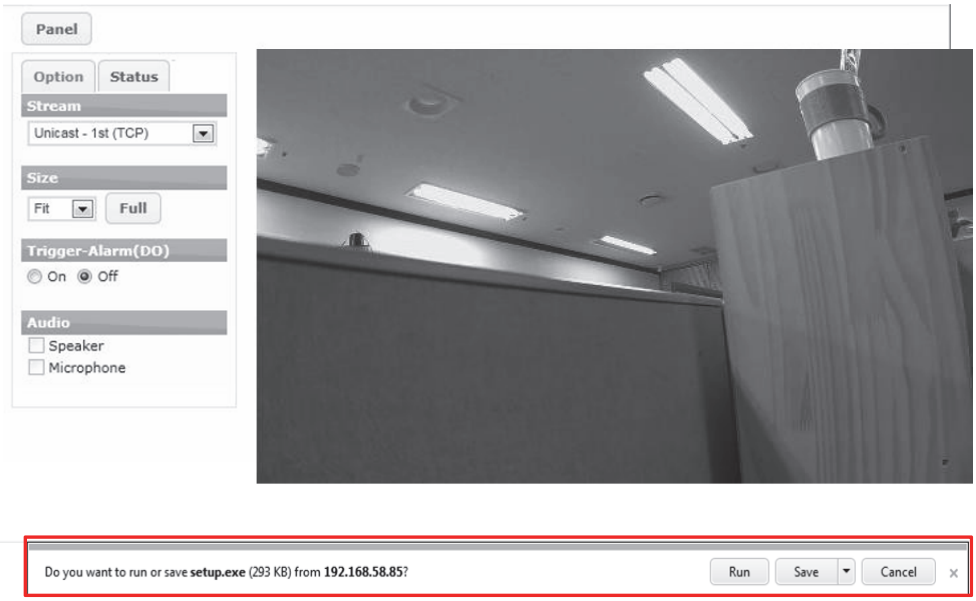
1. Click the installation warning message on the view page as below. JPEG snapshot is displayed every 1 second before you install AxUMF.cab





2. Click **Install** on the security warning message box. If the page is not responding after the installation, refresh the page.

3. Install **setup.exe** by clicking the link shown on the main page. JPEG snapshot is displayed every 1 second before you install **setup.exe**.



4. Follow the instructions of the dialog boxes, and complete the installation.

5. When the dialog box appears to request user name and password, enter the default value for the administrator account (case-sensitive) as below:

   - **User Name:** ***root***
   - **Password:** ***admin***

6. Refresh the page and check if the live image is displayed successfully.

2.2. Recommended PC Specification

The following table describes the recommended requirement of the PC system to use a Web browser with our products.

Item	Recommended
VGA	D3D support
OS	XP, Vista, 7
Direct X	9.0

Only Internet Explorer 8 or higher version x86 is officially supported.
With IE 11 Motion Detection and Privacy Masking have NO function!

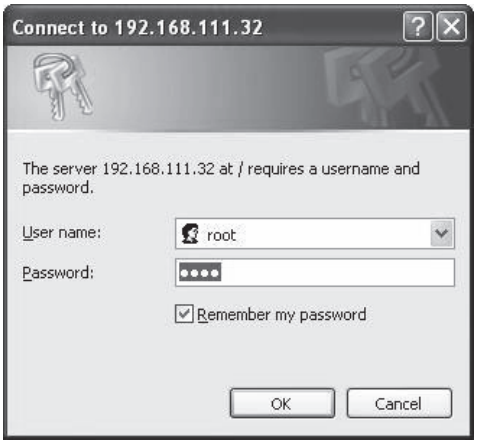
3. LIVE PAGE CONFIGURATION

When the device is accessed via the web browser, the live image of the device appears on the window. To go back to the live page either from the Storage or Setup page, click **Live** on the upper left corner of the web page.

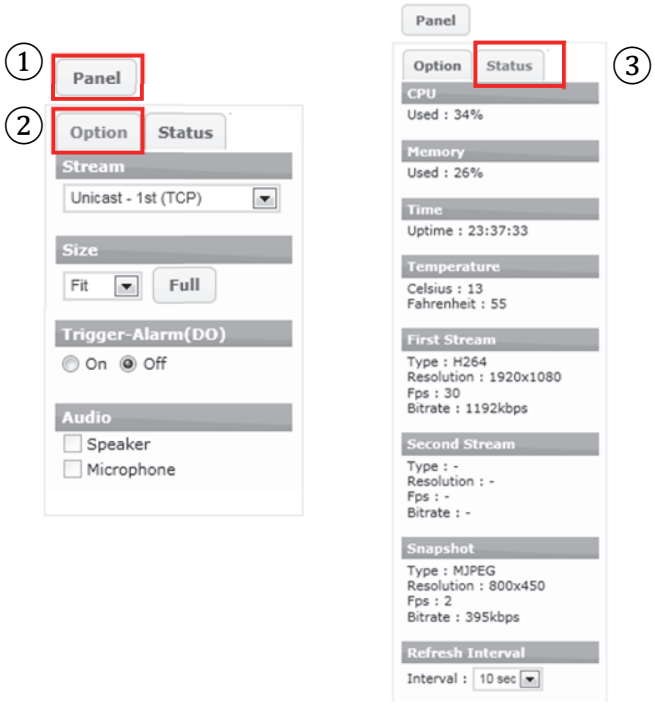
3.1. Log In

To access the device on the web browser:

1. Enter **root** for the user name and **admin** for the password on the pop-up window.
2. Click **OK** to access the main page.



3.2. Live Page Menus



1. **Panel:** Clicking the Panel button enables users to hide/show the menu tab.
2. **Stream:** If you go to **Setup > Stream > Snapshot** and tick *Enable*, *Snapshot* will be added and default value will be applied automatically.

Trigger Alarm (DO): If you go to **Setup > Peripheral > DI/DO** and tick *Enable*, menu will be activated and you can control *On/Off* of DO.
Audio: Audio-Speaker will be activated when *Input Enable* of *Audio* tab **(Setup > Stream > Audio)** and *Enable* of *Include audio stream* **(Setup > Network Configuration > RTSP/RTP)** are ticked.
Audio-Microphone will be activated when *Output Enable* of *Audio* tab **(Setup > Stream > Audio)** and *Enable* of *Include audio stream* **(Setup > Network Configuration > RTSP/RTP)** are ticked.
"Speaker" is a function to output audio of camera to client and *"Microphone"* is a function to output audio of client to camera.

3. **CPU**: Usage of CPU
   Memory: Usage of memory
   Time: Time after booting
   Temperature: Display camera temperature as ℃/℉.
   First/Second/Snapshot: Display current information of each stream.
   Refresh Interval: Configure: Set refresh interval

If the live image is not shown,

1. Check if the camera is powered on and connected properly.
2. When using the Internet Explorer, check if the ActiveX control is installed. For other types of web browsers, the live image is displayed via QuickTime Player.

If Direct3D Acceleration is disabled, you may not see the view page. In case of the blue screen appears instead of the proper video, please type 'dxdiag' from **Start** > **Run** on your computer and check the DirectX Features.

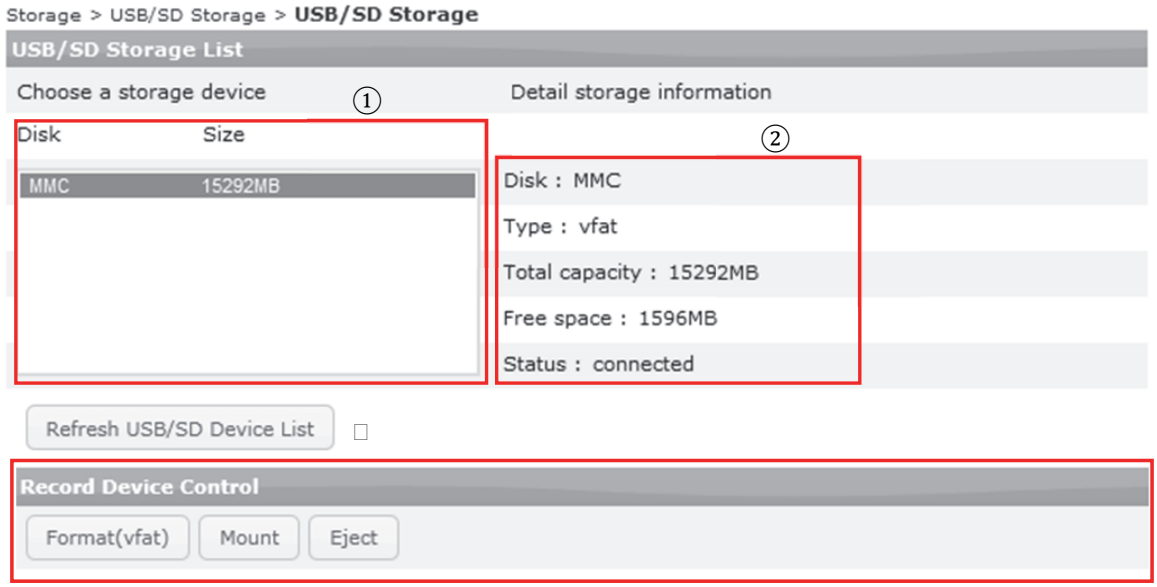
4. STORAGE CONFIGURATION

From the Storage page, users can configure a storage device and recording.

4.1. Storage device settings

4.1.1. USB/SD Storage

To search for mounted USB or storage devices and check the device information, click **Storage.**



1. **Device List**: The mounted devices are listed by clicking “Refresh USB/SD Device List”.

2. **Device Information**: The detailed information of the selected storage device is displayed. The information includes device name, type, total capacity, free space, and device status.

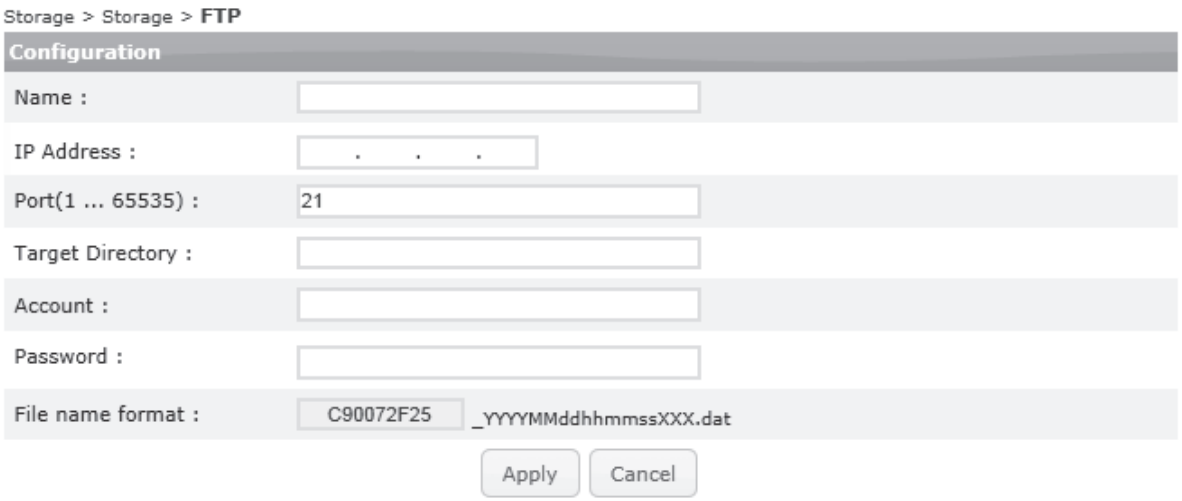
3. **Record Device Control**: It allows users to format a storage device as vfat or Ext3 file system, and mount or eject storage device that is available from the device list.

Ext3 file system is recommended due to its resilience against data loss in case the card is ejected or if there is abrupt power loss. Class 4 or higher Class SD card is recommended when recording high resolution video.

To start recording, the device must be connected. If the connected device does not appear, try to reboot the device and check its status again.

4.1.2. FTP

To specify the FTP server to record the video and audio, click **Storage > FTP**. Please note that this is the configuration for FTP server used only for the event recording.
Please refer to **4.2.3. Event recording** and **5.3. Event Configuration** for more details.



Name
Specify the FTP server name.

IP Address
Enter the FTP server address.

Port
Enter the server port number. The default is 21.

Target Directory
Enter the target directory to store the data.

Account
Enter the login user name of the FTP server.

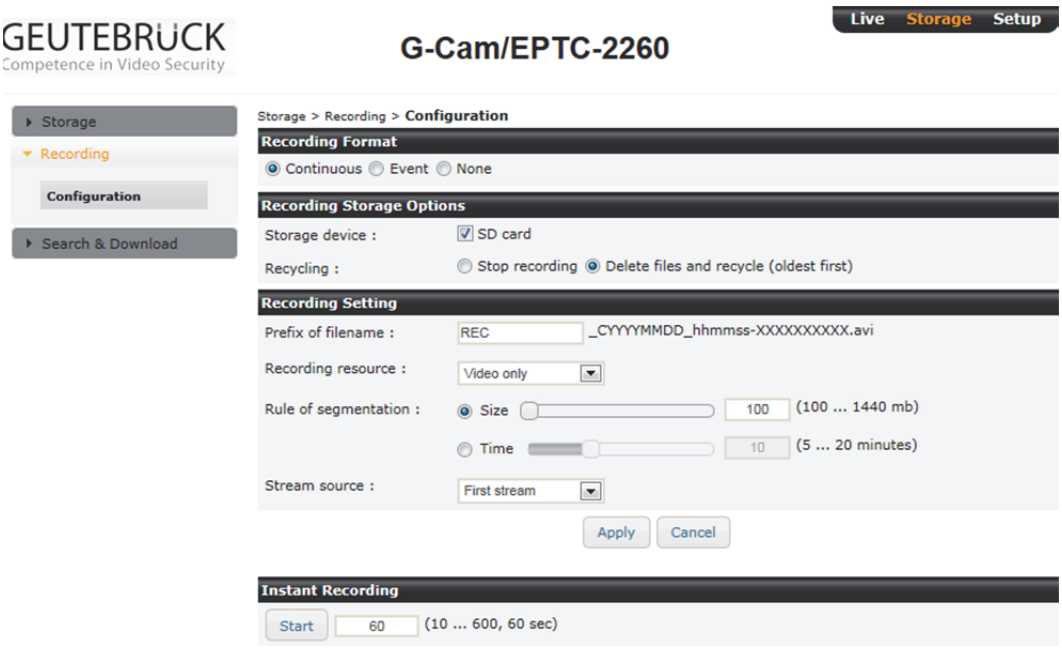
Password
Enter the password of the FTP server.

Prefix of filename
The prefix of file name is USN (Unique Serial Number) of each device for easier recognition of the recorded files among numerous devices using the same FTP server.

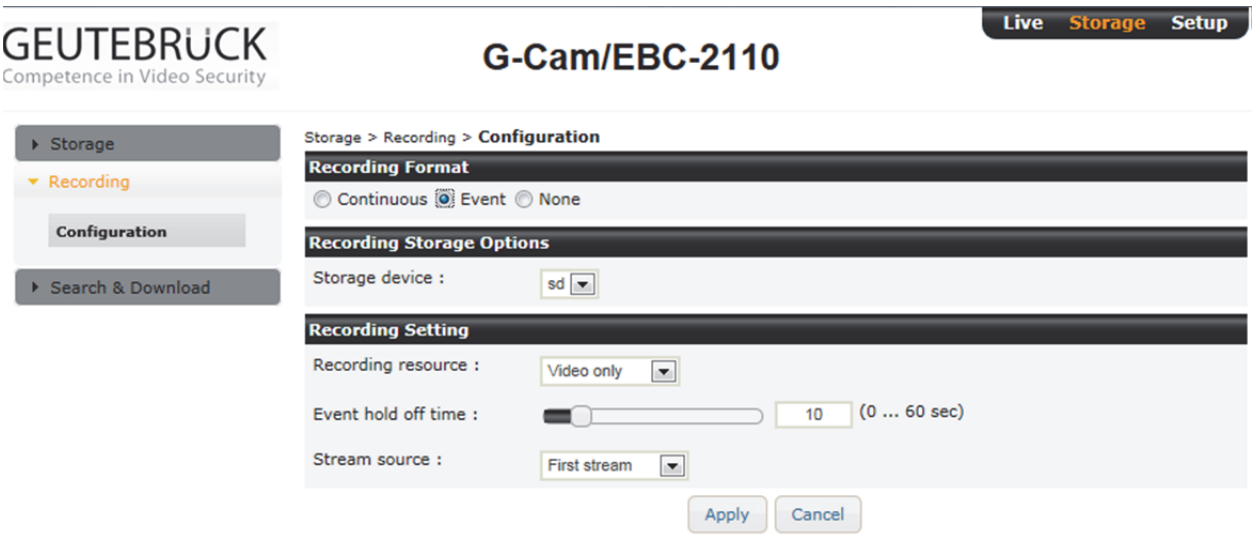
The date and time in the recorded file name is based on UTC time.

4.2. Recording

4.2.1. Recording file format



Continuous
This mode enables continuous recording on a SD card with AVI file format.



Event
Event mode enables intermittent recording when there is an event such as an intrusion or any other specific occasion.

4.2.2. Continuous recording

For the Continuous configuration, click **Storage** > **Recording** > **Configuration**. On this page, users can configure the recording storage option, recording conditions, and perform the instant recording.

Recording storage Options

- **Storage device**: **SD card** is pre-ticked and selected.

- **Recycling**: Users can select one of the options below when the storage is full.
  - **Stop recording:** Stops recording and keeps the recorded data.
  - **Delete files and recycle (oldest first):** Replaces oldest files with latest files (based on dates).

Recording Setting

- **Prefix of filename:** Give relevant name that will be used as the recorded file. For easier recognition of duplicate files, the end of every recording file name includes the date and time information as a default.
- **Recording resource**

Select the choice between 'Video only' and 'Audio+Video'.

- **Rule of segmentation**
  - (by) Size: The range of the file size is from 100 to 1440 Megabyte(s).
  - (by) Time: The range of the recording length is from 5 to 20 minute(s).
- **Stream source**

Users may choose primary recording source from either first stream or second stream. If it is a single stream, the second stream option is unavailable.

Instant Recording

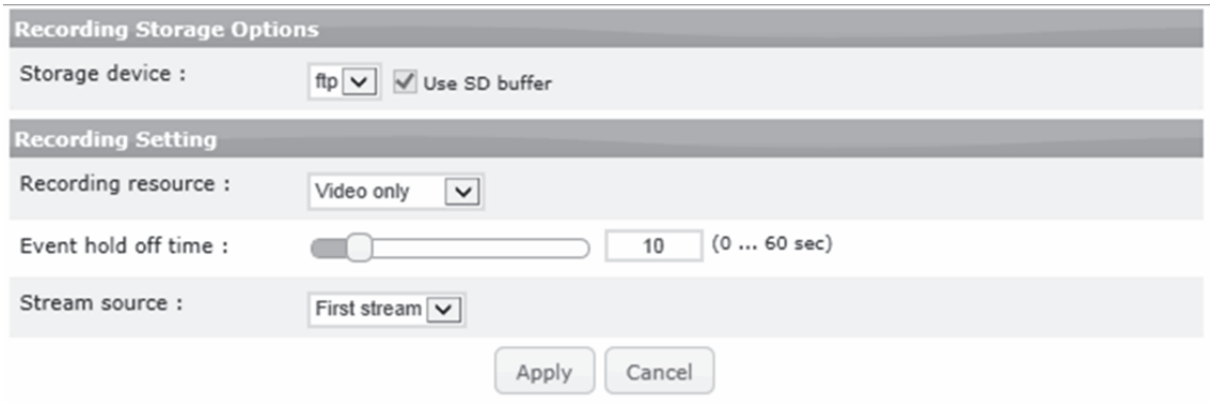
If the Start button is pressed, the recording will be started immediately. Before pressing the start button, input recording time (seconds) in the box next to the start button. The system default is 60 seconds, and the available recording time is from 10 to 600 seconds. (10 minutes) While the recording is in progress, the button label changes from "Start" to "Stop"; users can manually stop the recording while it is being progressed.

