

# EBN268 Outdoor Ball Network Camera

2-Megapixel, IR & WDR

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*User's Manual*



**EverFocus<sup>®</sup>**

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# About this document

All the safety and operating instructions should be read and followed before the unit is operated. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

## Regulatory Notices

### FCC Notice "Declaration of Conformity Information"

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Changes or modifications made to this equipment, not expressly approved by EverFocus or parties authorized by EverFocus could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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EBN268 camera complies with CE and FCC.

# Precautions

**1. Do not install the camera near electric or magnetic fields.**

Install the camera away from TV/radio transmitters, magnets, electric motors, transformers and audio speakers since the electromagnetic fields generated from these devices may distort the video image or otherwise interfere with camera operation.

**2. Never disassemble the camera beyond the recommendations in this manual nor introduce materials other than those recommended herein.**

Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.

**3. Try to avoid facing the camera toward the sun.**

In some circumstances, direct sunlight may cause permanent damage to the sensor and/or internal circuits, as well as creating unbalanced illumination beyond the capability of the camera to compensate.

**4. Keep the power cord away from water and other liquids and never touch the power cord with wet hands.**

Touching a wet power cord with your hands or touching the power cord with wet hands may result in electric shock.

**5. Never install the camera in areas exposed to oil, gas or solvents.**

Oil, gas or solvents may result in equipment failure, electric shock or, in extreme cases, fire.

**6. Cleaning**

For cameras with interchangeable lenses, do not touch the surface of the sensor directly with the hands. Use lens tissue or a cotton tipped applicator and ethanol to clean the sensor and the camera lens. Use a damp soft cloth to remove any dirt from the camera body. Please do not use complex solvents, corrosive or abrasive agents for cleaning of any part of the camera.

**7. Do not operate the camera beyond the specified temperature, humidity or power source ratings.**

Use the camera at temperatures within  $-10^{\circ}\text{C} \sim 50^{\circ}\text{C}$  /  $14^{\circ}\text{F} \sim 122^{\circ}\text{F}$ , and humidity between 20% and 80%; this device is not rated as submersible. The input power source is 12 VDC / PoE. Be sure to connect the proper + / - polarity and voltage, as incorrect polarity or too high a voltage will likely cause the camera to fail, and such damage is not covered by the warranty. The use of properly fused or Class 3 power limited type supplies is highly recommended.

**8. Mounting**

Use care in selecting a solid mounting surface which will support the weight of the camera plus any wind, snow, ice or other loading, and securely attach the camera to the mounting surface using screws and anchors which will properly support the camera. If necessary (e.g. when mounting to drop ceilings) use a safety wire to provide additional support for the camera.

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## 1. Introduction

The EBN268 is a 2-megapixel outdoor ball IP camera, providing 30 fps at 1920 x 1080 viewing resolution. The camera supports dual streams from H.264 and MJPEG video compression formats. Equipped with weather-resistance (IP66) housing plus **36** IR LEDs for enabling the night visibility of up to 30 meters, the camera meets a wide variety of needs for outdoor surveillance. Power over Ethernet (IEEE 802.3af) supplies power to the camera via the network for easy installation with only one cable, eliminating the need for power cables and reducing installation costs. EBN268 conforms to ONVIF / PSIA for compatibility with other network video devices – even from other manufacturers. You can also use EverFocus Mobile Applications to remotely view the live views of the cameras through your handheld devices; or use EverFocus CMS to remotely manage multiple IP devices connected on the network.

### System Requirement

Before installing, please check that your computer meets these system requirements.

- Operating System: Microsoft Windows XP / Vista (32-bit) / 7 (32-bit)
- Microsoft Internet Explorer 7 or above

**Note:** For using the Internet Explorer, some settings are required. Please refer to *5.2 Settings for Microsoft Internet Explorer*.

## 2. Physical Description



No.	Item Name	Descriptions
1	IR LEDs	36 IR LEDs for infrared illumination in night vision applications.
2	Lens	Fixed lens.
3	Light Sensor	Detects lights.
4	RJ-45 Connector Cable	Used to connect to a LAN/PoE cable.
5	12 VDC Cable	Used to connect to the power supply.

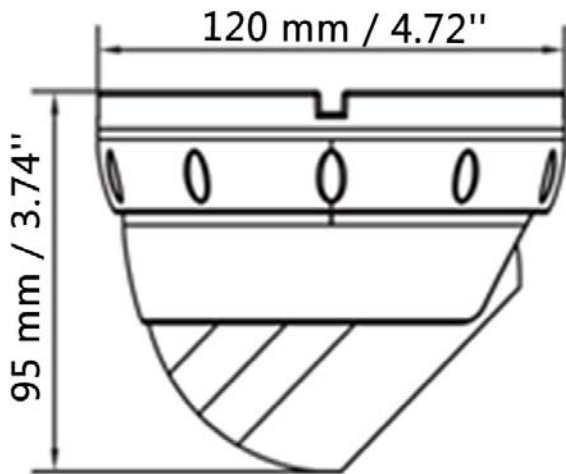
### Cable Connection



Cable Name	Description
Power Cable	Connects to the 12 VDC power source. You can optionally use the supplied Power Adapter Pigtail or a power adapter.
Power Adapter Pigtail	Connects one end to the Power Cable, and the other end to the 12 VDC power source (black wire to ground end; red to positive end).



## 2.1 Dimensions



## 3. Features

- 1/2.8" HD color CMOS image sensor delivers high resolution, and supports both H.264, MPEG-4 and M-JPEG in full frame rate
- Wide dynamic range
- Provides true day / night functionality with automatic IR filter operation
- Multi profiles settings for allows choice of image quality to fit the environment
- High performance noise filter improves image quality
- IP66 Weather Resistant
- Extended IR range of up to 30 m / 98.4 ft. with 36 LEDs
- Dual power capability PoE or 12 VDC for flexible installation
- Supports live monitoring of video from mobile devices via MobileFocus / MobileFocus Plus apps (iOS and Android)
- ONVIF / PSIA compliant

## 4. Installation

### 4.1 Packing List

Please check that there is no missing item in the package before installing.

- Camera x 1
- Screw x 4
- Screw Anchor x 4
- Set Screw x 3
- Software CD x 1
- Power Adapter Pigtail x 1
- Hexagon Wrench x 1 (for adjusting camera angle)
- Cable Gland and Screw Cap x 1  
(with one conduit on the inner stopper)
- Sticker x 1
- Quick Installation Guide x 1
- Waterproof Ring x 1

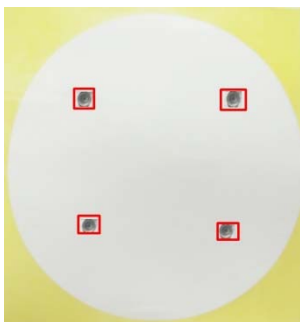
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**Note:**

1. Equipment configurations and supplied accessories vary by country. Please consult your local EverFocus office or agents for more information. Please also keep the shipping carton for possible future use.
  2. Contact the shipper if any items appear to have been damaged in the shipping process.
-

**4.2 Basic Installation**

1. Before screwing the camera to the wall, stick the Sticker on the wall / ceiling to mark the position for installation. Drill four holes on the wall / ceiling according to the supplied Sticker and push the supplied four Anchors into the four holes on the wall / ceiling.



2. Twist the Outer Housing counterclockwise and then remove the Outer Housing from the camera base.



3. Place the camera base on the wall / ceiling and run the cable through the camera base first. Use the supplied four Screws to screw the camera base to the ceiling / wall.



4. Adjust the camera angle and twist back the Outer Housing simultaneously.
5. Optionally screw back the Set Screw by using the supplied Hexagon Wrench to prevent uninstallation.



6. Connect the LAN / PoE cable to the camera.
  - a. Remove the Screw Cap from the Cable Gland.



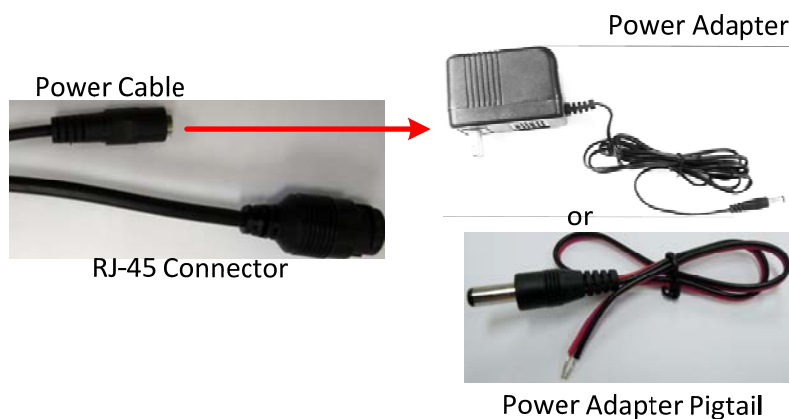
- b. Insert a RJ-45 network cable (without the RJ-45 connector on the one end) through the Cable Gland and Screw Cap.



- c. Place the Waterproof Ring into the LAN/PoE cable. Connect the RJ-45 cable to the RJ-45 Connector Cable. Tightly screw the Cable Gland and Screw Cap to the RJ-45 Connector Cable.



7. Optionally connect the camera to the 12 VDC power source using the supplied Power Adapter Pigtail or a power adapter.




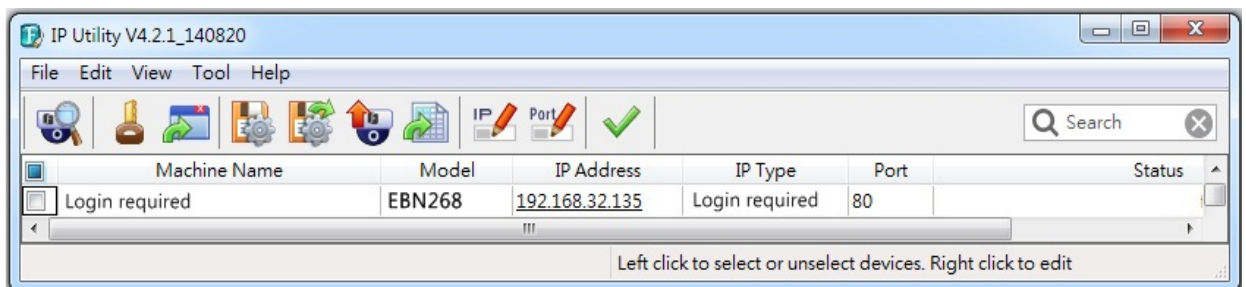
## 5. Accessing the User Interface

This section explains how to access the Web interface of the camera for configuration.

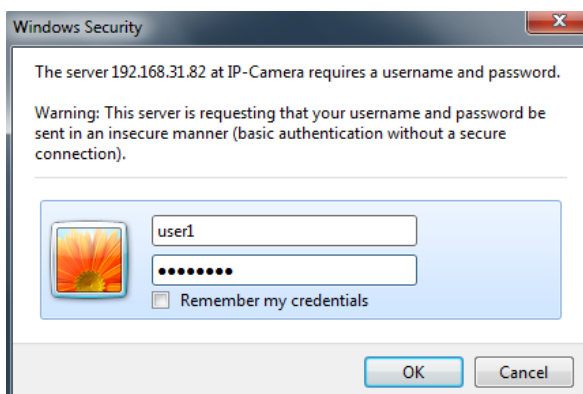
### 5.1 Checking the Dynamic IP Address

You can look up the IP address and access the Web interface of the camera using the **IP Utility (IPU)** software included in the software CD or from the Website of EverFocus (click [here](#) to download). Please connect the IP camera in the same LAN of your computer.

1. Save **IP Utility Setup AutoRun.exe**  in your computer. Double click the **.exe** file and follow the on-screen instructions. Check **Run IPUtility.exe** and click the **Finish** button, the IP Utility will be launched to search the IP devices connected in the same LAN automatically.




2. To access to the Live View window, double click the IP address of the desired device, the login window pops up. Type the user ID and password to log in. By default, the user ID is **user1** and the password is **11111111**.

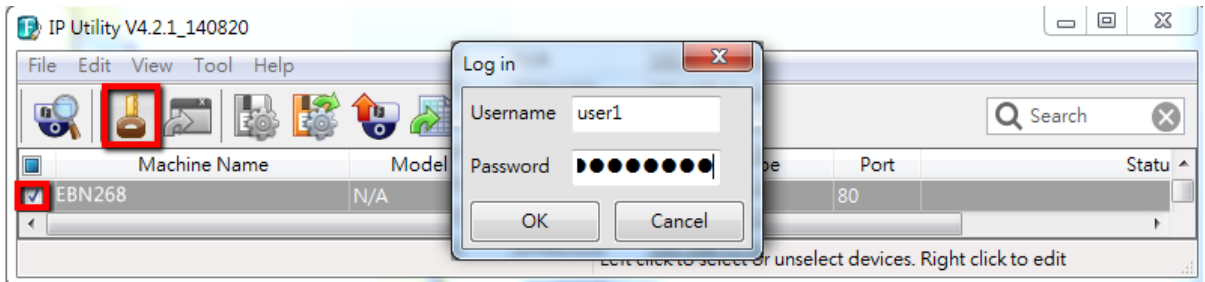


- Click **OK**, the Live View window appears.

**Note:**

- You might be required to download **ActiveX** for viewing the camera feed. If asked, click **Yes**.
- To enable Remote Live View, Firmware Upgrade and ActiveX Prompt on Internet Explorer, some settings have to be complete. Please refer to *5.2 Settings for Microsoft Internet Explorer* in the *User's Manual*.

- To optionally configure the Machine Name, IP Address, IP Type or Port Number using the IPU:
  - Log in the camera by checking the desired model and then click the **Log in**  icon. The Log in dialog box appears.




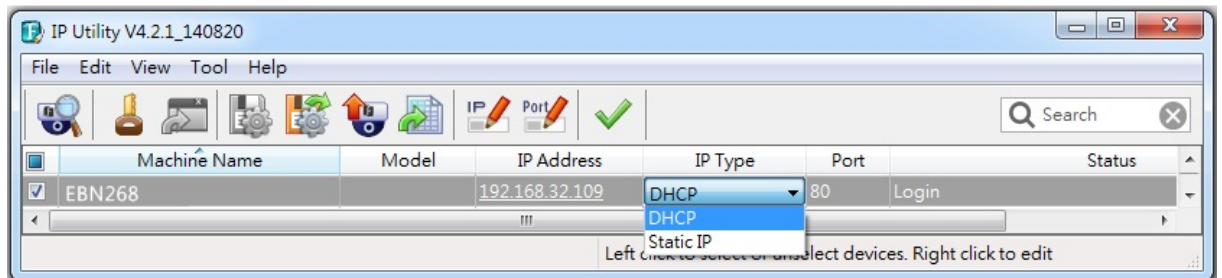
- Type the Username and Password. Click the **OK** button, the **Login** status displays.

	Machine Name	Model	IP Address	IP Type	Port	Status
<input checked="" type="checkbox"/>	EBN268	N/A			80	Login

**Note:**

- The default user ID is **user1** and the default password is **11111111**.
- If you select more than one camera that has the same user ID / password, you will be able to log in several cameras at once.

- Right click the column to configure the settings. Click the **Apply Changes**  button to apply and save the settings.



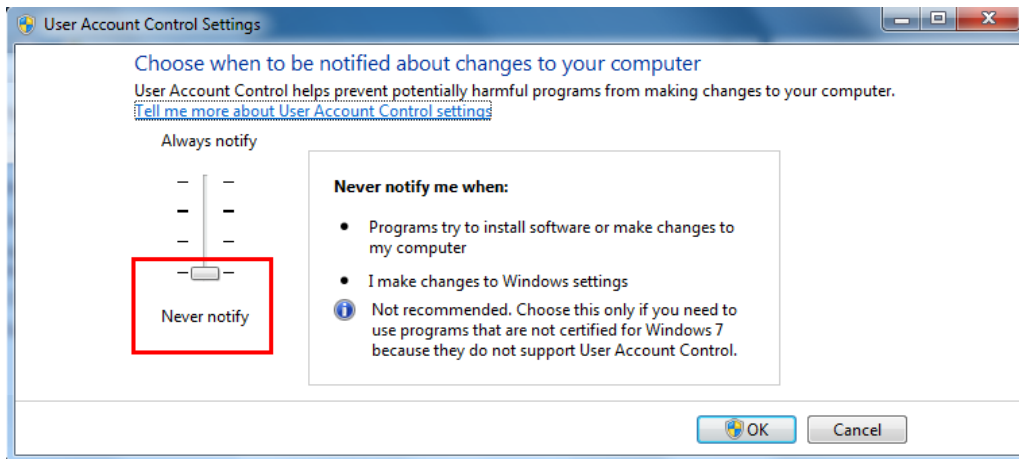
**Note:**

- Most networks uses DHCP to assign IP address, if you are unsure of your network settings, please consult your network administrators for configuration details.
- If you want to set up PPPoE, please refer to *6.1.1 Network*.

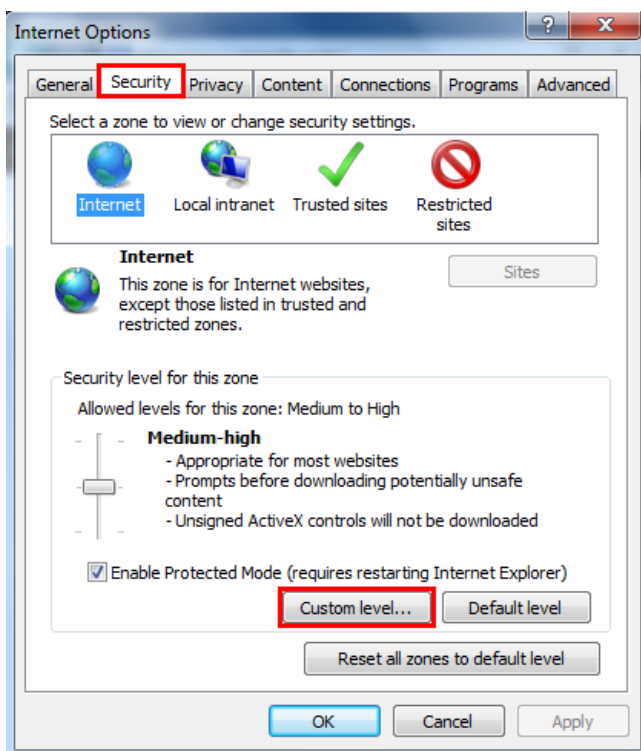
## 5.2 Settings for Microsoft Internet Explorer

To enable Remote Live View, Firmware Upgrade and ActiveX Prompt on Internet Explorer, some settings have to be complete. Please follow the steps below:

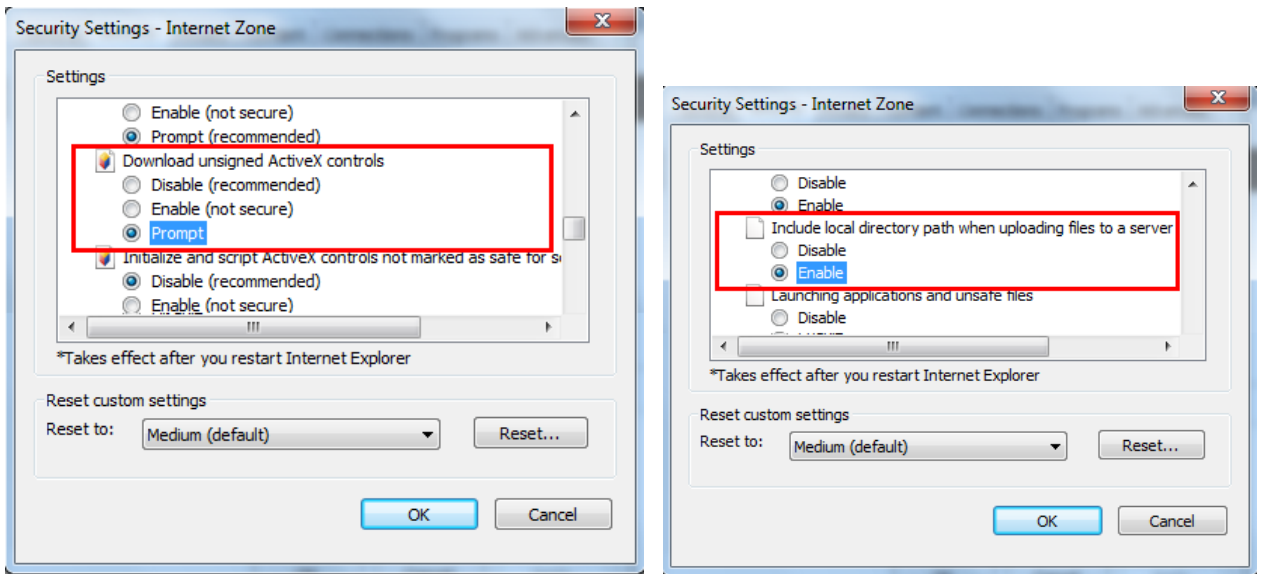
1. On the computer, click Start > Control Panel > System and Security > Action Center (click Change User Account Control Settings), the **User Account Control Settings** window appears. Adjust the slide bar to **Never Notify** and then click **OK**. Restart your computer if requested.



