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# M7 Series Net Video Recorder Manual

## Suitable Models:

Channel	Channel	Series
4/8/16 ch	1/2/4 HDD	H. 264 POE
4/8/16/32 ch	1/2/4/8 HDD	Standard H.264
20/40/80 ch	2/4/8 HDD	Standard H.265
0/40/80/160 ch	8/16 front-loaded HDD	Enhance H.265
5/10/20	1HDD	Lite H.265

## Responsibility Statement:

- This Manual may include some inaccurate or not practical points due to product continuous upgrade , we will modify this manual in time and inform the users
- This Manual is just for reference, we can't make sure all info is totally same with the real products, please check the real products for exact info.
- The parts, components and accessories mentioned in this manual don't mean the standard configuration, for detail configuration, please refer to the real products.
- The pictures, forms and words used in this Manual are not allowed to be transferred without approval.

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**Default Info:**

- Default administrator account: admin
- Default administrator password: admin
- Default IP address:192.168.1.3

**Signal Explanation:**

Signals	Explanation
	Low or moderate potential risk, it may slightly or moderately injure persons if the risks can't avoided.
	Potential risks .If this signal is ignored, it may damage the device, lost data, lower device functions or other potential damages.
	Additional info on the contents.

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## **1. Product Main Functions**

Basic Functions:

- Support IP camera, high speed dome IP camera, Internet video server , and third party IP products.
- Support Onvif standard protocol.
- Each channel supports dual –stream compression.
- Each channel’s encoder parameter is adjustable, including resolution, frame rate, bite rate,image qualify.
- Each channel support two module: timing module, and event module.
- Support fast adding IP channels.

### **Local Supervision.**

- Support VGA and HDMI.
- Support split preview screen: 1/4/6/8/9/10/13/16/20A/20B/25/32/36/40/64
- Support quick manual in preview interface.
- Support camera intelligent analysis processing and built-in intelligent analysis function.
- Support motion detection/lost video/hidden image detection.
- Support pan/tilt/zoom control protocol, support setting preset, cruise, scan and pattern.

### **Hard Disk Files Management**

- Display SMART info.
- Set disk property: redundancy , read-only, write, backup
- Support disk hibernation.
- Support raid , settings disk group, distributing different disks with different record space .
- Disk Group, allows recording files to be stored in different group.

- 
- Disk Quota, set max space for different files, such as video and image, in the disk.
  - All front-loaded NVR support RAID.

### **Records and Playback**

- Trigger recording methods : manual, timing, port/motion detection/ lost video/hidden image/intelligent video alarms
- Set Pre-recording and delay recording after being linked by alarms
- Query records according to timing/events.
- Support local redundancy recording.
- Support records encrypted
- Support 4 recording period each day , each period can be set different trigger mode .
- Support holiday strategy
- Smart search for records according to channels ,video type, start and end time , file format
- Support various playback modes: event/label/external file/smart /picture playback.
- Picture snapshot on videos, different records are marked different colors.
- Support: Pause, rapid play, slow play, jump advance 30s, jump after30s, target position by moving mouse .
- Enlarge or shorten the time bar by mouse roll.
- Digital zoom in any region in playback interface.
- Video records support Play back function.
- Max 16 channels synchronous playback.

### **Backup**

- Backup by USB
- Back up files in batch .

- 
- Backup record clips of playback interface
  - Backup according to channels and time
  - Backup device management.

### **Alarm and Unusual Situation Management**

- Set time for alarm in/out
- Alarm detection on lost video / motion detection/port /intelligent analysis /. All these alarms can link : single screen display , sound alert , upload into to management center , send emails , alarm output , video recording by any channel .
- Unusual situation detection on : no disk , full disk, error in disk reading and writing , illegal access , IP address conflict , MAC address conflict ,no available redundant disk , offline , hot spare error. All these info can link : screen alert info , sound alert , upload into to management center.
- When the system is unusually running, software watch -dog will reboot the system .

### **Other Functions**

- Four levels of user management : the administrator can set different levels of user and grant them different authority .
- Complete log and index information for operation, alarm or abnormality.
- Manually trigger alarm and clear alarms .
- Import and export configuration .

### **Internet Function**

- Support TCP/IP/PPPoE/DHCP/DNS/DDNS/NTP/SADP/NFS/HTTPS.
- Built-in WEB server.
- Support unicast and multicast, unicast supports TCP.UDP.RTP protocol .
- Support remote query , playback ,download ,lock and unlock records
- Gain / set/import/export parameter by remote access ,
- Gain info about device status, system log ,alarm status by remote access

- 
- Format hard disk ,upgrade ,reboot system by remote access .
  - Alarm port extension by alarm host.
  - Manually trigger and stop recording by remotes access .
  - Manually trigger and stop alarm output by remotes access .
  - Control PTZ by remotes access .
  - Audio intercom and broadcast .

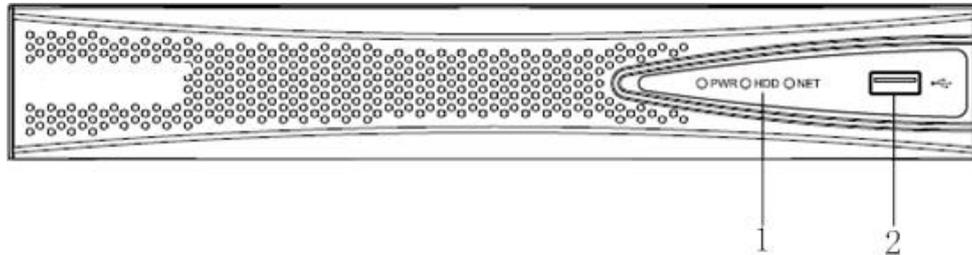
### **Support on Development**

- We can offer SDK for Windows.Linux system
- Original code for some software function.
- Development support and training on user system .

## 2. Operation Instruction

### 2.1 Front Panel

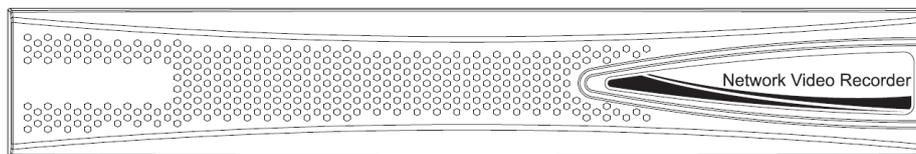
The following picture are PSE series NVR front panel.



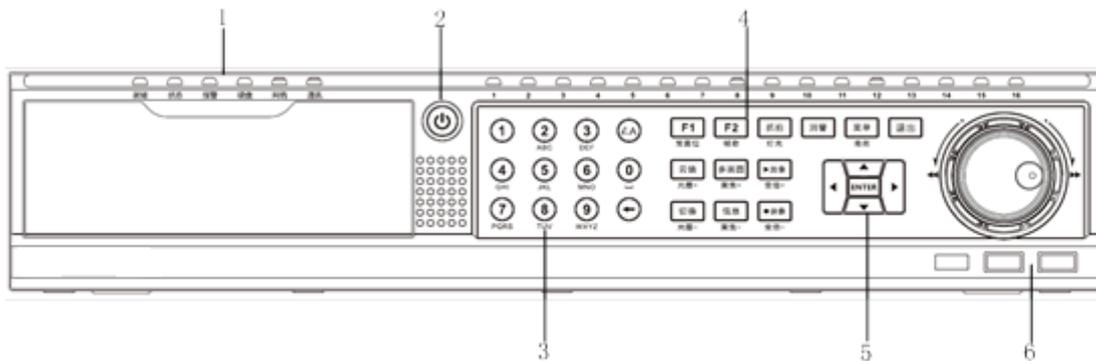
Function list:

NO.	Type	Name	Explanation
1	Status light	PWR	Power light will light up after the device power on
		HDD	HDD light will light up when reading and writing disk
		Internet	Internet light will light up after the device is connected with internet .
2	Port	USB	USB port can connect mouse , flash disk , portable HDD

Standard series NVR(1/2/4 HDD) front panel:



Standard series NVR(8 HDD) front panel:

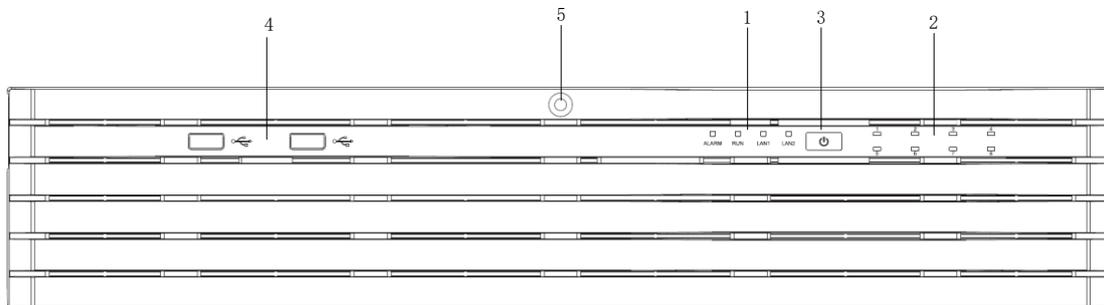


Standard series NVR(8 HDD) front panel lights:

NO.	Type	Name	Explanation
1	Status lights	Power light	It lights up after the nvr is powered on
		Status light	It lights up under remote controller
		Alarm light	It lights up after system alarms
		HDD lights	HDD light will light up when reading and writing disk
		Internet	Internet light will light up after the device is connected with internet .
		Communication	It lights up when front panel communicate with main board
		1—16	Lights for 1-16channels: blue light for previewing , yellow color for recording
2	Button	Power switch	Open/close NVR.
3	Button	Numbers button	Press number buttons to choose relative preview interface  Input numbers In editable mode

4	Button	Function buttons	For PTZ, these buttons can call preset .zoom ; control iris, focal length ,lights and wiper.  Other function : manually record, playback records , swift between main and sub output port , clear off alarms ,call main menu.
5	Button	Direction buttons	In main menu, it is used to choose options up and down .  In playback interface , it is used to speed up , slow down playing process , choose files up and down .
6	Interface	USB interface	It can connect mouse , flash disk , portable HDD

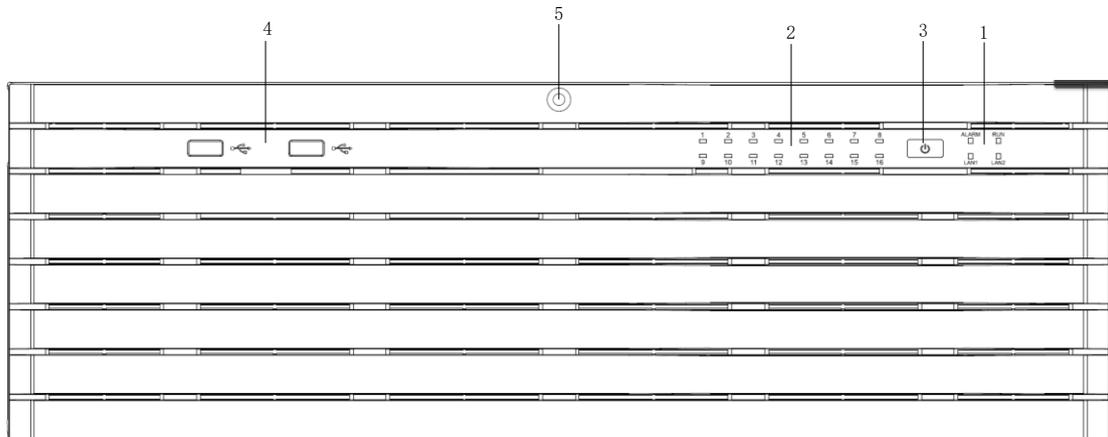
Front-loaded 8HDD NVR front panel



No	Type	Name	Discription
1	Status LED	ALRAM	When no alarm the LED is in Blue.  When there is alarm coming, the LED will change into Red with flickering.
		RUN	The LED keeps flickering when the NVR is on and in good status.
		LAN1	LAN1 status LED is flicking when the network is

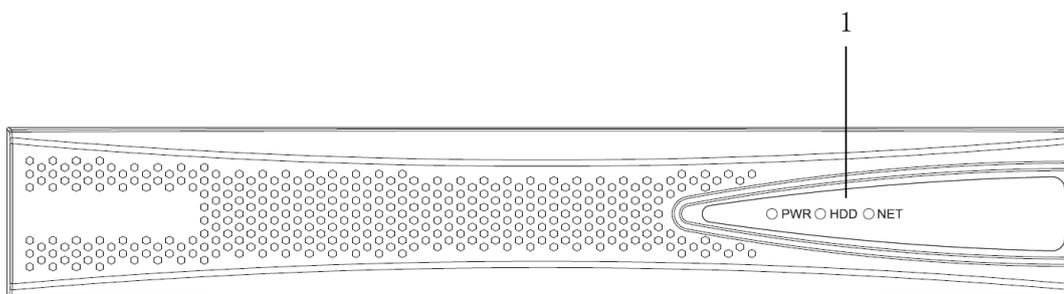
			plugged in.
		LAN2	LAN2 status LED is flicking when the network is plugged in.
2	Status LED	LED for hard disk status from 1~8	When the hard disks are in working well, the LED is Blue.
3	Button	POWER	Switch button + Power LED
4	Interface	USB	It can connect with mouse, USB sticker or mobile HDD.
5	Others	Panel lock	You can open the front panel by the key.

Front-loaded 16HDD NVR front panel



No	Type	Name	Discription
1	Status LED	ALRAM	When no alarm the LED is in Blue.  When there is alarm coming, the LED will change into Red with flickering.
		RUN	The LED keeps flickering when the NVR is on and in good status.
		LAN1	LAN1 status LED is flicking when the network is plugged in.
		LAN2	LAN2 status LED is flicking when the network is plugged in.
2	Status LED	LED for hard disk status from1~8	When the hard disks are in working well, the LED is Blue.
3	Button	POWER	Switch button + Power LED
4	Interface	USB	It can connect with mouse, USB sticker or mobile HDD.
5	Others	Panel lock	You can open the front panel by the key.

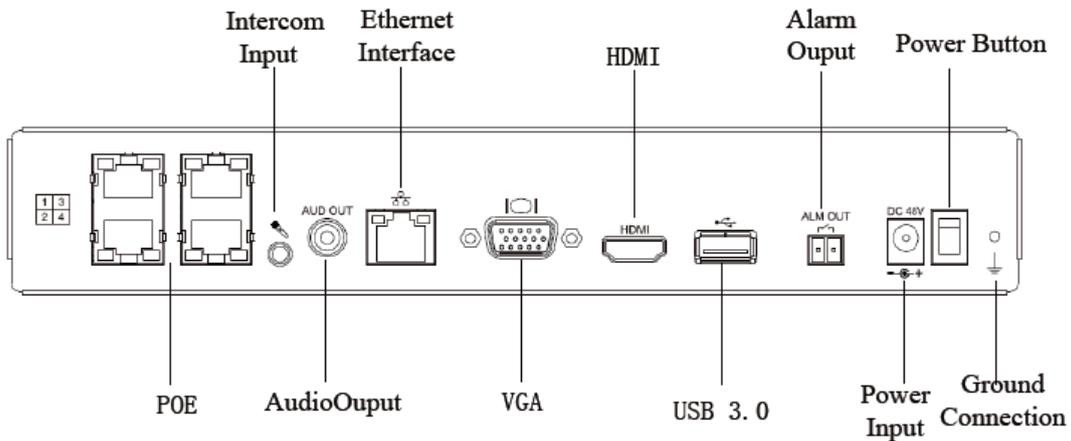
1HDD NVR front panel



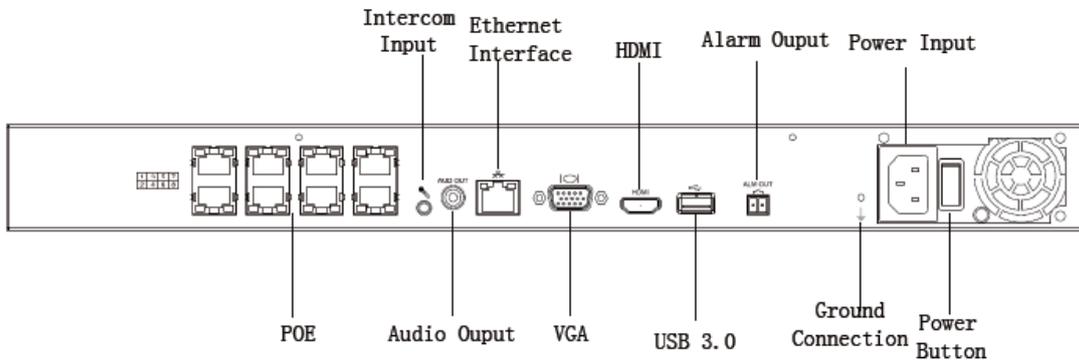
No	Type	Name	Discription
1	Status LED	PWR	Power LED is on when NVR is power on
		HDD	HDD working LED is flickering when disk accessing.
		NET	Network status is flickering when network is working.

## 2.2 Rear Panel

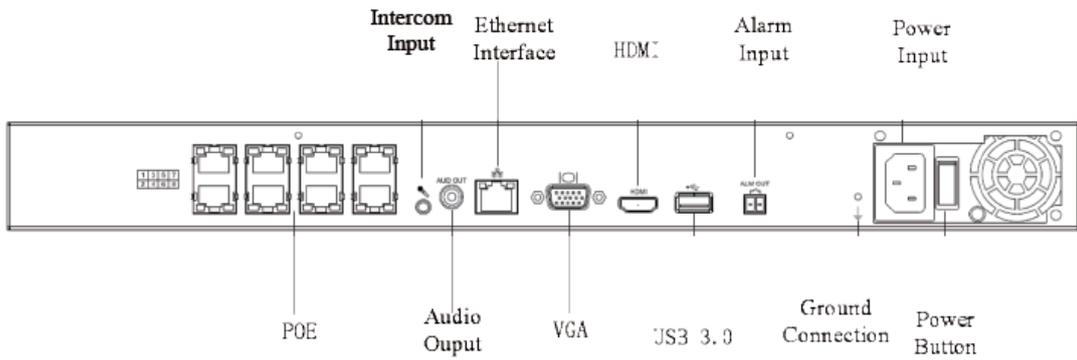
PSE series NVR(4ch 1 HDD)rear panel is like the following picture :



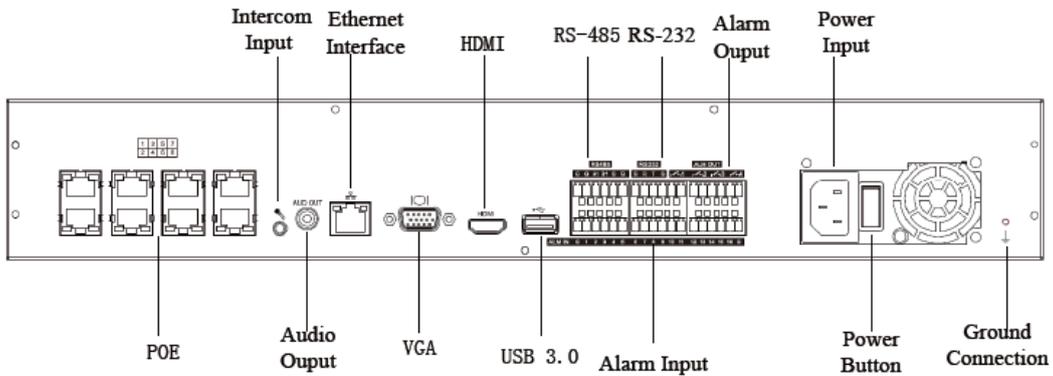
PSE series NVR (4ch 2HDD) rear panel is like the following picture:



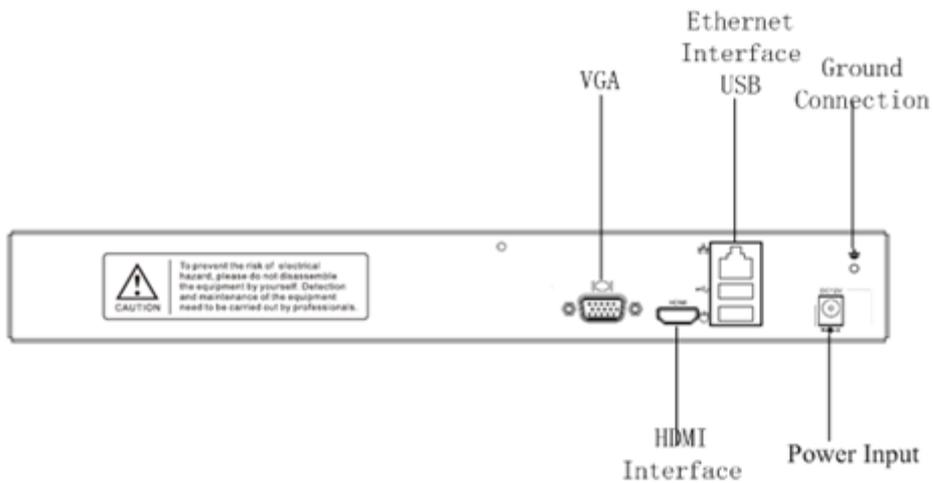
PSE series NVR (8ch 2HDD/16ch 2HDD ) rear panel is like the following picture :



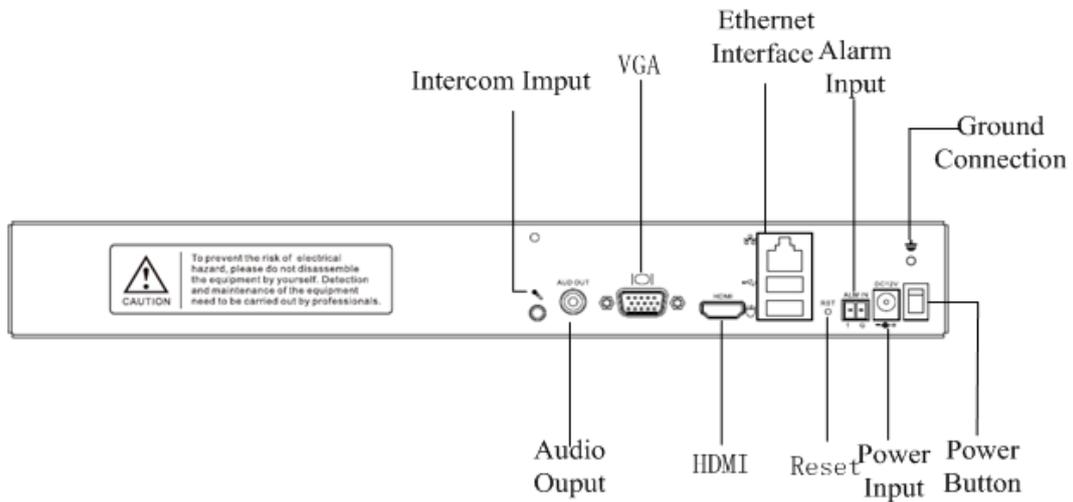
PSE series NVR (16ch 4HDD )rear panel is like the following picture :



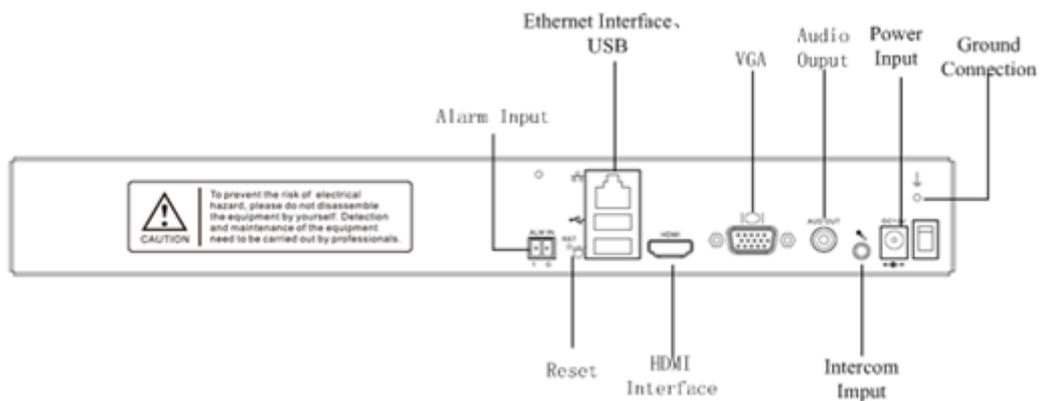
Standard NVR (4ch 1HDD )rear panel is like the following picture :



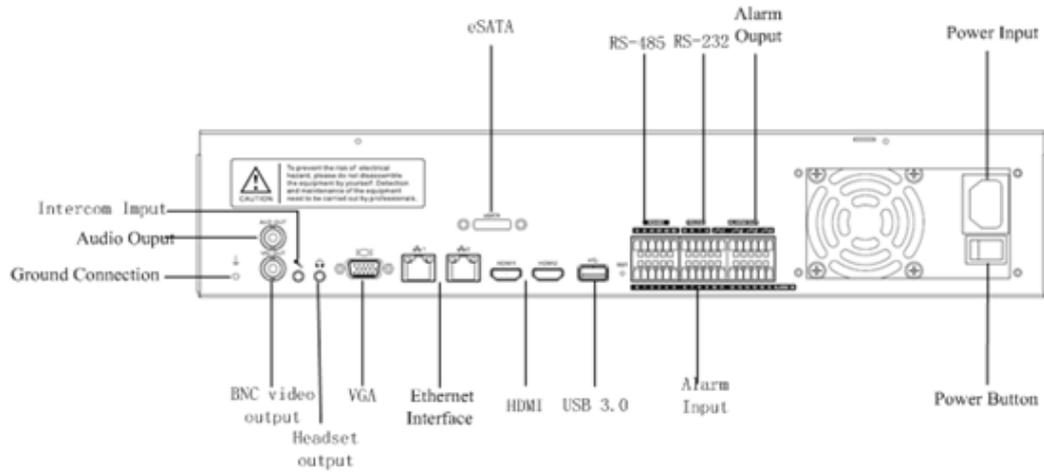
Standard series NVR (4ch 2HDD/8ch 2HDD )rear panel is like the following picture :



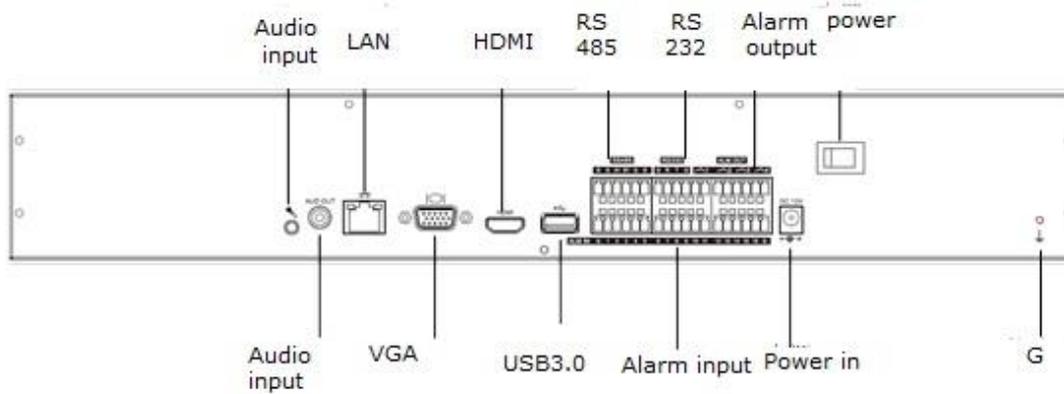
Standard series NVR (16ch 2HDD/16ch 4HDD )rear panel is like the following picture :



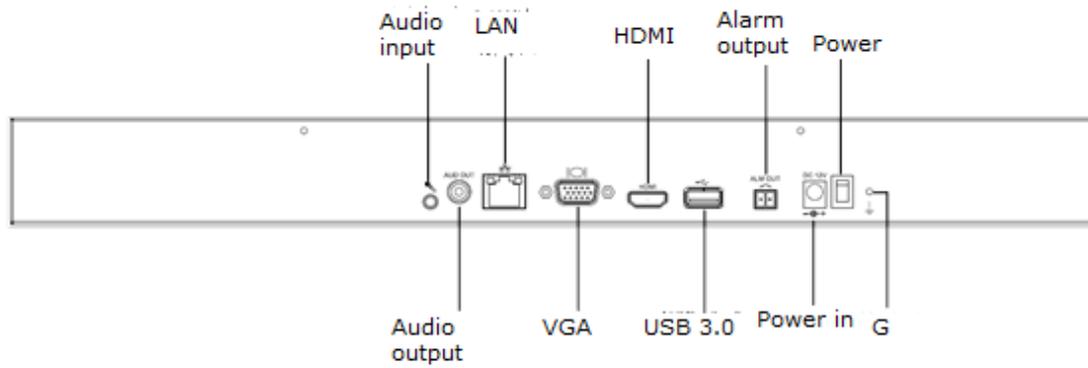
Standard series NVR (16ch 8HDD/32ch 8HDD )rear panel is like the following picture :



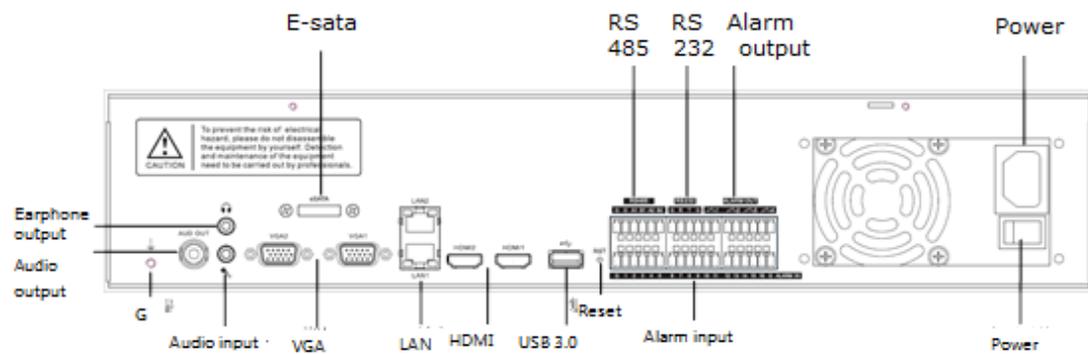
4HDD H.265 NVR rear panel



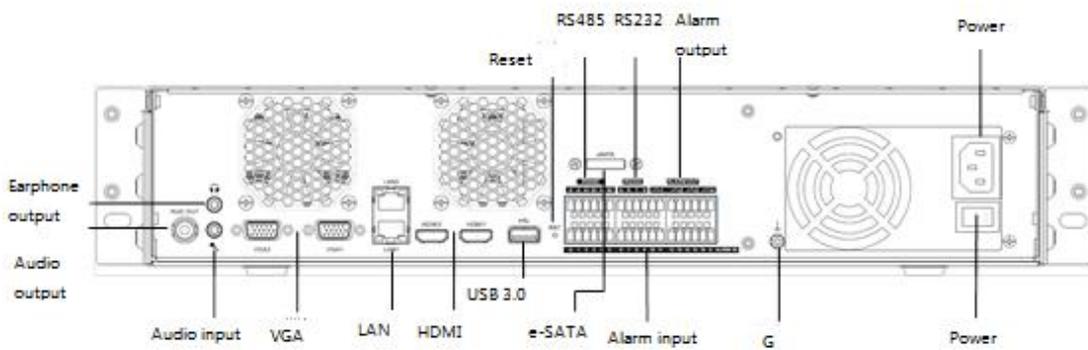
2HDD H.265 NVR rear panel



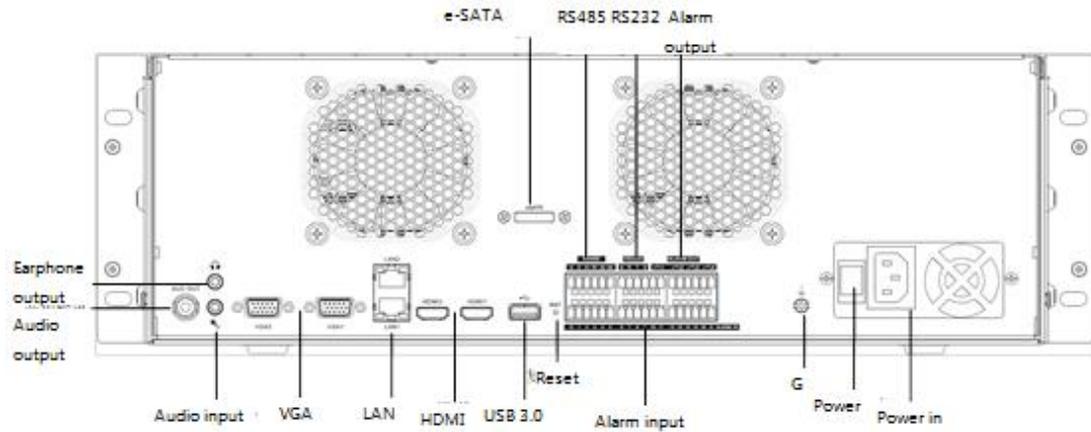
8HDD H.265 NVR rear panel



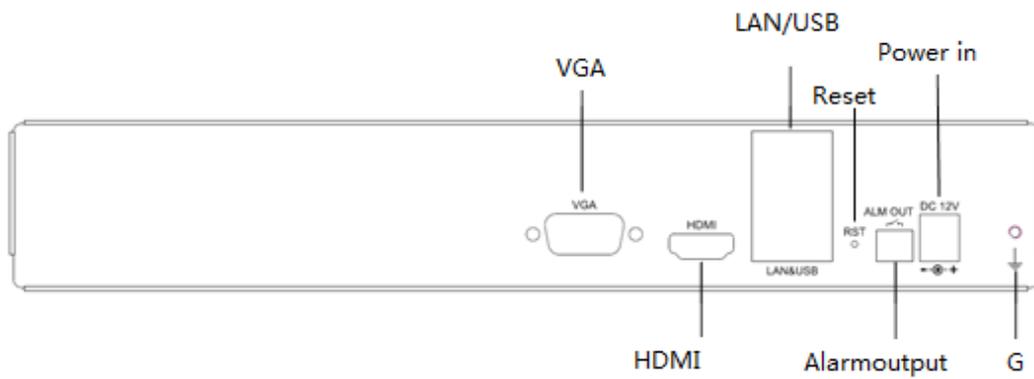
8HDD front-loaded H.265 NVR rear panel



16HDD front-loaded H.265 NVR rear panel



1HD H.265 NVR rear panel



**2.3 Mouse Operation Instruction:**

Mouse can control devices after being connected with device by USB. For details, please the following picture:

Part on mouse	Behavior	Instruction
Left button	Left click	<ul style="list-style-type: none"> <li>● Preview interface :click "+" to add device</li> <li>● Preview interface :click to show fast menu when there is image .</li> <li>● Menu interface :choose and confirm.</li> </ul>

	Double click	In preview and playback interface , click to swift from single and multi split screen
	drag	<ul style="list-style-type: none"> <li>● Change direction for PTZ</li> <li>● Set region for mask , motion</li> <li>● Change the position between two screen</li> </ul>
Right button	Click	<ul style="list-style-type: none"> <li>● Preview interface :click to show menu</li> <li>● Menu :Exit current menu , back to prior interface.</li> </ul>
Roller	Slid up	<ul style="list-style-type: none"> <li>● Slid to choose options</li> <li>● Slid to show upper page</li> </ul>
	Slid down	<ul style="list-style-type: none"> <li>● Slid to choose options</li> <li>● Slid to show lower page</li> </ul>
	Press and drag	Swift mouse between main and vice screen.

### 3. Installation and Connection

Before using, first please install HDD, then install NVR and other parts

#### 3.1 Warning



Warning:

Change battery or adapter may cause explosion. If necessary, please replace it by same type.

Installation precaution:

- Don't put liquid container on NVR
- NVR should be installed in good ventilation condition, distance between different NVR should be more 2CM.
- Working temperature (-10°C~+55°C), humidity (10%~90%)
- Please power off when clean NVR

- 
- The dust in board may lead to short circuit in humid condition. It is necessary to clean the board, connector and assembly , device case and fan with banister brush in time. If necessary, mild detergent after being diluted by water can be used. And finally please dry the device.
  - When cleaning the NVR, don't use alcohol, benzene, diluter or other volatile solvent. Don't use strong and abrasive cleaner in case of scratching the NVR interface.
  - Please buy HDD in regulated channel, we suggest Seagate.
  - Please pay attention to even mechanical load to avoid and damage.
  - Please make sure there is enough space for audio/video cable, cable bending radius should be no more than 5 times cable diameter.
  - Please make sure NVR have ground protection.

### **3.2 HDD installation**

NVR not include HDD. The disassembly of NVR case and HDD installation must be done by professional person.



#### **Precaution:**

- Please use monitoring-level HDD used specially for NVR.
- The max HDD can be installed refers description about hard disk part.
- Make sure the device is powered off before installation

#### **3.2.1 HDD capacity calculation method:**

The total capacity is calculated according to recording demand (record type, records retention time), the following sheet can be used as reference

Examples:

<b>Bite rate</b>	<b>File size/hour</b>	<b>Bite rate</b>	<b>File size/hour</b>
96Kbps	42M	128 Kbps	56 M
160 Kbps	70 M	192 Kbps	84 M
224 Kbps	98 M	256 Kbps	112 M
320 Kbps	140 M	384 Kbps	168 M
448 Kbps	196 M	512 Kbps	225 M
640 Kbps	281 M	768 Kbps	337 M
896 Kbps	393 M	1024 Kbps	450 M
1280 Kbps	562 M	1536 Kbps	675 M
1792 Kbps	787 M	2048 Kbps	900 M
3072 Kbps	1350 M	4096 Kbps	1800 M
8192 Kbps	3600 M	16384 Kbps	7200M



**Precaution:**

The upper file just for reference, file size may be a bit different with reality. Any damage made by this will not be taken by manufacturer.

**3.2.2 HDD installation steps:**

**Tool :** Philip's head screw

**Instruction pictures(1):**

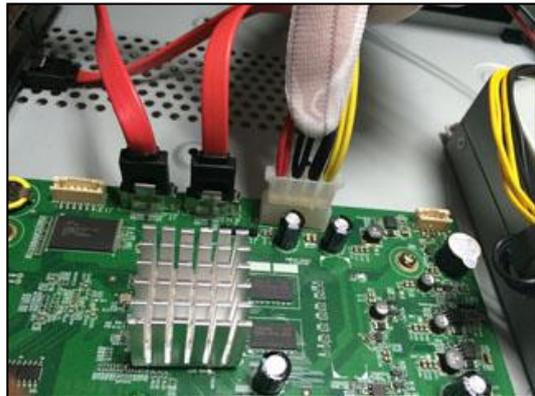
1. Loose the screws on the upper cover and remove the cover from the NVR.



2 Connect the data bus of HDD to the SATA data bus connector of the NVR



3. Connect the power cable of HDD to the power connector of the NVR.



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4. Fix the HDD with screws onto the bottom of the NVR. And then close the upper cover of the NVR, and fasten all the screws loosened in step 1.

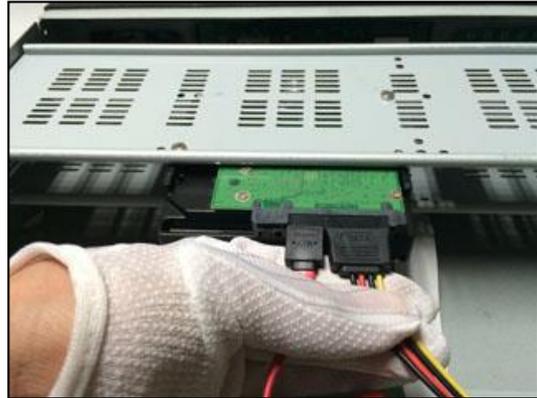


**Instruction pictures(2):**

1. Loose the screws on the upper cover and remove the cover from the NVR.



2. Connect the data bus of HDD to the SATA data bus connector of the NVR.



3. Connect the power cable of HDD to the power connector of the NVR.



---

## 4. Configuration and Operation

### 4.1 Start Up/Log Out

#### 4.1.1 Start Up



Before starting up the device, please make sure the power input and ground protection is well done.

Before starting up the device, please make sure NVR output interface and monitor is well connected.

Please make sure the power supplier is stable in case of any unusual condition or damage caused by this.

1. plug in power , open power on button on rear panel , the NVR will start up when it beeps .

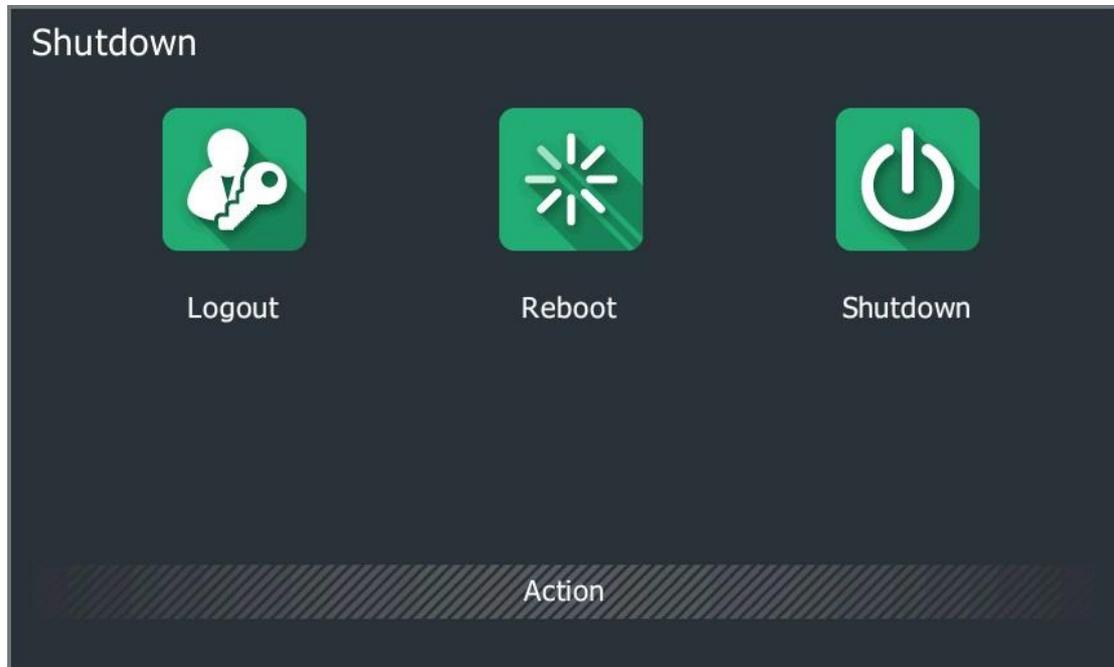
2. NVR will show the following interface when starting up .



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#### 4.1.2 log out

1. Choose "main menu ->log out".



#### **Precaution:**

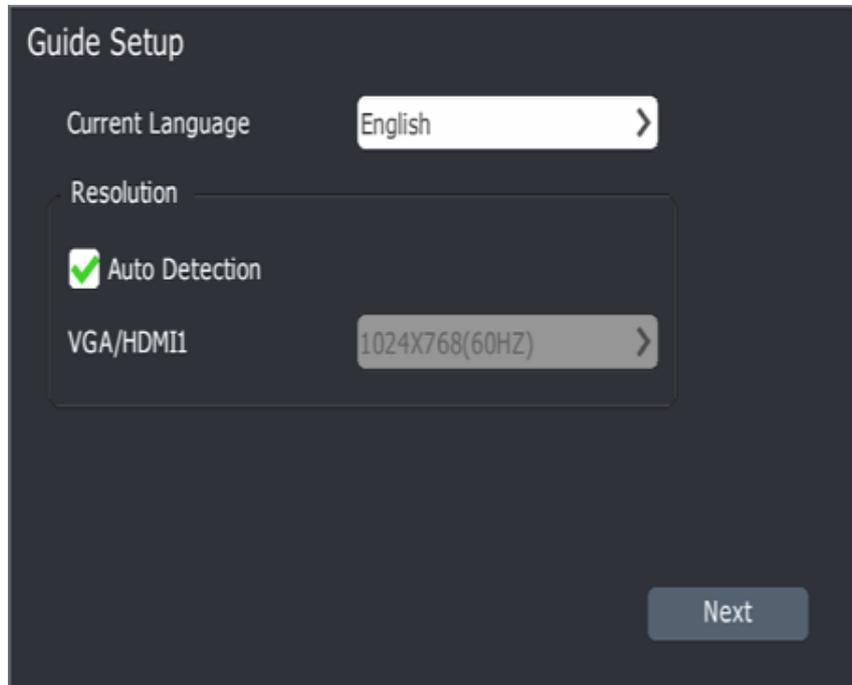
- Don't power off when the system shows "sign out current user"
- Don't power off compulsorily when the device is running.

---

## 4.2 Guide setup

Customer can do fast setting on the device by "guide setup"

1.First step: Set the current language, output resolution, and auto detection



2.Click"Next" to "Guide Setup":

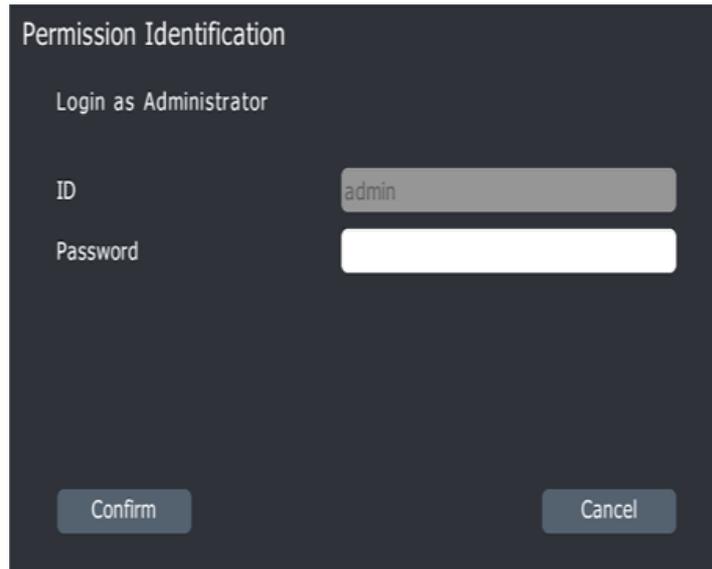




**Note:** Choose "Yes" to continue running "Guide setup"; choose "No" to jump "Guide setup", choose "Never" to jump "Guide setup" automatically when starting up the system next time.

3. Choose "Yes", it will show the following interface:

- ID: admin, Password: admin.



