OPTEX

VISUAL VERIFICATION PIR CAMERA

◀ **InSight** series

InSight IP camera
Install manual

User's Manual_Menu Part

Before installing and using the camera, please read this manual carefully.
Be sure to keep it handy for future reference.

VCA manual

Vist to the following web site to find VCA manual.
It guides you in adjusting the PIR detection area and camera angle.

https://navi.optex.net/manual/50427/?lang=en&type=vcamanual

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SETUP

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Network Setup -
IP Installer

1. Run IP Installer

❶ Download IP installer from
      https://navi.optex.net/firmware/50426
      https://navi.optex.net/firmware/50427
and Run IP installer.

❷ Click on Network Adaptor selection Menu (NIC) after run this program.

❸ Select a network which a camera is connected then click on a 'Search' button. (Takes about 5 sec.)

❹ Select a camera to set.

❺ The information of the selected camera will be shown at Device Info.

❻ Select the network type.

> ❶ The default network type of the camera is DHCP mode.
> ❶ If you have a DHCP server, it will automatically set the Camera IP.
> ❶ If you do not have a DHCP server, Camera IP is set to the one *indicated on the label and box of the detector* after one minute.

❼ Input IP setting information when the network type is set to STATIC.

> ❶ Default TCP/IP information
>   - IP: *indicated on the label and box of the detector*
>   - Subnet Mask: 255.255.0.0
>   - Gateway: 192.168.0.1
>   - DNS : 168.126.63.1

❽ Change the port as necessary when the network type is set to STATIC.

> ❶ A 'Port Forwarding' has to be set for external access to the camera.
> ❶ Refer to the manual of the network hub for 'Port Forwarding' settings.
> ❶ An additional change of HTTPS, RTSP port can be done at Web Viewer >Setup page.

❾ Input ID and PW of the camera for authentication.
> ※ Make sure to change the ID and PW for security reason.
> ※ Go to "Web viewer>Setup>System>Users Management" for ID and PW change.
> ※ The ID and PW will be set to default value when 'factory reset' the camera.

> ❶ Default ID / PW : root / OPTEX

❿ Make sure to click on 'Save' button to save changed values.
> ※ An "Apply" message will be popped-up when the settings are applied normally, or an error message will be popped-up when failed.

⓫ To reboot or reset (except network setting) the camera.
> ※ Select a camera (multiple camera can be selected) > Input ID and PW > Click on Reboot or Factory Reset button.

⓬ Able to delete an Active-X which is installed when accessing to Web Viewer.
> ※ You don't need the function because this camera use the VLC plug-in instead of the Active-X.

Network Setup -
Quick Start of Network Connection

Please follow the steps below to complete the initial setup of the network function.

> ❶ Please do not power on InSight until instructed.
> ❶ Temporarily disable any proxy servers configured in Chrome.
> ❶ If connecting InSight directly to a modem, power down and reset the modem. Leave the modem powered down until configurations are finished with InSight and the InSight has been correctly connected to the modem.

❶ Connect InSight and PC to the configured network.

❷ Open the IP Installer on a PC, then search for Insight.

> ❶ If you have a DHCP server, it will automatically set InSight.
> ❶ If you do not have a DHCP server, InSight is set to the one *indicated on the label and box of the detector* after one minute. In this case, PC IP must be changed to the IP to be able to access this one.

❸ If multiple numbers of camera are connected it should be distinguished by the mac address of the Camera.

❹ Click InSight, and connect to the WEB PAGE.

❺ Default ID / Password to access InSight :
root / OPTEX

❻ Familiarize yourself with the Viewer Interface Screen.

❼ Please install VLC to display live video, if necessary.

❽ The IP setting can be set to 'STATIC' at IP Installer or web viewer followed by Setup -> Network -> Network Settings

❾ If InSight is connected to a network which utilizes a router you must have Port Forwarding configured on your personal router to forward all ports to the IP address you have assigned InSight.

❿ After configuring Port Forwarding on your router (if necessary), you may access your InSight on your local network by opening Chrome and specifying the IP address and Web Port that you have assigned to InSight.

> ❶ Example: http://192.168.0.200:8888
> ❶ If you leave your Web Port set to 80, you don't need to specify the port in the Address Bar to access to your InSight.

⓫ Access your InSight via the Internet :

If you use a static IP address assigned by your ISP
1) Open Chrome.
2) Type the IP of InSight.
3) If you use a router, type the routers' static IP and the web port number of InSight.

Network Setup -
Guide to Network Environment

Please configure InSight at the installation site. You must determine your network scenario in order to configure InSight with the proper TCP/IP settings. This tutorial will guide you through the process.
Before actually configuring InSight, determine settings to be applied.
Record those settings to be used to configure your InSight for reference.

When configuring your InSight, treat InSight as another PC on your network.
You will assign it several addresses and other TCP/IP properties to match your current network.

This step-by-step tutorial will teach what IP addresses and network configurations should be assigned based on the network scenario.

1 Before you begin, locate any information and settings received from your Internet Service Provider (ISP).
You may need to refer to these IP addresses at a later time during the configuration.

Current TCP/IP Settings	
IP Address	
Subnet Mask	
Default Gateway	
Primary DNS Server	
Secondary DNS Server (Option)	

Static ☐   Dynamic ☐

> 🛈 If you were not given any IP addresses or the ISP was responsible for the setup and installation of your Internet connection, go to step 2.
> 🛈 If you are not using a router on your network, your 'Current TCP/IP Settings' (from the previous section) and 'Assigned IP Addresses from My ISP' will be exactly the same.

2 You must determine whether the IP address is STATIC or DYNAMIC. At this moment, you are only concerned about the ISP. Did they provide you with a STATIC or DYNAMIC address? If you are unsure, contact your ISP.

3 Configure your InSight's TCP/IP settings for network connectivity by selecting Setup from the main interface and selecting TCP/IP located on the left of the Setup screen.

4 If prompted for ID and Password, use 'admin' for both entries. The default web port number is 80. If port 80 is blocked by the ISP, a value between 1025 and 60000 should be used. If TCP port 80 is blocked, consult the ISP.

5 The following descriptions are several basic network scenarios. Determine which scenario describes your network. If your network does not match one of the scenarios below and you are unsure how to setup your InSight, contact your network administrator and then call our Support Center.

> 🛈 You cannot control the rectangular gray areas and only the ISP has access to the devices.

Network Setup -
Setup Case A, B

Case A:
Dynamic IP + Personal Router [Most SOHO]

Case B:
Static(Fixed) IP + Personal Router [Efficient]
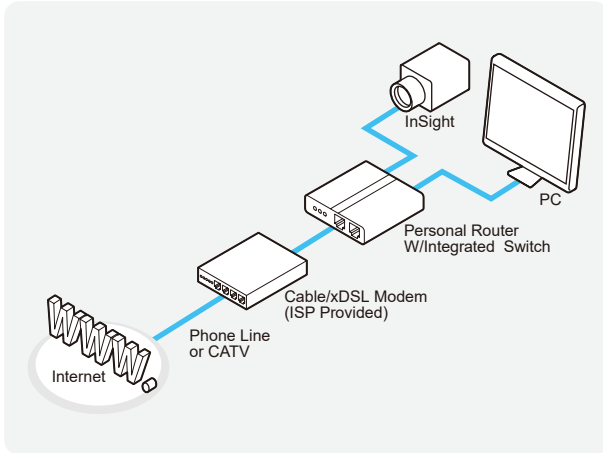
Configure your InSight's TCP/IP properties as follows :

❶ Network Type : STATIC (even though you have Dynamic IP from your ISP, use STATIC on InSight)

❷ Internet Address : A private IP address such as 192.168.0.200 (Example)

> ⓘ You need to assign an IP address to InSight just as you do with PC.
> ⓘ The IP address you assign must be unique to your network and match your network as well.
> For information on how to choose a unique IP and match your network, read the FAQ.
> ⓘ The IP address you assign must be a private IP.
> For information on how to choose a private IP please, read the FAQ.

❸ Subnet Mask : 255.255.255.0 (Example)

> ⓘ You must use the same subnet mask as the one you noted under 'Current TCP/IP Settings'.

❹ Default Gateway : 192.168.0.1 (Example)

> ⓘ This IP address must be the IP address of your router. (private or LAN side)
> ⓘ Use the same Default Gateway you noted under 'Current TCP/IP Settings'.

❺ Preferred DNS Server : Use the 1st DNS Server from 'Assigned IP Address from My ISP'.

> ⓘ If you did not receive any IP addresses from your ISP, contact the ISP and acquire the IP address of their DNS server.

❻ Web Port : 8888

> ⓘ Do not use the default port 80 as this number must be changed.
> ⓘ You may select any number between 1025 to 60000.

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Network Setup -
Port Forwarding

After entering the correct TCP/IP settings, you are ready for 'Port Forwarding' (Cases A, B).

Please record the TCP/IP settings of your InSight for future reference. You may need this information to access your InSight and to configure 'Port Forwarding'.

InSight TCP/IP Settings	
IP Address	
Subnet Mask	
Default Gateway	
Preferred DNS Server	
Web Port	

❷ After clicking 'Apply', the system will prompt for reboot. Please allow the system 50 seconds to reboot and accept the changes. After 50 seconds, close the configuration screen.
The view will display 'Trying to Reconnect'. If the ACTIVE light on InSight has gone off and is now back on again flashing, the InSight has rebooted. After the system reboots completely, remove the power supply from the unit and close Chrome.

❸ Return your PC/Laptop TCP/IP properties to their original settings.

❹ Before installing InSight, you must use 'Port Forwarding' on your personal router (Cases A, B).
You will need to forward 1 ports:
· Web Port
All the ports will be forwarded to the IP address you assigned to InSight.
In the example above, you would forward:
· 8888 > 192.168.0.200

ℹ️ For information on how to use 'Port Forwarding', please read Appendix C.

Network Setup -
Starting InSight

After forwarding correctly the Web Port, through your router (if applicable), install InSight in a proper location.

❶ Connect InSight to your router or cable/DSL modem (per your network scenario) via a Cat5/5e UTP Ethernet network cable.

❷ Supply power to InSight.

❸ After 1 minute, verify the IP Camera indicators:
· LINK : Flickering/Solid

❺ After 1 minute, verify InSight indicators (if necessary), access your InSight on your local network by opening Chrome and specifying the IP address and Web Port assigned to InSight.

ℹ️ Examples: http://192.168.0.200:8888 or http://24.106.88.123
ℹ️ If you left your Web Port set to 80, do not need to specify the port in the Address Bar to access InSight.

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Web Viewer Screen - Basic Screen (Default)
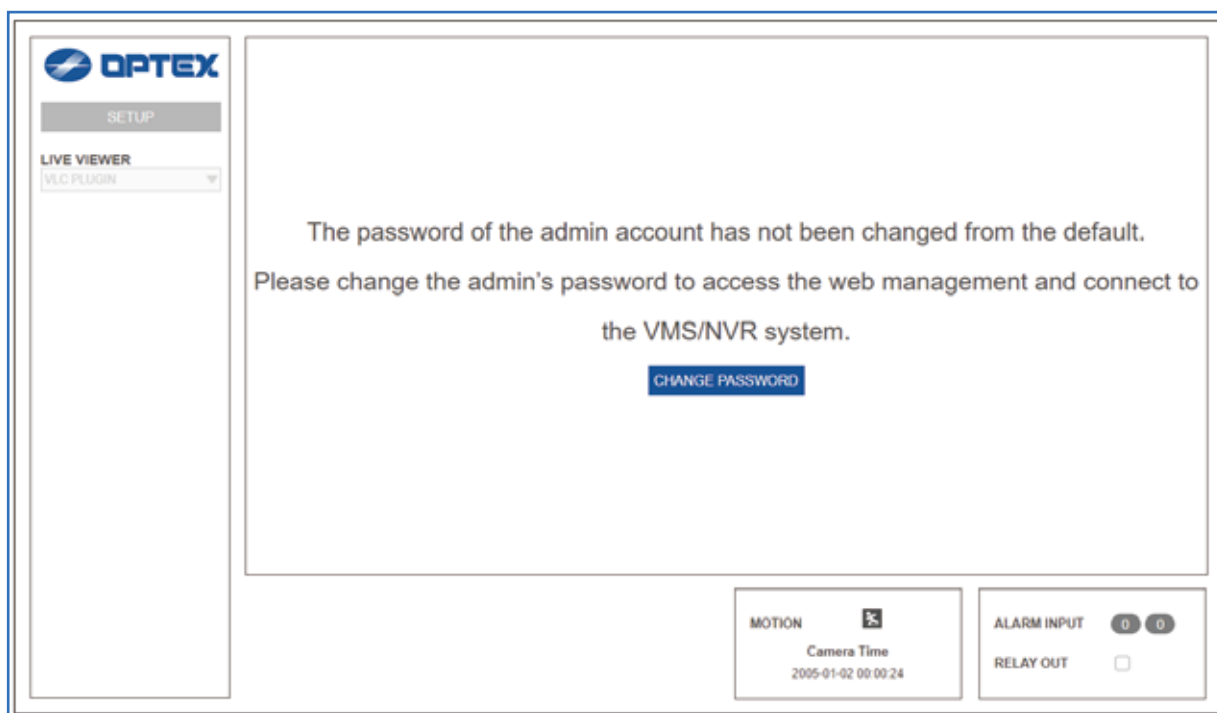
**Password change is required at initial connection in factory reset state.**

❶ You can not see the image, and the Setup button is disabled.

