AVerMedia®

AVerDiGi™
EH1000H-4 Nano

User's Manual

Oct. 2010

FCC NOTICE (Class A)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission Statement

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

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

Class A ITE

Class A ITE is a category of all other ITE which satisfies the class A ITE limits but not the class B ITE limits. Such equipment should not be restricted in its sale but the following warning shall be included in the instructions for use:
Warning -This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

European Community Compliance Statement (Class A)

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EEC.
Warning - This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures to correct this interference.

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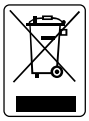

The mark of Crossed-out wheeled bin indicates that this product must not be disposed of with your other household waste. Instead, you need to dispose of the waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. For more information about where to drop off your waste equipment for recycling, please contact your household waste disposal service or the shop where you purchased the product.

Battery Safety Information

- Store the batteries in a cool dry place.
- Do not dispose of used batteries in domestic waste. Dispose of batteries at special collection points or return to point of sale if applies.
- Remove the batteries during long periods of non-use. Always remove exhausted batteries from the remote control. Battery leakage and corrosion can damage this remote control, dispose of batteries safely.
- Do not mix old and new batteries.
- Do not mix different types of batteries: alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium).
- Do not dispose of batteries in a fire. The batteries may explode or leak.
- Never short circuit the battery terminals.

WARNING

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

CAUTION

IF THERE IS ANY DAMAGE, SHORTAGE OR INAPPROPRIATE ITEM IN THE PACKAGE, PLEASE CONTACT WITH YOUR LOCAL DEALER. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION

NOTICE

- INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.
- THE INFORMATION CONTAINED HEREIN IS TO BE CONSIDERED FOR REFERENCE ONLY.

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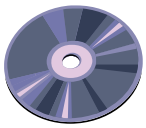
Chapter 1 Introduction

1.1 Package Content

1.1.1 EH1004H-4 Nano

(1)

(2)



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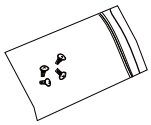


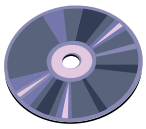
(7)

- ☐ (1) EH1004H-4 Nano unit
- ☐ (2) Quick Installation Guide
- ☐ (3) Software CD (User's Manual is included)
- ☐ (4) Remote Control(Batteries are included)
- ☐ (5) Power adaptor
- ☐ (6) Power Cord
  * The power cord varies depending on the standard power outlet of the country where it is sold.
- ☐ (7) Screws for HDD installation

1.1.2 EH1008H-4 Nano

(1)

(2)



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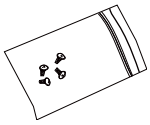


(8)

- ☐ (2) EH1004H-8 Nano unit
- ☐ (2) Quick Installation Guide
- ☐ (3) Software CD (User's Manual is included)
- ☐ (4) Remote Control(Batteries are included)
- ☐ (5) Audio cable
- ☐ (6) Power adaptor
- ☐ (7) Power Cord
  * The power cord varies depending on the standard power outlet of the country where it is sold.
- ☐ (8) Screws for HDD installation

1.1.3 Optional Accessories

IR extended cable

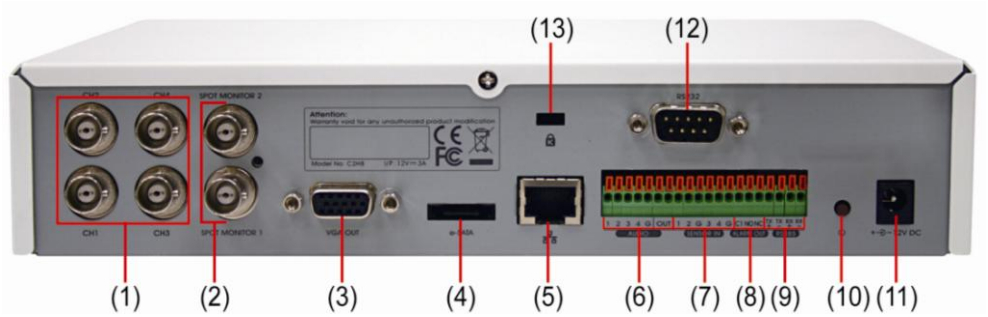
1.2 Front Panel

1.2.1 NH1004H-4 Nano/NH1008H-4 Nano

Name	Function
(1) System Power indicator	System power status indicators. Indicate running state of system. Lights when the system is running.
(2) Record indicator	When DVR system is recording, the light will keep flashing.
(3) IR Sensor	Receive signal from the remote control to operate the DVR unit
(4) IR Sensor port	For extended IR sensor cable(optional)
(5) USB port(mouse)	For USB mouse connection.
(6) USB port	For connecting USB device, ex: USB pen drive, external hard disk, mouse…and so on. The USB storage device must be in FAT32 format.

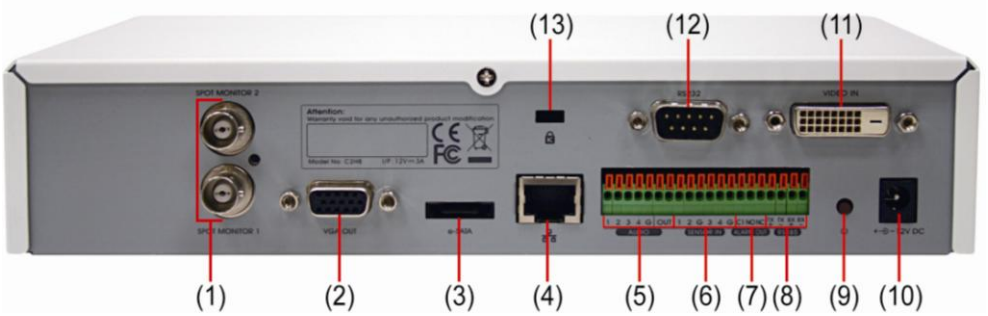
1.3 Back Panel

1.3.1 NH1004H-4 Nano



Name		Function
(1)	Video Input 1~4	Input the video camera signal (channel 1 ~ 4).
(2)	Analog SPOT Output 1/2	Outputs the analog video signals to SPOT monitor when receive the alarm events.
(3)	VGA Output	Outputs the camera video signal to a LCD monitor.
(4)	eSATA port	For connecting with eSATA RAID.
(5)	LAN Port	Ethernet connection wit10/100Mbps.
(6)	Audio In/Audio Out	Input/output audio signal to audio input/output device such as microphone or speaker. - Audio input:4 channels - Audio output: 1 channel
	The audio input and output device has its own power supply is necessary.	
(7)	Sensor In	Support up to 4 sensor devices.
(8)	Relay Out	Support 1 relay device.
(9)	RS485	For PTZ camera connection (also see Chapter 1.5).
(10)	Power button	Press it to power on the DVR unit.
(11)	12V DC connector	For connecting the power cord.
(12)	RS232 port	For POS device connection.
(13)	Lock hole	For locking the DVR unit to avoid DVR unit been taken.

1.3.2 NH1008H-4 Nano



Name		Function
(1)	Analog SPOT Output 1/2	Outputs the analog video signals to SPOT monitor when receive the alarm events.
(2)	VGA Output	Outputs the camera video signal to a LCD monitor.
(3)	eSATA port	For connecting with eSATA RAID.
(4)	LAN Port	Ethernet connection wit10/100Mbps.

Name		Function
(5)	Audio In/Audio Out	Input/output audio signal to audio input/output device such as microphone or speaker. - Audio input:4 channels - Audio output: 1 channel

The audio input and output device has its own power supply is necessary.

(6)	Sensor In	Support up to 4 sensor devices.
(7)	Relay Out	Support 1 relay device.
(8)	RS485	For PTZ camera connection (also see Chapter 1.5).
(9)	Power button	Press it to power on the DVR unit.
(10)	12V DC connector	For connecting the power cord.
(11)	Video Input	Input the video camera signal(Channel1~8).
(12)	RS232 port	For POS device connection.
(13)	Lock hole	For locking the DVR unit to avoid DVR unit been taken.

1.4 Setting Up the DVR Unit

1.4.1 Installing the Hard Disk

- For hard disk spec, please referring to http://www.avermedia.com/AVerDiGi/Product/ → Embedded Hybrid DVR/NVR → AVerDiGi EH1000H series → Hardware Recommendations
- The external USB hard disk only supports on file backup. Please **do not** use the external USB hard disk for recording purpose.

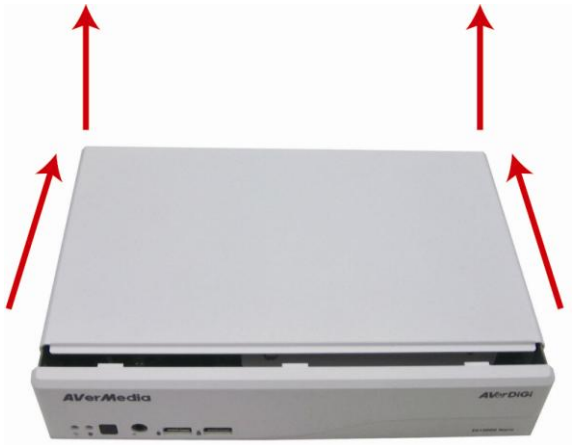
The "compatible hard disks" indicated in the above recommendation list only means that these commercially available hard disks were tested with AVerMedia® products and functioned well under normal operation conditions. AVerMedia® does not guarantee or provide warranties, explicitly, implied or statutory with respect to the reliability of the hard disk function or its compatibility. In no event AVerMedia® shall be liable for damages, with respect to any business interruption of clients, lost profits, loss of programs or other data on your information handling system or otherwise. This includes direct, indirect, incidental, special, or consequential damages, resulting from the incompatibility caused by the usage of these hard disks, even if AVerMedia® has expressly advised about the risk of such damages. The entire risk arising out of the use of any information attached here with is borne by the recipient.

User can install 1 SATA hard disks inside the DVR unit.

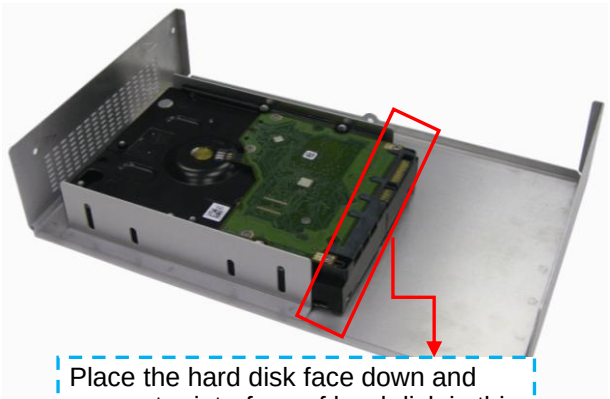
Follow the illustrated instructions below to install the hard disk:

1. Loosen all screws(2 sides and rear side)

2. Push the cover backward and lift. The cover is a little bit tight, please be carefully the hands.



3. Turn the cover over and place the SATA hard disk (face down) inside the HDD holder.

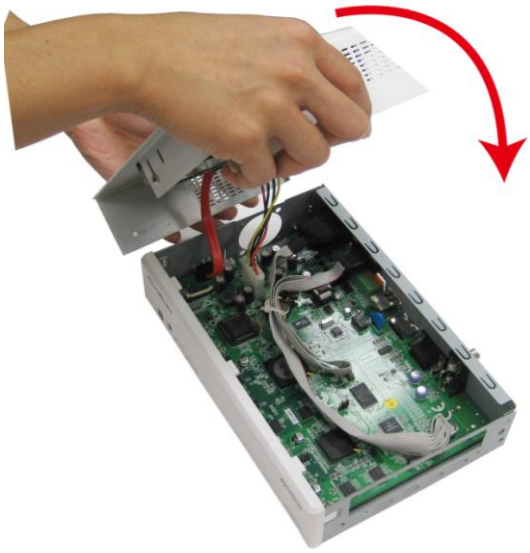


Place the hard disk face down and connector interface of hard disk in this direction.

4. Screw the hard disk(both side)

5. Hold the cover and connect the power cable and SATA cable to the hard disk.

6. And then, turn the cover over carefully.



7. Hold the cover parallel with DVR unit and put the cover back to the DVR unit and be carefully the hard disk that inside the cover.

8. Finally, Push the cover forward and secure the cover

1.4.2 Connecting Devices

Pen drive and external hard disk must be FAT32 format.

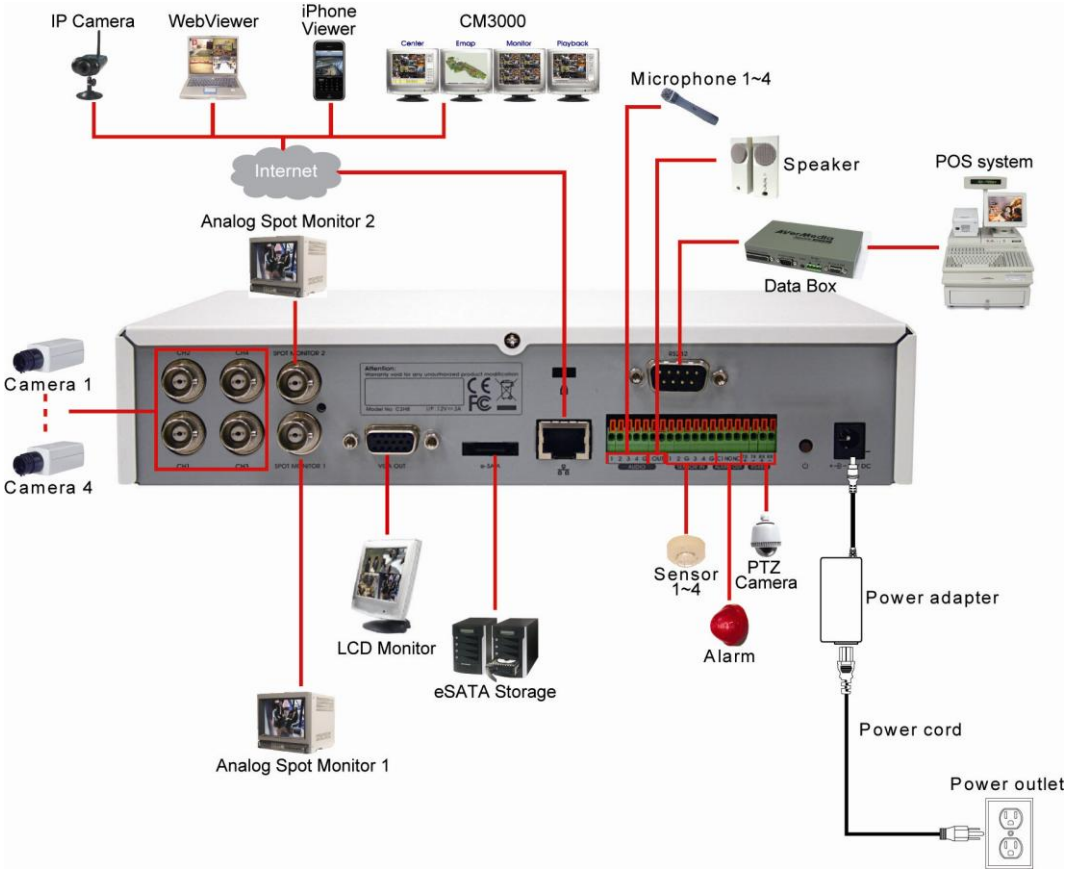
- All connected devices have its own power supply is necessary.
- 1.3 M with H.264/MPEG4/ MJPEG on the first 4 channels and 2.3M with MJPEG on the 1st channel for IP cam connection.

■ NH1004H-4 Nano

EH1004H-4 Nano supports both Analog and IP camera in 4 channels.

The back panel of the DVR unit, user can connect up to 4 cameras in combination of analog and IP camera. The DVR unit also can connect 4 sensor devices, 1 alarm devices, and output video to a LCD monitor.

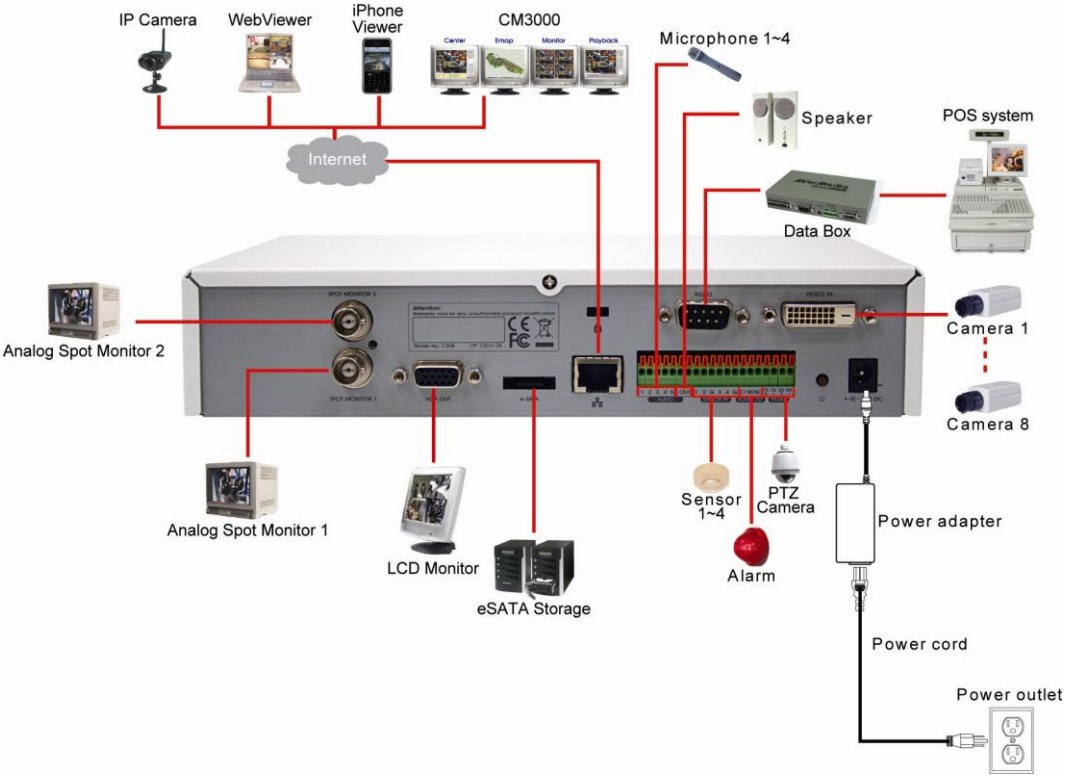
Follow the illustration below to make the connection:



■ NH1008H-4 Nano

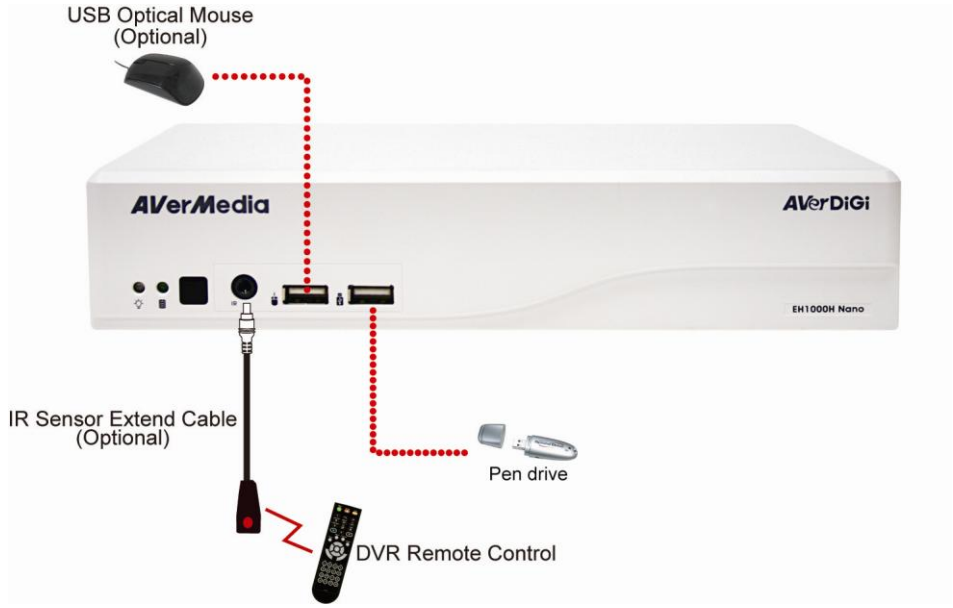
EH1008H-4 Nano only supports first 4 channels for IP camera connection.

The back panel of the DVR unit, user can connect up to 4 cameras in combination of analog and IP camera. The DVR unit also can connect 4 sensor devices, 1 alarm devices, and output video to a LCD monitor.
Follow the illustration below to make the connection:



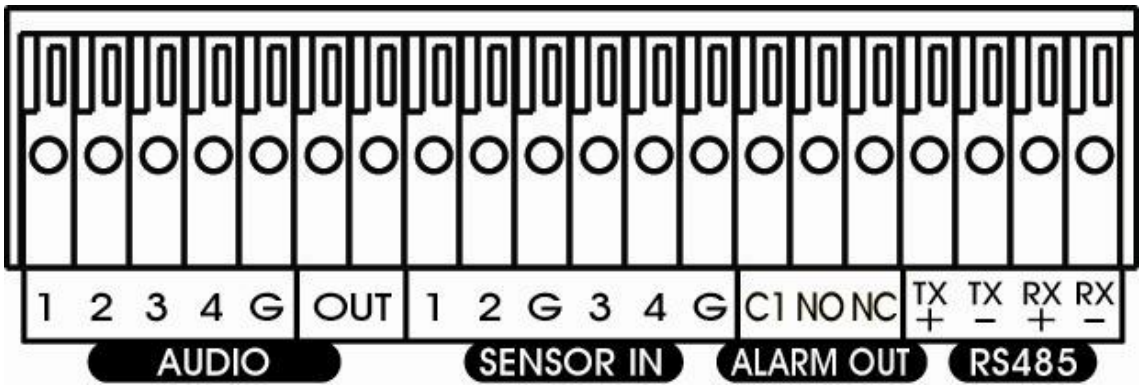
■ NH1004H-4 Nano/NH1008H-4 Nano

For backup recorded video, plugging the pen drive or external hard disk through USB port that are located at front panel of DVR unit, and then, use the bundled software enables user to transfer, playback and segment the video.
Follow the illustration below to make the connection:



1.5 Sensor, Relay and RS485 pinhole allocation

The Sensor and Alarm enable you to connect 4 sensor inputs, 1 relay outputs and PTZ cameras. Just connect the external sensor, relay, and PTZ camera pin directly to the pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



1.5.1 Audio In/Out Pin Definition

Pin#	Definition
1	Audio in signal
2	Audio in signal
3	Audio in signal
4	Audio in signal
G	Audio ground single
OUT	Audio out signal

1.5.2 Sensor Pin Definition

Sensor Pin #	Definition
1	Sensor 1 signal
2	Sensor 2 signal
G	Sensor ground
3	Sensor 3 signal
4	Sensor 4 signal
G	Sensor ground

1.5.3 Relay Pin Definition

Relay Pin #	Definition
C1	Relay Common 1
NO	Relay Normal Open
NC	Relay Normal Close

1.5.4 RS485 Pin Definition

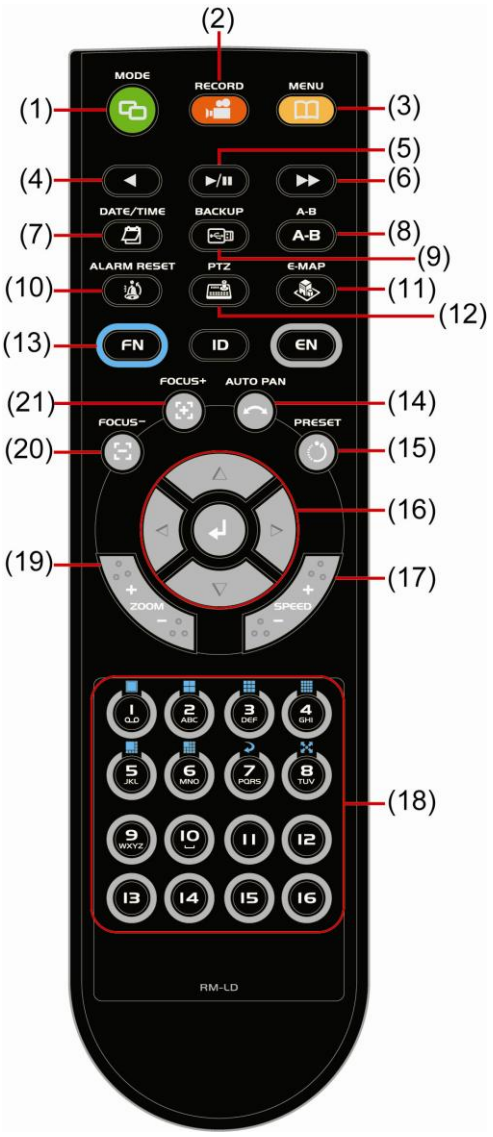
When connect PTZ camera through RS485 interface, please refer to the following pin definition to connect the DVR and PTZ.

Pin #	DVR site	PTZ site
TX+	RS485 TX+ signal	RS485 RX+ signal
TX-	RS485 TX- signal	RS485 RX- signal
RX+	RS485 RX+ signal	RS485 TX+ signal
RX-	RS485 RX- signal	RS485 TX- signal

If user uses the 2 wires for the PTZ camera connection, please connect to the RS-485 TX+ and TX- of the DVR site.

1.6 Familiarizing the Remote Control Buttons

Use the Remote control to operate the DVR unit.



Name	Function
(1)	Switch to playback mode
(2)	Start/stop recording video. To stop recording, the authentication password is required.
(3)	To call out system setup menu.
(4)	To rewind the recorded video.
(5)	To start playback. To pause playback.
(6)	To playback video at faster speed (1x ~ 32x).
(7)	To select the time and date of playback file.
(8) A-B	Set a playing recorded video from A point to B point segment and repeat playing on surveillance screen
(9)	To backup recorded video file to USB pen drive.
(10)	To reset alarm status.
(11)	Switch to Emap mode.
(12)	Call out PTZ control panel. Press again will close the PTZ control panel.

Name	Function
(13) FN	Press FN to enable FN modes (The word "**Fn+**" will show up in the left bottom corner on screen). To exit FN modes, press FN again. FN + 1 : Switch to single screen display mode FN + 2 : Switch to QUAD display mode FN + 3 : Switch to 9 spilt screen display mode FN + 5 : Switch to one single and 7 + 1 spilt screen display mode FN + 7 : Enable/disable auto scan FN + 8 : Switch to full screen
	The FN + 4, 6, 9 ~ 16 don't have any functions.

Name	Function
(14)	To enable auto pan function.
(15)	To move the PTZ camera to the preset position. Press button and the "**PS+**" will show up on screen. And then, press preset position number button (~).
(16)	To move PTZ camera to left. To move the mouse cursor to left. To move PTZ camera to right. To move the mouse cursor to right.
(16)	To move PTZ camera lens up To move the mouse cursor up. To move PTZ camera lens down To move the mouse cursor down. Confirm or make a selection
(17)	Speed + : To speed up movement of PTZ camera lens
	Speed - :To speed down movement of PTZ camera lens
(18)	~ as number 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0. 11 : ! 14 : $ 12 : @ 15 : % 13 : # 16 : ^
	~ Channel camera selection number in playback and preview mode.
	+ ~ As a preset position in PTZ control mode.
	FN + ~ With FN button can switch to different screen display modes and enable auto scan and full screen.
(19)	Zoom + : To zoom in view of PTZ camera
	Zoom - :To zoom out view of PTZ camera
(20)	To focus out PTZ camera lens
(21)	To focus in PTZ camera lens

The EN and ID button doesn't support at this version.

Chapter 2 Using the DVR Software

2.1 First Time Using the DVR Unit

1. Connect the mouse to DVR unit (through USB port).
2. Connect all necessary external devices.

DVR unit doesn't supply the power to connected external devices.

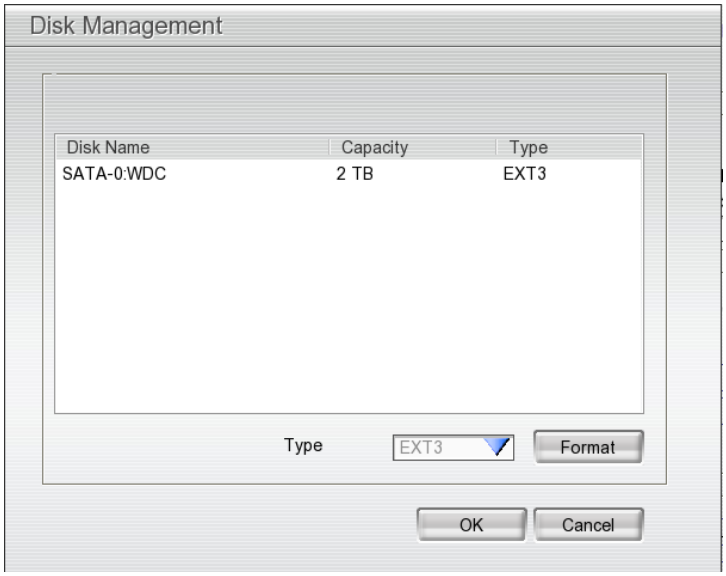
3. Plug the power to turn on the DVR unit.
4. Please wait for a while until start up process is completed. And then, the preview screen will show up on surveillance screen.

5. **Format hard disk:** If the hard disk is first time installed in the DVR unit, please format the hard disk. Following the below steps to format the hard disk.

- Before formatting hard disk, please stop recording.
- While formatting hard disk, the CPU usage will be near to 100% and might slow down the DVR system response.

a. Click **Setup** and enter the password (If this is the first time, enter the default password [**admin**]. The default ID [**admin]**).

b. Click **System** → **Add**



c. Select the hard disk from list.
d. Click **Format** button and click **Start** to begin formatting
e. When formatting is done, click **OK**.

6. **Adjust time and date:** Setup the DVR system date and time in order to have correct recording time and date. Following the below steps to setup date and time:
   a. Click **Setup** and enter the password (If this is the first time, enter the default password [**admin**]. The default ID [**admin**]).
   b. Select **System**.
   c. In **Date and Time Setting**, click **Setting** button of **System Date and Time**.
   d. Select the Year and Month by click arrow button, click on the date to select the date. And adjust the time, and then, click **OK**.
7. **Connecting the cameras:** DVR supports IP and Analog camera.

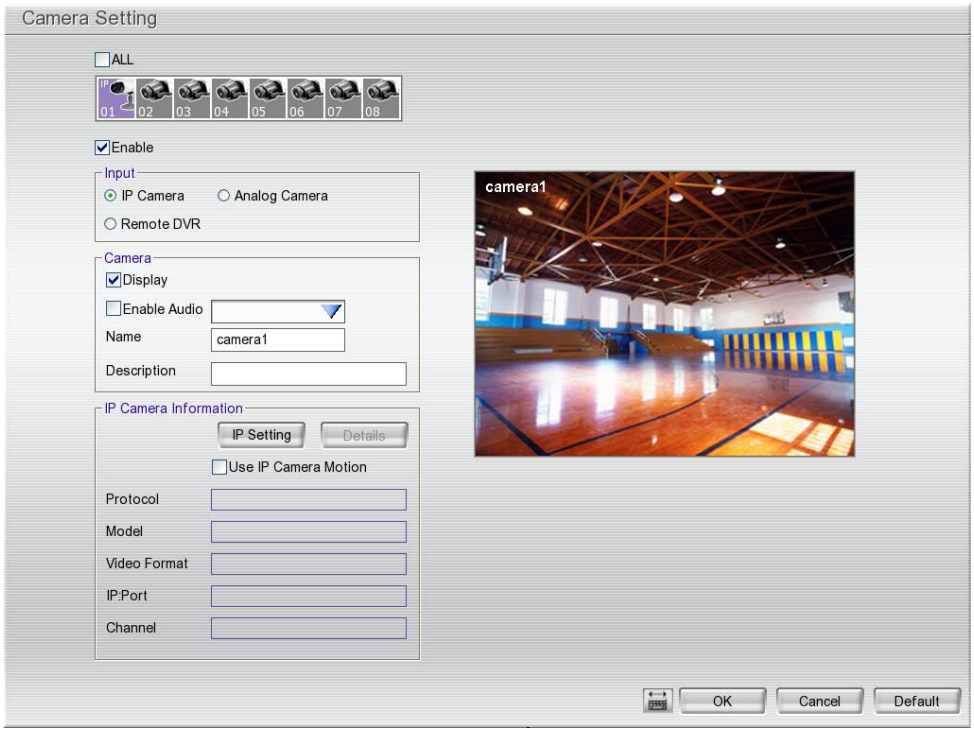
■ **Analog camera**

a. Connect the analog camera video cable to video cable.
b. Click **Setup** → **Camera**
c. Select camera channel and mark **Enable** to enable the channel.
d. Select **Input** as Analog Camera.
e. In **Camera** section, mark **Display** to allow the live video of camera to display on surveillance screen. And then, enter the **Name** and **Description** of the channel. Mark **Enable Audio** will allow recording the sound that received from selected audio input channel (audio input channel located on back panel of DVR) with the camera channel. For example: user has enabled audio and select audio input channel 1 to on the camera 4. Therefore, DVR will record the video of camera 4 and sound that received from audio input channel 1 together. While playback, user will hear sound that received by audio input channel 1 on camera 4.
f. Adjust the bright, contrast, hue, and saturation of the camera.
g. Click **OK**.

■ **IP camera**

- EH1008H-4 Nano only supports first 4 channels (CH1~4) for IP camera.
- EH1004H-4 supports both analog and IP camera in 4 channels.
- 1.3 M with H.264/MPEG4/ MJPEG on the first 4 channels and 2.3M with MJPEG on the 1st channel for IP cam connection.

a. Click **Setup** → **Camera**.



b. Select camera channel (1~4) and mark **Enable** to enable the channel.

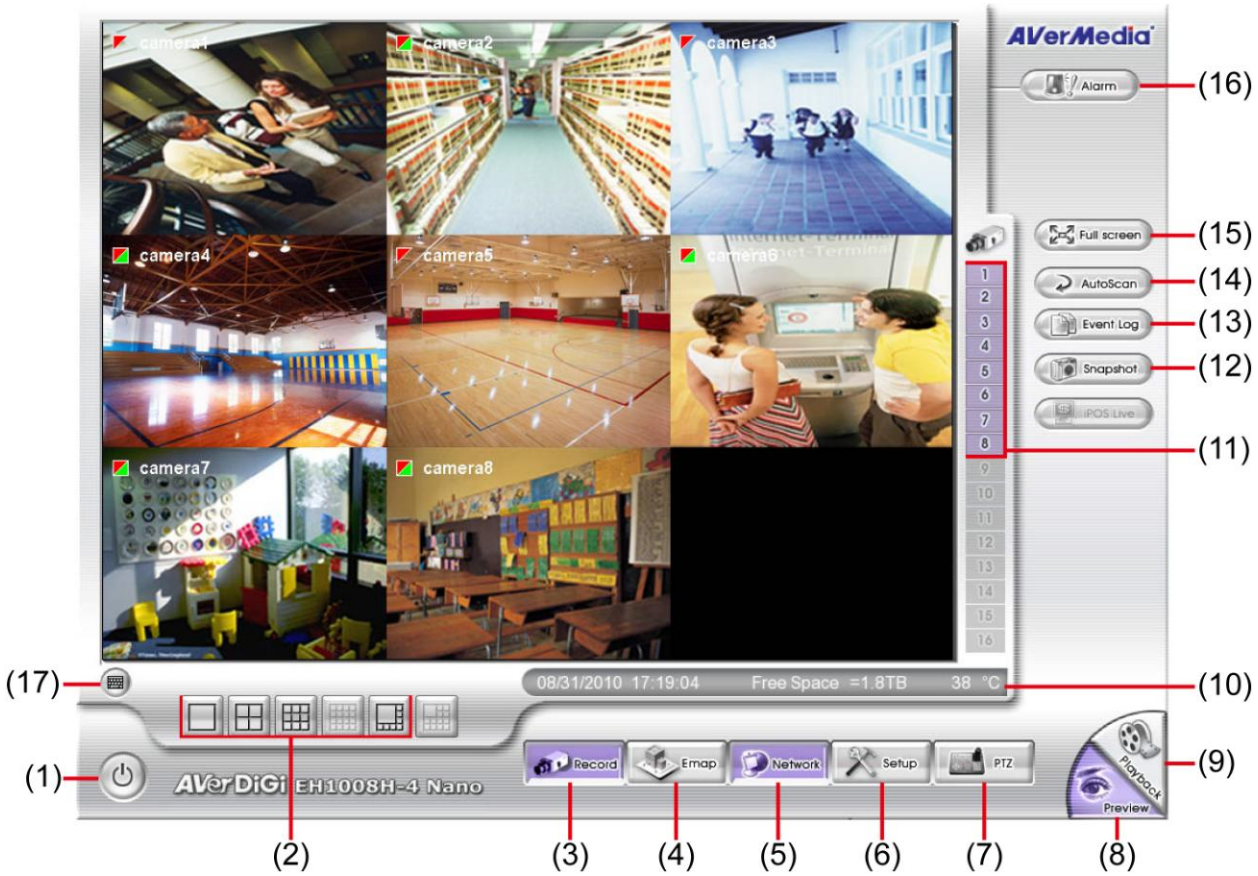
c. Select **Input** as IP Camera.
d. In **Camera** section, mark **Display** to allow the live video of camera to display on surveillance screen. And then, select the channel for **Enable Audio** and enter the **Name** and **Description** of the channel.
e. In **Camera Information** section, click **IP Setting** for detail setting.

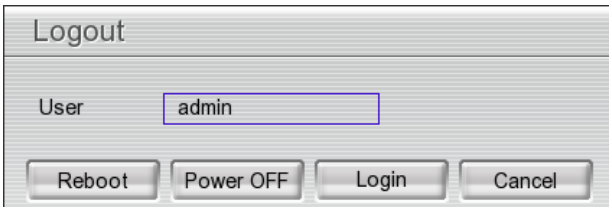
f. **In IP Camera Setting** window, click **Protocol**, and then, select **Protocol**, **Mode**, and **Video Format**.
g. Enter IP address in **IP Camera site** column or enter the **URL** of IP camera.
h. Enable **Authentication** and enter **ID** and **password** if IP camera's access authority is required.
i. Click **OK** to save the setting.
j. When the IP camera has connected, user should see the camera information of **Protocol**, **Model**, **Video Format**, **IP port**, and **Channel**.
k. To connect another IP camera, follow the above steps.

2.1.2 Using the Virtual Keyboard

User can use the Virtual Keyboard when the keyboard is not available. Just click or right-click screen to call out the virtual keyboard. For uppercase, click **Caps** button. To exit, click **Esc**.

2.2 Familiarizing the Buttons in Preview Mode



Name		Function
(1)	Logout	- **Reboot:** To restart the DVR system. It is required to enter the password - **Power Off:** To shut down the DVR system. It is required to enter the password - **Login:** Using different ID to login to DVR system. - **Cancel:** To return to DVR application. 
(2)	Split Screen Mode	Select from four (4) different split screen types to view all the camera, or one camera over the other or alongside on a single screen. It also allows you to switch and view different camera number.

- When you are in single screen mode, **Right click** and **Drag** a square on the area you want to enlarge. Right-click on screen again, the screen view will back to normal view.
- When you are in full screen mode, partial enlarges does not support.

(3)	Record	Start/stop video recording.
(4)	EMap	Display the map in each area, and the location of camera/ sensor/ relay and the warning (see also Chapter 2.2.1).
(5)	Network	Enable/disable remote system access. This feature allows you to access DVR server from a remote location via internet connection. The default is disabled.
(6)	Setup	Configure the system settings. (see also Chapter 3)
(7)	PTZ	Access PTZ control panel. (see also Chapter 2.2.2)
(8)	Preview	Switch to Preview mode. This allows you to view live camera display.
(9)	Playback	Switch to Playback mode. This allows you to view the recorded video file. (see also Chapter 2.3)
(10)	Status bar	Display the current date, time, hard disk free space and temperature of unit.

Name	Function
(11) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(12) Snapshot	Capture and save the screen shot in *.jpg format.

Please plug the USB pen drive to DVR server before press **Snapshot** button.

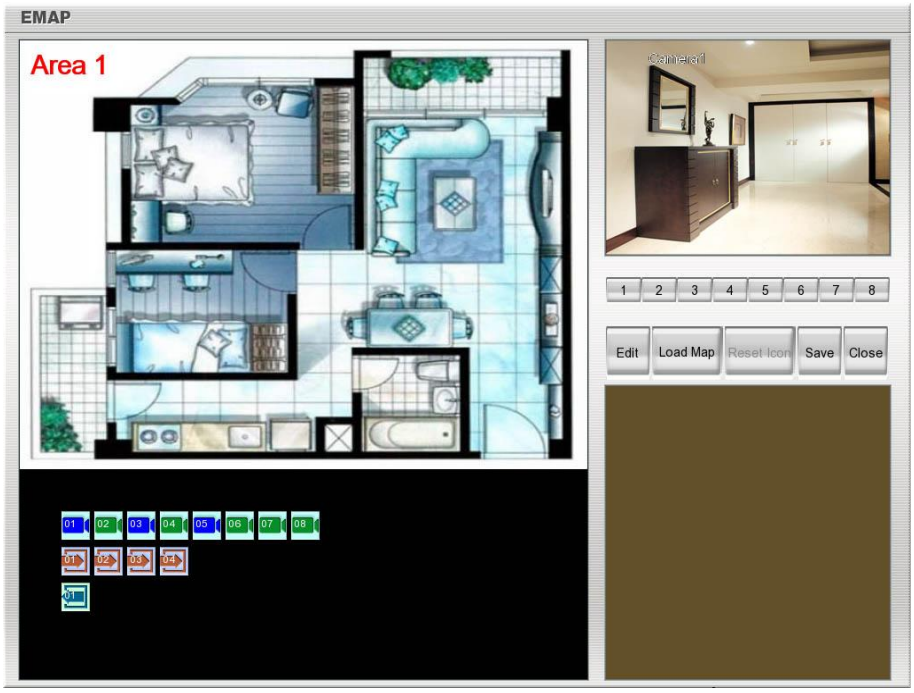
(13) Event log	Show the record of activities that take place in the system. (see also Chapter 2.2.3)
(14) AutoScan	Start/Stop video screen cycle switch.
(15) Full screen	View in full screen. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(16) Alarm	Alert and display warning info.
(17) Virtual Keyboard	Click to enable virtual keyboard.

