— DVR —

Notice: This content is subject to be change without notice.

CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

This symbol is intended to alert the user to the presence of unprotected “Dangerous voltage" within the product's enclosure that may be strong enough to cause a risk of electric shock.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING

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

NOTE: This equipment has been tested and found to comply with the limits for a class digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems)

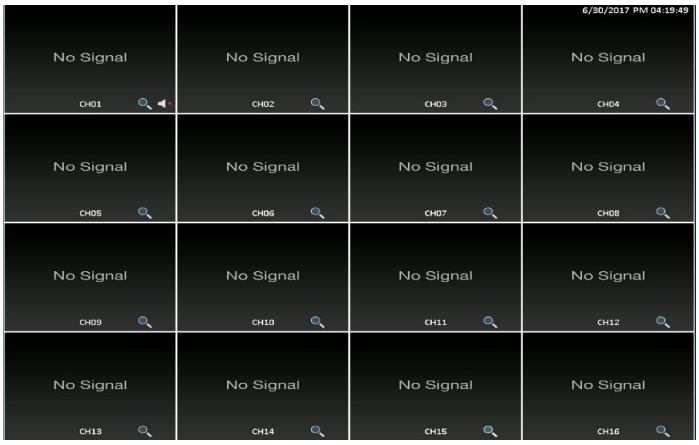
This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help to conserve natural resources. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Notice: Ghosting or fractured images may occur on the screen when there is a suddenly surge or lightning stroke which cause damage on IC in the DVRs.

GPL Licensing

This product contains codes which are developed by Third-Party-Companies and which are subject to the GNU Public License (“GPL2”) or the GNU Lesser Public License (“LGPL”). The GPL Code used in this product is released without warranty and is subject to the copyright of the corresponding author. Further source codes which are subject to the GPL-licenses are available upon request. We provide our modifications to the Linux Kernel, as well as new commands, and tools to get you into the code. The codes are provided on the FTP site, and please download them from the following site or you can refer to your distributor:

FTP site：http://icatch.azurewebsites.net/GPL/



Display, right-click on the screen to evoke the main menu.

Single Screen CH1.CH2,CH3.CH4…..

Multi-Screen Quad-Screen Division, 8-Screen Division ..

Previews Screen

Next Screen

Start Auto-switch

Start Recording Off, Continuous Record, Schedule Record

Freeze Video

PTZ control

Playback

Menu::

Play Back: Playback by time

Export: Export record files by file on USB/DVD/Remote PC.

Manual: Manual Recording / Alarm

HDD: HDD Format and settings

Record: Record Schedule , parameters settings ... etc.

Camera: Camera OSD , event, PTZ settings ... etc.

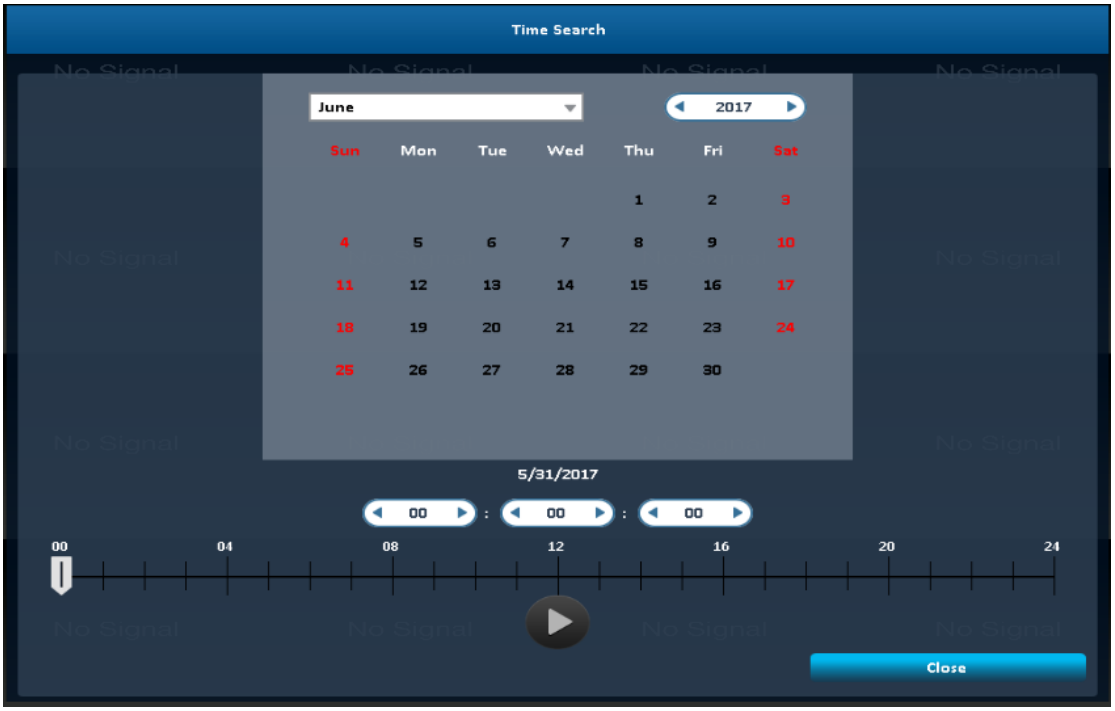
Configuration: System time / date, network, alarm settings ... etc.

Maintenance: Upgrade, log, default etc.

Shutdown: Shutdown, reboot and logout.

Login: Name, Password

1 Play Back: Time Search



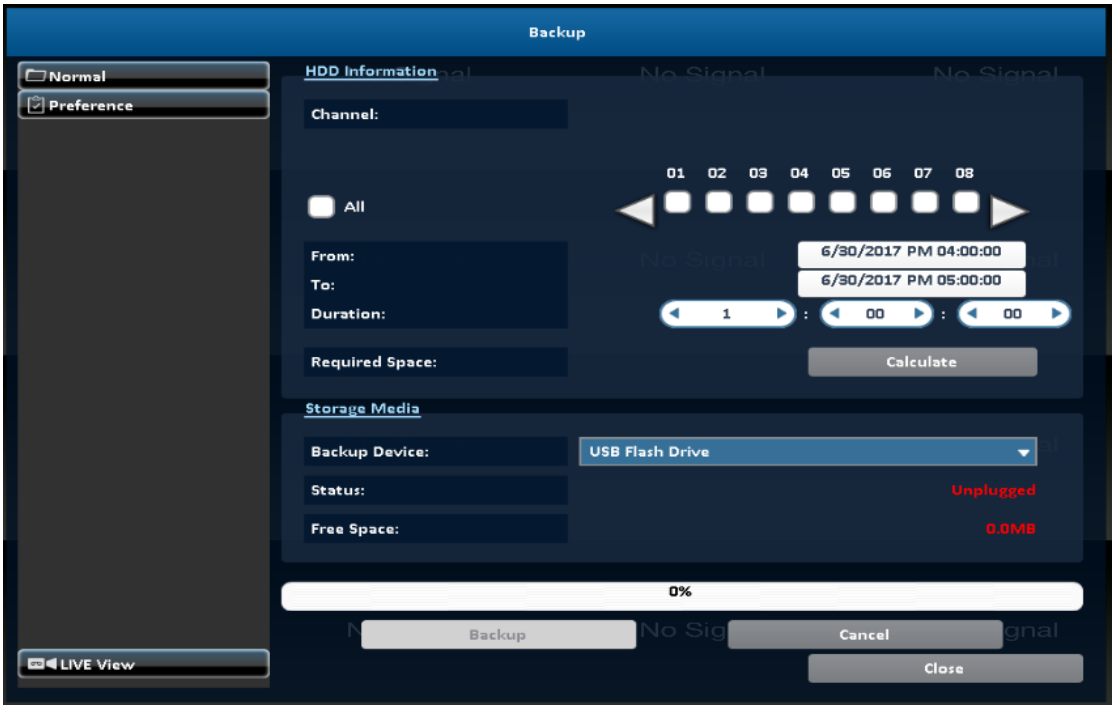
Time search can search for the specific time of recorded data to playback. Note that dates with recording data are marked wi th a blue box. System will start playing video of specified time slot. Calendar will be shown by using mouse to click on “yea r” and “month”.

Click “date” to display recording time of that specific date with time bar. You can change time (hour/minute/second) or click o n a specific pint of time bar by mouse then press “ok” . DVR will playback the recorded data of the specific time.

Item	Description
	Playbackbut-ton,startplay-bac.
	Select playback time by sliding the position of the cursor to the specified time. The

	timeline scale is 24 hours. The blue chart represents available video data.

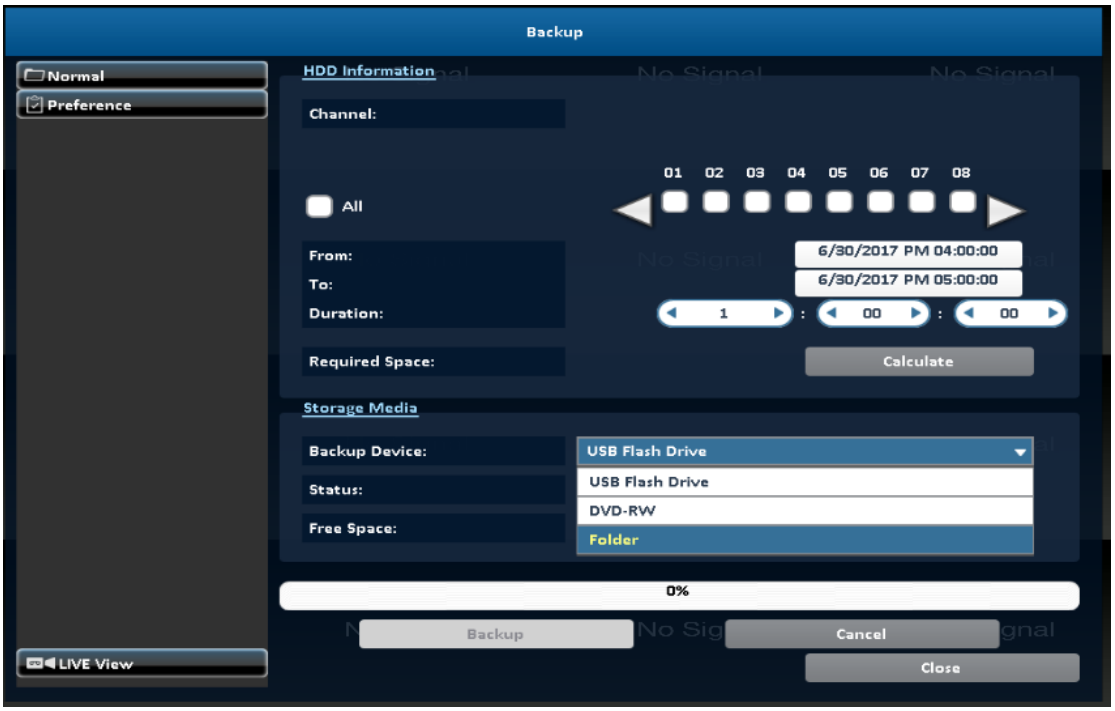
2 xport: Export record files by file on USB/DVD/Remote PC. User can backup recorded video data of a specified time frame. The DVR can backup video data to either direct-attached storage, such as DVR or USB drive, or remote folder of a PC.



2-1 Selection

Item	Description
From	The start time of video data to be backed up
To	The end time of video data to be backed up
Duration	The time duration of backup file

All	It can select all channels or clear all selected channels to backup
Required Space	Show the size of the backup file

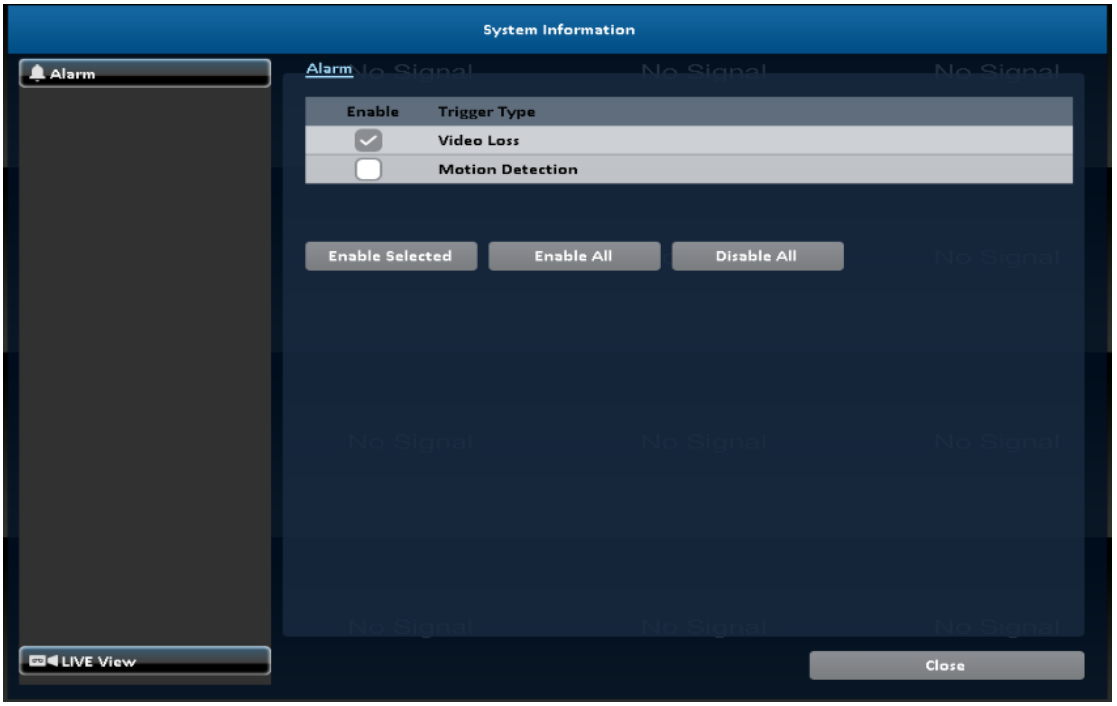


2-2 Select Backup Device

Item	Description
Backup Device	Select target device of backup (USB/DVD-RW/remote folder)
Status	The status of target backup device
Free Space	The available space in the target backup device. (not available for remote folder backup)
Backup	Start backup operation. Be sure to calculate the size of backup file BEFORE operating backup.

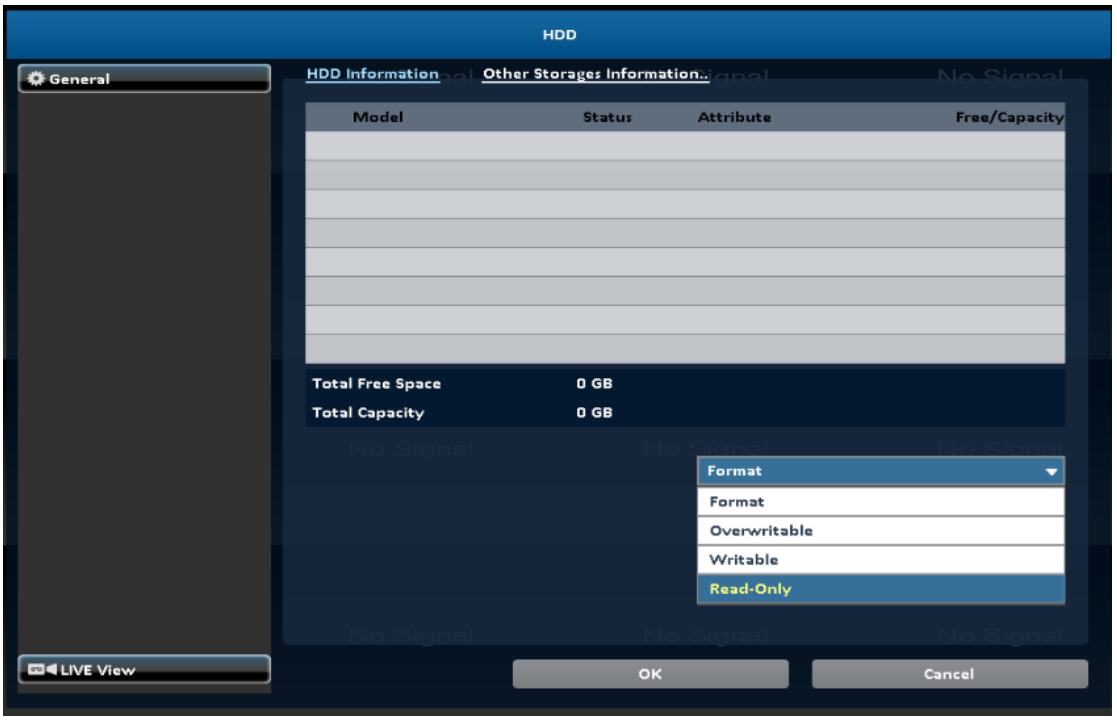
Do not unplug the USB device or turn off the DVR during the backup process to avoid unrecoverable error.

