

EZN3240



User's Manual



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Product Name: EZN3240 EverFocus IP Network Cameras

Model Number(s): EZN3240

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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Taipei Hsien, Taiwan, R.O.C.

EZN3240 complies with CE and FCC rules.

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.

Safety Notices

- These limits are designed to provide reasonable protection against interference. This equipment may generate, use 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 these separations 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



To reduce risk of fire or electric shock, do not expose this camera to rain or moisture.



Do not attempt to disassemble the camera. To prevent electric shock, do not remove screws or covers. There are no user-serviceable parts inside. Contact qualified service personnel for maintenance. Handle the camera with care. Do not strike or shake, as this may damage the camera.



Do not use strong or abrasive detergents when cleaning the camera body. Use a dry cloth to clean the camera when it is dirty. When the dirt is hard to remove,

use a mild detergent and wipe gently.

 Do not operate the camera beyond its specified temperature, humidity or power source ratings. Do not use the camera in an extreme environment where high temperature or high humidity exists. Use the camera at temperature within -40°C ~ 50°C / -40°F ~ 122°F and a humidity below 90%. The input power source for this camera is 12 VDC & 24CAV & 802.3af PoE.

 Use only the recommended power supplies. Power supplies must comply with the requirement of the latest version of IEC60950-1. Substitutions may damage the unit or cause a fire or shock hazard.

 Electrostatic-sensitive device. Use proper CMOS/MOSFET handling precautions to avoid electrostatic discharge.

 Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

Terms and Trademark

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Support

If the unit ever needs repair service, the customer should contact the nearest EverFocus Electronics Corp. Service Center for return authorization and shipping instruction.

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1. INTRODUCTION

EverFocus EZN3240 enable to delivers HDTV video with superior image quality at up to 30fps in 1080p resolution, with extended IR range, variable output IR control to manage illumination and conserve energy, split glass to prevent internal IR reflections, full motion true day/night images even with no ambient light without ghosting to handle the most challenging of bright or unbalanced scene lighting conditions. Installation is made easy with features such as Power over Ethernet (IEEE 802.3af), Vandal resistant, IP66, with motorized varifocal auto IRIS lens and remotely control lens zoom & Focus via web browser. EZN3240 is ideal for outdoor applications that require super image detail.

2. FEATURES

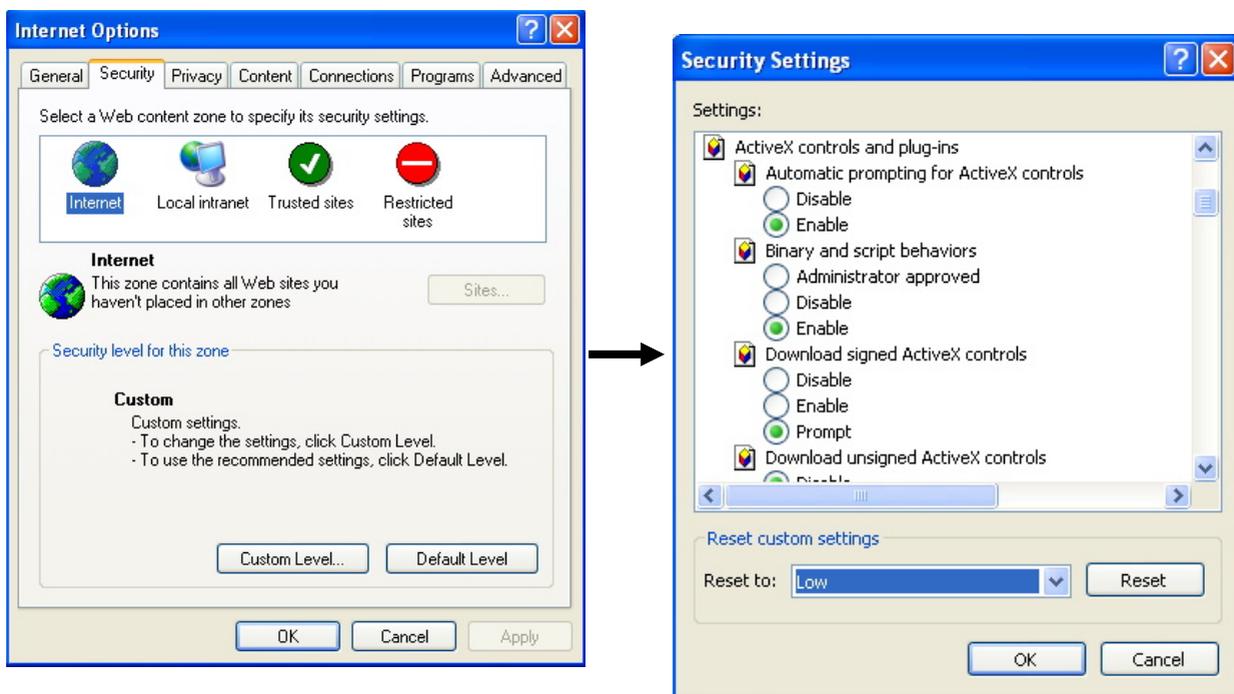
- 1/2.7" 1080p/720p HD color CMOS image sensor delivers HDTV video quality in 16:9 aspect ratio
- Supports both H.264 and Motion JPEG in full 30 FPS frame rate.
- High Performance Noise Filter improves image quality
- Provides NTSC/PAL TV Signal 'test mode' output for local aim and focus or display on an analog monitor.
- Dual Codec for H.264 and MJPEG allows choice of stream formats to fit the application
- Provides true day/night functionality with automatic IR filter operation
- Up to 4X 'sens-up' low light enhancement
- Two Way Audio transport (line level input/output)
- ONVIF / PSIA compliance interoperates with a broad range of systems
- Dual power capability PoE or 12VDC for flexible installation
- Local alarm inputs and outputs
- Extended IR range of up to 40M (196ft) with 35 LEDs and variable output IR control to manage illumination and conserve energy
- Split glass to prevent internal IR reflections
- Flexible mounting and positioning – speed – mount ring fits 4" round electrical box; or remove base to mate with 1" conduit
- E-Z lock ring at the base is designed with easy to grip tabs for firmly clamp the camera in place, plus a set screw for added security.
- Easy bottom access to video test point and lens control inside weatherproof cover plus Remote Zoom & Focus adjustment by web browser

- IP66 and vandal resistant
- Multiple power supply includes 12VDC, 24VAC and PoE

3. ACCESSING THE CAMERA MENU

Step 1. Start an Internet Explorer browser session. Before accessing to the EZN3240 over IE browser, user should adjust the security level.

Open the IE browser and set the security level to “Low” in “Tools->InternetOptions->Security->CustomLevel...”, and enable ActiveX Control and Plug-in directly as well.



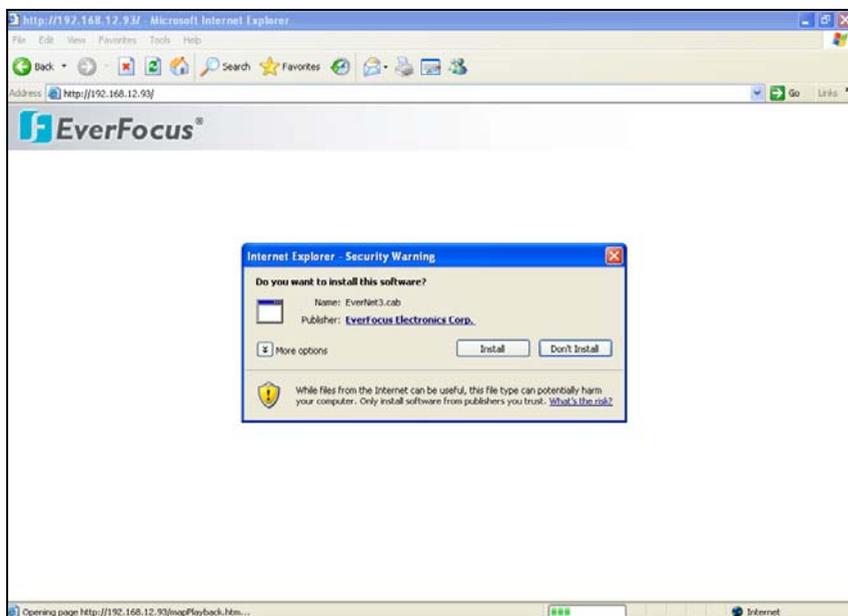
Step 2. Enter the IP address or host name of the camera in the **Location/Address** field of your Internet Explorer browser in the form <http://nn.nn.nn.nn:port>, or <http://ddnsname.everfocusddns.com>. (Please refer to EZN3240 Installation Guide for how to find the IP address by using the IP Finder)

Step 3. At the login popup window enter “User Name” and “Password”. Default User name is “user1” and default password is “1111111”.

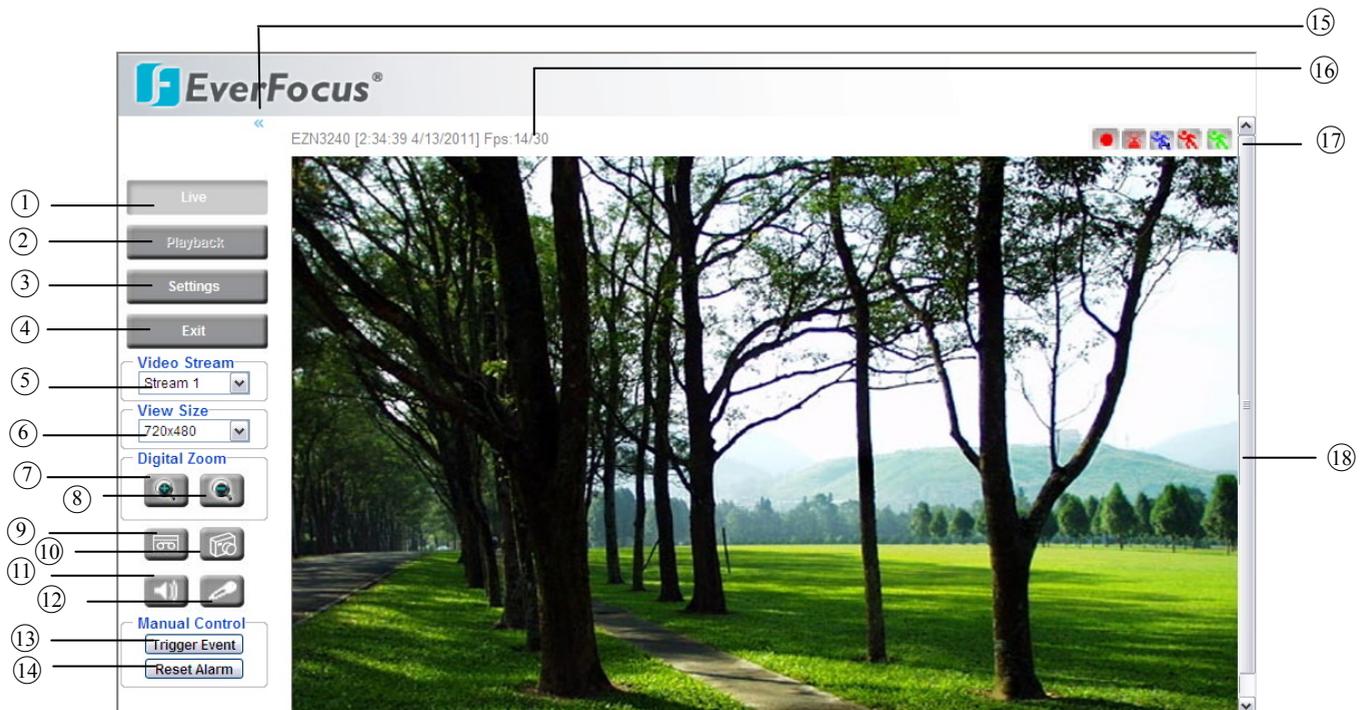


Step 4. Click "OK" button.

Step 5. You might be required to download Active X files, which are required to process camera video. Please click "Install".



Step 6. Congratulations!! You should now be able to see the live image.



① Press  button to display the "Live" page.

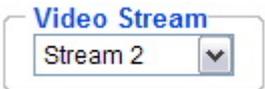
Double click on the image to show a full screen display, double click again or press ESC to return to the normal live display.

② Press  button to go SD card playback page. Please refer to “Section 4. Playback” for further information.

Note: This function is available for the models with built-in SD card.

③ Press  button to enter the camera Setting page. In the Setting page, there are 8 sections: [System Info], [User Config], [Network], [Video], [Audio], [User], [Event] and [System]. Please refer to “Section 5. Setting” for further information.

④ Press  button to close the EZN3240 network page.

⑤ Video Stream 

Select the desired Video Stream from Stream 1 and Stream 2 (stream must be enabled in camera Setting menu). Please refer to "Section 5.4.1 Multi Streaming" for further information.

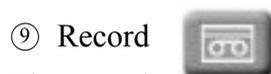


You can select View size to either reduce or enlarge the image to the appropriate size. Select the view size for live images from:

1920x1080/1280x1024/1280x720/1024x768/800x600/720x480(720x576)/640x480/320x240(352x288)/320x240

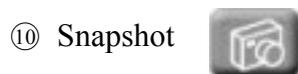


Press "+" or "-" button or roll the mouse wheel to magnify / reduce the displayed image. (max. is X10) Clicking on a magnified image will re-center the image around that point.