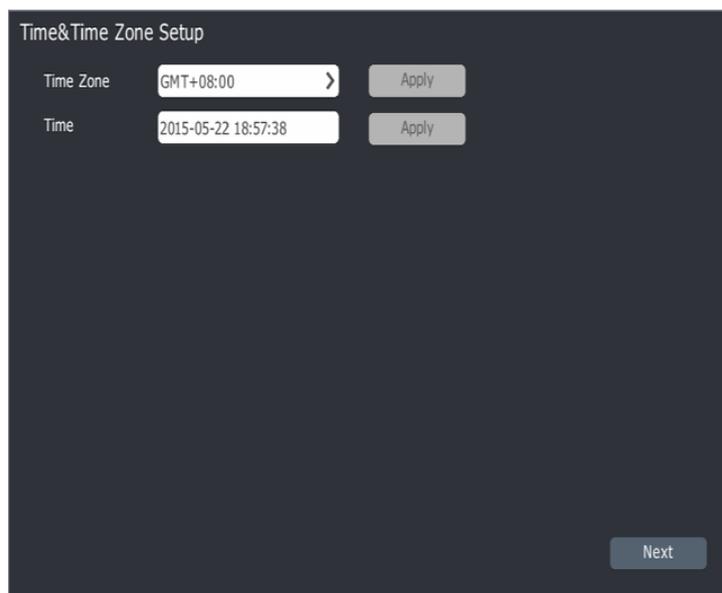
Permission Identification

Login as Administrator

ID

Password

4. Click "confirm" to enter "Time and Time zone" setting interface:



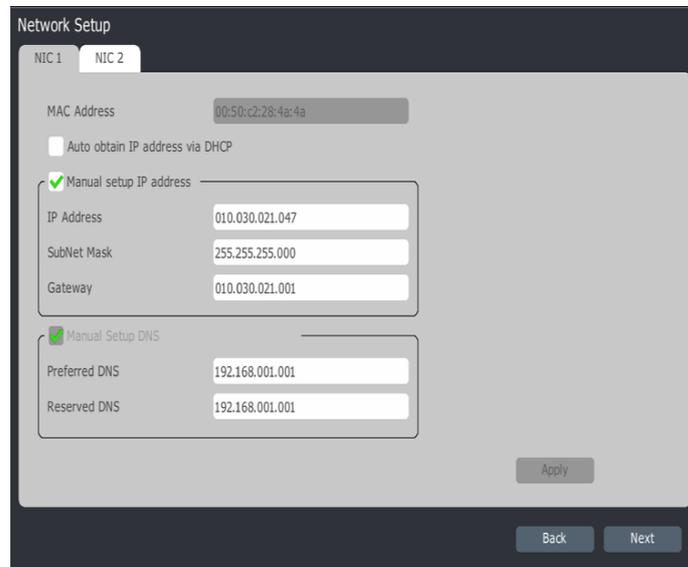
Time&Time Zone Setup

Time Zone

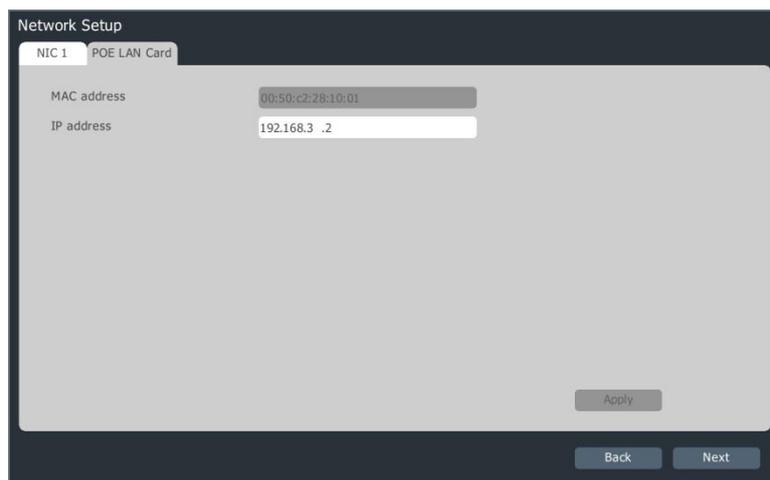
Time

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5. Click "Next" to enter "Network Setup" interface.

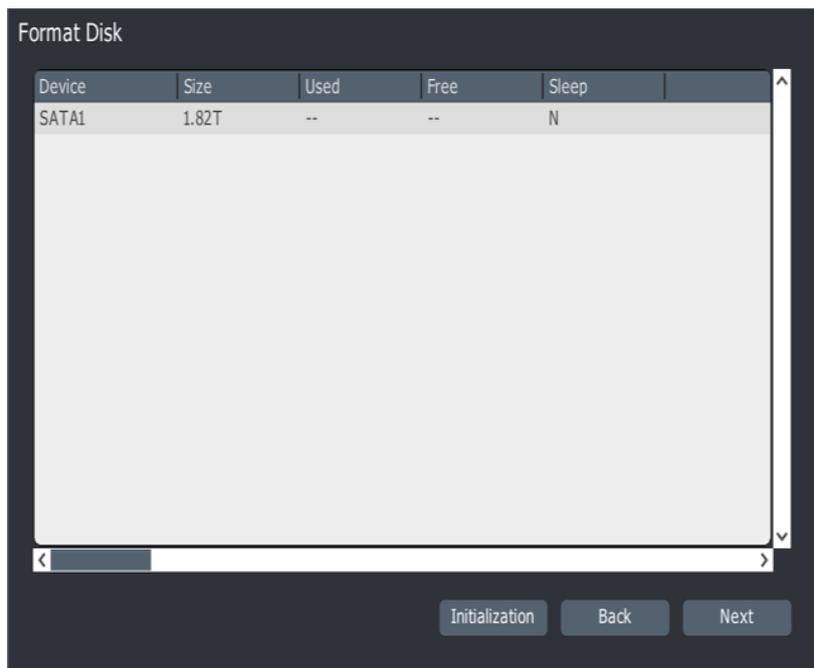


The screenshot shows the "Network Setup" interface for "NIC 2". The "MAC Address" is 00:50:c2:28:4a:4a. The "Auto obtain IP address via DHCP" checkbox is unchecked. The "Manual setup IP address" checkbox is checked. The IP Address is 010.030.021.047, SubNet Mask is 255.255.255.000, and Gateway is 010.030.021.001. The "Manual Setup DNS" checkbox is checked. The Preferred DNS is 192.168.001.001 and Reserved DNS is 192.168.001.001. There are "Apply", "Back", and "Next" buttons at the bottom.



The screenshot shows the "Network Setup" interface for "POE LAN Card". The "MAC address" is 00:50:c2:28:10:01 and the "IP address" is 192.168.3 .2. There are "Apply", "Back", and "Next" buttons at the bottom.

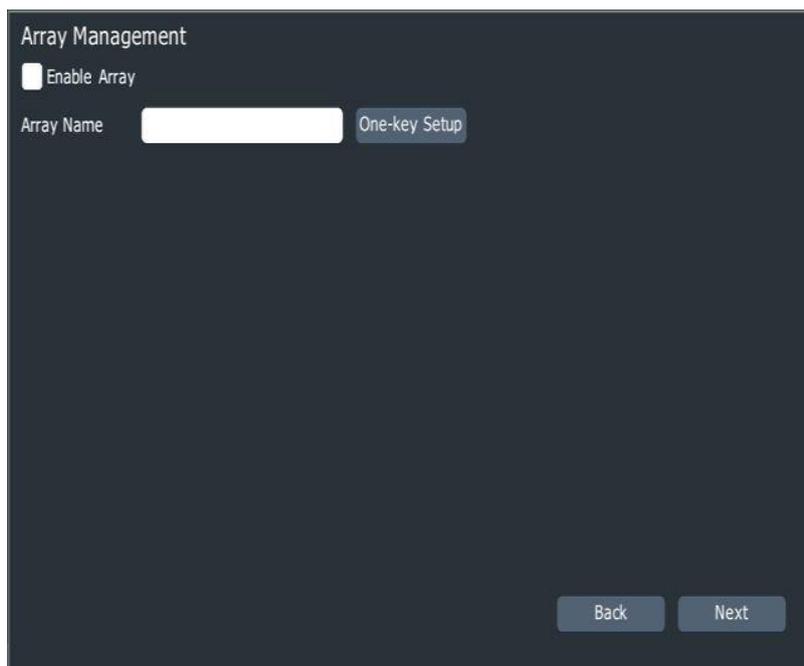
6. Click "next" to formatting Disk.

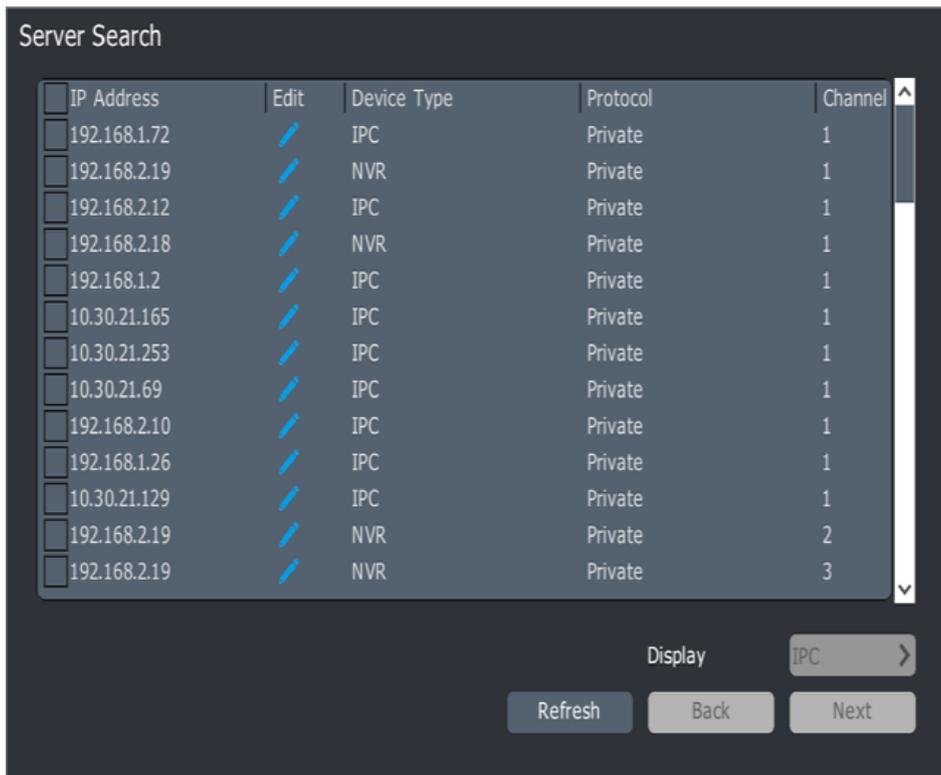


**Note:**

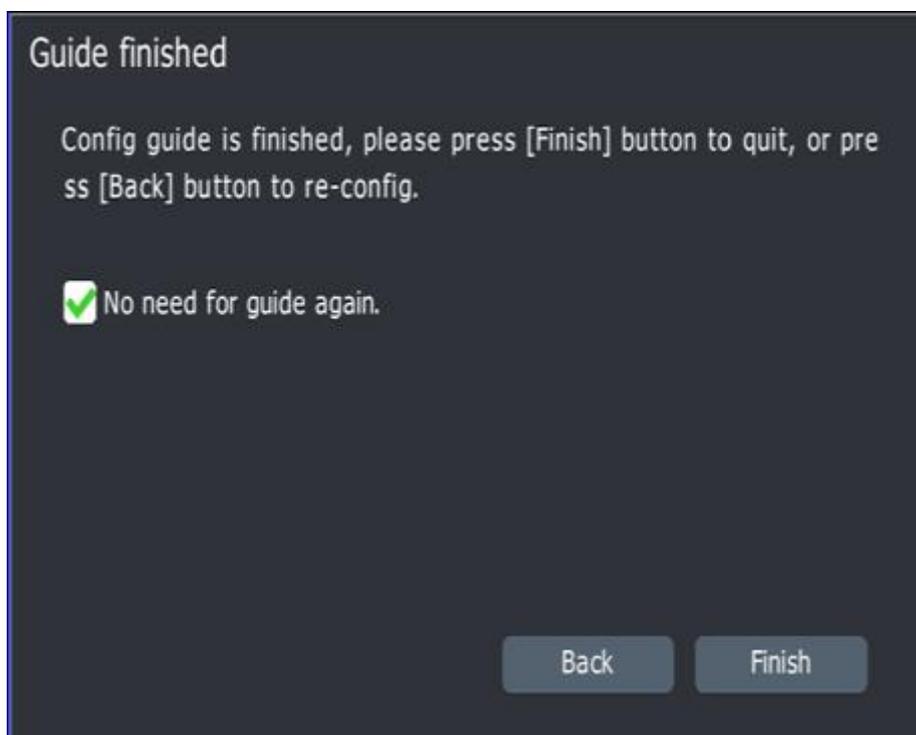
Recording can work only after disks get initialization.

7. Click "next" to search and add devices.

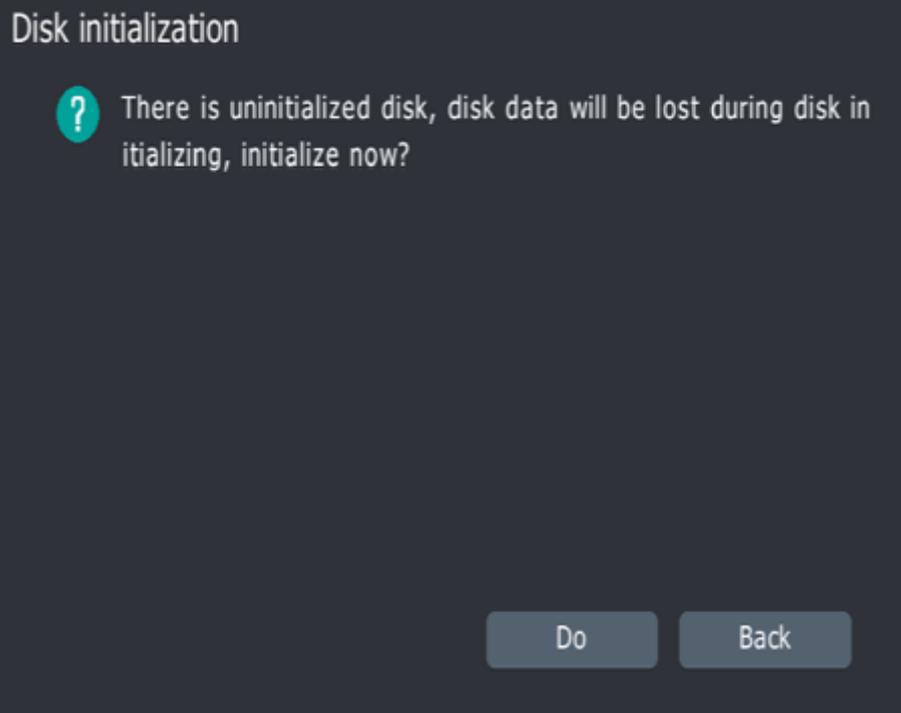




8. After configuration guide is finished, it will show the following interface



9. If there is still uninitialized disk, it will show the following interface.



Click "Do", then I will automatically formatting the uninitialized disks

### **4.3 channel management**

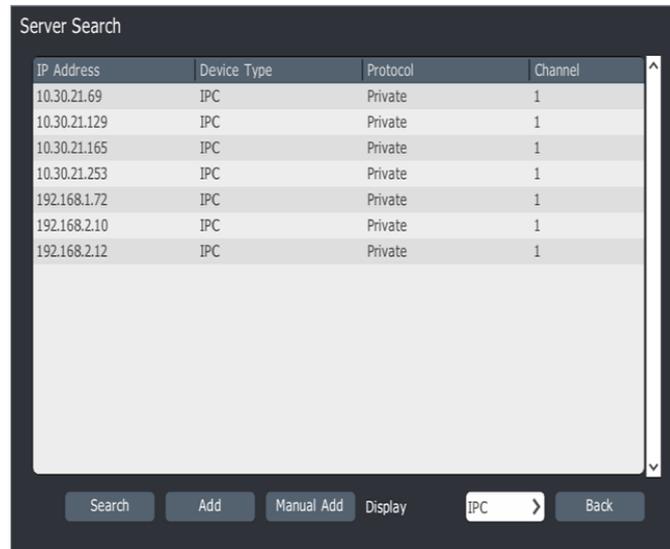
#### **4.3.1 Add device.**

If one channel is not added camera yet, it will show the following mark , click "+" to add device.



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1. Click "+" in preview interface, it will show the following interface :



IP Address	Device Type	Protocol	Channel
10.30.21.69	IPC	Private	1
10.30.21.129	IPC	Private	1
10.30.21.165	IPC	Private	1
10.30.21.253	IPC	Private	1
192.168.1.72	IPC	Private	1
192.168.2.10	IPC	Private	1
192.168.2.12	IPC	Private	1

 **note:**

- Mouse click is not available in searching process.
- The system will automatically add the devices with default port, ID and password, if the info doesn't match the default info, customer can choose Manual Add.

2. After searching, double click the IP in the list to add or choose "Add" button.

3. Choose "Manual Add.", it will show the following interface:

4. After input Device IP address, Port NO., User name and password, then it will add devices successfully.

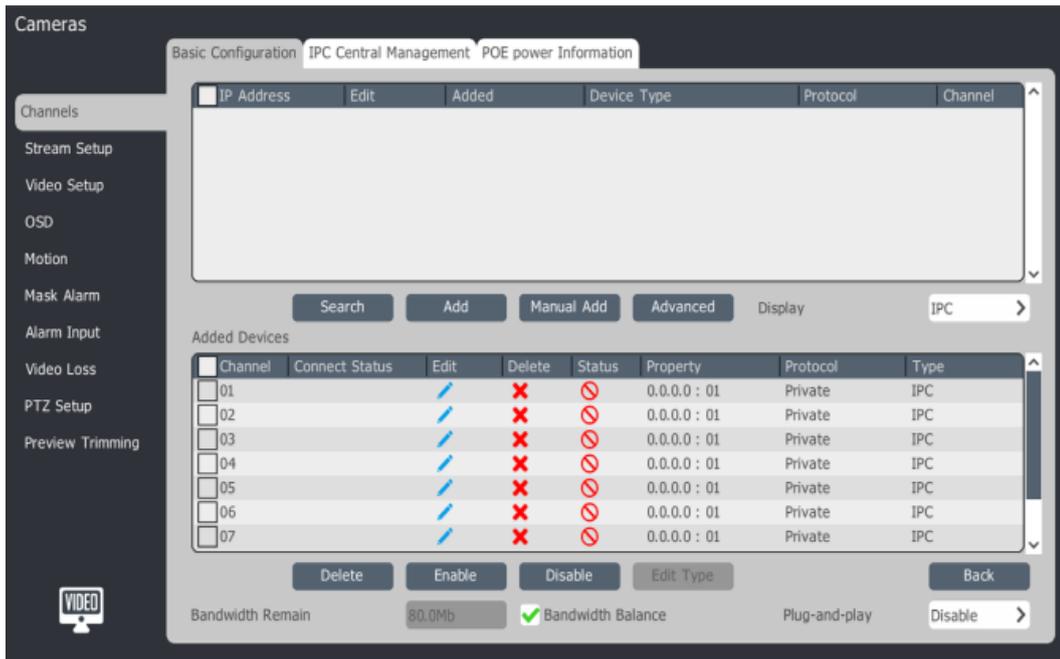


**Note:**

- For PSE-NVR POE port, the system will add devices automatically, for PSE-NVR standard port, it support manual add.

**4.3.2 Add devices in usual way**

1. Choose "main menu->channel management->basic configuration" to enter channel management interface like the following picture:



**note:**

- For difference devices, this interface is different
- After add successfully, you can see the device in the “added devices” list .
- When connection status shows , move your mouse on , it will show you the reson of failure.

2. In the search result , the sequence is arranged automatically according to IP

address. Clients can click to change the IP address, like the following picture:

**Modify IP**

MAC address: 00:50:c2:28:10:69

Original network address: 010.030.021.069

New network address: 010.030.021.069

SubnetMask: 255.255.255.000

Gateway: 010.030.021.001

DNS: 010.030.021.001

Confirm Cancel

Click "Advance Search", customer can search devices according to different connect mode, like the following interface:

**Server Search**

IP Address	Server Name	Serial Number	Channel

Connect Mode: Domain > Search Add Back

2. In the search result interface, choose the IP address, then click "Add" to add device into NVR channel , or double click IP address to add. It supports bulk adding.



**note:**

- For PSE-NVR digital channels, if this channel used “Plug and Play”, then this channel is occupied.
- Manual Add

1. In channel configuration / basic configuration interface, click “manual add” to enter digital channel interface like the following :

Digital Channel

Channel No.	01	State	<input type="checkbox"/> Enable
Add Method	Manual Add	Device Type	Private Protocol
Connect mode	IP	Device Address	0.0.0.0
Proxy IP		Port No.	3000
Device Channel	01	User	Admin
Stream	Mainstream	Password	****
Decryption			

Smart Adding

<input type="checkbox"/> IP address ascending	Target Channel	01	—	32
<input type="checkbox"/> Channel number ascending		<input type="button" value="Batch Adding"/>		

Bandwidth Remain 200.0Mb

2. Choose the channel number to add the camera, check “enable ” button, choose connection mode according to camera type, when the Device type is RTSP, the interface is like the following picture:

3. When the Device type is ONVIF, the interface is like the following picture:

4. Input device IP address or URL address, User name and password, click "confirm" to finish device adding. Adding other devices in the same way.

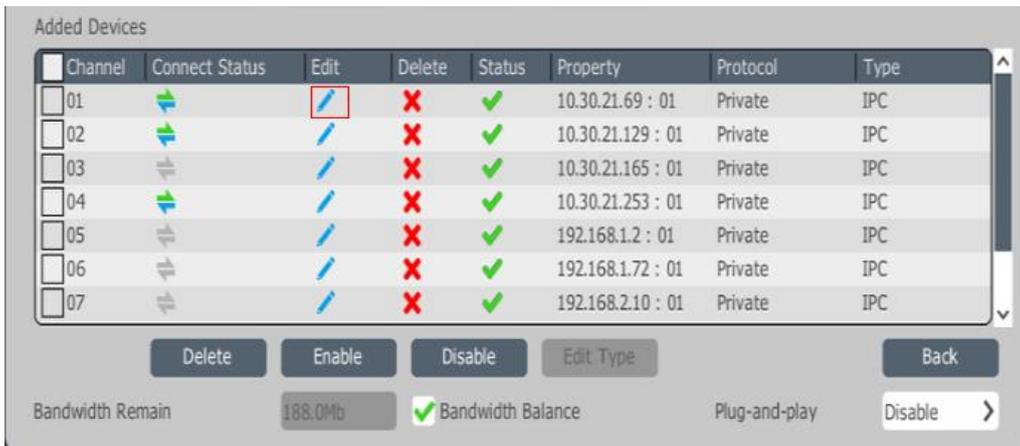
---

 **Note:**

- If you want to add several channels together, please choose the channels in "device channels" interface
- If you choose adding devices with IP address increasing, then after the IP address's last number reach 255, it will stop adding.
- If the device type is ONVIF, default port is 80, user and password is Admin/Admin, for different brand devices, the log in account and password may be different.

### 4.3.3 Add device in NVR PSE channel

1. Click  In "channel configuration" -> "basic configuration" -> "added list"
2. In "Added Devices" interface, click  or double click channels to enter "Digital channels" interface



Channel	Connect Status	Edit	Delete	Status	Property	Protocol	Type
<input type="checkbox"/> 01					10.30.21.69 : 01	Private	IPC
<input type="checkbox"/> 02					10.30.21.129 : 01	Private	IPC
<input type="checkbox"/> 03					10.30.21.165 : 01	Private	IPC
<input type="checkbox"/> 04					10.30.21.253 : 01	Private	IPC
<input type="checkbox"/> 05					192.168.1.2 : 01	Private	IPC
<input type="checkbox"/> 06					192.168.1.72 : 01	Private	IPC
<input type="checkbox"/> 07					192.168.2.10 : 01	Private	IPC

Buttons: Delete, Enable, Disable, Edit Type, Back

Bandwidth Remain: 188.0Mb,  Bandwidth Balance, Plug-and-play,

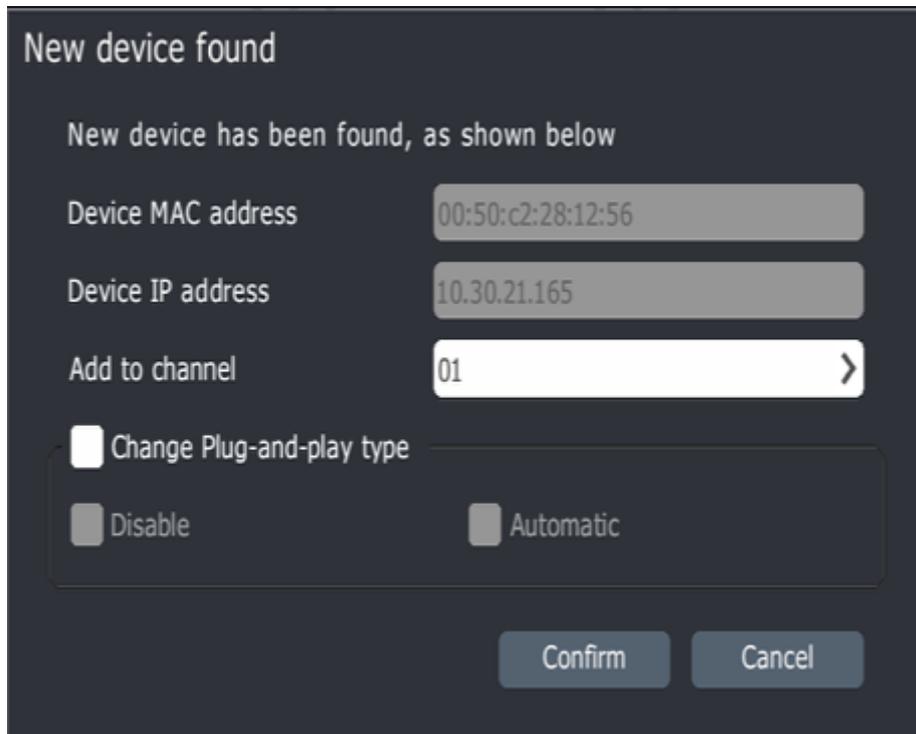
3. PSE channel can add devices in two ways : "plug and play" and "manual add"
  - 1) for "Manual Add", the device should be internet connected with the IP channels
  - 2) for "plug and play", connect the camera in POE port, the system will add automatically.

---

#### 4.3.4 Plug and Play Set

Users can enable "plug and play" to add cameras In the same LAN.

- There are three options for "plug and play"
- Disable :unable "plug and play", users can add cameras manually
- Add automatic: in this mode, NVR will automatically search and add devices.
- Automatic found: in this mode, when you get back to preview interface, the system will automatically search the available devices and show the following interface: you can choose whether you want to add this device or not.



New device found

New device has been found, as shown below

Device MAC address 00:50:c2:28:12:56

Device IP address 10.30.21.165

Add to channel 01 >

Change Plug-and-play type

Disable  Automatic

Confirm Cancel



#### note:

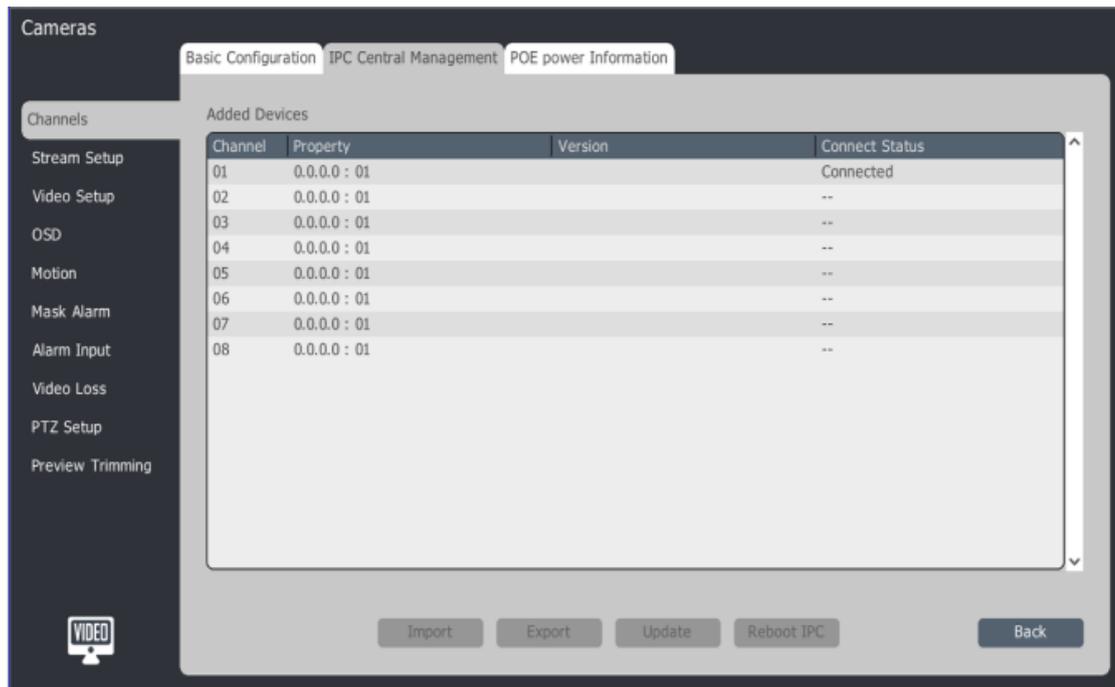
- "plug and play" function will automatically clear off "added device " list , and automatically change the cameras' IP address in search result .
- If the user select Plug&Play, this function would clear the added device list automatically, and auto-modify IP address of searched camera. The user must be pay more attention about this function.
- If the user want to choose to add camera manually, please unable Plug&Play.

---

### 4.3.5 IPC Central Management:

Through IPC central management, users can export and import the parameters of, upgrade by remote access to , and reboot added devices.

1.choose "main menu" ->channel configuration->IPC central management" to enter the following interface :



 **note:**

- This interface shows added cameras' channel number, property, version and connect status.

2.parameter import/export

1)choose the camera for import/export in added list .

2)click "import" to enter the following interface :

3)choose related file to import



**note:**

- After the parameter is imported successfully ,the camera will reboot automatically

4) click "export" to enter the following interface :

Configuration Export

Export to

File name

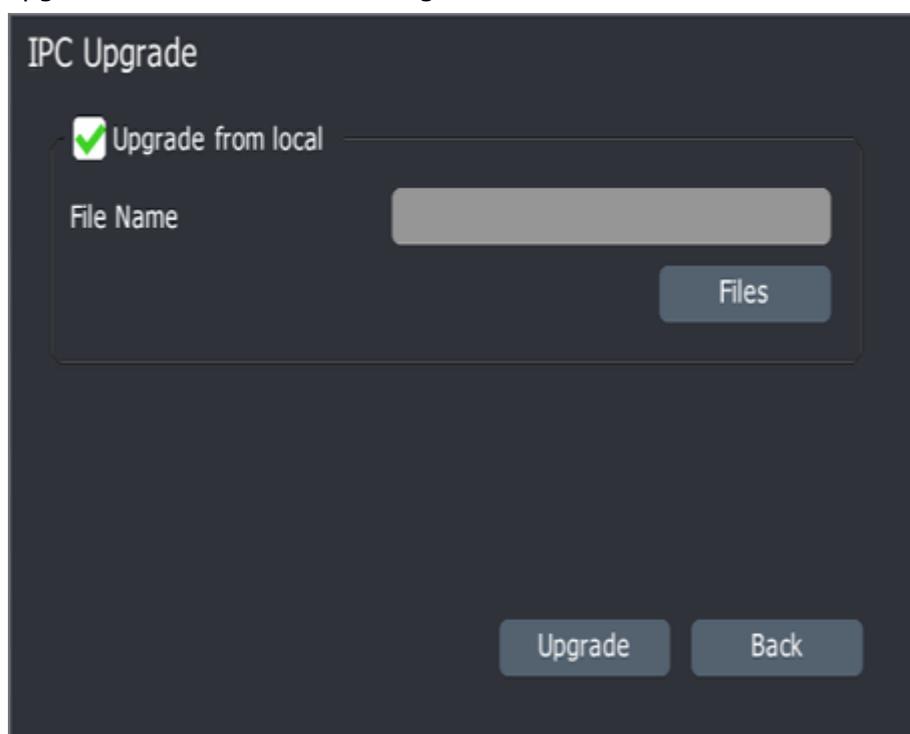
Export Cancel

5)choose storage place for exporting files, when it show the following interface , the exporting work succeed.



Upgrade by remote access, reboot IPC

- 1) Choose the camera for import/export in added list .
- 2) Click "upgrade " to enter the following interface



- 3) Click "browser files" to choose upgrade file
- 4) Click "reboot IPC " to restart cameras .

### 4.3.6 POE Power Info.

Only PSE NVR has this function

1. choose "main menu->channel management ->channels->POE power information", to enter the following interface.

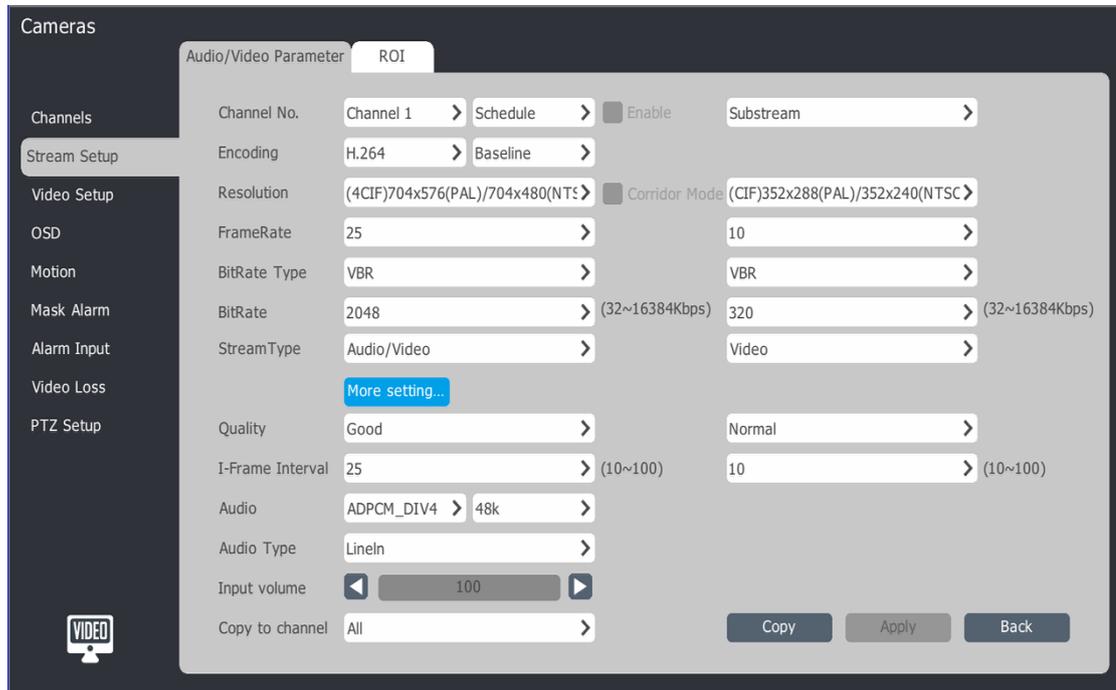


**note :**

- "🟢" this logo means POE supply is working , "🔴" this logo means no cameras connected or no power
- "🟢" the info upper this logo means realtime power info.

### 4.3.7 Stream setup

#### 1. Select main menu-cameras-stream setup



#### Video/audio parameter

##### 1. Select channel

- Channel No.: video compression type: main stream(), main stream(timing), main stream(event), sub-stream, timing mode1, timing mode2.
- Compression type: support H.264 and High Profile, Main Profile, Baseline Profile
- Resolution: Setup the resolution of camera.
- Enable corridor mode: Enable this function when resolution is 16:9, after enable resolution will change to 9:16
- Frame Rate: Video frames per second
- Bit rate type: CBR and VBR for option. VBR will change according to scene.
- Bit Rate Range: 32-16384Kbps.

- 
- Quality: Best, better, good, normal and poor.
  - Stream Type: Video and video/audio
  - I-Frame Interval: I-Frame is a important frame. I-Frame rate is inversely proportional to the code rate.
  - Audio: ADPCM\_D(ADPCM\_DIV4).G.711A.G.711U for option. And also support 8K.32K.48K three audio sampling rate.
  - Enable Audio Mixing: In order to meet special requirements, it need mix two channel audio, when the equipment has a virtual channel (VC) synthesis, the two different channels in the channel can be mixing.
  - Audio Control Type: Lineln and MicIn.
  - Input volume: Range is 0-255.



**Note:**

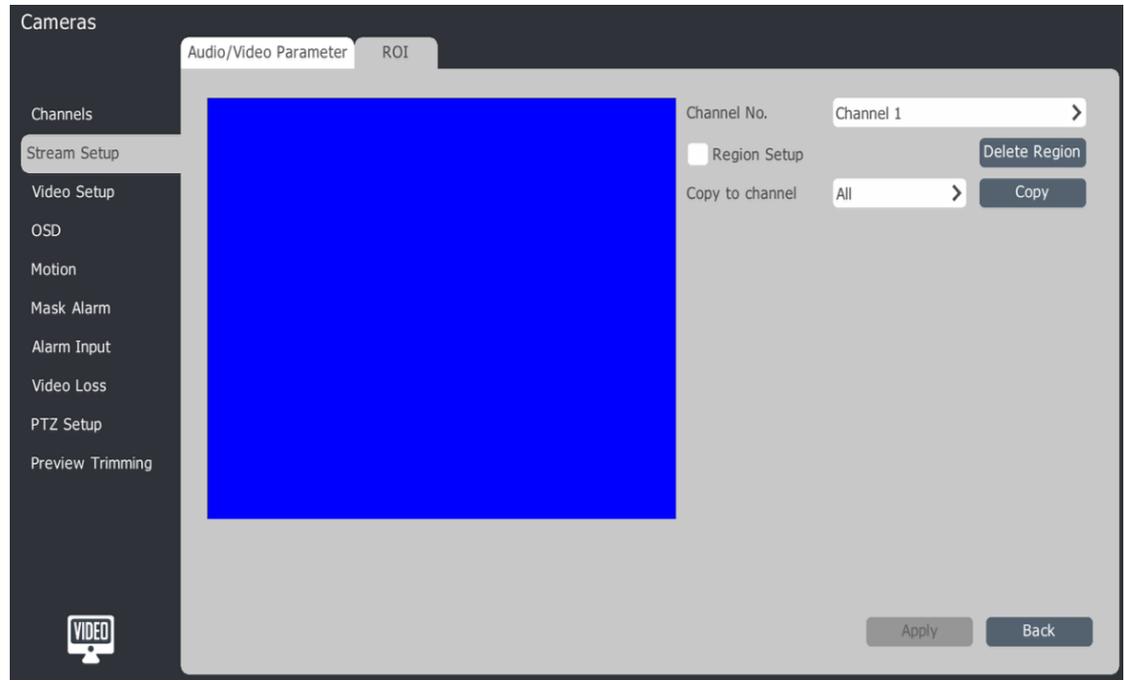
- Sub stream used for network transmission and mobile monitoring.
- Corridor mode only for 1080P/720P/QXGA
- Enabling corridor mode needs that IPC support this function.
- Different model coding parameter have various template.
- Click more details to fold up and down to show more settings.

---

## ROI

High quality picture in ROI

### 1. Select ROI interface

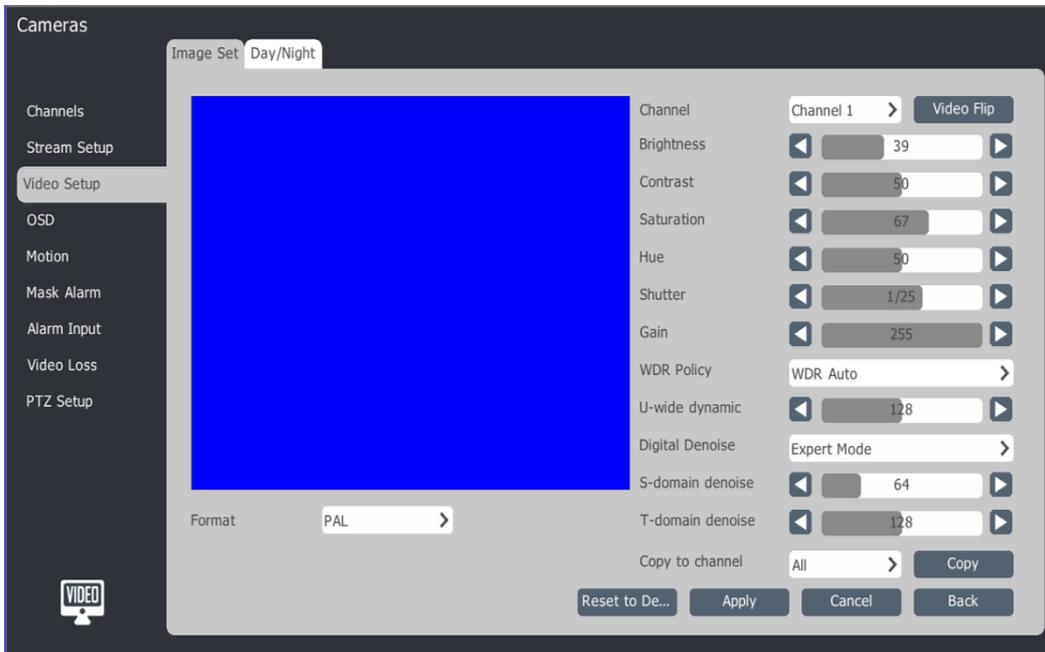


2. Select region setup and enable this function, hold the left mouse button drag on video, it can set the key area. The maximum support 4 ROI.

3. Click apply and save the setup.

## 4.3.8 Video Setup

### 1. Select main menu-cameras-video setup



### 2. Select channel

### 3. Setup format, video flip and mode.



#### Note:

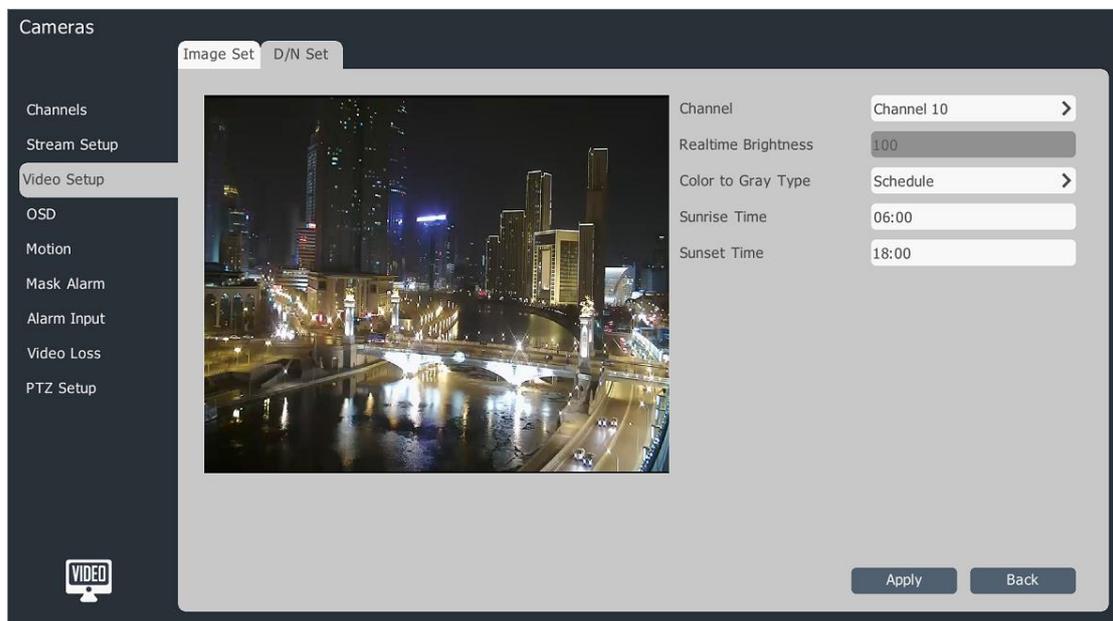
- Equipment support four period and a temporary value, different time parameters can be independent configuration, time period shall not overlap, if the time of beginning and ending time period is the same time will be disabled. The current time is out of the period, according to the provisional value to set the video input parameters
- Setup standard, indoor, weak light, outdoor, custom and five video mode.
- Brightness, contrast, saturation, chroma is adjustable between 0-255
- It can choose to copy to the channel function then will copy all parameter.

- 
- Use the mouse wheel can debug video input parameters, also can click on the icon  and  increase or decrease the value

3. Click apply to save parameter.

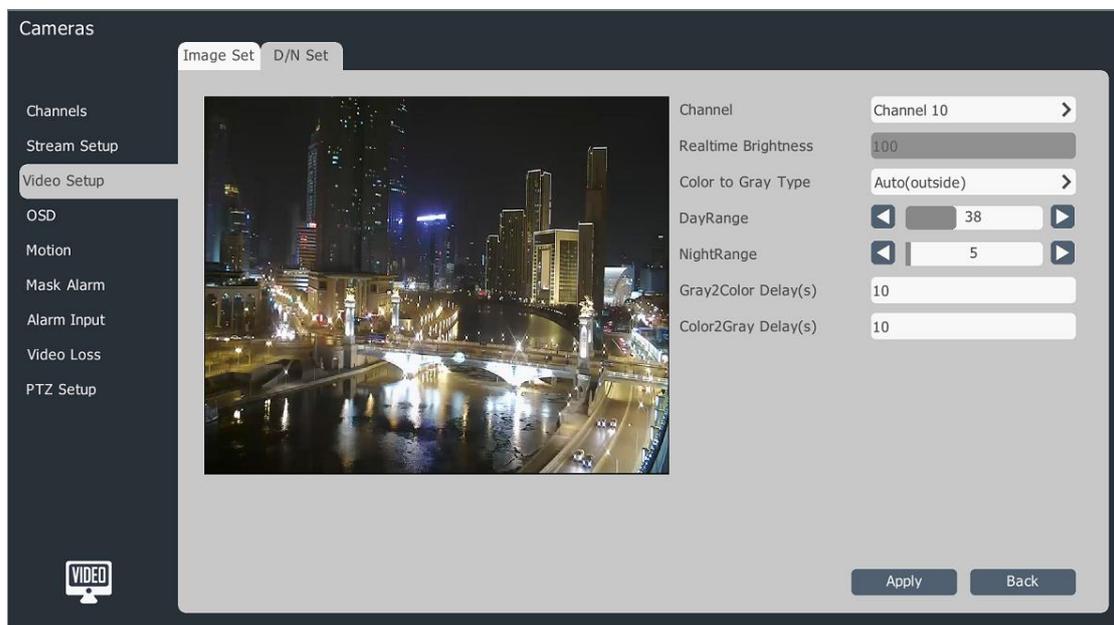
### Color to grey

- 1 Select target channel
- 2 The mode of changing color into grey including color, grey, timing, inter-sync, exter-syncn, day/night, self-adaption.
- 3 Timming mode page is as below

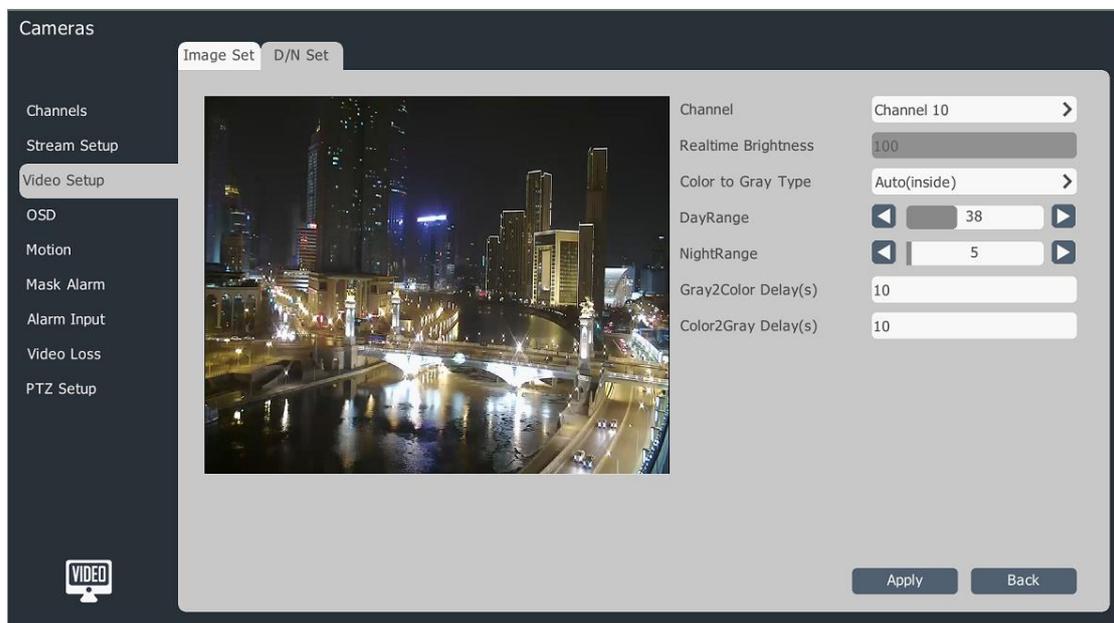


Note: Day time and night time can be set ranging from 00:00~ 23:59, and night time must be later than day time.