3 Manual: Manual Recording / Alarm



Video Loss / Motion Detection / Sensor

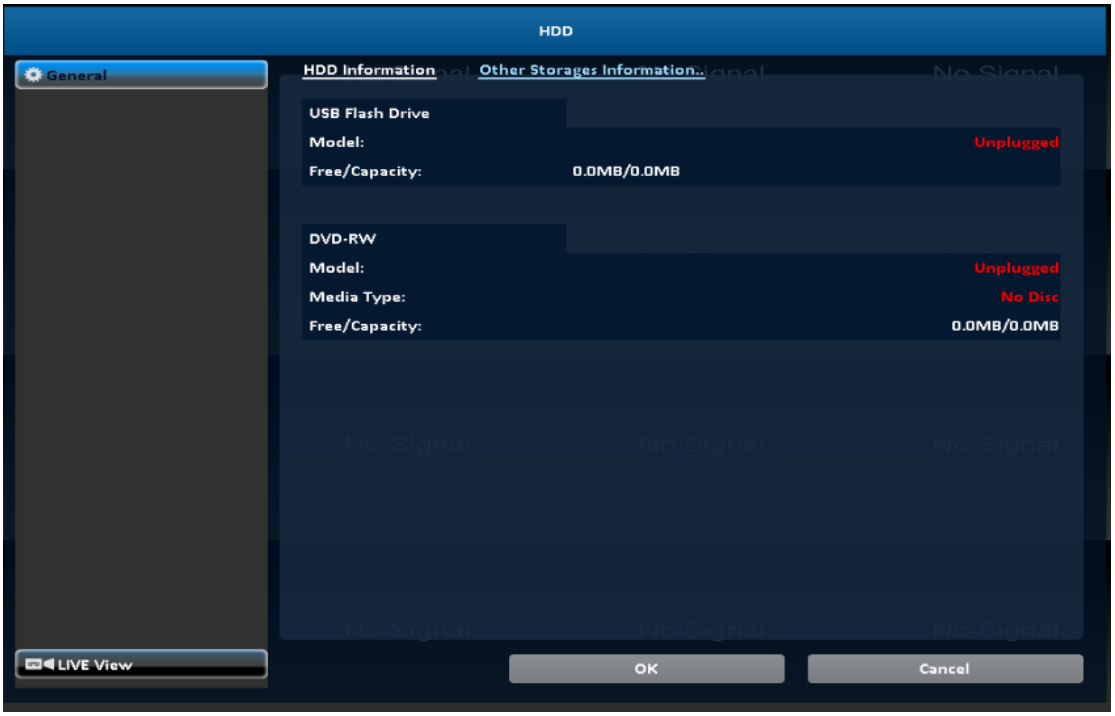
4 HDD: HDD Format and settings



4-1 HDD Information

Item	Description
Model	Display HDD model
Status	Display HDD status (Recording/Error)
Attribute	Display HDD Attribute (Overwritable/Writable/Read-Only)
Free/Capacity	Display HDD capacity (Free/Capacity)
Format	Check the hard disk drive and press "Format", ther e are four options to set the HDD. Start Format HDD DVR. Status bar "successful" HD D initialization! Enter the menu, there will be all of the hard disk informa tion (model, capacity).
Overwritable	Set the hard disk to be replicated state will start to overwrite the hard disk is full.
Writable	Set the hard disk as writable state, after the hard disk is full stop writing.
Read-Only	Set the hard disk is read-only, read-only cannot be written to the hard disk.

4-2 Other Storages Information



4-2-1 USB Flash Derive Setup

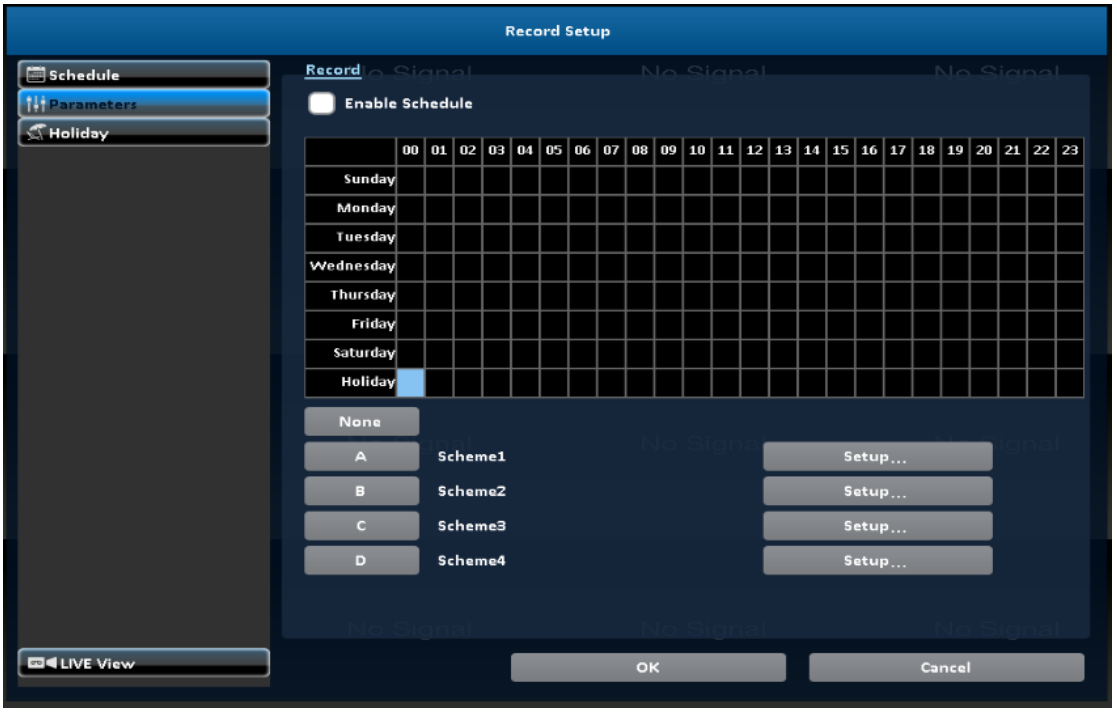
Item	Description
Model	Display USB flash drive model
Free/Capacity	Display USB flash drive capacity (Free/Capacity)

4-2-2 DVD-RW Setup

Item	Description
Model	Display DVR-RW model
Media Type	Display disk type
Free/Capacity	Display DVR-RW capacity (Free/Capacity)

5 Record: Record Schedule , parameters settings ... Etc.

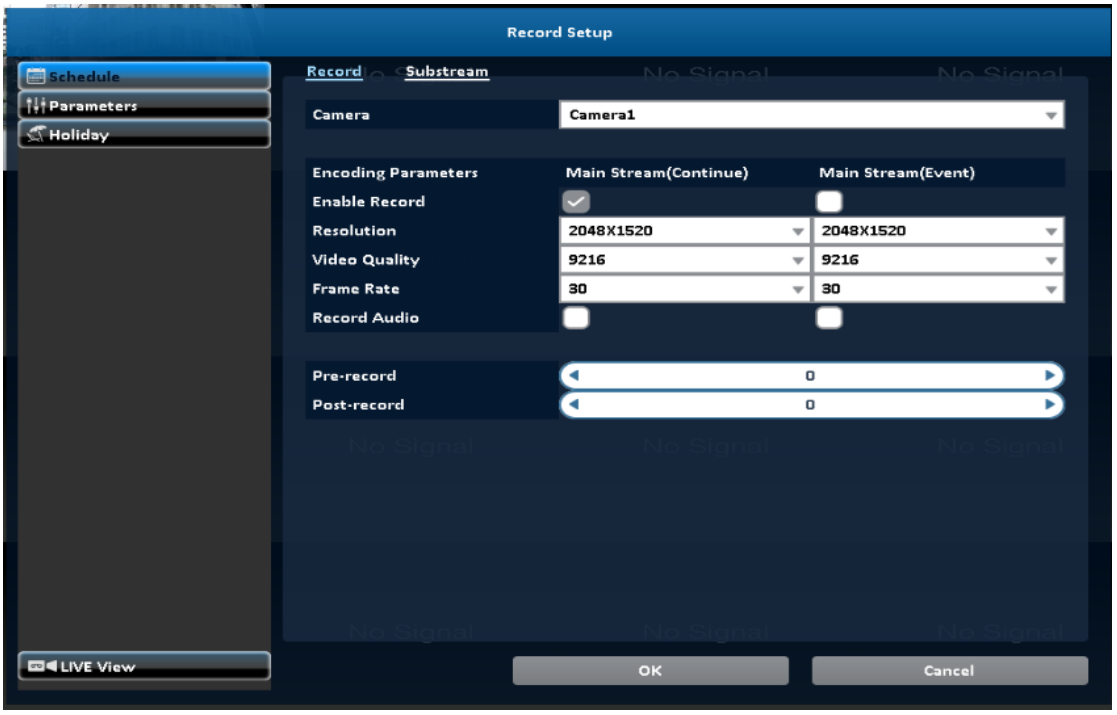
5-1 Schedule Recording



Schedule recording can configure recording time by days of a week and hour.

With the A, B, C, D four settings, users can set different recor ding scheme according to different configuration needs. In the day and time grid map, select the schedule time zone, and the n press A, B, C, D one of the buttons to specify the video set tings.

5-2 Parameters

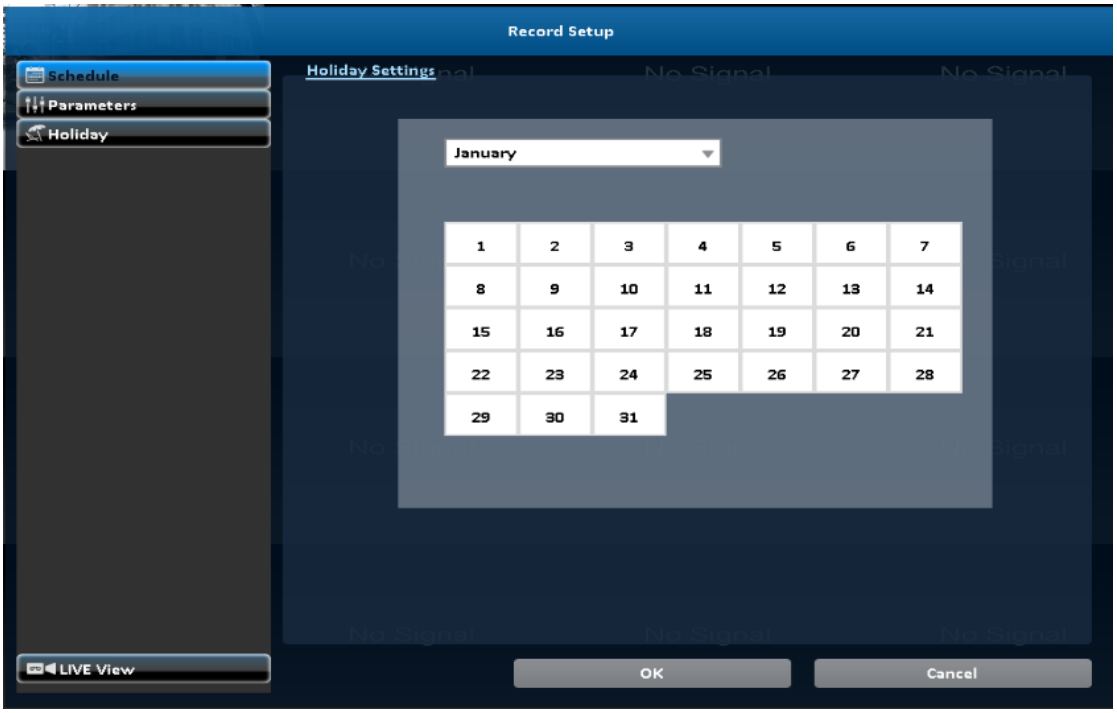


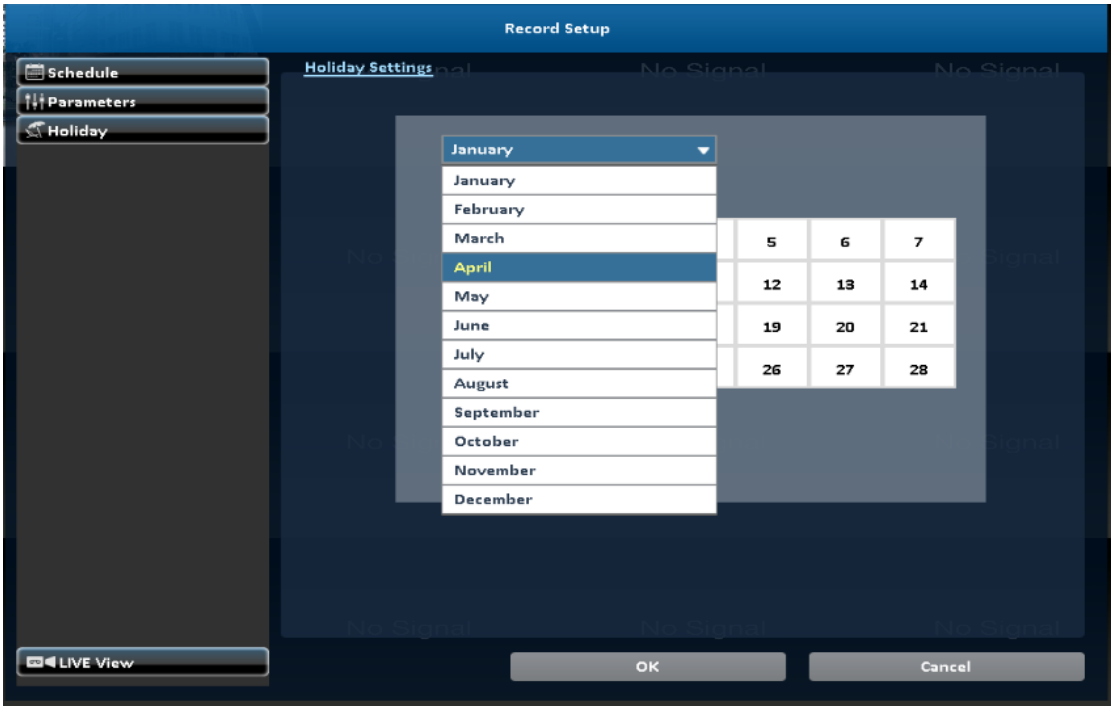
Item	Description
Camera	Set Camera
Record	Enable / Disable recording for this channel (Continus & Event)
Resolution	Recording resolution selection
Video Quality	Recording quality, from 10 to 100. The larger number means the better quality
Frame Rate	Select recording frame rate, from 1 to 30
Record Audio	Enable / Disable recording audio
Pre-record	Set the record seconds before the event, from 0 to 10.
Post-record	Set the playback seconds after the event, from 0 to 10

5-3 Holiday Configuration

The number of holiday is up to 50. When the time comes to the specified holidays, the DVR will start recording according to holiday configuration.

