EMX32

16-Channel IP Decoder

User's Manual

EverFocus®

EVERFOCUS ELECTRONICS CORPORATION

EMX32

User's Manual

Safety Precautions

➢ Refer all work related to the installation of this product to qualified service personnel or system installers.

➢ Do not block the ventilation openings or slots on the cover.

➢ Do not drop metallic parts through slots. This could permanently damage the appliance. Turn the power off immediately and contact qualified service personnel for service.

➢ Do not attempt to disassemble the appliance. 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 appliance with care. Do not strike or shake, as this may damage the appliance.

➢ Do not expose the appliance to water or moisture, nor try to operate it in wet areas. Do take immediate action if the appliance becomes wet. Turn the power off and refer servicing to qualified service personnel. Moisture may damage the appliance and also may cause electric shock.

➢ Do not use strong or abrasive detergents when cleaning the appliance body. Use a dry cloth to clean the appliance when it is dirty. When the dirt is hard to remove, use a mild detergent and wipe gently.

➢ Do not overload outlets and extension cords as this may result in a risk of fire or electric shock.

➢ Do not operate the appliance beyond its specified temperature, humidity or power source ratings. Do not use the appliance in an extreme environment where high temperature or high humidity exists. Use the IP decoder at temperatures within 0°C~40°C / 32°F~104°F (Storage). The input power source is 100-240 VAC~ / 150W max.

➢ **Read Instructions**
   All the safety and operating instructions should be read before the unit is operated.

➢ **Retain Instructions**
   The safety and operating instructions should be retained for future reference.

➢ **Heed Warnings**
   All warnings on the unit and in the operating instructions should be adhered to.

- ➢ **Follow Instructions**

  All operating and use instructions should be followed.

- ➢ **Cleaning**

  Unplug the unit from the outlet before cleaning. Do not use liquid cleaners, abrasive or aerosol cleaners. Use a damp cloth for cleaning

- ➢ **Attachments**

  Do not use attachments not recommended by the product manufacturer as they may cause hazards.

- ➢ **Water and Moisture**

  Do not use this unit near water-for example, near a bath tub, wash bowl, kitchen sink, or laundry tub, in a wet basement, near a swimming pool, in an unprotected outdoor installation, or any area which is classified as a wet location.

- ➢ **Servicing**

  Do not attempt to service this unit by yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

- ➢ **Power Cord Protection**

  Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, playing particular attention to cords and plugs, convenience receptacles, and the point where they exit from the appliance.

- ➢ **Object and Liquid Entry**

  Never push objects of any kind into this unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

- ➢ **Battery**

  Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
  a. Use only two AAA dry cell batteries.
  b. Do not dispose of the batteries in a fire as it may explode.

$C\epsilon$	**ATTENTION!** This is a class A product which may cause radio interference in a domestic environment; in this case, the user may be urged to take adequate measures.

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B 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 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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the users' authority to operate this equipment.

This Product is RoHS compliant.

WEEE

Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product.
Please, help us to conserve the environment we live in!

This product complies with the High-Definition Multimedia Interface (HDMI) Specification Adopter Agreement.

The information in this manual was current upon publication.   The manufacturer reserves the right to revise and improve his products. Therefore, all specifications are subject to change without prior notice. Manufacturer is not responsible for misprints or typographical errors.
Please read this manual carefully before installing and using this unit. Be sure to keep it handy for later reference.

TABLE OF CONTENTS

1. Introduction

The EverFocus EMX32 IP Decoder is an open, true 1080p HD Decoder. The device can simultaneously decode up to four high definition (1080P) or standard definition (720P) video streams, and display those streams in up to four division screens on a monitor. The EMX32 IP Decoder can display its views on HD monitors or televisions.

The EMX32 IP Decoder is able to decode IP streams from EverFocus and ONVIF and RTSP-compliant IP devices. It is used as a medium to connect the cameras and the monitor for displaying video in different screen division. It supports the third-party IP cameras which are compatible with ONVIF standards and RTSP protocol, and it can automatically search for ONVIF supported third-party IP devices under the same LAN.

The cost-effective EMX32 IP Decoder eliminates the cost of the traditional DVR or PC. Just used with a monitor only, you can easily view all the IP or analog video streams. The operator can control and configure the settings either through the user-friendly local display OSD or by the intuitive web-based user interface.

The EMX32 provide two video outputs HDMI and VGA, and both video output ports can be used simultaneously. It also has one RS-485 port for connecting joystick or keyboard. This slim, compact and VESA-mountable design is easy to install and can be used anywhere such as retail stores or offices.

1.1 Overview

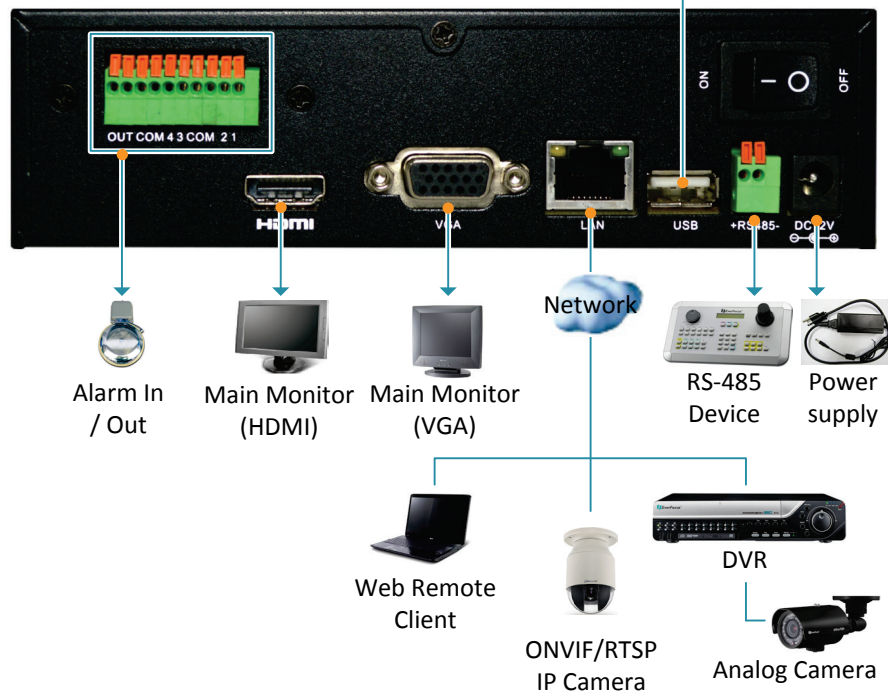### Front View

IR Remote
Control

Mouse / EKB200 Keyboard
USB Memory Stick

Rear View

Alarm In / Out

Main Monitor (HDMI)

Main Monitor (VGA)

Network

RS-485 Device

Power supply

Web Remote Client

ONVIF/RTSP IP Camera

DVR

Analog Camera
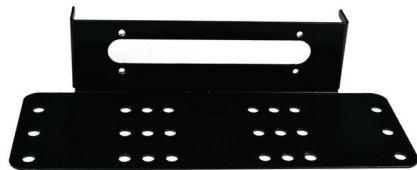
1.2 Features

- Decodes up to four 1080p/30fps video streams in H.264 codec simultaneously

- Decodes up to 16 IP streams

- Support all the EverFocus IP Camera *

- Support ONVIF or RTSP compliant third-party IP cameras

- Multiple main monitors: Separately configured HDMI and VGA (1080p) main monitor outputs

- Free EverFocus DDNS service – static IP address is not required for reliable remote access

- Multiple control inputs: mouse / remote controller

- Remote configuration support from built-in web interface

- Standing mount and VESA mount options

- Multiple control inputs: mouse / remote controller / EKB500 and EKB200 keyboards

- Multi-language support

* **EverFocus IP Camera Support List:** The latest EverFocus IP Camera Support List for EMX32 will be updated on our website, please go to http://www.everfocus.com.tw/HQ/Support/DownloadCenter_p1.aspx to download the document.

1.3   Packing List

• EMX32 x 1	• QIG x 1
• CD x 1 (Please see Note 3.)	• Mouse x 1
• Power Cord x 1	• Power Adaptor x 1
• IR Remote Control x 1	• AAA Battery x 2 (Please see Note 4.)
• VESA Monitor Mount Bracket	• **Washer Head Sliver Screw** x 4 for VESA Mount (50x50 / 75x75 / 100x100 mm) • **Washer Head Black Screw** x 4 for VESA Mount(200x200 mm) • **Small Black Screw** x 4

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.
3. The CD contains the IP Utility software, EF Player, JAVA software, User Manual and Quick Installation Guide.
4. Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.
   a. Use only two AAA dry cell batteries.
   b. Do not dispose of the batteries in a fire as it may explode.

1.4 Optional Accessories

- EKB200 (USB controller keyboard: connect to the PC or the IP decoder to control the PTZ cameras connected to the IP decoder). Please refer to *5.5.5 EKB200 Setting* and the *User Manual* of the *EKB200 Keyboard*.

- EKB500 (RS-485 keyboard: connect to the RS-485 port to control the PTZ cameras connected to the IP decoder). Please refer to *5.1 Camera* and the *User Manual* of the *EKB500 Keyboard*.

1.5 Front Panel
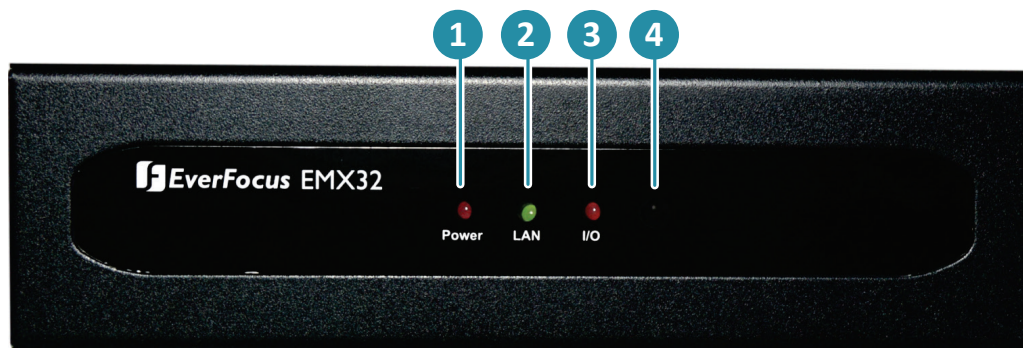
No.	Name	Description
1	**Power**	Indicates the power is on.
2	**LAN**	Indicates the IP decoder is connected to the network.
3	**I/O**	Indicates an alarm input is triggered.
4	**IR Receiver**	Receiver for signals from the IR remote control.

1.6 Rear Panel
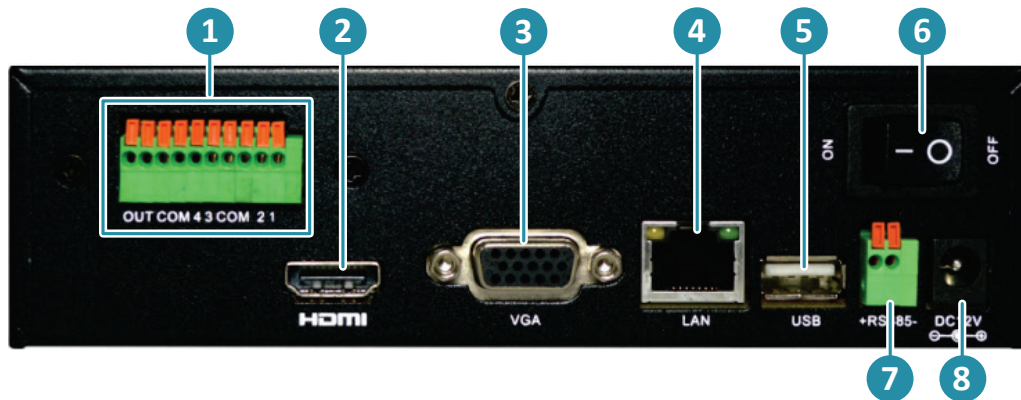
No.	Name	Description
1	**Alarm Input / Output**	Connects up to 4 alarm inputs and 1 alarm output devices. Please refer to 2.2.3 Alarm IO.
2	**HDMI Port**	Connects to the Main monitor using a HDMI cable. Please refer to 2.2.1 Monitor Connection.
3	**VGA Port**	Connects to the Main monitor using a VGA cable. Please refer to 2.2.1 Monitor Connection.
4	**LAN**	Connects to IP cameras or to the network using a standard RJ-45 CAT5 10/100Mb Ethernet cable. Please refer to *2.2 Connection.*
5	**USB**	The USB2.0 port for connecting to a mouse, external storage device or EKB200 keyboard.
6	**Power Switch**	Press to turn On / Off the IP decoder.
7	**RS-485 Port**	Connects to the RS-485 device, such as EverFocus' EKB-500 keyboard. Please refer to *2.2.4 RS-485 Port*.
8	**Power Port**	Connects to the power using the supplied Power Adaptor and Power Cord.

2.   Installation

You can simply place the IP decoder, EMX32, on the desk or install it behind a VESA monitor. (VESA Mount Bracket: 50mmx 50mm / 75mm x 75mm / 100mm x 100mm / 200mm x 200 mm).

EMX32   VESA Mount Bracket

50   75   100   200

Unit: mm
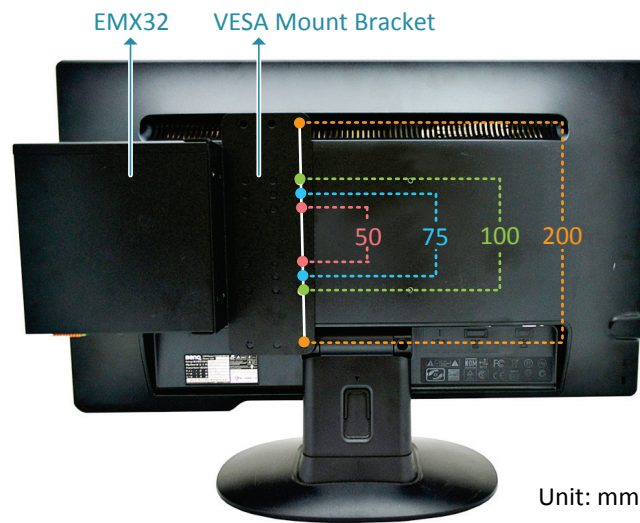
2.1   VESA Monitor Mount

1. Screw the VESA Mount Bracket on either side of the EMX32 using the four supplied Small Black Screws.

VESA Mount Bracket
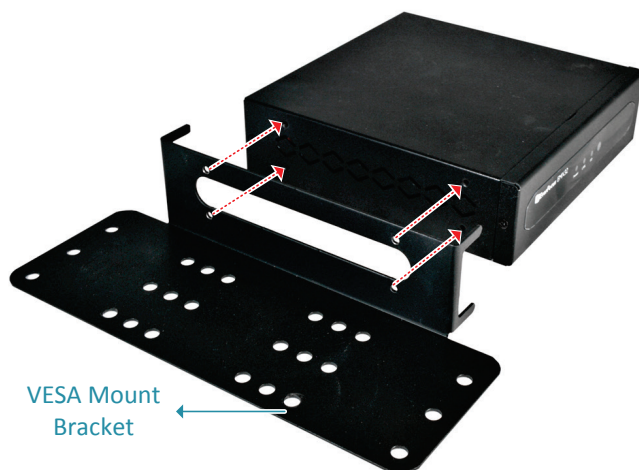
2. You just need to use two Washer Head Screws to fix the EMX32 onto the back of the monitor, and the front panel of the EMX32 has to be facing UPWARD.

> **Note:** VESA mount (50x50 / 75x75 / 100x100 mm): Use the Washer Head **Sliver** Screws.
>   VESA mount (200x200 mm): Use the Washer Head **Black** Screws.
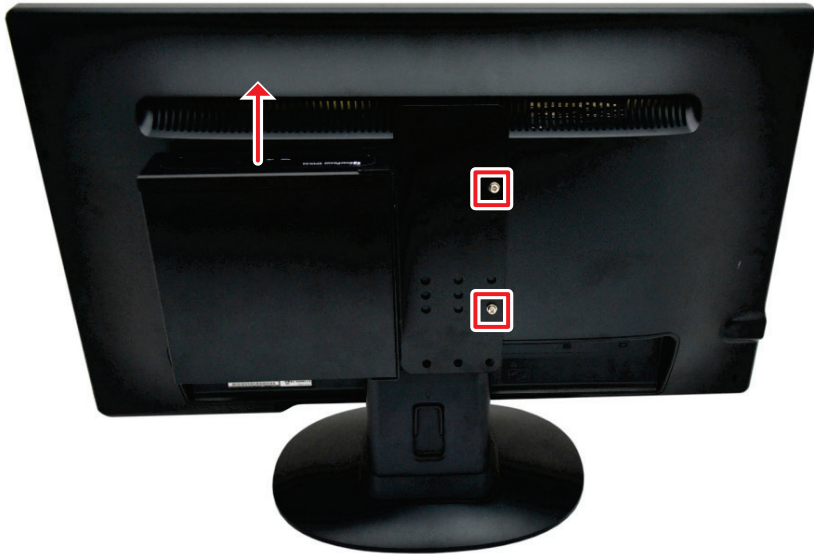
3. If your monitor is to be mounted on the wall, you should attach the EMX32 to the very right or left side of the monitor and leave the four VESA mounting holes of the monitor uncovered so that you can screw the monitor on the wall.

2.2 Connection

The instructions below describe the basic connection for IP decoder: EMX32.
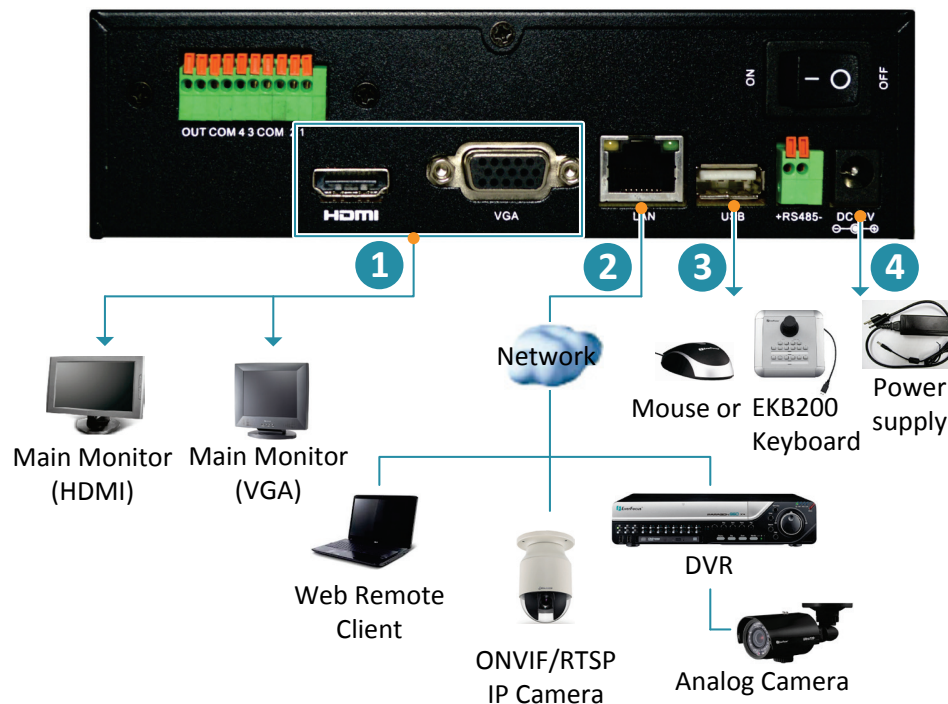
1. To view videos, connect a monitor to the HDMI or VGA port using the HDMI or VGA cable supplied by the monitor manufacturer.

2. To receive video streams or to manage the IP decoder over network, use a standard RJ-45 CAT5 10/100/1000Mb Ethernet cable to connect the LAN port to the network. Please refer to *2.4 Connecting the IP decoder to the Network*.

3. Optionally connect a mouse or a keyboard (EKB200) to the IP decoder to control the system. You can also control the system using the supplied IR Remote Controller.

4. Using the supplied Power Cord with Adaptor, connect one end to the DC 12V port on the IP decoder and the other end to the power outlet.

2.2.1 Monitor Connection

The IP decoder provides 2 main monitor outputs with identical functionality - VGA and HDMI. You can connect the monitor to the VGA or HDMI port on the rear panel of the IP decoder. Both of the VGA and HDMI video outputs can be used simultaneously and deliver full HD resolution (1920 x 1080, progressive, 60 Hz. Vert., 68 KHz hor.).

HDMI Cable | VGA Cable

Main Monitor (HDMI) | Main Monitor (VGA)
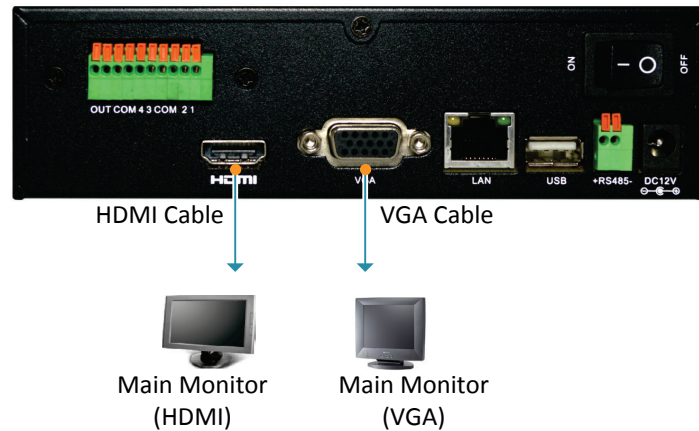
Note:
1. The connected monitors' specifications must comply with the resolution requirements.
2. Do not exceed the max. HDMI cable length of 15 meters.
3. The standard HDMI cables can support cable length up to 3 meters. For longer distances, such as 15 meters, it is highly recommended to use high quality HDMI cables.

2.2.2 Display Aspect Ratio

It is recommended to select the same ratio of the screen resolution and the camera live view display to avoid black bars showing on the live view screen as the images below.

If you select 1920x1080 (16:9) screen resolution in the **Screen Mode** drop-down list (see *5.3.1 Monitor OSD*), it is recommended to also change the camera live view display to 16:9 aspect ratio in the **Ratio** drop-down list (see *5.1.8 Adjust*).

Screen Mode: 1920x1080 (16:9)

Camera Ratio: 16:9   Camera Ratio: 4:3
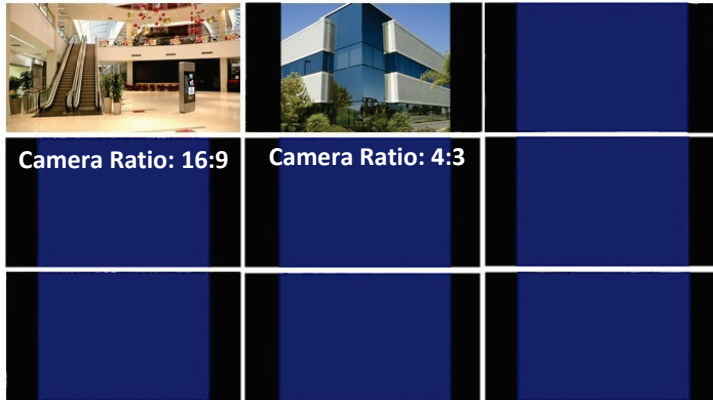
If selecting 800x600, 1024x768 or 1280x1024 (4:3) screen resolution in the **Screen Mode** drop-down list (see *5.3.1 Monitor OSD*), it is recommended to also change the camera live view display to 4:3 aspect ratio in the **Ratio** drop-down list (see *5.1.8 Adjust*).

Screen Mode: 800x600 / 1024x768 /1280x1024 (4:3)

Camera Ratio: 16:9   Camera Ratio: 4:3
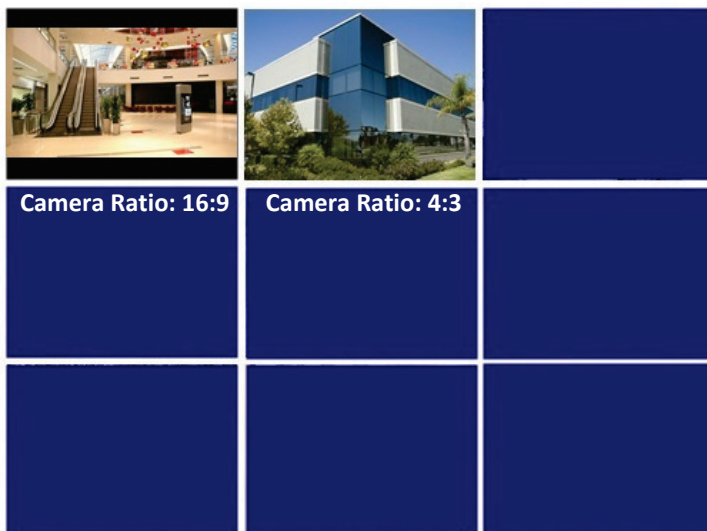
2.2.3 Alarm I/O

The IP decoder provides four alarm inputs and one alarm outputs. Please refer to the table below for PIN assignment.