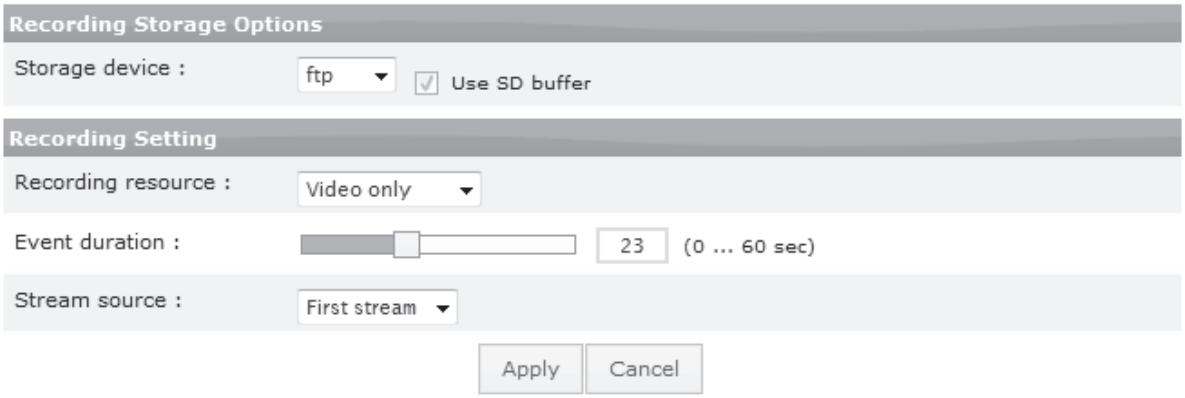
NOTE: If Instant Recording doesn't show on the page, make sure to select **Continuous**, and click **Apply**.

When the recording is complete, **Download** appears on far right; Click the button to download the recording as a file.

4.2.3. Event recording

To configure the event recording, click **Storage** > **Recording** > **Configuration,** and then select **Event** of **Recording Format**. On this page, users can choose the desired storage (SD card, or FTP server) for event recording and set related recording parameters.





Recording storage Options

Select the storage device type. If FTP is selected, the SD memory can be used as a buffer to transfer stably.

Recording Setting

- Recording resource
Select the choice between ‘Video only’ and ‘Audio+Video’.

- Event hold off time
Specify the time between the successive triggered events so as to ignore the often repeated event.

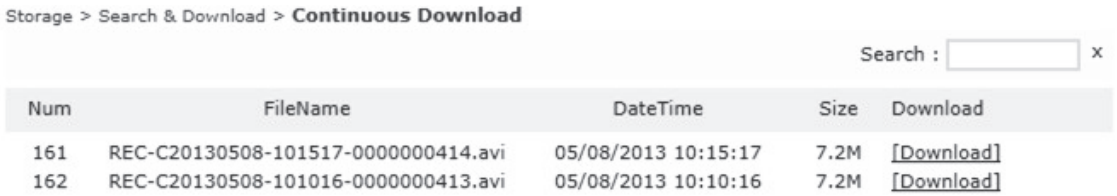
Stream source

Users may choose primary recording source from either first stream or second stream. If it is a single stream, the second stream option is unavailable.

4.3. Search and Download

4.3.1. Continuous recording file download

To view and download the recorded files, click **Storage > Search & Download > Continuous** Download.

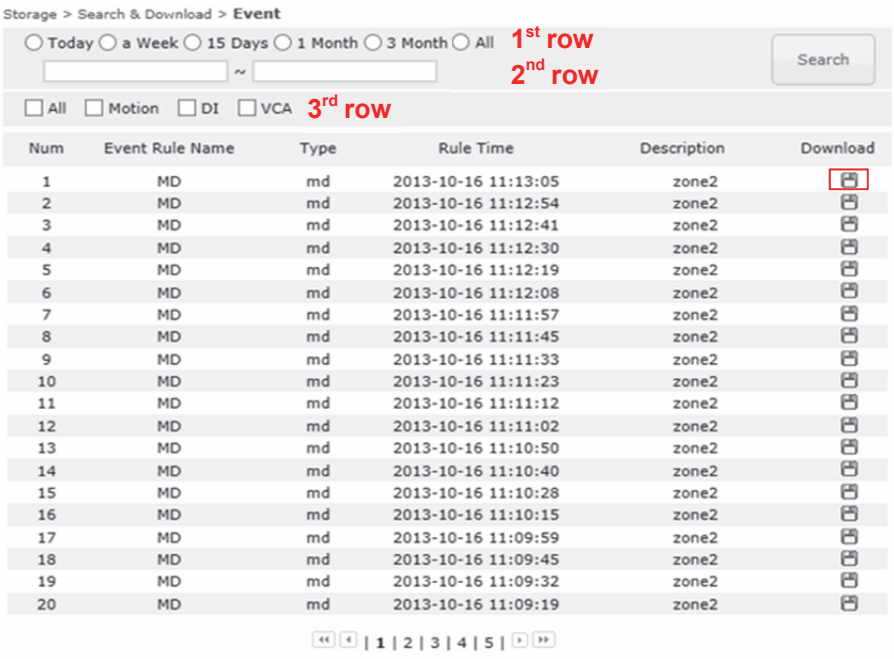


All of the recorded files are listed with maximum 40 files per page on the File Download page. Currently recording file is displayed as [Recording] on the Download column. Users can select the desired file from the list or search it by date. To list up the files which are recorded on a specific date only, click on the Search box. A calendar appears from the search box and select the desirable date. To go back to the original list, click the 'x' button next to the Search box.

To download a file, click [Download]. Then, the pop up window appears for the file download.

4.3.2. Event recording file download

To search event and download the corresponding recording files, click **Storage > Search & Download** > **Event**



- **1st & 2nd row:** Users can select or specify a period.
- **3rd row:** Users can select event types.
- **Event Rule Name:** The name defined when creating the rule
- **Type:** The event type selected on the 3rd row
- **Rule Time:** The time that the event was detected
- **Description:** Additional information about the event
- **Download:** Clicking a floppy disk icon enables users to download the file.

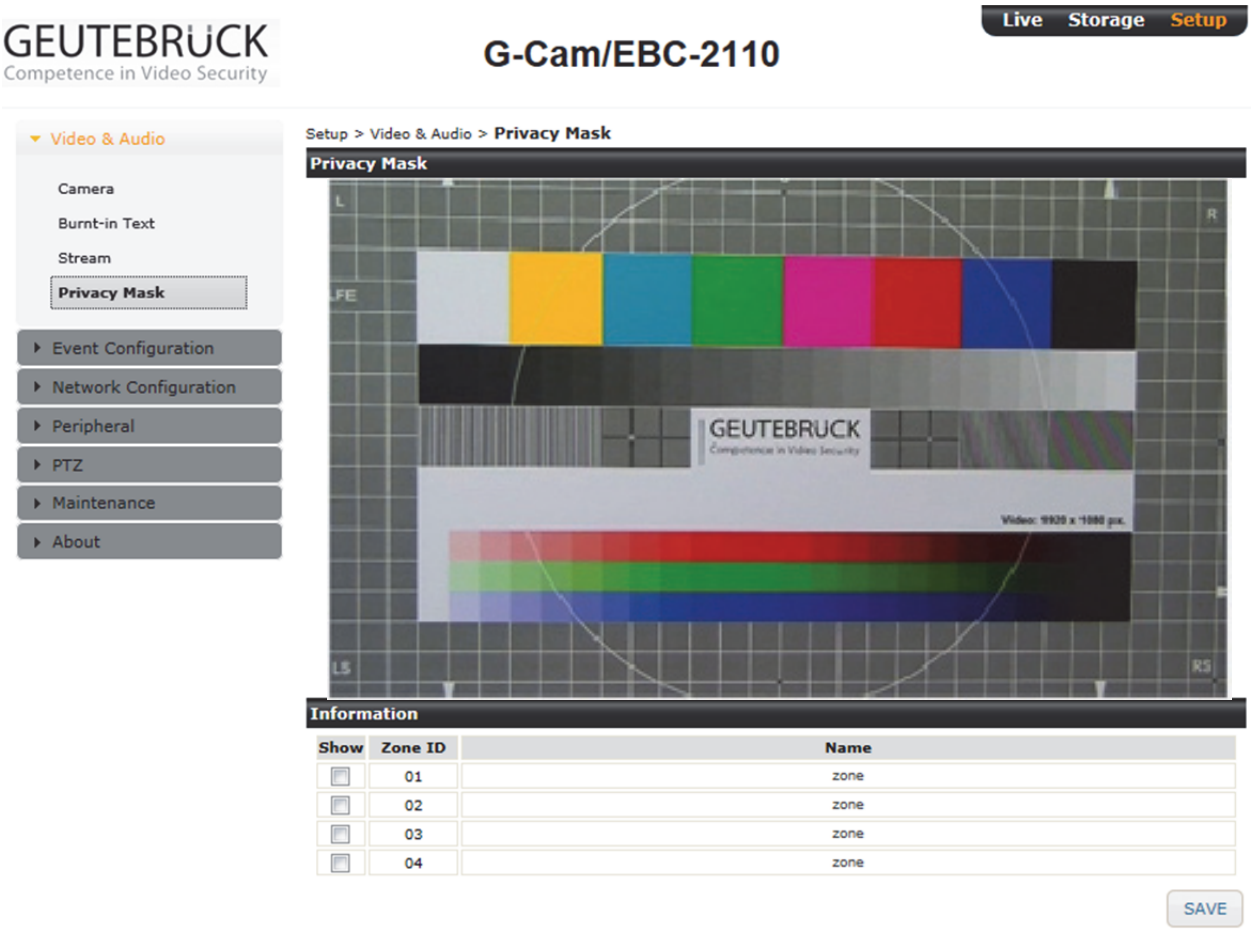
5. SETUP

To configure the setting values of the device, click **Setup** on the main page. To access the Setup page, ID and passwords are required.

5.1. Video and Audio

To change the setting for video input, Repositioning (only with EPTC-2260!) Burnt-in text, stream and privacy mask (NOT with EPTC-2260!), go to the Video & Audio page by selecting **Setup** > **Video & Audio**.

EPTC-2260: with repositioning, without Privacy Masking

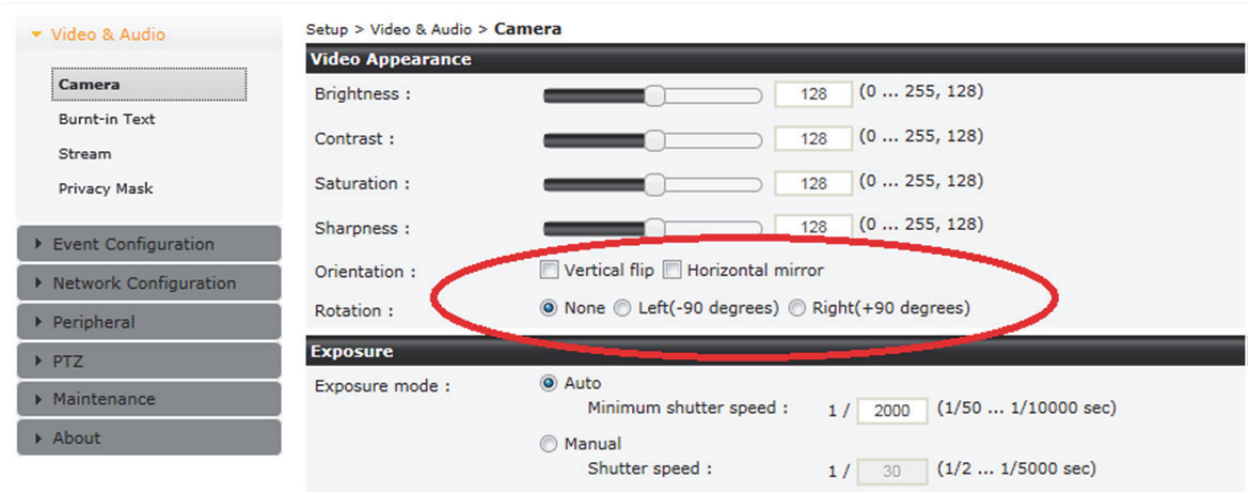


EBC-2110: with Privacy Masking, without repositioning

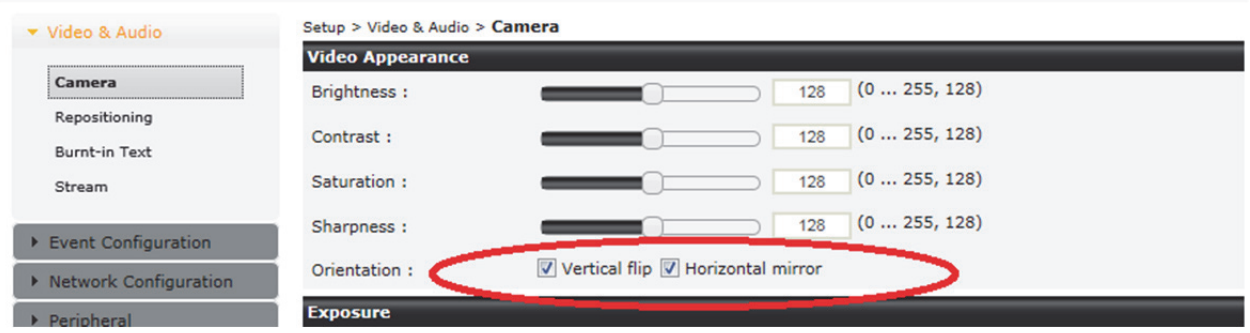
5.1.1. Camera (channel naming / video format / color control)

The camera setting page provides options to:

- Name a channel for the camera
- Set image attributes
- Adjust the image exposure
- Configure Day & Night mode
- Configure the image signal processing
- Preview the current setting
- Rotate image (rotation depends on camera type! -> see below)



EBC-2110: all rotations including corridor view



EPTC-2260: only vertical flip / horizontal mirror

1. Click **Preview** to see how the image will appear on the preview window at the bottom of the page prior to the actual modification of camera setting.
2. Click **Apply** to save changes, and click **Cancel** to return to the previous setting.

Friendly name

The user may provide friendly name (alias) to an individual device in case when utilizing multiple channels and devices. Using alias is recommended to distinguish the device where environment requires multiple image feedbacks with multiple monitoring devices.

Video Appearance
Brightness, contrast, saturation, sharpness and orientation are adjusted.

- **Brightness:** The range is from 0 to 255, the default is 128.
- **Contrast:** The range is from 0 to 255, the default is 128.
- **Saturation:** The range is from 0 to 255, the default is 128.
- **Sharpness:** The range is from 0 to 255, the default is 128.

Sharpness is affected by installation environment. Here in the web menu's "range" definition is operating range, therefore configuring the right value for each camera is necessary.

Vertical Flip
This enables an image to be rotated vertically.

Horizontal mirror
This enables an image to be mirrored.

Rotation (corridor mode; NOT with EPTC-2260!)
Image rotation is a corridor mode which rotates the video image 90 degrees in an area that is more vertical than horizontal in shape such as staircase, hallways, aisles to view a vertically oriented video stream. The options are 'None', 'Left (-90°)', and 'Right (+90°)'.

Image rotation using high resolution (1080p) may affect the frame rate.

Exposure mode
Selecting the right exposure control mode depends on the installation site's environment. 3 modes are available;

- **Auto:** This mode adjusts the shutter speed automatically in range from the shutter speed specified by minimum shutter speed to the maximum shutter speed of the camera depending on the light condition.
  *Shutter speed will vary from 1/50 per second up to the degree the user sets as the minimum shutter speed.
- **Manual:** If the auto mode doesn't work properly or you want to fix the shutter speed, you may select this mode and set the shutter speed manually.
- **Flickerless:** Under the fluorescent light, the flicker may happen and select proper light frequency to compensate the light flickering.

Exposure adjustment
Correct exposure value should be selected from the list box to adjust the target brightness for the automatic exposure setting. The high value makes the image brighter, and the low value makes the image darker. Select the value as follows: +1.0, +0.6, +0.3, 0, –0.3, –0.6, –1.0 (EV);

Backlight compensation (BLC) allows the camera to control the exposure level of the entire image to properly expose the subject in the foreground. (In images where a bright light source is behind the subject of interest, the subject would normally appear in silhouette.)

Digital slow shutter allows to get the proper exposure in low light condition even the frame rate may be dropped.

Digital Wide Dynamic Range (DWDR)
This ensures image clarity in strongly lit and contrasting places.

Day & Night
Three different day/night modes are supported: Auto, Day, and Night. Select the desired mode based on the installation environment. Default value is *Auto*. Threshold value for Day to Night and Night to Day can be controlled when the Auto mode is set. Please note that Night to Day level should always be set higher than Day to Night level.

- **Day to Night level:** This has range of 0 ~ 63. (Default value is 0)
- **Night to Day level:** This has range of 1 ~ 64. (Default value is 3)
- **Refocus:** This function enables automatic focus when day changes to night and vice- versa.

White Balance
Set of different white balance modes are available in drop down list, and Red and Blue hues can be adjusted.

- **atw1:** Automatically adjust white balance in image.
- **atw2:** Automatically adjust white balance but with different range compare to atw1.
- **push:** Applies adjusted white balance to image.
- **manual:** the user can manually adjust red and blue hues.

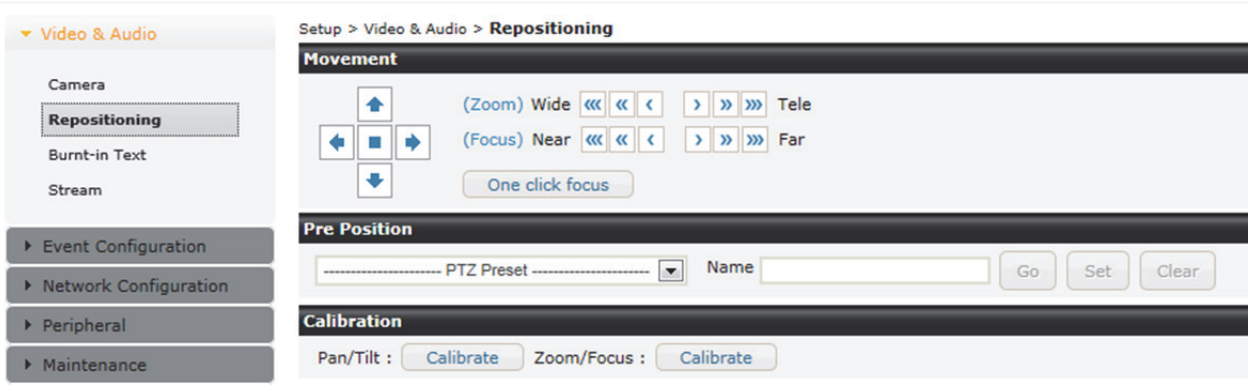
Image Signal Processing
When noise filter value is 0, the noise filter is off. The noise suppression is performed to the maximum when the value set is 15. The video quality will suffer when the value is set to the highest. The range is from 0 to 15, and the default is 3.

Analog output
This selects the video format on the video output port.

5.2.2. Repositioning

Note: This part is for the repositionable dome cameras only.

To change the repositioning setting, go to **Setup** > **Video & Audio** > **Repositioning**



Repositioning only with EPTC-2260!

Movement

- **Arrow buttons**: The camera can move to 4 directions; up, down, left, and right. The camera moves to the desired position while the button is clicked and held. Stop button can be used while using zoom / focus settings or auto focus settings.
- **Zoom/Focus buttons**: 3 levels of movements are available for wide, tele, near and far movements. Clicking the buttons to move the lens more extensively than the buttons .
- **One Click Focus**: Clicking this button automatically sets the lens focus.

Pre Position

- **Drop-down list**: Stored position list (available to store maximum 16).
- **Name**: Text box to enter name of appointed position.
- **Go**: Clicking **Go** moves the camera to the selected position after selecting one from the drop-down list.
- **Set**: Saving the current camera position.
- **Clear**: Removing the current camera position.

Calibration

- **Pan/Tilt**: Move Pan and Tilt to default location.
- **Zoom/Focus**: Move Zoom and Focus to default location.

Status

- **Cycle (Pan)** / **Cycle (Tilt)**: Pan and Tilt cycle status. Numbers indicate pan and tilt motor's number of revolutions.