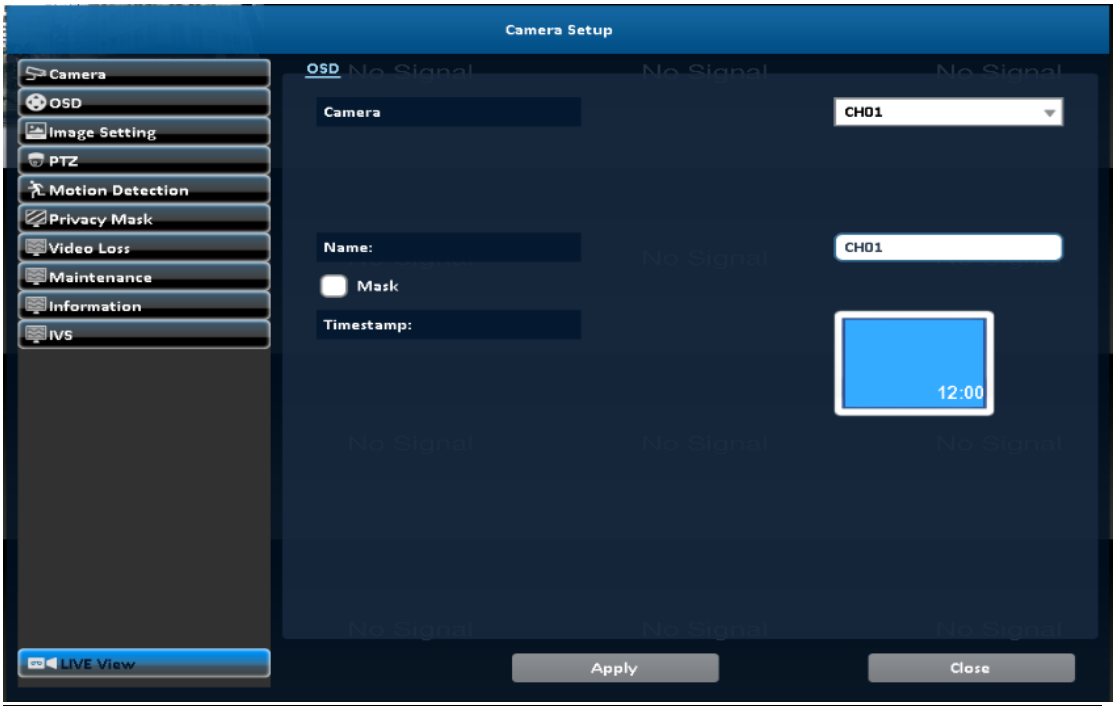
Since holidays are different by different country and region, users can setup holidays according to user needs.





6 Camera: Camera OSD , event, PTZ settings ... Etc.

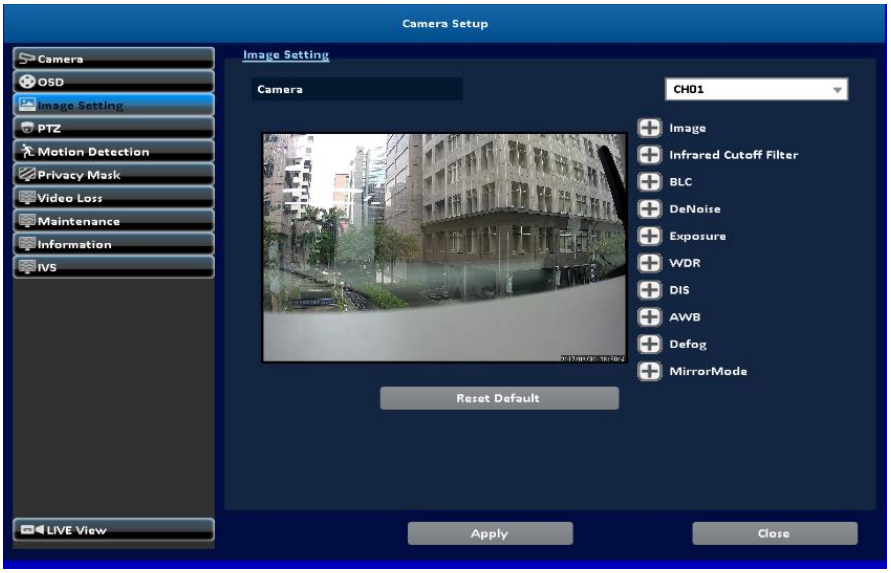
6-1 OSD



Item	Description
Name	Channel name
Timestamp	Click on the blue screen to set position of the

	timestamp.

6-2 Image Setting



Item	Description
	Image
	Infrared Cutoff Filter
	BLC
	DeNoise
	Exposure
	WDR
	DIS
	AWB
	Defog
	MirrorMode

6-3 PTZ

6-3-1 Table-2 Setup description

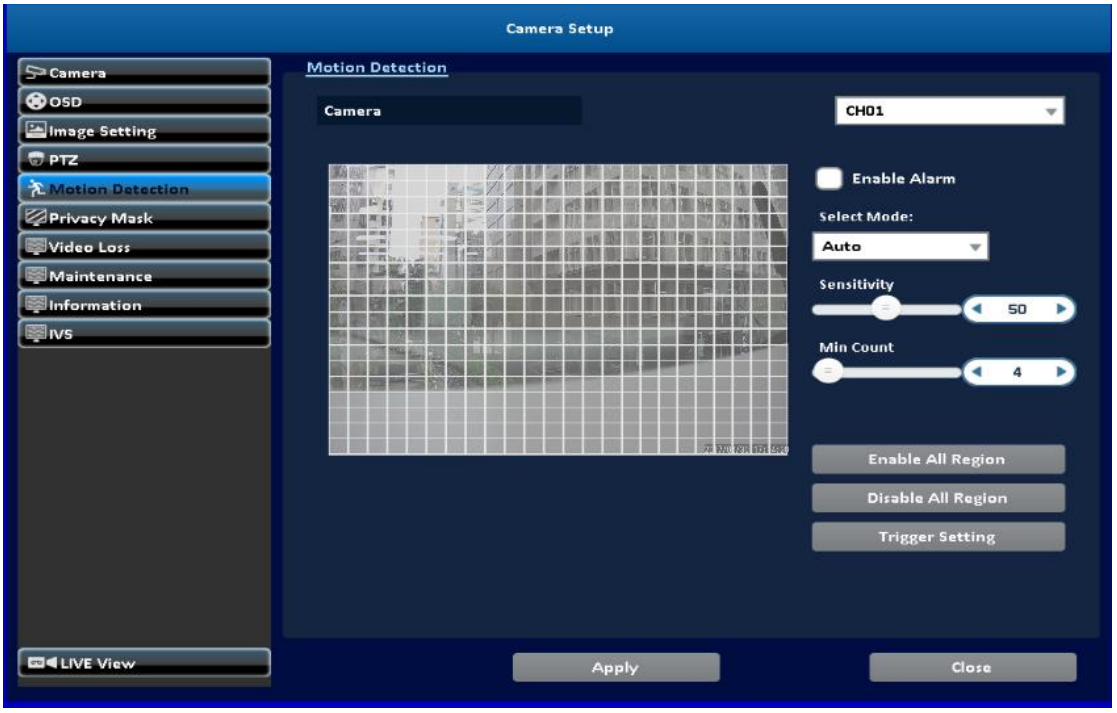
Item	Description
Enable	Click the box to Enable/Disable PTZ function.
Protocol	Set up the protocol of PTZ cam. The supported protocol are: PELCO-D、PELCO-P、Merit LiLin 1、Merit LiLin 2、SAMSUNG、LG-MultixE
PTZ ID	Set up PTZ ID. The valid ID value is from 0 to 255.
Baud Rate	Select Baud Rate of PTZ control protocol from 2400, 4800, 9600,19200

6-3-2 Table-2 Function description

Item	Description

	ZOOM. Press + / - or move the slider to adjust the zoom level.
	FOCUS. Press + / - or move the slider adjust the PTZ focus
	IRIS. Press + / - or move the slider to adjust the PTZ iris
	Press left and right arrow keys to move the camera to the preset locations, and then press to set current camera location to default point.
	Press left and right arrow keys to move the camera to the preset locations, and then press to change the camera to next preset point.
Rotate Video	Make the display upside down

6-4 Motion Detection



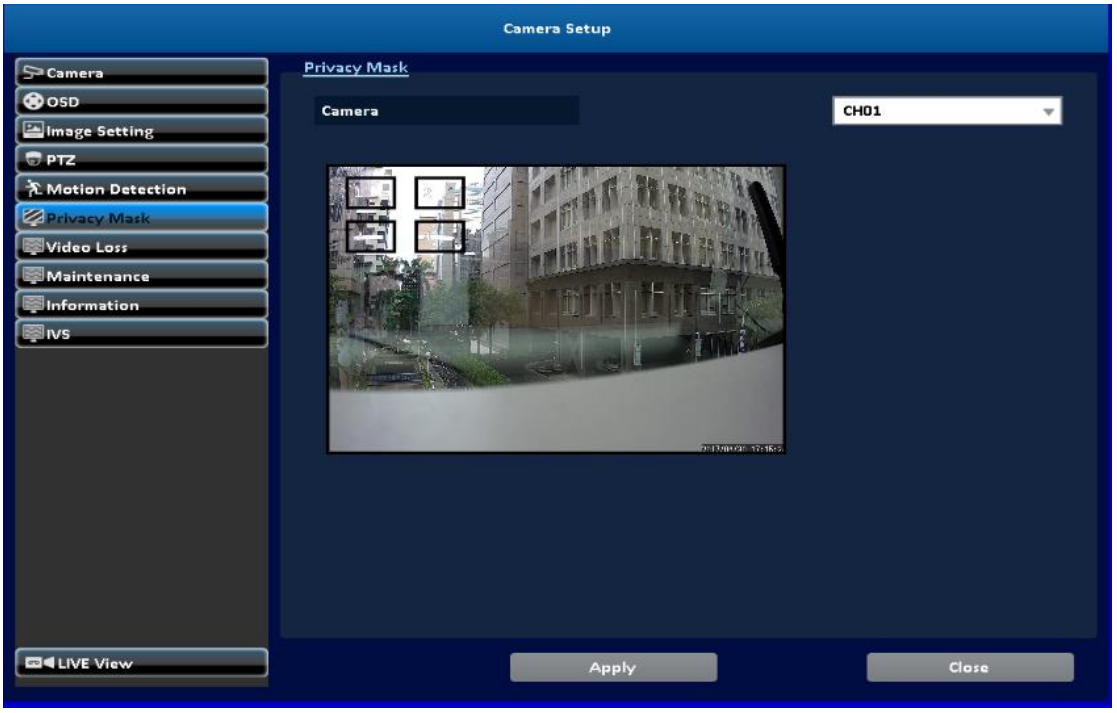
6-4-1 Motion Setup

The motion detection has been divided into 22 x18 grids. The default detection area is full screen. The screen is marked in transparent for detection area and grey for disabled area of motion detection.

Item	Description
CH01~ CH4 / CH8 / CH16....	Selected channel motion detection function。
Enable	Enable / Disable the motion detection function of this channel
Sensitivity	The sensitivity value is from 0 to 100. The higher value means higher sensitivity.
Motion Area	Enter to setup motion detection area

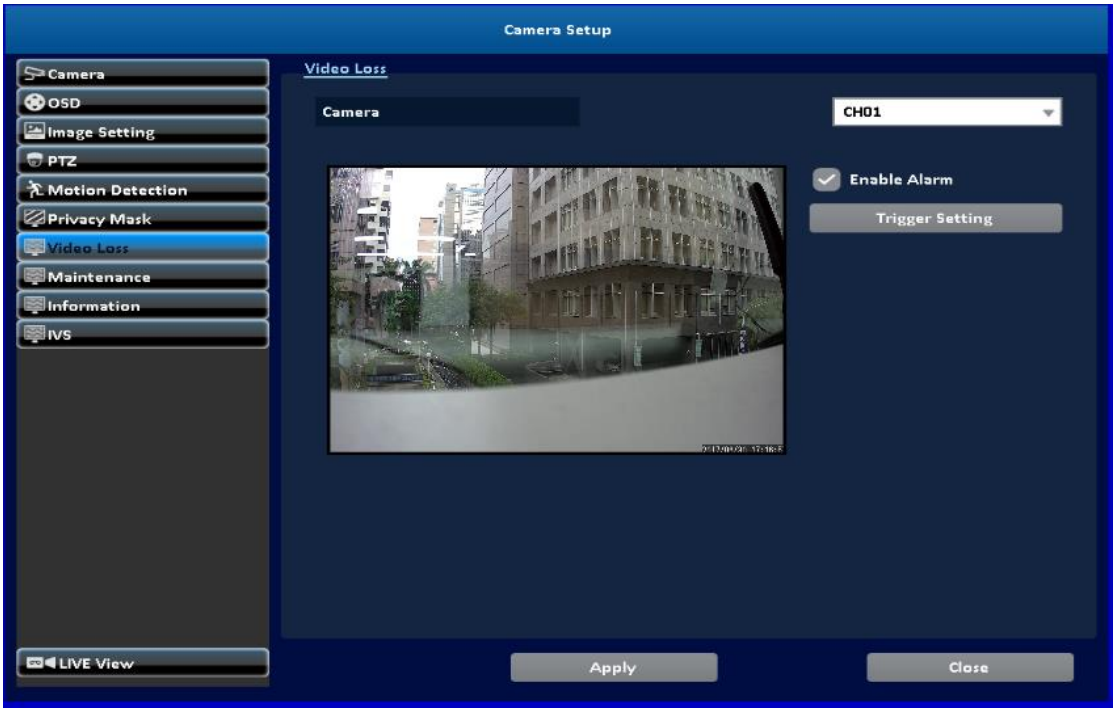
Alarm	Enable or Unable Alarm
Enable All Region	Select entire screen as detection area.
Disable All Region	Deselect entire detection area.
Trigger Setting	Popup Channel

6-5 Privacy Mask



Item	Description
CH01~ CH4 / CH8 / CH16....	Selected channel for Mask.

6-6 Video Loss



6-6-1 Alarm setting

Item	Description
CH01~ CH4 / CH8 / CH16....	Selected channel Alarm function。
Enable	Enable / Disable the Alarm function of this channel

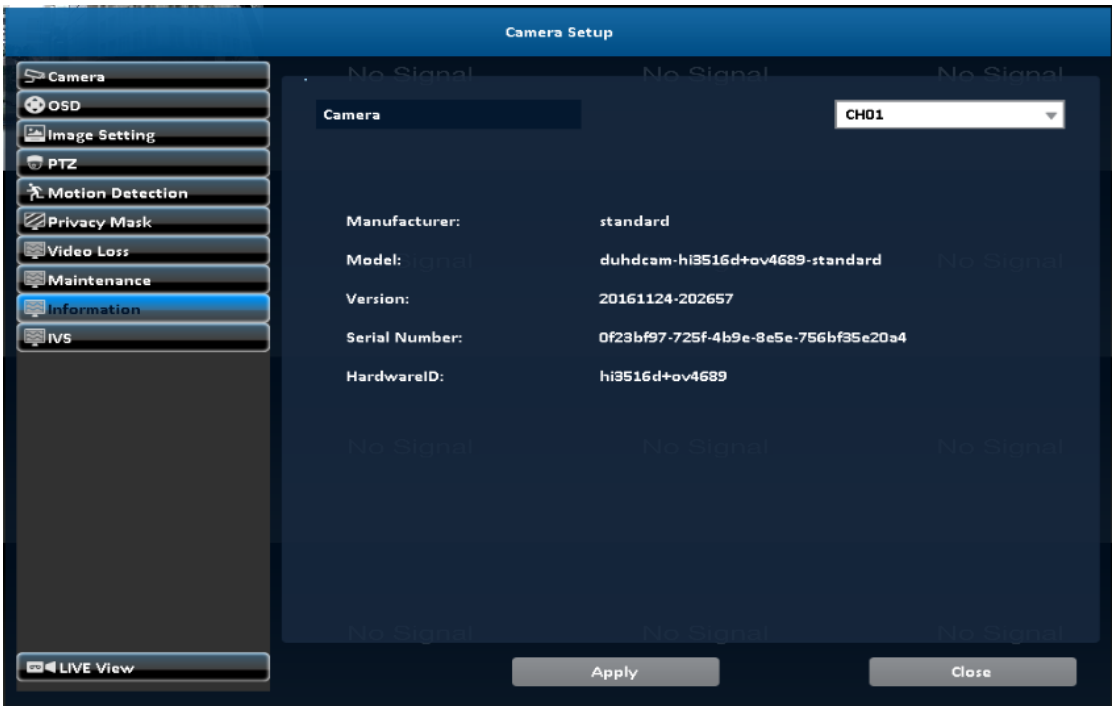
6-6-2 Trigger Setting

Popup	In the live mode, if video loss of a channel is detected, it will pop up the channel full screen. You can specify a warning window display, 1: the main screen, 2: the second screen.*1
Popup Channel	When an event occurs, pop up the specified

	channel.

