



Dahua Network Video Server User's Manual

V1.0.0

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Welcome

Thank you for purchasing our NVS!

This user's manual is designed to be a reference tool for the installation and operation of your system.

Here you can find information about this series standalone NVS features and functions.

Before installation and operation please read the following safeguards and warnings carefully!

Important Safeguards and Warnings

1 . Electrical safety

All installation and operation here should conform to your local electrical safety codes.

The product must be grounded to reduce the risk of electric shock.

We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.

2 . Transportation security

Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.

3 . Installation

Keep upwards. Handle with care.

Do not apply power to the NVS before completing installation.

Do not place objects on the NVS.

4 . Qualified engineers needed

All the examination and repair work should be done by the qualified service engineers.

We are not liable for any problems caused by unauthorized modifications or attempted repair.

5 . Environment

The NVS should be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

6. Accessories

Be sure to use all the accessories recommended by manufacturer.

Before installation, please open the package and check all the components are included.

Contact your local retailer ASAP if something is broken in your package.

7. Lithium battery

Improper battery use may result in fire, explosion, or personal injury!

When replace the battery, please make sure you are using the same model!

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE.

DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.



CAUTION

FOR YOUR OWN SAFETY, PLEASE CHANGE SYSTEM DEFAULT PASSWORD AFTER YOU FIRST LOGIN!

1 FEATURES AND SPECIFICATIONS

1.1 Overview

This series product is an excellent digital surveillance product designed for security field.

It adopts embedded Linux OS to maintain reliable operation. It is easy to use and can realize surveillance function after some simple settings. It has various functions such as record, playback, monitor at the same time and can guarantee audio video synchronization. This series product has advanced technology and strong network data transmission function.

This series device adopts embedded design to achieve high security and reliability. It can work in the local end, and at the same time, when connecting it to the professional surveillance software (PSS), it can connect to the security network to realize strong network and remote monitor function. It can upgrade current existing system to the HD system without replacing original cables.

This series product can be widely used in various areas such as banking, telecommunication, electric power, interrogation, transportation, intelligent resident zone, factory, warehouse, resources, and water conservancy.

1.2 Features

- **Default**

Just click one button to restore default setup.

- **A/D switch**

Support analog/digital channel switch.

- **Various video types**

WEB supports various signal sources: HDCVI signal/standard definition signal/high definition/digital signal.

- **EQ**

Image equalization and image equalization lock function.

- **Encode mode**

SmartH264 encode.

- **Resistance heating**

Support resistance heating function.

- **Real-time surveillance**

VGA port. Realize the surveillance through displayer/monitor.

- **Storage function**

Special data format to guarantee data security and can remove the risk of the vicious data modification.

MicroSD card storage. Hot swap. Auto resumes transmission after network connection failure.

- **Compression format**

Support multiple-channel audio and video. An independent hardware decodes the audio and video signal from each channel to maintain video and audio synchronization.

- **Record & playback function**

Support each channel real-time record independently, and at the same time it can support search, forward play, network monitor, record search, download and etc.

Support various playback modes: slow play, fast play, backward play and frame by frame play.

Support time title overlay so that you can view event accurate occurred time

Support digital zoom function during the preview.

- **Alarm activation function**

Several relay alarm outputs to realize alarm activation and on-site light control.

The alarm input port and output has the protection circuit to guarantee device safety.

- **Communication port**

Standard Ethernet port can realize network access function.

- **PTZ control**

Support PTZ decoder via RS485.

Support various decode protocol to support PTZ and speed dome control function.

- **UPNP (Universal Plug and Play)**

Establish mapping connection between LAN and WAN via UPNP protocol.

1.3 Specifications

	Parameter	NVS0104HDC	NVS0204HDC	NVS0404HDC
System	Main Processor	High-performance industrial embedded micro controller		
	OS	Embedded LINUX		
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously		
	Interface	No local interface. User-friendly WEB user interface		

Video monitor	Video Input	1-ch PAL/NTSC BNC; (HDCVI HD video/general standard definition video self-adaptive)	2-ch PAL/NTSC BNC; (HDCVI HD video/general standard definition video self-adaptive)	4-ch PAL/NTSC BNC; (HDCVI HD video/general standard definition video self-adaptive)
	Video Output	1-ch TV output. Reuse the Audio out port (Using 3.5mm AV cable to output).		
	Loop Output	N/A		
	Matrix Output	N/A		
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel		
	Video Bit Streams	32Kbps~4096Kbps (720P: Default 2Mbps, max 4Mbps; 1080P: Default 4M, max 4M)		
	Video Partition	1 window	2 windows	4 windows
	Monitor Touring	N/A		
Audio	Audio Input	1-ch	2-ch	4-ch
	Audio Output	1-ch bidirectional talk output. 3.5mm. Reuse the 3.5mm AV cable to output audio.		
	Audio Compression Standard	G.711A, G.711U, PCM		
	Bidirectional Talk	Reuse the audio output port		
	Audio Sampling Rate	8KHz, bidirectional talk (48KHz)		
	Audio Bit Rate	64Kbps, bidirectional talk (384Kbps)		
Video	Video Compression Standard	H.264. Support smartpH.264		
	Resolution	All-channel 1080P @25/30fps	All-channel 1080P @25/30fps	All-channel 720P @25/30fps; 1-channel 1080P @25/30fps+3-channel 1080N realtime/ 1080P/720P/960H/D1 @12/15fp
Alarm	Alarm Input	4-ch input		

	Alarm Output	2-ch output
	Alarm Pre-record	0 to 30 seconds pre-record when an alarm occurred.
Storage	HDD Amount	1 Micro SD card
	Storage Management	N/A
Port	SD Card	1 Micro SD card. Max 128G.
	USB Port	N/A
	Network Port	1 RJ45 100/100Mbps self-adaptive Ethernet port
	eSATA Port	N/A
	RS485 Port	1 PTZ control port. Support various protocols.
	RS232 Port	1 RS232 port
	WIFI (Optional)	Support 2.4G/5G module.
	Indicator Light	ACT/NET/ALM/VIDEO. Display status.
	Antenna Port	One antenna port. Connect to wireless module antenna.
General Parameter	Power Supplying	DC +12V/2A
	Power Consumption	<10W
	Working Temperature	-10℃~+55℃
	Working Humidity	10%~90%
	Air Pressure	86kPa~106kPa
	Dimension	137mm×162mm×30mm
	Weight	1.0Kg
	Installation Mode	Desktop installation

2 Overview and Controls

Note:

- All the installation and operations here should conform to your local electric safety rules.

2.1 Front Panel

The front panel is shown as below. See Figure 2-1.

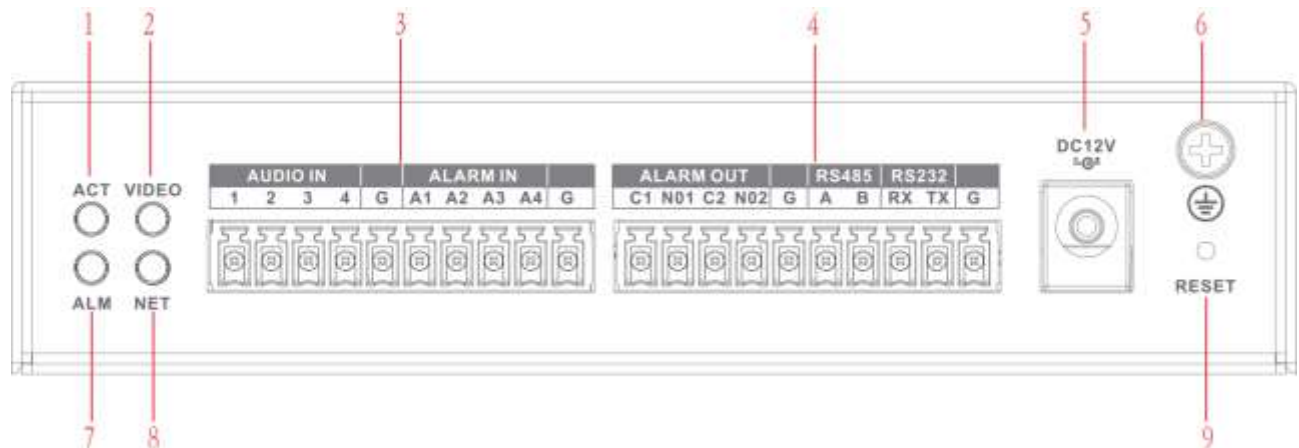



Figure 2-1

Please refer to the following sheet for detailed information.

SN	Icon	Name	Function
1	ACT	Status indicator light	<ul style="list-style-type: none"> • Connect the device to the power source: The light is green. It is not so bright. • Device is working properly: The light is green. The light is bright. • Device is upgrading: The light is flashing. • Device has shut down or there is no power: The light is off.
2	VIDEO	Video indicator light	<ul style="list-style-type: none"> • Connect to the analog video but device is not recording: The light is on. • No analog video connected but device is not recording: The light is off. • The device is recording: The light is flashing.
3	1~4	Audio input port 1~4	Connect to audio input device such as microphone.
	G	GND	Audio input ground.
	A1~A4	Alarm input 1~4	<ul style="list-style-type: none"> • They are to receive the signal from the external alarm source. There are two

SN	Icon	Name	Function
			types; NO (normal open)/NC (normal close). <ul style="list-style-type: none"> When your alarm input device is using external power, please make sure the device and the NVS have the same ground.
	G	GND	Alarm input ground.
4	NO1~NO2	Alarm output port 1~2	<ul style="list-style-type: none"> 2 groups of alarm output ports. (Group 1: port NO1~C1, Group 2: port NO2~C2). Output alarm signal to the alarm device. Please make sure there is power to the external alarm device. NO: Normal open alarm output port. C: Alarm output public end.
	G	GND	Alarm output ground.
	A、B	RS-485 communication port	<ul style="list-style-type: none"> RS485_A port. It is the cable A. You can connect to the control devices such as speed dome PTZ. RS485_B. It is the cable B. You can connect to the control devices such as speed dome PTZ.
	RX、TX	RS-232 communication port	General serial port debug.
	G	GND	COM ground
5	DC 12V	Power input port	12V 2A power port. DC 8V-DC 16V.
6		GND	Ground
7	ALM	Alarm indicator light	<ul style="list-style-type: none"> Device local alarm has been armed: The light is on. Device local alarm has triggered: The light is flashing. Device local alarm has been disarmed: The light is off.
8	NET	Network status indicator light	<ul style="list-style-type: none"> Wire network connection is OK: The light is off. Wire network connection is abnormal: The light is on.
9	RESET	Reset	Press for 5 seconds to restore default setup.

2.2 Rear Panel

The rear panel is shown as below. See Figure 2-2.

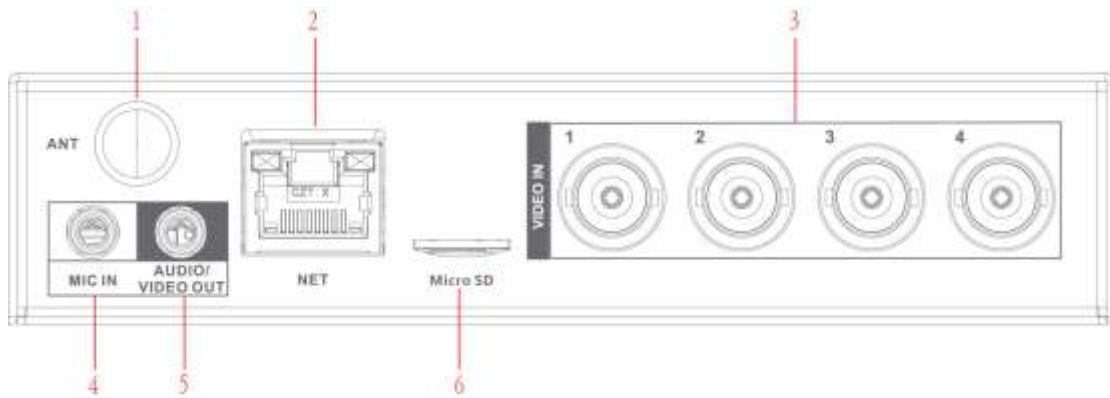


Figure 2-2

Please refer to the following sheet for front panel button information.

SN	Icon	Name	Function
1	ANT	Screw to connect to the antenna	Connect to antenna
2	NET	Network port	10M/100Mbps Ethernet port.
3	1~4	Video input port 1~4	Conenct to analog camera to input video signal.
4	MIC IN	Bidirectional talk input port	Bidirectional talk input port. It is to receive the analog audio signal from the devices such as microphone, pickup.
5	AUDIO/VIDEO OUT	Audio/video output port	Using the cable in the accessories bag to output video/audio signal at the same time <ul style="list-style-type: none"> Video output port: Connect to output device such as TV to view the video. Audio output port: Connect to audio output device to listen to audio. When bidirectional talk function is enabled, the audio output port is working as the bidirectional talk output port.
6	Micro SD	SD slot	Inseert Micro SD card.

3 Device Installation

Note:

- All the installation and operations here should conform to your local electric safety rules.

3.1 Check Unpacked Device

When you received the device from the shipping agency, please check whether there is any visible damage. The protective materials used for the package of the device can protect most accidental clashes during transportation. Then you can open the box to check the accessories.

Please check the items in accordance with the list. Finally you can remove the protective film of the device.

The label at the bottom of the box is very important. Usually we need you to present the serial number when we provide the service after sales.

3.2 Connection Sample

The connection sample is shown as in Figure 3-1 and Figure 3-2.

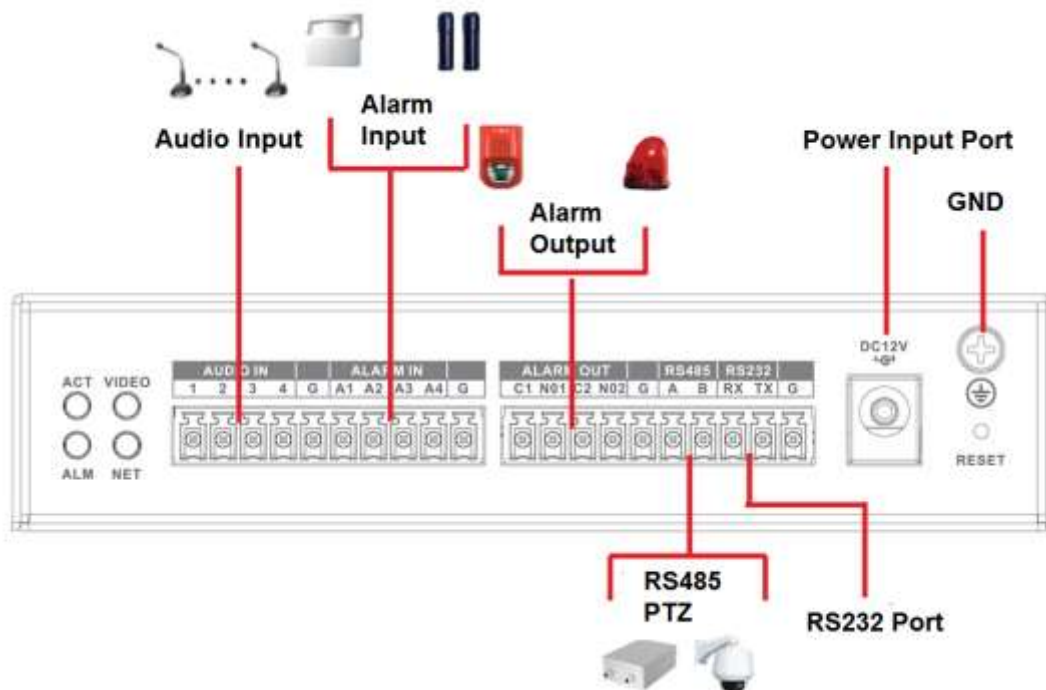


Figure 3-1

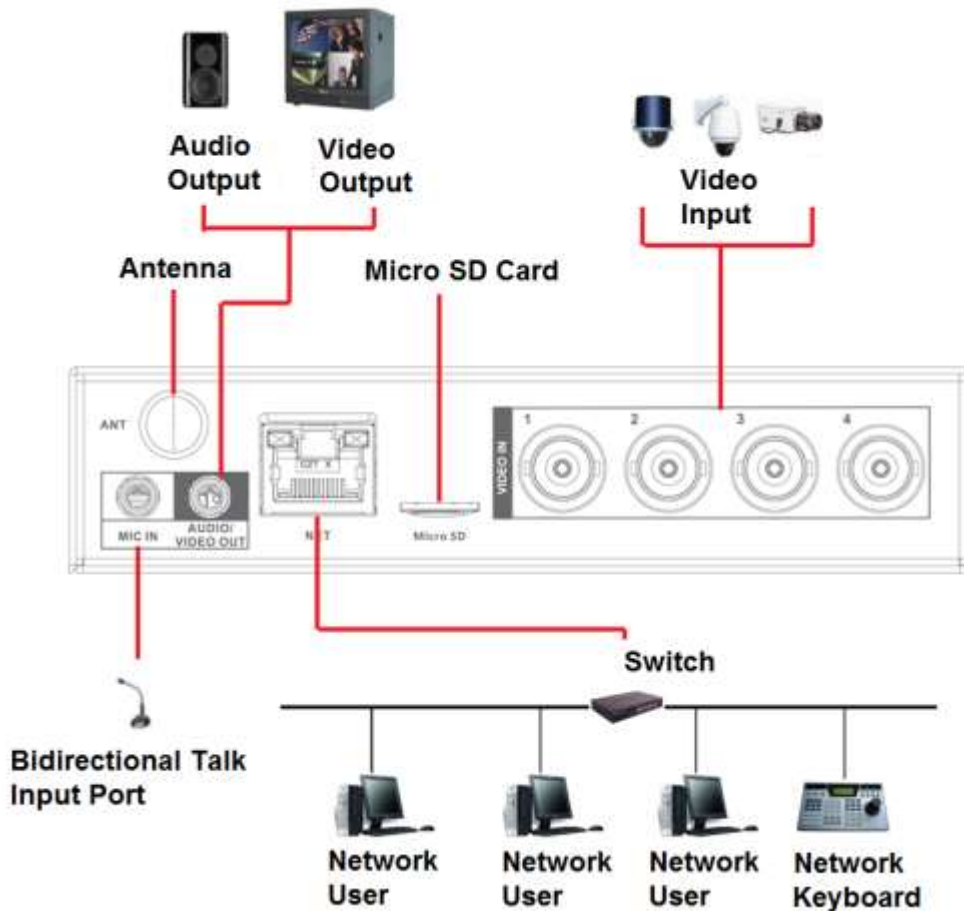


Figure 3-2

3.3 Connecting Power Supply

Please check input voltage and device power button match or not.

We recommend you use UPS to guarantee steady operation, NVS life span, and other peripheral equipment operation such as cameras.

3.4 Connecting Video Input and Output Devices

3.4.1 Connecting Video Input

The video input interface is BNC. The input video format includes: PAL/NTSC BNC (1.0V_{P-P}, 75Ω.)

The video signal should comply with your national standards.

The input video signal shall have high SNR, low distortion; low interference, natural color and suitable lightness.

Guarantee the stability and reliability of the camera signal:

The camera shall be installed in a cool, dry place away from direct sunlight, inflammable, explosive substances and etc.

The camera and the NVS should have the same grounding to ensure the normal

operation of the camera.

Guarantee stability and reliability of the transmission line

Please use high quality, sound shielded BNC. Please select suitable BNC model according to the transmission distance.

If the distance is too long, you should use twisted pair cable, and you can add video compensation devices or use optical fiber to ensure video quality.

You should keep the video signal away from the strong electromagnetic interference, especially the high tension current.

Keep connection lugs in well contact

The signal line and shielded wire should be fixed firmly and in well connection. Avoid dry joint, lap welding and oxidation.

3.4.2 Connecting Video Output

System supports TV output.

When you are using pc-type monitor to replace the monitor, please pay attention to the following points:

- To defer aging, do not allow the pc monitor to run for a long time.
- Regular demagnetization will keep device maintain proper status.
- Keep it away from strong electromagnetic interference devices.

Using TV as video output device is not a reliable substitution method. You also need to reduce the working hour and control the interference from power supply and other devices. The low quality TV may result in device damage.

3.5 Connecting Audio Input & Output, Bidirectional Audio

3.5.1 Audio Input

These series products audio input port adopt BNC port.

Due to high impedance of audio input, please use active sound pick-up.

Audio transmission is similar to video transmission. Try to avoid interference, dry joint, loose contact and it shall be away from high tension current.

3.5.2 Audio Output

The audio output signal parameter is usually over 200mv 1K Ω (RCA). It can directly connect to low impedance earphone, active sound box or amplifier-drive audio output device.

If the sound box and the pick-up cannot be separated spatially, it is easy to arouse squeaking. In this case you can adopt the following measures:

- Use better sound pick-up with better directing property.
- Reduce the volume of the sound box.
- Using more sound-absorbing materials in decoration can reduce voice echo and improve acoustics environment.
- Adjust the layout to reduce happening of the squeaking.

3.6 Alarm Input and Output Connection

Please read the followings before connecting.

1. Alarm input

- Please make sure alarm input mode is grounding alarm input.
- Grounding signal is needed for alarm input.
- Alarm input needs the low level voltage signal.
- Alarm input mode can be either NC (normal Open) or NO (Normal Close)
- When you are connecting two NVSs or you are connecting one NVS and one other device, please use a relay to separate them,

2. Alarm output

The alarm output port should not be connected to high power load directly (It shall be less than 1A) to avoid high current which may result in relay damage. Please use the co contactor to realize the connection between the alarm output port and the load.

3. How to connect PTZ decoder

- Ensure the decoder has the same grounding with NVS; otherwise you may not control the PTZ. Shielded twisted wire is recommended and the shielded layer is used to connect to the grounding.
- Avoid high voltage. Ensure proper wiring and some thunder protection measures.
- For too long signal wires, 120Ω should be parallel connected between A, B lines on the far end to reduce reflection and guarantee the signal quality.
- "485 A, B" of NVS cannot parallel connect with "485 port" of other device.
- The voltage between of A, B lines of the decoder should be less than 5V.

4. Please make sure the front-end device has soundly earthed.

Improper grounding may result in chip damage.

3.6.1 Alarm Input and Output Details



Figure 3-3

A1-A4	ALARM 1 to ALARM 4. The alarm becomes active in low voltage.
1-NO C, 2-NO C	There are two groups of normal open activation output (on/off button)
G	Ground cable.

3.6.2 Alarm Input Port

Please refer to the following sheet for more information.

- Grounding alarm inputs. Normal open or Normal close type)
- Please parallel connect COM end and GND end of the alarm detector (Provide external power to the alarm detector).
- Please parallel connect the Ground of the NVS and the ground of the alarm detector.
- Please connect the NC port of the alarm sensor to the NVS alarm input(ALARM)
- Use the same ground with that of NVS if you use external power to the alarm device.

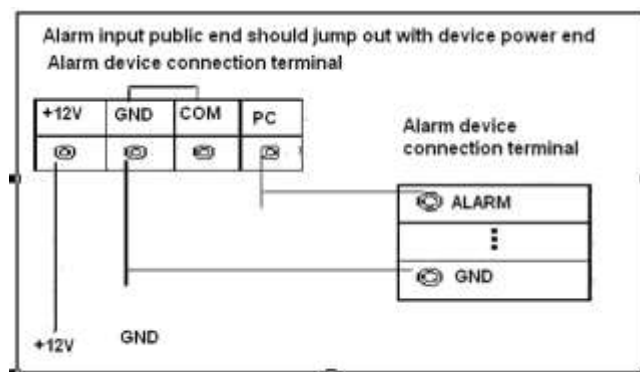


Figure 3-4

3.6.3 Alarm Output Port

- Provide external power to external alarm device.
- To avoid overloading, please read the following relay parameters sheet carefully.
- RS485 A/B cable is for the A/B cable of the PTZ decoder.
- T+,T-,R+,R- are four-wire double duplex RS485 port.
T+ T-: output wire
R+ R-: input wire

Relay Specification

Model:	JRC-27F	
Material of the touch	Silver	
Rating (Resistance Load)	Rated switch capacity	30V DC 1A, 125V AC 0.5A
	Maximum switch power	62.5VA/30W
	Maximum switch voltage	125V AC, 60V DC
	Maximum switch currency	2A
Insulation	Between touch and loop	1000V AC 1minute
Length of open time	3ms max ≤5ms	
Length of close time	3ms max ≤5ms	
Longevity	Mechanical	1×10^7 次(300 times/MIN)
	Electrical	1×10^5 次(30 times/MIN)

Temperature	-30°C ~+70°C
-------------	--------------

3.7 RS485

When the NVS receives a camera control command, it transmits that command up the coaxial cable to the PTZ device. RS485 is a single-direction protocol; the PTZ device can't return any data to the unit. To enable the operation, connect the PTZ device to the RS485 (A,B) input on the NVS.

Since RS485 is disabled by default for each camera, you must enable the PTZ settings first. This series NVSs support multiple protocols such as Pelco-D, Pelco-P.

To connect PTZ devices to the NVS:

1. Connect RS485 A,B on the NVS rear panel.
2. Connect the other end of the cable to the proper pins in the connector on the camera.
3. Please follow the instructions to configure a camera to enable each PTZ device on the NVS.

4 WEB

4.1 Network Connection

- 1) Use network cable to connect PC with the NVS directly.
- 2) Change PC IP in the same IP segment with the NVS (192.168.1.108). For Windows OS, from **Control panel->Network and Internet->View network status and task->Local connection->Properties->Internet protocol version 4(TCP/IP)->Properties**, set PC IP address, subnet mask, default gateway and etc. See Figure 4-1.