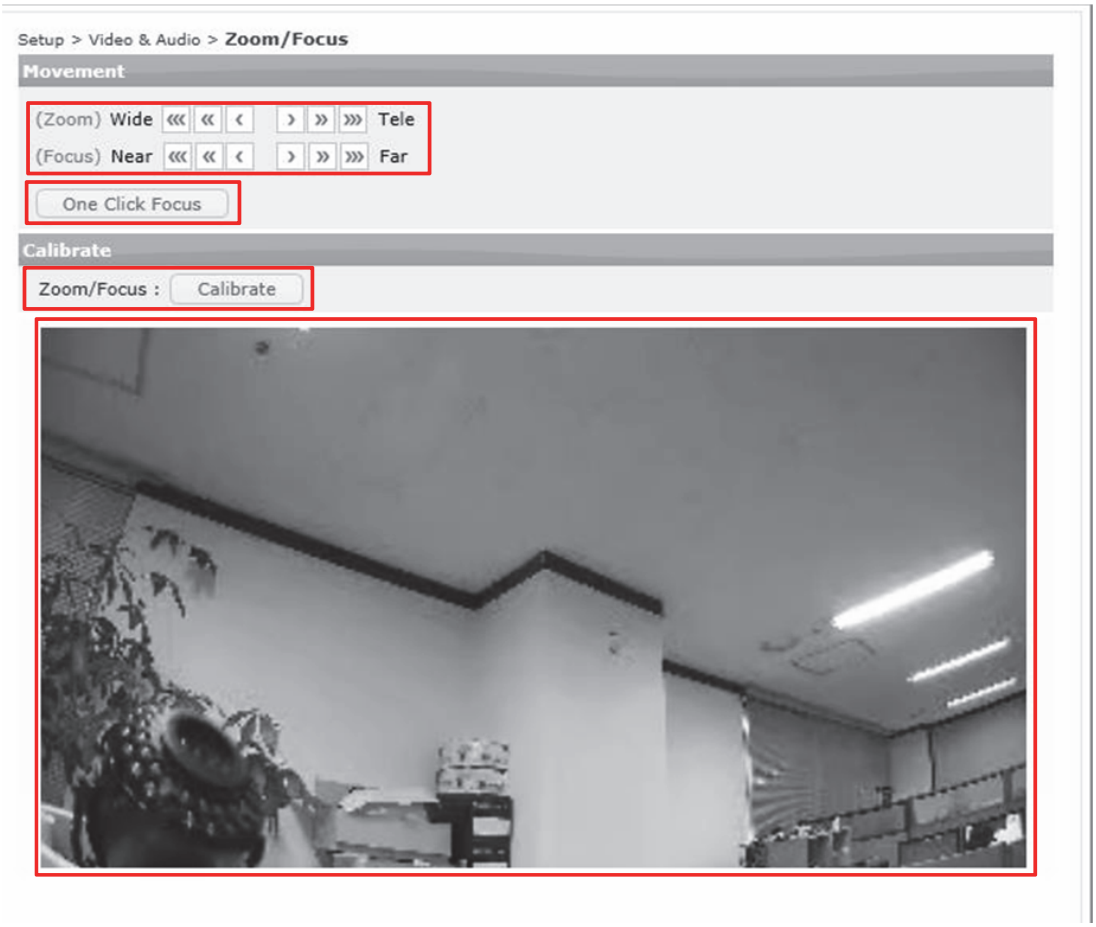
Schedule

- Set up to 4 schedules of prepositions to focus on during desired date and time periods.

5.2.3. Zoom/Focus

Note: Zoom/Focus is for motorized lens cameras only.

To change the Zoom/Focus setting, go to **Setup** > **Video & Audio** > **Zoom/Focus**



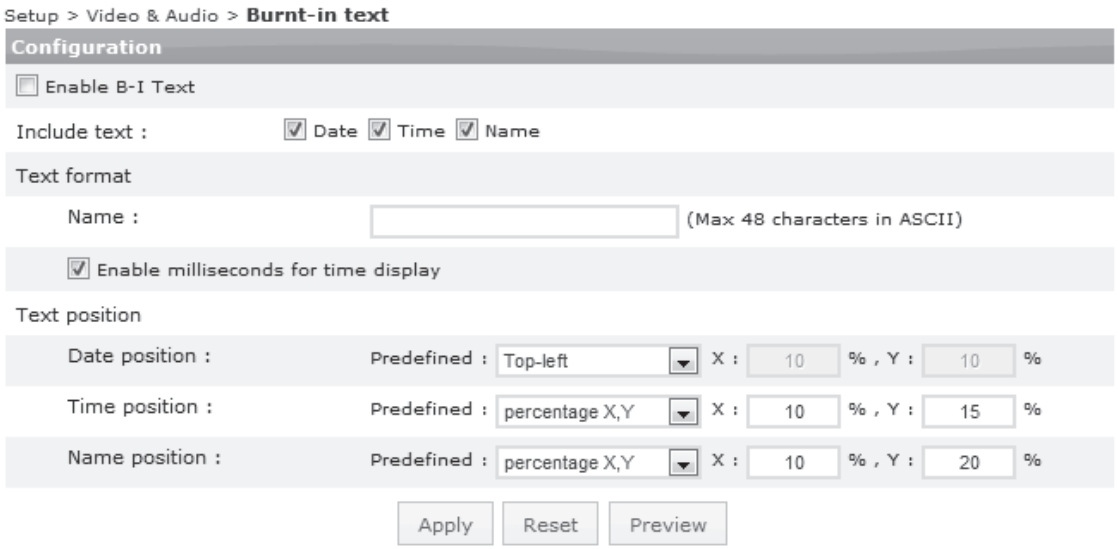
- **Zoom/Focus**: Three levels of movements are available as wide, tele, near and far. Clicking the buttons « » move the lens more extensively than the buttons ‹ › .

- **One Click Focus**: Clicking this button automatically sets the lens focus.

- **Calibrate (Zoom/Focus)**: This function rectifies misalignment by rebooting to a zero point and then aligning to a correct position.

5.2.4. Burnt-in Text

To change the burnt-in text setting, go to **Setup** > **Video & Audio** > **Burnt-in Text**.



The setting of the Burnt-in Text is applied to first stream, second stream (if the device supports) and snapshot modes identically. To add burnt-in text, check on the box of **Enable B-I Text** after the setting and click **Apply**.

What is Burnt-in Text?
Burnt-in Text 'burns' information into streaming visuals before it gets compressed, thus prohibiting manipulation or alteration of the events' time. It allows the file to become reliable evidence as it discourages intentional manipulation of the date and time for an alibi.

Text configuration
Select information (Date, time and name) to include as the burnt-in text in image. To include a specific name or info, type the desired text on the name text box. To display millisecond (time), check the 'Enable milliseconds for time display' checkbox.

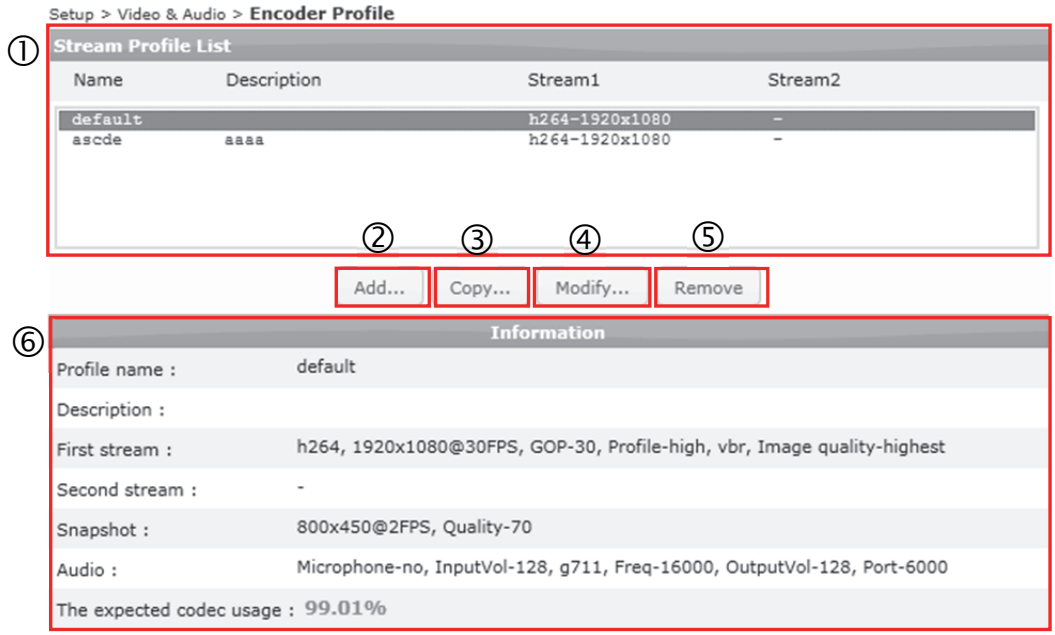
Text position
Set where the burnt-in text will be positioned in image. Predefined locations are provided as well as manual position options.

It is recommended to use normalized X, Y instead of predefined positions (left-top, left-bottom, right-top, right-bottom) for the burnt-in text positions. Selecting same predefined positions on all three categories may cause overlapping texts, depending on image resolution or the position of each text. Utilizing PREVIEW is highly encouraged to review the selected positions of those burnt-in texts.

Preview
Preview button allows to view the visual with applied settings (need to press APPLY to view).

5.2.5. Encoder profile

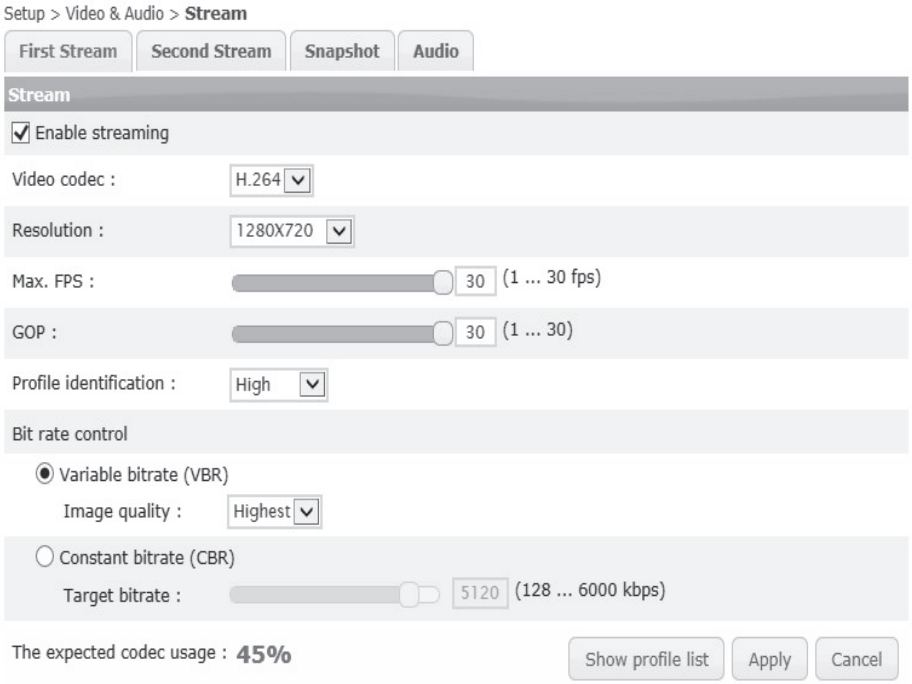
To create pre-defined encoder profiles, go to **Setup** > **Video & Audio** > **Encoder Profile**.



You can check all the profiles on the **Encoder Profile** page, and add, copy, modify, or remove a profile.

Stream Profile List: It shows a list of defined encoder profiles. Clicking a highlighted profile shows the detailed information about the profile. Click **Add** to create a new profile, and click **Copy** to easily create a duplicated profile. If you want to modify a currently existing profile, click **Modify**, and make changes on the existing setting. Clicking **Remove** gets rid of the highlighted profile on the list, but the default profile cannot be removed.

If you click either one of *Add*, *Copy*, or *Modify* button, the profile configuration page appears as shown below. On this page, users can configure the settings for each stream, snapshot and audio separately.



Users can configure streams, snapshot and audio settings.
Click **APPLY** to apply all changes to the current profile, or click **Cancel** to go back to the last saved profile.

Stream Configuration (First Stream and Second Stream)

The expected codec usage
The expected codec usage is calculated automatically according to your configuration parameters. Do not exceed the usage over 100%.

Enable streaming
Check the 'Enable streaming' box to enable streaming on the selected stream. Always keep unused streams disabled.

Video codec
Select the video codec from MJPEG and H.264.

Resolution
The supported resolution in pixels for the current stream profile is listed on the drop down box. Select the desired resolution.

Cameras
1920x1080
1280x720
1120x630
960x540
800x450
640x360
480x270
320x180

Maximum FPS
Define the desired frame rate per second.
The max frame rate is 30.

GOP
This parameter defines the length of the group of pictures. If this value is set to 1, the video stream will only have one I-frame. Keep this value high to minimize bandwidth. The max GOP is 30.

Profile Identification
This option allows users to select between three H.264 different profiles. This directly affects the quality of the video due to the amount of compression applied. *Baseline* profile provides maximum compression to the video. *High* profile gives the best quality. The *Main* profile is balanced between the other two.

Variable Bit Rate (VBR)
VBR allows a higher bitrate (and therefore more storage space) to be allocated to the more complex segments of media files while less space is allocated to less complex segments. It is used when the system has enough storage and a high quality image is required. Image quality can be configured as highest, high, normal, low and lowest.

Constant Bit Rate (CBR)
CBR mode maintains the defined bitrate level all the time.

Snapshot Configuration

Once 'Enable snapshot' is ticked, it will not stop until the checkbox is unchecked and 'Apply' is pressed.

Enable snapshot
Tick **Enable snapshot** to enable snapshot on the selected stream.

Resolution
The supported resolution for the product is listed on the drop down box. Select the desired resolution.

Maximum FPS
Enter how many snapshot files you want to send per a second. The maximum value is 5.

JPEG quality
Enter the JPEG quality. The range is from 0 to 100 and '100' means the best quality.

Audio Configuration

Enable audio
Select the **Enable** check box for the microphone or speaker to be enabled.

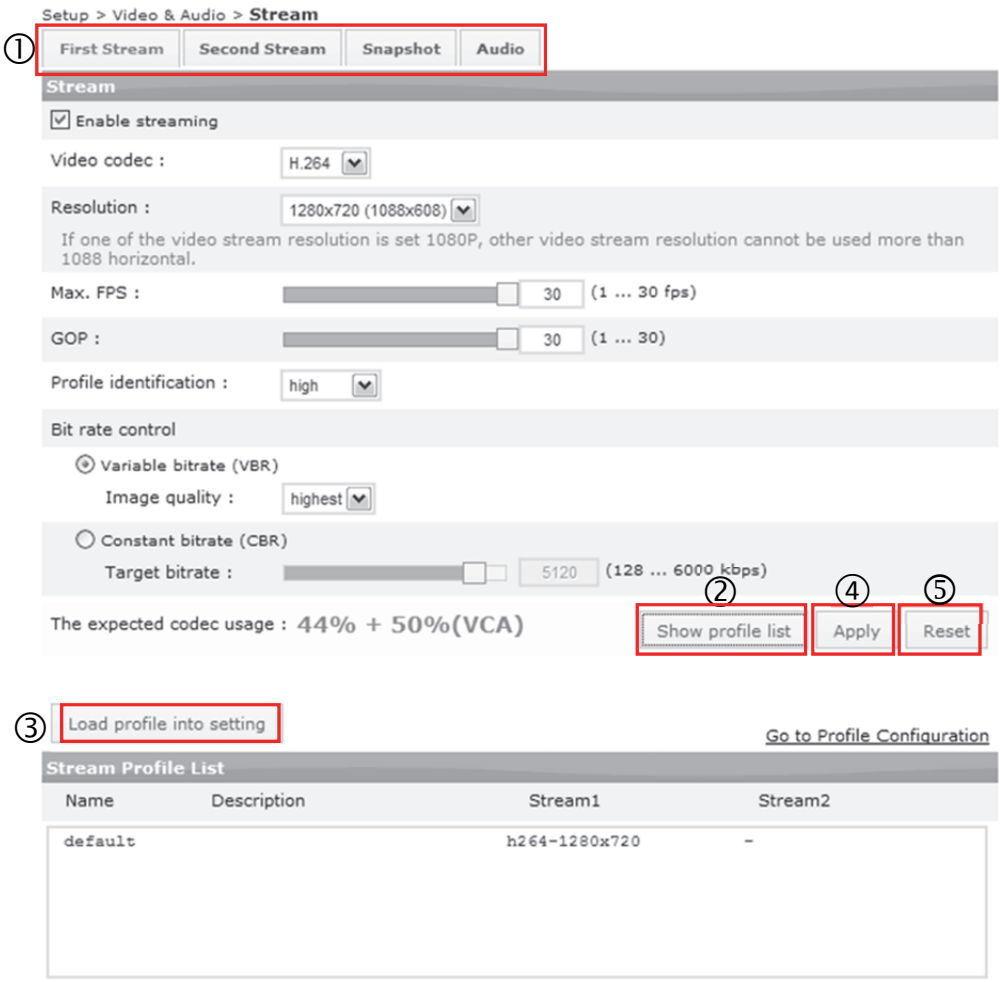
Audio Input
Volume: Enter the audio input volume. The available range is from 0 to 225. Codec: G.711 is supported for the audio codec.
Sampling Frequency: The sampling frequency is selectable between 8 KHz and 16 KHz.

Audio Output
Volume: Enter the audio output volume. The available range is from 0 to 255.
TCP/IP listen port: Set the port for listening to the audio received from the camera. The default is 6000 and the range is from 1 to 65535.

After the setting, make sure to click **OK** to save changes.

5.2.6. Stream

To configure predefined stream profile, go to **Setup** > **Video&Audio** > **Stream**.



This part has the same structure as in **Setup > Encoder Profile** and actual stream is applied on this page.
Clicking **Show profile list** will display all the profiles that you had previously added in **5.2.5.** Encoder profile.*

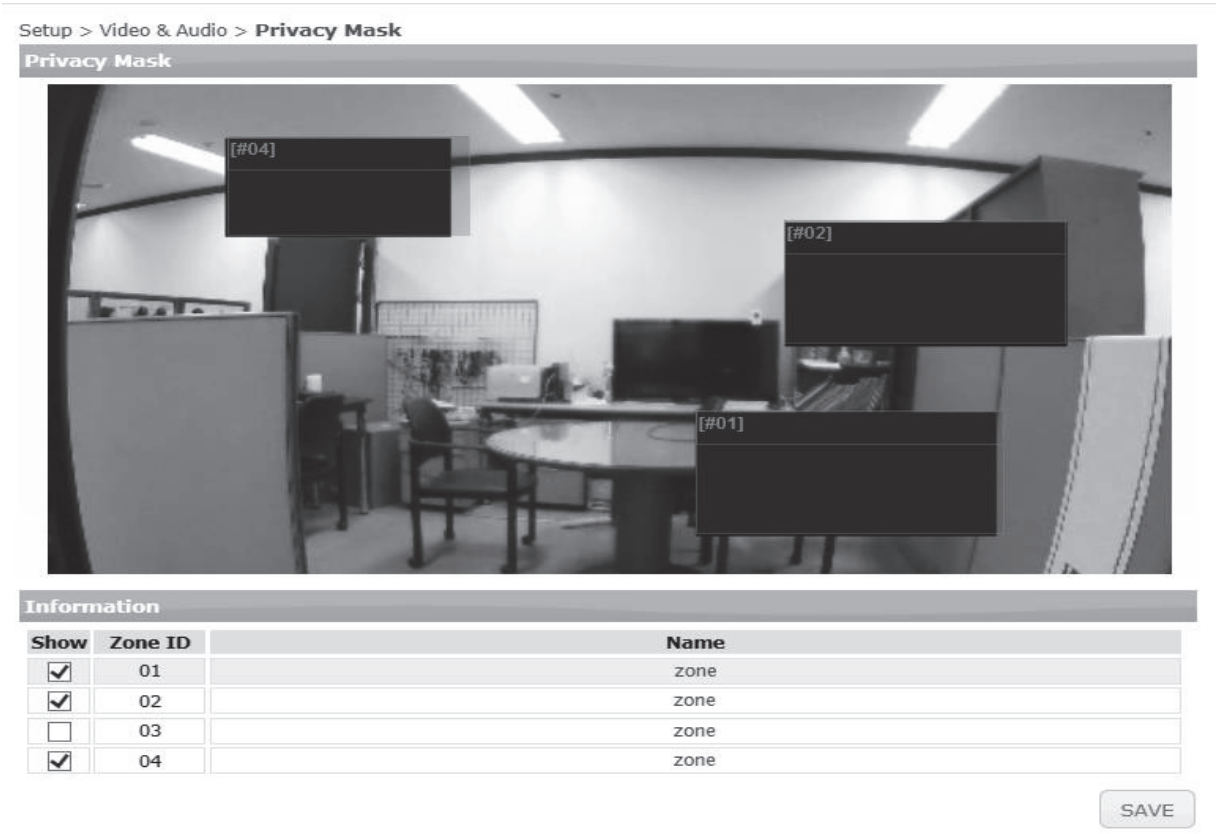
1. Highlight a profile that you wish to configure from the list, and click **Load profile settings** to bring up its setting below the **Stream** panel.
2. Click **Apply** to implement all changes to the currently loaded profile. Or, click **Cancel** to reverse all the changes made on this page to the latest-applied values.