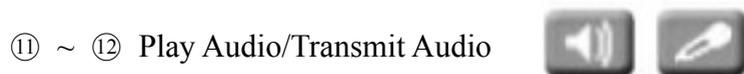


The record button is used to record the current video stream. The location where the image file is saved can be specified in Setting -> User Config. Please refer to "Section 5.2 User Config" for further information.

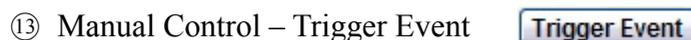
Note: Record segment is unlimited. However, if you switch to any other page, record will stop.



The Snapshot button saves a .jpg image of the video image currently being displayed. The location where the snapshot data is saved can be specified in Setting -> User Config. Please refer to "Section 5.2 User Config" for further information.



Click the "Play Audio" and "Transmit Audio" buttons to switch the sound off and on for the audio input and output, respectively.



Press “Trigger Event” button to trigger an event directly from the live view page, and event actions will be initiated if they have been set up in the “Event” menu. (Please refer to “Section 5.7.1 Event Settings”)

⑭ Manual Control – Reset Alarm 

Press “Reset Alarm” button to reset an alarm condition remotely.

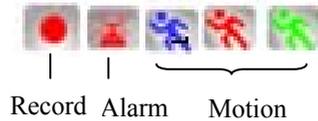
⑮ The « icon is used to fold the control panel at left and view the image in a full screen. Click on » icon to unfold the control panel.

⑯ Status Display

The name of the camera currently being viewed, current date/time and current frame rate will be displayed.

⑰ Event signals

When an alarm or motion event is triggered, a signal icon will flash to alert the user. The first icon is for alarm events and the other 5 icons are for motion events. The motion event icons, which differ by color, correspond to the motion trigger areas set in the Motion menu. Please refer to “Section 5.7.2 Motion” for detailed information about Motion setup.

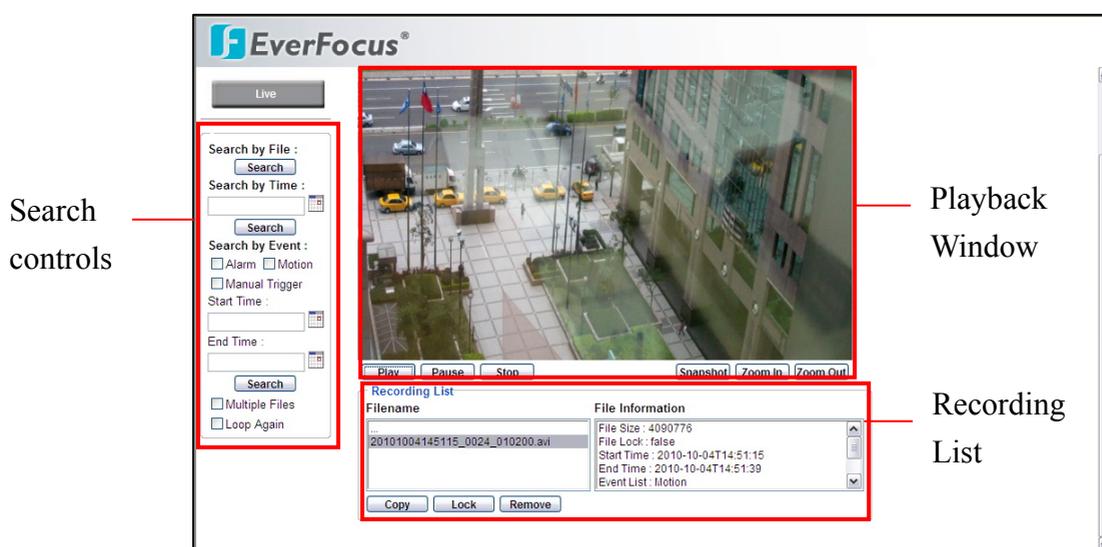


⑱ Scroll bar: Drag the scroll bar to move the image up, down, left or right if the image size exceeds window’s size.

4. Playback

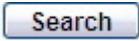
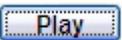
Playback button is only active when SD card is inserted. If SD card is not inserted, Playback button will be disabled. Administrator can set user's authority, to allow/disallow user to view information from the SD card. Below is the detailed description about remote playback from SD card.

Press the  button to enter Playback page. Playback is divided into 3 main sections: Search Controls, Playback Window and Recording List.

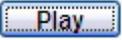


In the **Search** section, 3 methods are provided to search the video:

1. Search by File:

Press  button to list all the files in the **Recording List** section. In the Recording List, file name and file information will be displayed. Click the file name that you wish to playback and press  button.

2. Search by Time:

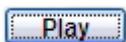
Press the calendar icon to select the date and time to be searched. Press  button to start time search. In "Recording List" section, the file name and file information that is the most close to the specified time will be displayed. Click the file name that you wish to playback and press  button.

3. Search by Event:

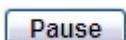
Select which event type(s) to search for. Choose from Alarm, Motion or Video Loss. Select “Start Time” and “End Time”. Press “Search” button to start time search. In “Recording List” section, file name and file information will be displayed. Click the file name that you wish to playback and press  button.

Check “Multiple Files” and the playback function will keep playing to next file until the end of file list in the same folder.

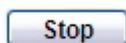
Check “Loop Again” and playback function will loop playback the selected file.



Playback the selected video



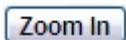
Pause the playback video



Stop the playback video



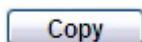
Snapshot the current image. The video image currently being displayed will be saved as a .jpg file. The location where the snapshot data is saved can be specified in “Setting -> User Config. “. Please refer to “Section 5.2 User Config” for further information.



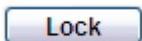
Zoom In the image



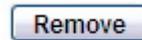
Zoom Out the image



Archive the video file. Specify the recording path if you wish to save the file to your local PC.



Lock the selected file. The file saved in the SD card will be overwritten if the setting in “System->SD Card->Overwrite” is ON, however the data being locked will be protected from overwriting.

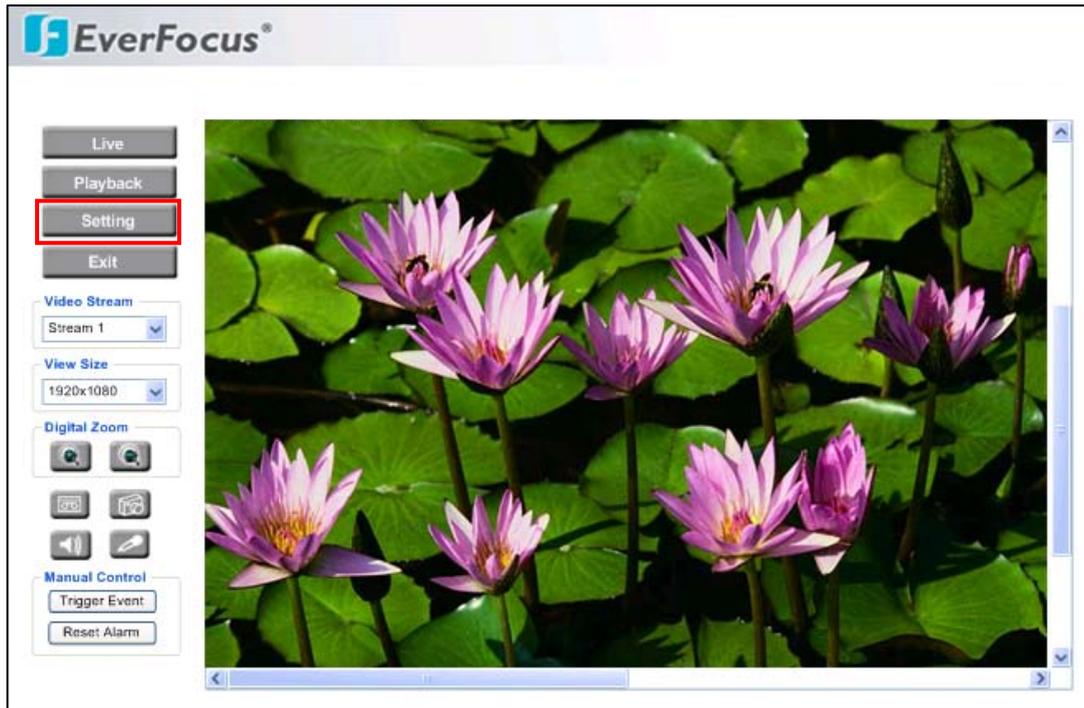


Remotely remove the selected file from SD card.

Press  button to return to live view.

5. SETTING

Click this button to display the camera setup menu.



Note: Press  button anytime to return to live view.

5.1 System Info

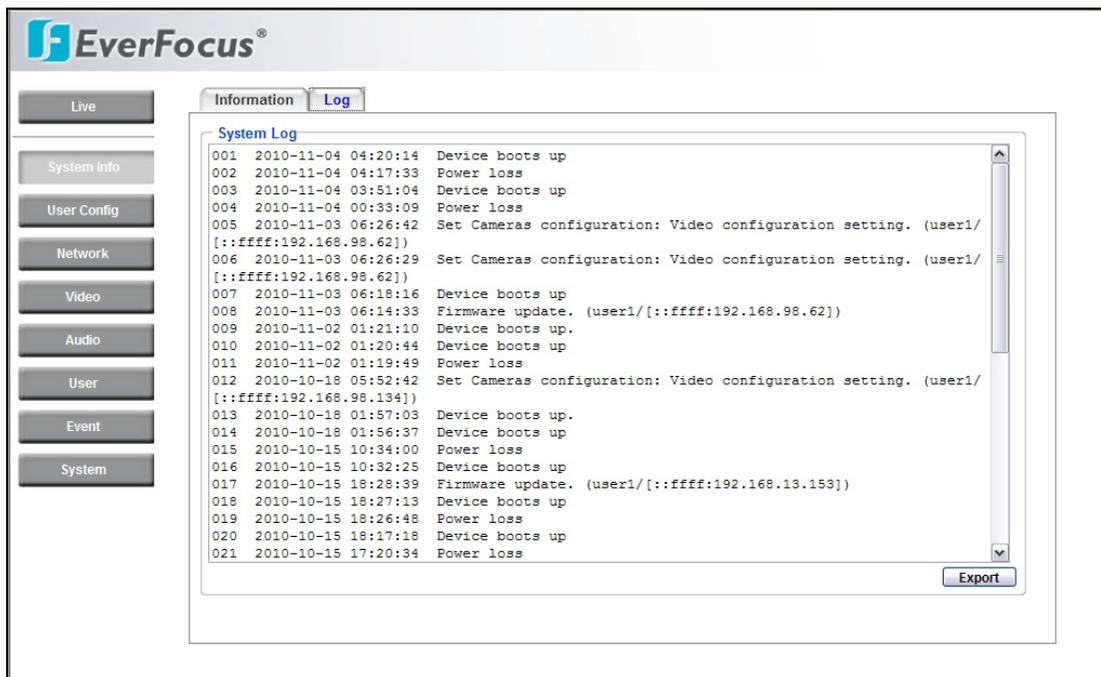
System information and system log events can be accessed on this page via 2 tabs: [Information] tab and [Log] tab.

5.1.1 Information Tab

System Information: Firmware version, MAC address, Model Name and TV Out format. (this data may not be changed in this page and is for reference only)



5.1.2 Log Tab



System Log:

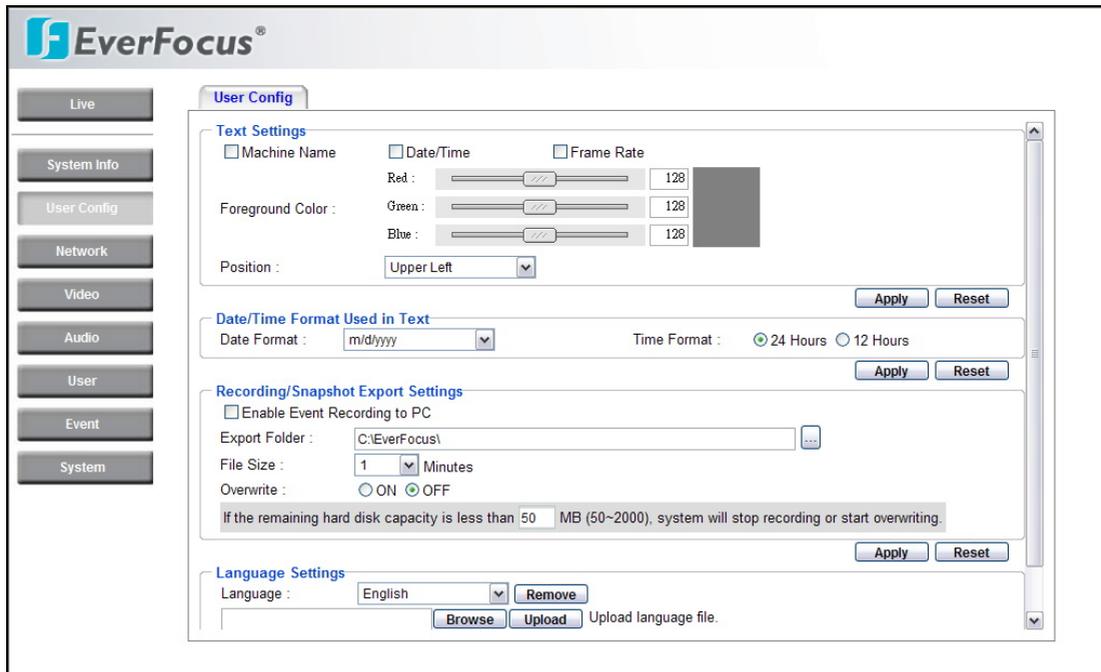
Date/Time: displays date and time of the log event.