2.2.1 Setting Up and Using the Emap

E-Map can hold up to 8 maps in *.jpg format. You may locate the camera, sensor and relay on the map.

To Set Up the Emap

1. Click **Emap**.
2. When the Emap screen appears, click the area number (1 to 8 buttons) on where you want to insert the map.

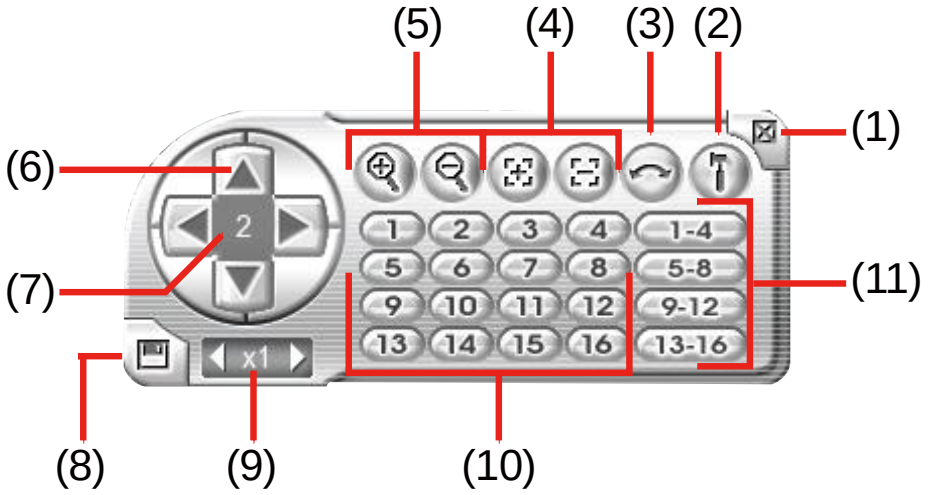


3. Click **Load Map** to insert the map. When the open dialog box appears, locate and select the map and click **Open**.
4. When the inserted map appears on the Emap screen, click **Edit**. You may now drag the camera, sensor, and relay icons to its place on the map. Icons on the map can be relocated anywhere. If you are going to locate the icon on the map to other area, you need to drag the icon to the black pane at the bottom of the Emap screen and then switch to the area on where you want to locate the icon. To bring all the icons back to the black pane at the bottom of the Emap screen, click **Reset Icon**.
5. When you are done, click **Save** button to save the new setting. To exit Emap screen, click **Close**.

To Use the Emap

1. Click **E-map**.
2. In the Emap screen, click the camera icon to switch on the area where the camera is located on the map and to display the video at the upper right corner of the Emap screen. At the lower right corner of the Emap screen, it lists all the warning message.
3. Click **Close** to exit Emap screen.

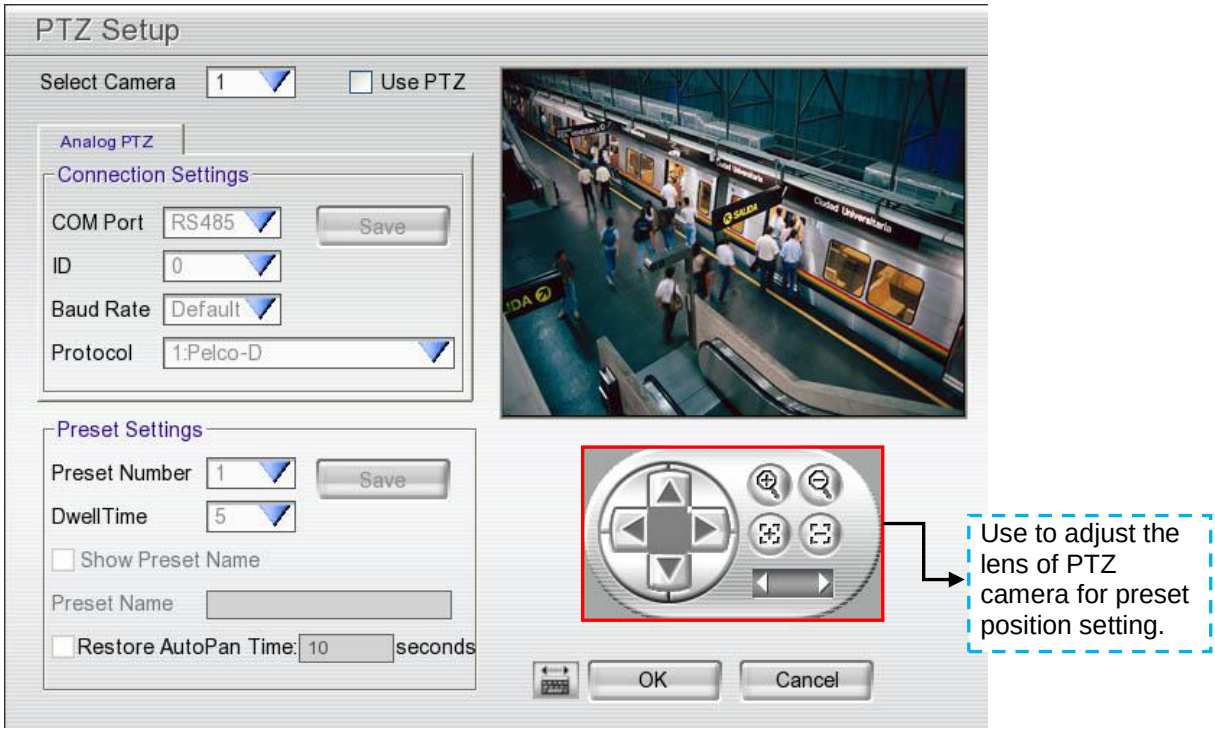
2.2.2 Familiarizing the Buttons in PTZ Camera Controller



Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Configure PTZ cameras.(see also Chapter 2.2.2.1 and Chapter 2.2.2.2)
(3) AutoPan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera.
(7) Camera ID pane	Display the PTZ camera number that is being operated.
(8) Save Camera preset position	Save the PTZ camera preset position number. Select the camera and click the preset position number and save it.
(9) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(10) Camera preset position number	Move the PTZ camera to the preset point.
(11) Group AutoPan	Select to automatically operate PTZ camera in group.

2.2.2.1 Setup the Analog PTZ Camera

1. Select the channel of analog PTZ camera on Preview UI.
2. Click **PTZ** button from preview UI. And then, the PTZ control panel will show up on screen.
3. In the PTZ control panel, click **Setup** (see also Chapter 2.2.2).
4. When the PTZ Setup dialog box appears, select the camera number and mark the **Use PTZ** check box to enable PTZ setting.



5. In the Connection Settings section, fill in the following selections. Then, click **Save** to keep the settings.
   - **COMPort:** The connecting port is fixed and can't be changed. The default is RS485 port.
   - **ID:** Assign an ID number for the PTZ camera.
   - **Baud Rate:** Please refer to the user's manual of the PTZ camera to make sure the baud rate.
   - **Protocol:** Please refer to the user's manual of the PTZ camera to make sure what protocol is using.
6. In the **Preset Setting** section, use the control panel to adjust the position of the PTZ camera and select the preset number to assign a number for the PTZ camera current position. Set the **DwellTime** (1-60 sec) for how long the PTZ camera stays in that position before it moves to the next one. Click **Save** to keep the **Preset Setting** settings.

The gray out functions mean DVR doesn't support.

---

7. Repeat step 4 and 5, if you want to save another PTZ camera position.
8. **Restore AutoPan Time:** set a time period for restoring auto path function after the PTZ camera has been moved manually. Mark the check box and set the time period in second.
9. After finished all configurations, click **OK** to exit. Click **Cancel** will exit and without saving the settings.

2.2.2.2 Setup the IP PTZ Camera

When IP PTZ camera has successful connected with the DVR system, user can use the PTZ function directly without any configuration. To make connection of IP PTZ camera, please refer to Chapter 3.2.1.
In PTZ control panel, user can setup the preset position of the camera. The number of preset positions is depending on the IP PTZ camera has supported. For example: A brand of IP PTZ camera only supports 4 preset positions. Therefore, user only can setup 4 preset positions. User can refer to the user's manual of the IP PTZ camera to make sure the number of the preset positions has supported.
Please follow the below steps to configure the preset position.

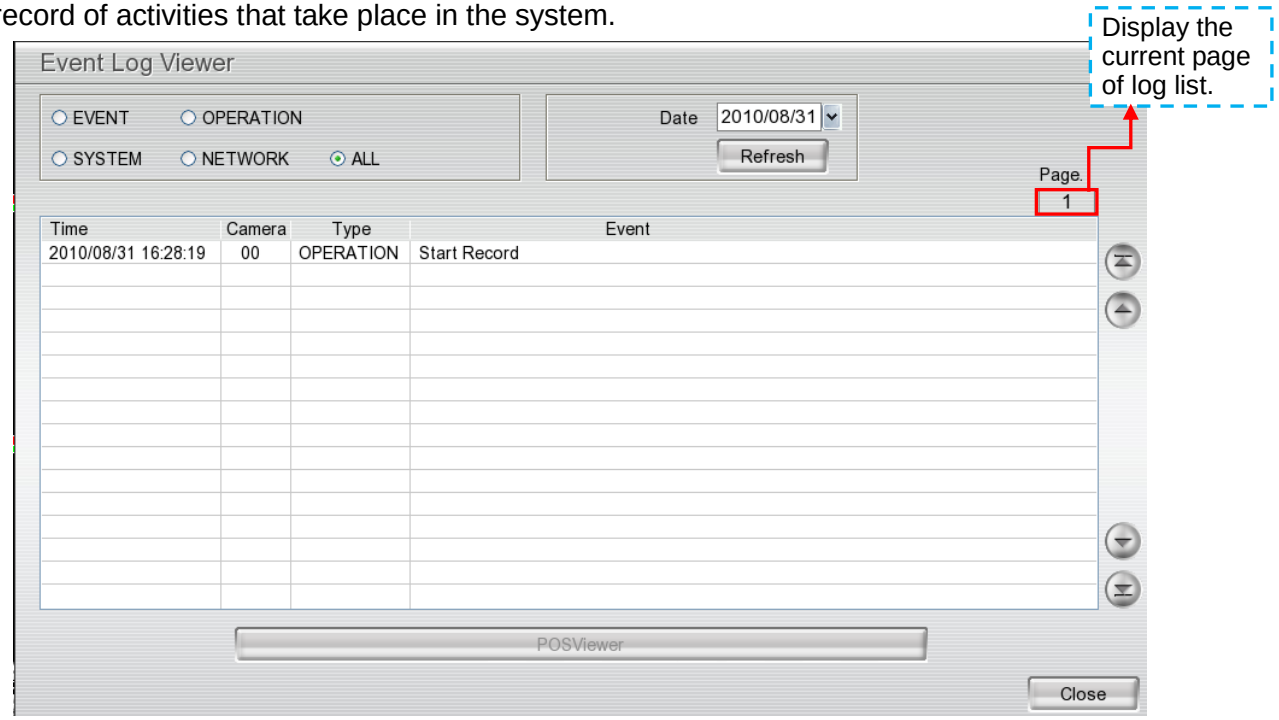
The gray out functions mean DVR doesn't support.

1. In preview mode, select the channel that is an IP PTZ camera channel.
2. Click **PTZ** button on preview UI and PTZ control panel will show up.
3. In the PTZ control panel, using the arrow button to adjust the position of IP PTZ camera.
4. And then, click **Setup** (see also Chapter 2.2.2). The Preset Settings window will show.

5. Select the **Preset Number** to assign a number as the PTZ camera current position. And then, click **Save** to save the setting.
6. Set the **DwellTime** for how long the PTZ camera stays in that position before it moves to the next one.
7. Repeat step 3 to 6, if you want to save another preset position.
8. **Restore AutoPan Time:** set a time period for restoring auto path function after the PTZ camera has been moved manually. Mark the check box and set the time period in second.
9. Click **OK** to complete the setting.

2.2.3 Using Event Log Viewer

Show the record of activities that take place in the system.



1. Click the **Event Log** button on DVR system main interface. The Event log viewer window will show up.
2. Select the **Date** to view.
3. To filter the records, select and click the select button to display **Event**, **System**, **Operation**, **Network** or **All**.
4. Use the scroll button to go next, previous, first, or last page of event list. Click **Refresh** button can refresh the logs' list.
5. To exit the event log viewer window, click **Close** button.

2.3 Familiarizing the Buttons in Playback Mode

To switch in Playback mode, click **Playback** button at the lower right corner of Preview mode UI.

Name	Function
(1) Split Screen Mode	Select from 4 different split screen type to playback the recorded video file of all the cameras or one camera over the other or alongside on a single screen.

- When you are in single screen mode, **Right click** and **Drag** a square on the area you want to enlarge. Right-click on the screen again, the screen view will back to normal view.
- When you are in full screen mode, partial enlarges does not support.
- NH1000H-4 Nano series don't support 13 and 16 split screen mode.

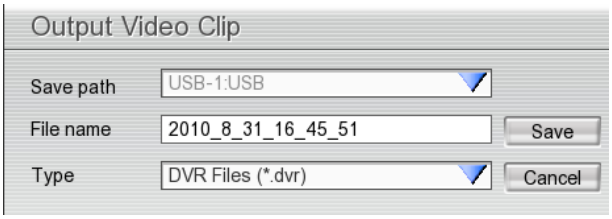
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.

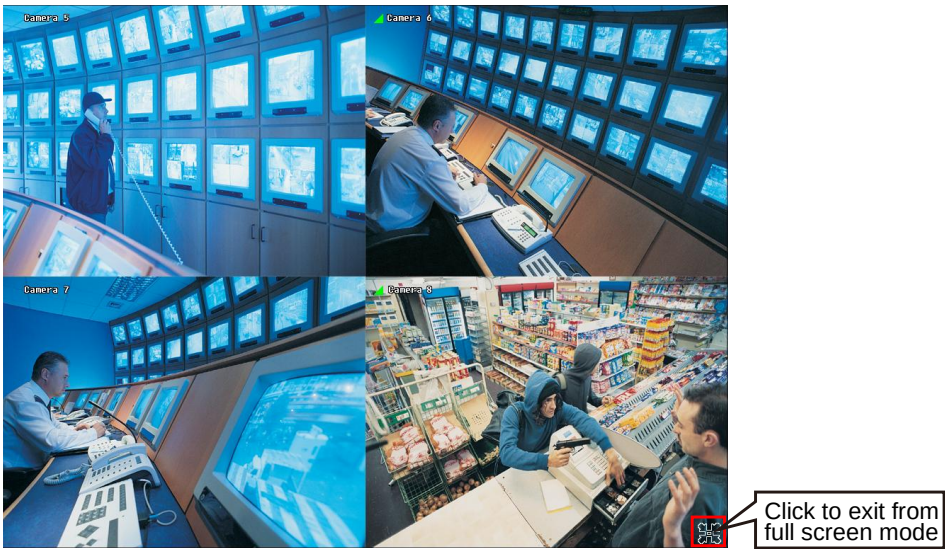
(4) Playback Control Buttons	From left to right order: **Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the reduce speed from 64x, 32x, 16x, 8x, 4x, 2x, 1x, 1/2X, 1/4X. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, 32x or 64x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.

Name	Function
(5) Date	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 08 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(6) Preview	Switch to Preview mode.
(7) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(8) Status bar	Display the recorded date, time and play speed.
(9) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(10) Export	Export includes Snapshot, Output Video Clip, and Backup function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg format. ■ **Output Video Clip:** Save the segmented file in *.dvr format to USB pen drive (see also Chapter 2.3.1).  ■ **Backup:** Save the playback file to USB device or DVD-ROM disk(see also Chapter 3.6)

Please plug the USB pen drive to DVR server before execute **Export** function (Snapshot, Output Video Clip, and Backup).

(11) Segment	Keep a portion of the recorded video (see also Chapter 2.3.1).
(12) Full screen	View in full screen. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon.  When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Event log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or All.
(14) Bookmark	Mark a reference point when reviewing the recorded video file to which you may return for later reference (see also Chapter 2.3.2).
(15) Find Next	Search for the next event. You can use this when you are using Event Search function.
(16) Event Search	Search from the recorded activities that were recorded in event log (i.e., Sensor, Motion, Video Loss). (see also Chapter 2.3.3)
(17) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

2.3.1 To Cut and Save the Portion of the Recorded Video

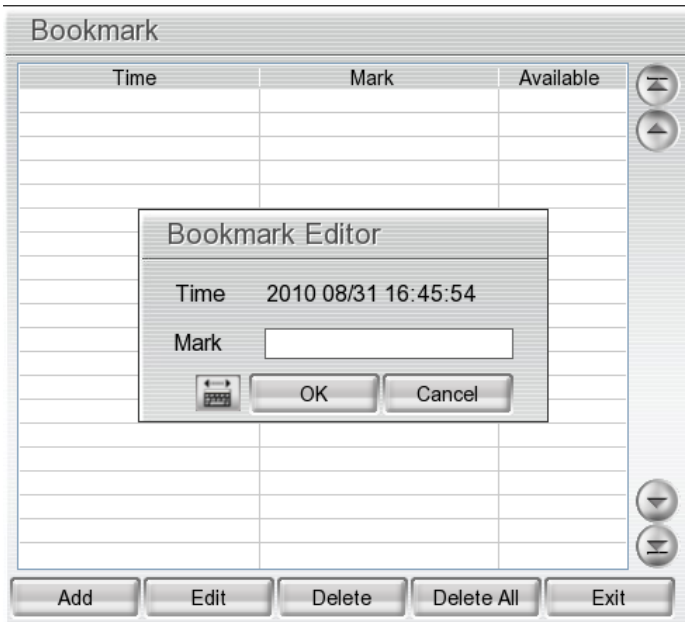
1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

3. Click **Export** > **Output Video Clip** button to save the wanted portion.
4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.

2.3.2 To Bookmark a Video Section

1. Click **Bookmark** button
2. In the Bookmark dialog box, you may do the following:
   - **Add** to create the new reference mark in the bookmark list. Click **Add** button, the Bookmark Editor dialog will show up. Enter the name or short description in **Mark** column. And then, click **OK** to complete a bookmark.
   - **Edit** to change the mark description.
   - **Delete** to remove the selected reference mark in the list.
   - **Delete All** to remove all the reference marks in the list.
   - **Exit** to close Bookmark dialog box.
3. Select and click one in the bookmark list to review the file.



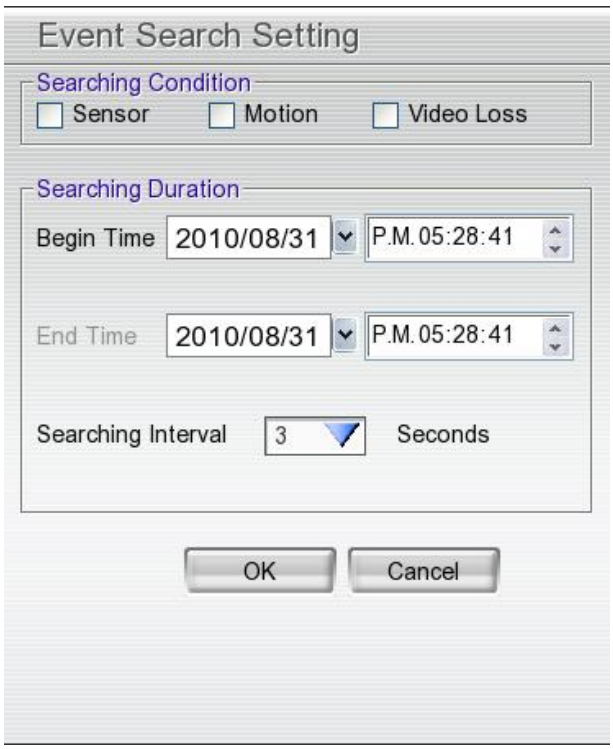
2.3.3 Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search Setting dialog box would appear on the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click

.
4. You may also set to search and list all the result. In the **Search Duration** section, set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.

The DVR system will automatically set the date of **End Time** at 3 days later of **Begin Time**. If event data are less than 3 days, the DVR system will set End Time at current date. Time of End Time is adjustable.

5. When the Event list appear, click and select the item you want to view.

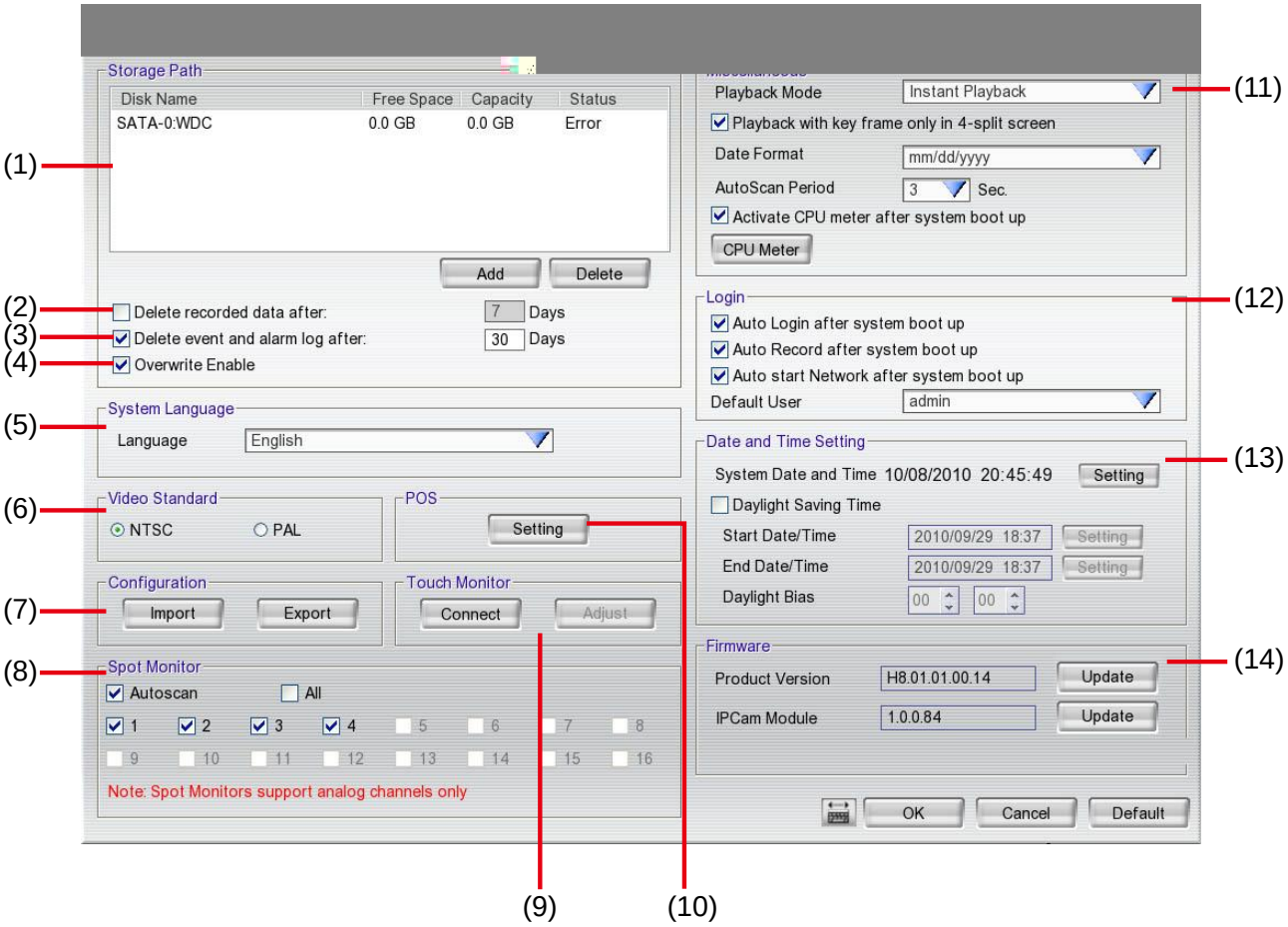


Chapter 3 Customizing the DVR System

In the Preview screen mode, click button to customize your DVR. When the DVR configuration setup selection appears, select and click the buttons you want to change the setting.

3.1 System Setup

In the System Setting dialog box, click **OK** to accept the new settings, click **Cancel** to exit without saving.



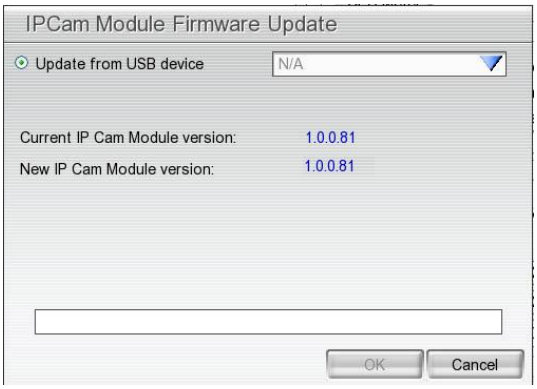
(1) Storage Path

Set the HDD on where to save the data. In case you have more than one storage device, the system automatically saves the data to the next storage device. To insert another storage device, click **Add** and select the storage path. To remove the selected path, click **Delete**.If the hard disk is the first time for DVR system, please format the hard disk before starting to use it. To format the hard disk, select the hard disk and click **Format** button.

- Before formatting hard disk, please stop all operations on DVR system.
- While formatting hard disk, the CPU usage will be near to 100% and might slow down the DVR system response.

3. Select the USB pen drive if there is more than one USB storage device from drop down list. The DVR unit will auto detects the firmware.
4. Click **OK** to start upgrading.

- **IPCam Module:** Update firmware of IP camera.
  1. Save the firmware on root directory of USB pen drive. And then, plug USB pen drive to DVR server.
  2. Click **Update** button, a **Firmware Upgrade** windows will show up.



  3. Select the USB pen drive if there is more than one USB storage device from drop down list. The DVR unit will auto detects the firmware.
  4. Click **OK** to start upgrading.

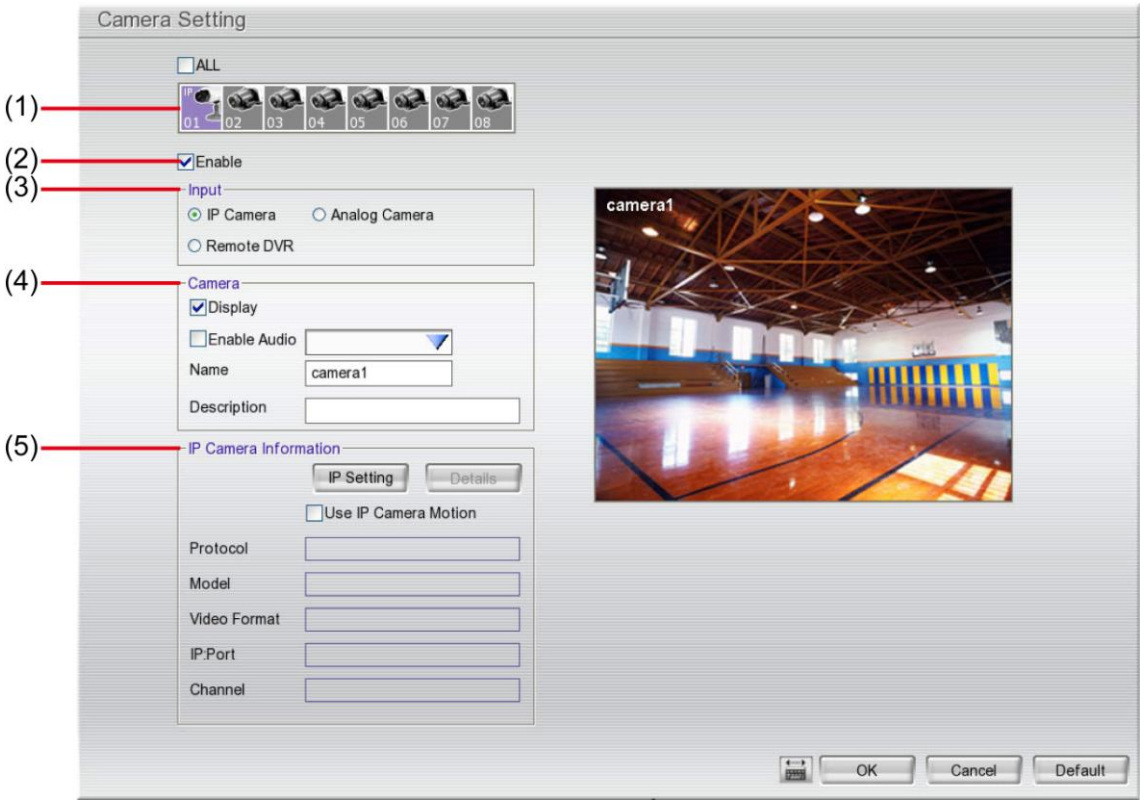
3.2 Camera Setup

The DVR system supports 8 cameras in combination of analog and IP cameras or only analog cameras. The DVR system only supports first 4 channels (CH1 ~ 4) for IP camera.

3.2.1 To Setup IP Camera

Click **Default** will back to the factory default value.

- EH1008H-4 Nano only supports first 4 channels (CH1~4) for IP camera.
- EH1004H-4 supports both analog and IP camera in 4 channels.
- 1.3 M with H.264/MPEG4/ MJPEG on the first 4 channels and 2.3M with MJPEG on the 1st channel for IP cam connection.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **IP Camera**.

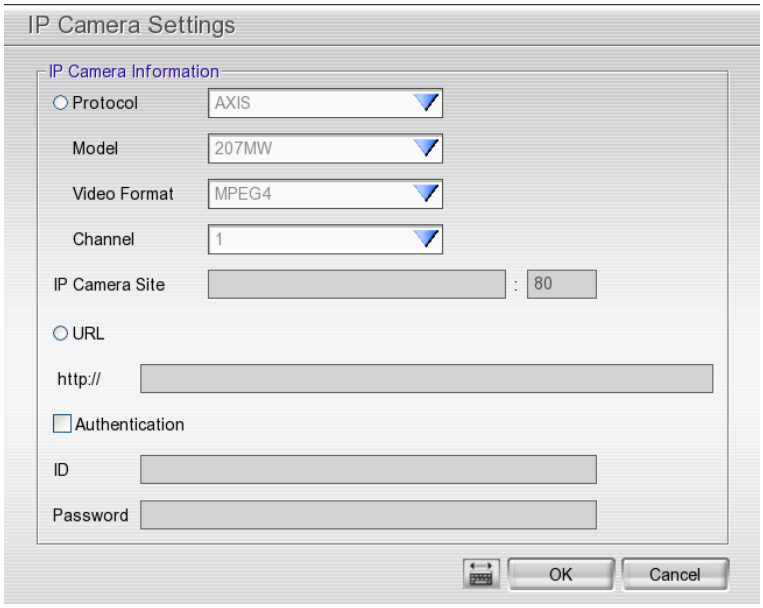
(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) IP Camera Information

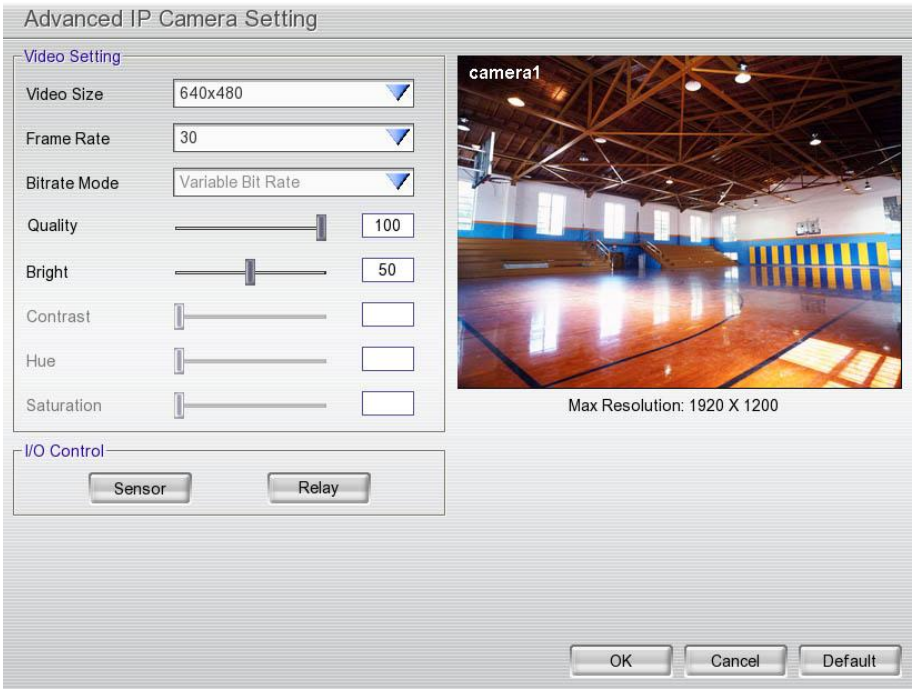
To setup IP camera and display current IP camera information.

- **Using IP Camera Motion:** Enable to use the motion detection function of IP camera if the IP camera has support motion detection and the motion recording will based on IP camera's motion detection setting.
- **IP Setting:** Click **IP setting** to add the IP camera.



1. Click the radio button of **Protocol** to enable the setup of IP camera.
2. Select the **Protocol**, **Model**, **Video Format**, and **Channel** of the IP camera.
3. Enter IP address and connecting port in **IP Camera Site** column.
4. Also, user can enter URL of IP camera instead of IP address.
5. If the IP camera has authority request, please enable **Authentication** and enter **ID** and **Password**.
6. Click **OK** to connect with the IP camera.

- **Detail:** To adjust IP camera parameters, click **Detail**. Click **Default** will back to the factory default value.



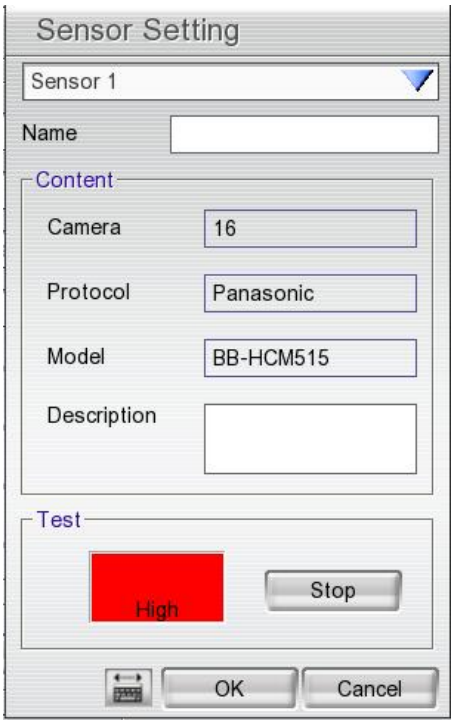
User can select **Video size**, **Frame rate**, **Bitrate Mode** and **Quality** of camera. Also, user can adjust **Bright**, **Contrast**, **Hue**, **Saturation**, and **I/O Control** of the camera.

The selection and adjustment items may vary by the camera has supported.

I/O Control: Setup the sensor and relay that is embedded on the IP camera.

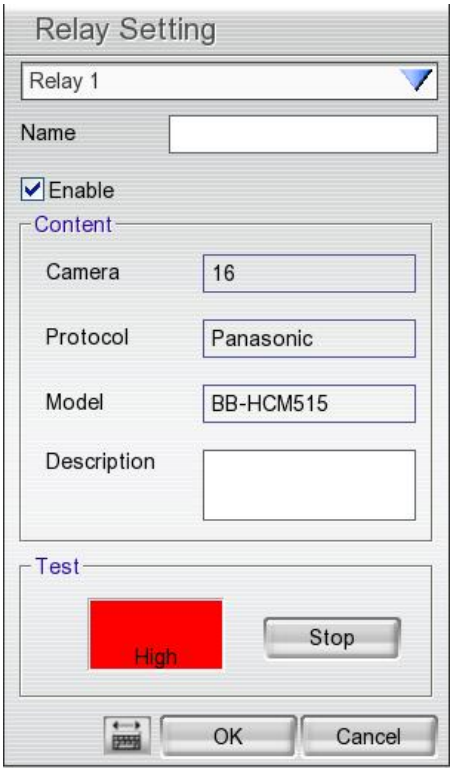
■ Sensor Setting

1. Click **Sensor** button.
2. Click the drop-down list and select the sensor ID number.
3. Enter sensor name in **Name** column
4. The system automatically detects the camera and input relates information. In the Content section, enter sensor **Description**.
5. In the test section, click **Test** to check the sensor status. **Red** is high and **Green** is low.
6. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



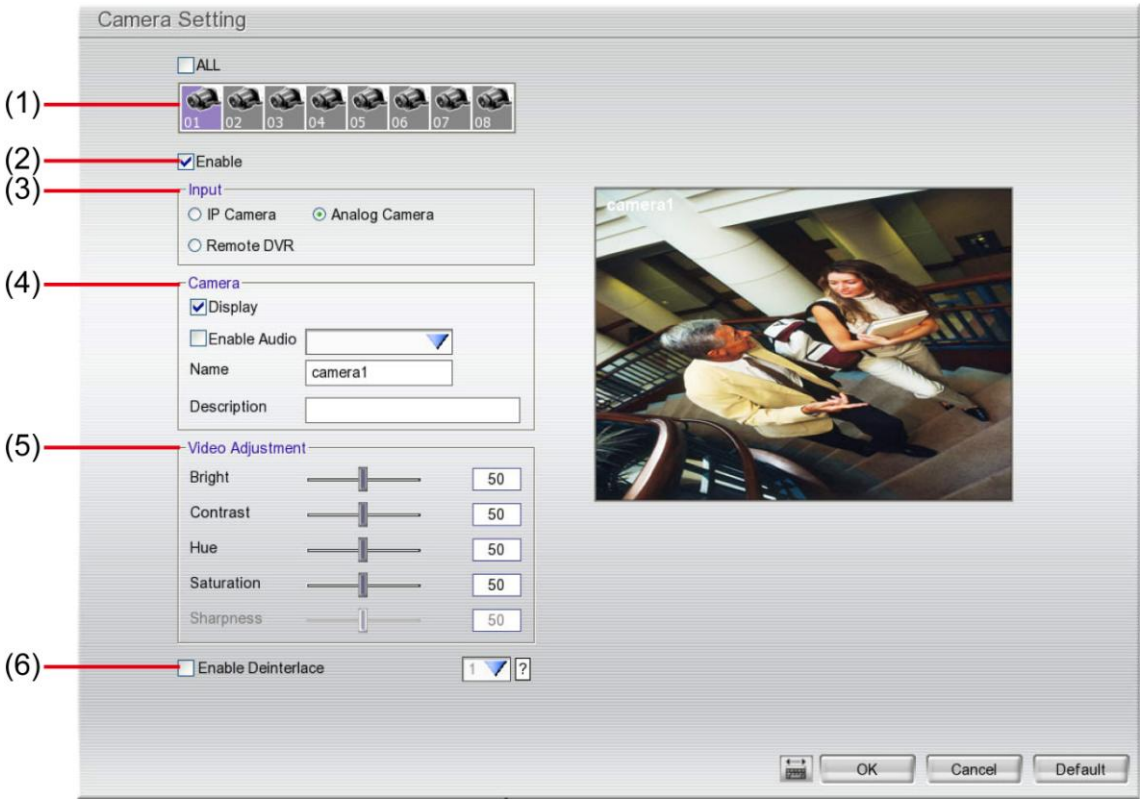
■ Relay Setting

1. Click **Relay** button.
2. Click the drop-down list and select the relay ID number.
3. Enter relay name in **Name** column
4. The system automatically detects the camera and input relates information. In the Content section, enter relay **Description**.
5. In the test section, click **Test** to check the relay status. **Red** is high and **Green** is low.
6. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



3.2.2 To Setup Analog Camera

Click **Default** will back to the factory default value.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Analog Camera**.

(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) Video Adjustment

Adjust the Brightness, Contrast, Hue, Sharpness, and Saturation of the camera.

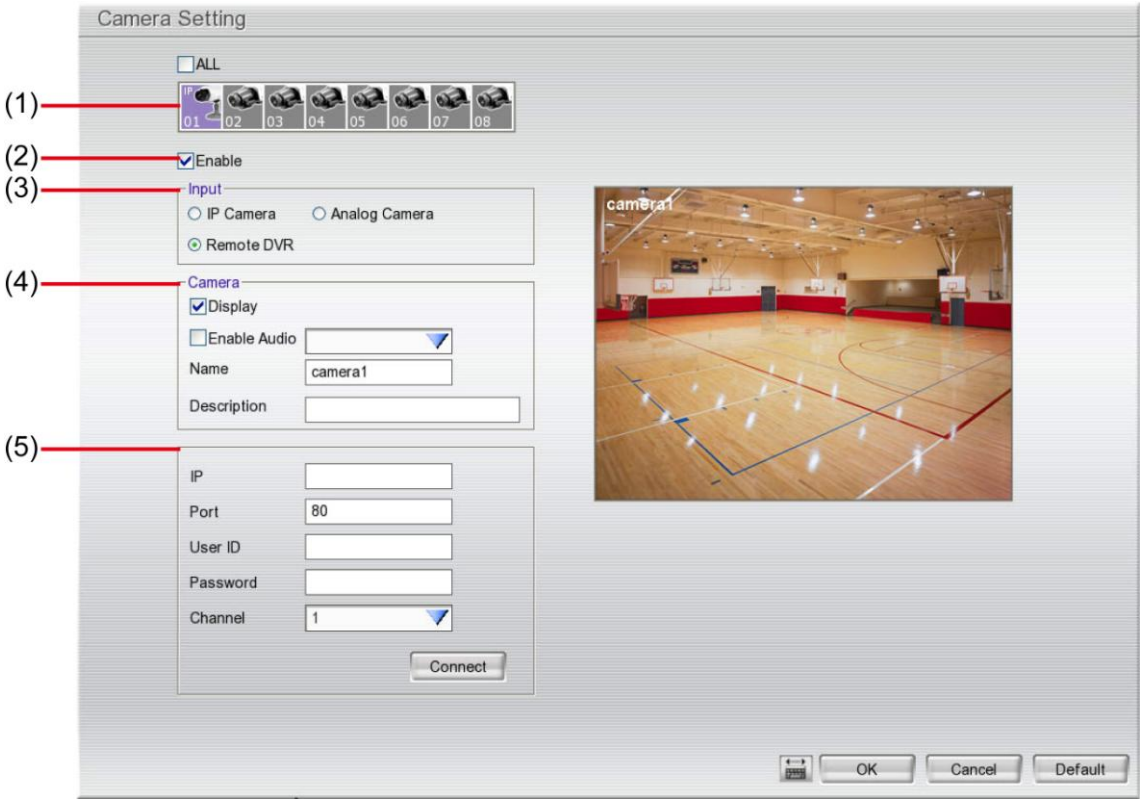
(6) Enable Deinterlace

Enhance the video quality. Set the **Enable Deinterlace** mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

3.2.3 To Setup Camera from the Remote DVR

User can add the camera from another DVR through the network.