❷ Change the password with the CHANGE PASSWORD button.
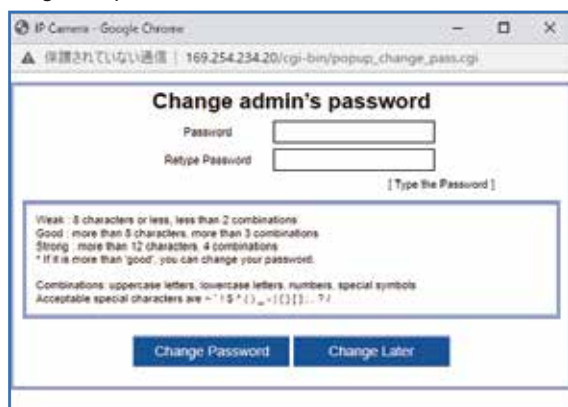
❸ After changing the password, you must log in again by pressing the RE-LOGIN button.
Web index In the state of the page, when the web page does not have a mouse click or keyboard input event, the web session it will close and automatically switch to the log out page. (You must log in again with the RE-LOGIN button.)
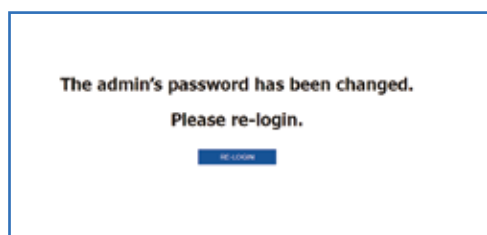
Web Viewer Screen -
Basic Screen
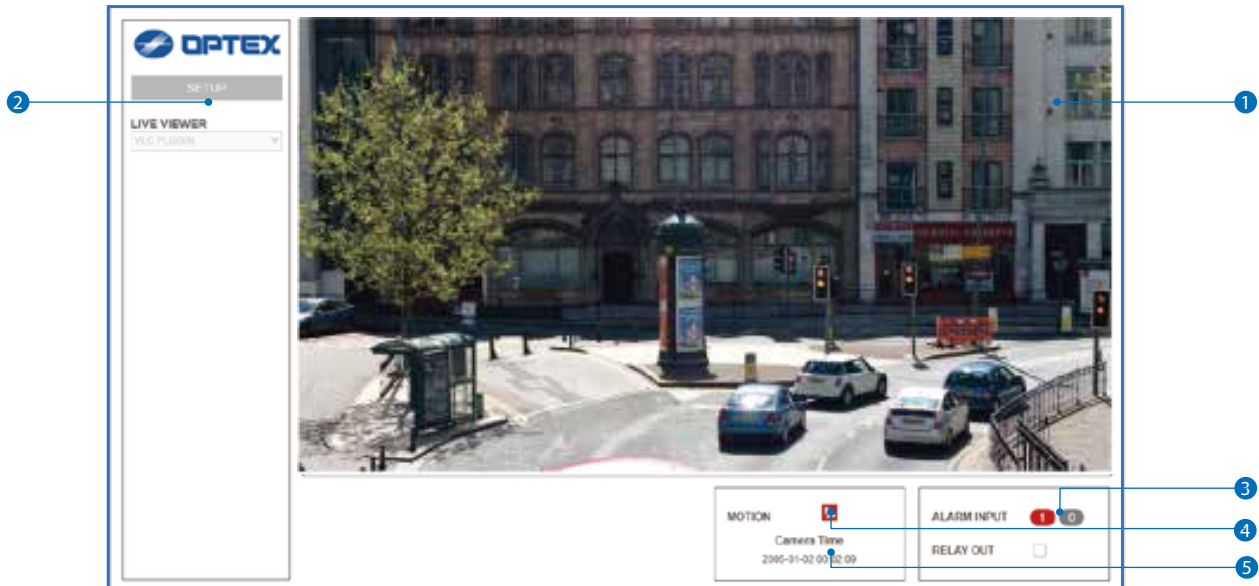
※ Web viewer is optimized with explorer10 or above version and Chrome.
  ※ If VLC is not installed or VLC plugin is not supported (Chrome), Live buffering and Channel select menu on 3, 4 will be changed to Live Viewer menu, and then if HTML5(MJPEG) is selected on Live Viewer menu, then you can check the video.

❶ Live video display. This is the region for live video stream from the camera. If the display is delayed, press the reload button (F5).

❷ Setup popup button. Click it to open the Setup page to setup details of InSight like Video, Network, Events, System and etc. See the section 'Setup' .

❸ **Alarm Input** - If the alarm is triggered, the color of corresponding input number will be changed to red from dark gray.
        Left indicator: InSightAlarm

❹ **Motion** - It shows the Motion event status.
  ※ Event Alert Icon (🔺) appears if 'Motion Alarm' is activated.

❺ **Camera Time** -   Display the camera time.

Setup - Video Setup
Video Configuration
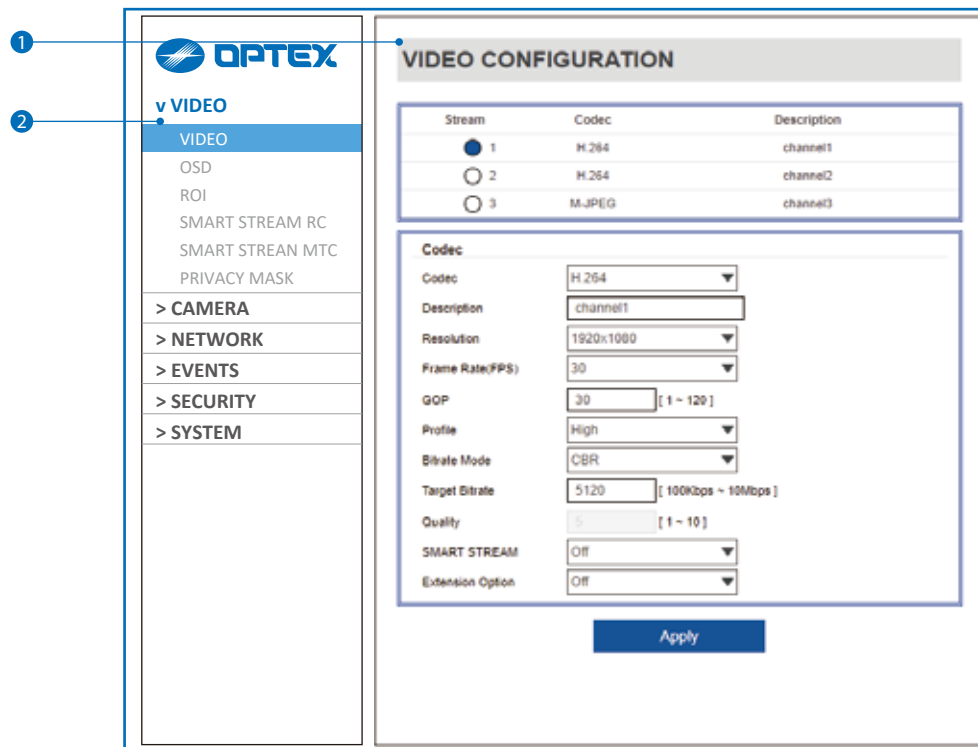
❶ **Detail Page -** When you selects an item from the menu, you can set the details for the selected item.

❷ **Setup Constitution**

Video
[VIDEO, OSD, ROI, SMART STREAM RATE CONTROL, SMART STREAM MTC, PRIVACY MASK]
Camera
[PROFILE, IMAGE ADJUSTMENT, EXPOSURE, DAY&NIGHT, BACKLIGHT, WHITE BALANCE, IMAGE, VIDEO]
Network
[STATUS, NETWORK SETTING, EMERGENCY IP, ONVIF, SNMP, RTSP INFORMATION]
Events
[TAMPER, TEMPERATURE, ONVIF EVENTS]
PIR detector
[DETECTOR N.O./N.C., DETECTION AREA]
Security
[IP ADDRESS FILTER, RTSP AUTHENTICATION, IEEE 802.1X, HTTPS, CERTIFICATES]
System
[INFORMATION, DIAGNOSTICS, FIRMWARE UPDATE, DATE&TIME, DST, USER MANAGEMENT, LOG,
  LANGUAGE, FACTORY RESET, RESTART, OPEN SOURCE]

Setup - Video Setup
Video Configuration

1. **Live Video Channel Setup -** The video can be configured to variety settings with a combination of codec and resolution. The camera performance has to be considered when setting multiple channels. This effects on the performance of the camera.
   ※ H.265 (HEVC) codec with higher bitrate may cause the unstable live streaming or reload the webpage.

2. **Codec -** Choose the video codec. According to the selected codec, the subcategories can be changed automatically.

3. **Description -** Input the additional description about the selected channel. Max. 30 alphabets are allowed(Including space). For the description, English Alphabets, numbers and special characters (- _ @ .) can be used.

4. **Resolution -** Select the video resolution.
   ※ Available resolution can be depends on the codec setup between the channels.
   <Resolution of Video Format>

	1080p/i	720p/i	VGA	4CIF	CIF
NTSC	1920 x 1080	1280 x 720	640 x 480	704 x 576 704 x 480	352 x 288 352 x 240
PAL	1920 x 1080	1280 x 720	640 x 480	704 x 576 704 x 480	352 x 288 352 x 240

5. **Frame Rate -** Select the maximum Frame Rate.
   ※ Available Frame Rate can be different although same codecs were set up.

Setup - Video Setup
Video Configuration

⑥ **GOP(Group of Pictures) Size -** Set up the number of frames (P-frame) which contain only changed information based on basic frame (I-frame). Regarding videos with lots of movement, if you set GOP size bigger, only the number of P-frames is bigger. As a result, video resolution will be low but 'File size' and 'Bit-rate can be decreased.

　※ **GOP(Group of Pictures) Size is..**

　I-frame and P-frame can be created for MPEG4, H.264 and H.265 (HEVC) video compression. I-frame(=key-frame) means the whole image data for one specific scene of video. P-frame is image data which has been changed information compared to I-frame GOP is made up of one I-frame and corresponding several P-frames. To improve video quality, set the number of P-frames smaller and to decrease image size, set the number of P-frames bigger.

⑦ **Profile -** The profile defines the subset of bit stream features in H.264, H.265 (HEVC) stream, including color reproduction and additional video compression.

　※ H.264 : Main, High / H.265 (HEVC) : Main

Main - An intermediate profile with a medium compression ratio. The main profile supports I-frames, P-frames, and B-frames.

High - A complex profile with a high compression ratio. The high profile supports I-frames, P-frames, and B-frames.

⑧ **Bitrate Mode -** Select the bit rate control scheme of video compression from CBR (Constant Bit Rate) or VBR (Variable Bit Rate).

CVBR (Framerate priority) - This Mode is for cameras which do not want absolute any frame drop, but still want to get lower bitrate. It has limitation when the Target bitrate is set to be very low, but actual motion is big or scene is very noisy.

VBR - To guarantee the designated quality, the bit rate of video stream is changed in this mode. Therefore, the frame rate of video is likely to be varying when network traffic is changing.