Log message: all information and event message, including login, user's IP, reboot,

firmware upgrade, load factory default, configuration reset and event detected.
System will keep the newest 256 records.

Press **Export** button to export the system log into a “.txt” file and select the location where the exported log file will be saved.

5.2 User Config



The configuration and operation of the Live View screen can be changed based on the login user ID. The settings which can be customized for each of the 10 possible login IDs are:

Text Settings

Check the box to enable display of the **Machine name**, **Date/Time** or **Frame Rate** on the screen.

Foreground Color: Select the foreground color of text to be displayed by moving the slide bar between **Red**, **Green** and **Blue** until the desired color is obtained.

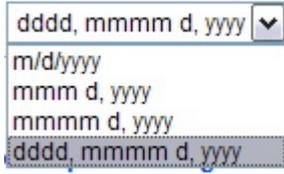
Position: Select the position where the text will be displayed: Upper Left / Lower Right / Lower Left.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the

changes.

Date/Time Format Used in Text

Select Date/Time Format from the following options:



* day of week, Month, date, year

Time Format: choose between 24 Hours or 12 Hours.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

Recording/Snapshot Export Setting

Enable Event Recording to PC: Allow event video recorded to users' PC if any events have been set to record to PC.

Export folder: Select Export folder by clicking on  button, then direct to the folder to be exported.

File size: Set the limit for the size of the single recording file in minutes. When the single recording file size exceeds the time you set, the system will create a new file to continue recording.

Overwrite: Select “ON” for overwriting recording/snapshot file when the disk storage capacity is full.

If the remaining hard disk capacity is less than ____ MB (enter the value you wish to set between 50~2000), the system will stop recording or start overwriting.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the changes.

Language Settings

Language: Select the language to be displayed in web page. Default language is

English. To add a new language which is not listed in the original configuration, press the **Browse** button to locate the new language file (.evb) and then click the Load button.

Note:

Uploading a new language file will reboot the system automatically. Please reconnect to the IP camera after reboot.

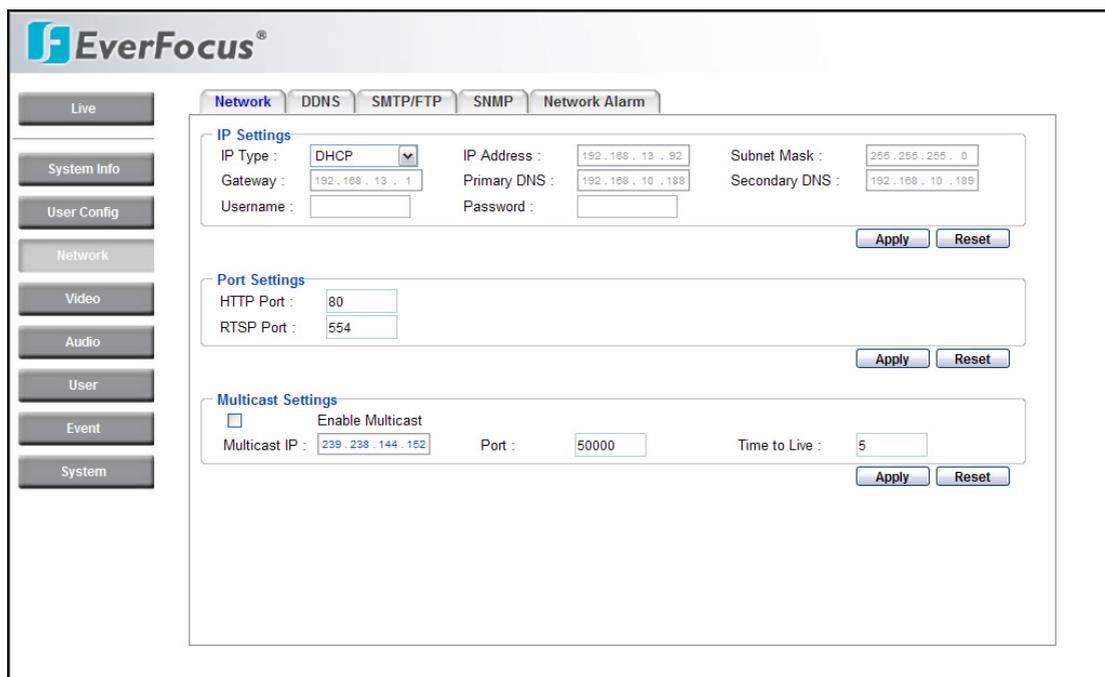
Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.3 Network

The network settings and the settings relating to Network, DDNS, SMTP/FTP, SNMP and Network Alarm can be configured on this page.

The "Network setup" page has 5 tabs: [Network] tab, the [DDNS] tab, the [SMTP/FTP] tab, the [SNMP] tab and the [Network Alarm] tab.

5.3.1 Network



The screenshot displays the EverFocus web interface for network configuration. It features a sidebar on the left with buttons for 'Live', 'System Info', 'User Config', 'Network', 'Video', 'Audio', 'User', 'Event', and 'System'. The main area has tabs for 'Network', 'DDNS', 'SMTP/FTP', 'SNMP', and 'Network Alarm'. The 'Network' tab is selected, showing three sections: 'IP Settings', 'Port Settings', and 'Multicast Settings'. Each section includes input fields and 'Apply'/'Reset' buttons.

Section	Field	Value
IP Settings	IP Type	DHCP
	IP Address	192.168.13.92
	Subnet Mask	255.255.255.0
	Gateway	192.168.13.1
Port Settings	HTTP Port	80
	RTSP Port	554
	Primary DNS	192.168.10.188
Multicast Settings	Enable Multicast	<input type="checkbox"/>
	Multicast IP	239.238.144.152
	Port	50000
	Time to Live	5

The following information is required to configure the network settings. Contact the network administrator or your Internet service provider.

IP Settings

- IP Type
- IP address
- Subnet mask
- Gateway (when using the gateway server/router)
- Primary DNS, Secondary DNS (when using DNS)

IP Type

DHCP: Configure the DHCP server not to assign the same IP addresses used for the other network cameras and PCs whose IP address is unique.

Refer to the network administrator for the settings of the server.

Default: DHCP.

Note: If a DHCP server is not available, the system will use xxx.xxx.xxx.xxx as the default IP address.

Static IP: User can manually set the static IP for network connection.

PPPoE: This is for a DSL DIRECT connection application; the ISP will require a user name and password. (That is, if a single camera is connected directly to the DSL modem.)

Note: If PPPoE is used as IP type, IP Utility software will not be able to detect the device.

IP address

When not using DHCP, enter the IP address of the camera. Avoid address conflicts; do not enter an IP address already used for a PC or other network cameras. Every device on an IP network must have a unique IP address.

Subnet Mask

This field is to set the netmask for your network so as the IP camera will be recognized within the network. Example: 255.255.255.000 typical for a Class “C” network. When DHCP is selected, the DHCP server will assign this value automatically.

Gateway

This field is to set the gateway for your network so the IP camera will be recognized within the network. When DHCP is selected, the DHCP server will

assign this value automatically.

Primary DNS

An IP address of DNS server that is provided by ISP. This address may be assigned automatically if DHCP is used. A correct DNS IP is essential if DDNS will be used.

Secondary DNS

If your ISP provides you an IP address secondary DNS, please set it here.

Username

Enter User name of the account (used only for PPPoE).

Password

Enter Password of the account (used only for PPPoE).

Port Settings

HTTP Port

Enter HTTP port number.

RTSP Port

Enter RTSP port number.

Multicast Setting

Multicast provides the most efficient usage of bandwidth when there are large numbers of clients viewing simultaneously. A multicast broadcast cannot however, pass a network router unless the router is configured to allow this. It is not possible to multicast over the Internet, for example. Note also that all multicast viewers count as one unicast viewer.

Enable Multicast: Check the box to enable multicast. Multicast provides the most efficient usage of bandwidth when there are large numbers of clients viewing simultaneously. A multicast broadcast cannot however, pass a network router unless the router is configured to allow this. It is not possible to multicast over the Internet, for example. Note also that all multicast viewers count as one unicast viewer

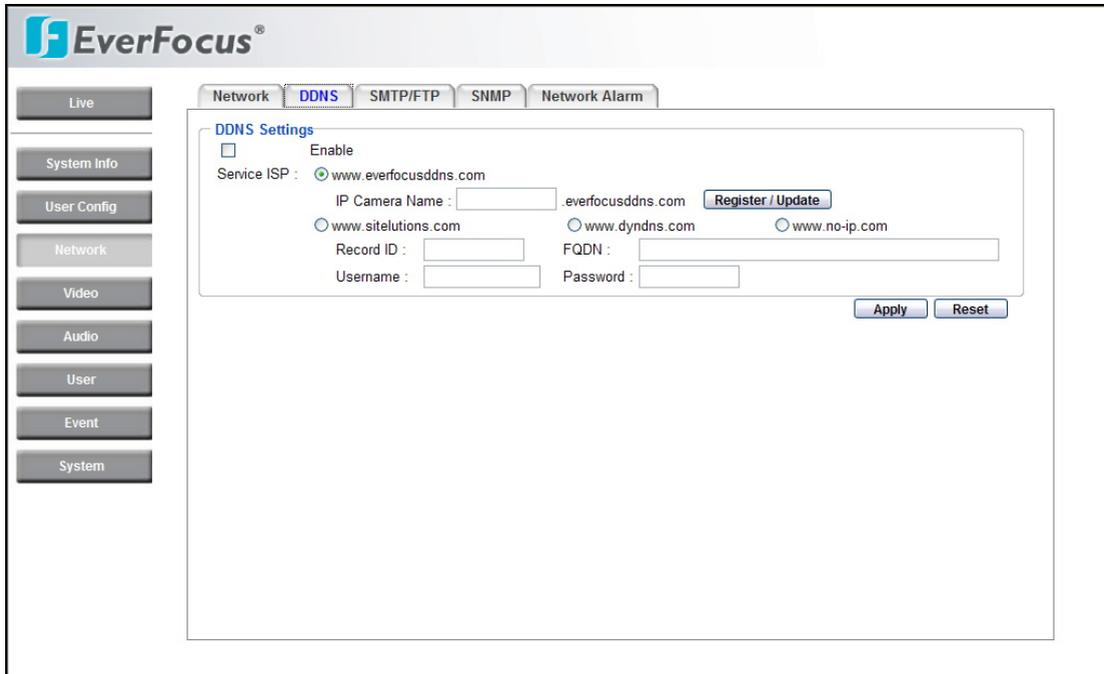
Multicast IP: Enter the multicast IP address.

Port: Enter the multicast port.

Time to live: Enter the multicast TTL value. It is a limit on the period of time or number of iterations or transmissions in computer and computer network technology that a unit of data (e.g. a packet) can experience before it should be discarded.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.3.2 DDNS



DDNS settings

When accessing the camera via the Internet in a network environment where the site IP address is obtained using DHCP, the DDNS function is necessary.

To use the DDNS function, it is necessary to connect to the dedicated DDNS server. We support 4 DDNS server providers as follows:

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

Enable: Check the box to enable DDNS setting.

Service ISP: If you choose EverFocus DDNS server, you can easily register a DDNS name and obtain free DDNS services from EverFocus at ”www.everfocusddns.com”.

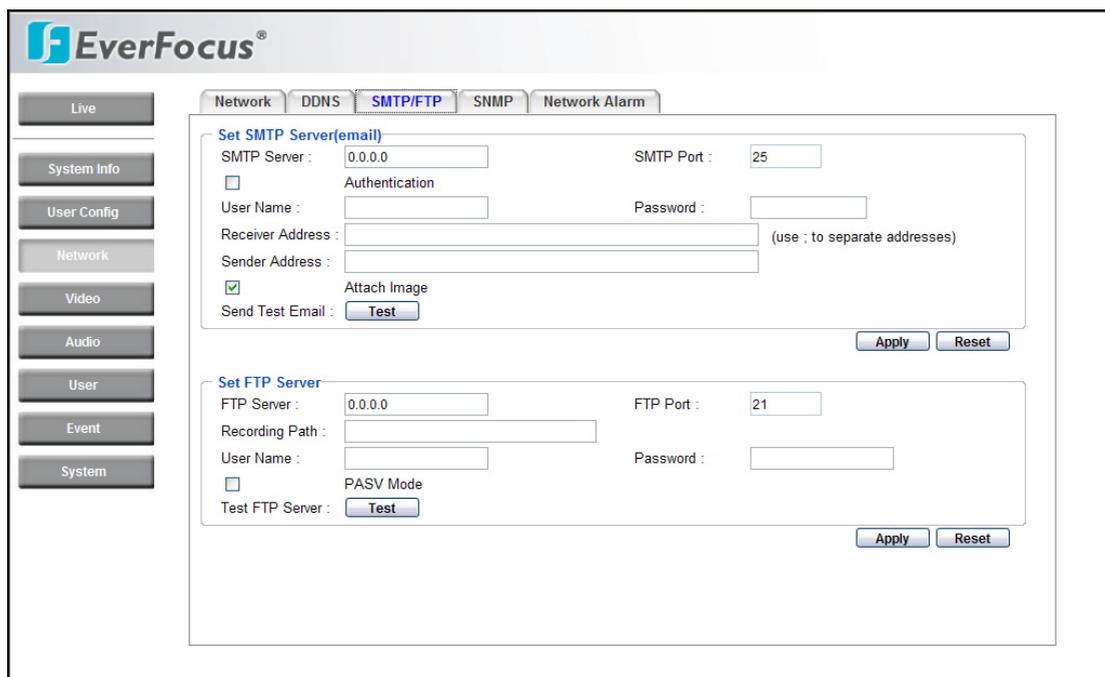
Enter an IP Cam Account Name: _____everfocusddns.com

Press **Register / Update** button to register or update DDNS account.