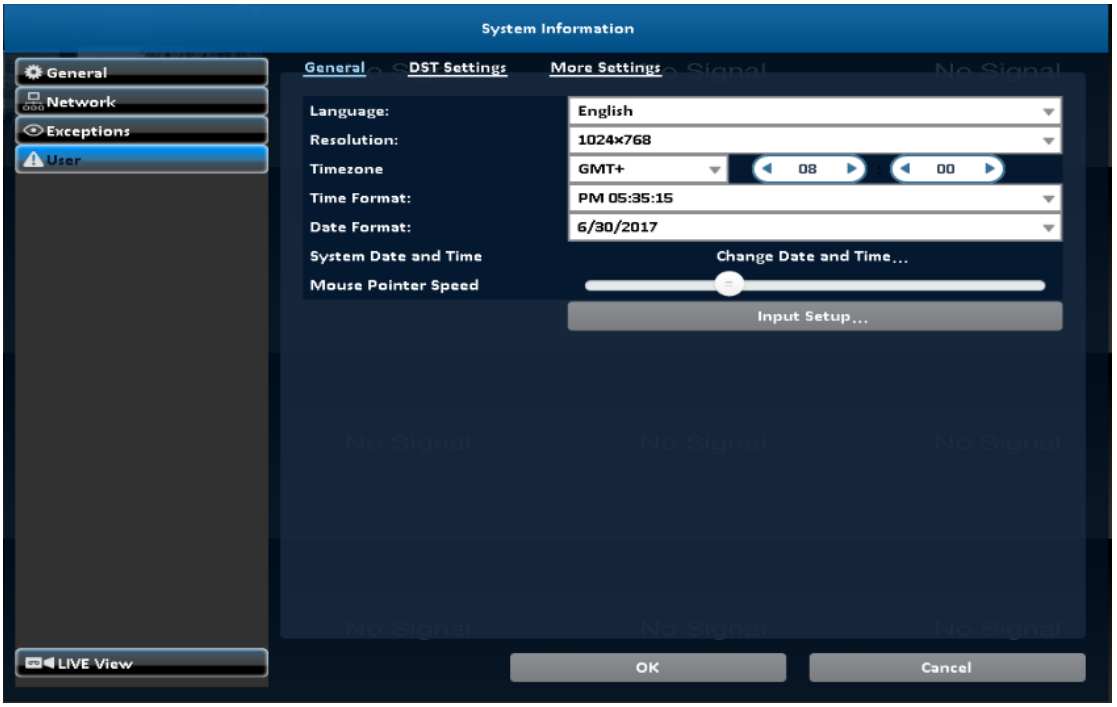
6-7 Maintenance

6-8 Information



6-9 IVS

7 Configuration: System time / date, network, alarm settings ... etc.

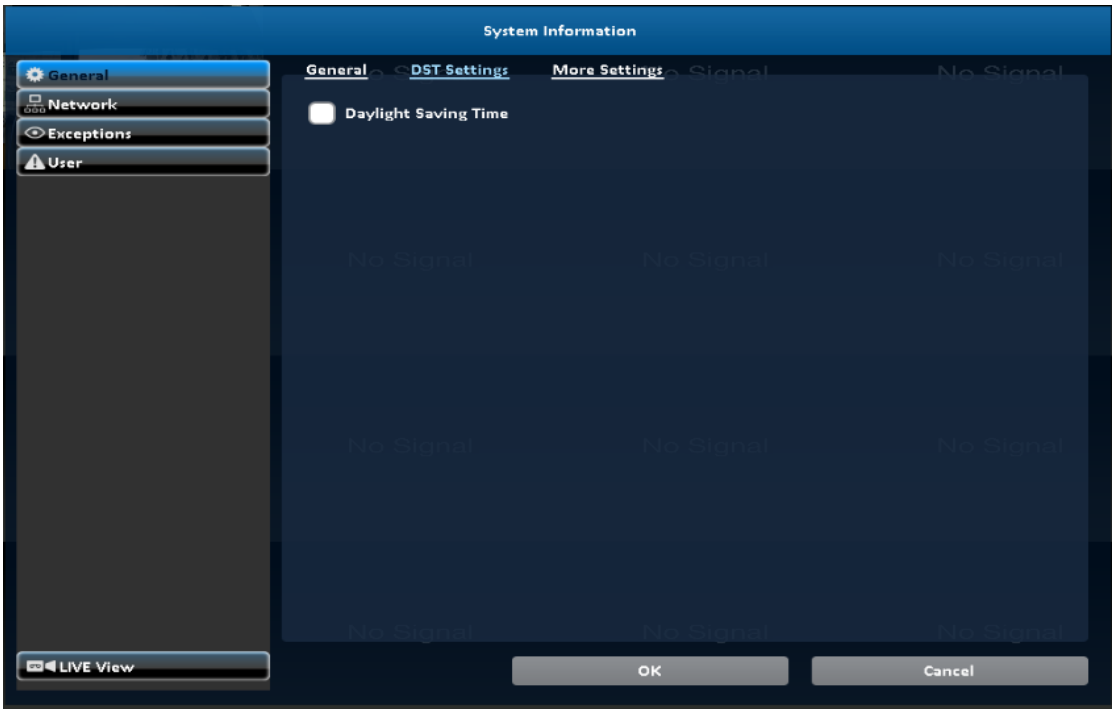


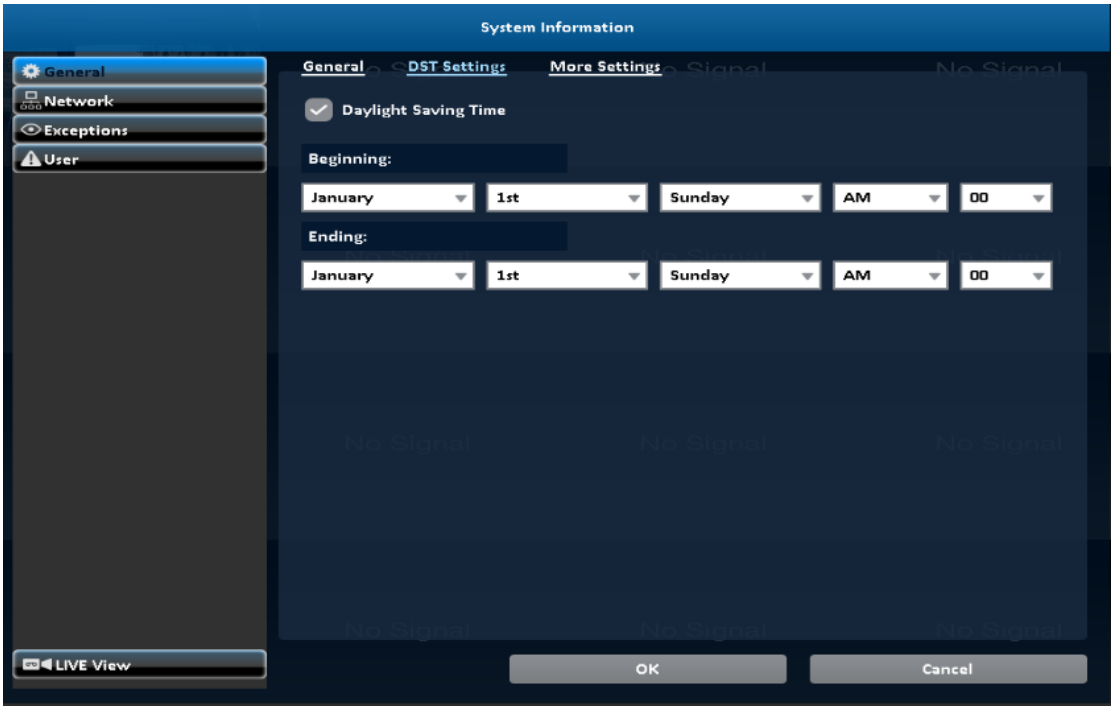
7-1-1 General

Language	Specify the OSD language.
Resolution	selection screen resolution
TimeZone	Set up the time zone of the DVR, from

	GMT-13 ~ GMT+ 13
Date Format / Time Format	MM-DD-YY/DD-MM-YY/YY-MM-DD AM PM xx:xx:xx
System Date and Time	Setup date and time of the DVR.
Mouse Pointer Speed	Setup the mouse cursor speed. The right side of the slider means faster mouse speed. (Only valid for local configuration)

7-1-2 DST Setting

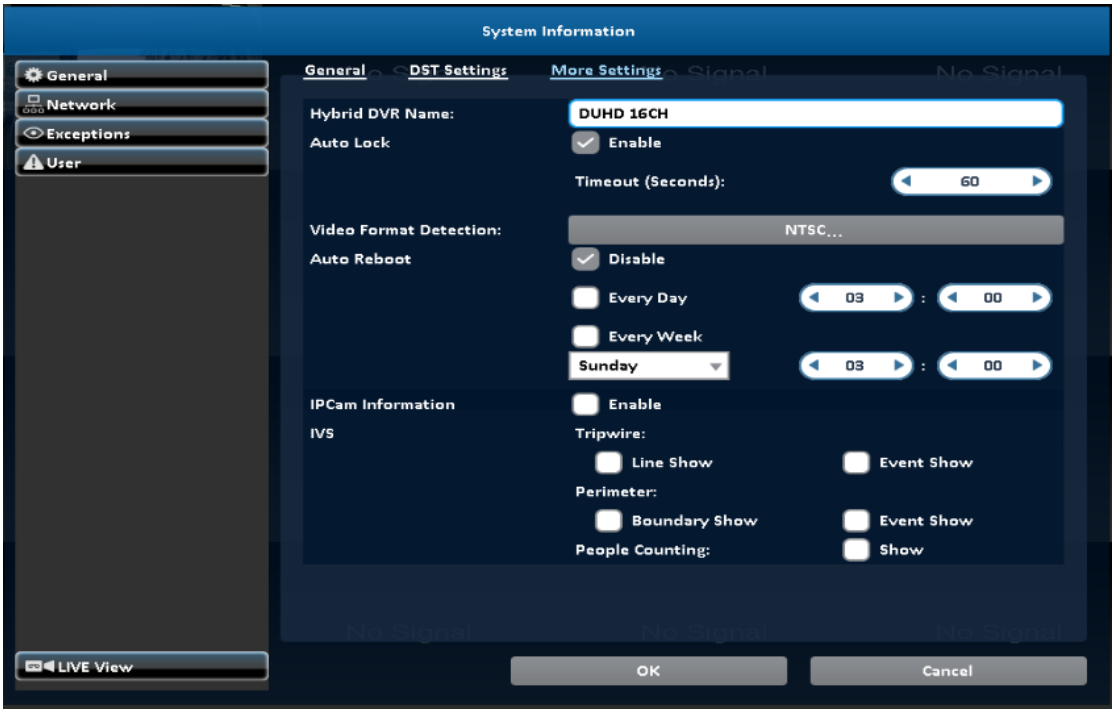




Daylight Saving Time Setup

Item	Description
Beginning	Setup the beginning time of Daylight Saving Time.
Ending	Setup the ending time of Daylight Saving Time.

7-1-3 More Setting



NVR Name	The name of DVR to be shown while users login from remote site.
Auto Lock	Set the number of seconds to wait. It there is no action, the panel will be automatically locked and the DVR logs out current user. When DVR logs out automatically, it only supports basic operations, such as picture freezing, picture, zoom, and auto switch channel, screen-split. To enter the setup menu, search menu, backup menu, status query, playback, and other operations, users need to input the username and password to login in. Available timeout value is from 10 to 9999 seconds
Time Out	Seconds
Video Format Detection	Specify the format of video signal (auto-detect, NTSC, PAL). The configuration require

	s DVR reboot to take effect

7-1-3-1 Auto Reboot

Item	Description
Disable	Enable / Disable Auto Reboot.
Every day	Setup the time of daily auto-reboot.
Every Week	Setup the time of weekly auto-reboot.

7-1-4 IPCam Information

7-1-5 IVS

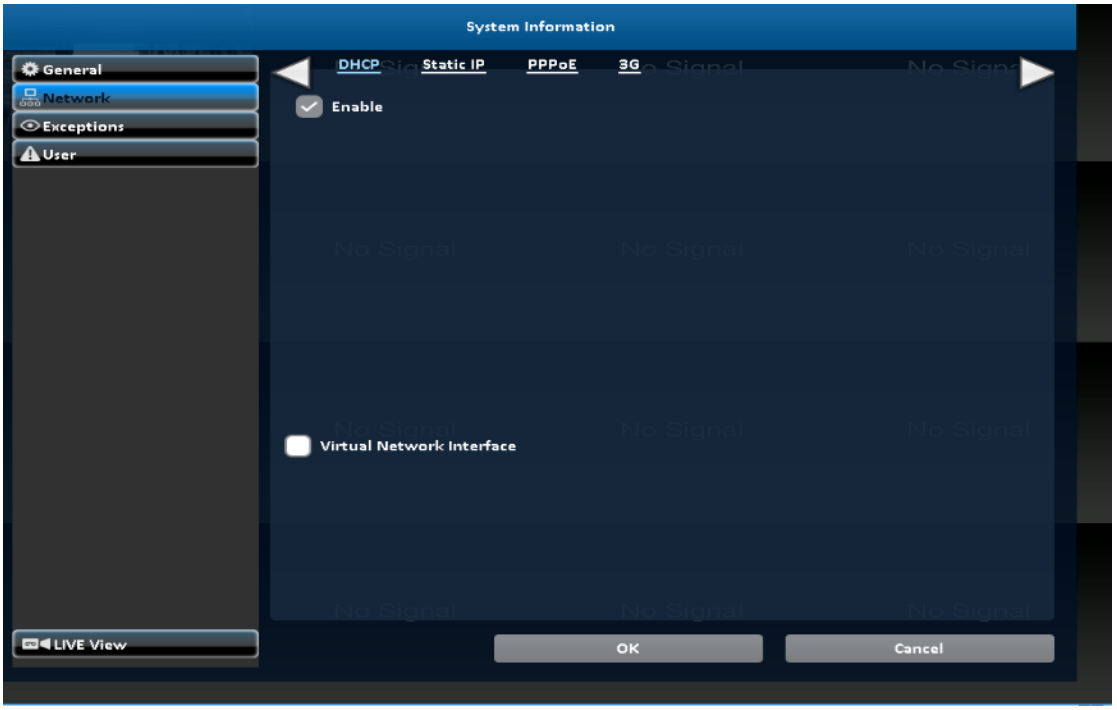
7-2 NetWork

There are five ways to connect to the network.

7-2-1-1 DHCP Setup

When DHCP is selected, IP address will be assigned by DHCP server automatically.

Notice: The IP address shown in this page is not the IP address obtained from the DHCP server. The IP obtained from the DHCP server is shown in the System Information Page.



7-2-1-2 Virtual Network Interface

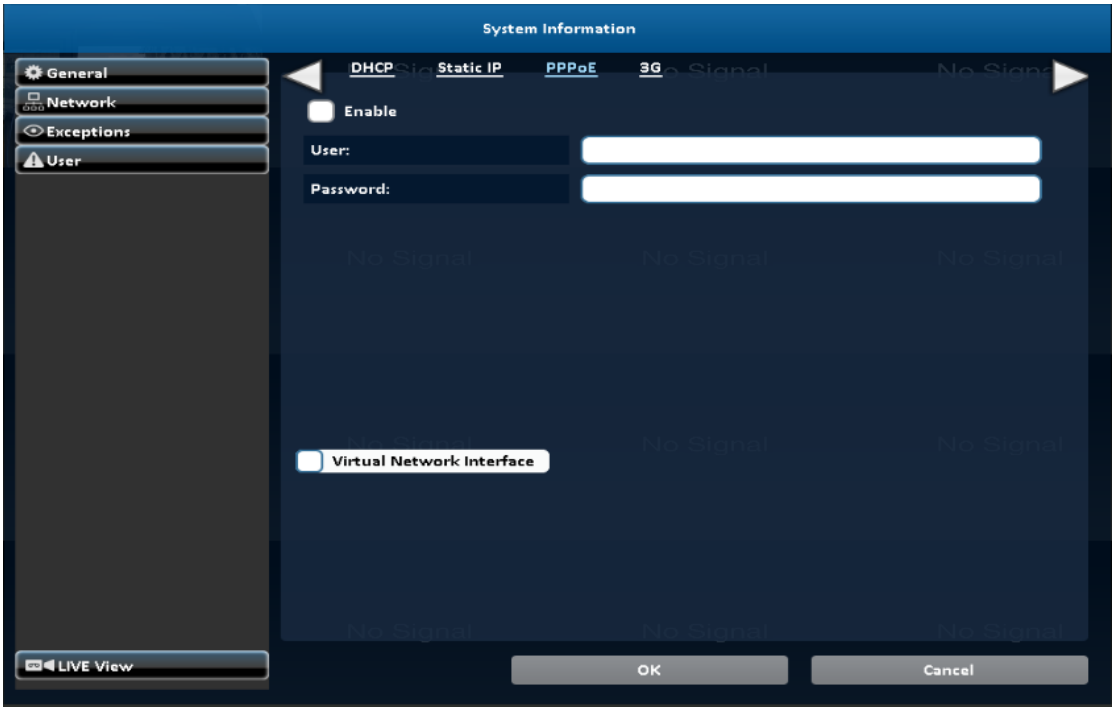
7-2-2 Static IP Setup

Setup Static IP for network connection, the following informatio n is required.