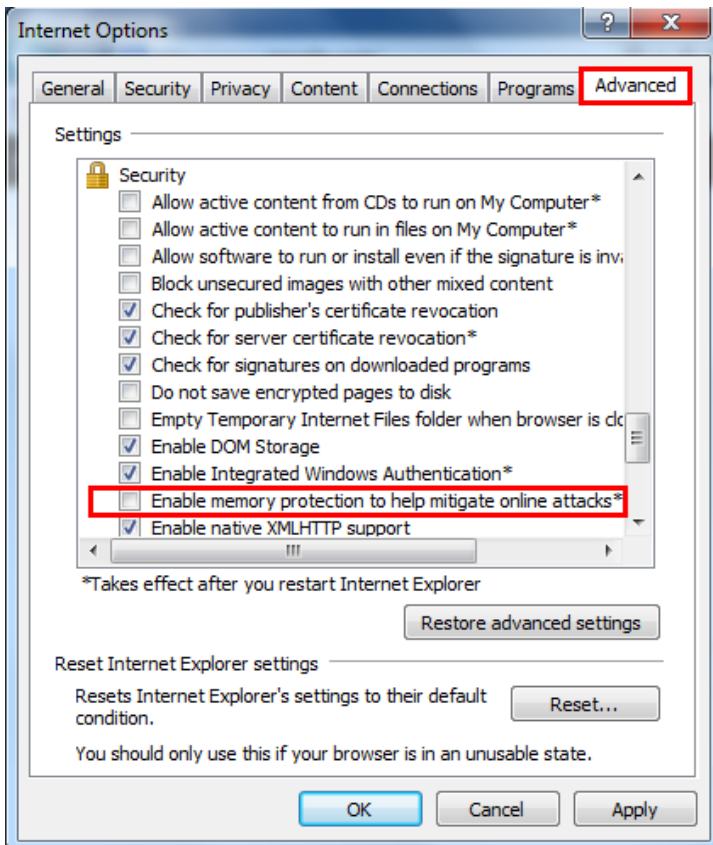
2. Open the Internet Explorer, click Tools > Internet Options > Security Tab > Custom Level, the **Security Settings** windows appears.



- In the **Download unsigned ActiveX controls** field, select **Prompt**. In the **Include local directory path when uploading files to a server** field, select **Enable**. Click **OK**.



- In the Internet Options window, click the **Advanced** tab and then disable **Enable memory protection to help mitigate online attacks**. Click **OK**.



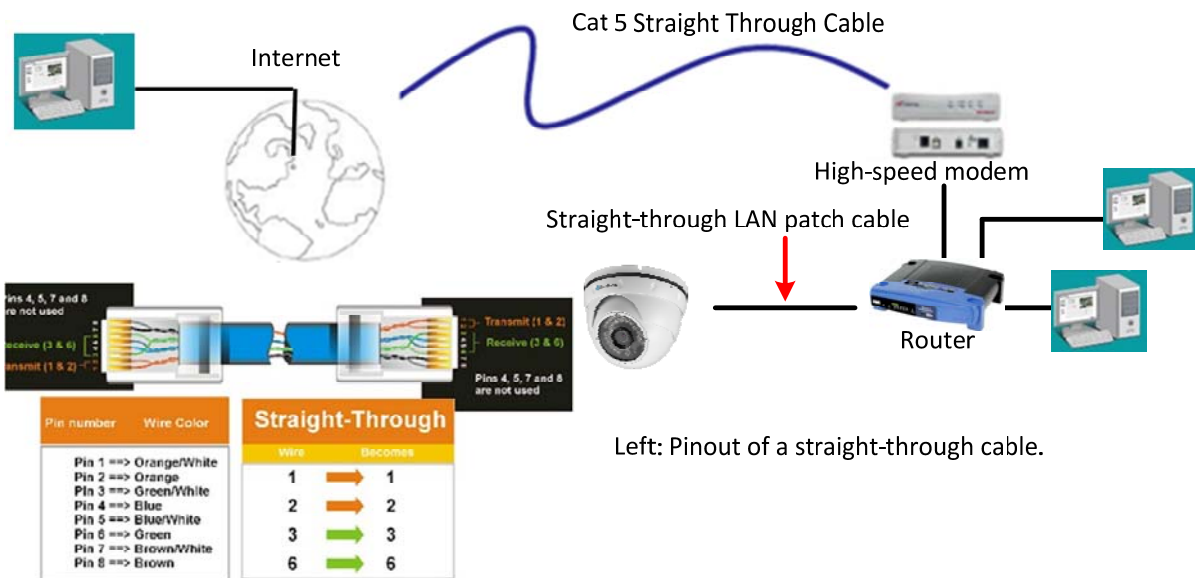


### 5.3 Connecting the Camera to the Network

There are three methods to connect the IP camera to the network: **Router or LAN Connection**, **Direct High-Speed Connection** and **One-to-One Connection**.

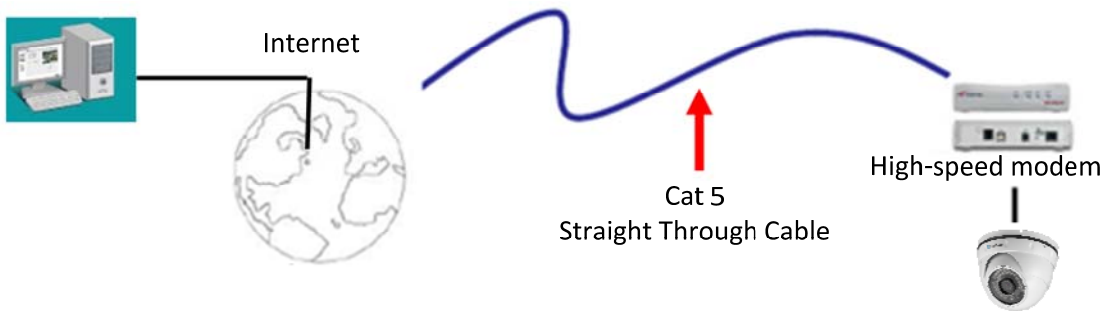
#### Router or LAN connection

This is the most common connection in which the IP camera is connected to a router and allows multiple users on and off site to see the IP camera on a LAN/WAN (Internet). The camera must be assigned an IP address that is compatible with its LAN. By setting up port forwarding on the router, you can remotely access the cameras from outside of the LAN via the Internet. To remotely access the Web interface of the IP camera, please refer to 6.1.1 DDNS. To set up port forwarding, please consult the manual of the router.



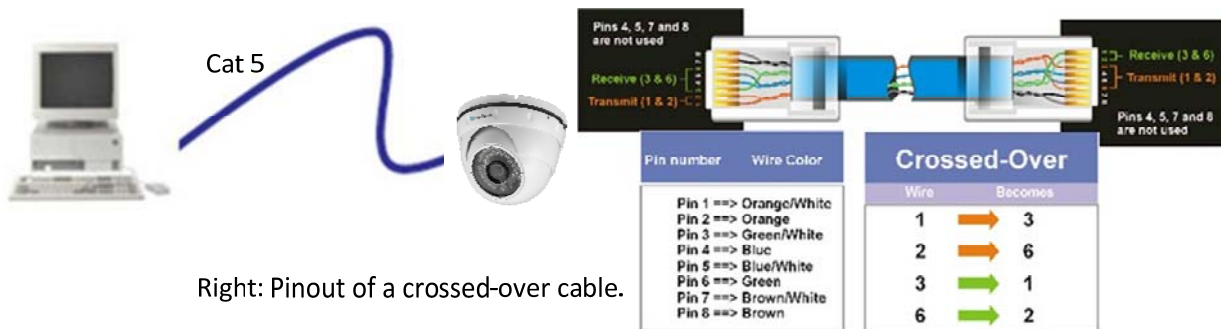
**Direct High-Speed Connection**

In a Direct High-Speed Connection, the camera connects directly to a modem without the need for a router. You need to set the static or dynamic WAN IP address assigned by your ISP (Internet Service Provider) in the camera’s configuration web pages. To access the camera, just type “http://xxx.xxx.xxx.xxx”, where xxx.xxx.xxx.xxx is the IP address given by your ISP. If you have a dynamic IP address, this connection may require that you use DDNS for a reliable connection. Please refer to 6.1.1 DDNS.



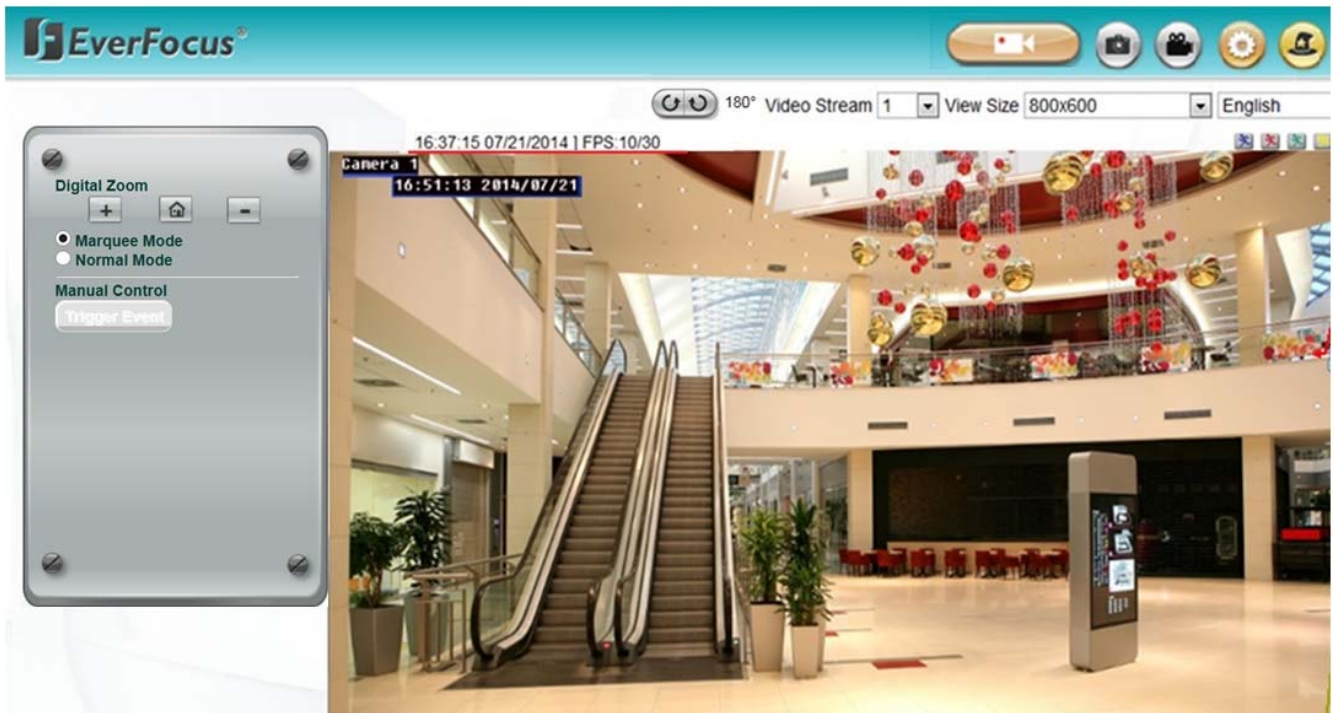
**One-to-One Connection (Directly from PC to IP Camera)**

You can connect directly without using a switch, router or modem. However, only the PC connected to the camera will be able to view the IP camera. You will also have to manually assign a compatible IP address to both the computer and the IP camera. Unless the PC has another network connection, the IP camera will be the only network device visible to the PC. See the diagram below:



Right: Pinout of a crossed-over cable.

5.4 Live View Window



1. **Live View** 

Click the **Live View** button to display the Live View window. If you experience video feed lag time (if connected via Internet), you can reduce the resolution or limit the number of streams. See 6.2.1 *Streaming*.

2. **Snapshot** 

Click the **Snapshot** button to take a snapshot.

**Note:** For Microsoft IE10 and above users, some settings have to be complete to enable this function (see *B. Snapshot/Record error message* in 9. *Troubleshooting*).

3. **Record** 

Click the **Record** button to start / stop recording the current video stream. By default, this icon is only for one-minute video recording and the recordings will be saved at C:\EverFocus\. To change the recording time, see *File Size* in 6.1.3 *Storage*. To change the location, see *Record to Local* in 6.1.3 *Storage*. To record long-period recordings, please set up a recording schedule (*Schedule Settings* in 6.3.2 *Event*). To change the source video stream and recording format, see *Recording and Snapshot Settings* in 6.1.3 *Storage*.


**Note:** For Microsoft IE10 and above users, some settings have to be complete to enable this function (see *B. Snapshot/Record error message* in 9. *Troubleshooting*).

4. **Setting** 

Click the **Setting** button to enter the Settings page (see 6. Settings).

5. **Wizard** 

Click the **Wizard** button to enter the Setup Wizard.

6. **Hallway Display (9:16):** Click the **Rotate** button  to rotate the live image. This function allows users to monitor vertically-oriented areas such as hallway, corridors and aisles.



**Note:** To achieve the best 9:16 display effect, it's recommended to:

1. Install the camera sideways by rotating the camera to the left or right by 90°.



2. Select a 16:9 View Size (e.g. 1920x1080 / 1024x768).
3. Use the Rotate button.

7. **Video Stream**

Select the Video Stream (Stream 1 and Stream 2) that will be displayed in the live view window on the bottom. (see 6.2.1 Streaming). The default setting is Stream 1 only. If extra streams required, EverFocus can customize the settings.

**8. View Size**

Use this to select the appropriate view size and shape of the live view window on the bottom. A smaller size might increase transmission speed and video quality.

**9. Language**

Click the Language drop-down list to select the desired language.

**10. Digital Zoom**

Click the zoom in / zoom out buttons or roll the mouse wheel to zoom in / out the camera live view. Click the Home button to go back to the home position.

Marquee Mode: Select this mode to drag around a portion of the live view window you want to zoom into with your mouse.

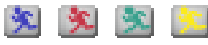
Normal Mode: Select this mode to set the zoom level in the magnified window. Clicking on the magnified image will re-center the image around that point.

**11. Status Display (info line that can be placed above video box or at bottom of page)**

This shows the name of the camera that is currently active or being configured, current date/time and current frame rate. You can activate these info displays in the Overlay Text Settings (see 6.1.4 *Display and Overlay*).


**12. Event signal icons (above video screen)**

When a motion event is triggered, a signal icon will appear at the top right of the Live View window to alert the user.

Motion detection icons  : The colors of these motion event icons correspond to the colors of the motion trigger areas you have configured in the Motion Settings (see 6.3.2 *Event*).

Recording icon  : When the camera is recording to a PC-based folder, this icon appears.

## 6. Settings

Click the **Setting**  button on the Live View Window to enter the setting submenu. There are two tabs: Basic and Advanced on the left-side bar. You can set up the basic camera settings in the **Basic** tab. To further set up comprehensive camera settings, click the **Advanced** tab, which includes all the settings to be configured. The chapters below describe the detailed information of the Advanced tab.



The screenshot displays the 'Advanced' settings tab for a camera. The left sidebar contains a navigation menu with sections for System Settings, Camera Settings, and Event Settings. The main content area is divided into three sections: Protocol Settings, IP Settings, and Port Settings.

**Protocol Settings:** Includes radio buttons for RTP over UDP, RTP over TCP, RTP over HTTP, and CGI (which is selected). 'Apply' and 'Cancel' buttons are present.

**IP Settings:** Includes radio buttons for IP Mode: DHCP (selected), Static IP, and PPPoE. It contains input fields for IPv4 (IP Address: 192.168.33.196, Subnet Mask: 255.255.255.0, Gateway: 192.168.33.254, Primary DNS: 192.168.10.188, Secondary DNS: 192.168.10.189, Username, Password) and IPv6 (IP Address: fe80:0:0:0:25a:20ff:fe38:9909 / 64, Gateway: fe80:0:0:0:0:0:0:0, Primary DNS: 0:0:0:0:0:0:0:0). 'Apply' and 'Cancel' buttons are present.

**Port Settings:** Includes input fields for HTTP Port (80), HTTPS Port (443), and RTSP Port (554). There is a checkbox for 'Enable UPnP Port Forwarding' which is unchecked. 'Apply' and 'Cancel' buttons are present.