　※ This category won't be appear if you select the codec.

Setup - Video Setup
Video Configuration

⑨ **Target Bitrate -** If Bitrate Control is set to be CBR, you can set the Target Bitrate.

⑩ **Quality -** For VBR control mode, The Target Quality of video can be setup.

⑪ **SMART STREAM -** Off / Smart Stream Rate Control / Smart Stream MTC
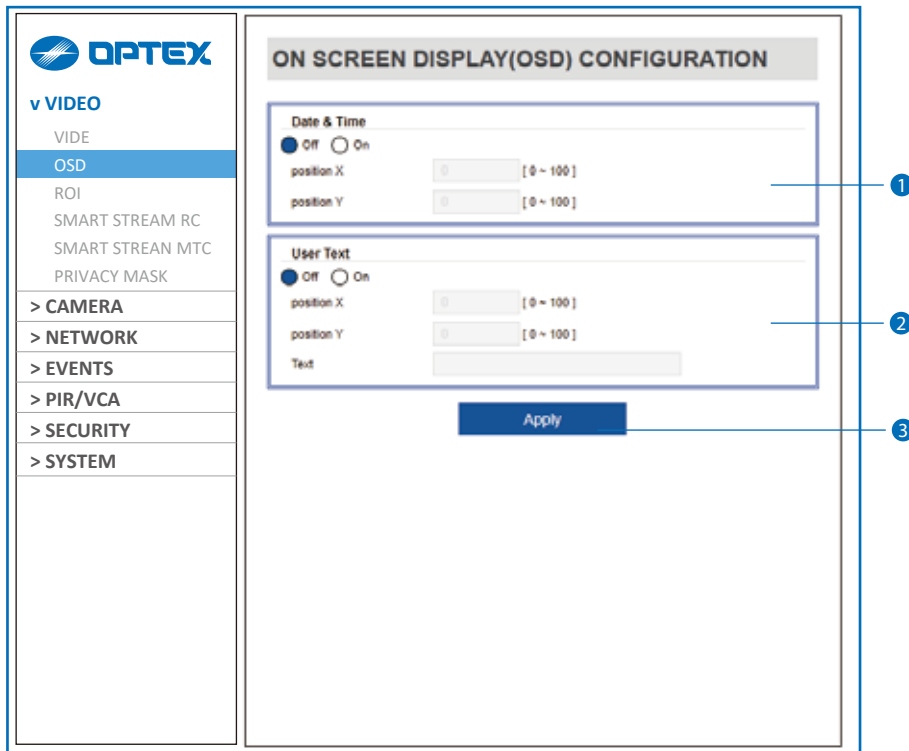
⑫ **Extension Option**

Off - You can not use the Extension Option.

SVC-T On - The H.264, H.265 (HEVC), SVC (Scalable Video Coding) is a video compression algorithm that enables effective and efficient transmission of video files over low bandwidth networks.

⑬ Click 'Apply' to make above setting effective.

Setup - Video Setup
OSD Configuration

❶ **Date / Time -** Display the current time.

❷ **User Text -** Output the TEXT entered by the user. Support a maximum of 30 characters.

❸ Click 'Apply' to make above setting effective.

Region of Interest Configuration
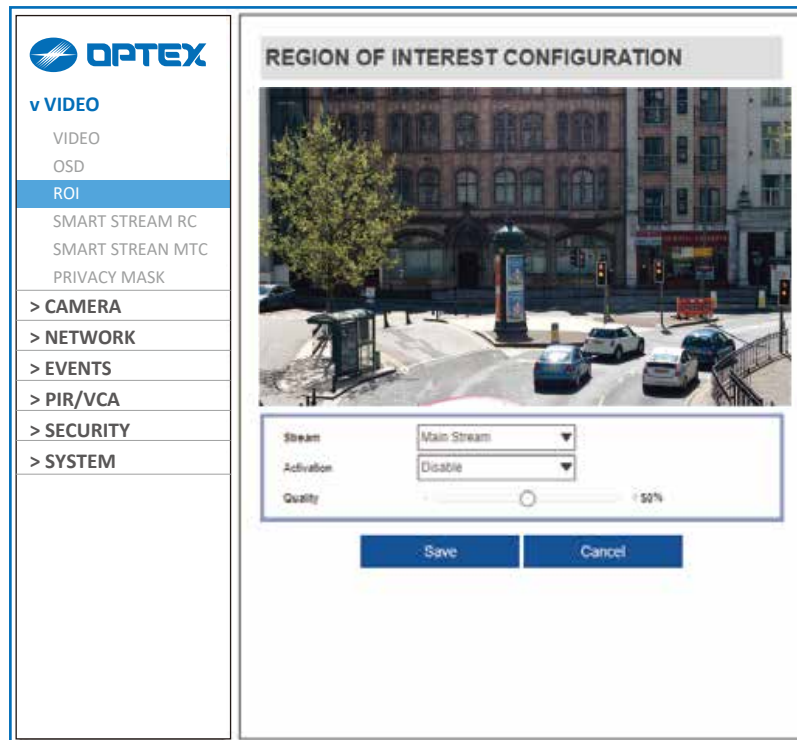
Region of interest function gives much more efficiency picture quality for indicated area to improve picture qualities of movement scene at the same bandwidth.

1 **Stream -** Select the Stream.
   ※ Currently it supports only H.264, H.265 (HEVC).
   ※ The function is not supported in MJPEG codec.

2 **Activation -** The Region of interest can be enable or disable.

3 **Quality -** Set the quality of the set area.

4 Click 'Save' to save the current settings.
   ※ Click 'Cancel' to return to the previous setting.

Smart Stream Rate Control

All menus are activated by selecting Smart Stream Rate Control as the smart core menu on the Video Configuration page.

❶ **Stream -**   Select the Stream. Main Stream, Sub Stream.

❷ **Stream Quality -** Select the Stream Quality. Low, Medium, High, Extreme.

❸ **Dynamic GOP -** This Dynamic GOP function keeps bitrate first.

❹ **FPS Drop -** It is a function to drop the FPS in order to maintain the quality first.

❺ Click 'Apply' to make above setting effective.

Setup - Video Setup
Smart Stream Motion Triggered Control
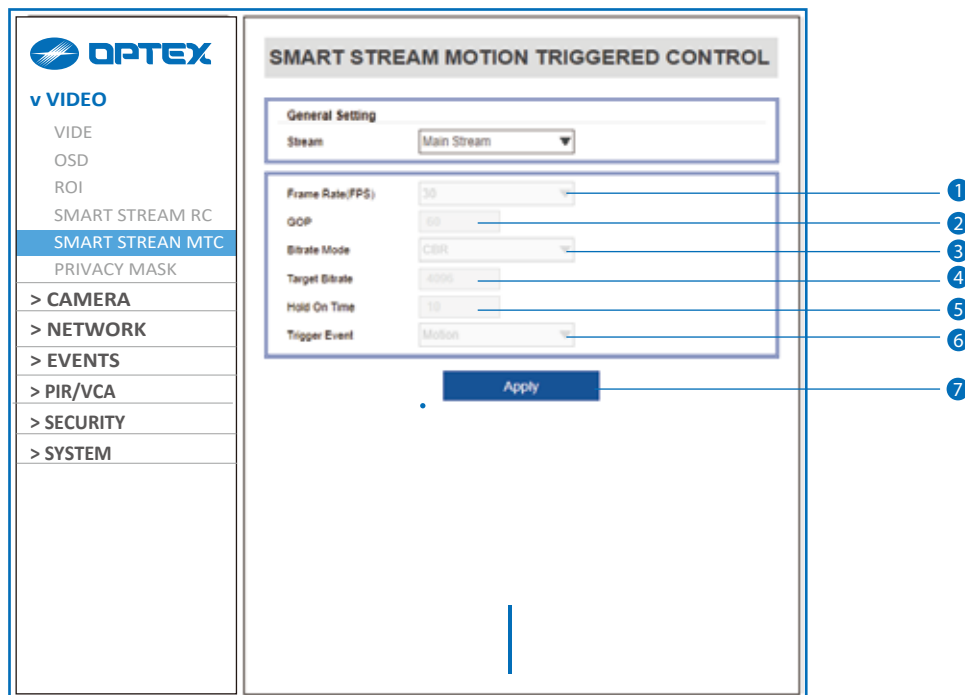
All menus are activated by selecting Smart Stream MTC as the smart core menu on the Video Configuration page.

❶ **Frame Rate -** Set the frame rate value to be changed when a trigger event occurs.

❷ **GOP -** Set GOP value to be changed when trigger event occurs.

❸ **Bitrate Mode -** Set bitrate mode to be changed when trigger event occurs.

❹ **Target Bitrate -** Set Target Bitrate value to be changed when trigger event occurs.

❺ **Hold On Time -** Set the time to keep the set value when trigger event occurs. (Range: 5sec to 60sec)

❻ **Trigger Event -** Motion / Alarm Input /Motion & Alarm Input

❼ Click 'Apply' to make above setting effective.

Setup - Video Setup
Privacy Mask Configuration
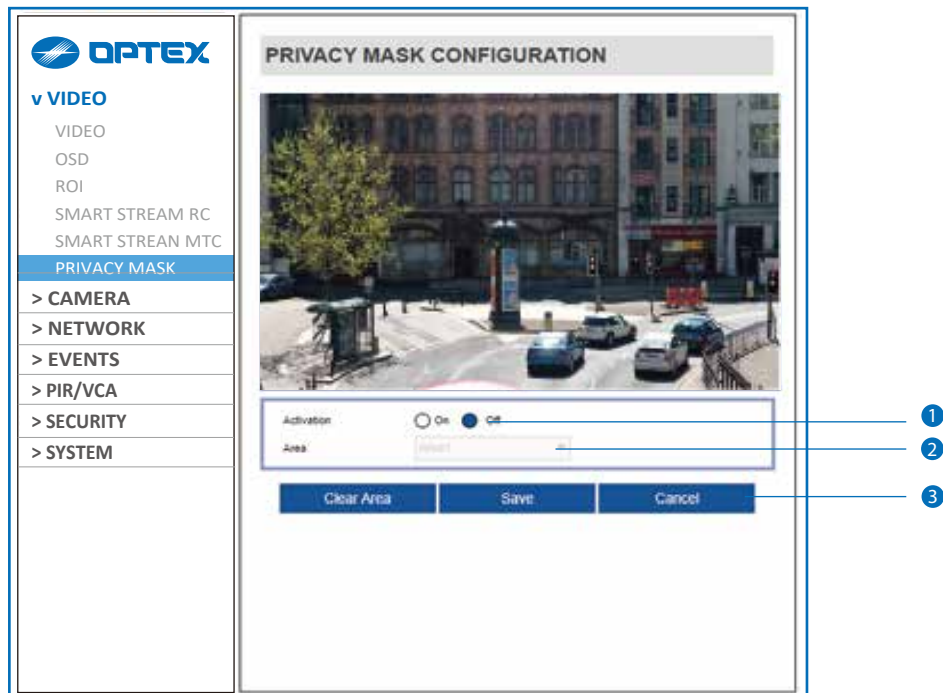
Use this function to mask areas that you want to hide on screen to protect privacy.

❶ **Activation -** The Privacy mask function can be enable or disable.

❷ **Area -** Select the Area1 to Area16 and Set the privacy area.

❸ Click 'Save' to save the current settings.
  ※ Click 'Cancel' to return to the previous setting.
  ※ Click 'Clear Area' to delete the selected Area1 to Area16.