Item	Description
Enable	Enable / Disable Static IP function。
IP	Enter the static IP address provided by ISP
Subnet Mask	Enter IP address of Subnet Mask provided by ISP
Gateway	Enter IP address of the Gateway provided by ISP
DNS	Enter the DNS address provided by ISP. (Note: The correct DNS address must be entered for DDNS function).

7-2-3 PPPoE Setup

Select PPPoE for network connection, the following information is required.



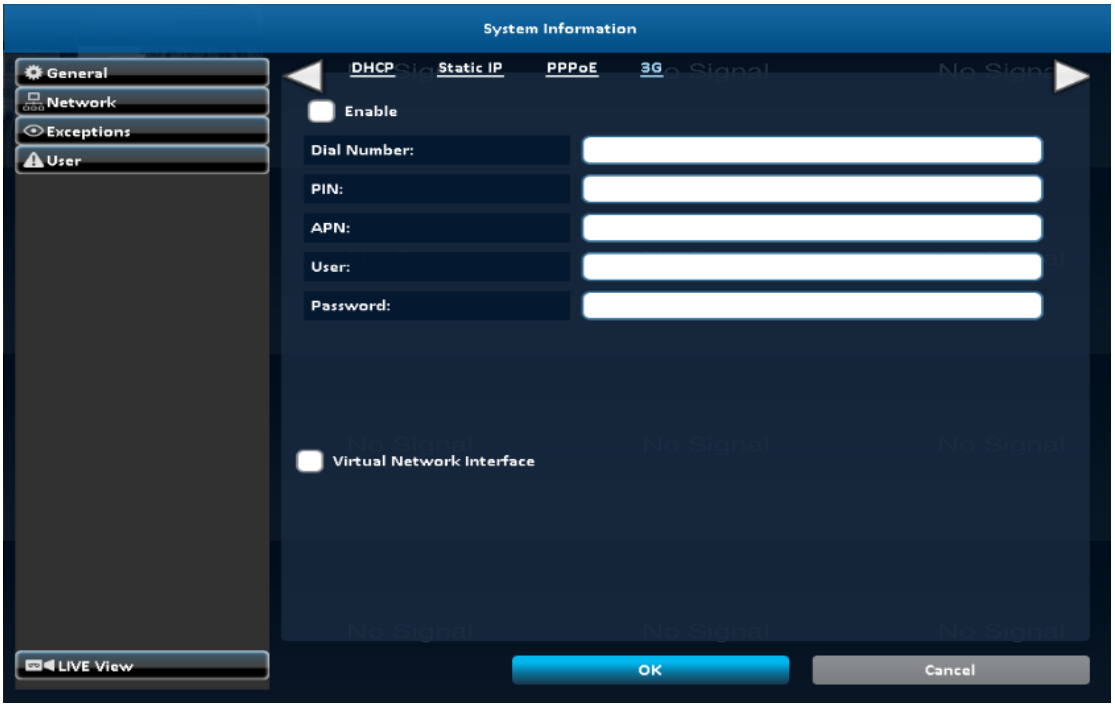
Item	Description

Enable	Enable / Disable PPPoE function。
User	Enter user name provided by ISP
Password	Enter password provided by ISP

7-2-4 3G Setup

Using the USB 3G dongle to access the network

PS: only specific chip of 3G dongle is supported and the 3G dial-up features may not be compatible to some ISPs.



Item	Description
Enable	Enable / Disable 3G function.
Dial Number	Dial-up Number, offer by the ISP
PIN	Enter SIM card password
APN	Enter “internet” or other value offered by the ISP.

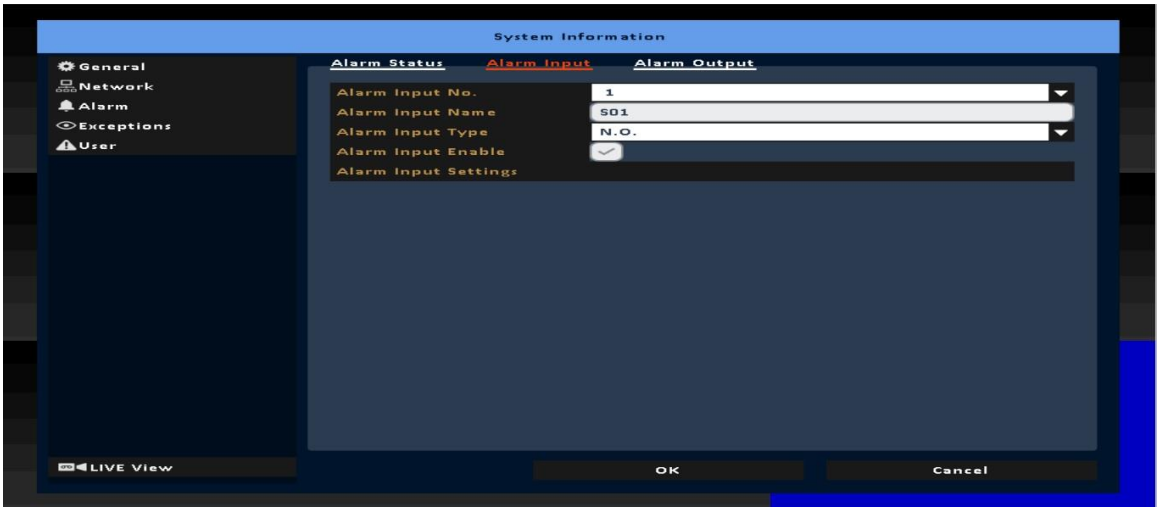
User	Enter ISP username
Password	Enter ISP password

7-3 Alarm

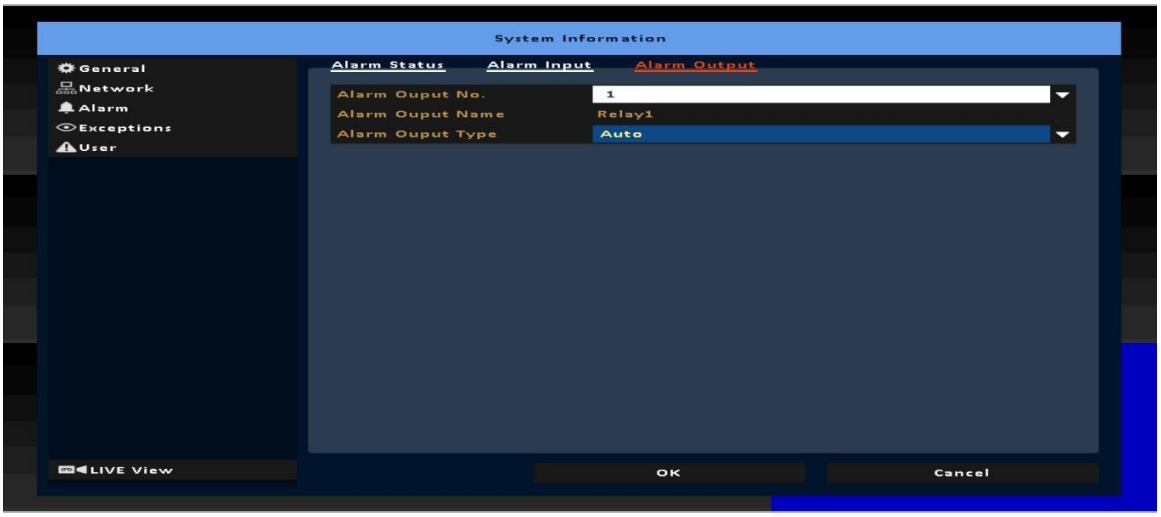
7-3-1 Alarm Status

Item	Description
Enable	Enable/Disable sensor
Polarity	N.C: Sensor has not been triggered. When connected, sensor will be turned on
	N.O: Sensor has been triggered. When connected, sensor status will be turned off

7-3-2 Alarm Input

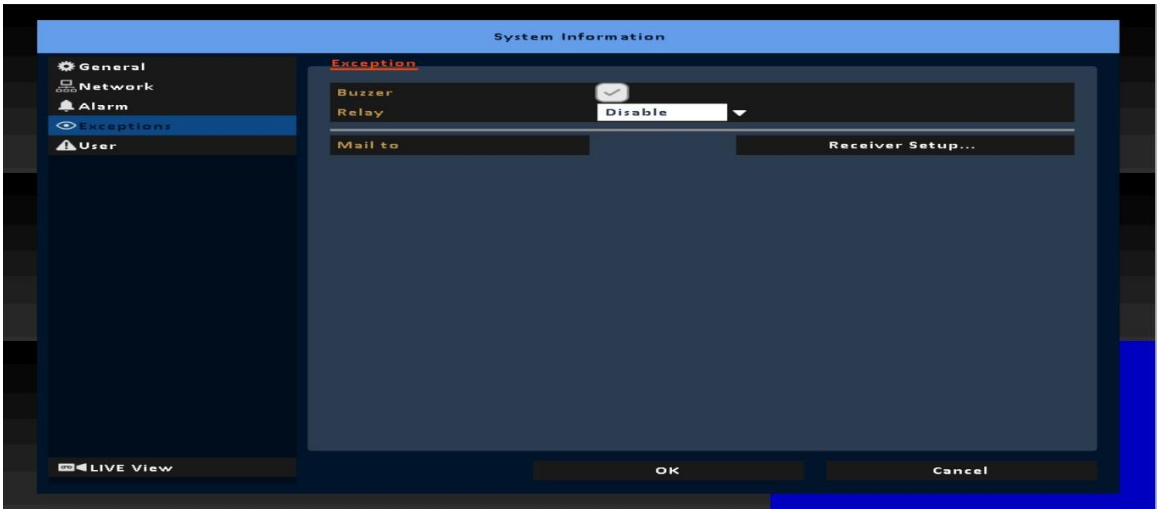


7-3-3 Alarm Output



7-4 Exceptions

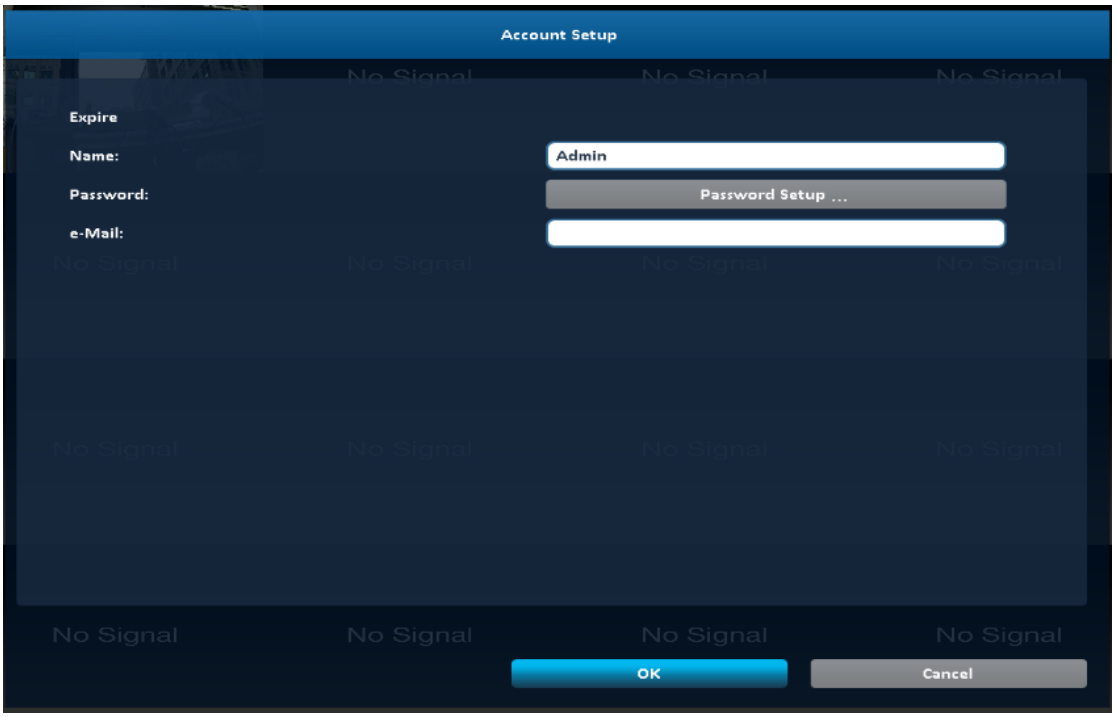
When the system event occurs, give a notice or warning according to the settings of relay, buzzer, and receiver. If the buzzer box is checked, the buzzer continually beeps for only errors related to the video (such as hard drives can't write or not install the hard drive). The buzzer does not beep when other system events, such as login, log out or boot, etc., occurs.



Item	Description
Buzzer	Specify whether the buzzer beeps when a recording error occurs.
Relay	Specify the relay to be evoked when an event occurs.
Mail To	Specify the receiver of e-mail setup

7-5 User

You can set the user password and permissions of 10 user accounts (1 admin + 10 users). These different accounts gives users different permissions of DVR features.

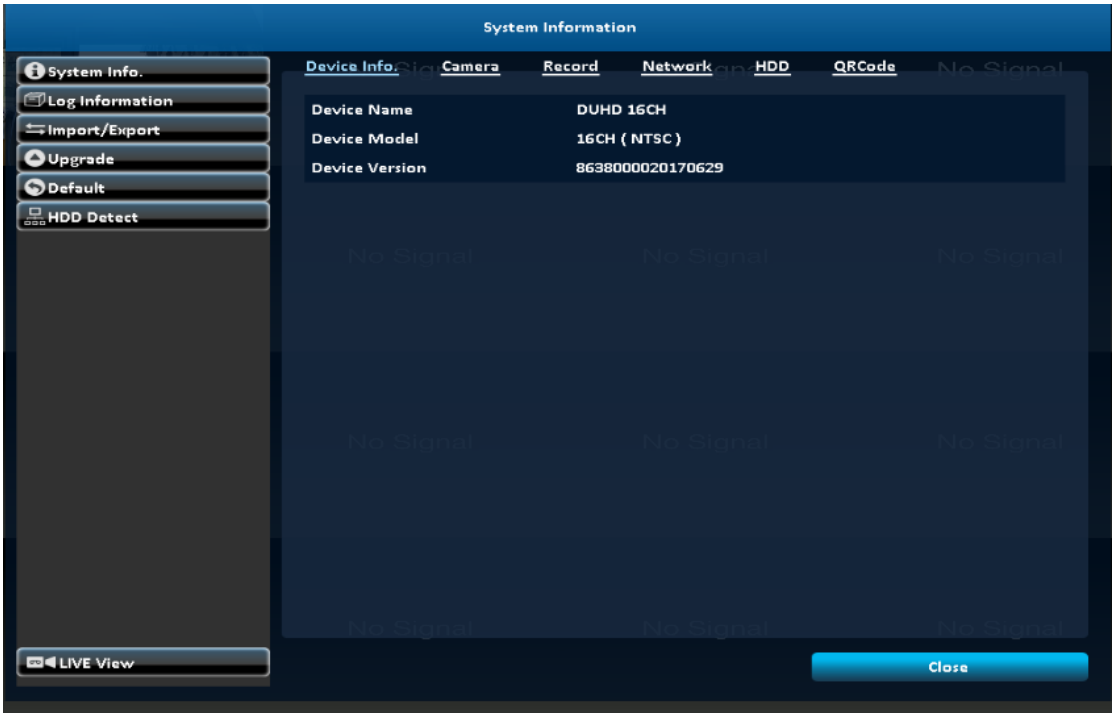


Item	Description
Enable	Check to activate the user's account.
Expire	Set the expire date of the user account
Name	Set up the username
Password	Set up the password. The password can be mixed of letters and numbers and is case-sensitive.

e-Mail	Set up user email

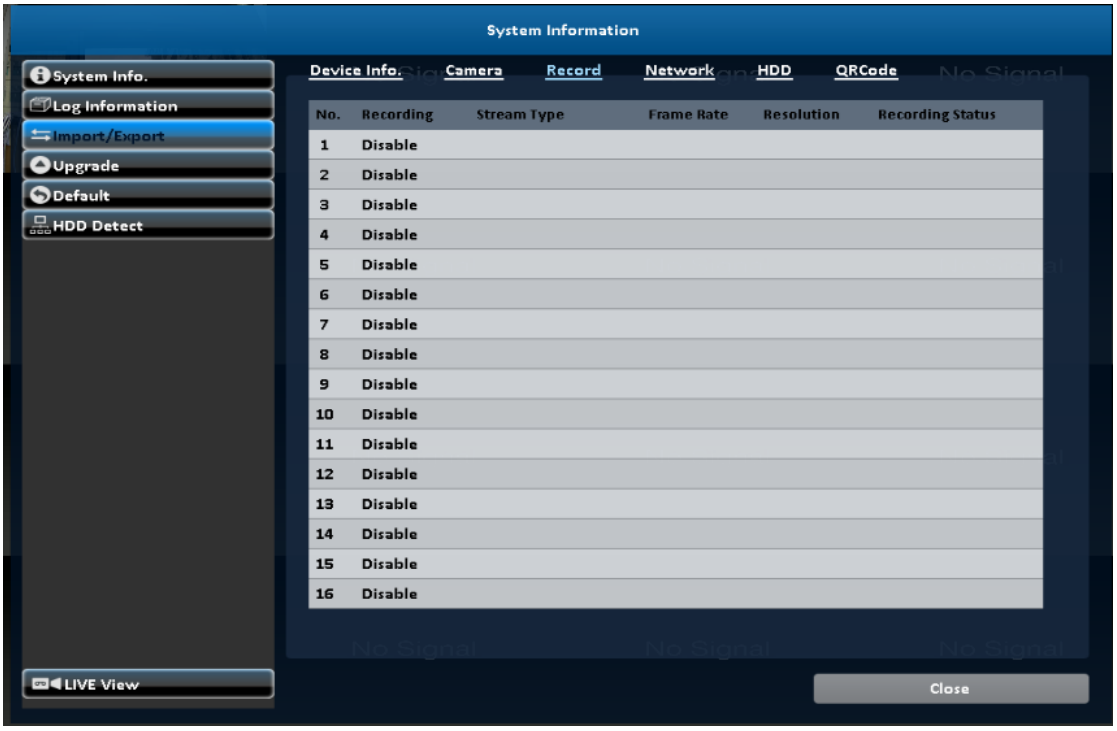
8 Maintenance: Upgrade, log, default etc.