EH1004H-4 Nano and EH1008H-4 Nano only support first 4 channels (CH1~4) for remote DVR's camera.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Remote DVR**.

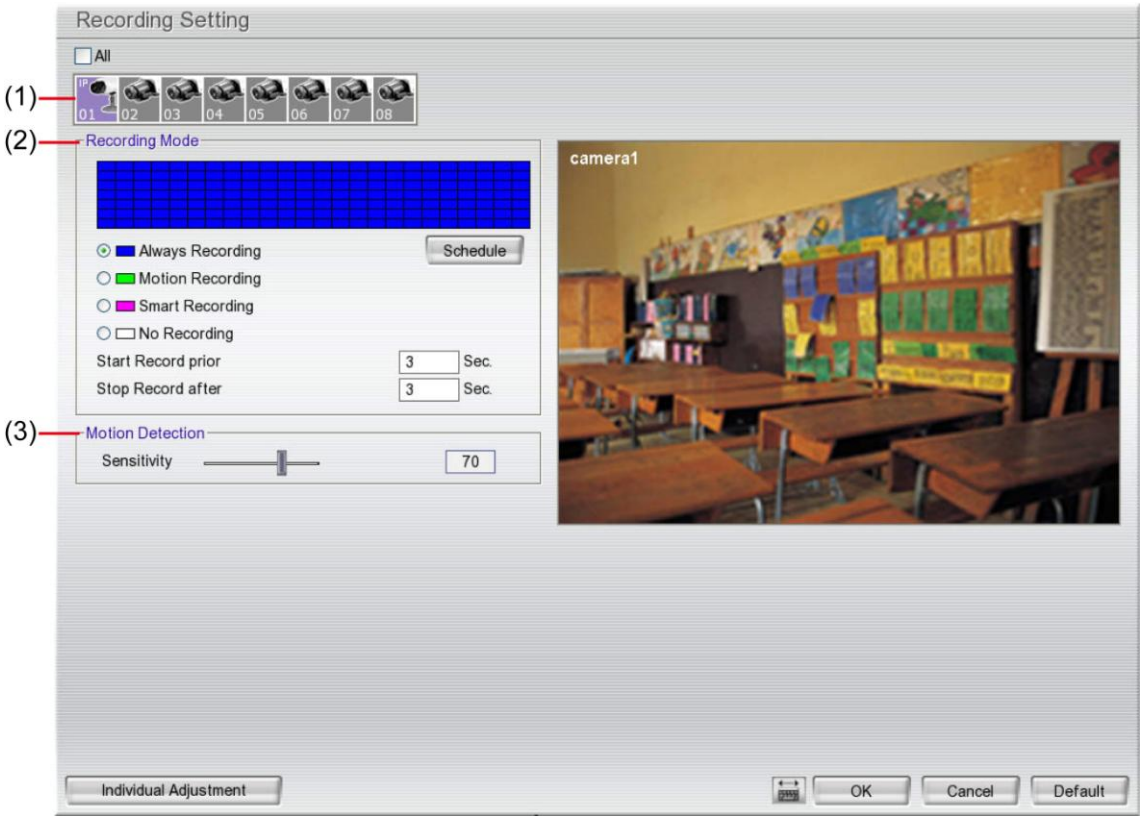
(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment
- **IP**
  Enter the IP address of the camera
- **Port**
  The port for connection
- **User ID**
  Enter the user id that for connecting authority
- **Password**
  Enter the password that is for connecting authority

- **Channel**
  Select the channel of connected camera
- **Connect**
  Click to connect the camera when all configurations are set.

3.3 Recording Setup

3.3.1 Setup IP Camera Record Setting



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

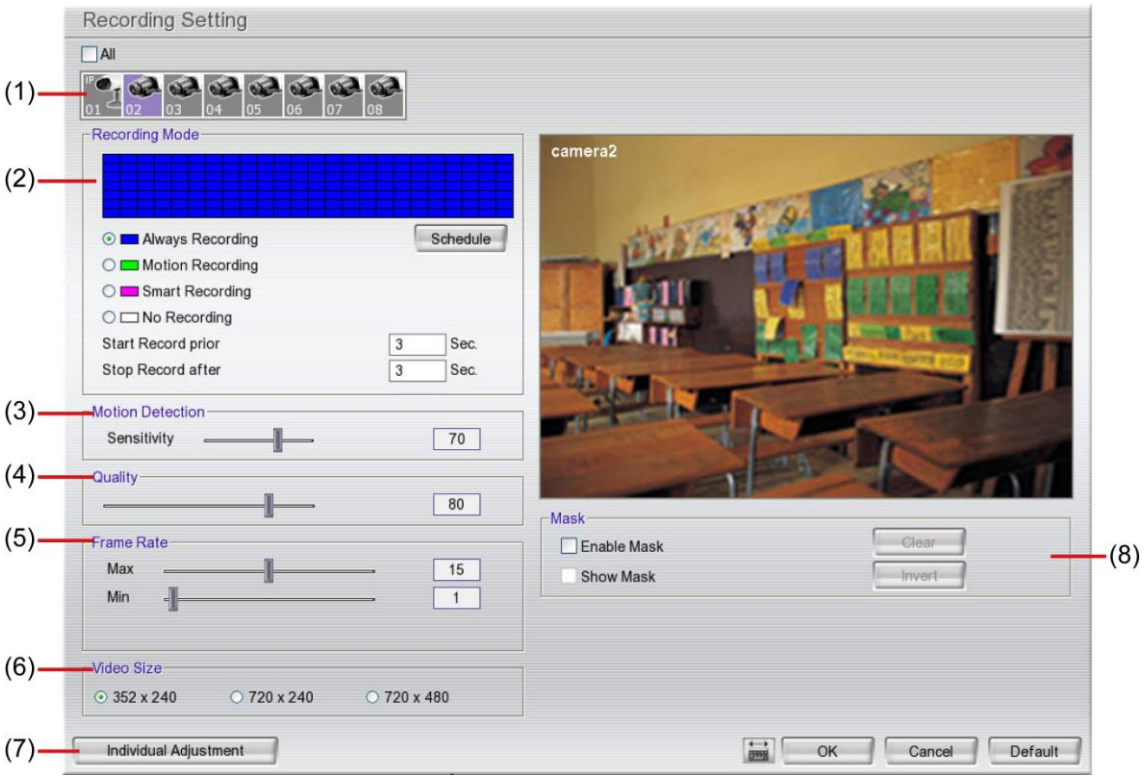
- **Always Recording**
  Record the video from the selected camera and save it to the designated storage device
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

3.3.2 Setup Analog Camera Record Setting

Click **Default** will back to the factory default value.



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

- **Always Recording**
  Record the video from the selected camera and save it to the designated storage device
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**
  Automatically switch to record at the maximum frame rate setting once a motion is detected and recording time will be based on **Stop Record After** setting; if there is no motion, it records at the minimum frame rate setting. Set the frame rate in **(5) Frame Rate**.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(4) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(5) Frame Rate

Set the maximum and minimum number of frames to be recorded during motion and motionless state. The frame rate ranges from 01 to 30 for NTSC and 01 to 25 for PAL. The higher the frame rate, it uses more hard disk space.

Always recoding frame rate is depending on value of max frame rate.

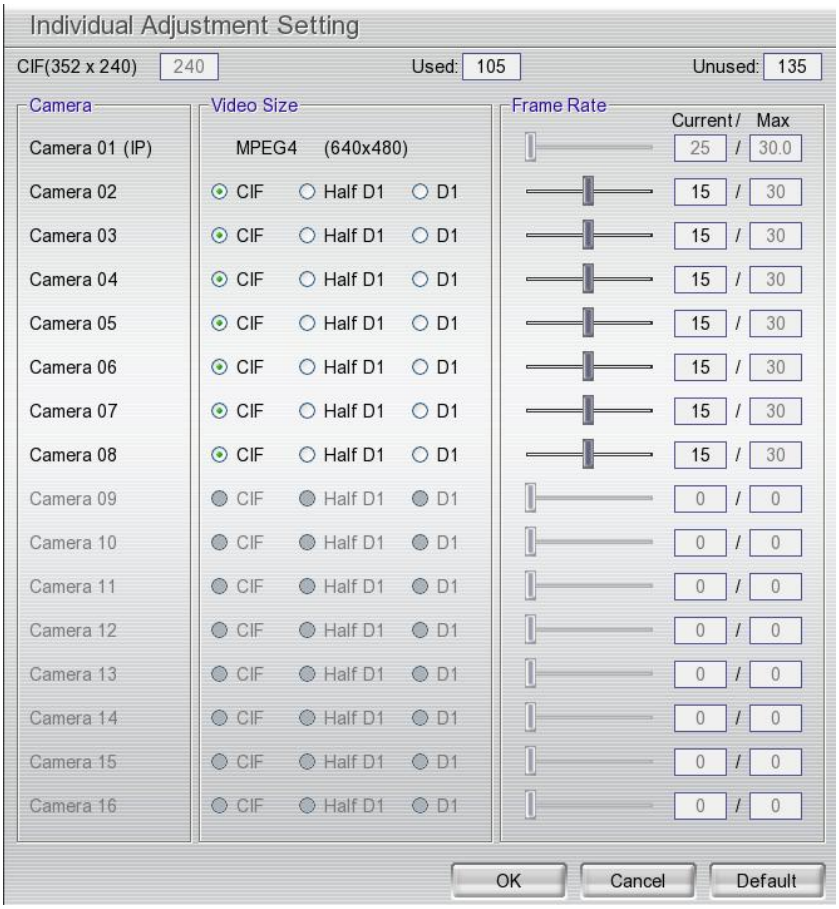
(6) Video Size

Select the size of the video and click the ⊙ button. The higher the size, the larger the file it create.

(7) Individual Adjustment

Each camera can adjust video size and frame rate individually. Click **Default** will back to the factory default value. The frame rate usage is shown in **Used** and **Unused** columns by CIF mode.

Adjusting video size and frame rate by channel, only available on the analog camera.

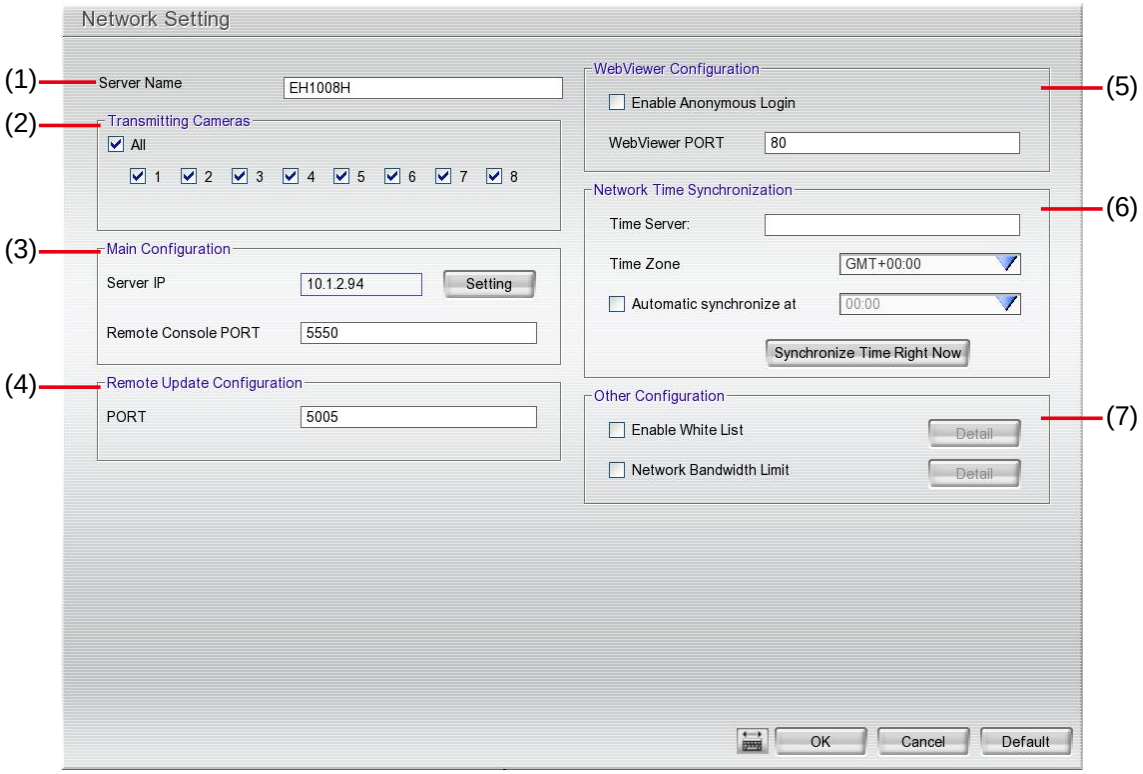


(8) Mask

Mark an area on the screen to disregards the motion in the marked area and to only monitor outside the marked area. Enable the **Enable Mask** and click-and-drag an area on screen that user wants to mask. To clear all mask area, click **Clear** button. To inverse the mask area, click **Invert** button. The original selected area will exchanged with un-selected area. To show the mask area on preview screen, enable **Show Mask**. The mask is able to see on the screen only when preview screen is in single screen mode

3.4 Network Setup

Click **Default** will back to the factory default value.



(1) Server Name

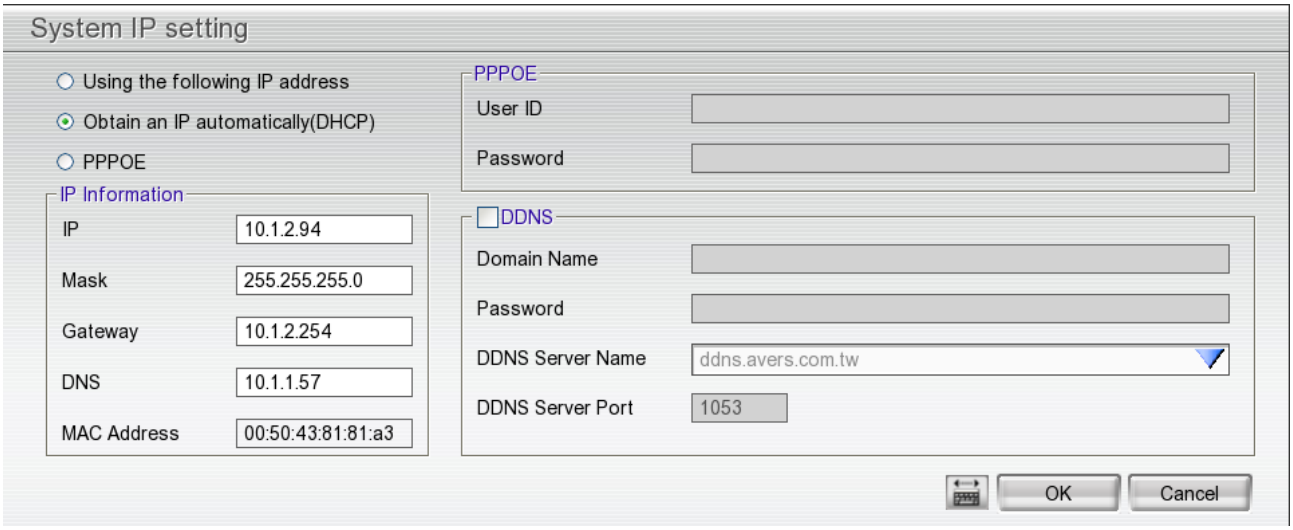
Assign a name for the DVR unit. Alphabet letters and numbers only.

(2) Transmitting Cameras

Select and click on the camera number in the Transmitting Camera section you want to make it accessible via internet using WebViewer, Remote Console, PDA Viewer and JAVAViewer (still image). To select all the cameras, enable the **ALL** check box.

(3) Main Configuration

Set the DVR IP address and **Remote Console Port**. You need this when accessing DVR server from the remote location via internet. Click **Setting** to setup DVR IP.



- **Using the following IP address:** Assigns an IP address for the DVR system. Fill in the IP related parameters in **IP information** section.
  - **IP:** Assign a constant IP address which a real IP address gives from ISP to DVR system.
  - **Mask:** It is a bitmask used to identify the sub network and how many bits provide room for host addresses. Enter the subnet mask of the IP address which user has assigned to DVR system.
  - **Gateway:** A network device acts as a passageway to internet. Enter the network gateway IP address
  - **DNS:** Domain Name Server translates domain names (such as www.abb.com.tw) to IP addresses.

Enter the IP address of DNS if it is available.

- **MAC Address:** An identifier hardware address of DVR unit that is assigned by the manufacturer for identification. User don't need to fill in, it will generated by system automatically.

- **Obtain an IP automatically (DHCP):** Assign the IP address by local DHCP server to DVR system.
- **PPPOE:** Point-to-Point Protocol over Ethernet is a network protocol for encapsulating PPP frames in Ethernet frames. It is used mainly with ADSL services. If your network is using ADSL service connecting to internet, and then, select PPPOE mode. Enter **User ID** and **Password** that is given by your ISP for PPPOE connecting authority.
- **DDNS:** DDNS(Dynamic Domain Name Service) is a data query service mainly used on the Internet for translating domain names into Internet addresses. Users can register their own domain name on **http://ddns.avers.com.tw**. (See Appendix A)
  - **Domain Name**
    Enter the domain name that user has registered.
  - **Password**
    A password use to access DDNS that user has setup when register the domain name
  - **DDNS Server Name**
    Select your DDNS server. The default only has one DDNS server now. It may provide more DDNS in future.
  - **DDNS Server Port**
    Fill in the port that connects to DDNS server. Default is 1053.

(4) Remote Upgrade Configuration

A port is using for the remote firmware upgrade through network.

(5) WebViewer Configuration

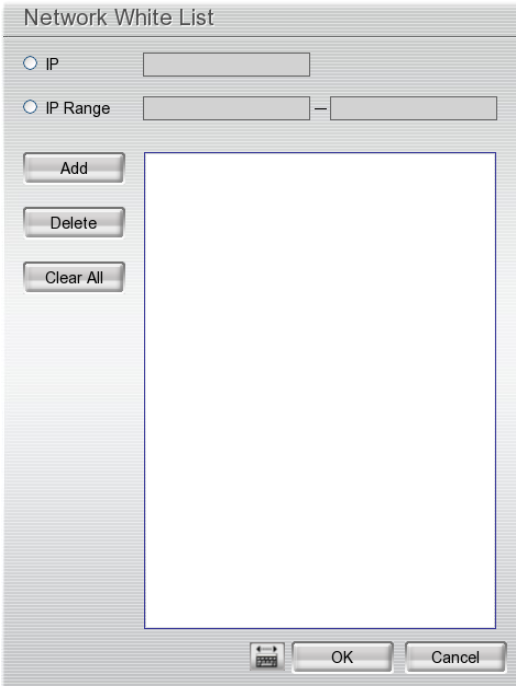
Activate **Enable Anonymous Login** to remotely access the DVR server without the need of password. Fill in the **WebViewer PORT** for remote accessing connection.

(6) Network Time Synchronization

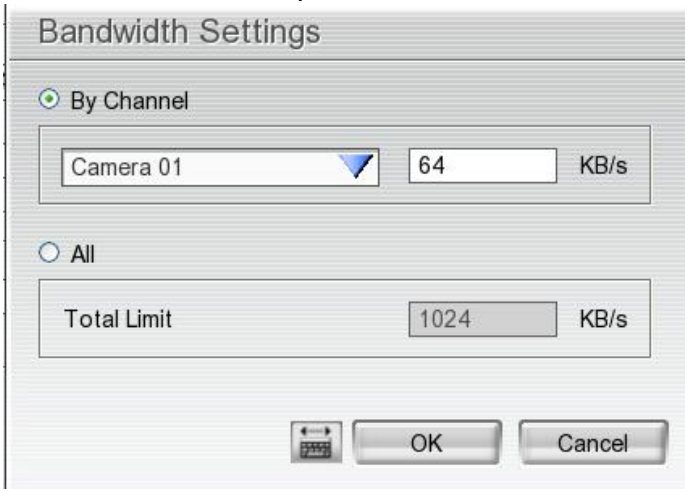
Adjust the DVR system time same as network time server. Fill in the **Time Server** IP address or domain name and select the **Time Zone**. User can enable **Automatic Synchronize at** to set automatic synchronize time on a daily basis. Or, user can click **Synchronize Time Right Now** to adjust time right away.

(7) Other Configuration

- **Enable White List**
  An access permit list for the remote accessing of DVR server. Enter the IP address and click **Add**. Or, enter a range of IP address and click **Add**. To delete the IP from the list, select the IP and click **Delete** button. To reset the input, click **Clear** button.

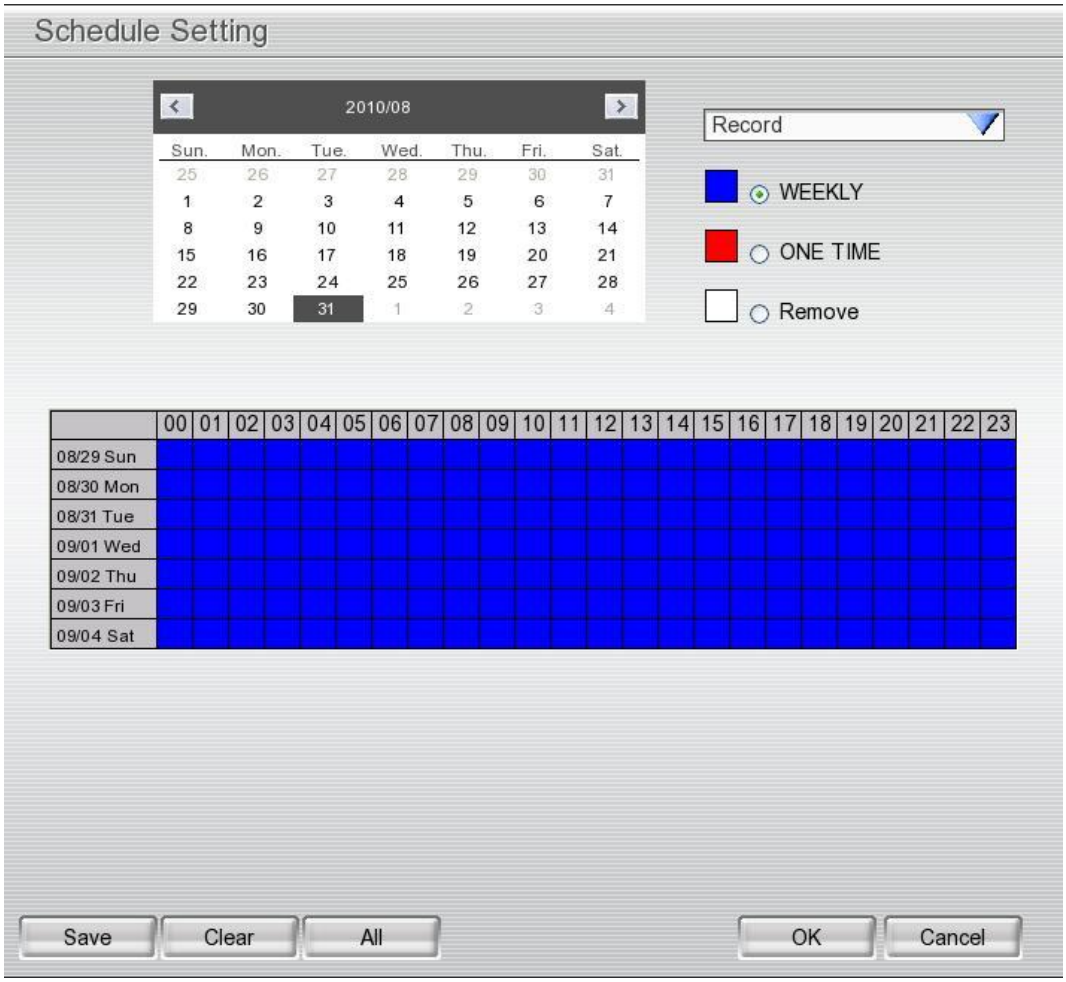


- **Network Bandwidth Limit**
  By Channel: Set the network bandwidth by each channel.
  All: Set the total network bandwidth consumption limit.



3.5 Schedule Setting

Schedule to record, enable network, reboot and disable alarm of all the cameras either weekly or one time. The number from 00 to 23 represent the time in 24-hour clock. The left most column display the days in a week.



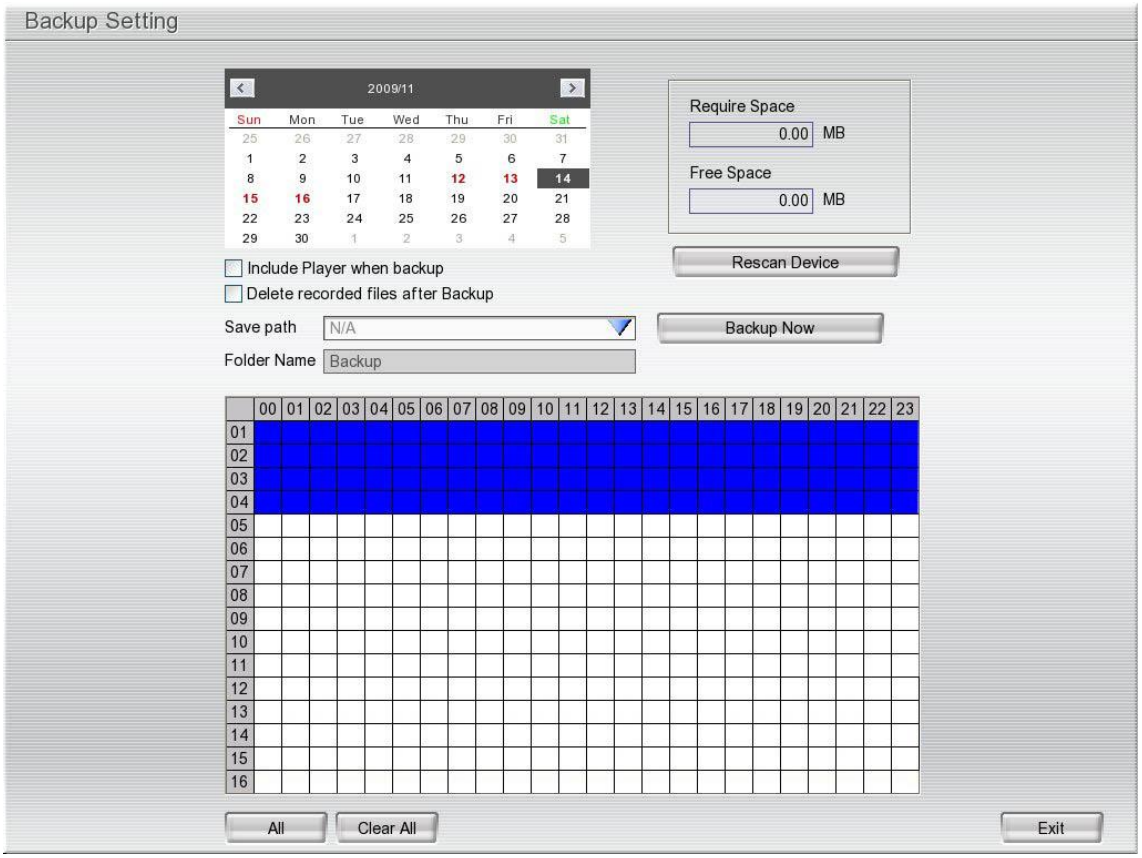
To Set the Schedule Setting:

1. Select the date in the calendar. Use ◂ and ▸ buttons to shift the calendar to the left or right.
2. Select the condition you want to schedule in the drop down list.
   - **Record**
     Activate all the cameras to start video recording at the set time based on the Recording setting
   - **Enable Network**
     Activate DVR remote system to access at the set time. After the appointed time, the Network function will be disabled. If the Network function is already enabled, the Network function will not be disabled when the appointed time has ended.
   - **Reboot**
     Restart the PC at the appointed time.
   - **Disable Alarm**
     Deactivate the alarm at the set time temporarily.
3. Set the schedule as weekly or one time. Click ⊙ to make a selection.
4. Click on the blocks to set the schedule or click **All** to select all. To un-select the specific schedule blocks, click the **Remove** and click blocks to un-select. To store the setting, click **Save**. To remove the settings, click **Clear**.
5. To end Schedule Setting, click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

3.6 Backup Setup

While backup, the CPU usage will be near to 100% and might slow down the DVR system response.

In the Backup Setting dialog box, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 08 represent the camera number. When you back up the file, you may find Qplayer application included in the backup folder. User need to execute the Qplayer installation on PC for playback (see also Chapter 3.6.1).



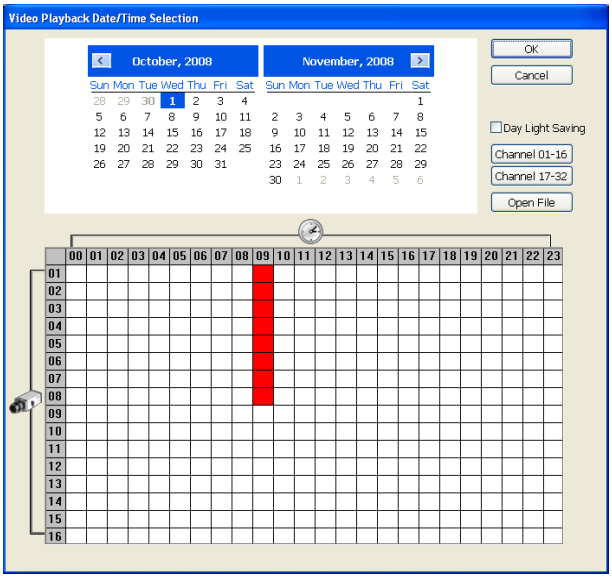
1. Select the date of the recorded file in the calendar you want to backup. Use ◂ and ▸ buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select the recorded file or click camera (01~16) or time (00~23) to select the whole row or column. The blue block turns red when it is selected. The block that appears in white doesn't have data.
3. Check the space need for backup beside the calendar. Click **Rescan Device** to calculate the space for backup.
   - **Require Space**: Show the total size of the backup file.
   - **Free Space**: Show the available storage space
4. If user wants to include the Qplayer program in backup folder, mark the **Inculde Player when backup** check box. The Qplayer program will be in backup folder for playback using.
5. If you do **NOT** want to keep the recorded file in the storage folder, enable **Delete files after Backup** check box.
6. DVR system will give **Folder Name** automatically.
7. Click **Backup Now** button to start archiving the selected file.

3.6.1 Using QPlayer to Playback Backup Video

You can playback the backup files by using QPlayer applications on the PC. When you back up the recorded file, QPlayer applications are automatically included in the backup folder if user has enabled the selection of **Inculde player when backup** when backup recorded file. With QPlayer, it is the same as in Playback mode and supports different split screen types to view all the video at the same time. The only difference is that there are no Preview and Playback buttons.

To run the application, go to backup folder and double-click **Oplayer.exe**.

Name	Function
(1) Exit	To close the application
(2) Split Screen Mode	Select from 6 different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
	- If there are only 8 cameras, when user select 13 and 16-split screen mode, only 8 channels have the video display and rest of channels will be black screen. - To zoom in an area on the screen, **Right** click and **Drag** a square on the area you want to enlarge.
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
	The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.
(5) Playback Control Buttons	From left to right order: **Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2X, 1/4X, 1/8X, 1/16X, or 1/32X. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.

Name	Function
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. − **OPEN FILE:** user can open the recorded file from HDD − **Channel 01~ 16**&**Channel 17 ~ 32:** If the channels are over 16, click button to switch to different channel group of playback calendar. − **Day Light Saving:** the playback calendar will show the available video records during day light saving time period. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(7) Status bar	Display the recorded date, time and play speed.
(8) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(9) Language	Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.
(10) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.dvr format.
(11) Segment	Keep a portion of the recorded video (see also Chapter 3.6.2).
(12) Full screen	View in full screen mode. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.

Name	Function
(13) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(14) Event Search	Search from the recorded activities that were recorded in event log (i.e., Sensor, Motion, Video Loss). (See also Chapter 3.6.3)
(15) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 3.6.4).
(16) Audio	Enable/disable volume
(17) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

3.6.2 To Cut and Save the Portion of the Recorded Video

1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

3. Click **Export** > **Output Video Clip** button to save the wanted portion.
4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.

3.6.3 To Search Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. The video search would stop at the frame that matches the condition. To keep on searching click **Find Next**(

) button.
4. You may also set to search and list all the result. In the **Search Duration** section, set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.
5. When the Event list appear, click and select the item you want to view.

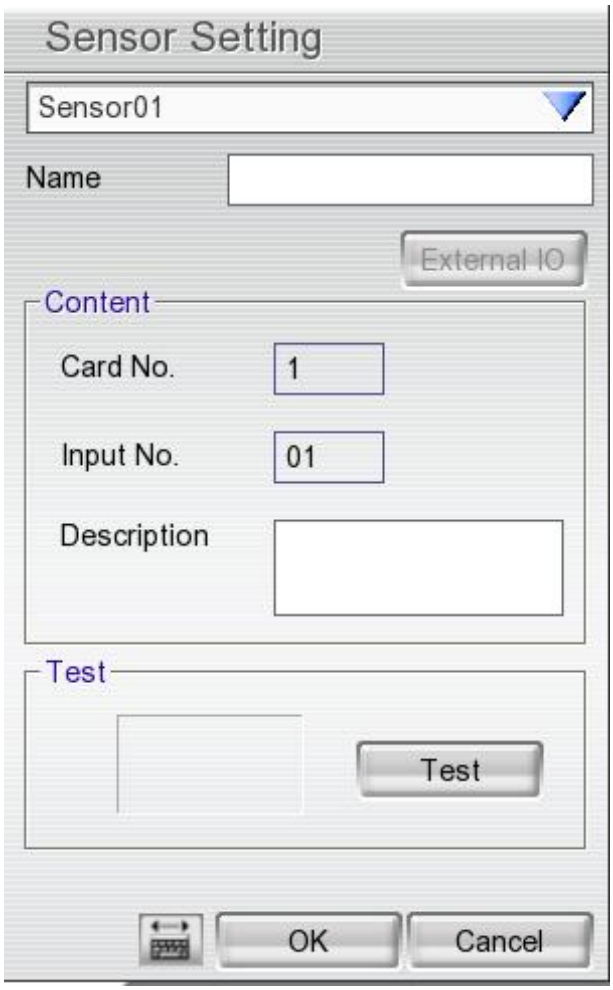
3.6.4 To Search Using the Intelligent Search

1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click . You may also set to search and list all the result. Just check the **List** box. In the **Search Duration** section set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.

3.7 Sensor Setting

The I/O device must be installed to use this function.

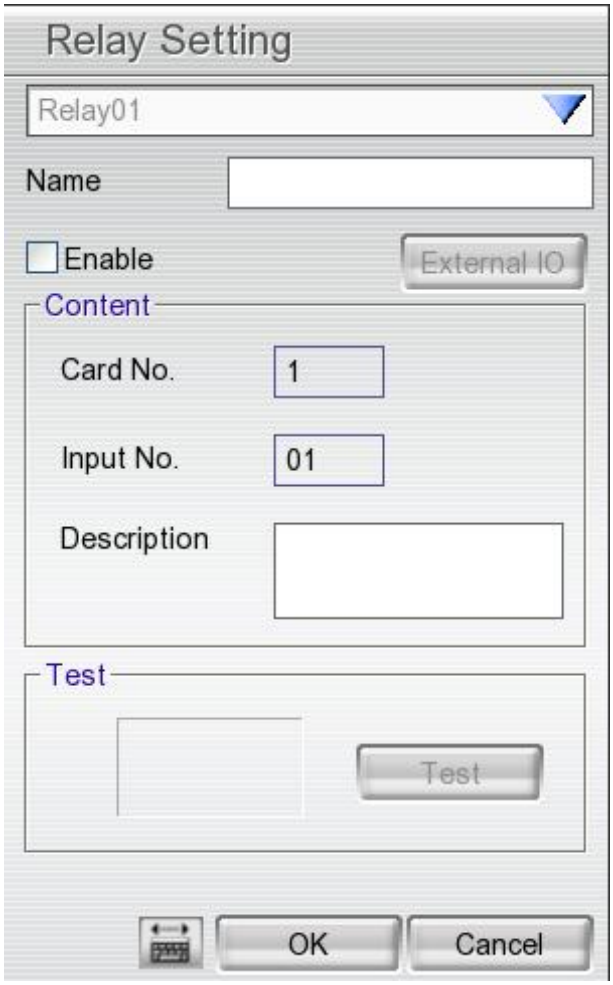
1. Click the drop-down list and select the sensor.
2. Enter sensor name in **Name** column.
3. The system automatically detects the card and input number. In the **Content** section, enter **Description** of sensor.
4. In the test section, click **Test** to check the sensor status. **Red** is high and **Green** is low.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



3.8 Relay Setting

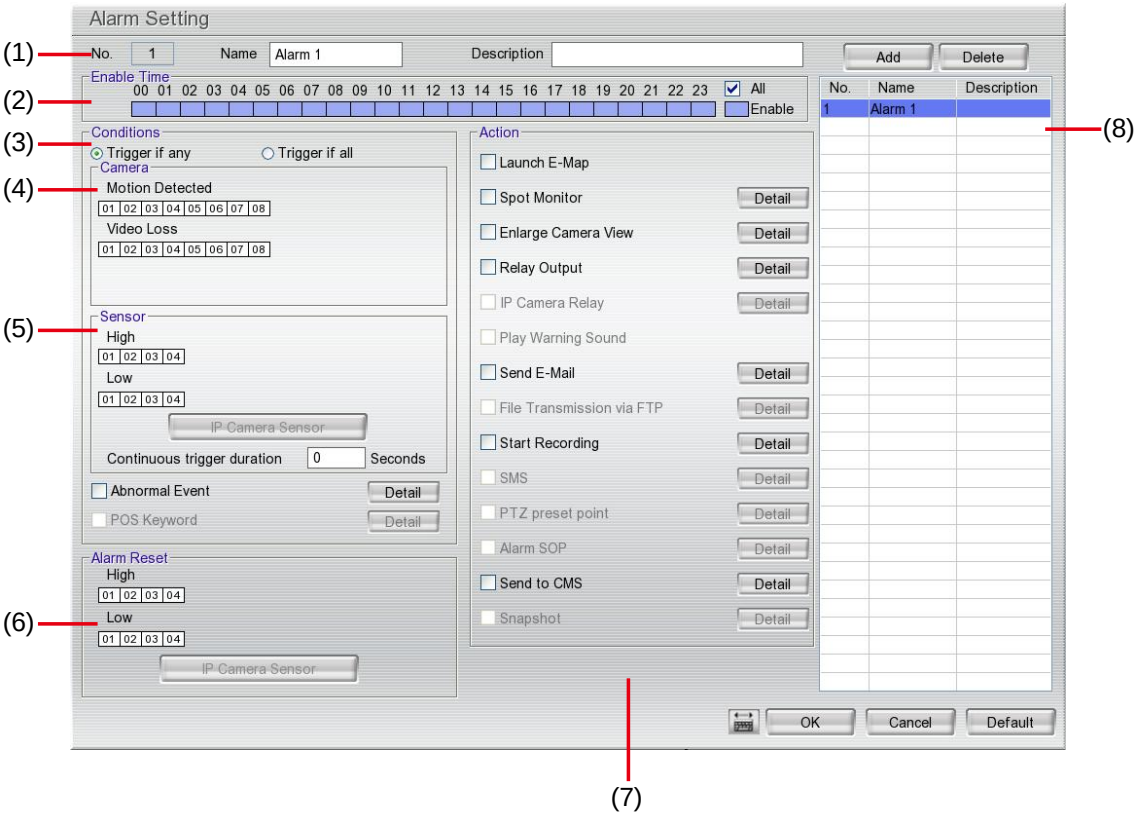
The I/O device must be installed to use this function.

1. Click the drop-down list and select the relay.
2. Enter relay name in **Name** column.
3. The system automatically detects the card and input number. In the Content section, enter **Description** of relay.
4. In the test section, click **Test** to trigger relay. **Red** is high and **Green** is low.
5. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

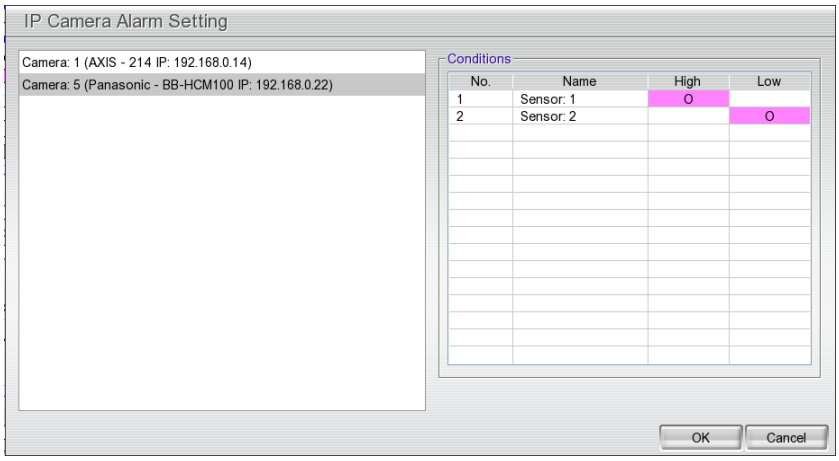


3.10 Alarm Setting

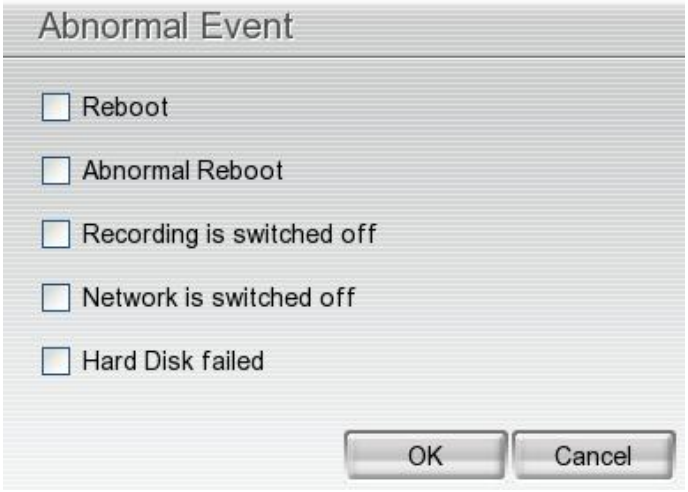
In the Alarm Setting dialog box, click **Add** to insert and set new alarm setting, click **Delete** to remove the selected alarm setting, click **OK** to exit and save the setting, **Cancel** to exit without saving. Click **Default** will back to factory default value.