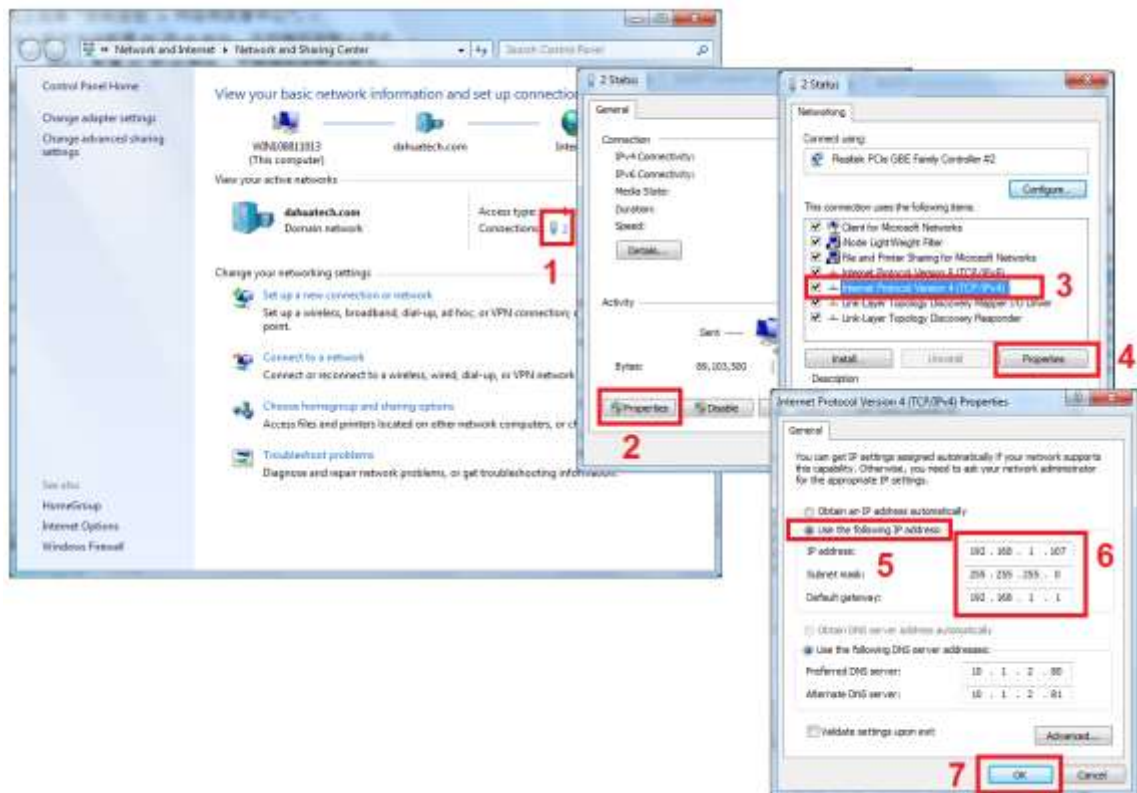


Figure 4-1

- 3) Open browser, input NVS default IP address 192.168.1.108.
- 4) Form **Setup->Network-<TCP/IP**, set NVS IP address. If there is a router in the network, please set the corresponding gateway and subnet mask.
- 5) Connect NVS to the network.
- 6) Set PC IP address, subnet mask, gateway (if there is no router, please set the IP address of the same IP segment. If there is a router, please set corresponding gateway and subnet mask.)
- 7) Use command ping *****.***.***.*****(NVS IP address) to check network. If the returned TTL value is 255, the connection is OK now.
- 8) Open browser, input the NVS IP address.

Note

- WEB control can be downloaded and installed automatically. System can download the latest Web control and remove the old one.
- Run uninstall.bat (a tool to uninstall controls) to delete or go to the C:\Program Files\webrec to delete WEB3.0 folder.
- Current series product supports various browsers such as Safari, fire fox browser, Google browser. Device supports multiple-channel monitor, PTZ control, NVS parameter setup on the Apple PC.

4.2 Login and Logout

Open IE and input NVS address in the address column. For example, if your NVS IP is 10.10.3.16, then please input http:// 10.10.3.16 in IE address column.

System pops up warning information to ask you whether install control or not. Please click Install button. See Figure 4-2.



Figure 4-2

After installation, the interface is shown as below. See Figure 4-3.

System default user name is **admin** and the password is **admin**.

If you can't download the controls, please lower your browser security level or make sure there is no other plug-in forbidding the download operation.



Figure 4-3

System pops up the following dialogue box for you to change administrator password. See Figure 4-4.

For you own safety, please change the default password after you first login.

ADMIN SECURITY

User Name

Old Password

New Password

Low

Middle

High

Confirm Password

* For your device safety, please change administrator default password.

* The password can contain letter(s), number(s) and character(s).

* For your account security, the password shall contain the letter(s), number (s), and special character(s) together.

* For your device safety, the password shall not be the same as the user name in case there is illegal account usage.

Save

Cancel

Figure 4-4

Please input twice to set a password and then click Save button to complete the setup.

For the LAN mode, the interface is shown as in Figure 4-5.

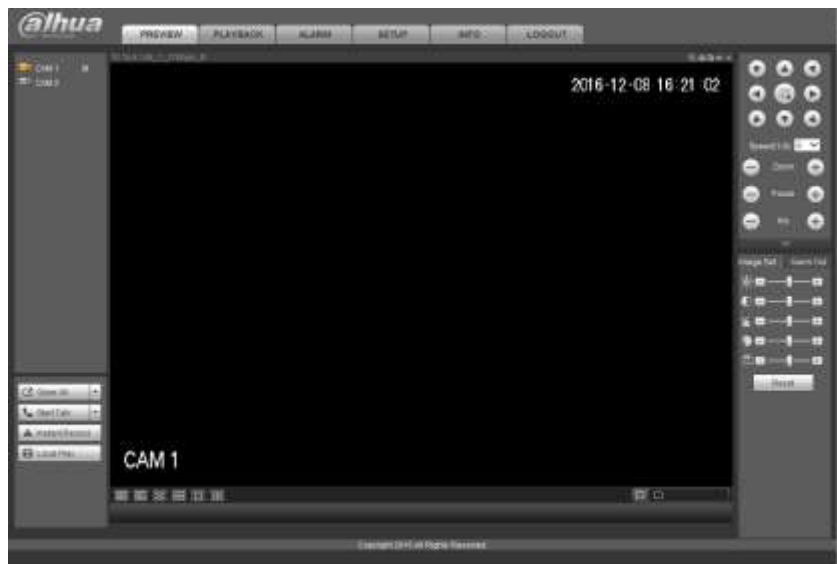


Figure 4-5

For the WAN mode, the interface is shown as in Figure 4-6.



Figure 4-6

4.3 Preview

4.3.1 LAN Mode

For the LAN mode, after you logged in, you can see the main window. See Figure 4-7.

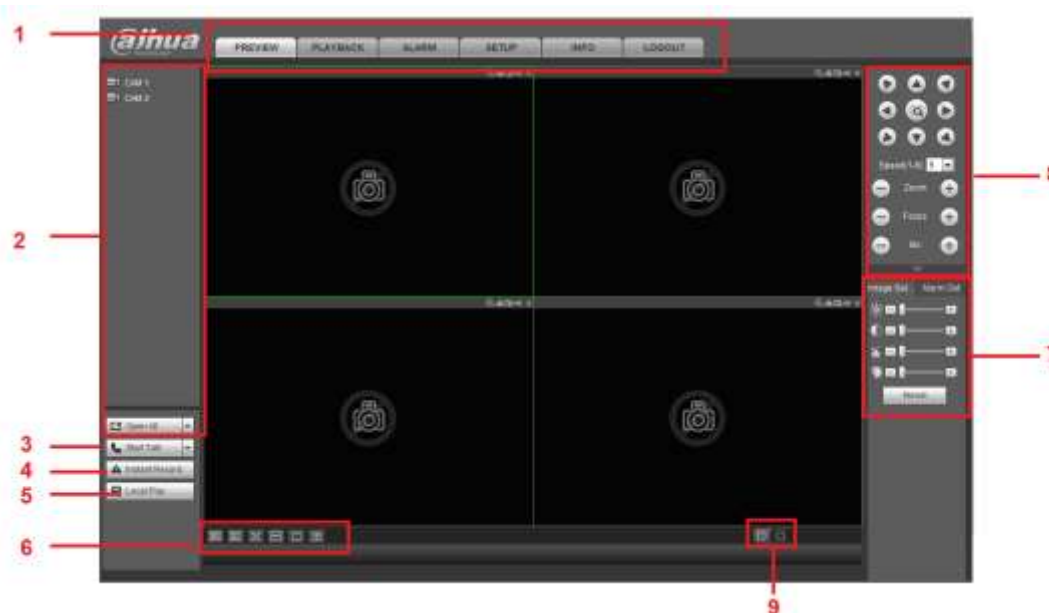


Figure 4-7

Please refer to the following sheet for detailed information.

SN	Name	SN	Name
1	System menu	2	Realtime monitor channel
3	Bidirectional talk	4	Instant record
5	Local playback	6	Switch monitor window
7	Image setup /alarm output	8	PTZ control
9	Zero-channel encode		

About LAN login and WAN login

After WAN login, system opens the main stream video of the first channel by default. Refer to Figure 4-8 to select split mode and channel number.

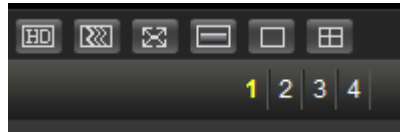


Figure 4-8

The split amount depends on the channel number. For 4-channel series product, the max split amount is 4.

In multiple-channel surveillance mode, system uses sub streams by default. Once you double click a channel to go to one-channel surveillance mode, then system restores main stream surveillance. Refer to the top left corner for main stream (M)/sub stream (S) information.



Important

Please refer to the following contents for LAN and WAN login difference.

Important

- For multiple-channel monitor mode, system adopts extra stream to monitor by default. You can not modify manually. All channels are trying to synchronize. Please note the synchronization effect still depends on your network environments.
- For bandwidth consideration, system can not support monitor and playback at the same time. System auto closes monitor or playback interface when you are searching setup in the configuration interface. It is to enhance search speed.

4.3.2 System Menu

The system menu interface is shown as below. See Figure 4-123.

Please refer to chapter 4.3.2.1 Preview, chapter 4.4 Setup , chapter 4.5 Playback, chapter 4.6 Alarm, chapter 4.7 Info, chapter 4.8 Logout for detailed information.



Figure 4-9

4.3.2.1 Preview

Left click the channel name on the left pane of the main interface; you can see the corresponding video in current window.

On the top left corner, you can view device IP, channel number, network monitor bit stream. See Figure 4-10.



Figure 4-10

Please refer to the following sheet for detailed information.

	Name	Function
1-4	Display device information	When there is video, it is to display "Device IP-Monitor channel number-network bit stream-decode mode". Otherwise, it shows as "No video".
5	Digital zoom	Click this button and then left drag the mouse in the zone to zoom in. right click mouse system restores original status.
6	Local record	When you click local record button, the system begins recording and this button becomes highlighted. You can go to system folder RecordDownload to view the recorded file.
7	Snapshot	You can snapshot important video. All images are memorized in system client folder PictureDownload (default).
8	Audio	Turn on or off audio. Note: It has no relationship with system audio setup.
9	Close video	Close video

4.3.2.2 Open All

Open all button is to enable/disable all-channel real-time monitor. Click it the button becomes yellow. See Figure 4-11.

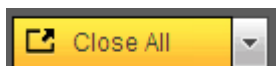


Figure 4-11

4.3.2.3 Main stream/sub stream

Please refer to Figure 4-12 for main stream and extra stream switch information.

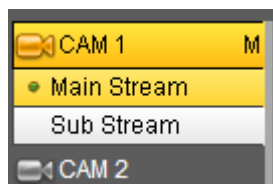


Figure 4-12

4.3.3 Start dialogue

You can click this button to enable audio talk. Click 【▼】 to select bidirectional talk mode. There are four options: DEFAULT, G711a, G711u and PCM. After you enable the bidirectional talk, the Start talk button becomes End Talk button and it becomes yellow. See Figure 4-13.

Please note, if audio input port from the device to the client-end is using the first channel audio input port. During the bidirectional talk process, system will not encode the audio data from the 1-channel.

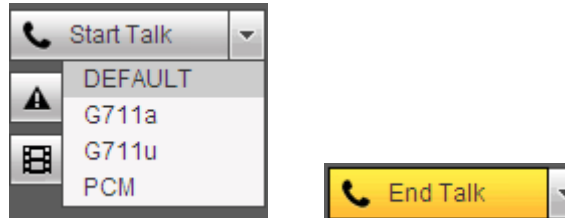


Figure 4-13

4.3.4 Instant record

Click it, the button becomes yellow and system begins manual record. See Figure 4-14. Click it again, system restores previous record mode.



Figure 4-14

4.3.5 Local play

The Web can playback the saved (Extension name is dav) files in the PC-end.

Click local play button, system pops up the following interface for you to select local play file. See Figure 4-15.



Figure 4-15

4.3.5.1 Switch monitor window

You can set video fluency and real-time feature priority. See Figure 4-16.

Note

The following interface may vary due to different series product.



Figure 4-16

SN	Name	Function
1	Image quality	Select high quality or low quality.
2	Fluency	For realtime preview, it can set video fluency or realtime feature.
3	Full screen	Click to go to full screen. Click 【Esc】 to exit.
4	Synchronization	Enable this function when the decoded video is not fluent. <ul style="list-style-type: none"> When enable this function, the video is slightly not fluent but the whole video is complete. When disable this function, the video may not be complete, but it is fluent.
5	1-window	Display 1-window.
6	4-window	Display 4-window.

4.3.5.2 Image

Here you can adjust its brightness, contrast, hue and saturation. (Current channel border becomes green). See Figure 4-17.

Or you can click Reset button to restore system default setup.

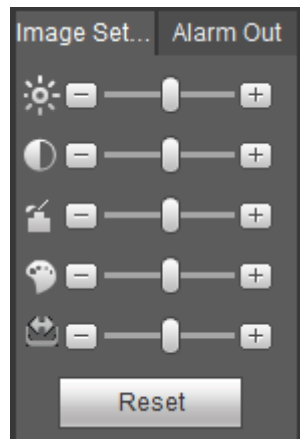


Figure 4-17

4.3.5.3 Alarm out

Here you can enable or disable the alarm signal of the corresponding port. See Figure 4-18.

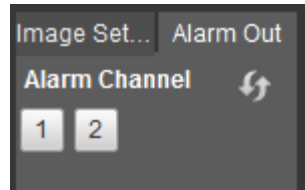


Figure 4-18

4.3.5.4 PTZ

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to chapter 4.4.5.4).

There are eight direction keys. In the middle of the eight direction keys, there is a 3D intelligent positioning key.

Click 3D intelligent positioning key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. It can realize PTZ automatically.

Please refer to the following sheet for PTZ setup information.

Parameter	Function
Scan	<ul style="list-style-type: none"> ● Select Scan from the dropdown list. ● Click Set button, you can set scan left and right limit. ● Use direction buttons to move the camera to you desired location and then click left limit button. Then move the camera again and then click right limit button to set a right limit.
Preset	<ul style="list-style-type: none"> ● Select Preset from the dropdown list. ● Turn the camera to the corresponding position and Input the preset value. Click Add button to add a preset.
Tour	<ul style="list-style-type: none"> ● Select Tour from the dropdown list. ● Input preset value in the column. Click Add preset button, you have added one preset in the tour. ● Repeat the above procedures you can add more presets in one tour. ● Or you can click delete preset button to remove one preset from the tour.
Pattern	<ul style="list-style-type: none"> ● Select Pattern from the dropdown list. ● You can input pattern value and then click Start button to begin PTZ movement such as zoom, focus, iris, direction and etc. Then you can click Add button to set one pattern.
Aux	<ul style="list-style-type: none"> ● Please input the corresponding aux value here. ● You can select one option and then click AUX on or AUX off button.
Light and wiper	You can turn on or turn off the light/wiper.

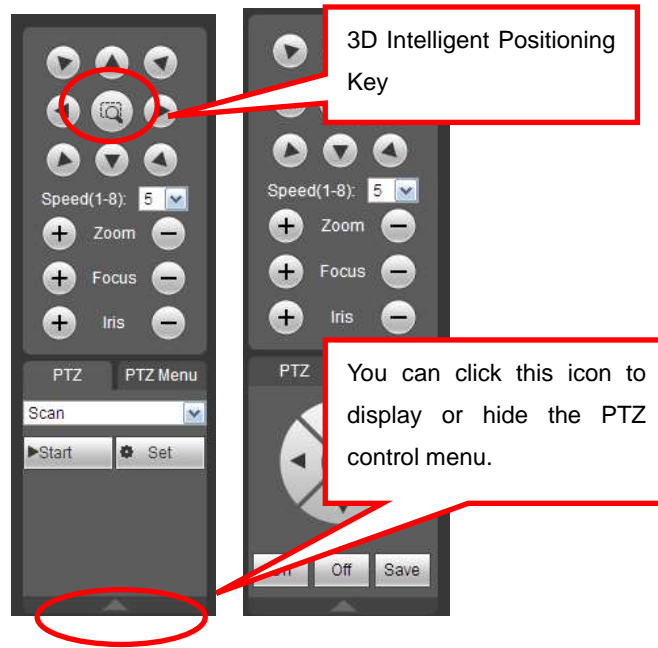


Figure 4-19

PTZ Menu



Parameter	Function
Direction buttons	Up/down button to select parameters, left/right button to select value.
Save	Confirm button.
On	Open OSD menu.
Off	Close OSD menu.

4.4 Setup

Here is to introduce NVS basic setups and system configurations.

4.4.1 Camera

It is to add network camera, set camera properties and set encode parameters.

4.4.1.1 Registration (For digital channel only)

Please go to main window->Setup->Camera->Channel type to enable IP channel function, otherwise you can not see the following interface.

Here you can add network camera automatically or manually, set/delete corresponding information and upgrade network camera.

From main window->Setup->Camera->Registration, registration interface is shown as below. See Figure 4-20.

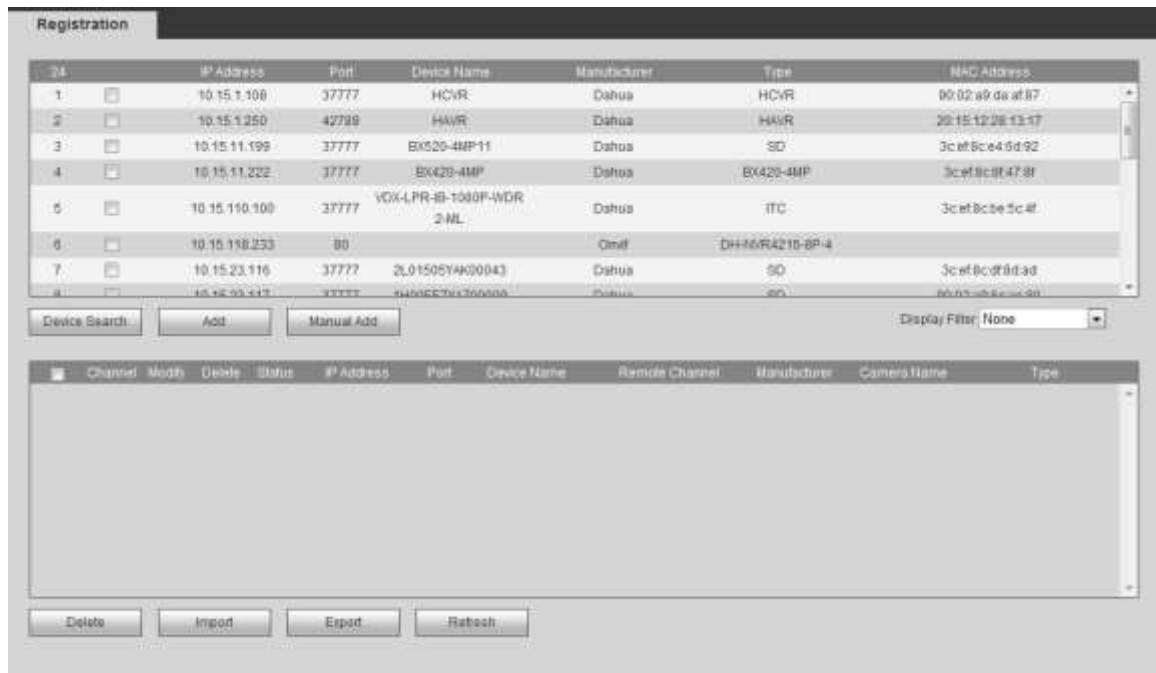






Figure 4-20

Please refer to the following sheet for log parameter information.

Parameter	Function
Device search	Click Device search button, you can view the searched device information on the list. It includes device IP address, port, device name, manufacturer and type.
Add	Select a device in the list and then click Add button, system can connect the device automatically and add it to the Added device list. Or you can double click one item in the list to add a device.
Modify	Click  or any device in the Added device list, you can change the corresponding channel setup.
Delete	Click  , you can delete the remote connection of the corresponding channel.
Connection status	 : Connection succeeded.  : Connection failed.
Delete	Select a device in the Added device list and then click Delete button, system can disconnect the device and remove it from the Added device list.

Parameter	Function
Manual Add	<p>Click it, the interface is shown as in Figure 4-21. Here you can add network camera manually.</p> <p>You can select a channel from the dropdown list (Here only shows disconnection channel.)</p> <p>Note:</p> <ul style="list-style-type: none"> System supports manufactures such as Panasonic, Sony, Dynacolor, Samsung, AXIS, Arecont, Dahua and Onvif standard protocol. If you do not input IP address here. System uses default IP 192.168.0.0 and system does not connect to this IP. Can not add two devices at the same time. Click OK button here, system only connect to the corresponding device of current channel.

Manual Add

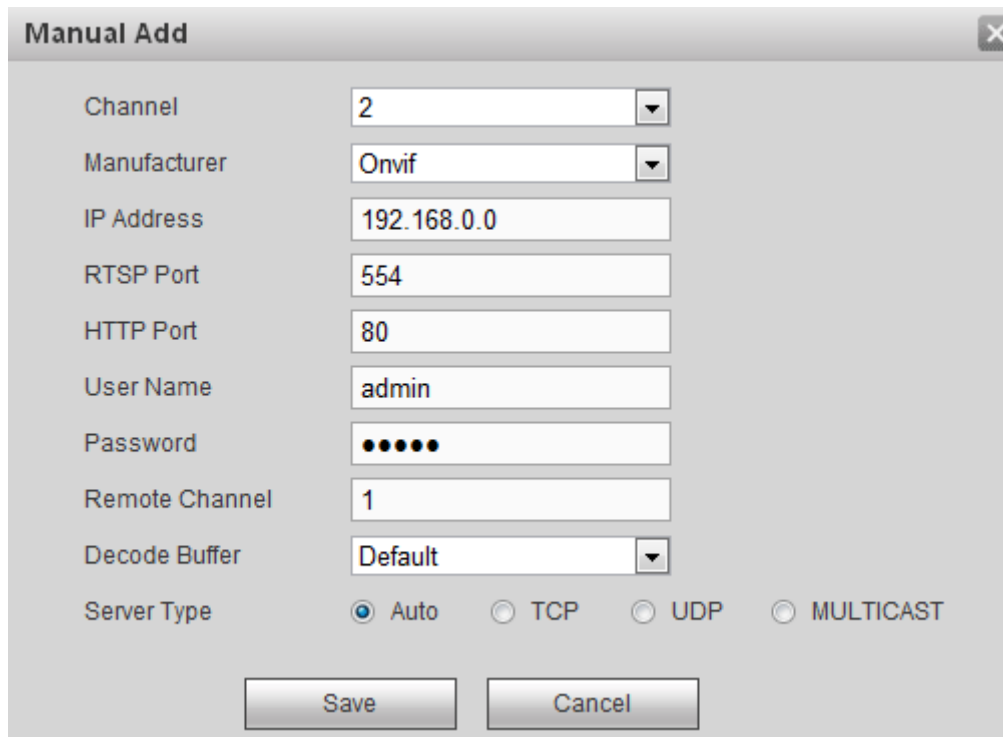


Figure 4-21

Parameter	Function
Channel	Select a channel number.
Manufacturer	Select from the dropdown list. It includes: ONVIF,private, panasonic, Sony, Dynacolor, Axis, Arecont, customized and etc.
URL address	When the manufacturer type is customized, please input URL address.
IP address	Input remote device IP address.

Parameter	Function	
RTSP port	RTSP port of the remote device. The default setup is 554.	Note These two items are not valid when the manufacturer type is private or customized
HTTP port	HTTP port of the remote device. The default setup is 80.	
TCP port	TCP port value. The default setup is 37777.	
User name/password	The user name/password to login the remote device.	
Remote channel	The remote device channel name.	
Channel	The local channel name.	
Decoder buffer	It includes:default,realtime, fluent.	
Server type	It includes:auto,TCP and UDP. For Onvif device, it has MULTICAST too.	

Export IP

You can export the list of the added devices to your local PC.

Click Export button and then select the saved path. Click OK.

You can see "Backup completed " prompt.

Note

The export file extension name is .CVS. The file contains IP address, port, remote channel No. manufacturer, user name, password and etc.

Import IP

You can import the added device list to add the device conveniently.

Click Import button, and then select the import file.

Note

If the imported IP is already in the added device list, system pops up dialogue box for you to confirm overwrite or not.

- Click OK button, the new IP setup can overwrite the old one.
- Click Cancel button, system adds the new IP setup.



Important

- You can edit the exported file. Please make sure the file format is the same. Otherwise you can not import the file again!
- The import/export function is for the devices of the same language.

4.4.1.2 Conditions

From main window->Setup->Camera->Image, here you can view device property

information. The setups become valid immediately after you set.
The analog channel is shown as in Figure 4-22.



Figure 4-22

The digital channel is shown as in Figure 4-23.