8-1-1 Device Info.



8-1-2 Camera Info.

8-1-3 Record Info.

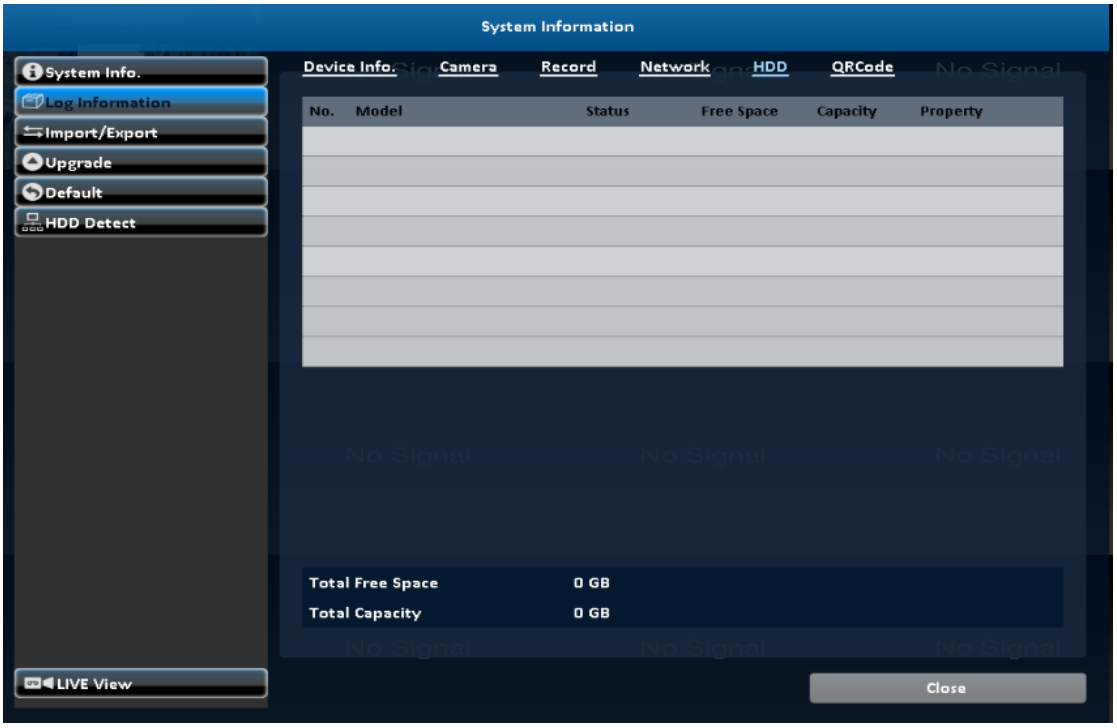


8-1-4 Network Info.

Item	Description
IP	DVR IP address

	If there is no network connection, it will show "Network is not connected.
MAC	The DVR MAC address

8-1-5 HDD Info.



Item	Description
Recording Scheme	Display installed HDD recording type
Model	Display installed HDD model
Status	Display installed HDD recording status
Free Space	Display installed HDD Free space
Capacity	Display installed HDD capacity

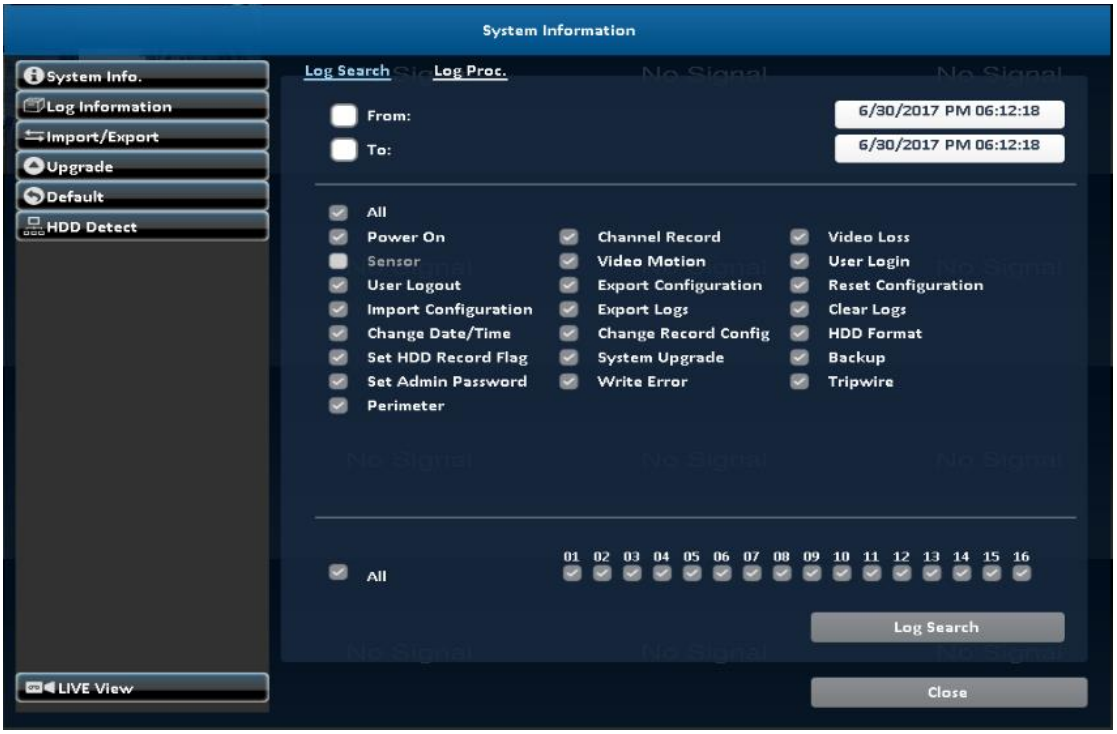
8-2 Log Information

The DVR logs events automatically. The event list shows the l ogged events, event type, event detail, event filter (criteria), an

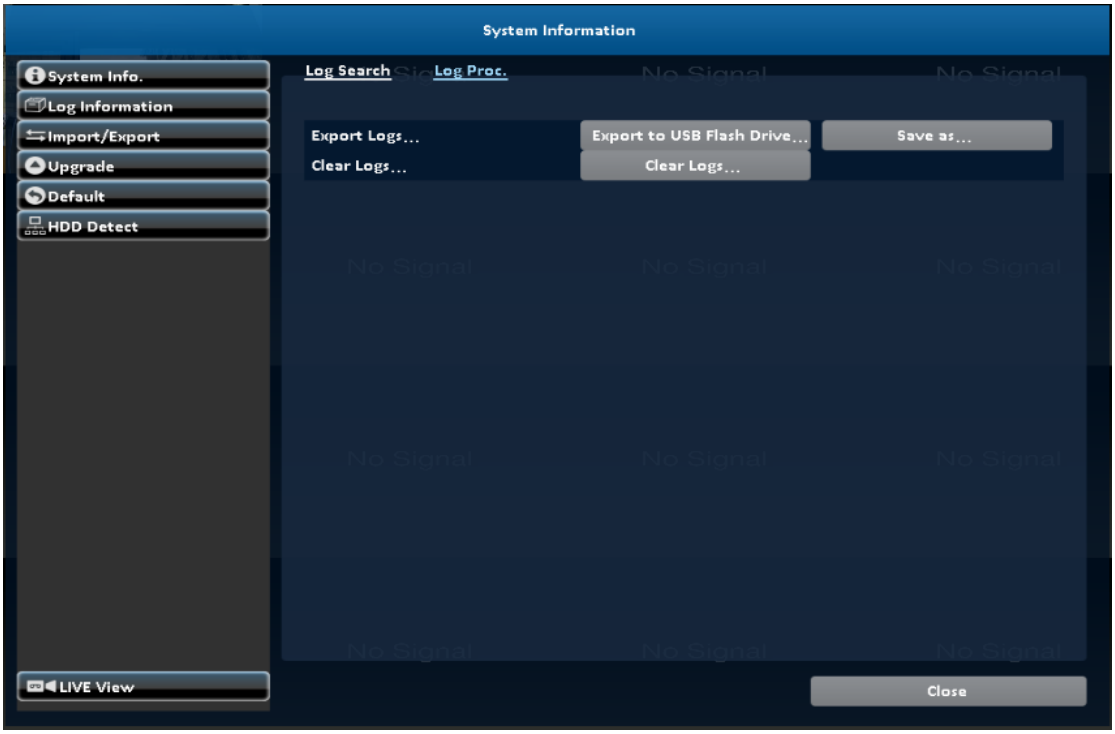
d page number of the event list. If the event video is logged, t here is a gray video symbol "►" on the left of the event. Move the cursor to event line and press "ENTER", or double-click m ouse button, DVR playback this record video related to the eve nt.

8-2-1 Log Search

The number of event is up to thousands, therefore, to set "sea rch criteria" to facilitate rapid classification of events. If the che ckbox of start time and end time is checked, the event list will only display the events within the specific time slot. If the use r unchecks some events and press the "OK ", the lists will onl y shows checked events. If you uncheck the channels, the eve nt list will filter out unchecked the channels.

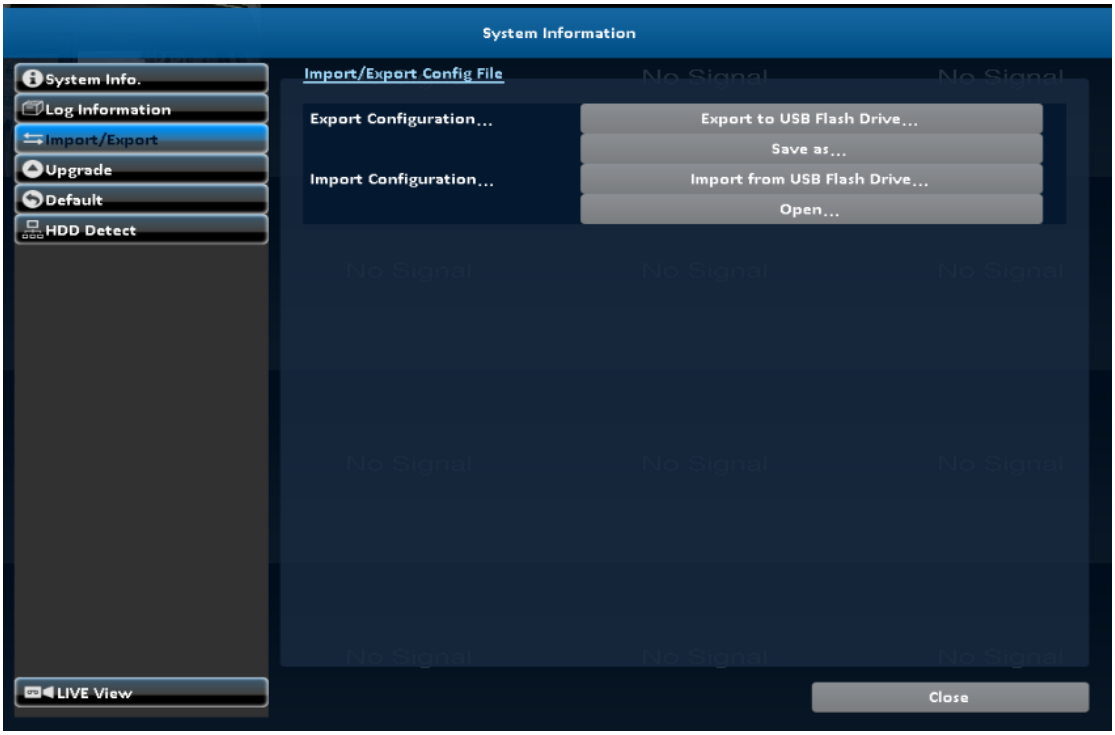


8-2-2 Log Proc.



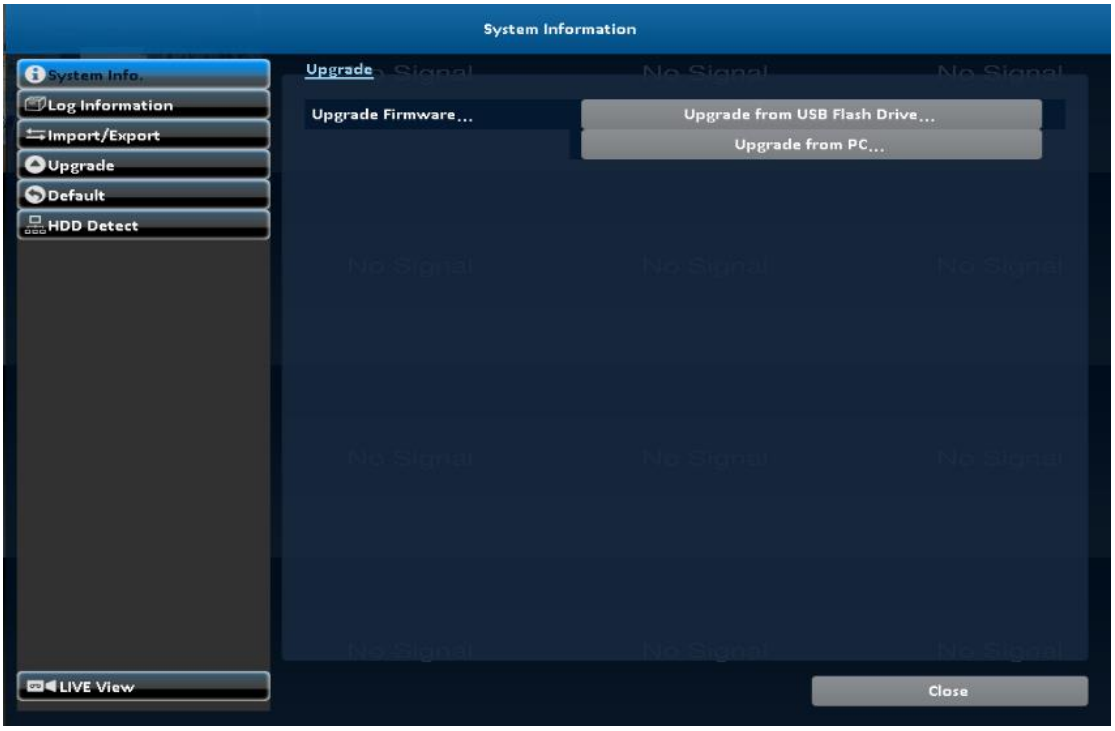
Item	Description
Export Logs	Save DVR system log to a USB flash drive or a remote PC.
Clear Logs	Clear all DVR system log.