1. Click **Add** to insert and set a new alarm setting. Click the items in the **(8) Alarm Setting List** if you want to modify the alarm setting.
2. In **(1) No./Name/Description** enter alarm name and description. Alarm **No.** will be created by DVR system.
3. In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Select the time and click the block you want to activate or deactivate the alarm function. When it is deactivated the color of the block turns white.
4. In **(3) Conditions**, you can set "**Trigger if any**" to activate if it falls to one of the conditions or "**Trigger if all**" to activate if it falls to all conditions.
5. In **(4) Camera** section, select and click on the camera number (01 to 08) in **Motion Detected** and **Video Loss** to set the condition for the system to alarm.
6. In **(5) Sensor**, select and click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
   - **IP Camera Sensor:** To adjust sensor high/low that is connected on the IP camera.

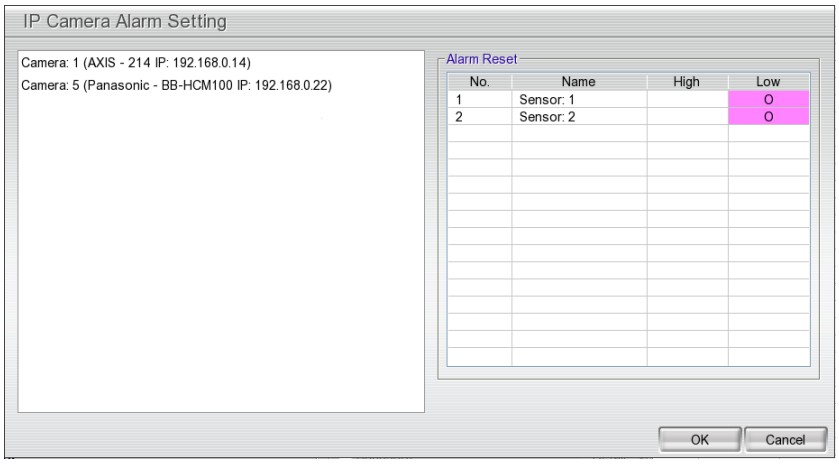


- Enable/disable the **Abnormal Event** check box, to set the condition of the event for system to alarm.



  - **Reboot:** when the DVR system reboot without abnormal condition, the system will send out the alarm message.
  - **Abnormal Reboot:** when the DVR system reboot in irregular condition, the system will send out the alarm message.
  - **Recording is switched off:** when the recording has been stopped, the system will send out the alarm message.
  - **Network is switched off:** when the network connection of DVR system is lost, the system will send out the alarm message.
  - **Hard Disk failed:** when the hard disk doesn't work normally, the system will send out the alarm message.
- **Continue trigger duration:** Set a time period that when sensor has been trigger and stay in the same status for that period, then the alarm will be sent out.

7. In **(6) Alarm Reset**, click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment. If the sensor normal status is high, set the alarm reset condition to low. Click **IP Camera Sensor** to configure sensor status of IP camera. Click **High**/**Low** to set sensor status to high or low.



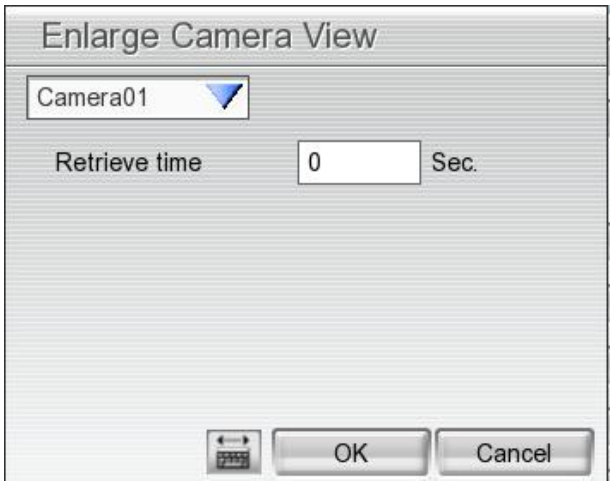
8. In **(7) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.
   - **Launch E-Map:** Display mini E-map screen.
   - **Spot Monitor**
     When the DVR system receives the alarm, the alarm video will display on spot monitor.
     Mark **Spot Monitor 1**/**Spot Monitor 2** to enable the sport monitor function. And then, select the camera (channel) when the DVR system receives the alarm from the selected camera will display the alarm video on the spot monitor.

- **Enlarge Camera View**

  Switch to only display video in Preview mode from where the alarm is activated.

  a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.

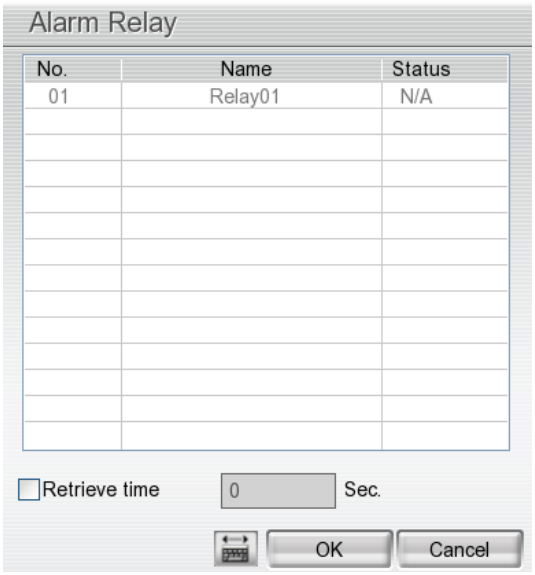
  b. **Retrieve time:** set the waiting duration before system switching back to original Preview mode. If the retrieve time is un-mark, the alarm video will keep enlarging until user switch back to Preview mode manually. The retrieve time range is 0~ 600 seconds.



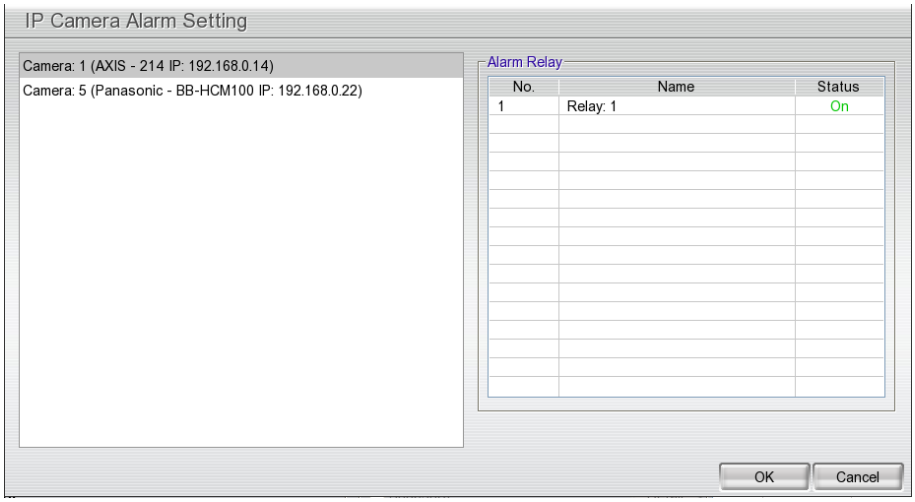
- **Relay Output**

  Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation.

  1. Beside the Relay Output check box, click **Detail**.
  2. In the Alarm Relay dialog box, select from the available relay list and in the **Status** column, set to on/off the relay operation when the alarm is activated.
  3. In the **Retrieve time** check box, you may enable/disable to extend the relay operation time and set the duration in second.
  4. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



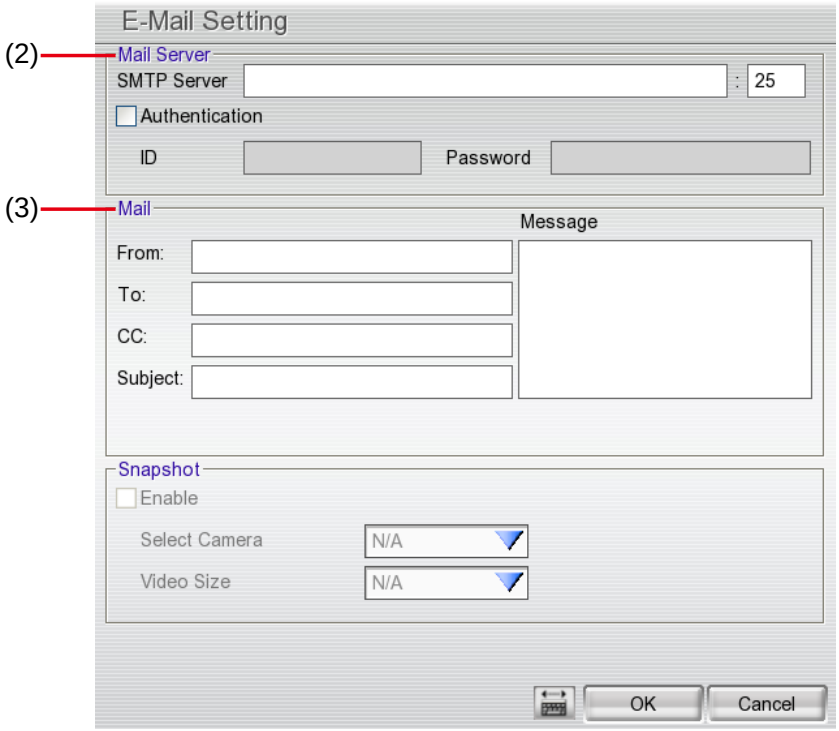
- **IP Camera Relay:** Set to enable/disable the relay operation when the alarm is activated.



- **Send E-mail**

  Send an electronic text message. Beside the Send Email check box, click **Detail**.

  In the E-mail Setting dialog box, click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



(1) Mail Server

Enter the **SMTP Server** and **port**. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.

(2) Mail

Fill the mailing information.

- ✓ **From:** Enter the sender e-mail address.
- ✓ **To and CC:** Enter the recipient email address and separate it with comma or a semicolon (;).
- ✓ **Subject:** Enter the message title.
- ✓ **Message:** Type the message.

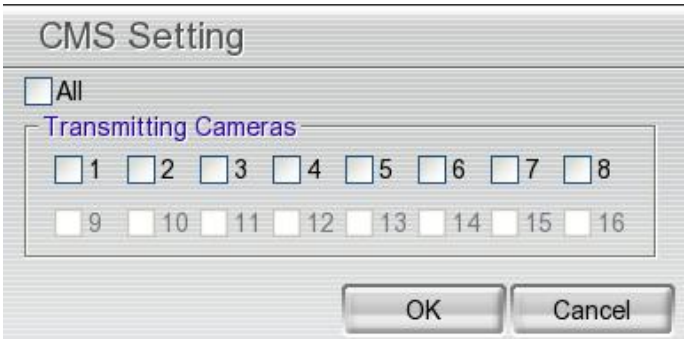
- **Start Recording**

  Record the video from the selected camera.

  1. Beside the Start Recording check box, click **Detail**.
  2. In the Alarm Recording Setting dialog box, select the camera to enable/disable video recording. Enable **All** to select all cameras.
  3. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting.
  4. In the **Start Record prior** text box, mark and set the number in second for the program to begin recording after the alarm has been trigger. The time range is 1~10 seconds.
  5. In the **Stop Record after** text box, mark and set the number in second for the program to continue recording after the alarm has ended. The time range is 1~999 seconds. If user doesn't mark and set the time, the alarm recording will continue recording until alarm is reset.
  6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

- **Send to CMS (Central Management System)**

  Enable/disable the selected camera to send video to CMS when the alarm is activated.

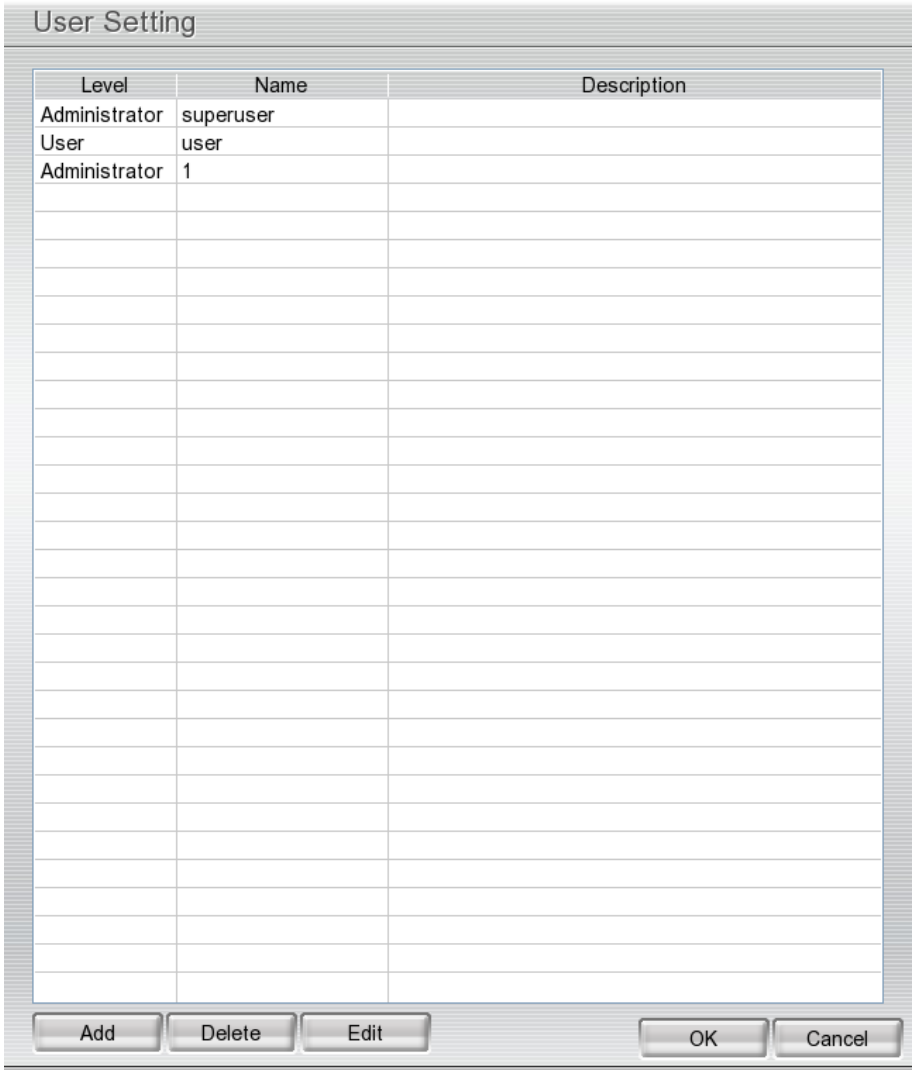


  Beside the Send to CMS check box, click **Detail**. In the CMS Setting, select the camera to enable/disable sending the video to CMS. Enable **All** to select all cameras. Then, click **OK** to accept the new settings and **Cancel** to exit without saving.

3.11 User Setup

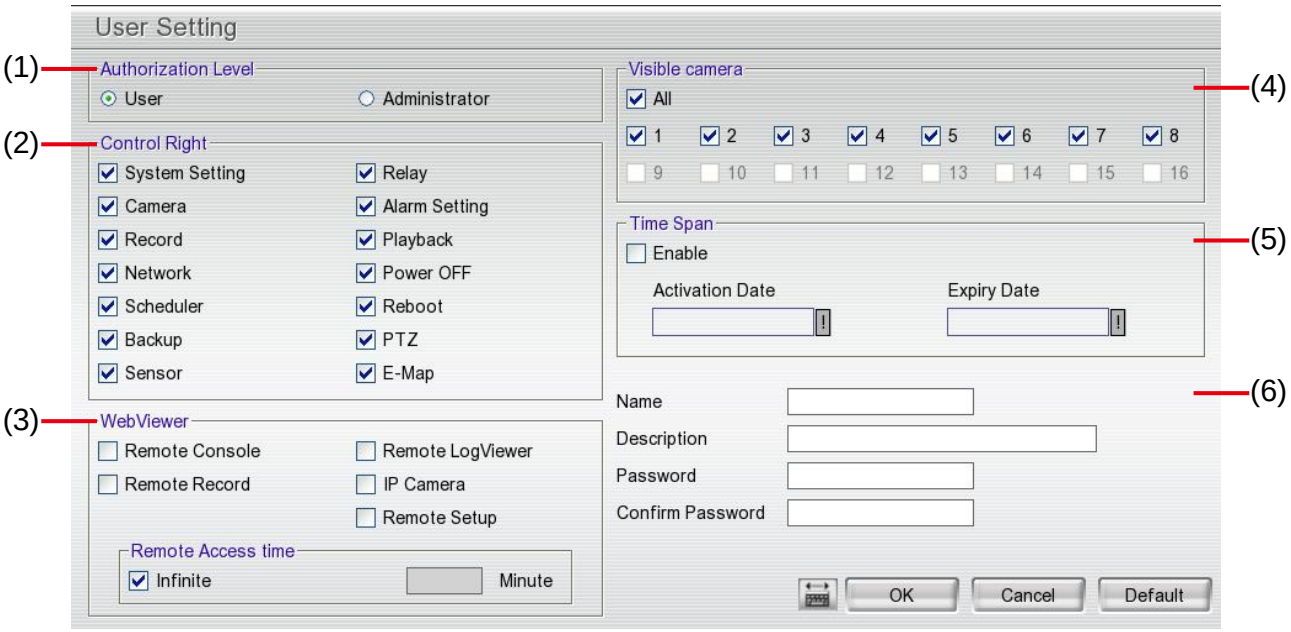
Only administrator level authority can access User Setting. The maximum user accounts are 32.

In the User Setting dialog box, click **Add** to insert a new user, **Delete** to remove the selected user, **Edit** to modify the user control right, **OK** to exit and accept the setting, and **Cancel** to exit without saving the setting.



To Add a User Account:

1. In the User Setting dialog box, click **Add**.
2. Select and fill in the following information.



(1) Authorization level

Select the status of the user.

(2) Control Right

Enable the items that would allow the user to access.

(3) Web Viewer

Enable/disable Web Viewer control right that allow the user to operate from a remote location using internet explorer.

- **Remote Console**
  Allow the user to remote modify DVR system setting.
- **Remote Record**
  Allow the user to execute recording.
- **Remote LogViewer**
  Allow the user to view the event log from remote site.
- **IP Camera**
  Enable/disable user to add new IP camera when using the Web Viewer.
- **Remote Setup**
  Allow user to change/modify DVR system setting from remote site.
- **Remote Access Time**
  Enable **Infinite** check box to access DVR without time limit. If you want to set time limit, enter the number of minutes in **Minute** text box.

(4) Visible Camera

Select the camera number that would allow the user to access or view. To select all the cameras, enable the **ALL** check box.

(5) Time Span

Set the user account a specific time period that user only can use given account to login DVR program in that specific period. Mark **Enable** check box and select the **Activation Date** and **Expiry Date**.

(6) Name

Enter the user name.

Description

Enter the user description.

Password

Enter the user password.

Confirm Password

Enter the same user password for confirmation.

Chapter 4 Using the UPC to Playback Backup File

4.1 Recommended System Requirements

- ☐ Pentium®4 2.4GHZ or above
- ☐ Windows®2000/ XP/Vista/7
- ☐ DDR 256 MB
- ☐ Graphic function must support DirectDraw
- ☐ Audio card or built-in
- ☐ Speaker
- ☐ 1 available USB2.0 port

4.2 Installing the USB Playback Console

To install the USB Playback Console:

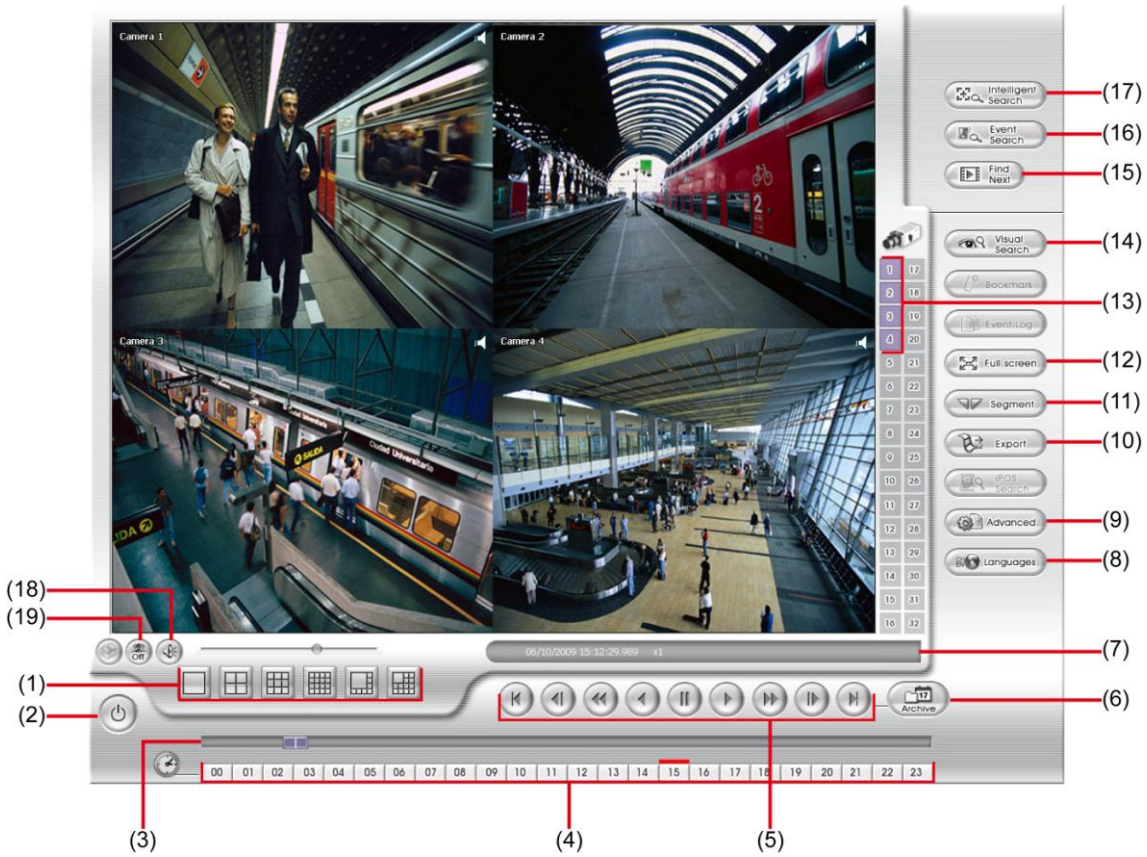
1. Place Installation CD into the CD-ROM drive. When the installation main screen appears, click **Install USB Playback Console** and then follow the on screen instructions

2. Select the language you prefer

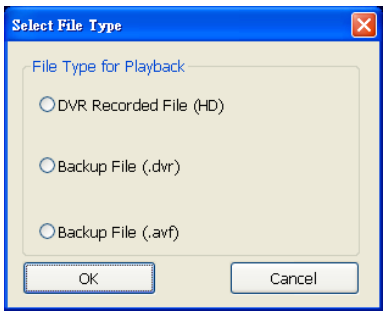
3. Click **OK** to install the application.
4. Click **Exit** to close the installation main screen.
5. You may now connect the external USB storage device that has saved recorded files to PC.

4.3 Familiarizing the Buttons in USB Playback Console

To run the application, click the icon on the PC desktop



Name	Function
(1) Split Screen Mode	Select from different screen view to playback the recorded video file of the entire camera or one camera on screen.
(2) Exit	Close the application.
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour button	Select and click to playback the recorded video file on the specific time frame.
(5) Playback Controller	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame by frame. **Slower:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, or 32x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 1/2x, 1/4x, 1/8x, 1/16x, or 1/32x. **Next:** Go to the next frame by frame. **End:** Go to the end of the recorded video file.

Name	Function
(6) Archive	To select the video file source for playing.  – **DVR Recorded File (HD):** To playback the recorded video from the hard disk which was recording video on the DVR system. (see also Chapter 4.3.2) – **Backup File(.dvr):** The file is backup and save in *.dvr file format. (see also Chapter 4.3.3) – **Backup File (.avf):** The file is backup and save to external USB storage device in *.avf format. Select the file source folder and click **OK** to playback (EH1008H-4 doesn't support *.avf file format).
(7) Status bar	Display the recorded date, time and play speed.
(8) Language	To switch DVR application UI language.
(9) Advanced	Advanced function is including : ■ **HDD Backup:** to call out HDD Backup application. (see also Chapter 4.3.4) ■ **iEnhance:** to call out iEnhance application. (see also Chapter 6) ■ **AVF to AVI:** save *.avf file format as *.avi file format.
(10) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output:** Save the segmented file in *.avi format
(11) Segment	Keep a portion of the recorded video (see also Chapter 4.3.1)
(12) Full screen	Use the entire area of the screen to only display the video. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(14) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second(see also Chapter 4.3.5)
(15) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(16) Event Search	Search from the recorded activities that take place in the system (i.e., Sensor, Motion, Video Loss, POS)(see also Chapter 4.3.6)
(17) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 4.3.7)
When back file is opened by date (**Open date**), the **Visual Search**, **Find Next**, **Event Search**, and **Intelligent Search** are not supported.	
(18) Sound /Sound bar	- Turn on and off the sound - Increase and decrease the volume
(19) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

4.3.1 To Cut and Save the Portion of the Recorded Video

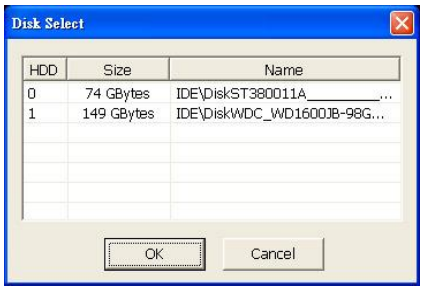
1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

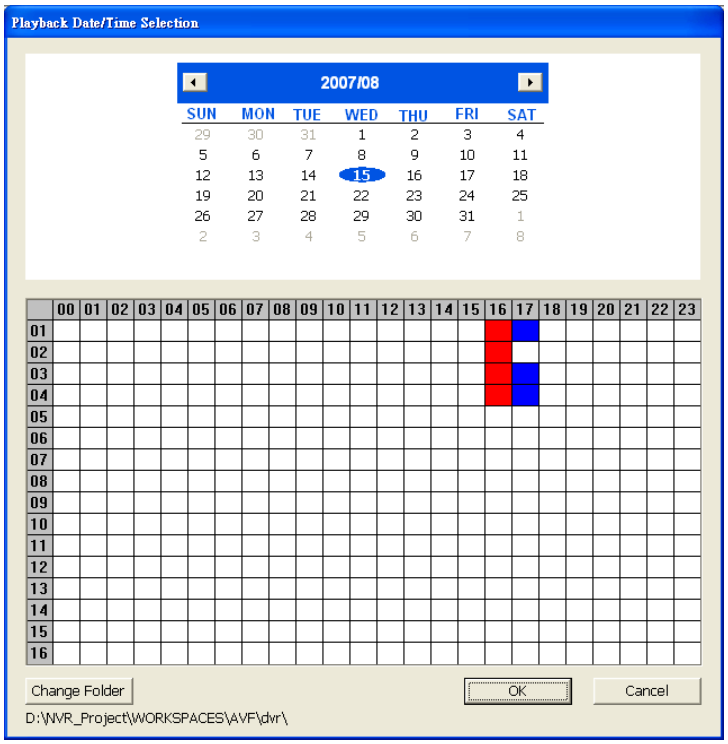
3. Click **Export** > **Output Video Clip** button to save the wanted portion.
4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.

4.3.2 Playback DVR Recorded File from Hard Disk

1. Please have the hard disk which containing of recorded video data install on your PC or using external USB enclosure to connect to your PC.
2. Click **Open File** button
3. Select **DVR Recorded File(HD)** and click **OK**.
4. Select the hard disk drive from **Select Disk** window and click **OK**.



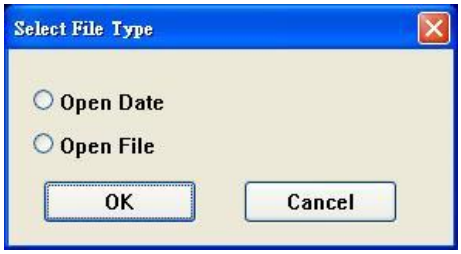
5. And then, Playback Date/Time Selection window appears. Select the date and time and click **OK**.



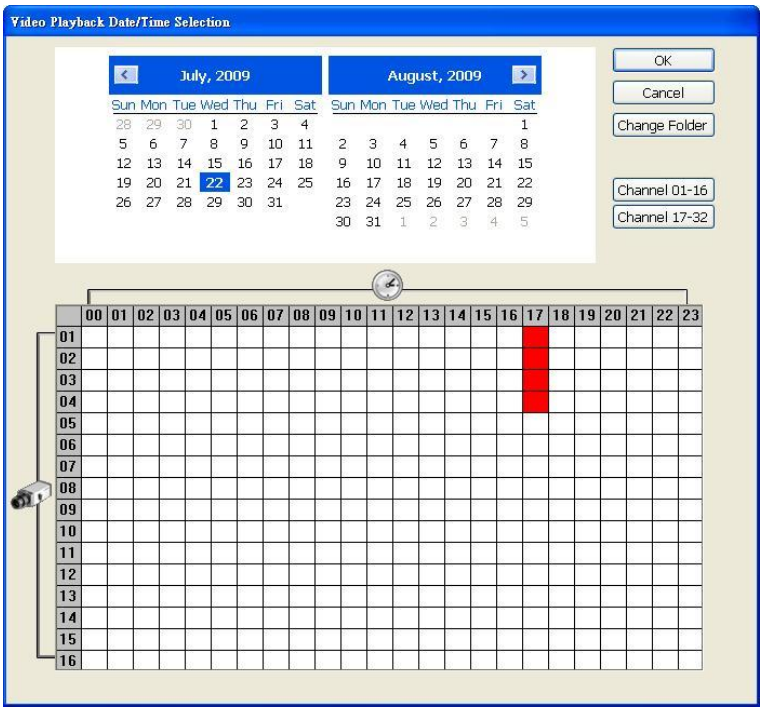
4.3.3 Playback Backup File(*.dvr)

1. Click **Archive** button.
2. Select **Backup File(*.dvr)** and click **OK**.

3. The **Select File Type** window will show up. Select the way to open the backup file.



- **Open Date:** Open backup file by date. Located the backup file on local hard disk and select the date on calendar to playback.
  - ✓ **Change Folder:** To select different playback file form other folder location.
  - ✓ **Channel 01~ 16**&**Channel 17 ~ 32:** Switch to different channel group of playback calendar if the camera channel is more than 16 channels.



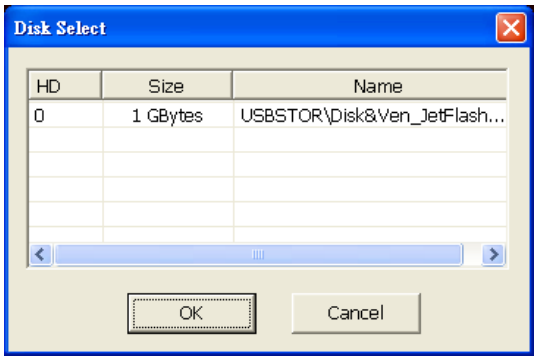
- **Open File:** Locate the backup file folder and click **OK**.

When open the backup video file, just locate the where backup file folder is.

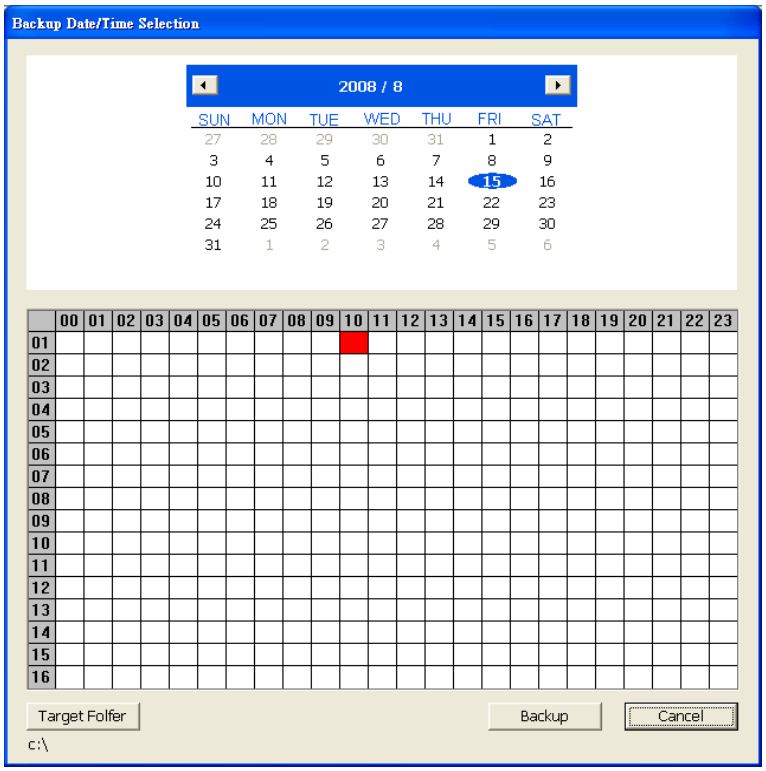
4.3.4 To Backup Recorded File

HDD backup function allows user to backup recorded file from hard disk.

1. Click **Advanced** → **HDD Backup** on USB Playback Console UI.
2. Select the source hard disk.



3. In Backup date/time selection windows, select the date and time. 00-24 represents hours and 01-08 represents channels. Blue block means there has recorded file. Red block means the block has been selected. Click-and-drag can select multiple blocks at once.

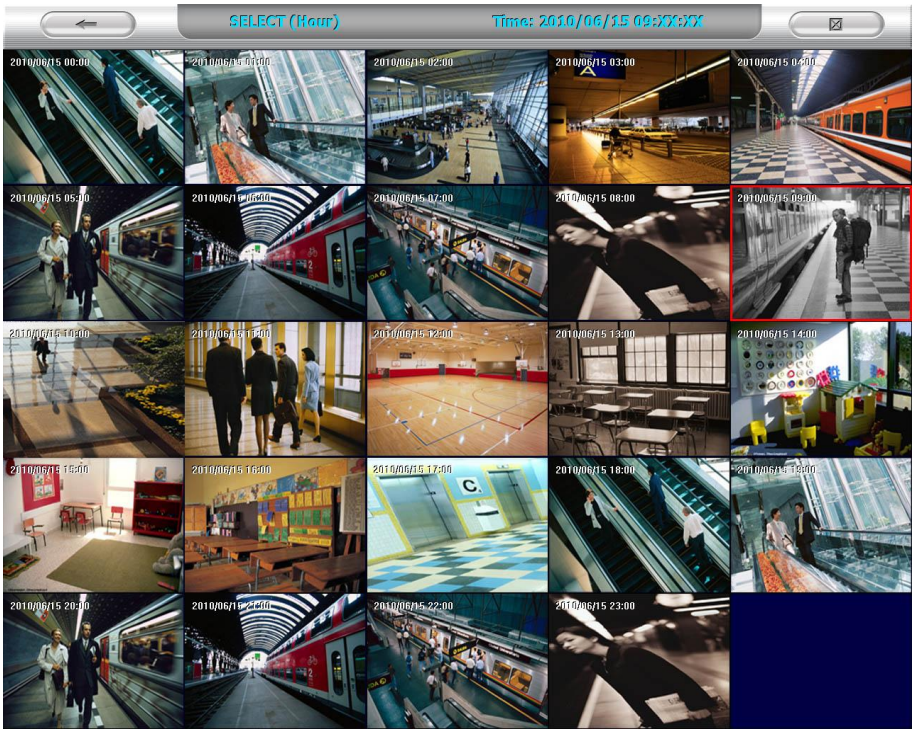


4. Click **Backup** to start backup file.
5. When backup complete, the complete information windows will display.

4.3.5 To Search Using the Visual Search

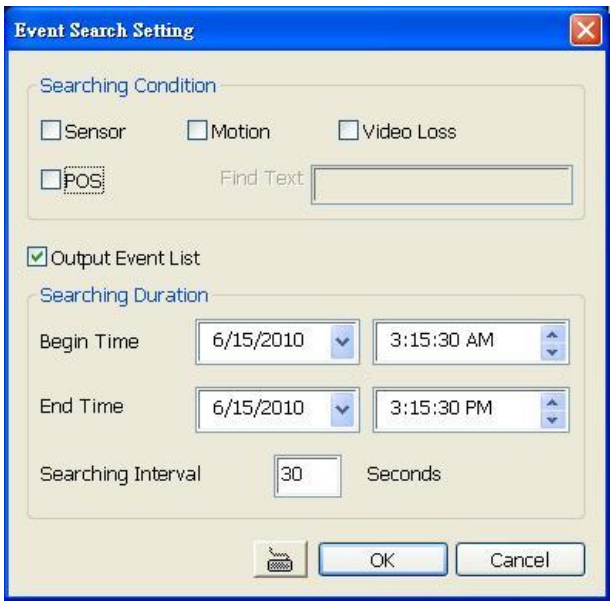
1. Click **Visual Search**.
2. In the Visual Search Setting dialog box, select the Camera number and the date. Then click **OK**.

3. When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every 3Minutes of that hour, every 10 Seconds of that minute, every Second of that 10 seconds. To go back, click . To view from the selected frame and close event search, click .



4.3.6 To Search Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. The video search would stop at the frame that matches the condition. To keep on searching click **Find Next** ( ) button.
4. You may also set to search and list all the result. In the **Search Duration** section, set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.
5. When the Event list appear, click and select the item you want to view.



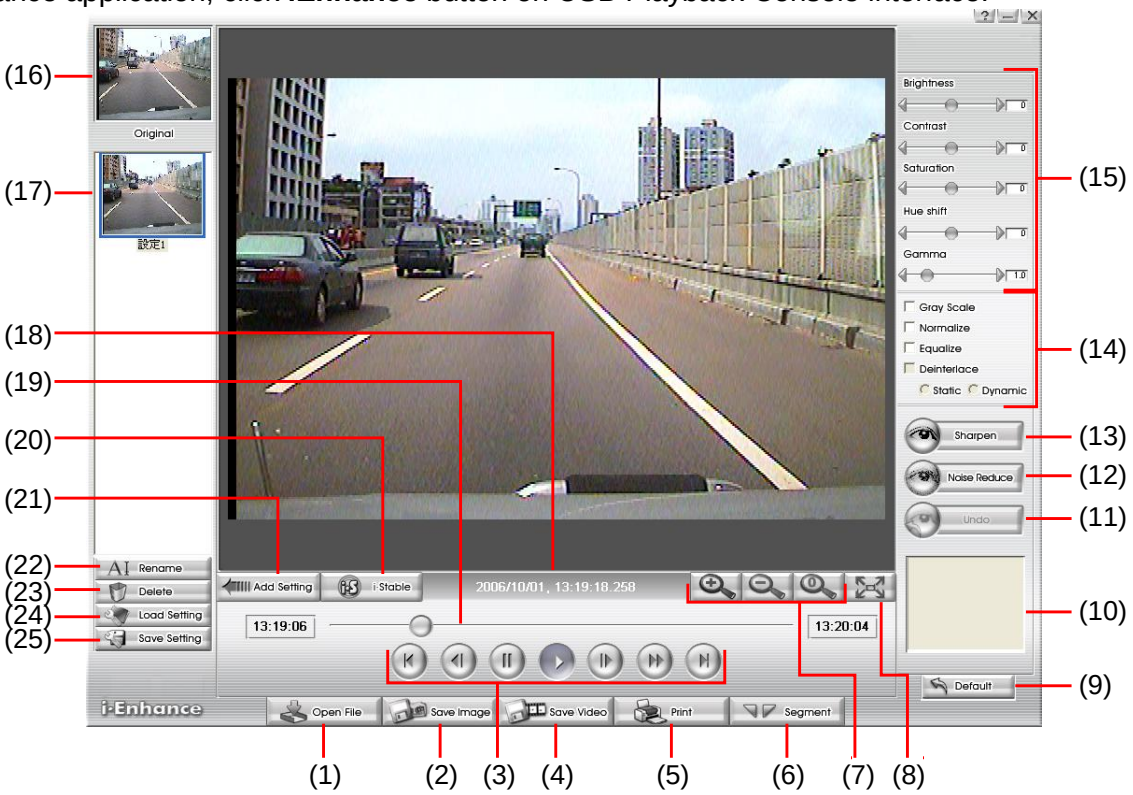
4.3.7 To Search Using the Intelligent Search

1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click **Find Next** ( ). You may also set to search and list all the result. Just check the **List** box. In the **Search Duration** section set the **Begin Time** and **End Time**. Set the **Searching Interval** time that system won't list out the same events in a period of time that user has setup. Then, click **OK** to start searching.

Chapter 5 iEnhance

The bundled iEnhance is a video editing tool and can only be used with *.dvr and *.avf video file. It allows you to adjust the video picture quality, segment and save the selected portion of the video, zoom in and out the image, and print or save the screen shot. You can also save the setting and apply it on other files.

To run iEnhance application, click **iEnhance** button on USB Playback Console interface.