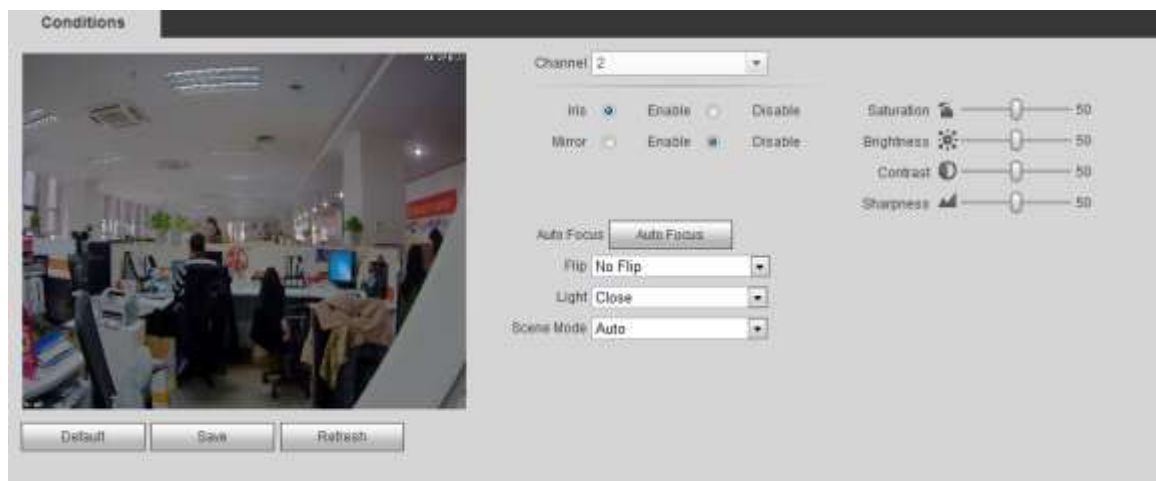



Figure 4-23

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel from the dropdown list.
Period	It divides one day (24 hours) to two periods. You can set different hue, brightness, and contrast for different periods.
Hue	It is to adjust monitor video brightness and darkness level. The default value is 50. The bigger the value is, the large the contrast between the bright and dark section is and vice versa.
Brightness	It is to adjust monitor window brightness. The default value is 50. The larger the number is, the bright the video is. When you input the value here, the bright section and the dark section of the video will be adjusted accordingly. You can use this function

	when the whole video is too dark or too bright. Please note the video may become hazy if the value is too high. The value ranges from 0 to 100. The recommended value ranges from 40 to 60.
Contrast	It is to adjust monitor window contrast. The value ranges from 0 to 100. The default value is 50. The larger the number is, the higher the contrast is. You can use this function when the whole video bright is OK but the contrast is not proper. Please note the video may become hazy if the value is too low. If this value is too high, the dark section may lack brightness while the bright section may over exposure. The recommended value ranges from 40 to 60.
Saturation	It is to adjust monitor window saturation. The value ranges from 0 to 100. The default value is 50. The larger the number is, the strong the color is. This value has no effect on the general brightness of the whole video. The video color may become too strong if the value is too high. For the grey part of the video, the distortion may occur if the white balance is not accurate. Please note the video may not be attractive if the value is too low. The recommended value ranges from 40 to 60.
Color mode	It includes several modes such as standard, color. You can select corresponding color mode here, you can see hue, brightness, and contrast and etc will adjust accordingly.
Mirror	It is to switch video up and bottom limit. This function is disabled by default.
Flip	It is to switch video left and right limit. This function is disabled by default. If you want to flip 90°, the resolution shall not be higher than 720P.
Image enhancement	It is to enhance image effect. The default setup is 30. The higher the value is, the higher the video effect is.
NR	It is to enhance noise reduction effect. The default setup is 50. The higher the value is, the higher the noise reduction effect is.
EQ(image equalization)	It is to adjust image equalization. The default setup is 0. Click  to lock EQ. There is no auto EQ after device boots in the future, so that the device can maintenance the sound parameters after the auto maintenance.

4.4.1.3 Encode

It includes encode setup, snapshot setup, video overlay and storage path setup.

4.4.1.3.1 Encode

From main window->Setup->Camera->Encode->Encode, the encode interface is shown as below. See Figure 4-24.

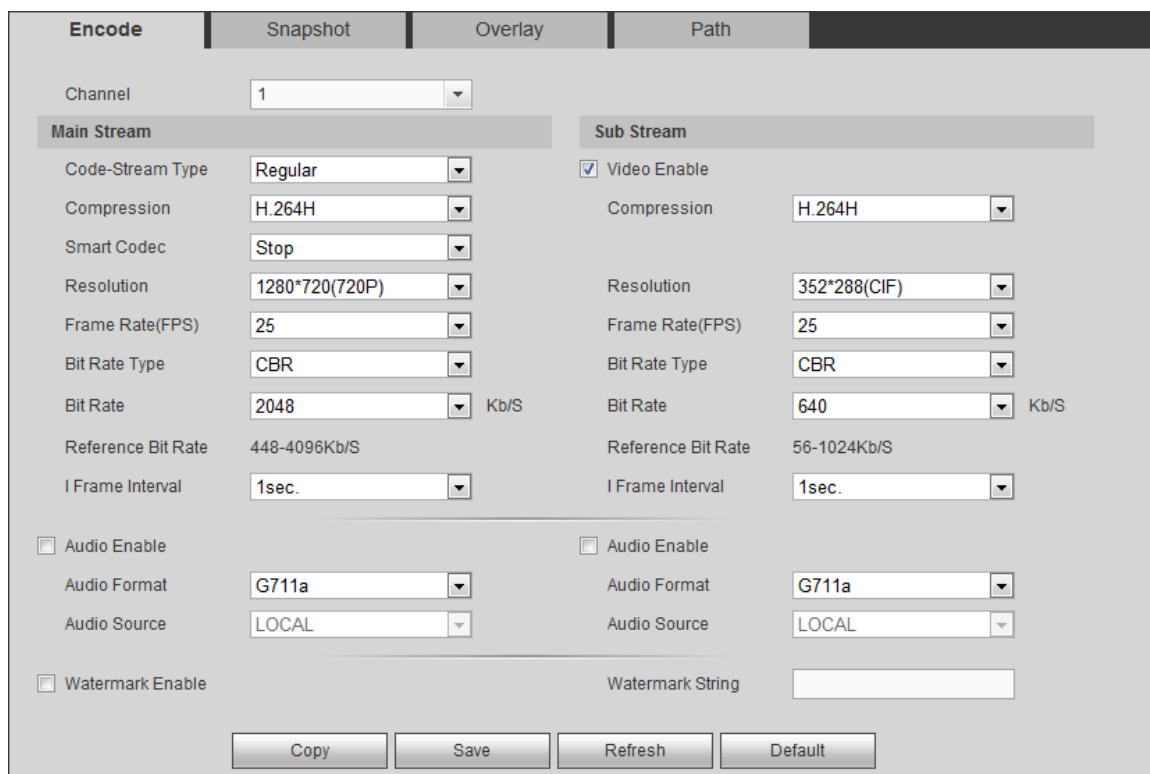


Figure 4-24

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel from the dropdown list.
SVC	SVC is so called scaled video coding. Check the box to enable this function. During the network transmission process, system discards unimportant frames when the bandwidth is not sufficient or the decode capability is low. It is to guarantee video quality and transmission fluency.
Video enable	Check the box here to enable extra stream video. This item is enabled by default.
Code stream type	It includes main stream, motion stream and alarm stream. You can select different encode frame rates form different recorded events. System supports active control frame function (ACF). It allows you to record in different frame rates. For example, you can use high frame rate to record important events, record scheduled event in lower frame rate and it allows you to set different frame rates for motion detection record and alarm record.
Smart Codec	Select Start from the dropdown list to enable smart codec function. The NVS can auto reduce the video bit stream of the non-important surveillance object to save the storage space. Please note this function is for main stream only.

Compression	<p>Compression: System main stream supports H.264H, H.264, and H.264B. The sub stream supports H.264H, H.264, H.264B and MJPEG.</p> <ul style="list-style-type: none"> ✧ H.264H: It is the High Profile compression algorithm. It has the high encode compression rate. It can achieve high quality encode at low bit stream. Usually we recommend this type. ✧ H.264 is the general compression algorithm. ✧ H.264B is the Baseline algorithm. Its compression rate is low. For the same video quality, it has high bit stream requirements.
Resolution	It is to set video resolution. The higher the resolution is, the better the video quality is.
Frame Rate	PAL: 1~25f/s; NTSC: 1~30f/s.
Bit Rate	<ul style="list-style-type: none"> ● Main stream: You can set bit rate here to change video quality. The large the bit rate is , the better the quality is. Please refer to recommend bit rate for the detailed information. ● Extra stream: In CBR, the bit rate here is the max value. In dynamic video, system needs to low frame rate or video quality to guarantee the value. The value is null in VBR mode.
Reference bit rate	Recommended bit rate value according to the resolution and frame rate you have set.
I Frame	<p>Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50.</p> <p>Recommended value is frame rate *2.</p>
Audio format	It includes G711a/G711u/PCM.
Audio source	Please select from the dropdown list. There are two options: Normal/HDCVI. In the normal mode, the audio signal comes from the Audio In. In the HDCVI mode, the audio signal comes from the coaxial cable of the camera.
Watermark enable	<p>This function allows you to verify the video is tampered or not.</p> <p>Here you can select watermark bit stream, watermark mode and watermark character. Default character is DigitalCCTV. The max length is 85-digit. The character can only include number, character and underline.</p>

4.4.1.3.2 Snapshot

From main window->Setup->Camera->Encode->Snapshot, the snapshot interface is shown as in Figure 4-25.

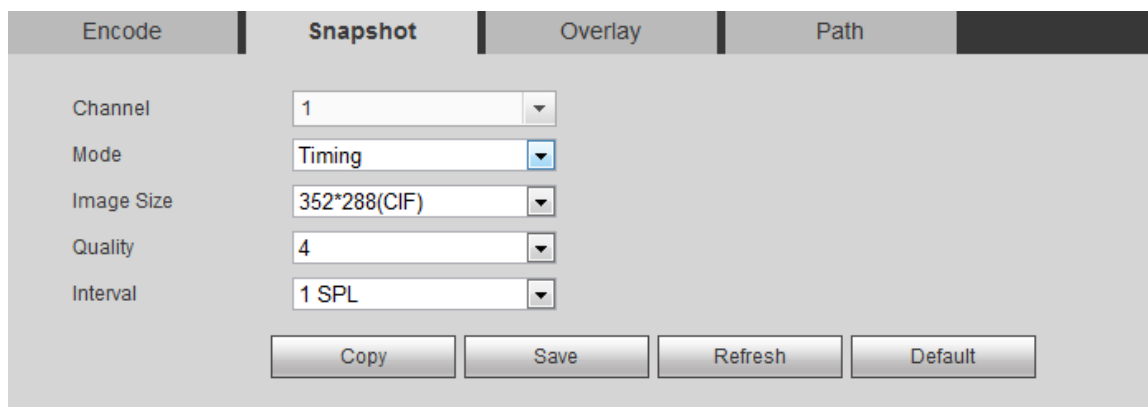


Figure 4-25

Please refer to the following sheet for detailed information.

Parameter	Function
Snapshot type	There are two modes: Regular (schedule) and Trigger. <ul style="list-style-type: none"> Regular snapshot is valid during the specified period you set. Trigger snapshot only is valid when motion detect alarm, tampering alarm or local activation alarm occurs.
Image size	It includes 960H/D1/HD1/BCIF/CIF/QCIF.
Quality	It is to set the image quality. There are six levels.
Interval	It is to set snapshot frequency. The value ranges from 1s to 7s. Or you can set customized value. The max setup is 3600s/picture.
Copy	Click it; you can copy current channel setup to other channel(s).

4.4.1.3.3 Video Overlay

From main window->Setup->Camera->Encode->Overlay, the video overlay interface is shown as in Figure 4-26.

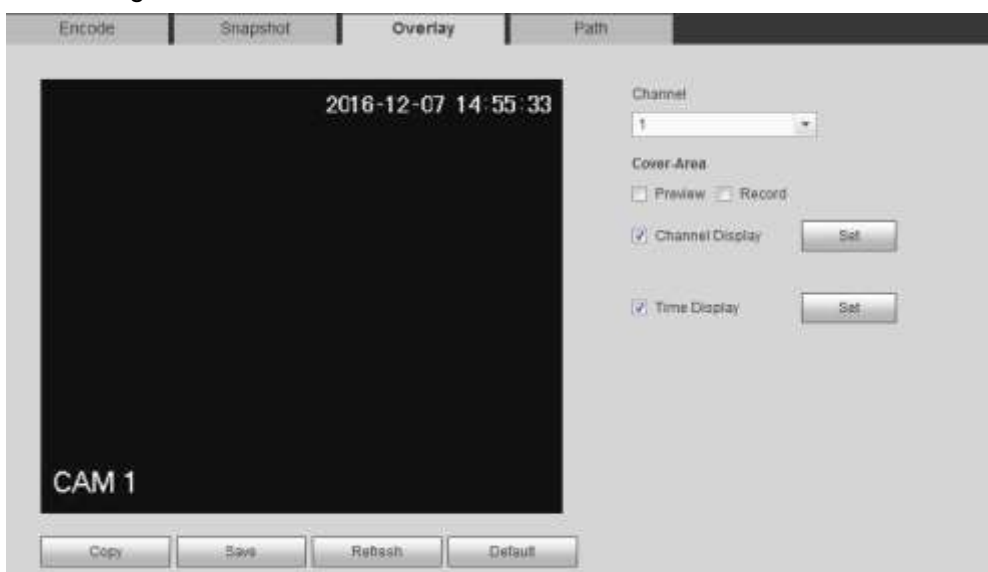




Figure 4-26

Please refer to the following sheet for detailed information.

Parameter	Function
Cover-area	Check Preview or Monitor first. Click Set button, you can privacy mask the specified video in the preview or monitor video. System max supports 4 privacy mask zones.
Time Title	You can enable this function so that system overlays time information in video window. You can use the mouse to drag the time title position. You can view time title on the live video of the WEB or the playback video.
Channel Title	You can enable this function so that system overlays channel information in video window. You can use the mouse to drag the channel title position. You can view channel title on the live video of the WEB or the playback video.

4.4.1.3.4 Path

From main window->Setup->Camera->Encode->Path, the storage path interface is shown as in Figure 4-27.

Here you can set snap image saved path ( in the preview interface) and the record storage path ( in the preview interface).The default setup is C:\PictureDownload and C:\RecordDownload.

Please click the Save button to save current setup.

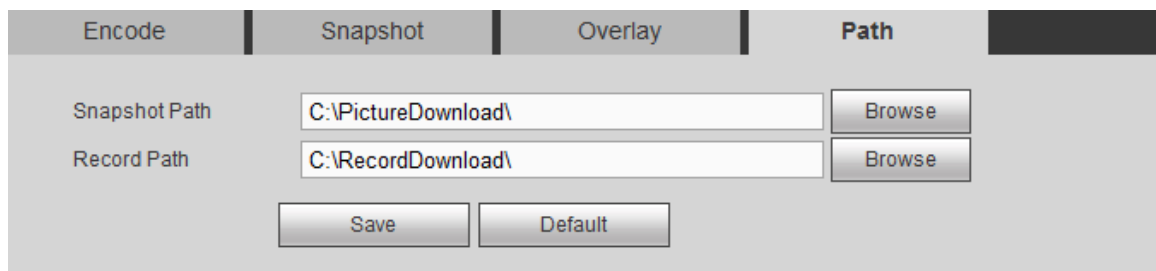




Figure 4-27

4.4.1.4 Channel Name

From main window->Setup->Camera->Camera name, here you can set channel name. See Figure 4-28.

Please note this function is for analog channel only. The offline digital channel name here is read-only.

- The image of the manual snapshot button  is saved at C:\PictureDownload.
- The record file of manual record button  is saved at C:\RecordDownload.

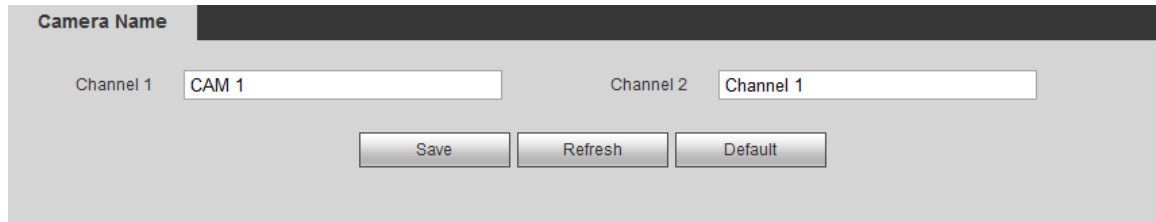


Figure 4-28

4.4.1.5 Channel Type

It is to set channel type. Each channel supports analog camera (analog standard definition/HDCVI) /network camera connection. Please note NVS needs to restart to activate new setup. The network camera connection shall begin with the last channel.

Note

If there is no connected channel, the channel type here just displays previous connection record. System supports self-adaptive after camera connection.

From main window->Setup->Camera->Channel type, you can go to the following interface. See Figure 4-29.

- Auto: It supports self-adaptive function.
- CVI: It supports HDCVI signal input.
- AHD: It supports AHD signal input.
- CVBS: It support standard definition CVBS signal input.
- Other: It supports HDTV signal input.

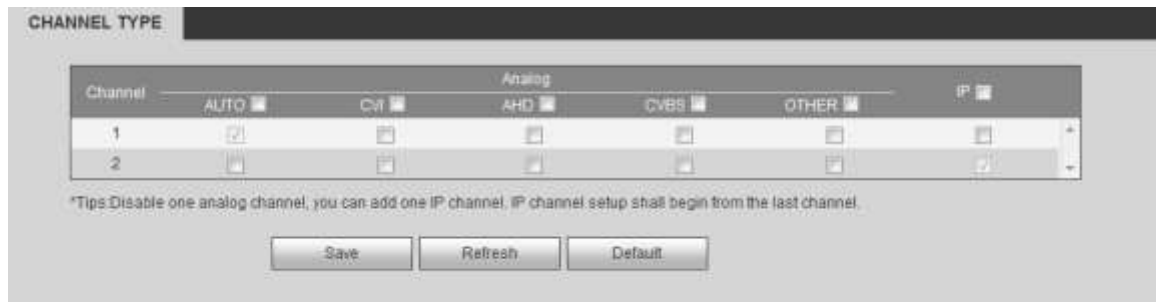


Figure 4-29

4.4.2 Network

4.4.2.1 TCP/IP

Here is for you to set NVS IP address and DNS server so that it can connect with other devices in the LAN.

Before the operation, please check:

- If there is no router, please set the IP address of the same IP segment.
- If there is a router, please set corresponding gateway and subnet mask.

From main window->Setup->Network->TCP/IP, you can go to the following interface.

The interface is shown as in Figure 4-30.

TCP/IP

IP Version

IPv4

MAC Address

3c . ef . 8c . 1b . 76 . 31

Mode

☒ STATIC
 ☐ DHCP

IP Address

10 . 15 . 6 . 145

Subnet Mask

255 . 255 . 0 . 0

Default Gateway

10 . 15 . 0 . 1

Preferred DNS

8 . 8 . 8 . 8

Alternate DNS

8 . 8 . 4 . 4

MTU

1500

☐

LAN Download

Save

Refresh

Default

Figure 4-30

Please refer to the following sheet for detailed information.

Parameter	Function
Mac Address	It is to display host Mac address.
IP Version	It is to select IP version. IPV4 or IPV6. You can access the IP address of these two versions.
IP Address	Please use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.
Preferred DNS	DNS IP address.
Alternate DNS	Alternate DNS IP address.
MTU	<p>It is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes.</p> <p>The following MTU value is for reference only.</p> <ul style="list-style-type: none"> 1500: Ethernet information packet max value and it is also the default value. It is the typical setup when there is no PPPoE or VPN. It is the default setup of some router, switch or the network adapter. 1492: Recommend value for PPPoE. 1468: Recommend value for DHCP.

	<ul style="list-style-type: none"> 1450: Recommended value for VPN.
For the IP address of IPv6 version, default gateway, preferred DNS and alternate DNS, the input value shall be 128-digit. It shall not be left in blank.	
LAN load	System can process the downloaded data first if you enable this function. The download speed is 1.5X or 2.0X of the normal speed.

4.4.2.2 Connection

4.4.2.2.1 Connection

Here you can set port connection amount and each port value.

From main window->Setup->Network->Connection->Connection, the connection interface is shown as in Figure 4-31.

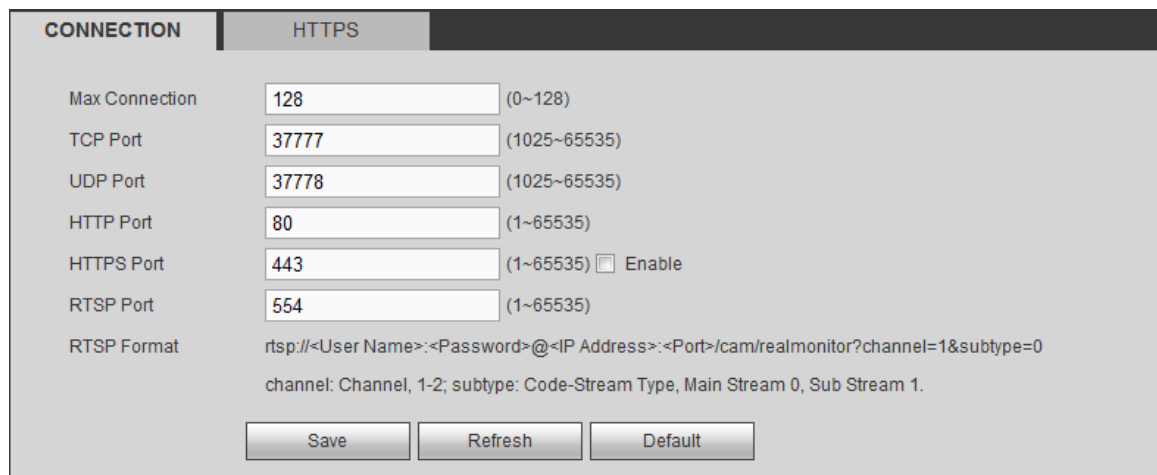


Figure 4-31

Please refer to the following sheet for detailed information.

Parameter	Function
Max connection	It is the max Web connection for the same device. The value ranges from 1 to 120. The default setup is 120.
TCP port	The default value is 37777. You can input the actual port number if necessary.
UDP port	The default value is 37778. You can input the actual port number if necessary.
HTTP port	The default value is 80. You can input the actual port number if necessary.
HTTPS	The default value is 443. You can input the actual port number if necessary.
RTSP port	The default value is 554. Please leave it in blank if you are using default value. When you are using QuickTime or VLC, you can use the following format. BlackBerry cellphone support this function too.

	<ul style="list-style-type: none"> Real-time monitoring URL format: please require real-time RTSP media server, require channel number, and bit stream type in URL. You may need username and password. When you are using BlackBerry, please set encode mode as H.264B, resolution to CIF and turn off audio. <p>URL format is: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0 username/password/IP and port.</p> <ul style="list-style-type: none"> Username: such as admin. Password: such as admin. IP: Device IP such as 10.7.8.122. Port: Port value. The default setup is 554. You can leave in blank if you are using default value. Channel: channel number. It starts with 1. If it is channel 2, then channel=2. Subtype: bit stream type. The main stream is 0(subtype=0), subtype is 1(subtype=1). <p>For example, if you want to get the substream of the channel 2, the URL is: rtsp://admin:admin@10.12.4.84:554/cam/realmonitor?channel=2&subtype=1.</p> <p>If there is no authentication, there is no need to specify user name and password, you can use the followinf format: rtsp://ip:port/cam/realmonitor?channel=1&subtype=0</p>
POS port	The value ranges from 1 to 65535. The default setup is 38800.

4.4.2.2.2 HTTPS

Before you create certificate or download certificate, From main window->Setup->Network->Connection, set HTTPS port value and then check the box to enable HTTPS function.

From main window->Setup->Network->Connection->HTTPS, in this interface, you can set to make sure the PC can successfully login via the HTTPS. It is to guarantee communication data security. The reliable and stable technology can secure the user information security and device safety. See Figure 4-32.

Note

- You need to implement server certificate again if you have changed device IP.
- You need to download root certificate if it is your first time to use HTTPS on current PC.

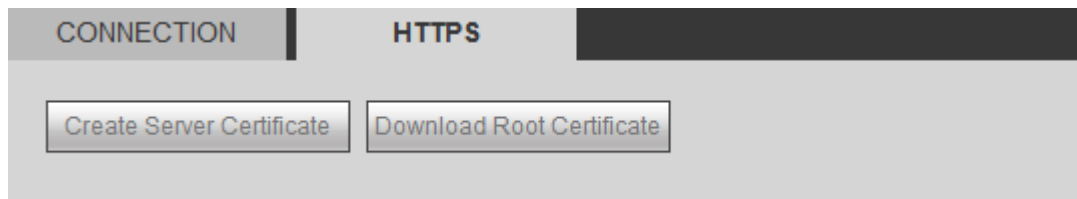
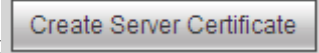


Figure 4-32

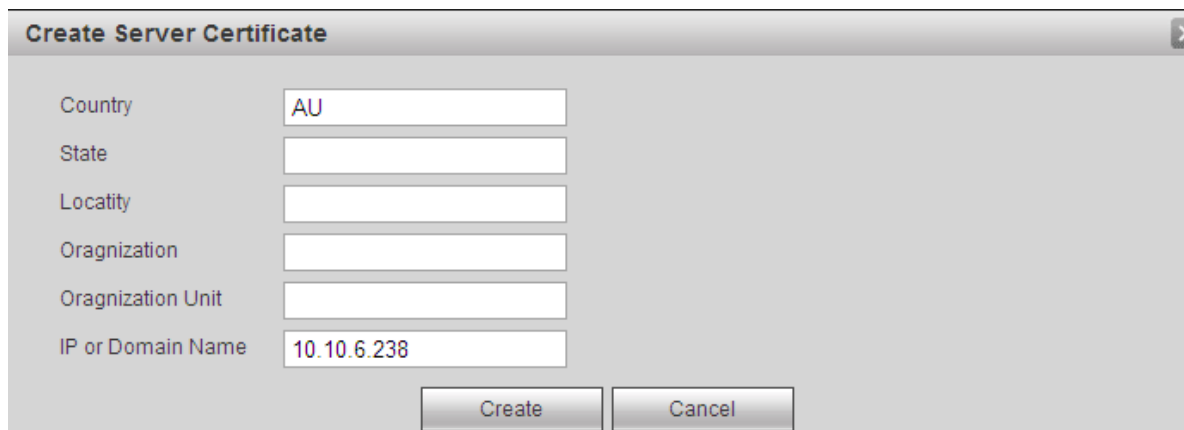
4.4.2.2.3 Create Server Certificate

If it is your first time to use this function, please follow the steps listed below.

In Figure 4-32, click  button, input country name, state name and etc. Click Create button. See Figure 4-33.

Note

Please make sure the IP or domain information is the same as your device IP or domain name.



The dialog box titled "Create Server Certificate" contains the following fields and buttons:

- Country: AU
- State: (empty)
- Locality: (empty)
- Organization: (empty)
- Organization Unit: (empty)
- IP or Domain Name: 10.10.6.238
- Buttons: Create, Cancel

Figure 4-33

You can see the corresponding prompt. See Figure 4-34. Now the server certificate is successfully created.



Figure 4-34

4.4.2.2.4 Download root certificate

In Figure 4-32, click  button, system pops up a dialogue box. See Figure 4-35.

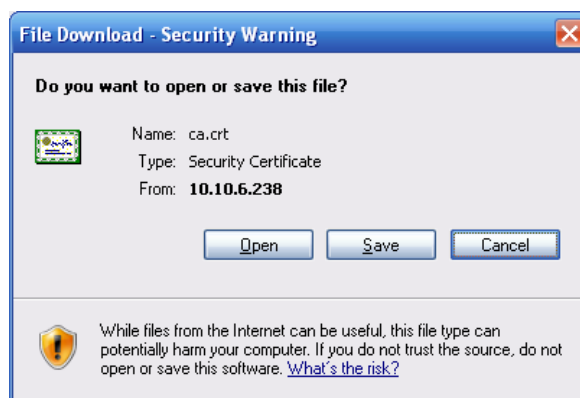


Figure 4-35

Click Open button, you can go to the following interface. See Figure 4-36.