Alarm Out   Alarm In

COM NC G G   4 3 G G 2 1

OUT COM 4 3 COM 2 1
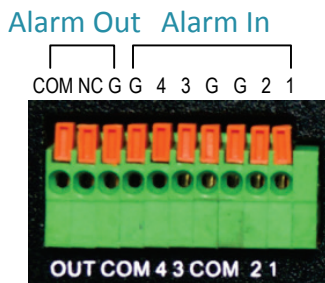
Alarm Input

No.	Description	No.	Description
1-4	ALM_IN1 -- ALM_IN4	COM	GND

Alarm Input Contacts

This IP decoder provides one alarm input per camera. All inputs are programmable N.O. (Normal Open) or N.C. (Normal Closed). All settings are programmed in the ALARM / Event menu.

ALMIN

GND

Alarm Input with N.O. contact in idle state

ALMIN

GND
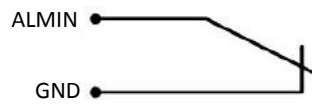
Alarm Input with N.C. contact in idle state

Alarm Output Contacts

The relay output provides either Normally Open or Normally Closed dry contacts.

ALMOUT +

ALMOUT -

ALMOUT +

ALMOUT -
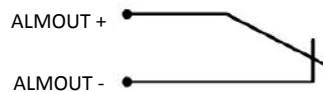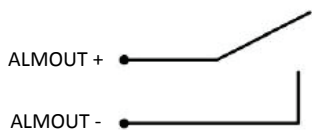
2.2.4 RS-485 Port

The RS-485 port, located on the rear panel of the IP decoder, can be used to connect to an RS-485 keyboard, such as EverFocus' EKB500, for controlling IP decoder and HD PTZ cameras. For details on the RS-485 configurations on the IP decoder, please refer to *5.5.4 I/O Control*. The RS-485 pin assignment is as follows:
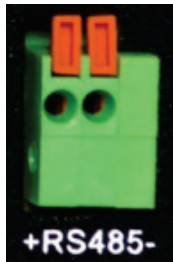
2.3 Turning On / Off the Power

Before powering on the IP decoder, please make sure the internal HDDs have been installed properly. When you have completed the basic cable connections, you are ready to turn on the IP decoder.

To turn on the power, connect the supplied Power Cord to the power outlet and turn on the **Power Switch**. All of the LED indicators on the front panel will light up for a second, but the Power LED will remain light up. To turn off the power, simply unplug the Power Cord from the power outlet. You can also press the **Power Switch** on the rear panel to turn on and off the IP decoder without unplugging the Power Cord.

2.4 Connecting the IP decoder to the Network

There are three methods to connect the IP decoder to the network: **Router or LAN Connection**, **Direct High-Speed Connection** and **One-to-One Connection**. For more information of the network, please refer to *Appendix A. Network Overview*.

2.4.1 Router or LAN Connection

This is the most common connection in which the IP decoder is connected to a router and allows multiple users on and off site to see the IP decoder on a LAN/WAN (Internet). The IP decoder 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, please refer to *6. Remote Access to the IP decoder*. To set up port forwarding, please consult the manual of the router or refer to *Appendix B: Linksys & D-Link Port Forwarding.*

Straight-through LAN patch cable
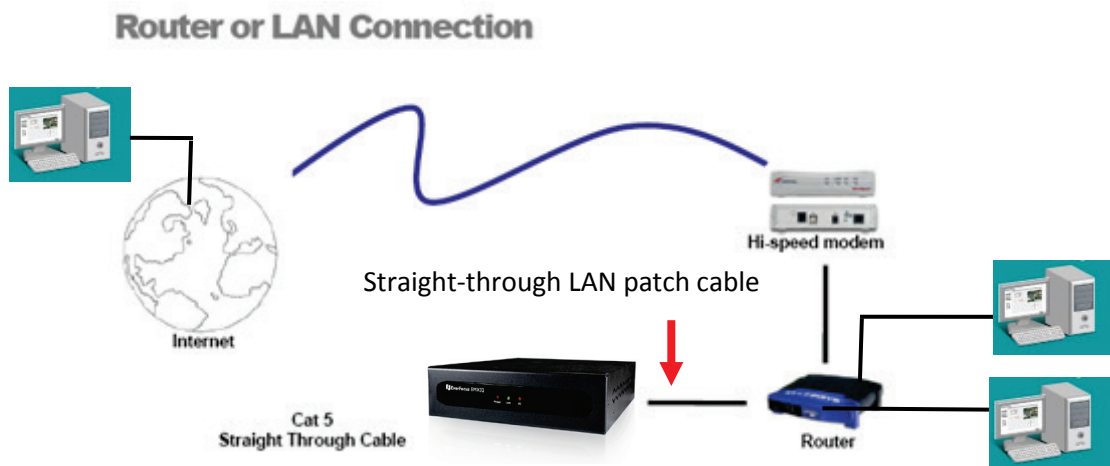
Right: Pinout of a straight-through cable.
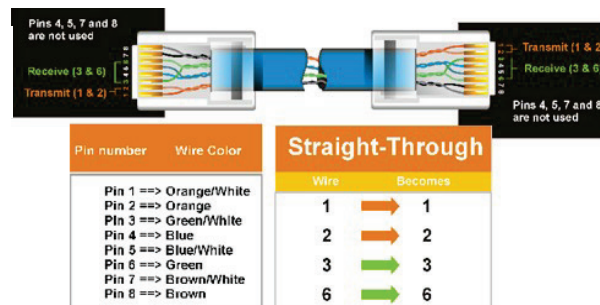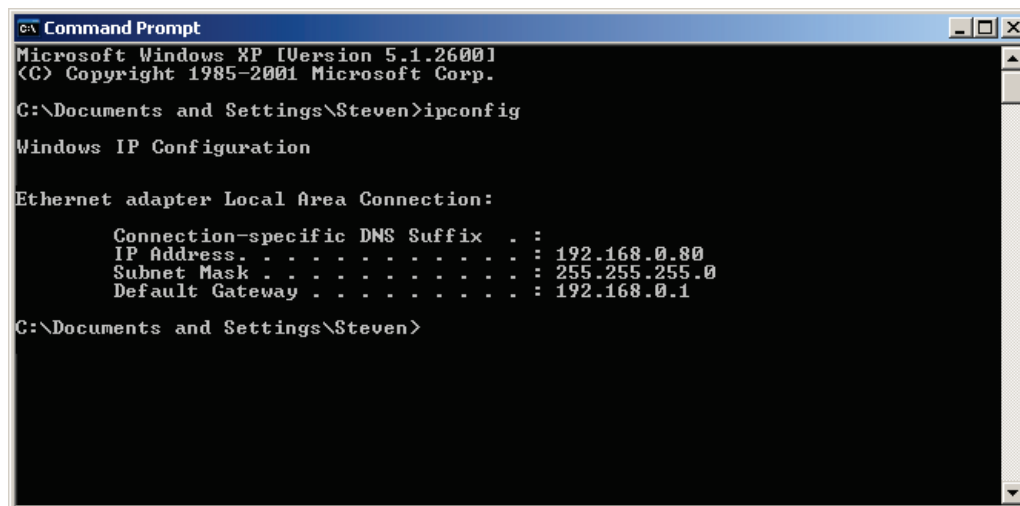
Connection Procedure:

➢ The First step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application.

➢ Once you have a straight through cable, plug one end into the LAN port on the back of the recorder and the other into the router.

➢ Log into the EverFocus IP decoder menu and go to the Network Setting Menu.

➢ To let the router automatically assign an address:

◆ Set the Network Type to DHCP. Make sure to write down the IP address and the Gateway.

◆ Exit from the Menu to save settings.

To manually assign an address:

◆ Go to a computer connected on the same network as the IP decoder.

◆ Click on the Start button and choose Run.

  If using Windows Vista, choose Search instead.

◆ Type "command" and click on OK.

  In Vista, you will need to double-click on the "Command Prompt" file to open it.

◆ In the DOS prompt, type "ipconfig" and press Enter.

◆ The network information will be displayed on a screen similar to the one below.

  In Windows Vista, look for the information that says "IP v4".

◆ Take the values for Subnet Mask and Default Gateway and input them into the IP decoder; these values should be exactly the same in both devices. However, you should change the last number of the IP address. For example, if the IP address of the computer is 192.168.2.101, the IP decoder's IP address should be 192.168.2.50.

➢ To access the IP decoder from a computer simply open Internet Explorer and in the address bar type:

  http:// (IP address of the IP decoder)

> **Note:** The IP decoder's IP address will only work at the location of the IP decoder. To connect from a different location over the Internet, see below.

To set the IP decoder for Internet Connection through router:

➢ The next step is to open ports within your router. Log into the router using a PC and open the following ports.

◆ Ports to open: 80

◆ If your Internet service provider blocks port 80, you can change it to a different port in the IP decoder's Network Menu Setup; open/forward that port instead.

◆ If you are using a Linksys or D-Link router, see *Appendix B* for basic support on setting up ports. For any other router, you will need to contact the manufacturer for support.

➢ To access the IP decoder from a computer simply open Internet Explorer and in the address bar type:

  http:// (the IP address given by your internet service provider)

> **Note:** If you changed to a different port other than 80, you will need to include this at the end of the IP address:
> http:// (the IP address given by your internet service provider):port number

➢ If you have a WAN Dynamic IP address and have opened the ports, go to *6.7.3 DDNS Setup* to configure the DDNS settings.

2.4.2　Direct High-Speed Connection

In a Direct High-Speed Connection, the IP decoder 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 IP decoder's configuration web pages. To access the IP decoder, just type "http://xxx", where 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.
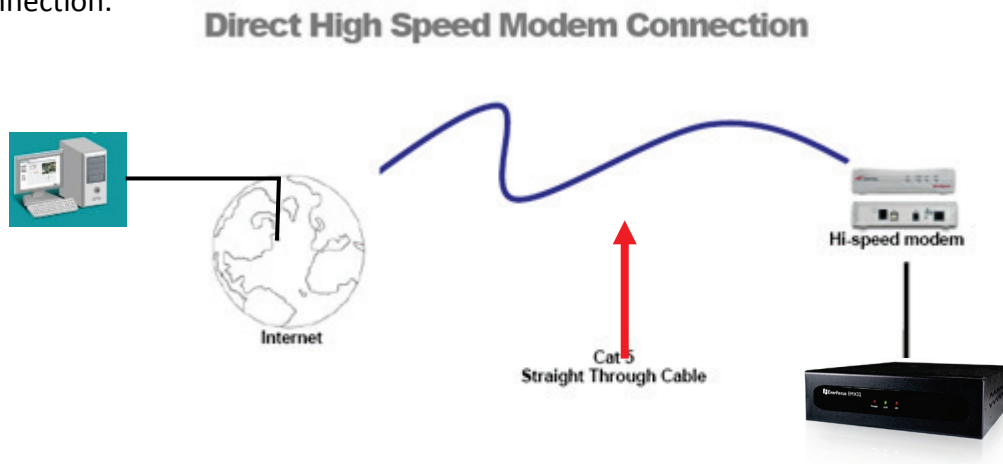
Direct High Speed Modem Connection

Internet

Hi-speed modem

Cat 5
Straight Through Cable

Connection Procedure:

➢ The first step is to purchase or make a straight through cable. We recommend purchasing one if you have never made a straight through cable. Please remember you can not use a cross-over network cable for this application

➢ Once you have a straight through cable plug one end into the LAN port on the back of the recorder and the other into the high speed modem.

➢ Log into the EverFocus IP decoder menu and go to the Network Setting Menu.

➢ Input the Static IP address, the Subnet Mask, and the Gateway that you obtained from the internet service provider.

Note: If you have a dynamic IP address, you can set the IP decoder to DHCP to automatically detect the network settings. Therefore, it can use a dynamic IP address.

➢ Exit from the IP decoder's Menu to save the settings.

➢ To access the IP decoder from a computer, open Internet Explorer and in the address bar type: http:// (IP address given by your internet service provider)

Note: When using this type of connection, only one device can be connected to the modem at a time. You will need to use a computer at a different location to test the connection s.

2.4.3 One-to-One Connection

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

Right: Pinout of a crossed-over cable.
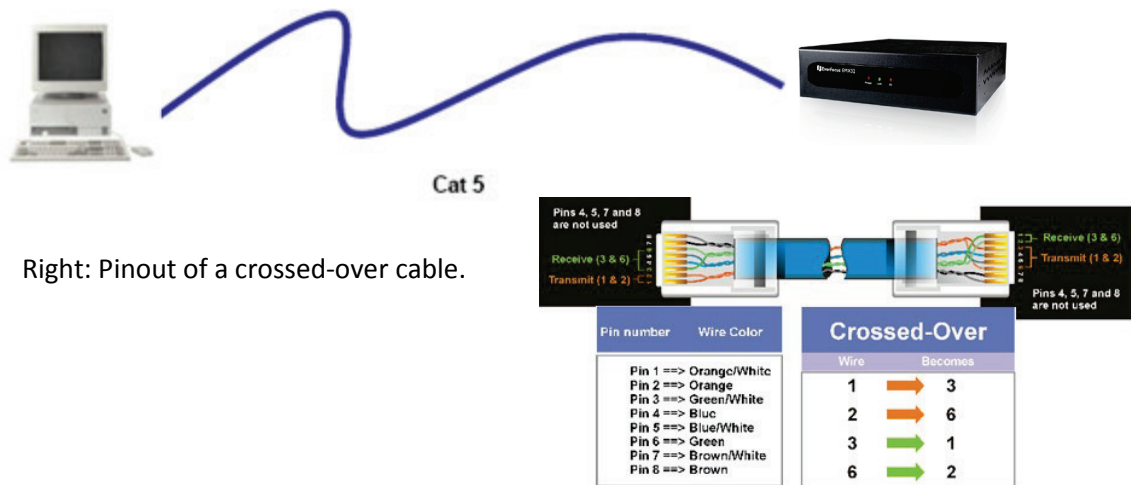
Connection Procedure:

➢ The First step is to purchase or make a cross-over cable. We recommend purchasing one if you have never made a cross-over cable. Please remember you can not use a straight through network cable for this application.

➢ Once you have a cross-over cable, plug one end into the LAN port on the back of the IP decoder and the other into the network card on the back of the computer.

➢ Log into the EverFocus IP decoder menu and go to the Network Setting Menu.

➢ You must use the Static IP option for this type of connection.

➢ Assign an IP of 192.168.001.003, a Subnet Mask of 255.255.255.000, and a Gateway of 192.168.001.001. You can ignore DNS Server.

➢ The next step is to set the computer's network settings to match those of the IP decoder. You will need Administrator privileges on your Windows machine to do this.

➢ To assign a fixed IP address in Windows 2000/XP, follow the instructions below:

◆   Go to **Start**. Double-click on **Control Panel**.
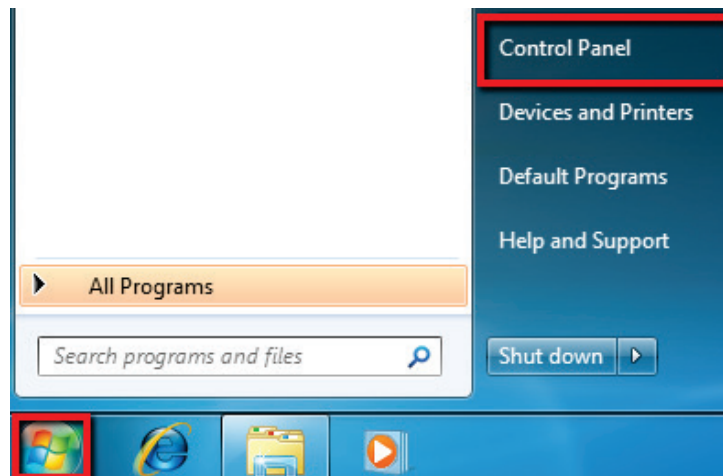
◆   Click **Network and Sharing Center**.
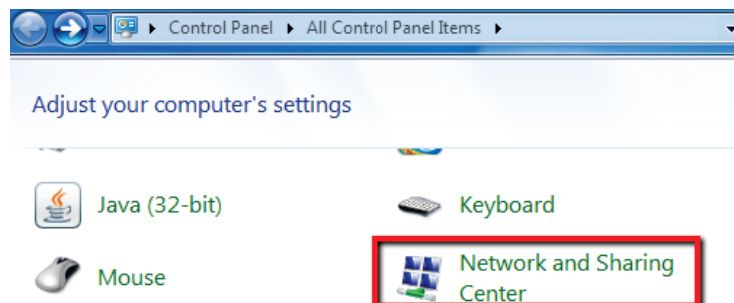
◆   Click **Local Area Connection**.
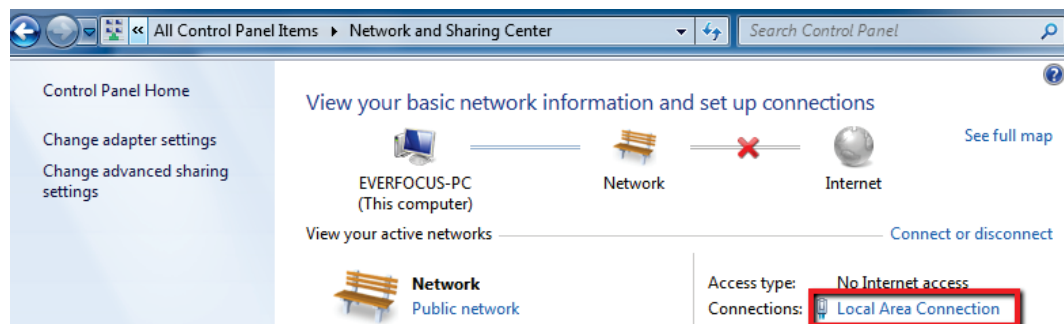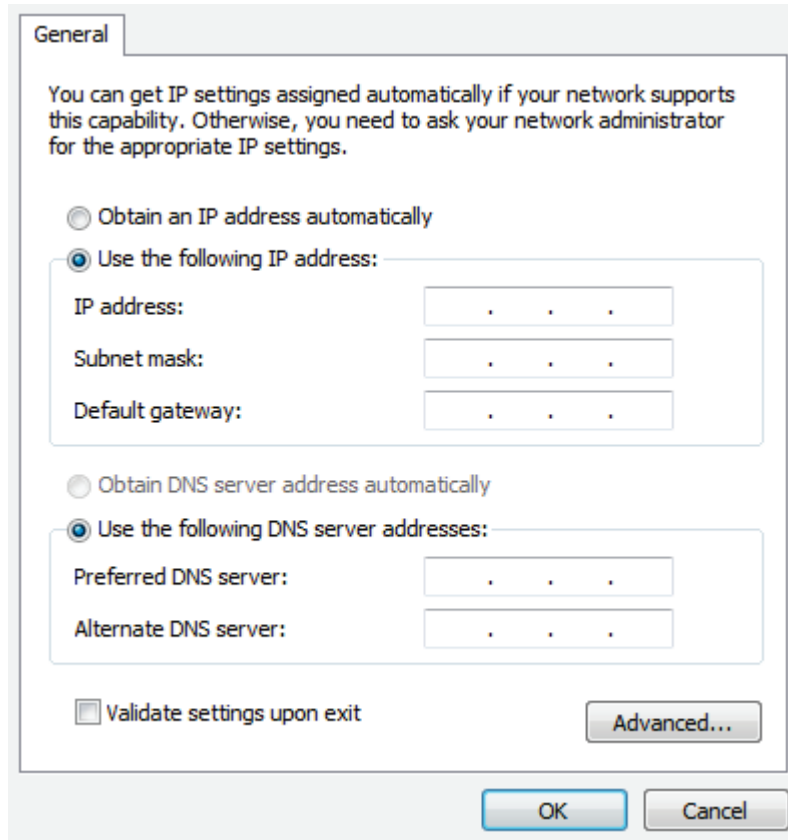
◆ Click **Properties**.
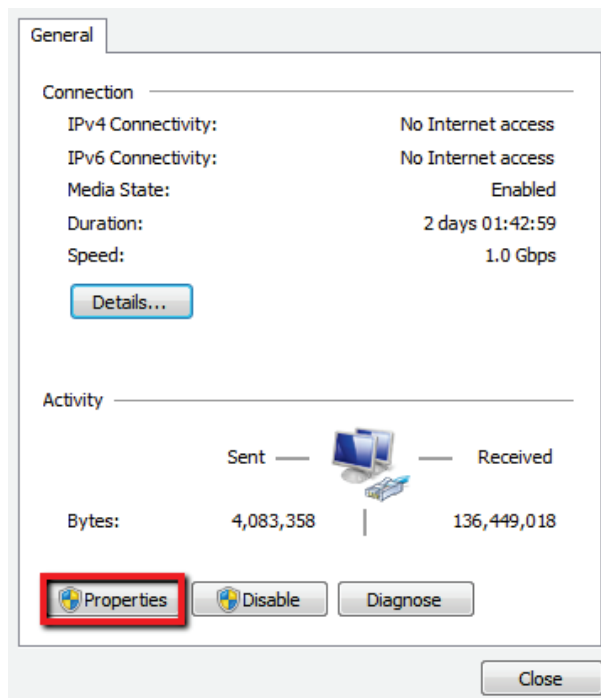
◆ Click on **Internet Protocol Version 4(TCP/IPv4)** and then click **Properties**.
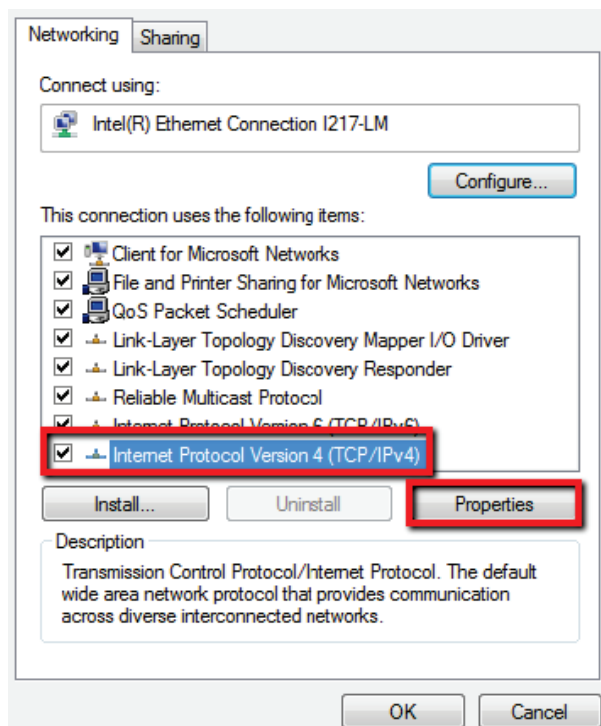
◆ Select **Use the following IP address**. Assign an IP address of 192.168.1.2, a Subnet Mask of 255.255.255.0, and a Default Gateway of 192.168.1.1 and then click **OK**.

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically

◉ Use the following IP address:

IP address: [.   .   .]

Subnet mask: [.   .   .]

Default gateway: [.   .   .]

○ Obtain DNS server address automatically

◉ Use the following DNS server addresses:

Preferred DNS server: [.   .   .]

Alternate DNS server: [.   .   .]

☐ Validate settings upon exit   [Advanced...]

[OK]   [Cancel]

◆ Restart both of the computer and the IP decoder.

◆ To access the IP decoder from the computer, simply open Internet Explorer and in the address bar type: http://192.168.1.3

2.5   Checking the Dynamic IP Address

You can look up the IP address and access the Web interface of the IP decoder using the **IP Utility (IPU)** program, which is contained in the CD. It can also be downloaded from EverFocus' Website: http://www.everfocus.com/HQ/Support/DownloadCenter_p1.aspx. Please connect the IP decoder in the same LAN of your computer.

1. Install and then start the IPU program . The following dialog box appears.
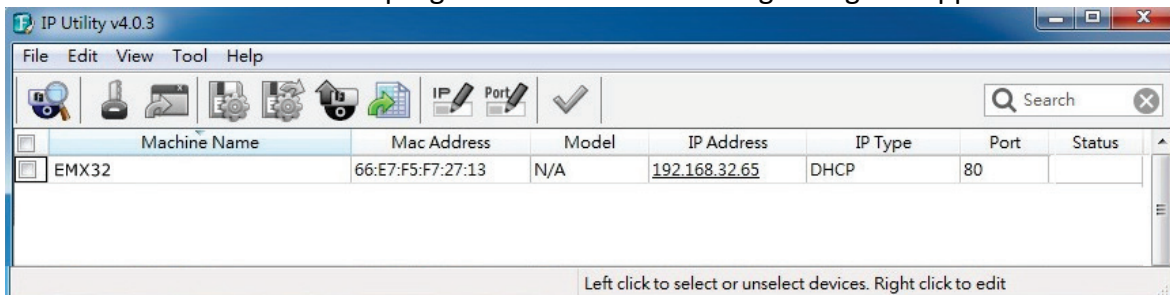
2. IPU will automatically search the IP devices connected in the LAN. The default network values of the IP devices will be displayed. By default, the network protocol of the IP device is **DHCP**.