If you wish to get a domain name from another DDNS provider, it may be necessary to configure Record ID, FQDN, Username and password and register in advance for DDNS services. Refer to the web site for further information about the DDNS provider.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.3.3 SMTP/FTP



The screenshot shows the EverFocus web interface with the 'SMTP/FTP' tab selected. The interface includes a sidebar with navigation buttons for Live, System Info, User Config, Network, Video, Audio, User, Event, and System. The main content area is divided into two sections:

- Set SMTP Server(email):**
 - SMTP Server: 0.0.0.0
 - SMTP Port: 25
 - Authentication
 - User Name: [text input]
 - Password: [text input]
 - Receiver Address: [text input] (use ; to separate addresses)
 - Sender Address: [text input]
 - Attach Image
 - Send Test Email: **Test**
 - Apply** **Reset**
- Set FTP Server:**
 - FTP Server: 0.0.0.0
 - FTP Port: 21
 - Recording Path: [text input]
 - User Name: [text input]
 - Password: [text input]
 - PASV Mode
 - Test FTP Server: **Test**
 - Apply** **Reset**

Set SMTP

The settings relating to the mail server used to send the e-mail notification from the camera to predefined addresses via SMTP can be configured.

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. Default is 25.

Authentication: Check the box, if the SMTP server requires Authentication (user/password).

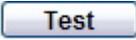
User Name: Input the login user ID if the SMTP server requires Authentication. (max. 31 bytes; a-z;A-Z;0-9;@)

Password: Input the password if the SMTP server requires authentication. (max. 15 bytes; a-z;A-Z;0-9;@)

Receiver Address: Input the e-mail address to receive an e-mail message when the EVENT is enabled and triggered. Please use “;” to separate address.

Sender Address: Input sender’s e-mail address, so that receiver can recognize the sender when an event message is sent out.

Attach image: Check the box to send an e-mail notification with a FPS video file attached.

Send Test Mail: Press  button to send a test e-mail to the designated address.

Set FTP

The settings relating to an FTP server to be used to receive alarm images can be configured.

FTP Server: Enter the IP address or the host name of the FTP server.

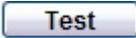
FTP Port: Enter the port number for FTP server. Default is 21.

Recording Path: Assign the recording path.

User Name: Set FTP User name.

Password: Set FTP password.

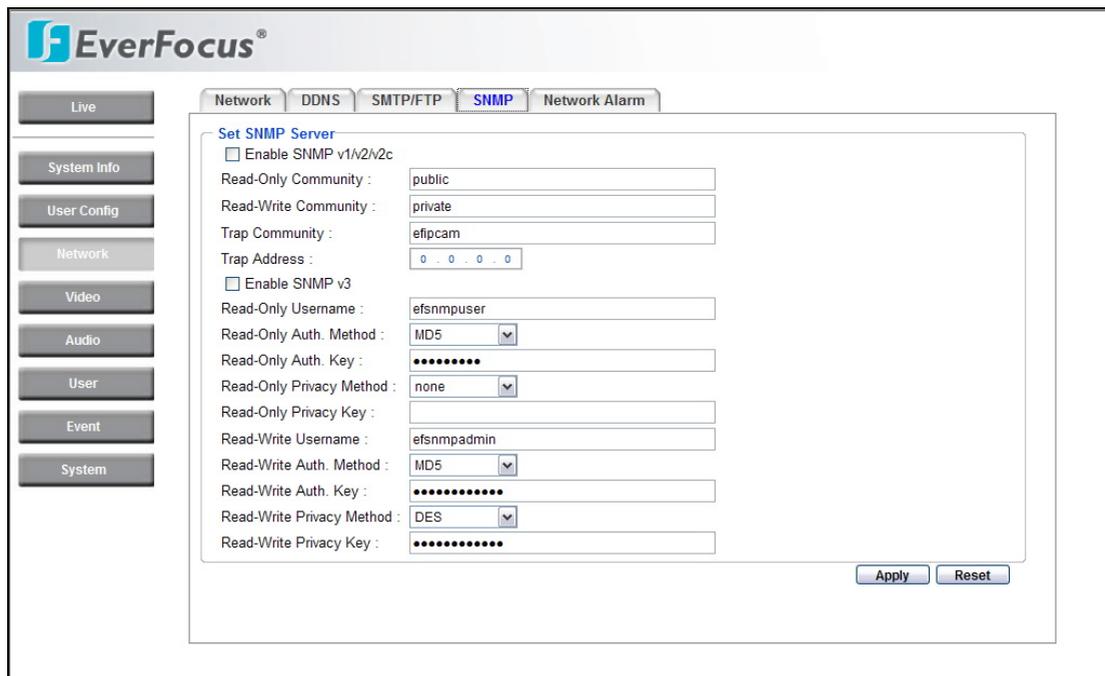
PASV mode: Check to enable Passive mode (most sites normally require Passive mode). If unable to establish a connection, uncheck "PASV" mode.

Test FTP Server: Press  button to send a test file to the designated FTP server.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.3.4 SNMP

This page allows the user to set IP Camera SNMP settings so it can be used by a NMS (Network Management System).



Set SNMP Server

Enable SNMP v1/v2/v2c

Read-Only Community : public

Read-Write Community : private

Trap Community : efsnmpcam

Trap Address : 0 . 0 . 0 . 0

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 :

Apply **Reset**

Set SNMP Server

SNMP is the Simple Network Management Protocol.

The SNMP protocol is used by network management systems to communicate with network elements.

Many network elements support only SNMPv1, SNMPv2 and SNMPv2c. Support for SNMPv3 is minimal.

Version	Description
SNMPv1	SNMPv1, which implements community-based security
SNMPv2c	SNMPv2 with community-based security
SNMPv2	SNMPv2 with party-based security
SNMPv3	SNMPv3, which implements user-based security

Enable SNMP v1/v2/v2c: Check the box to enable SNMP v1/v2/v2c.

Read-Only Community: Identifies the community string for read-only access. The community string has to be the same as that set in NMS.

Read-Write Community: Identifies the community string for read and write access.

The community string has to be the same as that set in NMS.

Trap Community: The community string used for the traps.

Trap Address: Identifies the IP address of the trap destination

Enable SNMP v3: check the box to enable SNMP v3.

Read-only Username: Set the user name to be used for authentication and privacy. (Read-only)

Read-only Auth. Method: Select authentication method which will be used with the password to authenticate with the device. (Read-only)

Read-only Auth. Key: Set authentication password. (Read-only)

Read-only Privacy method: Select the privacy method which will be used with the encryption password. (Read-only)

Read-only Privacy key: Set privacy password. (Read-only)

Read-Write Username: Set the user name to be used for authentication and privacy. (Read-write)

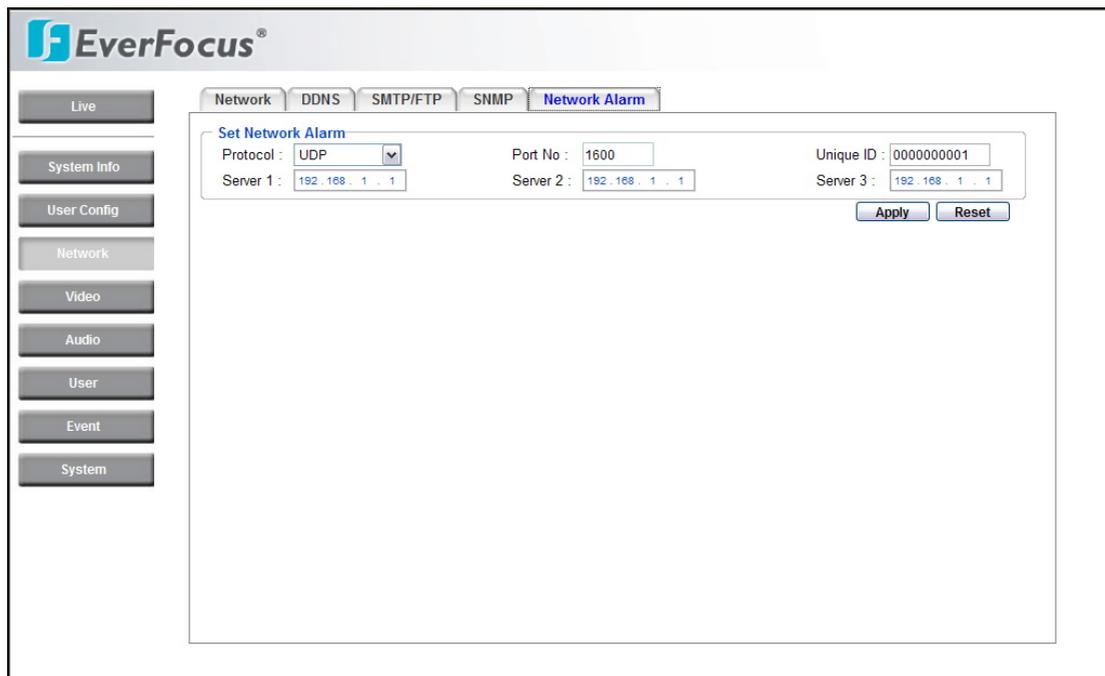
Read-Write Auth. Method: Select authentication method which will be used with the password to authenticate with the device. (Read-write)

Read-Write Auth. Key: Set authentication password. (Read-write)

Read-Write Privacy Method: Select the privacy method which will be used with the encryption password. (Read-write)

Read-Write Privacy Key: Set privacy password. (Read-write)

5.3.5 Network Alarm (reserved for PowerCon)



Set Network Alarm

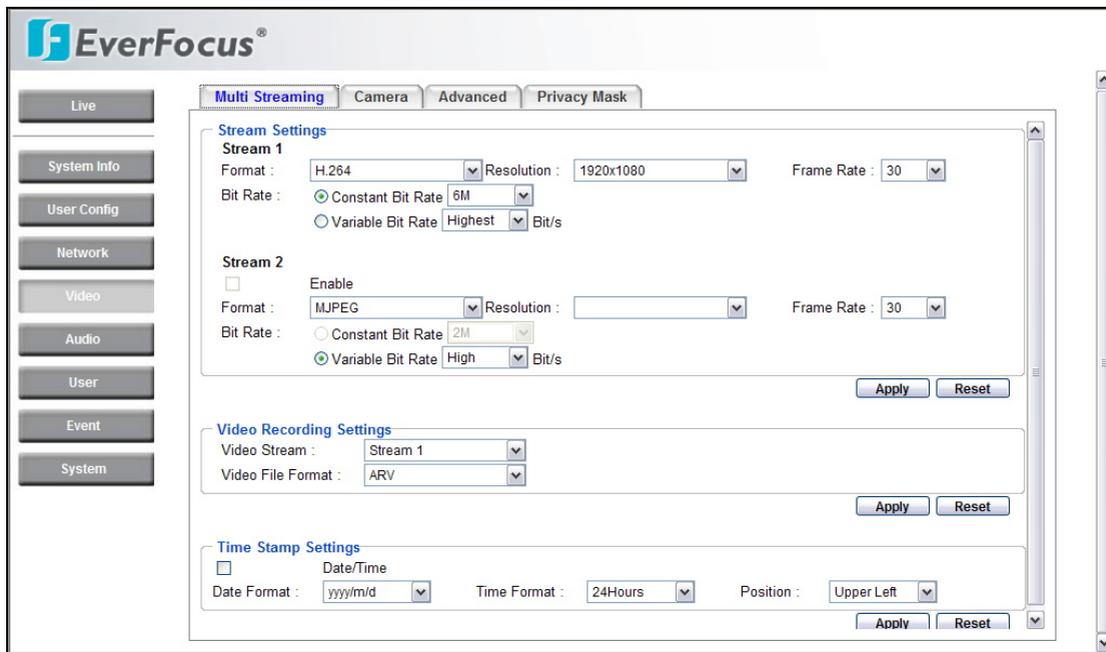
This function is reserved for PowerCon software, for the details regarding these settings please refer to the documentation for the PowerCon network alarm protocol.

5.4 Video

The settings relating video such as streaming, camera OSD can be configured on this page.

The "Video" page has 3 tabs: the [Multi-streaming] tab, the [Camera] tab and the [Advanced] tab.

5.4.1 Multi Streaming



The screenshot shows the 'Multi Streaming' configuration page in the EverFocus web interface. It features a sidebar with navigation options and a main content area with three tabs: 'Multi Streaming', 'Camera', and 'Advanced'. The 'Multi Streaming' tab is active, displaying settings for two video streams. Stream 1 is enabled and configured with H.264 format, 1920x1080 resolution, 30 FPS, and a constant bit rate of 6M. Stream 2 is currently disabled. Below the stream settings are sections for 'Video Recording Settings' (Stream 1, ARV format) and 'Time Stamp Settings' (Date/Time, yyyy/m/d format, 24Hours time format, Upper Left position).

Stream Settings

The system can output 2 video streams simultaneously. For each of them, the user can set compression format, resolution and frame rate individually. Stream 1 is always enabled for live view.

Check “Enable” box to enable stream2.

Format: Select compression format from H.264 and MJPEG.

Bit Rate: The bit rate can be set as Variable Bit Rate (VBR) or Constant Bit Rate

(CBR).