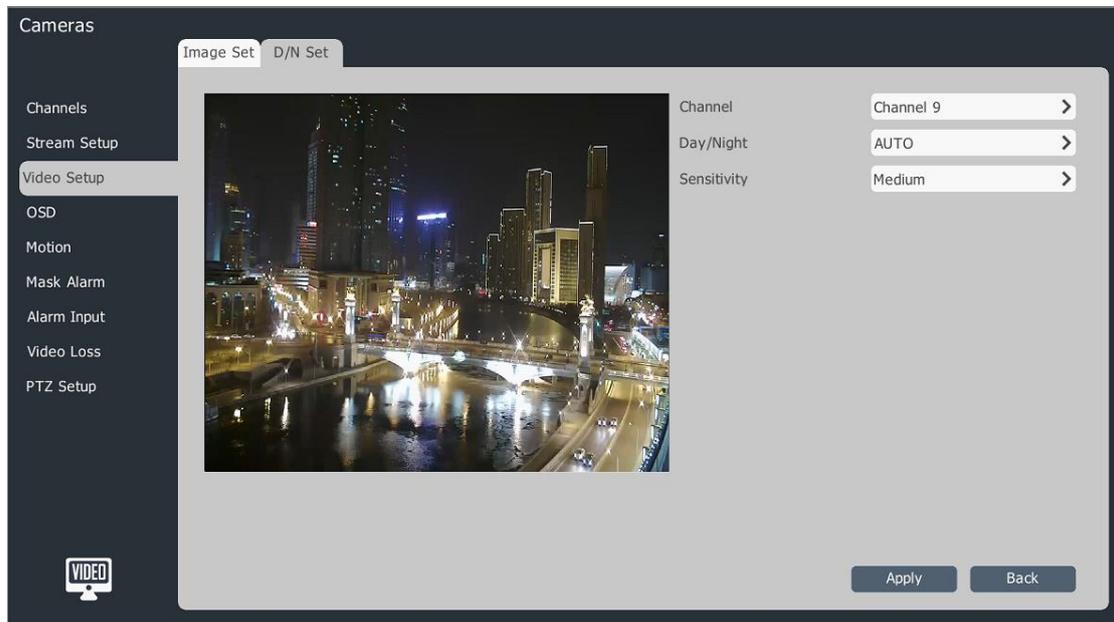
4 Exter-sync mode page is as below



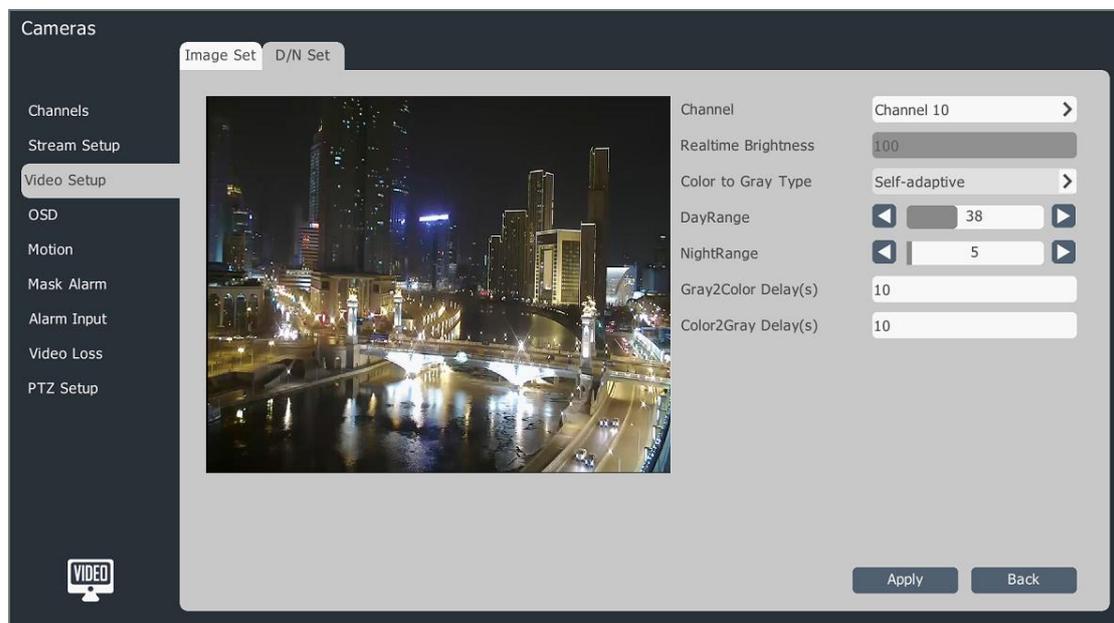
5 Inter-sync mode page is as below



6 Day/Night mode page is as below

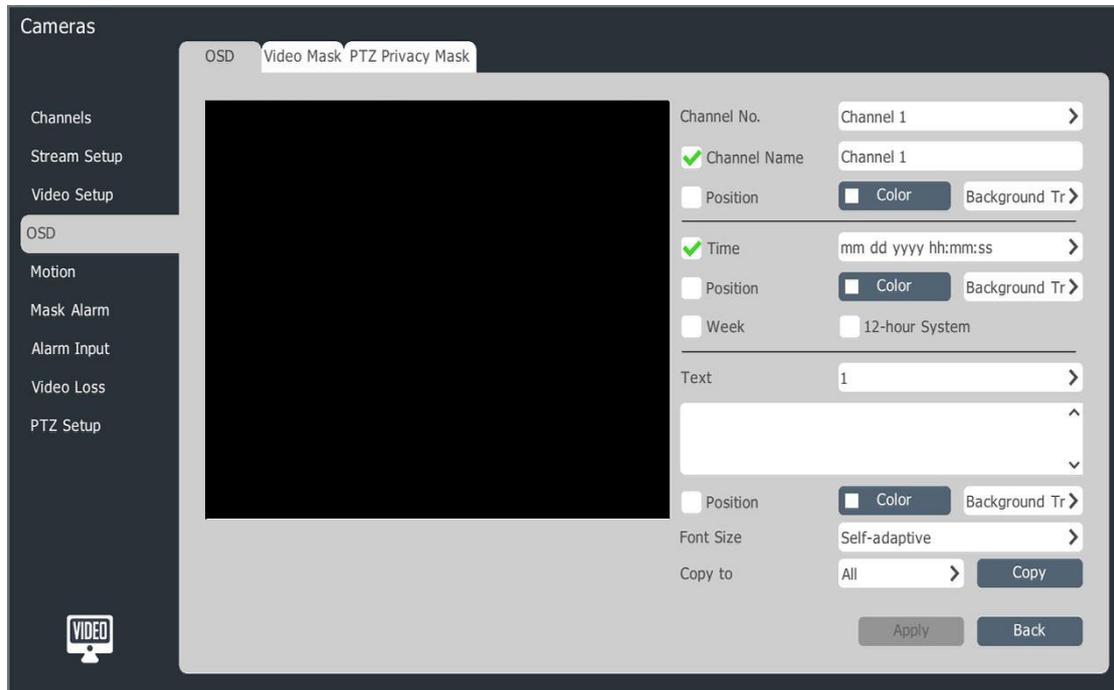


7 Self-adaption mode page is as below



### 4.3.9 OSD

#### 1. Select main menu-cameras-OSD



### OSD

#### 1. Select channel

#### 2. Setup OSD for this channel

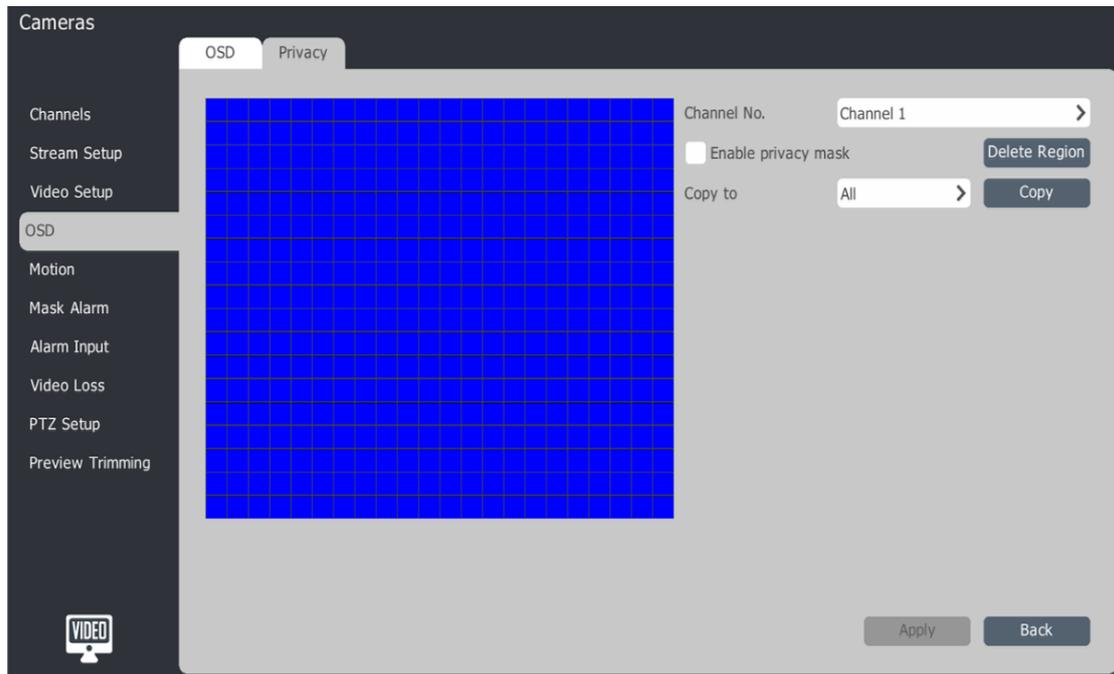
If want to change OSD position, drive OSD directly.



#### Note:

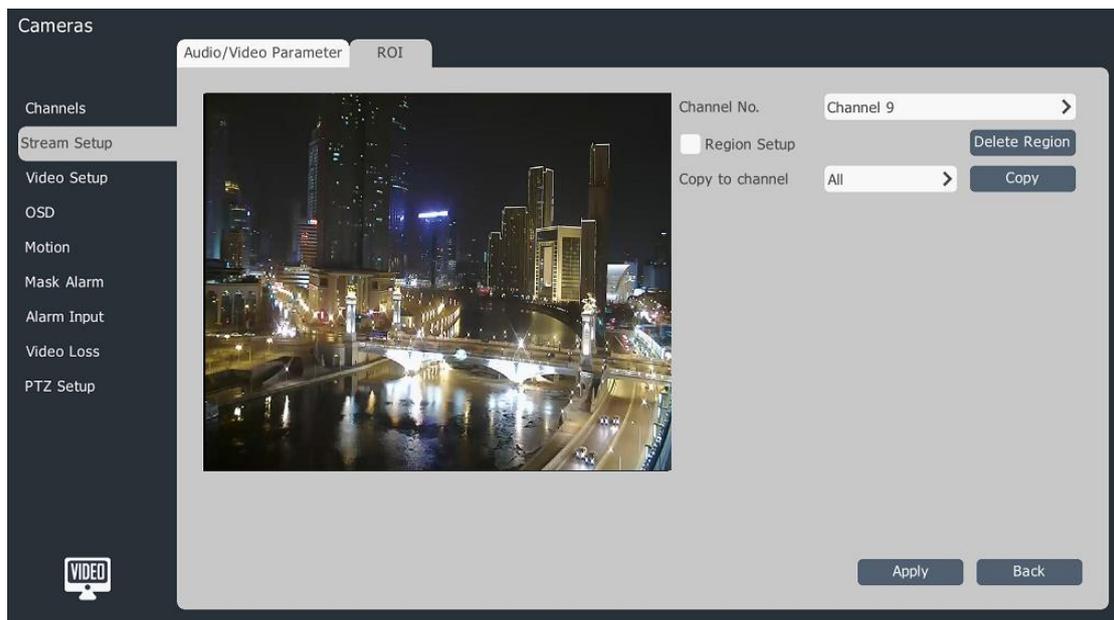
- OSD setup include name, date, week, 12 hours system, date format, time format, OSE color and background color.

## Privacy



1. Select channel.
2. Drive mouse and setup privacy section.

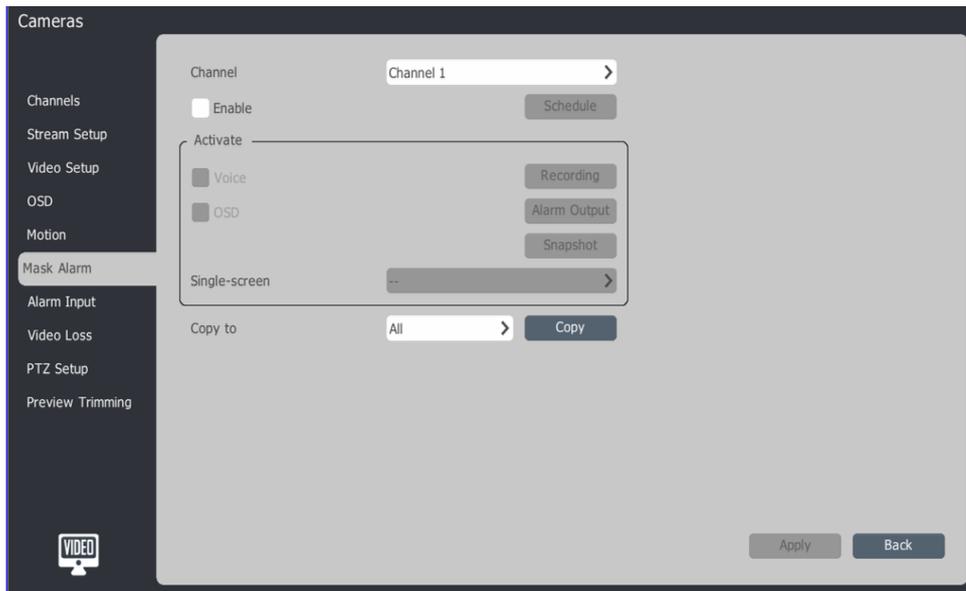
## Dynamic privacy mask



- 
1. Select target channel.
  2. Control PTZ to the location where you want to mask.
  3. Drag mouse to draw privacy mask area and click "add area".
  4. The added area is on the right list, and click "delete area" if you want to delete it.

#### 4.3.10 Mask Alarm

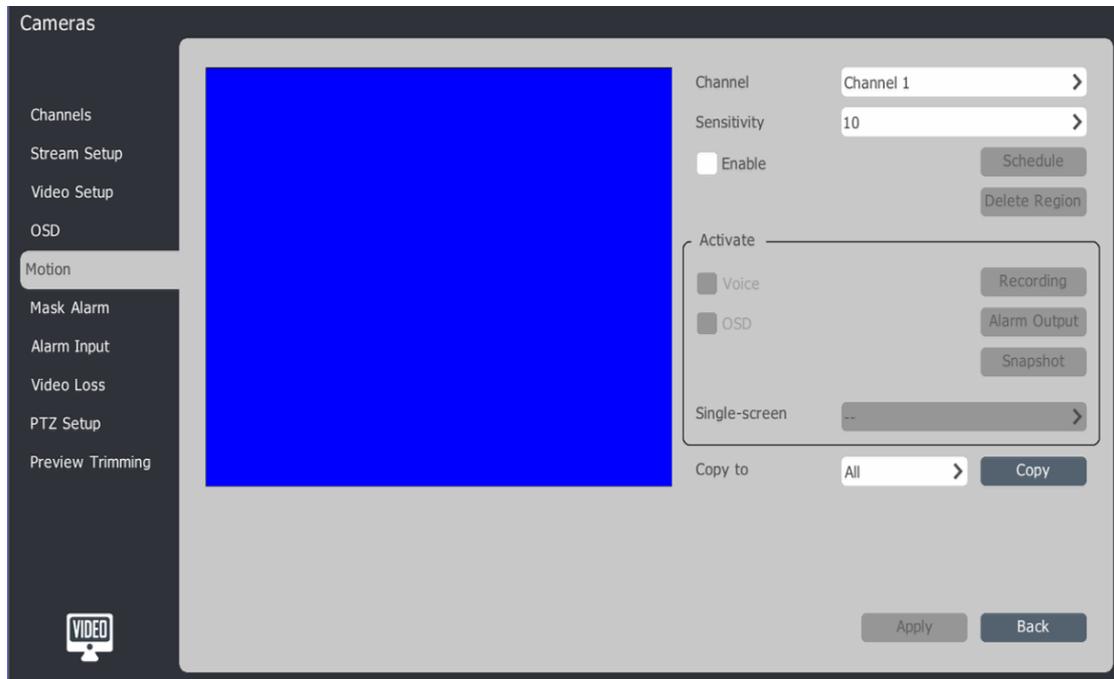
1. Select main menu-cameras-mask alarm



2. Select channel
3. Select enable
4. Click schedule and setup time.
5. Select activate, when the alarm occurs, it can trigger voice prompt, screen display, record, alarm output, capture and single picture.
6. Parameter can copy to other channel and clicks apply to save setup.

### 4.3.11 Motion

1. Select main menu-cameras-motion



2. Select channel

3. Setup motion schedule time, region and sensitivity.

1) Click enable

2) Click schedule and setup schedule time.

3) Drive mouse and draw region.

4) Edit the sensitivity. The smaller the value of the sensitivity and motion detecting more sensitive

4. Select active and setup motion alarm.

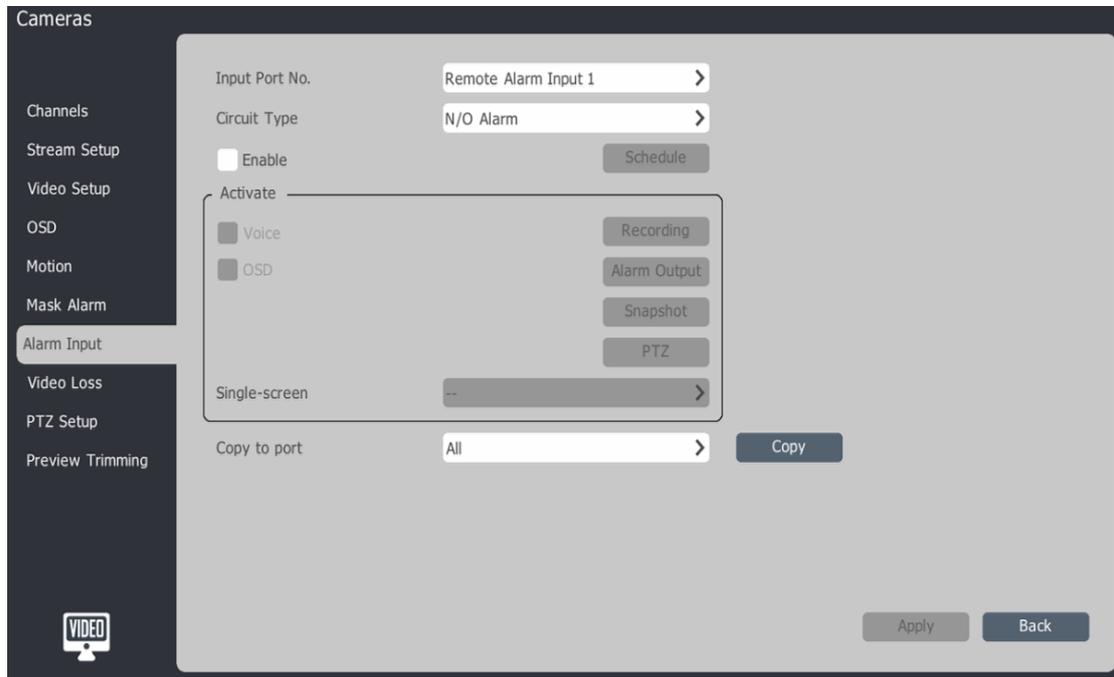
1) It can trigger voice prompt, screen display, record, alarm output, capture and single picture.

2) Parameter can copy to other channel

5. Click apply to save parameter.

### 4.3.12 Alarm Input

1. Select main menu-cameras-alarm input



2. Select port

3. Select alarm type

4. Select enable, click schedule and setup alarm input schedule time.

5. Select active and setup alarm trigger

1) It can trigger voice prompt, screen display, record, alarm output, capture and single picture.

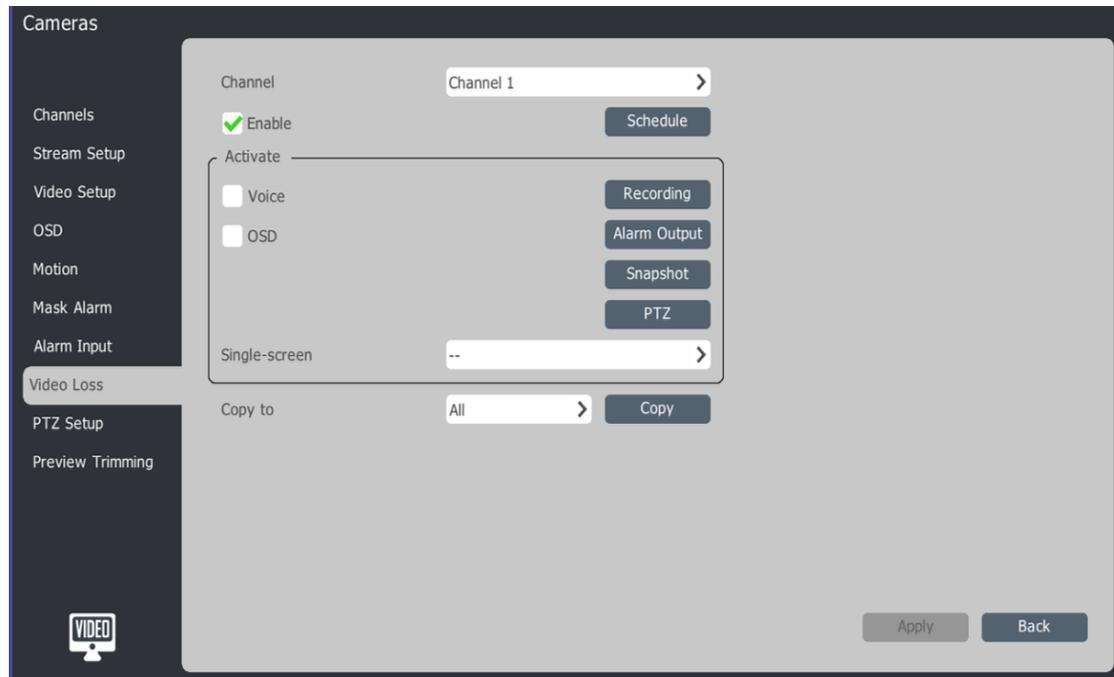
2) Parameter can copy to other channel

6. Click apply to save parameter.

---

### 4.3.13 Video Loss

1. Select main menu-cameras-video loss



2. Select channel

3. Select enable and click schedule then setup alarm input schedule time.

4. Select activate and setup alarm trigger

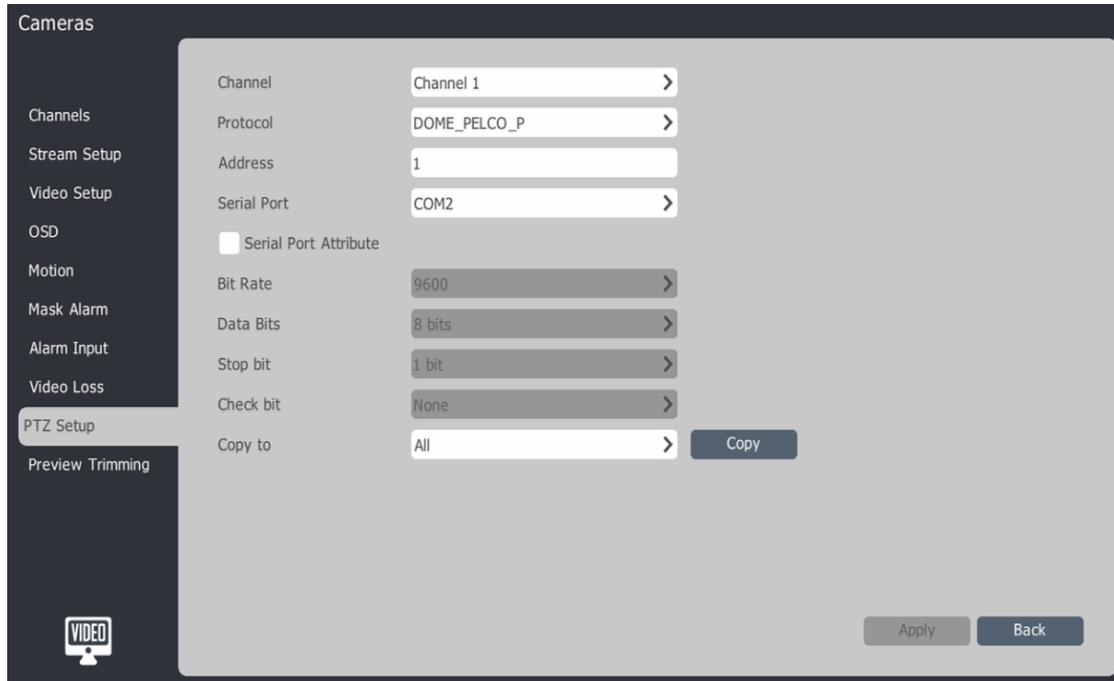
1) It can trigger voice prompt, screen display, record, alarm output, capture and single picture.

2) Parameter can copy to other channel

5. Click apply to save parameter.

### 4.3.14 PTZ Setup

1. Select main menu-cameras-PTZ Setup



The screenshot shows the 'Cameras' configuration page with the 'PTZ Setup' option selected in the left sidebar. The main configuration area contains the following settings:

Channel	Channel 1
Protocol	DOME_PELCO_P
Address	1
Serial Port	COM2
<input type="checkbox"/> Serial Port Attribute	
Bit Rate	9600
Data Bits	8 bits
Stop bit	1 bit
Check bit	None
Copy to	All

Buttons for 'Copy', 'Apply', and 'Back' are visible at the bottom of the configuration area.

2. Select channel

3. Select PTZ control protocol, address and port.

4. Click apply to save parameter.



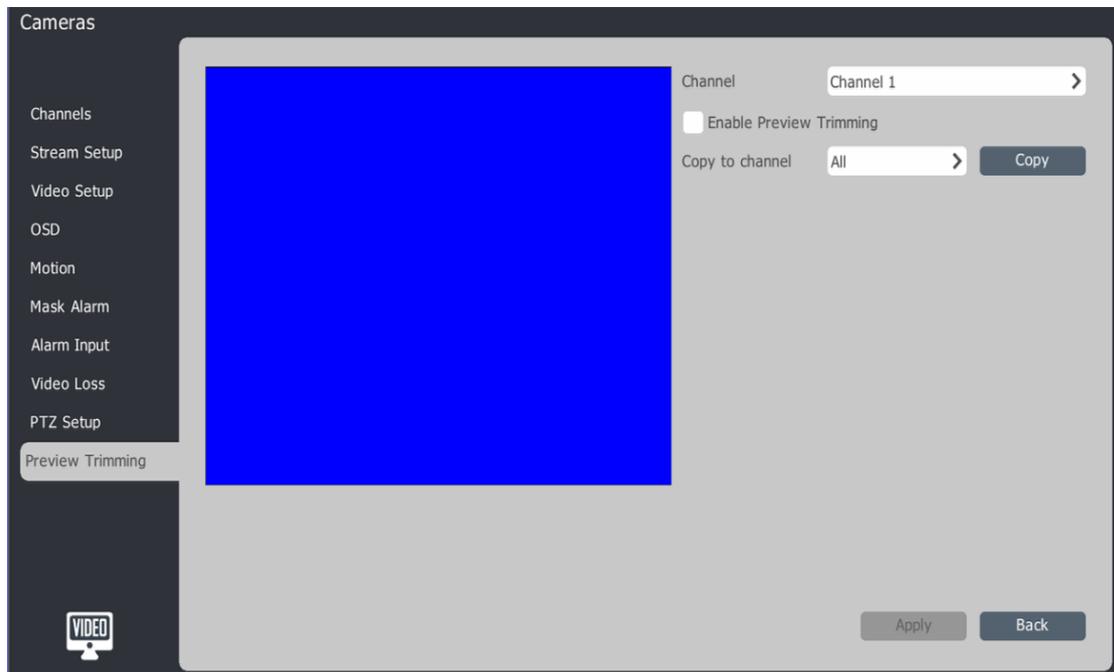
#### Note:

Users can customize a serial port attributes, set the baud rate of serial port, data bits, stop bits, parity and then copy to other channel.

---

### 4.3.15 Preview Trimming

#### 1. Select-cameras-preview trimming



#### 2. Select channel

#### 3. Select enable preview trimming, and then copy to other channel.

#### 4. Click apply to save parameter.

---

## 4.4 Preview

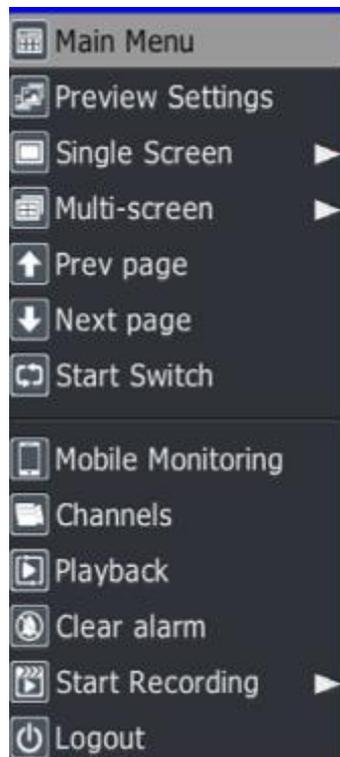
### 4.4.1 Preview

Icon	Description
	Alarm(motion detection alarm, video privacy alarm, port alarm, video loss alarm and IVS alarm)
	Record( timing, manual)
	This channel is on recording and has alarm at the same time.

### 4.4.2 Menu

In preview, it can do switch preview screen, preview setup, cameras, playback and enable record.

#### MENU



---

**Description:**

Name	Description
Main menu	Entry main menu
Preview settings	Entry preview settings screen
Single screen	Select channel and switch single screen
Multi-screen	Change preview mode
Prev page	Switch prev page
Next page	Switch next page
Start switch	According to the preview Settings constantly switching the next screen, it will switch to final screen again from the first screen
Mobile monitoring	Download mobile monitoring software and ID
Channels	Entry to channel
Playback	Entry to playback
Clear alarm	Clear all alarm
Start recording	Enable whole day timing and motion record for all channels
Supplementary port	Switch to supplementary port
Logout	Logout, refresh and restart system.

**Note:**

- If need to use the "start" switch operation, please set "cruise" in the preview set in advance
- It support mobile monitoring software for IOS and Android

- NVR (16-ch 8HDD& 32-ch 8HDD) have advocate complementary mouth set, the rest of the models and auxiliary.

Description of supplementary port

<b>Name</b>	<b>Description</b>
Preview settings	Entry preview settings screen
Single screen	Select channel and switch single screen
Multi-screen	Change preview mode
Prev page	Switch prev page
Next page	Switch next page
Start switch	According to the preview Settings constantly switching the next screen, it will switch to final screen again from the first screen
Main port	Switch to main port from supplementary port
Set to main port	Set the supplementary port to main port

### **Single screen**

The current screen changes to a specified channel. In the "single screen" menu, select a particular channel

### **Multi-screen**

Change display mode, system support 1/4/6/8/9/16/25/32.



#### **Note:**

- NVR (16-ch 8HDD, 32-ch 8 HDD) support 25 or 32 screen, and another same output will be forced to single screen display

---

## **Scroll**

Click prev page switch to prec screen and next page switch to next screen.

## **Single Screen**

Right click "single screen" menu and select a channel.

## **Mutilpul Secreen**

Select multiple screen preview 1/4/6/8/9/10/13/16/20A/20B/25/32

/36/64



## **Description**

VGA1/HDMI1 support up to 64-split screen, except 20ch NVR.

VGA2/HDMI2 support up to 32-split screen.

## **Page Up/Down**

Click Page up to go to previous page, and click page down to go to next page.

## **Start/Stop Switch**

Click "Start" to start switch the screen in the queue, and click "stop" to stop it.

### 4.4.3 Super menu description

Mouse sliding into a display on the right side, a super task bar which can be enter the main menu by one key, including video playback, video Settings, preview Settings, PTZ control are fixed for the first four, the remaining ICONS according to click update frequency

ICON	MEBU
	playback
	Record settings
	Preview settings
	PTZ control
	channels
	Systems settings
	backup
	Alarm settings
	IVA
	User management



### 4.4.4 Preview operation

1. In preview, select channel and then will display shortcut bar.



2.The shortcut bar support PTZ control, instant playback, manual capture, manual record, E-zoom, intercom and edit channel information.

Button	Description
	PTZ control
	PTZ control: up, down, left, right and cruise
	<b>OSD overlay</b>
	Instant playback
	manual capture
	start/stop manual record
	E-zoom
	start/stop intercom
	check/edit channel information
	check decoder parameter

### Instant playback

It will playback 5 mins record

### E-zoom

1.Click 



2. Use the mouse to choose magnified area, that is, to enlarge the red areas
3. Mouse wheel can zoom in and out red box area, move or choose a new red box area, can switch to the need enlarge the area.



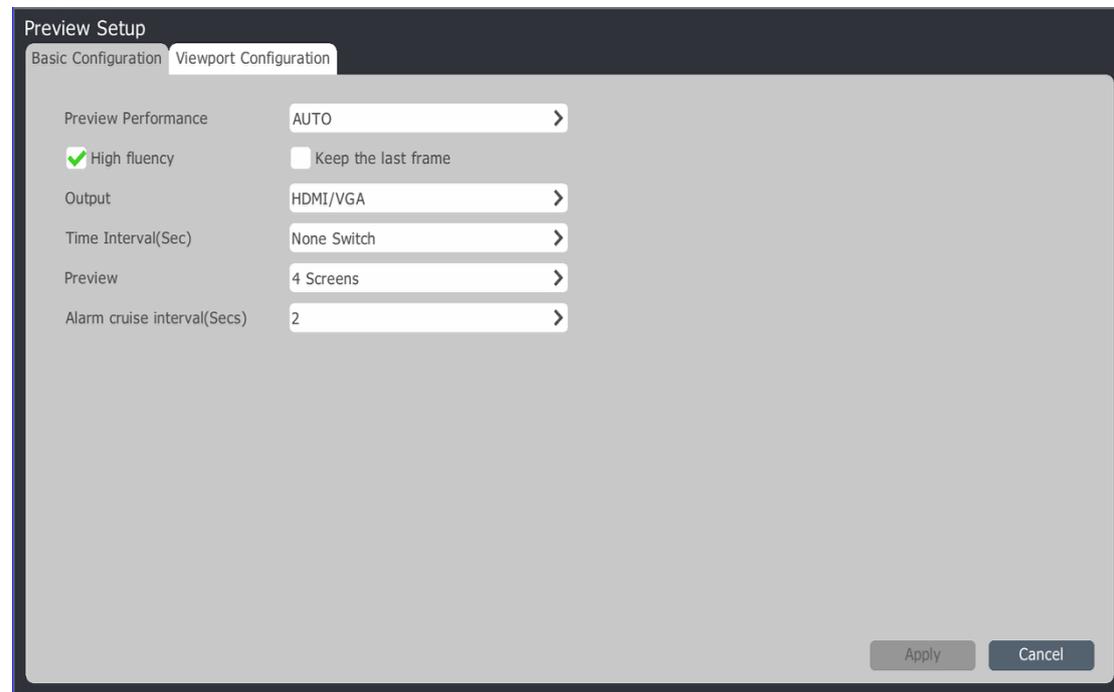
**Note:**

- NVR (4-ch 1HDD, 4-ch 2HDD, 8-ch 2HDD) can zoom in to 8 times, other models can up to 16 times.

---

## 4.4.5 Preview parameter setup

1. In preview, select preview settings

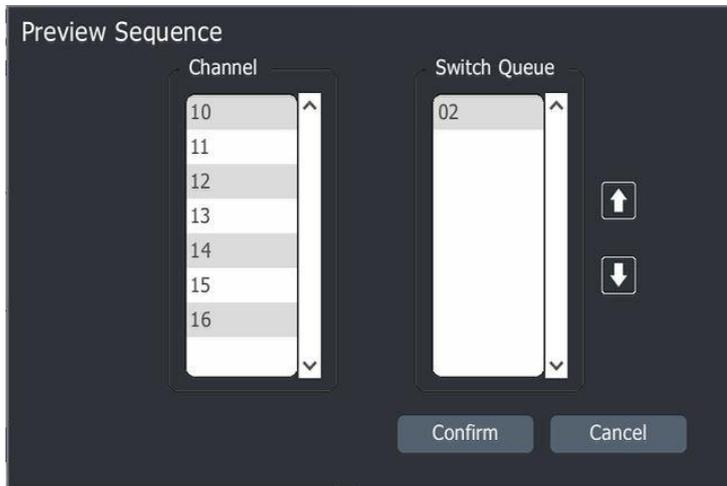


2. preview settings

- Preview: System default option "auto", that is, starts to preview video by sub stream. The best image quality: in order to ensure the preview effect, all channels use main stream for preview. Preview the biggest performance: the system based on the current preview performance adjustment of main stream
- Output: Select video output: HDMI2/BNC.VGA/HDMI.VC
- Cruise intervals: Set the preview automatic switch time, that is no cruise, 2s, 3s, 5s, 10s, 15s, 30s and 60s.
- Alarm cruise interval: set time interval of single screen alarm linkage, there are 2s, 3s, 5s, 10s and 15s for option.
- Retain the last frame: after the camera off line, the preview will stay on the last frame. Otherwise it will display "No Video"
- High flow: select high flow, NVR device will be according to the network conditions to ensure the fluency.
- Set preview sequence

---

1)Click preview channel



2)Double click channel number in channel and switch channel to add and remove preview queue

- Auto configuration

Click on the "automatic configuration" button, the system will automatically distribute video input channel in every display in turn. Four images showed automatic configuration, for example, the system automatically distribute channel 1, 5, 9, 13 to the first picture; Channel 2, 6, 10, 14 are assigned to the second picture; Channel 3, 7, 11, 15 assigned to the third picture; Channel 4, 8, 12, 16 are assigned to the fourth picture



**Note:**

- NVR (16-ch 8HDD, 32-ch 8HDD) have HDMI2/BNC.VGA/HDMI1
- Only the last one channel can be set to synthesis of virtual channel, suggested that VC (virtual synthesis channel) does not exceed the "preview mode" setting of "nine" picture. Otherwise it may cause equipment with low frame
- When the main stream to switch to the sub stream in preview biggest performance, UI will appear the phenomenon of no sound at this time. With limited by equipment performance, when the access codes flow reaches on limit it cannot continue to connect other stream

---

#### 4.4.6 Preview information

##### Decoding performance limited

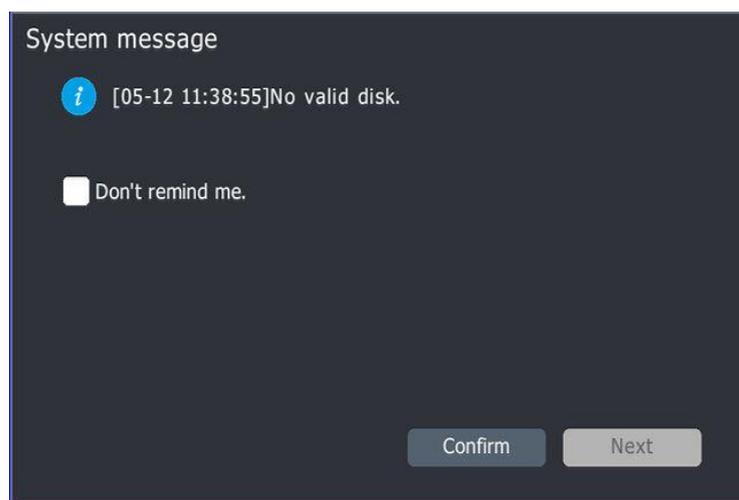
When the decoding performance reach the limit, it will display "decoding performance reached upper limit, please manually disable parts of channel".

Whether enable the prompt can be option, as shown in the system Settings - > display Settings. The default is disable.

##### System abnormal information

Enable system settings-system information-abnormal and it occurs abnormal event

 will display in the right corner. Then double click  it will open system notice screen.



##### Note:

The user can choose not display prompt information, or click "next" to see the message

#### 4.4.7 Audio preview and intercom

##### Audio preview

Select one video with mouse or remote control, system will play audio automatically.

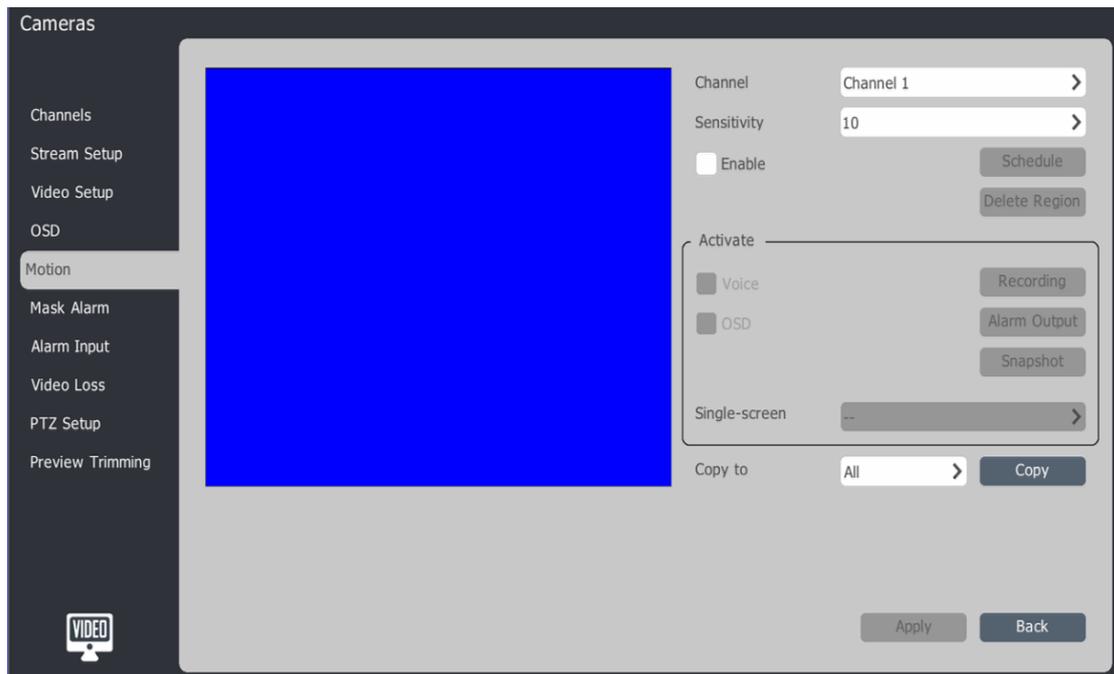
---

## Intercom

Users can use voice intercom equipment interface to realize intercom between remote control and and equipment. Before intercom, please connect the pick-up and speakers

### 4.4.8 One key back to preview

In parameter configuration, click  can back to preview screen.



## 4.5 PTZ control

### 4.5.1 PTZ parameter setting



#### Tips:

- Before the PTZ control, please confirm the network connected between the PTZ decoder and the NVR and have the PTZ decoder parameters configuration in device.
- IPC serial port parameter Settings see 4.3.14 section.
- NVR local serial port parameters Settings see system setup instructions.

---

#### 4.5.2 PTZ control

1. Enter the preview mode, double click mouse to choose targeted channel .Then enter fullscreen and right click the mouse choose "control panel" ,and pop-up window PTZ control interface as below.



2. Choose channel.
3. PTZ control description:

1) **PTZ Control:**Use mouse to click  to control PTZ going up, down, left and right. Use mouse to click  to control PTZ going inclined direction. Click  to start or stop PTZ take auto horizontal action.

2) **Lenz control:** Click  at left side of "aperture "to shut down aperture ,click  at the right to open aperture. Click  at the at the left of "focus" to focus objectives at distance and click  at right side to focus close objects. Click  at left side of "zoom" to zoom out and click  to zoom in .

#### 3) Speed setting

Scroll up and down the mouse to change rotate speed, or the user may click  or  to turn down or up the value. The more value you turn, the faster the PTZ rotates. The default value is 12.

---

4) Click  to set one-key-focus (for camera with motorized lens), and click  open 3D position function.

5) Click  or  to fold down or up control menu at the right. Please see right menu page as below.