Setup - Camera Setup
Profile Configuration
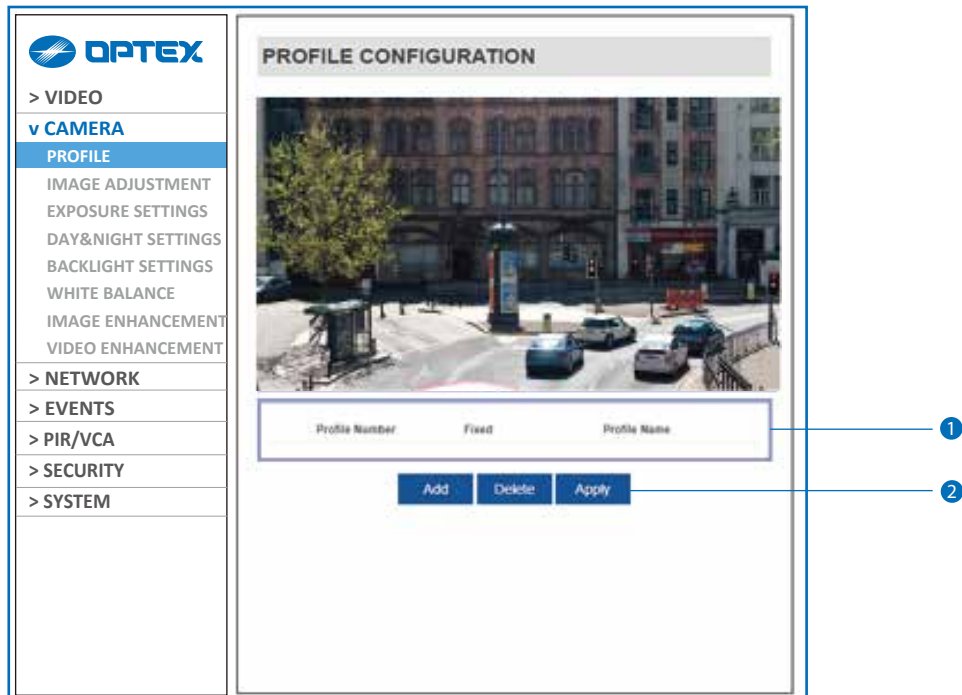
① **Profile List -** Display the information in profile list.

② Click 'Add' to add the profile stored the current camera settings.
  ※ Click 'Delete' to delete selected item from the profile list.
  ※ Click 'Apply' to apply selected item from the profile list.

Setup - Camera Setup
Camera Image Adjustment
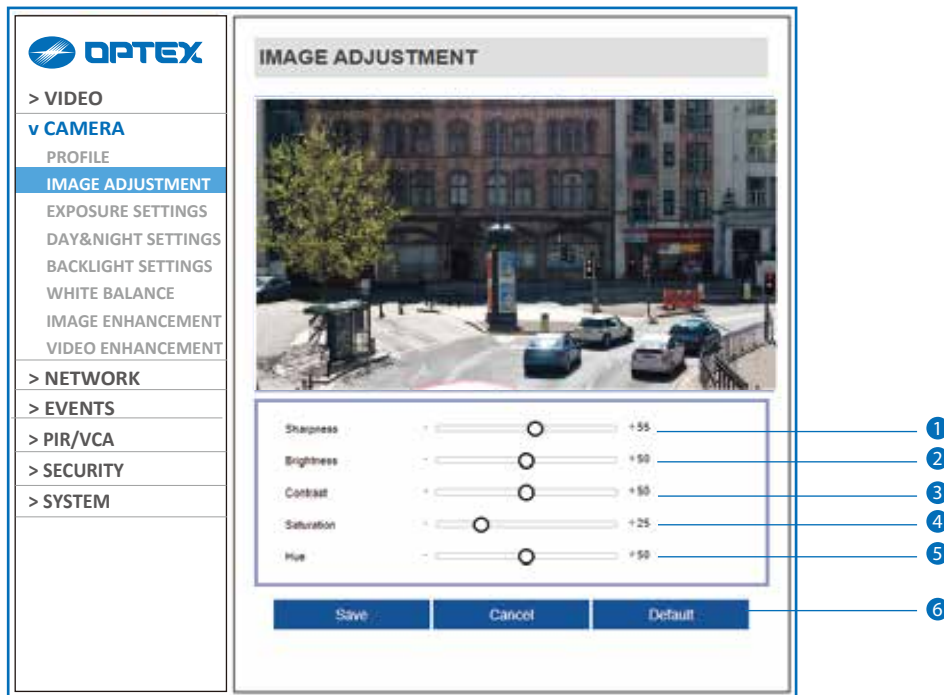
1 **Sharpness -** Using this control, sharpness of image can be adjusted to meet your preference.

2 **Brightness -** Using this control, brightness of image can be adjusted to meet your preference.

3 **Contrast -** Using this control, contrast of image can be adjusted to meet your preference.

4 **Saturation -** Using this control, Saturation of image can be adjusted to meet your preference.

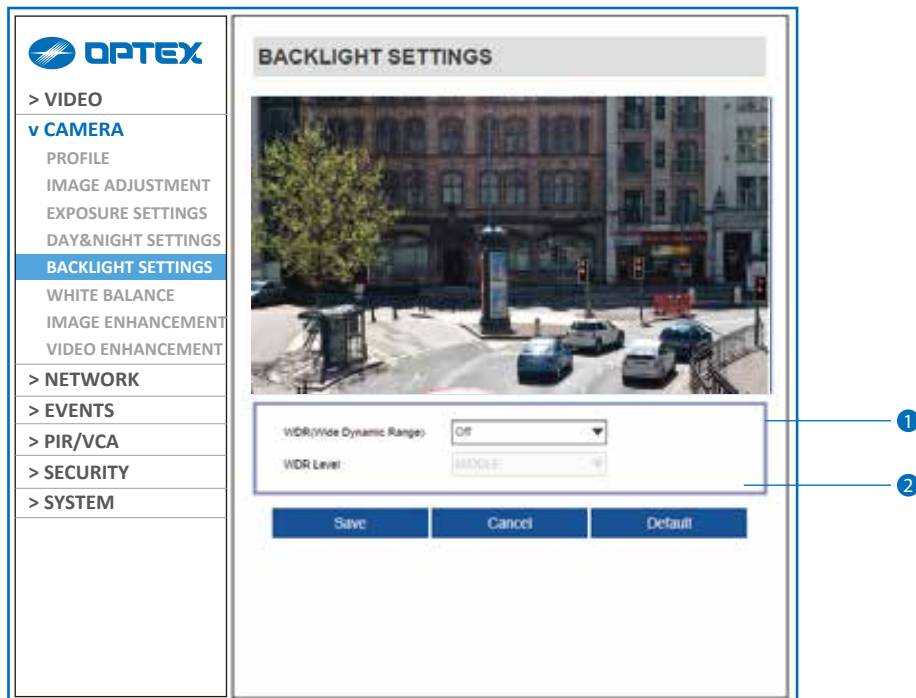**5** **Hue -** Using this control, Hue of image can be adjusted to meet your preference.

6 Click 'Save' to save the current settings.
　※ Click 'Cancel' to return to the previous setting.
　※ Click 'Default' to settings to the factory defaults.

Setup - Camera Setup
Camera Exposure Settings
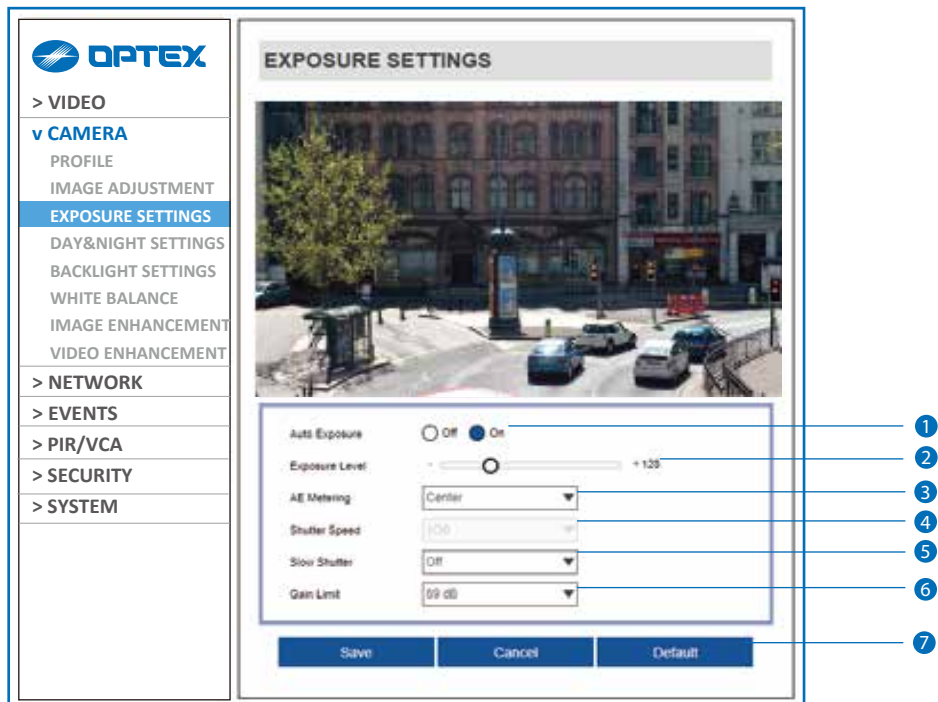
① **Auto Exposure -** Automatic exposure(AE) automatically sets the aperture or shutter speed, based on the external lighting conditions for the photo.

② **Exposure Level -** If this value is increases, the image becomes brighter.

③ **AE metering -** AE metering mode refers to the way in which a camera determines the exposure.

④ **Shutter Speed -** If this speed is faster, the moving object can be photographed without the ghost effect.
However, picture can be dark if there is no sufficient lighting.

⑤ **Slow Shutter Level -** Slow shutter Level lets you adjust the amount of light striking the sensor, and essentially determines when the video sensor sends out its batch of data for processing.

⑥ **Gain Limit -** The smaller number makes the darker image.

⑦ Click 'Save' to save the current settings.
  ※ Click 'Cancel' to return to the previous setting.
  ※ Click 'Default' to settings to the factory defaults.

Camera Day & Night Setting
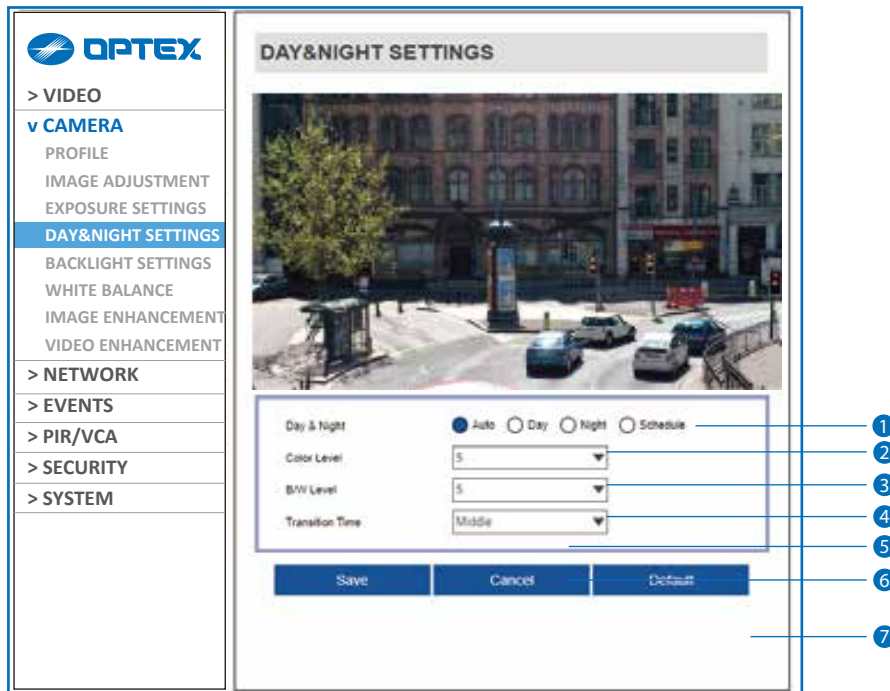

❶ Day & Night
- **Auto:** In this mode, the IR cut filter is removed automatically depending on the light condition around.
- **Day:** In this mode, the IR cut filter is applied to the image sensor all the time.
    Thus, the sensitivity will be reduced in the dark light condition but the better color reproduction performance are obtained.
- **Night:** In this mode, the IR cut filter on the image sensor is removed all the time.
    The sensitivity will be enhanced in the dark light condition but the image is black and white.
- **Schedule:** In this mode, Day / Night mode is converted accordance with the scheduled time.

❷ Color Level - It is a level to change Night mode into Day mode when Day & Night mode is Auto.

❸ B / W Level - It is a level to change Day mode into Night mode when Day & Night mode is Auto.