3. To optionally configure the Machine Name, IP Address, IP Type or Port Number using the IPU:

    a. Log in the IP decoder by checking the desired model and then click the **Log in** icon. The Log in dialog box appears.
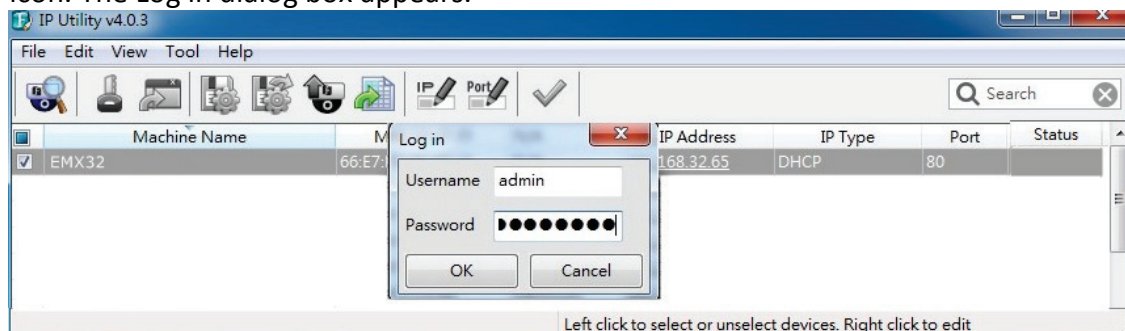
    b. Type the Username and Password. Click the **OK** button, the status of the selected camera will display **Login**.

> **Note:**
> 1. The default user ID is **admin** and the default password is **11111111**.
> 2. If you select more than one IP decoders that have the same user ID / password, you will be able to log in several IP decoders at once.

c. Right click the column to configure the setting. Click **Apply Changes** ✓ button to apply and save the settings.
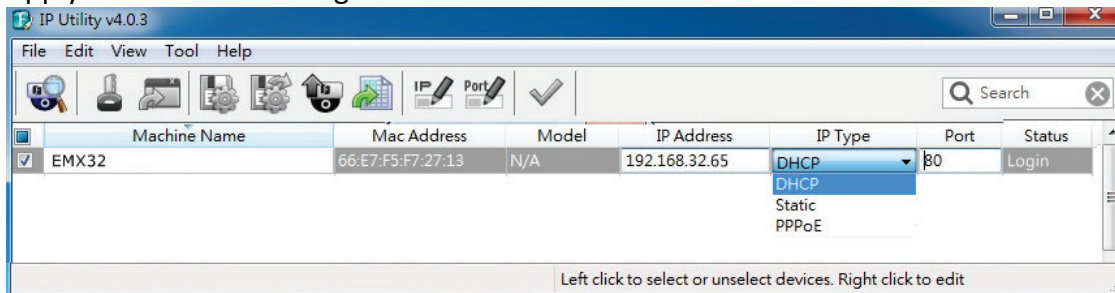
> **Note:** Most networks uses DHCP to assign IP address, if you are unsure of your network settings, please consult your network administrators for configuration details.

4. 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 **admin** and the password is **11111111**.
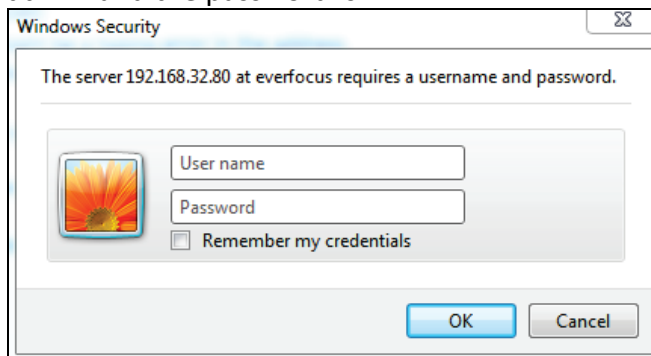
5. When first connecting to the IP decoder's IP address, the following dialog may appear. Please check the "Always trust content from this publisher" box and click the **Run** button to run the EverFocus Viewer application.

6. You might be required to download **ActiveX** and **JAVA software** for viewing the camera feed. If asked, click **Yes**. For more details, please refer to *6.2 Install JAVA Runtime* and *7.3 Browser Security Setting*.

7. You may need to turn User Account Control off if you still can't see the Remote Live View.

8. 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.
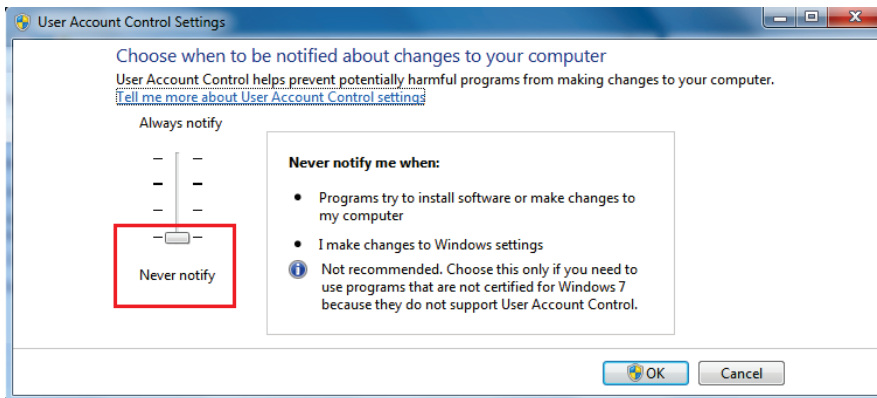
Chapter

3

3. General Operation

There are three ways to control the IP decoder: with a **Mouse**, the handheld **IR Remote Controller**, or the optional device **EKB500 Keyboard**. For details on the IR remote control, please refer to *Appendix C, IR Remote Control*. This chapter will discuss the basic operations using the mouse.

3.1 Login

In order to access IP decoder, you may be prompted to log in for authority identification. To log in, follow the steps below.

1. Right-click on the screen, the Login window appears.
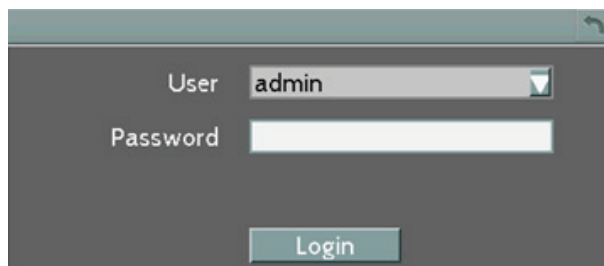
2. Select a user name from the drop-down list. Click the Password field to bring up the on-screen keyboard. Click the buttons and then click [⏎] to confirm the User Name / Password.

3. The default user name and password are:

   User: admin

   Password: 11111111

   Note: For details on setting up multiple user accounts, please refer to *5.5.3 User Management*.

4. Click **Login** to log in the IP decoder.

3.2 Camera Selection

You can control each camera individually by selecting that camera. To select a camera, follow the instructions below:

1. Click a camera on the screen, and the selected camera will be highlighted with a red frame.

2. All cameras will be selected when you scrolling the mouse up / down between the first and the last channel.

3. Double clicking on a channel screen will display full screen for this channel.

3.3 Opening OSD Root Menu

1. Right-click the mouse, the OSD Root Menu appears.

2. Click on any icon to enter the setup menus.

3. Click the [icon] button on the top-right corner or right-click to close the OSD Root Menu.

3.4   Field Input Option

You may found the following fields in the Configuration menu. Follow the instructions below to configure the settings.

Text Box: Click on the box and an on-screen keyboard will appear.

Title	IP Camera01

On-Screen Keyboard: Click on a button to input that character. The buttons on the right and bottom have the following functions:

Caps	Switch to capital letters
←	Delete the letter backwards
⏎	Confirm the selection
◀	Move to left
▶	Move to right
Space	Enter a space

Drop-Down Box: Click on the down arrow to see all selections, then directly click on an option to select it.

Resolution	1920x1080 ▼

Check Box: Click on the box to enable it (checked) or disable it (unchecked).

Enable	✓
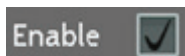
Button: Click the button to execute the function.

    Save
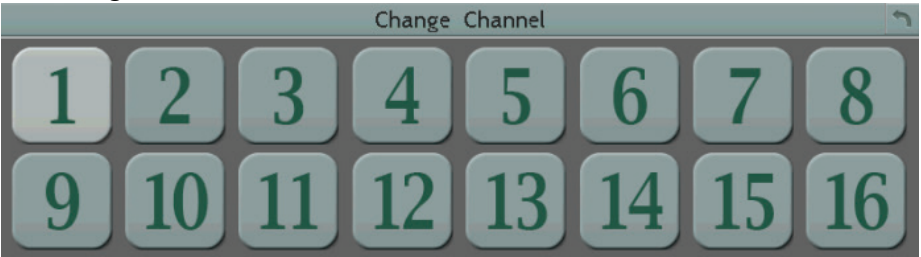
Bar: Slide the bar to the left or right for adjusting the set point.

Brightness: 50

    [50]

4

4. OSD Root Menu
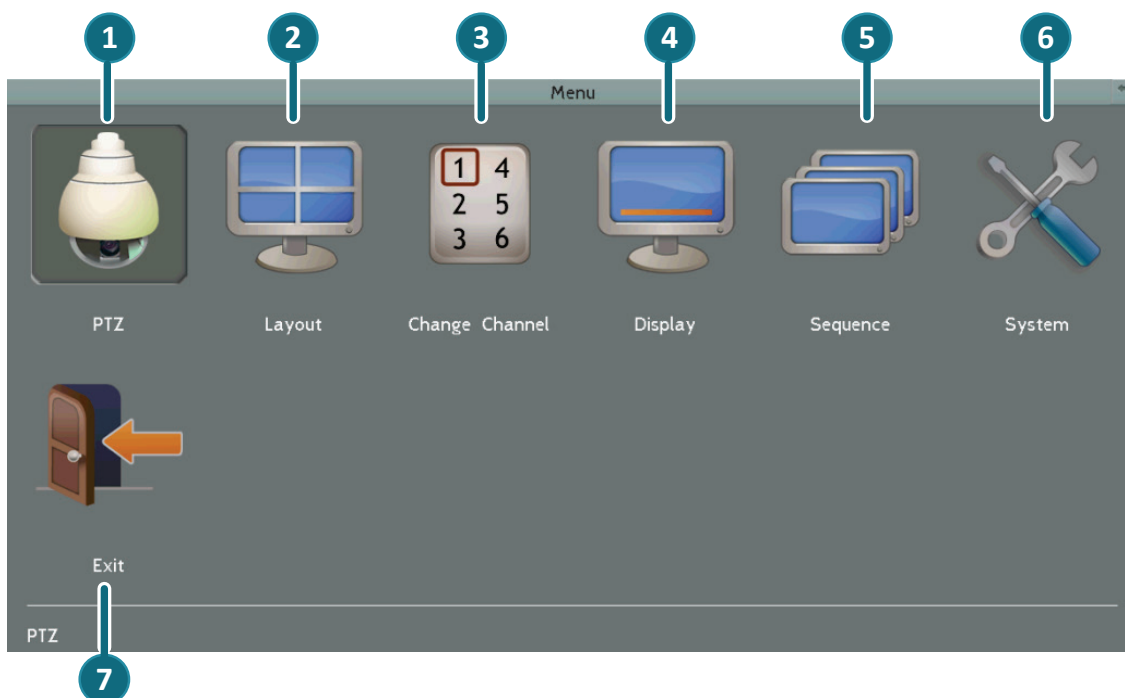
No	Name	Description
1	**PTZ**	Click to display the PTZ Control Panel for controlling the connected PTZ cameras. For details, please refer to *4.1 PTZ.*
2	**Layout**	Click to display the Layout Bar as shown below. Select a layout type for the live view display on the Main Monitor. For details, please refer to *4.2 Layout Switching.*

3	Channel	Click to display the Channel Changing Bar as show below. To switch the selected camera to a specific channel, please refer to *4.3 Channel Switching*. ![Change Channel bar showing buttons 1 through 16](change_channel.png)
4	Display	Click to display system information icons or status icons on the live view screen. For details, please refer to *4.4 Display*.
5	Sequence	Click to enter the auto sequential switching mode. Click again to disable. For setting up the sequencing order, please refer to *5.3.2 M/T SEQ.*
6	Configuration	Click to enter the Configuration menu. Please refer to *5. Configuration*.
7	Logout	Click to bring up the Logout Confirmation window and then click Yes to log out the system (see *4.6 Logout*). To log in, please refer to *3.1 Login*.

4.1 PTZ

You can use the PTZ Control Panel to control the connected PTZ cameras. To bring up the PTZ

control panel, on the OSD Root Menu, click the PTZ button .

The following actions can be performed using the PTZ Control Panel:

1. To move the camera to the desired direction and angle, click the **Direction** buttons.
2. To zoom in / out the camera view, click the **Zoom** buttons.
3. To adjust the camera focus, click the Focus buttons.
4. To adjust the Iris open to increase / decrease the amount of light in, click the **Iris** buttons.
5. To program a Preset Position (if supported by the camera):
   a. Move the PTZ camera to the desired position.
   b. Click the **Preset** button.
   c. Set up a preset number for the current position by clicking the number buttons. The number will be displayed in the number box.
   d. Click the **Set** button to save the settings.
6. To jump to a Preset Position:
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Go** button.
7. Shortcut for Preset 1 ~ 9:
   a. Click digit 1 ~ 9 button without clicking any other buttons.
   b. The camera will seek that Preset Position.
8. To delete a Preset Position (if supported by the camera):
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Delete** button.
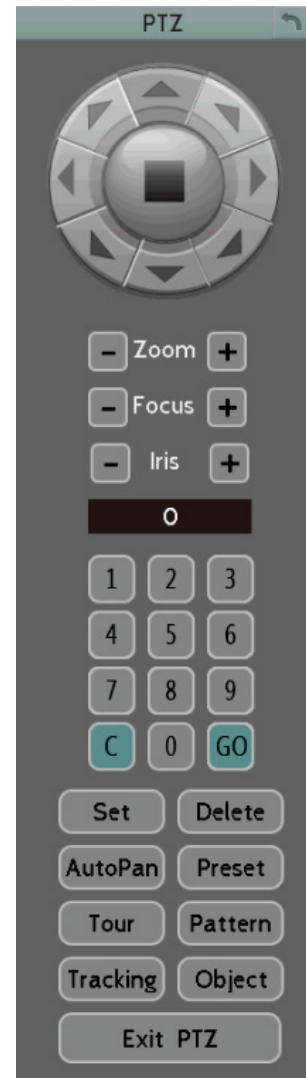
9. To operate the Auto Pan function, click the **Auto Pan** button.

10. To operate the Pattern function, click the **Pattern** button. The Pattern is the "0" Tour in EverFocus and Pelco PTZ cameras.

11. To operate the Tour function:

    a. Click the **Tour** button.

    b. Click the desired Tour number.

    c. Click the **Go** button.

12. To remove a pre-configured Tour (if supported by the camera):

    a. Click the **Tour** button.

    b. Click the desired Tour number.

    c. Click the **Delete** button.

13. To start the auto-tracking function, click the **Track** button.

14. To start tracking a selected object on the screen, click the **Object** button. When the object selection box displays on the screen, click to select an object to start auto tracking. Once the PTZ camera loses track of the object, the camera will return to the auto tracking start point. Please select forward position in the object movement path to get better tracking result.

Click **C** to clear the entered number in the Number Box.

Click at the top-right corner to hide the PTZ Control Panel (see *4.1.1 Express Control of PTZ*). To display the PTZ Control Panel, right-click on the screen.

Click **Logout** to close the PTZ Control Panel and exit the PTZ mode.

Note: Before start using the Auto Pan, Pattern, Tour, and Tracking functions, you have to configure the related settings for the connected PTZ cameras. Please refer to *5.1 Camera* or the User's Manual of your PTZ cameras.

4.1.1 Express Control of PTZ

If the PTZ Control Panel has first been opened and then hidden, the mouse can be used to control basic PTZ functions. Move your mouse cursor on the screen, the mouse cursor will turn into a control icon (direction, focus or zoom) in different areas of the screen. You can control PTZ direction, focus and zoom by clicking directly on the screen.
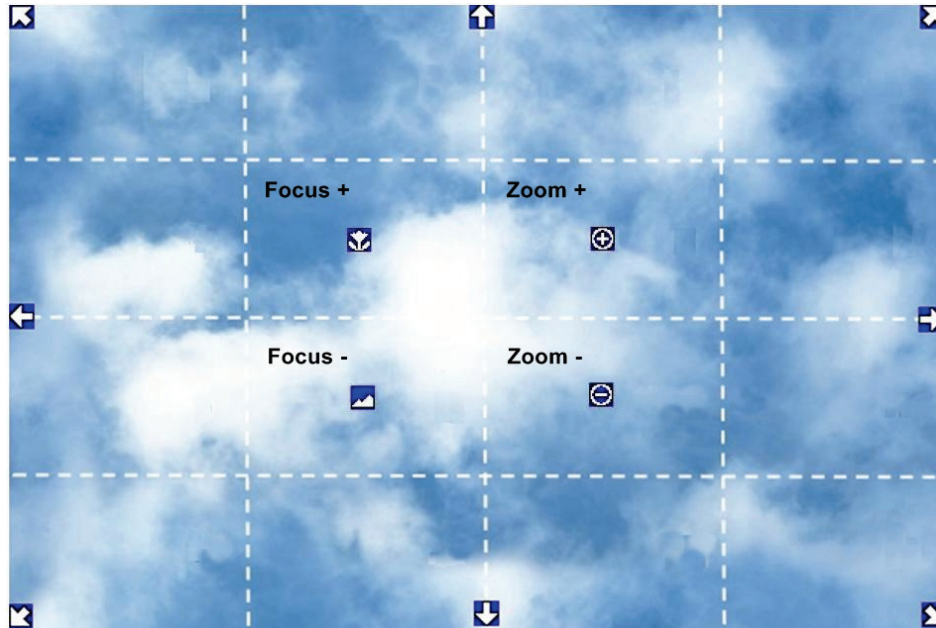
Direction Controls: When your mouse cursor turns into a direction icon, click on the screen will force the camera to turn in that direction.

Focus Controls: When your mouse cursor turns into [icon], click on the screen will focus closer the image. When your mouse cursor turns into [icon], click on the screen will focus farther the image.

Zoom Controls: When your mouse cursor turns into [icon], click on the screen will zoom in the image. When your mouse cursor turns into [icon], click on the screen will zoom out the image.

4.2 Layout Switching

The IP decoder has 7 screen division types available. The seven layouts are shown as below:
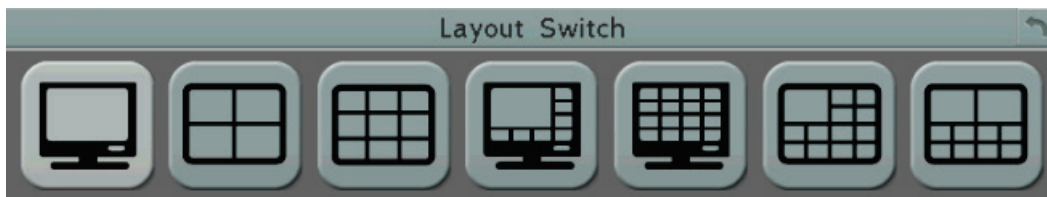
To change layout, follow the steps below:

1. Right-click to bring up the OSD Root Menu and click the Layout icon.
2. Click on the desired layout.

4.3 Channel Switching

You can switch the selected camera to a specific channel. Follow the steps below:

1. On the live view screen, select a camera, the selected camera will be highlighted with a red frame.
2. Right-click to display the OSD Root Menu.
3. Click the **Channel** icon , the Channel Bar appears.

4. Select a channel, the selected camera will be switched to that channel.

4.4 Display

You can display system and camera status on the live view screen. Follow the steps below:

1. Click the Display button on the OSD Root Menu or press the Display button on the front panel to display the system and camera status. Click the button to choose the desired display mode:

2. The following icons will be displayed at the top-left side of each camera stream to show each camera's status.

Alarm	Connection loss	Uninstall	

3. The following icons will be displayed at the bottom of the monitor to show the system status.

Alarm	Connection loss	No network LAN	Main	Sequence

4. There are four display modes, and you can click the Display button to change the display mode: (1) Display both the camera and system status icons. (2) Display only the camera status icons. (3) Display only the system status icons. (4) Hide both the camera and system status icons.

4.5 Sequence

The sequence function is used to display each channel in sequence mode. To enable this function:

Click the Sequence button to enter the sequential switching mode. The IP decoder will display one channel at a time in full screen. The channels will be displayed in the sequence and for the amount of time as configured in the System > Display Setting > M/T SEQ submenu. The default setting is channels 1~16 with a dwell time of 3 seconds each – repeated. Please refer to *5.3.2 M/T SEQ* for detailed information.

4.6　Logout

You can log out the IP decoder by clicking the Logout icon on the OSD Root Menu to bring up the Logout Confirmation window as Figure 4-9. Press "Yes" when you are ready to logout of the system. You will need to login again before accessing the OSD Root Menu.
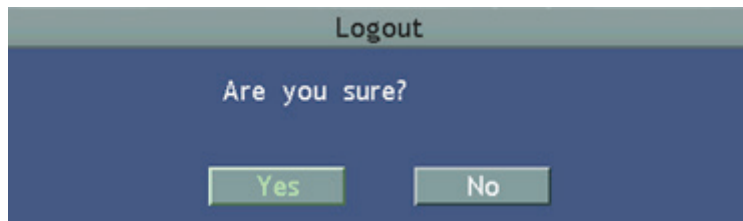
If you do not need the Login / Logout step before entering the Root Menu, please uncheck the **Login** box in the User Management setting page. For more details, please refer to *5.5.3 User Management*.
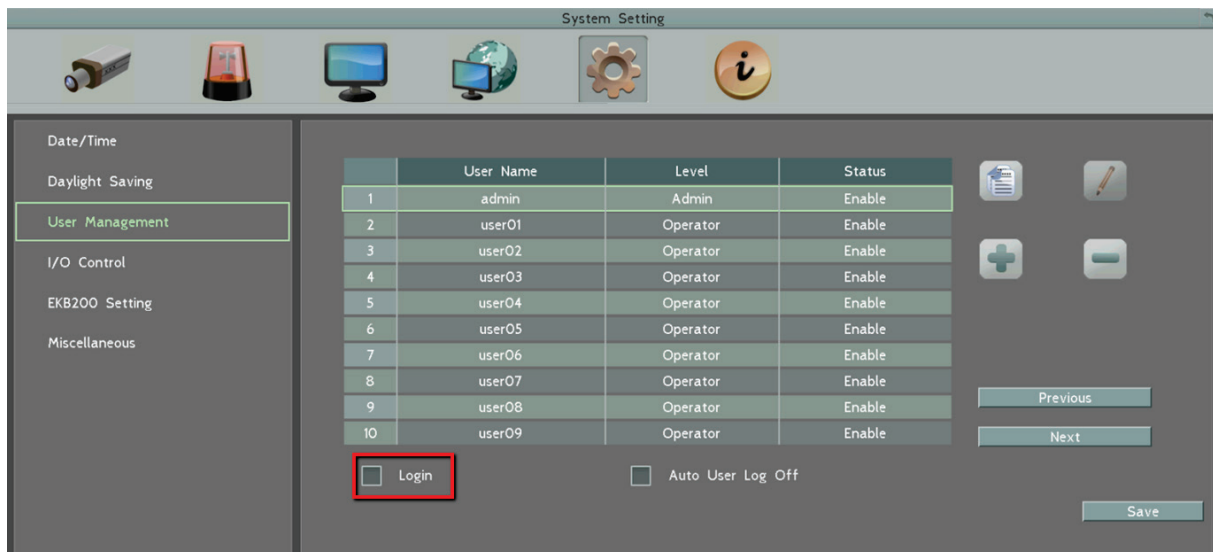
5. Configuration

The EMX32 can be configured through a series of menus on screen by using a **Mouse**, the supplied **IR Remote Control**, or the optional device **EKB500 keyboard**. The following operations are examples of using a Mouse. This chapter describes the functions and options of the Configuration Setting in the on-screen display (OSD) menus. Right-click the mouse, the OSD

Root Menu appears. Click the **Configuration** button [ ], the following Configuration Menu displayed with 9 setup options appears.

Ch	Title	Address	Port	FPS	Mbps	Connect
1	camera1	192.168.32.50	80	30	5.0	Connect
2	camera2	192.168.32.155	80	30	2.8	Connect
3	camera3	192.168.32.56	80	30	2.4	Connect
4	IPCamera04	192.168.32.170	80	30	5.7	Connect
5	IPCamera05	192.168.32.60	80	30	1.1	Connect
6	IPCamera06	192.168.32.57	80	30	0.0	Disconnect
7	IPCamera07	192.168.32.51	80	30	3.4	Connect
8	IPCamera08	192.168.32.46	80	30	2.1	Connect

Left menu:
- Camera Status
- Auto Search
- Basic
- Advanced
- PTZ
- Tracking
- Pattern Tour
- Adjust

Previous   Next   1/2

List of Configuration Options:

Please find the topic of interest by referring to the section prefixed to each option.