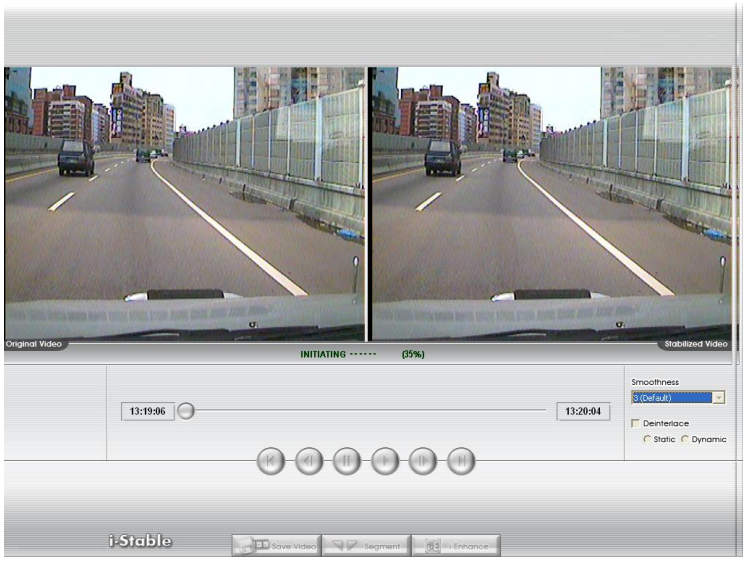
Name	Function
(1) Open File	Access *.dvr and *avf video file.
(2) Save Image	Capture and save the screen shot in *.bmp format.
(3) Playback Control Buttons	**Begin:** Move at the beginning of the video file. **Previous:** Go back to previous frame. **Pause:** Briefly stop playing the video file. **Play:** Play the video file. **Faster:** Play the video file at the faster speed. **Next:** Go to the next frame. **End:** Go to the end of the video file.
(4) Save Video	Save the edited or segmented video in *.avi format.
(5) Print	Print the screen shot.
(6) Segment	Mark the beginning and the end of the selected portion of the video. Two triangle marks will appear on the slider. To cancel video segmentation, click this button again.
(7) Zoom Buttons	Enlarge, reduce, and set the image back to normal size.
(8) Full Screen	Use the entire screen to only display the video.
(9) Default	Set the video back to original state and delete all the changes in the history box.
(10) History Box	List all the actions.
(11) Undo	Delete the last action.
(12) Noise Reduce	Adjust the softness and repair the damaged colors.
(13) Sharpness	Improve the overall image by enhancing edges. This gives the image more depth.

Name	Function
(14) Effects	■ **Gray Scale:** convert the image into black and white (monochrome). ■ **Normalize:** adjust the brightness intensity. ■ **Equalize:** automatically adjust the images that are too dark. ■ **De-interlace:** smooth out the overlying frames. - **Static:** de-interlace for motionless scene. - **Dynamic:** de-interlace for moving scene.
(15) Picture Adjustment	Adjust the Brightness, Contrast, Saturation, Hue and Gamma.
(16) Original Screen	Display the original state of the image.
(17) Temporary Setting Block	Display the sample settings. Click the sample to apply the setting on the current video.
(18) Status Bar	Display the date, and time of the video.
(19) Progress Bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(20) iStable	To reduce the jolt in the recorded video.(also see Chapter 5.1)
(21) Add Setting	Include the new setting to the temporary setting block.
(22) Rename	Change the name of the selected setting in the temporary setting block.
(23) Delete	Permanently remove the selected setting in the temporary setting block.
(24) Load Setting	Call the saved settings.
(25) Save Setting	Store the settings in the temporary setting block.

5.1 To Use iStable

The iStable function can reduce the jolt in the recorded video.

1. Click **Open File** button and select the recorded video.
2. And then, click **iStable** button.
3. iStable windows will show up.
4. Select the **smoothness** level – 1(Low), 2, 3, 4, and 5(High). The default value is 3.
5. Click Play button, and then iStable function will start to initial the recorded video.
6. When the initialize is done, user will see the original and stabilized recorded video play in two windows. The original video on the left side of window and the stabilized video on the right side of window.

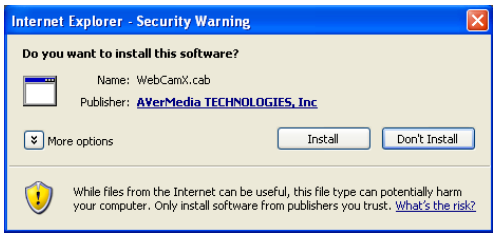


Chapter 6 Using the Remote Programs

User can use Microsoft Internet Explorer to access DVR system by entering the IP address. To use this feature, make sure that your PC and DVR server both are connected to the internet and the Network feature is enabled.

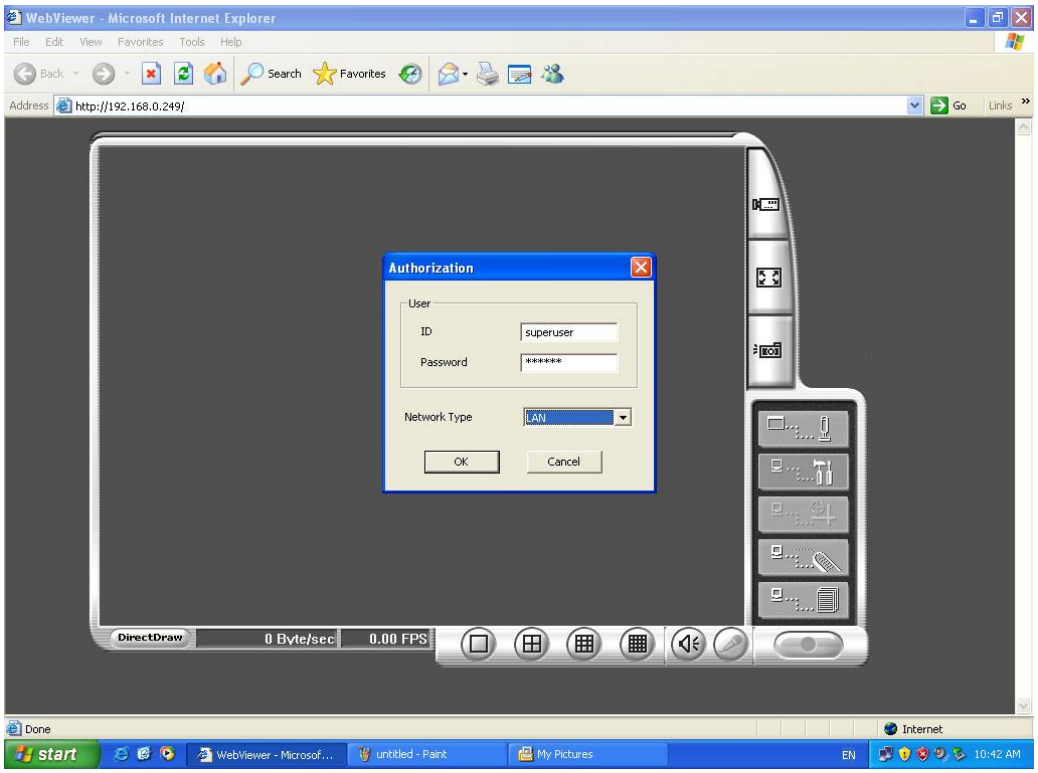
Accessing this feature for the first time you will be prompted by your browser to install WebCamX.cab, allow the installation and you should be able to connect and login afterwards.
For Windows 2000, click **Yes** when the Security Warning dialog box appears.

For Windows XP/Vista/7, click Install when the Internet Explorer - Security Warning dialog box appears.



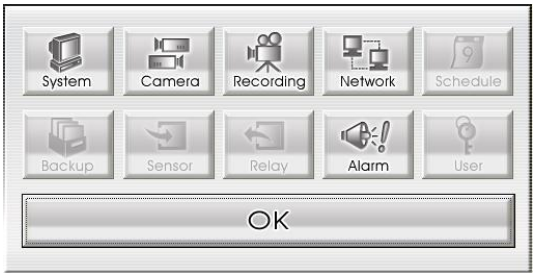
After installing the WebCamX.cab and when connecting to the DVR system, you are required to enter account ID (default is **admin**) and password (default is **admin**) and select the type of network. **Admin** account has the authority to remote setup the DVR system configuration on WebViewer.

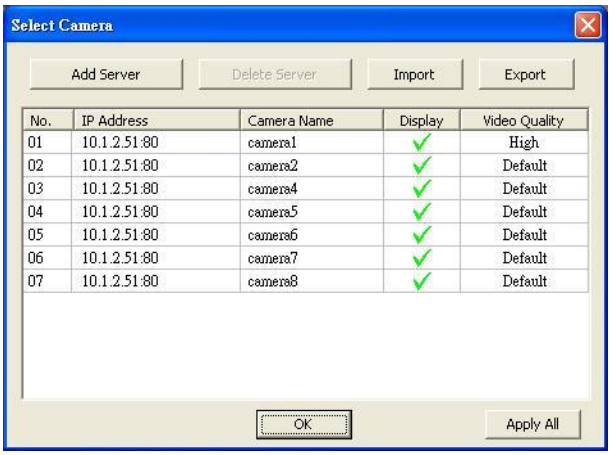
Changing account password is strongly recommended.



6.1 Familiarizing the Buttons in WebViewer

Right-clicking on the WebViewer video screen, enables you to start video recording, change video quality, switch camera and enable/disable DirectDraw.

Name	Function
(1) DirectDraw	Enhance the video quality.
	Not all graphic cards can support this function. If you cannot see the screen display correctly or screen is messed, please check with VGA card vendor.
(2) Received file size	Indicate the size of the data being sent per second.
(3) Camera frames	Indicate the number of frames per second.
(4) Split screen view	To view all cameras on screen simultaneously.
(5) Audio	Enable/disable remote sound.
(6) Record	Start to record the video of the selected camera in AVI format. Directly click screen to select the channel that user wants to record and press **Record** button.
(7) Event Log Viewer	Display the Event logs, Operation logs, System logs, and Network logs.
(8) Remote Console	Initiate Remote Console. It allows you to control DVR server (see also Chapter 6.3).
(9) Remote setup	Change the DVR server settings (see also Chapter 6.1.1) 
(10) PTZ Control	Initiate PTZ camera controller(see also Chapter 6.2)
(11) Snapshot	Capture and save the screen shot in *.bmp format.
(12) Full screen	Use the entire area of the screen to only display the video. To return, Right click the mouse or press ESC on the keyboard.

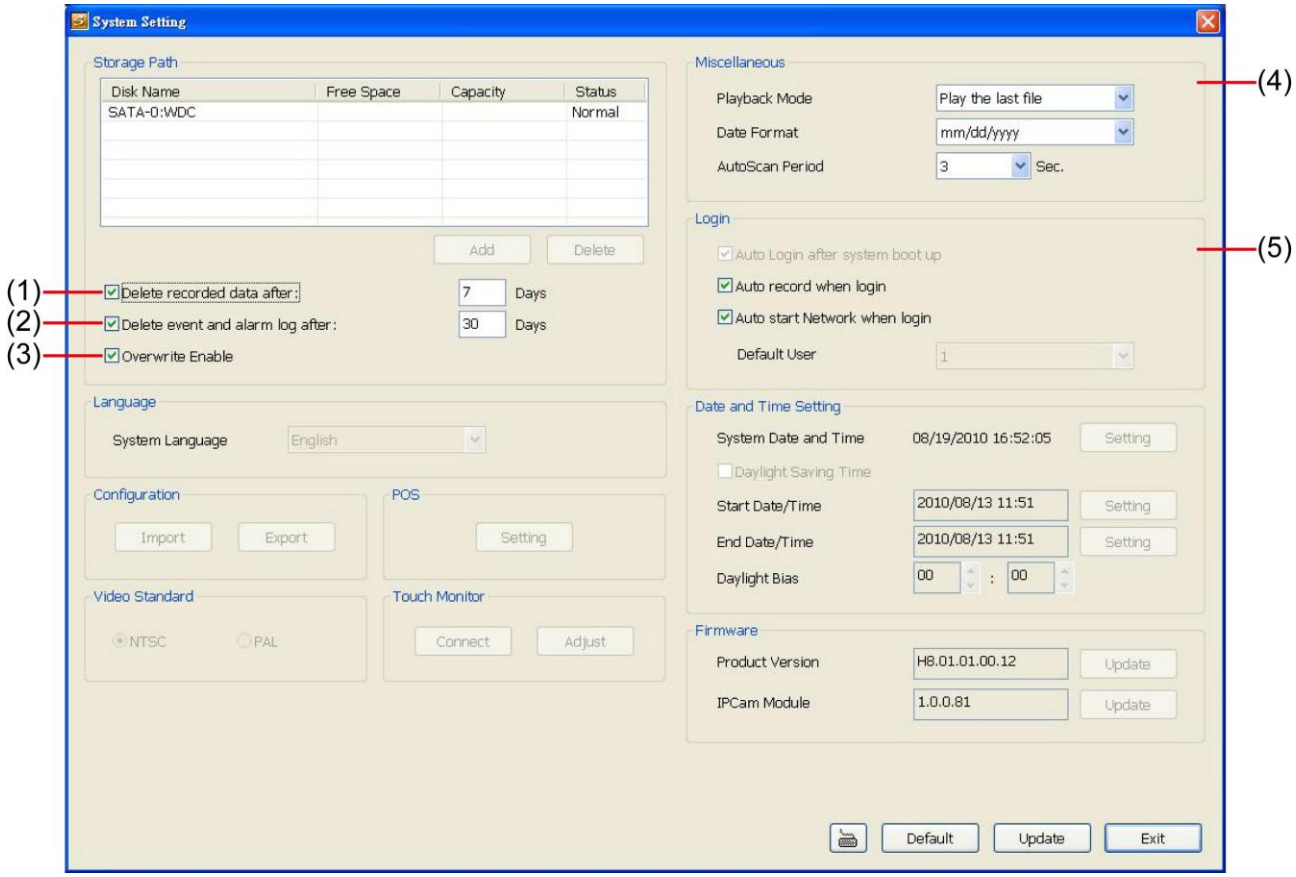
Name	Function
(13) Select cameras to view	Select to the view camera from different server. In Select Camera dialog box, Display column, click to enable/disable viewing the camera. Click **Add Server** and select the server type between DVR and IP Cam to add. Click **Delete Server** to delete the selected item. Click **Import** to load the previous saved list. Click **Export** to save the list. Click **Apply All** to change all the camera video quality based on the selected setting. Click **OK** to exit. 

6.1.1 To Setup Remote System Setting

The setting here applies to Remote DVR only.

6.1.1.1 System Setting

In the System Setting windows, click **Update** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting.



(1) Delete recorded data after

If you want the system to automatically erase the data after a certain days, enable the **Delete recorded data after** check box and enter the numbers of days in **Days** text box.

(2) Delete event and alarm log after

If you want the system to automatically erase the event and alarm log files after a certain days, enable the **Delete event and alarm log after** check box and enter the numbers of days in **Days** text box.

(3) Overwrite Enable

When there is not enough free space to record one hour data, the system automatically replaces the oldest data.

(4) Miscellaneous

Enable the conditions in **Miscellaneous** section you want the system to perform.

- **Playback Mode**

  Select the mode of playback the video.

  - **Select date and time:** Select the date and time which user wants to playback.
  - **Play the last file:** Automatically playback the video from the last hour
  - **Instant Playback:** Automatically playback the video which has just recorded

- **Date Format**

  Select the date format which wants to display in **Select date and time** playback mode

- **Auto Scan Period**

  Set the time gap of the Auto Scan function from 3 to 10 seconds. This automatically switches to the next video in cycle depending on the set time gap.

(5) Login

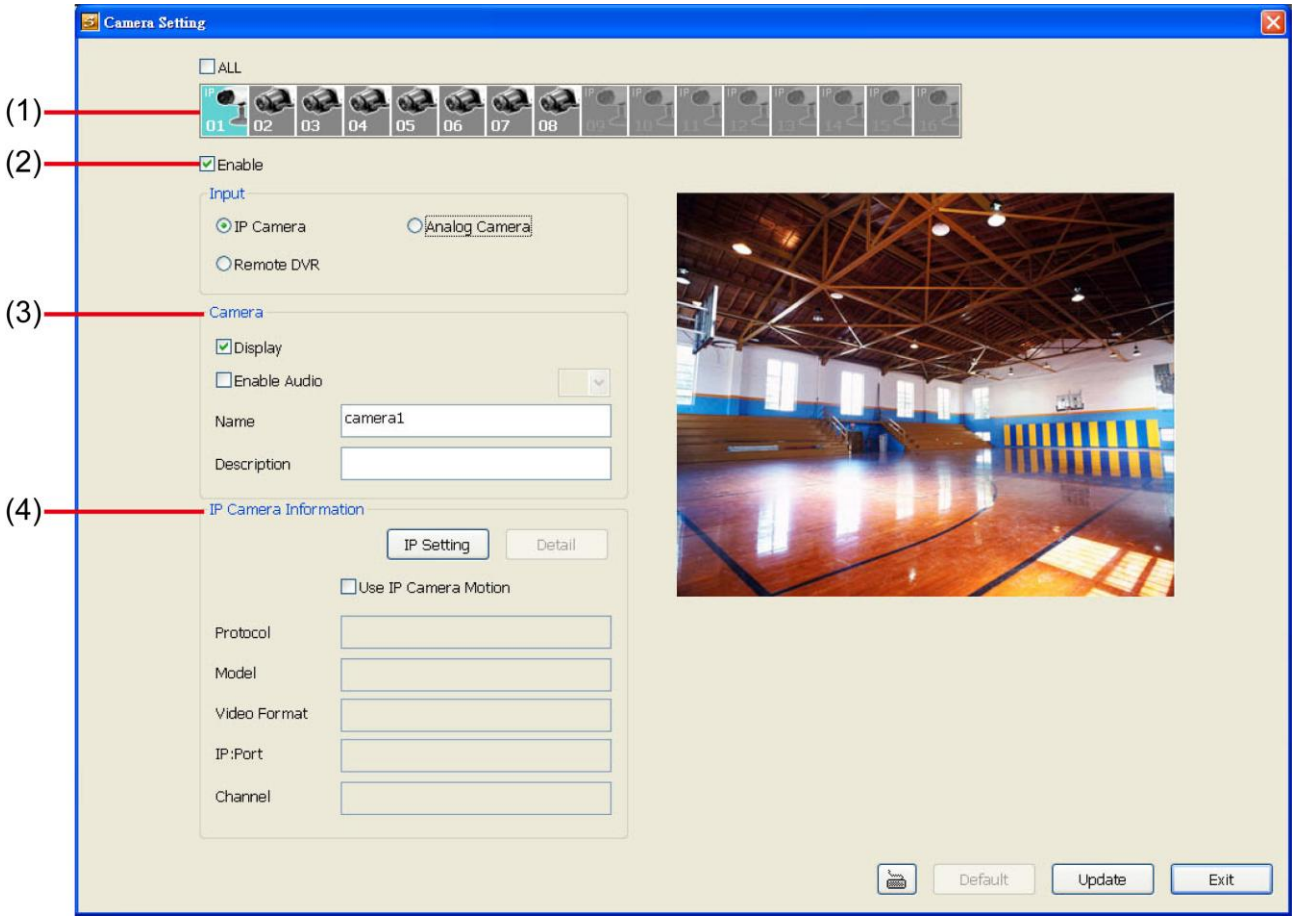
Enable the conditions in Login section you want the system to automatically carry out.

- **Auto record when login**
  Automatically start video recording when the DVR is executed.
- **Auto start Network when login**
  Automatically connect to network when the DVR is executed.

6.1.1.2 Camera Setting

Select the camera from remote DVR servers to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.

IP Camera Setting



(1) Camera Icons

Select the camera number you want to adjust the video setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, Right click on the camera icon. To select one camera only, Left click on the camera icon. The camera icon turns red when it is selected.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the type of camera as IP camera. For General camera setting, see Analog Camera Setting. To modify camera of remote DVR, see Remote DVR Camera Setting.

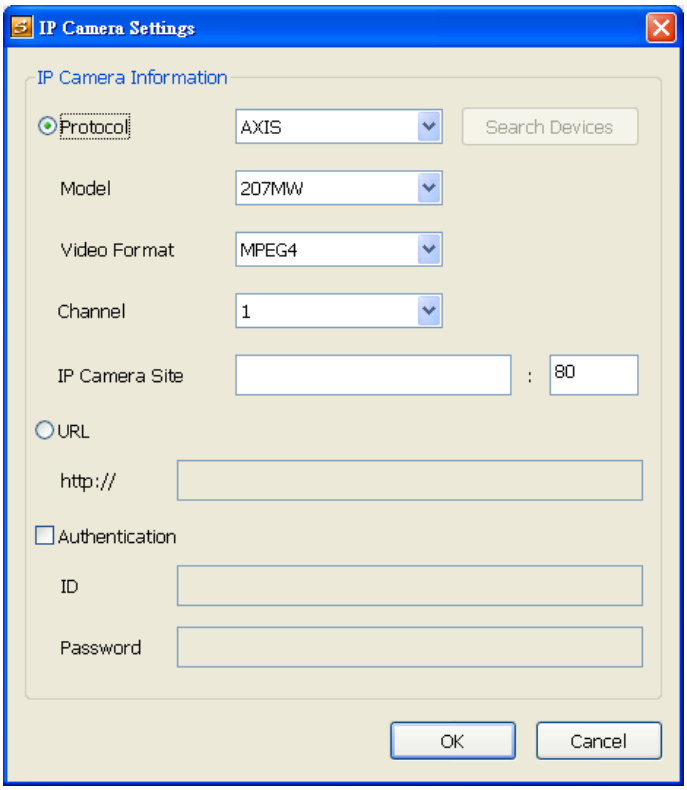
(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) IP Camera Information

To setup IP camera and display current IP camera information.

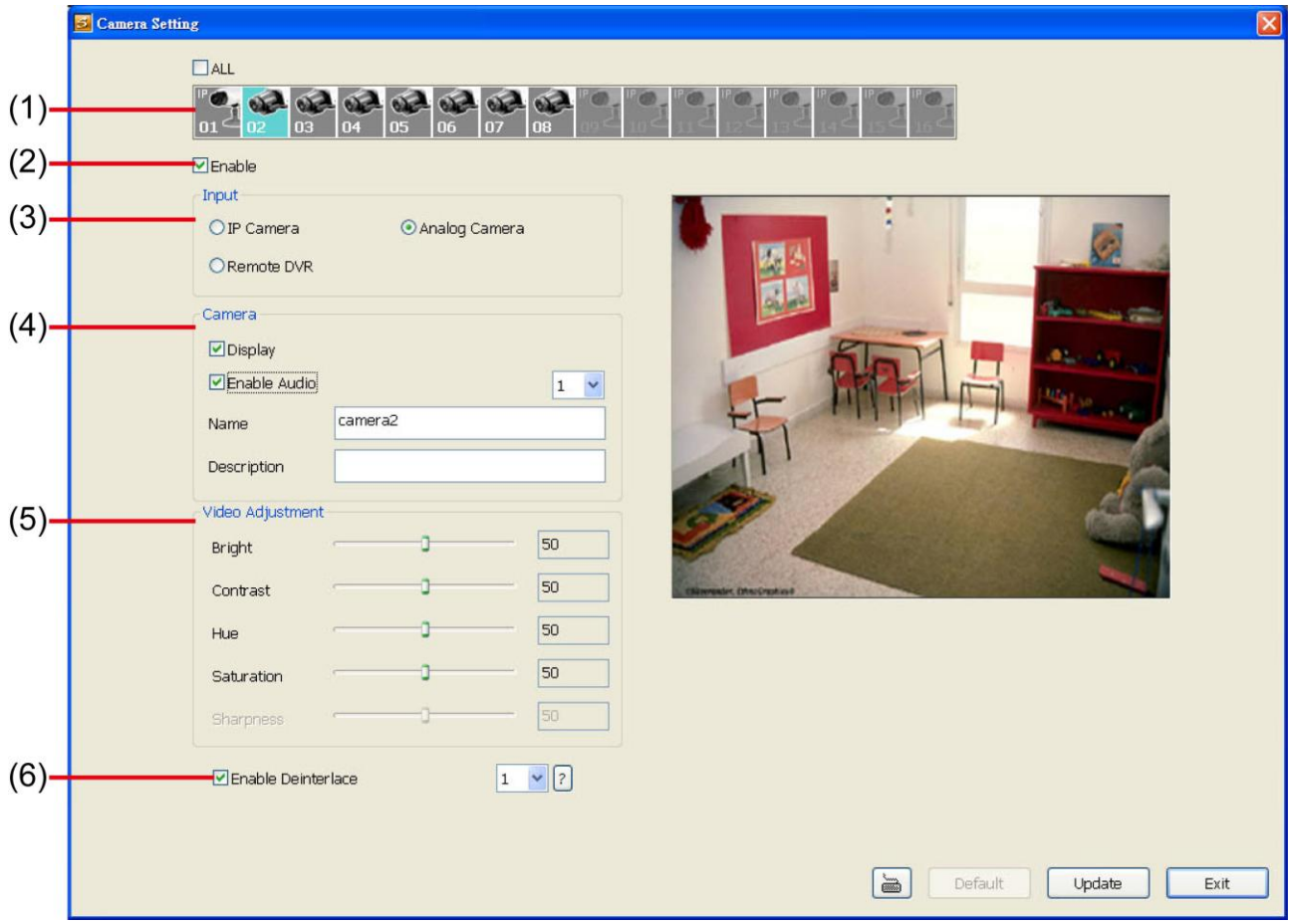
■ **IP Setting:** Click **IP setting** to add the IP camera.



1. Click the radio button of **Protocol** to start setup IP camera.
2. Select the **Protocol**, **Model**, **Video Format**, and **Channel** of the IP camera.
3. Enter IP address and connecting port in **IP Camera Site** column.
4. Also, user can enter URL of IP camera instead of IP address.
5. If the IP camera has authority request, please enable **Authentication** and enter **ID** and **Password**.
6. Click **OK** to connect with the IP camera.

Analog Camera Setting

Select the camera from remote DVR servers to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **General Camera**. For IP camera setting, see IP Camera Setting. To modify camera of remote DVR, see Remote DVR Camera Setting.

(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) Video Adjustment

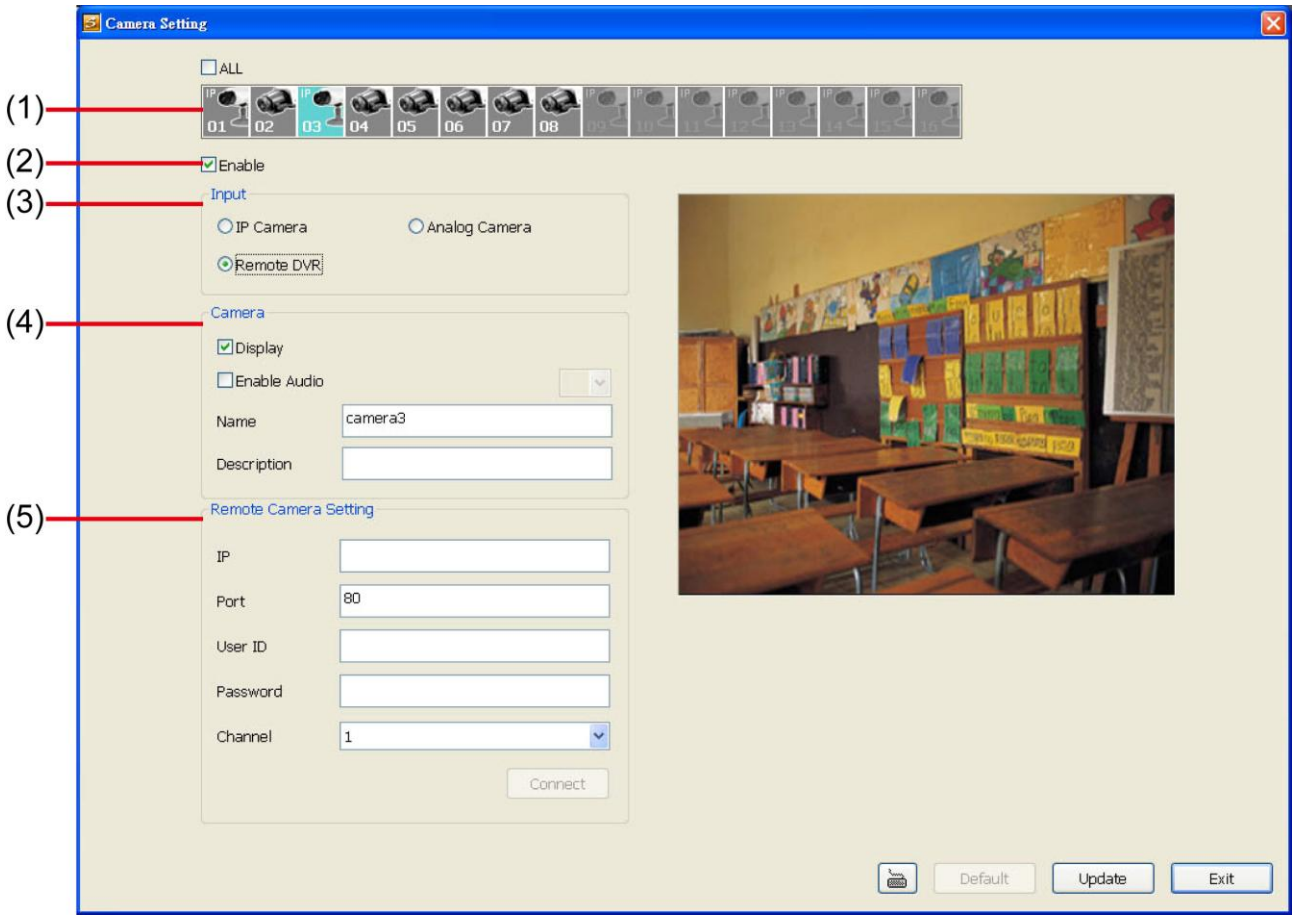
Adjust the Brightness, Contrast, Hue and Saturation of the camera.

(6) Enable Deinterlace

Enhance the video quality. Set the **Enable Deinterlace** mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

Remote DVR Camera Setting

Select the camera to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Remote DVR**. For IP camera setting, see IP Camera Setting. To modify analog camera setting, see Analog Camera Setting.

(4) Camera

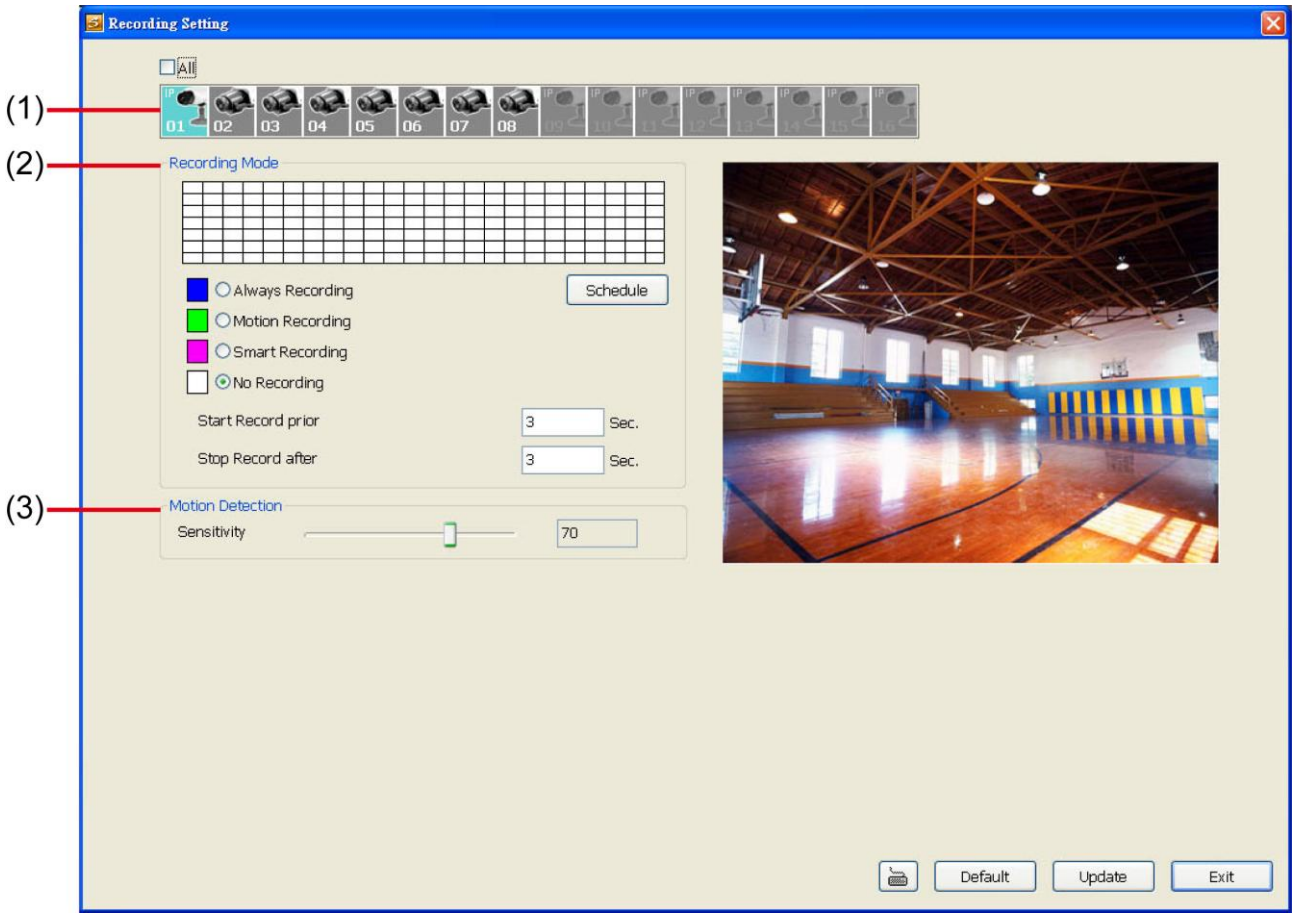
- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment
- **IP**
  Enter the IP address of the camera
- **Port**
  The port for connection
- **User ID**
  Enter the user id that for connecting authority

- **Password**
  Enter the password that is for connecting authority
- **Channel**
  Select the channel of connected camera

6.1.1.3 Record Setting

In the Recording setup windows, click **OK** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting.

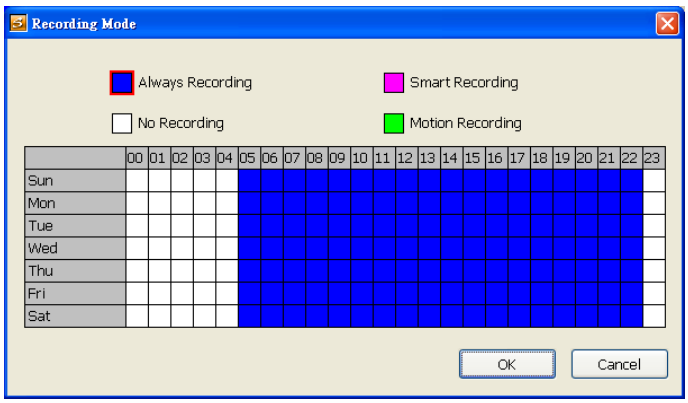
IP Camera



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns red when it is selected.

(2) Recording Mode



The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen. The recording modes are listed below:

- **Always Recording**
  Record the video from the selected camera and save it to the designated storage path
- **Motion Recording**

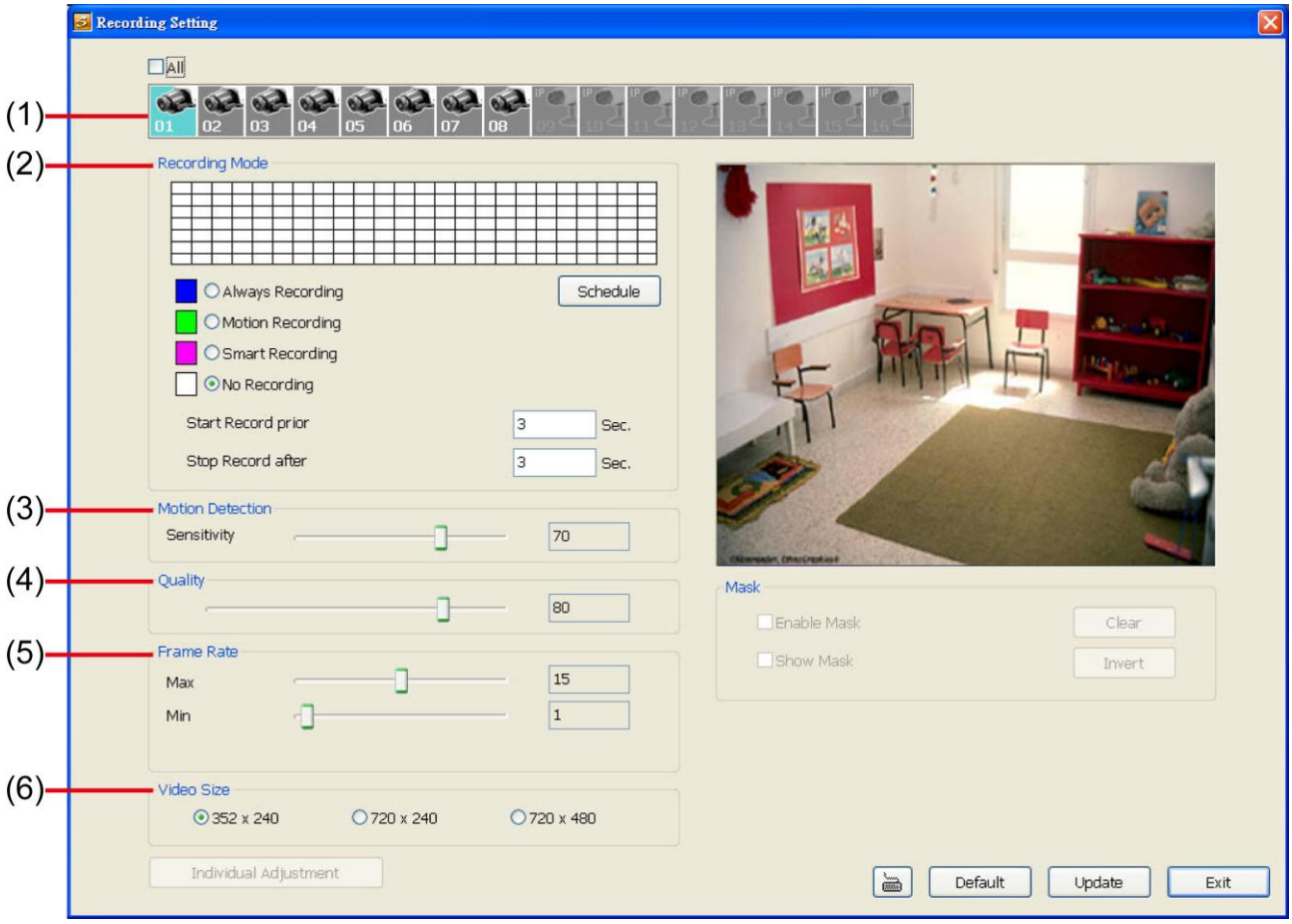
Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.

- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

Analog Camera

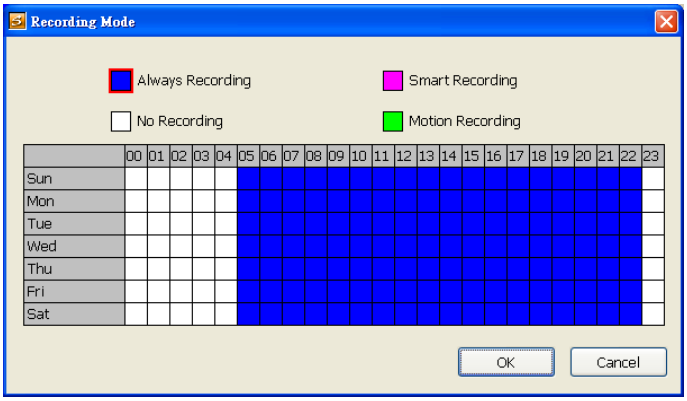


(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block 1 to 7 represent the day in the week block (Sunday to Saturday). To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen.



The recording modes are listed below:

- **Always Recording**
  Record the video from the selected camera and save it to the designated storage path
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.

- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(4) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(5) Frame Rate

Set the maximum and minimum number of frames to be recorded during motion and motionless state. The frame rate ranges from 01 to 30 for NTSC and 01 to 25 for PAL. The higher the frame rate, it uses more hard disk space.

Always recoding frame rate is depending on max frame rate value.