❹ Transition Time - If it is set to Auto, to determine the rate at which Day / Night is converted.

❺ If it is set to schedule mode, set also the time that both Day->Night and Night->Day are converted.

❻ Click 'Save' to save the current settings.
   ※ Click 'Cancel' to return to the previous setting.
   ※ Click 'Default' to settings to the factory defaults.

Setup - Camera Setup
Camera Backlight Settings

This is a feature used for problematic light conditions where the contrast from light to dark areas is very high.

❶ **WDR (Wide Dynamic Range) -** The WDR function can be enable or disable.

❷ Click 'Save' to save the current settings.
   ※ Click 'Cancel' to return to the previous setting.
   ※ Click 'Default' to settings to the factory defaults.

Camera White Balance
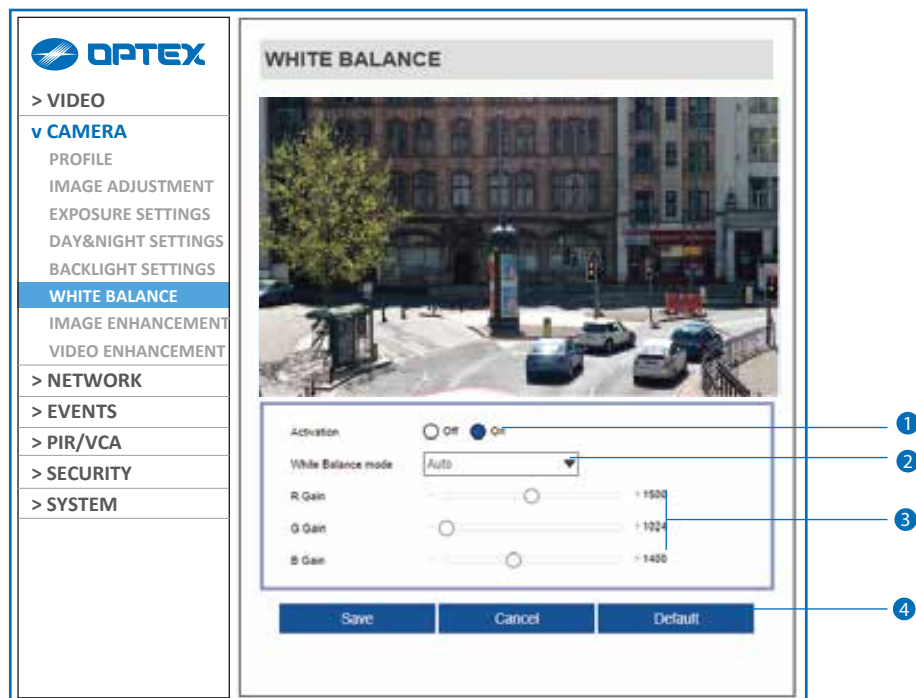
1 Activation - White Balance can be enable or disable.

2 White Balance Mode - Select White Balance depending on the lighting conditions.

3 RGB Gain - The R/G/B gain can be set only when the White Balance Mode is set to Manual.

4 Click 'Save' to save the current settings.
  ※ Click 'Cancel' to return to the previous setting.
  ※ Click 'Default' to settings to the factory defaults.

Setup - Camera Setup
Camera Image Enhancement
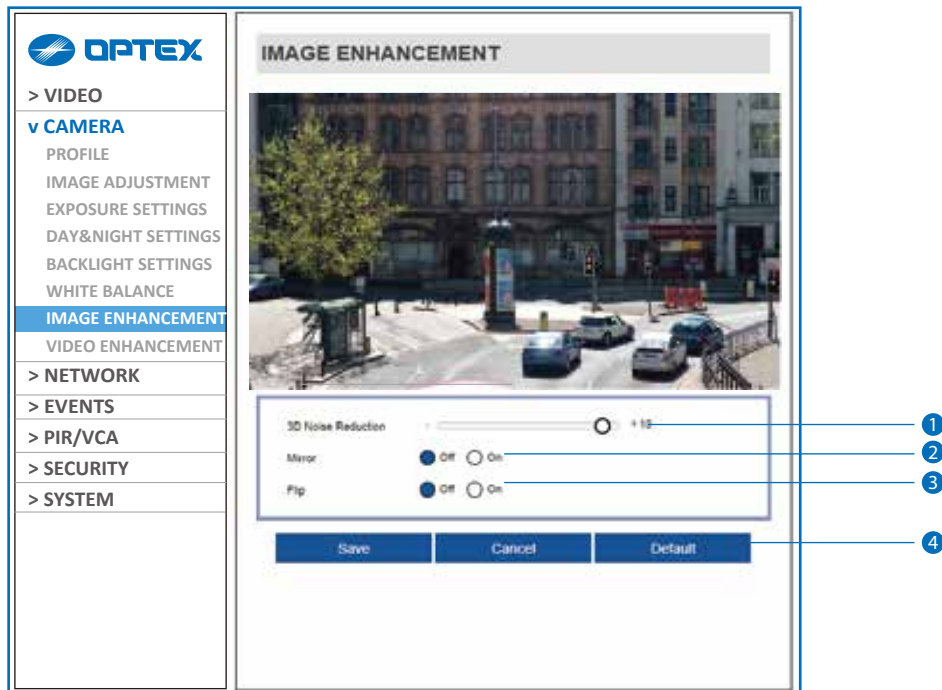
1. **3D Noise Reduction -** 3DNR function enables to suppress noise and retain good video quality in low light conditions.

2. **Mirror -** Reverse the video from side to side.

3. **Flip -** Reverse the video from up to down.

4. Click 'Save' to save the current settings.
   ※ Click 'Cancel' to return to the previous setting.
   ※ Click 'Default' to settings to the factory defaults.

Setup - Camera Setup
Video Enhancement
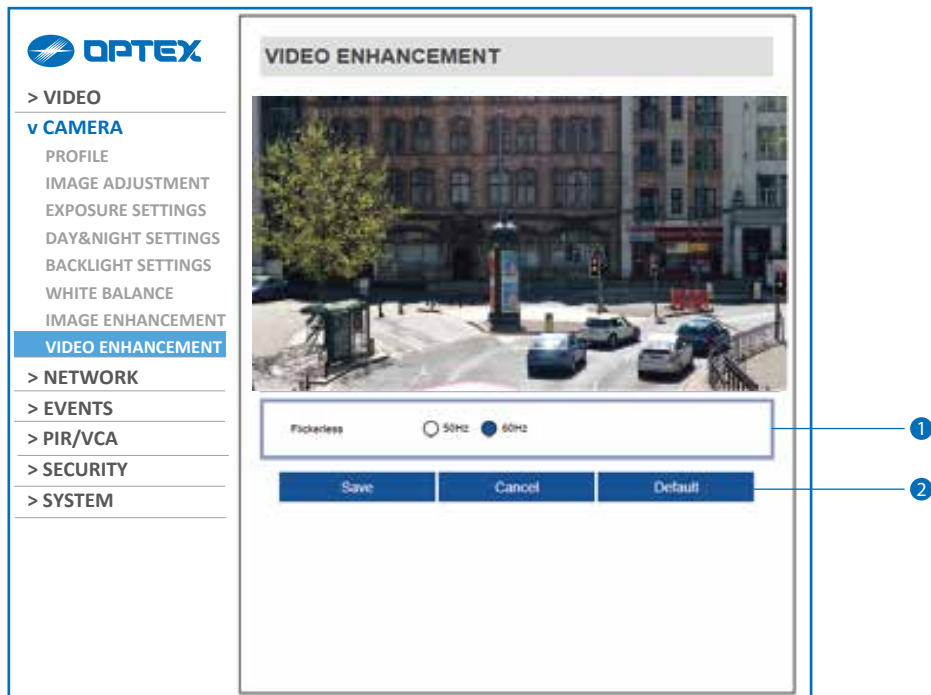
❶ **Flicker -** This function Enable to enhance the flicker situation.

❷ Click 'Save' to save the current settings.
  ※ Click 'Cancel' to return to the previous setting.
  ※ Click 'Default' to settings to the factory defaults.

Network Status

This menu will show you all the information of Network setting in the camera.

However, you cannot change those here.

Setup - Network Setup
Network Settings

① **Network Type -** Define network IP address type from the Static Mode for the fixed IP or the Dynamic Mode by the dynamic IP address.

If you select the Static Mode, you must fill out IP Address, Subnet Mask, Gateway, DNS Server and all ports.
If you select the Dynamic Mode, the IP address will be allocated automatically by DHCP equipment.
If you click the Apply button to update changes, the system will be re-booted.
In this case, you have to reconnect the camera using new IP address.

② **IP Address -** Define the IP address. The address is consisted of four numbers separated by dots and the range of each number is from 0 to 255.

③ **Subnet Mask -** Define the Subnet Mask. Format is same as the IP address.

④ **Default Gateway -** Default the Gateway IP address. Format is same as the IP address.

⑤ **Preferred DNS Server** - Define the DNS server IP address. Format is same as the IP address.

⑥ **Alternate DNS Server** - Define the Secondary DNS server IP address. Format is same as the IP address.

⑦ **HTTP Port -** The HTTP port can be set to 80 which default or in between 1025 to 60000.

⑧ **HTTPS Port -** The HTTPS port can be set to 443 which default or in between 1025 to 60000.

⑨ **RTSP Port -** The RTSP port can be set to 554 which default or in between 1025 to 60000.

⑩ Click 'Apply' to make above setting effective.
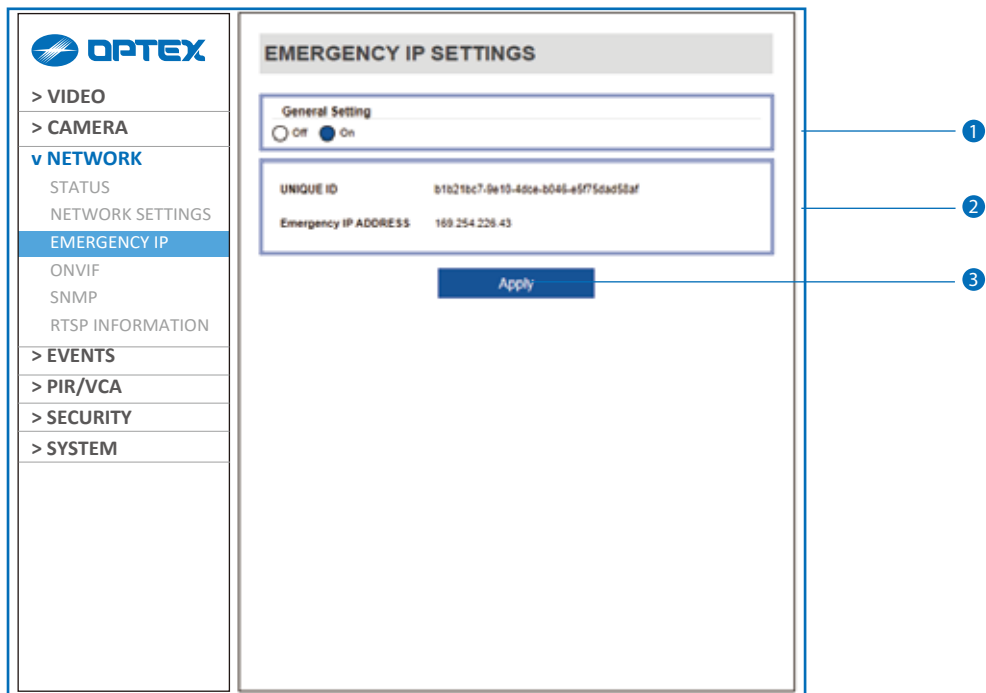
※ If the network type is dynamic, the IP address is changed in below cases.
Therefore, the IP address needs to be searched again, and the camera needs to be reconnected in these cases.
When the camera power is on/off.
- After Firmware update, Default set and reboot.

Setup - Network Setup
Emergency IP Settings

❶ **General Setting -** Emergency IP Settings function can be enable or disable.

❷ **Emergency IP Settings Information -** It displays the unique id or Emergency IP address.

❸ Click 'Apply' to make above setting effective.

Setup - Network Setup
ONVIF Settings

① **Authentication**
    None : Allows to access without ONVIF authentication.
    WS - Usertoken : Allows to access with WS-User Token of ONVIF authentication.
    WS - Usertoken + Digest : Allows to access with WS-User Token and Digest of ONVIF authentication.