Constant Bit Rates: 6M/5M/4M/3M/2M/1.5M/1M/750K/500K/384K/256K bit/s
CBR allows you to set a fixed Target bit rate that consumes a predictable amount of bandwidth. As the bit rate would usually need to increase for increased image activity, but in this case cannot, the frame rate and image quality are affected negatively.

Variable Bit Rates: Highest/High/Normal/Low/Lowest
VBR adjusts the bit rate according to the image complexity, using more bandwidth for increased activity in the image, and less for lower activity.

Resolution:

For single H.264 stream

1920x1080, 1440x1080, 1280x720, 1024x768, 720x576, 720x480, 704x576,
704x480, 640x480, 352x288, 352x240, 320x240

For single JPEG stream

1280x720, 1024x768, 720x576, 720x480, 704x576, 704x480, 640x480, 352x288,
352x240, 320x240

For H.264+JPEG dual streaming

H.264 1280x720 can combine with JPEG to make all resolution under D1

For H.264+H.264 dual streaming

H.264 1280x720 can combine with H.264 to make all resolution under D1

Frame Rate: select from NTSC: 30 / 15 / 10 / 7.5 / 6 / 3 / 1 fps ; PAL: 25 / 12.5 / 8 / 6 / 5 / 2.5 / 1 fps

Note:

- 1. Stream 2 is used for either test video output or video stream output. Whenever the Stream 2 is enabled, test video out will be off. If user wishes to use the test video out, please disable Stream 2.*
- 2. Bandwidth utilization will be in proportion to the quality setting, with highest quality requiring highest bandwidth.*
- 3. System performance may be influenced if user enables 2 video streams simultaneously.*

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

Video Recording Setting

User can set video recording by selecting one of the enabled video stream. This will allow users to view live images while also recording video from another video stream.

Video Stream: Select video recording stream from any enabled stream. Selections are Stream 1 / Stream 2.

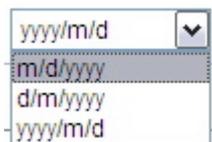
Video File format: Recording file will be saved as AVI or ARV, select which file format is to be used.

Time Stamp Setting

User can setup the Date/Time to be stamped on the video steam.

Date/Time: Check the box to enable time stamp function.

Select **Date Format** from the following options:



A dropdown menu showing four date format options: 'yyy/m/d', 'm/d/yyyy', 'd/m/yyyy', and 'yyyy/m/d'. The 'm/d/yyyy' option is currently selected and highlighted.

Time Format: 24 Hours or 12 Hours.

Position: Select the position where the text will be displaying from Upper Left / Lower Right / Lower Left.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.4.2 Camera

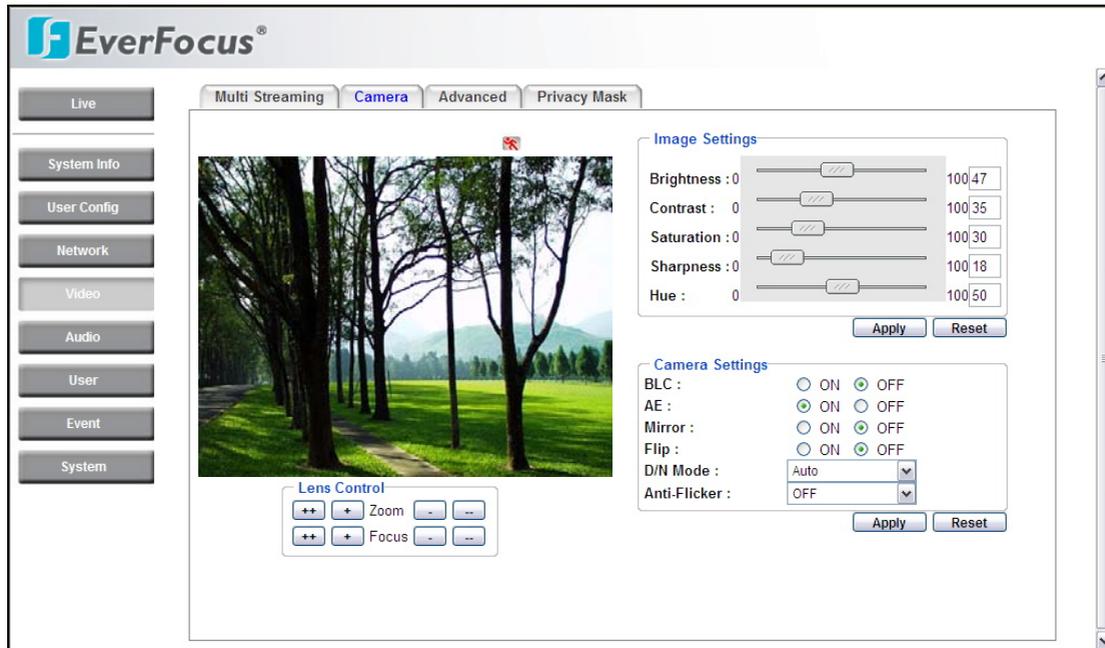


Image Settings

Brightness: to increase or decrease object contrast of images. It is adjustable from 0~255.

Contrast: to increase or decrease object contrast of images. It is adjustable from 0~255.

Saturation: to increase or decrease color saturation of video images. It is adjustable from 0~255.

Sharpness: to increase or decrease object sharpness of images. It is adjustable from 0~100.

Hue: to increase or decrease hue of video images. It is adjustable from 0~255.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

Camera Settings

BLC: Select ON or OFF for Backlight Compensation.

ON: When the background of the subject is very bright and the subject itself is dark, set the BLC ON. The BLC will measure the light of the image center and the lens iris will automatically set for optimum image quality.

OFF: Backlight will not be compensated.

AE: Select ON or OFF for Auto Exposure.

ON: The camera continuously adjusts the shutter speed from 1/60 (NTSC), 1/50 (PAL) second to 1/100,000 second according to the luminance conditions of the scene.

OFF: The default value of shutter speed is fixed at 1/60 (NTSC), 1/50 (PAL) second. **You may manually adjust shutter speed in “Video->Advanced”.** Please refer to “Section 5.4.3 Advanced” for further information.

Mirror: Select ON or OFF for Mirror.

ON: Sets a horizontal image inversion.

OFF: Disable mirror function.

Flip: Select ON or OFF for Flip.

ON: Sets a vertical image inversion

OFF: disable flip function.

D/N: These settings control the operation of the camera when the illumination level changes. Choices are Color at all times; B/W at all times or Auto.

Auto: The picture switches to color in a normal (bright) environment and switches to B/W when the ambient illumination is low. The switching point is controlled by the video signal level.

Color: The picture is always displayed in color, even at low light levels.

B/W: The picture is always displayed in B/W.

Anti-Flicker: Selections are Off, 50Hz and 60Hz. Camera will adjust the shutter to reduce the flicker caused by fluorescent light when manual lens is used.

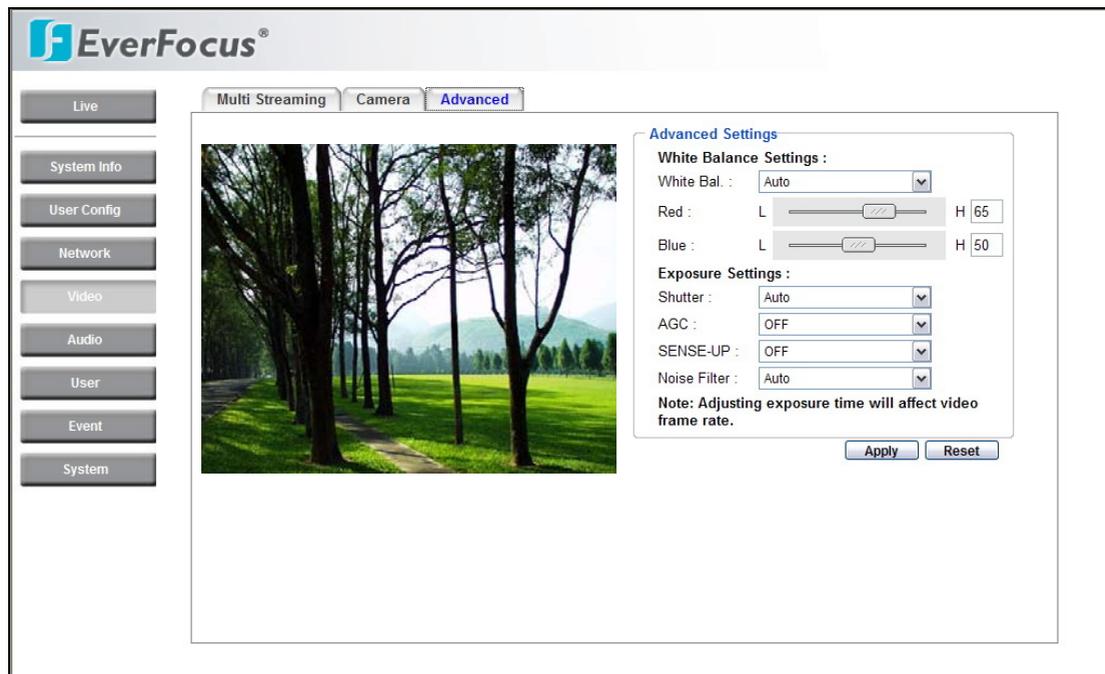
Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

Lens Control

Zoom: To adjust the viewing range, press “++”, “+” sign of Zoom to zoom out, and “-“, “--“ sign of Zoom to zoom in.

Focus: Press “++”, “+“, “-“ or “--“ sign of Focus to set Focus manually.

5.4.3 Advanced



Advanced Settings

White Balance Settings

The screen color can be adjusted by using the WHITE BALANCE function.

White Bal: Select the mode you would like to operate from Auto and Custom.

Auto: White balance will be adjusted automatically by the system.

Custom: The custom adjustment mode enables a more precise adjustment. Increase or decrease the red and blue color values at the same time while checking the color changes of the objects in view. Also, adjust the hue value for red and blue colors in order to set the suitable color temperature.

Exposure Settings

Shutter: Select the shutter mode from x4, x2, 1/60, 1/250, 1/500, 1/2000, 1/5000, 1/10000, for NTSC model or x4, x2, 1/50, 1/250, 1/500, 1/2000, 1/5000,

1/10000, for PAL model.

AGC: Select the level you would like to choose. The more the level of gain increases, the brighter the screen, but the level of noise increases as well. Please select from Auto, 0 (L) ~ 36 (H). Note: AGC must be on for sense-up low light boost to function.

SENS-UP: SENSE-UP is used to keep a brilliant, vivid screen image under low light level conditions by automatically compensating for changes in the level of light. Select the mode you would like to operate from Off, X2 and X4.

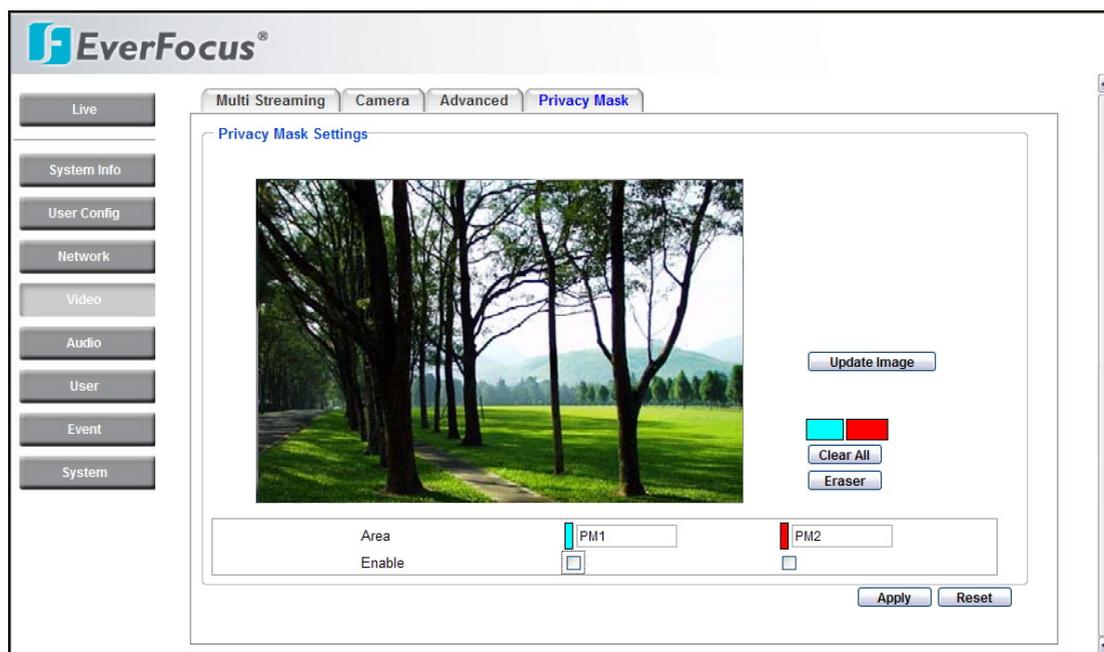
Note:

1. When SHUTTER is in manual mode, SENSE-UP will be disabled.
2. When AGC is turned off, SENSE-UP will be disabled.

Noise Filter: As the level of gain changes, the background noise in the low light level automatically decreases. Selectable from Auto/ or 1 (L) ~6 (H).

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.4.4 Privacy Mask



This mode masks areas you do not want to display on the screen or record.

User can define the area to be hid by clicking on 2 points sequentially to form a rectangular on the preview window with the mouse. The rectangular area between these 2 points is filled with color and this is the privacy mask area.