6.1 System Settings

6.1.1 Network

Basic / Advanced

**System Settings**

Network

Date/Time

Storage

Display and Overlay

System Maintenance

System Information

User

Black/White List

**Camera Settings**

Streaming

Profile

Camera

Schedule

Image

**Event Settings**

Event Wizard

Event

Notification

[Link to Smart Phone App](#)

### Protocol Settings

RTP over UDP  
 RTP over TCP  
 RTP over HTTP  
 CGI

Apply Cancel

---

### IP Settings

IP Mode:  DHCP  Static IP  PPPoE

IPv4

IP Address:

Subnet Mask:  Gateway:

Primary DNS:  Secondary DNS:

Username:  Password:

Apply Cancel

IPv6

IP Address:  /E4

Gateway:

Primary DNS:

---

### Port Settings

HTTP Port:

HTTPS Port:

RTSP Port:

Apply Cancel

Enable UPnP Port Forwarding

---

### Multicast Settings

Enable Multicast

Port:  Multicast IP:

Time to Live:

Apply Cancel

---

### DDNS Settings

Enable Service ISP

www.everfocusddns.com

IP Camera Name:  .everfocusddns.com

Apply Cancel

www.sitelutions.com  www.dyndns.com  www.no-ip.com

Record ID:  FQDN:

Username:  Password:

---

### HTTPS Settings

Create Certificated Mode:  Self-signed Certificated  Certificate Request

Country Name:

State or Province Name:

Locality Name:

Organization Name:

Organization Unit Name:

Common Name:

Email:

Validity:  Day

Apply Cancel

Created Request:

Install Signed Certificated:

Install Certificated Info:

Property Information

---

### QoS Settings

Enable QoS/DSCP

Live video:

Live audio:

Event/Alarm:

Management:

Apply Cancel

**【Protocol Settings】** You can transmit the data stream from the IP cameras using the RTSP (Real Time Streaming Protocol) on the network. The RTSP is a protocol that allows you to access video streams by using the compatible media players. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

- **RTP over UDP:** The RTSP protocol uses UDP for camera data stream transmission.
- **RTP over TCP:** The RTSP protocol uses TCP for camera data stream transmission.
- **RTP over HTTP:** The RTSP protocol uses HTTP for camera data stream transmission.
- **CGI:** use CGI for camera data stream transmission.

**【IP Settings】** Enter the IPv4 / IPv6 details in this area, which applies to your system. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

■ **IPv4:**

**IP Mode:** Refer to the network administrator for these settings of the server. **Default: DHCP.**

- **DHCP:** This setting lets the system use an automatically assigned (dynamic) IP address. This address can change under certain circumstances. For instance, when the camera's network switch/hub has to be rebooted. Do not assign to the DHCP server the same IP addresses used for the other network cameras and PCs with unique IP addresses.
- **Static IP:** The user can manually set the Static IP address. This type of address is stable and cannot change, but the user has to make sure there are no address conflicts with other network-connected devices.
- **PPPoE:** This is a DSL-connection application. The ISP will ask the user to input a username and password. Contact your ISP for these details.

**IP address:** When DHCP is not used, the user needs to manually enter the IP address of the camera. Do not enter an IP address that is already used for your computer or other network cameras.

**Subnet Mask:** This field is used to set the subnet mask for your network, so that the IP camera will be recognized within the network. Example: 255.255.255.0. When DHCP is selected, the DHCP server will assign this value automatically.

**Gateway:** This field is used to set the gateway for your network so that the IP camera will be recognized within the network. When DHCP is selected, the DHCP server will assign this value automatically.

**Primary DNS:** Enter the IP address of the DNS server if this is provided by an ISP.

**Secondary DNS:** If your ISP provided you with a secondary DNS address, please enter it here.

**Username:** Enter the account's username (used only for PPPoE).

**Password:** Used only for PPPoE.

- **IPv6:** Enter the IPv6 details in this area, if this applies to your system.



**【Port Settings】** Enter the HTTP, HTTPS and RTSP port numbers. Check the **Enable UPnP Port Forwarding** box to enable the UPnP function. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

Promoted by the UPnP Forum (Universal Plug and Play), the UPnP is a networking architecture providing compatibility among networked devices listed in the networked device table. Enable the UPnP function means you can directly connect the cameras listed in the networked device table by clicking on them.

**Note:**

1. For the UPnP function to work, an UPnP-enabled router is required.
2. The UPnP function may fail owing to the compatibility between the camera and the router.

**【Multicast Settings】** Enable if required, fill in the setting options and click **Apply** to save. For more details, please refer to *Appendix Enabling the Multicast Function*.

**Enable Multicast:** Check the box to enable the Multicast function.

**Multicast IP:** Fill in the multicast IP address. IP addresses in the range of 224.0.0.0 through 239.255.255.255 are reserved for multicasting. For devices, you can use 225.x.x.x - 232.x.x.x and 234.x.x.x - 238.x.x.x. Click [here](#) for more details.

**Port:** Change the port number if necessary. The port number has set to 50000 by default.

**Time to Live:** Input a Time-To-Live (TTL) value. The TTL value specifies the number of routers (hops) that multicast traffic is permitted to pass through before expiring on the network.

**【DDNS Settings】**This function can only be set up in the **Advanced** tab. DDNS (Dynamic Domain Name System) is a service used to map a domain name to the dynamic IP address of a network device. You can set up the DDNS service for remote access to the IP camera. DDNS assigns a domain name (URL) to the IP camera, so that the user does not need to go through the trouble of checking if the IP address assigned by DHCP Server has changed. Once the IP is changed, the IP camera will automatically update the information to the DDNS to ensure it is always available for remote access. Before enabling the following DDNS function, user should have applied for a host name from the DDS service provider’s website. We support these four DDNS server providers: [www.everfocusddns.com](http://www.everfocusddns.com), [www.sitelutions.com](http://www.sitelutions.com), [www.dyndns.com](http://www.dyndns.com), and [www.no-ip.com](http://www.no-ip.com)

**Note:** We highly recommend that you use [xxx.everfocusddns.com](http://xxx.everfocusddns.com) for the simplicity of setting up your IP cameras.

- **Enable Service ISP:** Check this box to enable the DDNS function. You can either apply for a host name from **EverFocus** or **other DDNS server providers**.
  - **From EverFocus:** If you choose the EverFocus DDNS server, you can obtain a free host name from EverFocus. To obtain a free host name from EverFocus, type a desired host name in the textbox, click the **Register / Update** button, and then click the **Apply** button.

- **From other DDNS server providers:** To obtain a domain name from one of the three DDNS server providers, you have to register your name with the provider first, and then select the provider and fill in the required information. Please refer to the specific DDNS company’s website for further information.

Record ID: Type the record ID if provided by the DDNS server provider.

FQDN: Type the fully qualified domain name applied from the DDNS server provider. For example, xxxx.dyndns.com

Username / Password: Type the login account of your DDNS server provider.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**Note:**

1. In order to support the full functionality of the camera, you must open the port numbers (80, 554, 443) on the router for remote access to the IP camera. This function is available on most routers in the market and is often known as “Port Forwarding”. To set up Port Forwarding, please consult the manual of the router.
2. In certain router models, it is possible that you will not be able to access the camera using DDNS while inside the router’s network. Please try using a PC located outside of your router’s network.

**Default Ports on All EverFocus IP Cameras:**

HTTP: 80

RTSP: 554

HTTPS: 443

**【HTTPS Settings】** This function can only be set up in the **Advanced** tab. Hypertext Transfer Protocol Secure (HTTPS) is a combination of the Hypertext Transfer Protocol and the SSL/TLS protocol that provides encrypted communication and secure identification of a network web server. Before using the HTTPS function for communication with the IP camera, a Certificate must be created first. There are two ways to create and install a certificate: **Self-Signed Certificated** and **Certificate Request**.

**Self-Signed Certificated**

Please note that even though self-signed certificates are free and offer some protection, true security is only implemented after the installation of a signed certificate issued by a certificate authority.

1. Select **Self-Signed Certificated** and fill in the following information.

Create Certificated Mode	<input checked="" type="radio"/> Self-signed Certificated <input type="radio"/> Certificate Request
Country Name	TW
State or Province Name	TPE
Locality Name	TPE
Organization Name	EF
Organization Unit Name	PM
Common Name	1
Email	everfocus@everfocus.c
Validity	7 Day

2. Click the **Apply** button. The subject line will be displayed in the Install Certificated Info field.

Install Certificated Info		Property	Remove
---------------------------	--	----------	--------

3. Click the **Property** button, a pop-up window appears to display the details of the certificate.

**Property Information**

**Install Certificated Info Property**

Not Valid Before : Tue Sep 6 22:10:33 2011  
 Not Valid After : Tue Sep 13 22:10:33 2011  
 Subject : C=TW,ST=TPE,L=TPE,O=EF,OU=PM,CN=1

Certificated (PEM format) :

```
-----BEGIN RSA PRIVATE KEY-----
MIICXglBAAKBgQCyludiB5SKR0JaRUvxeZmZDorhDosOpDidwRYTo4Y1r5N/kAAI
memxkCjQSiVh317WkMC2oOnS0P4gtNqvUDSz3iLtKSJUnjtoazZ8Yd57Q8b0Sbzg
HXSB66JuoiT+7oB6x040EI2Ue32Im20wAsXxVV0Coq4FkhiRs2LzTkuf8QIDAQAB
AoGARK/Rclyj/sMFfB6m5Mr2Dm4PcBvd09XJiLMYwJjmFjUHL7C8vbmCri5Z5DKA
SjJVEYU++X7OL6z98KpeaYsZmWdfAa1cz7j06phgzlrFeoq6qtgXTkWZ4V8lgx8P
0rg5nZ4HyCTk/BYa4kHBBGsNWccDa+99Z3Ze0tbep/Js0xkCQQDnH6M8bhNlcaWy
lzbNK/PLxgXFmevUuR2t3Rs8NRh0I23VI4BWiVbVx6AbcoEqs8K6LywHzHFcJBBQ
ZZt45qwPAkEAxc++t+1NSjW6Dgr2PnjT9sg8vL8NIZ0dqjDMEdVQM/NE+MZGUrMk
PtZsz1Pk75M4QD9g9yCj1V8nnTC+/Yzz/wJBALveo7nDYFDdiGsbL5inWY0Sci6I
Z2WK8+0YBcNzBWYAkW7nZLLzAhrVwfeNpCEp7eeZ4JiWPq8/QWOYtEAagVECCQDA
7k5ltd2cc6pz590kMVULbWFP9keZIRRJ2i4vdo4zHSI4Qap1HqRLZXfa/0hbllovK
-----
```

4. To optionally create and install other certificates, remove the existing one by clicking the **Remove** button to erase the certificate.
5. On the Web page, change the address from “http://” to https:// in the address bar and press Enter on the keyboard. Some Security Alert dialogs will pop up. Click **OK** or **Yes** to enable HTTPS.

### Create Certificate Request

You can apply for an official certificate from an issuing Certificate Authority.

1. Select **Certificate Request** and fill in the following information.

<b>Create Certificated Mode</b>	<input type="radio"/> Self-signed Certificated <input checked="" type="radio"/> Certificate Request
<b>Country Name</b>	TW
<b>State or Province Name</b>	TPE
<b>Locality Name</b>	TPE
<b>Organization Name</b>	EF
<b>Organization Unit Name</b>	PM
<b>Common Name</b>	1
<b>Email</b>	everfocus@everfocus.c
<b>Validity</b>	7 Day

2. Type the required Certificate information and then click the **Apply** button. The subject line will be displayed in the Created Request field

<b>Created Request</b>		<b>Property</b>	<b>Remove</b>
------------------------	--	-----------------	---------------

3. Click the **Property** button, a pop-up window appears to display the details of the certificate.

**Property Information**

**Created Request Property**

**Subject :** C=TW,ST=TPE,L=TPE,O=EF,OU=PM,CN=1

**Certificated (PEM format) :**

```

-----BEGIN CERTIFICATE-----
MIIDQzCCAqygAwIBAgIJA0wbJX1WmibSMA0GCSqGSIb3DQEBBQUAMHUxCzAJBgNV
BAYTAIRXMQwwCgYDVQQIEwNUUEUxDDAKBgNVBACjA1RQRTELMakGA1UEChMCRUYx
CzAJBgNVBAsTAIBNMQowCAYDVQQDEwExMSQwIlgYJKoZIhvcNAQkBFhVldmVyZm9j
dXNAZXZlcmZvY3VzLmMwHhcNMTEwOTA2MjlyNTEwWhcNMTEwOTEzMTlyNTEwWjB1
MQswCQYDVQQGEwJUVzEMMAoGA1UECBMDVFBFMQwwCgYDVQQHEwNUUEUxCzAJBgNV
BAoTAKVGMQswCQYDVQQLLEwJQTTEKMAgGA1UEAxMBMTEkMCIGCSqGSIb3DQEJARYV
ZXZlcmZvY3VzQGZ2ZXJmb2N1cy5jMIGfMA0GCSqGSIb3DQEBQUAA4GNADCBiQKB
gQDGEUBQQIPWgIEqDZmtOWb/2Q+yAgF8roJgoiEwURY5vPH72acjVsEo4/+XeNIT
yxR8r1UeUviAduMXpnwNe04VhTKceC5eWkPEgyEebQtZITdPw+3GZije00SK5Ztp
hnhA0MwLJCMSKVMRFTaU3H/UmJkJKI+F55z3q+EqC0mRNwIDAQABo4HaMIHXMB0G
A1UdDgQWBBTh07oQ3ydr7X+fzBljxWAQ7ZTLBzCBpwYDVR0jBIGfMIGcgBTh07oQ
3ydr7X+fzBljxWAQ7ZTLB6F5pHcWdTELMakGA1UEBhMCMVFcxDDAKBgNVBAGTA1RQ
RTEMMMAoGA1UEBxMDVFBFMQswCQYDVQQKEwJFRjJELMakGA1UECxmCUE0xCjAIBgNV
        
```

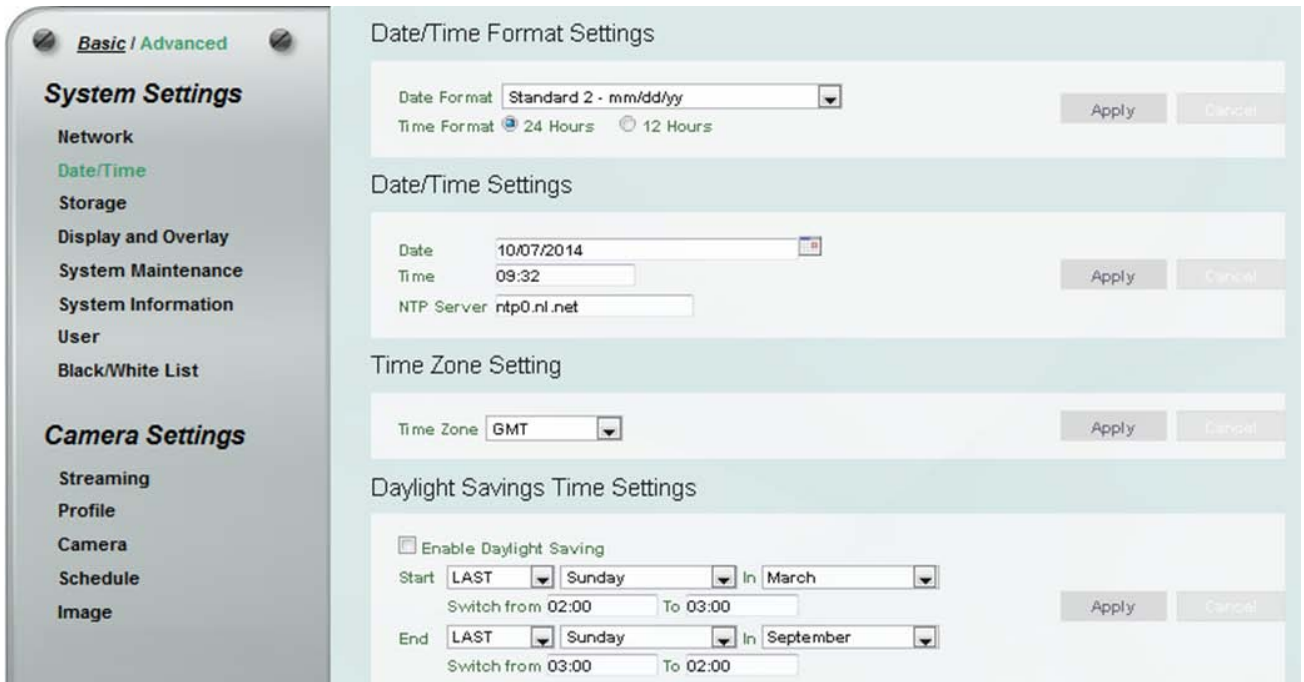
4. To optionally create and install other certificates or request, remove the existing one by clicking the **Remove** button to erase the certificate or request.
5. Copy the contents of the Certificate request (in PEM format) and paste it to the certificate request field on the Web page of the 3<sup>rd</sup>-party certification authority such as Symantec VeriSign. Wait for the certificate authority to issue an SSL/TLS certificate and then download the issued certificate on your computer.

6. In the Install Signed Certificated field, click the **Browse** button to search for the issued certificate, and then click the **Upload** button to import the certificate. Once the certificate has been uploaded, this field will show the subject line of the certificate.

**【QoS Settings】** This function can only be set up in the **Advanced** tab used to set up the priority of package transimission. Adjust the value from 0 – 64 for Live video, Live audio, Event/Alarm and Management. The higher the value, the higher the priority. Click **Apply** to save the changes.

### 6.1.2 Date / Time

You can set up the system's time on this page.



**【Date/Time Format Settings】** Select the desired Date / Time format and then click the **Apply** button. To enable displaying the date and time information on the Live View Window, you have to check the **Date/Time** box in the Overlay Text Settings (see 6.1.4 Display and Overlay).

**【Date/Time Settings】**

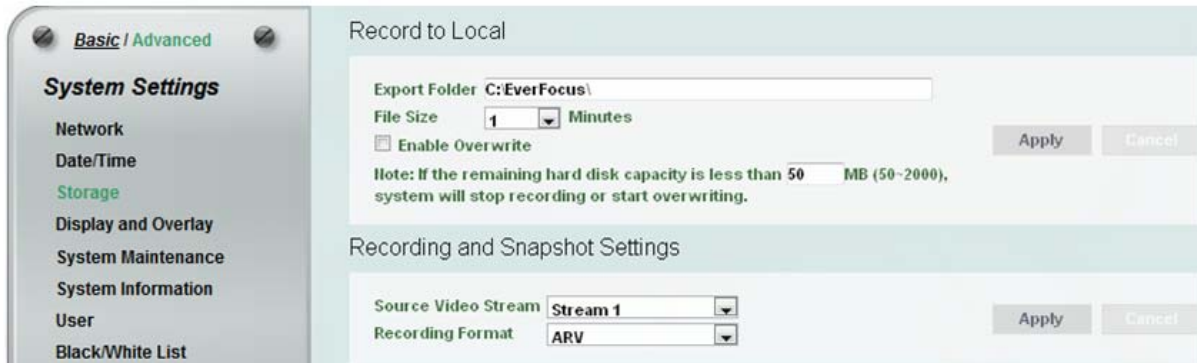
- **Date:** Set the date by clicking the calendar. Click **Apply** to save the setting.
- **Time:** Click time to set desired hour and minute. Click **Apply** to save the setting.
- **NTP:** Enter the Network Time Protocol server, if applicable. The camera's time will be automatically adjusted by synchronizing with the NTP server. Click **Apply** to save the setting.

**【Time Zone Setting】** Set the time zone of the camera's location. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**【Daylight Savings Time Settings】** Click **Enable Daylight Saving** to enable this schedule, and select the dates when the region's daylight saving period begins and ends. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

### 6.1.3 Storage

You can configure the recording path / format, and source video stream settings on this page.



**【Record to Local】** This function can only be set up in the **Advanced** tab. You can configure the storage path for storing the recordings / snapshot on your PC.