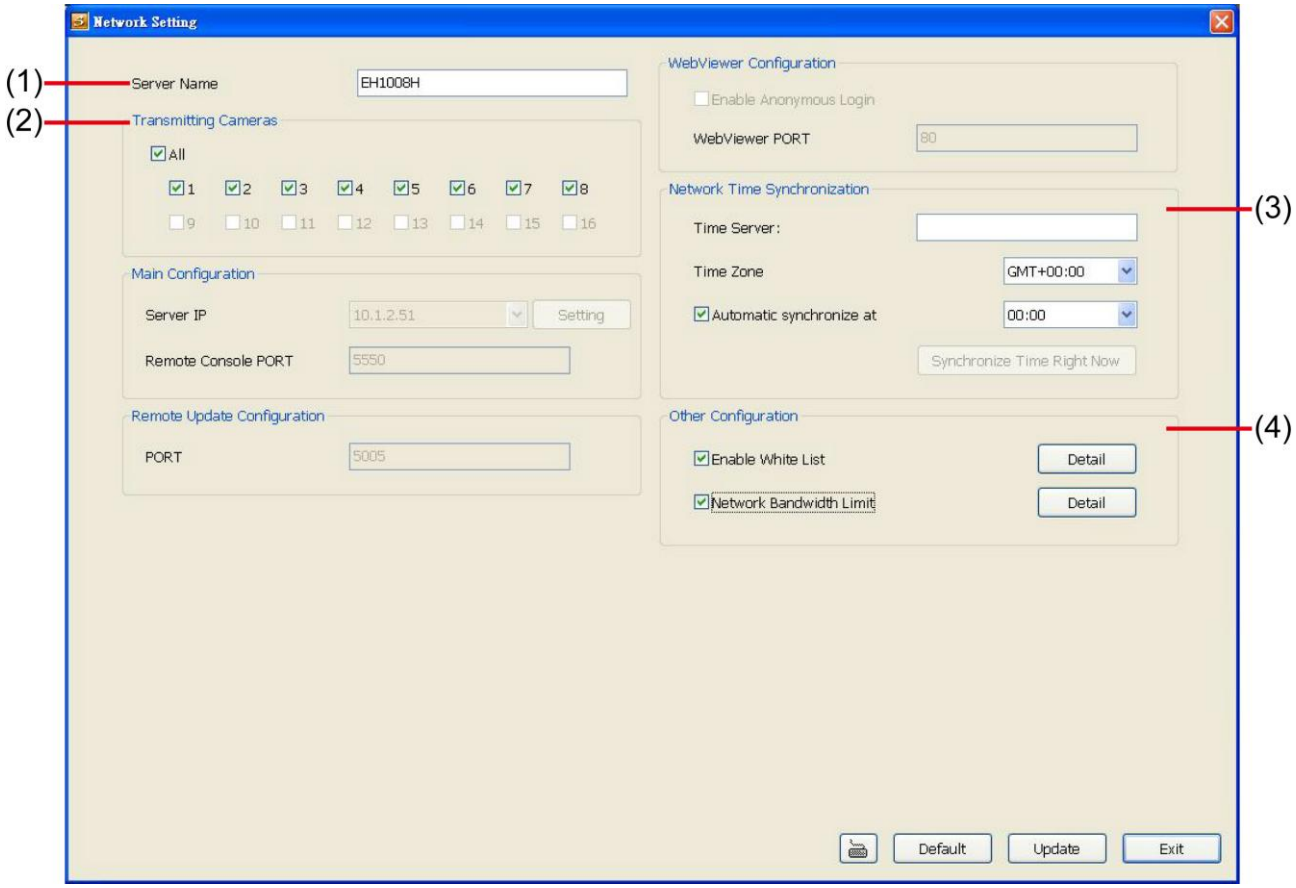
---

(6) Video Size

Select the size of the video and click the ⊙ button. The higher the size, the larger the file it create.

6.1.1.2 Network Setting

In the Network Setting dialog box, click **Update** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting. For the network service ports that use by DVR server, please see Appendix A.



(1) Server Name

Assign a name for the DVR unit. Alphabet letters and numbers only.

(2) Transmitting Cameras

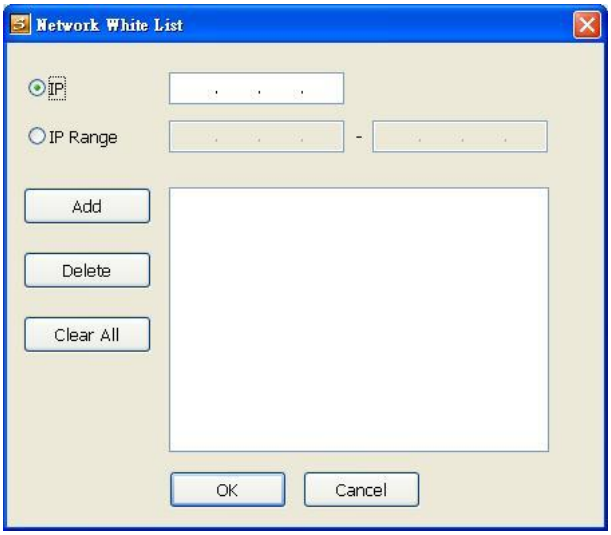
Select and click on the camera number in the Transmitting Camera section you want to make it accessible via internet using WebViewer, Remote Console, PDA Viewer and JAVAViewer (still image). To select all the cameras, enable the **ALL** check box.

(3) Network Time Synchronization

Adjust the DVR system time same as network time server. Fill in the **Time Server** IP address or domain name. Select the **Time Zone** that DVR is located. And then, mark the **Automatic Synchronize** time to set automatic synchronize time on a daily basis.

(4) Other Configuration

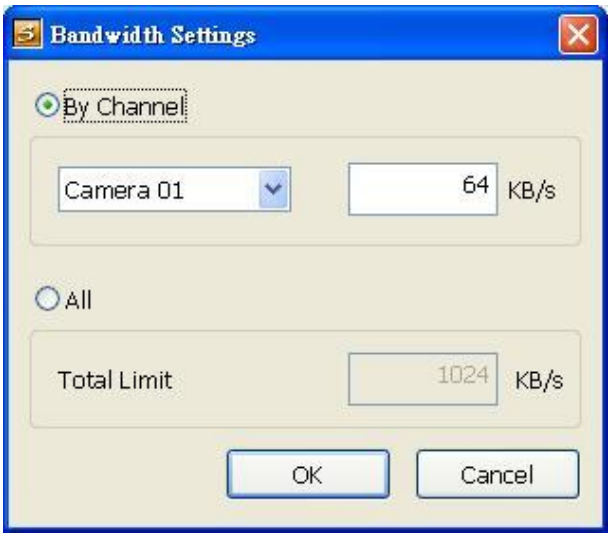
- **Enable White List**
  An access permit list for the remote accessing of DVR server. Enter the IP address and click **Add**. Or, enter a range of IP address and click **Add**. To delete the IP from the list, select the IP and click **Delete** button. To reset the input, click **Clear** button.



- **Network Bandwidth Limit**

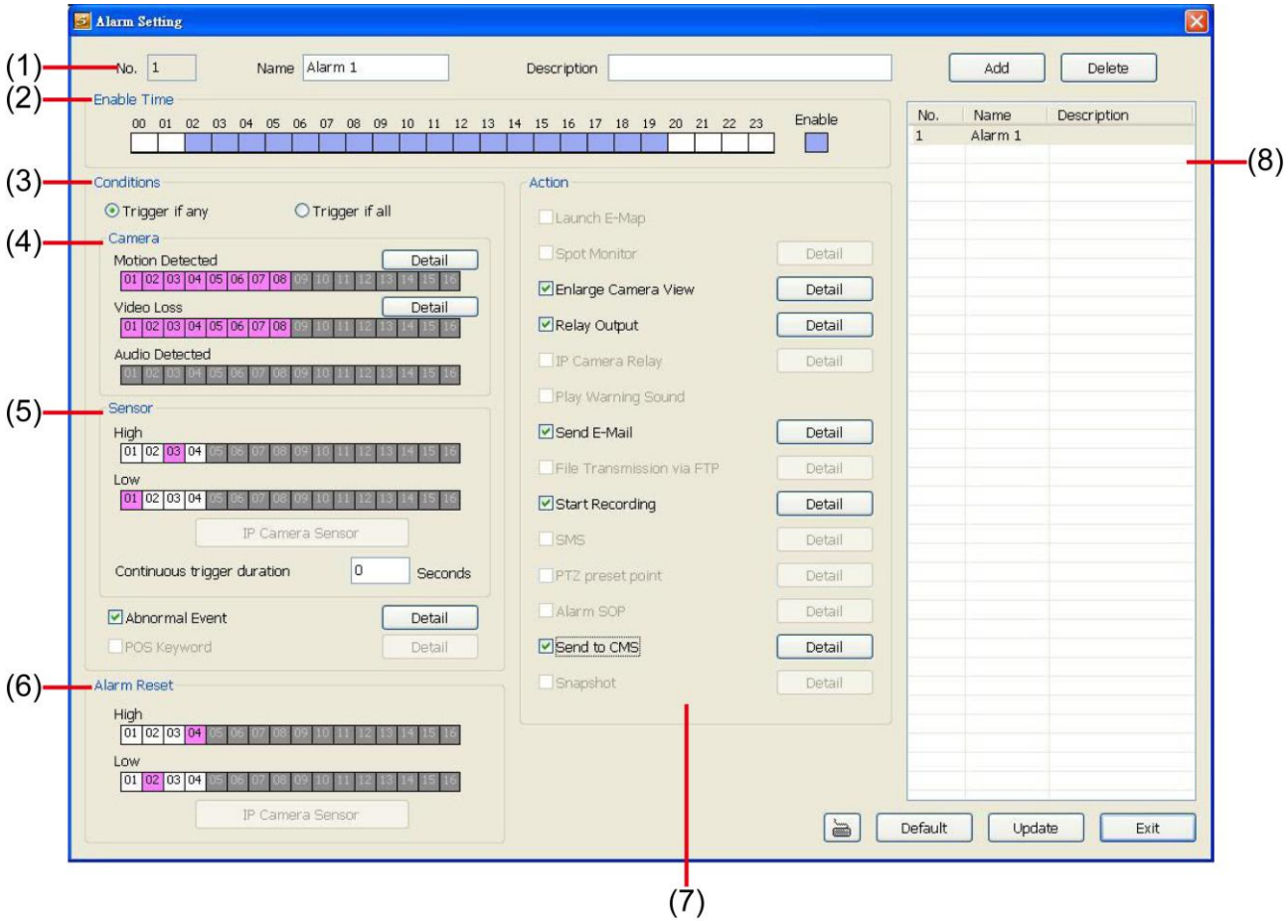
  By Channel: Set the network bandwidth by each channel.

  All: Set the total network bandwidth consumption limit.



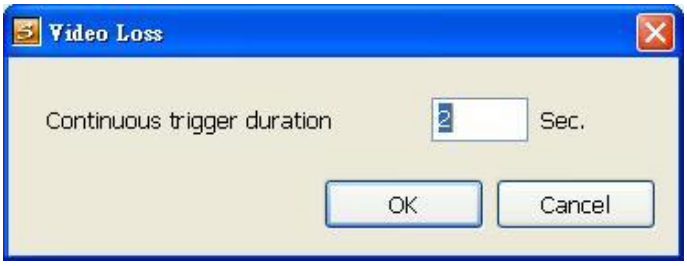
6.1.1.3 Alarm Setting

In the Alarm Setting dialog box, click **Add** to insert and set new alarm setting, click **Delete** to remove the selected alarm setting, click **Update** to save the setting, **Exit** to exit without saving, and **Default** to revert back to original factory setting.

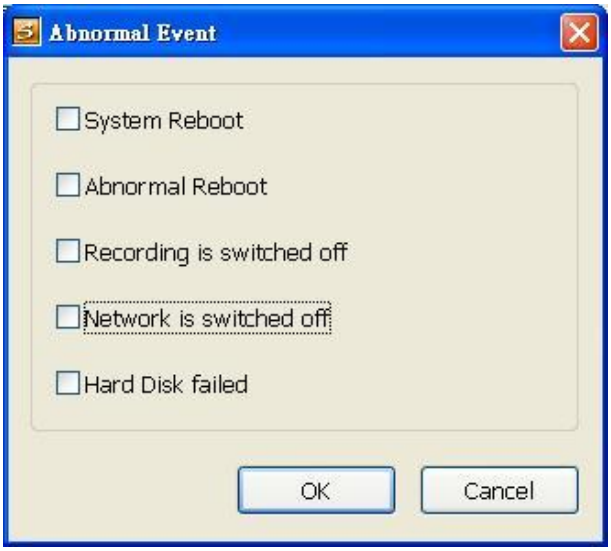


1. Click **Add** to insert and set a new alarm setting. Click the items in the **(8) Alarm Setting List** if you want to modify the alarm setting.
2. In **(1) No./Name/Description** enter alarm name and description. Alarm **No.** will be created by DVR system.
3. In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Select the time and click the block you want to activate or deactivate the alarm function. When it is deactivated the color of the block turns white.
4. In **(3) Conditions**, you can set "**Trigger if any**" to activate if it falls to one of the conditions or "**Trigger if all**" to activate if it falls to all conditions.
5. In **(4) Camera** section, select and click on the camera number (01 to 16) in **Motion Detected** and **Video Loss** to set the condition for the system to alarm.
   - **Motion Detected:** Click on the camera number to the motion condition for the system to alarm. Click **Detail** to setup the system to send out the alarm when motion has been detected to last the time that user has entered in **Continuous trigger duration**.

   - **Video Loss**: Click the camera number to set the alarm condition when video is lost. Click the **Detail** to setup the system to send out the alarm when video has been lost to last the time that user has entered in **Continuous trigger duration**.



6. In **(5) Sensor**, select and click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
   - Enable/disable the **Abnormal Event** check box, to set the condition of the event for system to alarm.

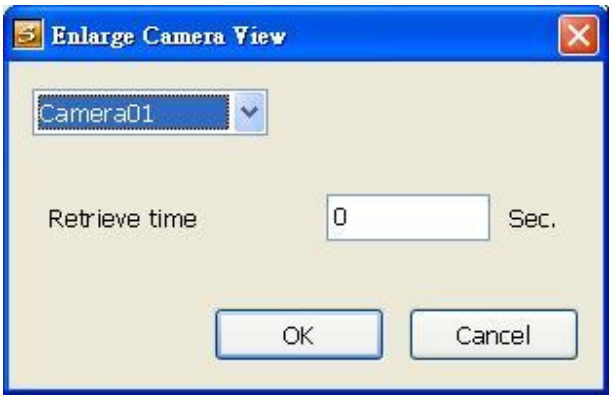


   - **System Reboot:** when the DVR system reboot without abnormal condition, the system will send out the alarm message.
   - **Abnormal Reboot:** when the DVR system reboot in irregular condition, the system will send out the alarm message.
   - **Recording is switched off:** when the recording has been stopped, the system will send out the alarm message.
   - **Network is switched off:** when the network connection of DVR system is lost, the system will send out the alarm message.
   - **Hard Disk failed:** when the hard disk doesn't work normally, the system will send out the alarm message.
   - **Continue trigger duration:** Set a time period that when sensor has been trigger and stay in the same status for that period, then the alarm will be sent out.
7. In **(6) Alarm Reset**, click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment. If the sensor normal status is high, set the alarm reset condition to low.
8. In **(7) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.
   - **Enlarge Camera View**

     Switch to only display video in Preview mode from where the alarm is activated.

     a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.

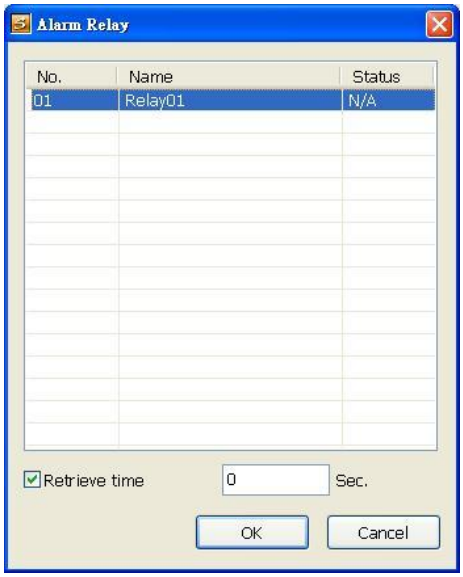
     b. **Retrieve time:** set the waiting duration before system switching back to original Preview mode. If the retrieve time is un-mark, the alarm video will keep enlarging until user switch back to Preview mode manually. The retrieve time range is 0~ 600 seconds.



- **Relay Output**

  Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation.

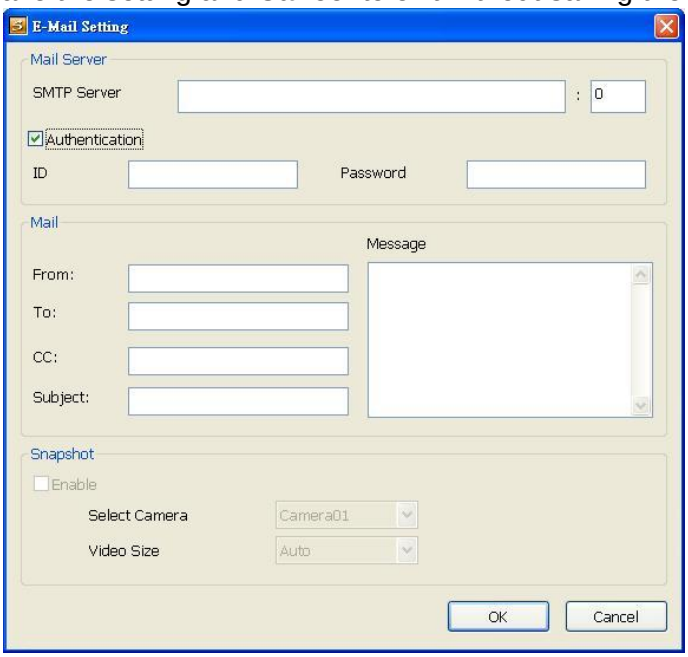
  1. Beside the Relay Output check box, click **Detail**.
  2. In the Alarm Relay dialog box, select from the available relay list and in the ON column, set to enable/disable the relay operation when the alarm is activated.
  3. In the Retrieve time check box, you may enable/disable to extend the relay operation time and set the duration in second.
  4. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



- **Send E-mail**

  Send an electronic text message. Beside the Send Email check box, click **Detail**.

  In the E-mail Setting dialog box, click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



  - ➢ **Mail Server**

    Enter the **SMTP Server** and **port**. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.

  - ➢ **Mail**

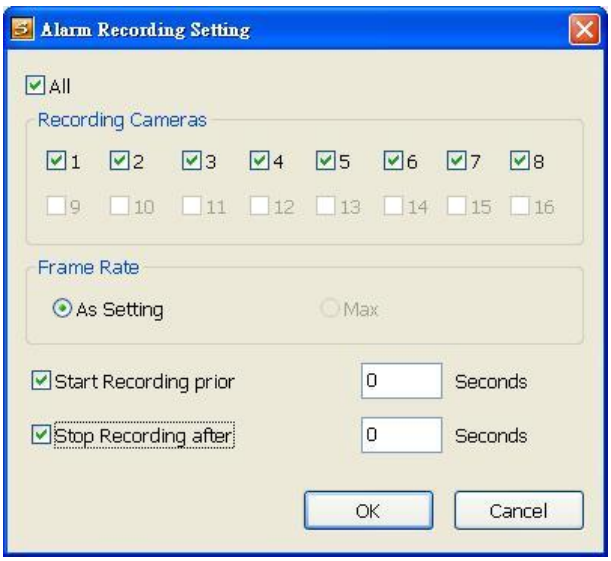
    Fill the mailing information.

    - ✓ **From:** Enter the sender e-mail address.
    - ✓ **To and CC:** Enter the recipient email address and separate it with comma or a semicolon (;).
    - ✓ **Subject:** Enter the message title.
    - ✓ **Message:** Type the message.

- **Start Recording**

  Record the video from the selected camera.

  1. Beside the Start Recording check box, click **Detail**.
  2. In the Alarm Recording Setting dialog box, select the camera to enable/disable video recording. Enable **All** to select all cameras.
  3. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting.
  4. In the **Start Record prior** text box, mark and set the number in second for the program to begin recording after the alarm has been trigger. The time range is 1~10 seconds.
  5. In the **Stop Record after** text box, mark and set the number in second for the program to continue recording after the alarm has ended. The time range is 1~999 seconds. If user doesn't mark and set the time, the alarm recording will continue recording until

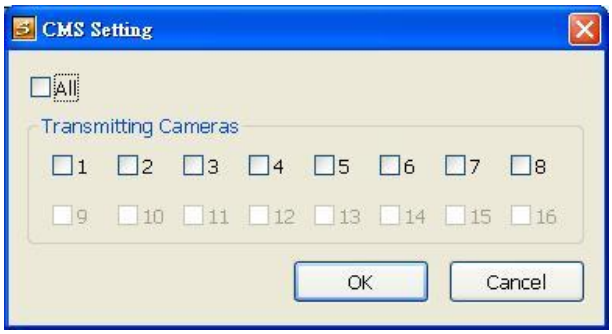


alarm is reset.

6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

- **Send to CMS (Central Management System)**

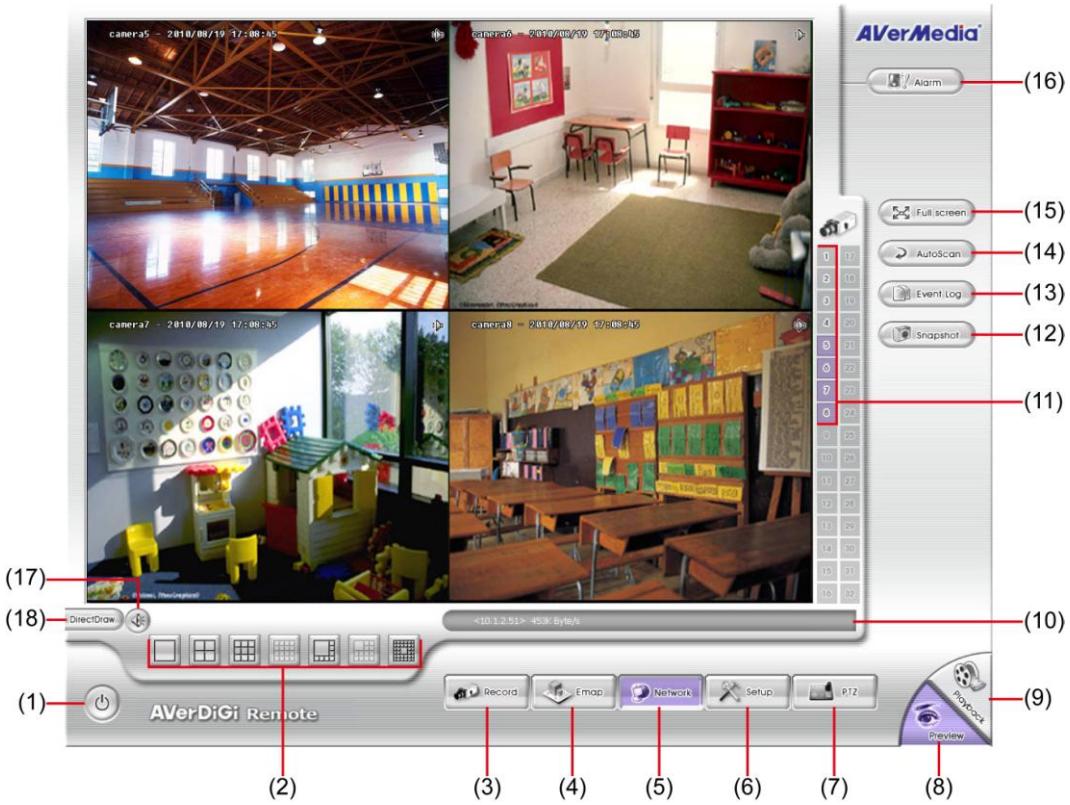
  Enable/disable the selected camera to send video to CMS when the alarm is activated. Beside the Send to CMS check box, click **Detail**. In the CMS Setting, select the camera to enable/disable sending the video to CMS. Enable **All** to select all cameras. Then, click **OK** to accept the new settings and **Cancel** to exit without saving.



6.2 Familiarizing the Buttons in WebViewer PTZ

Name	Function
(1) Direction buttons	Adjust and position the focal point of the PTZ camera. Click the center to pan automatically.
(2) Zoom +/-	Zoom in and out the image.
(3) Select PTZ	Choose to enable/disable the PTZ camera. In the Select PTZ dialog box, Select column, click to enable/disable viewing and controlling the PTZ camera. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) AutoPan Groups	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(6) Camera preset position number	Move the PTZ camera to the preset point. The reset point (1~9) is based on the user has setup by remote control at local site.

6.3 Familiarizing the Buttons in Remote Console

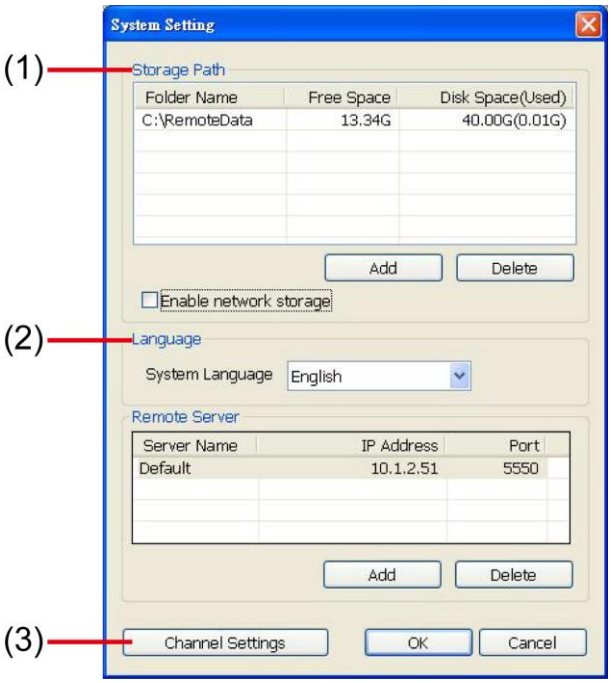


Name	Function
(1) Exit	Close the Remote Console.
(2) Split Screen Mode	Select from five(5) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen. If there are only 8 cameras, you won't be able to switch to 13 and 16 split screen mode.
(3) Record	Start/stop video recording.
(4) EMap	To call out EMap screen to view.
(5) Network	Enable/disable remote system access. This feature allows you to access DVR server from a remote location via internet connection.
(6) Setup	Configure the Remote Console setting. (see also Chapter 6.3.1)
(7) PTZ	Access PTZ control panel(see Chapter 6.3.2).
(8) Preview	Switch to Preview/Playback mode. This allows you to view live camera display.
(9) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see also Chapter 6.4)
(10) Status Bar	Display the current date, time and hard disk free space.
(11) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(12) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(13) Event Log	Display the Event logs, Operation logs, System logs, and Network logs.
(14) Auto Scan	Enable/disable channel switch cycle.
(15) Full screen	Use the entire area of the screen to only display the video. To return, Right-click the mouse or press **ESC** on the keyboard.
(16) Alarm	Alert and display warning info.
(17) Audio button	Enable/disable the sound.
(18) DirectDraw	Enhance the video quality.

Direct Draw function supports for certain VGA card. For more information, please contact your VGA card vendor.

6.3.1 To Setup Remote Console Setting

Click **Setup** button to call out the **System Setting** windows. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



(1) Storage Path

Set the directory on where to save the data. When there is not enough free space to record one hour data, the system automatically replaces the oldest data. In case you have more than one storage path, the system automatically saves the data to the next storage path. By default the data is stored in C:\RemoteData, to insert another storage path, click **Add**. To remove the selected path, click **Delete**.

- **Enable network storage:** Select the Enable network storage check box to send the recorded video in network-attached storage.

To add network storage, the Internet storage drive/folder must be mapped as Network Driver in DVR server.

(2) Language

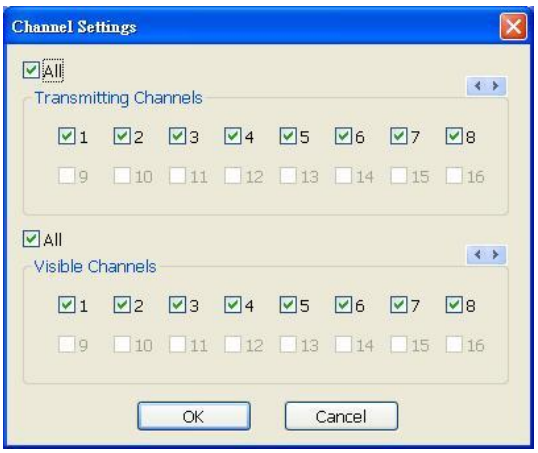
Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.

(3) Remote Server

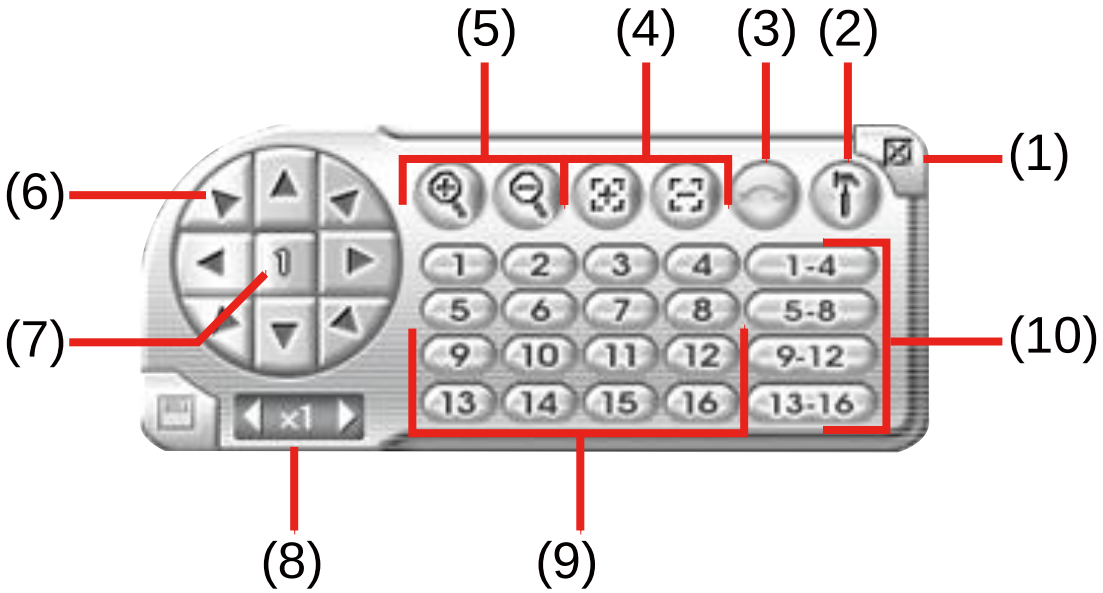
Enter the DVR Server IP and Server Port number.

(4) Channel Settings

The numbers from 1 to 16 represent the camera ID. In Transmitting Channels section, enable the camera number to receive the camera signal from the server. In Visible Channels section, enable the camera number to view the camera signal on Remote Console screen. To select all the cameras, enable the **ALL** check box.



6.3.2 Familiarizing the Buttons in PTZ Camera Controller



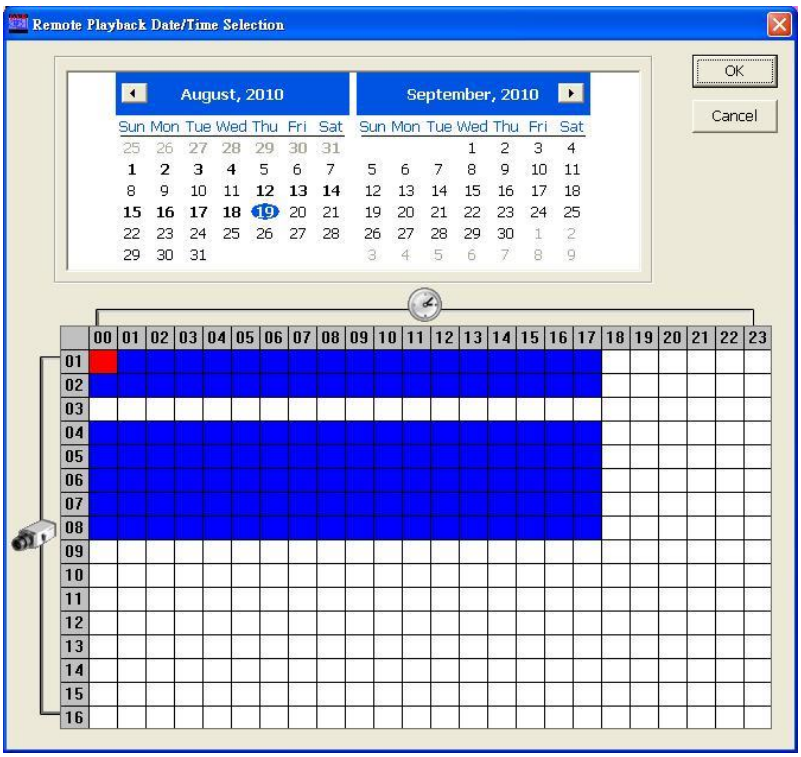
Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Select the PTZ camera to operate.
(3) AutoPan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera.
(7) Camera ID pane	Display the PTZ camera number that is being operated.
(8) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(9) Camera preset position number	Move the PTZ camera to the preset point.
(10) Group AutoPan	Select to automatically operate PTZ camera in group.

6.4 Using the Remote Playback

To use this feature, first you need to select the source of the file. In the Select Playback Mode dialog box, choose **Local Playback** to open the file that is recorded in the Remote Console, and **Remote Playback** to open the file that is recorded in the DVR server. When you choose Remote Playback, select **RealTime Playback** if your internet bandwidth is fast and big enough, otherwise choose **Download and Playback**.

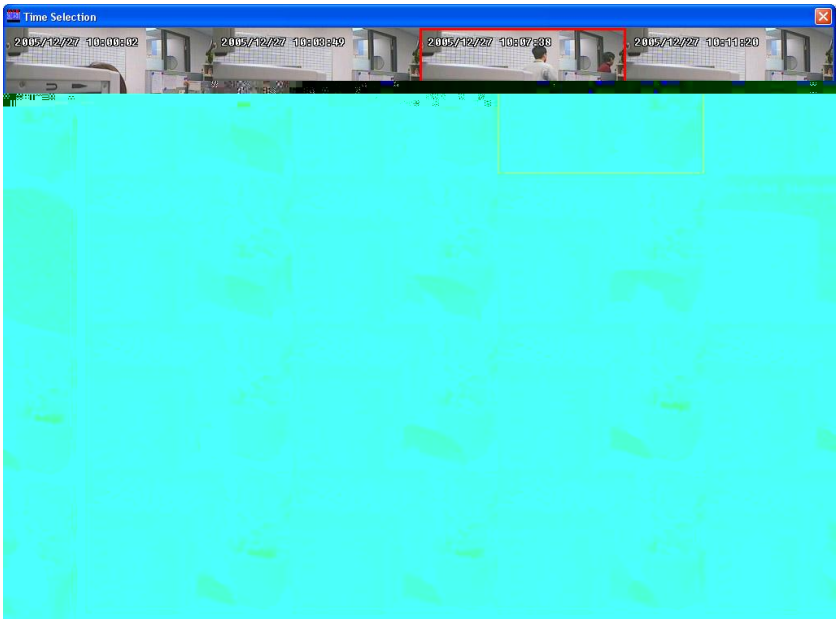
Click **OK** to proceed and **Cancel** to void this operation.

In the Video Playback Date/Time Selection, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 8 represent the camera number.

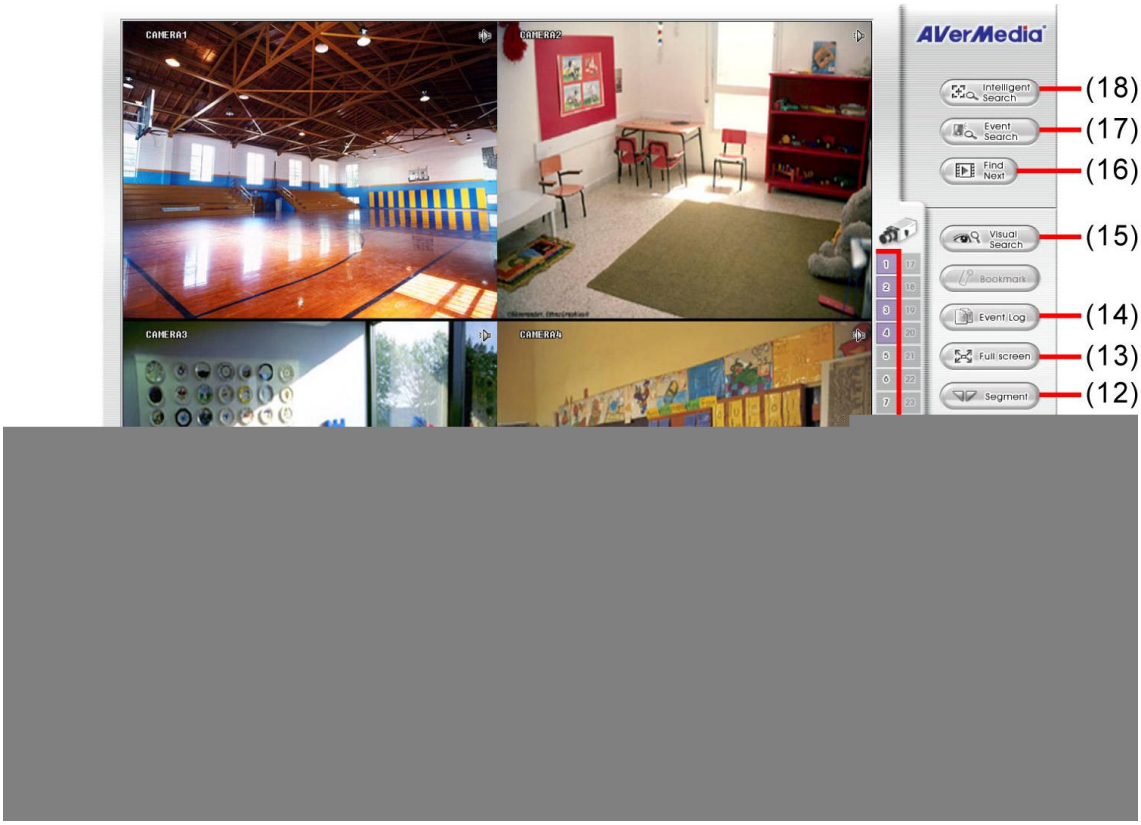


To Make a Selection:

1. Select the date in the calendar. Use ◂ and ▸ buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select and open the recorded file. The blue block turns red when it is selected. The block that appears in white doesn't have data. You can only select one block when you choose Download and Playback.
3. Click **OK** to proceed and **Cancel** to void this operation.
4. If you select Download Playback and after making the selection, the system divides the selected hour into 16 video thumbnails. In the Time Selection screen, click on the video thumbnail you want to download (see also Chapter 6.4.3).



6.4.1 Familiarizing the Buttons in Local Playback

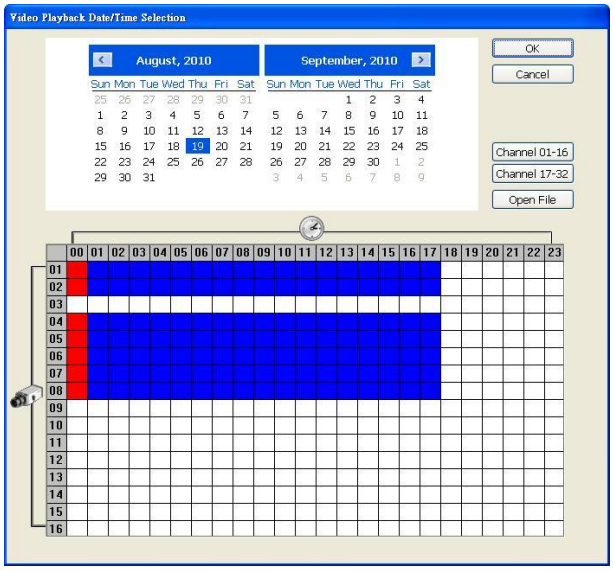


Name	Function
(1) Exit	To close the application
(2) Split Screen Mode	Select from four(4) different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.

- If there are only 8 cameras enabled, you won't be able to switch to 13 and 16 split screen mode.
- To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge. To back to normal view, right click the channel screen again.

(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

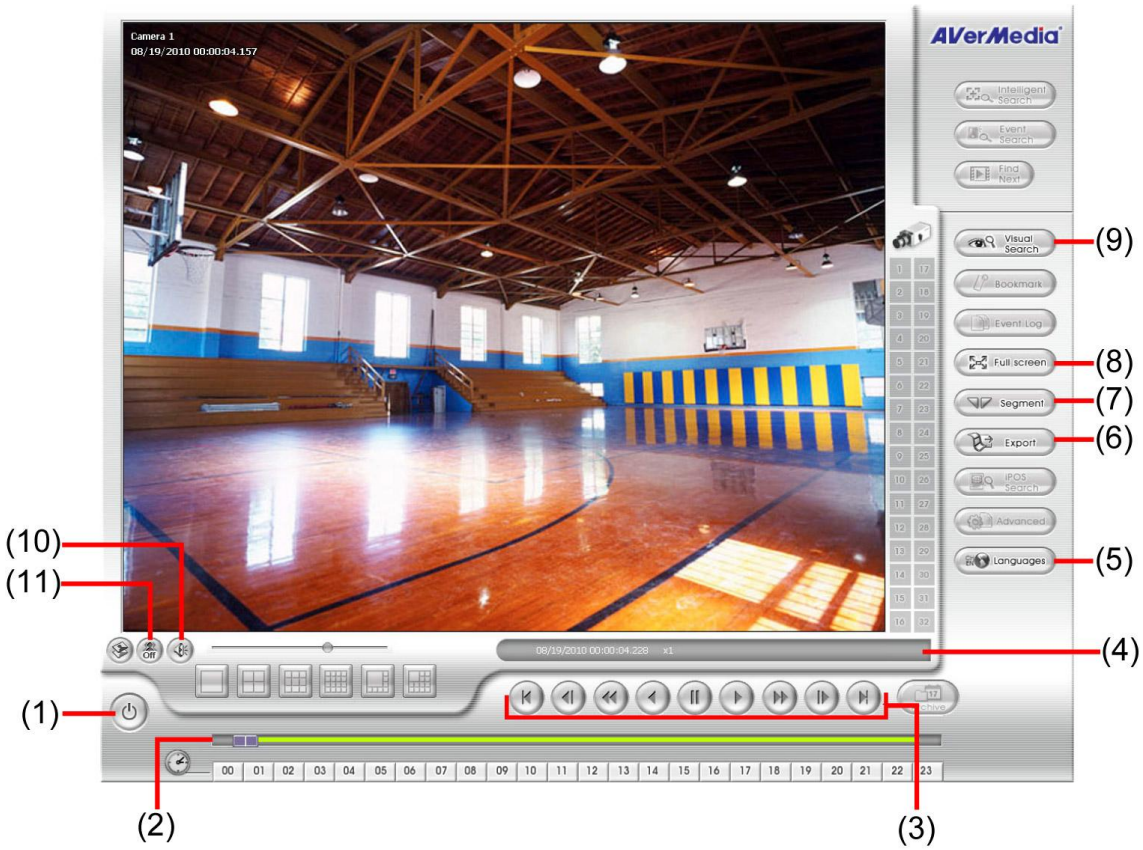
The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. If there is no recorded data within the hour, there will be no color bar on top of the hour button. While the red bar indicates that you are currently viewing the recorded video file.