#### **4.5.3 Preset, Cruise and path setting and call**

##### **Prest settig and call**

1. Call preset: Select the preset position number in the "Preset" drop-down list, or input the preset no. and click "call" to transfer the selected preset position.
2. Preset setting:Control the PTZ to a particular location, and select the preset number in preset drop-down list, or directly enter the preset number, click "Settings" to complete preset position setting of this number.

##### **Recording and demonstration track**

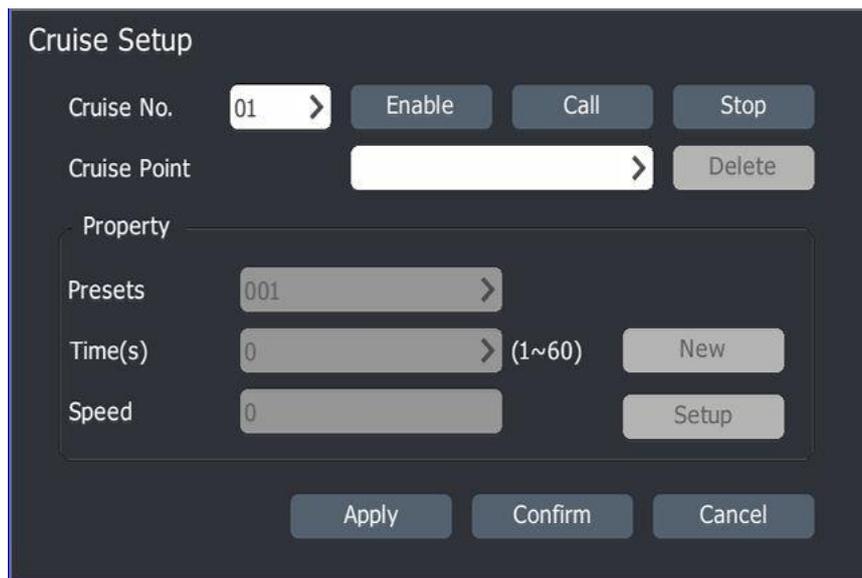
Click "began track", the icon's message becomes "end track", the system enters into the track recording status. The system will automatically record all operations taken by the user before "end track" is clicked. When the user presses the "end track", track recording operation is complete and the system automatically exits track recording status. The user can click on the "demo track" to show track just recorded.

##### **Light ,wiper and auxiliary switch setting**

Check the "Light" option box to turn on light of corresponding device of selected channel and shut down light if cancel it . "Aux" option box is checked to open the channel corresponding auxiliary switch, and to close auxiliary switch if selection is cancelled. By using the left mouse button and hold down the "wiper" button, the wipers start action corresponding to the channel, and to stop it if loosen the button.

##### **Cruise path setting**

1. Click "Cruiser Setup" to enter into cruise setting interface



2. Cruise path description:

**1) Cruiser path information browser:**

Select cruiser number in "Cruise No." drop-down list. when select a certain cruise point the system will automatically display the preset position corresponding to the point of the cruise and the preset position dwell time and call speed.

**2) Editing the cruising path:**

Select targeted path number in "path number" drop-down list, if the path is disabled at this time, press the "Enable" button to enable the cruise path. Select targeted preset number in "preset " drop-down list, enter the time and speed, then click the "Add" button, the preset position is added to the cruise point list of consecutive path. When select a certain cruise point in the "cruise point" list and click "delete" button to remove this cruise point from the list. When select a certain cruise point and select a preset position from the preset drop-down list, then input speed and time and click "Setup" button to modify the configuration information of the selected cruise point.

**3) Enable / Disable the cruise path:**

Select cruise path number in "Cruise No." list, and users can enable and disable this cruise.

**4) Call / Stop cruiser path:**

---

when click "call" button the device will cruise according to preset path. When click stop it will stop current cruising status.

### 5)Quit cruise path setting interface

When click "Apply" button, all path editing operations taken after enter into the cruise path interface will be saved in the system at the same time quit path setting interface. When click "cancel" button the system will automatically neglect all editing operations and quit path setting interface.

### 6)3D positioning

By using 3D positioning function, the user can use the mouse to select any area in the screen, the system will automatically control the PTZ operation to realize scenes zoom functions (zoom in drawn from left to right and zoom out drawn from right to left) .

#### 4.5.4 PTZ control by USB keyboard

1. Under the preview mode, press **【↑】** **【↓】** to select the control channel .Press **【P】** ,the selected channel will show in the system single picture. On the top right corner of screen shows "PTZ ChnXX"to prompt user the system is under which channel PTZ controlling now.

2. PTZ control operation

PTZ control: under the PTZ control mode, press**【↑】****【↓】****【←】****【→】**to control direction action. When press **【OK】** the PTZ to start auto running at pan range. Press **【OK】** again the PTZ would stop auto running at pan range.

- Lenz control: under the PTZ control mode, press **【I】** or **【G】** to open the aperture. Press **【Ctrl+I】**or**【Ctrl+G】** to close the aperture. Press" **【Z】** or **【B】** for zoom in,press **【Ctrl+Z】** or **【Ctrl+B】** for zoom out. Press **【F】** or **【J】** to focus objectives at distance, Press **【Ctrl+F】** or **【Ctrl+J】** for close focus.
- Call preset: under the PTZ control mode, press **【backspace】** and **【number】** and then **【OK】** , the system will take action of call preset accordingly.
- Speed setting: under the PTZ control mode, press number keys **【1】** ~ **【4】** to set speed of PTZ action.
- Control PTZ light, wiper and auxiliary switch: when in the PTZ control mode, press **【W】** or **【Y】** to start wiper, and loosen it to stop wiper. Press **【A】** to open

---

auxiliary switch and when press **【A】** again to shut down auxiliary switch. Press **【L】** or **【D】** to turn on light and when press again to shut down light.

- Quit PTZ control mode : under the PTZ control mode, click **【backspace】** , return preview mode.

## 4.6 Record

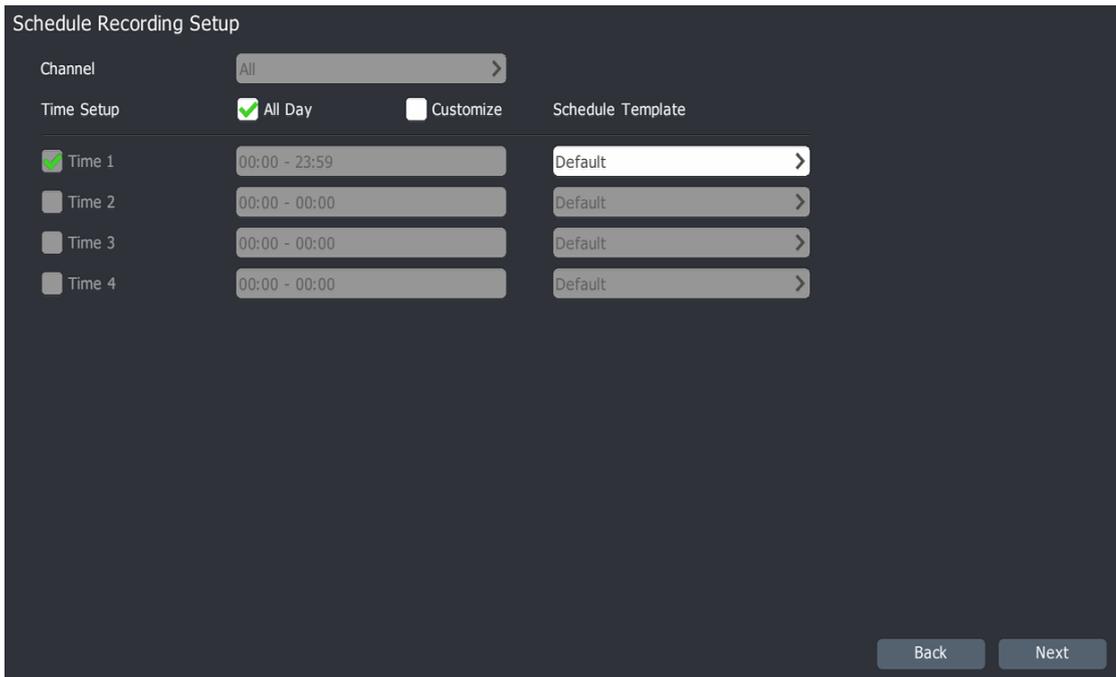
### 4.6.1 Quick Guide

Enter [Main Men] —>[ Quick Guide] can configure the four kinds of schedule recording, motion detecting, video port alarm and intelligent video analysis recording conveniently. Refer the figure below.

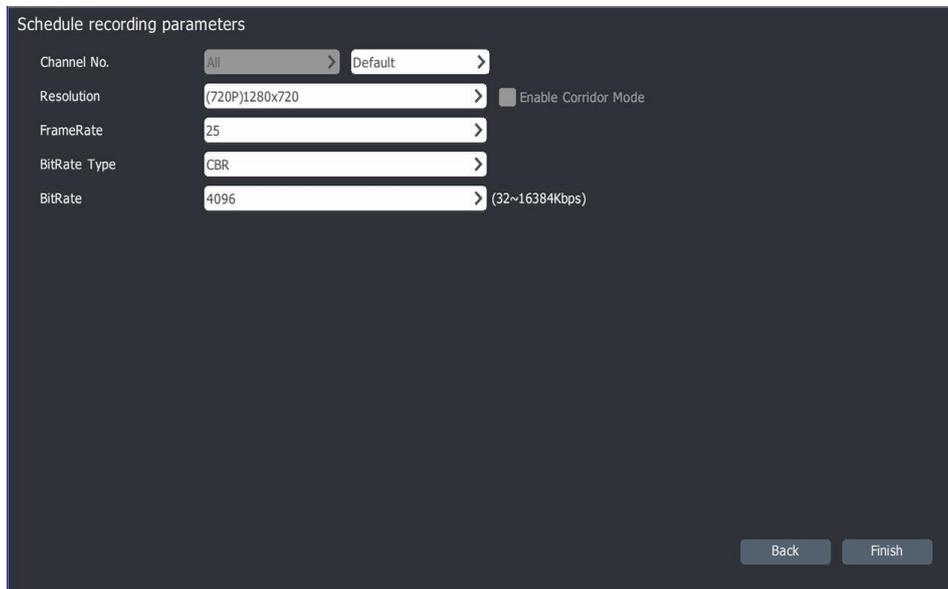


#### 1. Schedule Recording setup

1) Choose[Main Menu]->[Quick Guide]->[Record ],enter [Schedule Recording Setup] as below.



2) It will be used for all channels' schedule time under "Schedule Recording setup" interface. Click [ Next ] enter the interface of [Schedule Recording parameters].

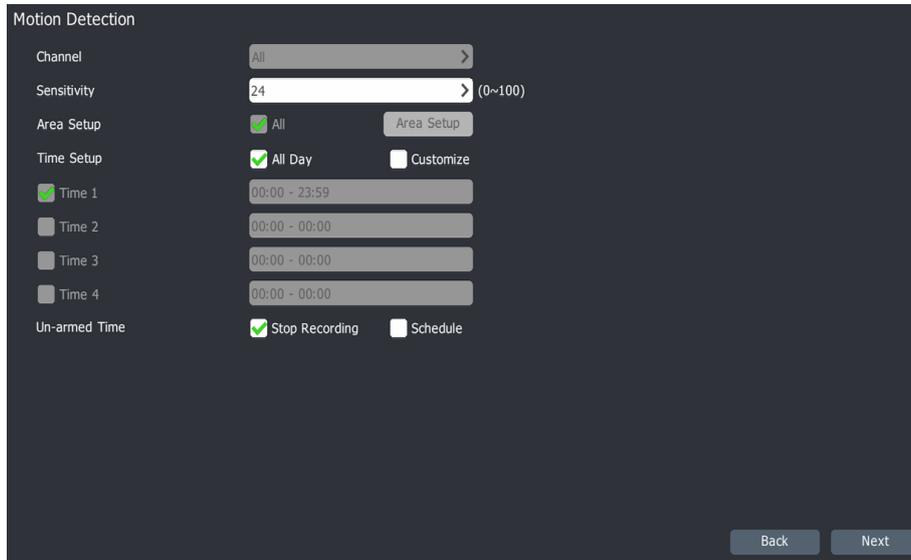


3) Under this page to enable the "Schedule Recording", these parameters will be used for all channels.

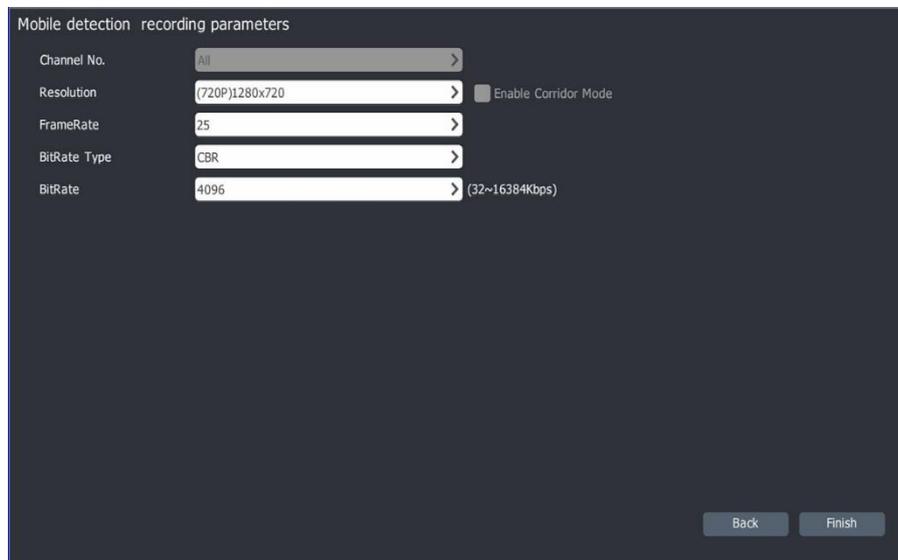
4) Click[Finish], save the configuration.

## 2. Motion Detection Recording setup

1) Choose [Main Menu]->[Quick Guide]->[Motion],enter the window as below.



2) Under "Motion Detection", here can set all channels of motion detecting alarm sensitivity, time period and the un-armed time operation. The motion detecting region defaults to the whole region. Click **【next】** into the [motion detecting video parameter] setting.

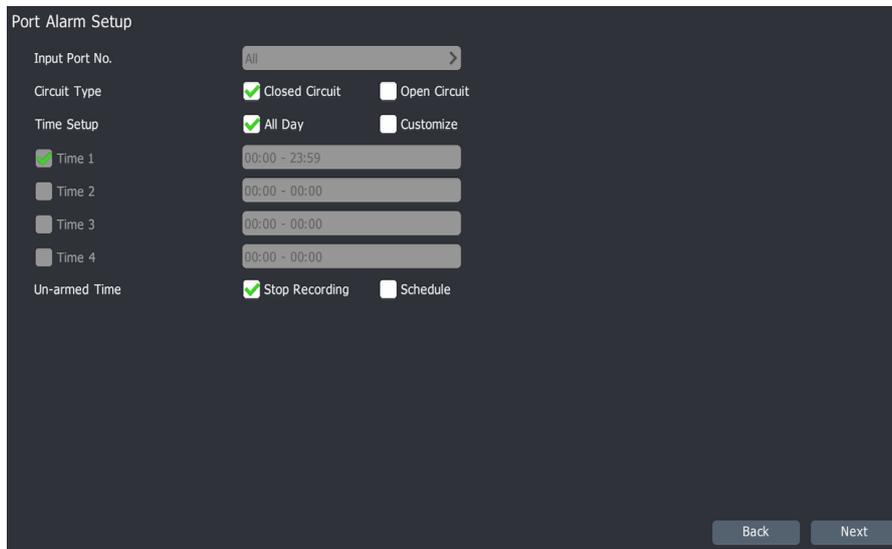


3) Enable "Mobile detection recording parameters", it will be used for all channels.

4) Click[Finish], save the configuration.

### 3. Port Alarm Recording Setup

1) Choose [Main Menu]->[Quick Guide]->[Port alarm],enter the window as below.

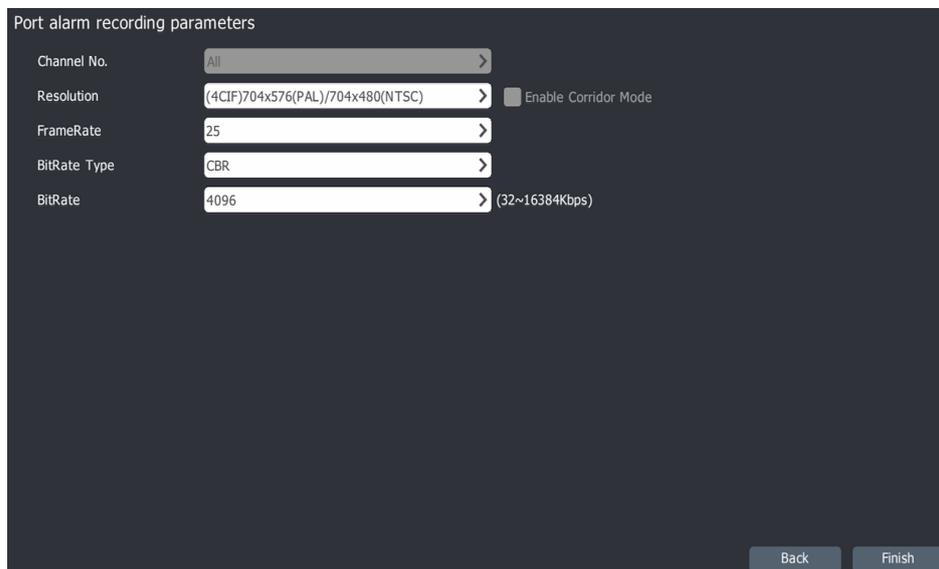


The screenshot shows the 'Port Alarm Setup' interface. It includes the following settings:

- Input Port No.: All
- Circuit Type:  Closed Circuit,  Open Circuit
- Time Setup:  All Day,  Customize
- Time 1:  00:00 - 23:59
- Time 2:  00:00 - 00:00
- Time 3:  00:00 - 00:00
- Time 4:  00:00 - 00:00
- Un-armed Time:  Stop Recording,  Schedule

Buttons: Back, Next

2)Under the "Port Alarm Setup],users can set alarm circuit type, time period and un-armed time operation. Click [Next] to "Port alarm recording parameters" interface.



The screenshot shows the 'Port alarm recording parameters' interface. It includes the following settings:

- Channel No.: All
- Resolution: (4CIF)704x576(PAL)/704x480(NTSC)  Enable Corridor Mode
- FrameRate: 25
- BitRate Type: CBR
- BitRate: 4096 (32~16384Kbps)

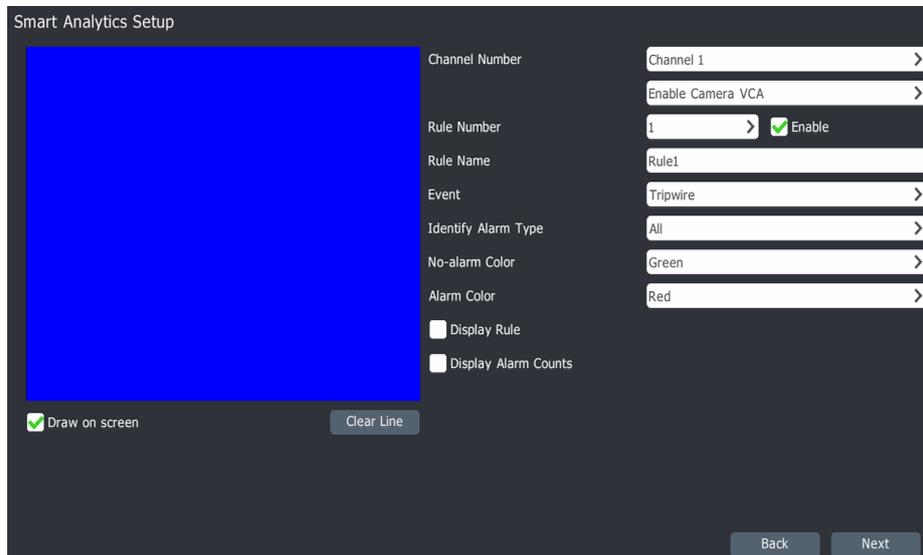
Buttons: Back, Finish

3)Enable "Port alarm recoding parameters" ,it will been used for all channels.

4)Click[Finish], save the configuration.

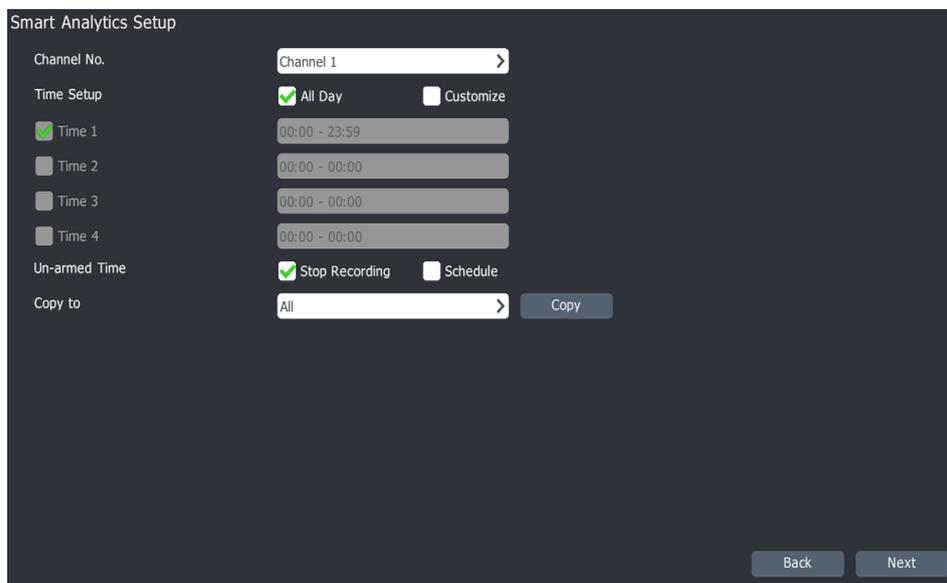
#### 4. Smart Analytics Setup

1) Choose [Main Menu] -> [Quick Guide] -> [VCA ], enter [Smart Analytics Setup] as below.



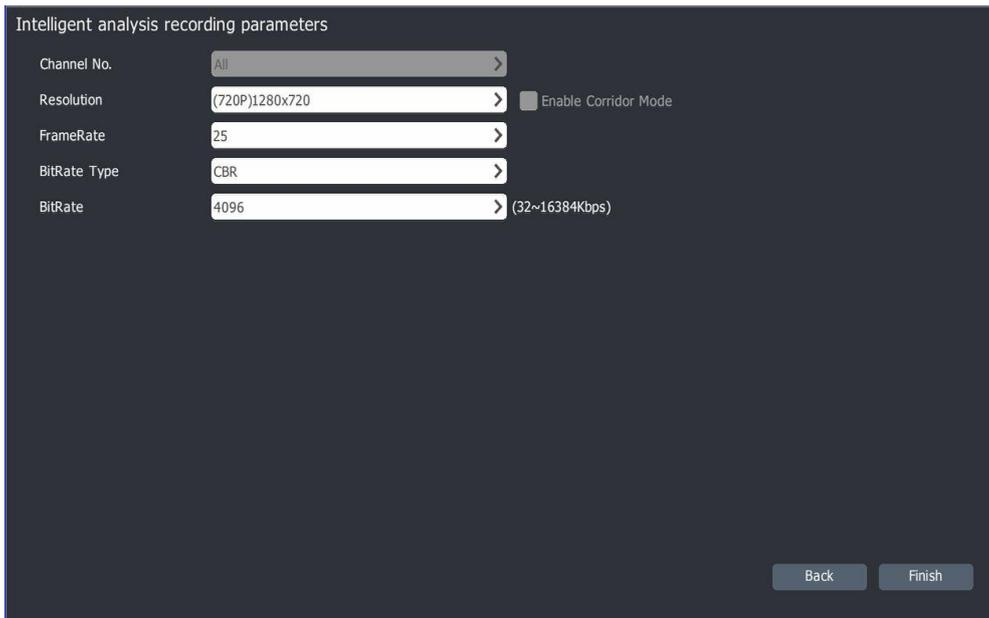
The image shows the 'Smart Analytics Setup' interface. On the left is a large blue rectangular area. To its right are several configuration fields: 'Channel Number' (Channel 1), 'Enable Camera VCA', 'Rule Number' (1) with an 'Enable' checkbox, 'Rule Name' (Rule1), 'Event' (Tripwire), 'Identify Alarm Type' (All), 'No-alarm Color' (Green), and 'Alarm Color' (Red). Below these are two checkboxes: 'Display Rule' and 'Display Alarm Counts'. At the bottom left, there is a 'Draw on screen' checkbox and a 'Clear Line' button. At the bottom right, there are 'Back' and 'Next' buttons.

2) Set the VCA parameters under "Smart Analytics setup", the details configuration please refer the "VCA" chapter. Click [Next] to "Smart Analytics Setup"



The image shows the 'Smart Analytics Setup' interface for time configuration. It includes: 'Channel No.' (Channel 1), 'Time Setup' with 'All Day' checked and 'Customize' unchecked, four time slots (Time 1 to Time 4) with 'Time 1' checked and a time range of 00:00 - 23:59, 'Un-armed Time' with 'Stop Recording' checked and 'Schedule' unchecked, and a 'Copy to' dropdown set to 'All' with a 'Copy' button. 'Back' and 'Next' buttons are at the bottom right.

3) Set the time period of the selected channels and the un-armed time operation under "Smart Analytics Setup". The configuration info. can be copied to other channels. Click [Next] to "Smart Analytics Parameter" interface.

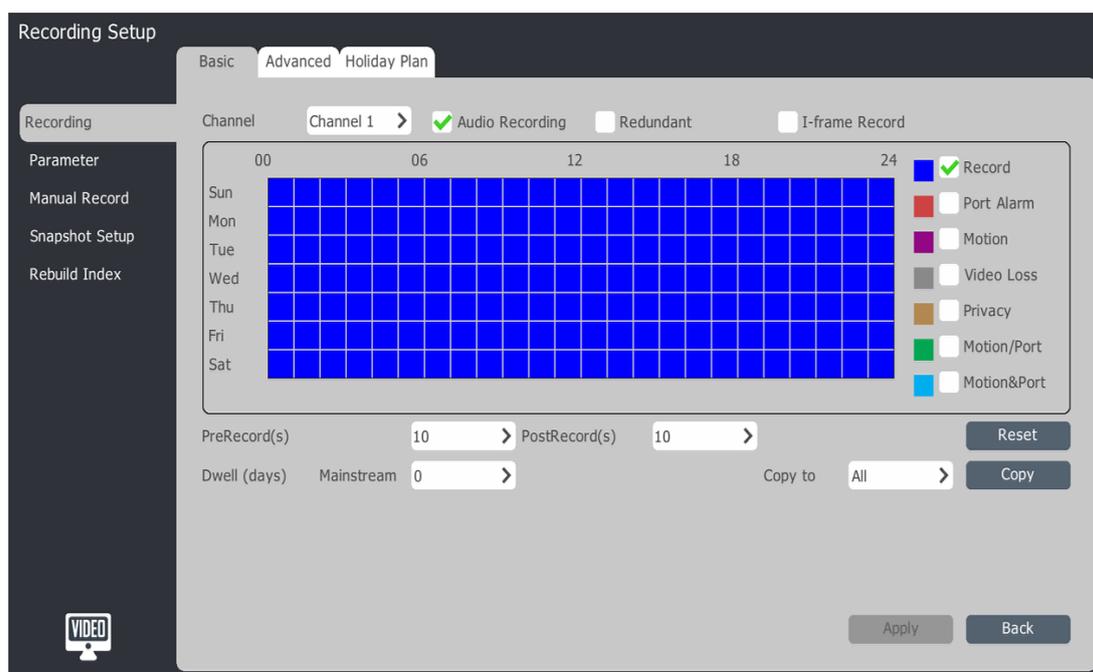


4) Set the "Intelligent analysis recording parameters" , it will be used for all channels. Click [Finish], save the configuration.

#### 4.6.2 Recording Setup

##### Basic Setup

1. Choose [Main Menu]->[Recording Setup]->[Recording]->[Basic ], enter the recording template setup as below.

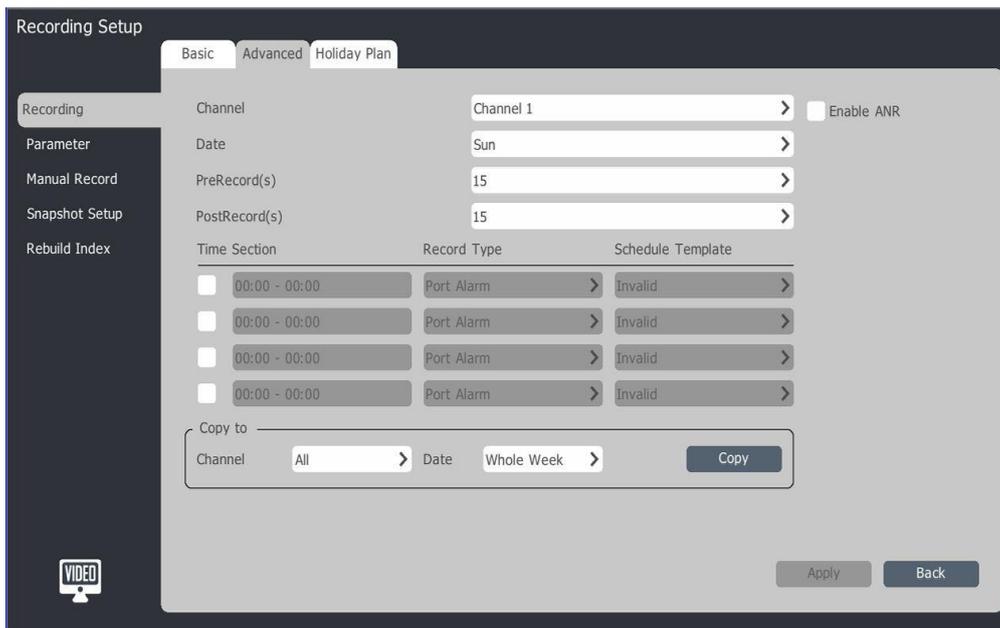


- 
2. Choose the setup channels.
  3. Choose whether to enable record "audio", "redundant" or "I-frame".
    - If not check **【Audio Recording】** , it only save the video data in recording files.
    - If system exit a redundant disk and enable the "Redundant/Snapshot" function, the video and captured image can be saved in video disc and in redundant disk save a copy.
    - Enable the **【I-frame Record】** ,system will draw frame processing on video files. In this way, it can save the memory for the non-key region recording.
  4. Recording Template Setup.

It include "Record (timing recording)", "Port Alarm, Motion", "Video Loss", "Privacy", "Motion/Port", "Motion &Port" seven alarm types.
  5. Hold the left mouse button drag in the area of the period, the recording type will be used for the selected time zone is updated to the video types.
  6. Prerecord and Post record setup
    - Prerecord: if users set "5S",System will save the video 5S before alarm recording automatically
    - Post Record: the post record used for alarm recording, if set it "5S" ,system will save the video until alarm disappear 5S.
    - Pre Record and post record used for the video analysis before and after the alarm.
  7. Dwell (days) setup. "0" means no time limitation, the max video retention time is 60(days).
  8. Click **【Apply】** save the configurations.

### **Advance Setup**

1. Choose [Main Menu]->[Recording Setup]>[Recording]->[Advanced], enter the window as below.

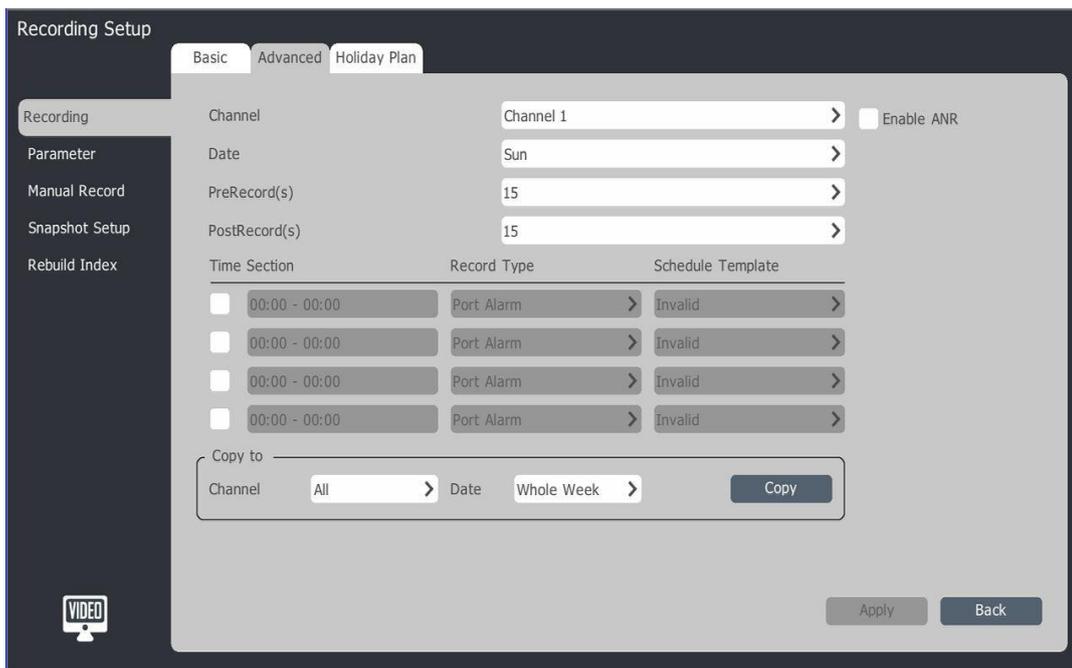


2. Choose the the channels to set.
3. Enable ANR, If enabled, the IPC will automatically start the local video when offline. And it will automatically upload the local video to NVR once online.
4. Prerecord (s), choose the prerecord time in the drop-down list.
5. Post Record (s), select the Post Record time in the drop-down list.
6. Time Section, Set time period and the video types of this period. Check the time option box, make it in the selected state. Enter the start and end time. Select one recording type in the list, can set different recording type for different time periods.
7. Copy recording template. Select "Channel" and "Date", then copy it.
8. Click **【apply】** to save it.

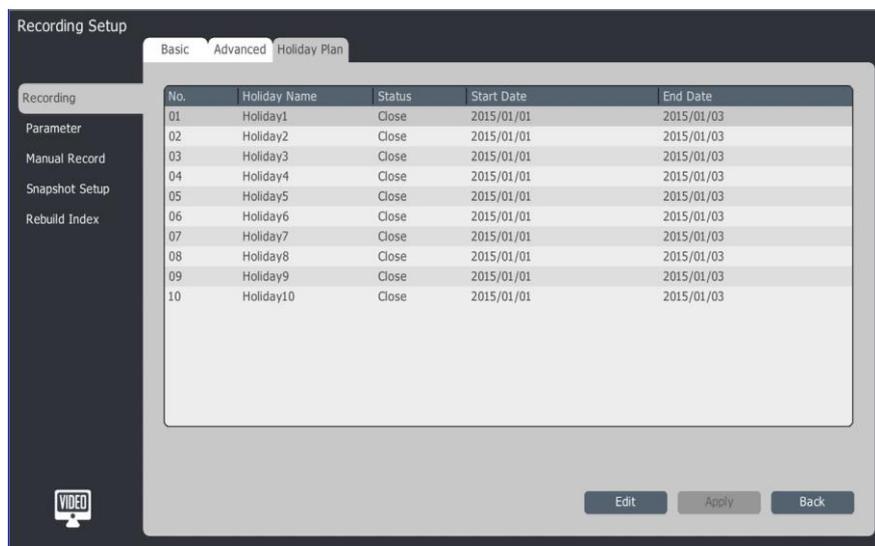
### **Holiday Plan :**

Configure the holiday plan of current year .Once enable ,it will carry out the plan preferential during the holiday.

1. Choose [Main Menu]->[Recording Setup]>[Recoding]->[Holiday Plan ], enter the window as below.



2. Click one of the Holiday plan and press **【Edit】** or double click enter the "Holiday setup" directly.



- 
3. Check **【Enable Holiday Plan】**, select holiday mode “by day”, “by month” or “by week”. Input the holiday start date and end date. Click **【Confirm】** to save.

Holiday Setup

Holiday Name

Enable Holiday Plan

Mode

Start Date

End Date



**Tips :**

- If no Special instructions, Sunday is the first day for week setting.

#### 4.6.3 Recording Parameter

1. Choose [Main Menu]->[Recording Setup]>[Parameter], enter the setting page as below.

Recording Setup

Recording

Parameter

Manual Record

Snapshot Setup

Rebuild Index

Filename Extension

Not Enough Disk Capacity

Overwrite File

Delete Non-alarm Record

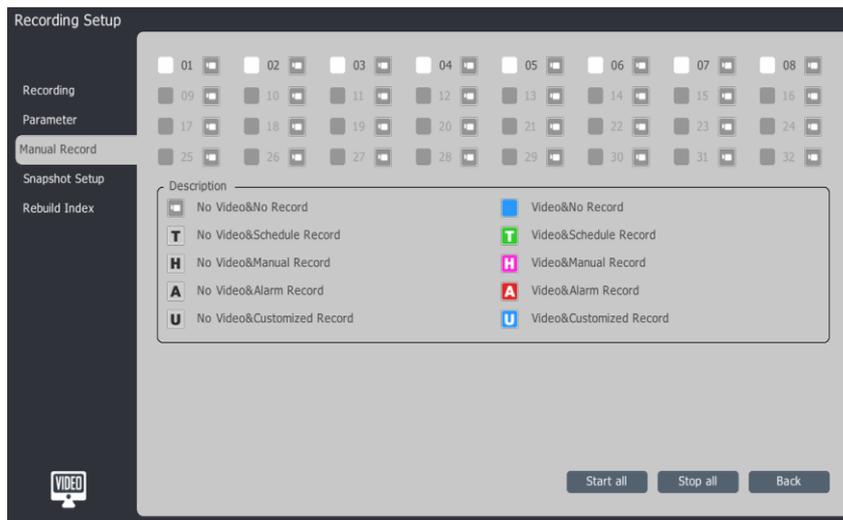
Stop Recording

2. Choose the method when disk capacity not enough , 【Overwrite File】 【Delete Non-Alarm Record】 【Stop Recording】 .

3. Click 【Apply】 to save.

#### 4.6.4 Manual Record

1. Choose [Main Menu]->[Recording Setup]>[Manual Record], enter the setting page as below.



2. Check and Uncheck channels to start or stop the manual record.

3. Click 【Start all】 ,then start all channels manual record.

4. Click 【Stop all】 ,then stop all channels manual record.



**Tips:**

Icon	Status descriptions
	no video, no recording
	have video, no recording
	no video ,under manual recording

	video available and under manual recording
	no video, under schedule recording
	video available and under schedule recording
	no video, under alarm recording
	video available, under alert recording
	no video, under customized recording
	no video, under customized recording

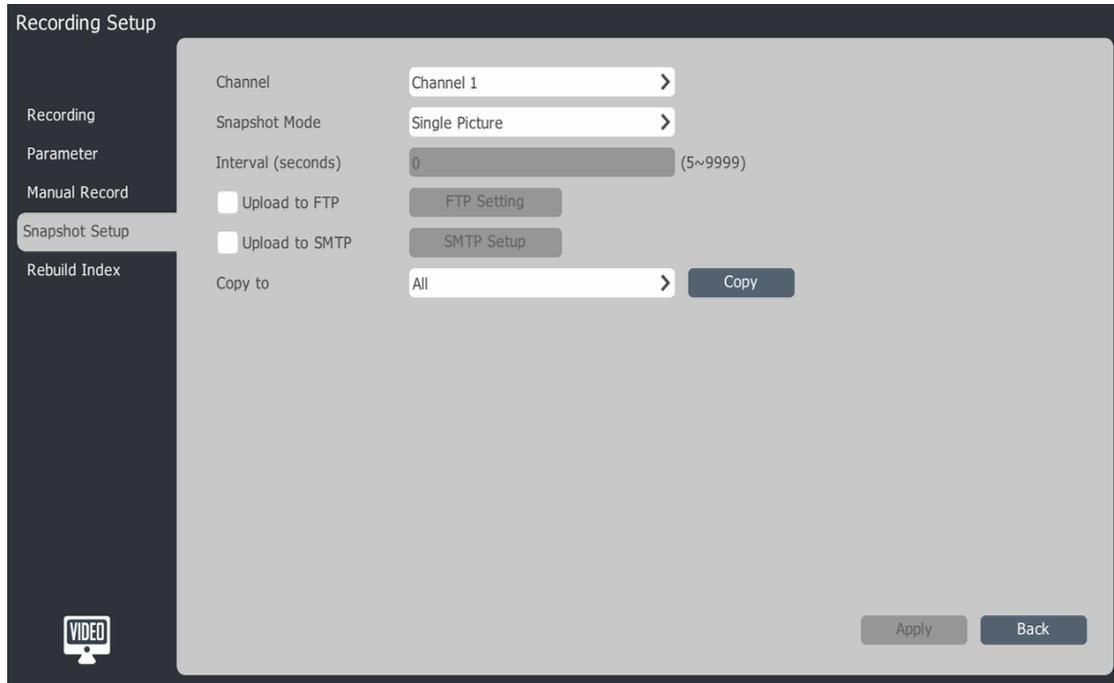


**Tips:**

- The manual recording can only stop by manual, otherwise the video will always going on until restart the device. If enable the recoding template for some channels , it will go on the template setting after stopping the manual recording

#### 4.6.5 Snapshot Setup

1. Choose [Main Menu]->[Recording Setup]>[ Snapshot setup], enter the setting page as below.



The screenshot shows the 'Recording Setup' interface with a sidebar on the left containing 'Recording', 'Parameter', 'Manual Record', 'Snapshot Setup', and 'Rebuild Index'. The 'Snapshot Setup' section is active, displaying the following settings:

- Channel: Channel 1
- Snapshot Mode: Single Picture
- Interval (seconds): 0 (range 5~9999)
- Upload to FTP:  (with 'FTP Setting' button)
- Upload to SMTP:  (with 'SMTP Setup' button)
- Copy to: All (with 'Copy' button)

At the bottom right, there are 'Apply' and 'Back' buttons. A 'VIDEO' logo is visible in the bottom left corner of the interface.

- 1) Choose the target channel no. for snapshot setup.
- 2) Snapshot Mode: "Single Picture" and "Timing capture"
- 3) Set the interval time (seconds)
- 4) Choose whether to upload the snapshot to FTP. Click on the "FTP Settings" button to enter the setting interface, specific FTP setting method can be found in the corresponding sections.
- 5) Choose whether to upload the snapshot to SMTP. Click on the "SMTP Setup" button to enter the setting interface, specific SMTP setting method can be found in the corresponding sections.
- 6) The current channel's snapshot parameters can be copy to other channels.
- 7) Click **【Apply】** to save



#### Tips:

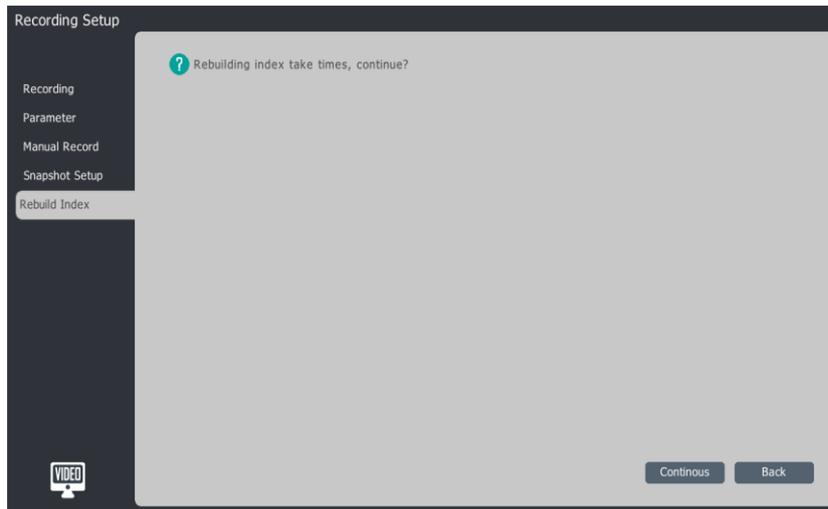
System captured a maximum of 2000 images in 24 hours.

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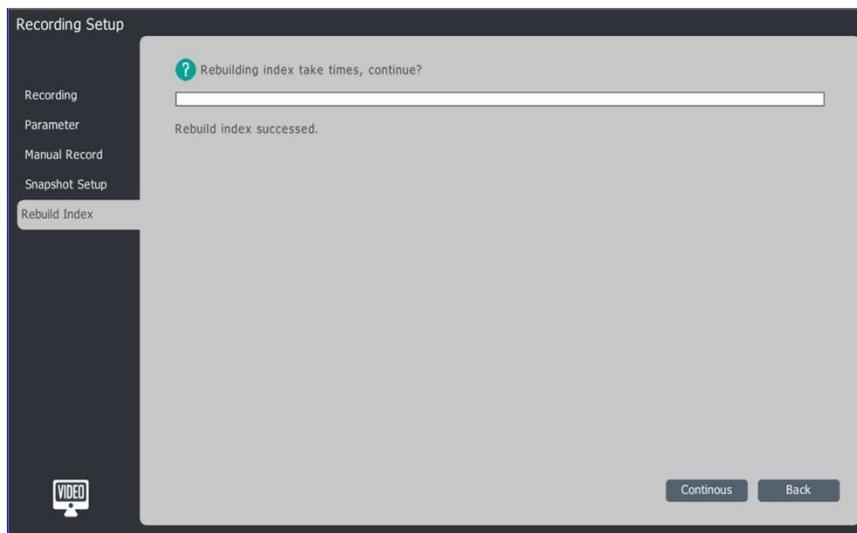
#### 4.6.6 Rebuild Index

When HDD exception or video loss occurs, user can rebuild the index to maximize the recovery of lost video.

1. Choose [Main Menu]->[Recording Setup]>[ Rebuild Index], enter the setting page as below.



2. Click **【Continuous】** ,start the cooperation of “rebuild index”.



3. Users can exit this page for other operation under the process of “rebuild index.”

#### 4.7 Playback

##### 4.7.1 Instant Playback

Under “Preview” page, it can playback only 5 minutes video of selected channel.