Press  to update the current image.

Press  to clear all selections.

Press  and click on the rectangular, to erase that area/

There are 2 privacy mask trigger areas, which can be distinguished by 2 different colors.

Area: Enter Privacy Mask Area name.

Check **Enable** checkbox to enable event actions related to that area.

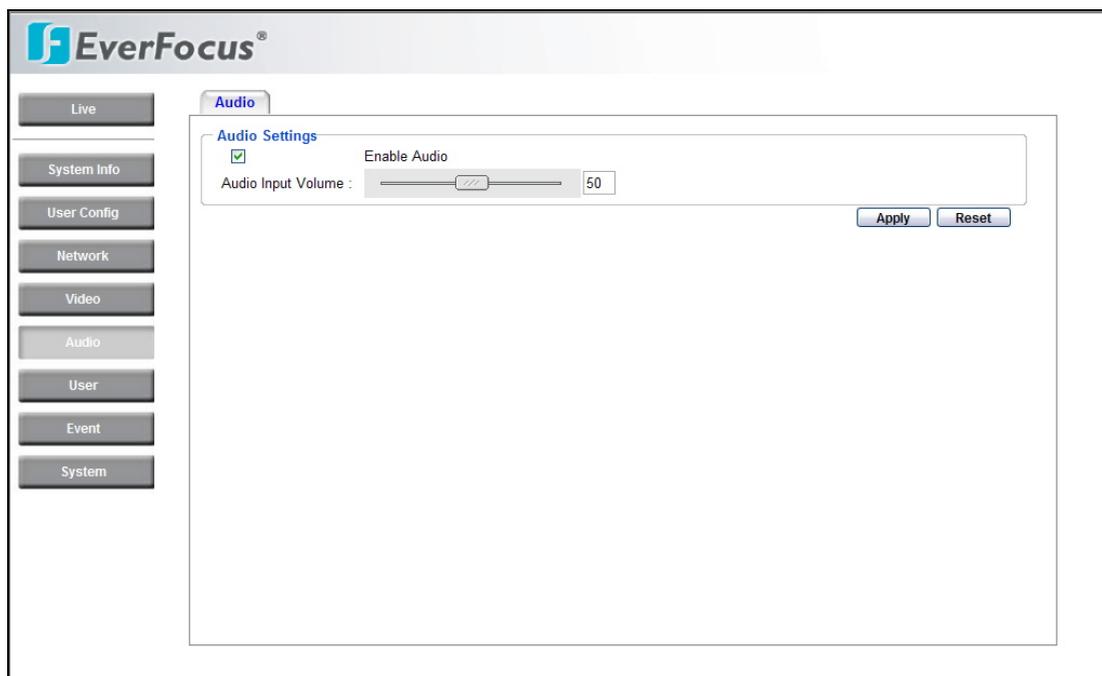
Note:

Privacy mask only works for the stream resolution under 720x480 (720x576).

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.5 Audio

The EZN3240 camera can transmit audio to client PCs by connecting an external source (line-in), and can play audio received from client PCs (line-out) into amplified speakers. This section describes how to configure the basic audio settings.



Audio

Check **Enable Audio** box to enable audio function.

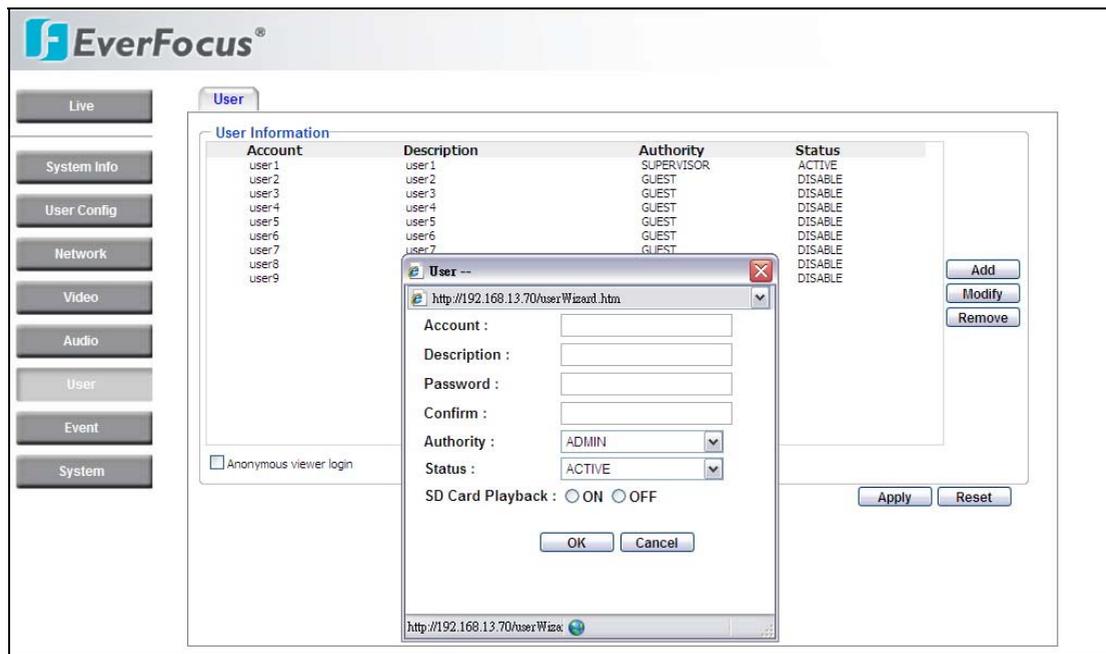
Audio Input: Audio from an internal microphone or a line source can be connected to the Audio connector of EZN3240.

Units designed for use in the US and its territories are not equipped with internal microphones.

Audio Input volume: Adjust the Audio Input Volume for the audio input devices connected to the camera if there are problems with the sound input being too low or high.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the changes.

5.6 USER



Press **Add** to add a user, press **Modify** to modify a user, press **Remove** to remove a user.

User Information

Account: Enter account name.

Description: Enter description.

Password: Enter a password.

Authority: Select authority type from Supervisor, Administrator, User and Guest.

Status: Status of the account, select from Active and disable.

SD Card Playback: Select ON to allow the user to playback SD card data. Select Off to resist the user to playback SD card data.

Maximum 10 user IDs can be created to access the IP camera. The **user information screen** displays the authorized IDs. Access levels are:

- **Supervisor/Administrator** –a supervisor/administrator has unrestricted access to the Setting menus and can determine the registration of all other users. However, an administrator is not allowed to change a supervisor’s account and password.
- **User**- can view the Live View page, system info, network, video, audio, and adjust user config settings. The User level does not have access to the “user”, “event” and “system pages”.
- **Guest**- the lowest level of access, which only allows access to the Live View page.

Anonymous viewer login: Check the box to allow anonymous viewer login.

Note: Please select Active in Status section to activate an account.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the changes.

5.7 EVENT

An event in the camera is when an Event Type is activated and causes certain actions to be performed. The event type is the set of conditions that specifies how and when which actions will be performed.

This table describes how to setup action types and event type.

Event Type / Action Type	Alarm Input	Manual Trigger	Motion Detection	Schedule Recording	Pre/Post-Alarm
Trigger Alarm	x	x	x		
Send Mail notification	x	x	x		
Upload to FTP**	x	x	x		x
Record to SD Card***	x	x	x	x	x
Record to PC*	x	x	x	x	x
Network Alarm	x	x	x		
Re-trigger	x	x	x		

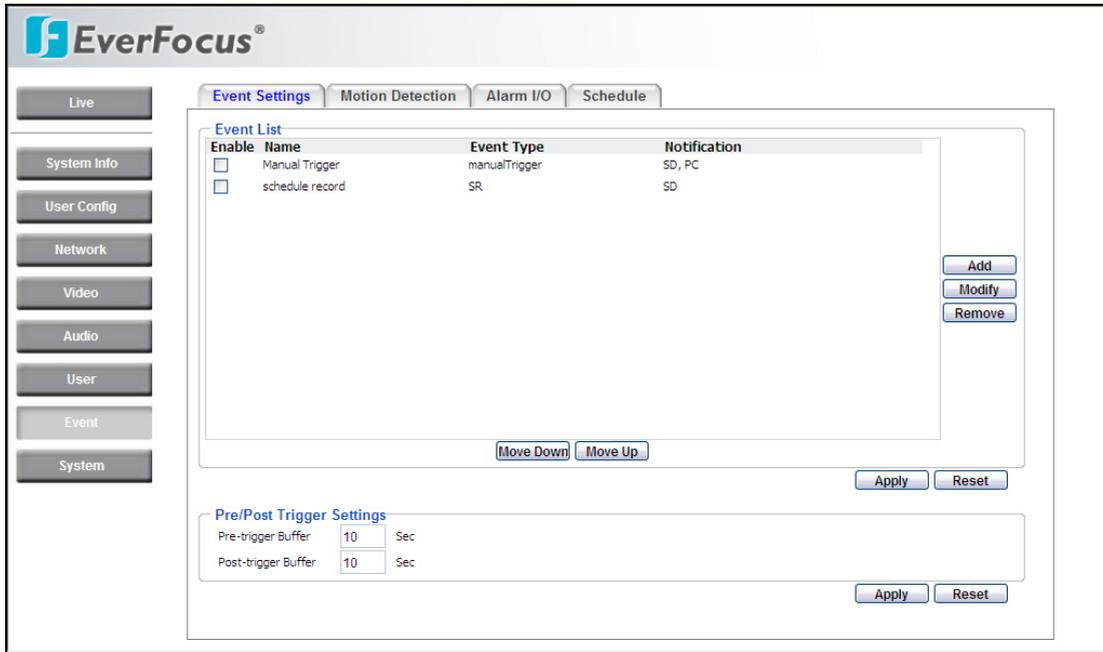
Note:

1. * Record to PC only works when PC and IP camera are connected.
2. **Only Upload to FTP can be selected to record event video to remote site.
3. *** The function is available for the models built-in SD card.
4. Up to 10 event types can be configured in the camera, and up to 3 of these can be configured to upload images.

5.7.1 Event Settings

The settings relating to event occurrences such as settings for motion, alarms and schedule can be configured on this page.

The "Event " page has 4 tabs: [Event Settings] tab, [Motion Detection] tab, [Alarm I/O] tab and [Schedule] tab.



Event List

Press **Add** button to add an event condition.

To modify the event list, click on the event and it will be highlighted. Press

Modify button to modify the setting.

To remove an event from event list, click on the event and it will be highlighted.

Press **Remove** button to remove the event.

Check **Enable** checkbox to activate event actions when the event occurs in the specified time zone.

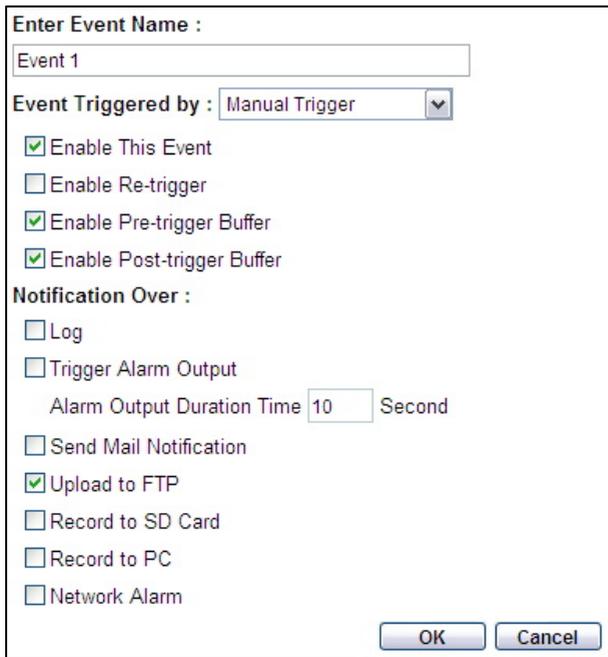
Enable	Name	Event Type	Notification
<input checked="" type="checkbox"/>	Manual Trigger	manualTrigger	SD, PC
<input type="checkbox"/>	schedule record	SR	SD

To change the priority of events, click on the event and it will be highlighted. Press

Move Down or **Move Up** button to change the priority of events. The event that has highest priority will be activated first.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

This example describes how to set the camera to upload images to an FTP site when someone press Manual trigger button:



Enter Event Name :
 Event 1

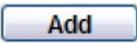
Event Triggered by : Manual Trigger

Enable This Event
 Enable Re-trigger
 Enable Pre-trigger Buffer
 Enable Post-trigger Buffer

Notification Over :

Log
 Trigger Alarm Output
 Alarm Output Duration Time 10 Second
 Send Mail Notification
 Upload to FTP
 Record to SD Card
 Record to PC
 Network Alarm

OK Cancel

1. Click  button in Event page.
2. Enter an event name for the event, e.g. Event 1.
3. Select “Manual Trigger” as event type.
4. Select “Upload to FTP” as action type.
5. Check “Enable This Event”.
6. Check “Enable Pre-Trigger Buffer” and “Enable Post-Trigger Buffer”.
7. Click  to save this event in event list.