*Different values for streaming can be applied by directly changing the values below the **Stream** panel other than setting profiles thru **Encoder Profile**.

5.2.7. Privacy Mask (NOT with EPTC-2260!)

To set up the privacy mask, go to **Setup** > **Video & Audio** > **Privacy Mask**.

How to configure privacy mask zones



1. Check **Show** of the desired privacy zone ID on the information panel.
2. On the screen move the mouse beside the zone ID, hold the left button and move the zone to the place where it is needed.
3. To change the size of a zone move the mouse over one vertical or horizontal zone line. A white double arrow appears with which the zone size can be changed.
4. Click the **Save** to save changes.

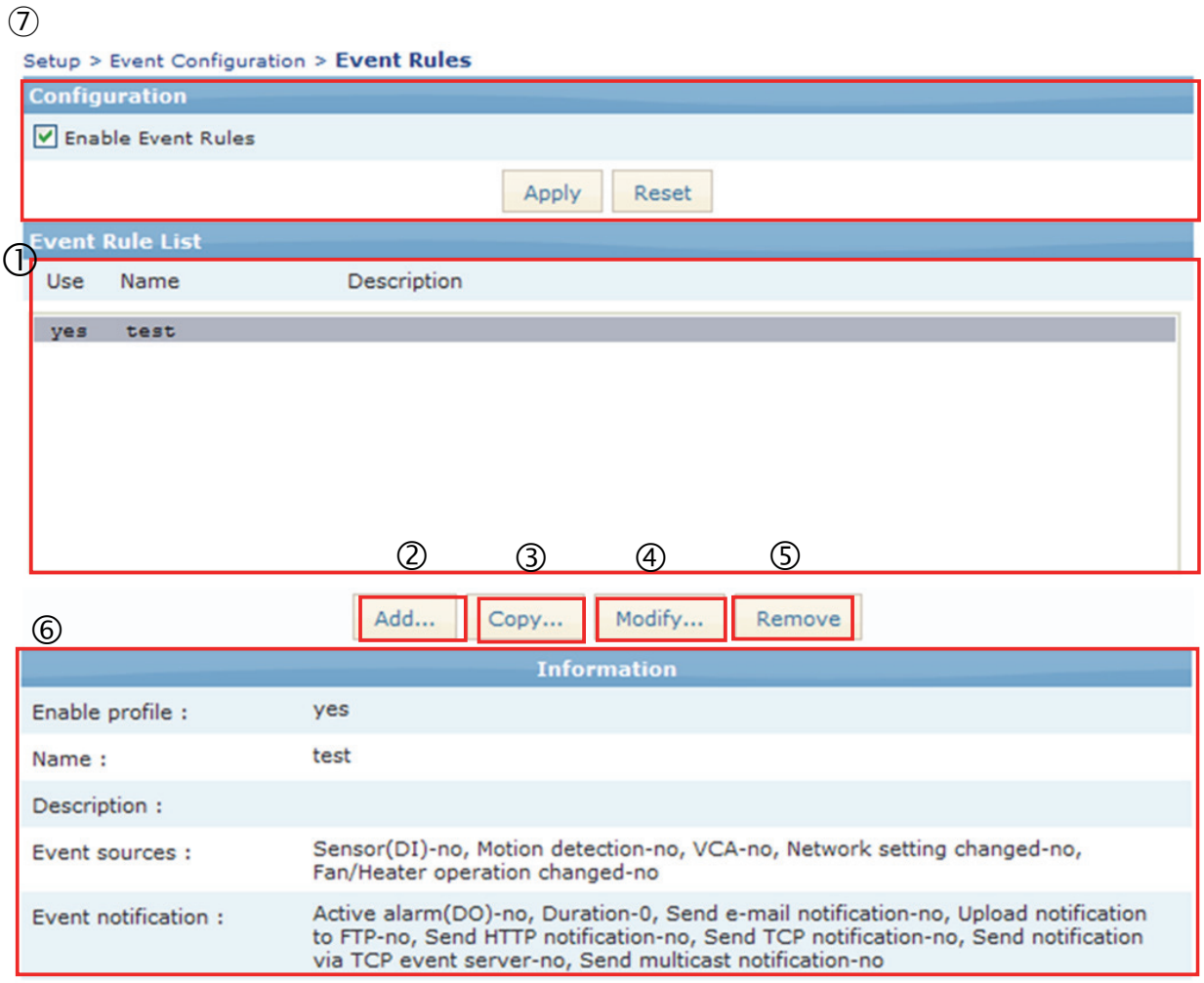
5.3. Event Configuration

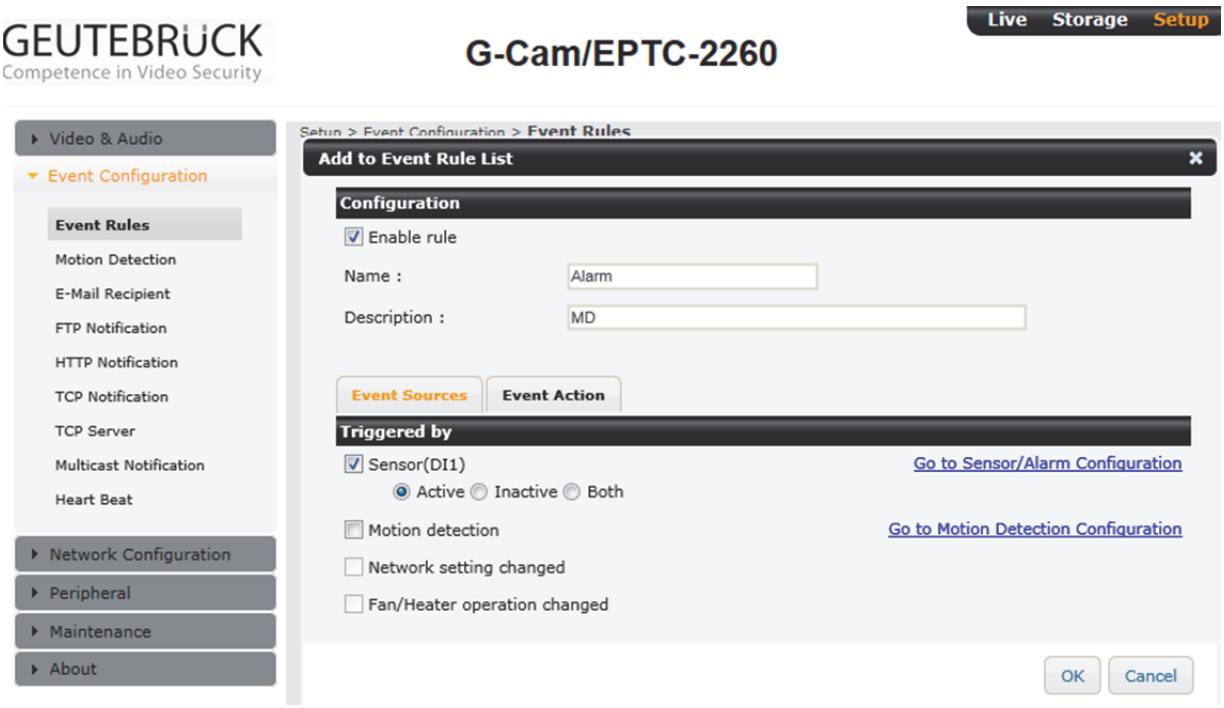
On the Event Configuration section, users can link event sources such as DI (Digital Input: sensor) and Motion Detection to event actions such as triggering alarms and sending notifications via email or FTP/HTTP/TCP servers.

Before you create an event profile, go to the desired subscriber configuration page (E-Mail Recipient, FTP Notification, or HTTP Notification), and complete the required server settings.

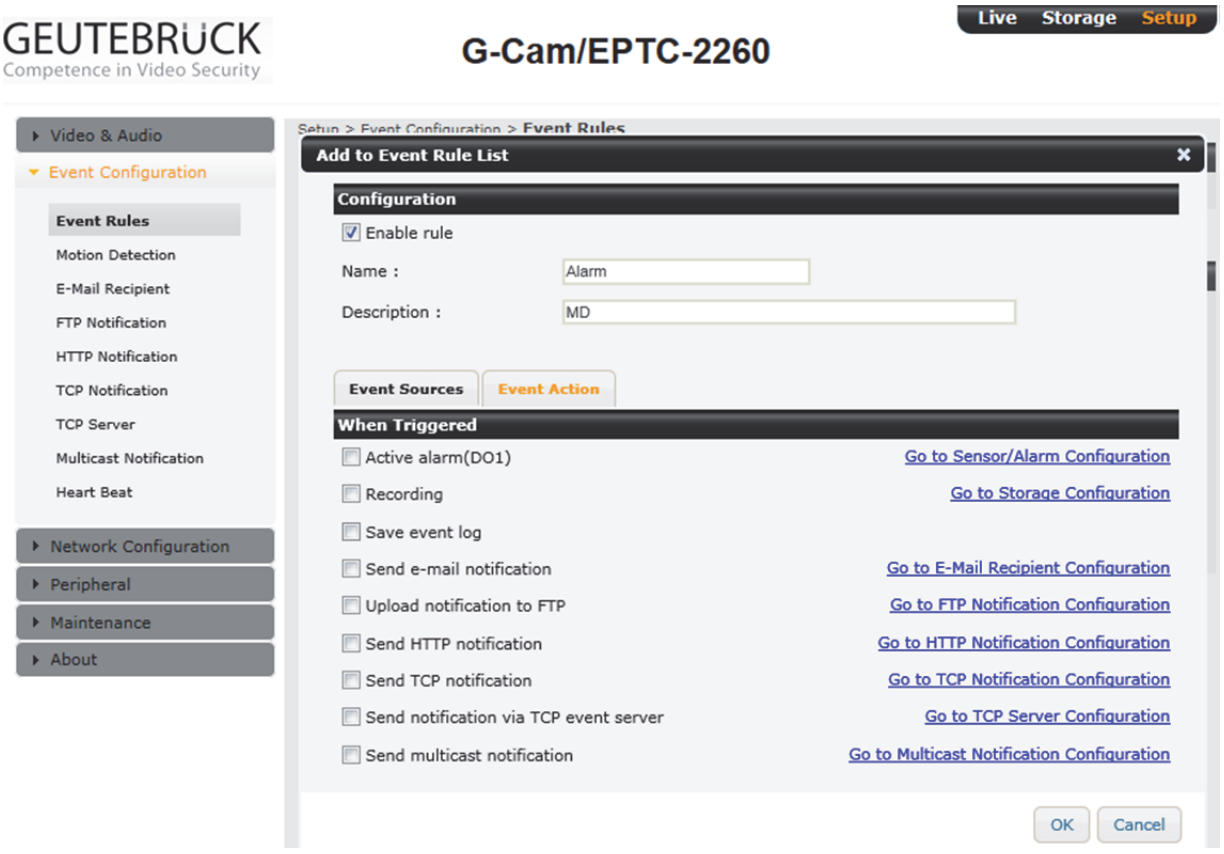
5.3.1. Event Rules

After the event subscriber configuration, you can make several event profiles with different options of event source and event action. Go to **Setup** > **Event Configuration** > **Event Rules** to manage the event profile. On this page, you can configure the event source type and specify what actions to generate as a notification when an event trigger is activated.





Event sources



Event Action

You can check the defined profile list on the main page, and add, copy, modify or remove an event rule.

1. Tick the checkbox of **Enable event rules** under **Configuration** tab, and click apply to begin creating event rules.
2. Click **Add** to create an event rule, and select desired **Event Sources** when a pop up

window of **Add to Event Rule List** appears.

3. Click **Event Action** tab to select desired **Event Action**s.
4. **Name** the event rule on the **Configuration** section, and tick **Enable Rule** if you want to use the event rule, and then click **OK**.
5. Clicking on an event rule in **Event Rule List** will display the detailed information about the highlighted event rule.
   If you want to copy a profile of an existing event rule, highlight the desired event rule, and click **Copy**. Copying an event profile allows you to easily create multiple profiles with the same configuration. Clicking **Modify** enables you to modify the profile of the highlighted event rule. Clicking **Remove** will get rid of the highlighted event rule from **Event Rule List**.

Event Source Configuration

The supported event sources may be different depending on the hardware/software specification of each model.

Event Action Configuration

The supported event actions may be different depending on the hardware/software specification of each model.

Active Alarm (DO)
Select the check box to activate the DO for the event publisher. The number of active alarm (DO) checkboxes varies depending on each device.
Specify the alarm duration. **Duration** indicates how long the DO works. For example, if you input '0,' a DO device keeps working until you turn it off manually. If you input '10,' a DO device will work for 10 seconds and finish the operation.

Recording
Select the check box to record the video and audio data to the preconfigured FTP or SD memory when the event is triggered. To use this event action, the recording format should be at **Storage > Recording > Configuration.** The recording format should be **Event** to enable recording. **Pre interval** and **Post interval** specifies the recording duration before and after the event occurs.

Save event log
It is automatically ticked as an event action in case **Network setting changed** or **Fan/Heater operation changed** is selected as an event source.

Send E-mail notification
Select the check box to send E-mail to designated recipients. To attach a snapshot image, select **Attach a snapshot**. Up to three snapshots taken before the triggered moment (defined as pre-image on the webpage) can be emailed while one snapshot at the triggered moment can be attached.
From the recipient list, select the recipient to send the notification. To create a new recipient that is not on the list, go to **Setup** > **Event Configuration** > **E-Mail Recipient** and create a new recipient information. Once the desired recipient is selected, write the subject for the email.

Upload notification to FTP
Select the check box to activate the FTP notification method. To attach a snapshot image, select the *Attach a snapshot* check box.

From the FTP server list, select the FTP server to send the notification. To create a new FTP server that is not on the list, go to **Setup** > **Event Configuration** > **FTP Notification** and create a new FTP server information.

Send HTTP Notification
Select the check box to activate HTTP notification method. From the HTTP notification list, select the HTTP server to send the notification. To create a new HTTP server that is not on the list, go to **Setup** > **Event Configuration** > **HTTP Notification** and create a new HTTP server information.

Send TCP Notification
Select the check box to activate TCP notification method. To configure a new TCP server, go to Setup > Event Configuration > TCP Notification and configure TCP server information.

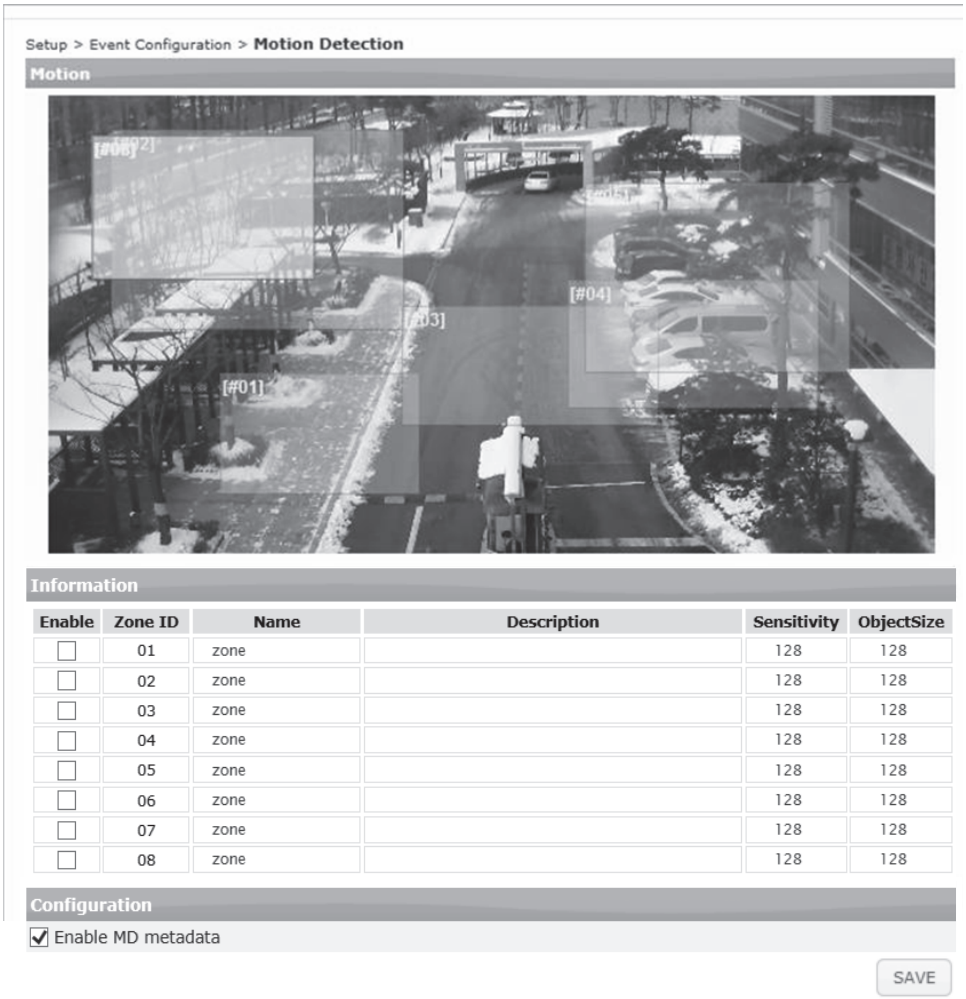
Send Notification via TCP event server
Select the check box to activate TCP event server notification method. To configure a new TCP server, go to **Setup** > **Event Configuration** > **TCP Server** and configure TCP server.

Send multicast notification
Select the check box to activate multicast notification, and go to **Setup** > **Event Configuration** > **Multicast Notification** to configure multicast notification.

To attach a snapshot image on the configuration of E-mail Recipient or FTP notification, make sure the snapshot setting from **Setup** > **Video & Audio** > **Encoder Profile** has been enabled.

5.3.2. Motion Detection

To add motion detection zones and to configure related parameters, go to **Setup** > **Event Configuration > Motion Detection.**



How to configure the motion detection zones

1. On the Information panel, select **Enable** on a desired Zone ID. Then, a rectangle appears on the screen.
2. Relocate the rectangle or adjust the size with the left mouse button by dragging the mouse on top or on the edge of the rectangle. The rectangle is motion detection zone.
3. Provide a relevant name and description of the motion detection zone on its text box.
4. Adjust the value sensitivity and object size.
5. Uncheck **Enable** if you want to hide a motion detection zone.
6. Click **Save** to apply changes to the screen.

* Tick the checkbox of **Enable MD metadata**, and click **SAVE** to apply if you want to see which spot has a subject's movement on the screen.

What is Sensitivity?

Every motion detection zone is divided into multiple squares, which is called 'Macro blocks.' Each of macro blocks consists in groups of 16 x 16 pixels. The value of sensitivity means the sensitivity of each macro block. To configure the zone less sensitive than the factory default (128), set the number value higher; to configure the zone more sensitive than the factory default, set the number value lower.