② **Discovery Mode -** The discovery function can be enable or disable.

③ Click 'Apply' to make above setting effective.

Setup - Network Setup
SNMP Settings

❶ **SNMPv1/SNMPv2 -** Select the SNMPv1/SNMPv2 option and type the names of Read community and Write community.

SNMP trap can be used to check periodically for operational thresholds or failures that are defined in the MIB.

❷ **SNMP Trap -** SNMP trap can be enable or disable.

SNMPv3 contains cryptographic security, a higher security level, which allows you to set the Authentication password and the Encryption password.

❸ **Mode -** Select the either Read or Read/Write mode.

❹ **Activation -** It can be enable or disable selected mode.

❺ **Read/Write name -** Define Read name and Write name.

❻ **Security Level -** Select one of no auth, no priv/auth, no priv/auth, priv

❼ **Authentication Algorithm -** Select MD5 or SHA as the authentication method.

❽ **Authentication Password -** The Authentication Password is an encryption for authentication and they are at least 8 digits and up to 30 digits allowed.

❾ **Private-Key Algorithm -** Select DES or AES as the encryption algorithm.

❿ **Private-Key Password -** Information protection password is a private encryption and they are at least 8 digits and up to 30 digits allowed.

⓫ Click 'Apply' to make above setting effective.

RTSP Information

❶ **Target Stream -** Select the stream you want to set.

❷ **RTSP Session -**

Time out **-** Set the RTSP time out.
  ※ The session is disconnected after the specified time out.

Identifier **-** Please do not change this text.

❸ **QoS Setting -** Set the quality of service to ensure data transfer performance.

❹ **RTP Multicast -** Check RTP Multicast On/Off. To activate RTP Multicast.
  1. Click "On" button.
  2. Enter accessible RTP Multicast IP, port for video stream control, RTP packet TTL.
  3. Click "Apply" button.
  ※ It is possible to set each RTP Multicast for CH1~3.

❺ Click 'Apply' to make above setting effective.
  ※ Click this button when completed setup each channels.

❻ It shows RTSP Connection information.

Setup - Event Setup
Camera Scene Change Configuration

The Camera Scene Change Detection feature is intended to detect camera tampering events such as bagging, defocusing and moving the camera. This is achieved by detecting large persistent changes in the image.

❶ **Camera Scene Change Detection** *(Defult: OFF)*
 - **Enable:** Defines the current state of the plug-in features.
   On: Enables the Camera Scene Change Detection feature.
   Off: Disables the Camera Scene Change Detection feature.
 - **Duration:** Defines the length of time, in seconds, that the image must be persistently changed before the alarm is triggered.
 - **Area Threshold:** Defines the percentage area of the image which must be changed for tampering to be triggered.
 - **Suppress Alarm on light:** In scenarios where sudden changes in lighting such as switching on/off indoor lighting can cause false tamper events.
   On: Enables the suppressing feature.
   Off: Disables the suppressing feature

 ※ Note: The option will reduce sensitivity to genuine alarms and should be used with caution.
    Remember to Apply changes for them to take effect.

❷ **Event Actions**
 - **Enable TCP Event:** Defines if a TCP notification will be sent when the Camera Scene Change detection triggers.
   On: Enables the TCP event feature.
   Off: Disables the TCP event feature.
 - **Enable HTTP Event:** Defines if a HTTP notification will be sent when the Camera Scene Change detection triggers.
   On: Enables the HTTP event feature.
   Off: Disables the HTTP event feature.

❸ Click 'Apply' to save the current settings.

Setup - Event Setup
ONVIF Events

❶ **InSightAlarm output**

 - The InSight send ONVIF event "MotionAlarm" when the PIR detector output Alarm signal.
 - The InSight send ONVIF event "InSightAlarm" as DigitalInput according Detection rules either PIR and VCA
   / PIR or VCA / PIR / VCA. (Always ON)

❷ **PIR Alarm output**

 - The InSight send ONVIF event "PIRAlarm" when the PIR detector output Alarm signal. (Always ON)

❸ **VCA Polygon output**

 - The InSight send ONVIF event "Objectinside" when the VCA with Polygon rule detect object. (Always ON)

❹ **VCA Line output**

 - The InSight send ONVIF event "Crossed" when the VCA with Line rule detect object. (Always ON)

❺ **Camera Scene Change**

 - The InSight send ONVIF event "MotionAlarm" when the InSight detect camera scene change.
 - The InSight send ONVIF event "AnalyticsService" when the InSight detect camera scene change.
 (Always ON)

❻ Click 'Apply' to make above setting effective.

Setup - Event Setup
Temperature

① **Mode -** Select the either Fahrenheit and Celsius.

② **Threshold -** Define the temperature at which the event trigger is occurred.

③ **Temperature -** It indicates the current temperature of InSight.

④ Click 'Apply' to make above setting effective.

PIR/VCA

VCA manual

Vist to the following web site to find VCA manual.

It guides you in adjusting the PIR detection area and camera angle.

https://navi.optex.net/manual/50427/?lang=en&type=vcamanual

Setup - Security Setup
IP Address Filter Configuration

1. **IP Address Filter -** IP filter function can be enable or disable.

2. **IP Filter Type -** Select the recording IP filter type.

3. Click 'Apply' to make above setting effective.

4. **Filter IP Address -** Display the filtered IP address.

5. **IP Address -** Define the IP address you want to apply the IP filter.

6. Click 'Add' to add the IP address to the list.
   ※ Click 'Remove' to remove the IP address selected in the list.
   ※ Click 'Remove All' to remove all IP in the list.

Setup - Security Setup
RTSP Authentication Configuration
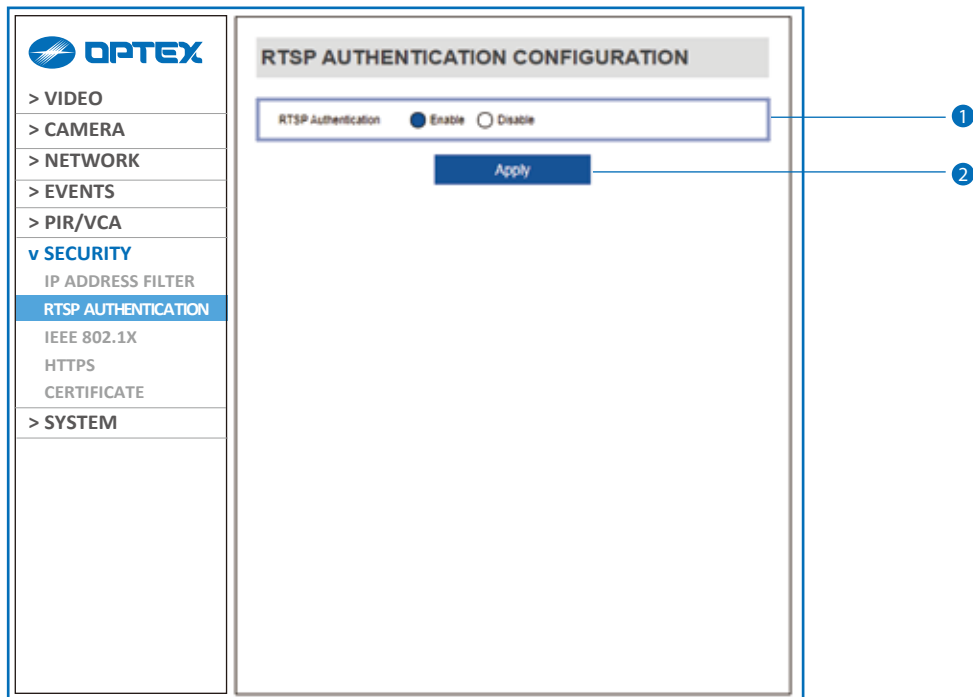
1 **RTSP Authentication -** RTSP Authentication can be enable or disable.

2 Click 'Apply' to make above setting effective.

IEEE 802.1X Configuration

The feature is needed when connecting the camera to the network protected by the IEEE 802.1X.

❶ **IEEE 802.1x -** The IEEE 802.1x feature can be enable or disable.

❷ **Protocol**
- MD5 : It provides one-way password-based network authentication of the client.
- PEAP : It is similar to TTLS in that it does not require a certificate on the client side.
- TTLS / MD5 : It does not require a certificate on the client side.
- TLS : It relies on client-side and server-side certificates to perform authentication.

❸ **EAPOL Version -** Select the EAPOL Version.

❹ **ID -** Type the ID to identify the client in the IEEE 802.1X authentication server.

❺ **Password -** Type the Password to identify the client in the IEEE 802.1X authentication server.

❻ **Verify -** Verify Password.

❼ **CA Certificate -** Select the CA certificate required for TLS, TTLS, and PEAP authentication.

❽ **Certificate -** Select the client certificate required for TLS authentication

❾ Click 'Apply' to make above setting effective.

HTTPS Configuration

HTTPS encrypts session data over SSL or TLS protocols instead of using plain text in socket communications.

❶ **Certificate -** Select an installed certificate.
　※ If you can not select a certificate, please install the certificate from the Security->Certificates menu.

❷ **HTTPS connection Policy -** Select one of "HTTP", "HTTPS", "HTTP and HTTPS" depending on the connected web, onvif, rtsp over http.
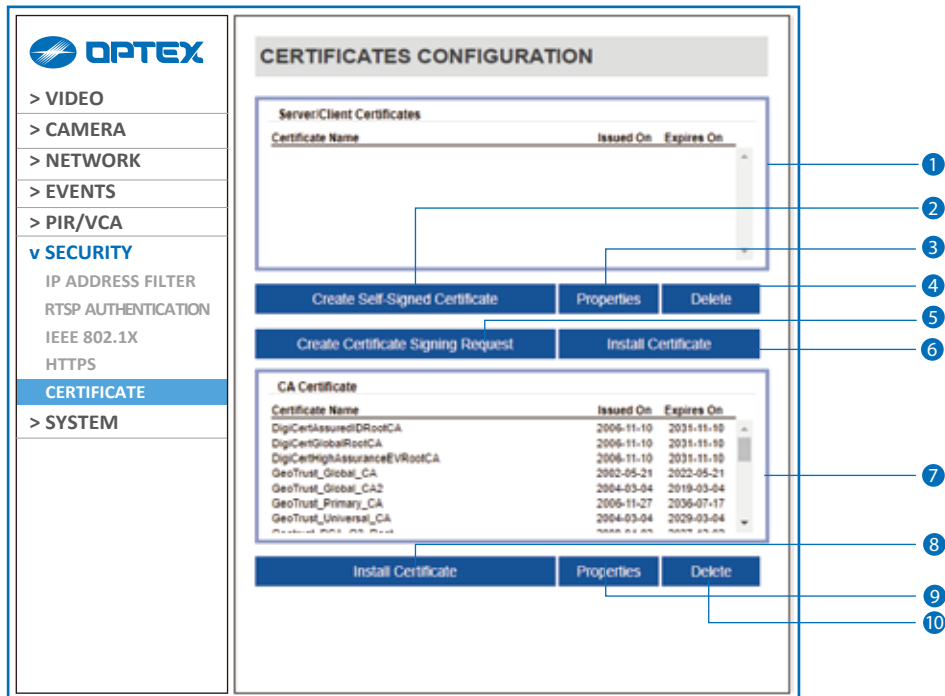
　- WEB : "HTTP" "HTTPS" "HTTP and HTTPS"
　- ONVIF, RTSP OVER HTTP : "HTTP" "HTTPS" "HTTP and HTTPS"

❸ Click 'Apply' to make above setting effective.
　※ When HTTPS mode is chosen, input https://<IP Address> to connect to the camera.

Setup - Security Setup
Certificates Configuration

❶ **Server/Client Certificates -** It show the installed certificates.

❷ **Create Self-Signed Certificate -** A self-signed SSL certificate is an identity certificate signed by its own creator. But they are considered to be less trustworthy.

❸ **Properties -** Shows information about the selected certificate.

❹ **Delete -** Delete the selected certificate.

❺ **Create Certificate signing request -** This is the encoded data that contains the necessary information for issuing the certificate.
  ※ They must be filled in when creating the CSR (Certificate Signing Request).