Pre/Post Trigger Settings

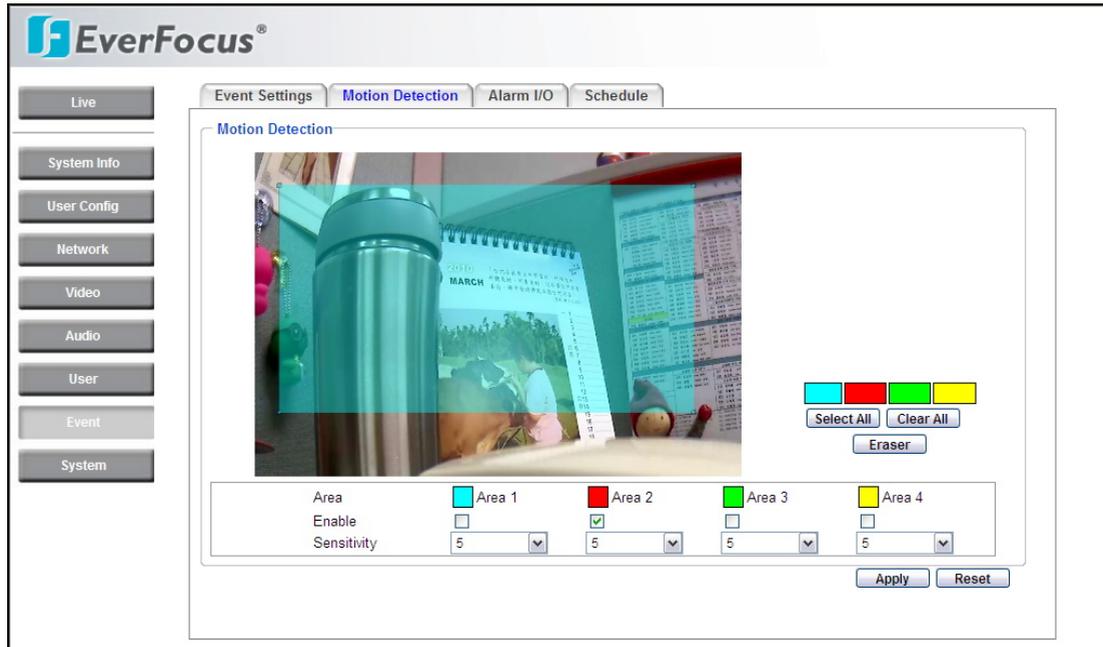
This function is used to be able to review what happened immediately before and after a trigger, e.g. 5 seconds before or after a motion has been detected, or after motion detection ceases.

Pre-Trigger Buffer: Image saved internally in the camera from the time immediately preceding the trigger. Input the desired length of pre-trigger buffer time. It can be set up to 120 seconds.

Post-Trigger Buffer: Image saved internally in the camera from the time immediately after the trigger condition has ceased/been reset. Input the desired length of post-trigger buffer time. It can be set up to 120 seconds.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.7.2 Motion Detection



Motion Detection

User can define the motion areas to be detected by clicking on 2 points sequentially to form a rectangular on the preview window with the mouse. The rectangular area between these 2 points is filled with color and this is the motion areas.

Press **Select All** to have the entire screen selected for motion detection.

Press **Clear All** to clear all selections.

Press **Eraser** and click on the polygon, to erase that polygon.

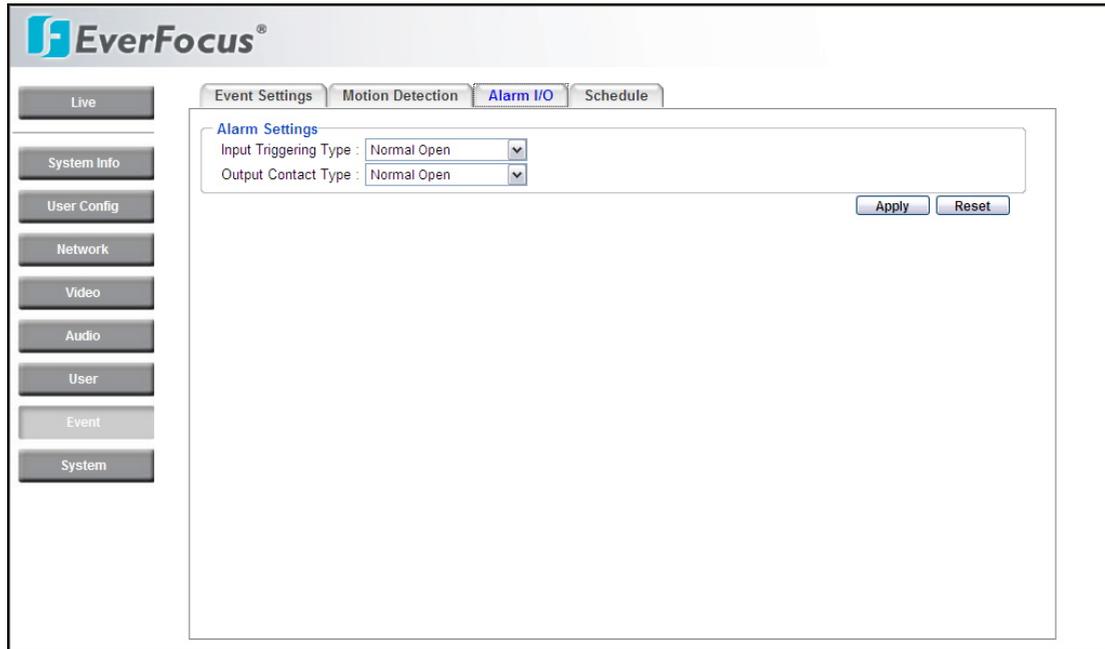
There are 4 possible motion trigger areas, which can be distinguished by 4 different colors. Check the **Enable** checkbox to enable event actions related to that area.

For each area, you can set the event action in response to motion detection in that area. Event actions can be set in “Event” section.

In addition, you can set the **Sensitivity** level for the motion trigger separately for each area by selecting from 1 (low), 2, 3, 4, 5, 6, 7, 8, 9 to 10 (high).

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.7.3 Alarm I/O



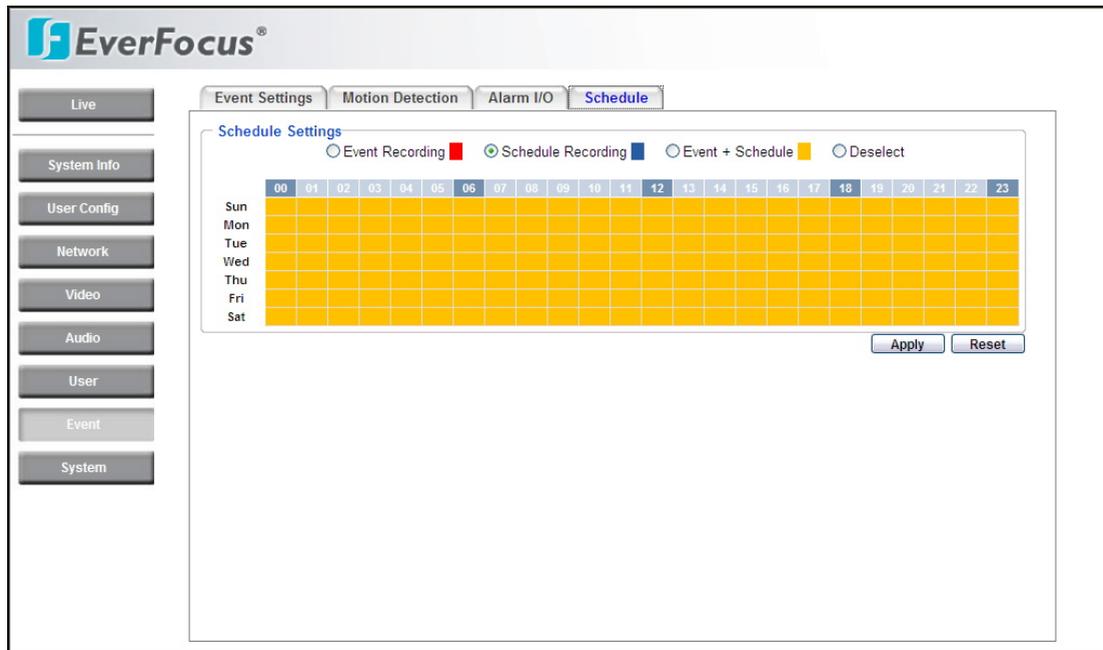
Alarm Settings

Input Triggering Type: Select from Normal Close and Normal Open. (Default: Normal Open)

Output Triggering Type: Select from Normal Close and Normal Open. (Default: Normal Open)

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.7.4 Schedule



The event will start at the specified schedule. After selecting a time zone, the block will show the time zone settings.

How to set a schedule:

Select the edit actions of “Event Recording”, “Schedule Recording”, “Event+Schedule” or “deselect”. The first 3 actions are distinguished by 3 different colors.

There are 24 blocks (one block = 1hr) on the time bar representing 24 hours respectively. Set a schedule start time by clicking on a desired start time block on a time bar. The selected blocks will turn the representing color, which means this color timezone has been set to the event schedule. The deselected blocks will turn back the original background color, which means the timezone has not been set to the event schedule.

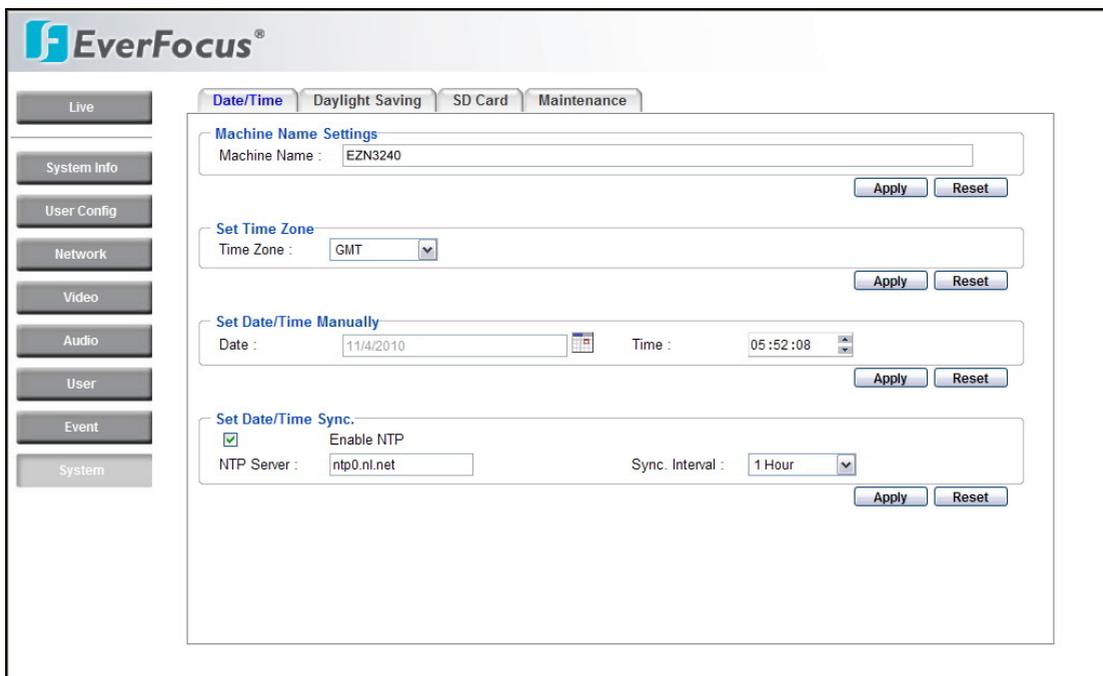
Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.8 SYSTEM

Date/Time, Daylight Saving, SD card and Maintenance settings can be accessed on this page.

The "System" page has 4 tabs: [Date/Time] tab, [Daylight Saving] tab, [SD card] tab and [Maintenance] tab.

5.8.1 Date/Time



Machine Name Setting

Machine Name: Enter the name for the camera. The entered name will be displayed in the status display area, and used to label any recording and/or snapshot folders created on a user's PC.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

Set Time Zone

Time Zone: Select a time zone according to where the camera is located.

Set Date/Time Manually

Date: Click the calendar and pick the date. Press << to go previous year, < to go previous month, > to go next month and >> to go next year.



Time: Click on Hour, Minute, Seconds, am/pm; then use up arrow to increase value and down arrow to decrease value.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

Set Date/Time Sync.

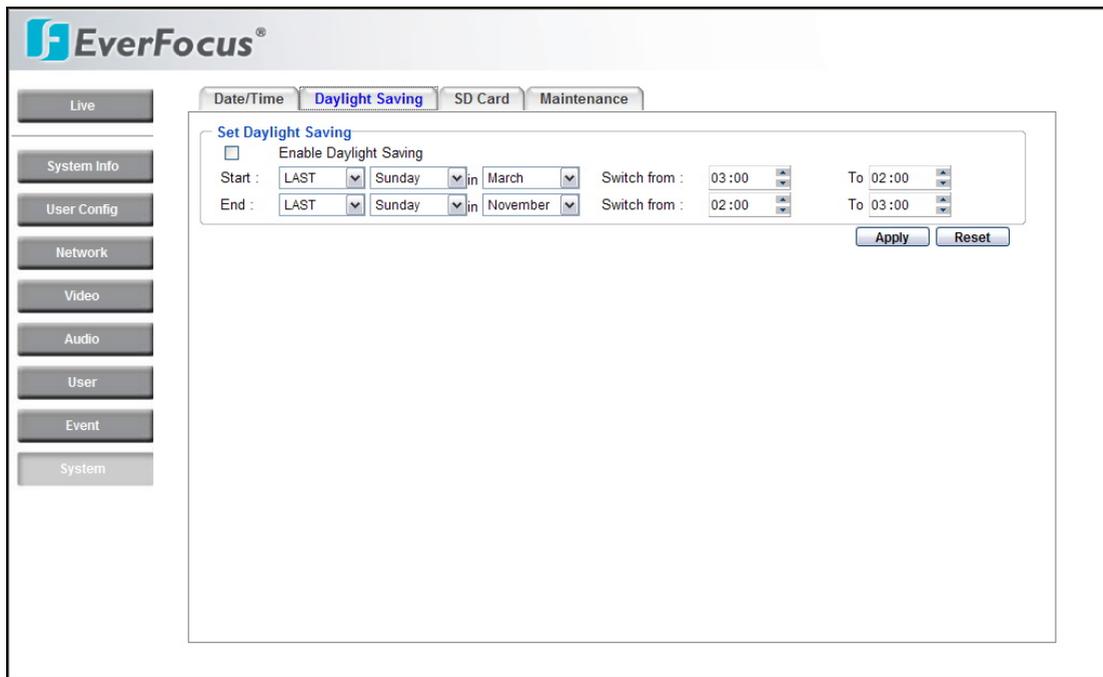
Check Enable NTP checkbox to enable NTP server.