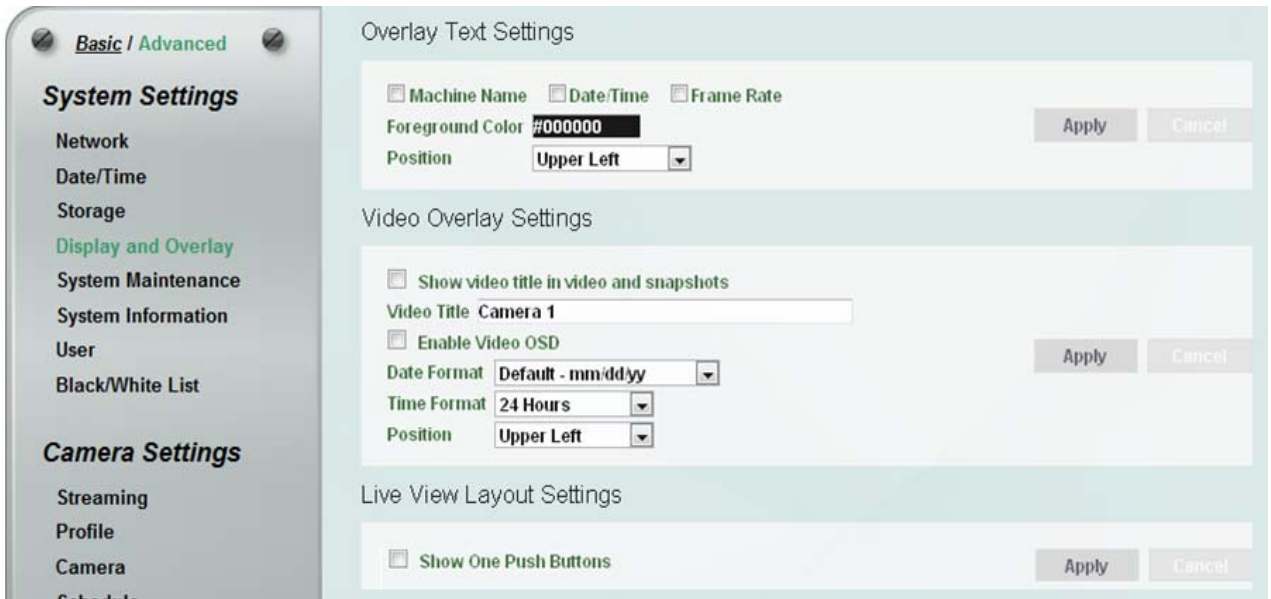
- **Export Folder:** Type the storage path for storing the recordings / snapshot.
- **File size:** The user can limit the size of each recorded file here (in minutes). Once you click the **Record** button on the Live View window, the camera will start recording the live stream to your computer. When a single recording file exceeds the time you set, the system will create a new file to save that data to.
- **Enable Overwrite:** Check the box for overwriting recording/snapshot file when the disk storage capacity is full. The user can set the storage capacity limitation in the in-sentence box below the Enable Overwrite setting: “If the remaining hard disk capacity is less than \_\_\_\_ MB (50~2000),... “

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

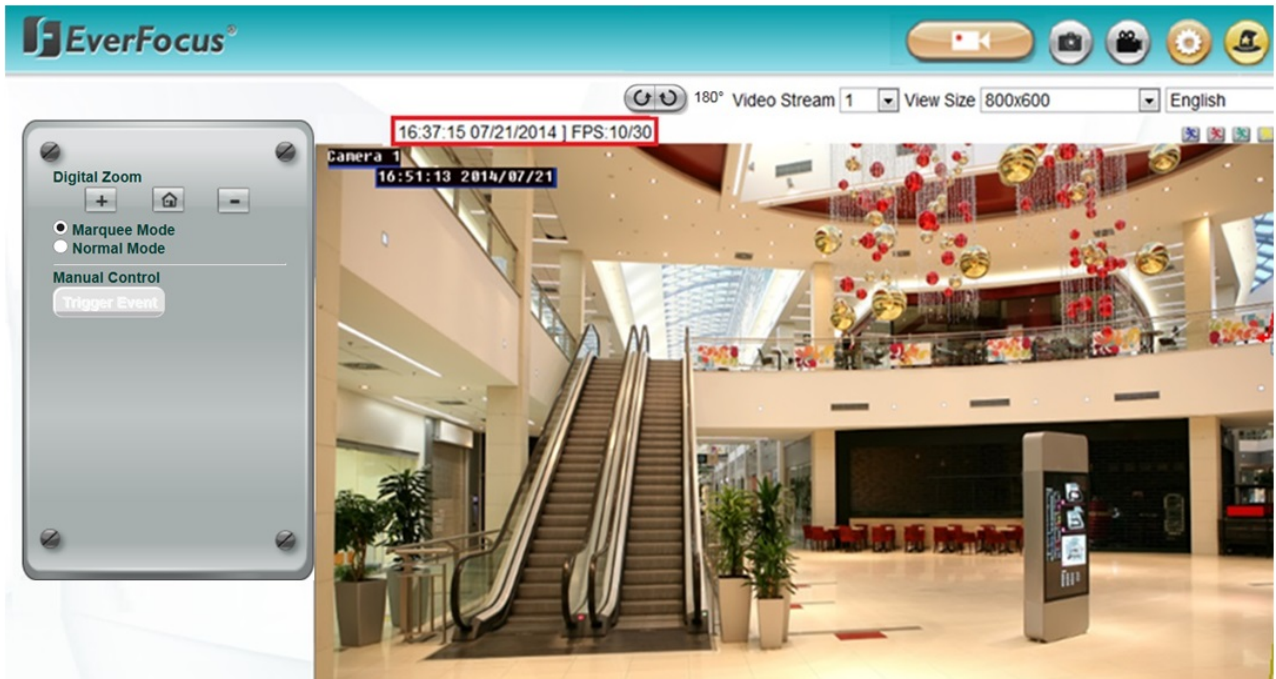
**【Recording and Snapshot Settings】** Select the desired video stream and recording format. The video stream can be configured in *6.2.1 Streaming*. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

### 6.1.4 Display and Overlay

You can configure the recording path / format, and source video stream settings on this page.



**【Overlay Text Settings】** Check the boxes to display the information on the Live View Window. The information will only be displayed on the Live View Window and will not be displayed on the live view video images nor snapshots. To change the foreground color of the text, directly click on the box and then select a color. Select a position where you want the information to be displayed on the Live Window. To change the Machine Name, see *Machine Name* in 6.1.5 System Maintenance. To change the day and time setting, see 6.1.2 Date / Time. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.





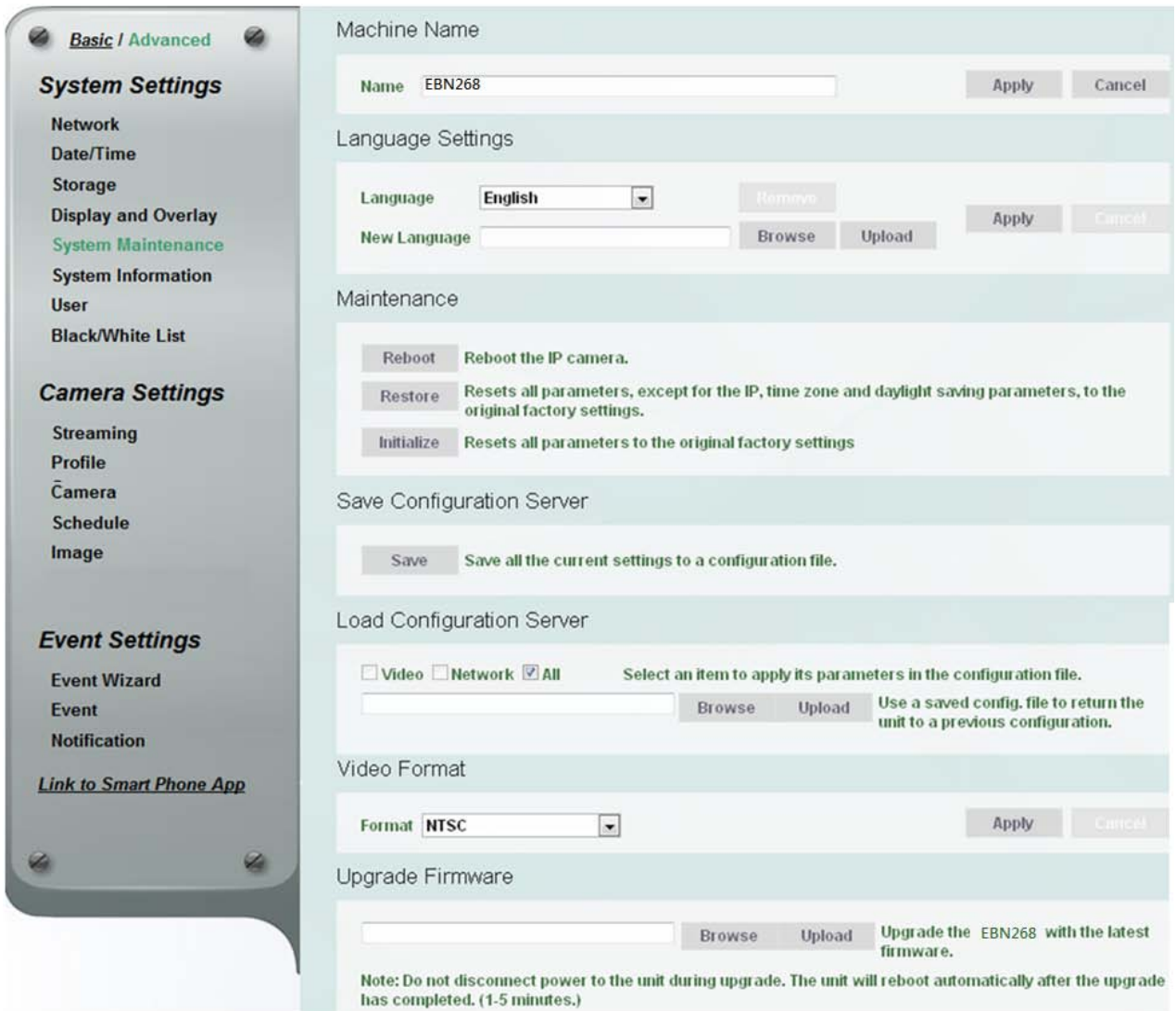
**【Video Overlay Settings】** Check the boxes to enable displaying video title or date/time on the live view video images. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.



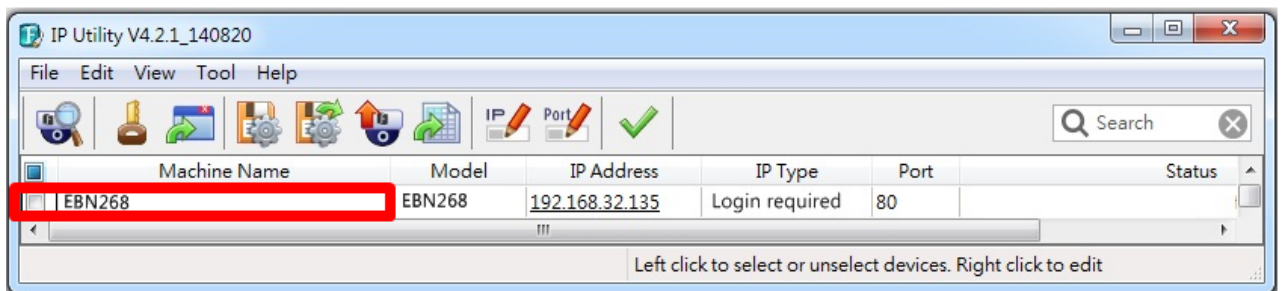
- **Show video title in video and snapshots:** Check the box to enable displaying video title on the live view video images and snapshots. To change the title, type a name in the **Video Title** column.
- **Enable Video OSD:** Check the box to enable displaying date/time information on the live view video images. Select the desired Date/Time format.
- **Position:** Select a position where you want the video title or date/time information to be displayed on the live view video images.

**【Live View Layout Settings】** Check the box if you want to show One Push button on the Live View Window. Uncheck this box to hide the buttons. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

6.1.5 System Maintenance



**【Machine Name】** If required, enter a new name for the machine. This name will be visible in the Machine Name field of the IP Utility software, which is included in the software CD or from the Website of EverFocus (click [here](#) to download. Please refer to 5. Accessing the User Interface). Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.



**【Language Settings】** Select the language to be displayed on the Web interface of the IP camera. The default language is English.

To add a new language not listed in the current Language list, click the **Browse** button to locate the new language file (.evb) on your computer and then click the **Upload** button. Updated language files might be available on the manufacturer’s website. Contact your vendor if required.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**Note:** Uploading a new language file will cause the system to reboot automatically. Please create a new network connection to the IP camera when the reboot is complete.

**【Maintenance】**

- **Reboot:** Click to reboot the unit without changing any of the settings. Use this function if the unit is not behaving as expected.
- **Restore:** Click to restart and reset most of the current settings to their factory default values. The only settings that will not be changed to default are: IP Settings and DDNS Settings.
- **Initialize:** This function can only be set up in the **Advanced** tab. This button should be used with caution. Clicking this button will return all of the camera's settings, including the IP address, to the factory default values. The camera will then have to be reconfigured.

**【Save Configuration Server】**

**Save:** To make a backup file of the machine’s current configurations, click this button to save all the configurations to a configuration file. This will enable the user to reload these configuration settings if the settings are changed and there is unexpected behavior.

**【Load Configuration Server】**

Select **Video** to apply only the video parameters from the configuration file to the system. Select **Network** to apply only the network parameters from the configuration file to the system. Select **All** to apply all the parameters from the configuration file to the system.

**Browse:** Click the **Browse** button to locate the saved config. File.

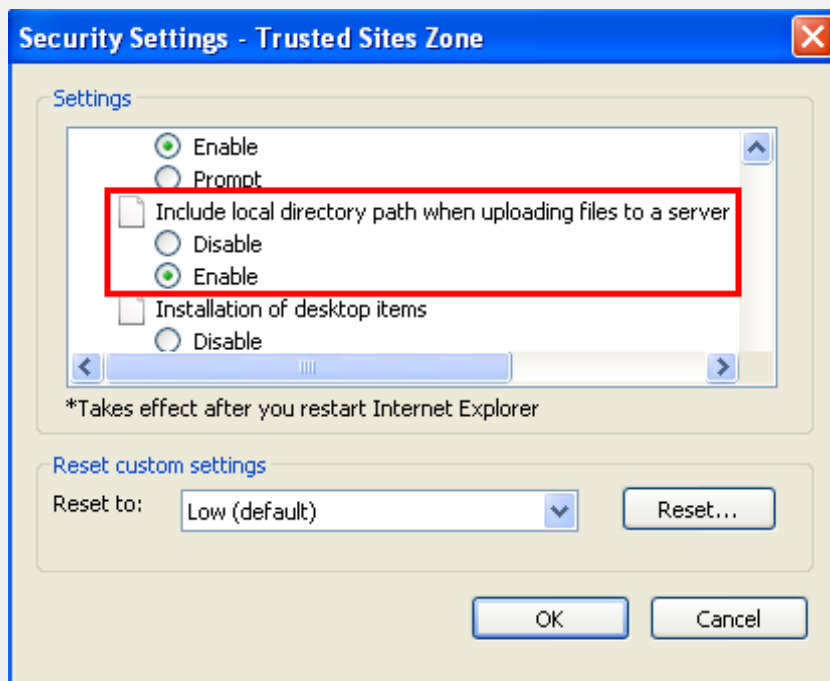
**Upload:** Click the **Upload** button to restore the system based on the selected parameters (Video, Network or All).

**【Video Format】** Select NTSC or PAL for your local scanning system. Click **Apply** to save the setting.

**【Upgrade Firmware】** This function can only be set up in the **Advanced** tab. Click the **Browse** button to find a previously prepared firmware upgrade file. Click the **Upload** button to install the new firmware.

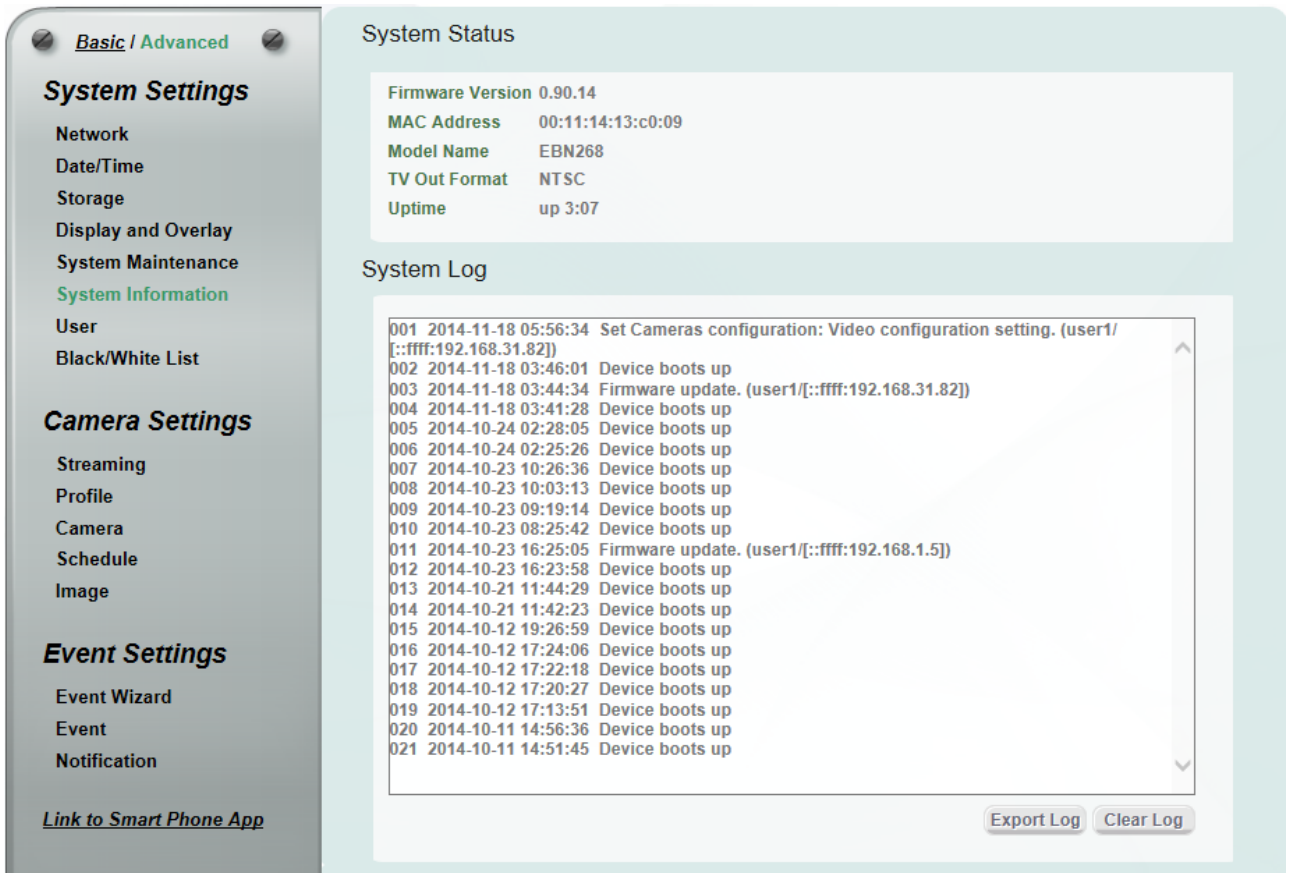
**Note:**

1. Do not disconnect power to the unit during the upgrade sequence. The unit will reboot automatically after the upgrade has completed (1-5 minutes).
2. During the upgrade process, all event recording actions will be stopped. Event recording actions will resume after the camera is rebooted.
3. If the *"File Error, Please re-login!!"* warning message appears when upgrading the firmware, please try the following instructions:
  - a. Go to Internet Explorer > Tools > Internet Option > Security > Custom.
  - b. Find and enable the **Include local directory path when uploading files to a server**.