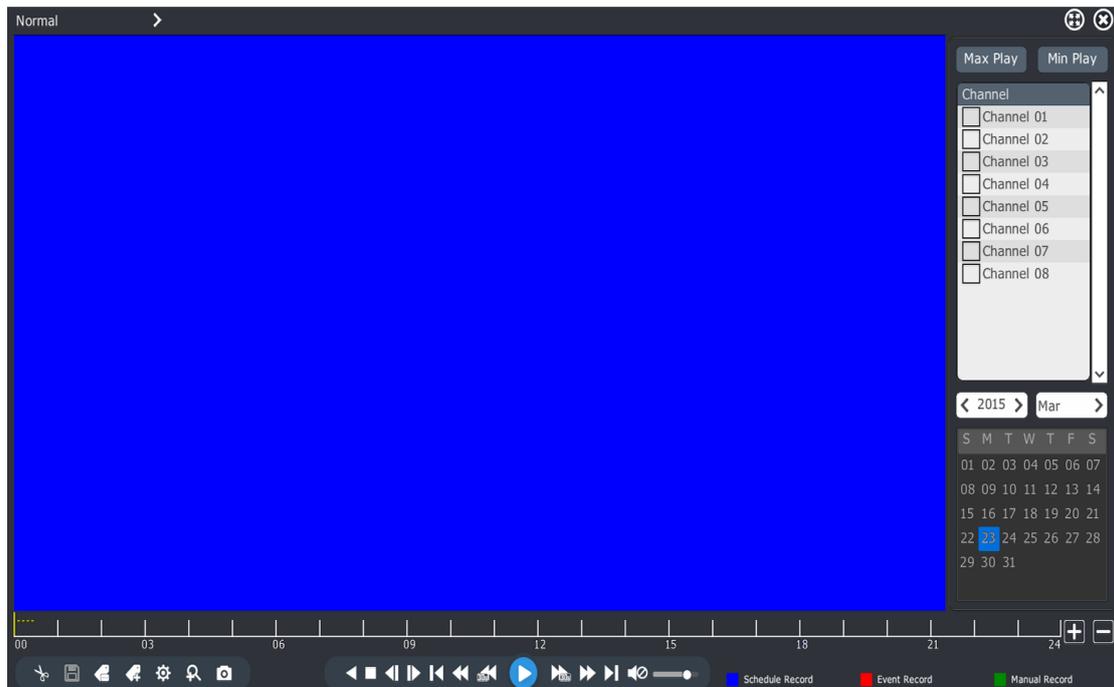
Under "Preview", choose the target channel, click "  "enter the Playback page, as above.

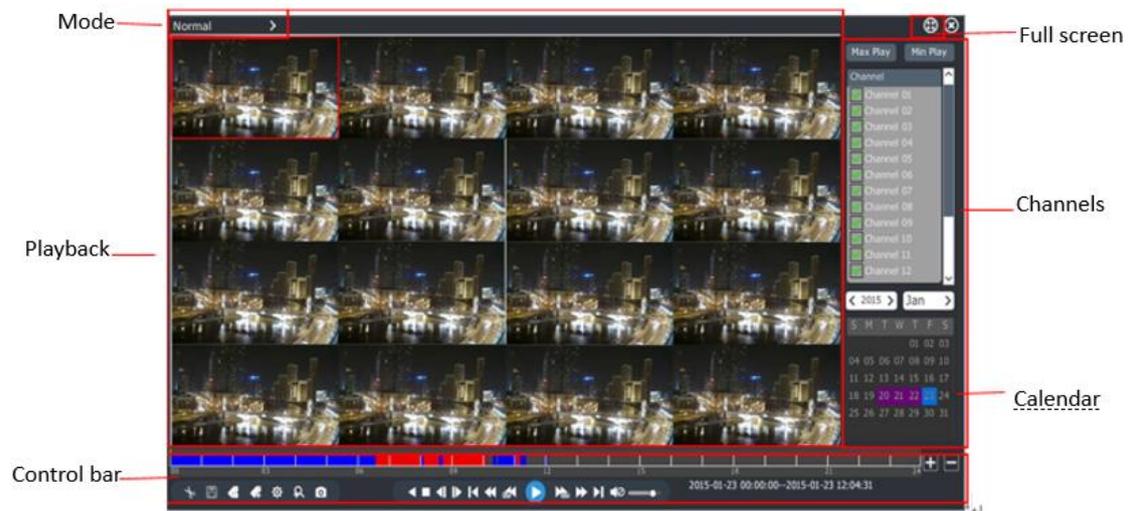
Easy button: 

#### 4.7.2 Playback Descriptions

The composition of the playback interface and each function module.

Enter the playback menu interface: Right click [menu]-> [Playback]





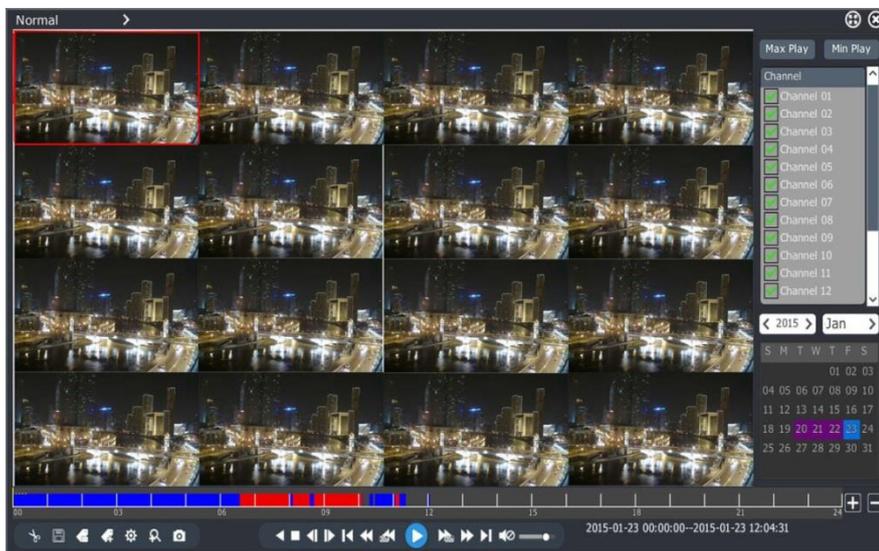
### Playback control bar description

Button	Description	Button	Description	Button	Description
	Open/Close voice		Star/End clips		Lable management
	Save clips		Add default lable		Add customized lable
	Digital zoom in		Tripwire/Perimeter video search		Confirm/Cancel search
	Pause/Backward		Pause/Play		Stop
	Play last 30s		play next 30s		Fast forward
	Slow down play		play by frame		Backward by frame
	Last day		Next day		Playback timeline
	Playback position /Snapshot		Capture		Amplify timeline
	Less timeline				

### 4.7.3 Normal Playback

According to the channels and date to retrieve the corresponding video file, Play the generated eligible videos in turn .The playback operation steps are as follows:

1. Choose [Main Menu]->[Playback],enter the page "Normal playback" page as below.
2. Select the video playback channel, calendar will automatically show the current month video
3. Single lick the playback date
4. System automatically play eligible video files



1. Other playback operation

Click"  ", enter full screen playback.

Click  or , realize the video "fast forward "or " Slow forward"



#### Tips:

- Max support 16ch synchronous playback, Different models and recording have different playback performance.

---

#### 4.7.4 Event Playback

By event type (port alarm, motion detection, video lost, video mask, VCA) query the video in a certain period .And play the qualified video from the generated query list. The specific steps are as follows:

1. Choose [Main Menu]->[Playback],Choose "Event" .
2. Select time type on the upper right corner.
3. Choose the video playback channel.
4. Single lick the playback date
5. System automatically play eligible video files



#### Tips:

- Event playback, the player will skip according to the alarm video, skip the no alarm video period

#### 4.7.5 Tag Playback

Tag record to help users take notes of relevant information during video playback at some point. Then users can search positioning video by tag in the future.

#### Add /manage Tags

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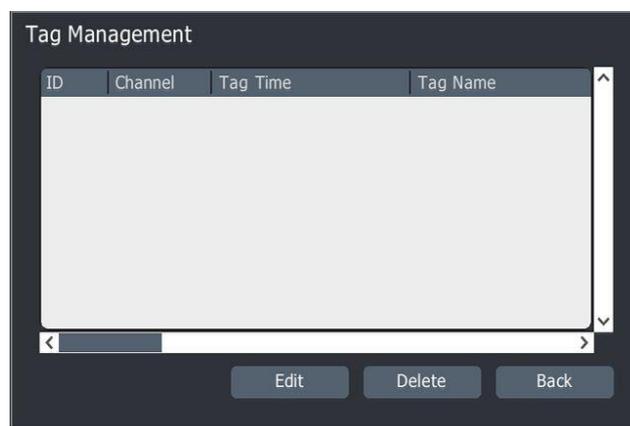
## 1. Enter Playback page

Click , add default tags.

Click , input tags' name , add "custom tag".

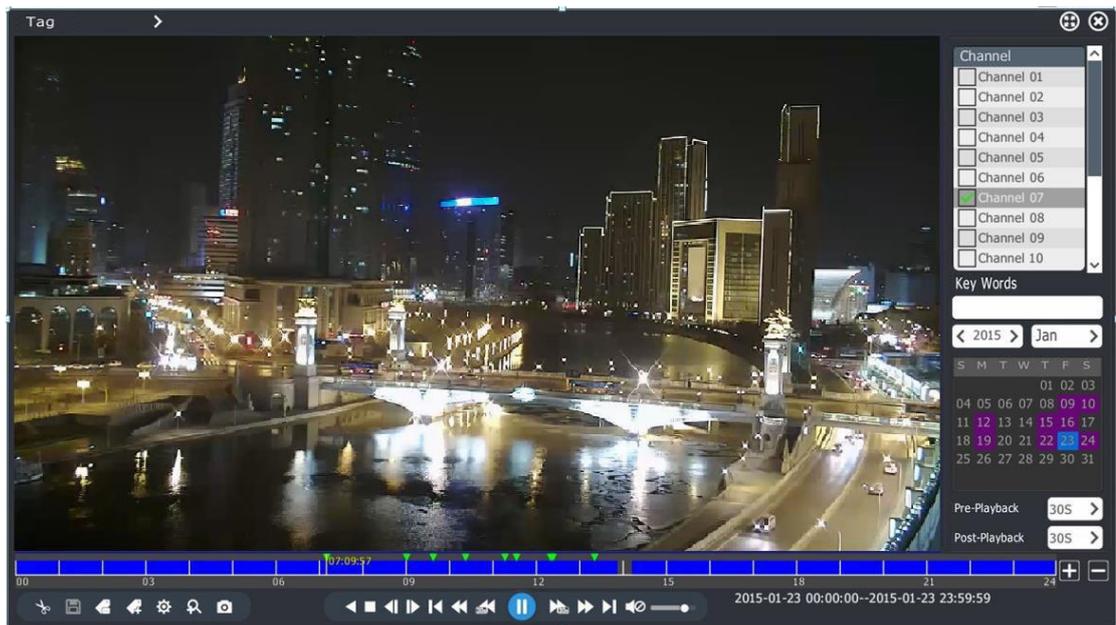
## 2. Tag management

Click , enter "tag management" page as below. Users can read, edit and delete the added tags.

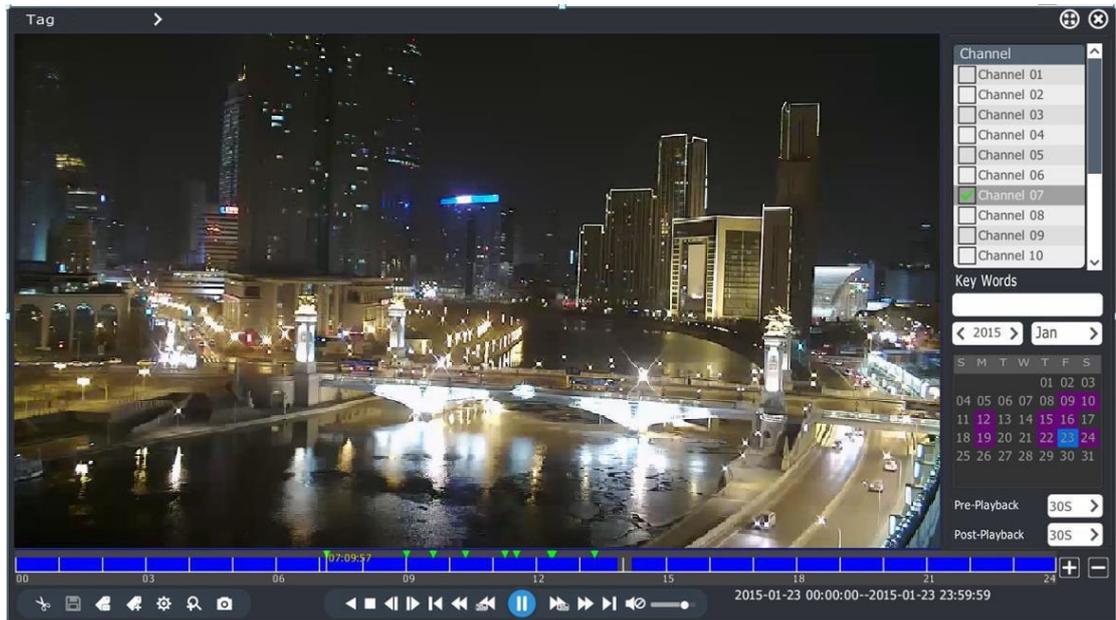


## Tags playback operation

1. Enter "Playback" interface, choose "Tag", go to the "Tag Playback" as below.
2. Choose channels.
3. Input keywords of Tag. If input nothing, it will default searching the scheduled date video from selected channels.
4. Select date.



- The playback progress bar appears the tag highlighted in green. When mouse moved to it, it automatically displays the tag information. As shown in the figure below



 **Tips:**

- Recording play from " Pre-Playback" to " Pose-Playback". And turn to next tag recording when play end
- "Pre-playback" and "Pose-playback" can be edited.

---

#### 4.7.6 Smart Playback

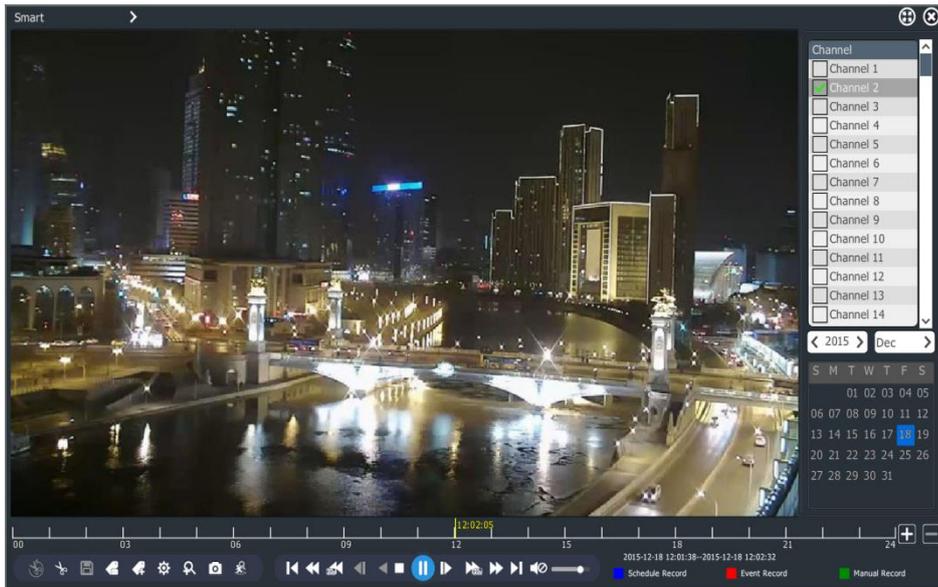
Smart Playback, an intelligent analysis for video and playback according to the result of analysis. Currently support "perimeter" "tripwire" "people counting" "face detection" and "Plate recognition" smart analysis only.

The specific steps as follows:

1. Enter "Playback" interface, choose "Smart" , go to the "Smart Playback" as below.



2. Select "channel" and "date",start to play.
3. Click  to the left corner. While entering the smart searching page, as below:

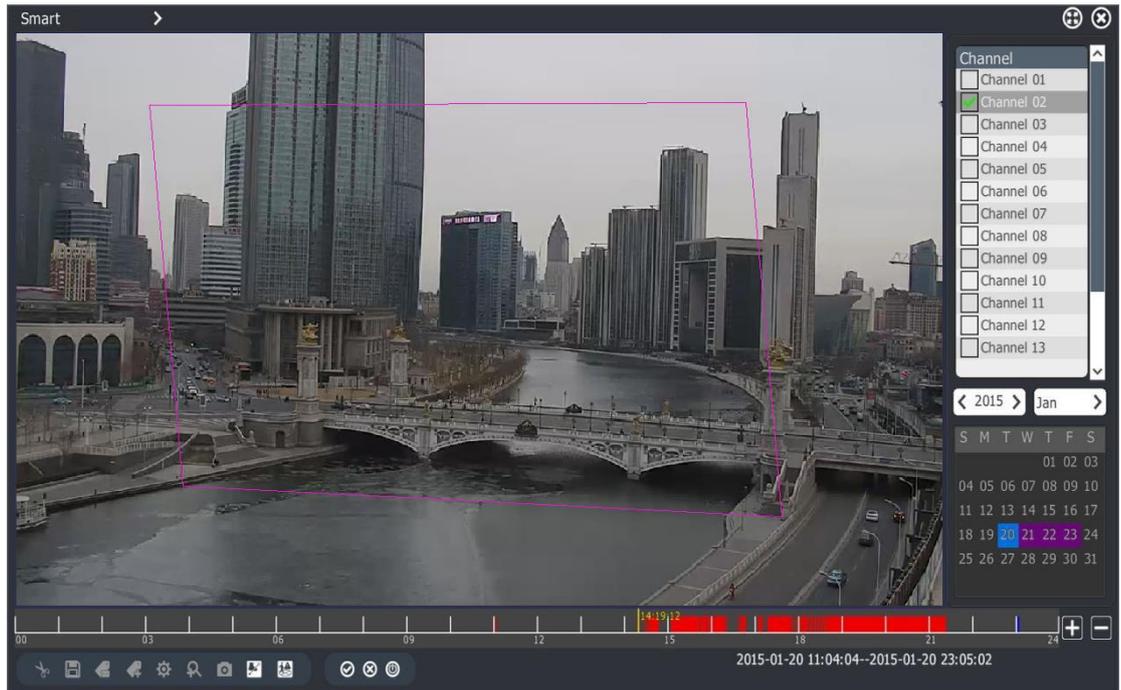


4. Click  at bottom and select searching model

#### 4.7.6.1 Perimeter and tripwire

1. Click  or  go to tripwire interface and draw a line as below:





- 2 Click  start to search. During the search process, the upper-left displaying the words " VCA SEARCHING ", at the same time, the progress bar will display the search progress and results.
- 3 When searching process ended, the system will automatically begin to play from the search results.



- 4 If click the other channels or dates during searching, search will automatically stop. Or click "stop search" button to manually stop the search.



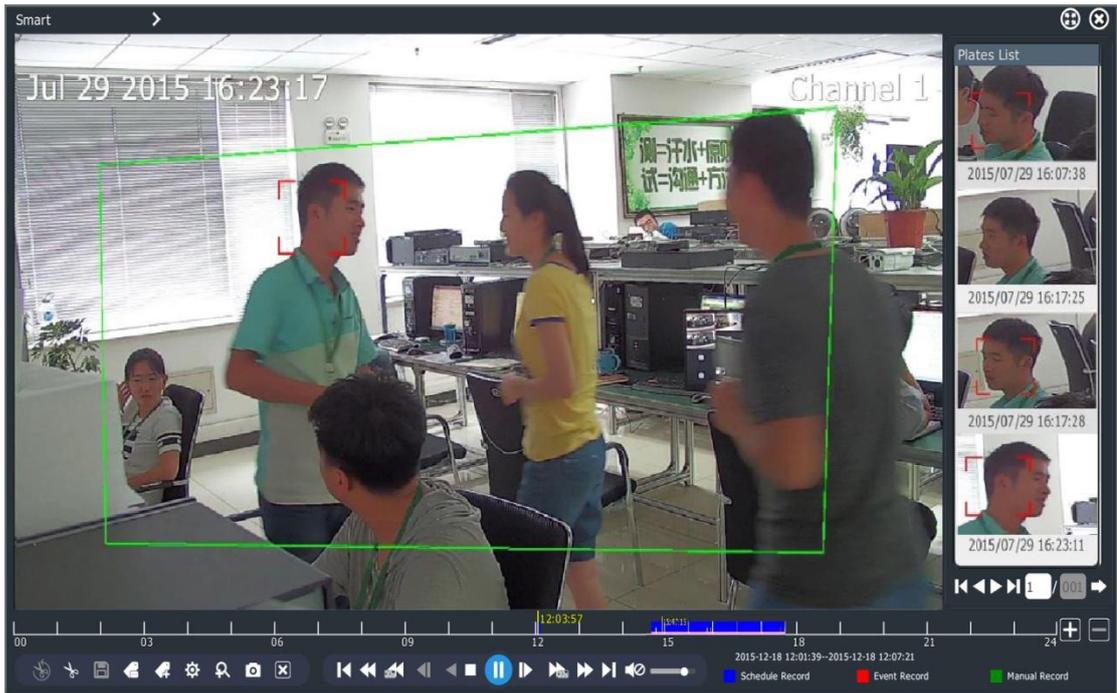
Intelligent playback process video only within the scope of time shaft.

#### 4.7.6.2 Face detection

- 1 Click  and entering into "face detection" under intelligent playback. As below:



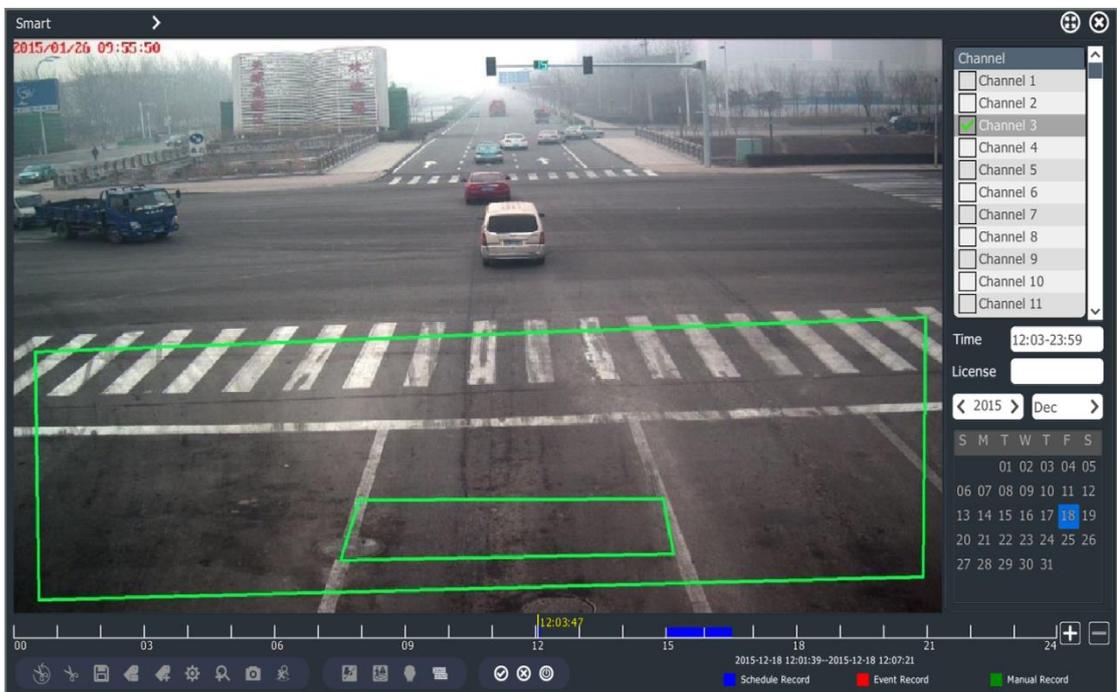
- 2 Click to start searching. Meanwhile to the left it will show "VCA SEARCHING" while the progress bar will show the searching progress. The result shall be shown to the right.



3 While searching if you push the stop button, searching shall stop. Click the searching result to the right the video shall position the corresponding place.

#### 4.7.6.2 Plate recognition

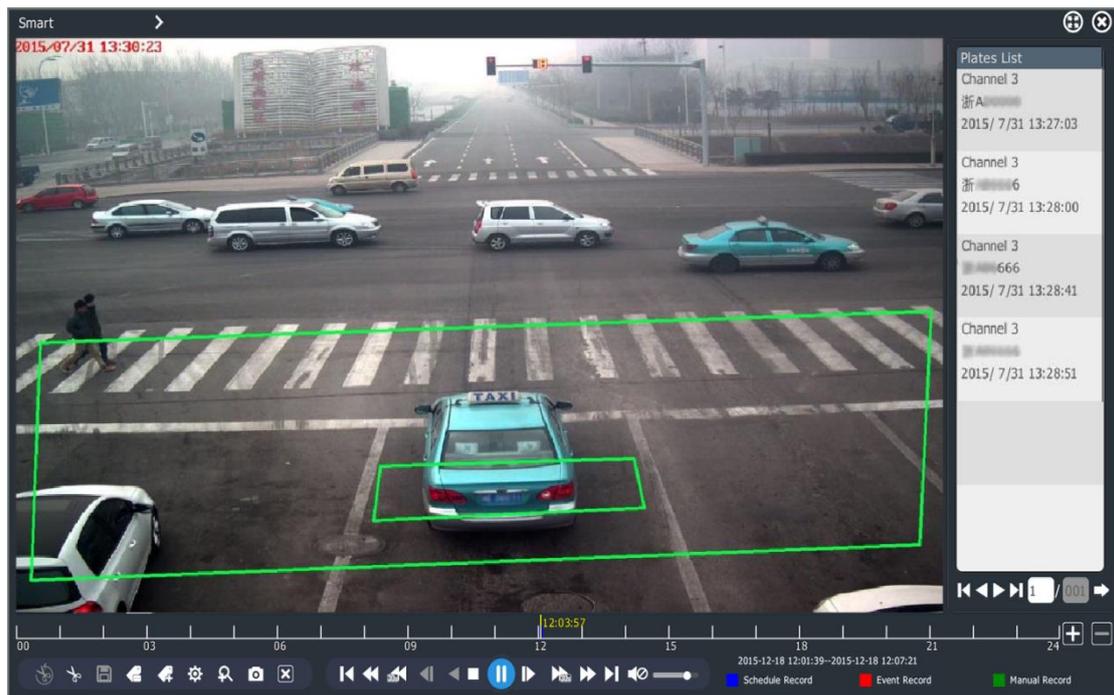
1 Click and enter into "Plate recognition" under intelligent searching window as below,



2 To the right under the table of channels is the setting area for searching period and registration plate(if searching item is clean it means to search all )

**Note:** Plate searching support for single channel and muti channels model.

3 Click to start searching. While searching to the left it will show "VCA SEARCHING"and the progress bar will show searching progress. To the right it shows the searching result.



4 While searching if you click the stop button it will stop. Click the searching result to the right video shall position to corresponding place.

**Note:**

Intelligent playback shall only be used for process time axis video files.

---

### 4.7.7 Picture viewer

Browse the pictures saved in the hard disk. See picture as below.



#### Description

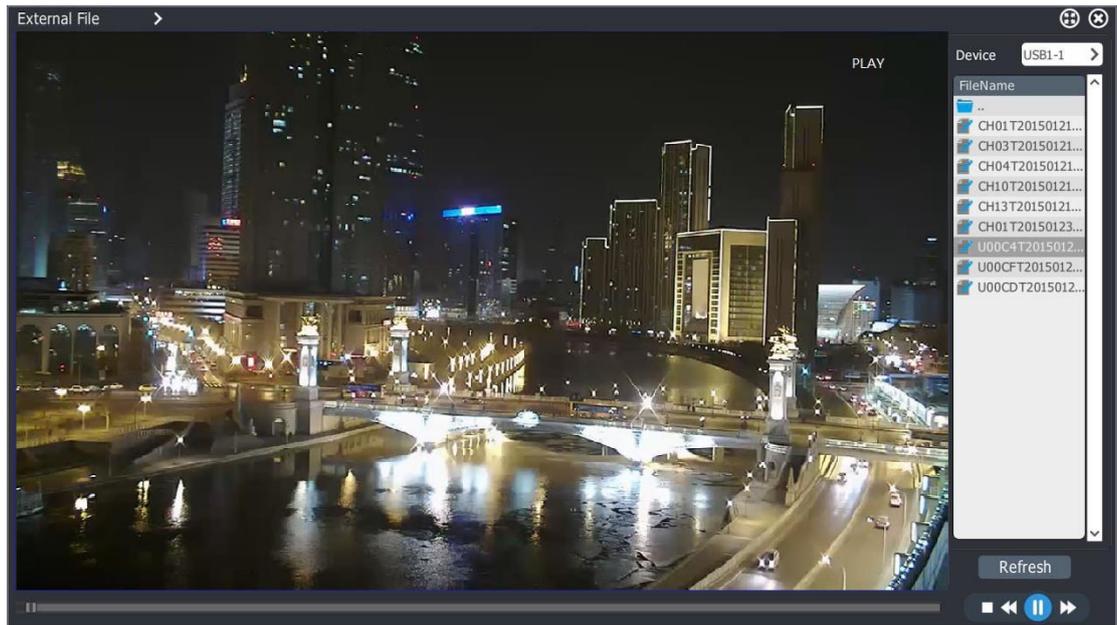
- User may set interval time to play the pictures automatically.
- Also user may pause auto-play and click left or right side of the picture to go to the previous or the next one.

### 4.7.8 Playback the files from external devices

Playback the recording files saved in external storage medium, such as USB flash disk, mobile HDD, CD, and etc.

Please follow the steps as below.

1. Enter playback interface, and select "External file".



2. Select "Refresh" to read files from external storage medium.

3. Click the target file to play.



### **Description**

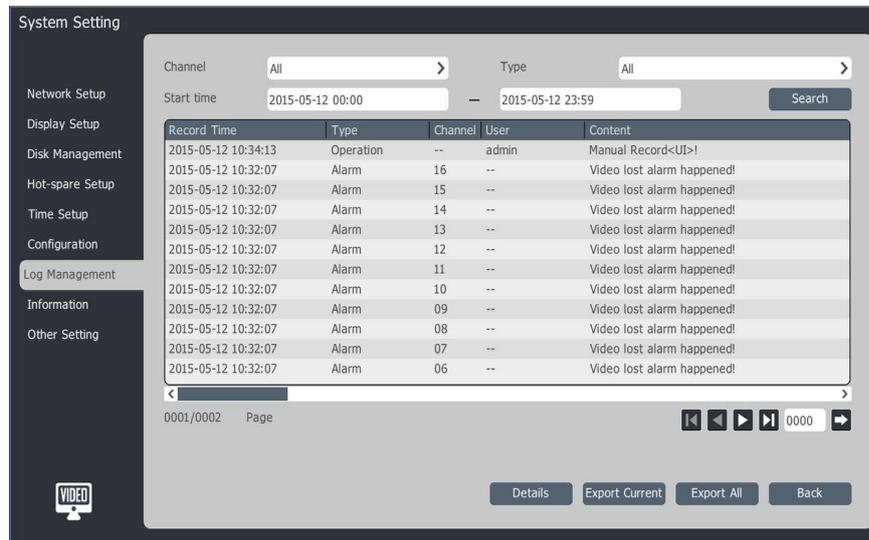
Ensure USB flash disk, mobile HDD or USB CD-ROM are well connected with NVR.

#### 4.7.9 Play by log information

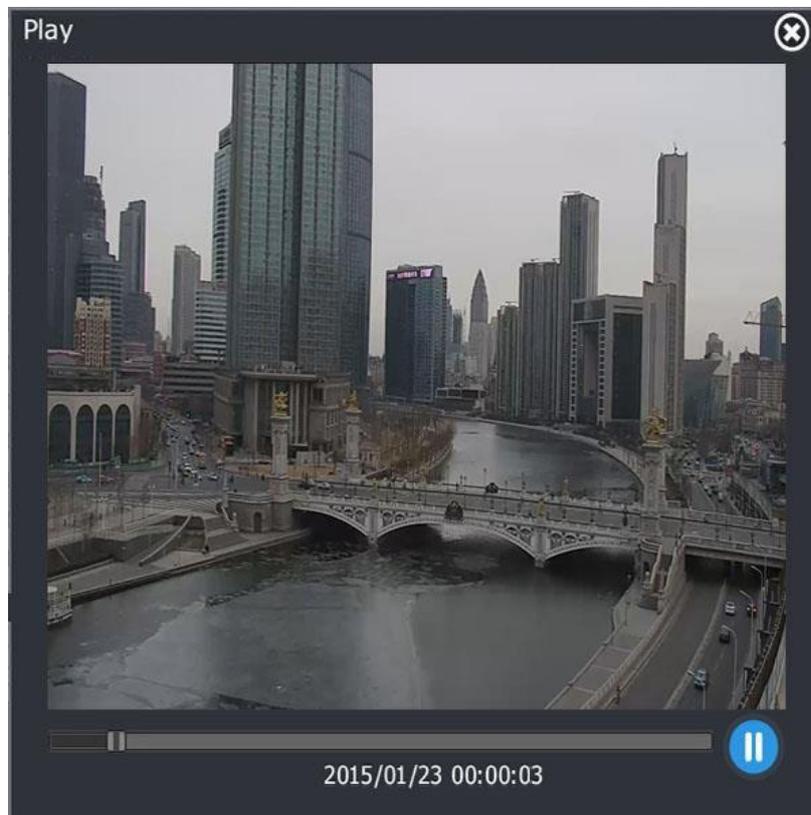
Play the files according to log information.

Please follow the steps as below.

1. Select " Main menu -> System Setting -> Log Management"



2. Select " Channel " and set " Type " and " Start time " and click " Query "
3. Double click file in log, and enter " Play " interface.





## Description

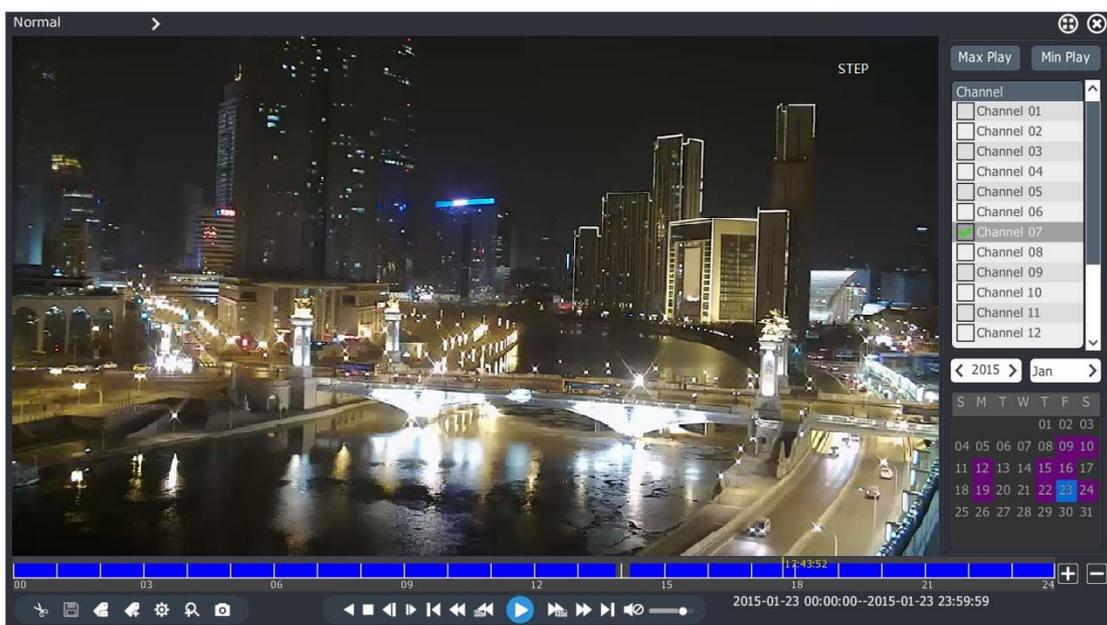
- Move the time bar to control playback progress.
- The recording files in the channel and time which you check must be available before you can play.

### 4.7.10 Playback assist function.

#### Single frame playback

You can find slight changing of image by single frame playback.

Enter " Playback " interface, and click  or  to adjust into " Single frame " speed. It will step forward by 1 frame in every click  , and step backward by 1 frame in every click .



#### E-zoom

When you playback or pause the video, E-zoom will help you zoom in the details into full screen.

Please follow the steps as below.

1. Enter playback interface.

2. Click  at the control bar to enter digital zoom in interface.

---

3.Zoom in the red square area you check and go into full screen. Also you may hold left click of mouse to drag location of red square.

4.Use mouse scroll wheel to adjust red square area.



### **Snapshot**

Capture the pictures when playback.

Please follow the steps as below.

1.Enter playback interface.

2.Click  at the control bar to capture picture of which channel you select.



### **Description**

- If you need save pictures which you snapshot in USB flash disk, please ensure the disk is well connected with NVR.

### **Thumbnail view**

In normal, event, tag, or smart playback mode, when you stay the mouse on a certain location of progress bar, the system would appear a thumbnail view to show the video at that time.

---

Please follow the steps as below.

1. Select one of mode which is referred above and start to play.
2. Staying the mouse on the progress bar where recording is available for 1 second, it will appear thumbnail view.



### Description

- When it is beyond the decoding capacity, thumbnail view cannot be displayed.
- When there is no recording files where your mouse stays, thumbnail view cannot be displayed.

---

## 4.8 Backup

### 4.8.1 Backup

Backup record files to backup disk or USB device (U disk, Mobile HDD etc.)

1. "Main menu"->"Backup":

The screenshot shows a 'Backup' configuration window with the following fields and controls:

- Channel:** A group of checkboxes including 'SelectAll', '01', '02', '03', and '04'. The 'SelectAll' checkbox is currently checked.
- Range:** A dropdown menu set to 'Record Files'.
- Type:** A dropdown menu set to 'All'.
- Start Date:** A date input field set to '2015-12-08' with a calendar icon to its right.
- Start Time:** A time input field set to '00:00'.
- End Date:** A date input field set to '2015-12-08' with a calendar icon to its right.
- End Time:** A time input field set to '23:59'.

At the bottom right of the window, there is a 'Recording Clip' button and a row of four buttons: 'Quick', 'Search Today', 'Search', and 'Back'.

2. "Search":

Search

Range Record Files >

Channel All >

Type All >

Port All >

Start Date 2015-05-11 12 Recording Clip

Start Time 00:00

End Date 2015-05-11 12

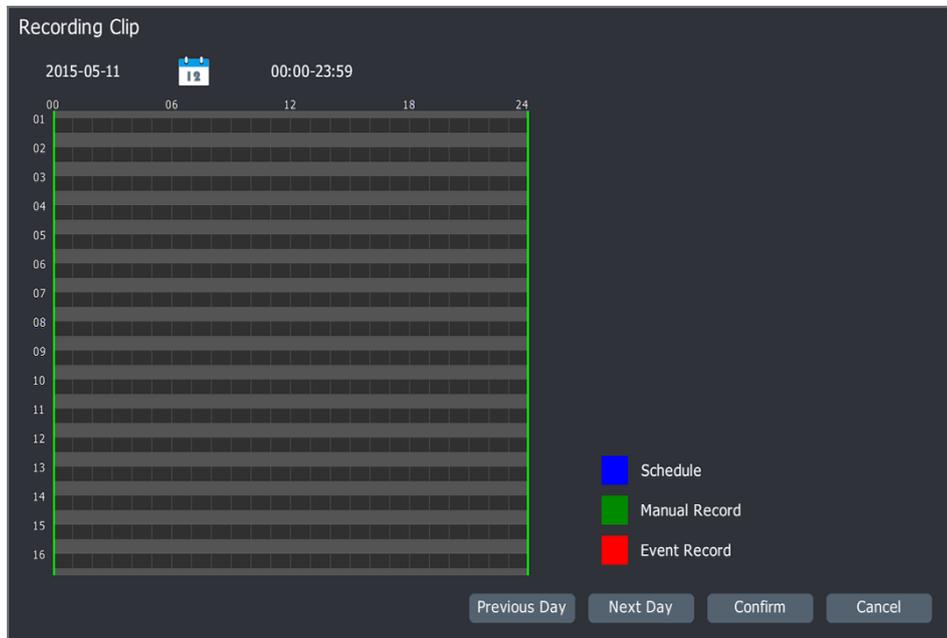
End Time 23:59

Search Today Search

3. After input search condition, click "Search".

Click "Search Today", only search today's recording

Click "Recording Clip":

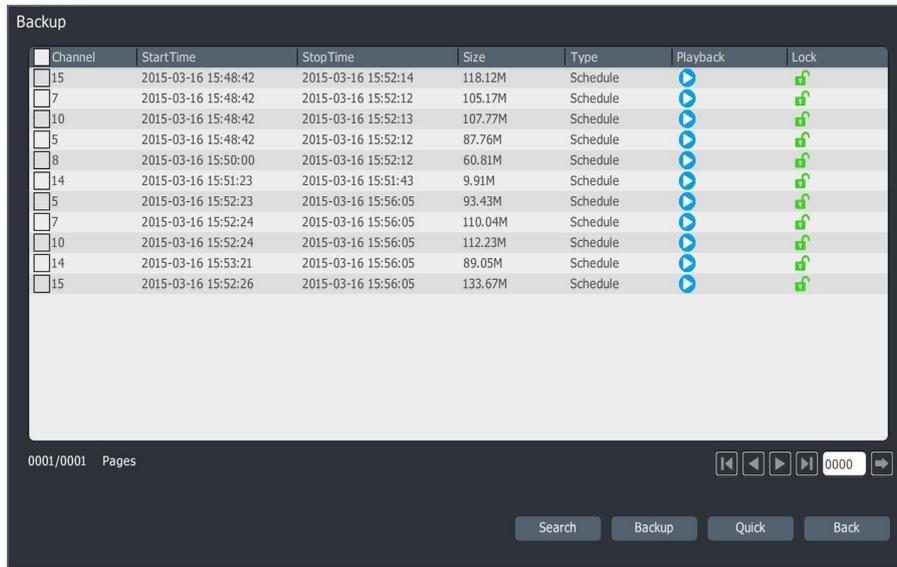


---

 **Notes:**

- Image file can't support "Recording Clip" function.

4. "Main menu"->"Backup":

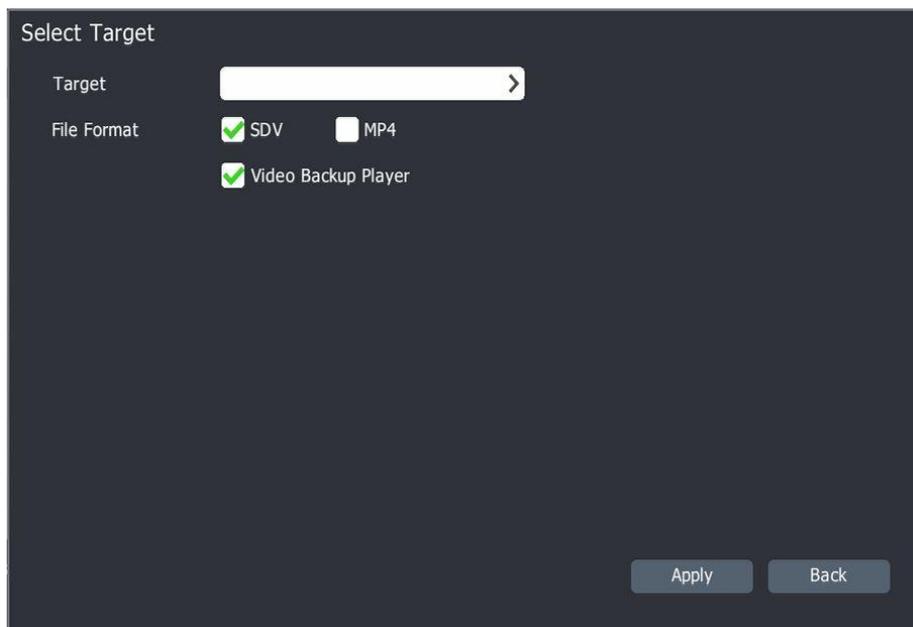


<input type="checkbox"/>	Channel	StartTime	StopTime	Size	Type	Playback	Lock
<input type="checkbox"/>	15	2015-03-16 15:48:42	2015-03-16 15:52:14	118.12M	Schedule		
<input type="checkbox"/>	7	2015-03-16 15:48:42	2015-03-16 15:52:12	105.17M	Schedule		
<input type="checkbox"/>	10	2015-03-16 15:48:42	2015-03-16 15:52:13	107.77M	Schedule		
<input type="checkbox"/>	5	2015-03-16 15:48:42	2015-03-16 15:52:12	87.76M	Schedule		
<input type="checkbox"/>	8	2015-03-16 15:50:00	2015-03-16 15:52:12	60.81M	Schedule		
<input type="checkbox"/>	14	2015-03-16 15:51:23	2015-03-16 15:51:43	9.91M	Schedule		
<input type="checkbox"/>	5	2015-03-16 15:52:23	2015-03-16 15:56:05	93.43M	Schedule		
<input type="checkbox"/>	7	2015-03-16 15:52:24	2015-03-16 15:56:05	110.04M	Schedule		
<input type="checkbox"/>	10	2015-03-16 15:52:24	2015-03-16 15:56:05	112.23M	Schedule		
<input type="checkbox"/>	14	2015-03-16 15:53:21	2015-03-16 15:56:05	89.05M	Schedule		
<input type="checkbox"/>	15	2015-03-16 15:52:26	2015-03-16 15:56:05	133.67M	Schedule		

Click " " or double click recording file to play it.

Click " ", lock or unlock the recording file.