5.1 Camera	5.1.1 Camera Status 5.1.2 Auto Search 5.1.3 Basic 5.1.4 Advanced 5.1.5 PTZ 5.1.6 Tracking 5.1.7 Pattern Tour 5.1.8 Adjust	
5.2 Event	5.2.1 Alarm	
5.3 Display Setting	5.3.1 Monitor OSD 5.3.2 M/T SEQ	
5.4 Network	5.4.1 LAN	
5.5 System Setting	6.5.1 Date / Time 6.5.2 Daylight Saving Time 6.5.3 User Management 6.5.4 I/O Control 6.5.5 EKB200 6.5.6 Miscellaneous	
5.6 System Information	5.6.1 System	

5.1 Camera

You can view the camera status, search the connected IP cameras and configure the Basic, Advanced, PTZ, Tracking, Pattern Tour and Adjust in the following setting pages.

5.1.1 Camera Status

This page displays added IP cameras' status.

Channel: Displays the channel number.

Title: Shows the name of the connected IP camera.

Address: Shows the IP address of the connected IP cameras.

Port: Shows the port number of the connected IP cameras

FPS (Frame Rate per Second): Shows the current frame rate of the connected IP camera.

Mbps: Shows the current Bit Rate of the connected IP camera.

Connect: Shows the connection status.

5.1.2   Auto Search

The function allows users to automatically search and add cameras in the same network.

To search cameras:

1. Click the **Search** button.

2. The IP cameras connected in the same network will show up in the **Camera List**.
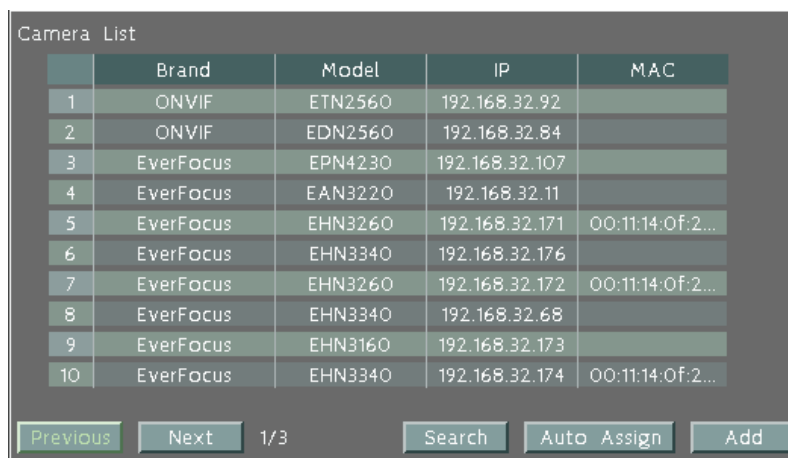
To add cameras: (A). You can add 16 cameras automatically assigned by the IP decoder to the channels at one time or (B). you can also add cameras one by one.

A. Click **Auto Assign**, the system will automatically add the first sixteen cameras shows on the list to channel 1~16. Click **Save** to save the setting.

B. You can also add the desired camera to channel one by one.

1. Click on a desired camera, and click **Add** to add that camera to Channel List.

Camera List

	Brand	Model	IP	MAC
1	ONVIF	ETN2560	192.168.32.92	00:11:14:11:4...
2	ONVIF	EDN2560	192.168.32.84	
3	EverFocus	EPN4230	192.168.32.107	00:11:14:0c:f...
4	ONVIF	FE8172V	192.168.32.145	00:02:d1:1c:d...
5	EverFocus	EAN3220	192.168.32.11	00:11:14:0d:c...
6	EverFocus	EHN3160	192.168.32.173	00:11:14:0f:2...
7	EverFocus	EPN4220	192.168.32.121	
8	EverFocus	EHN3260	192.168.32.147	00:11:14:0f:2...
9	EverFocus	EHN3340	192.168.32.68	00:11:14:0f:2...
10	EverFocus	EHN3260	192.168.32.171	00:11:14:0f:2...

Previous Next 1/3 Search Auto Assign Add

2. Click on a desired channel, and click **Add** to add the camera to that channel.

Channel List
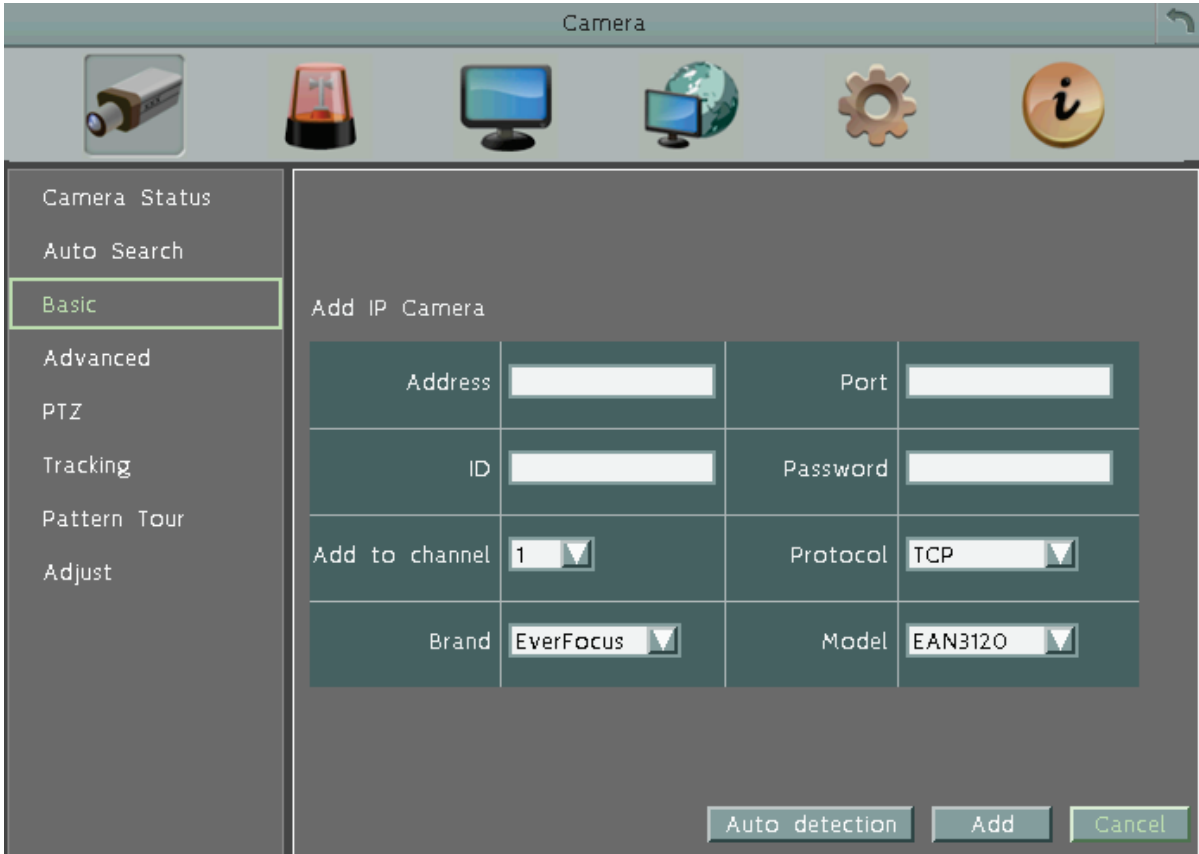
	Brand	Model	IP	MAC
1			0.0.0.0	
2			0.0.0.0	
3	ONVIF	ETN2560	192.168.32.92	00:11:14:11:4...
4			0.0.0.0	
5			0.0.0.0	
6			0.0.0.0	
7			0.0.0.0	
8			0.0.0.0	

Cancel Save Add

3. Click **Save** to save the setting or click **Cancel** to return to previous setting.

5.1.3　Basic

The function allows users to manually add IP cameras.

Address: Type the IP address of the camera.

Port: The default port is 80.

ID: Enter the account username of the camera.

Password: Enter the password of the camera.

Add to Channel: Select a channel number to add this camera to that channel.

Protocol: The data transmission protocol.

Brand: The brand of the camera.

Model: The model type of the camera.

Auto Detection: After entering the IP address, port, ID, password and selecting a channel, click this button to auto detect the protocol, brand and model of the camera.

Add: Click to add the camera, and bring up the detailed setting page as below.

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

To successfully add the IP camera, you need to click the **Save** button in this page. You can also configure the detailed settings as follows.

【**Main / Sub Stream Parameter**】 You can separately configure the settings for the Main / Sub Streams.

Camera Channel: Show the camera channel number.

Normal Frame Rate: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the IP decoder as allocated across all the installed cameras.

Event Frame Rate: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the IP decoder as allocated across all the installed cameras.

Resolution: Select a desired recording resolution.

Quality: Select an image quality of the camera.

Constant Bit Rate: set up the current Bit Rate of the connected IP camera.

Record Audio: Select to enable or disable the audio recording function.

Save: Click to add the camera and save the current settings.

Cancel: Click to cancel eth settings and return to the previous setting page.

5.1.4   Advanced

The Advanced Setting is for users to view, add, delete or modify the cameras in the Camera List.
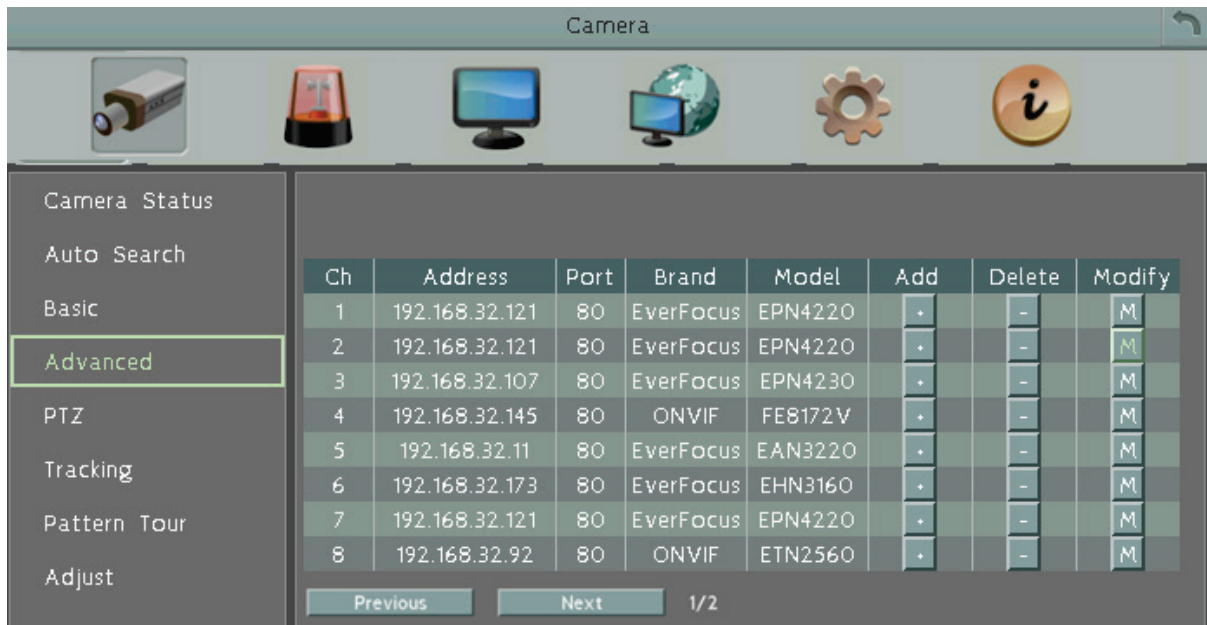
Add: Click the [ ] button to add camera manually. To add the cameras, please see *5.1.3 Basic*.

Delete: Click [ ] button to delete the camera.

Modify: Click [M] button to modify the settings of the added camera. Please refer to *5.1.3 Basic*.

5.1.5   PTZ

You can set up the Preset and Auto Pan settings in this page.
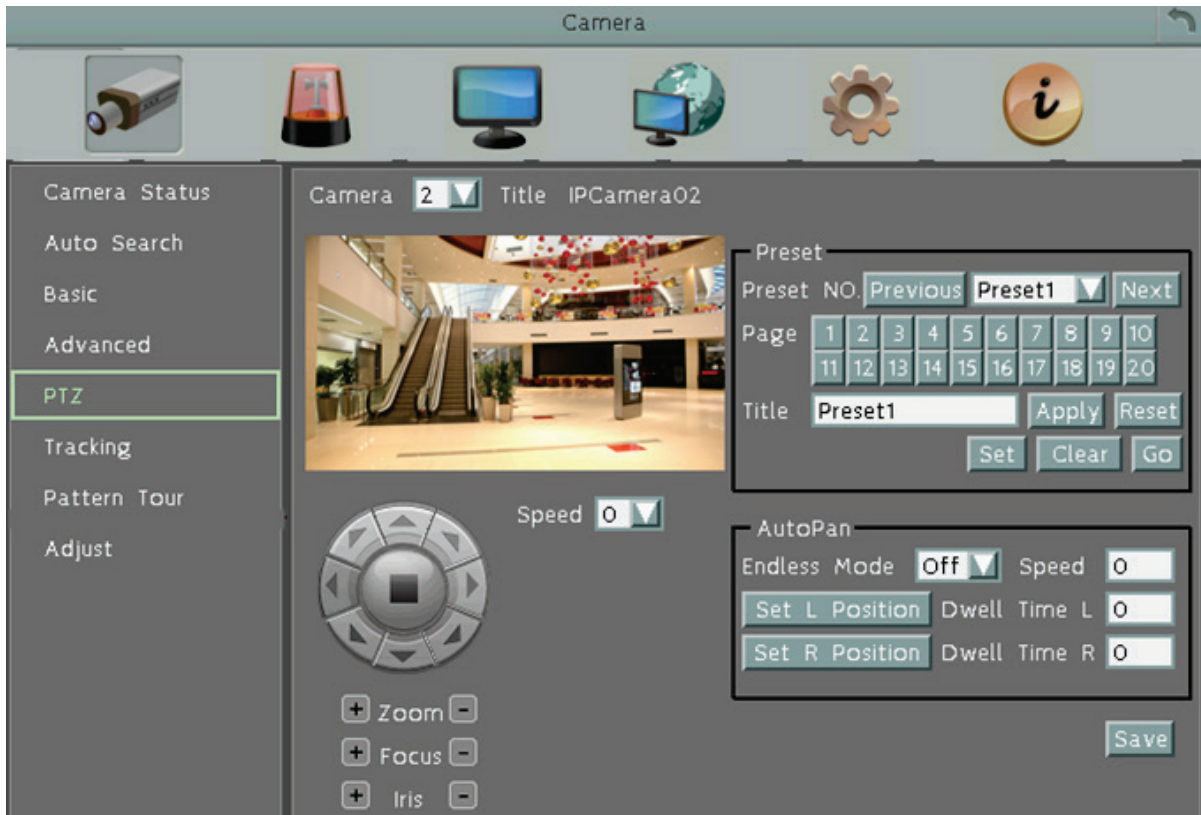
【**Camera**】**:** Select a PTZ camera.

【**Speed**】**:** Select a pan and tilt speed from the Speed drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period

【**PTZ Control Pad**】**:**
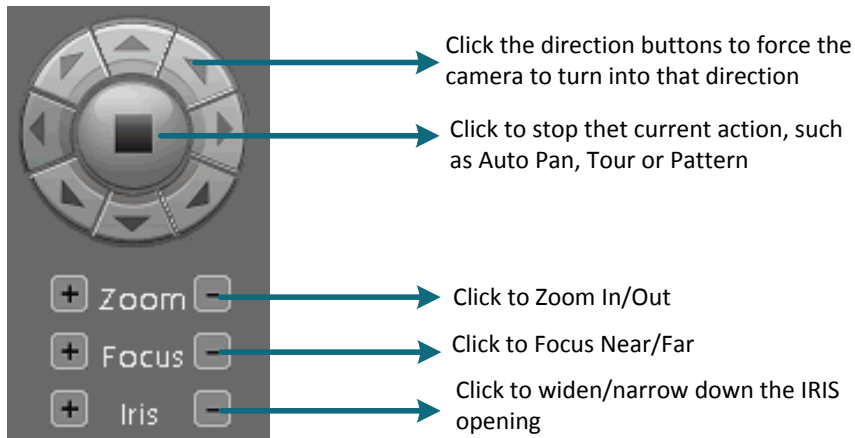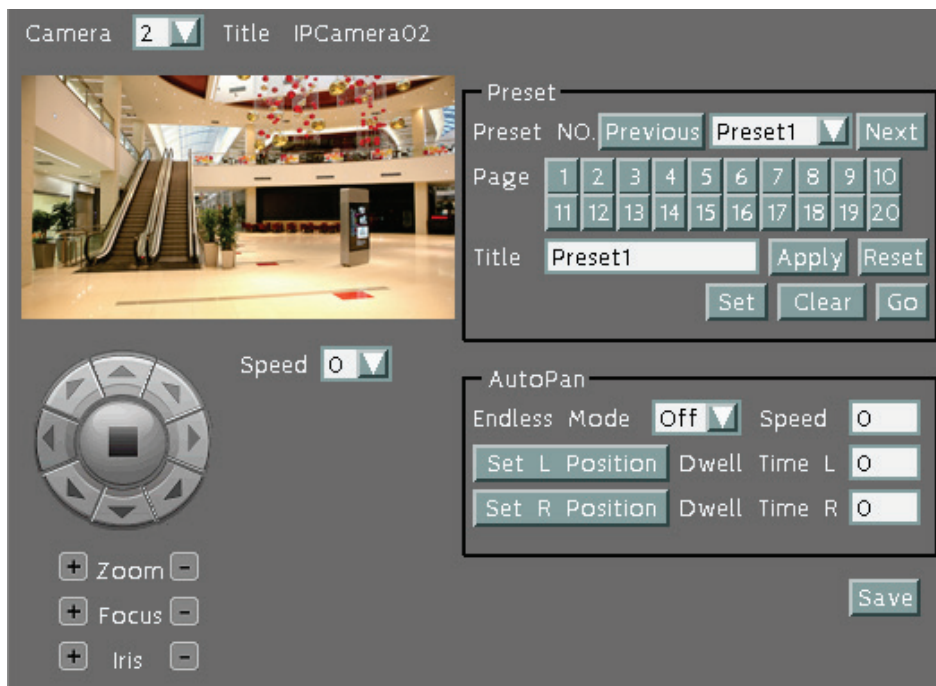
Click the direction buttons to force the camera to turn into that direction

Click to stop thet current action, such as Auto Pan, Tour or Pattern

Click to Zoom In/Out

Click to Focus Near/Far

Click to widen/narrow down the IRIS opening

<u>Preset:</u> You can configure up to 192 preset positions in this field.

To set up a Preset Positions:

1. Adjust the camera view to a desired position using the direction button. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.

2. To set up the current camera view as a preset position, select a preset number from the **Preset No** drop-down list for the current camera view.

3. Optionally set up a title for this preset position in the **Title** field .Click **Apply** to save the title name or click **Reset** to reset the current changes.

4. Click **Set** to save the current position as the Preset Number you have selected.

5. Follow Step 1 to 4 to set up another preset position. You can click the **Next** button to go to the next page and then click the Preset No drop-down list to select a number. Or click on the number in the Page field to select a preset number.

To activate the Preset function on the PTZ Live View window, click the PTZ icon on the OSD Root Menu. Click the **Preset** button, click on the numeric buttons to select a Preset number and then click the **Go** button. The selected Preset position should be displayed on the camera view. Please refer to *4.1 PTZ* for detailed instructions.

Auto Pan: You can only configure one Auto Pan sequence. The configured Auto Pan (A to B Pan) sequence will always be numbered as "1". The number "2" will always be an endless pan around the given (not preconfigured) X/Y tilt axis.

Endless Mode: The Endless Mode is always numbered as "99" in the PRESET function. If you select **On**, the Preset number "99" will be the 360° endless pan function; if you select **Off,** the Preset number "99" will be the preconfigured A to B Pan function. To use the function, go to PTZ live view page first. Click the **Preset** button and click the Preset number "99". Finally, click **Go** to activate the Endless Mode.

To set up an Auto Pan Sequence:

1. Using the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Left Position. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.

2. Click the **Set L Position** button to save the current position as the Left Position.

3. Follow Step 1 to set up the Right Position and then click the **Set R Position** to save the current position as the Right Position.

4. Enter a dwell time (1~99 seconds) for the Left and Right positions (the time that the camera will pause at each position).

5. Enter a speed (1~255) at which the camera will move during the Auto Pan sequence.

6. Click **Save** to save the settings.

To activate the configured Auto Pan on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Auto Pan** button, click "1" on the numeric buttons and then click the **Go** button. The camera will continuously move to the left and right positions which you have configured. Click "2" on the numeric buttons and then click the **Go** button will force the camera to pan 360° endlessly. To stop the Auto Pan function, click the **Stop** button on the PTZ Control panel.

5.1.6   Tracking

To set up the Auto Tracking function:

1. **Auto Tracking Start Point:** Check the box to enable a camera position to which the camera
    will return to after a tracking operation. Use the direction buttons to adjust the camera
    view to a desired position where you want to set up the position as the Auto Tracking Start
    Point. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the
    direction buttons. Adjust zoom, focus and Iris if necessary. Click **Set** to set the position as
    the Auto Tracking Start Point.

    > **Note:** If the user did not set up a start point or the start point is disabled, the camera will
    > go back to track/monitor the initial point instead of the Auto Tracking Start Point, once
    > the tracked object exits in the camera's field of view.

2. **Pan/Tilt Limit:** Check the box if you want to create a zone where the camera will track the
    movement inside the zone only. Before clicking the Upper/Lower/Right/Left buttons, use
    the direction buttons to adjust the camera view to a desired position where you want the
    camera to track the movement in that zone. You can select the pan / tilt speed from the
    Speed drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if
    necessary. Click the Upper/Lower/Right/Left buttons to set up the Pan/Tilt limits (Left and

Right for the Pan limit; Upper and Lower for the Tilt limit).

> **Note:** Please note that if enabling the **Pan/Tilt Limits** function, the position of the Start Point should be within the range of the **Pan/Tilt Limits**, or there will be a pop-up message showing "Setting error: Start Point is not inside Pan/Tilt Limits".

- **Zoom control on tracking:**
  Keep current zoom ratio: the current zoom ratio will stay fixed during the tracking process.
  Multi-step zoom function: the zoom ratio will change according to the distance of the object against the camera. When the object is moving further away, the camera will keep zooming in to track; on the other hand, when moving closer, the camera will zoom out to check whether it should track the object or not.
- **Tracking Duration:** User can set the tracking time duration of the camera (0~600 seconds). When the Tracking Duration is up, the camera will return to the Start Point. The function is used to prevent the camera from tracking an object which is intentionally set to lure the camera away.
- **When the object is lost on the screen:** User can select a tracking mode when the object is lost on the screen. The options are:
  Keep tracking: The camera will stop at the current position and wait for another moving object in the camera's field of view. Then, the camera will track the new object without changing zoom ratio.
  Zoom out and look for a new object: The camera will zoom out at the current position immediately for expanded the field of view and restart tracking a new moving object appearing in the camera's field of view.
  Stop tracking and zoom out: The camera will stop auto tracking and stay at the current position. Then, the camera will zoom out for expanded the field of view.
- **In sec and Back to Start Point:** Set up a period of time for the camera to stay at the current position before returning to the Start Point (0 is returning to Start Point without any waiting).
- **Resume from manual stop:** The function is used to set up the Auto Tracking restart time (0~600 seconds). If user manually operates the PTZ function during auto tracking process, the auto tracking function will stop. When the manual operation ceases, the camera will resume to "Auto Tracking Start Point" after a given period of time. Setting of value 0 indicates do not restart.

> **Note:** In the on-going auto tracking process after object is identified, the PTZ function keeps the moving object in the center of the screen. But the PTZ function may stop if the object moves too slow and stays in center of the screen too long. In case like this the auto tracking may incorrectly assume the object is lost and ends the tracking process.

5.1.7 Pattern Tour

Pattern: You are given 90 seconds to move the camera (via the PTZ buttons) to different positions (and different zoom / focus / Iris positions). The camera then saves that sequence under the Pattern No. you've selected. Up to 4 Patterns can be configured.

To set up a Pattern Sequence:

1. Select a pan and tilt speed from the **Speed** drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period.
2. Select a pattern number from the **Pattern No** drop-down list.
3. Click the **Set** button to start the 90-second configuration period. Use the direction / zoom / focus / Iris buttons to move the camera in the desired sequence.
4. Click the **Complete** button again to end the configuration.

Click **Clear** can void the configuration for the entered Pattern No. Click **Go** to view/test the configured Pattern sequence.

To activate the Pattern function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Pattern** button, click on the numeric buttons to select a Pattern number and then click the **Go** button. The camera will move to the positions in the Pattern sequence you have configured. To stop the Pattern function, click the **Stop** button on the PTZ Control panel. Please refer to *4.1 PTZ* for detailed instructions.