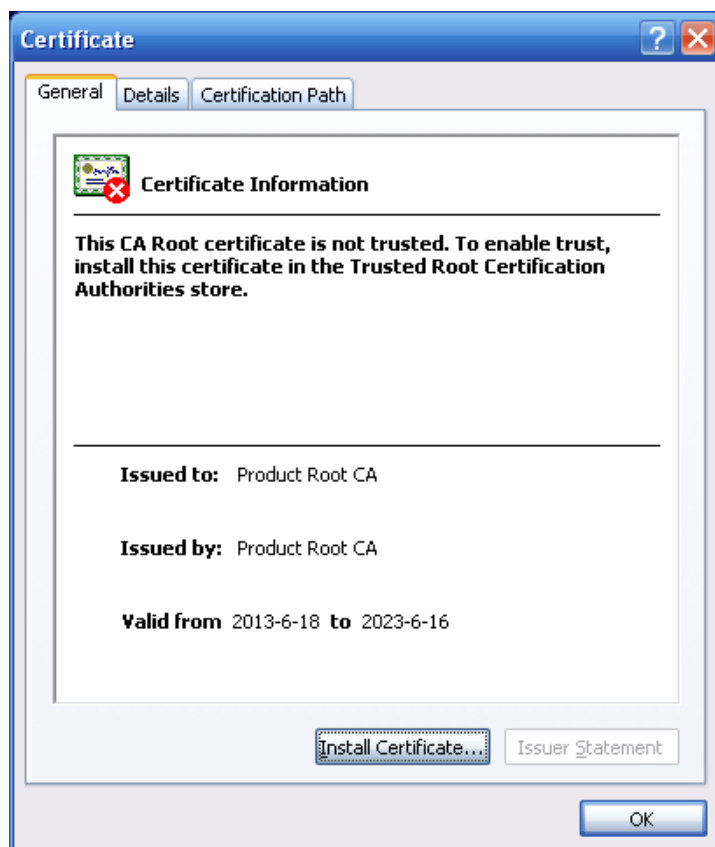


Figure 4-36

Click Install certificate button, you can go to certificate wizard. See Figure 4-37.



Figure 4-37

Click Next button to continue. Now you can select a location for the certificate. See Figure 4-38.

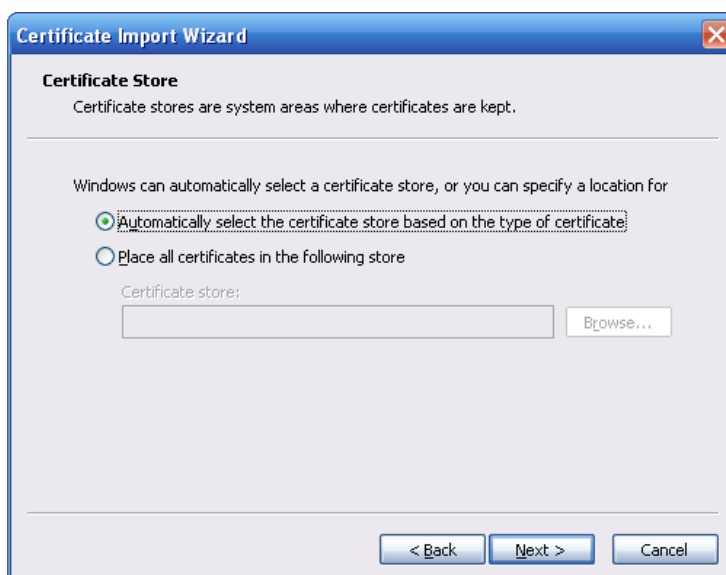


Figure 4-38

Click Next button, you can see the certificate import process is complete. See Figure 4-39.

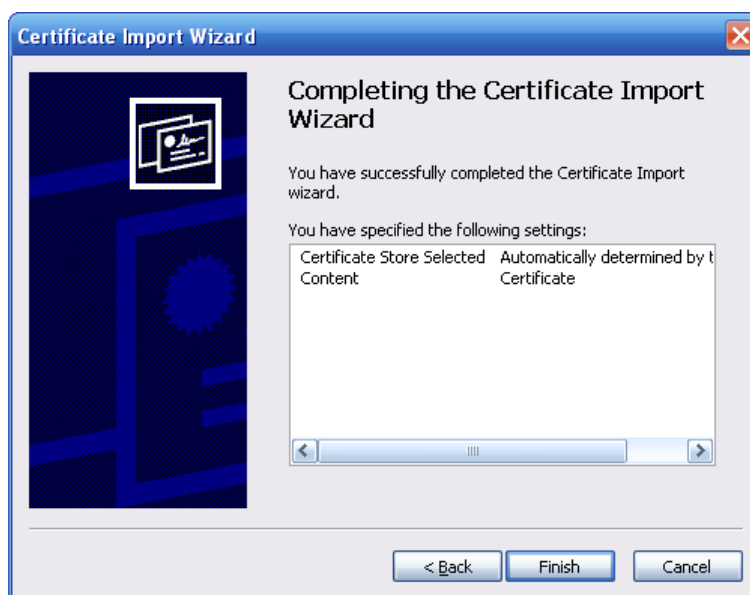


Figure 4-39

Click Finish button, you can see system pops up a security warning dialogue box. See Figure 4-40.



Figure 4-40

Click Yes button, system pops up the following dialogue box, you can see the certificate download is complete. See Figure 4-41.



Figure 4-41

4.4.2.2.5 View and set HTTPS port

From Setup->Network->Connection, you can see the following interface. See Figure 4-42. You can see HTTPS default value is 443.

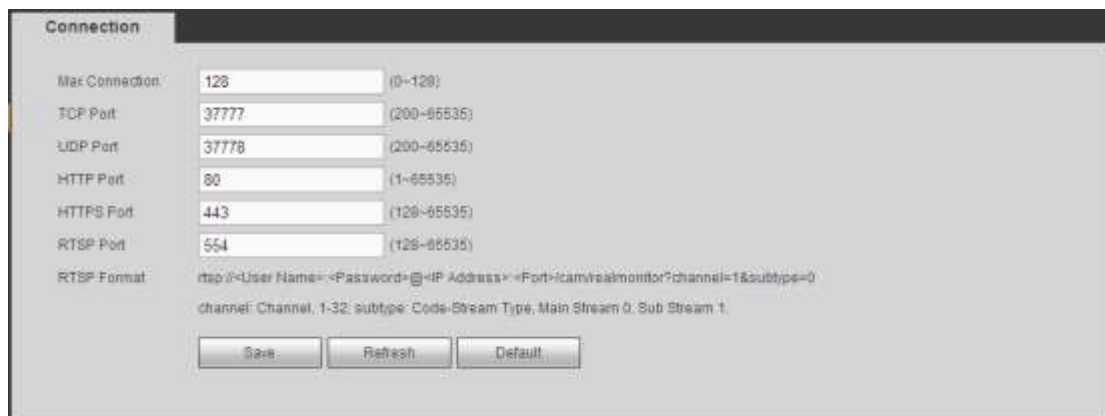


Figure 4-42

4.4.2.2.6 Login

Open the browser and then input <https://xx.xx.xx.xx:port>.

xx.xx.xx.xx: is your device IP or domain name.

Port is your HTTPS port. If you are using default HTTPS value 443, you do not need to add port information here. You can input <https://xx.xx.xx.xx> to access.

Now you can see the login interface if your setup is right.

4.4.2.3 WIFI

Please note this function is for the device of WIFI module.

This function allows you to connect the NVS to the network via the WIFI.

From main window->Setup->Network->WIFI, the WIFI interface is shown as in Figure 4-43.



Figure 4-43

Please check the box to enable WIFI function and then click the Search SSID button. Now you can view all the wireless network information in the following list. Double click a name to connect to it. Click Refresh button, you can view latest connection status.

4.4.2.4 3G/4G

4.4.2.4.1 CDMA/GPRS

From main window->Setup->Network->3G, the CDMA/GPRS interface is shown as in Figure 4-44.

Note

After you connected the 3G module, you can view the module information and wireless signal. If there is no information, click Search button to search.

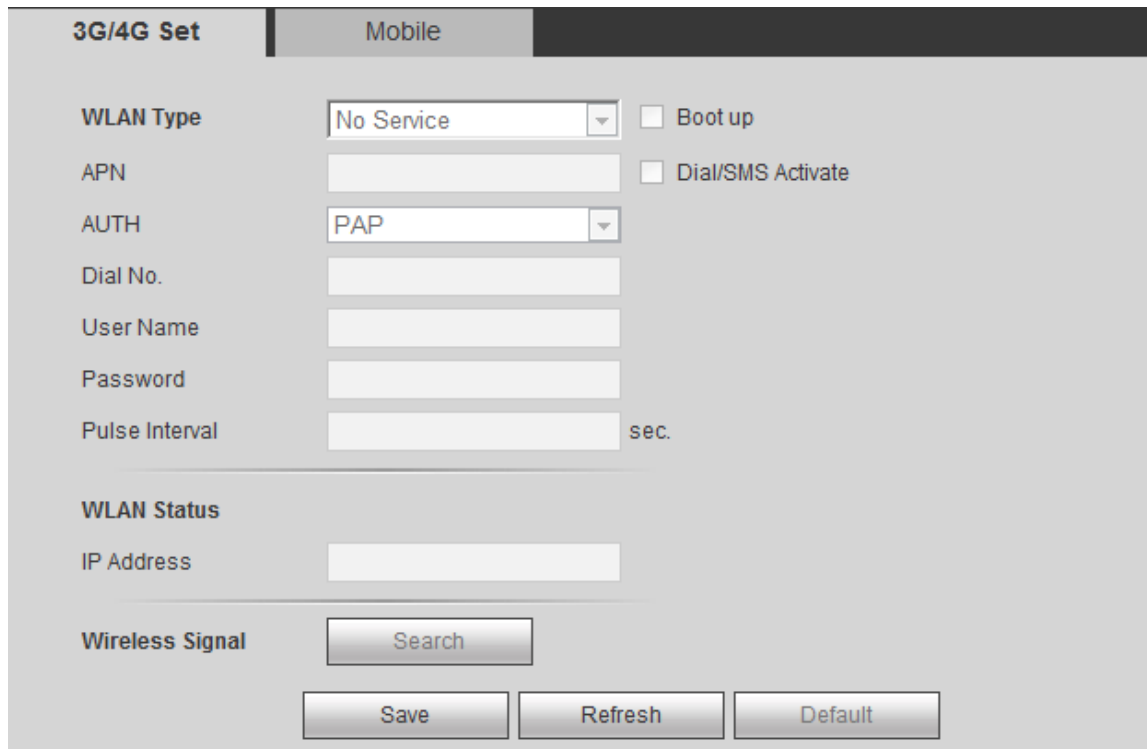


Figure 4-44

Please refer to the following sheet for detailed information.

Parameter	Function
WLAN type	Here you can select 3G network type to distinguish the 3G module from different ISP. The types include WCDMA, CDMA1x and etc.
APN/Dial No.	Here is the important parameter of PPP.
Authorization	It includes PAP,CHAP,NO_AUTH.
Pulse interval	It is to set time to end 3G connection after you close extra stream monitor. For example, if you input 60 here, system ends 3G connection after you close extra stream monitor 60 seconds.
Important <ul style="list-style-type: none"> ✧ If the pulse interval is 0, then system does not end 3G connection after you close the extra stream monitor. ✧ Pulse interval here is for extra stream only. This item is null if you are using main stream to monitor. 	

4.4.2.4.2 Mobile

Before you set cellphone, please go to the previous chapter to enable Dial/SMS activate function.

From main window->Setup->Network->3G->Mobile, the mobile setup interface is shown as in Figure 4-45.

Here you can activate or turn off the 3G connected phone or mobile phone, or the phone you set to get alarm message.

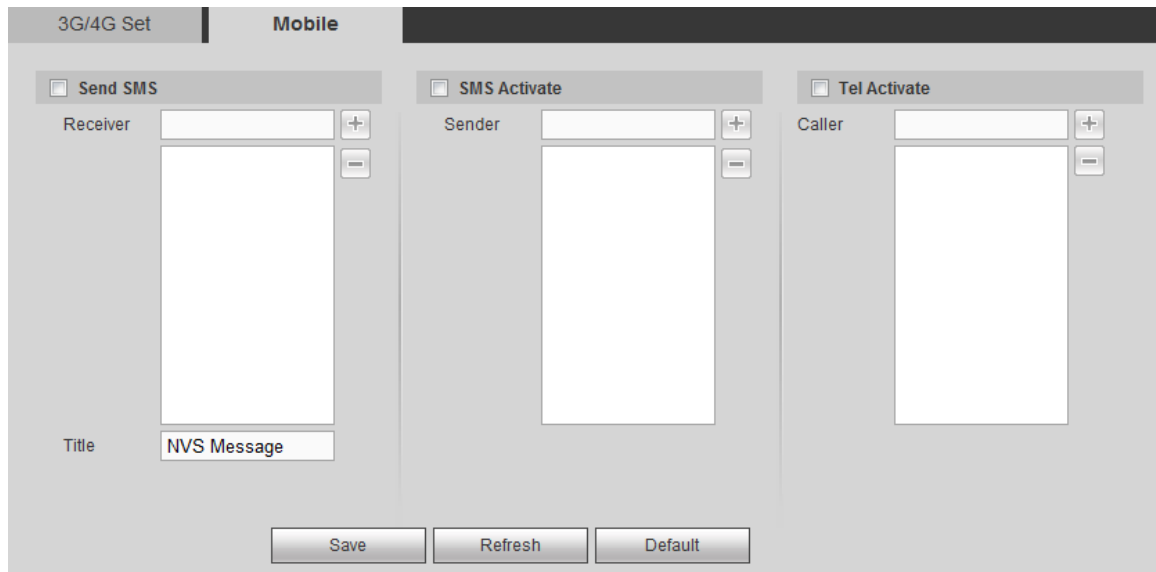




Figure 4-45

Check the box to enable send SMS/SMS activate/tel activate function.

Input sender/caller cellphone number and then click  to add the cellphone user to the list.

Select a number in the list and then click  to delete current number.

- Send SMS: Check the box to enable this function. Various kinds of alarm can trigger the NVS to send out alarm message to the receiver.
- SMS activate: Check the box to enable this function. The user can send out the message to the receiver to enable/disable 3G module.
- Telephone activate: Check the box to enable this function. The user can call the 3G user to enable/disable 3G module.

Click OK to complete the setup.

4.4.2.5 PPPoE

From main window->Setup->Network->PPPoE, the PPPoE interface is shown as in Figure 4-46.

Input the PPPoE user name and password you get from the IPS (internet service provider) and enable PPPoE function. Please save current setup and then reboot the device to get the setup activated.

Device connects to the internet via PPPoE after reboot. You can get the IP address in the WAN from the IP address column.

Please note, you need to use previous IP address in the LAN to login the device. Please go to the IP address item to view the device current device information. You can access the client-end via this new address.

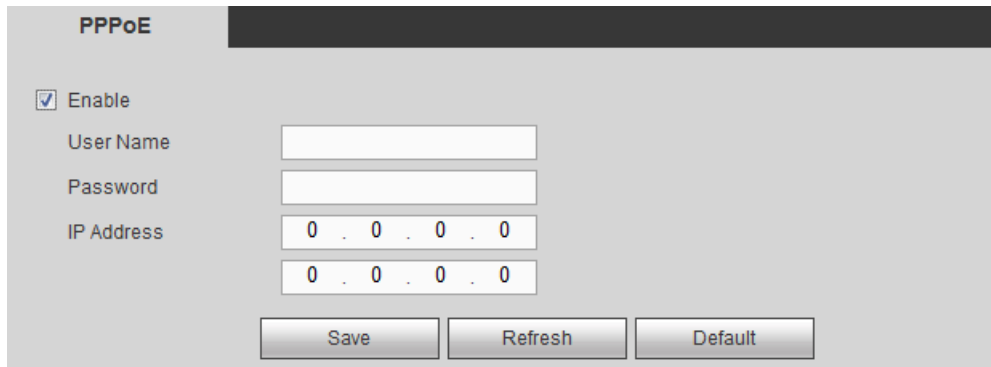


Figure 4-46

4.4.2.6 DDNS

From main window->Setup->Network->DDNS, the DDNS interface is shown as in Figure 4-47.

The DDNS is to set to connect the various servers so that you can access the system via the server. Please go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address has changed. Please select DDNS from the dropdown list (Multiple choices). Before you use this function, please make sure your purchased device support current function.



Figure 4-47

Please refer to the following sheet for detailed information.

Parameter	Function
Server Type	You can select DDNS protocol from the dropdown list and then enable DDNS function.
Server IP	DDNS server IP address
Server Port	DDNS server port.
Domain Name	Your self-defined domain name.
User	The user name you input to log in the server.
Password	The password you input to log in the server.
Update period	Device sends out alive signal to the server regularly. You can set interval value between the device and DDNS server here.

Dahua DDNS and Client-end Introduction

1) Background Introduction

Device IP is not fixed if you use ADSL to login the network. The DDNS function allows you to access the DVR via the registered domain name. Besides the general DDNS, the Dahua DDNS works with the device from the manufacturer so that it can add the extension function.

2) Function Introduction

The Dahua DDNS client has the same function as other DDNS client end. It realizes the bonding of the domain name and the IP address. Right now, current DDNS server is for our own devices only. You need to refresh the bonding relationship of the domain and the IP regularly. There is no user name, password or the ID registration on the server. At the same time, each device has a default domain name (Generated by MAC address) for your option. You can also use customized valid domain name (has not registered.).

3) Operation

Before you use Dahua DDNS, you need to enable this service and set proper server address, port value and domain name.

- Server address: www.dahuaddns.com
- Port number: 80
- Domain name: There are two modes: Default domain name and customized domain name.

Except default domain name registration, you can also use customized domain name (You can input your self-defined domain name.) After successful registration, you can use domain name to login installed of the device IP.

- User name: It is optional. You can input your commonly used email address.

Important

- Do not register frequently. The interval between two registrations shall be more than 60 seconds. Too many registration requests may result in server attack.
- System may take back the domain name that is idle for one year. You can get a notification email before the cancel operation if your email address setup is OK.

4.4.2.7 IP filter

4.4.2.7.1 IP Filter

From main window->Setup->Network->IP filter->IP filter, the IP filter interface is shown as in Figure 4-48.

After you enabled trusted sites function, only the IP listed below can access current NVS. If you enable blocked sites function, the following listed IP addresses can not access current NVS.

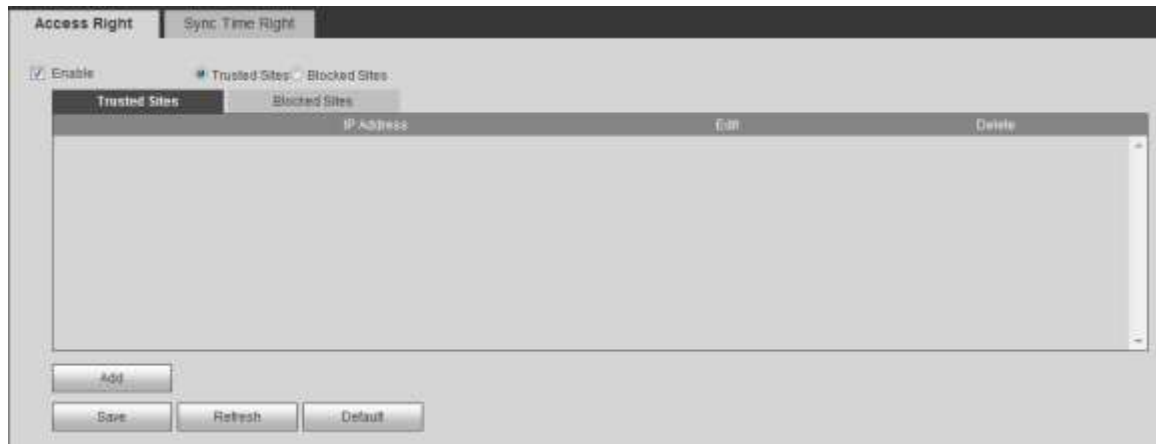


Figure 4-48

Please refer to the following sheet for detailed information.

Parameter	Function
IP address	Input the device IP address you want to add.
IP segment	Input the start address and end address of the IP segment you want to add.
IPv4	The IP address adopts IPv4 mode such as 172.16.5.10.
IPv6	The IP address adopts IPv6 mode such as aa:aa:aa:aa:aa:aa:aa:aa.
MAC address	Input the mac address you want to add. Note This function is for whitelist only.

4.4.2.7.2 Sync Time Right

From main window->Setup->Network->IP filter->Sync time right, the sync time interface is shown as Figure 4-49.

After you set sync time whitelist, only the specified IP address can sync or change device time. It is to avoid multiple hosts to sync or change time with the device at the same time. Please check the Enable box to enable this function and then click Add button to add the corresponding address, and then click Save button to complete the setup. From main menu->Setup->System->General->Date and time, change device time or check the IPC time sync box to enable time sync function.

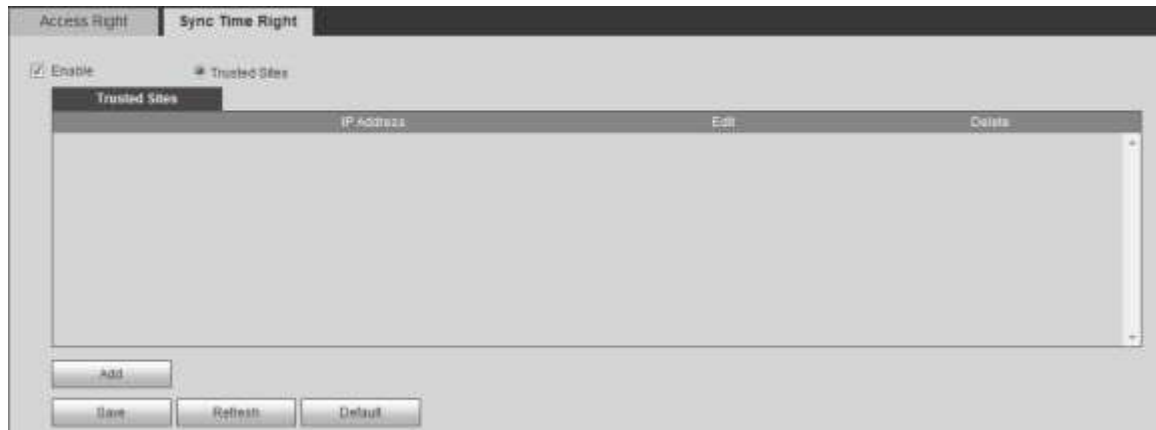


Figure 4-49

Please refer to the following sheet for detailed information.

Parameter	Function
IP address	Input the device IP address you want to add.
IP segment	Input the start address and end address of the IP segment you want to add.
IPv4	The IP address adopts IPv4 mode such as 172.16.5.10.
IPv6	The IP address adopts IPv6 mode such as aa:aa:aa:aa:aa:aa:aa:aa.
MAC address	Input the mac address you want to add.

4.4.2.8 Email

After you set email function, system can send out an email once there is an alarm, video detection event, abnormality event, intelligent event and etc.

From main window->Setup->Network->Email, the email interface is shown as in Figure 4-50.

Email

☒ Enable
 SMTP Server MailServer
 Port 25 (1~65535)
 ☒ Anonymous
 User Name
 Password
 Sender
 Encrypt Type NONE
 Subject NVS ALERT ☒ Attachment
 Receiver
 Interval 120 sec. (0~3600)
 ☐ Health Enable 60 min. (30~1440)
 Email Test
 Save Refresh Default

Figure 4-50

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Please check the box here to enable email function.
SMTP Server	Input server address and then enable this function.
Port	Default value is 25. You can modify it if necessary.
Anonymity	For the server supports the anonymity function. You can auto login anonymously. You do not need to input the user name. password and the sender information.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Authentication (Encryption mode)	You can select SSL or none.
Subject	Input email subject here.
Attachment	System can send out the email of the snapshot picture once you check the box here.

Parameter	Function
Receiver	Input receiver email address here. Max three addresses. It supports SSL, TLS email box.
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. Please note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormality event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormality events, which may result in heavy load for the email server.
Health mail enable	Please check the box here to enable this function.
Update period (interval)	This function allows the system to send out the test email to check the connection is OK or not. Please check the box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here.
Email test	The system will automatically sent out an email once to test the connection is OK or not .Before the email test, please save the email setup information.

4.4.2.9 FTP

You need to download or buy FTP service tool (such as Ser-U FTP SERVER) to establish FTP service.

Please install Ser-U FTP SERVER first. From “start” -> “program” -> Serv-U FTP Server -> Serv-U Administrator. Now you can set user password and FTP folder. Please note you need to grant write right to FTP upload user.

From main window->Setup->Network->FTP, the FTP interface is shown as in Figure 4-51. It is to set FTP IP, port and etc for remote storage.

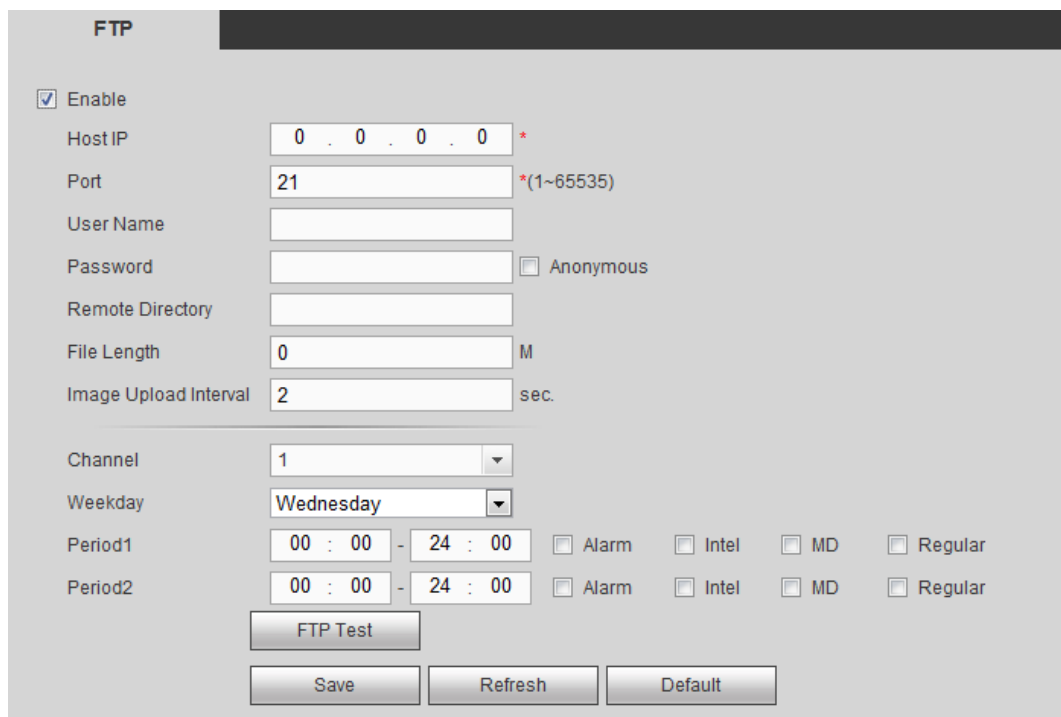


Figure 4-51

Please refer to the following sheet for detailed information.