8-3 Import / Export



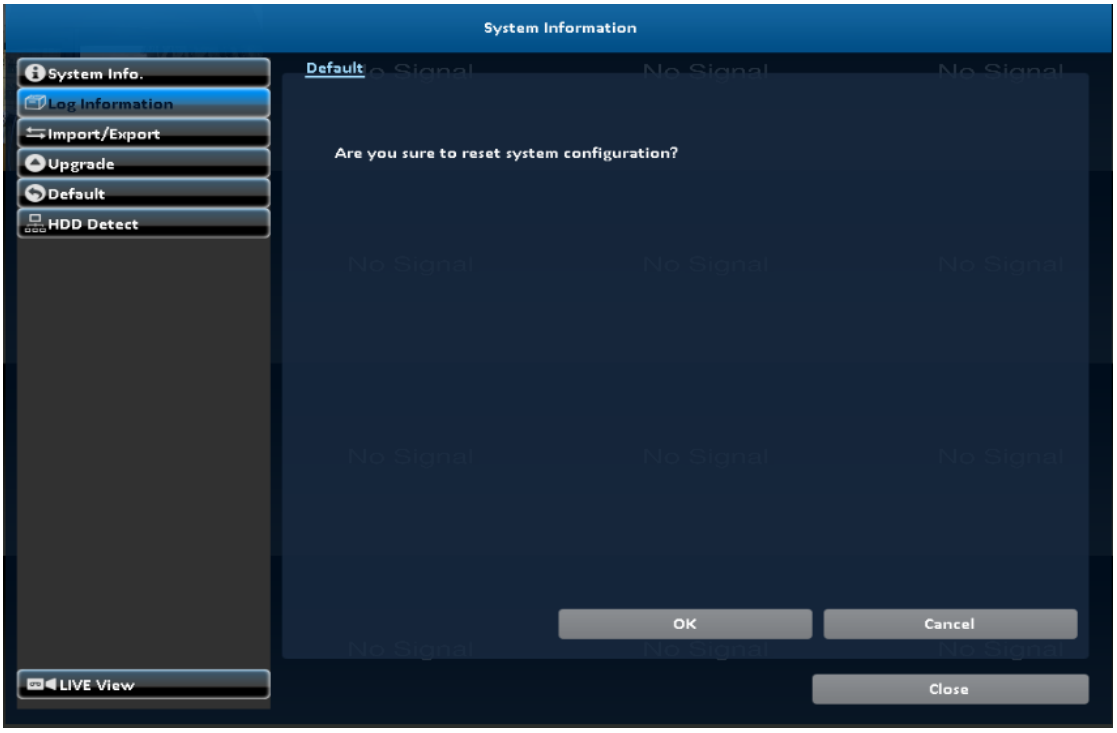
Item	Description
Export Config-uration	Export DVR configuration to a USB flash drive or a remote PC.
Import Config-uration	Import configuration from a USB flash drive or a remote PC to DVR.

8-4 Upgrade



Item	Description
Upgrade Firmware	Upgrade DVR firmware through a USB drive. Please stop recording and backup DVR configuration before upgrading System will reboot automatically when the upgrade is done.

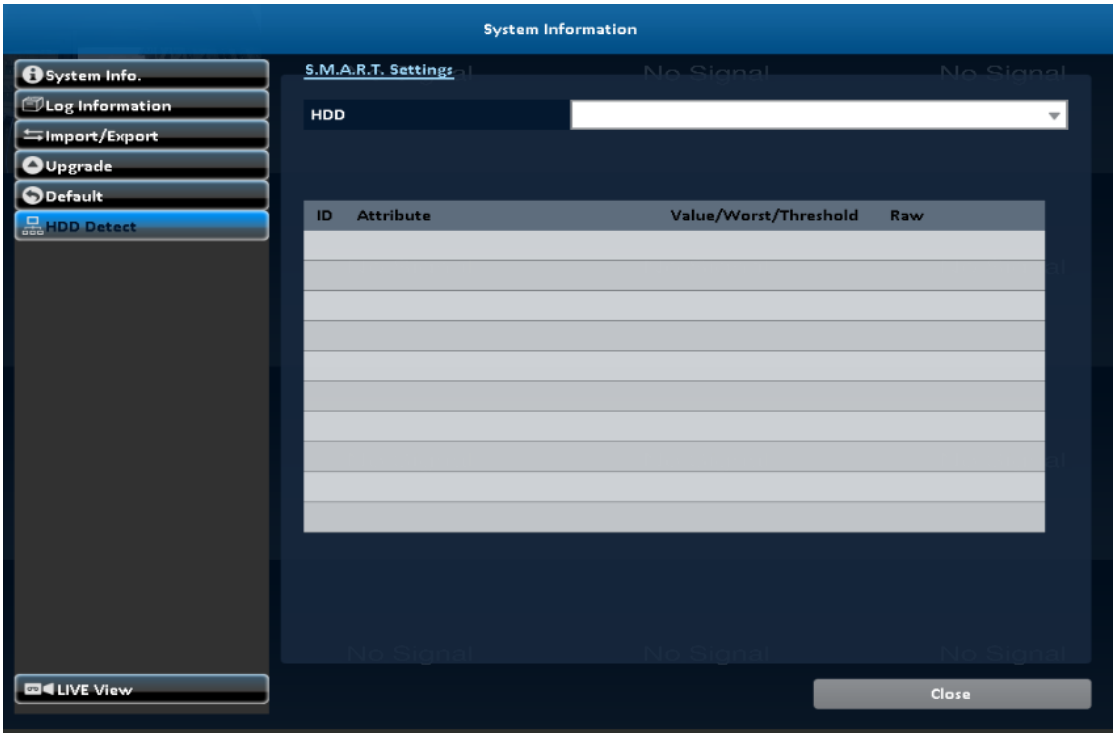
8-5 Default



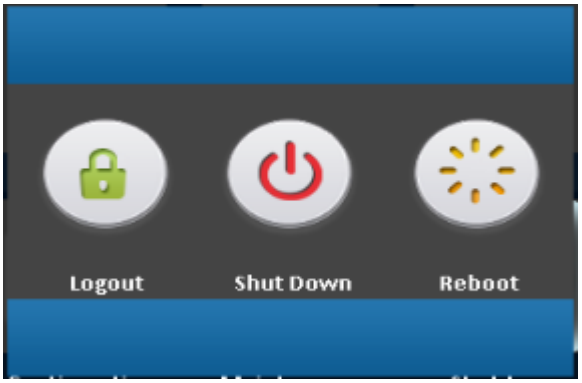
Item	Description
Reset Config-uration	Reset system configuration.

8-6 HDD Detect

8-6-1 S.M.A.R.T Setting



9 Shutdown: Shutdown, reboot and logout.

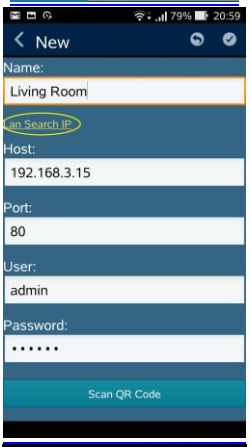


10 APP Software Connection (Android for example)：

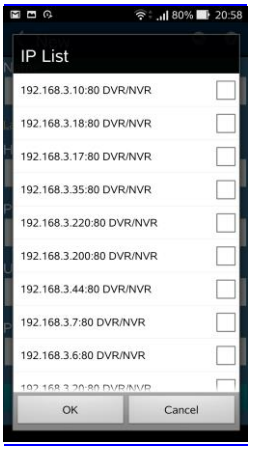
1. Go “Google Play” or “Android Market”(China) or APP store (iOS) to download the “Swift Connection”

2. Press the “+” key in the upper right corner to add a new connection.

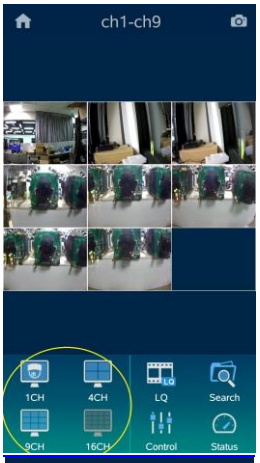
3. Give a Name of this connection and input network address、port (default:80)、Username (default：admin) and Password (Default：123456), or press “Lan Search IP” to search DVR/IP CAM IP in the same network.



4. Devices in the same network segment are going to be found and you can pick one of them but only the device which Swift Connection supported can be show on the screen.

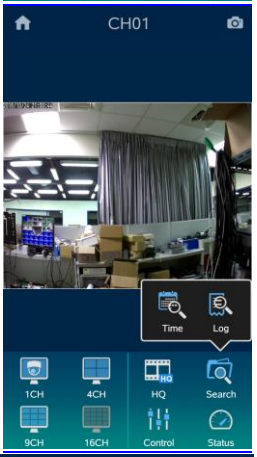


5. Multiscreen can be chose in Live view

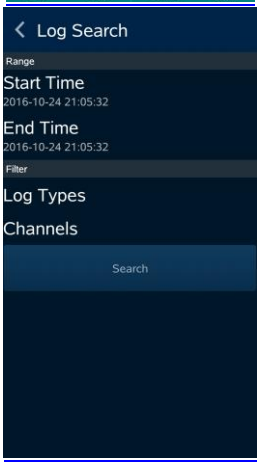


6. Video quality 、mute and unmute audio

7. Searching by Time or Log files

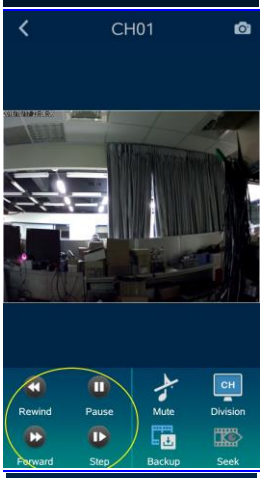


8. You can search by time or event (log type) in the log search.

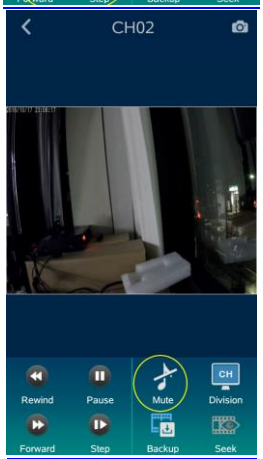


9. Highlights in the monthly calendar are those days which has video recording. Pick one of them and choose a start time to watch the recording.

10. Play Rewind、Forward、Pause and Start/Stop

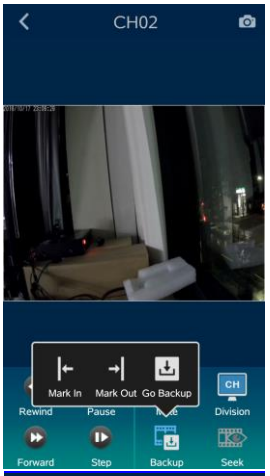


11. Mute and unmute the audio

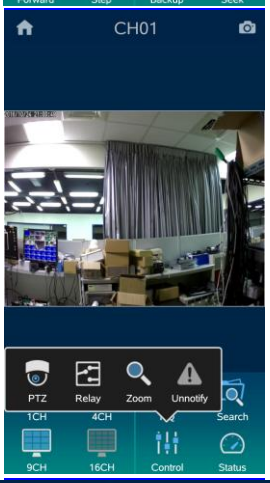


12. Switch multiscreen

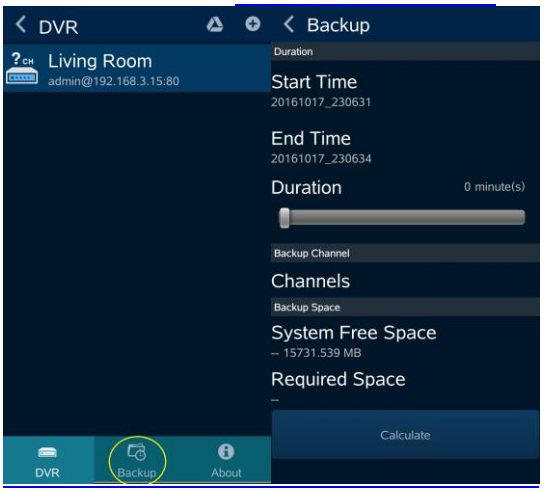
13. Choose a section of the recoding and back it down to your device



14. Other settings, such as PTZ、Relay、Zoom…etc.



15. Backup recording to your device



11 P2P Connection Setup

How to Setup

1. On your DVR/IVR, please go to Network Setup page:
   Main control panel => Configuration => Network Setup

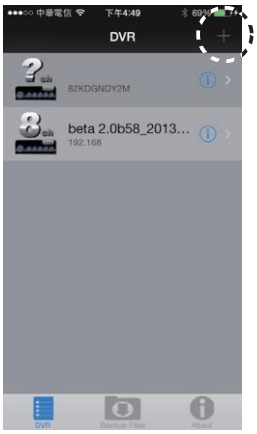
2. On lower part of Network Setup page, please input P2P Access Key for P2P and press Apply button.

   Please press OK button on lower part of Network Setup page and return to Configuration level.

3. lease go to System Information page:
   Main control panel => Configuration => System Information
   Under Network tag, you can find QR code, access key and expiry date for P2P feature.

4. For computer use, please login Swift Connection.
On prompting interface, please input P2P Access Key in Host field, input / modify the rest of fields as appropriate
Click on Connect button

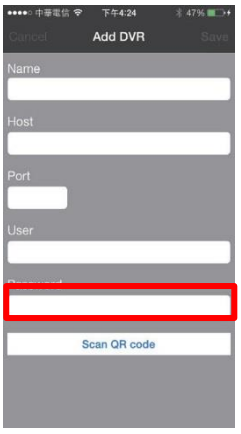
5. For mobile device (i.e., smart phone and tablet) users, please login APP "Swift Connection."
Click '+' (iOS) / (Android) icon on upper right corner to add a new connection.



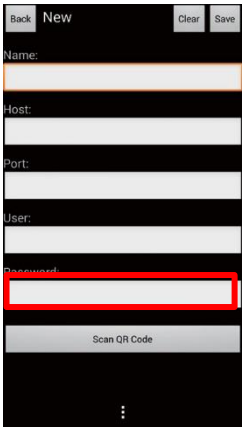
iOS

Android

6. Click on Scan QR code button as shown on following picture.



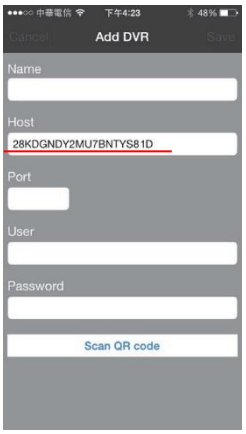
iOS

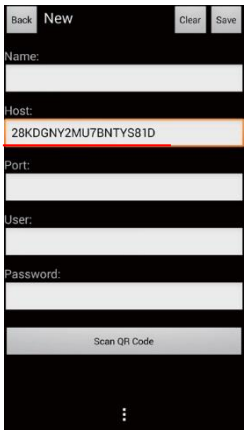


Android

7. Please scan QR code on DVR's System Information page

8. Access key information will be shown on Host field





Input / modify the rest of fields as appropriate.

Click on Save button on upper right corner.