Tour: You can combine up to 16 preconfigured camera positions and patterns into one long sequence. Up to 16 Tour sequences can be set up.

To set up a Pattern Sequence:

1. Select a number from the **Tour No** drop-down list.
2. To set up the first position for Tour No.1, select **OFF**, **Preset** or **Pattern** in the Mode field.

Tour			
Tour No. 1 ▼ Apply Clear Default Go			
Mode	Value	Dwell Time	Speed
Off ▼	0	0	0
Off	0	0	0
Preset	0	0	0
Pattern	0	0	0
Off ▼	0	0	0
Off ▼	0	0	0
Off ▼	0	0	0
Off ▼	0	0	0
Previous 1/2 Next			

3. Enter a Preset No. or Pattern No. in the **Value** field.
4. Enter a dwell time (1~99 seconds) in the **Dwell Tour** field that the Tour will pause at a Preset position or after a Pattern sequence.
5. Enter a speed (1~255) at which the camera will move to the Preset position or first point of the Pattern sequence.
6. Follow Step 3 to 5 to configure up to 16 positions for Tour No.1.
7. To configure another Tour sequences, select a number from the **Tour No** drop-down list and follow Step 3 to 6 to configure up to 16 positions for the selected Tour number.
8. Click **Apply** to apply the settings. Click **Clear** to clear the current settings for the selected Tour No.; click **Default** to set the Tour Sequence to Default setting; click **Go** to view/test the configured Tour sequence.

To activate the Tour function on the PTZ Live View window, click the PTZ icon ![icon] on the Menu Bar. Click the **Tour** button, click on the numeric buttons to select a Tour number and then click the **Go** button. The camera will move to the positions in a long sequence you have configured. To stop the Pattern function, click the **Stop** button ![icon] on the PTZ Control panel. Please refer to *4.1 PTZ* for detailed instructions.

5.1.8   Adjust

You can adjust detail camera settings in this page.

Camera: Select a desired camera for adjusting the following settings.

Device Title: Enter a camera title.

Record Dual Stream: Select to enable or disable the dual streams recording function.
Record Mode: Select a recording mode from the drop-down list.

Normal+Event: Set all cameras to the Continuous and Event recording mode.

Event Only: Set all cameras to the Event only recording mode.

Ratio: Select 4:3 or 16:9 display aspect ratio of a camera, and its video will be displayed in 4:3 or 16:9 format on that channel screen. Please refer to *2.2.2 Display Aspect Ratio* for more details.

Connected Channel: Check the box to enable the connection between the camera and the IP decoder. If the box is unchecked, the system will disconnect the camera and stop recording.

Mask Channel: Check the box to mask the camera's live view on the screen, but the recording function is still on.

Note: Whether the following functions marked with a "*" will be enabled or not depends on the connected IP camera. If the IP camera doesn't have the any one of these functions, the function will not be enabled. The setting options will also vary according to the IP cameras you selected. For more details, please refer to your IP camera's user's manual.

* Profile Setting: Select **Day Mode** or **Night Mode.** It is designed for user to easily have a best image quality of the camera in the daytime and night time.

* Profile Mode: Select a desired profile mode (Vivid/High Contrast, Standard, More Detail and User Define) to adjust image quality.

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

*【Exposure Settings】 This setting is used to adapt to the amount or type of light used by the camera.

* Mode:
- **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.

- **AES (Iris Priority):** Selecting AES (Auto Electronic Shutter) disables the Shutter setting below this setting. In this mode, the camera measures the light level and decides whether it needs more or less light and then automatically adjusts the shutter speed accordingly. You can further adjust the Iris (P-Iris) value.

- **Auto:** Selecting Auto for the camera to automatically adjust the Iris and Shutter based on the measured light level.

* Shutter: If enabled, this setting lets you set the shutter speed yourself (measured in fractions of a second).

* Flickerless: The function is only activated if you select **Auto** in the Mode field. Choose between OFF, 50HZ, 60HZ, 50HZ (High Luminance) or 60HZ (High Luminance).

Brightness: Move the bar to adjust the brightness.

Contrast: Move the bar to adjust the contrast.

Color: Move the bar to adjust the color.

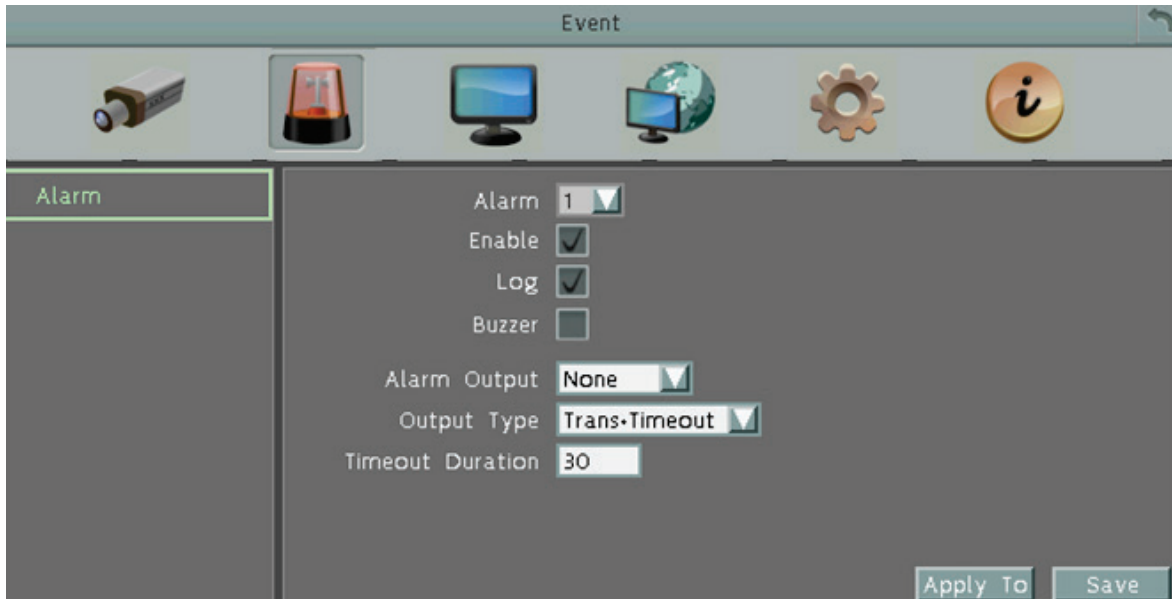**Sharpness:** Move the bar to adjust the sharpness.

Apply To: Click the button to apply the same settings to the desired cameras.

Save: Click to save the settings.

5.2 Event

You can configure the Alarm settings in this menu.

5.2.1 Alarm

Alarm: Select an Alarm input number from 1 to 2.

Enable: Check the box to enable the Alarm trigger function for the selected alarm input.

Log: Check the box to record alarm events to log data.

Buzzer: Check the box to enable the buzzer when an alarm event is triggered.

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Output Type: Select an output type when an alarm is triggered.

Timeout: Select this option and then set up the Timeout Duration in the field below, the alarm output will last for the setup duration time (10 ~ 150 seconds).

Permanent: Alarm will remain active until the user presses the "Enter" key on the IR Remote Control or resets the alarm remotely.

Transparent: Alarm output remains as long as the alarm input is active.

Trans + Timeout: Alarm output continues until event ends, then continues for the setup duration time (10 ~ 150 seconds).

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the motion event. The alarm output will last for the setup duration time between 1 and 150 seconds.

Apply To: Click the button to apply the same settings to the desired cameras.

When an alarm is triggered, it will pop up a warning image on the OSD as below. You can also replace the image with the one you like. However, to change the image, you need to access to the remote setting webpage, and then upload the image file (only support .bmp file format) on Alarm setting page, please refer to *6.6 Alarm.*

5.3 Display Setting

You can configure the settings for displaying the camera / IP decoder information on the live view image. You can also set up the sequencing order for the Main monitor.

5.3.1 Monitor OSD
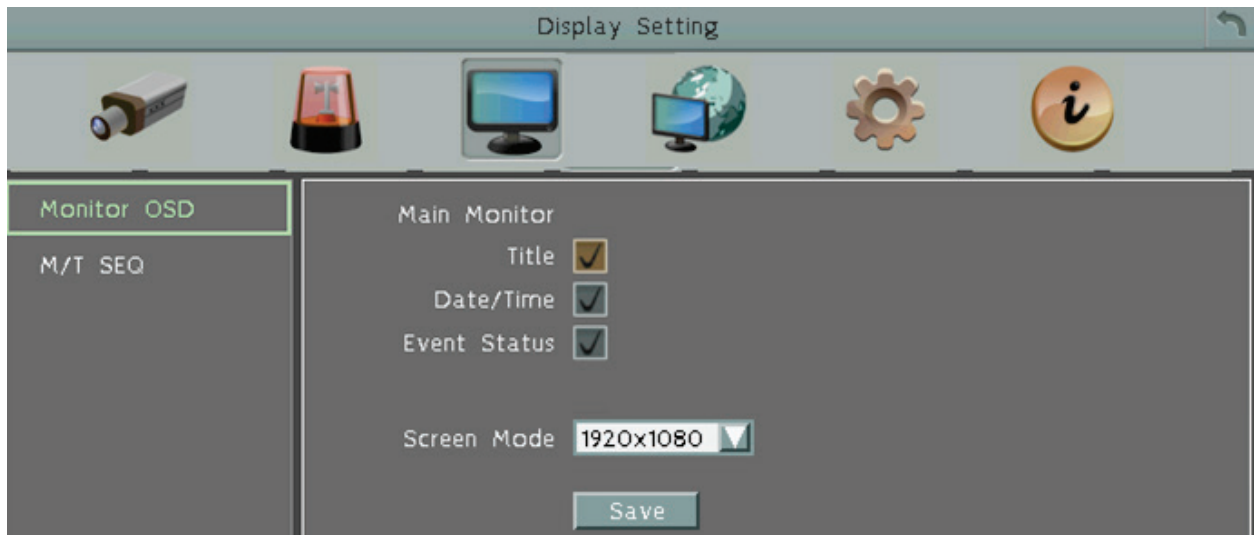
Title: Check the box to display camera titles.

Date/Time: Check the box to display current date/time.

Event Status: Check the box to display event status.

Screen Mode: Select the suitable screen mode. Selections are: 1920x1080; 1280x1024; 1024x768; 800x600. Please see to *2.2.2 Display Aspect Ratio* for more details.

5.3.2   M/T SEQ

You can configure up to 20 steps of the sequencing order for the Main monitor. The Sequence will repeat continuously from step 1 to step 20 until interrupted.

Step: The sequencing order.

Camera: Select a camera for the specific step.

Dwell (sec): Sets up the dwell time between 0 and 60 seconds for each step.

5.4 Network

The IP decoder allows you to use a Web browser to remotely view and manage the system. You can also receive live video streaming from the IP decoder using your smartphone.

Note: Since every Network Configuration is different, please check with your Network Administrator or ISP to see if your IP decoder should use specific IP addresses and/or port numbers.

5.4.1 LAN & WAN

According to your network environment, select **Static IP, DHCP** or **PPPoE** to configure an IP address to the IP decoder.

Network Type: Three options are selectable: **Static IP**, **DHCP** and **PPPoE**.

Static IP: User can set a fixed IP for network connection.

DHCP: DHCP server in LAN will automatically assign an IP configuration for the network connection.

PPPoE: For direct connection to the DSL only. Verify with your ISP if they use PPPoE. (The option is only for WLAN (WAN) port)

IP address: Displays the IP decoder's current IP Address. A static IP address must be set manually. If DHCP is selected, this value will be assigned automatically.

Subnet Mask: Displays the subnet mask for your network so the IP decoder will be recognized within the network. If DHCP is selected, this value will be assigned automatically.

Gateway: Displays the gateway on your network for the IP decoder to use when communicating with any devices not on the local network. If DHCP is selected, this value will be assigned automatically.

DNS Server 1: Displays the primary DNS server for your network. If DHCP is selected and an internet connection is available, this value should be assigned automatically. This field must have a valid DNS address in order to use the DDNS feature.

DNS Server 2: This field shows the secondary DNS server for your network.

HTTP Port: Port number for HTTP/WEB communication.

Bandwidth Limit (Kbps): Specify, disabled / 128 K/ 256 K / 512 K / 768K / 1M / 3M bps. This is the maximum bandwidth that the IP decoder is allowed to use on the network. This is a useful function when connecting the IP decoder to busy or heavily loaded networks, or when accessing the IP decoder(s) over a WAN.

Additional information:

1. Set up the IP decoder Network Menu according to the instructions detailed in the Networking chapter of this IP decoder's manual.

    a. If using DHCP, all settings will be detected automatically. While DHCP is a useful tool for determining the network settings, if you set up your IP decoder in this manner its IP address may change at different times for different reasons, particularly after a power failure. If the IP address of the IP decoder changes, you may have difficulties accessing your IP decoder locally and/or remotely. It is strongly recommended that you assign a fixed (static) IP address to your IP decoder, and that in order to avoid address conflicts the IP address assigned be outside of the DHCP range of addresses your router issues to DHCP clients. Please do not set the DHCP address issued to the IP decoder by the router as its static IP address unless you take specific steps that program your router to prevent such address conflicts.

    b. If using a Fixed IP (recommended), you will need to input the information manually. In order for DDNS to work, you must enter valid data, compatible with your network, for all four of the network setting fields: IP address, subnet mask, default gateway and the DNS Address (depending on your network hardware and IP configuration this may be the IP address of your router/gateway, or it may be the actual IP address of the local DNS server). The DNS server IP is required because your DNS server provides critical information necessary for the IP decoder to communicate with the DDNS server.

You can obtain the actual DNS IP from your Internet Service Provider (ISP); or, from a PC located on the same LAN as the IP decoder, go to http://www.dnsserverlist.org/ to obtain a list of the IP addresses of their recommendation of the best servers to use for your location.

2. If you are connecting through a router, make sure that you have 'opened up' all the required network ports in the port forwarding section of your router's setup options. That is, you have directed the router to send any incoming traffic using those IP ports to the LAN IP address of the IP decoder. Useful information about router port forwarding can be found at www.portforward.com . Different routers may use different terms for port forwarding function. For instance, D-Link calls it virtual server, Netopia calls it pinholes.

    The default port for the IP decoder is: 80

    Note: Port 80 is the default port used for Web browsing. Because of this, in order to prevent the average user from hosting a Web server, most ISPs BLOCK traffic using port 80 from reaching the average site. If you only plan to view your IP decoder on a LAN, you can use port 80, and don't have to concern yourself with DDNS or routers. However, if you desire **remote access** to your IP decoder, perhaps using DDNS (optional), you MUST select functional ports and set up the port forwarding in your router. Other ports, such as 8080 and 8000 are sometimes blocked by ISPs as well.

    What port(s) should be used? There are 65,535 valid IP ports to choose from. These are broken down into three groups:

    •   Well Known Ports 0 thru 1023

    •   Registered Ports 1024 thru 49151

   •   Dynamic and/or Private Ports 49152 thru 65535

    So, rather than encounter a port conflict by choosing a port commonly used for another purpose (like port 25 for SMTP mail or port 448 for secure sockets), choose an 'unusual' port number. For example, add 50,000 to your house number: 50,123 is less likely to lead to a port conflict. For a list of the known and registered ports, see http://www.iana.org/assignments/port-numbers

5.5   System Setting

You can configure the general settings for the IP decoder in this menu.

5.5.1   Date/Time

You can set up the date and time for the IP decoder.
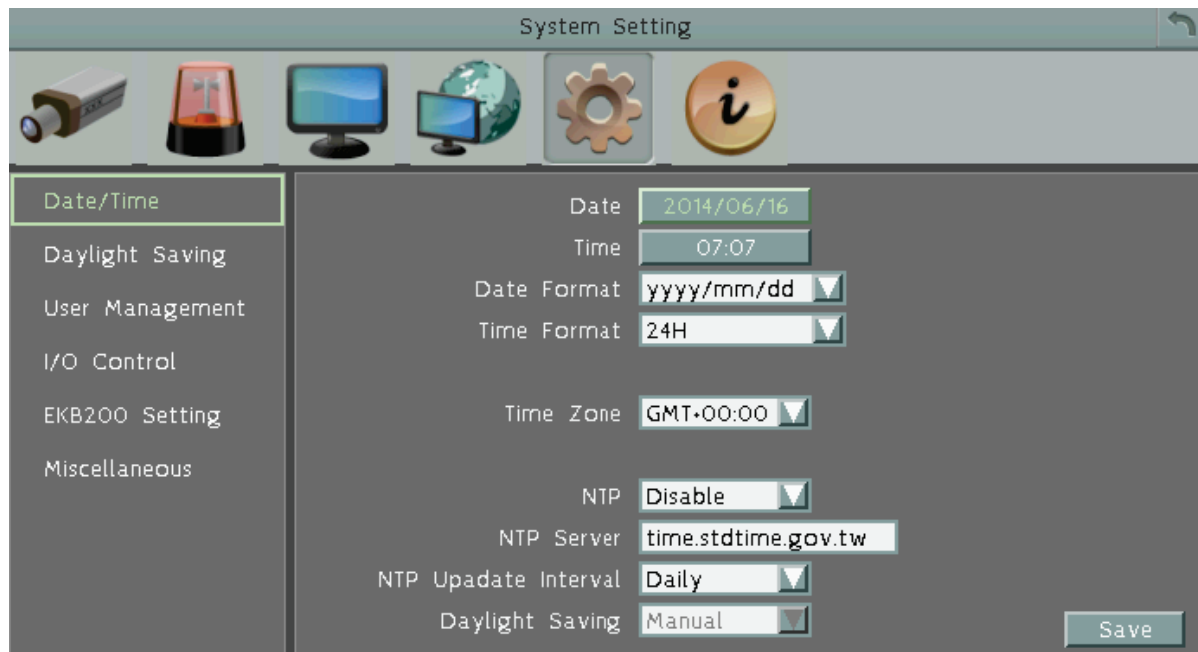
Date: Click to bring up the on-screen keyboard to set up the date.

Time: Click to bring up the on-screen clock to set up the time.

Date Format: Select a date format from the drop-down list.

Time Format: Select a time format from the drop-down list.

Time Zone: Select a time zone for the NVR to adjust to when updating from the time server.

NTP: Select Disable / Enable for NTP time synchronization.

NTP Server: Displays the time server address that the NVR uses for time synchronization. Requires operating network configuration and WAN or LAN access to a compatible NTP server. The default NTP address is the NTP server in Taiwan. To find a compatible NTP address of the NVR's physical location, follow the steps below:

a.   Use a computer connected to the Network.

b.   Click Start > Run > type "command" and then click OK.

c.   In the DOS Prompt, type "ping pool.ntp.org" to find out the IP address of an NTP Server.

NTP Update Interval: The frequency that the system automatically updates the time via the NTP server. Select Daily, Weekly or Monthly.

Daylight Saving: This **Auto** daylight saving function is used for the system to automatically set up the daylight saving time but it is currently reserved for the users in the United States. So, if you want to set up the daylight saving time, please go to Daylight Saving setting page to manually set up the time (refer to *5.5.2 Daylight Saving*).

For the users in United States, if they want to use the **Auto** daylight saving functions, please follow the steps below:

1.	Select a U.S Time zone (GMT -05:00 ~ GMT -08:00).
2.	Enable the **NTP**.
3.	Enter a NTP server IP address in United States.
4.	Select **Auto** in the **Daylight Saving** drop-down list.
5.	Click **Save** to save the settings.
6.	The Daylight Saving setting page (refer to *5.5.2 Daylight Saving*) will be grayed out and automatically set to the correct daylight saving time.
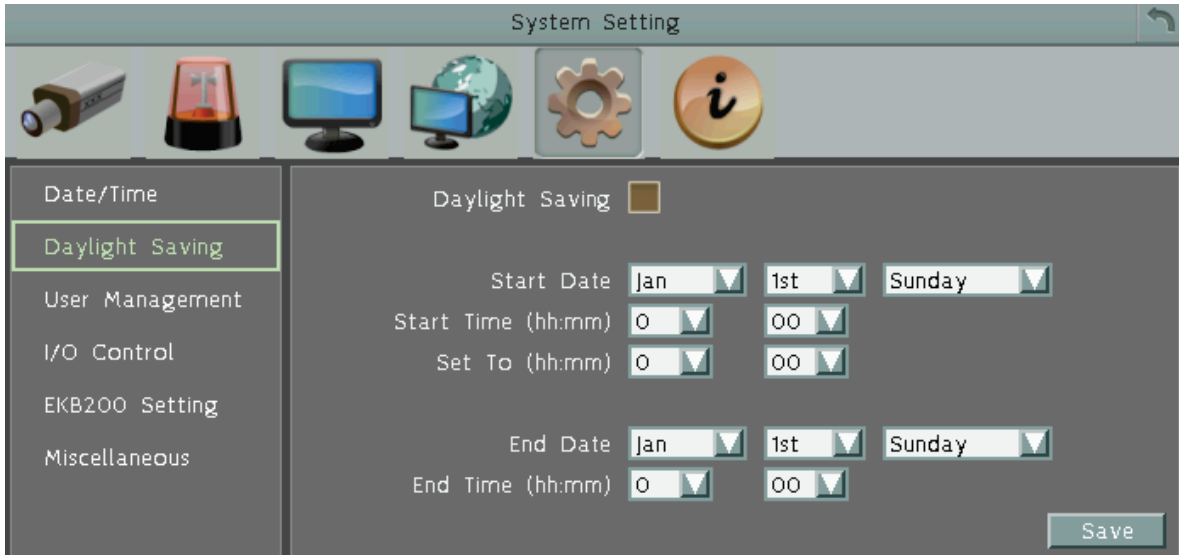
> **Note:** If you need to use the **Daylight Saving** function, you must set up the **Date / Time** first in this page. If you configure the **Daylight Saving** function first and then set up the **Date / Time** setting, the **Daylight Saving** function will then be disabled.

5.5.2 Daylight Saving

You can configure the settings for IP decoder to automatically adjust to daylight saving time.

> **Note:**
> 1. If this page is grayed out, it means that you have enabled the **Auto** daylight saving function, please refer to *5.5.1 Date/Time*.
> 2. If you need to use the **Daylight Saving** function, you must set up the **Date / Time** first in Date/Time setting page.

Daylight Saving: Check the box to enable automatic daylight saving time (DST).

Start Date: Set the start date for daylight saving time.

Start Time (hh:mm): Set the time when daylight saving time begins.

Set To (hh:mm): This is what the time will change to when daylight saving begins. For most regions, this will be one hour ahead of the "Start Time".

End Date: Set the end date for daylight saving time.

End Time (hh:mm): Set the time when daylight saving time ends.

The time change difference on the End Date will be the same as the difference between the Start Time and End Time entered for the Start Date (typically 1 hour as in the example shown).

5.5.3 User Management

You can create multiple user accounts (max: 20 user accounts) with different privileges. The IP decoder has default user accounts which you can choose to copy, edit, add or delete, and the default password is 11111111.

Copy: Click the button to copy the settings of an existing user account to a new user account.

Edit: Click the button to edit the settings of an existing user account.

Add: Click the button to add a new user.

Delete: Click the button to delete

Login: Check the box to enable the User Login function after logging out the IP decoder. For details on logging in the IP decoder, please refer to *3.1 Login*.

Auto User Log Off: Check the box to automatically logoff the IP decoder after 3 minutes of inactivity.

Previous: Click to return to the previous page.

Next: Click to enter the next page.

Apply: Click to apply all the settings.

You can further configure each user account and its settings individually, see the steps below:

1. Click to select a user account.
2. Click the **Add**, **Copy** or **Edit** button, and the following page appears.

User Name: Click to bring up the keyboard and input the desired user name.

User Group: Select a user group (access level).

Status: Select to enable or disable the user account.

Password: Input the password.

Confirm: Enter the same password again to confirm.

Camera Access: Click to bring up a new setting page as below, and check the boxes to enable the live or PTZ functions of the cameras for local or remote access.

User Right: Check the boxes to enable the functions for the user account.

5.5.4 I/O Control

The I/O Control setup menu is used to define the settings for controlling the IP decoder through RS-485 / RS-232 communication protocol and for IP decoder to control the connected PTZ cameras. Please note that the RS-232 port on the IP decoder is currently reserved.

RS-485

PTZ Protocol: Select PTZ protocol, choose from the following protocols: Transparent, Pelco_D, Pelco_P, Everfocus or Samsung. (Note: All cameras on the RS-485 bus must use the same protocol)

485 ID: This is the ID used by the EKB500 to send commands to the IP decoder. On an RS-485 connection, every device (PTZ, IP decoder and controller) must be assigned an unique ID number between 0 and 127.

Baud Rate: This field is to set the speed at which is used to transmit instruction or information through the RS-485 port on the IP decoder. There are eight different speeds: 1200 BPS, 2400 BPS, 4800 BPS, 9600 BPS, 19200 BPS, 38400 BPS, 57600 BPS and 115200 BPS.

Data Bit: This field is the data bit at which you will be transferring. There are two settings for this option: 8 or 7.