Parameter	Function
Host IP	The host IP you have installed the FTP server.
Port	The default setup is 21.
User name/Password	The account for you to access the FTP server.
Remote directory	<p>The folder you created under the root path of the FTP according to the corresponding rule.</p> <ul style="list-style-type: none"> ● If there is no remote directory, system can auto create different directories according to the IP, time and channel. ● If there is remote directory, system can create corresponding folder under the FTP root path and then create different folders according to IP address, time and channel.
File length	File length is upload file length. When setup is larger than the actual file length, system will upload the whole file. When setup here is smaller than the actual file length, system only uploads the set length and auto ignore the left section. When interval value is 0, system uploads all corresponding files.

Parameter	Function
Image upload interval	<p>It is the image upload interval. If the image upload interval is larger than the image snapshot frequency, system just uploads the lasted image.</p> <ul style="list-style-type: none"> ● If the image interval is 5 seconds and the snapshot frequency is 2 seconds, system will send out the latest image at the buffer at 5 seconds. ● If the image upload interval is smaller than the snapshot frequency, system will upload at the snapshot frequency. For example, if the image interval is 5 seconds and the snapshot frequency is 10 seconds, system will send out the image at 10 seconds. ● From main window->Setting->Camera->Encode->Snapshot to set snapshot frequency.
Channel	Select a channel from the dropdown list and then set week, period and record type.
Week day/Period	Please select from the dropdown list and for each day, you can set two periods.
Type	Please select uploaded record type (Alarm/intelligent/motion detect/regular). Please check the box to select upload type.

4.4.2.10 UPnP

It allows you to establish the mapping relationship between the LAN and the public network.


From main window->Setup->Network->UPnP, here you can also add, modify or remove UPnP item. See Figure 4-52.

- In the Windows OS, From Start->Control Panel->Add or remove programs. Click the “Add/Remove Windows Components” and then select the “Network Services” from the Windows Components Wizard.
- Click the Details button and then check the “Internet Gateway Device Discovery and Control client” and “UPnP User Interface”. Please click OK to begin installation.
- Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the NVS can auto detect it via the “My Network Places”



Figure 4-52

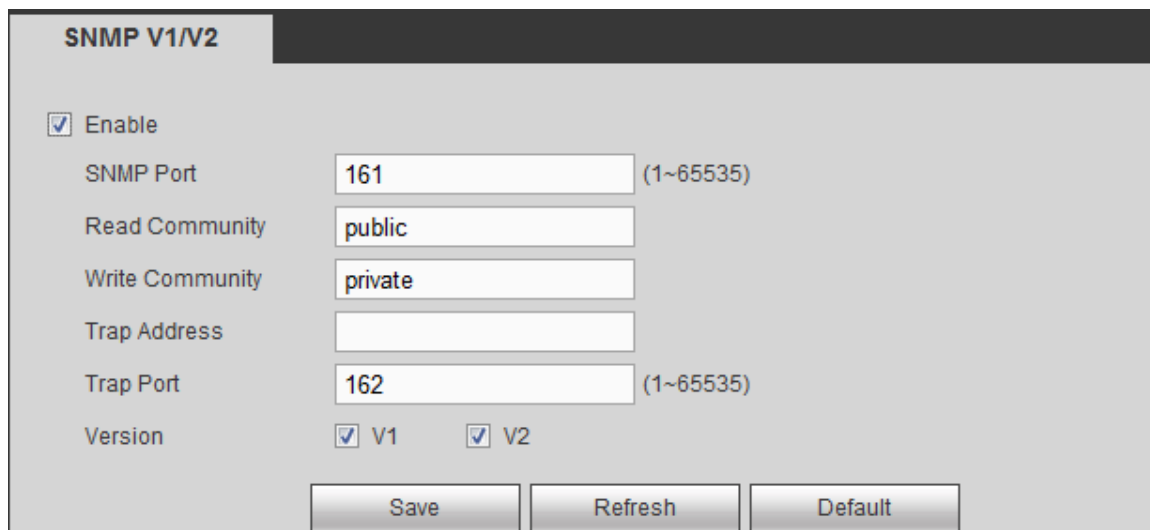
Please refer to the following sheet for detailed information.

Parameter	Function	
Port enable/disable	Check the box to enable/disable this function.	
LAN IP	It is the router IP in the LAN.	Device can auto get the IP address if the UPnP function succeeded. Do not need to set.
WAN IP	It is the router IP in the WAN.	
Status	When the UPNP is offline, it shows as “Searching”. When the UPNP works it shows “Success”	
Port mapping list	<p>It is the same information on the UPnP list of the router.</p> <ul style="list-style-type: none">● Service name: Defined by user.● Protocol: Protocol type● Internal port: Port that has been mapped in the router.● External port: Port that has been mapped locally. <p>Note</p> <ul style="list-style-type: none">● When you are setting the router external port, please use 1024~5000 port. Do not use well-known port 1~255 and the system port 256~1023 to avoid conflict.● When there are several devices in the same LAN, please arrange the port mapping properly in case several devices are mapping to the same external port.● Please make sure the mapping port is available.● For the TCP and UDP, please make sure the internal port and external port are the same to guarantee the proper data transmission.	
Modify	Click  , you can change WAN port value.	

4.4.2.11 SNMP

From main window->Setup->Network->SNMP, the SNMP interface is shown as in Figure 4-53.

The SNMP allows the communication between the network management work station software and the proxy of the managed device. It is reserved for the 3rd party to develop.



The image shows a web-based configuration interface for SNMP V1/V2. It includes a title bar 'SNMP V1/V2', a list of configuration items with input fields, and three buttons at the bottom: 'Save', 'Refresh', and 'Default'.

Parameter	Value	Range/Default
Enable	<input checked="" type="checkbox"/>	
SNMP Port	161	(1~65535)
Read Community	public	
Write Community	private	
Trap Address		
Trap Port	162	(1~65535)
Version	<input checked="" type="checkbox"/> V1 <input checked="" type="checkbox"/> V2	

Figure 4-53

Please refer to the following sheet for detailed information.

Parameter	Function
SNMP Port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Read Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Please make sure the device and the proxy are the same. The read community will read all the objects the SNMP supported in the specified name. The default setup is public.
Write Community	It is a string. It is a command between the manage process and the proxy process. It defined the authentication, access control and the management relationship between one proxy and one group of the managers. Please make sure the device and the proxy are the same. The read community will read/write/access all the objects the SNMP supported in the specified name. The default setup is write.
Trap address	The destination address of the Trap information from the proxy program of the device.
Trap port	The destination port of the Trap information from the proxy program of the device. It is for the gateway device and the client-end PC in the LAN to exchange the information. It is a non-protocol connection port. It has no effect on the network applications. It is a UDP port not TCP port. The value ranges from 1 to 165535. The default value is 162.
SNMP version	<ul style="list-style-type: none"> ● Check V1, system only processes the information of V1. ● Check V2, system only processes the information of V2.

- In Figure 4-53., check the box to enable the SNMP function. Input the IP address of the PC than is running the software in the Trap address. You can use default setup for the rest items.
- Compile the above mentioned two MIB file via the software MIB Builder.

- Run MG-SOFT MIB Browser to load the file from the previous step to the software.
- Input the device IP you want to manage in the MG-SOFT MIB Browser. Please set the corresponding version for your future reference.
- Open the tree list on the MG-SOFT MIB Browser; you can get the device configuration. Here you can see the device has how many video channels, audio channels, application version and etc.

4.4.2.12 Multicast

From main window->Setup->Network->Multicast, the multicast interface is shown as in Figure 4-54.

Multicast is a transmission mode of data packet. When there is multiple-host to receive the same data packet, multiple-cast is the best option to reduce the broad width and the CPU load. The source host can just send out one data to transit. This function also depends on the relationship of the group member and group of the router.

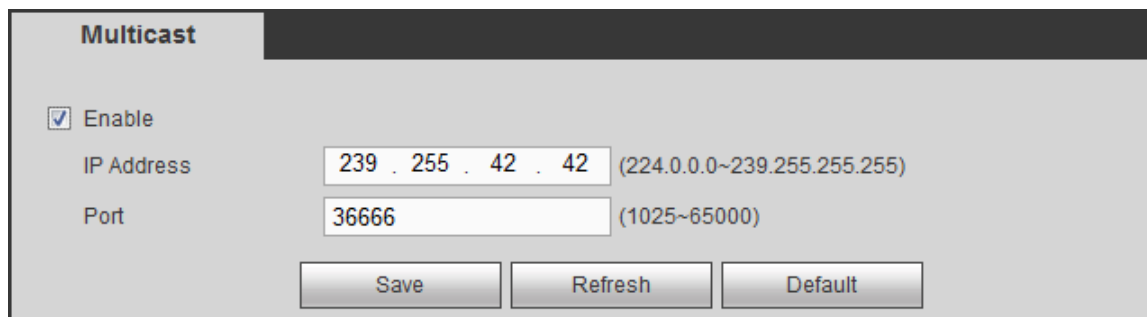


Figure 4-54

Please refer to the following sheet for detailed information.

Parameter	Function
IP address	The multicast IP address (0.0.0.0~255.255.255.255).
Port	The multicast port value(1025~65000).

Use WEB to login, you can see the following interface. See Figure 4-55. Select login type as the Multicast from the dropdown list. After you logged in the Web, the Web can automatically get multiple cast address and add it to the multiple cast groups. You can enable real-time monitor function to view the video.



Figure 4-55

4.4.2.13 Auto Register

From main window->Setup->Network->Register, the auto register interface is shown as below. See Figure 4-56.

This function allows the device to auto register to the proxy you specified. In this way, you can use the client-end to access the NVS and etc via the proxy. Here the proxy has a switch function. In the network service, device supports the server address of IPv4 or domain.

Please follow the steps listed below to use this function.

Please set proxy server address, port, and sub-device name at the device-end. Please enable the auto register function, the device can auto register to the proxy server.

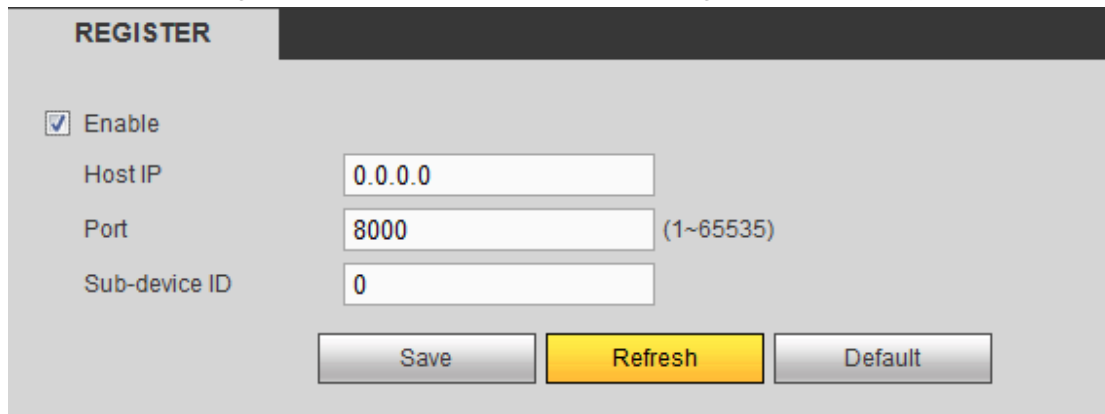


Figure 4-56

Please refer to the following sheet for detailed information.

Parameter	Function
Server IP address	The server IP address or server domain name you want to register.
Port	The auto registration port value of the server.
Sub-device ID	The device ID allocated by the server.

4.4.2.14 Alarm Centre

From main window->Setup->Network->Alarm center, the alarm center interface is shown as below. See Figure 4-57.

System can upload alarm signal to the alarm center when an alarm occurs.

Before you use alarm center, please set server IP, port and etc. When an alarm occurs, system can send out data as the protocol defined, so the client-end can get the data.

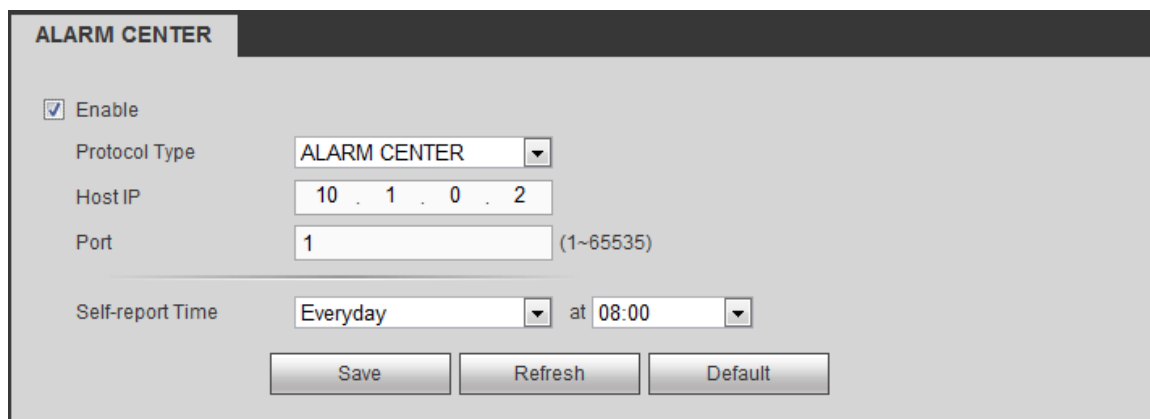


Figure 4-57

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	Check the box to enable alarm center function.
Server IP	The IP address and the communication port of the PC that has installed the alarm client.
Port	
Self-report time	Select alarm upload time from the dropdown list.

4.4.2.15 P2P

You can use cellphone client or the management platform to access the device.

- You can use your cell phone to scan the QR code and add it to the cell phone client.
- Via the SN from scanning the QR code, you can access the device in the WAN.

Please refer to the P2P operation manual included in the resources CD.

From main menu->Setup->Network->P2P, the P2P interface is shown as in Figure 4-58.

Check the Enable box to enable P2P function and then click the Save button. Now you can view the device status and SN.



Figure 4-58

- Android:

Open Google Play app in your smart phone. Search gDMSS Lite or gDMSS Plus, download it and install.

- iOS:

Open App Store app in your smart phone. Search iDMSS Lite or iDMSS Plus, download it and install.


Please follow the steps listed below.



- Open App; tap to go to the Live preview.

- Tap  at the top left corner, you can see the main menu.

- Tap Device manager button, you can use several modes (P2P/DDNS/IP and etc) to

add the device. Click  to save current setup. Tap Start Live preview to view all-channel video from the connected device. See Figure 4-59.

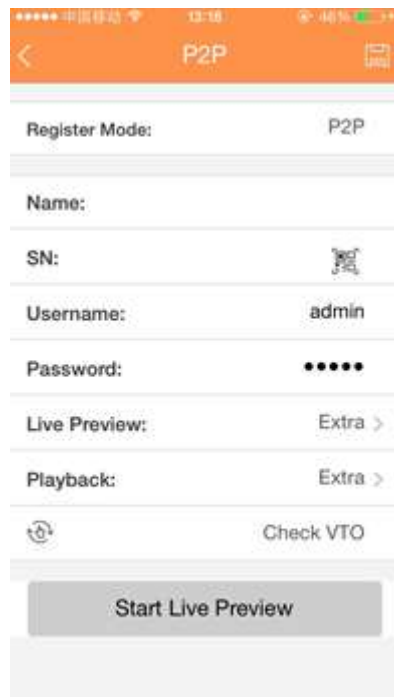


Figure 4-59

4.4.3 Event

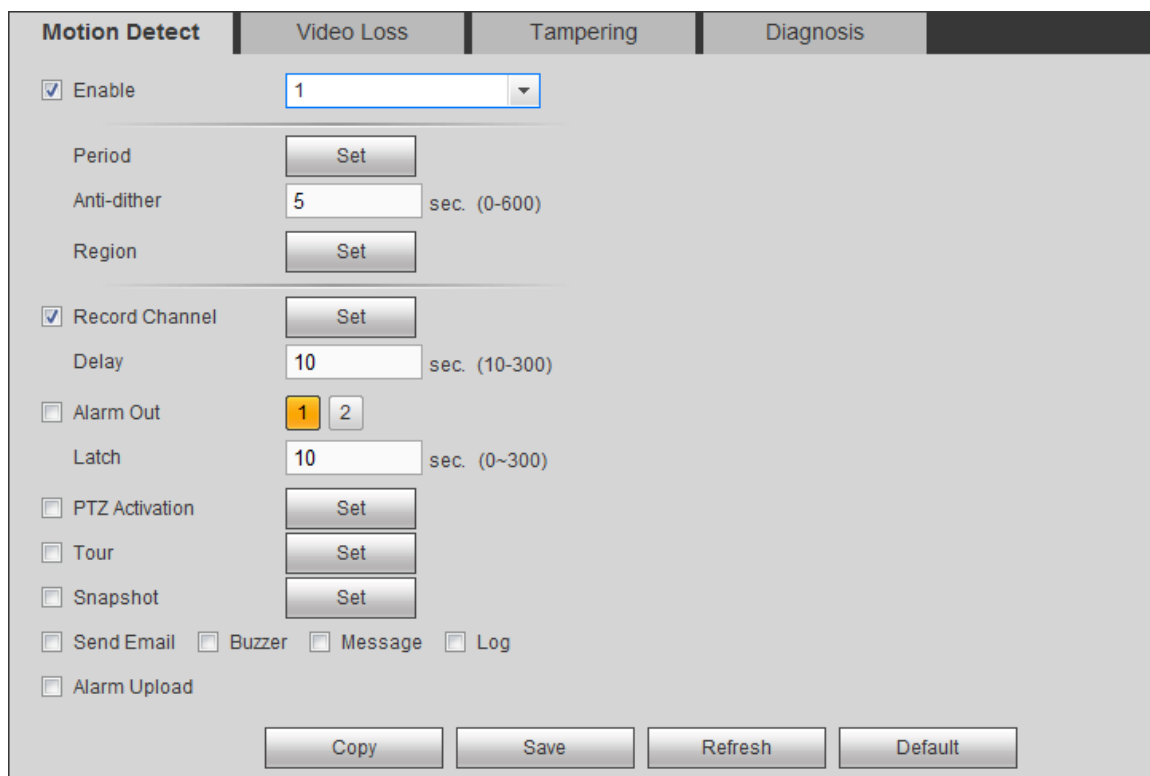
4.4.3.1 Video detect

The video detect includes motion detect, video loss, tampering, and diagnosis.

4.4.3.1.1 Motion Detect

From main window->Setup->Event->Video detect->Motion detect, the motion detect

interface is shown as in Figure 4-60.

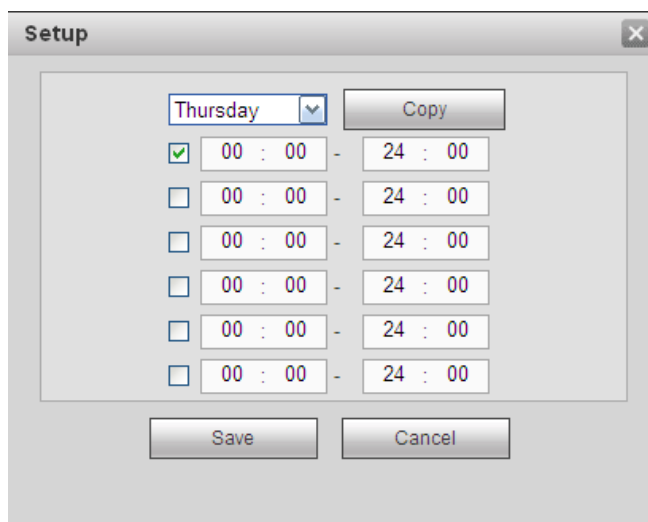


The interface shows the 'Motion Detect' tab with the following settings:

- ☒ Enable: 1
- Period: Set
- Anti-dither: 5 sec. (0-600)
- Region: Set
- ☒ Record Channel: Set
- Delay: 10 sec. (10-300)
- ☐ Alarm Out: 1 2
- Latch: 10 sec. (0-300)
- ☐ PTZ Activation: Set
- ☐ Tour: Set
- ☐ Snapshot: Set
- ☐ Send Email ☐ Buzzer ☐ Message ☐ Log
- ☐ Alarm Upload

Buttons at the bottom: Copy, Save, Refresh, Default.

Figure 4-60



The Setup dialog box shows the following configuration:

- Day: Thursday
- Copy button
- Time range: 00 : 00 - 24 : 00 (checked)
- Time range: 00 : 00 - 24 : 00 (unchecked)
- Time range: 00 : 00 - 24 : 00 (unchecked)
- Time range: 00 : 00 - 24 : 00 (unchecked)
- Time range: 00 : 00 - 24 : 00 (unchecked)
- Time range: 00 : 00 - 24 : 00 (unchecked)

Buttons at the bottom: Save, Cancel.

Figure 4-61

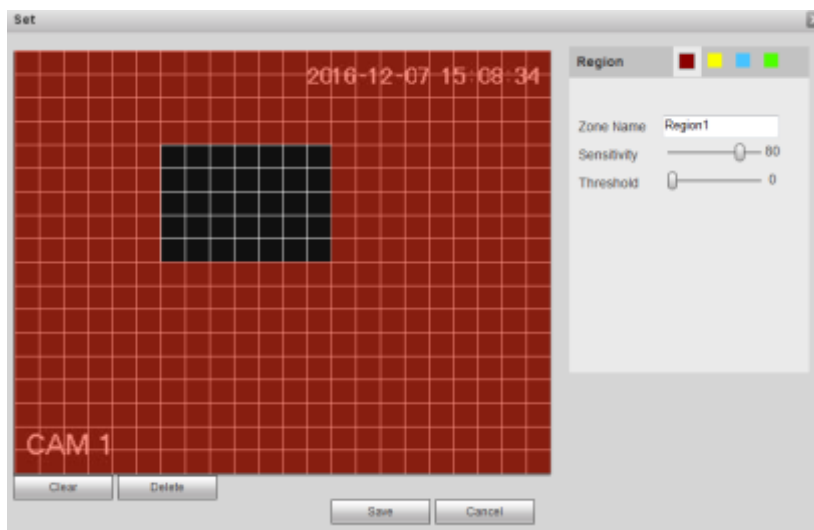


Figure 4-62

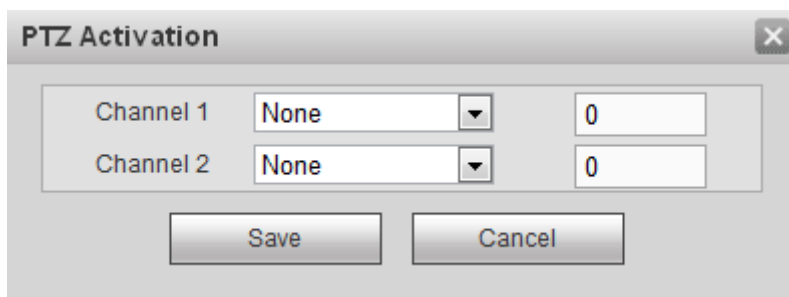


Figure 4-63

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable motion detection function. Please select a channel from the dropdown list.
Period	Motion detection function becomes activated in the specified periods. See Figure 4-61. There are six periods in one day. Please draw a circle to enable corresponding period. Click OK button, system goes back to motion detection interface, please click save button to exit.
Anti-Dither	System only memorizes one event during the anti-dither period. The value ranges from 5s to 600s.
Sensitivity	There are six levels. The sixth level has the highest sensitivity.
Region	If you select motion detection type, you can click this button to set motion detection zone. The interface is shown as in Figure 4-62. Here you can set motion detection zone. There are four zones for you to set. Please select a zone first and then left drag the mouse to select a zone. The corresponding color zone displays different detection zone. You can click Fn button to switch between the arm

Parameter	Function
	mode and disarm mode. In arm mode, you can click the direction buttons to move the green rectangle to set the motion detection zone. After you completed the setup, please click ENTER button to exit current setup. Do remember click save button to save current setup. If you click ESC button to exit the region setup interface system will not save your zone setup.
Record channel	System auto activates motion detection channel(s) to record once an alarm occurs. Please note you need to set motion detect record period and go to Storage-> Schedule to set current channel as schedule record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Alarm out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when an alarm occurs.
Latch	System can delay the alarm output for specified time after an alarm ended. The value ranges from 1s to 300s.
Snapshot	You need to check the box here to enable this function. You can set corresponding channel to snapshot when motion detect alarm occurs.
Show message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Buzzer	Check the box here to enable this function. The buzzer beeps when an alarm occurs.
Alarm upload	System can upload the alarm signal to the center (Including alarm center).
Message	When 3G network connection is OK, system can send out a message when motion detect occurs.
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
Tour	You need to check the box here to enable this function. System begins 1-window or multiple-window tour display among the channel(s) you set to record when an alarm occurs.
PTZ Activation	Here you can set PTZ movement when alarm occurs. Such as go to preset X. See Figure 4-63.

4.4.3.1.2 Video Loss

The video loss interface is shown as in Figure 4-64.

After analysis video, system can generate a video loss alarm when the detected moving signal reached the sensitivity you set here.