❻ **Install Certificate -** Install Certification

❼ **CA Certificate -** It show the installed CA certificates.

❽ **Install Certificate -** Install Certification, see the detail page.

❾ **Properties -** Shows information about the selected certificate.

❿ **Delete -** Delete the selected CA certificate.

Certificates Configuration

Detail for Install Certification.

❶ **Certificate From Signing Request -** Select to install signed certificate returned from the CA.

❷ **Certificate And Private Key -** Select to install Certificate And Private Key to install a certificate and private key.

❸ **Certificate Name -** Enter a unique name to identify certificate.

❹ **Select File -** Choose certificate file.

❺ **OK -** Request installing certificate.

❻ **Cancel -** Cancel install certificate and then back to certificates configuration.

Detail for Install CA Certification.

❼ **Certificate Name -** Enter a unique name to identify CA certificate.

❽ **Select File -** Choose CA certification file.

❾ **OK -** Request installing CA certificate.

❿ **Cancel -** Cancel install CA certificate and then back to certificates configuration.

System Information

System Capability information.

❶ **Device Name -** You can define the device name.

❷ **Location -** You can define the device location.

❸ Click 'Apply' to make above setting effective.
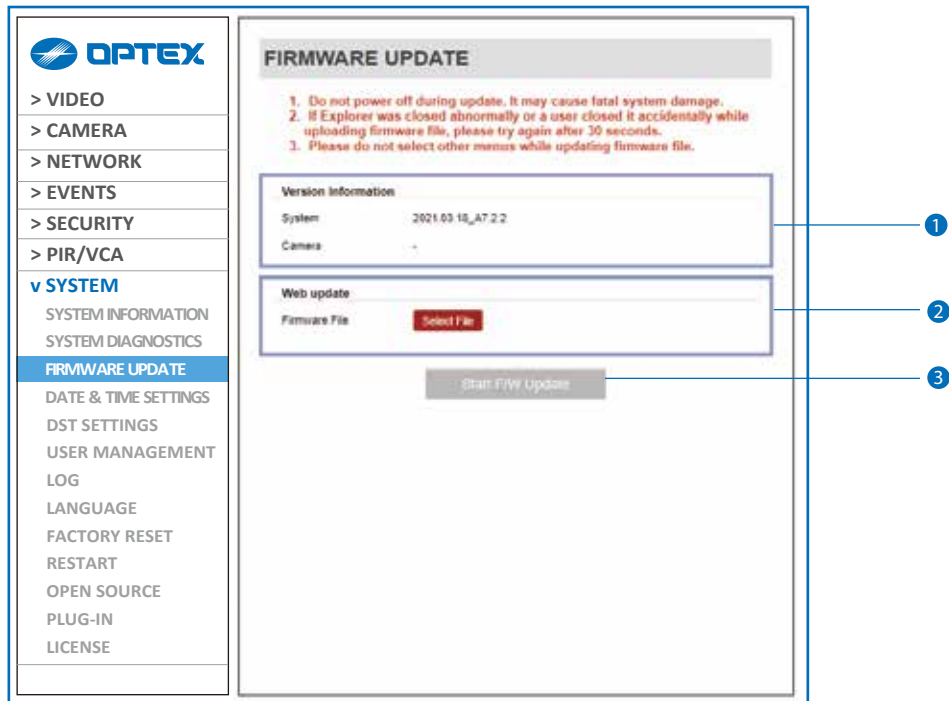
System Diagnostics
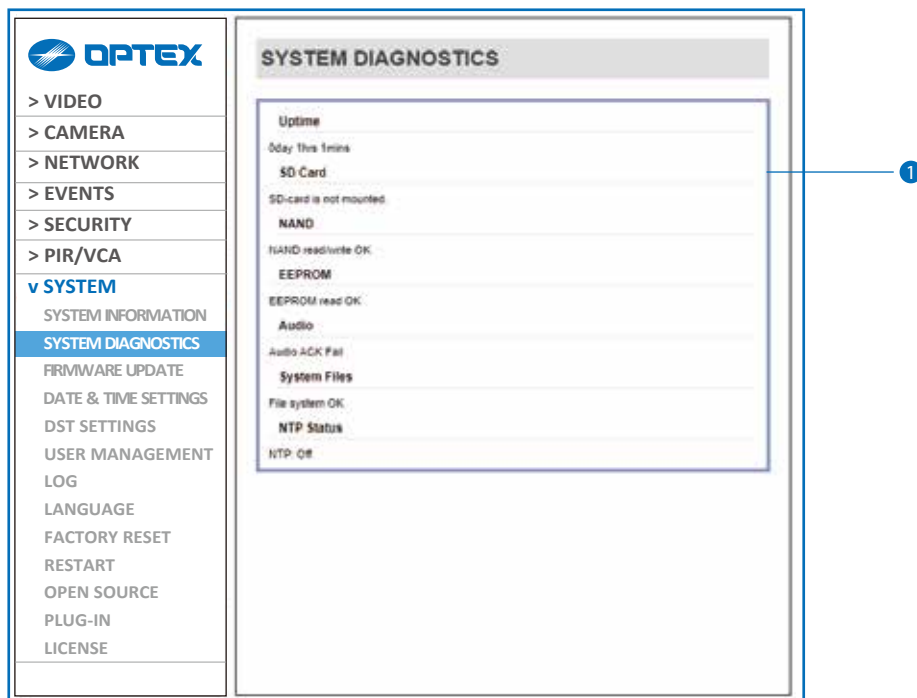
Shows basic hardware functions after inspection.

❶ Shows Uptime, SD card, NAND, EEPROM, Audio chip, Important file system and NTP Status.

Setup - System Setup
Firmware Update

❶ **Version Information -** It shows the current Firmware Version in the system.

❷ **Web Update -** Select the Firmware file in your computer by clicking [Select file] button.

❸ **Start F / W Update -** Click this button to start update. Progress of uploading will be displayed using Progress Bar. If you assign the wrong file name, an error message will be shown.

※ **Warning:**
1. Do not turn off the power of camera during the Firmware update. Otherwise, the system can be stuck to be unstable. If updating is finished, the system will be rebooted automatically.
2. Please make sure to check the 'Notice' shown on screen.
   If firmware update is completed, the camera will reboot automatically and 'Setup window' will be closed.
3. Firmware update can not be performed if there is no DHCP server in the Dynamic address setting.

Setup - System Setup
Date & Time Settings

❶ **TimeZone Setup -** Choose TimeZone for camera. It will be activated after clicking 'Apply' button.
　※ Prior to setting below 'New Camera Date & Time', set correct Timezone first.

❷ **Time Format -** Select the time format yy-mm-dd or mm/dd/yy.

❸ **Current Date & Time -** Shows the current date and time setting in the Camera.

❹ **Synchronize with my computer -** Set the date / time using those of PC currently connected.

❺ **Setup manually -** Set the date / time by typing manually.

❻ **Synchronize with time sever Time Zone (NTP) -** Choose time server available to connect to current camera.
　Date & Time will be updated automatically every hour when connected.

❼ Click 'Apply' to make above setting effective.

Setup - System Setup
DST Settings

Daylight Saving Time (DST) is the practice of setting the clocks forward one hour from standard time during the summer months, and back again in the fall, in order to make better use of natural daylight.

❶ **General Setting -** DST function can be enable or disable.

❷ **Date&Time Settings -** Set the Start time and end time that the DST apply.

❸ Click 'Apply' to make above setting effective.

Users Management
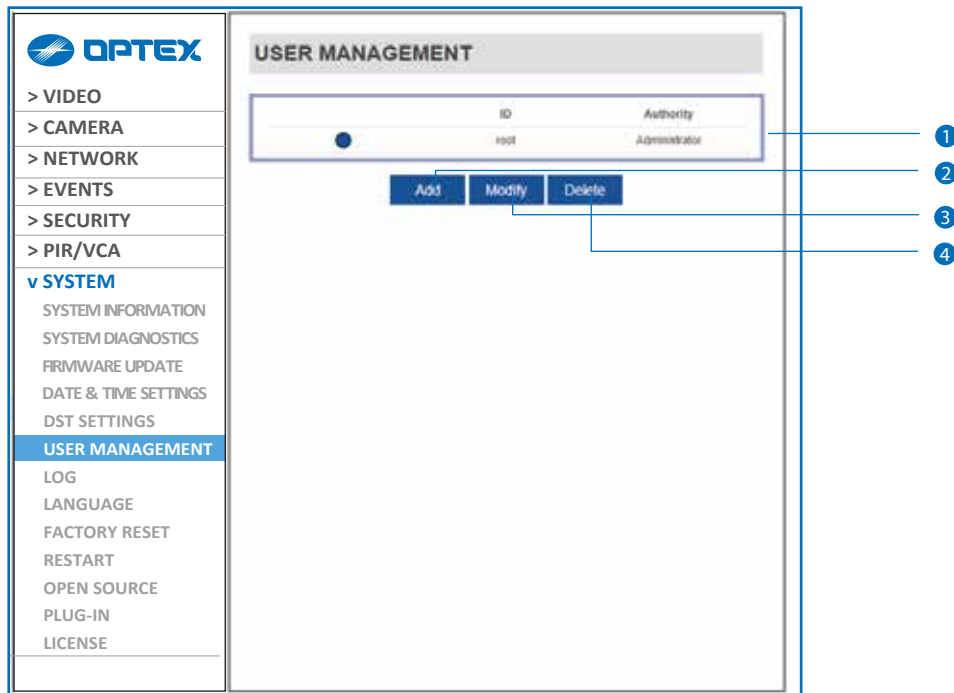
① **Users -** List all the user accounts for authentication.

② **Add -** Register a new user.

ID	Enter a new user ID except Admin since it exists.
Password	Enter the user Password. (Check the Password)
Verify	Enter the user Password again for verification.
User Authority	Select Operator or Viewer. Viewer & Operator : Only monitoring is allowed.

※ The ID is limited to 4 to 30 characters.
※ **[Password Rules]**
   Weak : 8 characters or less, less than 2 combinations
   Good : more than 8 characters, more than 3 combinations
   strong : more than 12 characters, 4 combinations
※ If it is more than 'Good', you can change your password.
   Combinations : uppercase letters, lowercase letters, numbers, special symbols.
   Acceptable special characters are ~ ' ! & ^ ( ) _ - | { } ; . ? /.

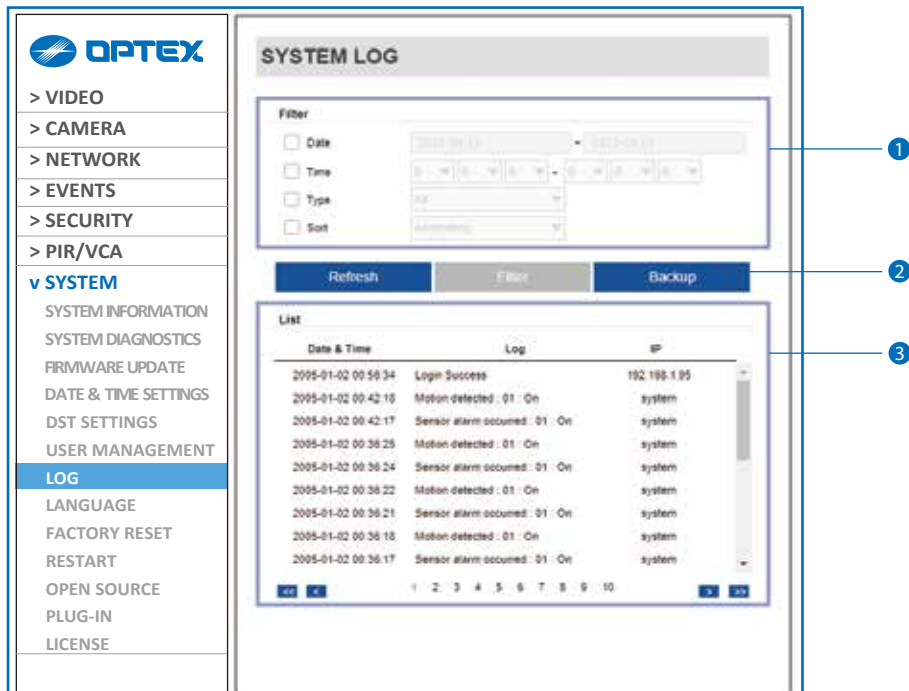Click 'Apply' to make above setting effective.
※ Click 'Cancel' to return to the previous menu.