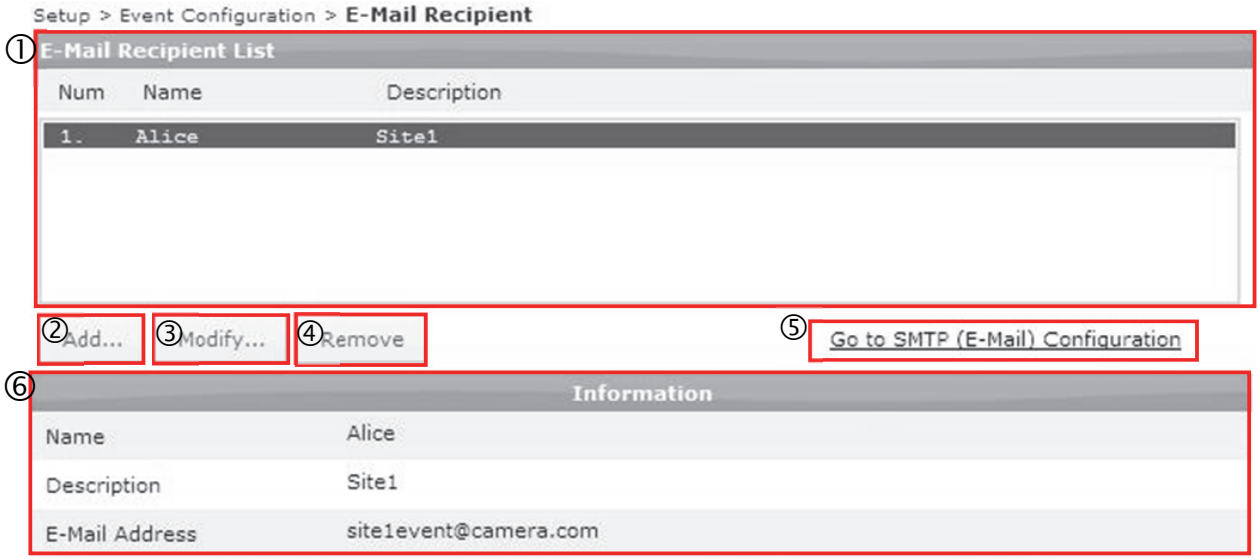
What is Object size?

The object size value means the proportion of the macro blocks which has exceeded the configured sensitivity. If you want to configure the zone less sensitive than the factory default (128), set the number value higher; to configure the zone more sensitive than the factory default, set the number value lower.

Important! Motion Detection is supported only with Internet Explorer 8, 9 and 10!

5.3.3. E-mail recipient

To configure the email recipient list for event notification, go to **Setup** > **Event Configuration** > **E-Mail Recipient.**



① **E-mail Recipient List**: Lists the defined e-mail recipient names.

② **Add**: Click this button to add e-mail recipient information.

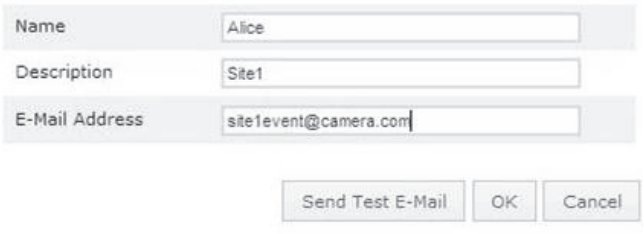
③ **Modify**: Select an e-mail recipient name and click this button to modify the current information of the e-mail recipient.

④ **Remove**: Select an e-mail recipient name and click this button to remove from the list.

⑤ **Go to SMTP Configuration**: If you want to receive notification messages via e-mail, you need to configure the SMTP server information first. Go to **Setup** > **Network Configuration** > **SMTP (E-Mail)**, and complete the required settings.

⑥ **Information**: Displays the detailed information of the selected e-mail recipient from the list.

Clicking **Add** will bring up a pop-up window, **Add to E-Mail Recipient List** as shown below.



Name
Specify the e-mail recipient name.

Description
Input a brief description of the e-mail recipient to easily distinguish.

E-Mail Address
Enter the e-mail address of the e-mail recipient. If you use host name, a valid DNS server must be specified in TCP/IP network settings.

Send Test E-Mail
To test the entered e-mail address, click the *Send Test E-Mail* button. If the e-mail address is available, '*Send okay*' message appears next to the test button.

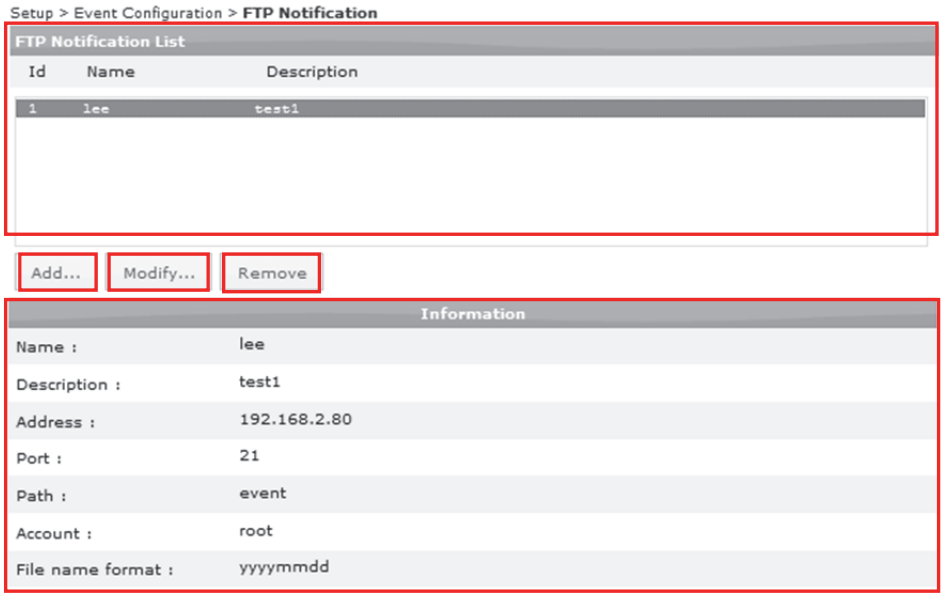
1. If you want to modify an E-mail recipient's information, click **Modify**, and update the information. (Clicking an E-mail recipient under **E-Mail Recipient List** will display the detail about the selected recipient profile.) If you want to remove an E-mail recipient from **E- Mail Recipient List**, click **Remove**, and click **OK** to apply the removal when a pop-up window appears to ask you to confirm the removal.

* **Go to SMTP Configuration**: If you want to send test E-mail to the E-mail recipients, you need to configure the SMTP server information first. Go to **Setup** > **Network Configuration** > **SMTP (E-Mail)**, and complete the required settings. Refer to **5.4.7. SMTP** for more information.

After the setting, make sure to click **OK** to save changes.

5.3.4. FTP Notification

To configure the FTP server for event notification, go to **Setup** > **Event Configuration** > **FTP Notification**.



You can check the defined FTP server list on the main page, and add, modify, or remove server information.

1 - **FTP Notification List**: It shows all the defined FTP server names.

2 - **Add**: Click this button to add FTP server information.

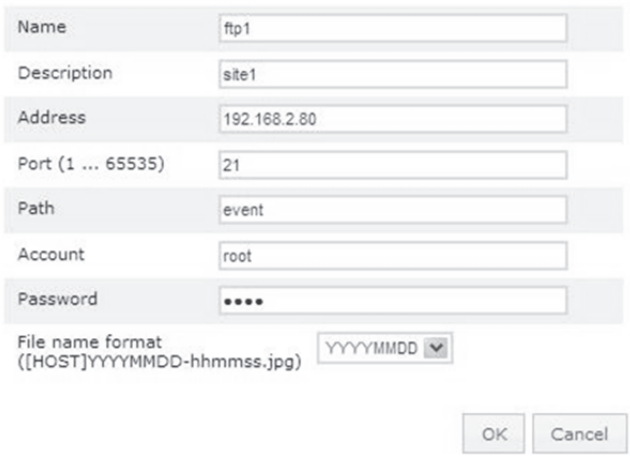
3 - **Modify**: Select an FTP server name, and click this button to modify the current information of

the FTP server.

4 - **Remove**: Select an FTP server name, and click this button to remove from the list.

5 - **Information**: It displays the detailed information of the selected FTP server from the list.

Clicking either **Add** or **Modify** will display the configuration page shown below.



Name
Specify the FTP server name.

Description
Input a brief description of the server to easily distinguish.

Address
Enter the IP address of the FTP server.

Port
Enter the server port number. The default is 21.

Path
Enter the folder name where the created files will be placed. If the folder does not exist on the server, the specified folder name will be automatically created on the FTP server.

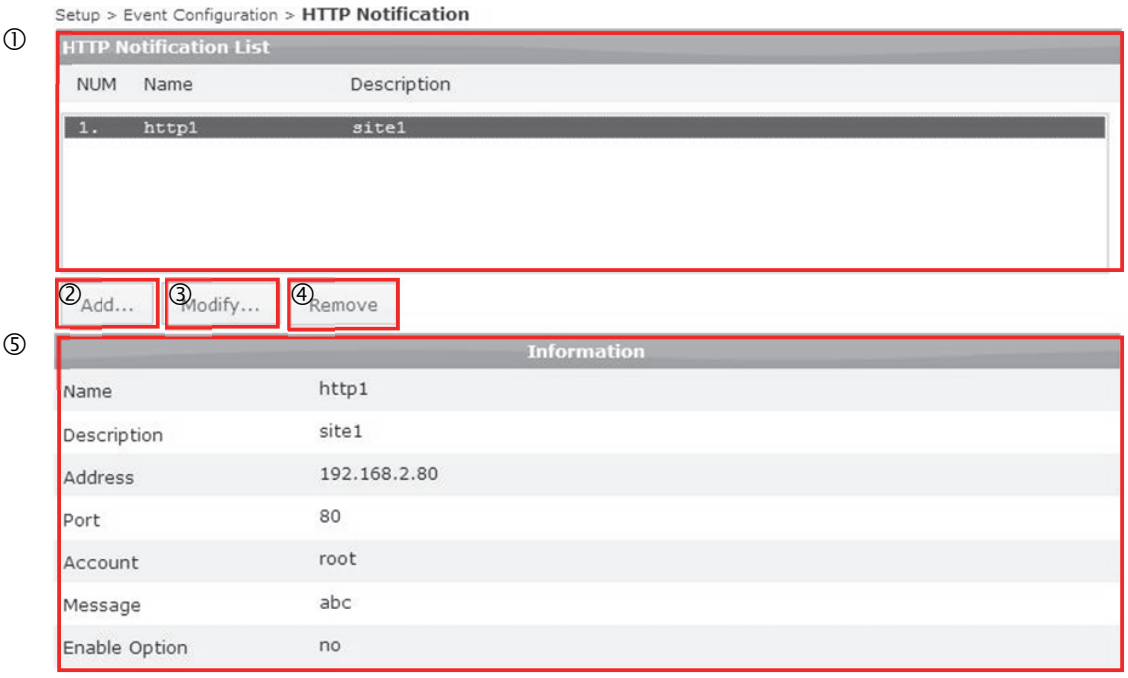
Account and password
Enter the login user name and password of the FTP server. The account and password information must be entered even for the anonymous FTP.

File name format
Select the desired date format.

After the setting, make sure to click **OK** to save changes.

5.3.5. HTTP Notification

To configure the HTTP server for event notification, go to **Setup** > **Event Configuration** > **HTTP Notification**.



You can check the defined HTTP server list on the main page, and add, modify, or remove server information.

① **HTTP Notification List**: Lists the defined HTTP server names.

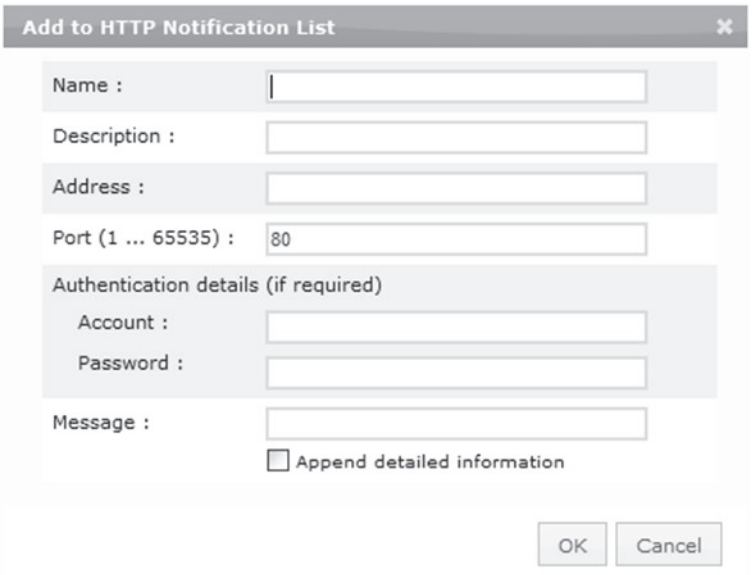
② **Add**: Click this button to add HTTP server information.

③ **Modify**: Select an HTTP server name and click this button to modify the current information of the FTP server.

④ **Remove**: Select an HTTP server name and click this button to from the list.

⑤ **Information**: Displays the detailed information of the selected HTTP server from the list.

Clicking either **Add** or **Modify** will display the configuration page shown below.



Name
Specify the HTTP server name.

Description
Input a brief description of the server to easily distinguish.

Address
Enter the IP address of the HTTP server.

Port
Enter the server port number. The default is 80.

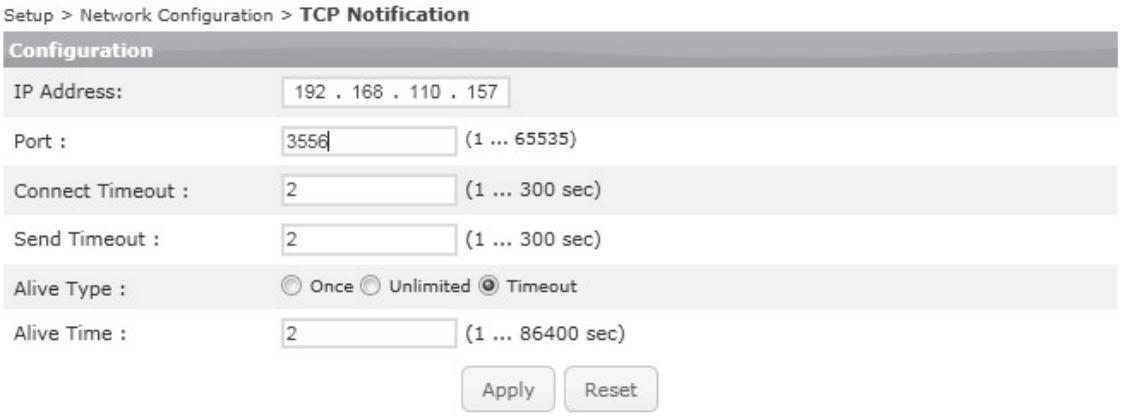
Account and password
Enter the login user name and password of the HTTP server. If you want to skip the login authentication process, leave the text boxes blank.

Message
Enter the message that you want to send with. Enabling the 'Append detailed information' will add event details in message. Please note that this requires '/' at the beginning of the message. For example, **YES**("/ABABAB"), **NO**("ABABAB")

After the setting, make sure to click **OK** to save changes.

5.3.6. TCP Notification

To configure the TCP push for event notification, go to **Setup** > **Event Configuration** > **TCP Push Notification**.



IP Address, port
Type the configuration of TCP server.

Connect Timeout
TCP push tries to connect to TCP server during the setting time, but if connection is not made during the setting time, TCP push will stop to try to connect.

Send Timeout
Holding time for data transmission when event occurs.

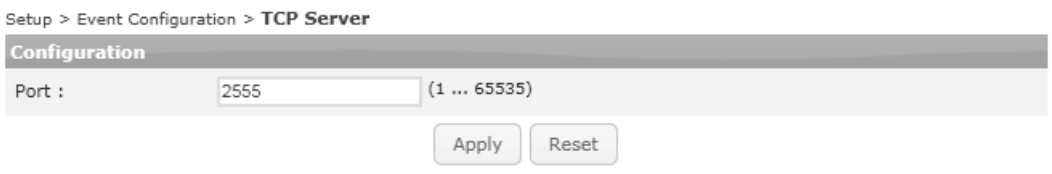
Alive Type
You can configure the condition of connection and the default value is **Timeout**.

- **Once:** Only one connection is made for each event. (There is no check that the connection is succeeded or not.)
- **Unlimited**: The connection continues for data transmission whether event occurs or not.
- **Timeout**: After the last data transmission if there is no event for setting time *of alive time* the connection will be disconnected.

Alive Time
When **Alive Type** is configured as **Timeout**, the connection will be continued for **Alive Time**.

5.3.7. TCP Server

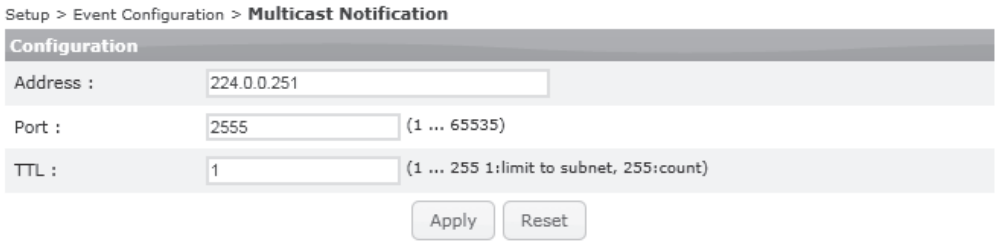
To configure the TCP server, go to **Setup** > **Event Configuration** > **TCP Server**. You can use TCP
server to get the event notification from the device and send them to the client application.



Port
Type the utilized port number to deliver the event message program

5.3.8. Multicast Notification

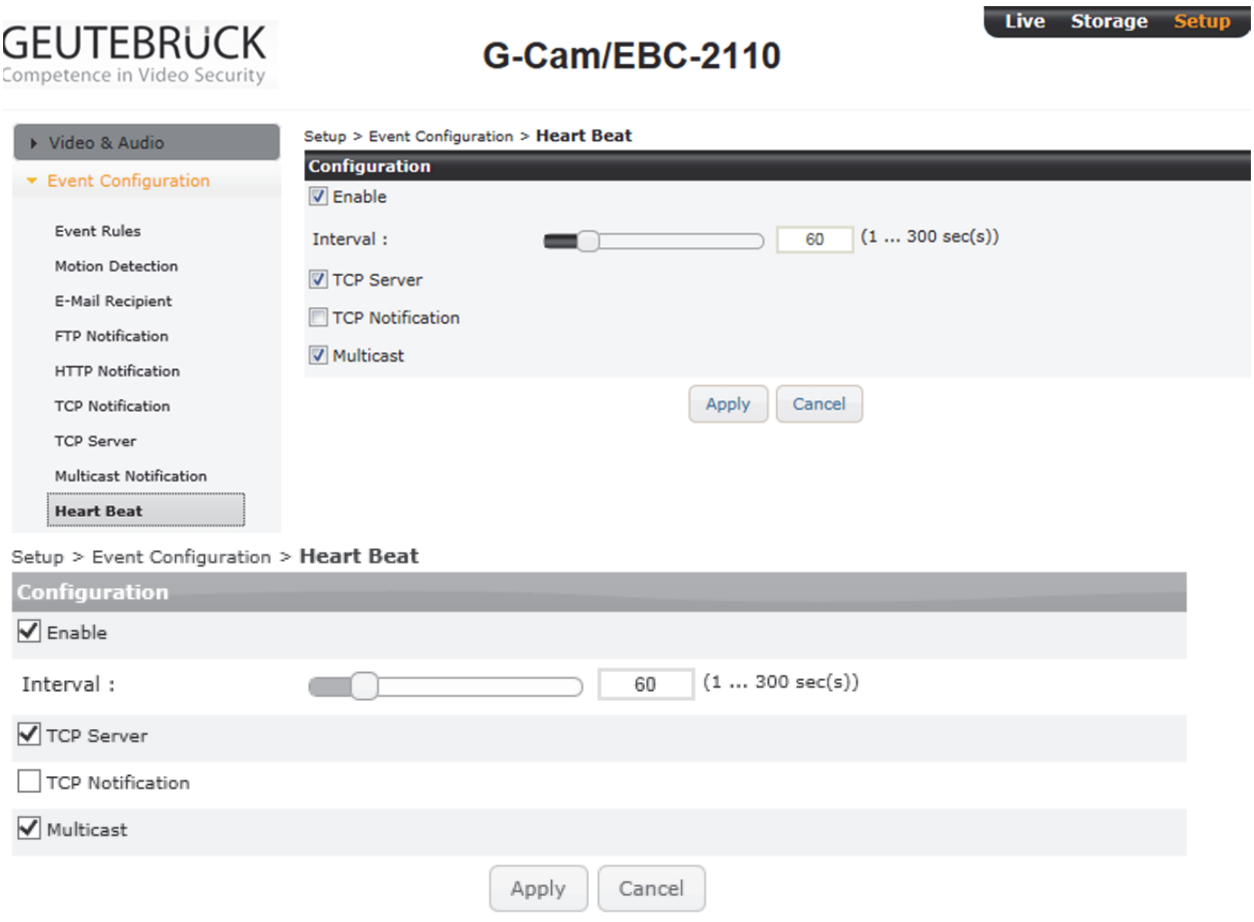
To configure the multicast server, go to **Setup** > **Event Configuration** > **Multicast Notification**. You can use Multicast server to get the event notification from the device and send them to the client application.