Please note video loss does not support anti-dither, sensitivity, region setup. For rest setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

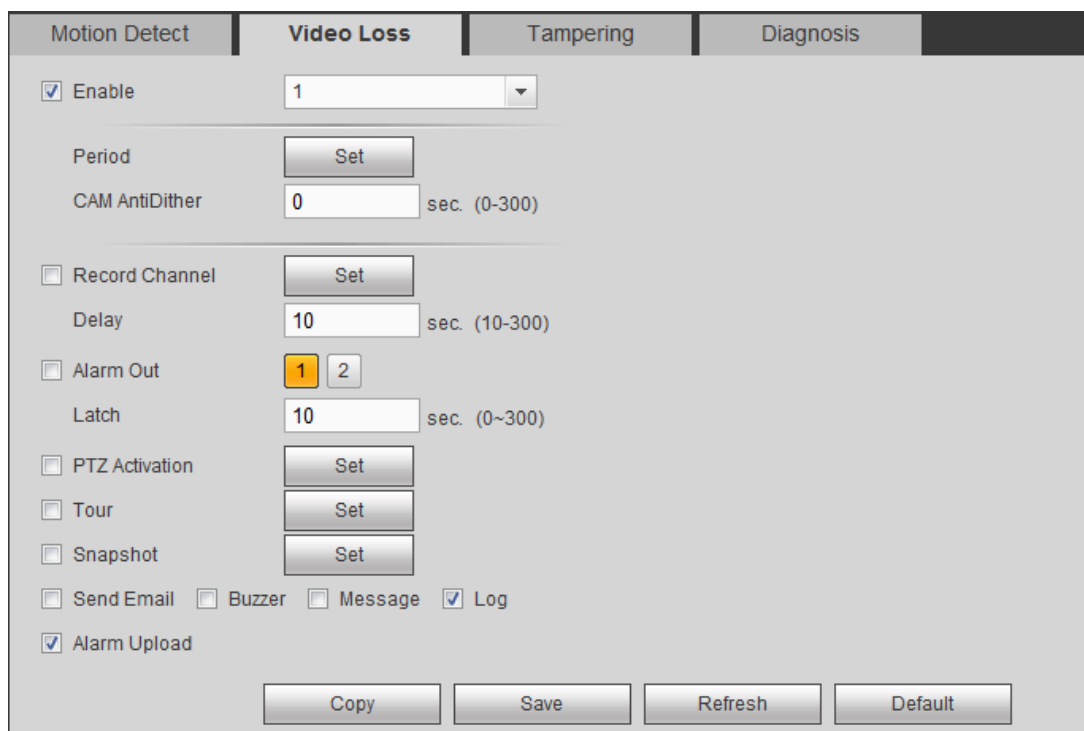


Figure 4-64

4.4.3.1.3 Tampering

The tampering interface is shown as in Figure 4-65.

After analysis video, system can generate a tampering alarm when the detected moving signal reached the sensitivity you set here.

For detailed setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

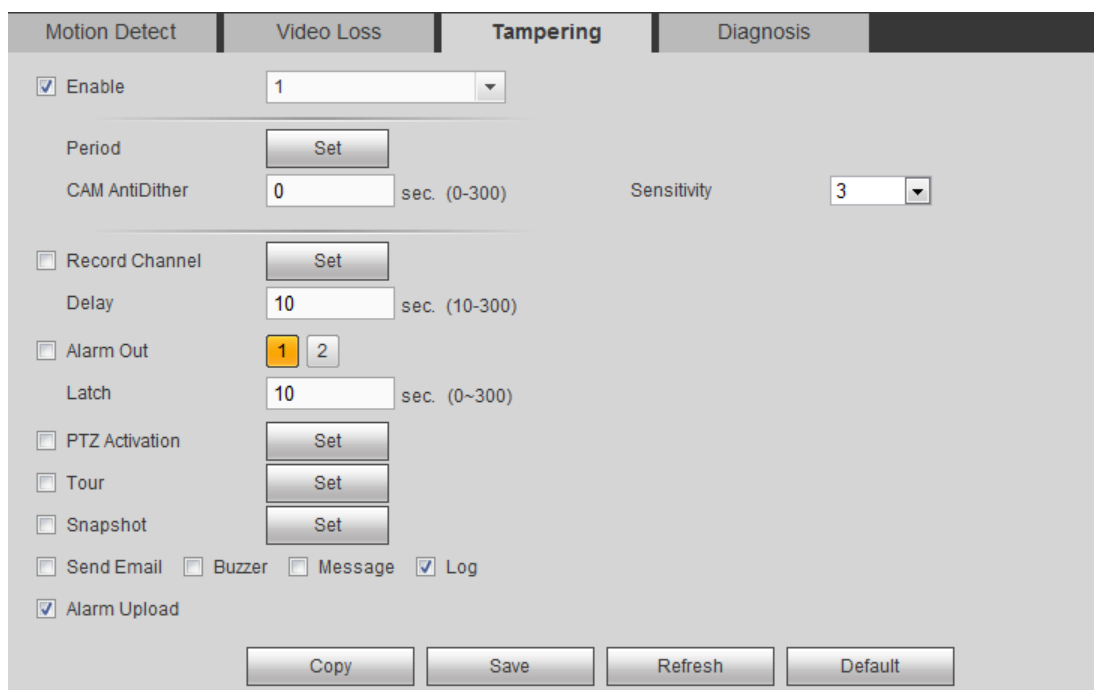


Figure 4-65

4.4.3.1.4 Diagnosis

System can trigger an alarm when the video stripe, noise, color cast, out of focus, over exposure event occurred. See Figure 4-66.

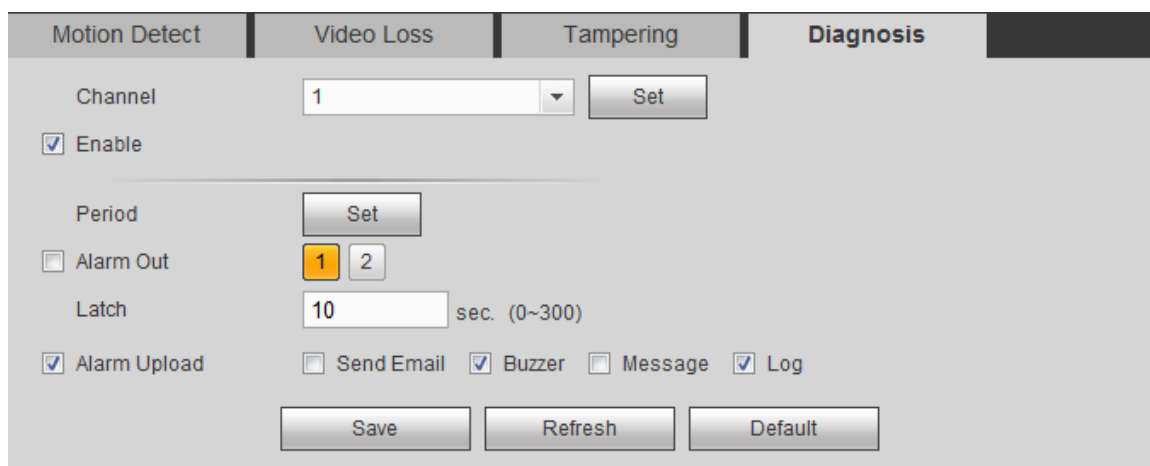


Figure 4-66

Click Set button, you can check the corresponding box to select diagnosis type. See Figure 4-67.

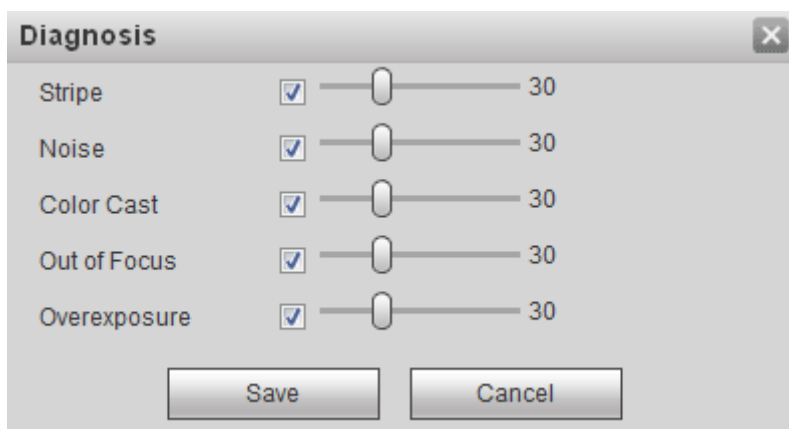


Figure 4-67

Note

Video diagnosis alarm can trigger PTZ preset, tour, and pattern.

For detailed setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

4.4.3.2 IVS (Optional)




- Right now, the IVS function max supports 10 rules.
- The IVS functions listed below for analog camera only.

Once any object violate the rule, the NVS can trigger an alarm and alert you as the specified alarm mode.

From main window->Setup->Event->IVS->Tripwire, you can see the following interface. Here you can set behavior analytics rule. See Figure 4-68.

Please follow the steps listed below.

- 1) Please select a channel from the dropdown list.
- 2) Click  and then select corresponding rule.
- 3) Set rule type and set corresponding parameters.
- 4) Check the box to enable the rule.
- 5) Click OK button to save current setup.

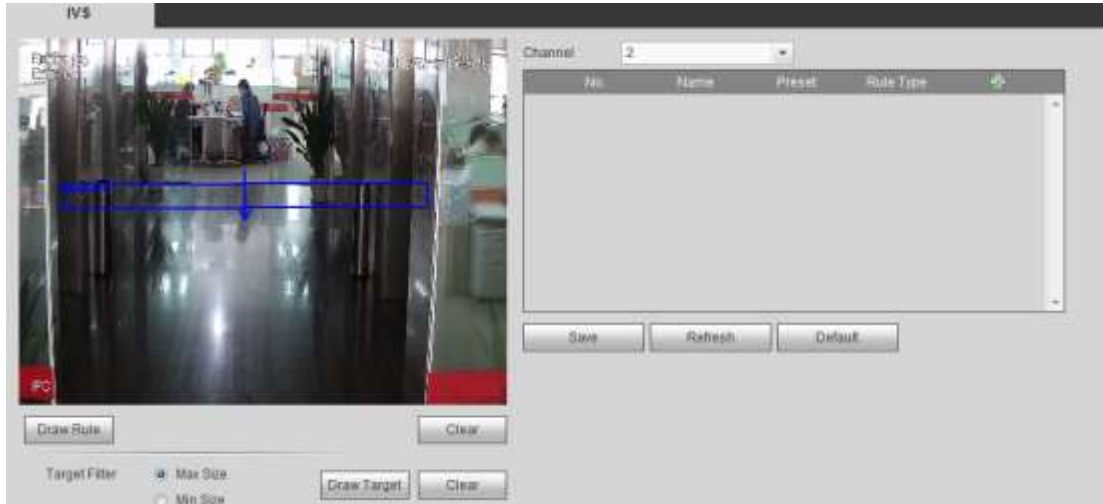



Figure 4-68

4.4.3.2.1 Tripwire

System generates an alarm once there is any object crossing the tripwire in the specified direction. Please use according to your actual situation.

Note:

- The tripwire function is valid once your connected network camera or your NVS supports this function.
- If you want to use the IVS function of the network camera, please make sure your connected network camera supports this function.

From main window->Setup->Event->IVS->Tripwire, click  to add the rule and select the rule type as Tripwire; check the Tripwire box to enable tripwire function. You can see the following interface. See Figure 4-69.

Tips

Double click to change the rule name.

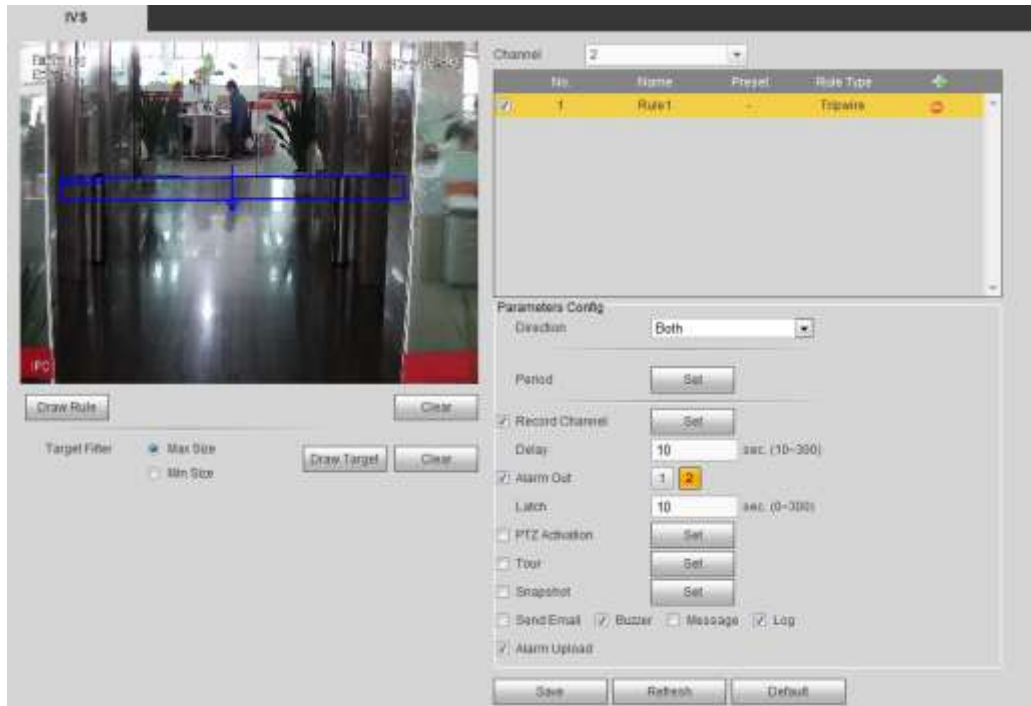


Figure 4-69

- Direction: There are three options: L->R, R->L, both. System can generate an alarm once there is any object crossing in the specified direction.

Now you can draw a rule. Click Draw rule button and then left click mouse to draw a tripwire. The tripwire can be a direct line, curve or polygon. Right click mouse to complete. See Figure 4-70.

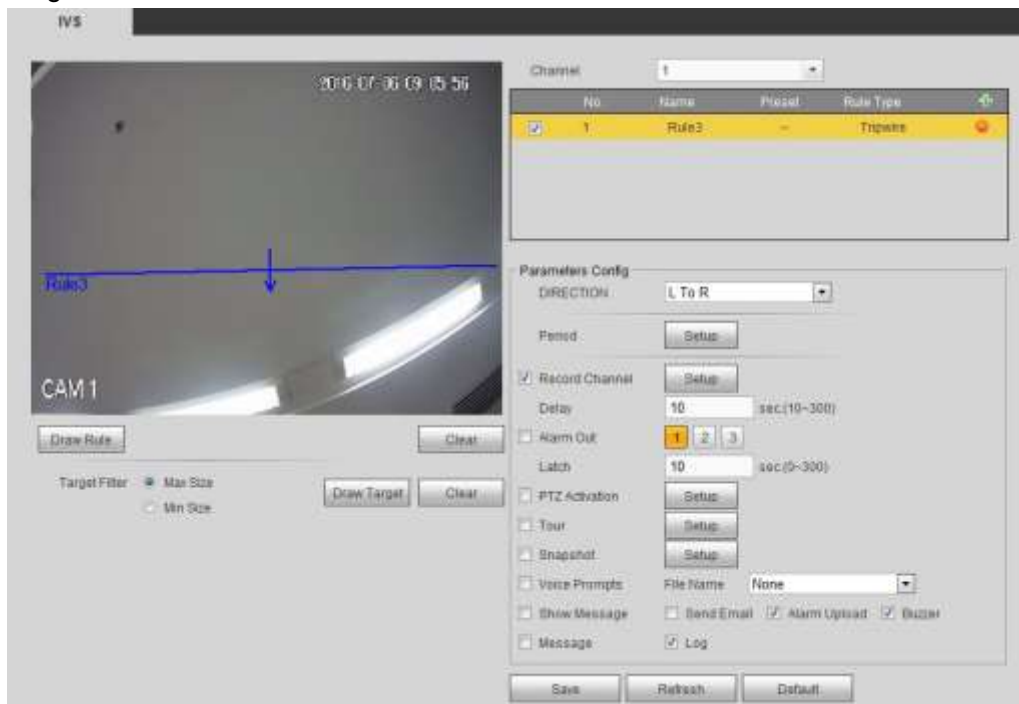


Figure 4-70

Click  to draw filter object.

Select the blue line and then use mouse to adjust zone size.

Note


- Each rule can set two sizes (min size/max size). Once the object is smaller than the min size or larger than the max size, there is no alarm. Please make sure the max size is larger than the min size.
- The default max size is the full screen, you can select the blue line and then use mouse to adjust.
- Click Clear to clear the zone you are drawing.

Click Ok to complete the rule setup.

For detailed setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

4.4.3.2 Intrusion (Cross warning zone)

This function is to detect there is any object enter or exit the zone. Please use according to your actual situation.

From main window->Setup->Event->IVS, click  to add the rule and select the rule type as Intrusion; check the Intrusion box to enable intrusion function. The intrusion interface is shown as below. See Figure 4-71.

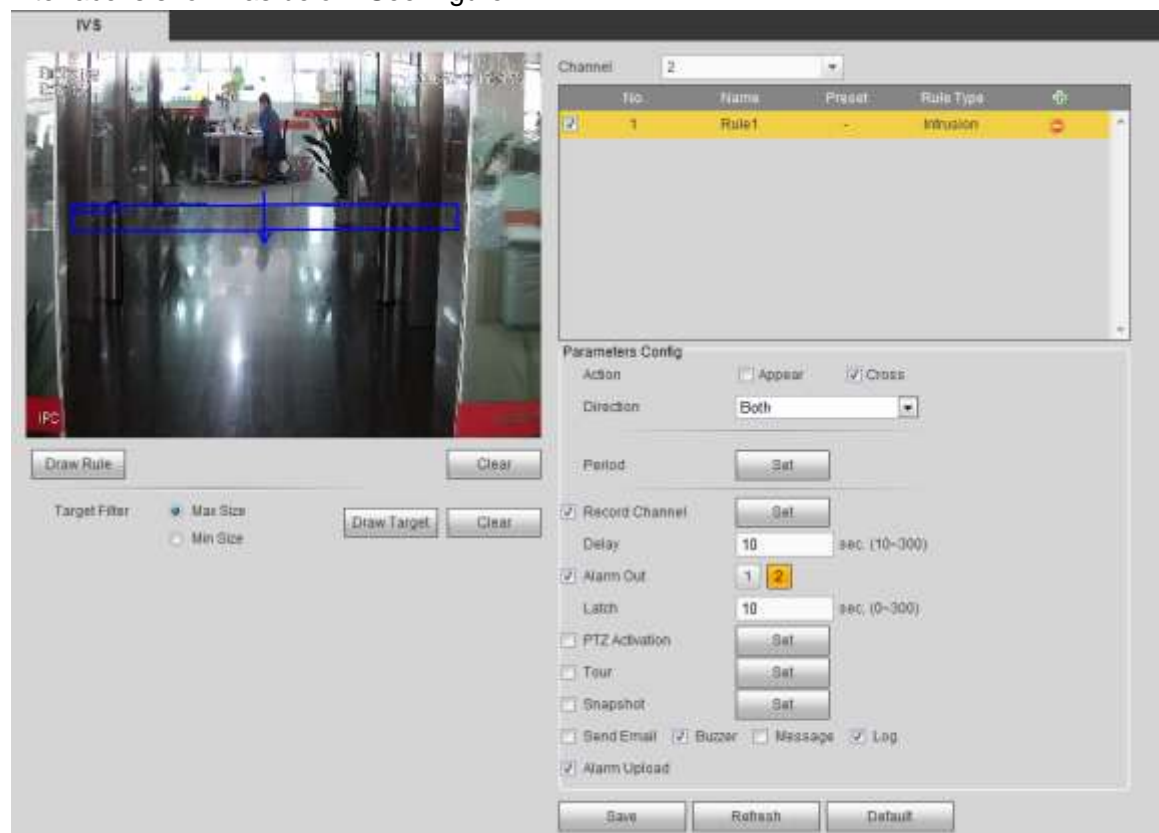
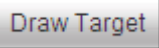


Figure 4-71

Tips

Double click to change the rule name.

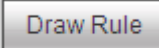
- Action: It is to set intrusion mode.
 - ✧ Cross: It includes enter the warning zone, leave the warning zone or cross the warning zone.
 - ✧ Appear: An object falling from nowhere (such as from the sky). It may not fully enter the warning zone.
 - Direction: When the action mode is cross, there are three options: A->B, B->A, both. System can generate an alarm once there is any object enter/exit (Or both) the zone.
- Now you can draw a rule. Left click mouse to draw a line first and then right click mouse to draw another line until you draw a rectangle, you can right click mouse to exit.

Click  to draw filter object. Select the blue line and then use mouse to adjust zone size.

Note

- Each rule can set two sizes (min size/max size). Once the object is smaller than the min size or larger than the max size, there is no alarm. Please make sure the max size is larger than the min size.
- The default max size is the full screen, you can select the blue line and then use mouse to adjust.
- Click Clear to clear the zone you are drawing.

Click Ok to complete the rule setup.

Click  to draw the zone. See Figure 4-72.

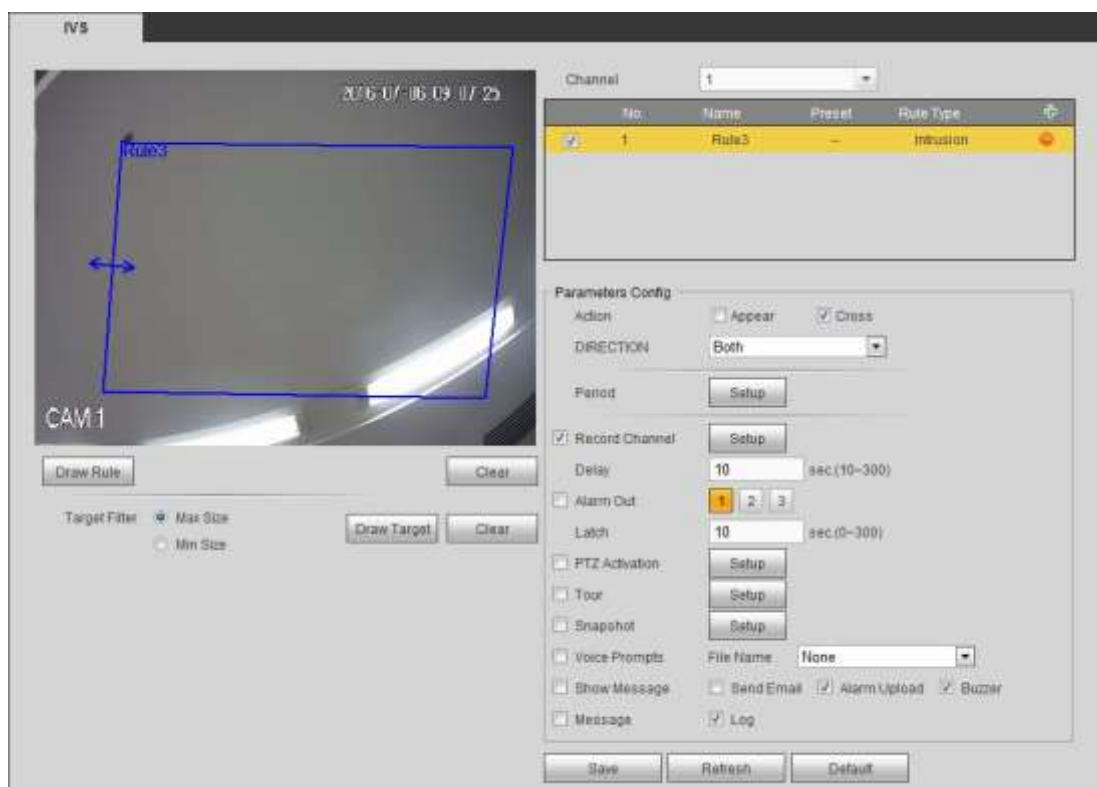



Figure 4-72

For detailed setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

4.4.3.2.3 Abandoned Object Detect

It is to detect there is any abandoned object. Please use according to your actual situation.

From main menu->Setup->Event->IVS, Click  to add the rule and select the rule type as Abandoned object detection, check the Abandoned object detection box to enable abandoned object detection function. The interface is shown as below. See Figure 4-73.

Tips

Double click to change the rule name.

Period: It refers to the time that object is staying in the zone time.

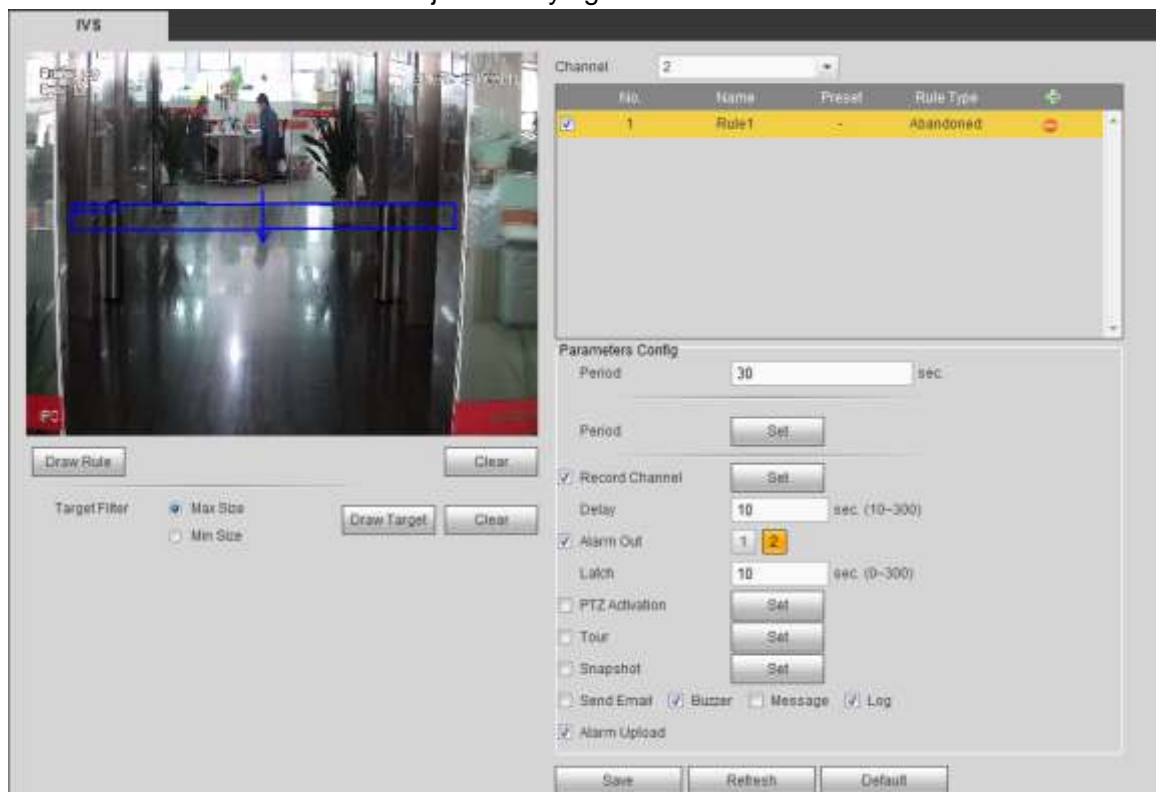
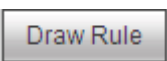


Figure 4-73

Click  to draw the rule. See Figure 4-74. Left click mouse to draw a line, until you draw a rectangle, you can right click mouse.