Stop Bit: This field is to set the stop bit for the RS232 connection. There are two different stop bits, 1 or 2.

Parity: This field is to select the parity level at which you will be connected. You can choose between None, Odd, or Even parity levels.

Control: One remote control can be used to operate four IP decoders. The IP decoder to be addressed is selected by pressing the key corresponding to its ID number on the IR Remote control. Please refer to *Appendix C: IR Remote Control*.

IR Controller ID: Set up an ID for the IP decoder and allow the IR remote control to control this IP decoder.

5.5.5 EKB200 Setting

You can connect an EKB200, which is EverFocus' USB keyboard, to the USB port on the IP decoder to control the Iris, focus or the pre-configured PTZ control functions of the connected cameras. For details on how to configure the PTZ control functions, including Preset Position, Auto Pan, Tour and Pattern, please refer to *5.1 Camera*.

The control keys on the EKB200

After connecting the EKB200 keyboard to the IP decoder and configuring the PTZ control functions, you need to configure the above setup page to define the function for each control key on the keyboard. Click the **Save** button to save the settings. Once you press the control key on the keyboard, the camera will do the action which you've defined for the key.

【Key No】 The control key number on the keyboard.

【Action】 Select an item from the drop-down list to define the function for each key on the keyboard.

- **Set Preset:** You can use the joystick on the keyboard to select a position and then press this key to save the position as the Preset Position.
- **Go to Preset:** Press this key to let the camera go to the Preset Position number specified in the Value column.
- **Go to Home:** Press this key and the camera will go to the Preset Position 1.
- **Clear Preset:** Press this key to clear the Preset Position number specified in the Value column.
- **Run Auto Pan:** Press this key to start the AutoPan number specified in the Value column.
- **Stop Auto Pan:** Press this key to stop the AutoPan number specified in the Value column.
- **Tour Run:** Press this key to start running the Tour number specified in the Value column.
- **Tour Stop:** Press this key to stop running the Tour number specified in the Value column.
- **Pattern Run:** Press this key to start running the Pattern number specified in the Value column.
- **Pattern Stop:** Press this key to stop running the Pattern number specified in the Value column.
- **Set Auto Tracking:** Press this key to switch On / Off the Auto-Tracking function.
- **Select Tracking Object:** Press the key to display the tracking crosshairs on the screen. Use the joystick on the keyboard to select the desired tracking object and press this key again to save the selection.
- **Toggle Full Screen:** Press this key to toggle between the full screen and current screen.

【Value】 Type in the number for the selected Action item. For example, selecting **Go to Preset** from the Action drop-down list and typing in 2 in the Value column represents the Preset Position 2.

To activate the EKB200 keyboard on the PTZ Live View window, click the PTZ icon on the OSD Root Menu, and then you are able to control the PTZ camera over the EKB200 keyboard (please refer to *4.1 PTZ*).

5.5.6 Miscellaneous

You can upgrade the latest firmware, restore the factory default settings to the IP decoder, upload / save the IP decoder configuration settings from / to the USB or change the language in this setup menu.
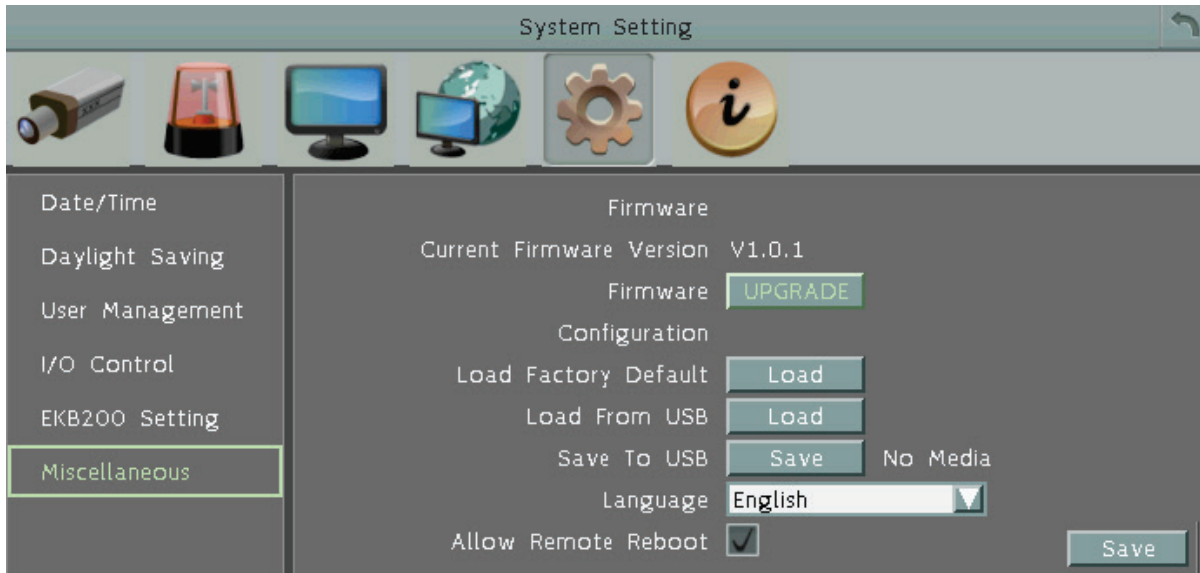
Firmware

Current Firmware Version: Shows the current firmware version of the IP decoder.

Upgrade: Click to upgrade the latest firmware. Note you will need to restore the firmware file to the USB flash device and then connect the USB flash device to the IP decoder.

Configurations

Load Factory Default: Click to restore the IP decoder to factory default settings. The User Account, Network IP Settings, and Time settings will not be affected.

Load From USB: Click to upload the IP decoder configurations restored in the USB flash device.

Save To USB: Click to save the IP decoder configurations to the USB flash device.

Language: Choose which language the IP decoder uses.

Allowed Remote Reboot: Check the box to enable restarting the IP decoder via the Network.

5.6 System Information

You can see the IP decoder information and Log data in this menu. Or export the log data to the USB storage device.

5.6.1 System

In the System Menu, you can only see the information of the IP decoder, Network or HDD. No configuration can be done in this menu.
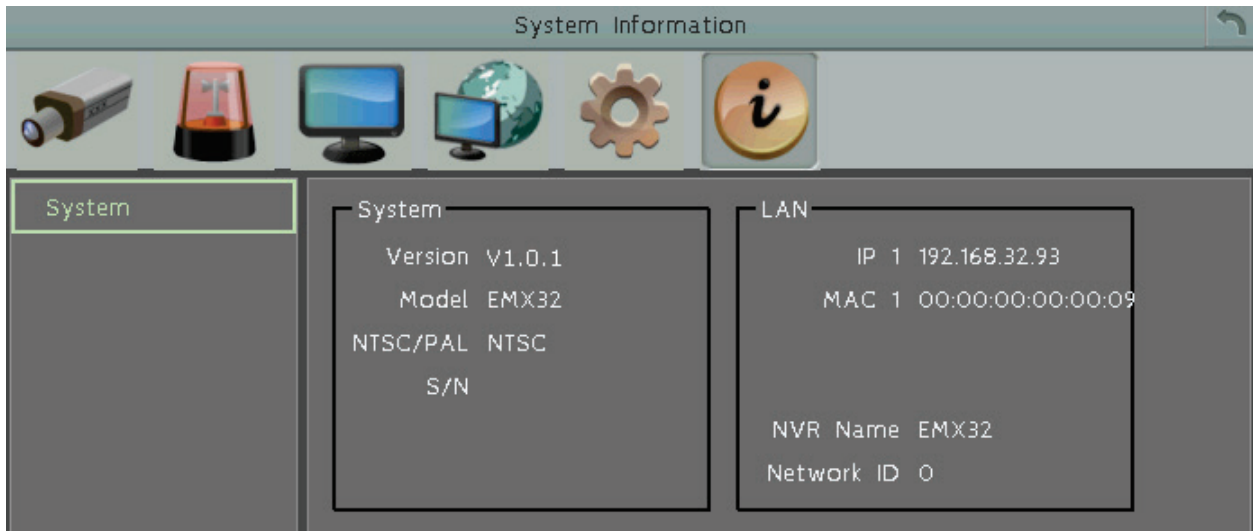
【**System**】

Version: Displays the firmware version.

Model: Displays the model name of the IP decoder.

NTSC / PAL: Displays the current video format automatically detected by the IP decoder.

S/N: Display the serial number of the IP decoder.

【**Lan**】

IP 1: Displays the IP address of LAN / WLAN set up in the Network or Express menu.

MAC 1: Displays the MAC address of LAN / WLAN. This option cannot be changed.

IP decoder Name: Displays the DDNS name if configured.

Network ID: The ID number for EverFocus' CMS as set up in the Alarm Server menu.

![EverFocus®]

6. Remote Access to the IP decoder

You can access and control the IP decoder remotely by using the web browser.

6.1 Accessing the IP decoder

Follow the steps below to access the IP decoder from a computer.

1. Open an Internet Explorer window and in the address bar type the IP address.

   Local connection:
   http:// (IP address from the IP decoder's Network Menu): IP port used
   e.g. http://192.168.1.163:2468

   Internet connection:
   http:// (IP address given by your Internet Service Provider): IP port used
   e.g. http://57.182.67.204:2468

2. The Login window pops up. Type the User Name and Password. The default User Name is **admin**, while the password is **11111111**. Click **OK**.
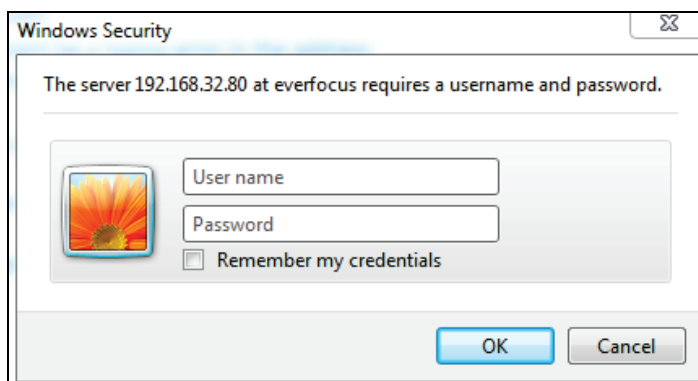
3. You might be required to download **ActiveX** and **JAVA software** for viewing the camera feed. If asked, click **Yes**. For more details, please refer to *6.2 Install JAVA Runtime* and *6.3 Browser Security Setting*.

4. When first connecting to the IP decoder's IP address, the following dialog may appear. Please check the "Always trust content from this publisher" box and click the **Run** button to run the EverFocus Viewer application.

5. You may need to turn User Account Control off if you still can't see the Remote Live View. 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.
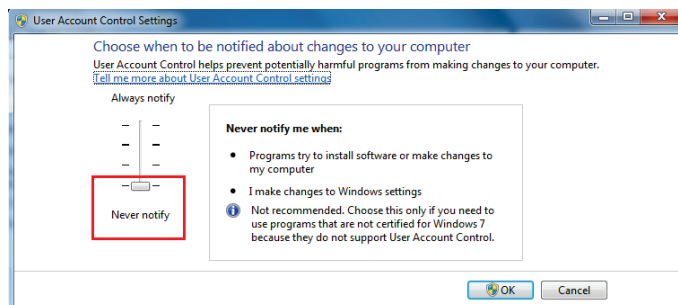
6. If your PC or laptop is running with Windows, it's required to run the browser as administrator when first entering the remote web page (IE browser) of the device. Go to **C:\Program Files (x86)\Internet Explorer**, right-click the browser and then click **Run as administrator**.
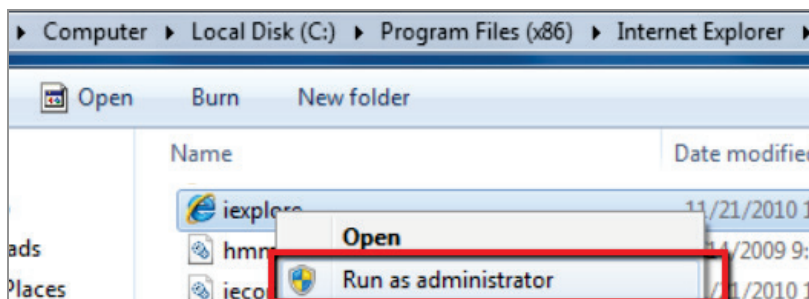
6.2   Install JAVA Runtime

You need to install the latest JAVA software for stable operation.

1. When first connecting to the IP decoder's IP address, the following dialog will show up
   if you didn't install the JAVA software or its latest version on your computer.
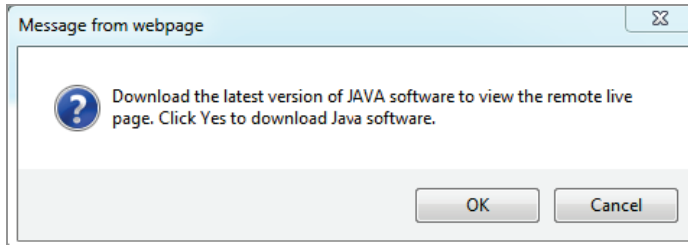
2. Please click **Update** to go to the JAVA website http://www.java.com/en/, and
   download the latest version of the JAVA software.

3. Please go to the Control Panel > JAVA Control Panel to change settings.

4. If you can't find the JAVA in the Control Panel, please go to Program Files > Java > jre7 >
   bin and double-click the **javacpl** (JAVA Control Panel).

5. Click **Advanced** tap on the top of the window, and scroll to "Mixed code (sandboxed vs.
   trusted) security verification", and select the **Enable – hide warning and run with
   protections**.
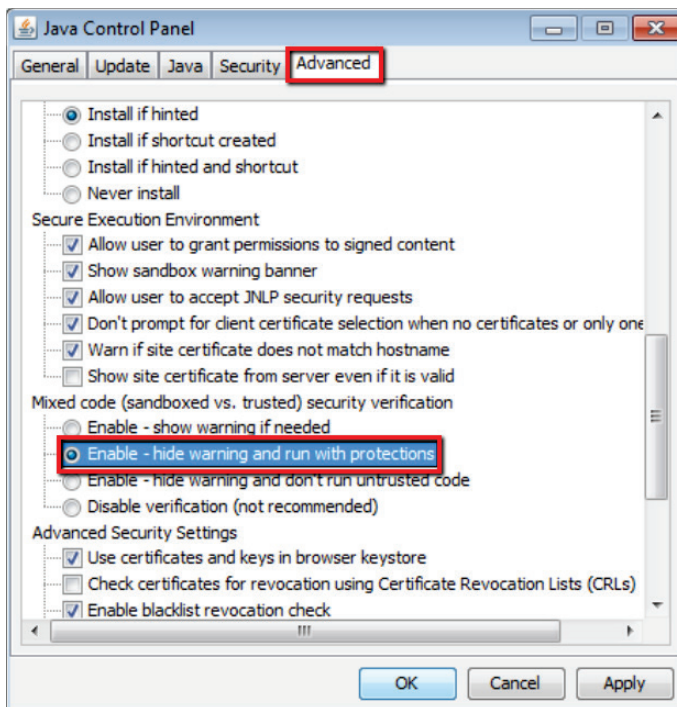
6. Scroll to "Check for certificate revocation using", and select the **Online Certificate Status Protocol (OCSP)**. Also, check **Place JAVA icon in system tray** in "Miscellaneous" option.
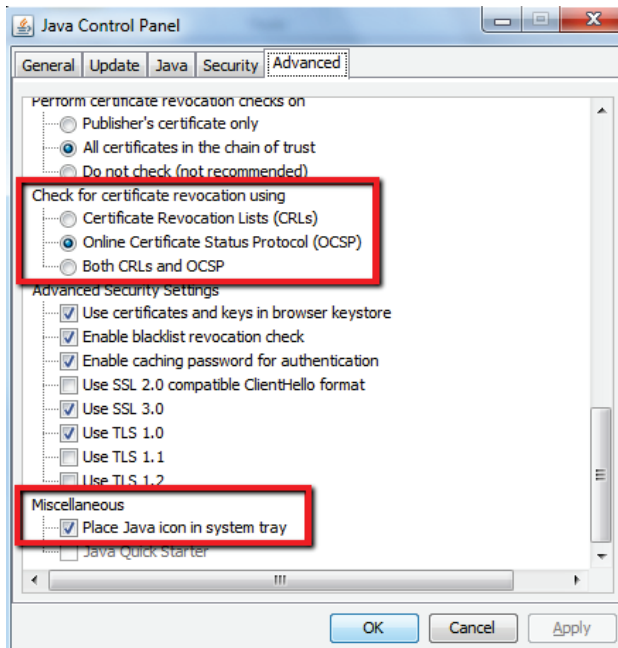
7. Scroll to "Default JAVA for Browser" and check **Mozilla family**.
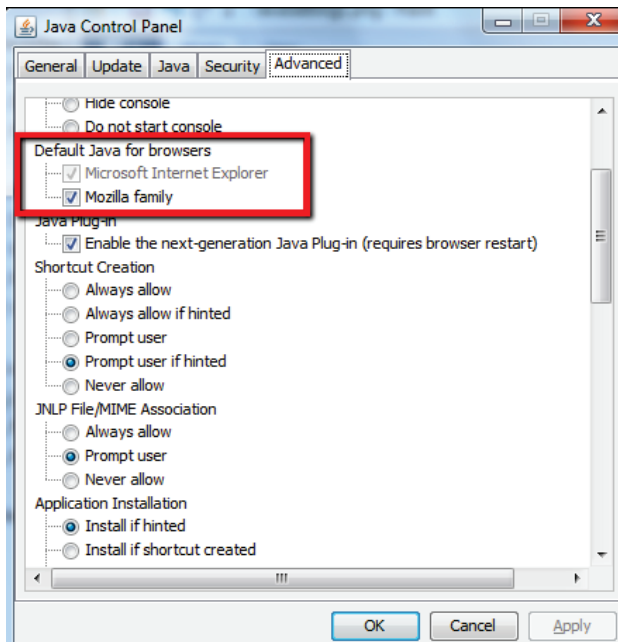
8. Connect the IP decoder's IP address again and the yellow bar may pop up on the top of the window. Please click it to run the JAVA application.

6.3 Browser Security Setting

6.3.1 Installing ActiveX Controls

Follow the steps below to install the ActiveX Controls when you first connect to the IP decoder's IP address. If you do not see the images below, your security settings may be too high. If so, go to "Section *6.3.2 Enabling ActiveX Controls*."

1. You may also prompt to install the MSXML file. Please right-click the yellow bar and select "Run Add-on…"

2. Install the MSXML file when prompted to do so.

3. Now you will be able to see the remote live page.

4. Please refer to *2.5 Checking the Dynamic IP Address* to adjust the settings of the **User Account Control** if you still can't see the remote live view.

6.3.2   Enabling ActiveX Controls

Note this section is only necessary if you DO NOT see the image as in step 1 of *6.3.1 Installing ActiveX Controls* popping up when you first connect to the IP decoder.

1. At the top of the Internet Explorer Window, click on **Tools** and then select **Internet Options**.
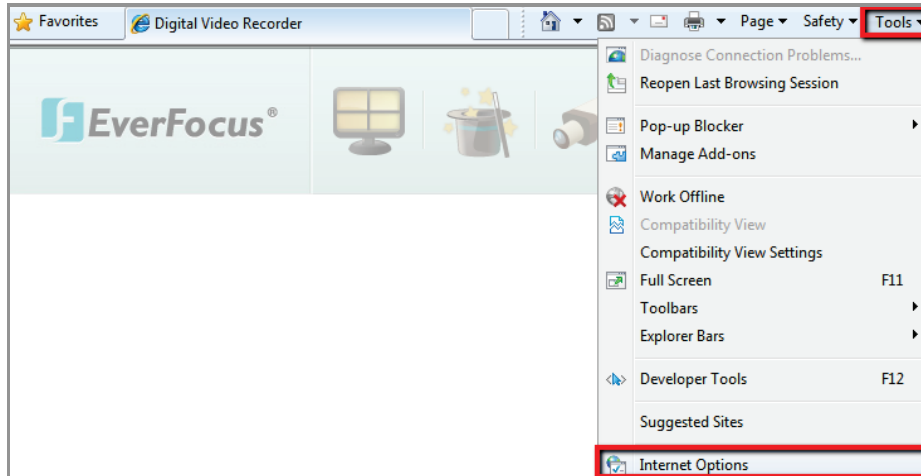
2. Click the **Security** tab at the top of the window and then click **Custom Level…**.
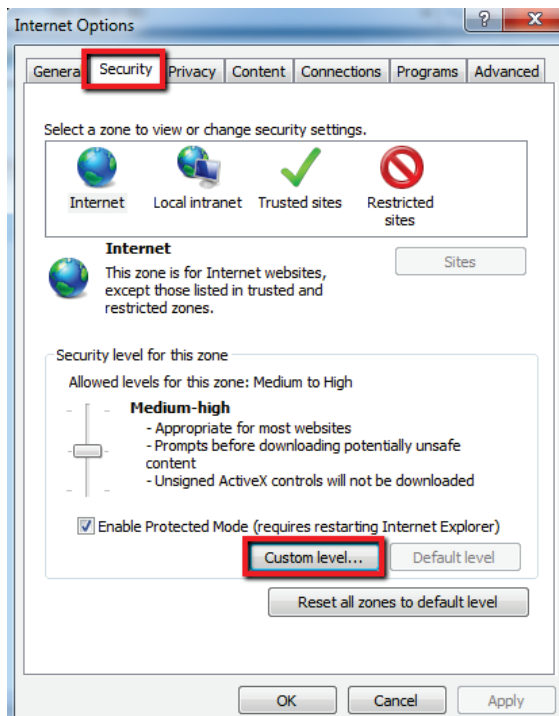
3. In the Security Settings window, scroll to "ActiveX controls and plug-ins".
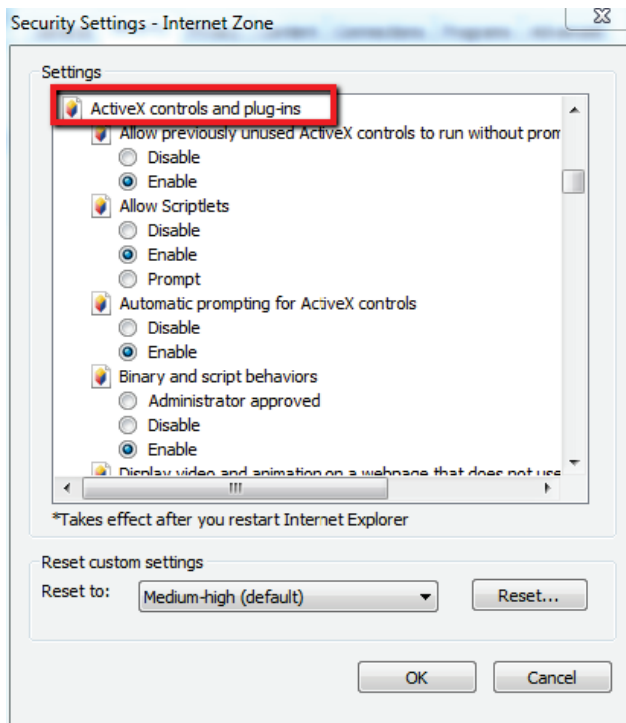
Set the controls as follows:

"**Enable**":
- ✓ Allow previously unused ActiveX controls to run without prompt (*Internet Explorer 7 only*)
- ✓ Allow scriptlets (IE7 only)
- ✓ Automatic prompting for ActiveX controls
- ✓ Binary and script behaviors
- ✓ Display video and animation on a webpage that does not use external media player (*IE7 only*)
- ✓ Run ActiveX controls and plug-ins
- ✓ Script ActiveX controls marked safe for scripting

"**Prompt**":
- ✓ Download signed ActiveX controls
- ✓ Download unsigned ActiveX controls

"**Disable**":
    Initialize and script ActiveX controls not marked as safe

4. Click **OK** and then choose **Yes** to change the security settings.

5. Close the window so you are back at the login screen.

6. Click the **Refresh** button to reload the page.
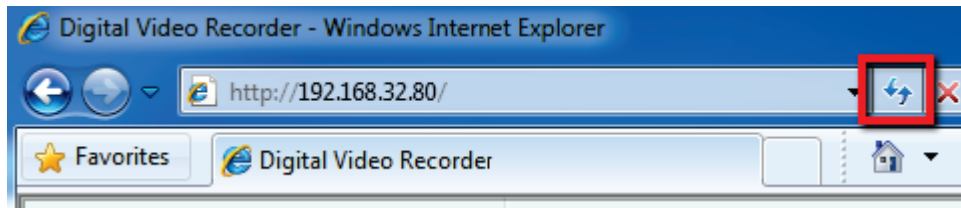
7. You may need to run the EverFocusViewer application when prompted to do so.