Type Address, port, and TTL according to your system setting. Factory default is 2555.

5.3.9. Heart beat

The camera sends out a heartbeat event repeatedly to the destination server with the specified time interval to inform the server of whether the camera is alive.

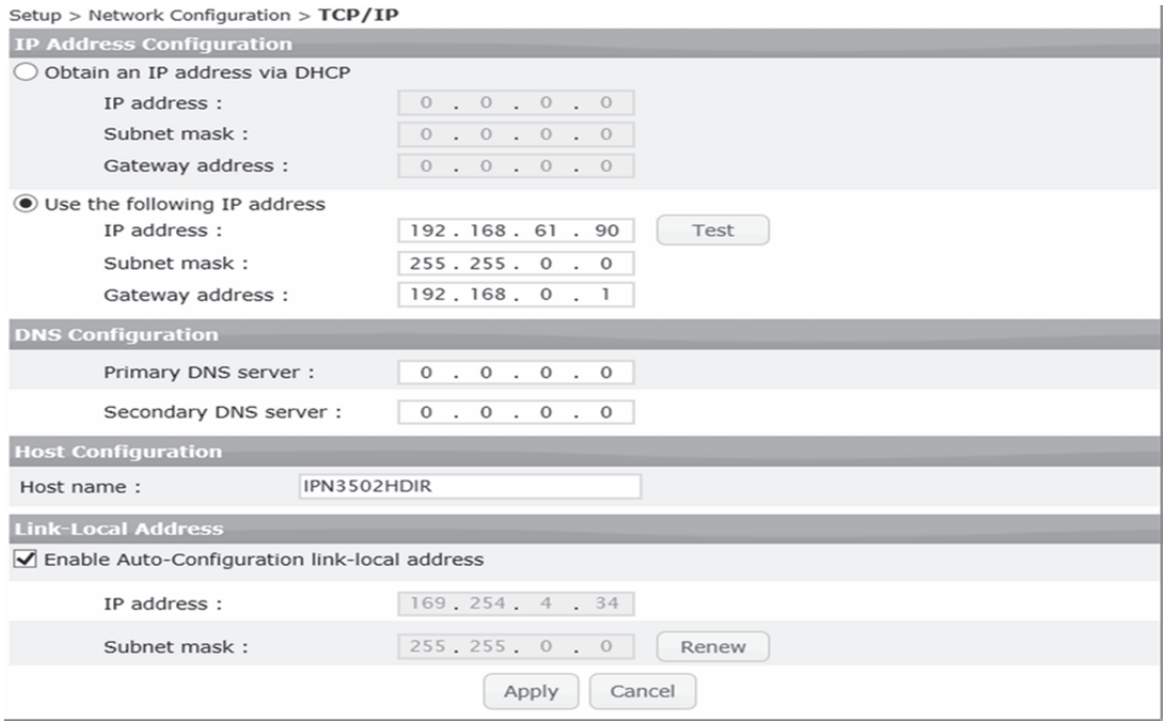


Heart Beat Configuration

5.4. Network Configuration

5.4.1. TCP/IP (DHCP, Static IP, DNS setting

To change the TCP/IP setting, go to **Setup** > **Network** > **TCP/IP**.



IP Address Configuration

IP Configuration by DHCP
If you want to get your IP from DHCP server automatically, check this option and click the Apply button. When the dialog box appears on the screen, click the ***OK*** button.

Use the static IP address
If you want to use your device with a static IP, select '*Use the following IP address*' and input the following information:

- **IP address**: The IP address of your device. The test button shows if the typed IP address is occupied or not. If the typed address is available, "Okay" appears next to the *Test* button. If the typed address has been taken already, "Fail" appears next to the button.
- **Subnet mask**: The address of subnet mask of your device.
- **Gateway address**: The gateway address of your device.
- **Broadcast address**: It is automatically fixed by the subnet mask and IP address of your own. For example, if you use B class (255.255.0.0) of mask, the broadcast address will be 192.168.255.255.

DNS Configuration

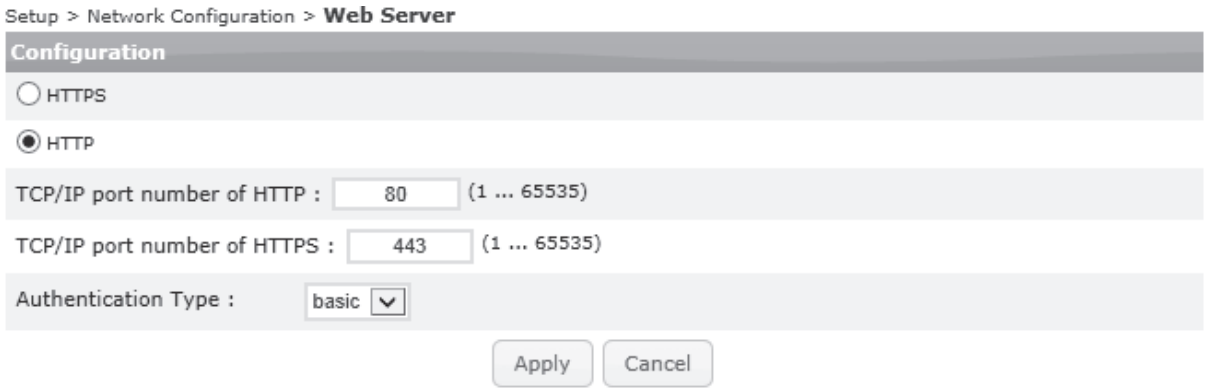
Type the IP address of DNS server you use.

Link-Local Address

This is a built-in function that assigns the device an additional IP address, which can be used to access the unit from other hosts on the same segment of the local network. An IP address is automatically assigned when the camera boots up.
The camera can have both a Link-Local IP and a static/DHCP-supplied IP address at the same time. The IP address block is from 169.254.1.0.to 169.254.254.255.
To change the IP address, click **Renew**.

5.4.2. Web Server

To change the Web Server setting, go to **Setup** > **Network Configuration** > **Web Server**.



The default value of web server is set to HTTP. To change its setting from HTTP to HTTPS, select HTTPS from the menu. It is recommended if enhanced security is required for accessing the web page. The data transmitted by HTTPS is encrypted by SSL to strengthen the security.

What is SSL?
SSL is the abbreviation of Secure Socket Layer. SSL protects web server and makes it easy for users to trust the contents. When HTTPS is being utilized to communicate with a server, the SSL certificate is required for the web server and the certificate enables encryption of video and audio data during online transactions. OpenSSL is one of the data security protocols for Linux system, which is used for the product.

Setting the port number of web server
To communicate with server by HTTP or HTTPS with TCP, the port number should be in between 1 and 65535. The default value is 80.

Redirecting HTTP to HTTPS
Even when users try to access the server with http, it is possible to enable the server to be redirected to HTTPS. In this case, do not set the value ‘80’ as the port number since it may cause a conflict with HTTP port.

Authentication Type
When accessing the page which requires authority, the web browser asks ID and password and then transfers them to the camera by the methods below.
Basic: It uses simple way of encryption of ID and Password with clear text.
Digest: It uses more enhanced way of encryption.

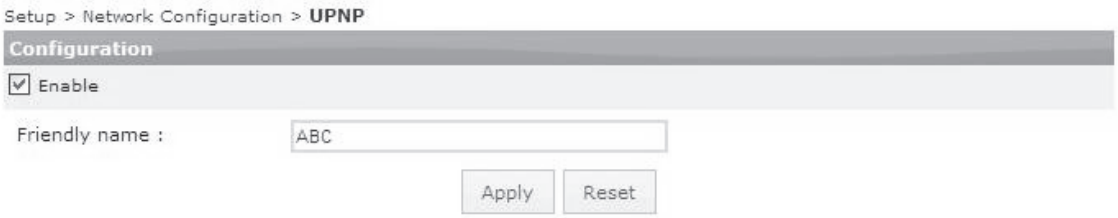
5.4.3. NTP Server

To change the NTP server setting, go to **Setup** > **Network Configuration** > **NTP**.

NTP Server Lists
Users can set up to four NTP servers. To enable the NTP servers, DNS server setting must be completed from Setup > Network Configuration > TCP/IP.

5.4.4. UPnP

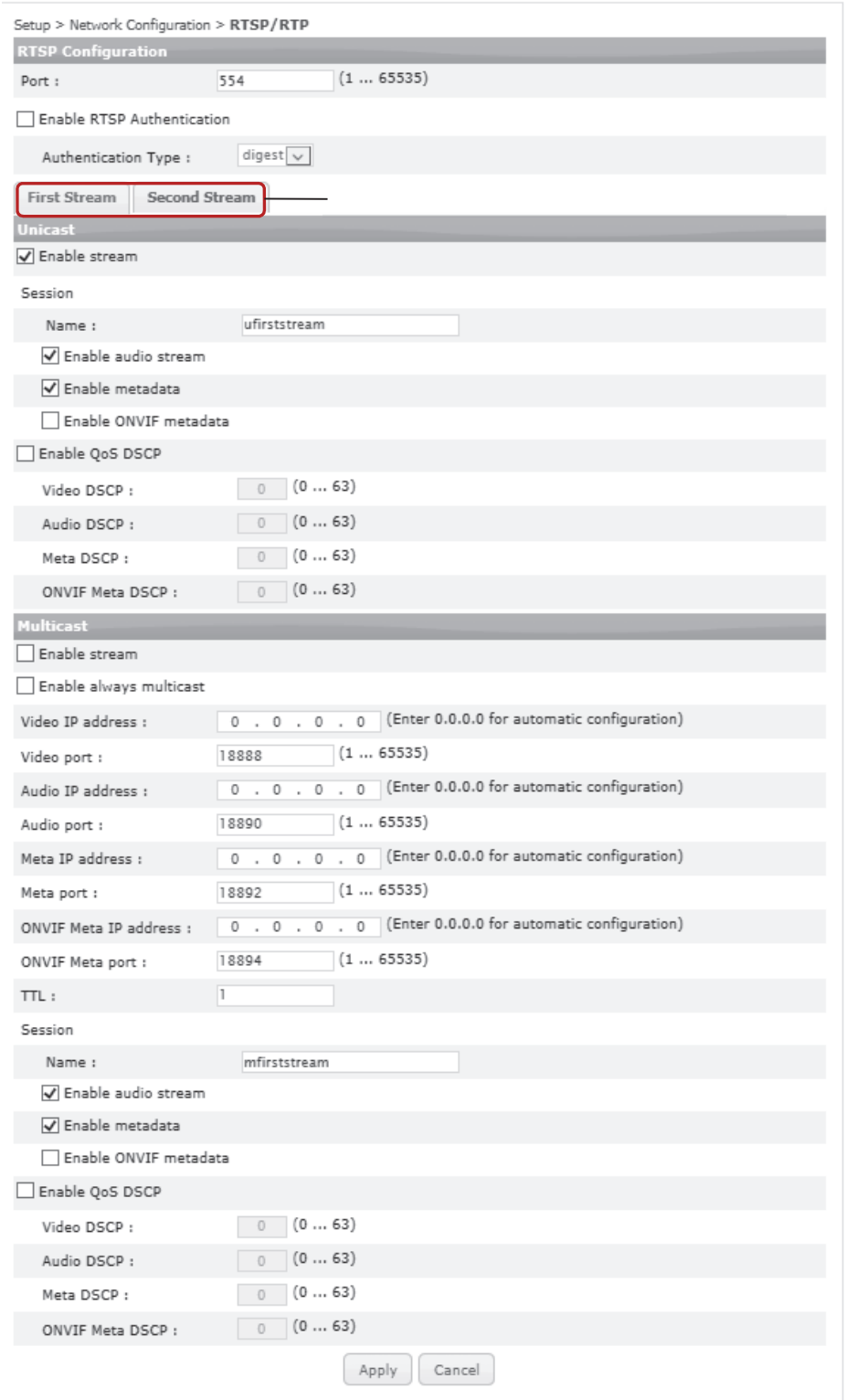
To change the Universal Plug & Play configuration, go to **Setup** > **Network configuration** > UPnP.



UPnP allows IP devices to connect seamlessly, and simplify the implementation of network in remote PC environments. On this page, users can enable or disable UPnP by selecting the Enable check box and apply the desired name (friendly name).

5.4.5. RTSP/RTP (multicast or unicast)

For the RTSP/RTP setting, go to **Setup** > **Network Configuration** > **RTSP/RTP**.



Select the correct streaming tab.

The product supports multicast and unicast for both stream channels. Click the appropriate stream tab and configure the RTP session as required by your network system.

RTSP Configuration

Set the port number for RTSP streaming.
RTSP Authentication option is available for those who have implemented the authentication process. It has two methods:

- **Basic:** It uses simple way of encryption of ID and Password with plain text.
- **Digest:** It uses more enhanced way of encryption.

RTSP Configuration for UNICAST

Session name
Type the appropriate session name. The allowed range for the session name is 64 characters with alphabets, Arabic numbers, and underscore bar (_).

Enable audio stream
Check this box to include the audio stream in addition to the video stream.

Enable Metadata
Check this box to add the metadata.

Enable Onvif Metadata
Check this box to include the Onvif metadata.

Enable QoS DSCP
By enabling the Quality of Service (QoS) feature, you can specify priority level of network traffic for video, audio, and metadata (motion detection). For each traffic type, determine the DSCP (Differentiated Services Code Point) value, which represents a QoS class in the Differentiated Services (DiffServe) model. For the details about the DiffServ standard, refer to RFC2474 and RFC2475.

RTSP configuration for MULTICAST

IP Address
In order to receive the streaming data from the device, set the IP address of group which is used for PC to join. '0,0,0,0' is configured as a factory default and it enables router program to generate the available IP for the device automatically. If you want to use specific address, type the address in the blank.
Available IP address range is from 224.0.0.0 to 239.255.255.255. However, there are already assigned IP addresses in the range.

RTP multicast is not allowed for streaming even if the address and the port information are known.

How does auto configuration of IP address work?
As the session name for each RTP session is defined already on the server, your PC can get the stream by the 'rtsp://rtsp server ipaddress : port / rtp session name' without the manual decision of IP address on the webpage.

Port
Set the port number used for router to receive the streaming data from the product (no need for unicast). The range of the port numbers is from 1 to 65535. Be sure that there are specific port numbers that you cannot use as they are already assigned to other necessary protocols.
* Default port number for each stream for each data is pre-defined on the textbox of the webpage, but users can set the numbers within the port range.

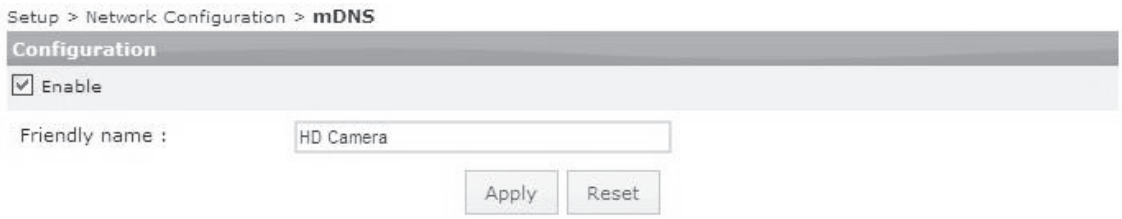
TTL
Set the TTL value. If you set 1 for TTL, it means the packet will pass only in a subnet (no need for unicast).

What is TTL?
It's the abbreviation of Time to live. If data is sent out from the encoder via network and all of the packets are alive permanently on the network, it will cause a big network load. TTL helps reducing the network load by controlling the time of staying on network. For example, if you set the TTL as 50, the data will be deleted after passing by 50 routers.

All other options are the same as the Unicast.

5.4.6. mDNS (Multicast DNS)

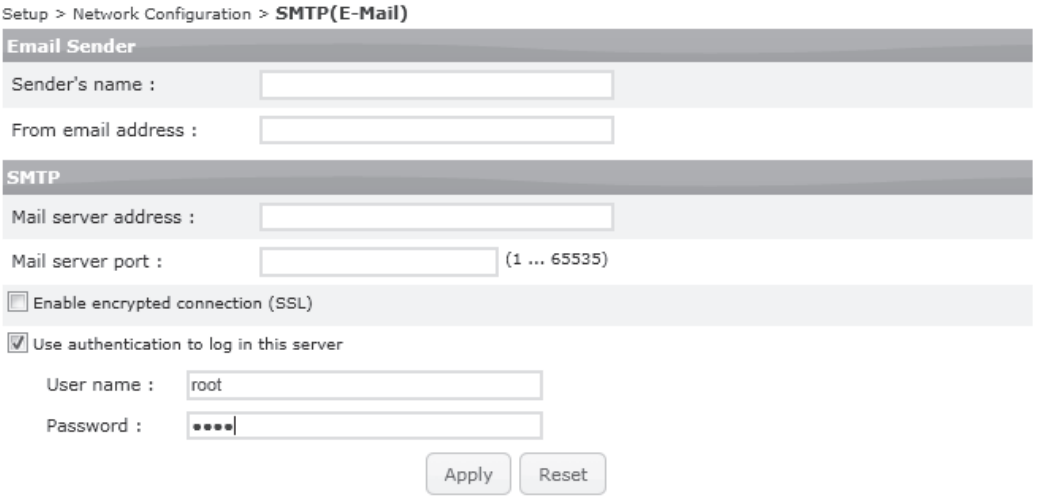
For the multicast DNS setting, go to **Setup** > **Network Configuration** > **mDNS**.



Configuration
If you check **Enable**, mDNS is activated. To use the IPAdminTool to identify the device, mDNS must be enabled. You can type a friendly name to be shown on the application program.

5.4.7. SMTP

To change the SMTP setting, go to Setup > Network Configuration > SMTP(E-Mail).



You can set a user's email account and server to apply this SMTP for the event subscriber or any other SMTP required purpose.

Configuring user information

Sender's name
Type the name of the sender; it can be either generic notification bot, name of the administrator, or the specific camera device, depends on its purpose.
Input range: 40 characters limit.

From email address
Type the e-mail address of a sender.
Input range: 128 characters limit.

Configuring server information

Mail server address
In order to send an email, the product needs the information of user's mail server. Type the host name or IP address of the mail server. If you use the host name, it requires the DNS registration. Check the DNS configuration from **Network Configuration** > **TCP/IP** and see if your DNS configuration is correct.
If you use host name, a valid DNS server must be specified in TCP/IP network settings.
Input range: 128 characters limit.

Mail server port
Type the mail server's port number within the range from 0 to 65535.

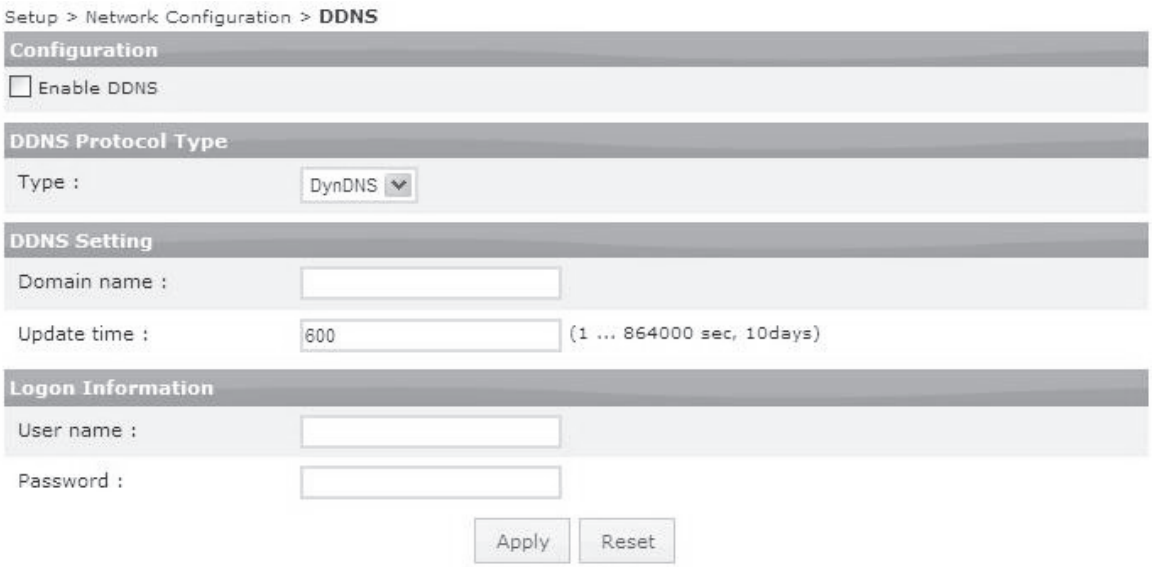
Enable encrypted connection (SSL)
If your email server requires encryption process of SSL and TLS, select the '***Enable encrypted connection (SSL)***' check box. TLS (Transport Layer Security) and SSL (Secure Sockets Layer) algorithm can be required for the security of communication over networks. It depends on your email server and you should check out the communication protocol of SMTP server.