5. Choose recording file, then click "Backup" button:



Select Target

Target

File Format  SDV  MP4

Video Backup Player

---

6. Choose "Target", file format, video backup player, then "Apply".

#### 4.8.2 Quick backup

1. "Main menu"->"Backup"->"Quick backup":

Quick

Range	Record Files
Channel	All
Type	All
Start Time	2015-05-11 00:00
End Time	2015-05-11 20:38
Target	
File Format	<input checked="" type="checkbox"/> SDV <input type="checkbox"/> MP4
	<input checked="" type="checkbox"/> Video Backup Player

Today's Backup

#### 4.9 Network setup

##### 4.9.1 NIC 1

1. "Main menu"->"System setting"->"Network setup"->"NIC 1"

System Setting

NIC 1 POE LAN Card PPPOE Permission Register Center DDNS FTP SMTP Others

Network Setup

MAC address 00:50:c2:28:10:31

Auto Get IP Address

Manual Setup IP Address

IP address 010.030.021.049

SubnetMask 255.255.255.000

Gateway 010.030.021.001

Manual Setup DNS

Preferred DNS 192.168.001.001

Reserved DNS 192.168.001.001

Apply Back

2. Choose "Auto Get IP Address" or "Manual Setup IP Address".

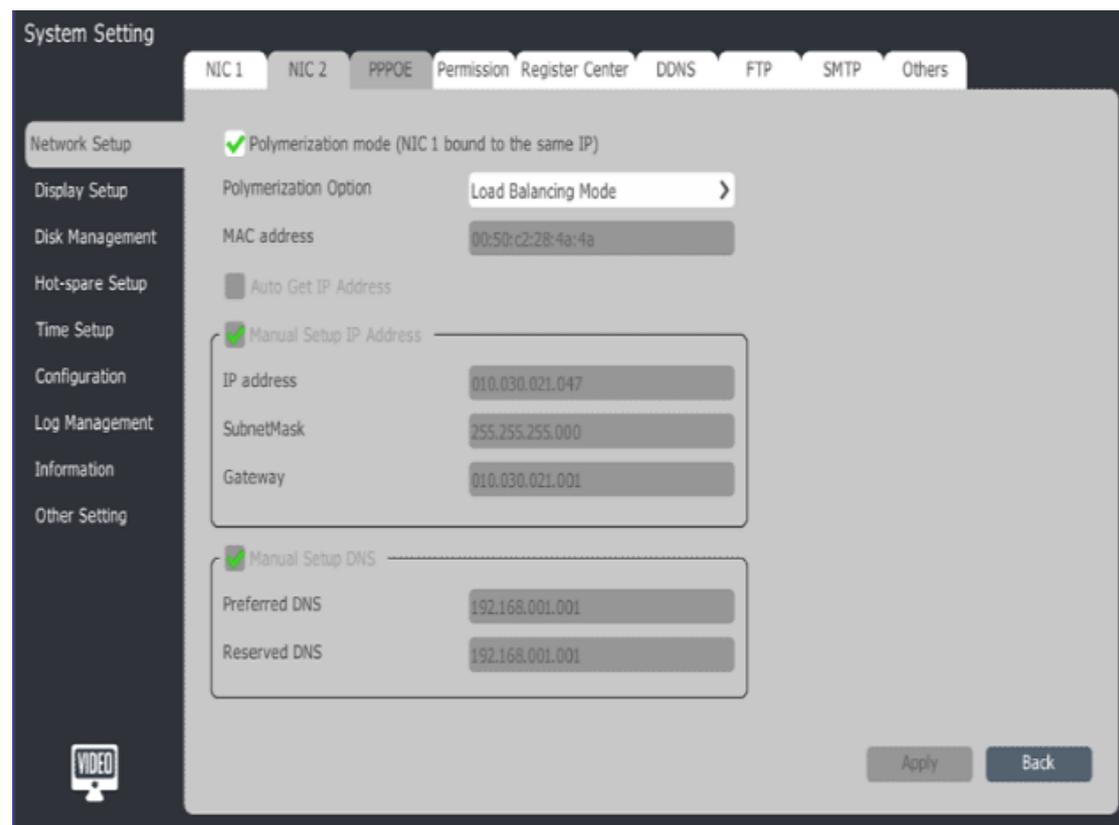
If choose "Auto Get IP Address", NVR will get IP address from DHCP after reboot.

3.If choose "Manual Setup IP Address", please set IP address, Subnet Mask, Gateway etc.

4."Apply", then NVR will reboot automatically.

#### 4.9.2 NIC 2

1."Main menu"->"System setting"->"Network setup"->"NIC 2"



2.Enable "Polymerization mode", you can choose:

Load Balancing Mode,2 network cards be used.

Network redundancy,1 network card be used, another one as standby

3. The Configuration method of NIC2 is the same as NIC1 if disable "Polymerization mode".

---

### 4.9.3 POE LAN Card

**Notes:** Only POE NVR support it.

1. "Main menu" -> "System setting" -> "Network setup" -> "POE LAN Card".
2. Plug and Play IP camera's IP address will be changed automatically when we change this POE NVR's IP address.



#### 4.9.4 PPPOE

1. "Main menu" -> "System setting" -> "Network setup" -> "PPPOE"

The screenshot displays the 'System Setting' web interface. The 'PPPOE' tab is selected in the top navigation bar. The left sidebar contains a menu with 'Network Setup' highlighted. The main content area shows the following configuration options:

- PPPOE status:** A dropdown menu currently set to 'Disconnected'.
- IP address:** A text input field containing '000.000.000.000'.
- SubnetMask:** A text input field containing '000.000.000.000'.
- Gateway:** A text input field containing '000.000.000.000'.
- Boot Auto-Dial:** An unchecked checkbox.
- UserName:** A text input field containing '12345678'.
- Password:** A text input field containing '\*\*\*\*\*'.

At the bottom right of the form, there are three buttons: 'Connect', 'Apply', and 'Back'. A 'VIDEO' icon is visible in the bottom left corner of the interface.

2. Set "Boot Auto-Dial".

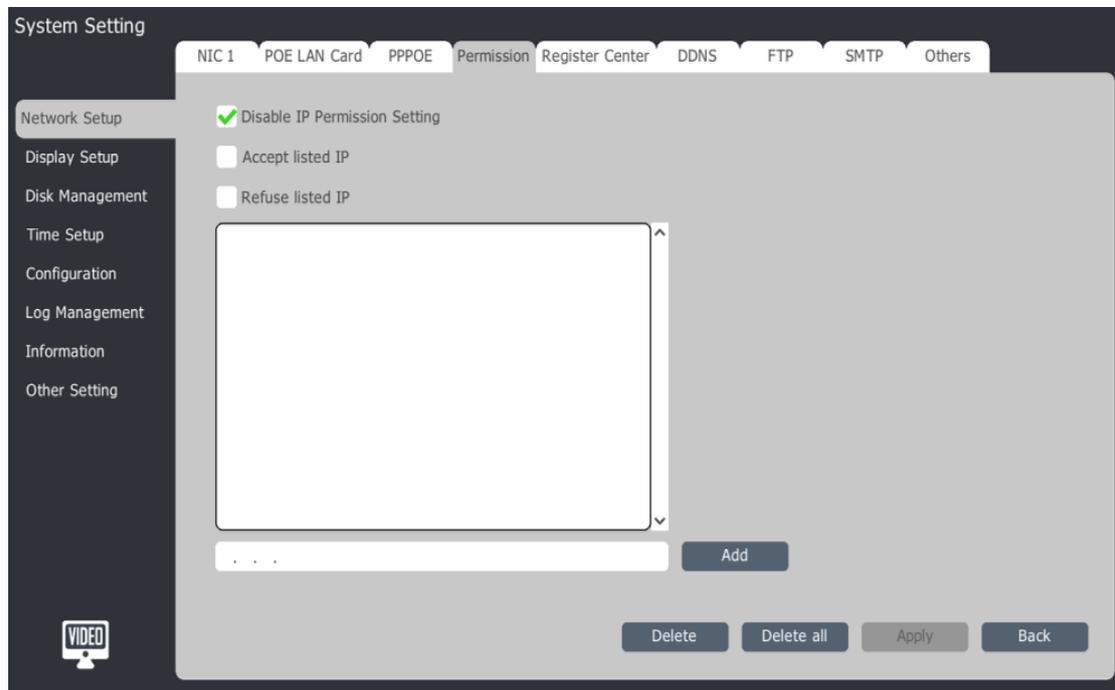
3. Input User Name and Password.

4. Connect.

5. Click "Apply" to save setting information.

## 4.9.5 IP permission

1. "Main menu" -> "System Setting" -> "Network Setup" -> "IP permission"



2. "Disable IP Permission Setting". "Accept listed IP" or "Refuse listed IP"

3. Input IP address

4. Add

5. Apply

## 4.9.6 Register Center

1. "Main menu" -> "System Setting" -> "Network Setup" -> "Register Center"

The screenshot shows the 'Register Center' configuration page within a 'System Setting' application. The interface has a dark sidebar on the left with menu items: Network Setup, Display Setup, Disk Management, Time Setup, Configuration, Log Management, Information, and Other Setting. The main content area has a top navigation bar with tabs: NIC 1, POE LAN Card, PPPoE, Permission, Register Center (selected), DDNS, FTP, SMTP, and Others. The 'Register Center' section contains the following fields:

Server1	0.0.0.0	:	6004
Server2	0.0.0.0	:	6004
Device Name	DVRS		
UserName			
Password			

At the bottom right of the main content area, there are two buttons: 'Apply' and 'Back'. A 'VIDEO' logo is visible in the bottom left corner of the sidebar.

2. Input main server and standby server's IP address and port number. The default port number is 6004.

3. Input device name, the device name is registered in the server.

4. Input User name and password. The user name and password are registered in the server.

5. Apply

## 4.9.7 DDNS Setting

1. "Main menu" -> "System setting" -> "Network setup" -> "DDNS"

The screenshot shows a web-based system settings interface. At the top, there are several tabs: NIC 1, POE LAN Card, PPPOE, Permission, Register Center, DDNS (selected), FTP, SMTP, and Others. On the left side, there is a vertical menu with options: Network Setup (selected), Display Setup, Disk Management, Time Setup, Configuration, Log Management, Information, and Other Setting. The main content area is titled 'System Setting' and contains a form for DDNS configuration. The form has a checkbox labeled 'Enable DDNS' which is currently unchecked. Below the checkbox are six input fields: 'Domain name' with the value 'dvr.3322.org', 'Server IP' with the value 'www.3322.org' and a dropdown arrow, 'Port' with the value '80', 'UserName' with the value 'dvr', and 'Password' with the value '\*\*\*'. At the bottom right of the form, there are two buttons: 'Apply' and 'Back'. In the bottom left corner of the interface, there is a small icon of a monitor with the word 'VIDEO' on it.

2. Click "Enable DDNS"

3. Input Domain name.

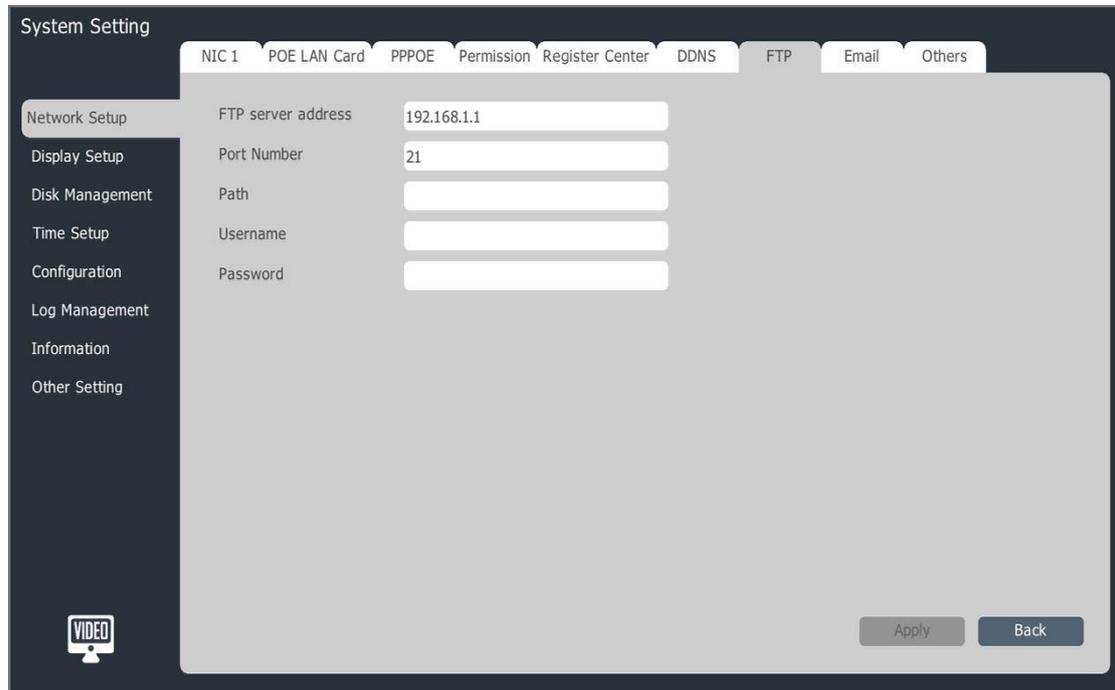
4. Input DDNS server's domain name or IP address.

5. Input DDNS server's port number, user name and password.

6. Apply

## 4.9.8 FTP Setting

1. "Main menu" -> "System setup" -> "Network Setup" -> "FTP"



The screenshot displays the 'System Setting' web interface. At the top, there are several tabs: 'NIC 1', 'POE LAN Card', 'PPPOE', 'Permission', 'Register Center', 'DDNS', 'FTP', 'Email', and 'Others'. The 'FTP' tab is currently selected. On the left side, there is a vertical navigation menu with the following items: 'Network Setup', 'Display Setup', 'Disk Management', 'Time Setup', 'Configuration', 'Log Management', 'Information', and 'Other Setting'. The 'Network Setup' item is highlighted. The main content area shows the following configuration fields:

FTP server address	<input type="text" value="192.168.1.1"/>
Port Number	<input type="text" value="21"/>
Path	<input type="text"/>
Username	<input type="text"/>
Password	<input type="password"/>

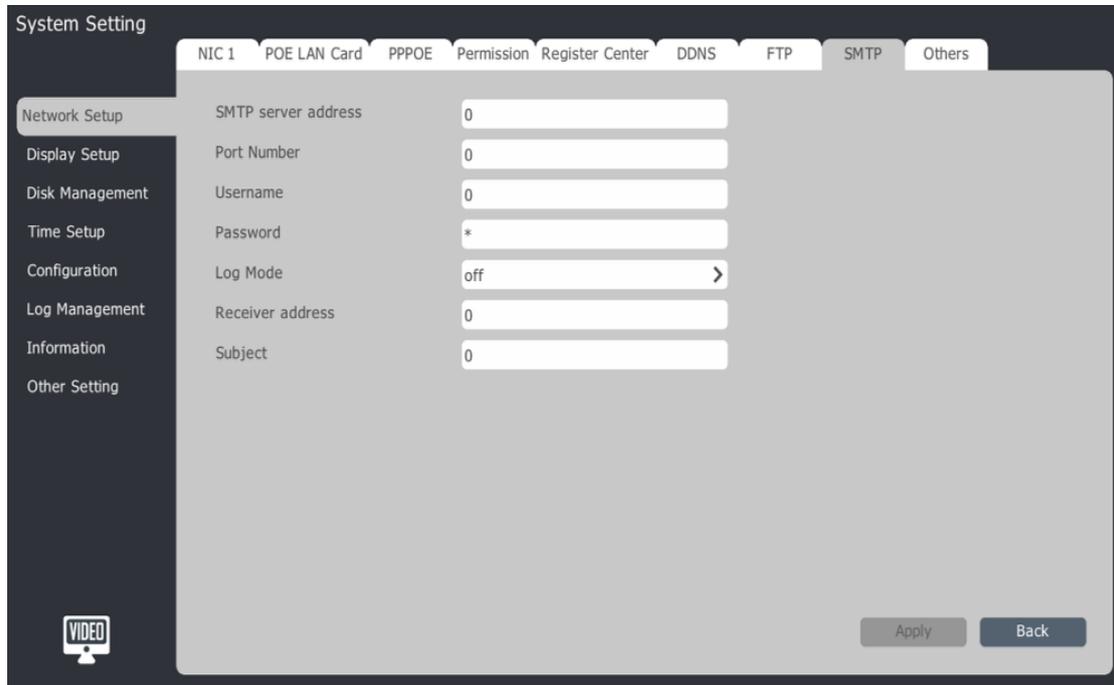
At the bottom right of the form, there are two buttons: 'Apply' and 'Back'. In the bottom left corner of the interface, there is a logo that says 'VIDEO' with a camera icon below it.

2. Input FTP Server's address, port number, user name and password.

3. Apply

## 4.9.9 SMTP

1. "Main menu" -> "System Setting" -> "Network setup" -> "SMTP"



The screenshot displays the 'System Setting' web interface. At the top, there is a navigation bar with tabs for 'NIC 1', 'POE LAN Card', 'PPPOE', 'Permission', 'Register Center', 'DDNS', 'FTP', 'SMTP', and 'Others'. The 'SMTP' tab is selected. On the left side, a sidebar menu lists various settings: 'Network Setup', 'Display Setup', 'Disk Management', 'Time Setup', 'Configuration', 'Log Management', 'Information', and 'Other Setting'. The 'Network Setup' section is expanded, showing the following configuration fields:

Field Name	Value
SMTP server address	0
Port Number	0
Username	0
Password	*
Log Mode	off
Receiver address	0
Subject	0

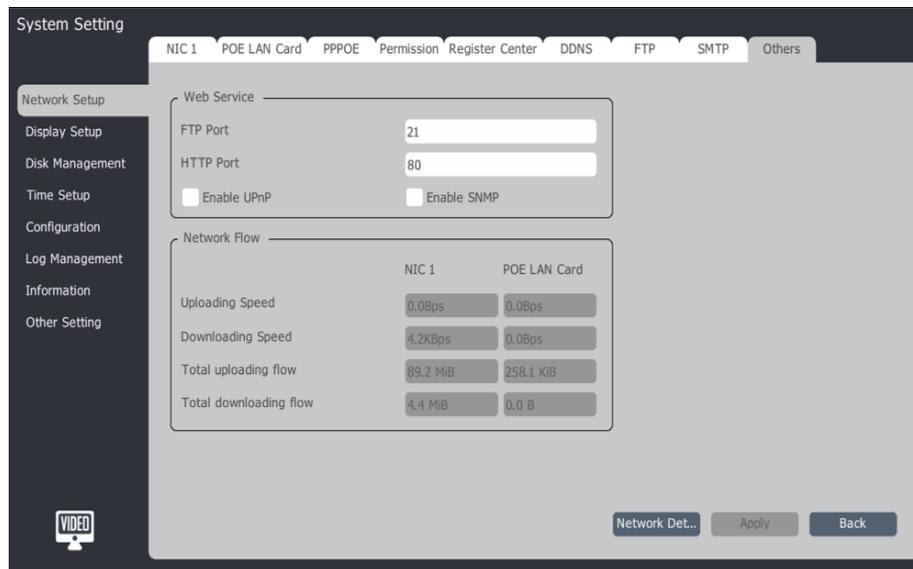
At the bottom right of the configuration area, there are two buttons: 'Apply' and 'Back'. A 'VIDEO' logo is visible in the bottom left corner of the interface.

2. Input SMTP server address, port number, user name, password, log mode, receiver address and subject.

3. Apply

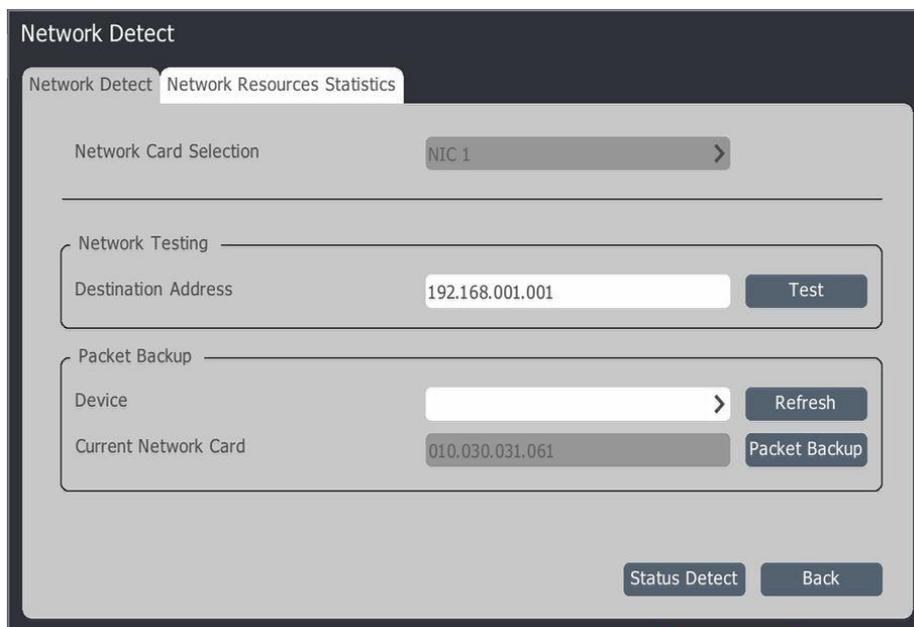
#### 4.9.10 Others

“Main menu”->“System Setting”->“Network setup”->“Others”.



#### Network Detect

1. “System Setting”->“Network Setup”->“Other Setting”->“Network Detect”:



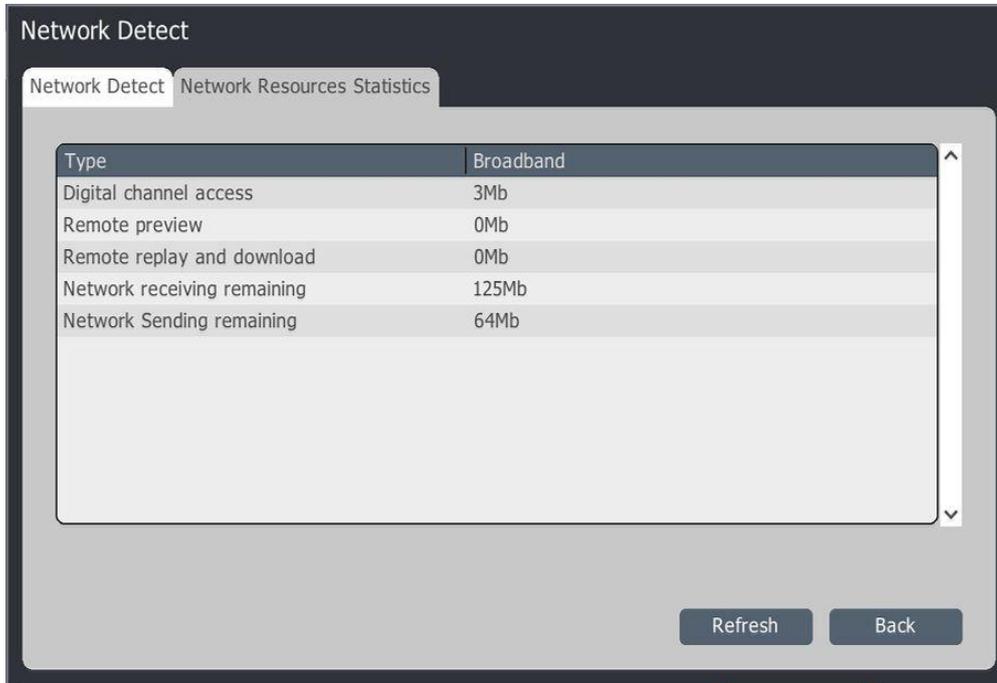
2. Input IP camera’s address in “Network testing”, then click “Test” to test network environment.

3. Click “Status Detect” to test “Network gateway”, DNS.

---

## Network Resources Statistics

"System Setting"->"Network setup"->"Other Setting"-> "Network Detect"->"Network Resources Statistics":

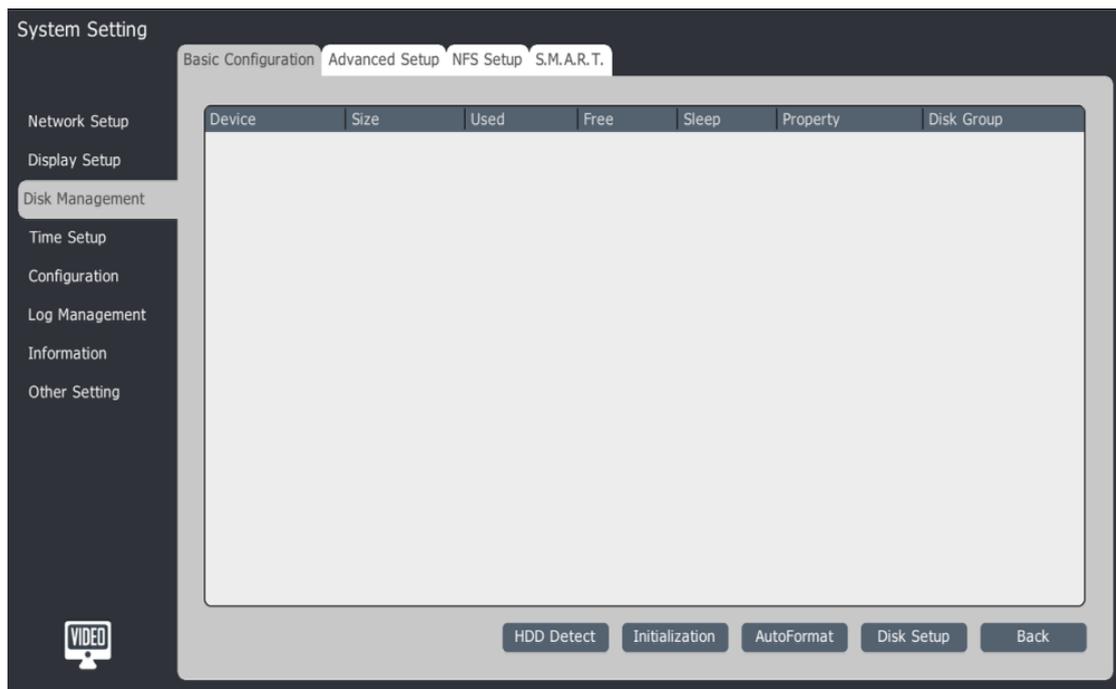


The screenshot shows the 'Network Detect' interface with the 'Network Resources Statistics' tab selected. It displays a table with network resource statistics and two buttons at the bottom: 'Refresh' and 'Back'.

Type	Broadband
Digital channel access	3Mb
Remote preview	0Mb
Remote replay and download	0Mb
Network receiving remaining	125Mb
Network Sending remaining	64Mb

## 4.10 Disk Management

"Main menu"->"System Setting"->"Disk management"



The screenshot shows the 'System Setting' interface with the 'Disk Management' tab selected. It displays a table with disk management information and a sidebar with navigation options. At the bottom, there are buttons for 'HDD Detect', 'Initialization', 'AutoFormat', 'Disk Setup', and 'Back'.

Device	Size	Used	Free	Sleep	Property	Disk Group
--------	------	------	------	-------	----------	------------

---

### 4.10.1 Basic Configuration

HDD Detect.

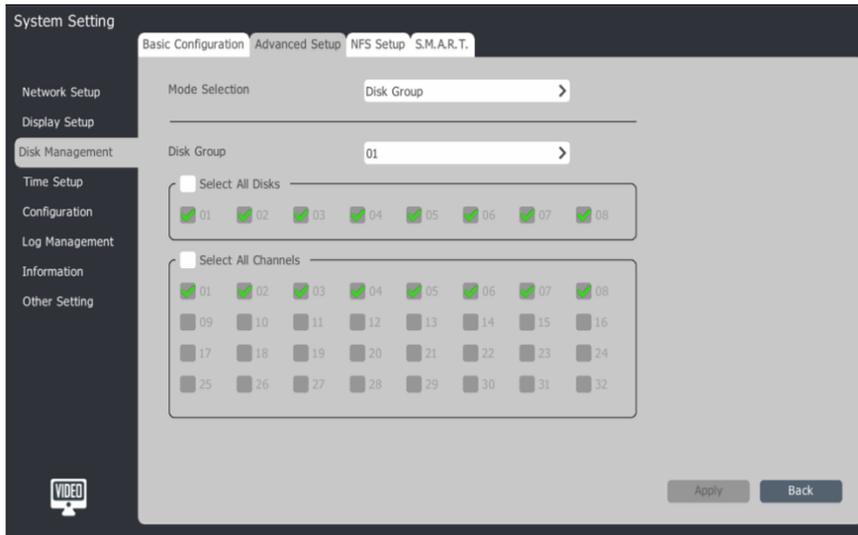
The screenshot shows a dark-themed window titled "HDD Detect". It contains two unchecked checkboxes: "Device will detect all disks after power off reboot." and "Repair damaged disks". At the bottom right, there are two buttons: "Confirm" and "Cancel".

Disk Setup:

The screenshot shows a dark-themed window titled "Disk Setup". It has two fields: "Disk Number" with a text input containing "1", and "Disk used for" with a dropdown menu. The dropdown menu is open, showing options: "R/W", "Backup", "Redundant", and "Read only". The "R/W" option is currently selected. At the bottom right, there are two buttons: "Confirm" and "Cancel".

## 4.10.2 Advanced Setup

### 1. "Disk Management"--"Advanced setup"



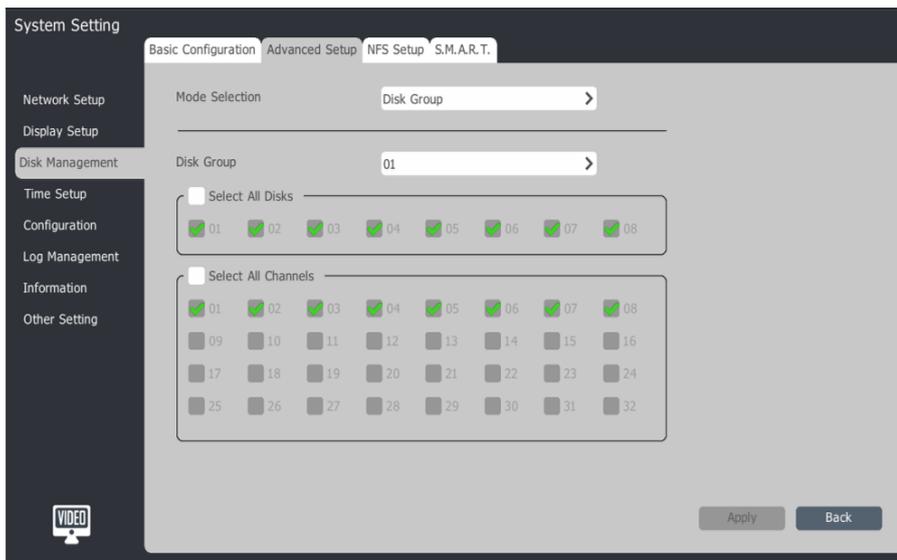
2.Mode

selection

Disk Group: you can define which disk record which channel or define which channel recorded into the targeted disk.

Quota: Set the max disk space for every channel, different channel can be set different disk space.

### 3.Disk Group



1)Choose group number (01-08)

2)Select disk number. One disk only can be selected once.

3)Select channel number.

4)Apply

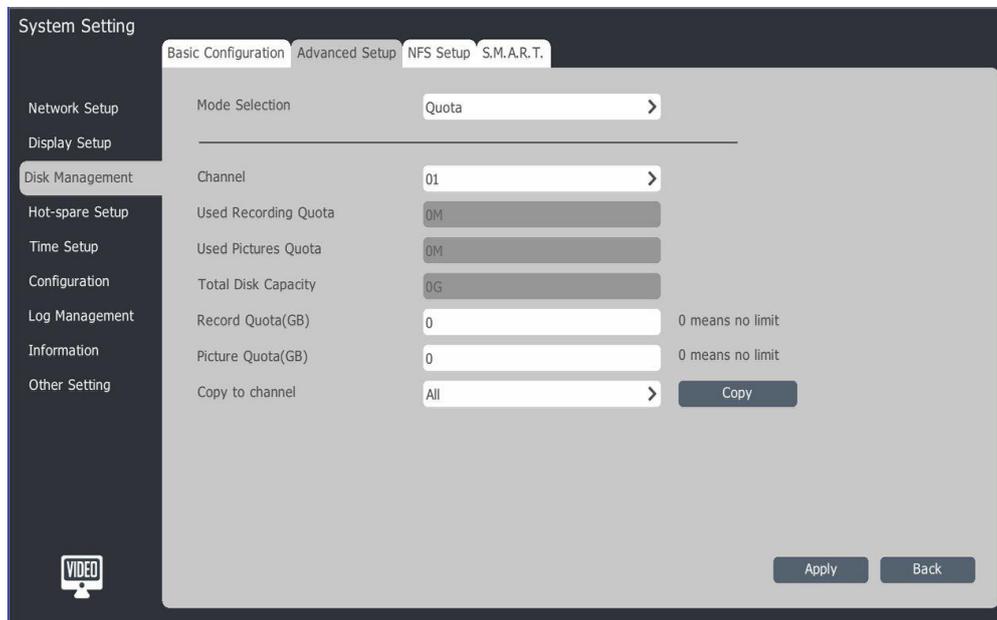


**Notes:**

Please setup 2 disk groups at least when 32 channel video input.

4.Quota

1)“Disk Management”->“Advanced Setup”→“Mode Selection”→“Quota”



2)Choose channel number.

3)Set disk space of recording file, unit is GB, 0 means unlimited.

4)Set disk space of pictures, unit is GB, 0 means unlimited.

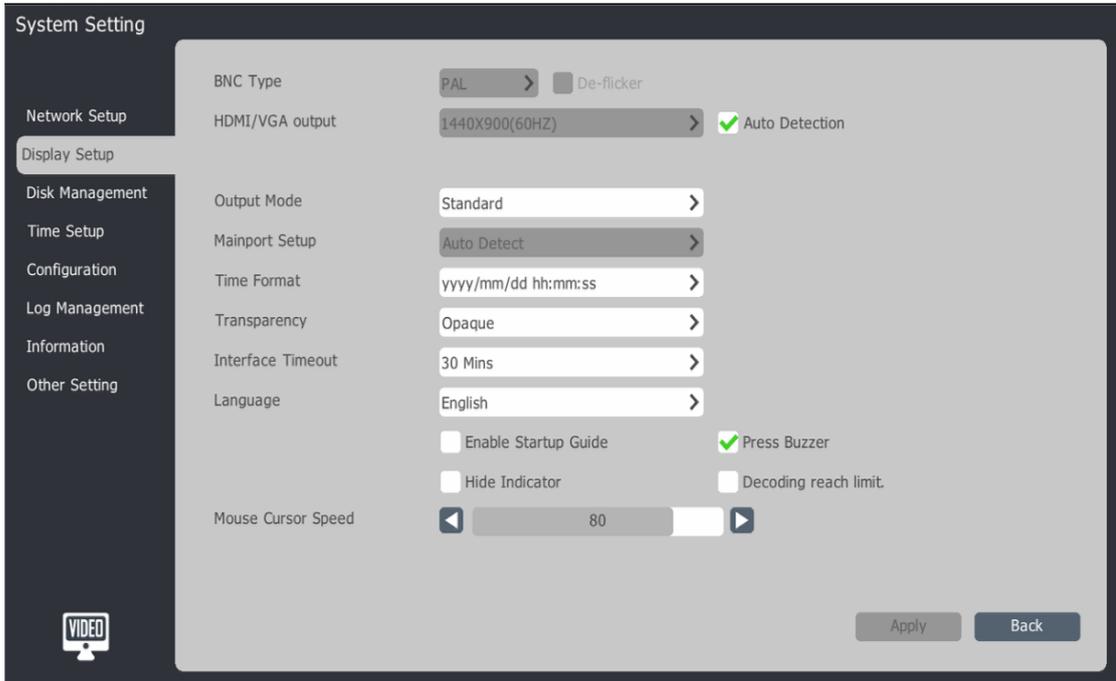
5)“Apply” for save.

---

### 4.10.3 Display Setup

Setup device display parameters.

#### 1.Main menu – system setting – display setup



#### 2.Display setup parameters instruction:

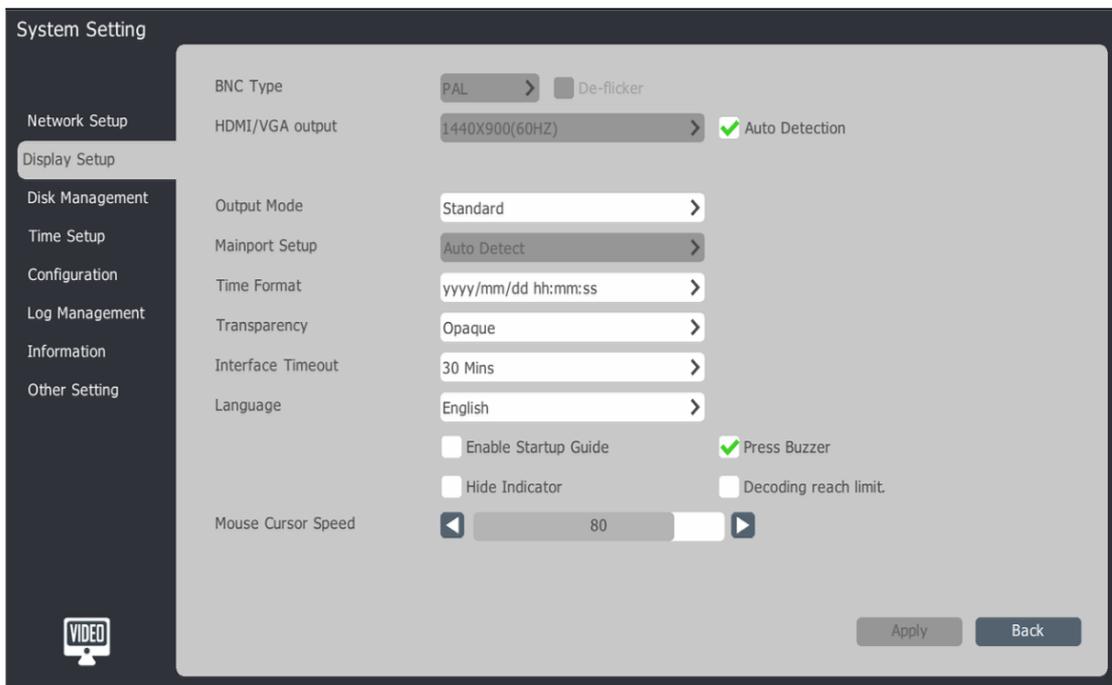
- BNC: BNC output mode, P/N optional, TC-2816AN-SR.TC-2800AN-R32-S8 support this setup.
- HDMI/VGA output: setup output device resolution
- Auto detection: auto adjust monitor best resolution
- Output mode: setup VGA output image mode, four modes optional.
- Main port setup: only TC-2816AN-SR.TC-2800AN-R32-S8 support this setup
- Time format: choose system time display format. Interface timeout: choose time of interface timeout. Language: support simple Chinese, traditional Chinese, English, Korea, Spanish, Italian, Thai, Russian, Turkish 9 languages.
- Enable startup guide: enable startup guide

- Press buzzer: setup buzzer or not when press front panel, remote controller
- Hide indicator: choose to show the record indicator and alarm indicator in preview interface.
- Decoding reach limit: choose there is tip information when device decode ability reach max limit.
- Mouse cursor speed: setup mouse speed, support 0-100 optional

#### 4.10.4 Display Setup

Setup device display parameters.

##### 1.Main menu – system setting – display setup



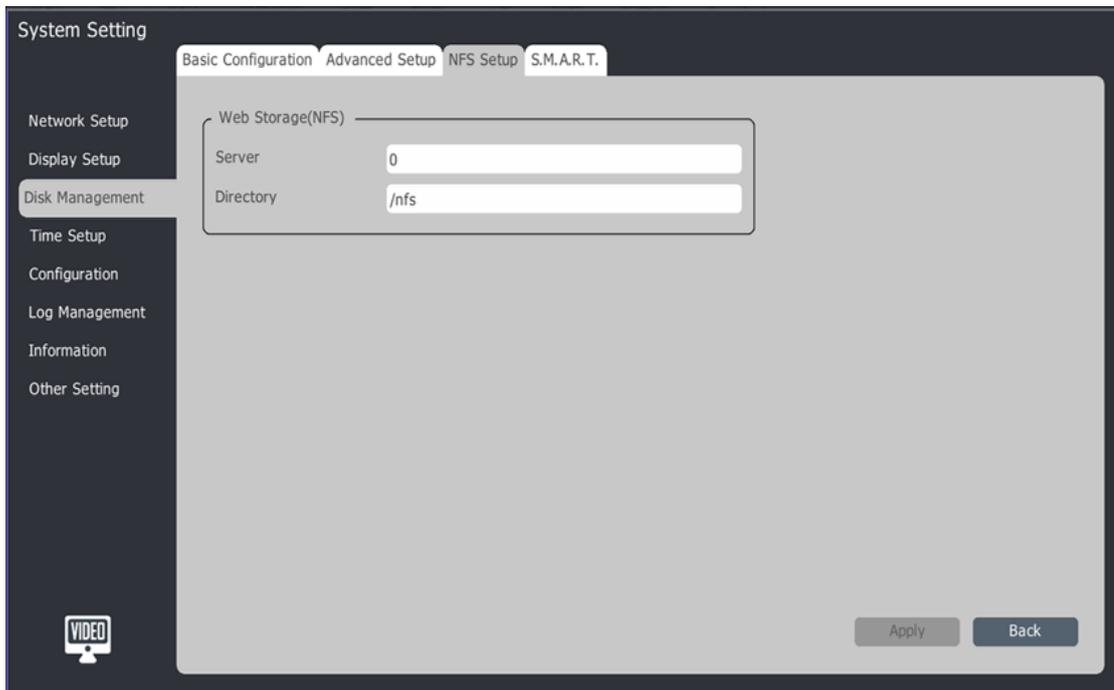
##### 2.Display setup parameters instruction:

- BNC:BNC output mode, P/N optional, TC-2816AN-SR.TC-2800AN-R32-S8 support this setup.
- HDMI/VGA output: setup output device resolution
- Auto detection: auto adjust monitor best resolution
- Output mode: setup VGA output image mode, four modes optional.

- Main port setup: only TC-2816AN-SR.TC-2800AN-R32-S8 support this setup
- Time format: choose system time display format. Interface timeout: choose time of interface timeout. Language: support simple Chinese, traditional Chinese, English, Korea, Spanish, Italian, Thai, Russian, Turkish 9 languages.
- Enable startup guide: enable startup guide
- Press buzzer: setup buzzer or not when press front panel, remote controller
- Hide indicator: choose to show the record indicator and alarm indicator in preview interface.
- Decoding reach limit: choose there is tip information when device decode ability reach max limit.
- Mouse cursor speed: setup mouse speed, support 0-100 optional

#### 4.10.5 NFS Setup

##### 1. Disk Management-->NFS Setup

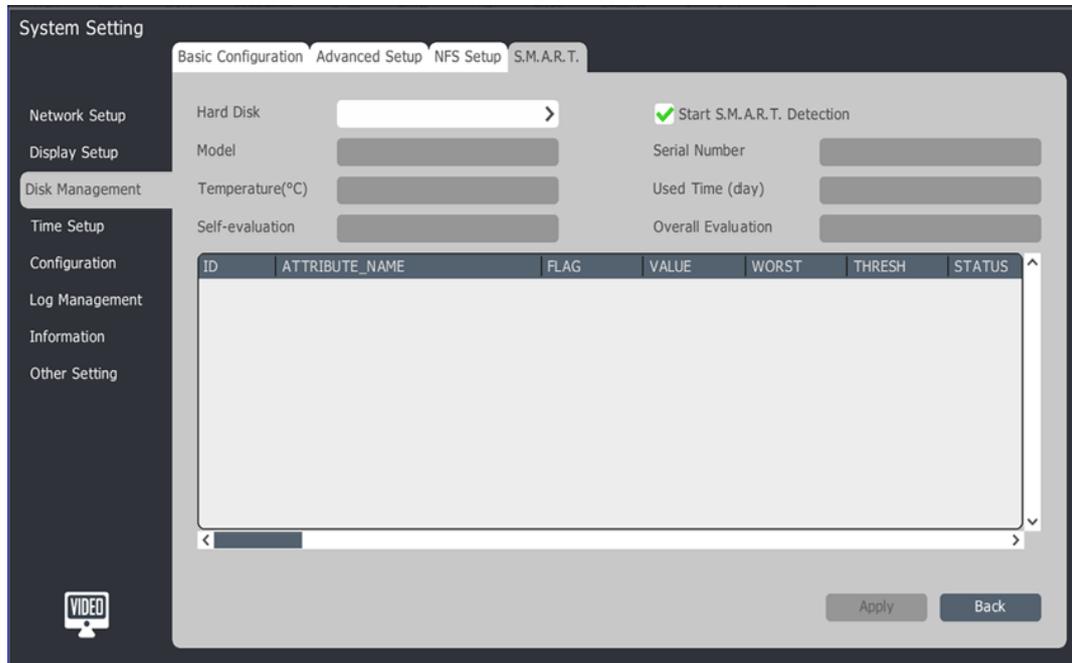


##### 2. Setup server IP address and storage path

##### 3. 【Apply】 to save the setup

## 4.10.6 S.M.A.R.T

### 1. Disk Management-->S.M.A.R.T Setup

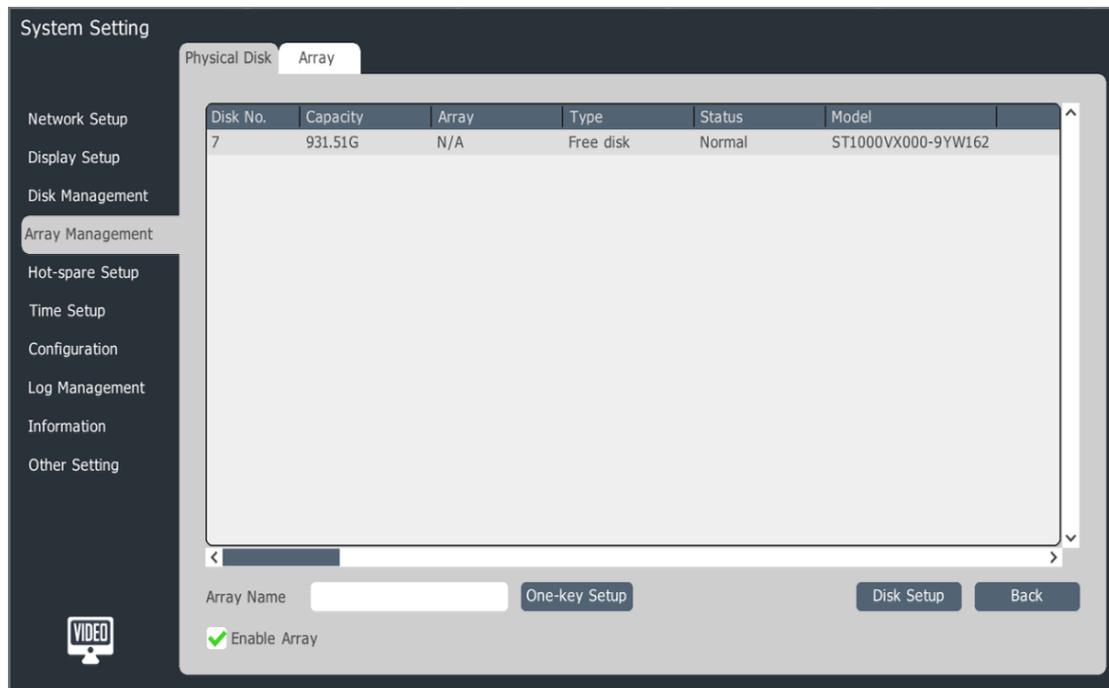


### 2. Select one hard disk

### 3. Enable **【Start S.M.A.R.T Detection】** , the information will be displayed in the list

## 4.11 Array Management

TC-NR2020M7-E8、TC-NR2040M7-E8、TC-NR2080M7-E8、TC-NR2080M7-E16、TC-NR2160M7-E16 : These models support Disk Array. As first step, array setting is necessary in the following interface:



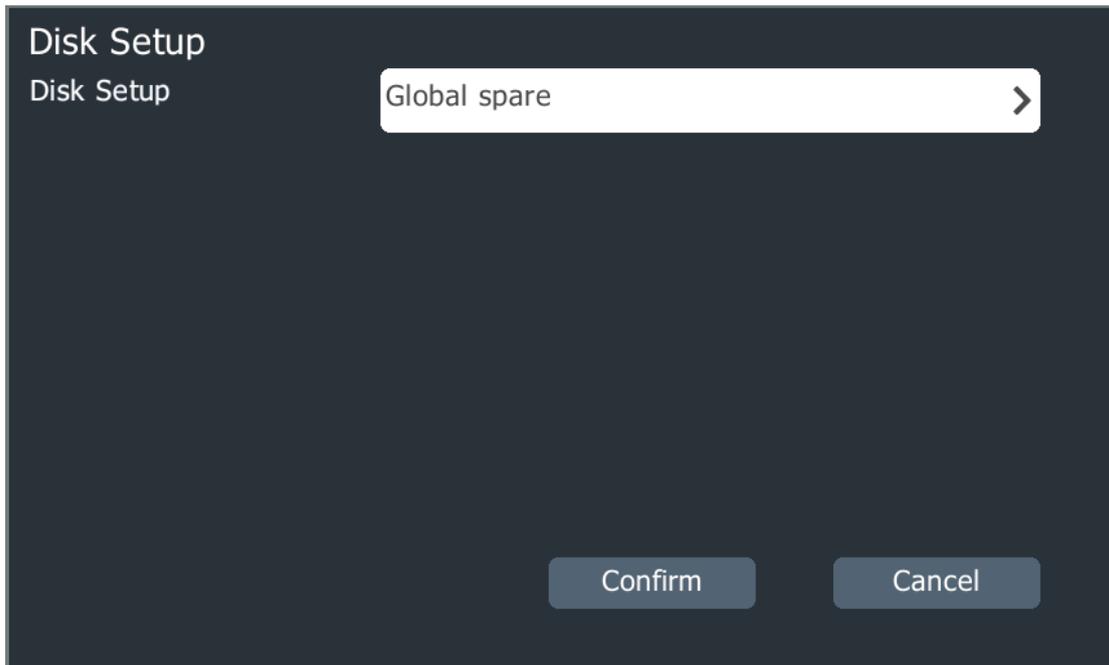
### 4.11.1 Physical Disk

This interface shows the disks' basis info such as capacity, array, type, status and model.