8. The login page will show up. Type in the user name and password and click Login to view the cameras. The default User Name is **admin**, while the password is **11111111**.
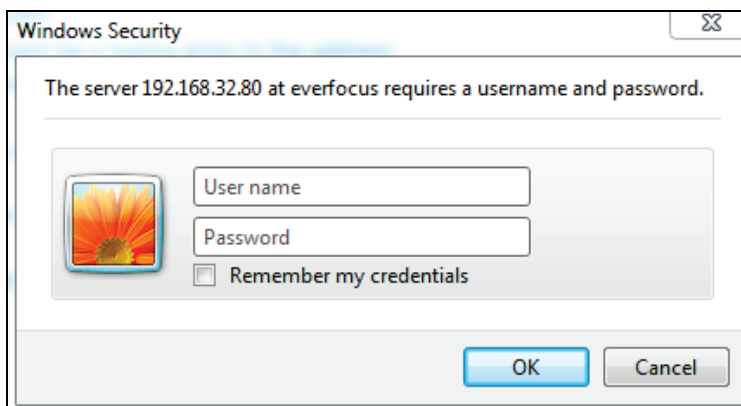
6.4 Remote Live View

When you access the IP decoder using web browser, the remote live view home page will display as below:

Live View:

No.	Name	Description
1	**Menu Bar**	For configuring the IP decoder.
2	**Layout**	Click a desired layout.
3	**Sub / Main**	Click to switch between the Main stream and Sub stream.
4	**Speaker / Microphone / Snapshot**	Click the **Speaker** button to transfer audio to the client side from IP decoder if there is a speaker on the PC and a microphone and preamp attached to the IP decoder, and audio recording is enabled on the IP decoder. Click the **Microphone** button to transfer audio to IP decoder from client side if there is a microphone attached to the PC and an amplifier and speaker attached to the IP decoder. Click the **Snapshot** button to save a snapshot of the video image
5	**Channel Buttons**	Click on the number to display the channel in full screen.

6	Status Highlight	Black Circle: Indicates the IP decoder is recording in sub-stream. White: Indicates the live view is in a normal status. Orange: Indicates a motion is being detected. Blue: Indicates disconnect. Red: Indicates an alarm / event is triggered. Grey: Indicates the live view is disabled.
7	Live View Window	Double-click on a camera image to enlarge the current display to full screen; double-click again to return to the normal view.

Menu Bar:

No.	Name	Description
1	Live View	Click to display the live view window.
2	Camera	Click to configure the camera settings. Please refer to *6.5 Camera.*
3	Alarm	Click to configure the alarm / event settings. Please refer to *6.6 Alarm*.
4	Display	Click to configure the display settings for displaying the camera information on the camera live view. Please refer to *5.3 Display Setting*.
5	Network	Click to configure the network settings. Please refer to *5.4 Network.*
6	System Setting	Click to configure the IP decoder time / user privilege / IO control / UI language or upgrading firmware and etc. Please refer to *5.5 System Setting.*
7	System Information	Displays the system information. Please refer to *5.6 System Information.*
8	PTZ	Click to control the connected PTZ cameras. Please refer to *6.7 PTZ.*

6.5 Camera

Users can view the camera status, automatically search and add the cameras in the Auto Search setting page, or add the cameras manually in the Add Camera Manually and Advanced Setting pages. In the Camera Setting page, users are able to configure the detailed settings and PTZ settings of the cameras.

6.5.1 Camera Status

This page shows the current status of the added IP cameras.

Channel	Name	IP Address	Port	Frame rate	Bit Rate	Record	Connect Status
CH01	EHN3160	192.168.32.123	80	30 fps	9.2 Mbps	Recording	Connect
CH02	---	---	---	--- fps	--- Mbps	No recording	Disconnect
CH03	EMN2220	192.168.32.131	80	29 fps	0.6 Mbps	Recording	Connect
CH04	---	---	---	--- fps	--- Mbps	No recording	Disconnect
CH05	EMN2220	192.168.32.129	80	30 fps	0.7 Mbps	Recording	Connect
CH06	EHN3160	192.168.32.57	80	25 fps	0.6 Mbps	Recording	Connect
CH07	EHN3260	192.168.32.52	80	35 fps	1.6 Mbps	Recording	Connect
CH08	---	---	---	--- fps	--- Mbps	No recording	Disconnect
CH09	---	---	---	--- fps	--- Mbps	No recording	Disconnect
CH10	---	---	---	--- fps	--- Mbps	No recording	Disconnect
CH11	EHN3340	192.168.32.54	80	29 fps	2.7 Mbps	Recording	Connect
CH12	EMN2220	192.168.32.130	80	29 fps	0.6 Mbps	Recording	Connect
CH13	EPN4230P	192.168.32.171	80	21 fps	7.7 Mbps	Recording	Connect
CH14	EPN4220	192.168.32.155	80	30 fps	0.9 Mbps	Recording	Connect
CH15	ETN2560	192.168.32.73	80	22 fps	5.7 Mbps	Recording	Connect
CH16	EMN2220	192.168.32.119	80	25 fps	8.4 Mbps	Recording	Connect

【Camera List】

Channel: Displays the channel number.

Title: Shows the name of the connected IP camera.

Address: Shows the IP address of the connected IP cameras.

Port: Shows the port number of the connected IP cameras

FPS (Frame Rate per Second): Shows the current frame rate of the connected IP camera.
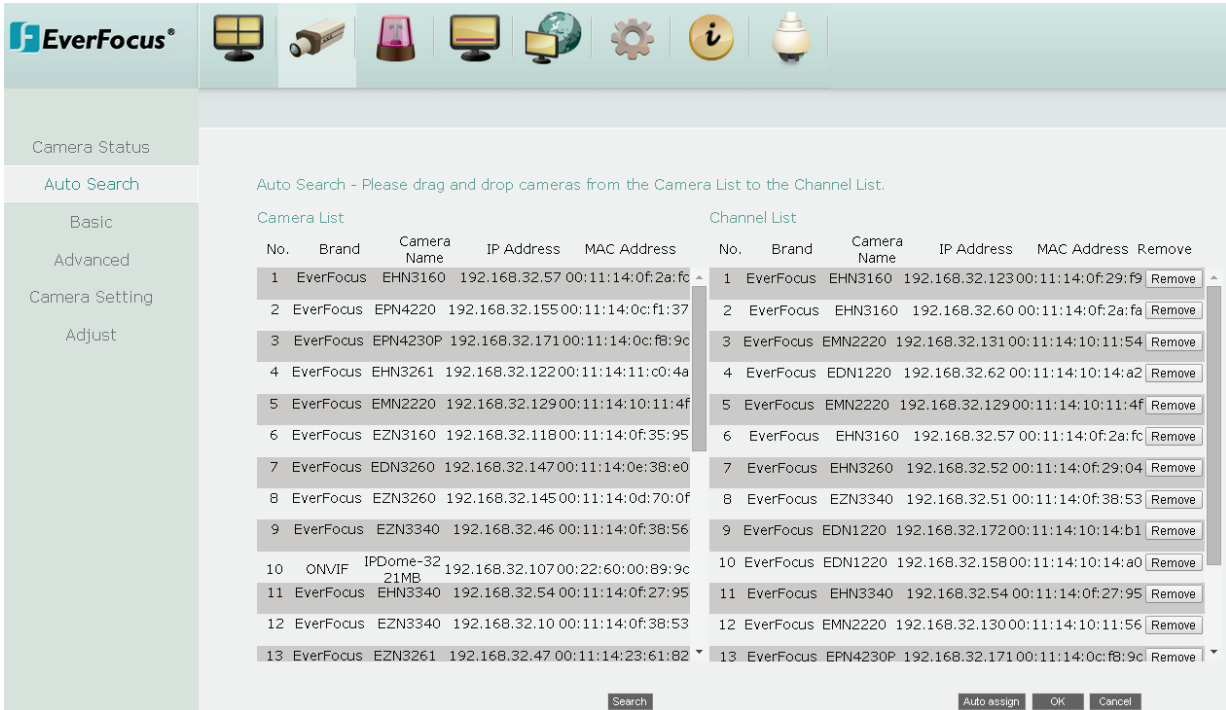
Mbps: Shows the current Bit Rate of the connected IP camera.

REC: Shows the recording status.

Connect: Shows the connection status.

6.5.2 Auto Search

The function allows users to automatically search and add cameras in the same network.

To search cameras:

1. Click the **Search** button.

2. The system will list all the currently available cameras under the **Camera List**.

To add cameras:

1. Click **Auto assign** to assign all the available cameras to the **Channel List.**

2. If you only want to add certain cameras, just drag the desired cameras in the **Camera List** and drop it onto the **Channel List**.

3. Click **OK** to add the cameras; click **Cancel** to remove the selected cameras.

6.5.3 Basic

You can also add the IP camera manually by typing its IP Address, Port, ID, Password and other settings.

Address: Type the IP address of the camera.

Port: The default port is 80.

ID: Enter the account username of the camera.

Password: Enter the password of the camera.

Add to Channel: Select a channel number to add this camera to that channel.

Protocol: The data transmission protocol.

Brand: The brand of the camera.

Model: The model type of the camera.

Auto Detection: After entering the IP address, port, ID, password and selecting a channel, click this button to auto detect the protocol, brand and model of the camera.

Add: Click to add the camera, and bring up the detailed setting page (please see the figure the instructions the next page).

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

To successfully add the IP camera, you need to click the **Save** button in this page. You can also configure the detailed settings as follows.

Main Stream
Camera Parameter

Camera Channel	Camera 05
Video Format	◉ H.264 ○ MPEG4 ○ MJPE
Normal Frame Rate	30 ▼
Event Frame Rate	30 ▼
Resolution	1920x1080 ▼
Quality	Superior ▼
Record Audio	◉ Enable ○ Disable

Sub Stream
Camera Parameter

Camera Channel	Camera 05
Video Format	◉ H.264 ○ MPEG4 ○ MJPE
Normal Frame Rate	30 ▼
Event Frame Rate	30 ▼
Resolution	720x480 ▼
Quality	Superior ▼
Record Audio	◉ Enable ○ Disable

Save Cancel

【**Main / Sub Stream**】 You can separately configure the settings for the Main and Sub Streams.

Camera Parameter

Camera Channel: Show the camera channel number.

Video Format: Select an encoding format.

Normal Frame Rate: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the IP decoder as allocated across all the installed cameras.

Event Frame Rate: Select a frame rate per second (FPS) for continuous recording. The frame rate is limited by the maximum total recording capacity of the IP decoder as allocated across all the installed cameras.

Resolution: Select a desired recording resolution.

Quality: Select an image quality of the camera.

Record Audio: Select to enable or disable the audio recording function.

Save: Click to add the camera and save the current settings.

Cancel: Click to cancel eth settings and return to the previous setting page.

6.5.4 Advanced

The Advanced setting page is for users to view, add, delete or modify the cameras in the Camera List.

Add: Click the [+] button to add camera manually. To add the cameras, please see *6.5.3 Basic*.
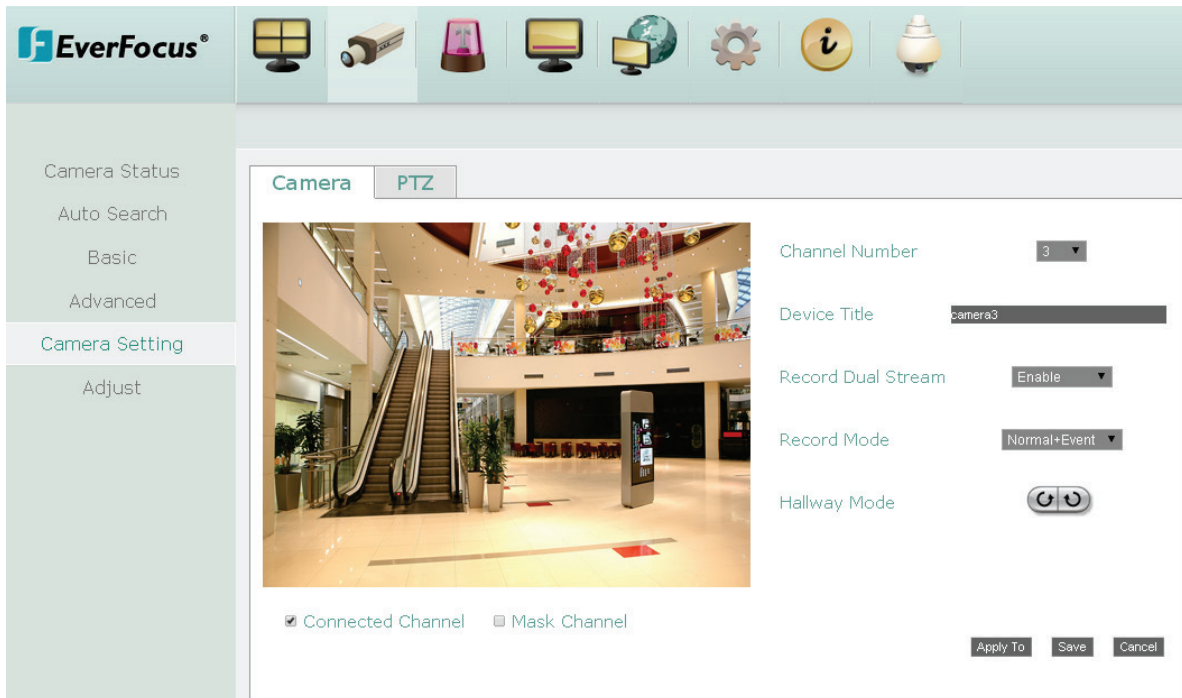
Delete: Click [-] button to delete the camera.

Modify: Click [M] button to modify the settings of the added camera. Please refer to *6.5.3 Basic*.

6.5.5 Camera Setting

User can configure the detailed camera settings, PTZ and tracking functions in this setting page.

6.5.5.1 Camera

Connected Channel: Check the box to enable the connection between the camera and the IP decoder. If the box is unchecked, the system will disconnect the camera and stop recording.

Mask Channel: Check the box to mask the camera's live view on the screen, but the recording function is still on.

Channel Number: Select a desired channel for configuration.

Device Title: Enter a camera title.

*Hallway Mode (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. It's recommended to select a 16:9 View Size (e.g. 1920x1080 / 1024x768) to achieve the best display effect. ***Please see the note below.**

Note: The **Hallway Mode** option only appears when the selected camera is equipped with the Hallway Display function.
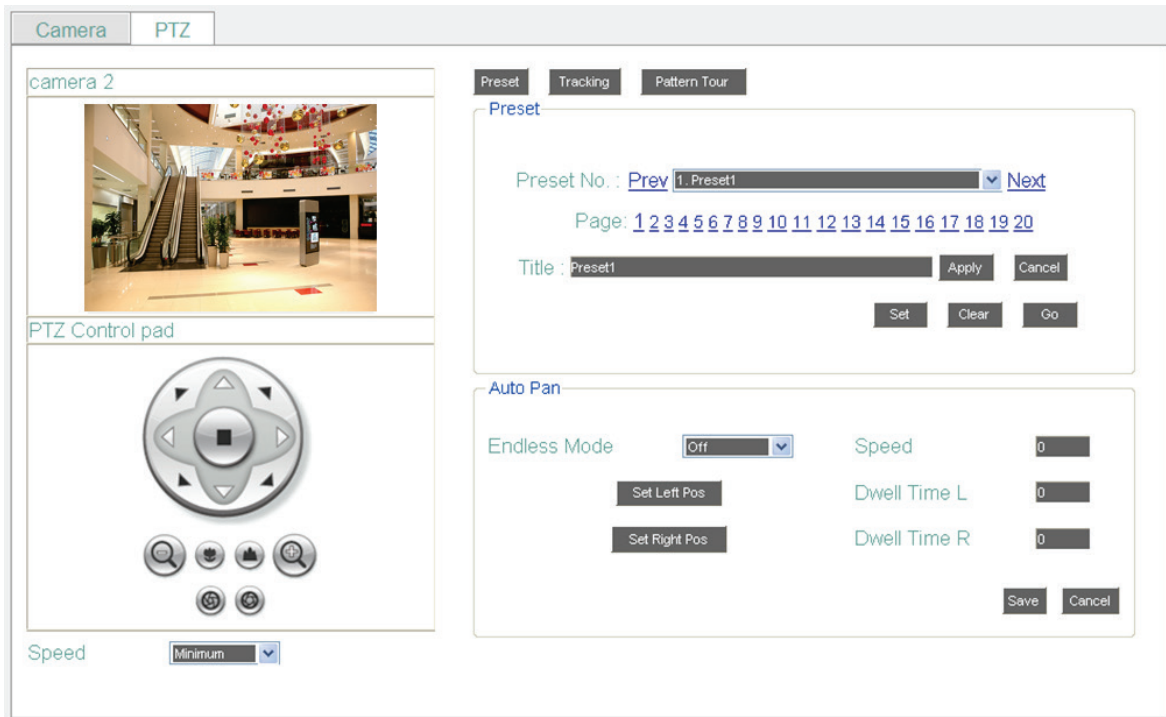
Apply To: Click to apply the same settings to the desired cameras.

Save: Click to add the camera and save the current settings.

Cancel: Click to cancel eth settings and return to the previous setting page.

6.5.5.2 PTZ

You can set up the Preset, Auto Pan, Tracking, Pattern and Tour settings in this page.

【**Camera (1~16)**】**:** Shows the PTZ camera live view. You need to select the PTZ camera from the **Channel Number** drop-down list in the **Camera** setting page (see *6.5.5.1 Camera*) before configuring the PTZ settings.

【**PTZ Control Pad**】**:**
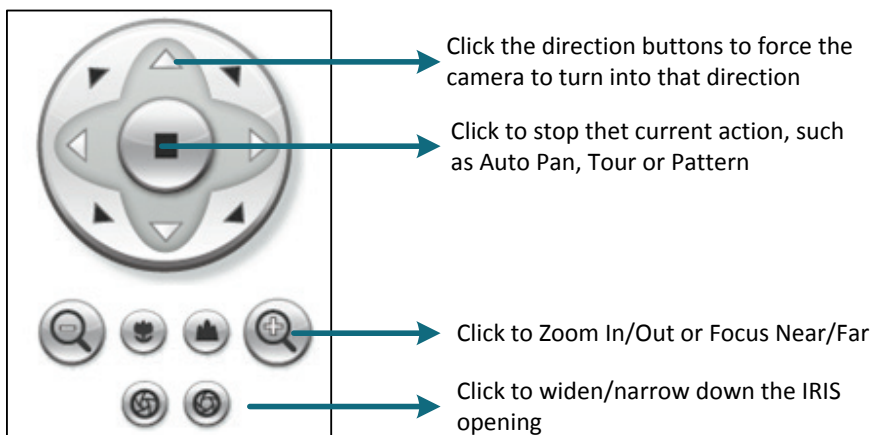
Click the direction buttons to force the camera to turn into that direction

Click to stop thet current action, such as Auto Pan, Tour or Pattern

Click to Zoom In/Out or Focus Near/Far

Click to widen/narrow down the IRIS opening

【**Speed**】**:** Select a pan and tilt speed from the Speed drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period

Preset: Click the **Preset** button to set up the Preset Position or the Auto Pan function.
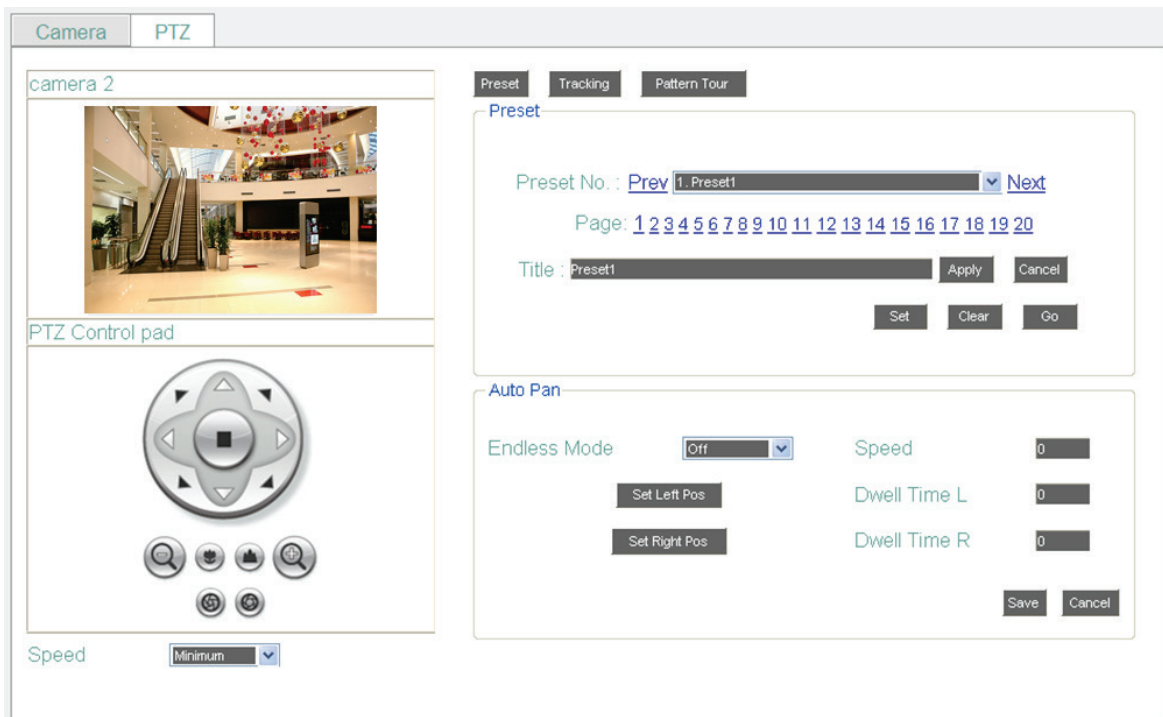
Preset: You can configure up to 192 preset positions in this field.

To set up a Preset Positions:

1.   Adjust the camera view to a desired position using the direction button. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.

2.   To set up the current camera view as a preset position, select a preset number from the **Preset No** drop-down list for the current camera view.

3.   Optionally set up a title for this preset position in the **Title** field .Click **Apply** to save the title name or click **Cancel** to cancel the current changes.

4.   Click **Set** to save the current position as the Preset Number you have selected.

5.   Follow Step 1 to 4 to set up another preset position. You can click the **Next** button to go to the next page and then click the Preset No drop-down list to select a number. Or click on the number in the Page field to select a preset number.

To activate the Preset function on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Preset** button, click on the numeric buttons to select a Preset number and then click the **Go** button. The selected Preset position should be displayed on the camera view. Please refer to *6.7 PTZ* for detailed instructions.

Auto Pan: You can only configure one Auto Pan sequence. The configured Auto Pan (A to B Pan) sequence will always be numbered as "1". The number "2" will always be an endless pan around the given (not preconfigured) X/Y tilt axis.

Endless Mode: The Endless Mode is always numbered as "99" in the PRESET function. If you select **On**, the Preset number "99" will be the 360° endless pan function; if you select **Off,** the Preset number "99" will be the preconfigured A to B Pan function. To use the function, go to PTZ live view page first. Click the **Preset** button and click the Preset number "99". Finally, click **Go** to activate the Endless Mode.

To set up an Auto Pan Sequence:

1. Using the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Left Position. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary.

2. Click the **Set Left Position** button to save the current position as the Left Position.

3. Follow Step 1 to set up the Right Position and then click the **Set Right Position** to save the current position as the Right Position.

4. Enter a dwell time (1~99 seconds) for the Left and Right positions (the time that the camera will pause at each position).

5. Enter a speed (1~255) at which the camera will move during the Auto Pan sequence.

6. Click **Save** to save the settings.

To activate the configured Auto Pan on the PTZ Live View window, click the PTZ icon on the Menu Bar. Click the **Auto Pan** button, click "1" on the numeric buttons and then click the **Go** button. The camera will continuously move to the left and right positions which you have configured. Click "2" on the numeric buttons and then click the **Go** button will force the camera to pan 360° endlessly. To stop the Auto Pan function, click the **Stop** button on the PTZ Control panel.

Tracking: Click the **Tracking** button to set up the tracking function which is functional only when the selected PTZ camera is equipped with the tracking function.

To set up the Auto Tracking function:

1. **Auto Tracking Start Point:** Check the box to enable a camera position to which the camera will return to after a tracking operation. Use the direction buttons to adjust the camera view to a desired position where you want to set up the position as the Auto Tracking Start Point. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary. Click **Set** to set the position as the Auto Tracking Start Point.

   Note: If the user did not set up a start point or the start point is disabled, the camera will go back to track/monitor the initial point instead of the Auto Tracking Start Point, once the tracked object exits in the camera's field of view.

2. **Pan/Tilt Limit:** Check the box if you want to create a zone where the camera will track the movement inside the zone only. Before clicking the Upper/Lower/Right/Left buttons, use the direction buttons to adjust the camera view to a desired position where you want the camera to track the movement in that zone. You can select the pan / tilt speed from the **Speed** drop-down list for controlling the direction buttons. Adjust zoom, focus and Iris if necessary. Click the Upper/Lower/Right/Left buttons to set up the Pan/Tilt limits (Left and Right for the Pan limit; Upper and Lower for the Tilt limit).

> **Note:** Please note that if enabling the **Pan/Tilt Limits** function, the position of the Start Point should be within the range of the **Pan/Tilt Limits**, or there will be a pop-up message showing "Setting error: Start Point is not inside Pan/Tilt Limits".