Use authentication to log in this server
If login information is mandatory before connecting to the server, check the box. Once the box is checked, the user name and password boxes appear for users to type.

User name input range: 128 characters limit.
Password input range: 32 characters limit.

5.4.8. DDNS (Dynamic DNS)

To change the Dynamic DNS setting, go to **Setup** > **Network Configuration** > **DDNS**.



Configuration
Enable or disable DDNS by selecting the check box.

DDNS Protocol Type
Select the desired protocol type. DyDNS / No-IP / FreeDNS

DDNS Setting
Type the domain name you want to use for the product and define the update time. The factory default is 600 seconds, and it enables the product to notify the DDNS of the current domain name in a given length of interval.

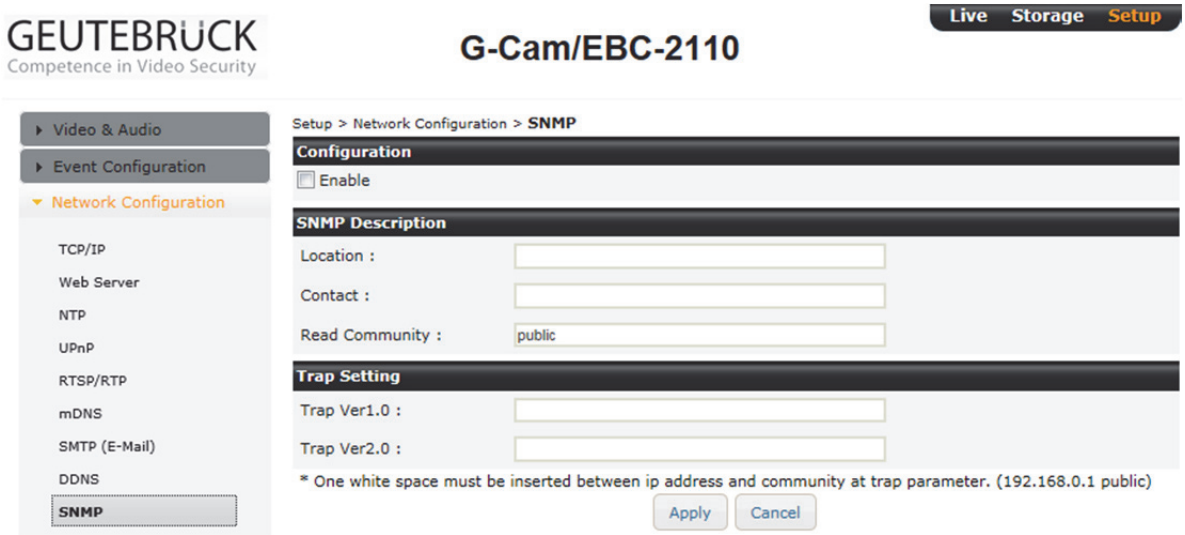
Logon Information
Type the user name and password of your DDNS account.

Asterisks are not allowed for the password.

5.4.9. SNMP

Simple Network Management Protocol (SNMP) is used in network management environment to monitor network-attached devices for their conditions. By retrieving the system information, it allows to manage network architecture, performance, device, and security. To enable SNMP, select the **Enable** check box. The encoder supports SNMP version 1 and 2.

Setup > Network Configuration > SNMP



Configuration
Activate checkbox to enable the SNMP.

SNMP Description

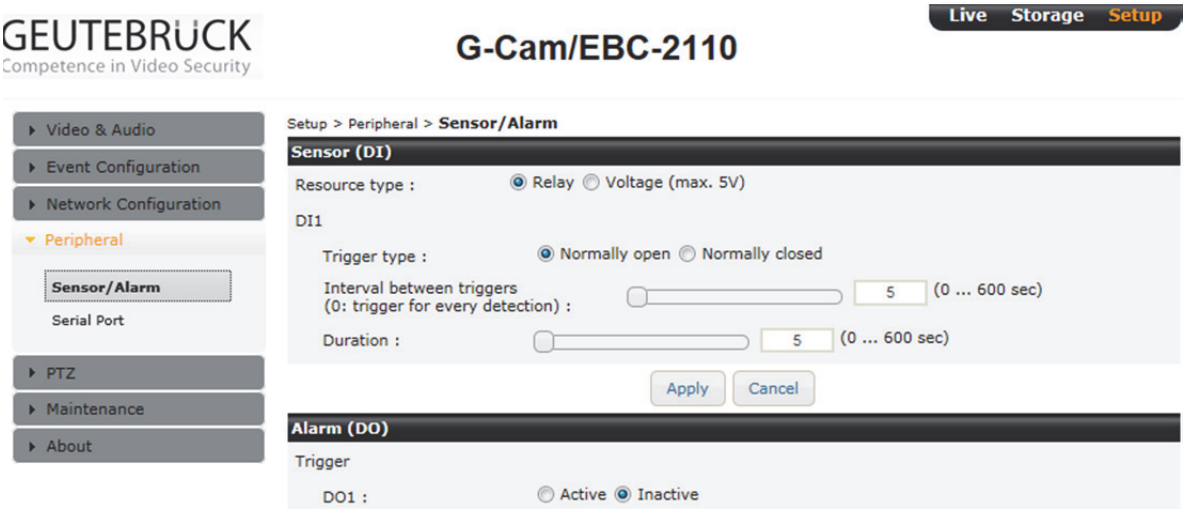
- **Location:** Provide description of SNMP location.
- **Contact:** Provide SNMP managing contact.
- **Read Community:** Input the community name, which is the authorized ID for reading SNMP data.

Trap Setting
Trap Setting provides information including changed DI, DO to notify the manager. Select the SNMP Trap version to receive Trap event, and input the IP address and community on the text box.

5.6. Peripheral

5.6.1. Sensor / Alarm

To configure the digital input and output to control external devices such as sensors or alarms, go to **Setup** > **Peripheral** > **Sensor / Alarm**. The configuration can be extended depending on the number of the sensor or alarm that the device supports. Please refer to the product user guide to know more about the electrical characteristic of these ports.



Sensor (DI) Configuration

Resource type
Select the type of sensor module. It can be either voltage [maximum 5 volts] or relay.

Trigger type
Select between 'Normally open' and 'Normally closed'.

Interval between triggers
Set the detection time interval for event publishers. For example, if you input '0,' it generates events whenever DI is activated. When the value is set to'10,' then only 1 event will be triggered every 10 seconds even if multiple DI events are detected within 10 seconds.

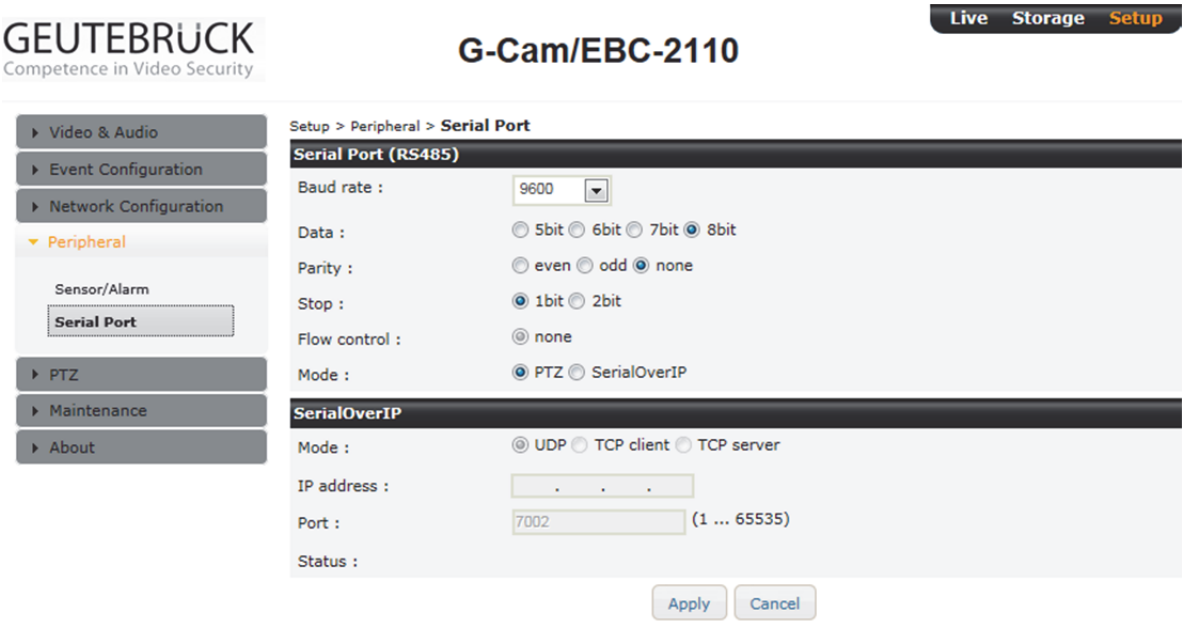
Duration
This function is used when a DI is combined with other events. Setting duration virtually extends the interval to make the combined several events within the same time frame to trigger an alarm. The duration has a range of 0 ~ 600.

Trigger Alarm (DO)

Select "**On**" or "**Off**" for DO.

5.6.2. Serial Port (NOT with EPTC-2260!)

For the USRT setting, go to **Setup** > **Peripheral** > **Serial Port**.



Serial port setup

These settings are necessary when you want your serial device to be communicated with the IP camera. The default values are set for the serial device but you can change the values according to your own device requirement.

Serial port mode

- **Serial Port (RS485):** This is used when you want to control a PTZ camera or the serial device with the selected PTZ protocol embedded in a device.

- **SerialOverIP:** Used to enable the communication for the devices connected to the serial ports.

SerialOverIP

This section is enabled only when you select SerialOverIP for the serial port mode.
Select the desired communication mode: UDP, TCP Client, or TCP Server. Once the mode has been selected, type the IP address of client and port number in the text boxes of SerialOverIP section.
If you select the TCP Client or TCP Server mode, you can set the time to end the connection automatically when there is no data coming from a client PC to the encoder in a specified time. This feature is provided to detect an abnormal closure of the socket or LAN cable disconnection. Input the desired time in the timeout text box.
The Status box indicates the connection status in the TCP Client or TCP Server mode. Refer to the following table and check how the message appears according to a connection status.

Status	Message for TCP Client	Message for TCP Server
Not Connected	Connecting	Disconnected
Connected	Connected	Connected

The Timeout and Status option are available only in the TCP Client and TCP Server mode.

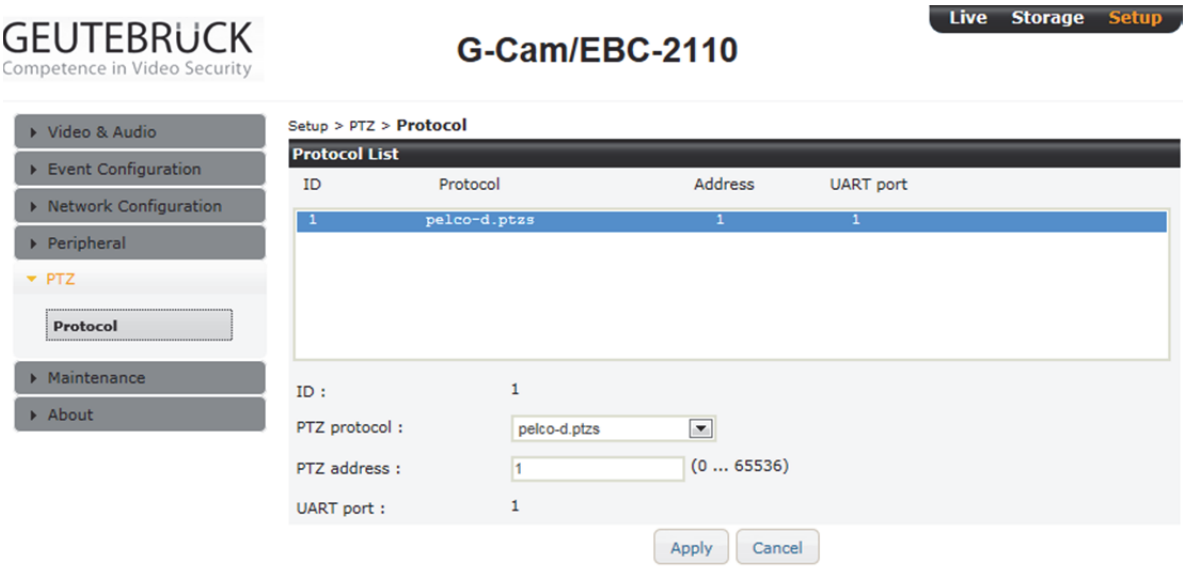
The mode for the serial port is selected as SerialOverIP, the menus in Protocol<PTZ<Setup will be deactivated. Likewise, the menus in SerialOverIP are deactivated when the mode is selected as PTZ.

You can check the communication status from the client PC by using a related freeware. If you run the program and connect to a device via its IP address and port number, you can see that the data transferred from the port is received at the serial port.

5.7. PTZ settings

5.7.1. Protocols

Protocols configuration allows users to set the PTZ protocols and the PTZ address.



Available protocols are; TBT (T-Pro), American Dynamics, Bosch, CDC, Elbex, JVC, Kalatel (ascii), Panasonic (CS850), Pelco-d (probe), Pelco-d, Pelco-p, Convex, and Samsung.

5.8. Maintenance

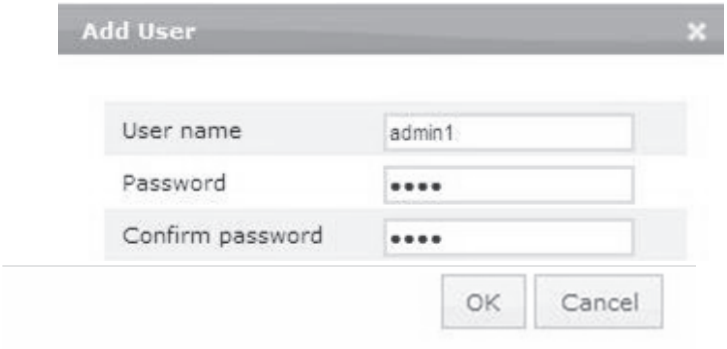
5.8.1. Users

To create / remove / modify a user group, go to **Setup** > **Maintenance** > **Users**.

How to add a user

To add a user for the webpage,

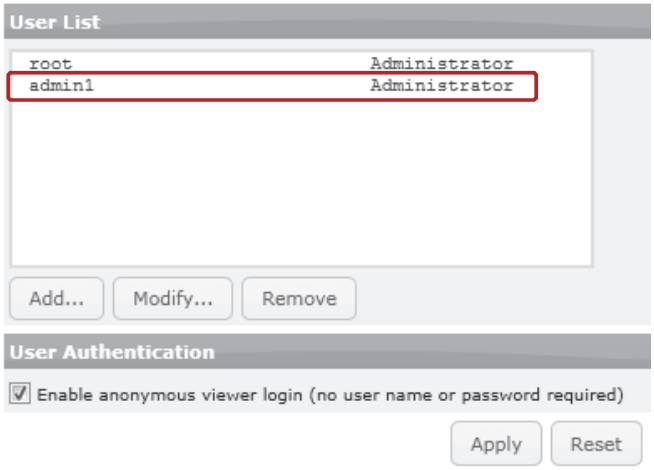
1. Go to Setup > Maintenance > Users.
2. Click **Add** below **User List**.
3. When the pop-up window appears, type a user name and password.



Limitation on user name
The user name can consist of alphabets from “a” through “z”, numbers from 0 to 9, and underscore symbol; the user name must begin with an alphabet letter.
Length: The length of user name must be between 4 and 32.
Character range: All upper or lower case letters, numbers from 0 to 9, and underscore.

Limitation on password
A password can contain from 1 to 8 characters with a combination of alphabet and numbers.
Length: The length of password must be between 4 and 8.
Character range: All upper or lower case letters and numbers from 0 to 9.

4. Click **OK** to save the changes.
5. Check if the user name is added to the list.



User Authentication
Enable or disable for anonymous viewer to connect *Live* page.

How to modify a user

To change your password or user name:

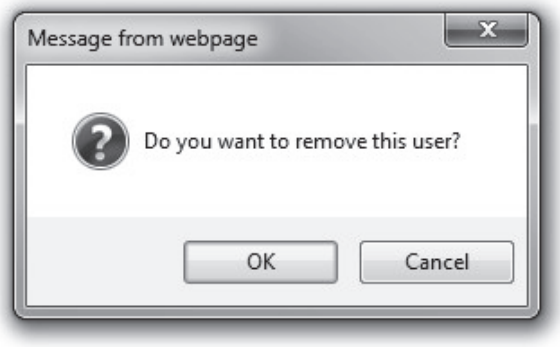
1. Go to Setup > Maintenance > Users.
2. On the User List, highlight user name.
3. Click the Modify button below the User List.
4. When the pop-up window appears, type the new password.
5. Re-type the same password again on the 'Confirm password' text box.
6. Click **OK** to save the changes.

Once the user name is set, it cannot be modified. Simply remove the user name, and add a new user with a desired name.

How to remove a user

To remove a user name from the User List:

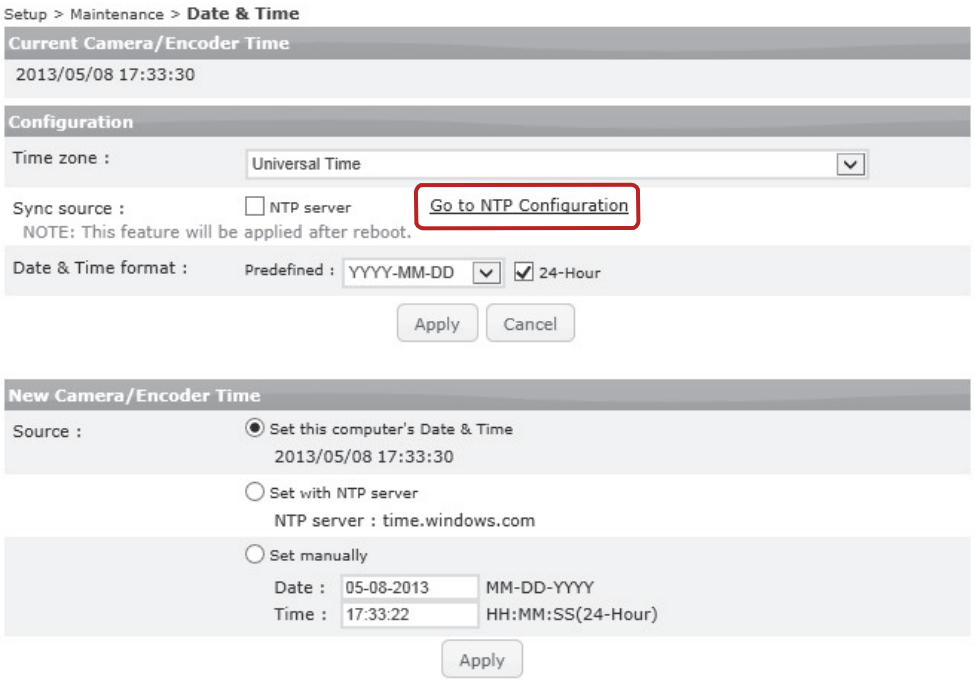
1. Go Setup > Maintenance > Users.
2. Select the user name to remove on the User List.
3. Click **Remove** below the User List.
4. When the dialog box appears to confirm your request, click **OK**.