Login with new settings

Appendix : **IVS setup**

DUHD IVS relevant setting instructions

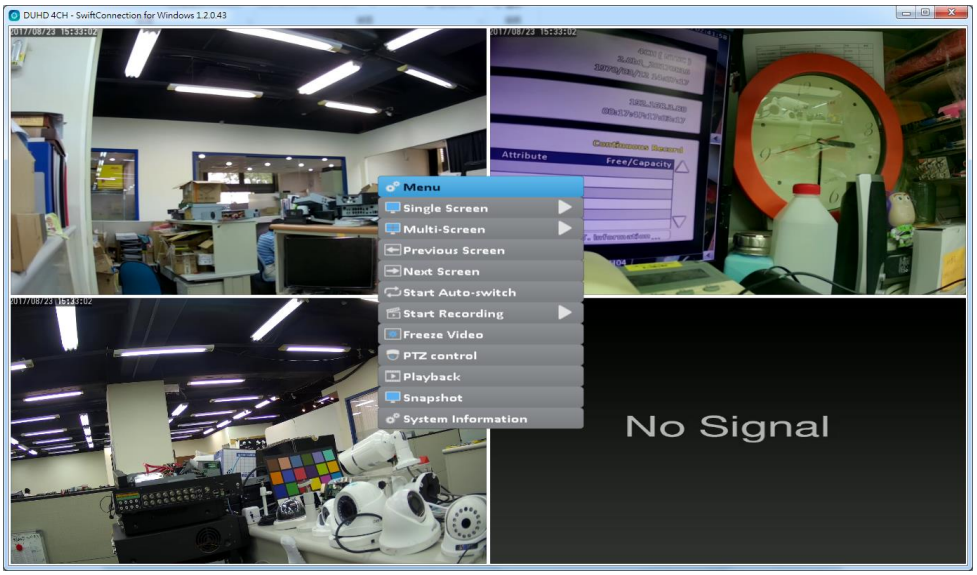
1.DUHD relevant parameters setting in the advanced setup of the camera are stored in the camera, if change to different channel, it will not need to reset the parameter.

2. The DUHD camera relevant functions of the IVS event settings are stored in the DVR.

A. DUHD Camera IVS related features setup

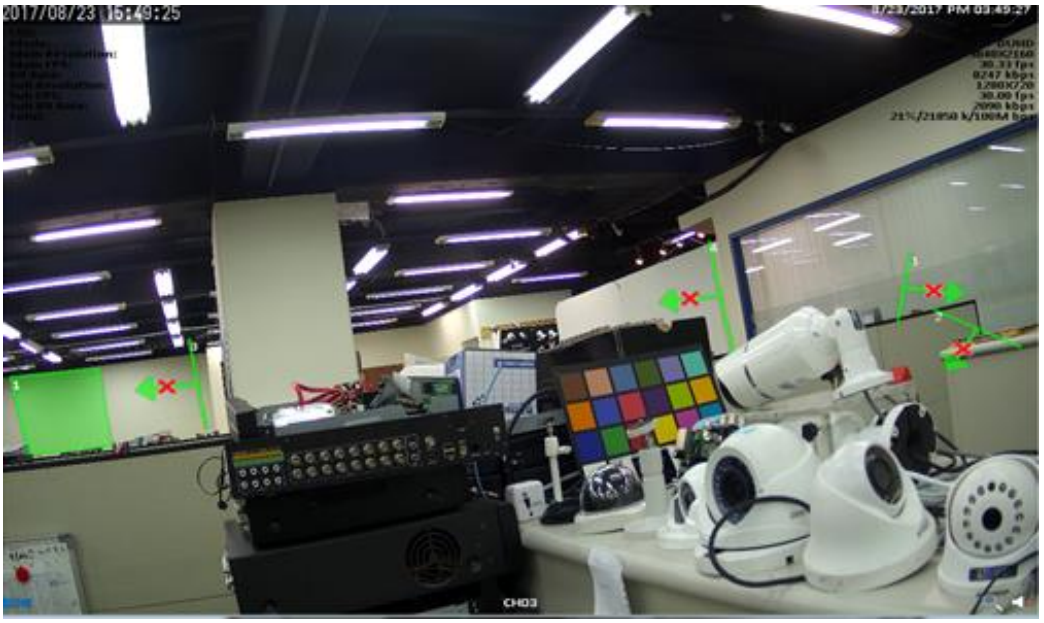
Click the IVS function in the camera settings

Menu → Camera →IVS



1. The IVS mode contain (PEA) and the (People Counting)
   Note: Each DUHD camera supports only one mode at the same time

A. In the PEA mode, it support four cordon lines with a block area to detection



In the part of the cordon, you can draw your own line / prohibited direction and whether you want to enable the detection of this cordon

Note : The Arrow is for the prohibited direction, One way means one-way prohi bition, Two Way means two-way prohibition

In the block detection section, you can draw your own alert area and whether you want to enable detection of the alert area.

1. In the people counting mode, you can set the detected block, the direction of entry and exit, the report interval and the recalculation interval (Reset Interval)
   Note: 1. The direction of the arrow is the direction of the exit 2. The time units of the Report Interval and Reset Interval are currently in seconds (sec).

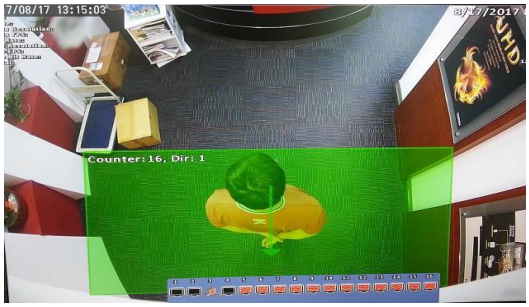
People Counting

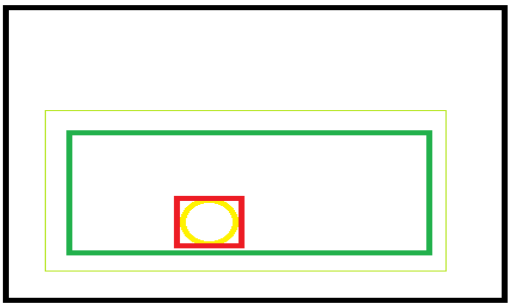
•Environmental requirements: light stability, adequate light, clear detail

•Camera set up, the lens is completely parallel to the ground, a slight offset is allowed to be able to shoot to the human of the head and shoulder shall prevail.

Adjust the camera so that the ground occupies approximately 2/3 to 3/4 of the width of the screen, leaving a certain space on both sides and making the flow channel in the middle of the screen.

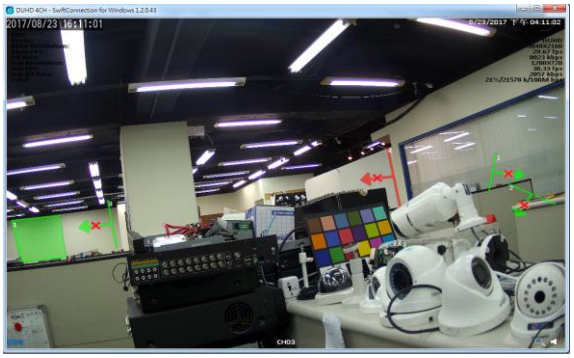
For example: white floor, dark hair, dark tops, full portrait size.



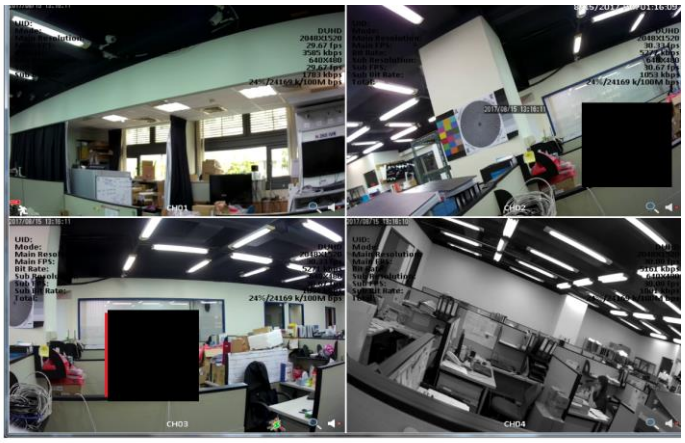


B. DUHD Camera IVS trigger pop-up settings

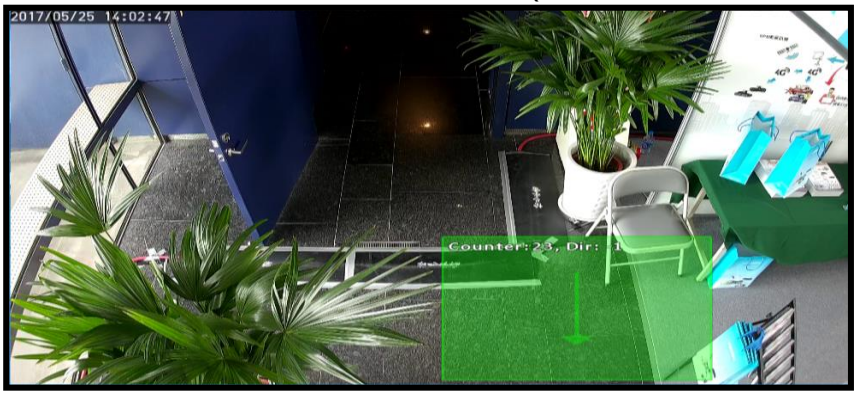
1. The PEA-related functions are divided into continuous display (Line / Boundary Show) and the (Event Show), the part of People Counting is only supported for continuous display and no display.

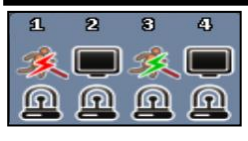


1. Displayed in green in non-triggered state in PEA mode, red when the event is sent



2. In People Counting, the current total number and the nearest direction are displayed.
   Note: Counter table is currently counted in the total number of internal, dir that direction, in to the 1, out to -1. (Future in the evaluation of display)

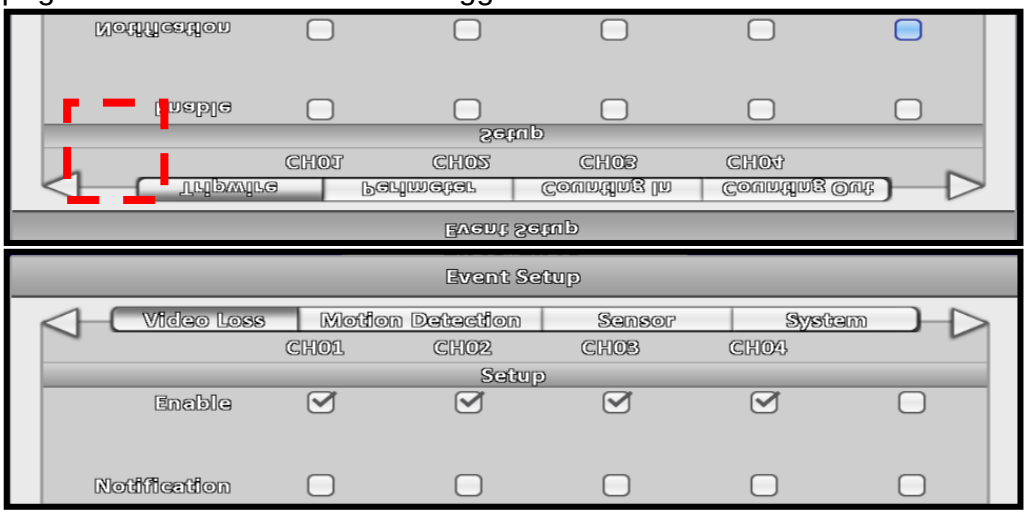




C. The relevant settings for DUHD IVS triggers

Note: Same as the Motion setting, if only the Motion detection area is set but Motion is not enabled in the event setting, even if there is no notification after the trigger

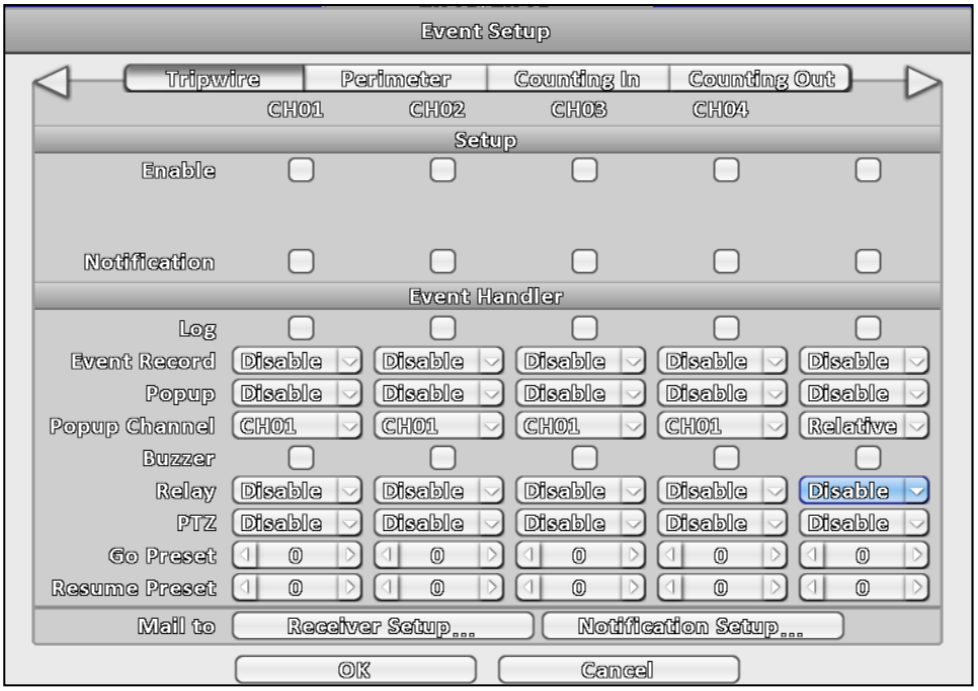
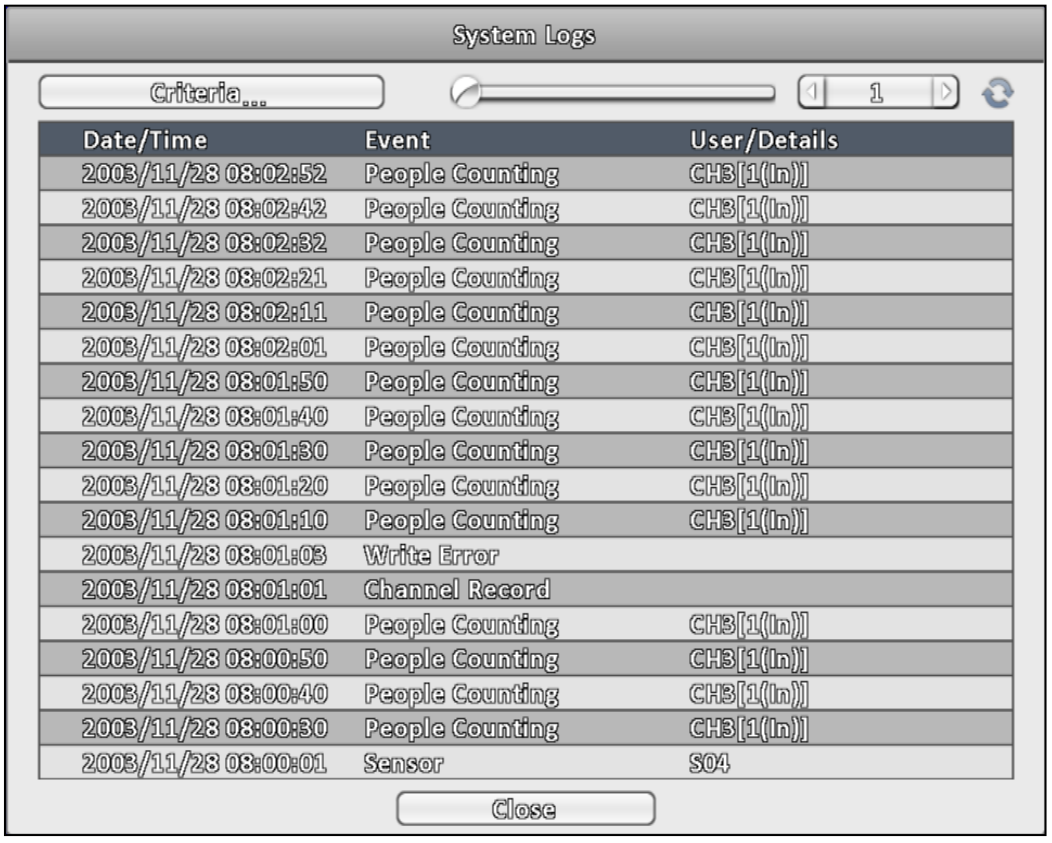
1. In the event setting page, click the left or right arrow to switch to the second page to set the relevant event trigger for IVS.



2. In the IVS event setting, there are alert settings such as alert line detection, area detection, and people counting (entry / exit).

   Note:

   1. Four alert lines are using the same set of settings, which means each of the four warning lines will refer to the current channel settings parameters
   2. In the IVS event settings, only the functions of PTZ can not work, the rest of the functions are normal.



3. How does the system record presented?
   The system records have been added to Tripwire, Perimeter and People C ounting.