■ **Zoom control on tracking:**
Keep current zoom ratio: the current zoom ratio will stay fixed during the tracking process.
Multi-step zoom function: the zoom ratio will change according to the distance of the object against the camera. When the object is moving further away, the camera will keep zooming in to track; on the other hand, when moving closer, the camera will zoom out to check whether it should track the object or not.

■ **Tracking Duration:** User can set the tracking time duration of the camera (0~600 seconds). When the Tracking Duration is up, the camera will return to the Start Point. The function is used to prevent the camera from tracking an object which is intentionally set to lure the camera away.

■ **When the object is lost on the screen:** User can select a tracking mode when the object is lost on the screen. The options are:
Keep tracking: The camera will stop at the current position and wait for another moving object in the camera's field of view. Then, the camera will track the new object without changing zoom ratio.
Zoom out and look for a new object: The camera will zoom out at the current position immediately for expanded the field of view and restart tracking a new moving object appearing in the camera's field of view.
Stop tracking and zoom out: The camera will stop auto tracking and stay at the current position. Then, the camera will zoom out for expanded the field of view.

■ **In sec and Back to Start Point:** Set up a period of time for the camera to stay at the current position before returning to the Start Point (0 is returning to Start Point without any waiting).

■ **Resume from manual stop:** The function is used to set up the Auto Tracking restart time (0~600 seconds). If user manually operates the PTZ function during auto tracking process, the auto tracking function will stop. When the manual operation ceases, the camera will resume to "Auto Tracking Start Point" after a given period of time. Setting of value 0 indicates do not restart.

> **Note:** In the on-going auto tracking process after object is identified, the PTZ function keeps the moving object in the center of the screen. But the PTZ function may stop if the object moves too slow and stays in center of the screen too long. In case like this the auto tracking may incorrectly assume the object is lost and ends the tracking process.

Pattern Tour:

Pattern: You are given 90 seconds to move the camera (via the PTZ buttons) to different positions (and different zoom / focus / Iris positions). The camera then saves that sequence under the Pattern No. you've selected. Up to 4 Patterns can be configured.

To set up a Pattern Sequence:

1. Select a pan and tilt speed from the **Speed** drop-down list for the camera to move to the directions when you use the direction buttons during the configuration period.
2. Select a pattern number from the **Pattern No** drop-down list.
3. Click the **Set** button to start the 90-second configuration period. Use the direction / zoom / focus / Iris buttons to move the camera in the desired sequence.
4. Click the **Complete** button again to end the configuration.

Click **Clear** can void the configuration for the entered Pattern No. Click **Go** to view/test the configured Pattern sequence.

To activate the Pattern function on the PTZ Live View window, click the PTZ icon [icon] on the Menu Bar. Click the **Pattern** button, click on the numeric buttons to select a Pattern number and then click the **Go** button. The camera will move to the positions in the Pattern sequence you have configured. To stop the Pattern function, click the **Stop** button [icon] on the PTZ Control panel. Please refer to *6.7 PTZ* for detailed instructions.

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Tour: You can combine up to 16 preconfigured camera positions and patterns into one long sequence. Up to 16 Tour sequences can be set up.

To set up a Pattern Sequence:

1. Select a number from the **Tour No** drop-down list.
2. To set up the first position for Tour No.1, select **OFF**, **Preset** or **Pattern** in the Mode field.

3. Enter a Preset No. or Pattern No. in the **Value** field.
4. Enter a dwell time (1~99 seconds) in the **Dwell Tour** field that the Tour will pause at a Preset position or after a Pattern sequence.
5. Enter a speed (1~255) at which the camera will move to the Preset position or first point of the Pattern sequence.
6. Follow Step 3 to 5 to configure up to 16 positions for Tour No.1.
7. To configure another Tour sequences, select a number from the **Tour No** drop-down list and follow Step 3 to 6 to configure up to 16 positions for the selected Tour number.
8. Click **Apply** to apply the settings. Click **Clear** to clear the current settings for the selected Tour No.; click **Default** to set the Tour Sequence to Default setting; click **Go** to view/test the configured Tour sequence.

To activate the Tour function on the PTZ Live View window, click the PTZ icon [icon] on the Menu Bar. Click the **Tour** button, click on the numeric buttons to select a Tour number and then click the **Go** button. The camera will move to the positions in a long sequence you have configured. To stop the Pattern function, click the **Stop** button [icon] on the PTZ Control panel. Please refer to *6.7 PTZ* for detailed instructions.

6.6 Alarm

Alarm: Select an Alarm input number from 1 to 2.

Enable: Check the box to enable the Alarm trigger function for the selected alarm input.

Log: Check the box to record alarm events to log data.

Buzzer: Check the box to enable the buzzer when an alarm event is triggered.

Alarm Output: Select an alarm output number. When an alarm is triggered, the signal will be transmitted through the selected alarm output relay.

Timeout Duration: This function only appears when you select **Timeout** or **Trans + Timeout** options in the Output Type drop-down list. Select a duration time for the motion event. The alarm output will last for the setup duration time between 1 and 150 seconds.

Image Upload: When an alarm is triggered, it will pop up a default warning image on the local OSD as below. You can also replace the image with the one you like by uploading an image (only support .bmp file format) for the alarm trigger pop-up image in this setting.

Apply To: Click the button to apply the same settings to the desired cameras.

6.7 PTZ

You can use the PTZ Control Panel to control the connected PTZ cameras, to set **Preset** setting and to activate the configured PTZ settings. You can also connect to an EverFocus' EKB200 keyboard to a computer to control the PTZ camera.
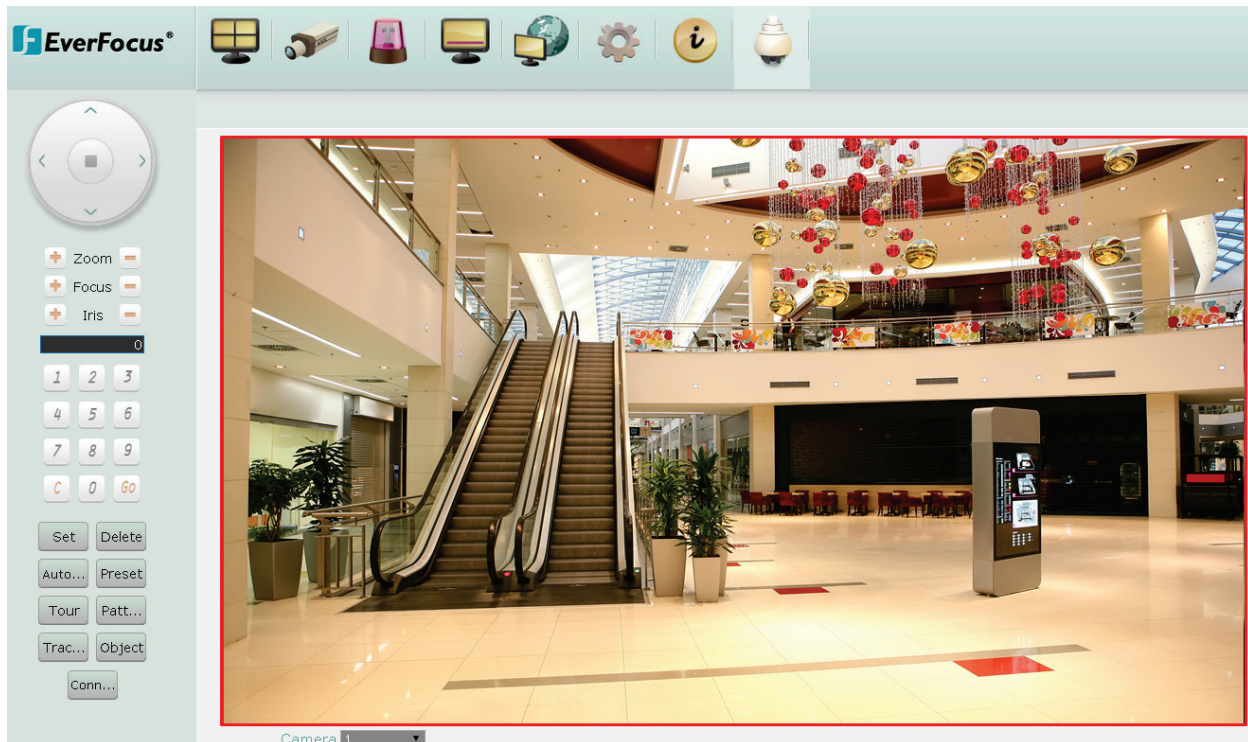
To control the PTZ camera:

1. Select a connected PTZ camera in the **Camera** drop-down list first.

2. To move the camera to the desired direction and angle, click the **Direction** buttons.

3. To zoom in / out the camera view, click the **Zoom** buttons.

4. To adjust the camera focus, click the **Focus** buttons.

5. To adjust the Iris open to increase / decrease the amount of light in, click the **Iris** buttons.

6. To program a Preset Position (if supported by the camera):

   a. Move the PTZ camera to the desired position.

   b. Click the **Preset** button.

   c. Set up a preset number for the current position by clicking the number buttons. The number will be displayed in the number box.

   d. Click the **Set** button to save the settings.

7. To jump to a Preset Position:
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Go** button.
8. Shortcut for Preset 1 ~ 9:
   a. Click digit 1 ~ 9 button without clicking any other buttons.
   b. The camera will seek that Preset Position.
9. To delete a Preset Position (if supported by the camera):
   a. Click the **Preset** button.
   b. Click the desired Preset number.
   c. Click the **Delete** button.
10. To operate the Auto Pan function, click the **Auto Pan** button.
11. To operate the Pattern function, click the **Pattern** button. The Pattern is the "0" Tour in EverFocus and Pelco PTZ cameras.
12. To operate the Tour function:
   a. Click the **Tour** button.
   b. Click the desired Tour number.
   c. Click the **Go** button.
13. To remove a pre-configured Tour (if supported by the camera):
   a. Click the **Tour** button.
   b. Click the desired Tour number.
   c. Click the **Delete** button.
14. To start the auto-tracking function, click the **Track** button.
15. To start tracking an object on the screen, click the **Object** button. When the object selection box displays on the screen, click to select an object to start auto tracking. Once the PTZ camera loses track of the object, the camera will return to the auto tracking start point. Please select forward position in the object movement path to get better tracking result.

Click **C** to clear the entered number in the Number Box.

> **Note:** Before start using the Auto Pan, Pattern, Tour, Tracking and Object functions, you have to configure the related settings for the connected PTZ cameras. Please refer to *6.5.5.2 PTZ* or the User's Manual of your PTZ cameras.

Control PTZ Camera over EKB200 Keyboard:

When using an EKB200 keyboard, you need to click the **Connect** button on the PTZ Control Panel. Please note that you need to configure the PTZ control functions and define the function for each control key on the keyboard before controlling the PTZ camera over the EKB200 keyboard (see *6.5.5.2 PTZ* and *5.5.5 EKB200*). For information about the installation of the EKB200 keyboard, please refer to your EKB200 keyboard User's Manual.

Chapter
8

7. Specifications

Model Name	EMX32
Channel Number	16 CH
Video Codec	H.264
Video Output	HDMI : 720X480, 1024X768, 1920X1080 VGA :720X480, 1024X768, 1920X1080
Alarm In	4
Alarm Out	1
Watch Dog Timer	Yes
User Interface	GUI (Graphical User Interface)
OS	Embedded Linux
Network / Protocol	10/100Mbps Ethernet ; TCP-IP / DHCP/ PPPoE / Everfocus DDNS / RTSP / RTP / HTTP / SMTP / POP3 / SSL
Control PTZ via OSD	Yes
Dual Streaming	Yes
USB	1 USB 2.0 ports (on Back Panel)
User Access	3 Levels of user access supported
RS-485	1 RS-485
Power Source	12VDC/ 5A (Max. 60 W)
Operating Temperature	0°C~40°C / 32°F~104°F (20~80% humidity)
Dimensions(L x W x H)	160 x 160 x 45 mm ; 6.29 x 6.29 x 1.77 inch
Certificates	CE, FCC, ROHS
Language	English, Japanese, Traditional Chinese, Spanish, Deutsch, French, Russian, Portuguese (Brazil), Dutch, Simplified Chinese.

Appendix A: Network Overview

This chapter will give you a basic instruction on how to set up the IP decoder for network connection. It is highly recommended that you have a working knowledge of what a network is and how it works. This will be helpful in completing the networking process.

Introduction to TCP / IP

TCP/IP is the group of protocols used by the Internet and most Local Area Networks (LANs) throughout the world. In TCP/IP, every computer or other communications device that is connected to the network has a unique IP address. By doing this you are giving your device a unique address similar to the address of your house. An IP address is composed of four octets (numbers in the range of 0 to 255) separated by decimal points. The IP address is used to uniquely identify a host or computer on the LAN. For example, one computer on a network could have an IP address of 192.168.1.127.

You should never give two or more devices the same exact IP address, but the first three octets of an IP address is often the same for all computers in the local area network. For example, if a total of 253 computers exist in a single LAN, the IP addresses could be assigned starting with 192.168.1.x, where x represents a number in the range of 2 to 254. In IPP address could be compared with a telephone number.

Subnet Masks

Each host in a LAN has a subnet mask. The subnet mask is a set of octets that is used to determine which LAN or class it belongs to. The number 255 is usually used to represent the network address portion of the IP address and a zero is placed at the end to identify the host portion of the address. Basically the subnet mask tells the devices how the network addresses are organized, and helps to determine which addresses are local and which are remote (on the other side of the router).

Gateway Address

Addressees are either local or remote. A gateway address is composed of four octets separated by decimal points. The gateway address is used to uniquely identify the device on the LAN that has access to the communications links connecting to other LANs, WANs and/or the Internet (access to the 'remote' addresses).

Virtual Ports

A **port number** represents a "channel" or entryway for network communications. Port numbers allow different computers to utilize network resources without interfering with each other. Port numbers most commonly appear in network programming, particularly socket programming. Sometimes, though, port numbers are made visible to the casual user. For example, some websites on the Internet use a URL like the following:
http://www.sitename.com:8100/

In this example, the number 8100 refers to the port number used by the browser to connect to the web server. The standard port number used by web sites is 80, so this number does not need to be included with the URL (although it can be). In IP networking, port numbers can theoretically range from 0 to 65535. Most popular network applications, though, use port numbers at the lower end of the range (such as 80 for HTTP).   Ports are similar to doors and windows of your house, with port 80 acting as the front door. If these are not open you could not enter the house. This is the same case with ports on a network. If the ports for a specific IP address are not open then you could not gain access to that IP address.

> **Note:** The term port also refers to several other aspects of network technology. A port can refer to Ethernet connection points, such as those on a hub, switch, or router. The term port is also used to refer to a physical connection point for peripheral devices such as serial, parallel, and USB ports.

Another analogy would be: if a WAN IP address is similar to the phone number identify a site, IP ports are similar to telephone extensions, in that they allow communication with specific devices within a site that all share the same external (WAN) IP address. A router is a device which allows multiple computers and other IP enabled equipment to share that single WAN IP address. It functions like a "switchboard operator" – opening ports creates an association between those port numbers and the LAN IP address of specific equipment on the LAN behind the router. When the router sees a 'call' for a specific 'extension' (port), it directs that data stream to the (LAN IP address of the) equipment associated with that 'extension' (port).

Pre-Installation

Before beginning the installation, please answer the following questions:

■ Do you have Hi-speed Internet? _____

There are many types of high speed Internet available. The most common ones are T1, Cable, and DSL (in order of speed). The IP decoder is not compatible with a dial-up connection.

Note: EverFocus suggests having a minimum upload speed of 256KBps. This can be addressed by your Internet Service Provider.

■ What type of modem/router do you have? _____
Modem/router model name/ #

The modem/router was either installed by your Internet service provider or purchased by you to establish a connection to the Internet. A router assigns different internal IP addresses to local computers; this allows multiple computers to access the Internet through the same external IP address.

■ Do you have a static IP address? _____

A Static IP address means you use the same IP address every time you connect to the Internet. With a static IP address, other Internet users always know the address of your location and can easily connect with it. This makes it much simpler to host a website, email server, or other type of server connection. EverFocus suggests using a static IP address. If this is not available, you will need to use a dynamic IP address. This is explained below.

■ Do you have a dynamic IP address? _____

A Dynamic IP address means your IP address changes each time you connect to the Internet. We recommend asking your Internet service provider for a Static IP address. If this is not a possibility, you may use the DDNS feature of the IP decoder. DDNS stands for Dynamic Domain Name Server, a service that provides a central database where IP information can be stored and retrieved. It allows those using a dynamic IP address to be registered centrally so users can connect to it by name. See *6.6.3 DDNS* for details on using EverFocus DDNS.

Pre-Installation

EverFocus' IP decoder can operate using one of three types of networking connections.

Simple One to One Connection: A simple one to one connection is the simplest type of network connection. It uses a cross-over cable to make a direct connection from one computer to another (or in this case a computer to a IP decoder).

Direct High Speed Modem Connection: A direct modem connection uses a standard network cable to connect the modem directly to a computer (or in this case a modem to the IP decoder). This type of connection only covers single-port modems. For a combination modem/router, use the setup described below.

Router or LAN Connection – A local area network connection requires either a router or a pre-existing LAN connection. This is the most common type of connection. A router allows multiple computers and IP decoder's to access each other as well as the Internet. It assigns different internal IP addresses to the computers.

Appendix

B

Appendix B: Linksys & D-Link Port Forwarding
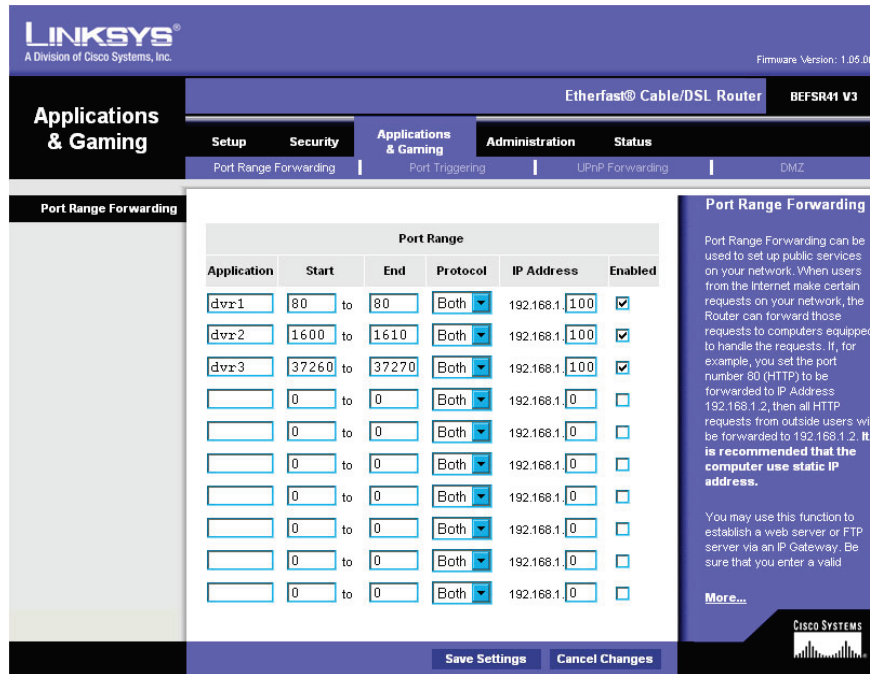
Typical Linksys Port Forwarding

This section will cover a few simple configurations for the Linksys router. This chapter is only to offer some help to the installer and end user. Please understand we **DO NOT** support this product and will not give tech support on it. If you need additional technical support on this router you must call Linksys.

To access the Web-based Utility, launch a web browser and type the Router's IP address, typically **192.168.1.1**, in the address bar. Then press Enter. A password request page will appear. (Non-Windows XP users will see a similar screen.) Leave the User Name field blank. The first time you access the router, use the default password **admin**. Click the **OK** button to continue.

The first screen that appears displays the Setup tab. This allows you to change the Router's general settings. Change these settings as described here and click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel your changes.

Click on the "Applications & Gaming" tab.

Applications and Gaming allows you to set up public services on your network, such as web servers, ftp servers, e-mail servers, or other specialized Internet applications. (Some Internet applications may not require any forwarding) To forward a port, enter the information on each line for the criteria required. Descriptions of each criterion are described here.

Application - In this field, enter the name you wish to give the application.
Start/End - Enter the starting number of the range under **Start** and the ending number under **End**.
Protocol - Enter the protocol used for this application, either **TCP** or **UDP**, or **Both**.
IP Address - For each application, enter the IP Address of the PC running the specific application.
Enable - Click the **Enable** checkbox to enable port forwarding for the relevant application.
When finished making changes, click the **Save Settings** button to apply your changes or **Cancel Changes** to cancel them.

Here is an example for how the port information might look:
    HTTP   80 to 80   Both 192.168.1.50   Enable

Where 192.168.1.50 is the IP address of the IP decoder on the LAN, and the default port 80 is in use.

Note: *If you changed port 80 in the IP decoder's Network Menu, open that port instead of 80.*

![EverFocus® logo]

Typical D-Link Port Forwarding

This section will cover a few simple configurations for the D-Link router. This chapter is only to offer some help to the installer and end user. Please understand we **DO NOT** support this product and will not give tech support on it. If you need additional technical support on this router you must call D-Link.

Whenever you want to configure your network or the DI-624, you can access the Configuration Menu by opening a web-browser and typing in the IP Address of the DI-264.
The DI-264 default IP Address is 192.168.0.1.

- Type "admin" in the **User Name** field
- Leave the **Passwor**d blank
- Click **OK**
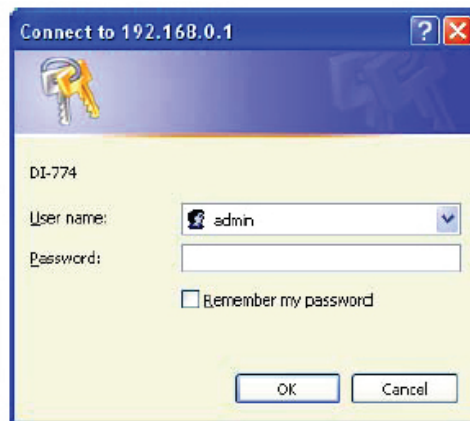
The first screen that shows up is the Home Tab. This is the starting point for all the router's settings and functions.

![EverFocus® logo]

Click Virtual Servers on the left to bring up the following screen.

Virtual Servers allows users who are connecting remotely to access services on the router's Local Network. The functions of each field are described below.

Virtual Server - Select **Enabled** or **Disabled**
Name - Enter the name referencing the virtual service
Private IP - The IP address of the device running the local services.
Protocol Type - The protocol used for the virtual service.
Private Port – The port number that the service uses on the LAN (Local Area Network).
Public Port - The port number that the services uses on the WAN (Wide Area Network).
Schedule – The time period the virtual server will be active.
When you have input all the information for a virtual server, click on **Apply** to add it to the list at the bottom or **Cancel** to clear all fields.
Here is an example of the information for each service:

Name	Private IP	Protocol	Private Port	Public Port	Schedule
HTTP	192.168.1.50	Both	80	80	Enable

Where 192.168.1.50 is the IP address of the IP decoder on the LAN, and the default port 80 is in use.

Note: *If you changed port 80 in the IP decoder's Network Menu, open that port instead of 80*.

Appendix

C

Appendix C: IR Remote Control

The IR remote control is an accessory to enhance the convenient operation of the IP decoder. You can perform all the settings and operations from the remote control. The effective distance is up to 33 feet line of sight.
When there is more than one IP decoder installed in the same environment, you need to select a correct IP decoder ID, preventing the IP decoder from responding to commands from the Remote Control.

To select the IP decoder ID,

1. Aim at the IR receiver of your IP decoder.
2. Press the **IP decoder Device Button** first.
3. Select the IP decoder ID number by pressing the **Number Button**. The IP decoder ID number here must correspond to the "IR Remote ID" set up in the "I/O Control Menu", and remember to click **Save** on that setting page (refer to *5.5.4 I/O Control)*. For example, if you set up "2" in the OSD setting page, you need to press "2" on the controller.
4. Press the **OK** button to complete the setting and now you can control the IP decoder.

To switch channels,

To select CH1~9, press Number Button 1~9.

To select CH10~16, press the "0" button first to change the Number Button 1~7 as CH10~16, and then press the Number Button 1~7 to switch to the desired channel. For example, if you want to select CH11, press "0" first, and then press "2".
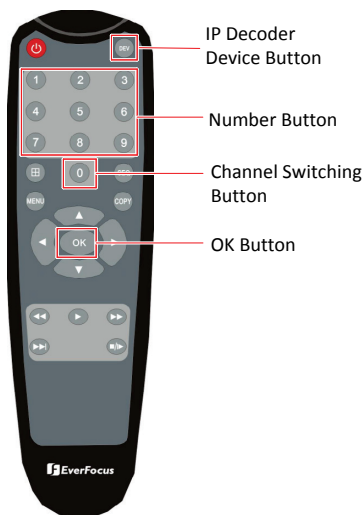
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