### 6.1.6 System Information

You can see the system information and log information displayed on this page.



**【System Status】** Displayed the system information. The values cannot be changed on this page. The Uptime represents the period since the camera has been powered on. For example, up 3:08 represents the camera has been powered on for 3 hours and 8 minutes.

**【System Log】** Displayed the sequence number, date, time and event messages of the log event. The log will display the last 256 log events. Click the **Export Log** button to export the system log event list into a ".txt" file and select the location where the exported log file will be saved to. Click the **Clear Log** to erase all the log data from the camera. The system will be required to reboot after clicking the Clear Log button.

### 6.1.7 User

The system administrator can create up to ten user accounts on this page.

**User Management**

Account	Authority	Description	Status
user1	Supervisor	user1	Active
user2	Guest	user2	Disable
user3	Guest	user3	Disable
user4	Guest	user4	Disable
user5	Guest	user5	Disable
user6	Guest	user6	Disable
user7	Guest	user7	Disable
user8	Guest	user8	Disable
user91	Guest	user9	Disable

View 1 - 9 of 9

Account:   
 Password:   
 Confirm Password:   
 Authority: **Administrator** (dropdown)  
 Description:   
 Status: **Active** (dropdown)

Buttons: Create, Remove, Edit, Cancel

**Anonymous Settings**

Anonymous viewer login

Note: To protect your camera from begin taken over by unauthorized persons, make sure the "Anonymous viewer login" button IS NOT checked/selected.

Buttons: Apply, Cancel

**【User Management】** The system has automatically created ten user accounts.

To set up an user account:

1. Highlight a user account and its information will be displayed in the field below the account list.
2. Revise the account name, password and description. Select an authority level for the user account.

The default setting is Supervisor when using user1 account to log in.

- **Administrator:** The only difference between a supervisor and administrator is that a supervisor can edit an administrator’s account and password, but an administrator cannot edit the supervisor’s account and password. The supervisor and administrators all have unrestricted access to the Setting submenus and can determine the registration of all other users.

- **User:** A user can not only view the live view but also view/configure the below camera settings.

View	Configure
<b>System Settings</b>	
Network	Network > Protocol Settings
Date/Time	Date/Time > Date/Time Format Settings
Storage > Record to Local	Storage > Record to Local
Display and Overlay > Overlay Text Settings	Display and Overlay > Overlay Text Settings
Display and Overlay > Video Overlay Time Stamp Settings	Display and Overlay > Video Overlay Time Stamp Settings
System Maintenance > Language Settings	System Maintenance > Language Settings
System Information	System Information > Export Log
<b>Camera Settings</b>	
Streaming	-
Camera	-
Schedule	-
Image	-

- **Guest:** The lowest level of access, which only allows the user access to the live view page.
3. Select **Active** or **Disable** to active or disable the user account.
  4. Click the **Edit** button to save the changes.

**Create** : The button is only activated when the number of list is less than ten. Enter the account information and click the **Create** button, the new account will be listed in the account list.

**Remove** : Highlight an account and then click the **Remove** button to remove the highlighted account.

**Edit** : Highlight an account and enter the account information in the boxes below the account list. Click the **Edit** button and the account will be edited.

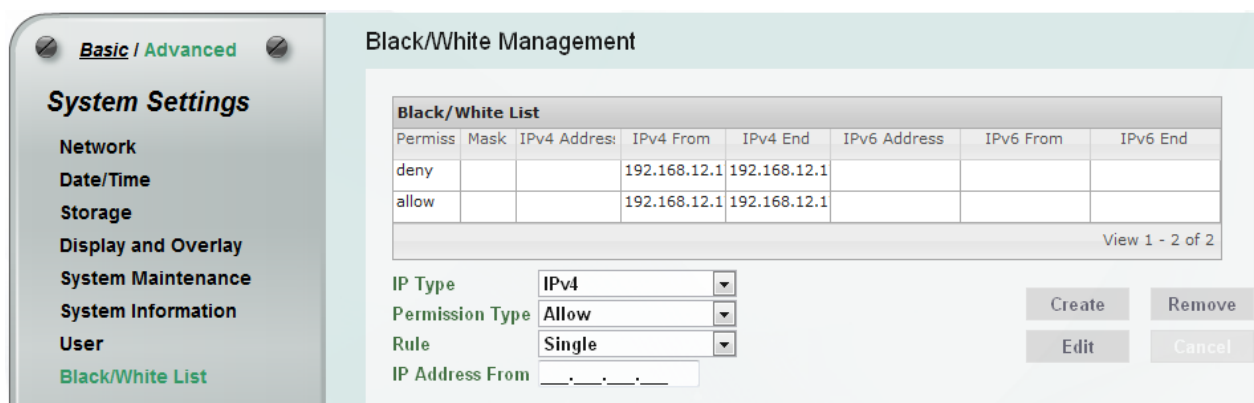
**Cancel** : Click the button to cancel the changes and return to the previous settings.

**【Anonymous Settings】** Check the box to allow the unauthorized persons to log in the camera. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

### 6.1.8 Black /White List

Use this page to specify IP addresses that are allowed / denied to access this camera. By default, any IP address can access the camera.

**Note:** The Allowed IP addresses only become relevant when the Denied items contain a **Network** or **Range**, and the supervisor wants to allow one or more IP addresses within that excluded range or network. In such a scenario, the user would enter the excluded range or network for the Denied items, and enter the exceptions for the Allowed items.



- **IP Type:** Select IPv4 or IPv6 from the drop-down list.
- **Permission Type:** Select **Deny** to deny the IP addresses configured below from accessing the camera. The **Allow** option is only relevant if you've set up at least one Deny item configured with Network or Range network rule from the Rule drop-down list.
- **Rule:** Select a network rule and then fill in the IP information in the below boxes.
  - **Single:** Type a single IP address in the IP Address field below.
  - **Network:** Type the IP address and subnet mask in the field below.
  - **Range:** Type a range for the IP addresses.
- **IP Address From:** Type an IP address here.

**Create** : Set up the IP information and click the **Create** button, the created IP information will be listed in the Black/White list.

**Remove** : Highlight an item in the list and then click the **Remove** button to remove the highlighted item.

**Edit** : Highlight an item in the list and set up the IP information in the boxes below the Black/White list. Click the **Edit** button and the item will be edited.

**Cancel** : Click the button to cancel the changes and return to the previous settings.



## 6.2 Camera Settings

You can configure camera related settings, such as video / audio, region of interest and privacy mask.

### 6.2.1 Streaming

The screenshot displays the camera's configuration menu. On the left is a sidebar with categories: System Settings (Network, Date/Time, Storage, Display and Overlay, System Maintenance, System Information, User, Black/White List), Camera Settings (Streaming, Profile, Camera, Schedule, Image), and Event Settings (Event Wizard, Event, Notification, Link to Smart Phone App). The main area is titled 'Stream Settings' and contains three sections: 'Stream 1' (H.264, 1920x1080, 30 FPS, 3M Bit/s), 'Stream 2' (H.264, 720x480, 30 FPS, 1M Bit/s), and 'Region of Interest Settings' (8 areas, all set to quality 10). Below that is 'Privacy Mask Settings' (Color, Black, Level, and three enableable areas). A live video preview of a mall interior is shown on the right, with 'Apply' and 'Cancel' buttons below it.

**【Stream Settings】** This IP camera can output three video streams simultaneously. For each of these streams, the user can set the compression format, resolution, bit rate, and frame rate individually. Stream 1 is always enabled for live view. To enable/disable Stream1 or Stream2, check the **Enable Stream 1 / Enable Stream 2** box.

**Note:** If you connect to the camera via the Internet and experience a delay (lag time) in the video feed, try to reduce the number of streams and the quality and resolution of the streams – but keep the frame rate at its maximum.

**Format:** Select the encoding format – H.264, MJPEG or MPEG4.

**Resolution:** Select the most suitable resolution for your needs.

**Frame Rate:** This function can only be set up in the **Advanced** tab. Select from 1 to 30 fps.


**Bit Rate:** This function can only be set up in the **Advanced** tab. If required, select whether you want the stream to stream a **Constant Bit Rate** or a **Variable Bit Rate**, and set the values of whichever option you choose.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**【Region of Interest Settings】** This function can only be set up in the **Advanced** tab. The Region of Interest (ROI) function allows users to set up multiple regions within an image with better quality and less distortion than the rest of the image. You can also use this function together with the Digital Zoom function on the Live View window to get a better image result. Up to eight ROIs can be configured in this field.




To set up an ROI region:

1. Enabled the **ROI Draw Tool** and click the **Draw** button .
2. On the left-side live image, move the cursor to the position where you want the ROI rectangle to start and then click. Move the cursor to the position (diagonally opposing corner) where you want the ROI rectangle to end and then click.
3. Select a quality value for the ROI from the Quality drop-down list.
4. Click the **Apply** button to apply the settings, or click the **Cancel** button to reset without saving the settings.

**【Privacy Mask Settings】** This function can only be set up in the **Advanced** tab. The Privacy Mask can block out sensitive areas from view, covering the areas with colored or black and white boxes in both live view and recorded clips. This feature is useful when users' don't want the sensitive information visible. Up to four Privacy Masks can be configured.

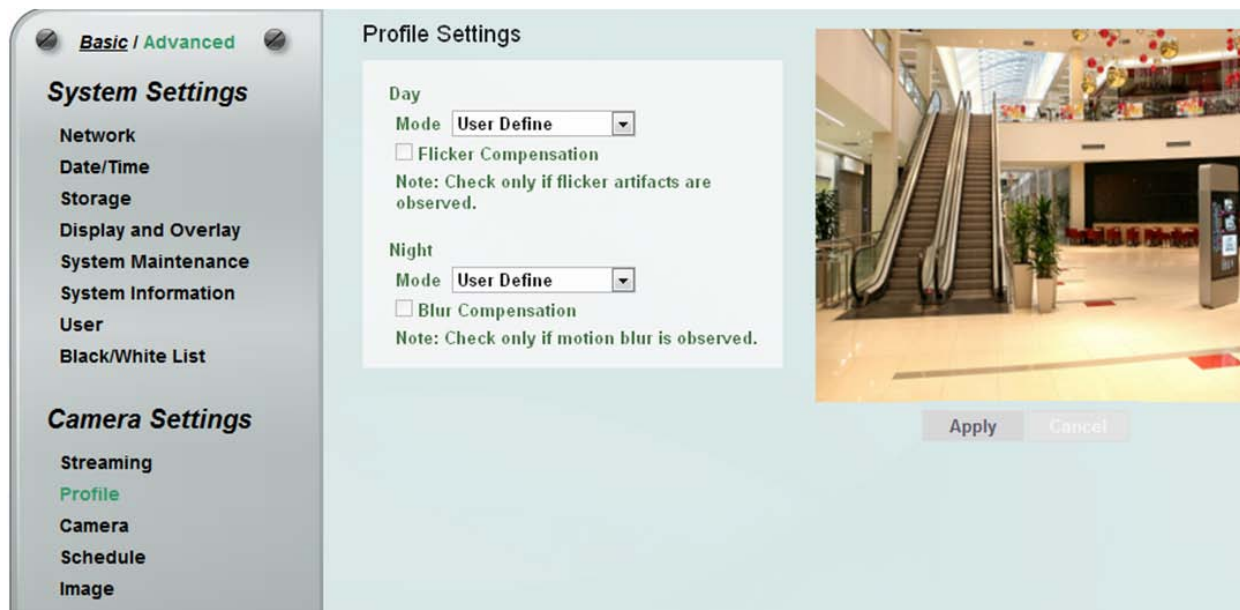


To set up a Privacy Mask:

1. Enabled the **Privacy Mask Draw Tool**.
2. From the Color drop-down list, select **Color** to make the masks appear as colored rectangles on the screen; or select **B/W** to make the masks appear as gray rectangles on the screen.
3. Select a color if you select **Color** from the color drop-down list. Select a level of grayness if you select B/W from the color drop-down list.
4. Check the **Enable** box to enable the configured privacy mask.
5. Click the **Draw** button  and move the cursor on the left-side live image.
6. Move the cursor to the position where you want the mask rectangle to start and then click. Move the cursor to the position (diagonally opposing corner) where you want the mask rectangle to end and then click.
7. Click the **Apply** button to apply the settings, or click the **Cancel** button to reset without saving the settings.

### 6.2.2 Profile

The Profile Settings is designed with four camera modes, which can be applied in various scenes to enhance image quality. You can apply different camera modes to the daytime and nighttime.



**【Day Mode】** Select a camera mode and then click the **Apply** button to save the settings.

- **Vivid:** Select Vivid mode to have images with optimized contrast ratio. You can further configure the camera settings on the Camera setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Camera setup page such as **Exposure Settings (AE), Noise Reduction Settings and Monitor Settings.**
- **Standard:** Select Standard mode to have images with system configured settings. You can further configure the camera settings on the Camera setup page if required. Note that selecting the Standard mode will lock (grayed-out) some Camera Settings on the Camera setup page such as **Exposure Settings (AE), Noise Reduction Settings and Monitor Settings.**
- **More Detail:** Select More Detail mode to enhance the dark parts of the images. You can further configure the camera settings on the Camera setup page if required. Note that selecting the More Detail mode will lock (grayed-out) some Camera Settings on the Camera setup page such as **Exposure Settings (AE), Noise Reduction Settings and Monitor Settings.**
- **User Define:** Select User Define mode to customize the camera settings. You can configure all the camera settings on the Camera setup page.

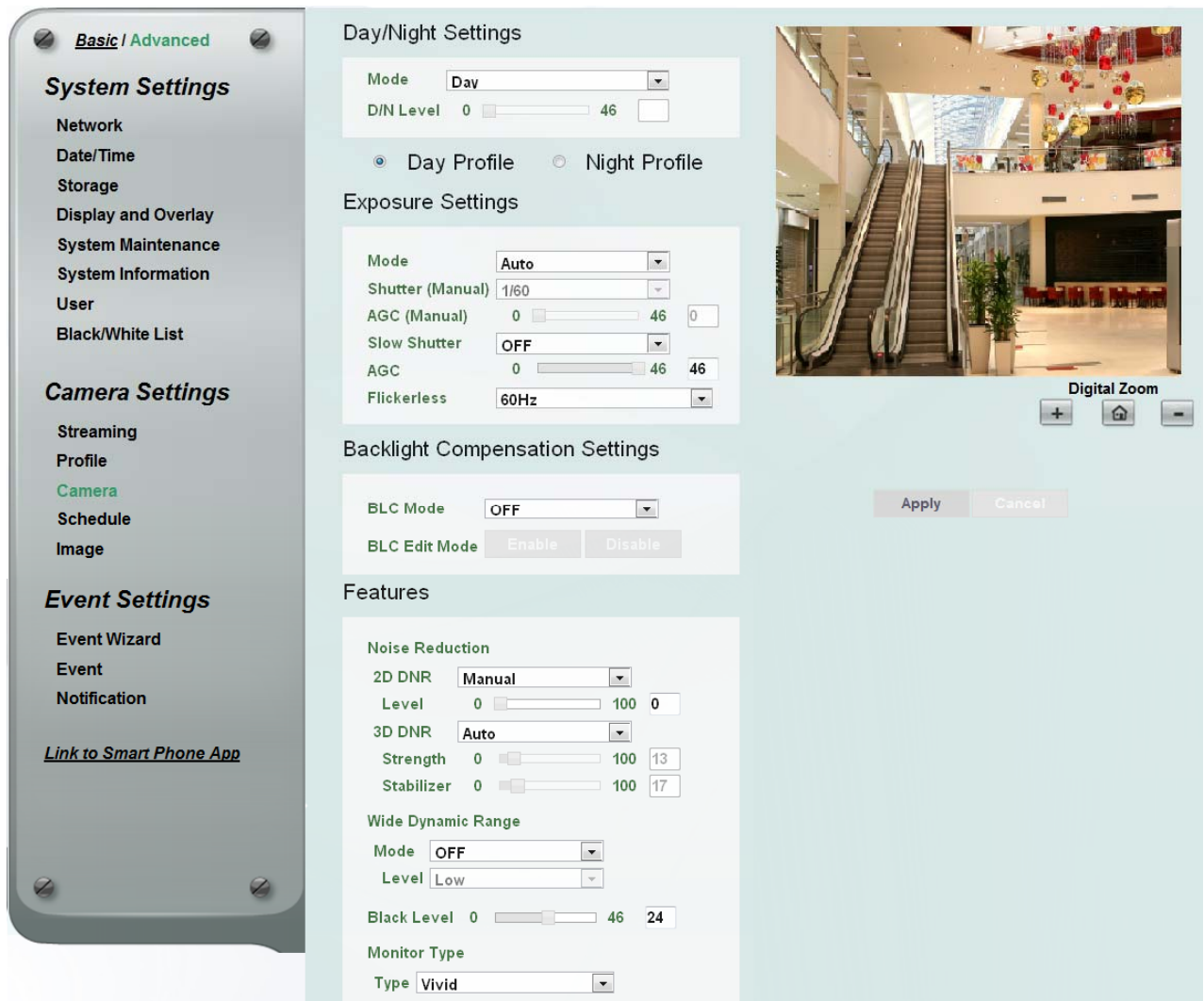
**Flicker Compensation:** Check the box to enable the Flicker Compensation function. Please enable this function only if flicker artifacts are observed.

**【Night Mode】** Select a camera mode and then click the **Apply** button to save the settings.

- **Vivid:** Select Vivid mode to have images with optimized contrast ratio. You can further configure the camera settings on the Camera setup page if required. Note that selecting the Vivid mode will lock (grayed-out) some Camera Settings on the Camera setup page such as **Exposure Settings (AE), Noise Reduction Settings and Monitor Settings.**
- **Standard:** Select Standard mode to have images with system configured settings. You can further configure the camera settings on the Camera setup page if required. Note that selecting the Standard mode will lock (grayed-out) some Camera Settings on the Camera setup page such as **Exposure Settings (AE), Noise Reduction Settings and Monitor Settings.**
- **More Detail:** Select More Detail mode to enhance the dark parts of the images. You can further configure the camera settings on the Camera setup page if required. Note that selecting the More Detail mode will lock (grayed-out) some Camera Settings on the Camera setup page such as **Exposure Settings (AE), Noise Reduction Settings and Monitor Settings.**
- **User Define:** Select User Define mode to customize the camera settings. You can configure all the camera settings on the Camera setup page.