Name	Function
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. - **Channel 01~16/Channel 17~32:** Click it to switch between channel group 1~16 and 17 ~32 of recorded data calendar. - **Open File:** To open the recorded file from other direction/storage path. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(7) Preview	Switch to Preview mode.
(8) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(9) Status bar	Display the recorded date, time and play speed.
(10) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(11) Export	**Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format.
(12) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Event Log	Show the record of activities that take place in the system
(14) Event Search	Search from the recorded activities that were recorded in event log (i.e., Sensor, Motion, Video Loss)(see also Chapter 4.3.6).
(15) Audio	Enable/disable volume
(16) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

6.4.3 Familiarizing the Buttons in Download and Playback



Name	Function
(1) Exit	To close the application.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, or 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.
(4) Status bar	Display the recorded date, time and play speed.
(5) Language	Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.
(6) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.mpg, *.avi, or *.dvr format (see also Chapter 6.4.1.1).
(7) Segment	Keep a portion of the recorded video you want (see also Chapter 6.4.1.1).
(8) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(9) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second. (See also Chapter 4.3.5).
(10) Audio	Enable/disable volume
(11) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

Chapter 7 Using HandyViewer to Access DVR Server

Users can use a mobile phone to access the DVR through Internet. Make sure your mobile phone support IE browser and is connected to the internet. To access the DVR server, open IE browser and enter **http://enter server IP or domain name here/mobile.** You can see the latest screen shot. Click **<< >>** to change the channel or camera and **Refresh** to reload new screen shot.

7.1 Using PDAViewer to Access DVR Server

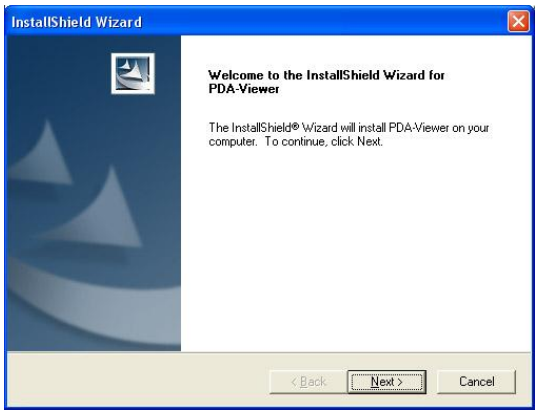
Users can also use a PDA to access the DVR through Internet. Make sure your PDA support IE browser and is connected to the internet. To use this feature, you need to install the PDAViewer software either thru ActiveSync connection or download it from the internet. Please check if your PDA meets the 2 requirements below.

OS: MS Windows CE 4.0, PocketPC 2002/2003, Mobile 5 PDA version
CPU: ARM architecture

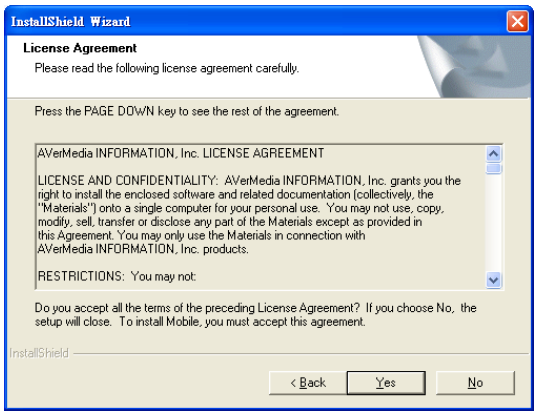
7.1.1 To Install PDAViewer thru ActiveSync

1. Connect your PDA to your PC. Place the CD into the CD-ROM drive then click **Utilise** and select the **PDAViewer** fold and click **setup.exe** to install the PDAViewer program. And follow the on screen instructions.

2. Click **Next** to continue.



3. Read the license agreement and click **Yes** to accept all the terms. The system will then automatically install the application.



7.1.2 To Install PDAViewer from the Internet

Make sure you are connected to the internet.

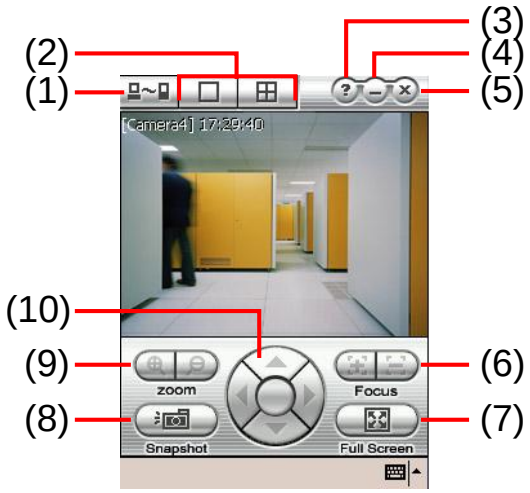
1. Open the web browser and enter the server IP. Then click the hyperlink **Download PDAViewer**.

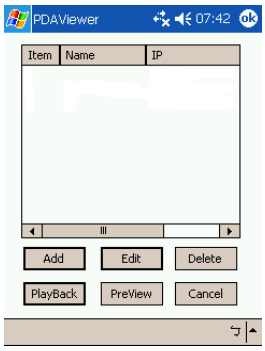
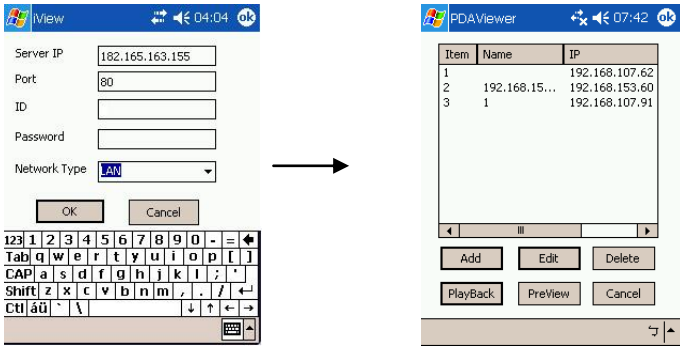
2. When the Download dialog box appears, enable **Open file after download** and click **Yes**.

3. After the installation, the PDAViewer icon will appear in the Programs list.

7.1.3 To Use the PDAViewer

1. Run the **PDAViewer** on your PDA.
2. Familiarizing the PDAViewer buttons.

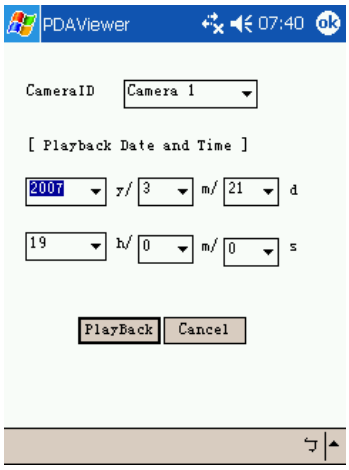


Name	Function
(1) Connect	Hook up to the DVR server. Make sure you are connected to internet. When the iView screen appears, click Add to add DVR server.  Enter the server IP, port, user ID, password and select the connection type. Then, click **OK**.  User can playback the recorded video from remote DVR server in PDAViewer.(see also Chapter 7.1.4)
(2) Split Screen Mode	Select between 2 screen display types. It also allows you to switch and view different camera number or channels.
(3) About	Display the PDAViewer software version.
(4) Minimize	Reduce the size to taskbar.
(5) Exit	Close the PDAViewer.
(6) Focus	Adjust the focus of PTZ camera to produce clear image.
(7) Full Screen	Use the entire screen to only display the video.
(8) Snapshot	Capture and save the screen shot in *.bmp format.
(9) Zoom	Zoom in and out the PTZ camera image.
(10) Direction buttons	Adjust and position the focal point of the PTZ camera.

3. To change the video quality, enable/disable audio, and select to display different camera, tap on the video screen longer the pop-up menu will appear.

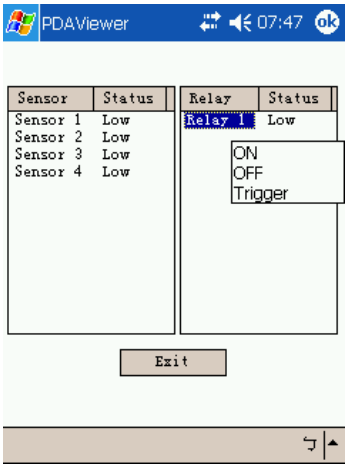
7.1.4 To Playback in PDAViewer

1. Run the **PDAViewer** in the Programs.
2. Hook up to the DVR server.
3. Click **Connect** icon and select the DVR server
4. Click **Playback** to enter playback option screen
5. Select the **camera**, **data**, and **time**
6. Click **Playback** to start playing the recorded video



7. While playback, user can view and change status of I/O devices
8. On the playback screen, tap on video screen longer the pop up menu will appear
9. Select the **Remote IO**

10. The sensor and relay devices will list as below:



11. User can change the relay status. Select the relay and tap on video screen longer the popup menu will appear, and then, select the status (ON, OFF, Tigger)

7.2 Using JavaViewer to Access DVR Server

Using the mobile phone within Symbian Smart Phone OS to access the DVR through Internet. Make sure your mobile phone supports Symbian Smart Phone OS and can be connected to the internet. To use this feature, you need to install the JAVA Viewer program that it can be downloading it from the DVR server through the internet.

7.2.1 To install JavaViewer from the DVR Server

1. Open the web browser and enter the DVR server IP (http://DVR server IP: port/Java-Viewer.html). Then click **Connect**.
2. When the Download screen appears, select **Java-Viewer.jad** and download it to your mobile phone.
3. After the installation, the JavaViewer will be in your mobile phone system. To find the JavaViewer program where is located, please refer to your mobile phone user's manual.

7.2.2 To Use the JavaViewer

1. Run the JavaViewer program.

2. Enter the DVR IP address, port number, user ID, and password. Please refer to your DVR server setting for that information.

3. And then, select the Connect to connect to DVR server.

4. Click **Yes** to accept the data from DVR server.

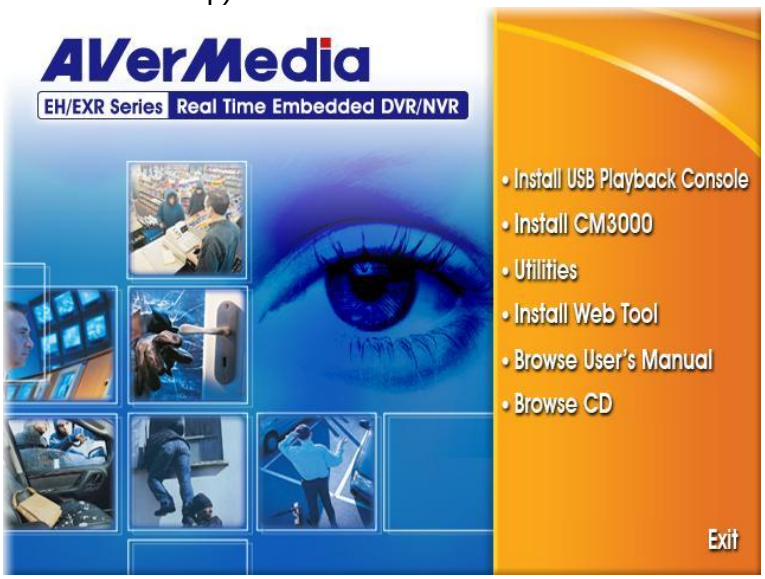
5. When connection is success, you will see the camera video on the screen.

6. To switch to different camera view, select menu and select the channel.

7. The JavaViewer support PTZ control function, you can refer to **Help** file for detail function control key. Select **menu** and go the way down to select the **Help** file.

Chapter 8 Using the Web Tools

The bundled Web Tools includes Dispatch Server, Remote Backup, and Remote Setup program. To install Web Tools, place the CD into the CD-ROM drive then click **Install Web Tool**. In selection window, user can select the application(Rmote iSetup, Remote iBackup) to istall.



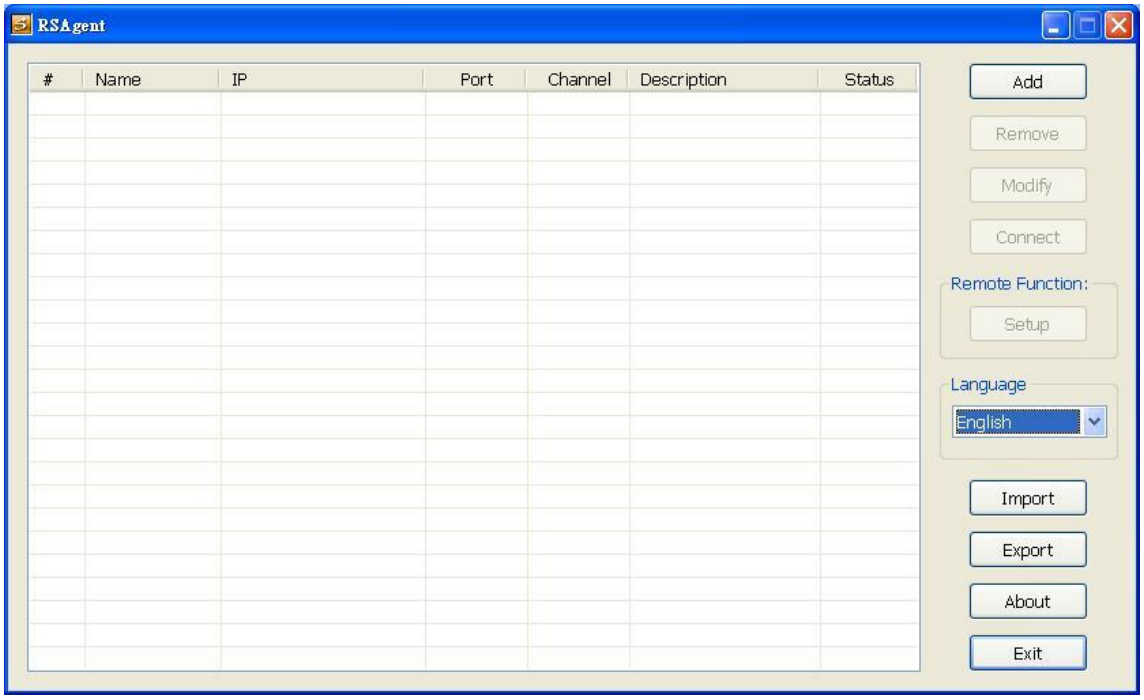
8.1 Remote iSetup

Remote iSetup is a tool for configuring DVR server from remote site. To install Remote Setup application, insert the Installation CD into CD-ROM drive and click **Install Web Tools** and select **Remote iSetup** to install. After installation, click

to start the Remote iSetup application.

8.1.1 To Add DVR server

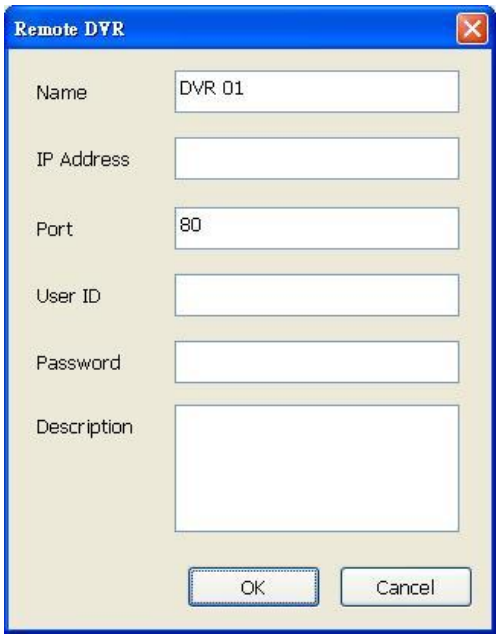
User need to add a DVR server and make connection in order to setup remote DVR server.



1. Click **Add**
2. In Edit DVR windows, fill in the following items:
   - **Name:** give a name for remote DVR server for easy managing
   - **IP:** fill in remote DVR server's IP address
   - **Port:** the port use to connect to remote DVR server. The port number is same the Webviewer port on the

remote DVR server. The default is 80.

- **User ID:** fill in the remote DVR server's login account
- **Password:** fill in the remote DVR server's login password
- **Description:** fill in a short description for the remote DVR server



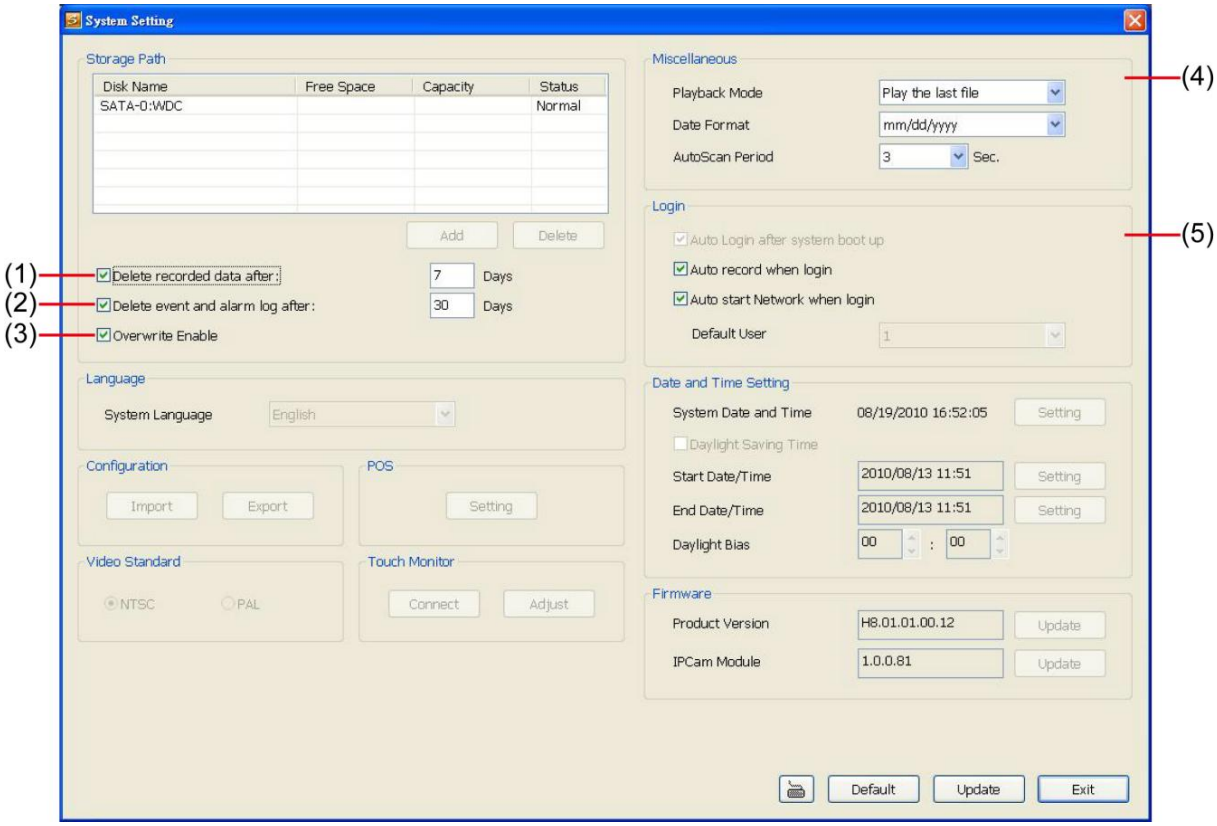
3. Click **OK** to complete adding remote DVR server.
4. The added DVR server will be listed and auto connects to DVR server.
5. Once the connecting is success, user can start to configure DVR server.
6. When connection is lost, click **Reconnect** to connect again.
7. To modify or delete the added DVR server, select the DVR server from listing and click **Modify** to change the setting and click **Delete** to remove the DVR server.
8. User also can import the setting by clicking **Import** button. To save the setting to local hard disk, click **Export** button.

8.1.2 To Setup Remote System Setting

The setting here applies to Remote DVR only.

8.1.2.1 System Setting

In the System Setting windows, click **Update** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting.



(1) Delete recorded data after

If you want the system to automatically erase the data after a certain days, enable the **Delete recorded data after** check box and enter the numbers of days in **Days** text box.

(2) Delete event and alarm log after

If you want the system to automatically erase the event and alarm log files after a certain days, enable the **Delete event and alarm log after** check box and enter the numbers of days in **Days** text box.

(3) Overwrite Enable

When there is not enough free space to record one hour data, the system automatically replaces the oldest data.

(4) Miscellaneous

Enable the conditions in **Miscellaneous** section you want the system to perform.

- **Playback Mode**
  Select the mode of playback the video.
  - ✓ **Select date and time:** Select the date and time which user wants to playback.
  - ✓ **Play the last file:** Automatically playback the video from the last hour
  - ✓ **Instant Playback:** Automatically playback the video which has just recorded
- **Date Format**
  Select the date format which wants to display in **Select date and time** playback mode
- **Auto Scan Period**
  Set the time gap of the Auto Scan function from 3 to 10 seconds. This automatically switches to the next video in cycle depending on the set time gap.

(5) Login

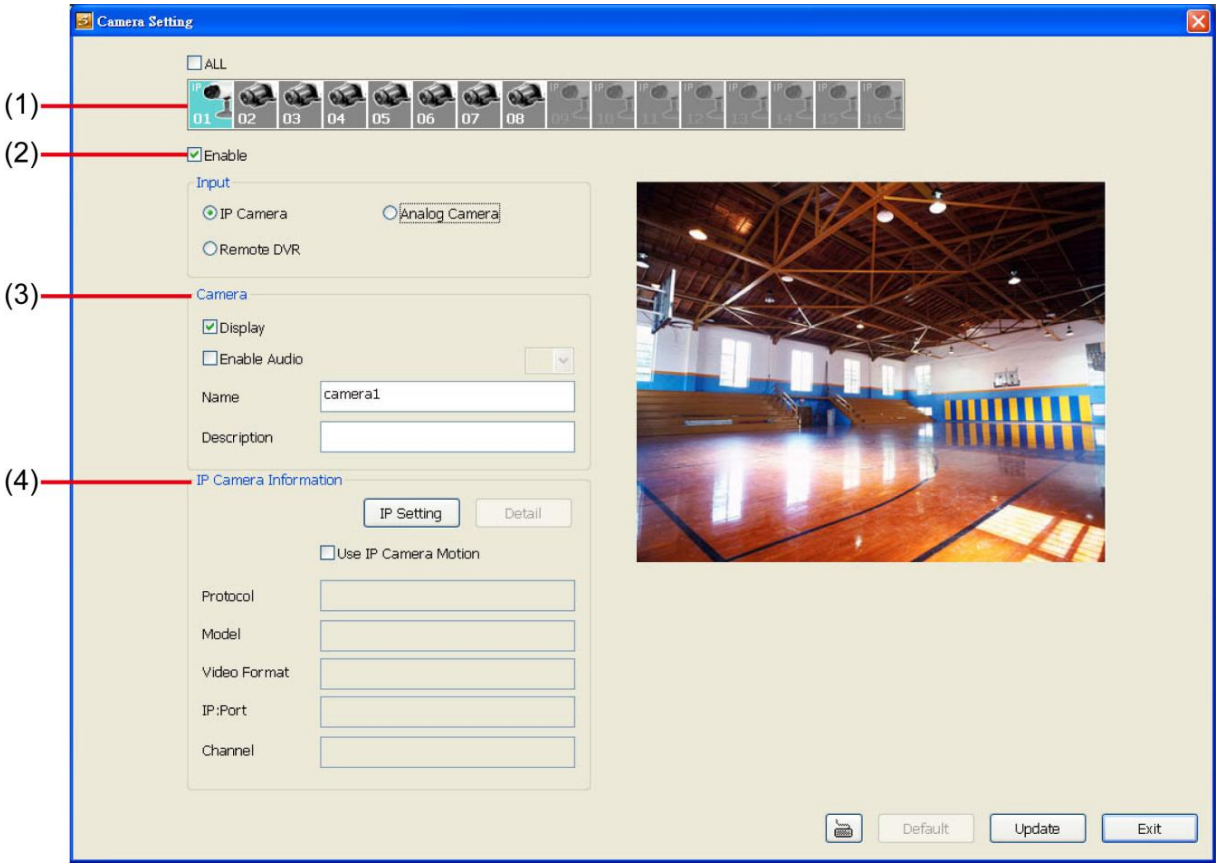
Enable the conditions in Login section you want the system to automatically carry out.

- **Auto record when login**
  Automatically start video recording when the DVR is executed.
- **Auto start Network when login**
  Automatically connect to network when the DVR is executed.

8.1.2.2 Camera Setting

Select the camera from remote DVR servers to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.

IP Camera Setting



(1) Camera Icons

Select the camera number you want to adjust the video setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, Right click on the camera icon. To select one camera only, Left click on the camera icon. The camera icon turns red when it is selected.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the type of camera as IP camera. For General camera setting, see Analog Camera Setting. To modify camera of remote DVR, see Remote DVR Camera Setting.

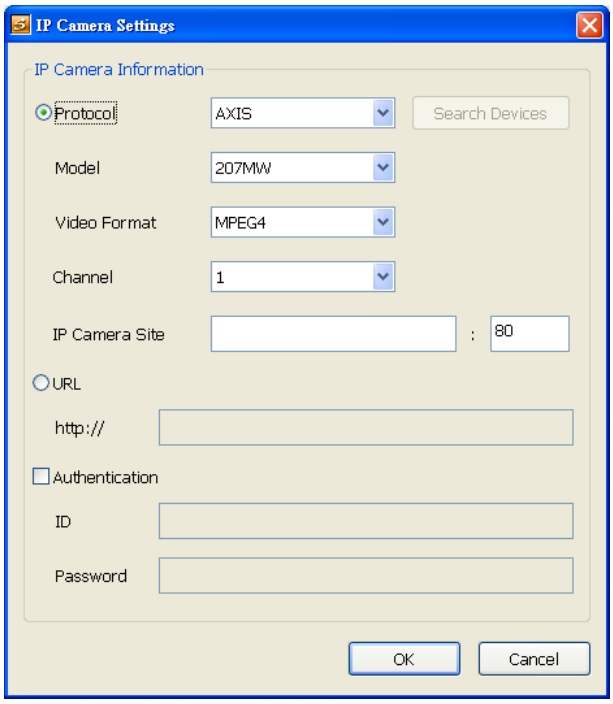
(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) IP Camera Information

To setup IP camera and display current IP camera information.

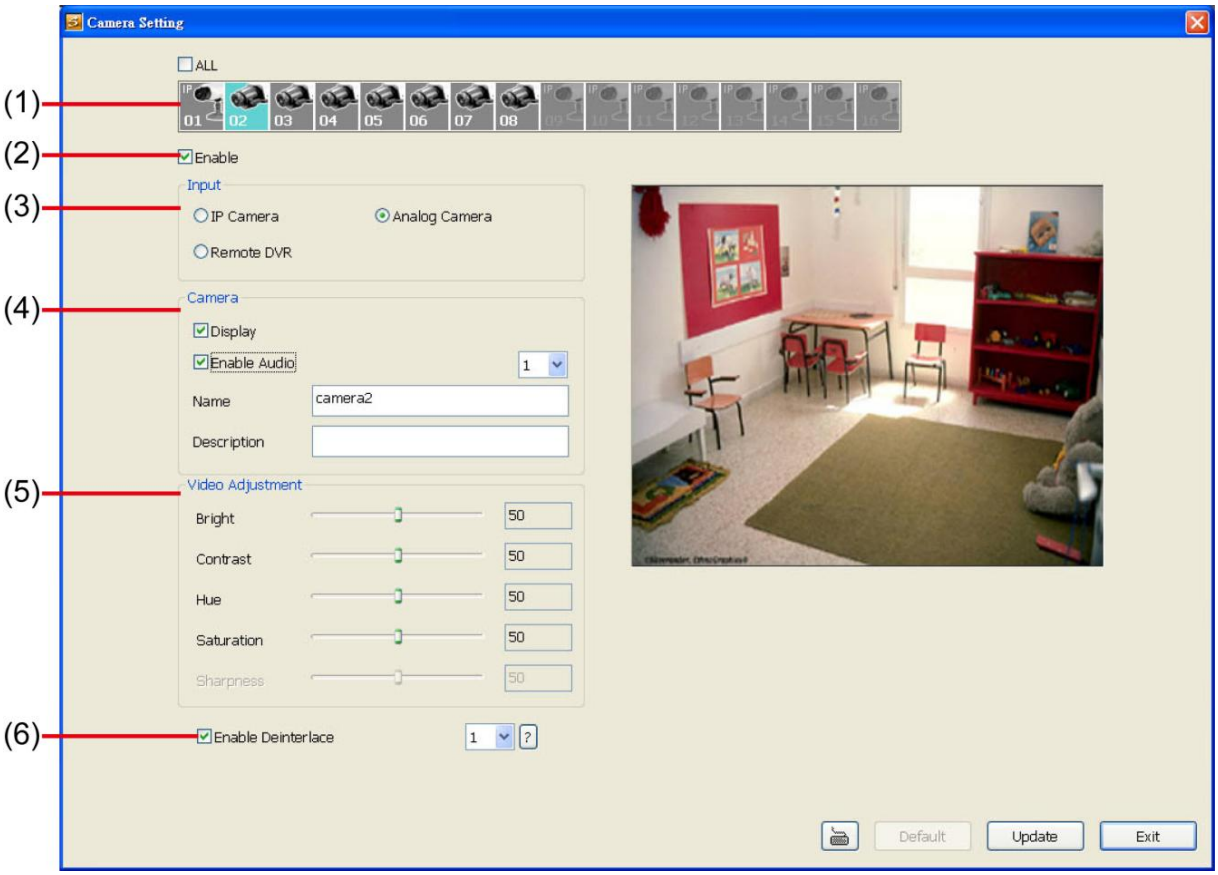
■ **IP Setting:** Click **IP setting** to add the IP camera.



1. Click the radio button of **Protocol** to start setup IP camera.
2. Select the **Protocol**, **Model**, **Video Format**, and **Channel** of the IP camera.
3. Enter IP address and connecting port in **IP Camera Site** column.
4. Also, user can enter URL of IP camera instead of IP address.
5. If the IP camera has authority request, please enable **Authentication** and enter **ID** and **Password**.
6. Click **OK** to connect with the IP camera.

Analog Camera Setting

Select the camera from remote DVR servers to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **General Camera**. For IP camera setting, see IP Camera Setting. To modify camera of remote DVR, see Remote DVR Camera Setting.

(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment

(5) Video Adjustment

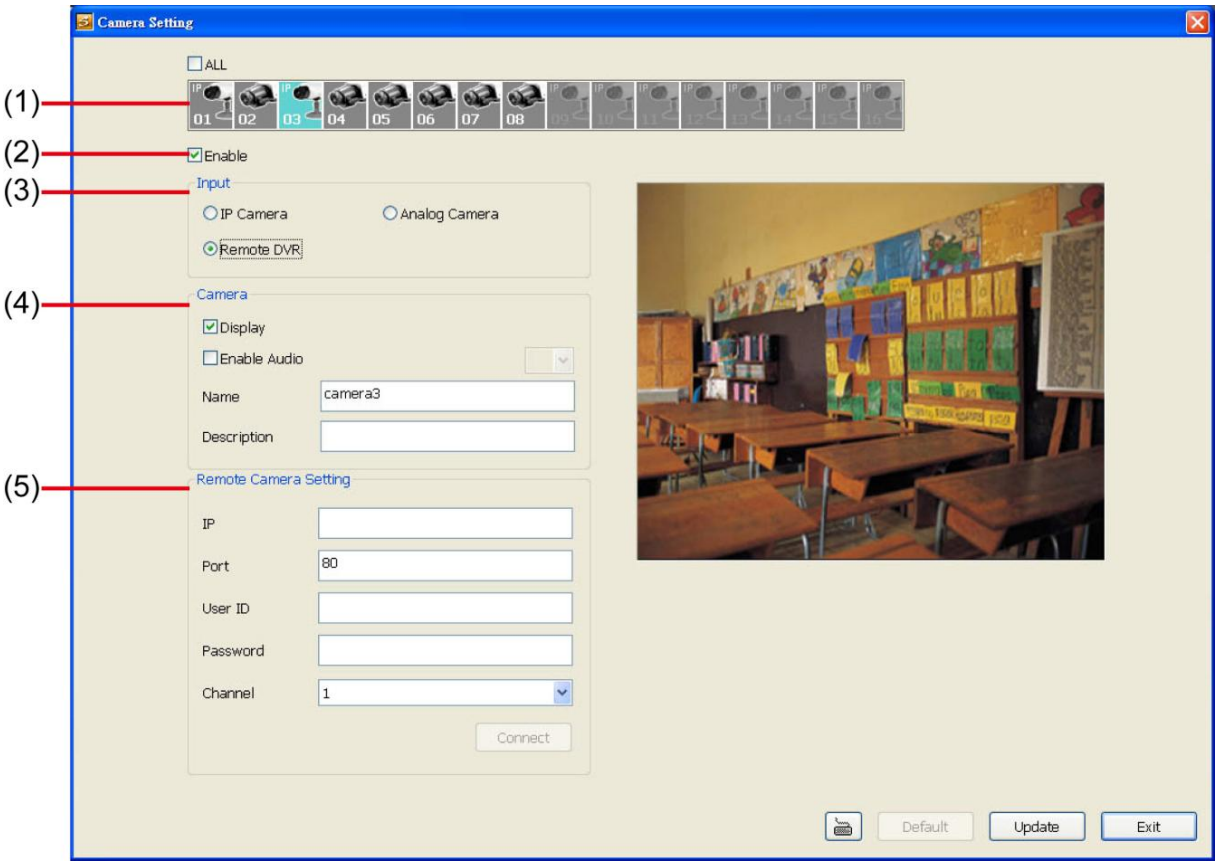
Adjust the Brightness, Contrast, Hue and Saturation of the camera.

(6) Enable Deinterlace

Enhance the video quality. Set the **Enable Deinterlace** mode to #1, if you are capturing motionless picture and select #2, if it captures lots of movement.

Remote DVR Camera Setting

Select the camera to modify settings. In the Camera Setting windows, click **Update** to save and apply the new settings, click **Exit** to exit without saving.



(1) Camera Icons

Select the camera number you want to view. To enable/disable all cameras, click **ALL** check box.

(2) Enable

Set to enable/disable the selected camera. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(3) Input

Select the camera type as **Remote DVR**. For IP camera setting, see IP Camera Setting. To modify analog camera setting, see Analog Camera Setting.

(4) Camera

- **Display**
  Enable/disable to show the video. Even if the video of the selected camera is hidden you can still record the video and preview it in playback mode.
- **Enable Audio**
  Enable/disable audio of the camera.
- **Name**
  Change the camera name
- **Description**
  Add a short comment
- **IP**
  Enter the IP address of the camera
- **Port**
  The port for connection
- **User ID**
  Enter the user id that for connecting authority
- **Password**

Enter the password that is for connecting authority

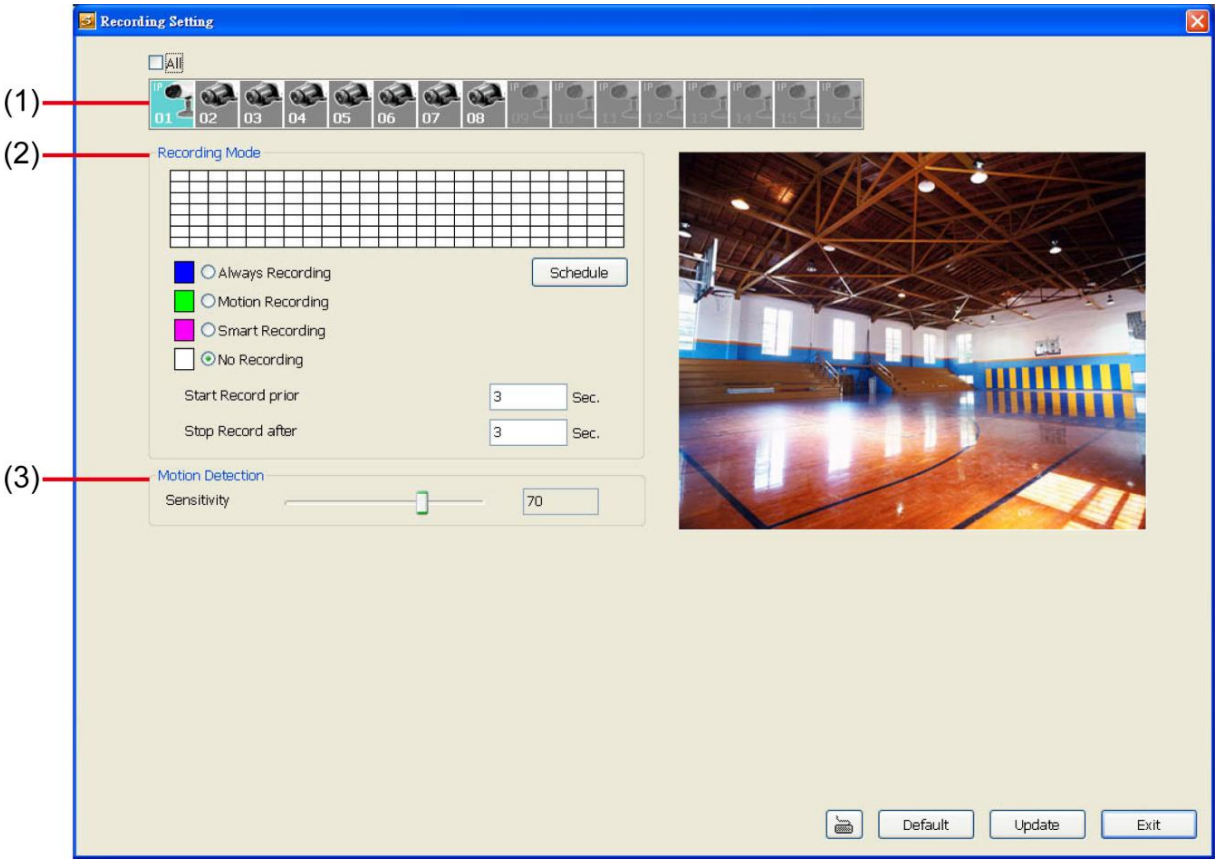
- **Channel**

  Select the channel of connected camera

8.1.2.3 Record Setting

In the Recording setup windows, click **OK** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting.

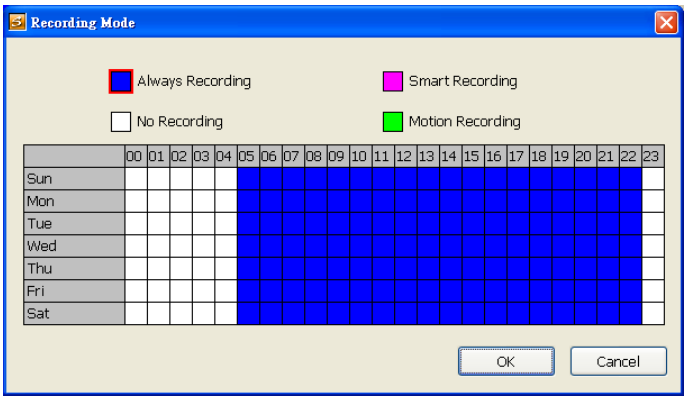
IP Camera



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode



The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block Sun. to Sat. represent the day in the week block. To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen.

The recording modes are listed below:

- **Always Recording**

  Record the video from the selected camera and save it to the designated storage path

- **Motion Recording**

  Start recording the video from the selected camera only when the system detects movement. Once a motion

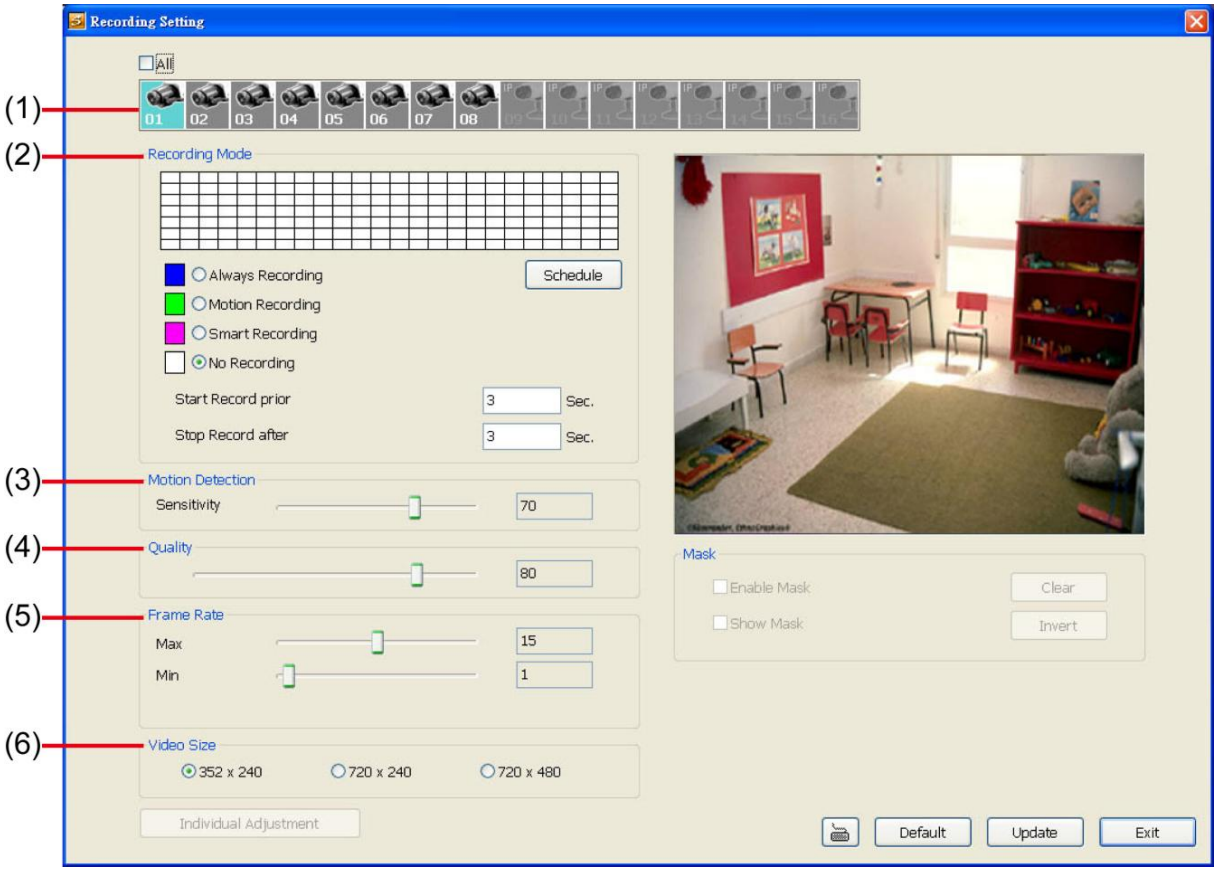
is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.