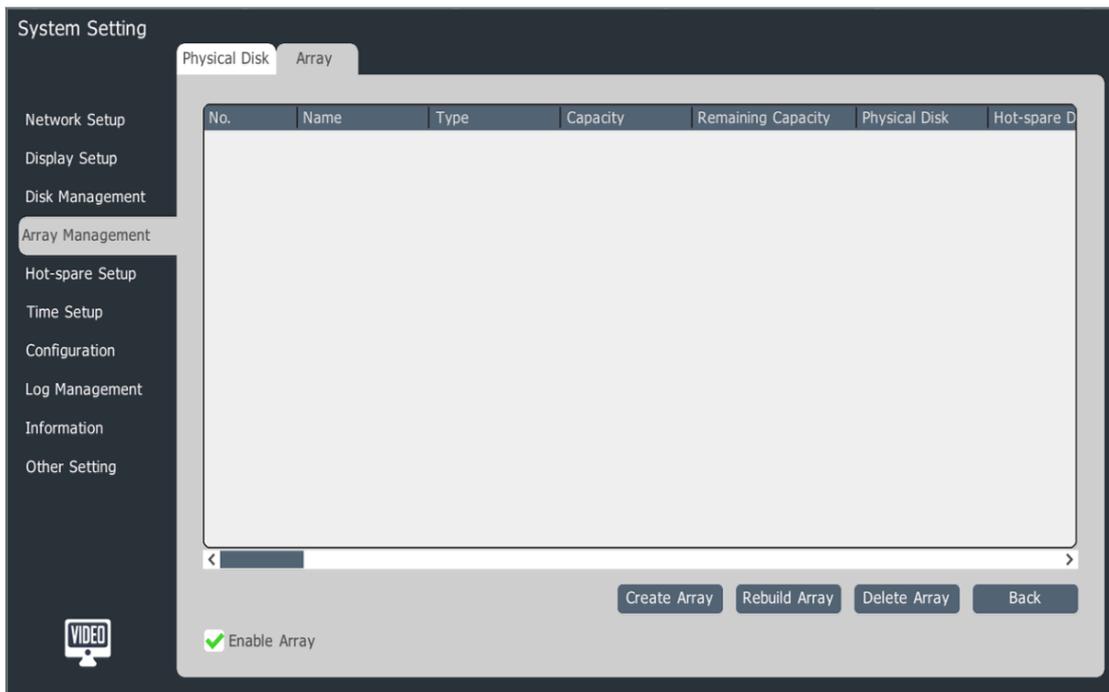
- 1 Enable Array: It will work after system reboots.
- 2 One-key setup: Input "array name", then click this button, then the system will create a array automatically.

Rule for this function: system will create a global spare disk; then if the spare disk  $\geq 4$  pcs, then Raid 5 will be created with 4 pcs disk; if the spare disk  $\geq 3$  pcs, then Raid 5 will be created with 3 pcs disk; if the spare disk  $< 3$  pcs, then all the spare disks will be kept spare disks.

- 3 Disk Setup: click this button after choosing one disk, then this disk is setted as "spare disk", "array hot spare disk" or "global spare disk".

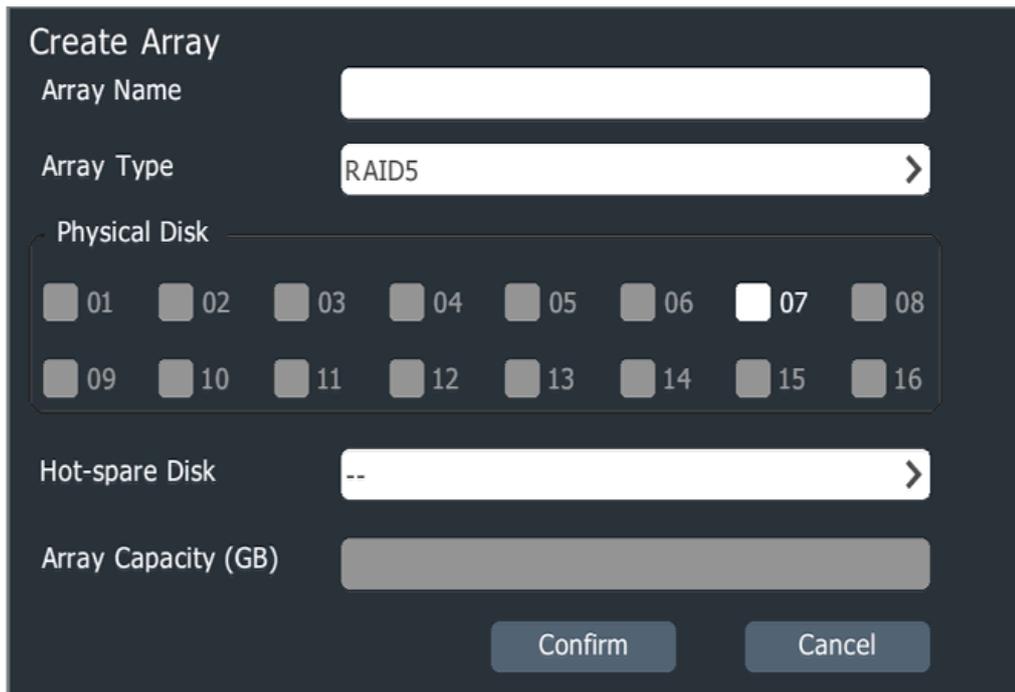


#### 4.11.2 Array Management



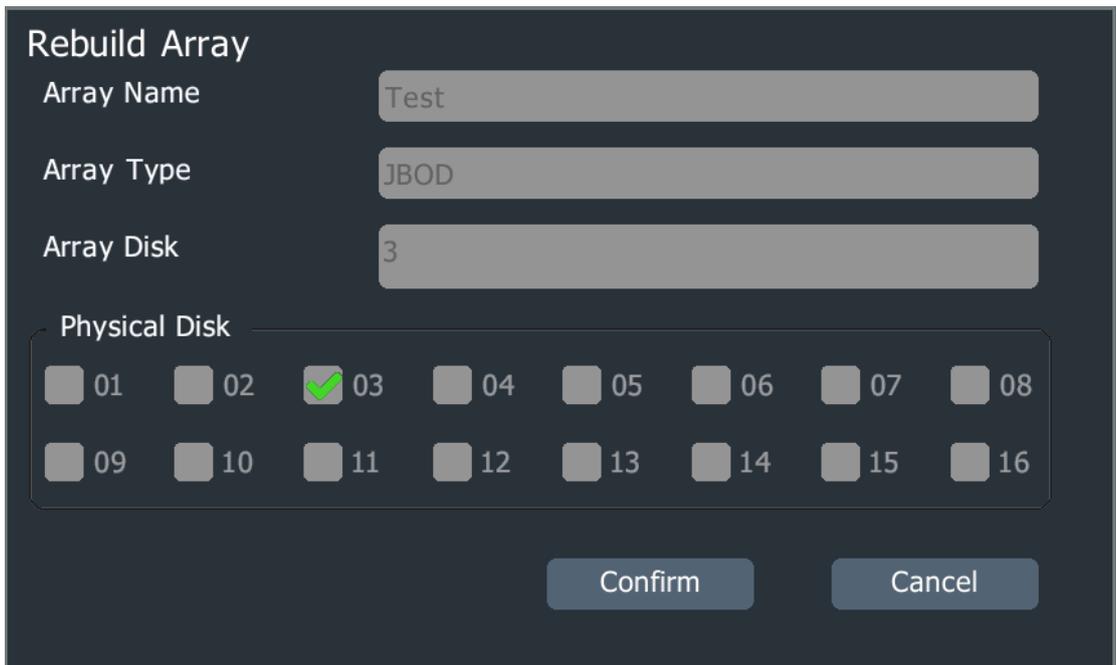
1 Click "Create Array" to enter the following interface. Array name, array type, physical Disk NO. And hot spare disk info are necessary for creating array.

---



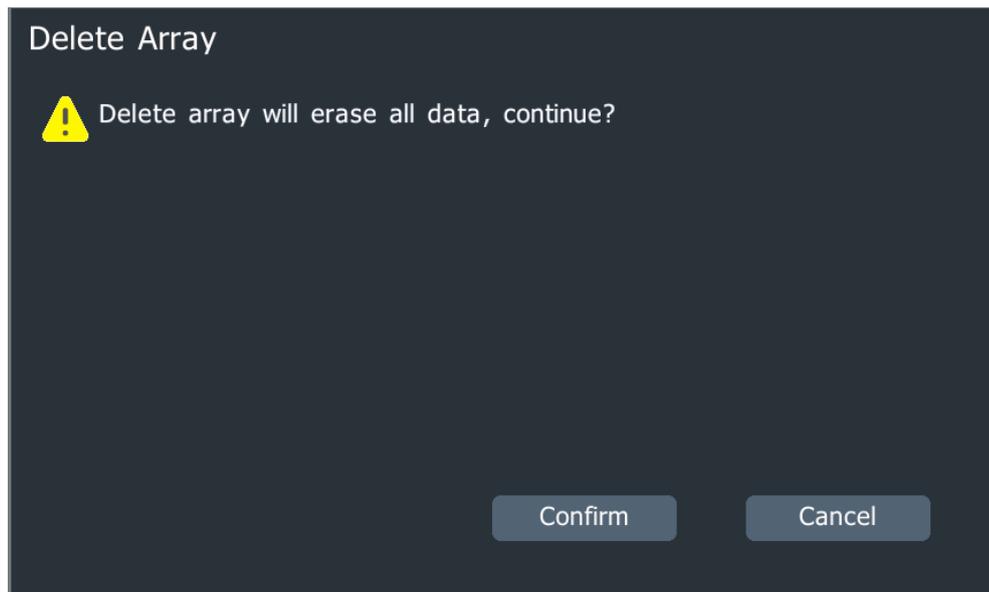
The 'Create Array' dialog box features a dark background with white text. It includes a text input for 'Array Name', a dropdown menu for 'Array Type' set to 'RAID5', a 'Physical Disk' selection area with 16 numbered checkboxes (01-16) where 07 is selected, a 'Hot-spare Disk' dropdown menu set to '--', and a 'Array Capacity (GB)' slider. At the bottom are 'Confirm' and 'Cancel' buttons.

2 Rebuild Array: choose another physical disk to replace the current one.



The 'Rebuild Array' dialog box has a dark background with white text. It includes a text input for 'Array Name' containing 'Test', a dropdown menu for 'Array Type' set to 'JBOD', a text input for 'Array Disk' containing '3', and a 'Physical Disk' selection area with 16 numbered checkboxes (01-16) where 03 is checked with a green checkmark. At the bottom are 'Confirm' and 'Cancel' buttons.

3 Delete Array: Choose one disk from disk list to delete.



#### **4.12 Hot-spare**

Note: 4/8ch and PSE NVR don't support hot-spare.

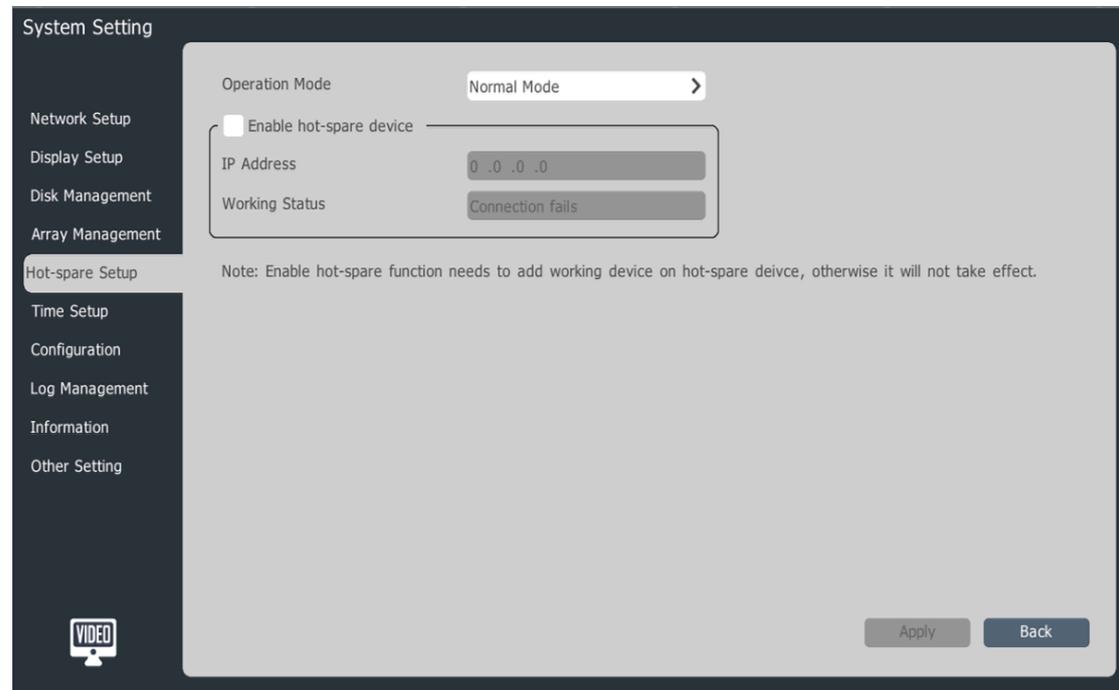
Enable hot-spare system, when one of the NVR has problem, the system will switch to standby NVR to ensure continuing records.

The hot-spare system is made of several working NVRs and one standby NVR. When standby NVR detect one of the working NVRs is offline, it will connect with IP Cameras actively and continue recording; When the working NVR is online, the standby NVR will disconnect with IP cameras actively and upload the backup records to the working NVR.

---

## 4.12.1 Working NVR Setup

### 1. Main Menu→System Setting→Hot-spare Setup



2. Operation Mode: Please select "Normal Mode"

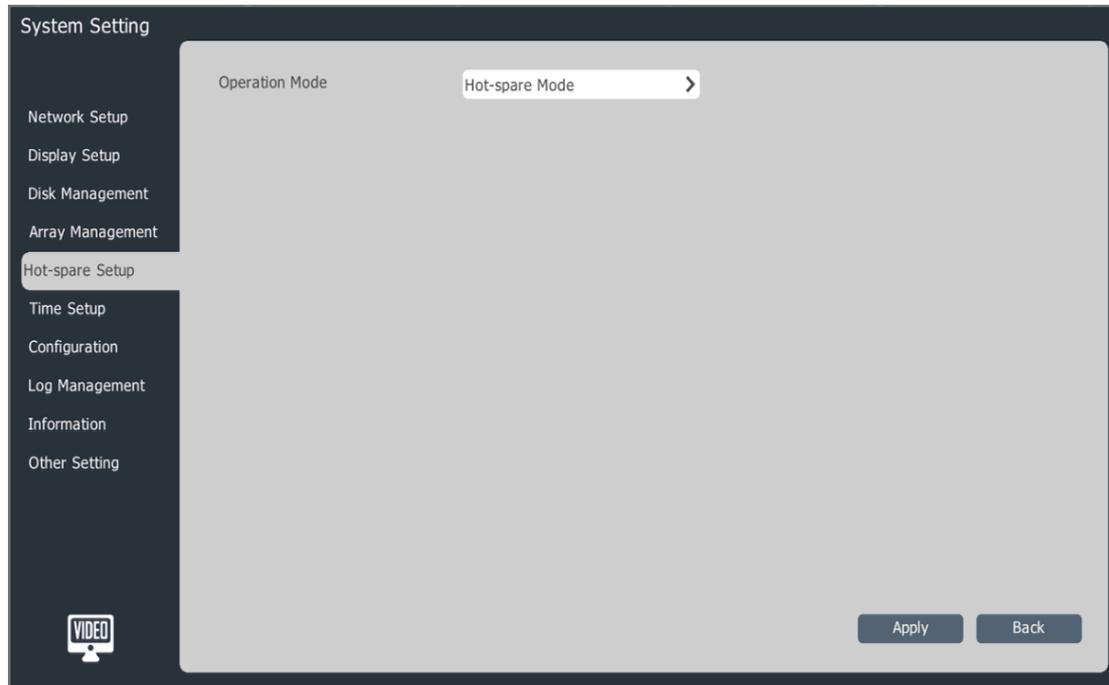
3. Enable hot-spare device, setup standby NVR IP address, and click apply to save

4. When standby NVR and working NVR are connected successfully, the working status will update to "Connection Success"; When standby NVR upload backup records actively, the working status will update to "In synchronous".

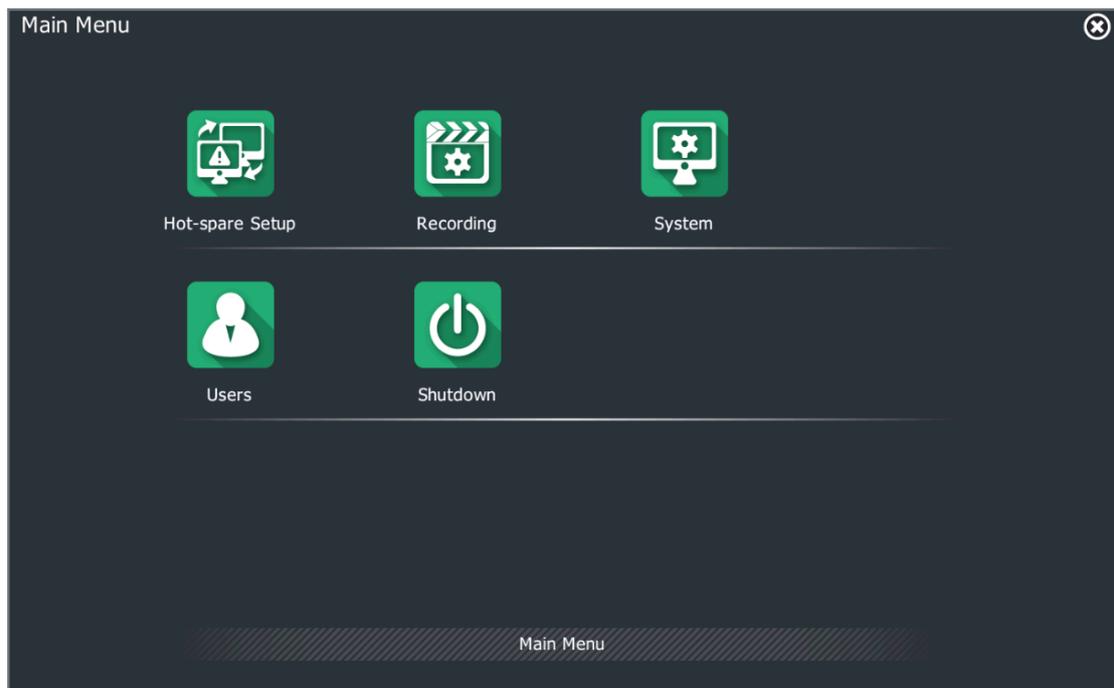
---

### 4.12.2 Standby NVR Setup

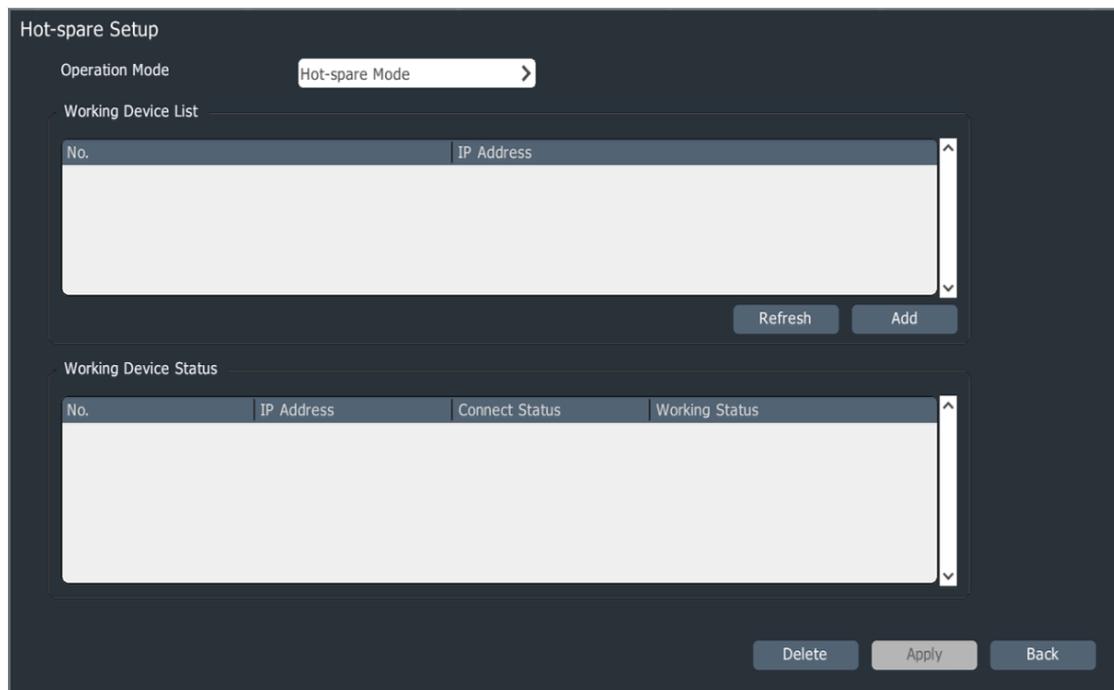
1. Main Menu→System Setting→Hot-spare Setup
2. Operation Mode: Please select “Hot-spare Mode”



3. Click “Apply” and the NVR need to restart
4. The standby NVR menu will be different from normal NVR, only have the necessary setup and functions.



5. Main Menu→System Setting→Hot-spare Setup



6. Select the working NVRs in the list

---

7. "Add" the working NVR need login it with user name and password.

"Working Device Status" will display the working NVR IP address and connection status.

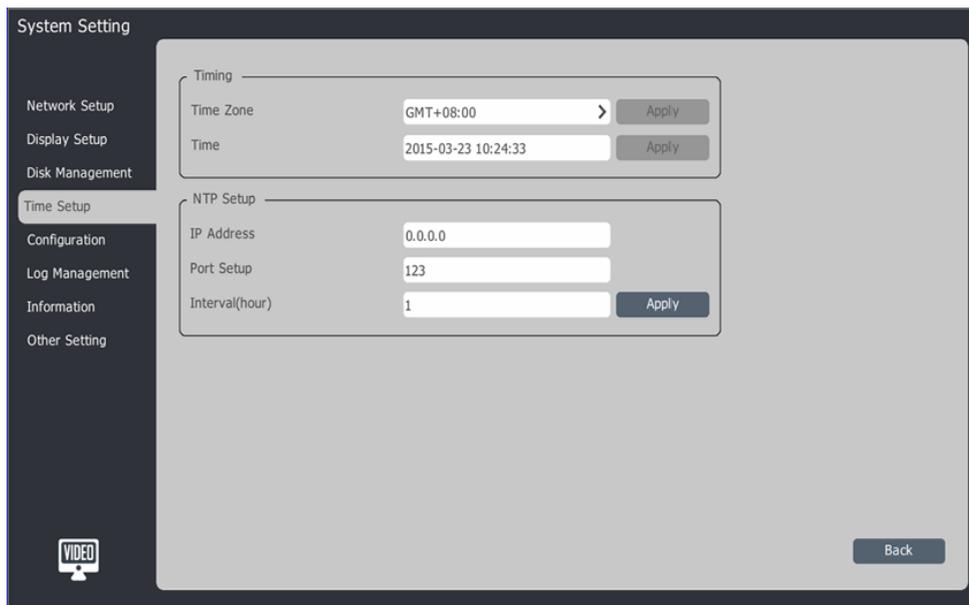
8. Click "Apply" to save the settings.

9. Select "Normal Mode" on "Operation Mode" to switch to working NVR.

Note: After standby NVR is switched to working NVR, it needs to restore default settings manually.

### 4.13 Time Setup

Setup system time, timing and NTP.



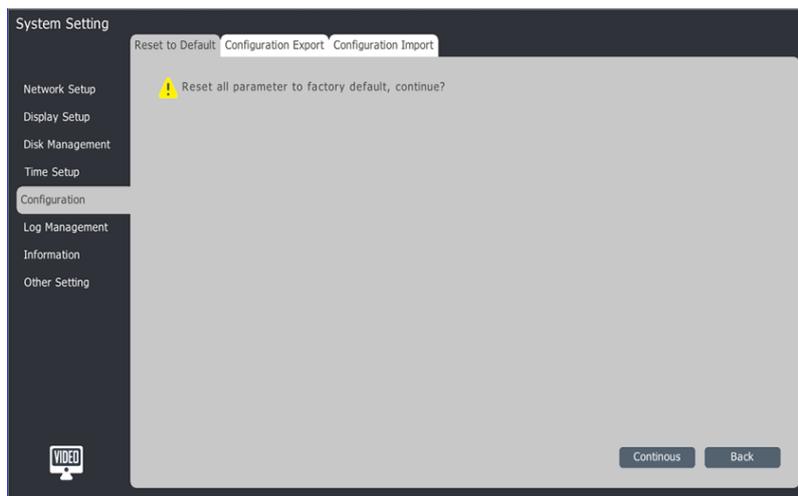
Modify system time zone and time, click "apply" to save the settings.

NTP setup: input NTP server address, port and interval time

### 4.14 Configuration

#### 4.14.1 Reset to Default

【Continue】 to reset all parameter to factory default

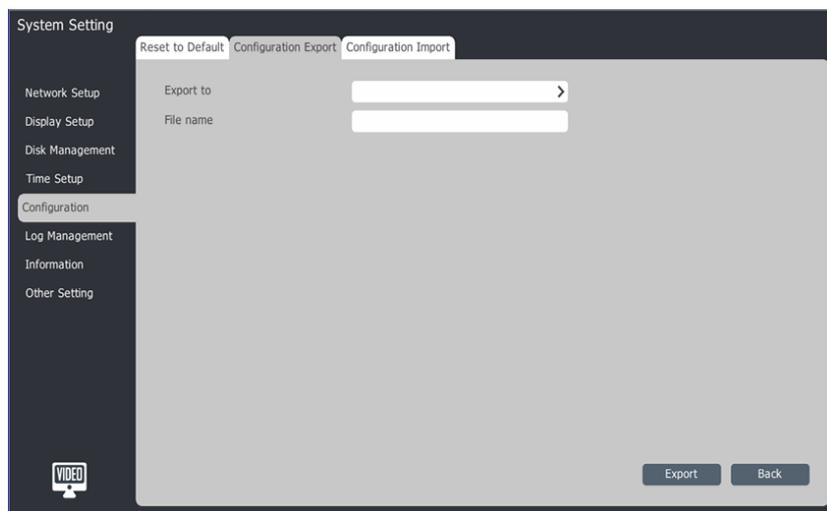


**Note:**The NVR will auto restart after resetting to default

#### 4.14.2 Configuration Export

【Export to】 select export save path

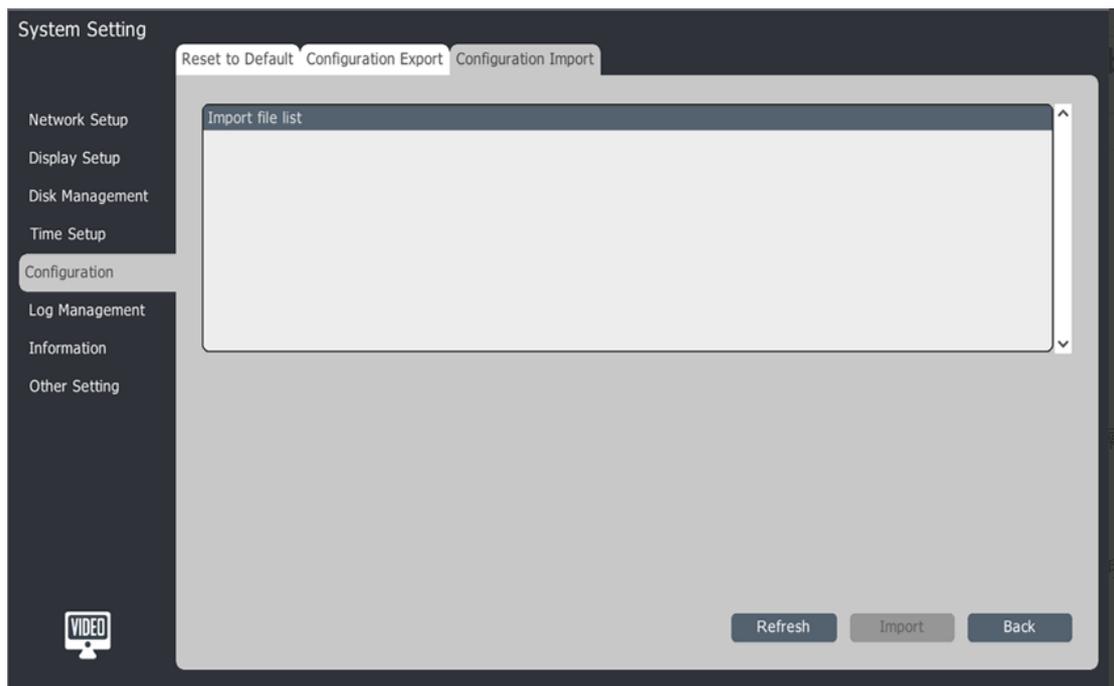
【File name】 name the export file



#### 4.14.3 Configuration Import

【Refresh】 to check the import file list

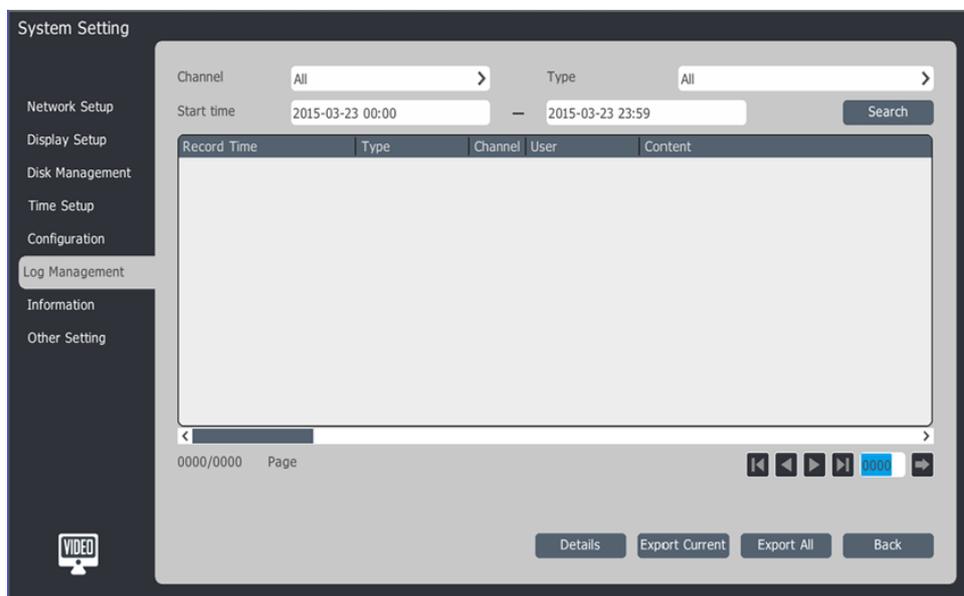
【Import】 to import the configuration



 **Note:**The NVR will auto restart after importing

#### 4.15 Log Management

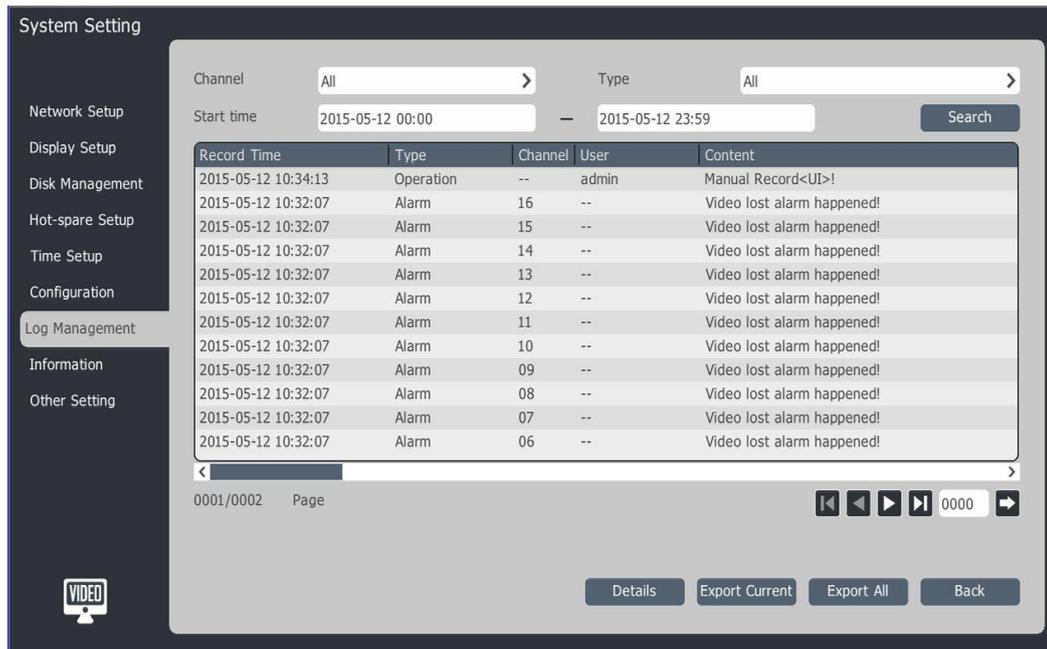
1. Search the log via **【Channel】** , **【Type】** and **【Start Time】**



2.  First page  Previous page

 Last page  Next page

 Enter page No. and turn to that page



System Setting

Channel: All Type: All

Start time: 2015-05-12 00:00 - 2015-05-12 23:59 Search

Record Time	Type	Channel	User	Content
2015-05-12 10:34:13	Operation	--	admin	Manual Record<UI>!
2015-05-12 10:32:07	Alarm	16	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	15	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	14	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	13	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	12	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	11	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	10	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	09	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	08	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	07	--	Video lost alarm happened!
2015-05-12 10:32:07	Alarm	06	--	Video lost alarm happened!

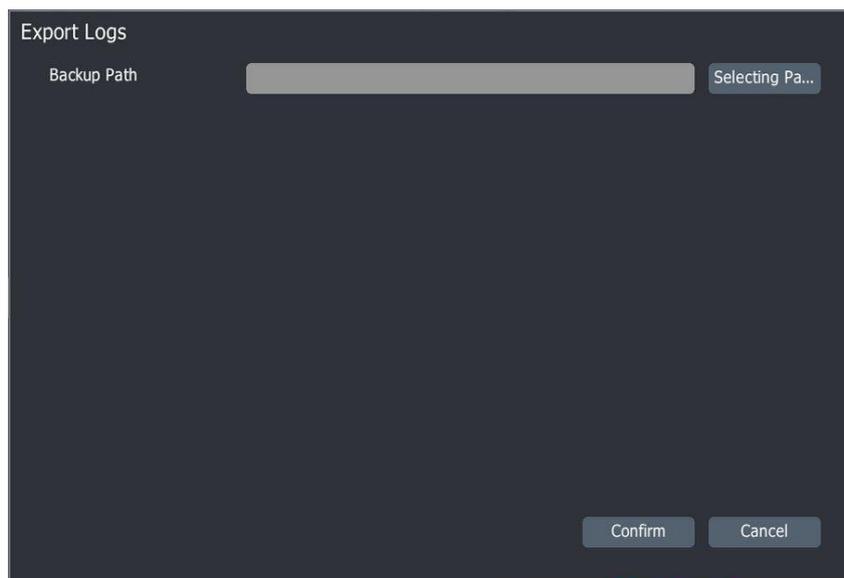
0001/0002 Page 

VIDEO

Details Export Current Export All Back

### 3. Log export

Select **【Export Current】** or **【Select All】** to export the logs, then select backup path



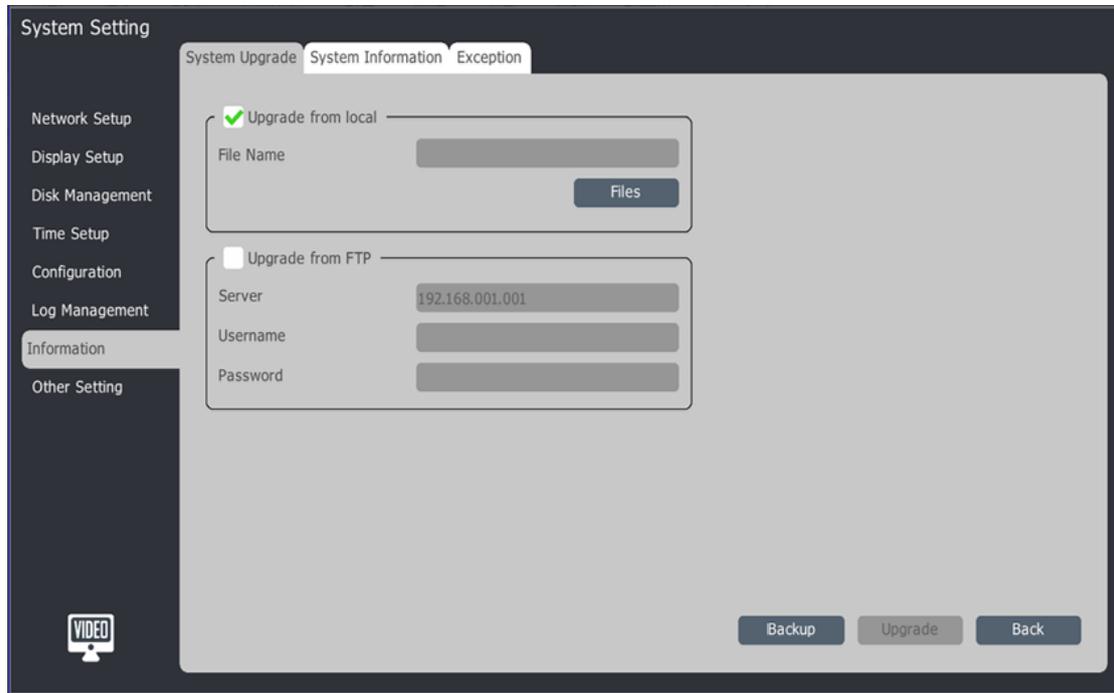
Export Logs

Backup Path  Selecting Pa...

Confirm Cancel

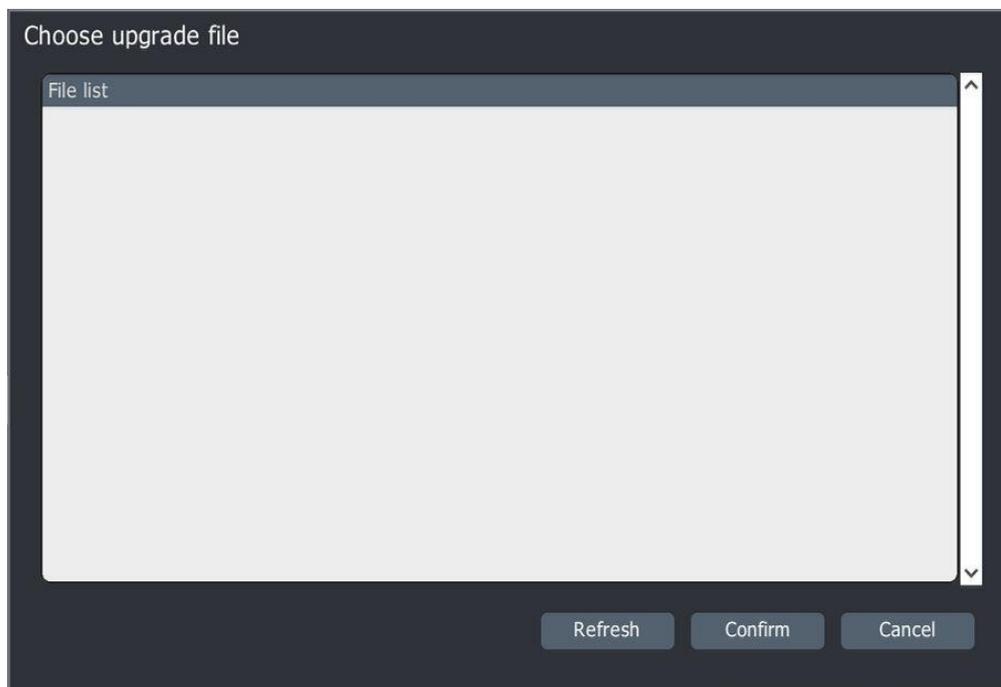
## 4.16 Information

### 4.16.1 System Upgrade



The screenshot shows the 'System Setting' interface with the 'System Upgrade' tab selected. On the left, a sidebar lists various settings: Network Setup, Display Setup, Disk Management, Time Setup, Configuration, Log Management, Information (highlighted), and Other Setting. The main area has three tabs: 'System Upgrade', 'System Information', and 'Exception'. Under 'System Upgrade', there are two options: 'Upgrade from local' (checked) and 'Upgrade from FTP' (unchecked). The 'Upgrade from local' option has a 'File Name' input field and a 'Files' button. The 'Upgrade from FTP' option has input fields for 'Server' (containing '192.168.001.001'), 'Username', and 'Password'. At the bottom right, there are 'Backup', 'Upgrade', and 'Back' buttons. A 'VIDEO' logo is visible in the bottom left corner.

Upgrade from local: select local firmware files



The screenshot shows a 'Choose upgrade file' dialog box. It has a title bar and a 'File list' area which is currently empty. At the bottom, there are three buttons: 'Refresh', 'Confirm', and 'Cancel'.

Upgrade from FTP: enter server IP, Username and Password

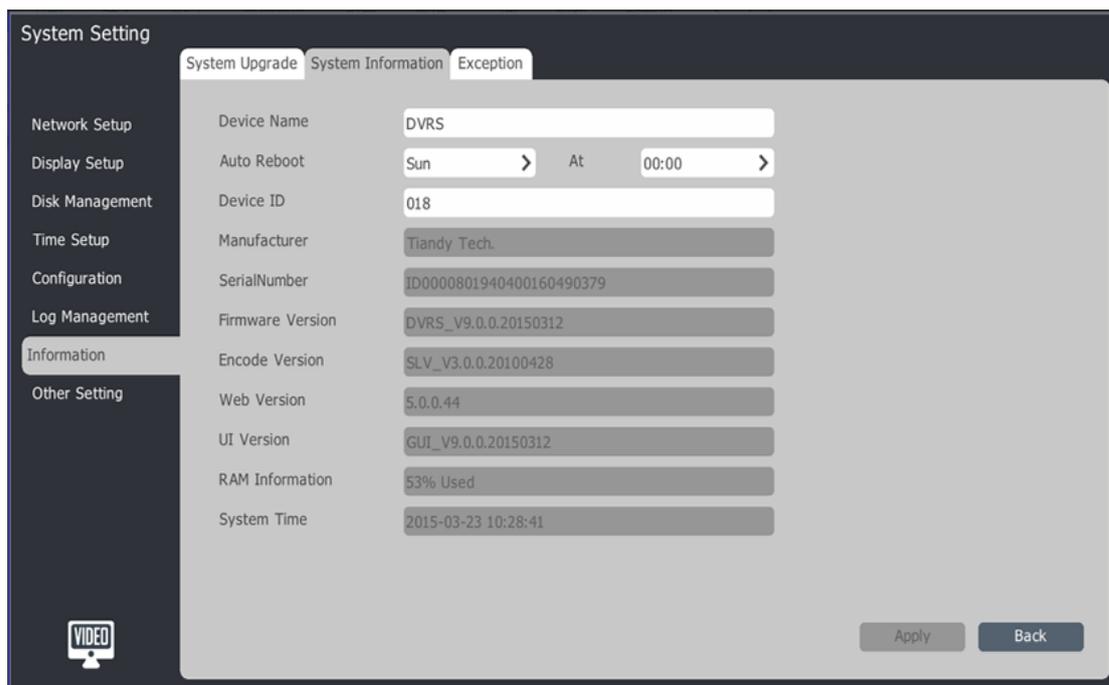


 **Note:**

- The NVR will auto restart after upgrading.
- If upgrade failed or can't work after restart, please contact supplier soon.
- The NVR is dual system, the kernel files may need upgrade twice, please select backup firmware

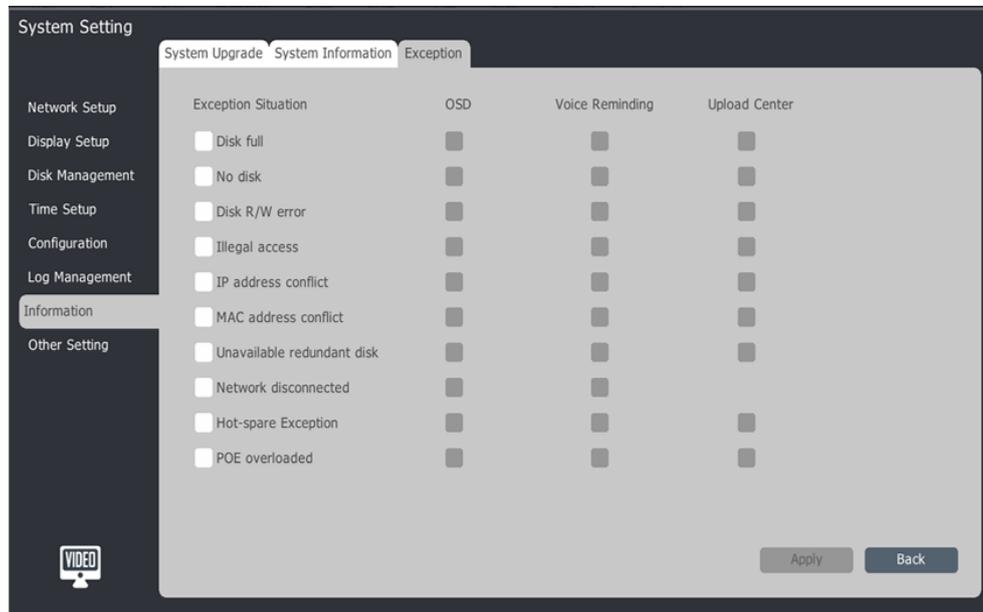
#### 4.16.2 System Information

Check **【Device Name】** , **【Device ID】** , **【Firmware Version】** , **【UI version】** , etc., also can set **【Auto Reboot】** time to maintenance regularly.