5. Check if the user name is removed from the list on the page.

5.8.2. Date & Time

Time setting is very significant for all parts of the product server because it affects the log of streaming and burnt-in text of video. To configure the date and time, go to **Setup** > **Maintenance** > **Date & Time**.



Current Camera / Encoder Time

It shows the camera's recognized time.

Configuration

Time zone

Select the proper time zone of where the camera is installed from the drop-down box. Daylight saving time is applied automatically.

Sync source

The camera is synchronized with the Real-time clock by default whenever the camera reboots once or when the system time is twelve at night if 24-Hour option is on. If NTP server is selected, the system time will be synchronized with the predefined the NTP server.

- **Real time clock on system** – Time setting relies on the Real-time clock which is inside the camera. The clock chip is attached as internal part of the product, and it is recharged automatically when the device is powered.

- **NTP server** – Time setting relies on designated NTP server. Users can configure available NTP servers at **Setup > Network Configuration > NTP**. Four NTP server lists can be added, and the first top list is the default source of the time (time.windows.com).

Date and time format

Select the desired date and time format from the drop-down list box.

New camera / encoder time

Select one of the 3 options:

- Synchronize the camera / encoder time with current client system time.
- Synchronize the camera / encoder time with NTP server.
- Set the camera / encoder time manually.

5.8.3. API

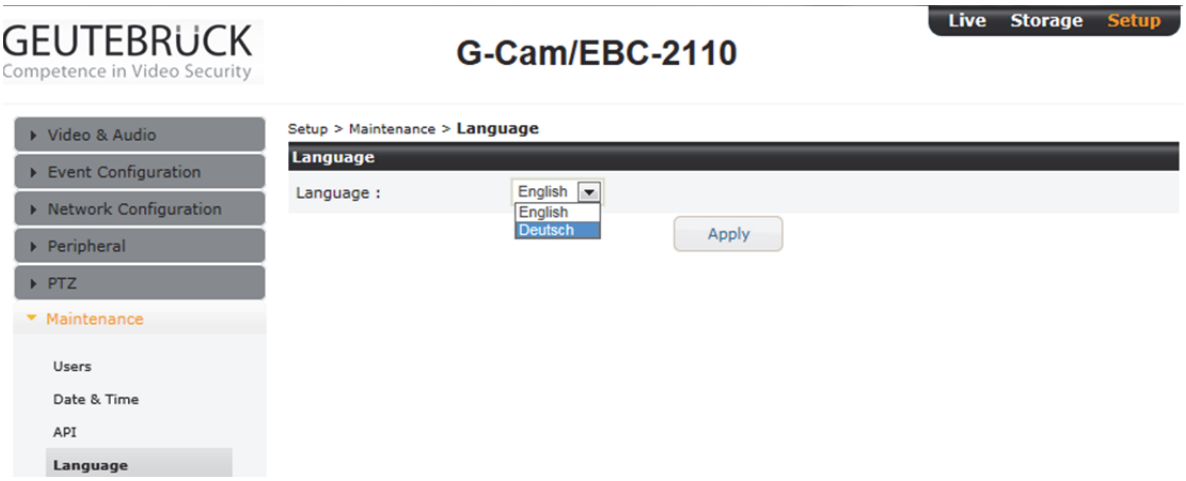
To activate the third party APIs or ONVIF protocol, go to **Setup > Maintenance > API**.

Enable ONVIF
ONVIF is supported.

- **Enable ws-discovery**: This function enables users to browse all the ONVIF supported cameras on the network.
- **Enable authentication**: This function asks users to type IP and Password.
  - **Replay attack protection**: This reinforces authentication by preventing replay attack.

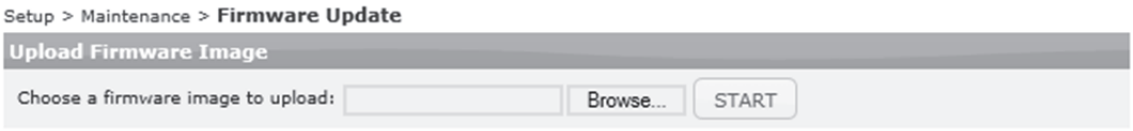
5.8.4. Language

English and German are supported in the Web interface, with English as the default language.



5.8.5. Firmware Upgrade

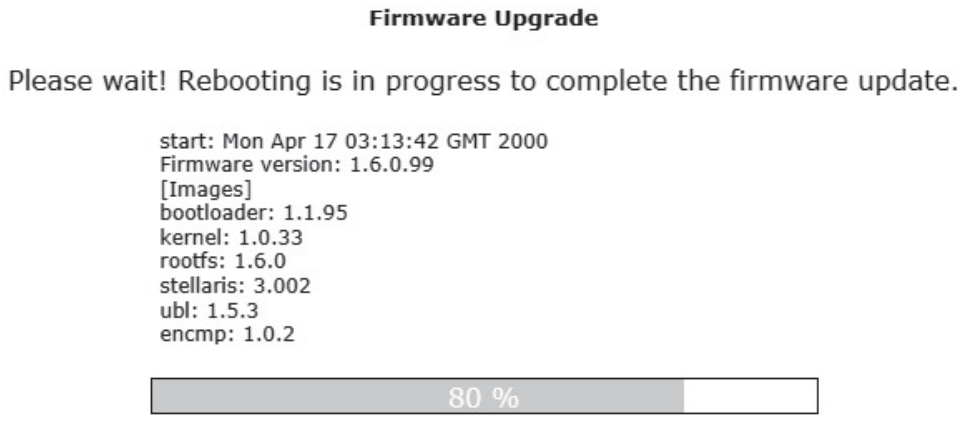
To update firmware, go to **Setup** > **Maintenance** > **Firmware Upgrade**, and follow the directions below.



Firmware update via the tool

To enable the firmware update via the IPAdminTool.exe, highlight the device to upgrade the firmware, and click **Update**. Then, the Fw Update window appears where users can set multiple devices to upgrade simultaneously.
Refer to the '*IPAdminTool User's Manual.pdf*' for the details how to update the firmware on your devices by using this tool.

Firmware update on the web browser



To update the firmware on the web browser, click **Browse** and search for the firmware file. If you select the file to upload, the Upload button appears next to the Browse button. Click **Upload** to update the firmware.

Firmware update with any tool to support ONVIF firmware update feature.

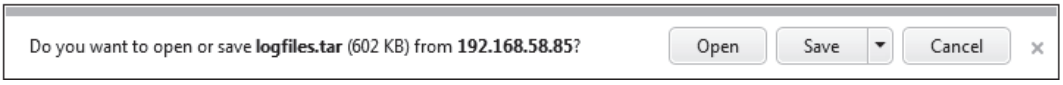
To update the firmware using the ONVIF protocol, please turn on **Enable ONVIF** at **Setup > Maintenance > API.**

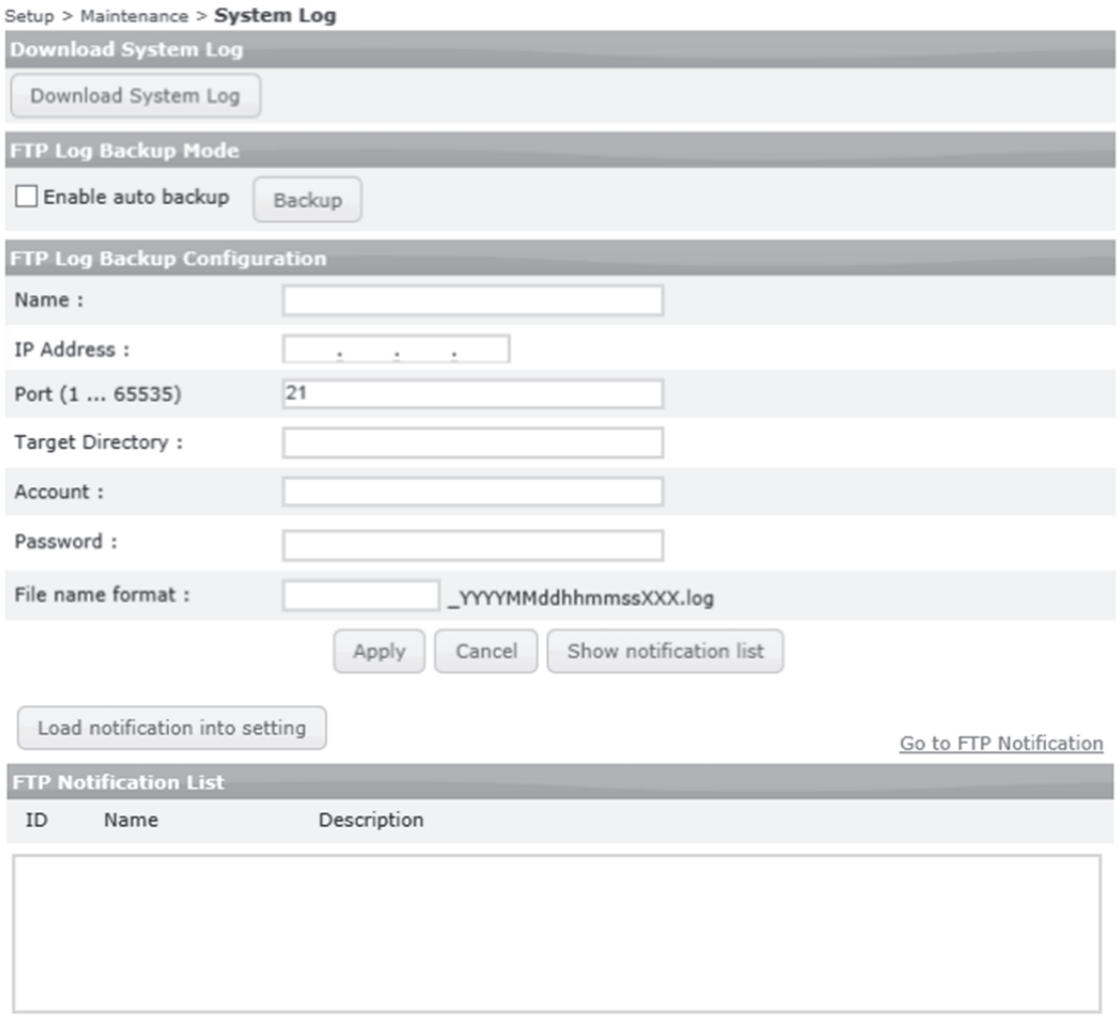
Remind that the process of firmware update should not be interrupted.
If the update process is interrupted (such as by a power outage), the device will go into safety mode!

5.8.6. System Log

To download system log, go to **Setup** > **Maintenance** > **System Log,** and follow the directions below.

Click **Download System Log**, then file download dialog box will appear.





FTP Log Backup Mode

- **Enable auto backup**: Ticking the checkbox enables automatic backup to the FTP server configured under FTP Log Backup Configuration.
- **Backup**: Clicking the button enables users to backup system logs to the client PC.

FTP Log Backup Configuration
This is a section to set up FTP configuration to enable automatic backup of system logs.

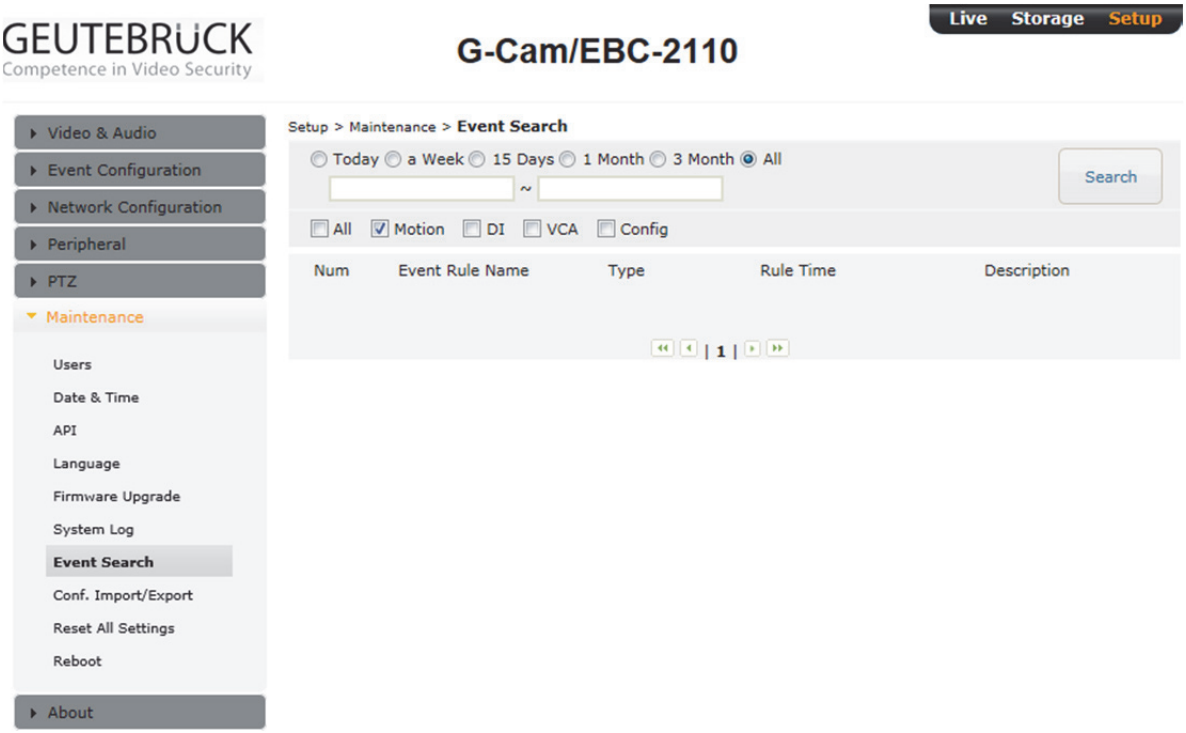
Show notification list
Clicking the button shows all available FTP notification list at the bottom.

Load notification into setting
Clicking Load notification into setting will copy pre-defined FTP server information in FTP Notification List under Event Configuration into FTP Log Backup Configuration.

5.8.7. Event Search

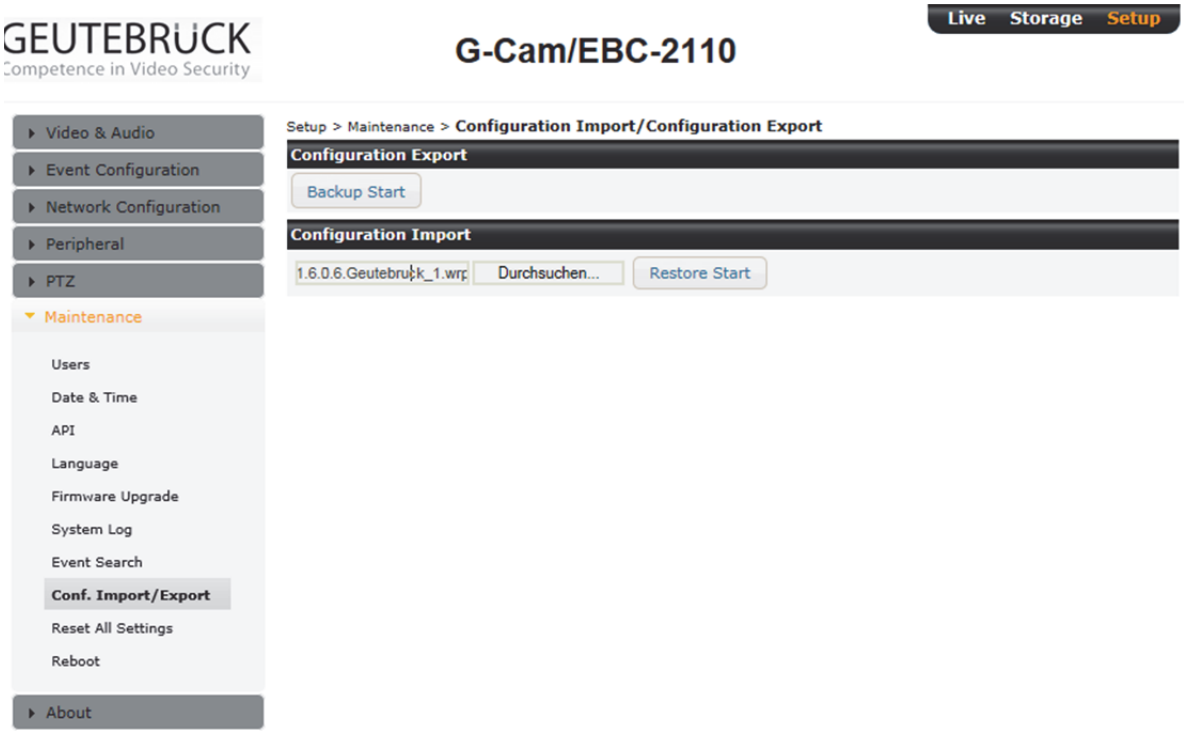
To search all the recorded events, go to **Setup** > **Maintenance** > **Event Search**. This feature enables searches for the recorded events.
To download recording files, go to **Storage > Search & Download**, or refer to **4.3. Search and Download** in this manual.

Event Search for cameras



5.8.8. Configuration Import / Export

For backup or application of same settings to other device, configuration file can be imported or exported. Go to **Setup** > **Maintenance** > **Configuration Import/Export**.



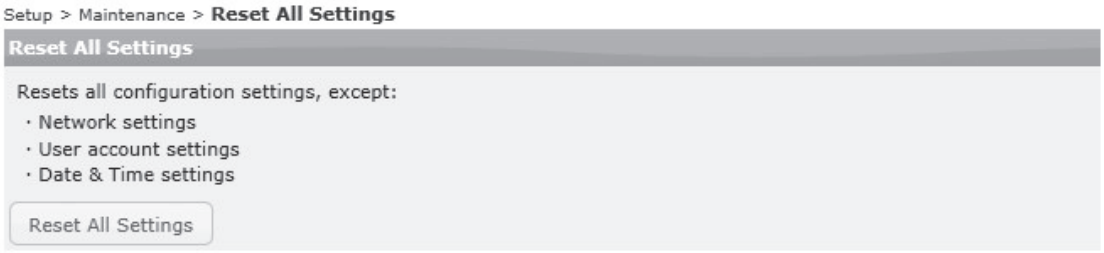
Click **Backup Start** to save latest settings as a file. Within a few seconds, the web will ask users to save or open the configure.dat file.

To overwrite latest settings, click **Browse**, and load the configure.dat file.

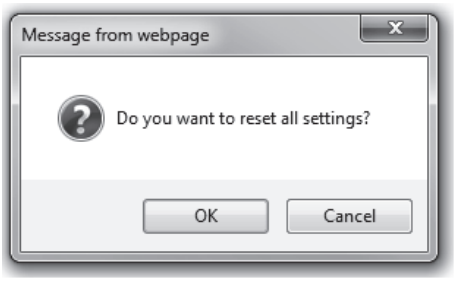
5.8.9. Reset All Settings

All information is initialized except user, network and time zone.

To reset the system setting to the factory default setting, go to **Setup** > **Maintenance** > **Reset All Settings** and follow the directions below.



1. Click **Reset All Settings**, and then the dialog box appears as follows.



2. Click **OK** to reset all settings. When a dialog box appears to ask rebooting the system, click OK.

3. The reboot starts automatically. Then, count for 120 seconds after **"Initializing….."** displays.
4. Check if all the settings are returned to the factory default values.

5.8.10. Reboot

To reboot the system on the web browser, go to **Setup** > **Maintenance** > **Reboot**.

Click **Reboot** to reboot the device.

5.9. About

5.9.1. Information

To find the product information including the hardware specification and software version, go to **Setup** > **About** > **Information**.

Setup > About > **Information**

USN :	BA0063A56
Full name :	IPX3302HD-5433
Short name :	IPX3302HD
Firmware version :	1.4.0B.7071
Userfs version :	
Micro-P version :	02.00
MAC address :	00:13:23:06:3A:56
Pan/Tilt :	Repositioning
Fan/Heater :	Yes/No
Focus/Zoom :	MFZ
DC Auto-Iris :	DC-IRIS
Day/Night :	TDN
IR Illumination :	None
TV-Out :	1
AudioIn/AudioOut :	1/1
DI/DO :	1/1
RS-485 :	0
USB :	1
SD :	1

5.9.2. License

To find the license information of the open source software that is used in the camera.

G-Cam/E Kameraserie_BA_EN 03.04.2014

Technical alterations reserved.

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