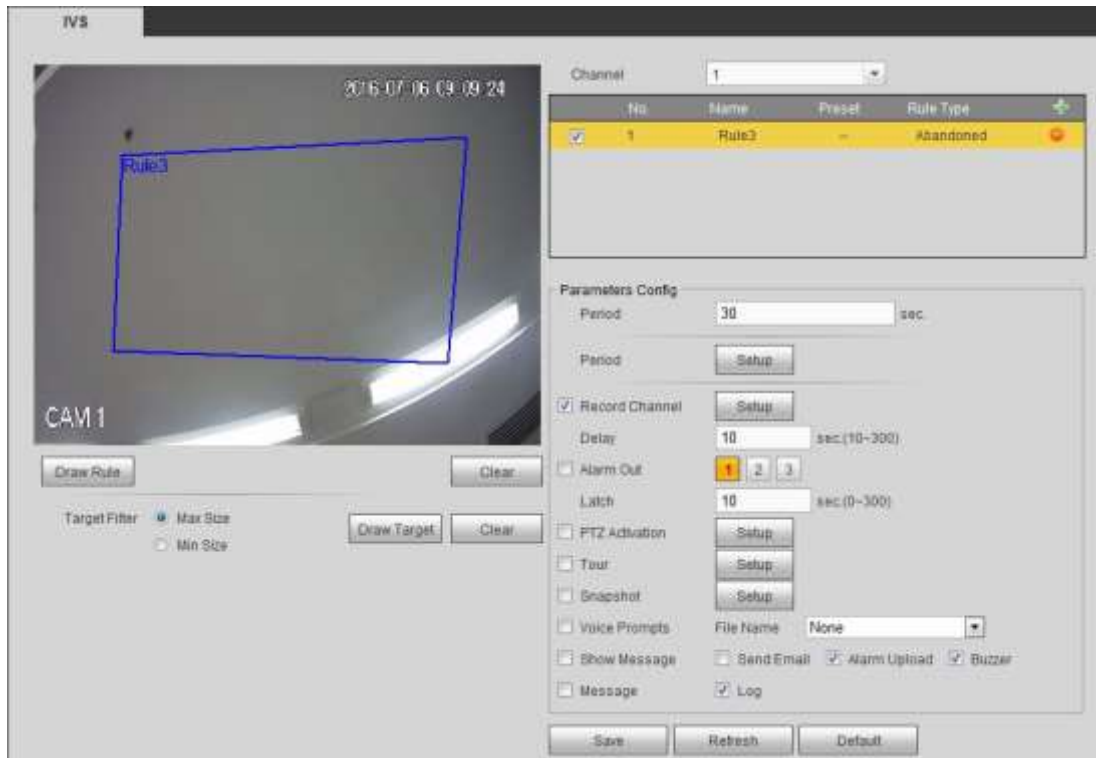
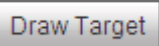


Figure 4-74

Click  to draw filter object. Select the blue line and then use mouse to adjust zone size.

Note

- Each rule can set two sizes (min size/max size). Once the object is smaller than the min size or larger than the max size, there is no alarm. Please make sure the max size is larger than the min size.
- The default max size is the full screen, you can select the blue line and then use mouse to adjust.
- Click Clear to clear the zone you are drawing.

Click Ok to complete the rule setup.

For detailed setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

4.4.3.2.4 Missing Object Detect

Note:

- System supports customized area shape and amount.
- Support period setup.
- Support objects filter function.

From main menu->Setup->Event->IVS, click , and then select rule type as missing object detection, you can see the following interface. See Figure 4-75.

Tips

Double click to change the rule name.

- Lasting period: It is the min time from the object left the zone to the alarm generation time.

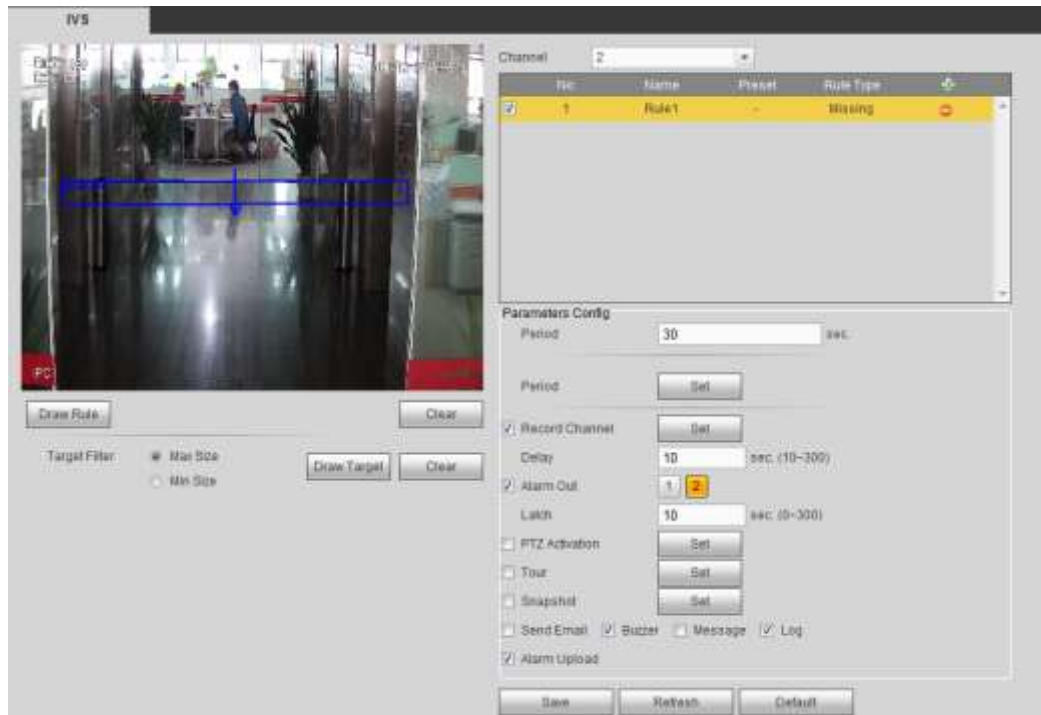
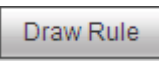


Figure 4-75

Click  to draw the rule. See Figure 4-76.

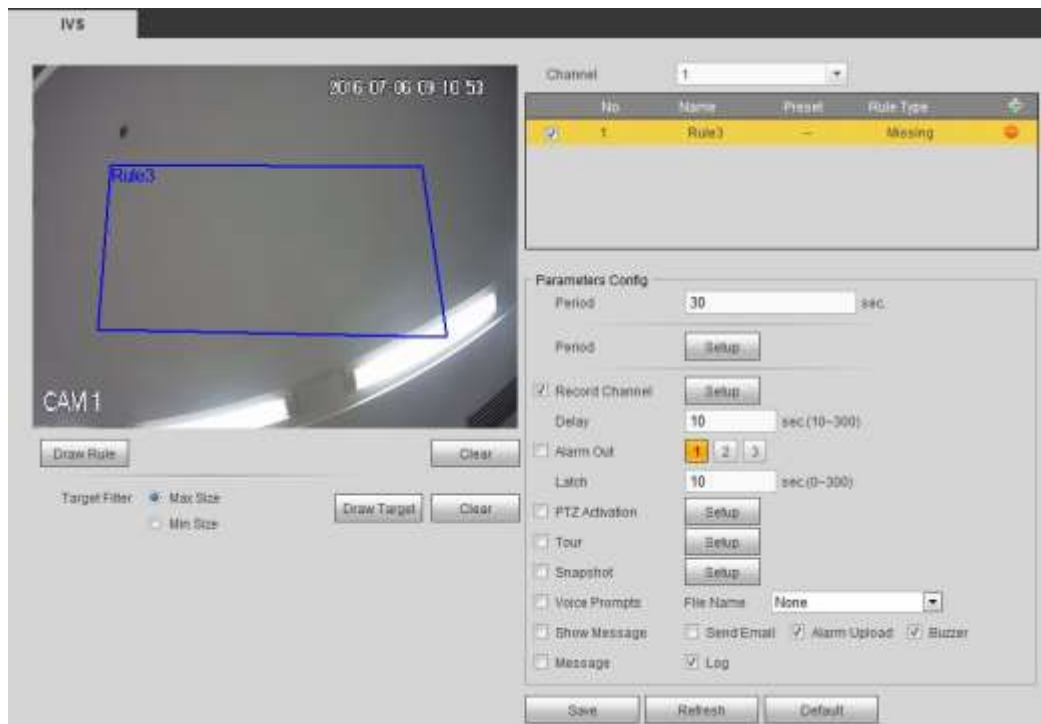
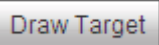


Figure 4-76

Click  to draw filter object. Select the blue line and then use mouse to adjust zone size.

Note

- Each rule can set two sizes (min size/max size). Once the object is smaller than the min size or larger than the max size, there is no alarm. Please make sure the max size is larger than the min size.
- The default max size is the full screen, you can select the blue line and then use mouse to adjust.
- Click Clear to clear the zone you are drawing.

Click Ok to complete the rule setup.

For detailed setups, please refer to chapter 4.4.3.1.1 motion detect for detailed information.

4.4.3.3 Alarm

Before operation, please make sure you have properly connected alarm devices such as buzzer. The input mode includes local alarm/network alarm/IPC external alarm/IPC offline alarm.

4.4.3.3.1 Local Alarm

From main menu->Setup->Event->Alarm, the local alarm interface is shown as in Figure 4-77. It refers to alarm from the local device.

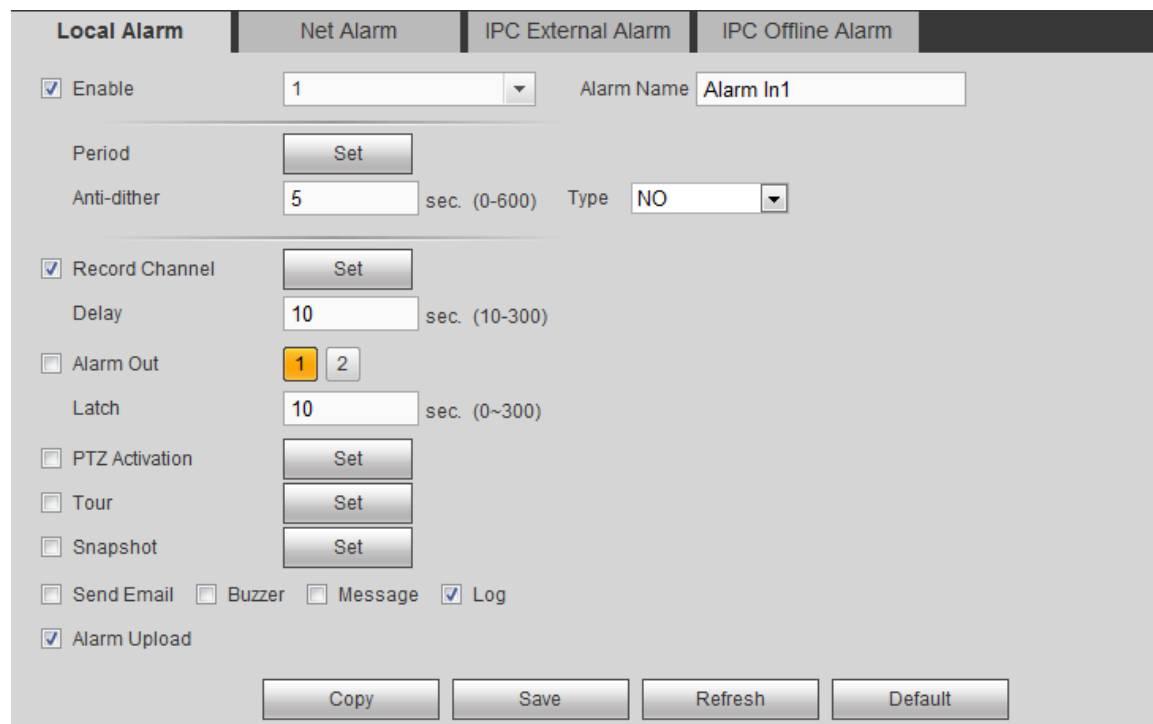


Figure 4-77

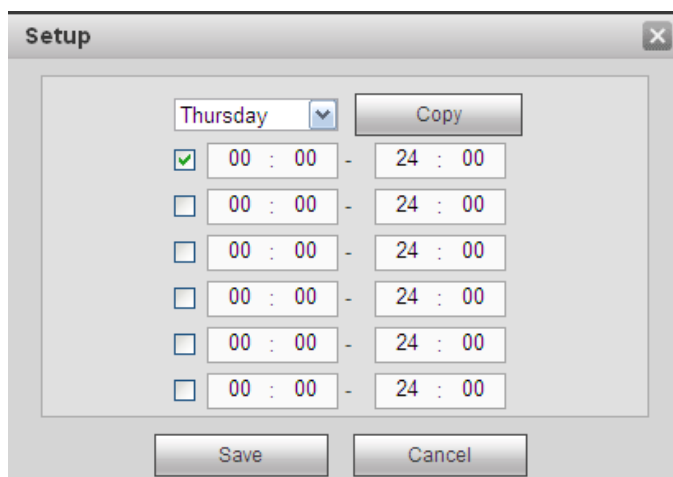


Figure 4-78

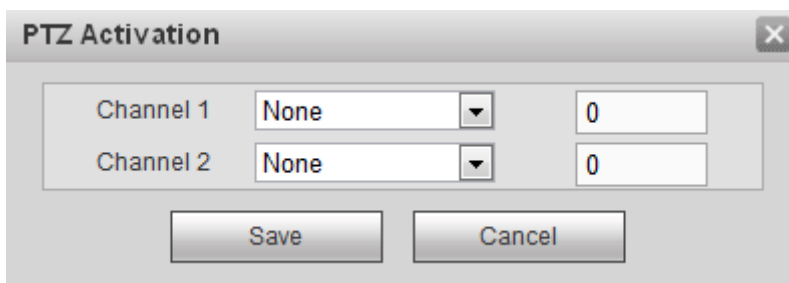


Figure 4-79

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	You need to check the box to enable this function. Please select a channel from the dropdown list.
Period	This function becomes activated in the specified periods. There are six periods in one day. Please draw a circle to enable corresponding period. Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. Click OK button, system goes back to local alarm interface, please click save button to exit.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 5s to 600s.
Sensor type	There are two options: NO/NC.
Record channel	System auto activates motion detection channel(s) to record once an alarm occurs. Please note you need to set alarm record period and go to Storage-> Schedule to set current channel as schedule record.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Function
Alarm out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when an alarm occurs.
Latch	System can delay the alarm output for specified time after an alarm ended. The value ranges from 1s to 300s.
Show message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Buzzer	Check the box here to enable this function. The buzzer beeps when an alarm occurs.
Alarm upload	System can upload the alarm signal to the center (Including alarm center).
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
Tour	You need to check the box here to enable this function. System begins 1-window or multiple-window tour display among the channel(s) you set to record when an alarm occurs.
PTZ Activation	Here you can set PTZ movement when alarm occurs. Such as go to preset X.
Log	Check the box here, system can record local alarm event log.

4.4.3.3.2 Net Alarm

From main menu->Setup->Event->Alarm, the network alarm interface is shown as in Figure 4-80.

Network alarm refers to the alarm signal from the network. System does not anti-dither and sensor type setup. For setup information, please refer to chapter 4.4.3.3.1.

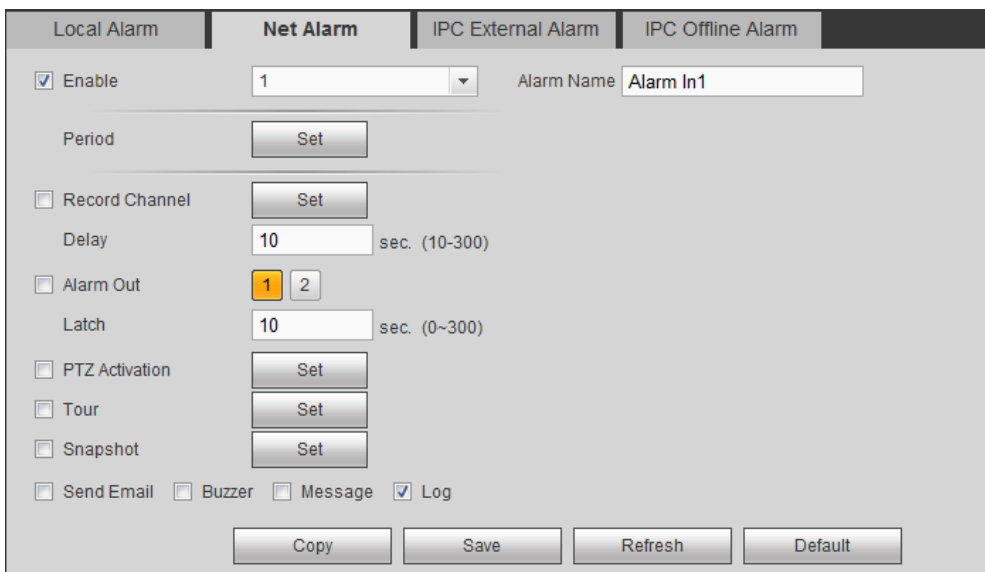


Figure 4-80

4.4.3.3.3 IPC External Alarm

From main menu->Setup->Event->Alarm, IPC external alarm interface is shown as below. See Figure 4-81. For setup information, please refer to chapter 4.4.3.3.1.

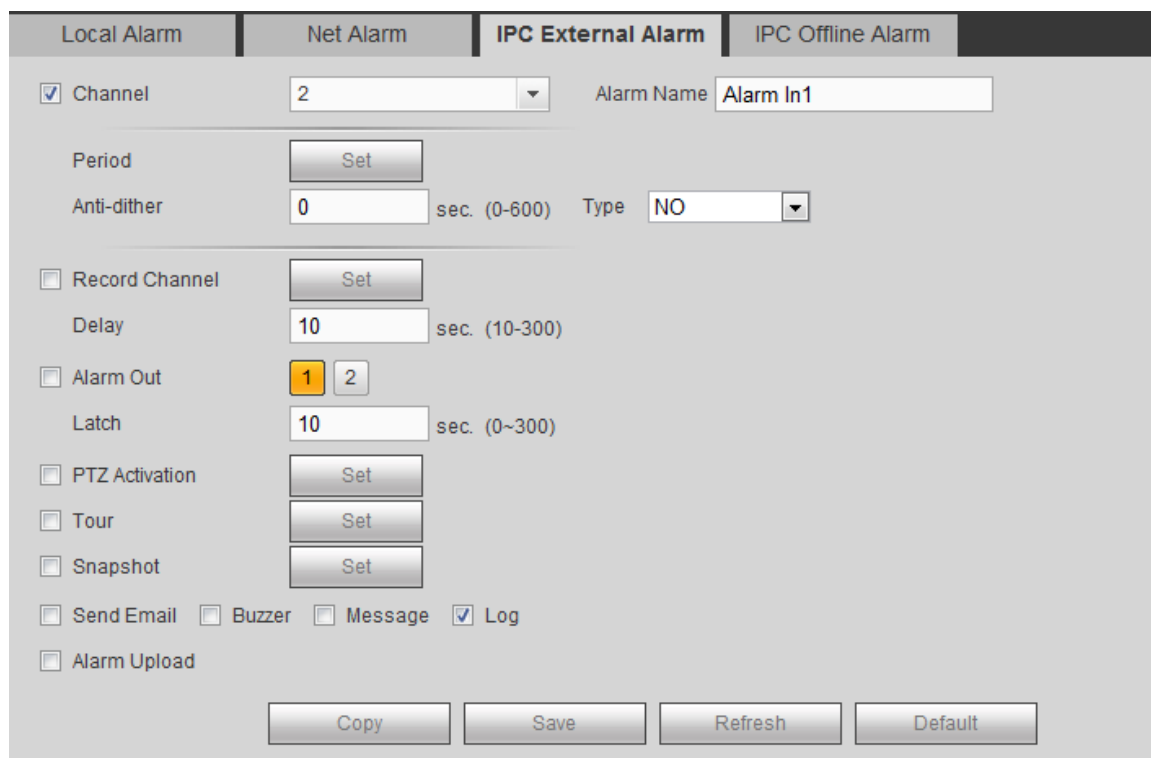


Figure 4-81

4.4.3.3.4 IPC Offline Alarm

From main menu->Setup->Event->Alarm, IPC offline alarm is shown as in Figure 4-82. For setup information, please refer to chapter 4.4.3.3.1.

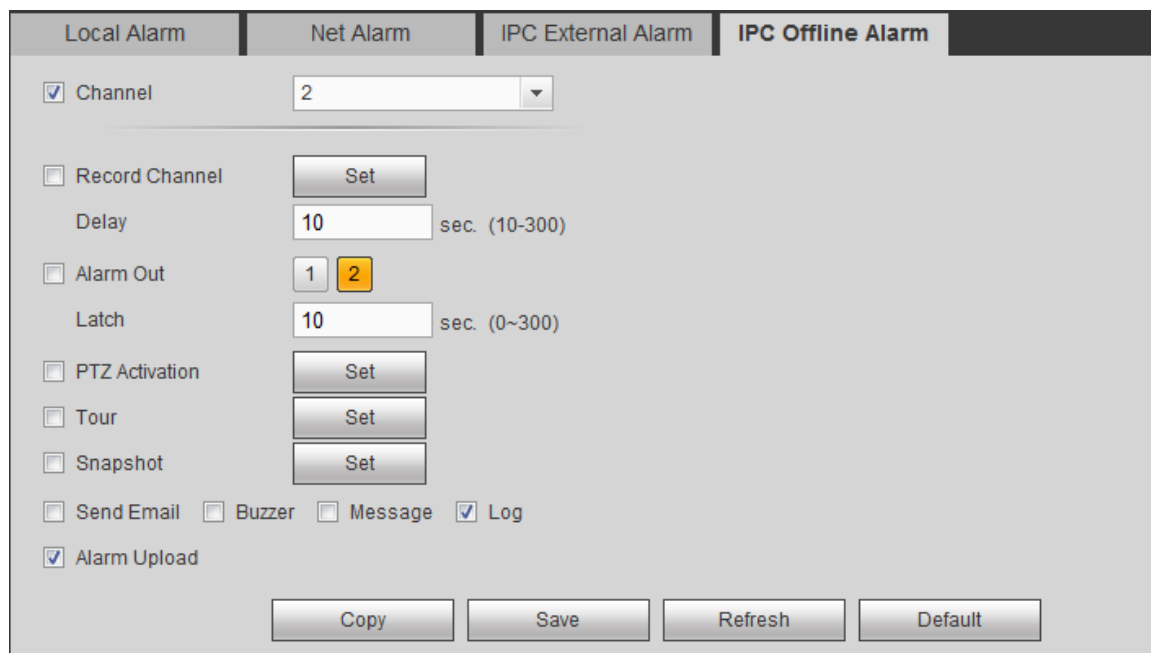


Figure 4-82

4.4.3.4 Abnormality

From main menu->Setup->Event->Abnormality, it includes four types: HDD/Network/User/Device. See Figure 4-83 through Figure 4-86.

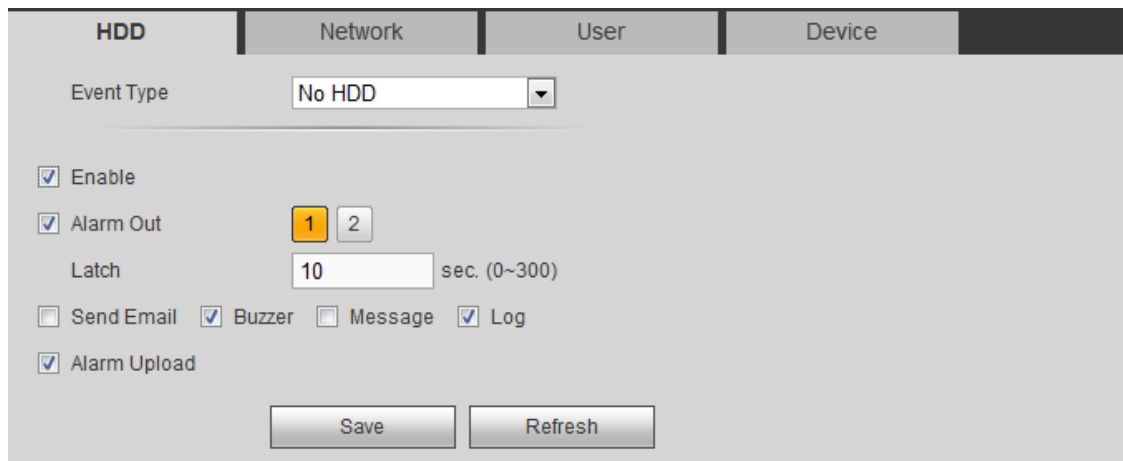


Figure 4-83 shows the configuration for HDD Abnormality. The interface has tabs for HDD, Network, User, and Device. The 'Event Type' is set to 'No HDD'. The 'Enable' checkbox is checked. The 'Alarm Out' checkbox is checked, with a '1' button highlighted. The 'Latch' is set to '10' seconds (0~300). The 'Send Email' checkbox is unchecked, 'Buzzer' is checked, 'Message' is unchecked, and 'Log' is checked. The 'Alarm Upload' checkbox is checked. There are 'Save' and 'Refresh' buttons at the bottom.