- **Smart Recording**
  Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

Analog Camera

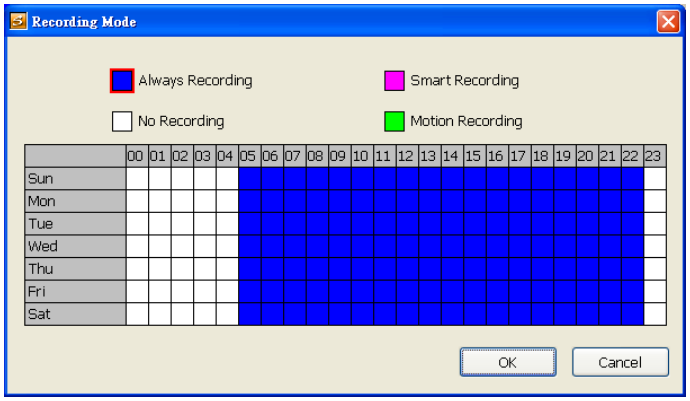


(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, enable the **ALL** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns purple when it is selected.

(2) Recording Mode

The horizontal blocks from 00 to 23 represent the time in 24-hour clock and the vertical block Sun. to Sat. represent the day in the week block. To record in full 24 hours and 7 days a week, select the recording mode and click the ⊙ button. If you want to only record at a particular time or day, click **Schedule** button and select the **Recording Mode** , and then click on the time or day blocks. When the system starts recording a red triangle mark would appear at the upper left corner of the screen.



The recording modes are listed below:

- **Always Recording**
  Record the video from the selected camera and save it to the designated storage path
- **Motion Recording**
  Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Start Record Prior** and **Stop Record After** settings.
- **Smart Recording**

Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.

- **No Recording**
  The system won't do any recording.

(3) Motion Detection

Adjust the sensitivity of the motion detection. The higher the value, the finer the sensitivity is detected. When it detects a motion, a green triangle mark would appear at the upper left corner of the screen.

(4) Quality

Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.

(5) Frame Rate

Set the maximum and minimum number of frames to be recorded during motion and motionless state. The frame rate ranges from 01 to 30 for NTSC and 01 to 25 for PAL. The higher the frame rate, it uses more hard disk space.

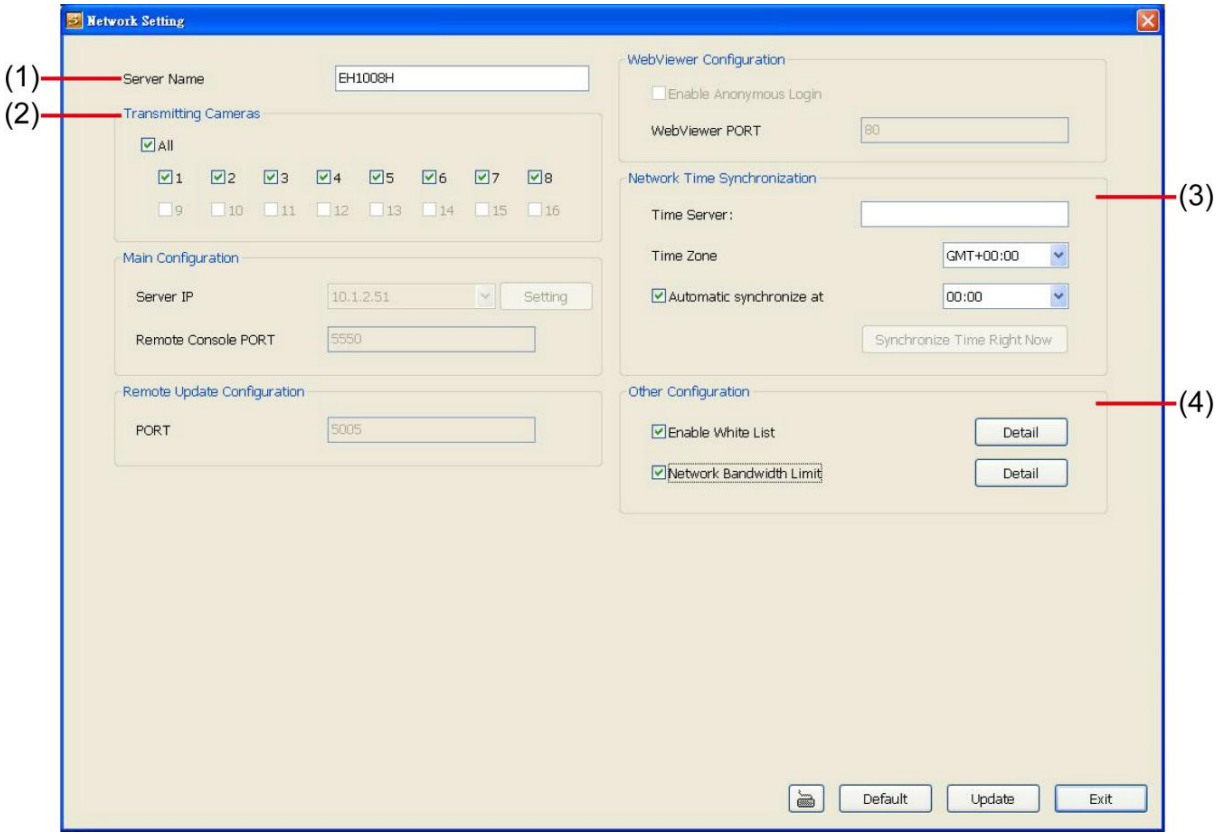
Always recoding frame rate is depending on max frame rate value.

(6) Video Size

Select the size of the video and click the ⊙ button. The higher the size, the larger the file it create.

8.1.2.4 Network Setting

In the Network Setting dialog box, click **Update** to accept the new settings, click **Exit** to exit without saving, and click **Default** to revert back to original factory setting. For the network service ports that use by DVR server, please see Appendix A.



(1) Server Name

Assign a name for the DVR unit. Alphabet letters and numbers only.

(2) Transmitting Cameras

Select and click on the camera number in the Transmitting Camera section you want to make it accessible via internet using WebViewer, Remote Console, PDA Viewer and JavaViewer (still image). To select all the cameras, enable the **ALL** check box.

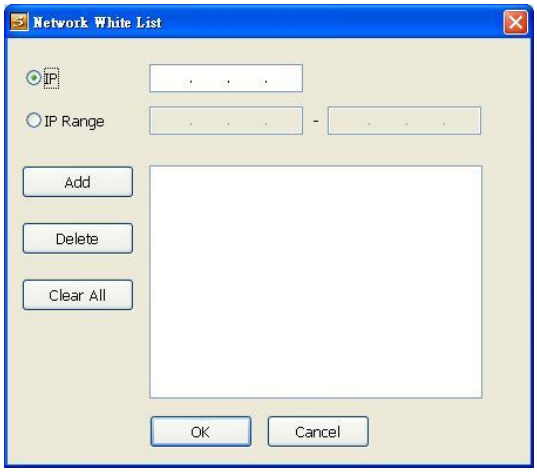
(3) Network Time Synchronization

Adjust the DVR system time same as network time server. Fill in the **Time Server** IP address or domain name. Select the **Time Zone** that DVR is located. And then, mark the **Automatic Synchronize** time to set automatic synchronize time on a daily basis.

(4) Other Configuration

- **Enable White List**

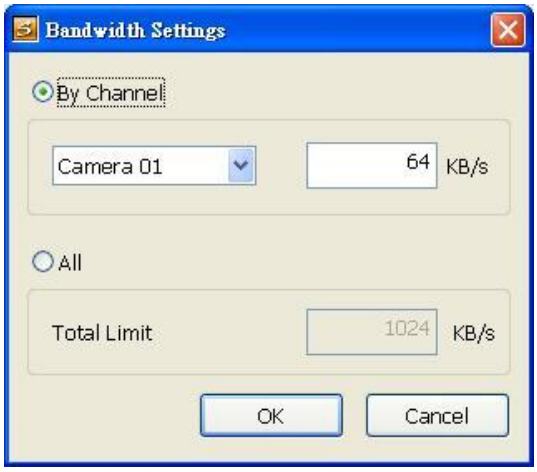
  An access permit list for the remote accessing of DVR server. Enter the IP address and click **Add**. Or, enter a range of IP address and click **Add**. To delete the IP from the list, select the IP and click **Delete** button. To reset the input, click **Clear** button.



- **Network Bandwidth Limit**

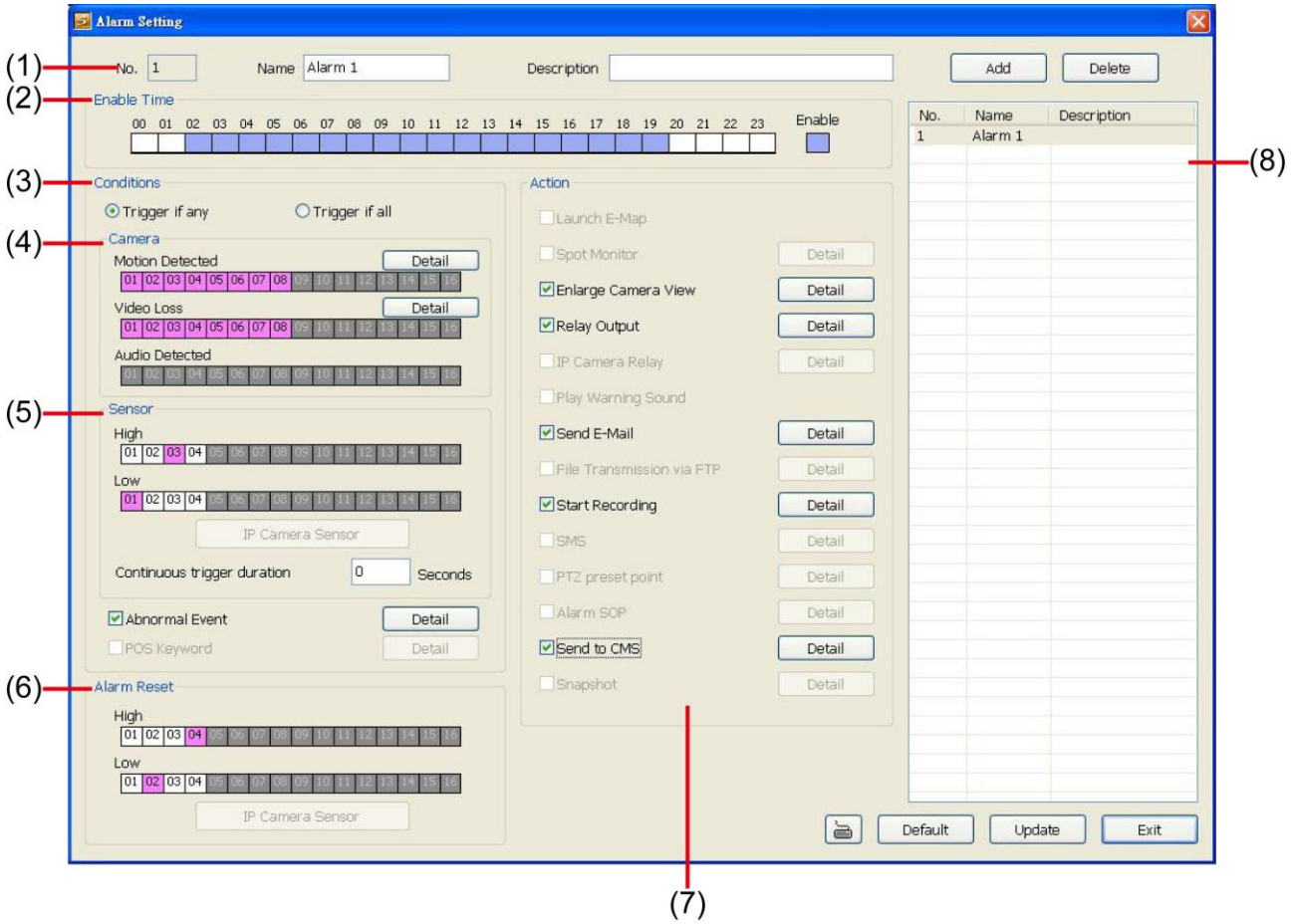
  By Channel: Set the network bandwidth by each channel.

  All: Set the total network bandwidth consumption limit.



8.1.2.5 Alarm Setting

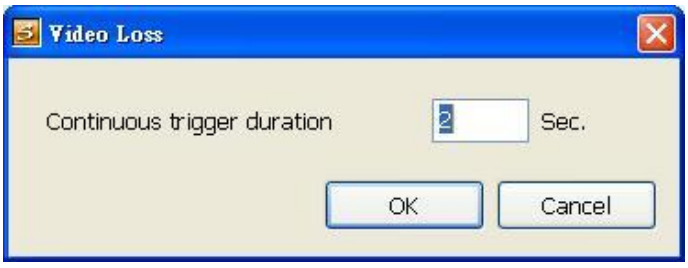
In the Alarm Setting dialog box, click **Add** to insert and set new alarm setting, click **Delete** to remove the selected alarm setting, click **Update** to save the setting, **Exit** to exit without saving, and **Default** to revert back to original factory setting.



1. Click **Add** to insert and set a new alarm setting. Click the items in the **(8) Alarm Setting List** if you want to modify the alarm setting.
2. In **(1) No./Name/Description** enter alarm name and description. Alarm **No.** will be created by DVR system.
3. In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Select the time and click the block you want to activate or deactivate the alarm function. When it is deactivated the color of the block turns white.
4. In **(3) Conditions**, you can set "**Trigger if any**" to activate if it falls to one of the conditions or "**Trigger if all**" to activate if it falls to all conditions.
5. In **(4) Camera** section, select and click on the camera number (01 to 16) in **Motion Detected** and **Video Loss** to set the condition for the system to alarm.
   - **Motion Detected:** select and click on the camera number (01 to 16) to set the condition for the system to alarm. **Right-click** on the camera number to setup the system to send out the alarm when motion has been detected last the time that user has entered in **Continuous trigger duration**.

   - **In Video Loss**, click the camera number (01 to 16) to set the alarm condition when video is lost. **Right-click** on the camera number (01 to 16) to setup the system to send out the alarm when video has

been lost to last the time that user has entered in **Continuous trigger duration**.



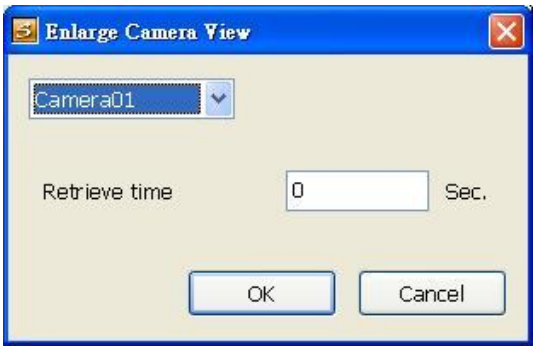
6. In **(5) Sensor**, select and click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
   - **Continue trigger duration:** Set a time period that when sensor has been trigger and stay in the same status for that period, then the alarm will be sent out.
   - Enable/disable the **Abnormal Event** check box, to set the condition of the event for system to alarm.

   - **Reboot:** when the DVR system reboot without abnormal condition, the system will send out the alarm message.
   - **Abnormal Reboot:** when the DVR system reboot in irregular condition, the system will send out the alarm message.
   - **Recording is switched off:** when the recording has been stopped, the system will send out the alarm message.
   - **Network is switched off:** when the network connection of DVR system is lost, the system will send out the alarm message.
   - **Hard Disk failed:** when the hard disk doesn't work normally, the system will send out the alarm message.
7. In **(6) Alarm Reset**, click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment. If the sensor normal status is high, set the alarm reset condition to low.
8. In **(7) Action**, you may now set the alarm action for the system to perform when the alarm condition is activated.
   - **Enlarge Camera View**

     Switch to only display video in Preview mode from where the alarm is activated.

     a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.

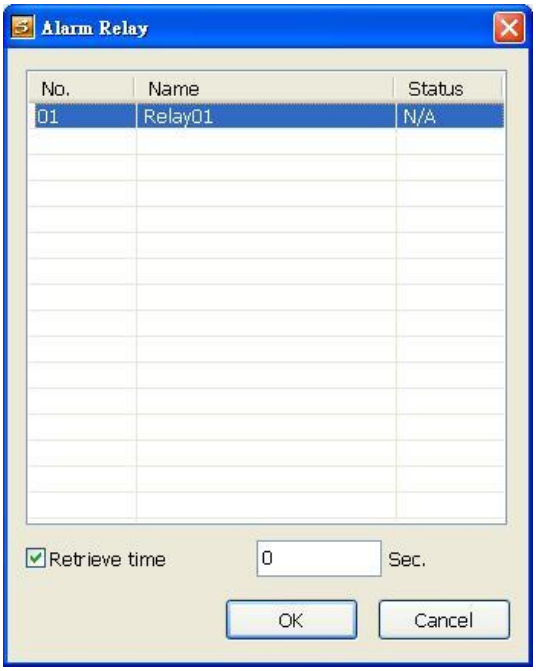
     b. **Retrieve time:** set the waiting duration before system switching back to original Preview mode. If the retrieve time is un-mark, the alarm video will keep enlarging until user switch back to Preview mode manually. The retrieve time range is 0~ 600 seconds.



- **Relay Output**

  Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation.

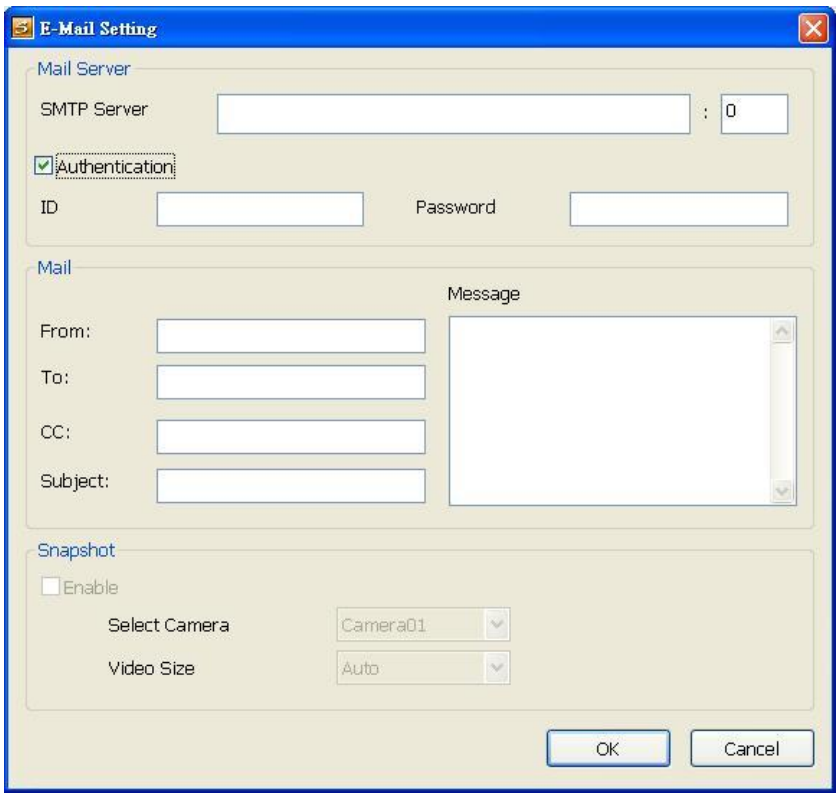
  1. Beside the Relay Output check box, click **Detail**.
  2. In the Alarm Relay dialog box, select from the available relay list and in the ON column, set to enable/disable the relay operation when the alarm is activated.
  3. In the Retrieve time check box, you may enable/disable to extend the relay operation time and set the duration in second.
  4. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



- **Send E-mail**

  Send an electronic text message. Beside the Send Email check box, click **Detail**.

  In the E-mail Setting dialog box, click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



  - **Mail Server**

    Enter the **SMTP Server** and **port**. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.

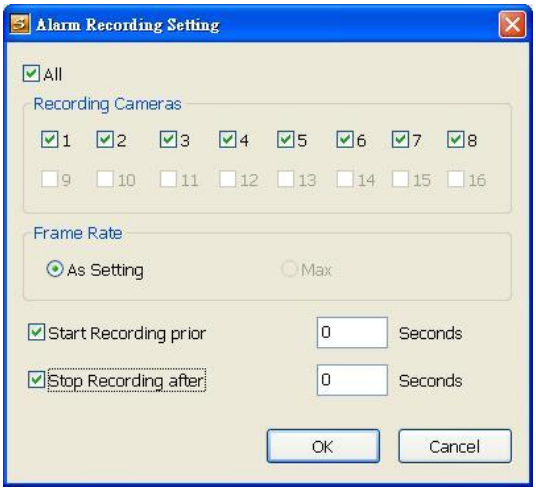
  - **Mail**

    Fill the mailing information.

    - ✓ **From:** Enter the sender e-mail address.
    - ✓ **To and CC:** Enter the recipient email address and separate it with comma or a semicolon (;).
    - ✓ **Subject:** Enter the message title.
    - ✓ **Message:** Type the message.

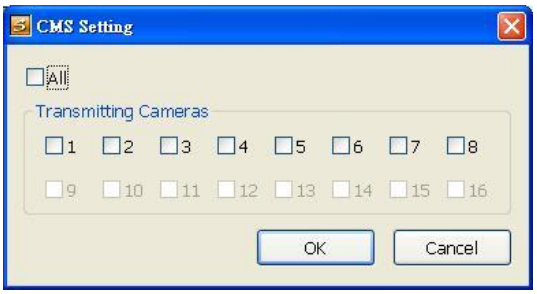
- **Start Recording**

  Record the video from the selected camera.



  1. Beside the Start Recording check box, click **Detail**.
  2. In the Alarm Recording Setting dialog box, select the camera to enable/disable video recording. Enable **All** to select all cameras.
  3. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting.
  4. In the **Start Record prior** text box, mark and set the number in second for the program to begin recording after the alarm has been trigger. The time range is 1~10 seconds.
  5. In the **Stop Record after** text box, mark and set the number in second for the program to continue recording after the alarm has ended. The time range is 1~999 seconds. If user doesn't mark and set the time, the alarm recording will continue recording until alarm is reset.
  6. Click **OK** to accept the new settings and **Cancel** to exit without saving.

- **Send to CMS (Central Management System)**



  Enable/disable the selected camera to send video to CMS when the alarm is activated. Beside the Send to CMS check box, click **Detail**. In the CMS Setting, select the camera to enable/disable sending the video to CMS. Enable **All** to select all cameras. Then, click **OK** to accept the new settings and **Cancel** to exit without saving.

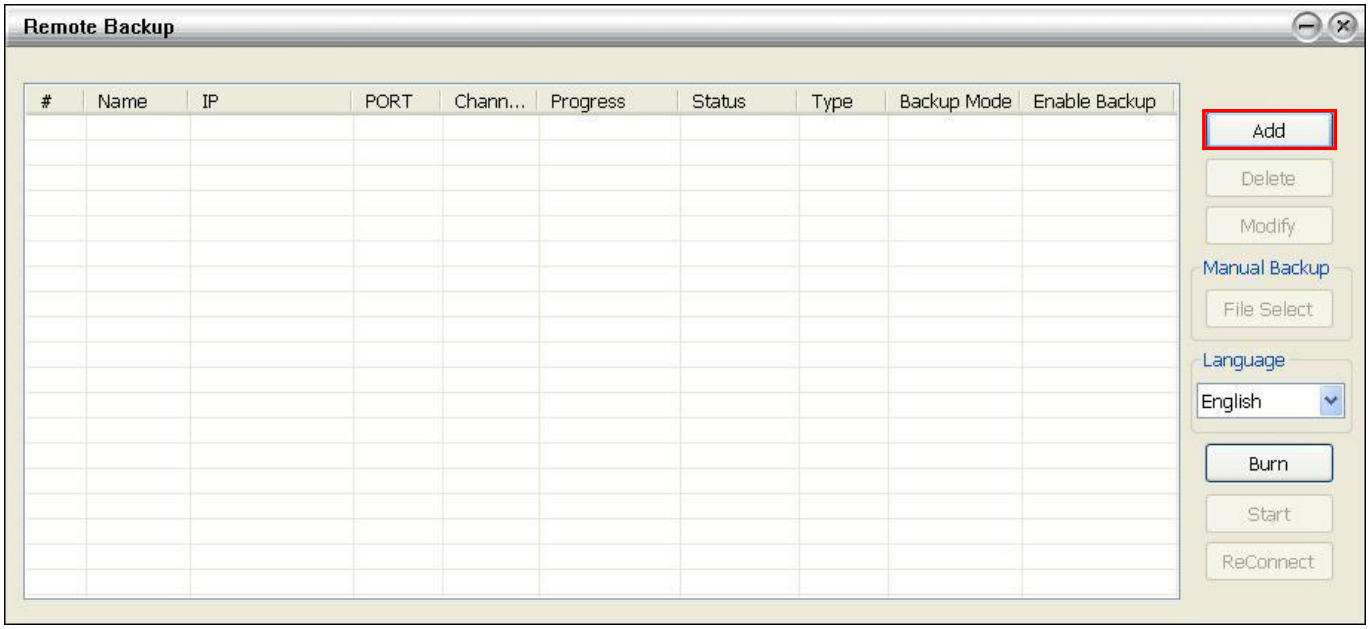
8.2 Remote iBackup

Remote Backup is purely for backing up the *.dvr file from the DVR sever. You can select between Auto Backup and Manual Backup. Auto Backup continuously archives one hour of the recorded data at a time, starting from the specified date. As for Manual Backup, it only archives the recorded data of selected date.

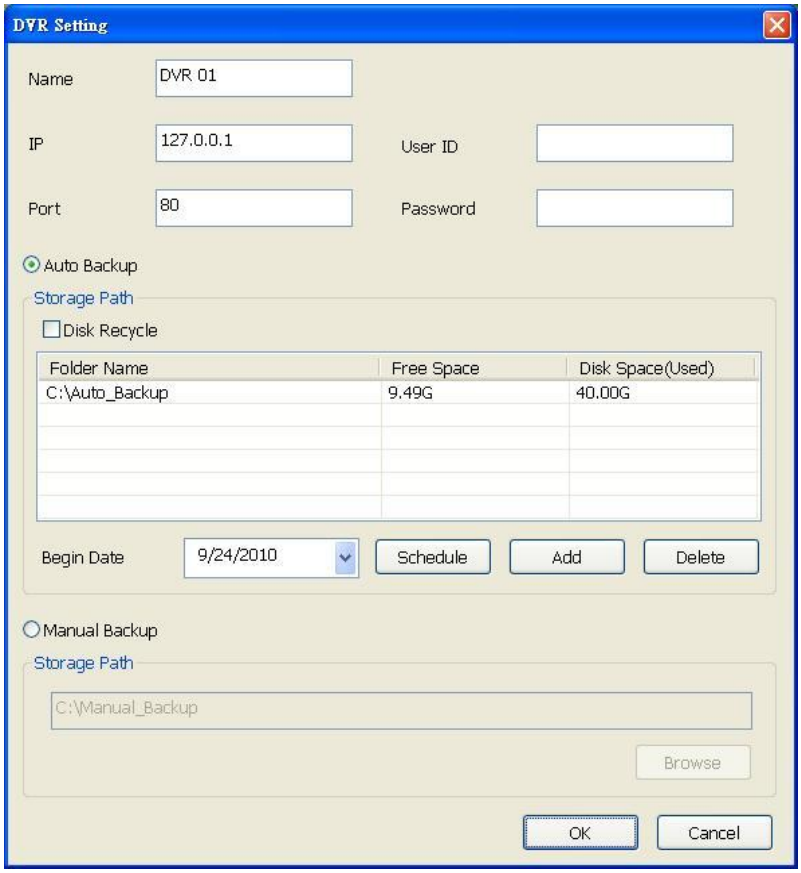
To back up the data, you must have at least 2G hard disk space.

8.2.1 To back up the recoded data from the DVR server

1. Make sure you are connected to the internet.
2. Click **Start** >> **Program** >> **DVR** >> **Web Tool** >> **Remote iBackup**
3. To add the DVR server, click **Add**.



4. In the Add New DVR windows, enter the Name, IP, user ID, and password.



5. Select the Backup mode:

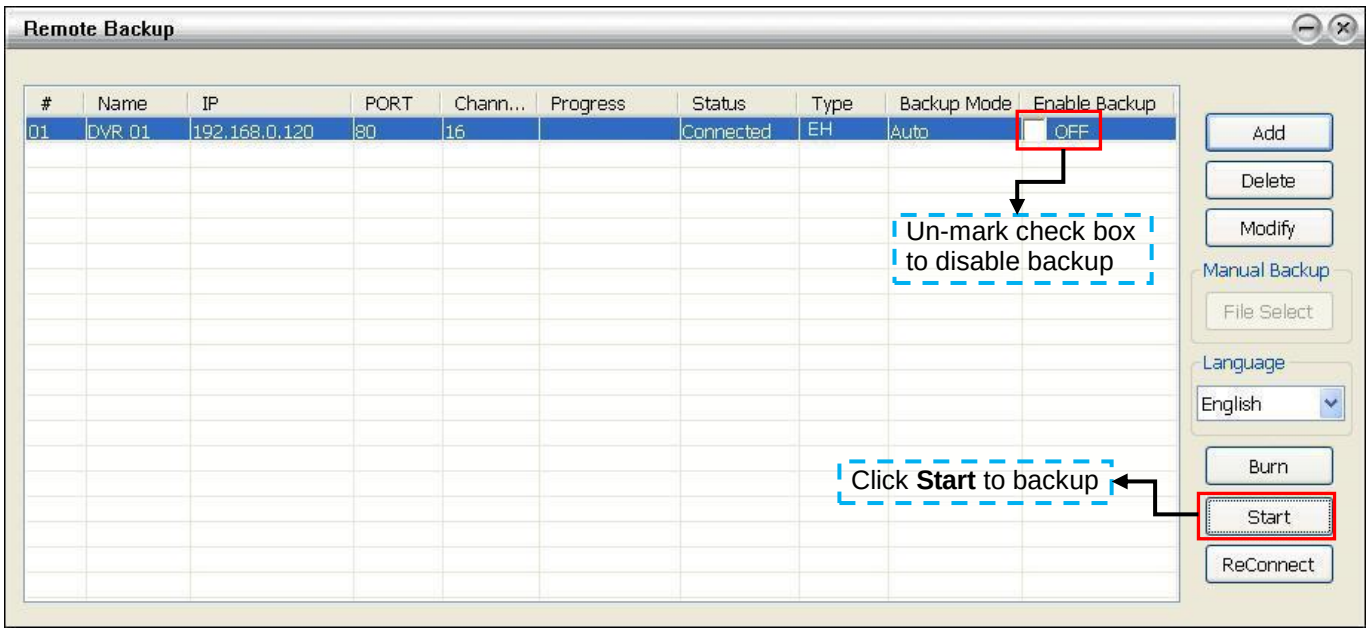
   Auto Backup mode: the backup will automatically execute when the setup is completed

   - In Begin Date drop down calendar, select the date from where to start
   - Click **Add** to set the storage path.
   - Click **Delete** to remove the selected storage path.
   - Click **Schedule** to select/unselect the time you want to backup. The red block turns white when it is unselected.
   - Enable/disable **Disk Recycle** check box, to automatically overwrite the oldest file when there is not enough free space to backup the file.

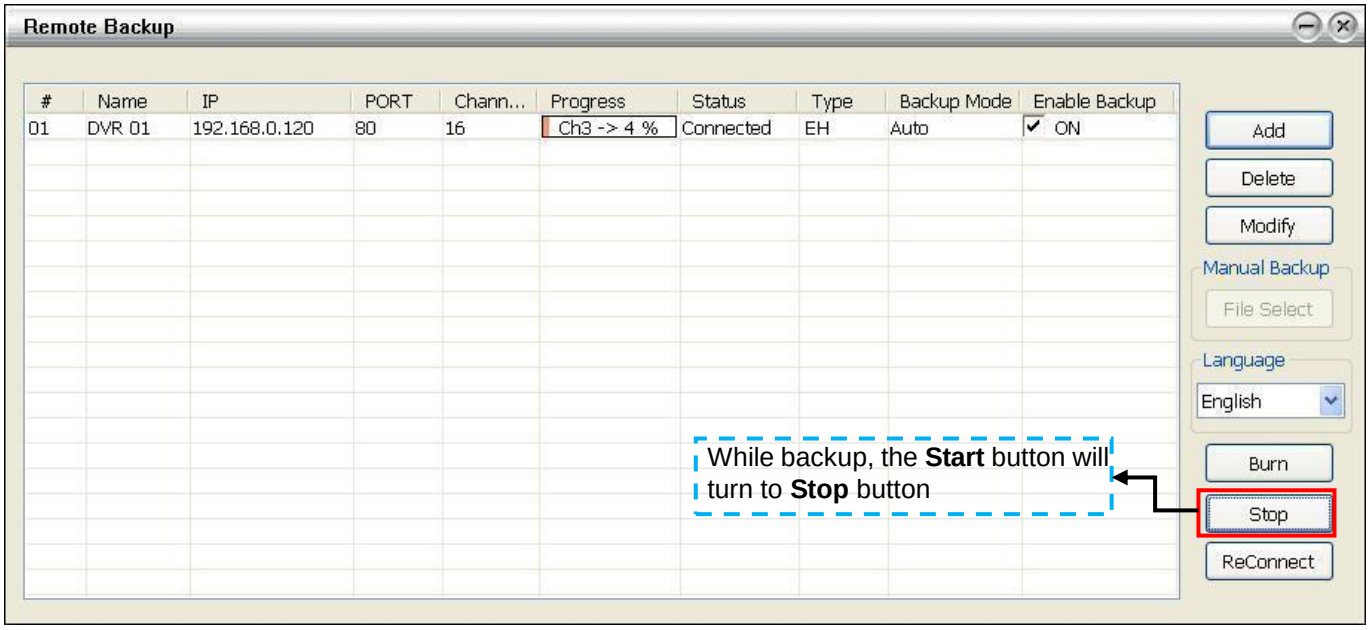
   Manual Backup mode: the backup progress will start when user press the backup button

   - Click **File Select** to choose the date, time and camera you want to back up.
   - Click **Browse** to set the storage path.

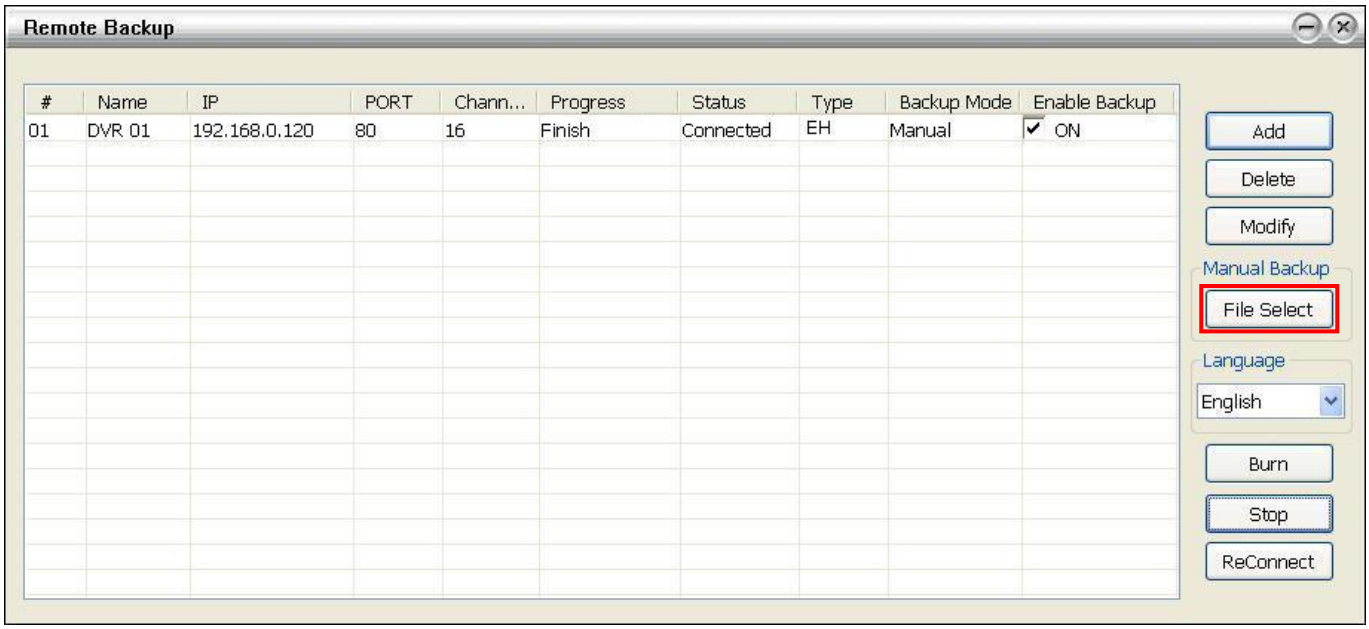
6. Click **OK** to complete the adding DVR server. The added DVR server will display in Remote Backup main windows.



7. Click **Start** to begin backup and click Stop to stop backup progress.



8. For manually backup, click **file select** button and select the DVR to backup.



Appendix A Registering Domain Name

DDNS (Dynamic Domain Name Service) is a data query service mainly used on the Internet for translating domain names into Internet addresses. It allows remote clients to intelligently search dynamic servers without any previous enquiring for servers' Internet addresses.

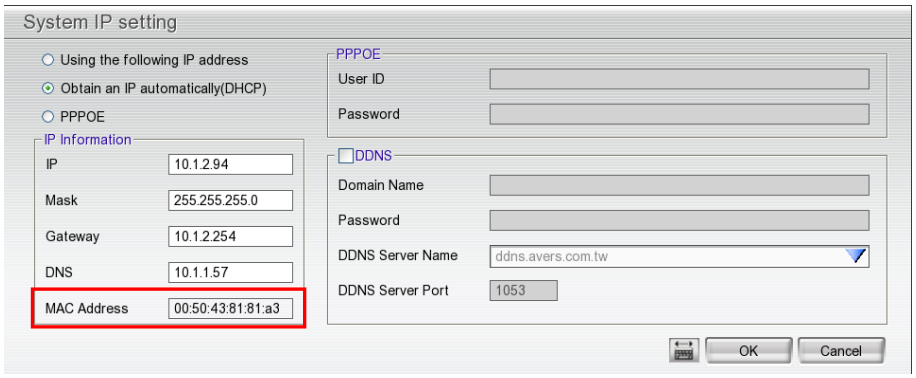
In order to take advantage of this intelligent service, first register your domain name on the following Web site **http://ddns.avers.com.tw**

- **User Login**

  Browse the website **ddns.avers.com.tw** with Microsoft IE or Netscape Navigator to access the following dialog.

- First input the **MAC Address** in **CD-Key No.** column and select the product name. Then click **OK** to login or **Reset** to clear the previous input.

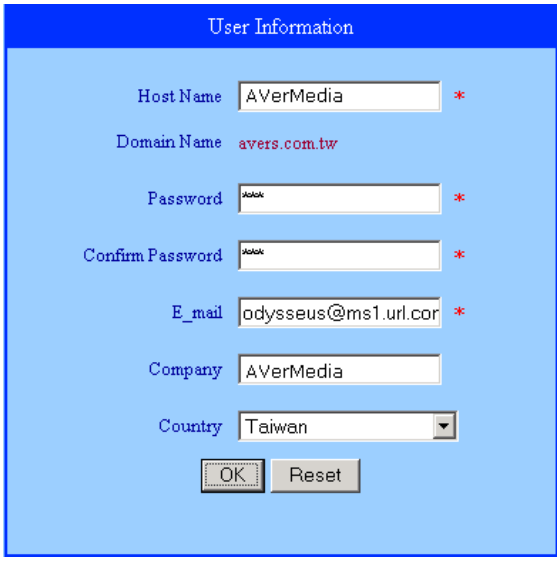
- To find the MAC address of the DVR, click **Setup** > **Network** in preview mode UI. And then, click **Setting** of the Main Configuration and user should see the **MAC address** in IP Information section.



- User also can find the MAC address at rear panel of the DVR unit.

- **User Information**

  Please provide the following user information, **Host Name** (user can choose any name he/she likes except the one violence with other users), **Password**, **E-mail**, **Company**, and **Country**. And then, click **OK** to complete the domain name registration.



Appendix B Network Service Port

The following table shows the ports that DVR server uses for certain network service.

	Port#	Variable
Remote Console	5550	Y
WebViewer	80	Y
CM3000	80	Y
Firmware Update	5005	Y
DVR DDNS (Upload / Download)	53/1053	N

WARRANTY NOTICE

LIMITED WARRANTY

AVerMedia INFORMATION, Inc. warrants this product to be free of defects resulting from faulty manufacture or components under the following terms:

WARRANTY LENGTH

Labor is warranted for (3) three year from the date of purchase.

Parts are warranted for (2) two year from the date of purchase.

Replacement products will be warranted for the remainder of the one year warranty period or (30) thirty days, whichever is longer

WHO IS PROTECTED

This warranty is enforceable only by the first consumer purchaser

WHAT IS AND IS NOT COVERED

Except as specified below, this warranty covers all defects resulting from faulty manufacturing of this product. The following are not covered by the warranty.

1. Any product on which the serial number has been defaced, modified, or removed
2. Damage, deterioration, or malfunction resulting from:

   Accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification, or failure to follow instructions included with the product.

   Misapplication of service by someone other than the manufacturer's representative

   Any shipment damages (Claims must be made with carrier)

   Any other cause which does not relate to a product defect
3. Cartons, cases, batteries, cabinets, tapes, or accessories used with product
4. AVerMedia does not warrant that this product will meet your requirements; it is your responsibility to determine the suitability of this product for your purpose

WHAT WE WILL AND WILL NOT PAY FOR

We will pay labor and material expenses for covered items. However, we will not pay for the following:

1. Removal or installation charges
2. Shipping charges
3. Any incidental charges

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