③ **Modify -** Modify the information of the user accounts registered. For admin account, only Password function can be modified.

④ **Delete -** Delete the selected user account. Admin account cannot be deleted.

Setup - System Setup
System Log

❶ **Filter -** Select a date, time, sort or type of log to filter the log.

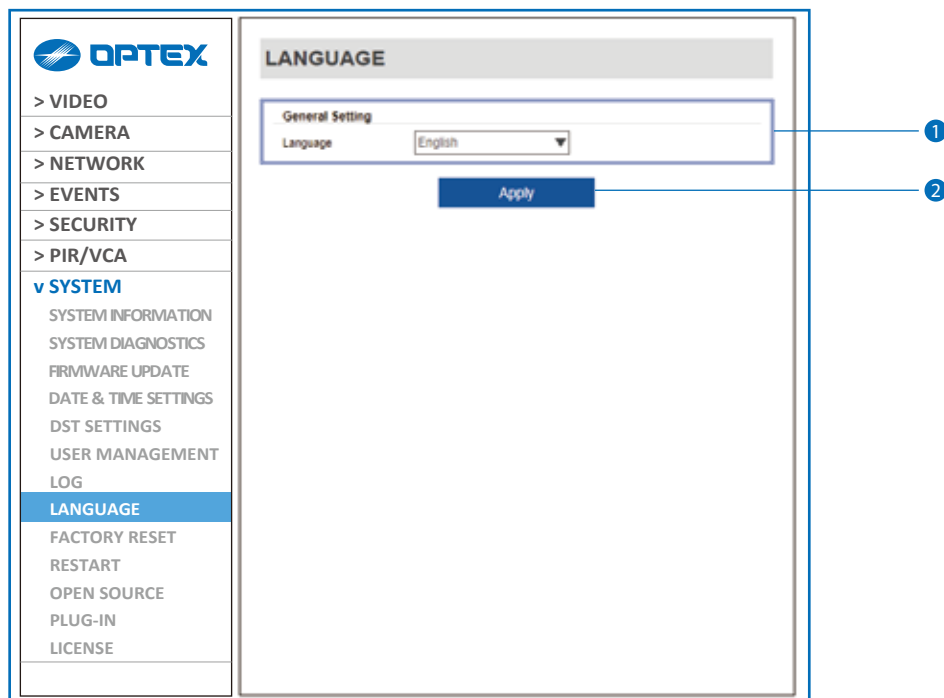❷ Click the 'Refresh' button to refresh the log list.
  ※ Click 'Filter' to view the filtered log.
  ※ Click 'Backup' to back up the filtered log.

❸ **System Log List -** The filtered log is displayed.
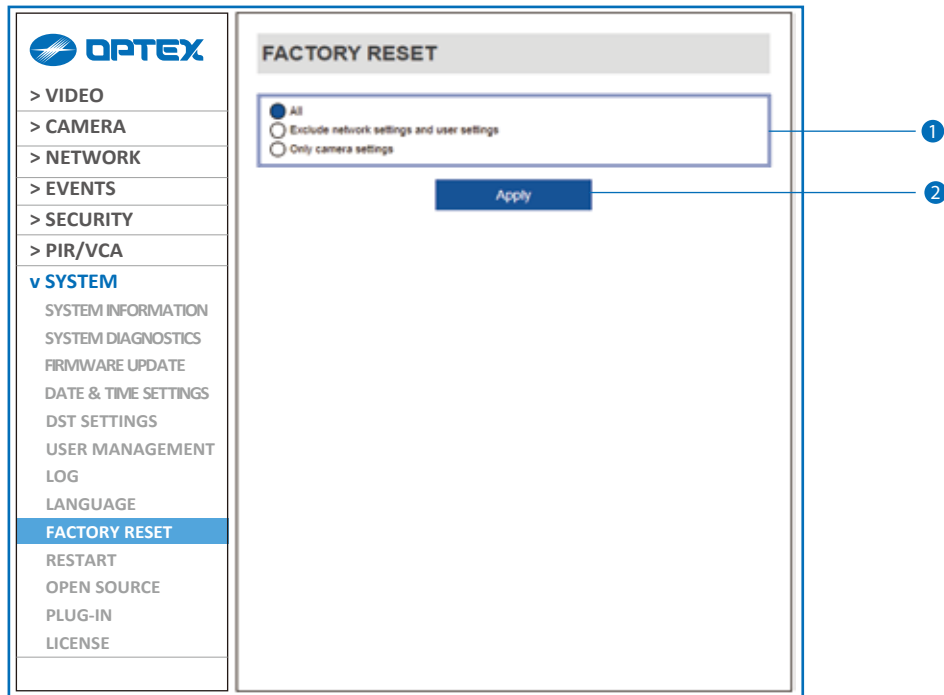
Setup - System Setup
Language

❶ **Language -** Select the language you want from the list.

❷ Click the 'Apply' to make above setting effective.

Setup - System Setup
Factory Reset

❶ **Reset to the factory defaults -** Return the setup to the factory default.

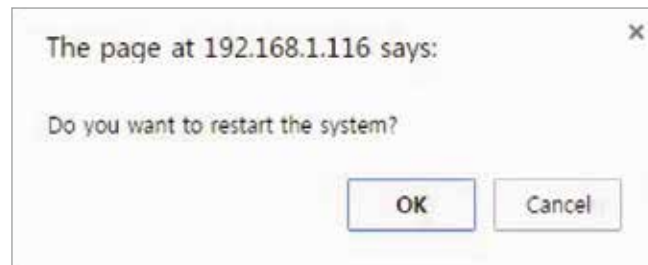**All -** Reset all Settings to the factory defaults.

Except Network Settings and User Settings - Except Network, User related settings , reset all others to the factory default.

Only Camera Settings - Reset only camera related settings to the factory defaults.

❷ Click 'Apply' to make above setting effective.

Setup - System Setup
Restart

If you click the 'RESTART' menu, a message box will be shown to confirm. Click the 'OK' button to restart.

System Open Source License

This menu will show you all the list of System Open Source License in the camera.
Open Source Name / Version / License.

Plug-in

This menu will show you all the list of plug-in programs.
Do not uninstall any of them.
If you uninstall one of them, the system will not work properly.

Appendix
A : Current TCP/IP Settings

> ⓘ If your IP settings are obtained automatically, you could use the MS-DOS prompt (or Command Prompt) to determine your IP address. For information on how to do this, please read the FAQ.

Windows 10 Users

Start

↓

Settings

↓

Network & Internet

↓

Click on Change adapter options in Ethernet

↓

Select the Ethernet, Right click and choose Properties

↓

Select Internet Protocol Ver.4 (TCP/IPv4)

↓

Click Properties
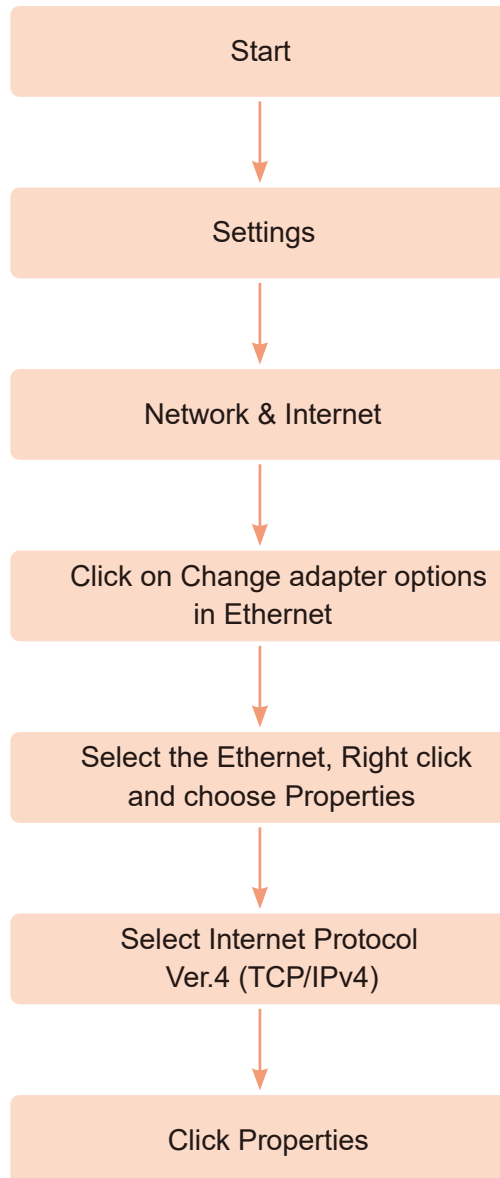
Under the 'General' tab of the TCP/IP Properties you will see your IP address information.

Appendix
B : Changing IP address and subnet mask

Windows 10 Users

```
┌─────────────────────────────────────┐
│                Start                 │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│               Settings               │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│          Network & Internet          │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│   Click on Change adapter options    │
│              in Ethernet             │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│   Select the Ethernet, Right click   │
│        and choose Properties         │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│       Select Internet Protocol       │
│          Ver.4 (TCP/IPv4)            │
└─────────────────────────────────────┘
                  │
                  ▼
┌─────────────────────────────────────┐
│            Click Properties          │
└─────────────────────────────────────┘
```
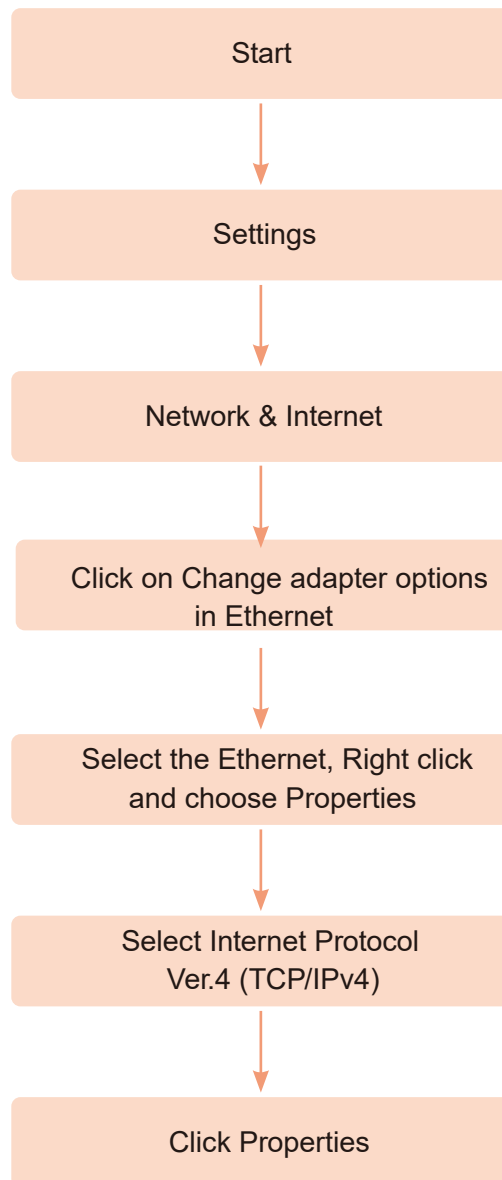
Select 'Use the following IP address'

OPTEX

OPTEX CO., LTD. (JAPAN)
www.optex.net

OPTEX INC./AMERICAS HQ (U.S.)
www.optexamerica.com

OPTEX (EUROPE) LTD./EMEA HQ (U.K.)
www.optex-europe.com

OPTEX SECURITY B.V.
(The Netherlands)
www.optex-europe.com/nl

OPTEX SECURITY SAS (France)
www.optex-europe.com/fr

OPTEX SECURITY Sp.z o.o. (Poland)
www.optex-europe.com/pl

OPTEX PINNACLE INDIA,
PVT., LTD. (India)
www.optexpinnacle.com

OPTEX KOREA CO.,LTD. (Korea)
www.optexkorea.com

OPTEX (DONGGUAN) CO.,LTD.
SHANGHAI OFFICE (China)
www.optexchina.com

OPTEX (Thailand) CO., LTD. (Thailand)
www.optex.co.th