**Blur Compensation:** Check the box to enable the Blur Compensation function. Please enable this function only if motion blur is observed.

6.2.3 Camera



**【Day/Night Settings】**

- **Mode:** Select a mode from the drop-down list.
  - **Auto:** Select to let the camera automatically switch to Night mode (black and white images with IR LED on) when the light levels fall to a specified level, and back to Day mode (color images) when the light levels rise to a specified level.
  - **Day:** Select to keep the camera in Day mode (color images with IR LED off), even in nighttime.
  - **Night:** Select to keep the camera in Night mode (black and white images with IR LED on), even in daytime.
  - **Schedule:** Select to let the camera to switch to Day mode or Night mode (IR LED on) based on the day and night schedule settings (see 6.2.4 Schedule).
  - **Auto mode without IR LED:** Select to let the camera automatically switch to Night mode (black and white images with IR LED off) when the light levels fall to a specified level, and back to Day mode (color) when the light levels rise to a specified level.

- **Night mode without IR LED:** Select to keep the camera in Night mode (black and white images with IR LED off), even in daytime.
- **Schedule without IR LED:** Select to let the camera to switch to Day mode or Night mode (IR LED off) based on the day and night schedule settings (see 6.2.4 *Schedule*).
- **D/N Level:** This function can only be activated if you select **Auto / Auto mode without IR LED** mode in the Day/Night Settings field. Adjust the level (0 - 46 lux) for the camera to switch from Day mode to Night mode based on the light level detected by the Light Sensor. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**Day Profile/ Night Profile:** Select **Day Profile** to configure the following settings for daytime and select **Night Profile** to configure the following settings for nighttime. Click the **Apply** button to save the settings.

**Note:** Some settings in the Exposure Settings / Features may be grayed-out. To configure all the settings, select **User Define** from the Day Mode / Night Mode drop-down list (see 6.2.2 *Profile*).

**【Exposure Settings】** This function can only be set up in the **Advanced** tab and can only be activated when you select **User Define** from the Day Mode / Night Mode drop-down list (see 6.2.2 *Profile*). This setting is used to adapt to the amount or type of light used by the camera. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

- **Mode:** Select a mode from the drop-down list.
  - **Auto:** Selecting Auto for the camera to automatically adjust the Shutter based on the measured light level.
  - **ALC (Shutter Priority):** Selecting ALC (Automatic Light Control) allows the camera circuitry to either take bright spots more into consideration (peak), bringing out detail in bright areas, or less into consideration (average) bringing out detail in shadows.
  - **Manual:** Select this option to manually set up the IRIS, Shutter (Manual) and AGC (Manual) values.
- **Shutter (Manual):** The function is only activated if you select **ALC** or **Manual** in the Mode field. If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second).
- **AGC (Manual):** The function is only activated if you select **Manual** in the Mode field. Set the Auto Gain Control limit here. The lower the AGC level, the lower the video signal and the noise.
- **Slow Shutter:** The function is only activated if you select **Auto** in the Mode field.
- **AGC:** The function is only activated if you select **Auto** or **ALC** in the Mode field. Set the Auto Gain Control limit here. The lower the AGC level, the lower the video signal and the noise.
- **Flickerless:** The function is only activated if you select **Auto** in the Mode field. Choose between OFF, 50HZ or 60HZ.

**【Backlight Compensation Settings】** Backlight Compensation Settings is used to make the subject appear clearer when it is set against a bright background. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**OFF:** Select to switch Back Light Compensation functions off.

**ON (BLC):** This option is useful when the background of the subject is very bright and the subject itself is dark. The BLC will measure the light of the image center and the lens iris will automatically set for optimal image quality.

**BLC Edit Mode:** Click the **Enable** button, the BLC grids appear on the image. Click on the grids to enable / disable the BLC function. The selected grids (in green) will be applied with the BLC function.



**【Features】** This function can only be set up in the **Advanced** tab. Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**Noise Reduction (NR):** This limits the amount of digital “video noise” that is usually found in any video stream, and helps to reduce file size. Select **Manual /Auto** to enable / disable the Noise Reduction function. Slide the Level bar to set up the level. The higher the level, the more the reduction.

**2D DNR:** Select Manual to enable the 2D DNR function and use the slide bar to set up the level. The greater the value, the more the reduction. Select Auto for the system to automatically adjust to the optimal 2D DNR value.

**Level:** Slide bar to set up 2D DNR level.

**3D DNR:** Select Manual to enable the 3D DNR function and use the slide bar to set up the level. The greater the value, the more the reduction. Select Auto for the system to automatically adjust to the optimal 3D DNR value. You can further set up the following two settings. You can reach optimal results once two settings are balanced.

**Strength:** The greater the value, the greater the strength is, the more the reduction, and the lower the image sharpness.

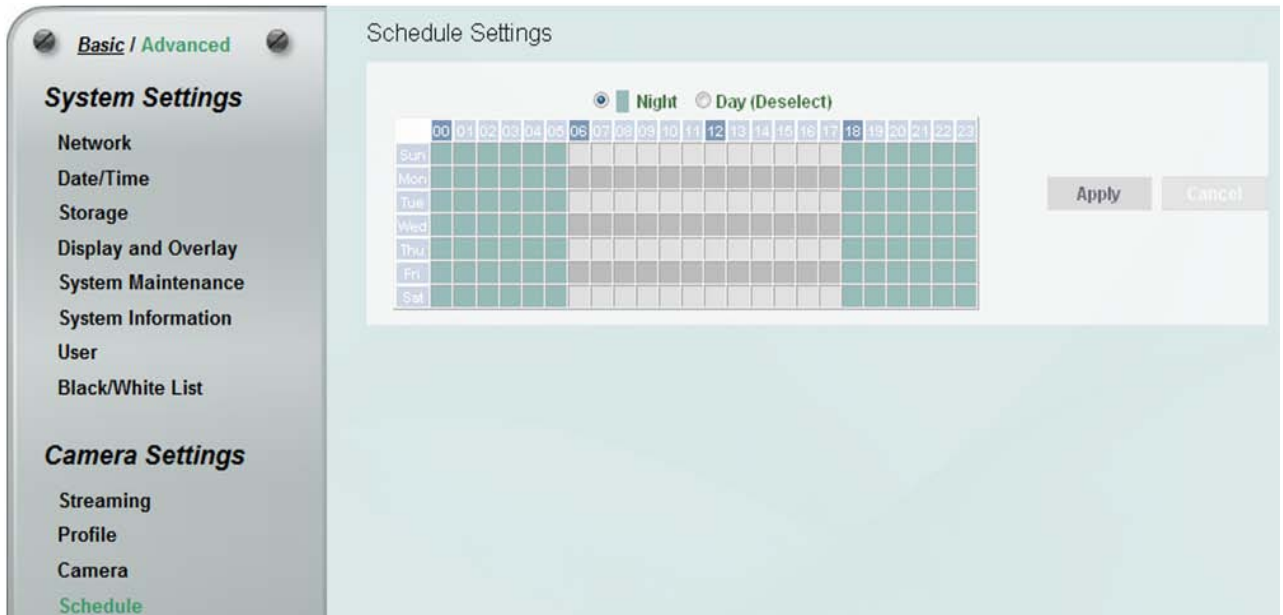
**Stabilizer:** The greater the value, the greater the stabilizer is, the more the reduction, and the streaking phenomenon appeared.

- **Wide Dynamic Range (WDR):** The WDR function provides clearer images when both of the very bright and dark areas simultaneously appear on the camera view. There are three value options: OFF, ON and Auto. Note that when WDR is ON, some parts of the image may appear solarized. This is normal for WDR, and is not a camera malfunction.
- **Black Level:** Slide the Level bar to set up the level (0 – 46).
- **Monitor Type:** Users can use this field to optimize video quality of the monitor. Choose Vivid, Standard, or Neutral from the drop down list.



### 6.2.4 Schedule

The Schedule setup page is designed for users to configure the daytime and nighttime of each day. The Schedule setting is only functional if you select **Schedule** from the D/N Mode drop-down list on the Camera setup page.

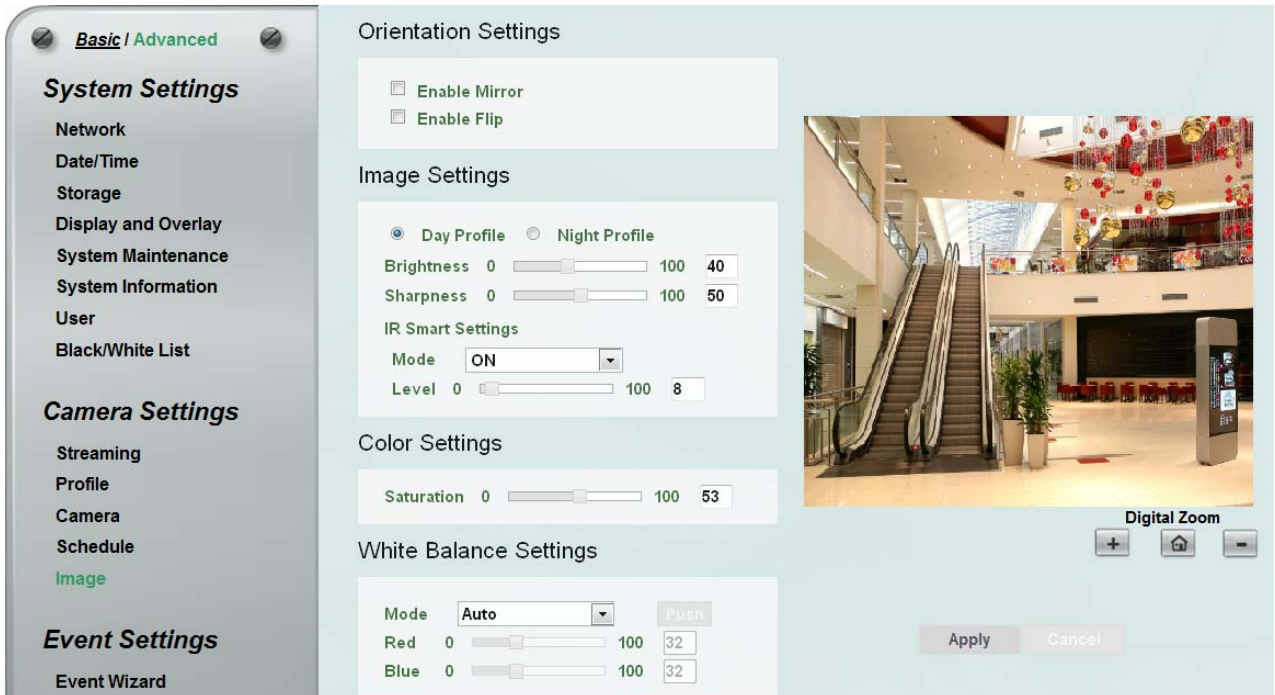


Select **Night** and then move the cursor on the desired time square, click and drag the cursor over the time squares to configure them to the Night mode (green color). Select **Day** and then move the cursor on the desired time square, click on the time squares to configure them to the Day mode (gray color).

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

### 6.2.5 Image

This function can only be set up in the **Advanced** tab.



#### 【Orientation Settings】

- **Enable Mirror:** Check the box to enable the mirror function. The image will be rotated horizontally around a vertical axis.
- **Enable Flip:** Check the box to enable the flip function. The image will be rotated vertically around a horizontal axis.

【Image Settings】 Select **Day Profile** or **Night Profile** and then adjust the slide bars below to configure the **Brightness** and **Sharpness** for daytime or nighttime.


**IR Smart Settings:** Select ON and set up the level to enhance the image quality when the images are over exposure. This function is useful when the camera is in the Night mode.

【Color Settings】 Slide the bar to adjust the saturation.

【White Balance Settings】 Select a mode that delivers the best image quality for the camera’s light environment.

- **Auto:** Select to let the camera automatically adjust the White Balance. In the Auto mode the camera computes the white balance value output using color information from the entire screen. It outputs the proper value using the color temperature radiating from a black subject based on

a range of value from 3000 to 7500K.

- **Manual:** Select to adjust the Red and Blue values yourself in the fields below this field.
- **One Push:** Select to enable the **Push** button  next to the Mode drop-down field.

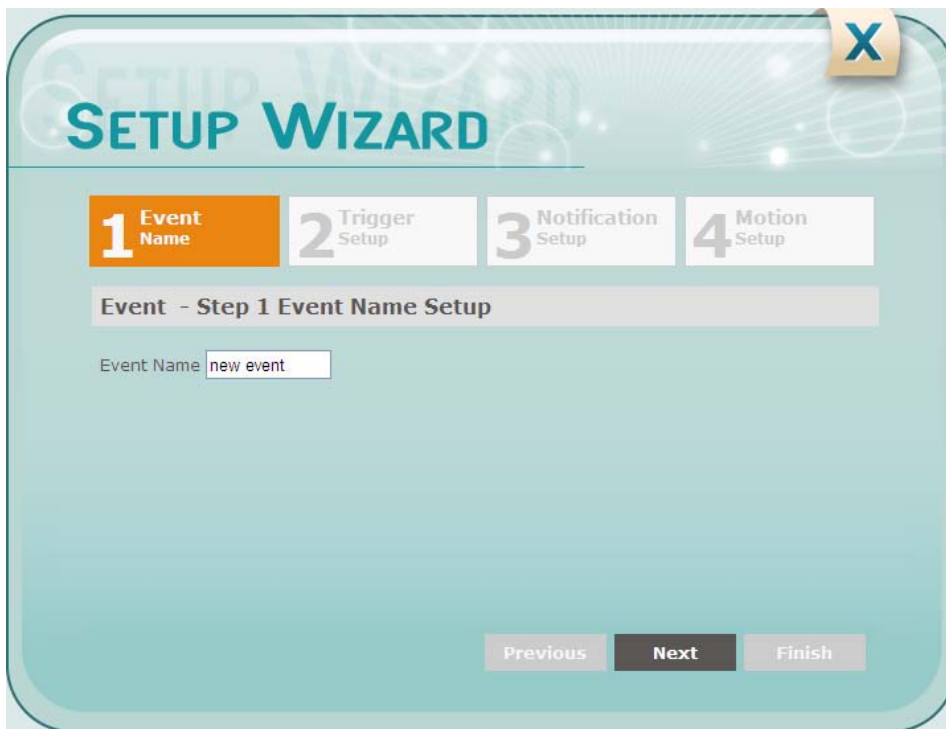
This will allow you to force the camera to readjust the white balance every time you push the **Push** button. The lens will hold the same focal position until the next trigger command is received. This function helps to prevent incorrect focusing in dark environments.

## 6.3 Event Settings

You can set up the Motion Detection event or Tampering Detection event to automatically notify the users when an event occurs. You can also set up a schedule to automatically record the videos when an event occurs.

### 6.3.1 Event Wizard

The Event Wizard allows users to easily configure the event settings. Follow the on-screen instructions to complete the event settings.



### 6.3.2 Event

This function can only be set up in the **Advanced** tab. Except the Event Wizard, you can also configure the event settings along with the Recording Schedule on this page.

Basic / **Advanced**

**System Settings**

- Network
- Date/Time
- Storage
- Display and Overlay
- System Maintenance
- System Information
- User
- Black/White List

**Camera Settings**

- Streaming
- Profile
- Camera
- Schedule
- Image

**Event Settings**

- Event Wizard
- Event**
- Notification

[Link to Smart Phone App](#)

#### Event Management

Event List			
Name	Type	Notification	Enable
new event1	Manual Triggs	SD	Yes
new event	Manual Triggs	SD	No
new event2123	Tampering De	SD	Yes

View 1 - 3 of 3

Event Name:

Event Trigger Type: Tampering Detection Motion Area1

Enable This event This Trigger Type has already been enabled  
 Enable Re-trigger miniman interval between triggers  second  
 Enable Pre-trigger Buffer  
 Enable Post-trigger Buffer

Notification Over

- Log
- Send Mail Notification
- Upload to FTP
- Network Alarm

---

#### Tamper Detection Settings

Tamper Duration Time  second

---

#### Trigger Options Settings

Pre-trigger Buffer  second  
 Post-trigger Buffer  second

---

#### Schedule Settings

Event  Schedule  Event + Schedule  Deselect

	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
Sun																									
Mon																									
Tue																									
Wed																									
Thu																									
Fri																									
Sat																									


---

#### Motion Settings

Area 1 ■  Enable  
 Sensitivity  [Red] [Blue]

Area 2 ■  Enable  
 Sensitivity  [Red] [Blue]

Area 3 ■  Enable  
 Sensitivity  [Red] [Blue]



**【Event Management】** You can set up the events such as Motion Detection or Tampering Detection to automatically notify the users when an event occurs.

**Event Name:** Type an event name.

- **Event Trigger Type:** Select an event for the to-be-specified-below reaction/s.
  - **Manual Trigger:** Select this option if you want to manually trigger the alarm by clicking the **Trigger Event** button on the Live View Page.
  - **Motion Detection:** Select this option to trigger the to-be-specified-below reaction/s when motion events occur. You have to pre-configure the Motion Settings for this function to work.
  - **Schedule Recording:** Select this option if you want the Schedule Recording periods configured in the Schedule Settings to activate this event. In this scenario, a preconfigured event reaction like a log entry will list the start and end times of each period. Actual recording will only be triggered if the event is preconfigured to do so.
  - **Tampering Detection:** Select this option if you want the camera's tampering detection sensor to trigger the to-be-specified-below reaction/s. You can set up the tamper duration time in the Event Trigger Settings field below.
- **Enable This Event:** Check the box to activate the event. For the Tampering Detection trigger type, multiple events can be created on the Event List but only one event can be enabled. For example, if you create three Tampering Detection trigger events, only one event under this trigger type can be enabled. The option of **Enable This Event** for the rest of two Tampering Detection events will be grayed out and display "This Trigger Type has already been enabled." To enable another event under the same type, uncheck to disable the event first and check the desired event.
- **Enable Re-trigger minimum interval between triggers xx second:** Check the box to set a minimum time after the event is triggered before the event can be triggered again.
- **Enable Pre-trigger Buffer:** Check the box if you want the Event reaction (as selected in the "Notification Over" field below) to be the activation of the video recording function, and if you want the recording to include the video feed from the time period (configurable in the Schedule Settings field) just before the Event trigger occurred.
- **Enable Post-trigger Buffer:** Check the box if you want the Event reaction (as selected in the Notification Over field) to be the activation of the video recording function, and if you want the recording to include the video feed from a time period (configurable in the Schedule Settings field) just after the Event trigger occurred.

**Notification Over:** Select the desired notification types from the following items.

- **Log:** Check the box if you want the camera to list the event's details in its log if the event is triggered.
- **Send Mail Notification:** Check the box if you want the camera to send an email text notification and one image file to the email address entered in the SMTP Settings field (see 6.3.3 *Notification*).

- **Upload to FTP:** Check the box if you want the camera to upload the recordings to the FTP server entered in the FTP Repository Settings (see 6.3.3 *Notification*).
- **Network Alarm:** Check the box if you want the camera to send a network alarm signal (when the event occurs) to the CMS servers. Note that you have to configure the Network Alarm Settings for this function to work (see 6.3.3 *Notification*).

**Create** : Set up the Event information and click the **Create** button, the created Event information will be listed in the Event List.