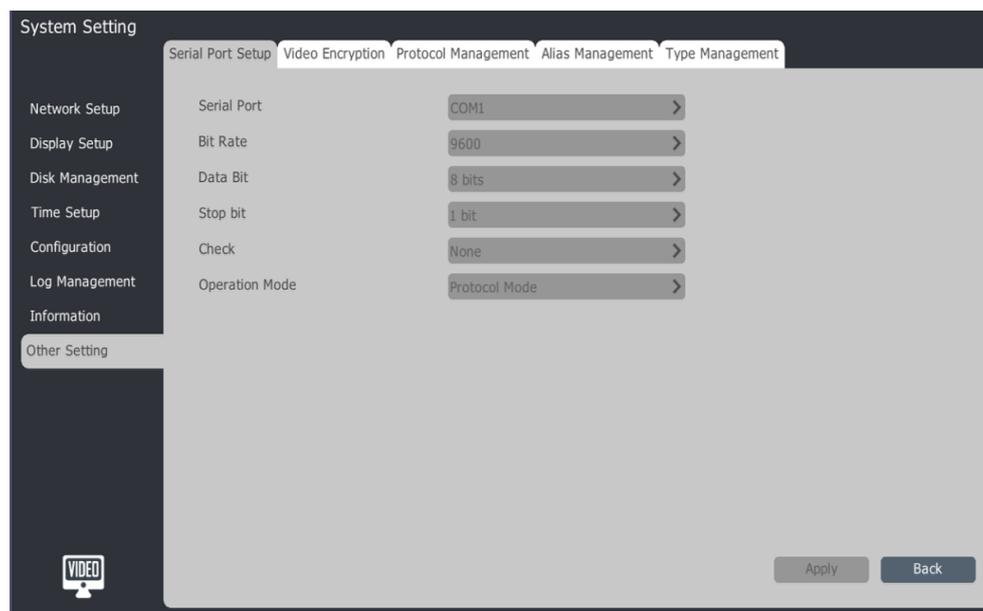
### 4.16.3 Exception

There are ten exception situation, such as **【Disk Full】**, **【No Disk】**, **【Disk R/W error】**, etc., and you can select to active **【OSD】**, **【Voice Reminding】** and **【Upload Center】** when it happens.



### 4.17 Other Setting

Setup serial port, video encryption, protocol management, alias management and type management.

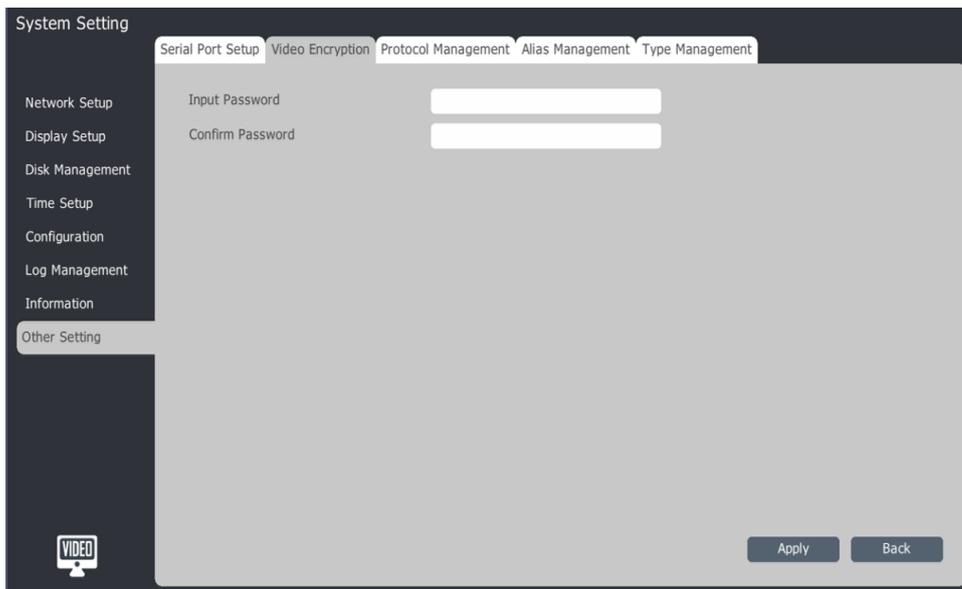


### 4.17.1 Serial port

Setup device serial port, bit rate, data bit, stop bit, check and operation mode.

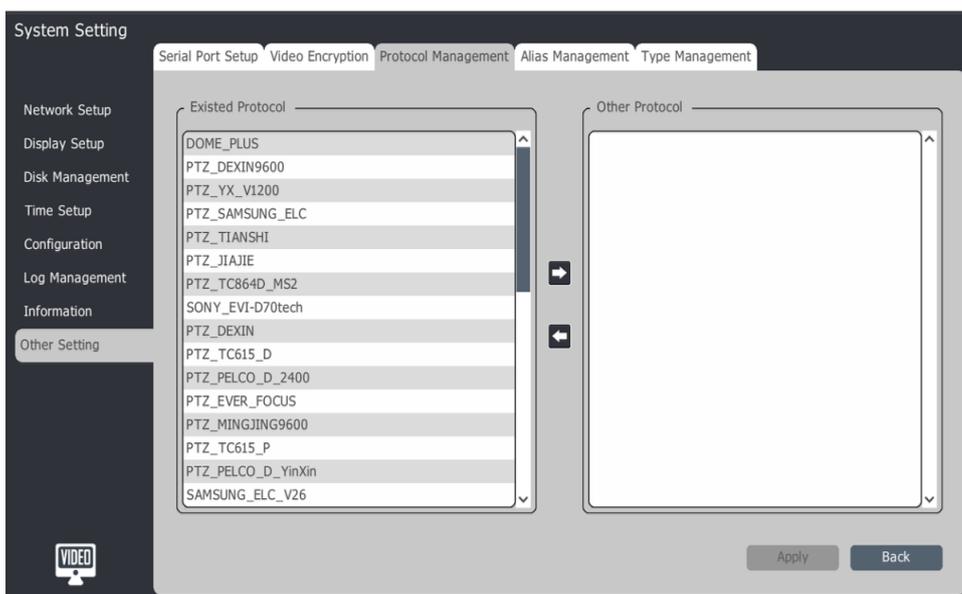
### Video encryption

Setup video encryption password



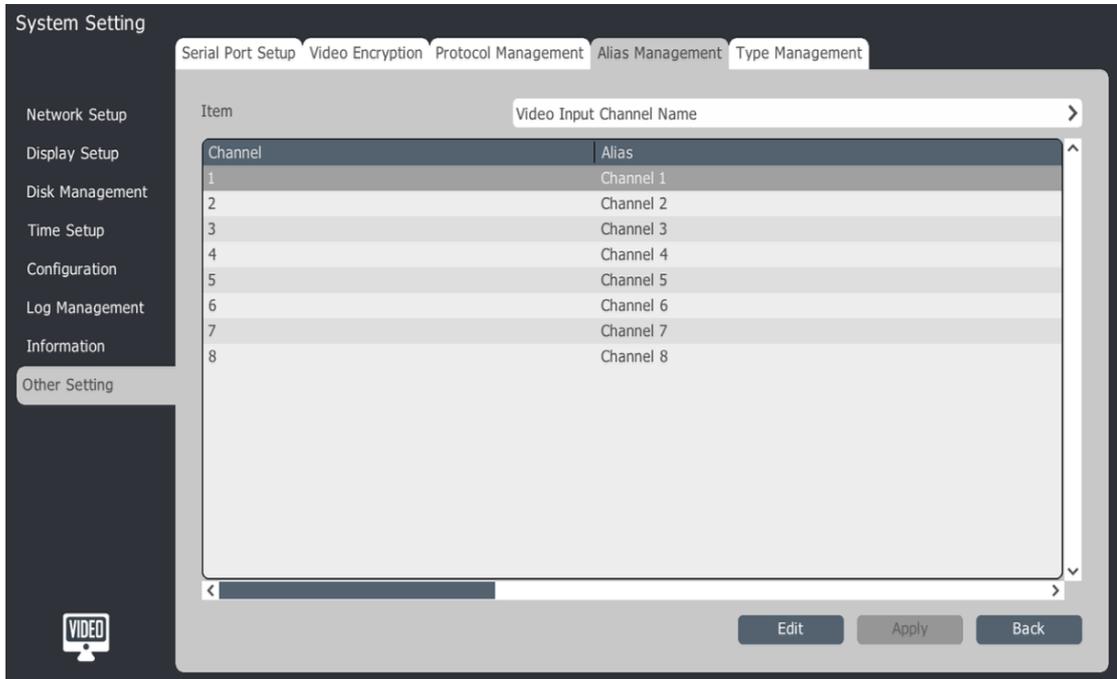
### 4.17.2 Protocol management

Setup and add device protocol



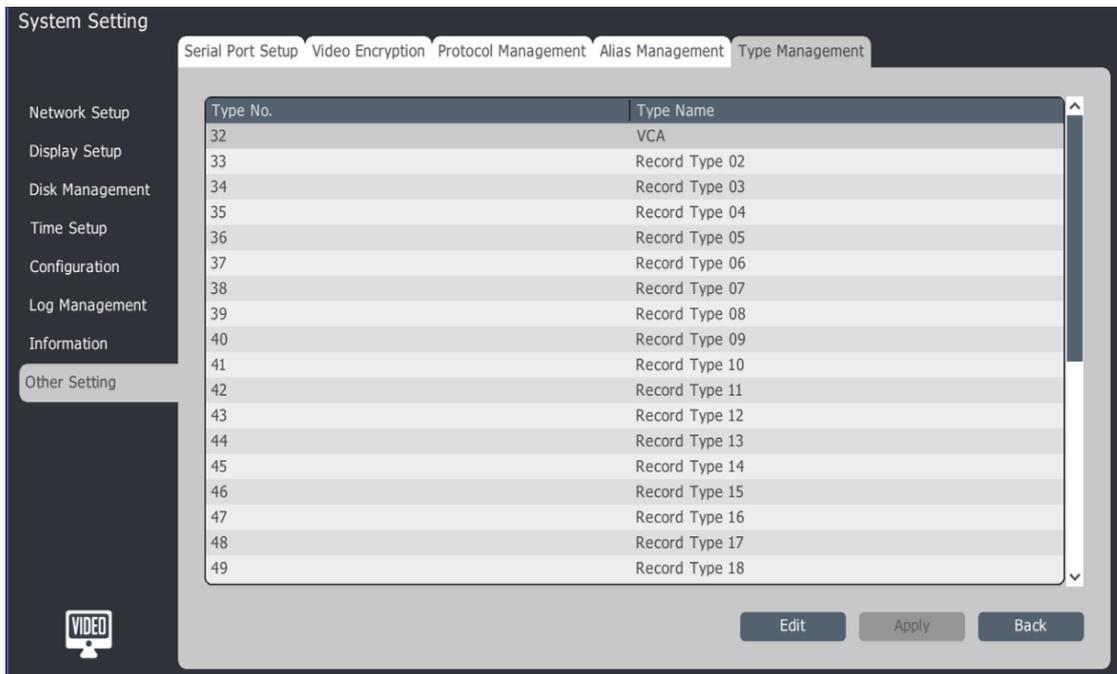
### 4.17.3 Alias management

Setup channel's alias



### 4.17.4 Type management

Setup record type name.

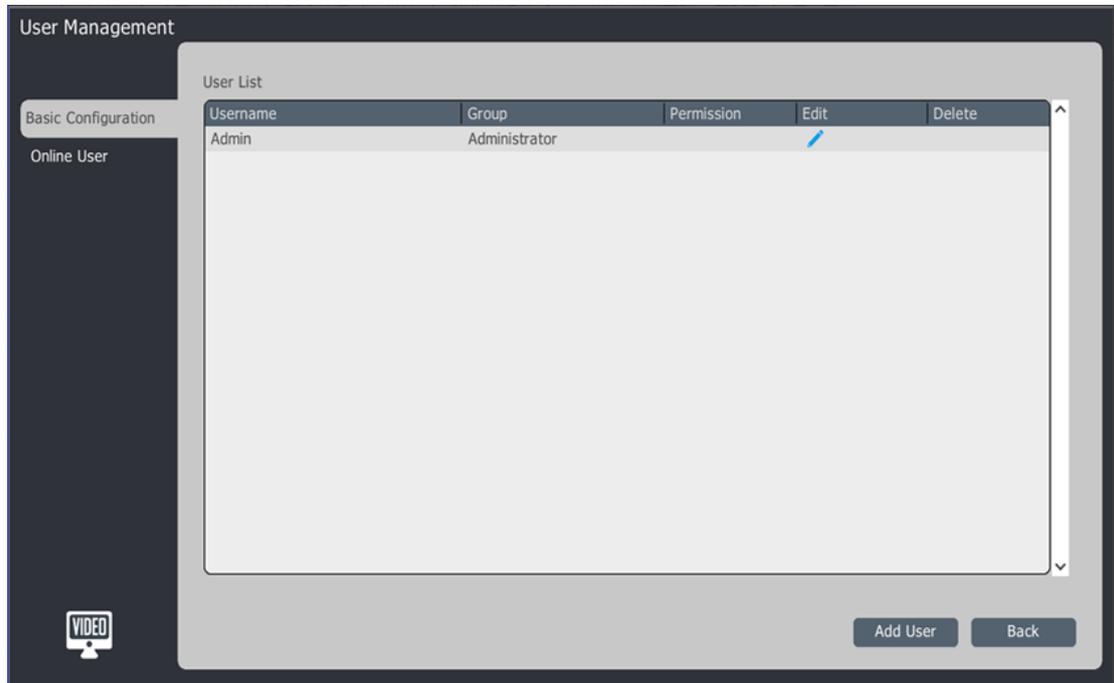


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## 4.18 User Management

### 4.18.1 Add User

Main Menu-->User Management-->Basic Configuration



**【Add User】** : Select **【Group】** -->Enter **【Account】** and **【Password】**

The 'Add User' form is displayed on a dark background. It contains the following fields and controls:

- Add to Group**: A dropdown menu currently showing 'Guest' with a right-pointing arrow.
- Username**: A text input field.
- Password**: A text input field.
- Password Confirm**: A text input field.

At the bottom right of the form are two buttons: 'Confirm' and 'Cancel'.



**Note:**

- Add up to 31 users
- There are four groups, "Normal User", "Special User", "Super User" and "Administrator", and the authorization are different as well:

Normal User:Preview

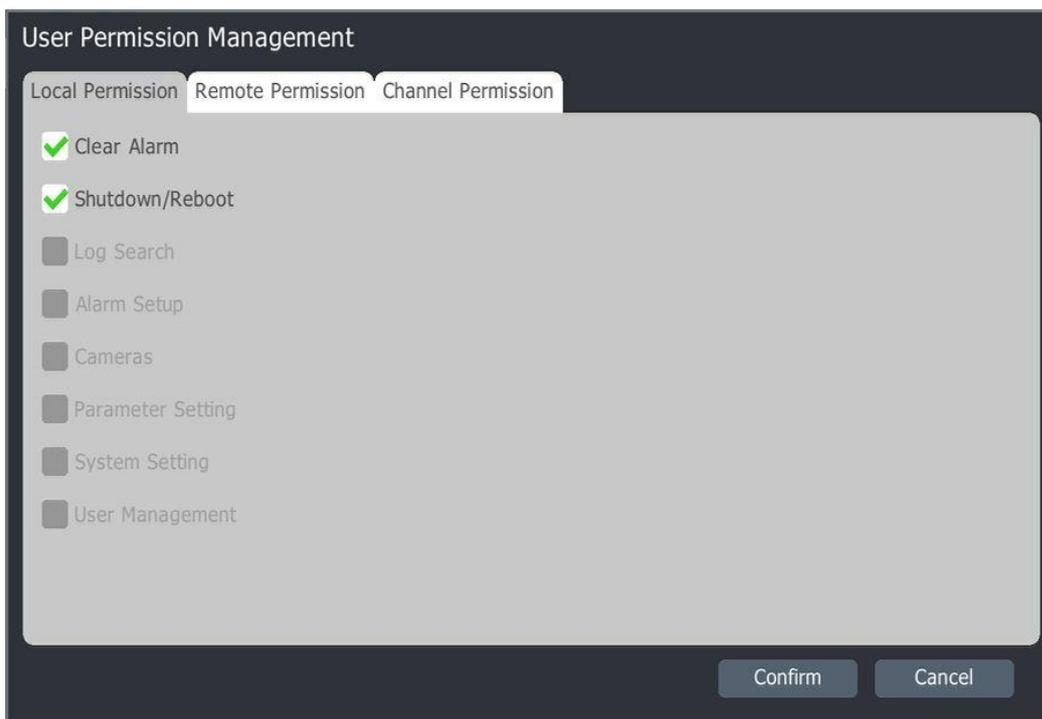
Special User:Preview + Control

Super User:Preview + Control + Setup

Administrator:Preview + Control + Setup + User Management

#### 4.18.2 User Authority Management

1. Select  in the user list to edit user authority



2. Authority Instruction:

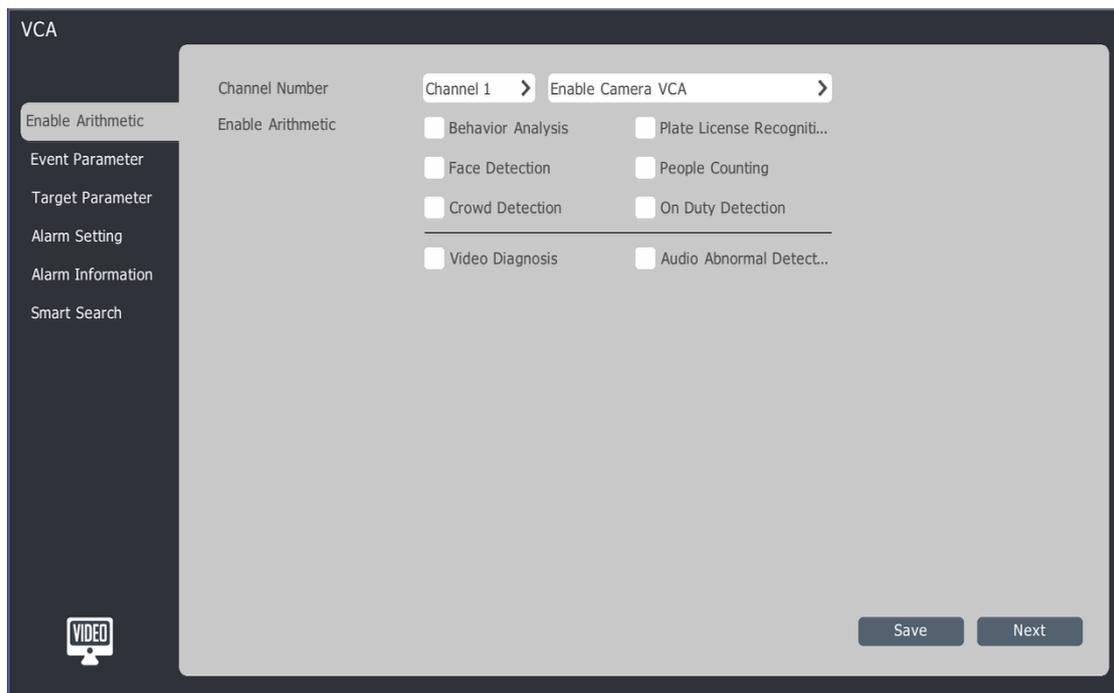
- 1) Local:Manual disalarm, shutdown/restart, log search, alarm setup, channel management, parameter setup, system setup and user management

2) Remote: Manual disalarm, shutdown/restart, log search, alarm setup, channel management, parameter setup, system setup and user management

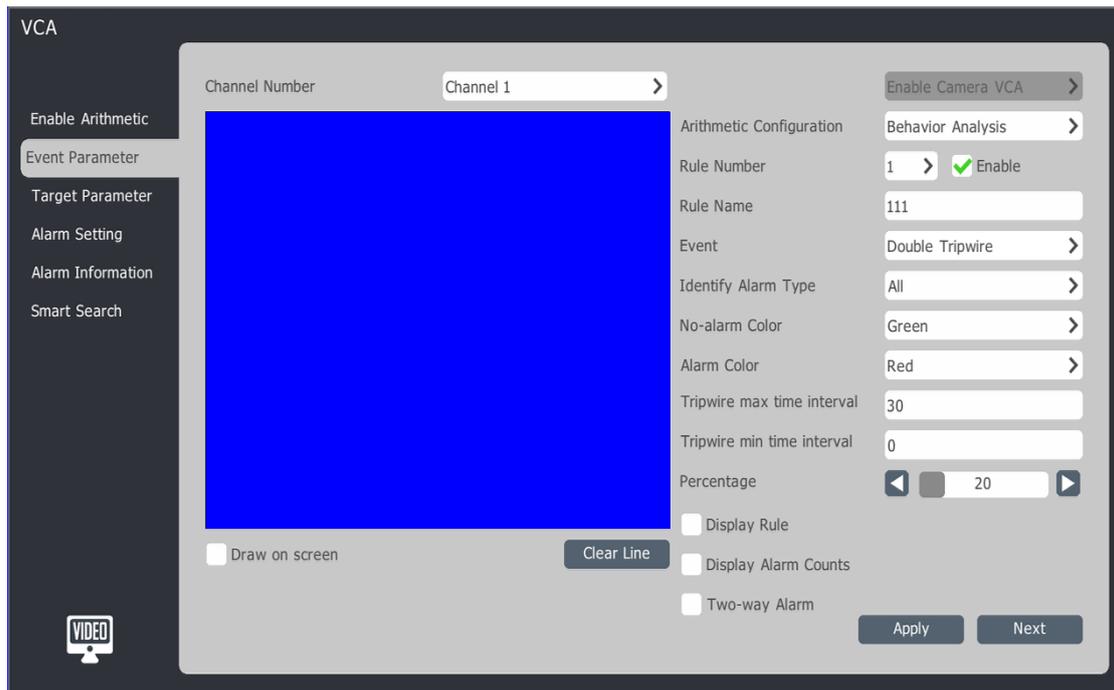
3) Channel:remote preview, local playback/ capture preview, remote playback/ capture preview, local/remote PTZ control

#### 4.19 VCA

1. Main menu-VCA-enable arithmetic



2. Main-VCA-event parameter



3 Select channel need setup.

4.Enable VCA, user can choose enable local VCA or IPC VCA.



**instructions:**

- Only standard NVR series (16 channel with 8HDD, 32 channel with 8HDD) and POE NVR (16 channel with 4HDD) support 2 channel local VCA.

4.VCA parameters setup:

- Rule number: choose VCA rule, every channel max support 8 rules..
- Enable: enable the rule.
- Rule name: setup rule name.
- Event: choose VCA mode, include tripwire, perimeter, object missing and video diagnosis etc.
- Identify alarm type: include all, people, car , people and car etc.
- No-alarm color: setup border color without alarm.
- Alarm color: setup border color with alarm.

- 
- Display rule: display rule information on screen.
  - Display alarm counts: display alarm accounts on screen.

5. Draw on screen: enable it and draw rule area on small screen, click "clear line" to clear rules on screen.

6. Click next to setup target parameter.

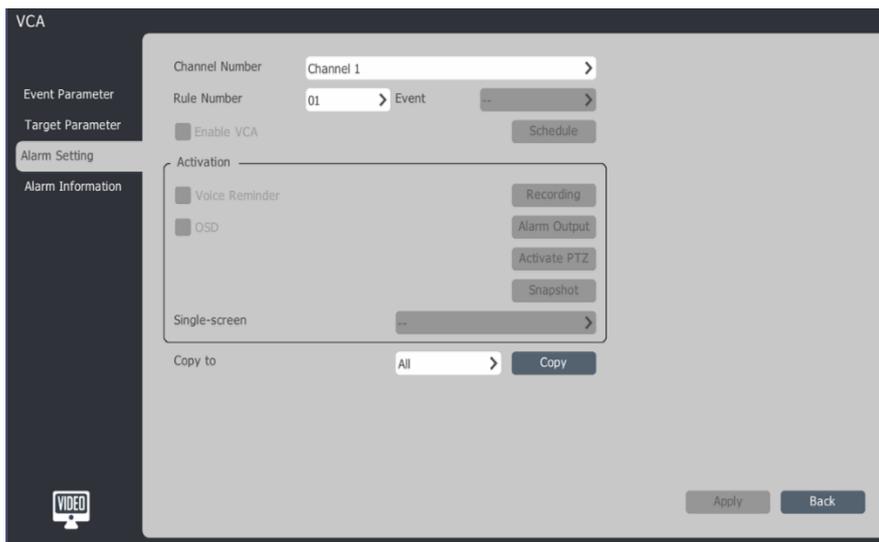
The screenshot displays the 'VCA' configuration interface. On the left, a dark sidebar contains a menu with four items: 'Event Parameter', 'Target Parameter' (highlighted), 'Alarm Setting', and 'Alarm Information'. At the bottom of the sidebar is a 'VIDEO' icon. The main content area is light gray and contains the following settings:

Channel Number	Channel 1	>
Target Color	Green	>
Target Alarm Color	Red	>
Detect Sensitivity	Medium	>
Track Length (0-40)	0	
<input checked="" type="checkbox"/> Display Target		
<input type="checkbox"/> Display Track		

At the bottom right of the main area, there are two buttons: 'Apply' and 'Next'.

7. User can setup target color, alarm color and detect sensitivity etc.

8. Click next to setup alarm setting.



1)choose rule number need to be setup

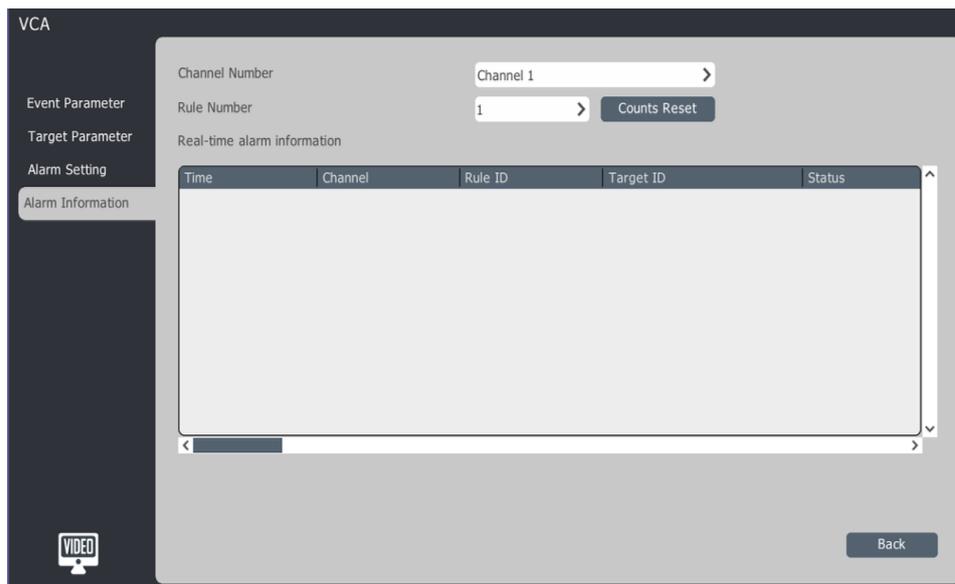
2)choose "enable VCA" and click schedule to setup.

3)Activation: setup VCA alarm trigger action, include voice, OSD, recording, alarm output, snapshot and single screen etc.

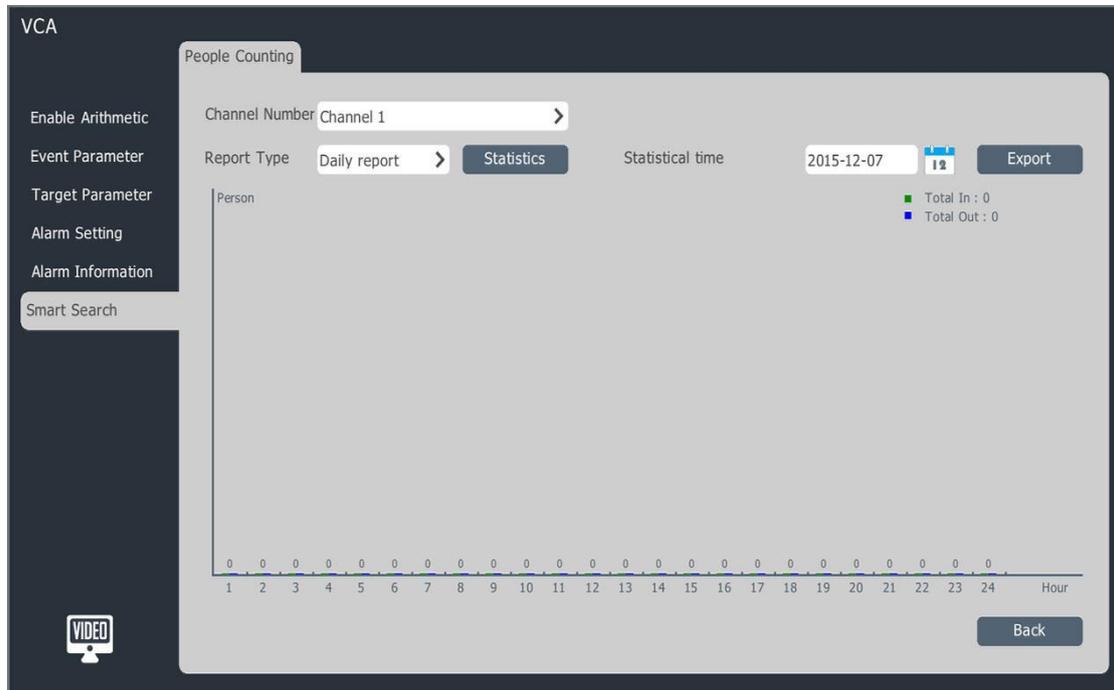
4)after done the setting, can copy to all channels.

9.click apply to save settings.

10.into alarm information interface, display real time alarm information.



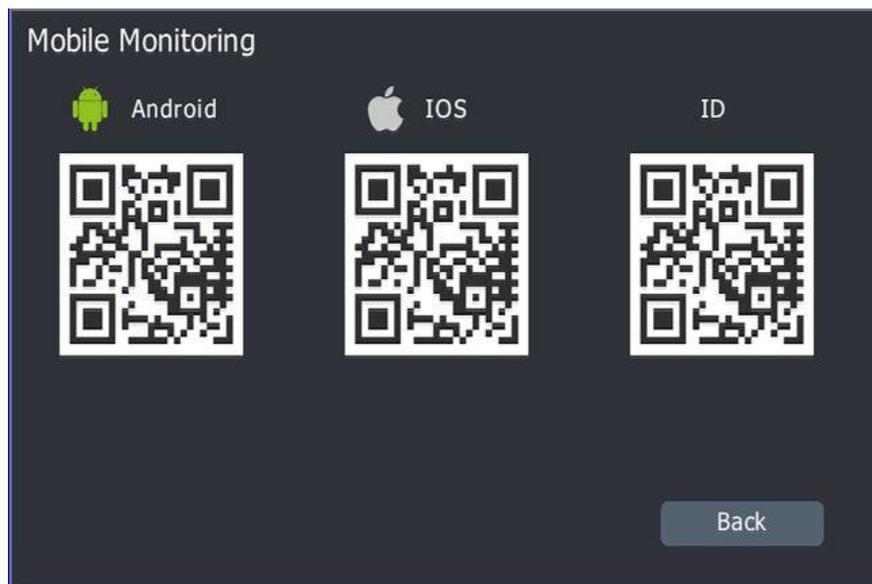
11. Into Smart search select people counting and channel no, report type, then click statistics. It will display statistical histogram and time. Click export will have report.



#### 4.20 Mobile Monitoring

User can download client app via scan QRcode, input ID to use mobile monitoring.

1. Mouse right button – mobile monitoring.



- 
3. user download Android or IOS client, register account, and scan QRcode to use mobile monitoring.

## 5. WEB Browser

### 5.1 Introduction

User can input device IP address in web browser to remote view device. Support IE/Firefox/Chrome.

### 5.2 Login

User can login device IE interface through multiple computers at same time.

1. Open Web browser, input NVR's IP address:



The screenshot shows the NETVIDEO login page. At the top left is the 'NETVIDEO' logo. At the top right is a language selection dropdown menu currently set to 'Chinese'. Below the logo and menu are three input fields: '用户名' (Username), '密码' (Password), and '端口号' (Port Number). The '端口号' field has '3000' entered. Below these fields is a blue button labeled '登录' (Login).

2. choose language

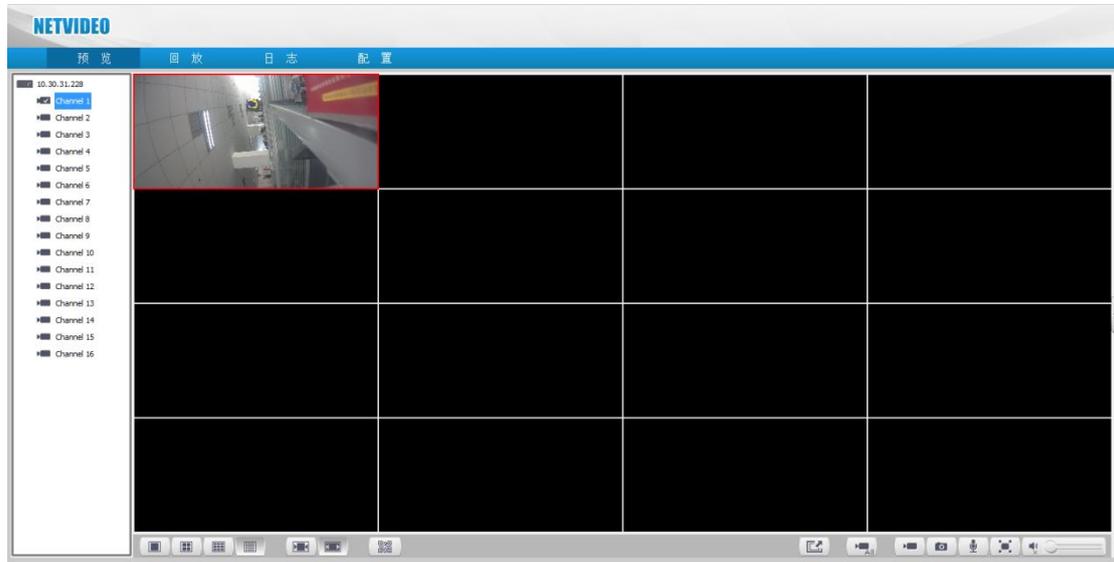
3. input user name, password, and click login into preview interface.

#### Notice:

- If use IE browser, please make sure version higher than V6.0

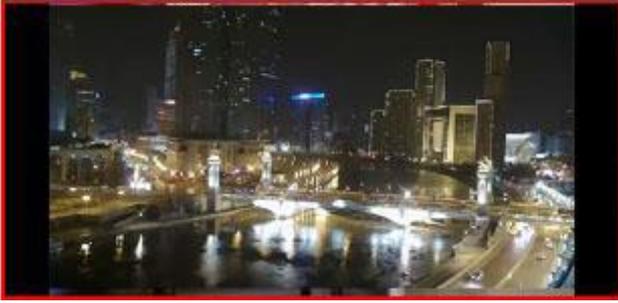
### 5.3 Preview

After login successfully enter preview page.



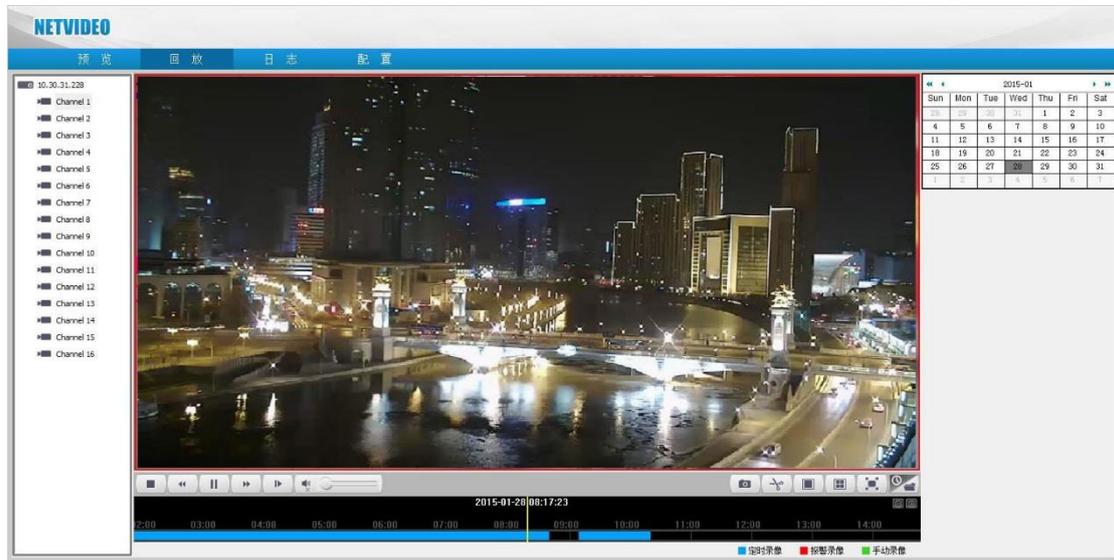
Preview icon description

Icon	Description
	Single screen
	4-split screen
	9-split screen
	16-split screen
	Fixed ratio

	
	<p>Ratio self-adaption</p> 
	<p>Connect all the channel</p>
	<p>Start remote recording</p>
	<p>Start recording</p>
	<p>Snapshot</p>
	<p>Talkback with front-side device</p>
	<p>Full screen</p>
	<p>Start full channels recording</p>
	<p>Volume</p>

## 5.4 Playback

Click "Playback" tab page to enter into web playback page.

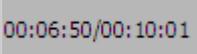


Playback icon description

Icon	Description
	Switch into playback by listed files portfolio
	Play recording file
	Pause
	Stop
	Step-forward by frame
	Fast forward, x2
	Slow forward, /2

	<b>Volume control</b>
	<b>Snapshot</b>
	<b>Cut recording file</b>
	<b>Single screen</b>
	<b>4-split screen play</b>
	<b>Full screen</b>
	<b>Switch mode</b>
	<b>Visualized play bar</b>  定时录像  报警录像  手动录像
	<b>Draw yellow line to move time shaft</b>
	<b>Zoom in time shaft</b>
	<b>Zoom out time shaft</b>

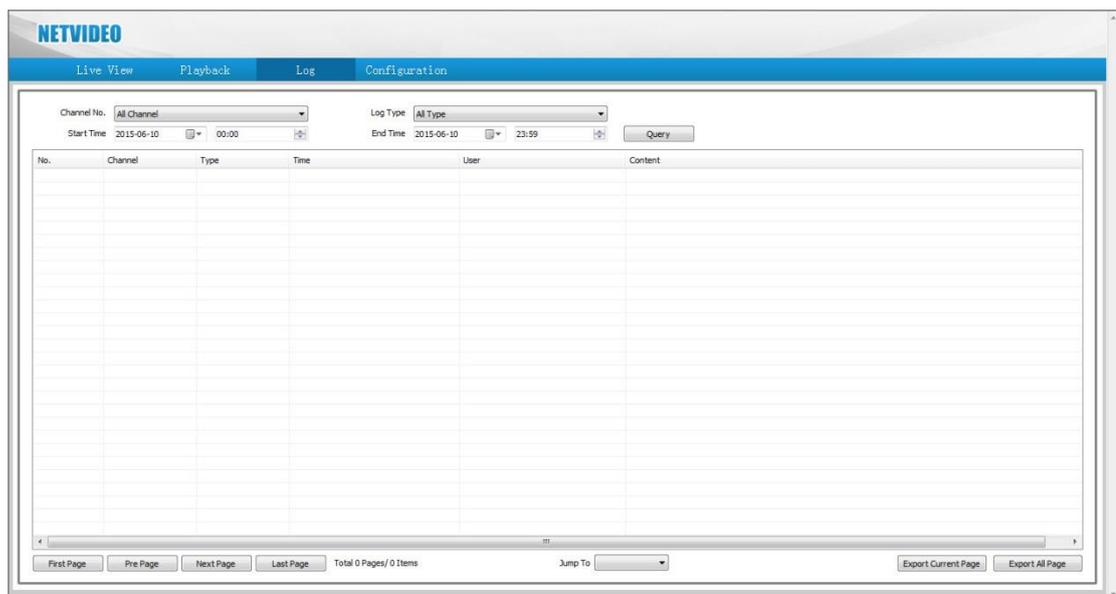
Control icon description

Icon	Description
	<b>Browse local recording files</b>
	<b>Elapsed time / Remaining time</b>

	<b>Progress bar</b>
	<b>First page</b>
	<b>Last page</b>
	<b>Next page</b>
	<b>End page</b>
	<b>Download</b>
	<b>Download management</b>

## 5.5 Log

Click "Log" tab page to enter into log query page.



Enter query condition to search log information and back it up.



## Description

- Log file saving path:D:\NetVideoBrowser

## 5.5 Configuration

Click "configuration" tab page to enter into configuration page.

The screenshot displays the NETVIDEO Configuration interface. The top navigation bar includes 'Live View', 'Playback', 'Log', and 'Configuration'. The left sidebar lists various configuration categories, with 'Stream Set' selected. The main content area is titled 'Stream Set' and contains the following configuration options:

- Channel No.: Channel 1
- Stream: M.C. str.(live)
- General Set
  - Stream Type: Audio Video
  - Resolution: VGA(640x480)
  - Bit Rate: 4096
  - Frame Rate: 25
  - N/P Mode: PAL
  - Priority: Quality
  - Video Quality: Poor
  - I-Frame Interval: 50
  - Encoding Mode: Variable Bit Rate
- Advanced Set

At the bottom of the configuration area, there are buttons for 'Save', 'Import', 'Export', and 'Copy to...'.



## Description

- If you revise configuration of remote cameras, the local specifications will be updated right away

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## Appendix 1 Hard disk capacity calculation method

According to recording conditions, such as recording type, saving time of recording files, you can figure out how much hard disk capacity a NVR need.

Method:

1. According to formula(1)we can get how much storage capacity needs for single channel per hour  $q_i$ , unit MByte.

$$q_i = d_i \div 8 \times 3600 \div 1024 \quad (1)$$

$d_i$  – code rate,unit Kbit/s

2. Confirming saving time we can get storage capacity for single channel  $m_i$ , unit MByte.

$$m_i = q_i \times h_i \times D_i \quad (2)$$

$h_i$  – Recording time per day (hour)

$D_i$  –Recording files saving days

3. According to formula(3)Total storage capacity for all channels **timing recordings** are  $q_T$ .

$$q_T = \sum_{i=1}^c m_i \quad (3)$$

$c$  –total channels of a NVR

4. According to formula(4)Total storage capacity for all channels **alarm recordings(including motion detection alarm)** are  $q_T$ .

$$q_T = \sum_{i=1}^c m_i \times a\%(4)$$

---

a%—alarm probability

## Appendix 2 Trouble shooting

Trouble	Possible reason
Plugging in power and turning on NVR, but "PWR" light on the panel is off, and the fan in the chassis does not work.	<ol style="list-style-type: none"><li>1) Power cable is broken.</li><li>2) Power supply is broken.</li></ol>
Plugging in power and turning on NVR, and "PWR" light on the panel is on in green, but the fan in the chassis does not work.	<ol style="list-style-type: none"><li>1) Cable on the panel is broken.</li><li>2) Fan is broken.</li></ol>
Booting the NVR, there is no video on the screen of monitor connected with VOUT.	<ol style="list-style-type: none"><li>1) Video cable is broken.</li><li>2) Interface panel of NVR is broken.</li><li>3) Main board of NVR is broken.</li></ol>
Booting the NVR, hard disk cannot be detected.	<ol style="list-style-type: none"><li>1) Hard disk cable is broken.</li><li>2) Hard disk cable is not plugged in.</li><li>3) Hard disk is broken.</li></ol>
NVR cannot record.	<ol style="list-style-type: none"><li>1) Hard disk is not connected with SATA.</li><li>2) Hard disk is not formatted.</li><li>3) Recording template is not activated or not configured in right time period.</li><li>4) In rebuilding index</li><li>5) SATA usage is not set as recording.</li></ol>

<p>PTZ cannot be control by RS-485 of NVR.</p>	<ol style="list-style-type: none"> <li>1) RS-485 cable is not well connected.</li> <li>2) PTZ decoder type is incorrect.</li> <li>3) RS-485 interface on the main board is broken.</li> <li>4) The location of connected serial port does not match what you set. (default is A2B2)</li> <li>5) Configuration of serial port is not correct or does not match the protocol.</li> </ol>
<p>Client side cannot transfer video or audio signal.</p>	<ol style="list-style-type: none"> <li>1) Enter wrong IP address, port number, user name or password on "local configuration" page in the client.</li> <li>2) Network cable is broken.</li> <li>3) Main board interface is broken.</li> </ol>

---

### **Appendix 3 Maintenance instruction**

1. The dust on the PCB board would cause short circuit after it is damped. To run the device well for a long time, we suggest to clean dust internal chassis regularly.
2. Please make sure all the devices are connected to the ground well in order to avoid disturbance of video or audio signal.
3. Do not hot-plug audio or video signal cables, RS-285 or alarm interfaces. Or else the interface is easy to be broken.
4. Do not shut down power switch directly when the device is closed. Please use shut-down button on the front panel (Press and hold for 3 seconds) or use shut-down button on the video interface, and then shut down the power before close the device for protection of hard disk.
5. Keep the device away from source of high temperature
6. Keep drafty condition around the devices for heat dissipation.
7. Please check and maintenance the system regularly.