NTP server: Time automatically adjusted by synchronizing with NTP server will be used as the standard time for the camera.

Sync. Internal: Select an interval (1 - 24 hours: in 1 hour intervals) to elapse between synchronizations with the NTP server.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.8.2 Daylight Saving



Set Daylight Saving

Check **Enable Daylight Saving** checkbox to enable daylight saving.

Set the start time for daylight saving time.

Set the start week for daylight saving time: 1st / 2nd / 3rd / 4th / Last

Set the start day of the week for daylight saving time: Sunday / Monday / Tuesday / Wednesday / Thursday / Friday / Saturday

Set the start month for daylight saving time: January / February / March / April / May / June / July / August / September / October / November / December.

Set the starting time for the change to daylight saving time: Choose the “From” time and “End” time when daylight saving starts.

Set the end time from daylight saving time.

Set the end week from daylight saving time: 1st / 2nd / 3rd / 4th / Last

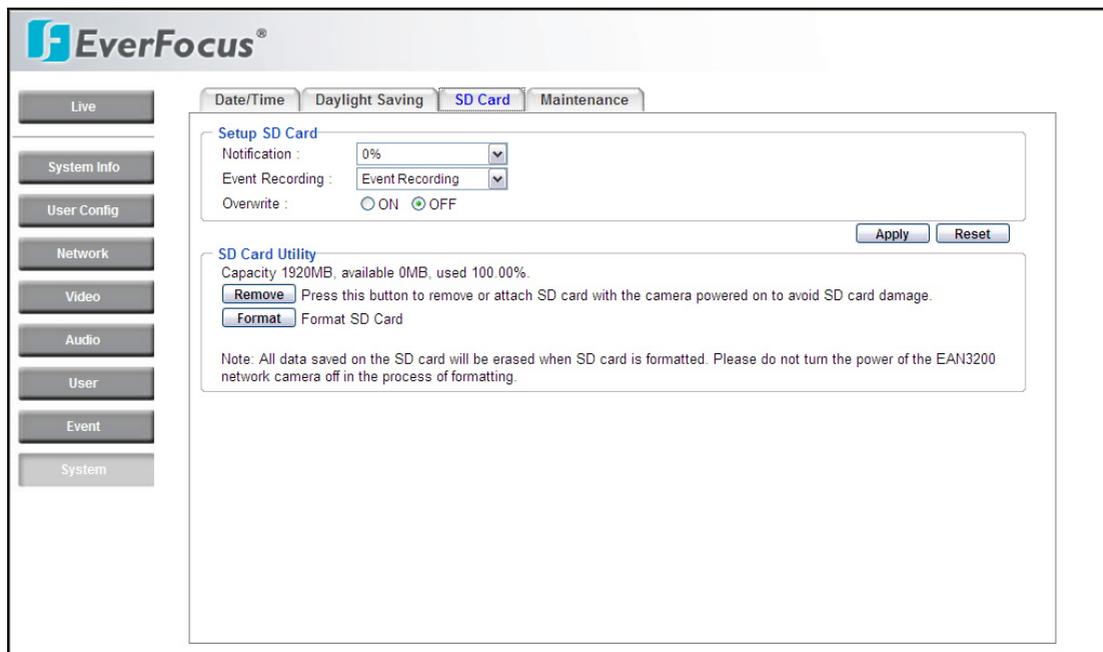
Set the end day of the week from daylight saving time: Sunday / Monday / Tuesday / Wednesday / Thursday / Friday / Saturday

Set the end month from daylight saving time: January / February / March / April / May / June / July / August / September / October / November / December.

Set the ending time for the change from daylight saving time: Choose the “From” time and “End” time when daylight saving ends.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

5.8.3 SD Card (optional)



Setup SD Card

Notification: Notification will be made via e-mail when the remaining space of the SD memory card reached the value selected from the following.

50%, 20%, 10%, 5%, 2%, 0%

Notes:

1. When "50%" is selected, e-mail notification will be made each time the remaining space reaches 50%, 20%, 10%, 5%, 2% and 0%.
2. E-mail notification may not always be made at a very moment when the remaining space of the SD memory card reaches the selected value.

Event Recording:

FTP backup only: Event video will record to the SD card when the network connection to the FTP server is unavailable.

Event Recording: Follows the event action settings you have made in the "Event" menu to record event video to the SD card.

Both: Event video will record to SD for both of the above situations.

Overwrite: Select ON for overwriting older data when the SD card memory is full. Select OFF for no overwriting the SD card data. Note: no recording can take place

if the SD card is full and Overwrite is “Off”.

Press **Apply** to apply the setting changes or **Reset** to reset without saving the change.

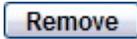
SD Card Utility

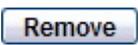
The total size and available size of the SD memory card will be displayed. Depending on the state of the SD memory card, the information will be displayed as follows:

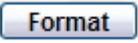
Indication Description

Capacity ___ MB, available ___ MB, used ___ %

Formatting the SD Card

Before formatting the SD memory card, it is necessary to press the  button.

Once the  button is pressed, the  button will be shown for a user to re-insert the SD card.

Press  button to format SD card.

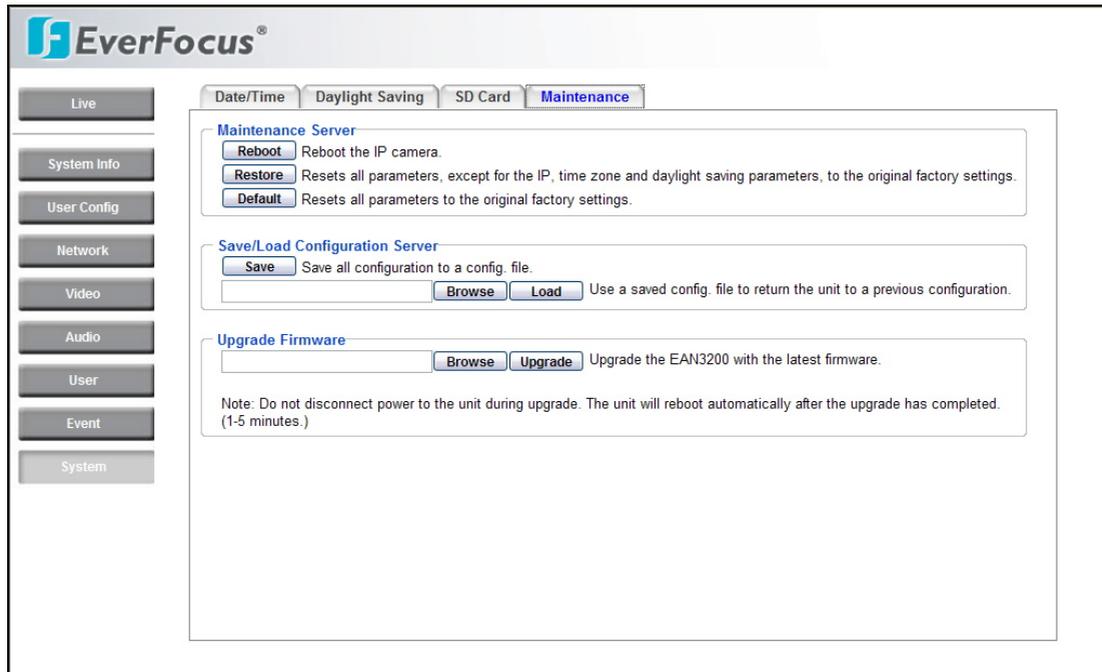
To obtain images from the SD memory card

1. Directly attach the SD card to a PC after removing the SD card from the camera. Access the camera using the Windows command prompt or FTP client software.
→ The window with the user name and password entry fields will be displayed.
2. Enter the user name whose access level is "Administrator" and its password.
→ Log in the camera.
3. A directory of all saved data will be displayed. You are now ready to obtain images from SD card.

Note:

- It is impossible to access the SD memory card in the process of formatting.
- All data saved on the SD memory card will be deleted when the SD memory card is formatted.
- Do not turn the power of the camera off in the process of formatting.

5.8.4 Maintenance



Maintenance

Reboot: The unit is rebooted without changing any of the settings. Use this method by pressing **Reboot** button if the unit is not behaving as expected.

Restore: The unit is restarted and most current settings are reset to the factory default values by pressing **Restore** button. The only settings saved are:

- IP setting
- DDNS setting

Default: The **Default** button should be used with caution. Pressing 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 re-installed.

Save/Load Configuration Server

To take a backup of all of the settings in the current configurations, press **Save** to save the configuration to a config. file. Once saved, it is then possible to return to the previous settings if/when desired.

To return to a previously saved configuration, press the **Browse** button to locate and select the saved config. file (see above) and then click the **Load** button. The settings will be restored to the previous configuration.

Upgrade Firmware

Upgrade the EZN3240 with the latest firmware.

Press the **Browse** button to locate the firmware file. Press the **Upgrade** button to upgrade the firmware.

- Note 1: Do not disconnect power to the unit during the upgrade. The unit reboots automatically after the upgrade has completed. (1-5 minutes.)*
- 2. During upgrade process, all event recording actions will be stopped. They will resume after the camera is rebooted.*

6. SPECIFICATIONS

CAMERA	
Pickup Device	1/2.7" Full HD progressive scan CMOS sensor
Lens Type	Vari-focal lens, Auto Iris, f=3.3~10mm with stepping motor
Sensitivity	0.5Lux / F=1.2 (0Lux / IR On)
Day/Night	True Day/Night with IR cut filter
Electronic Shutter Speed	1/10000 s to 1/7.5 s (1/60 second nominal)
SENSE-UP	OFF/x2/x4
Auto Gain Control	OFF/Low/Middle/High selectable
White Balance mode	Auto, Custom
Noise Filter	Auto/Low/High
Other settings	Brightness, Contrast, Saturation, Sharpness, Hue, Auto Exposure, Backlight Compensation, Mirror, Flip, Day/Night, Anti-Flicker
Video Test Output	BNC socket, composite 1 V p-p / 75Ω in local test mode only
IR Emitters	35 long life LEDs
IR Configuration	Split glass isolation prevents internal reflections
IR Output	Intelligent variable intensity illumination/Energy management
IR Distance	Up to 40M (131ft)
IR Wavelength	850nm
IR LED Lifespan	20,000 hours
VIDEO STREAMING	
Video Compression	H.264/M-JPEG
Video Resolution	1920x1080 to 160x120; depends on overall configuration of stream(s)
Video Quality	VBR: 5 level adjustable, CBR: 30Kbps~6Mbps
Frame Rate	1080p @ 25/30fps
AUDIO	
Audio Compression	G.711
Audio Input	1 Vrms ; 3.5mm phone jack; Mono, Line in
Audio Output	1 Vrms ; 3.5mm phone jack; Mono, Line out
Operation Mode	Two-way audio
NETWORK	
Interface	10Base-T/100Base-TX auto-negotiation, RJ-45 socket
Supported Protocols	HTTP, TCP/IP, UDP, RTP, RTSP, FTP, SMTP, DHCP, DNS, DDNS, NTP, uPnP, ONVIF/PSIA
TERMINAL I/O	
Alarm Input/Output	1/1
EVENT MANAGEMENT	
Event Trigger	Alarm Input, Manual Trigger, Motion Detection, Fan Failure, Camera Tampering, Schedule Recording
Notifications	Trigger alarm output, Send mail notification, Upload video to FTP, Record video to PC, Record to SD card and Network alarm
LOCAL STORAGE	
Pre- and Post - alarm buffer	40MB

Built-in SDHC Card (optional)	None, 8GB, 16GB, 32GB
POWER	
Power Supply	12 VDC & 24VAC & PoE
Power over Ethernet	Yes (PoE 802.3af)
Power Consumption	12VDC: 11W max. / 24VAC: 11W max. (IR LED On)
PHYSICAL	
Weight	1250g / 2.275 lbs.
Dimension	316.2mm (L) x 82.5mm (H) x 105.5mm Diameter (W) ; 12.49" (L) x 3.24" (H) x 4.15" Diameter (W)
ENVIRONMENTAL	
Operating Temp.	-40°C ~ 50°C / -40°F ~ 122°F (built-in heater)
Humidity	< 90% not condensing
Weatherproof	IP66, built-in heater
Vandal Resistant	Yes
Mounting Pattern	Speedy-Mounting Ring mates with 4" round electrical box; base swivel is 1"NPT – remove base plate for coupling to standard conduit fittings.
Certifications	CE / FCC

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