**Remove** Highlight an item in the Event List and then click the **Remove** button to remove the highlighted item.

**Edit** : Highlight an item in the Event List and edit the Event information on the left-side. Click the **Edit** button and the item will be edited.

**Cancel** : Click the button to cancel the changes and return to the previous settings.

### 【Tamper Detection Settings】

- **Tamper Duration Time:** Set up a duration time between 10 and 120 seconds.

### 【Trigger Options Settings】

- **Pre-trigger Buffer:** Select the duration for the buffer. This will determine the amount of footage (length of time) before the event trigger moment that will be included in an event-triggered video recording, if that buffer and video recording has been enabled in the Event Management field.

**Enable Pre-trigger Buffer**

- **Post-trigger Buffer:** Select the duration for the buffer. This will determine the amount of footage (length of time) after the event trigger moment that will be included in an event-triggered video recording, if that buffer and video recording has been enabled in the Event Management field.

**Enable Post-trigger Buffer**

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.


**【Schedule Settings】** Users can configure the recording schedule here. Select the desired recording types among the options below. Click and drag the cursor on the time block, which will be applied with the selected recording type.

- **Event Recording (Red):** Select for the camera to activate all the Event Recording set up in the Event Management field (Event Trigger Type), except the Schedule Recording.
- **Schedule Recording (Green):** Select for the camera to activate only the Schedule Recording set up in the Event Management field (Event Trigger Type).


- **Event + Schedule (Yellow):** Select for the camera to active both of the configured Event and Schedule Recordings.
- **Deselect (Grey):** Select for the camera to stop recording.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**【Motion Settings】** Use this page to configure up to four areas in which motion will be detected.

When a motion is detected by the camera, the motion detection icon  will appear at the top right corner on the Live page to alert the user. This function can also be linked with correctly configured Events to trigger Event reactions like the activation of video recording periods, snapshots, etc.

To set up the Motion area:

1. Check the **Enable** box to enable the selected area.
2. Select a sensitivity value of the motion detection sensor function.
3. Click the **Draw** button  and move the cursor on the left-side live image.
4. Move the cursor to the position where you want the motion rectangle to start and then click. Move the cursor to the position (diagonally opposing corner) where you want the motion rectangle to end and then click.
5. Click the **Apply** button to apply the settings, or click the **Cancel** button to reset without saving the settings.



### 6.3.3 Notification

This function can only be set up in the **Advanced** tab.

The screenshot displays the 'Advanced' configuration page for 'Notification'. On the left is a sidebar menu with the following items:

- System Settings**
  - Network
  - Date/Time
  - Storage
  - Display and Overlay
  - System Maintenance
  - System Information
  - User
  - Black/White List
- Camera Settings**
  - Streaming
  - Profile
  - Camera
  - Schedule
  - Image
- Event Settings**
  - Event Wizard
  - Event
  - Notification
- [Link to Smart Phone App](#)

The main configuration area is titled 'SMTP (Email) Settings' and includes:

- SMTP Server: 0.0.0.0
- SMTP Port: 25
- Authentication
- Username: [ ]
- Password: [ ]
- Receiver Address: [ ] (use ; to separate addresses)
- Sender Address: [ ]
- Attach Image
- SSL Connection
- Send Test Email: [ Test ]

The 'FTP Repository Settings' section includes:

- FTP Server: 0.0.0.0
- FTP Port: 21
- Recording Path: [ ]
- Username: [ ]
- Password: [ ]
- PASV Mode
- Test FTP Server: [ Test ]

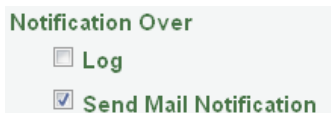
The 'SNMP Settings' section includes:

- Enable SNMP v1/v2/v3c
- Read-Only Community: public
- Read-Write Community: private
- Trap Community: efpicam
- Trap Address: 127.0.0.1
- Enable SNMP v3
- Read-Only Username: efsnmpuser
- Read-Only Auth. Method: MD5
- Read-Only Auth. Key: [ ]
- Read-Only Privacy Method: none
- Read-Only Privacy Key: [ ]
- Read-Write Username: efsnmpadmin
- Read-Write Auth. Method: MD5
- Read-Write Auth. Key: [ ]
- Read-Write Privacy Method: DES
- Read-Write Privacy Key: [ ]

The 'Network Alarm Settings' section includes:

- Protocol: UDP
- Port No: 1600
- Unique ID: 0000000001
- Server 1: 0.0.0.0
- Server 2: 0.0.0.0
- Server 3: 0.0.0.0

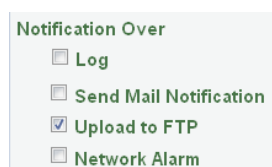
**【SMTP (Email) Settings】** This area is for configuring the mail server that is used to send e-mail text notifications and one image file from the camera to predefined addresses via SMTP. Note that to enable e-mail notification function, you have to check the **Send Mail Notification** box in the Event Management field (see 6.3.2 Event).



- **SMTP Server:** Enter the IP address or the host name of the SMTP server used to send e-mails.
- **SMTP Port:** Enter the port number for SMTP. The default is 25.
- **Authentication:** Check the box if the SMTP server requires authentication (user/password).
- **Username:** Input the user’s login ID if the SMTP server requires authentication.
- **Password:** Input the user’s login password if the SMTP server requires authentication.
- **Receiver Address:** Input the e-mail addresses for receiving an e-mail message when events occur. Please use “;” to separate multiple addresses.
- **Sender Address:** Input the sender’s e-mail address, so that the receiver can recognize the sender when an event message is received.
  - **Attach Image:** Check the box if you want to attach an image when events occur.
  - **SSL Connection:** Check the box to enable the SSL function. Enable this function means you can access the camera through the SSL protocol that provides communication security over the Internet.
- **Send Test Email:** Click the **Test** button to send a testing email to the assigned address.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**【FTP Repository Settings】** This area is for configuring the FTP server that is used to send alarm recordings from the camera to the preconfigured FTP server. Note that to enable uploading recordings to the FTP server function, you have to check the **Upload to FTP** box in the Event Management field (see 6.3.2 *Event*).



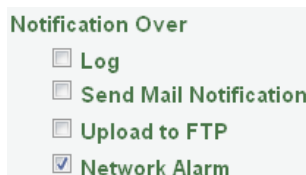
- **FTP Server:** Enter the IP address or the host name of the FTP server.
- **FTP Port:** Enter the port number for the FTP server. Default is 21.
- **Recording Path:** Assign the recording path.
- **Username:** Set FTP User’s name.
- **Password:** Set FTP password.
- **PASV mode:** Check the box to enable Passive mode. Passive mode is normally enabled. If a connection cannot be established, uncheck "PASV Mode".
- **Test FTP Server:** Click the **Test** button to send a testing file to the assigned FTP server.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

**【SNMP Settings】** The default values for SNMP v1/v2/v2c and SNMP v3 are already filled in. Click either of the Enable buttons to enable either of the two. Make your changes as desired. Click on the Trap Address field to enter the digits, if required.

Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

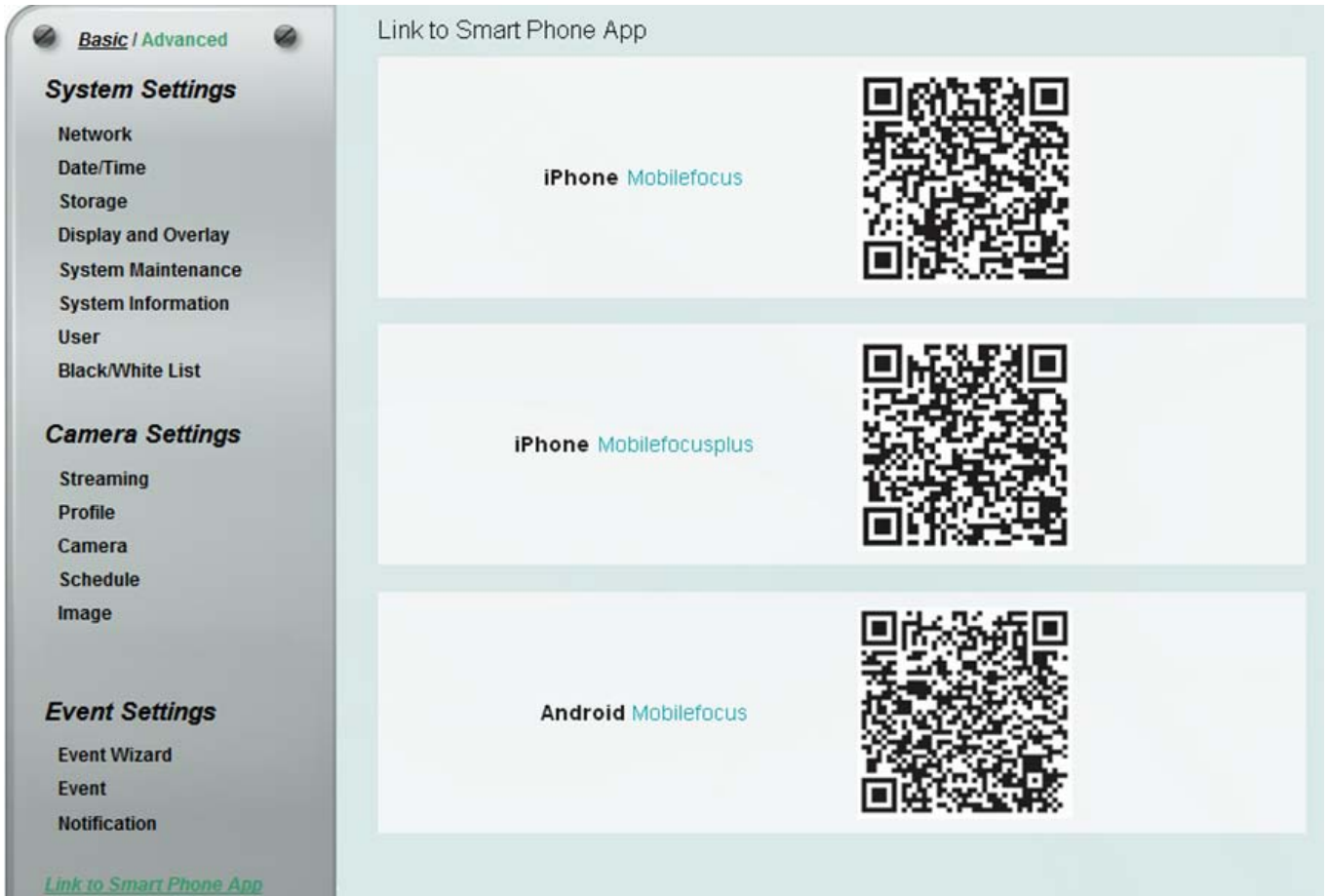
**【Network Alarm Settings】** This function works with EverFocus CMS software. The camera can send a network alarm signal (when the event occurs) to the CMS servers. To establish the connection between the camera and CMS servers, the protocol and port number should match with each other. For more details, please refer to the CMS user’s manual. Note that to enable the Network Alarm function, you have to check the **Network Alarm** box in the Event Management field (see 6.3.2 Event).



Click **Apply** to apply the changes or **Cancel** to cancel the changes and return to the previous settings.

## 6.4 Link to Smart Phone App

You can access camera live view or take a snapshot via your smart phone. This page is designed for users to download the mobile app to your mobile phone by scanning the QR code.



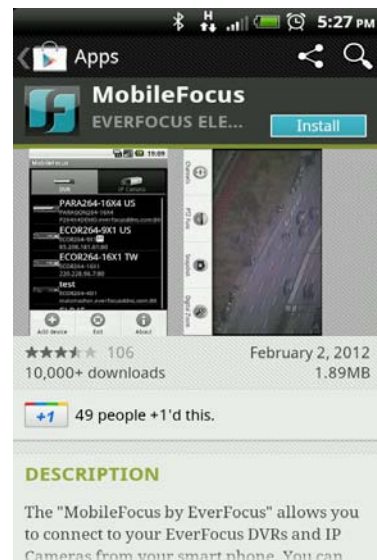
### MobileFocus for iPhone



### MobileFocusPlus for iPhone




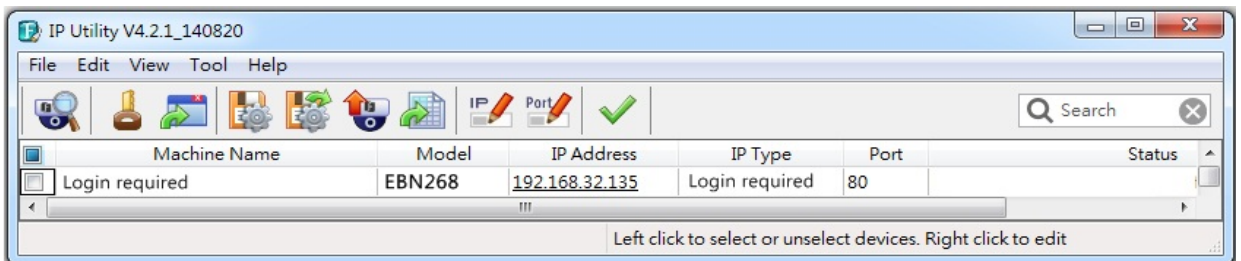
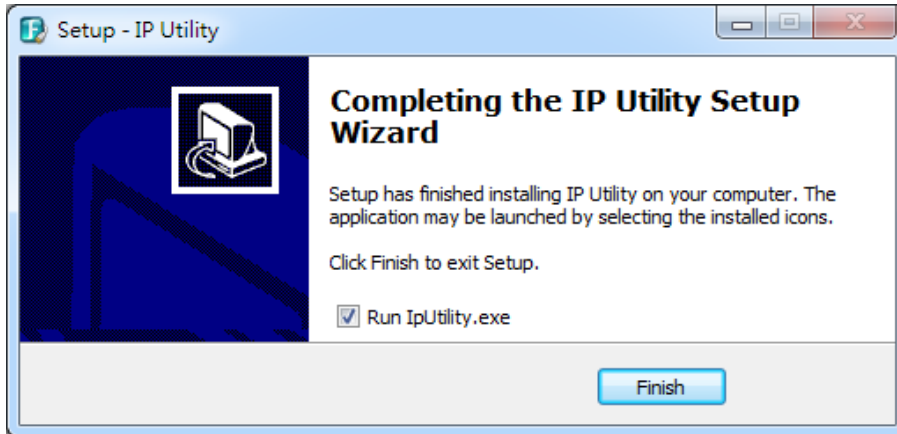
### MobileFocus for Android-based smart phone




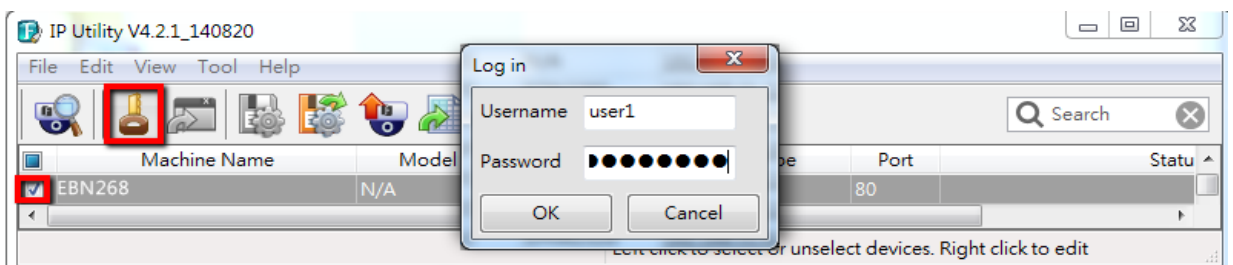
## 7. Upgrading Firmware Using IP Utility

You can upgrade the Firmware using the **IP Utility** software included in the software CD or from the Website of EverFocus (click [here](#) to download).

1. Save **IP Utility Setup AutoRun.exe**  in your computer. Double click the **.exe** file and follow the on-screen instructions. Check **Run IPUtility.exe** and click the **Finish** button, the IP Utility will be launched to search the IP devices connected in the same LAN automatically.



2. Log in the camera by checking the desired model and then click the **Log in**  icon. The Log in dialog box appears.




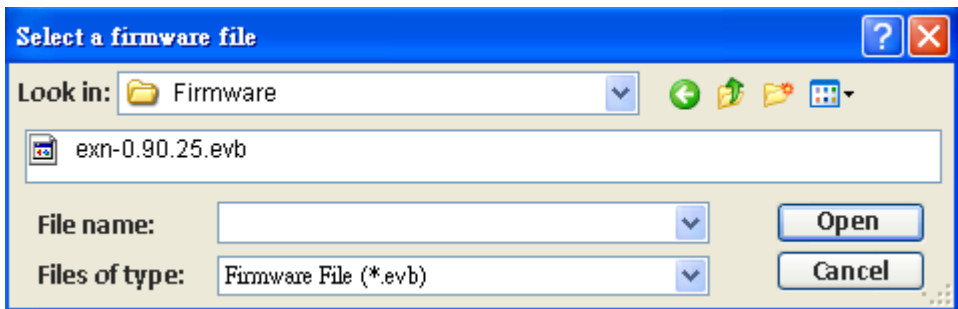
3. Type the Username and Password. Click the **OK** button, the **Login** status displays.

Machine Name	Model	IP Address	IP Type	Port	Status
<input checked="" type="checkbox"/> EBN268	EBN268	192.168.32.135	DHCP	80	Login

**Note:**

1. The default user ID is user1 and the default password is 11111111.
2. If you select more than one camera that has the same user ID / password, you will be able to log in several cameras at once.
3. Up to 10 cameras can be simultaneously upgraded to the latest firmware. If you connect the cameras to a PoE switch, please make sure the Power Consumption of the PoE switch is sufficient.

4. Click the **Upgrade Firmware** button , a browsing window appears.



5. Select the **firmware file (.evb)** and then click **Open**. The IPU will automatically upgrade the firmware. The camera will reboot once the upgrade process is complete.

	Machine Name	Model	IP Address	IP Type	Port	Status
<input checked="" type="checkbox"/>	EBN268	N/A	192.168.32.109	DHCP	80	Success

## 8. Specifications

Model		EBN268
<b>Camera</b>		
Image Sensor	1/2.8" SONY Progressive Scan CMOS Sensor	
Megapixel	2 MP	
Min. Illumination	Color: 0.2 Lux at F1.4 B/W: 0.05 Lux at F1.4 0 Lus at F1.4 (IR LEDs on)	
Electronic Shutter	8.5 ~ 1/60,000sec.	
Scanning System	NTSC / PAL	
WDR	Yes	
BLC	Yes	
Gain Control	Yes	
White Balance	Yes	
<b>Lens</b>		
Lens Type	Fixed Lens	
Focal Lens	3.6 mm / 6 mm	
Aperture Ratio	F1.4	
Day / Night	Yes (with removable IR-cut filter)	
IR Distance	30 m / 98.4 ft	
IR LED Quantity	36	
<b>Video</b>		
Video Compression	H.264 / MJPEG / MPEG4 (optional)	
Resolution	NTSC	1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768, 720 x 480, 704 x 480, 640 x 480, 352 x 240, 320 x 240, 160 x 120
	PAL	1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768, 720 x 576, 704 x 576, 640 x 480, 352 x 288, 320 x 288, 160 x 120
Frame Rate	30 fps at 1920 x 1080	
<b>Network</b>		
Interface	10BASE-T / 100BASE-TX auto-negotiation, RJ-45 socket Support MDI / MDI-X auto crossover function	

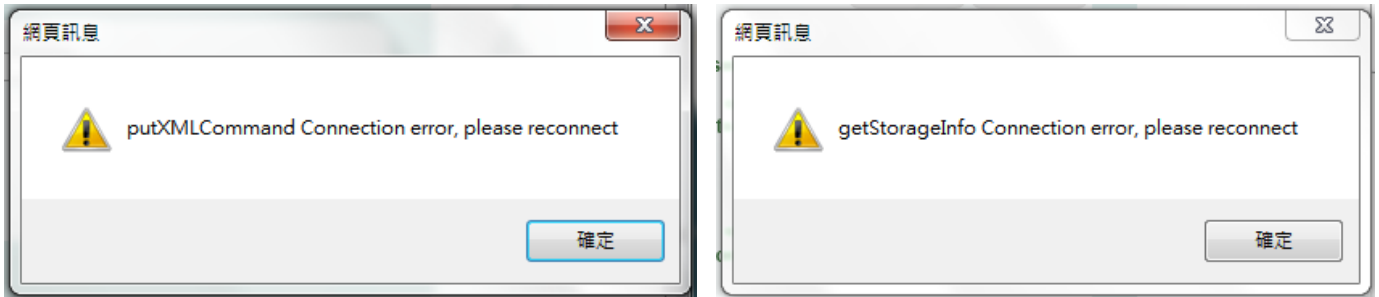
<b>Supported Protocols</b>		TCP / IP, IPV6, UDP, ICMP, DHCP, NTP, DNS, DDNS, SMTP, SNMP, FTP, HTTP, HTTPS, PPPoE, UPnP, Bonjour, RTP, RTSP, RTCP, UDP, IGMP,SSL, ICMP, ARP, ONVIF, PSIA, QoS
<b>Bandwidth control</b>		Min. 256 k Byte / sec adjustable
<b>Connector</b>	<b>Power</b>	12 VDC, PoE
	<b>Ethernet</b>	RJ-45
<b>General</b>		
<b>Power Source</b>		12 VDC / PoE (IEEE802.3af)
<b>Max. Power Consumption</b>		6W Max.
<b>Operating Temperature</b>		-10°C ~ 50°C / 14°F ~ 122°F
<b>Humidity</b>		20% ~ 80% (no condensation)
<b>Safety</b>		CE, FCC
<b>Weather-Resistant</b>		IP66
<b>Dimensions (Φ x H)</b>		120 x 95 mm /4.72" x 3.74"
<b>Weight</b>		740g / 1.63lbs
<b>Language</b>		Czech, Dutch, English, French, German, Japanese, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Traditional Chinese



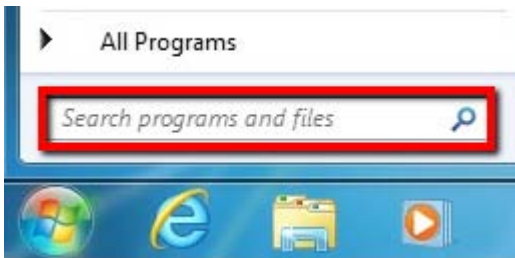
## 9. Troubleshooting

### Error messages pop up

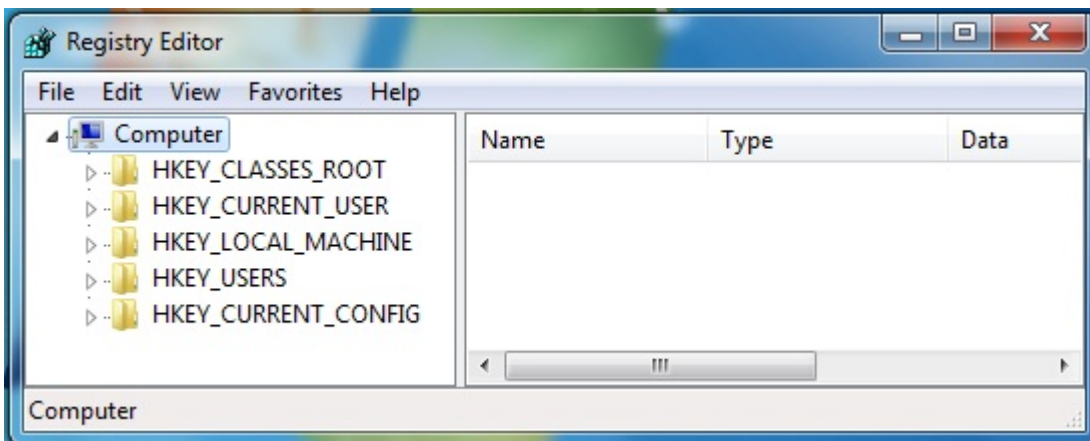
A. When these error messages pop up, follow the steps below to fix the problem.



1. To enter the Registry Editor of your computer: Click **Start** and type “**regedit**” in the *Search Program and Files* field.

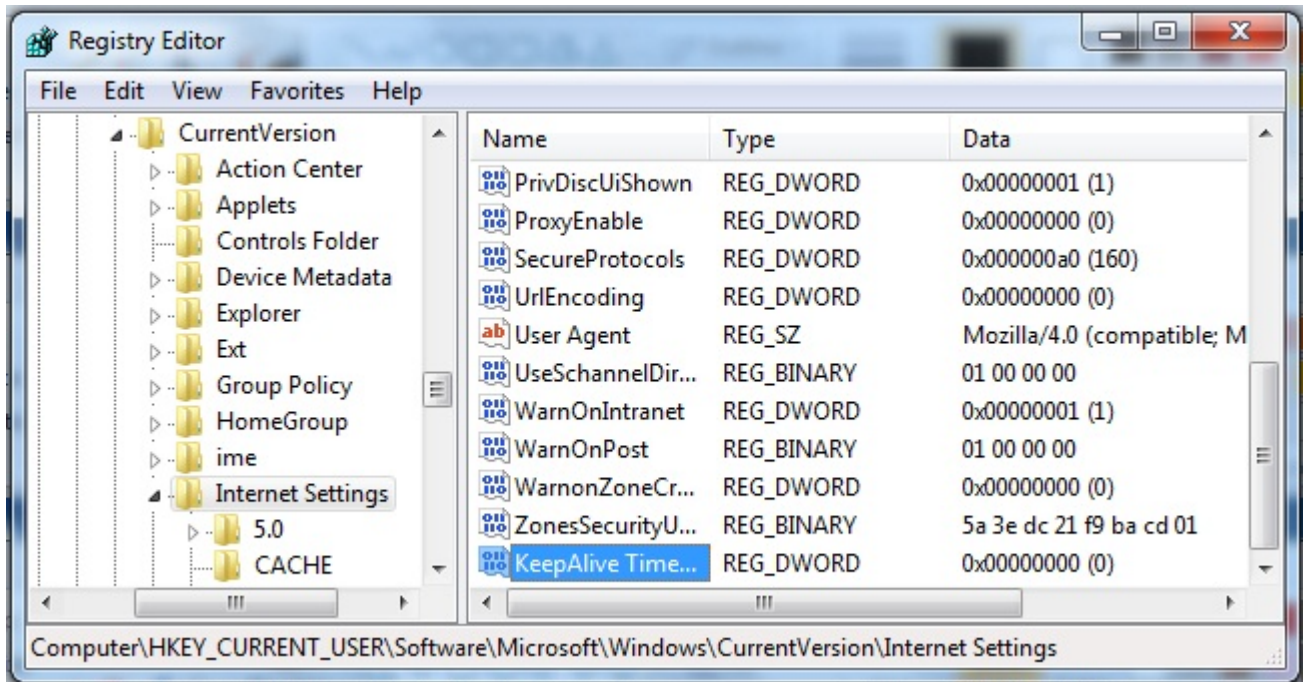


2. Click the **Enter** button, the Registry Editor window appears.

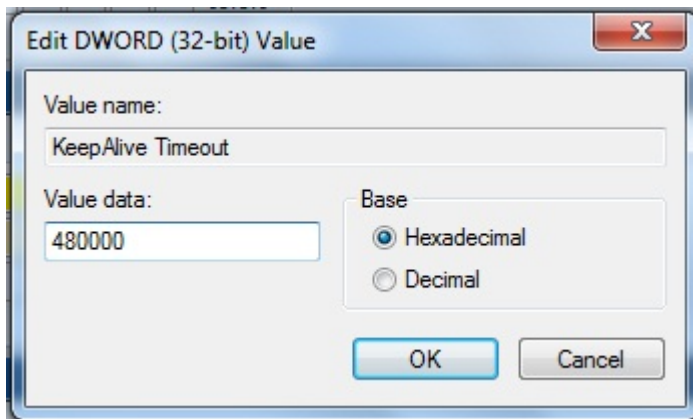


3. Find the **KeepAlive Timeout** Dword by following the path:

\HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\Internet Settings



4. Double-click **KeepAlive Timeout** and this window appears.




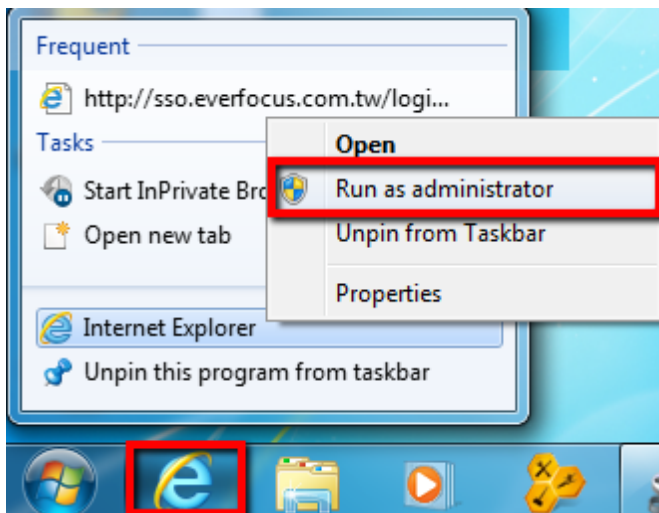
5. Change the Value data to **480000** and click **OK**.

B. Snapshot / Record error message.



For Microsoft IE10 and above users, you may have the above error message pop up when you click the

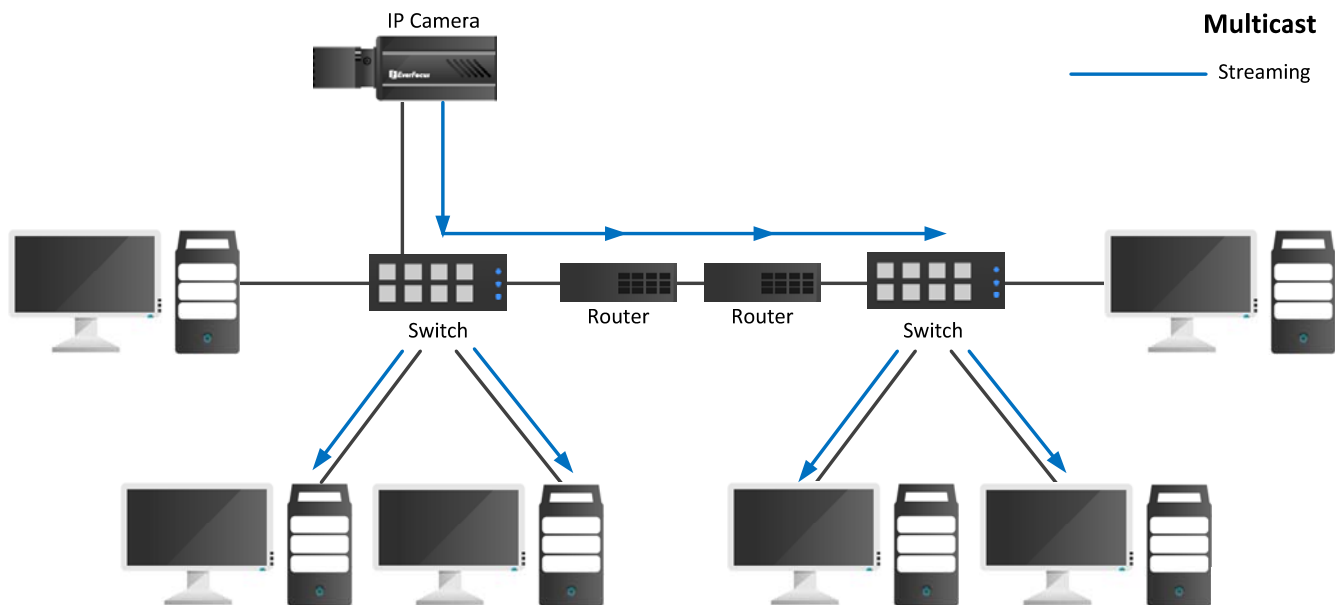
**Snapshot**  button on the Live View window. You can simply solve this problem by setting up your Microsoft Internet Explorer to **Run as administrator**.



Appendix

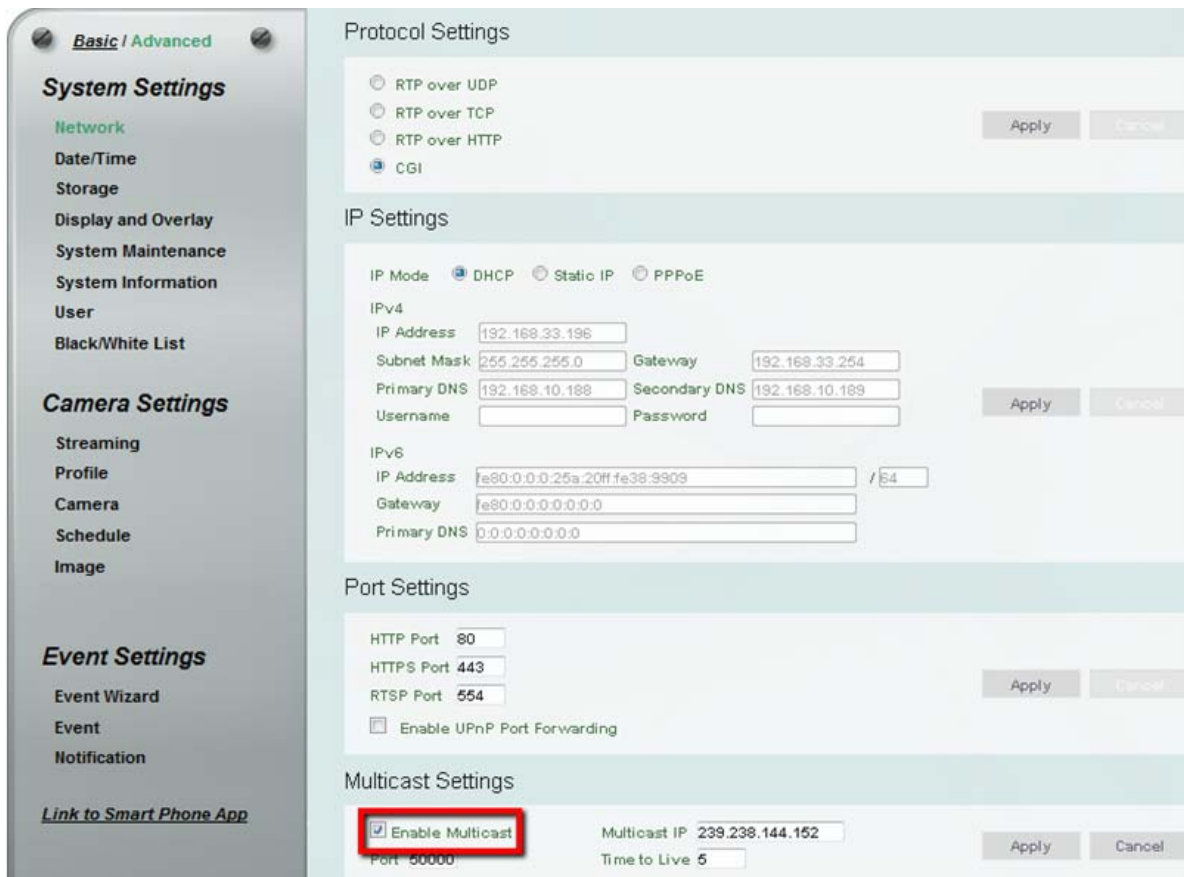
Enabling the Multicast Function

The Multicast Function is a technique for one-to-many communication over an IP infrastructure in a network that is designed to share IP camera loading and reduce network bandwidth. Note that for this function to work, the router / switch must support multicast function.

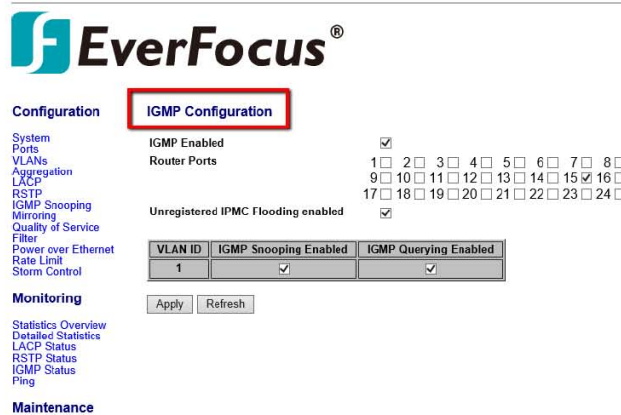
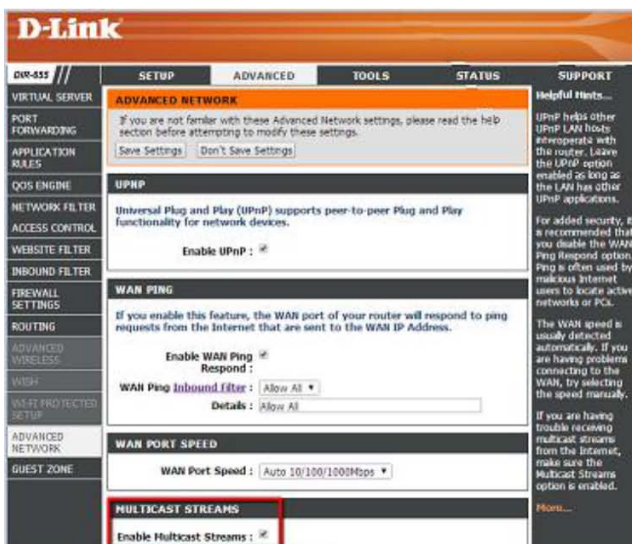


To enable the Multicast Function:

1. Complete the installation of the IP cameras, routers/ switches and computers (refer to diagram above).
2. Install VLC and Wireshark in your computer. Click [VLC](#) and [Wireshark](#) to download.
3. Access to the Web UI of the IP camera to enable the Multicast function. Click the **Apply** button to save the setting. (Advanced tab > Network> Multicast Settings> Enable Multicast)



4. Go to the setting page of the router/switch to enable the Multicast function. Here we use a D-Link DIR655 router and EverFocus 24-port switch for example.



5. The Multicast function setup is now complete.

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