Figure 4-83

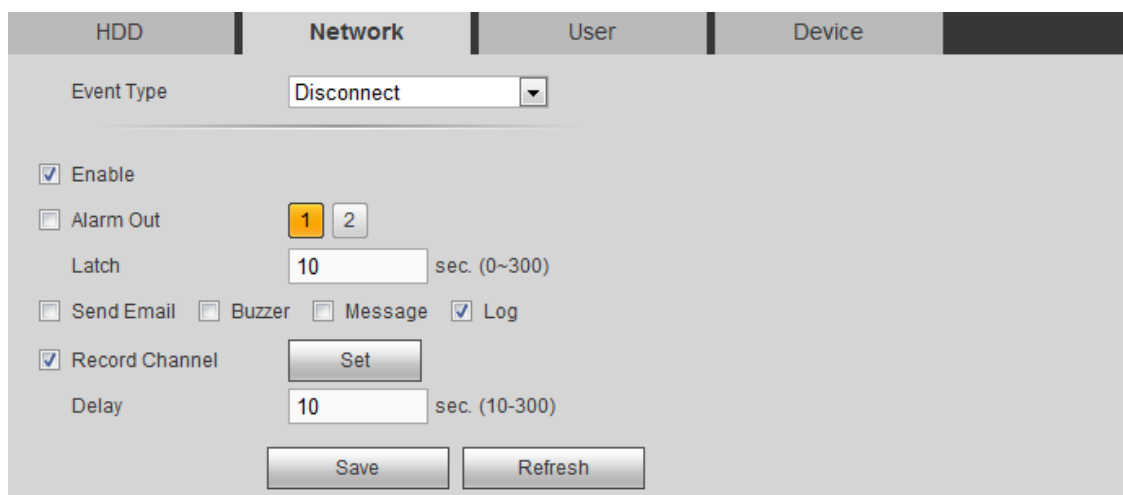


Figure 4-84 shows the configuration for Network Abnormality. The interface has tabs for HDD, Network, User, and Device. The 'Event Type' is set to 'Disconnect'. The 'Enable' checkbox is checked. The 'Alarm Out' checkbox is unchecked, with a '1' button highlighted. The 'Latch' is set to '10' seconds (0~300). The 'Send Email' checkbox is unchecked, 'Buzzer' is unchecked, 'Message' is unchecked, and 'Log' is checked. The 'Record Channel' checkbox is checked, with a 'Set' button next to it. The 'Delay' is set to '10' seconds (10-300). There are 'Save' and 'Refresh' buttons at the bottom.

Figure 4-84

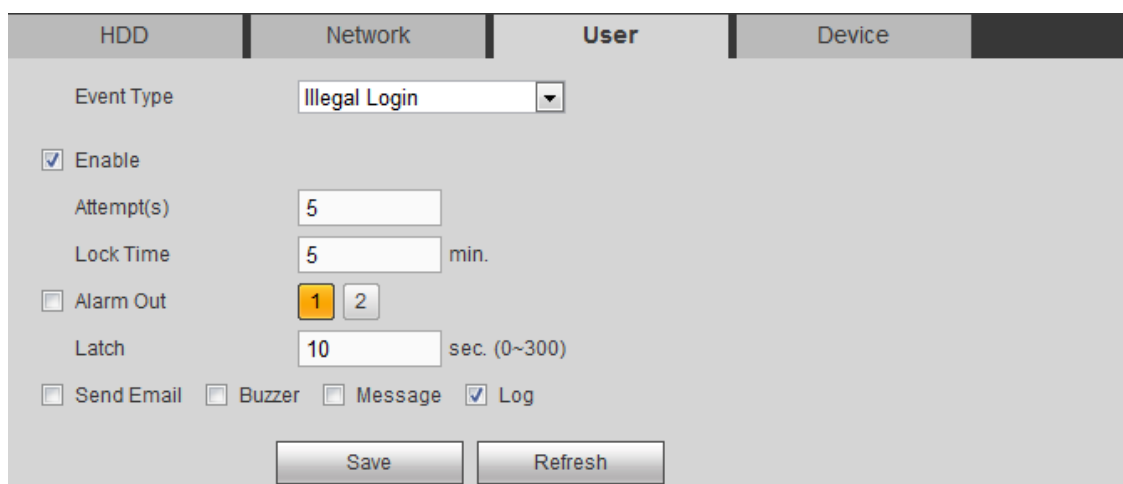


Figure 4-85 shows the configuration for User Abnormality. The interface has tabs for HDD, Network, User, and Device. The 'Event Type' is set to 'Illegal Login'. The 'Enable' checkbox is checked. The 'Attempt(s)' is set to '5'. The 'Lock Time' is set to '5' minutes. The 'Alarm Out' checkbox is unchecked, with a '1' button highlighted. The 'Latch' is set to '10' seconds (0~300). The 'Send Email' checkbox is unchecked, 'Buzzer' is unchecked, 'Message' is unchecked, and 'Log' is checked. There are 'Save' and 'Refresh' buttons at the bottom.

Figure 4-85

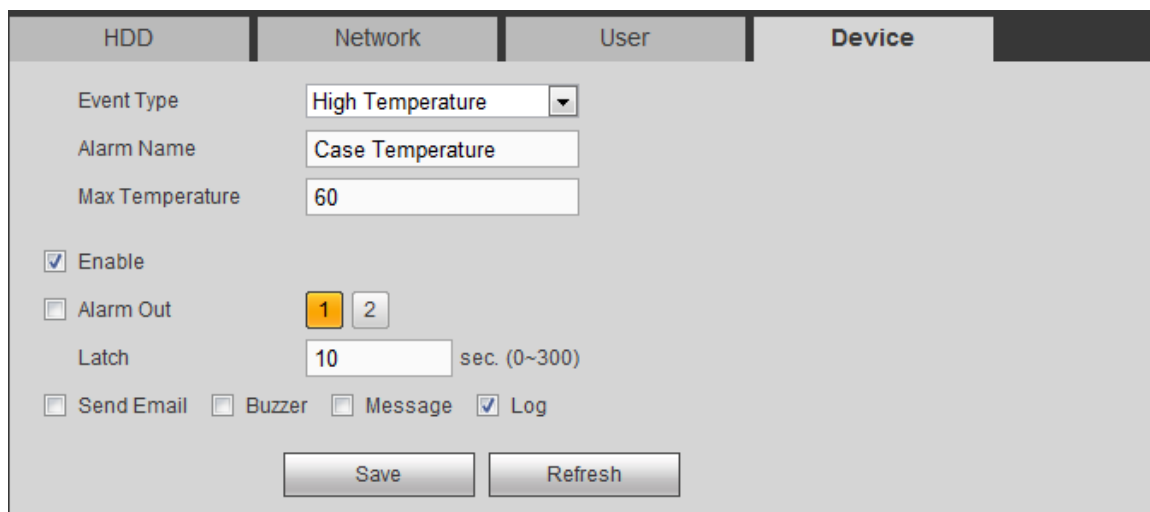


Figure 4-86

Please refer to the following sheet for detailed information.

Parameter	Function
Event Type	<p>The abnormal events include:</p> <ul style="list-style-type: none"> ● HDD: No disk, disk error, disk no space; ● Network: Net disconnection, IP conflict, MAC conflict. ● User: Illegal login. ● Device: Temperature is too high, fan speed is abnormal. Please note this function is for some series product only. <p>You can set one or more items here.</p> <ul style="list-style-type: none"> ● Less than: You can set the minimum percentage value here. The device can generate an alarm when capacity is not sufficient. This item is for disk no space type only. ● Max temperature: You can set max temperature value here. The device can generate an alarm once the device temperature is higher than the threshold you set. This item is for high temperature type only.
Enable	Check the box here to enable selected function.
Alarm Out	Please select corresponding alarm output channel when an alarm occurs. You need to check the box to enable this function.
Latch	The alarm output can delay for the specified time after an alarm stops. The value ranges from 0s to 300s. The default setup is 10 seconds. The 0 second means there is no delaying time.
Attempt(s)	It is to set login attempt times. Once the login attempt exceeds the threshold you set here, current account will be locked. This function is illegal login only.
Lock time	It is to set account lock time once its login attempt has exceeded the threshold you set. This function is for illegal login only.

Parameter	Function
Show message	System can pop up a message to alarm you in the local host screen if you enabled this function.
Alarm upload	System can upload the alarm signal to the center (Including alarm center).
Send Email	If you enabled this function, System can send out an email to alert you when an alarm occurs.
Buzzer	Check the box here to enable this function. The buzzer beeps when an alarm occurs.
Log	Check the box here, system can record the network event alarm log.

4.4.3.5 Alarm Output

From main menu->Setup->Event->Alarm output, it is to set alarm output mode. See Figure 4-87.

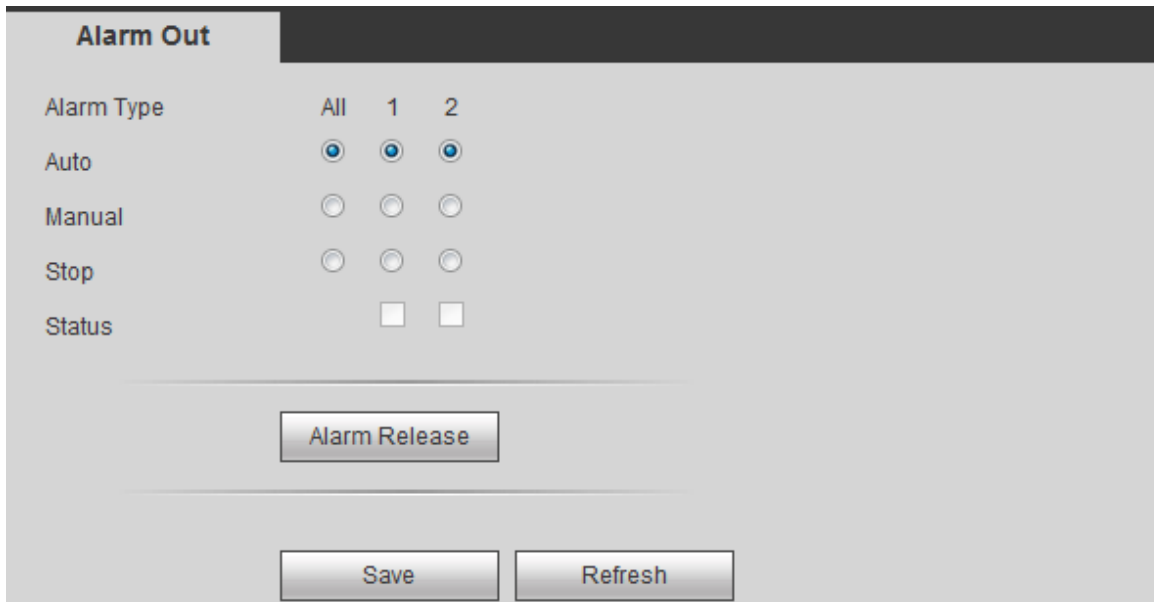


Figure 4-87

Please refer to the following sheet for detailed information.

Parameter	Function
Auto	The corresponding event triggers the alarm output or cancels alarm.
Manual	Forcedly trigger alarm output.
Close	Forcedly cancel or close alarm output.
Status	Here you can view alarm output port status. The alarm is enabled if the icon is highlighted.
Alarm release	Click the button, you can clear all alarm output status.

4.4.4 Storage

4.4.4.1 Schedule

4.4.4.1.1 Schedule Record

From main menu->Setup->Storage->schedule, you can add or remove the schedule record setup. See Figure 4-88.

There are five record modes: general (auto), motion detect and alarm, and intelligent. There are six periods in one day.

You can view the current time period setup from the color bar.

- Green color stands for the general record/snapshot.
- Yellow color stands for the motion detect record/snapshot..
- Red color stands for the alarm record/snapshot.
- Blue color stands for MD&alarm record/snapshot.
- Orange color stands for intelligent record.

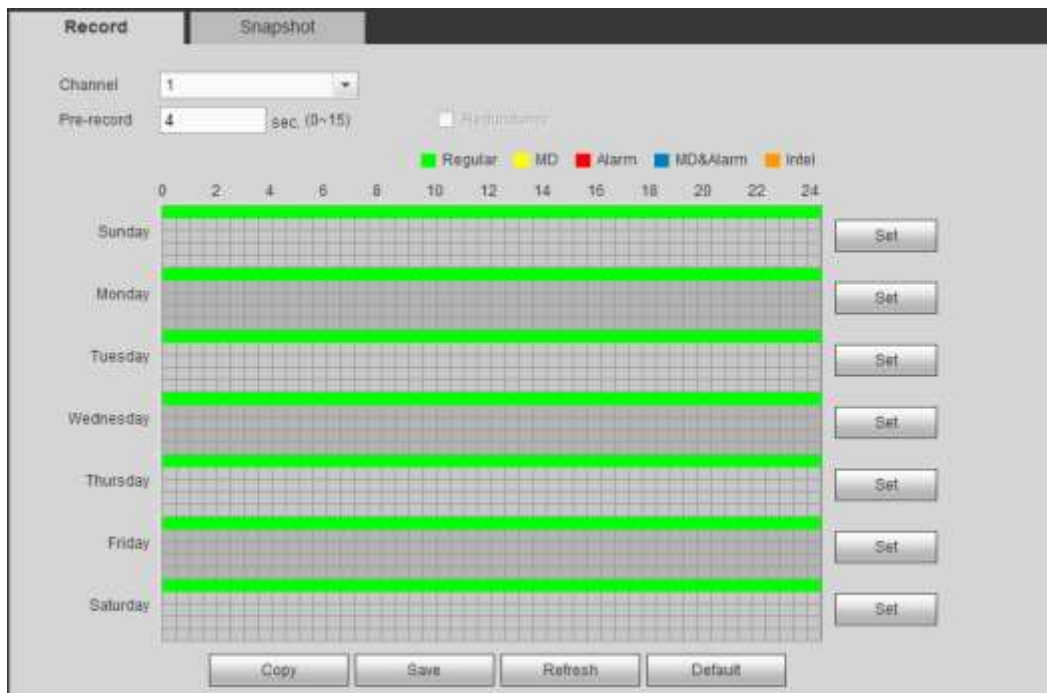


Figure 4-88

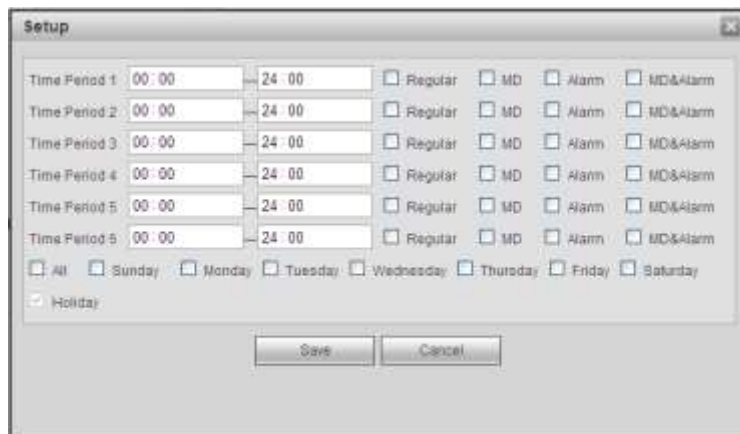


Figure 4-89

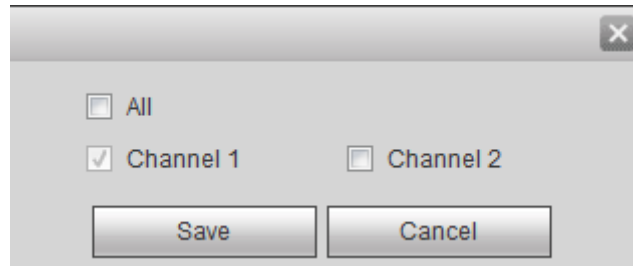


Figure 4-90

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Please select a channel from the dropdown list.
Pre-record	Please input pre-record time here. The value ranges from 0 to 30.
Redundancy	Check the box here to enable redundancy function. Please note this function is null if there is only one HDD.
Snapshot	Check the box here to enable snapshot function.
Holiday	Check the box here to enable holiday function.
Setup (Sunday to Saturday)	Click the Setup button, you can set record period. See Figure 4-89. There are six periods in one day. If you do not check the date at the bottom of the interface, current setup is for today only. Please click Save button and then exit.
Setup (Holiday)	Click the Setup button, you can set record period. See Figure 4-89. There are six periods in one day. If you check Holiday box, current channel shall record as your holiday setup here.
Copy	Copy function allows you to copy one channel setup to another. After setting in channel, click Copy button, you can go to interface Figure 4-90. You can see current channel name is grey such as channel 1. Now you can select the channel you want to paste such as channel 5/6/7. If you want to save current setup of channel 1 to all channels, you can click the first box "ALL". Click the OK button to save current copy setup. Click the OK button in the Encode interface, the copy function succeeded.

4.4.4.1.2 Schedule snapshot

The schedule snapshot interface is shown as below. See Figure 4-91.

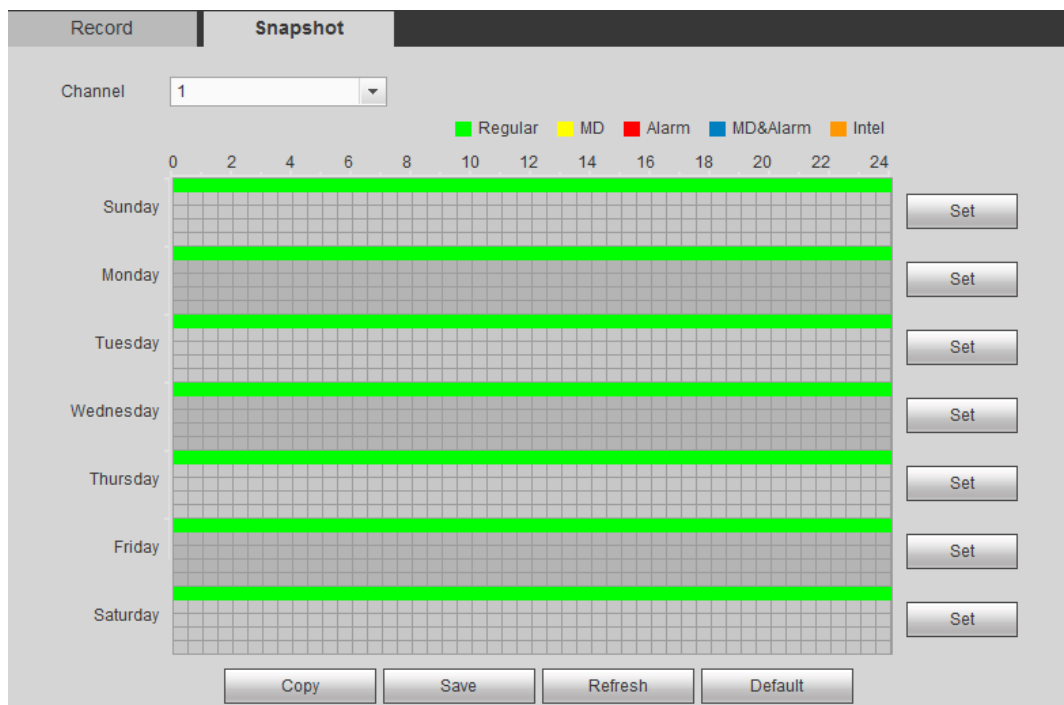


Figure 4-91

For detailed operation information, please refer to chapter 4.4.4.1.1.

4.4.4.2 HDD Manage

From main menu->Setup->Storage->HDD manager, the interface is shown as in Figure 4-92. Here you can see HDD information. You can also operate the read-only, read-write, redundancy (if there are more than on HDD) and format operation.

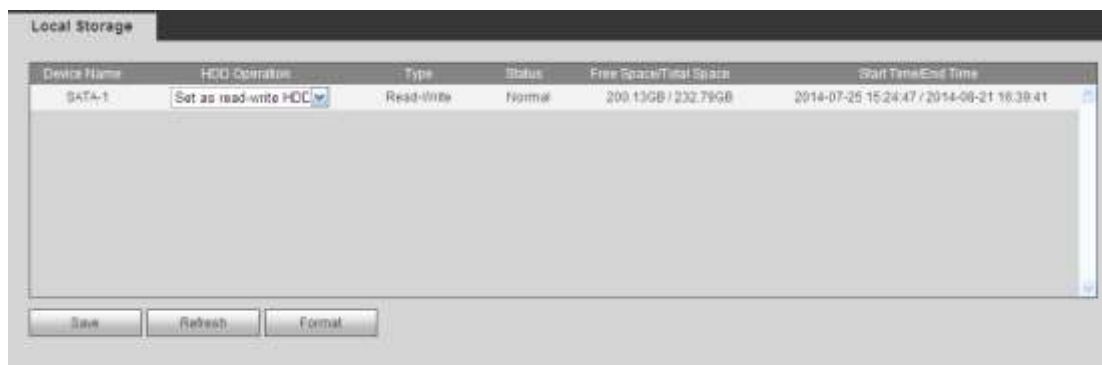
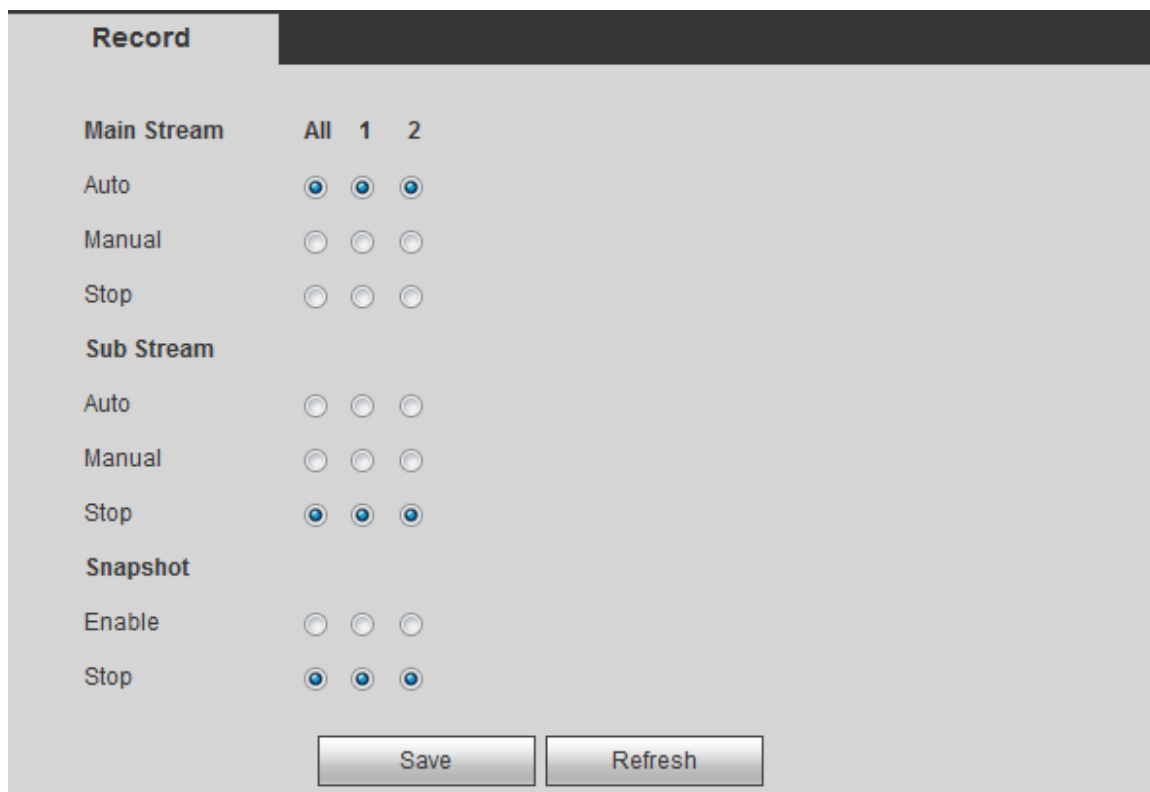


Figure 4-92

4.4.4.3 Manual Record

From main menu->Setup->Storage->Record, the interface is shown as in Figure 4-93.



Record

Main Stream **All** **1** **2**

Auto ☒ ☐ ☐

Manual ☐ ☐ ☐

Stop ☐ ☐ ☐

Sub Stream

Auto ☐ ☐ ☐

Manual ☐ ☐ ☐

Stop ☒ ☒ ☒

Snapshot

Enable ☐ ☐ ☐

Stop ☒ ☒ ☒

Save **Refresh**

Figure 4-93

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Here you can view channel number. The number displayed here is the max channel amount of your device.
Status	There are three statuses: schedule, manual and stop.
Schedule	System enables auto record function as you set in record schedule setup (general, motion detect and alarm).
Manual	It has the highest priority. Enable corresponding channel to record no matter what period applied in the record setup.
Stop	Stop current channel record no matter what period applied in the record setup.
Start all/ stop all	Check the corresponding All button, you can enable or disable all channels record.

4.4.4.4 iSCSI

From main menu->Setup->Storage->iSCSI, you can see an interface shown as in Figure 4-94. Here you can set corresponding HDD group to save main stream.

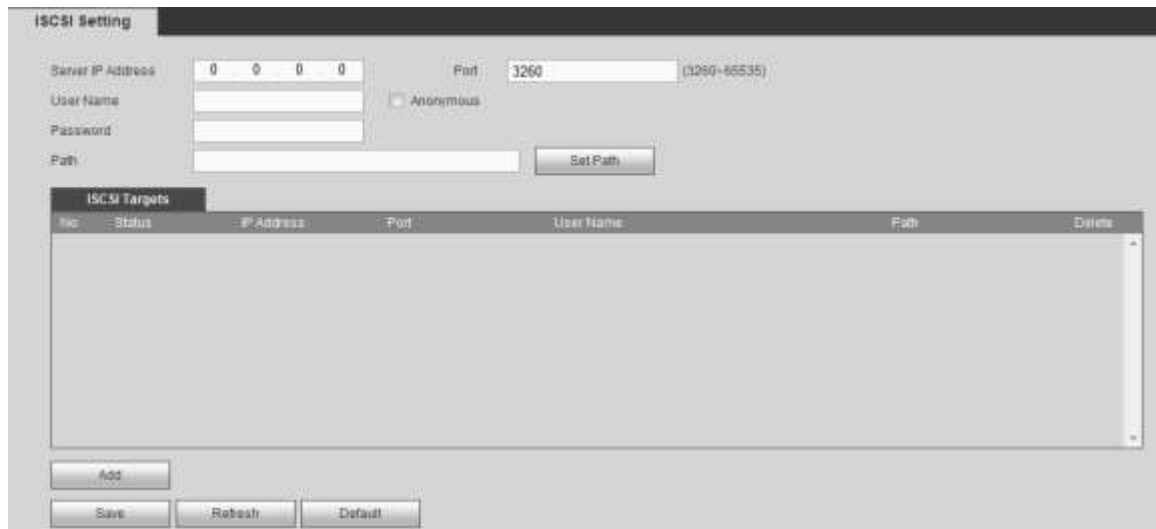


Figure 4-94

Check the box to enable iSCSI function and then input iSCSI server IP address and port. The default port number is 3260.

Click Set path button, system pops up the path setup dialogue box. Please select the connected path and then click OK button. See Figure 4-95.

Each path here stands for an iSCSI share disk. The path is already generated when it was created on the server.

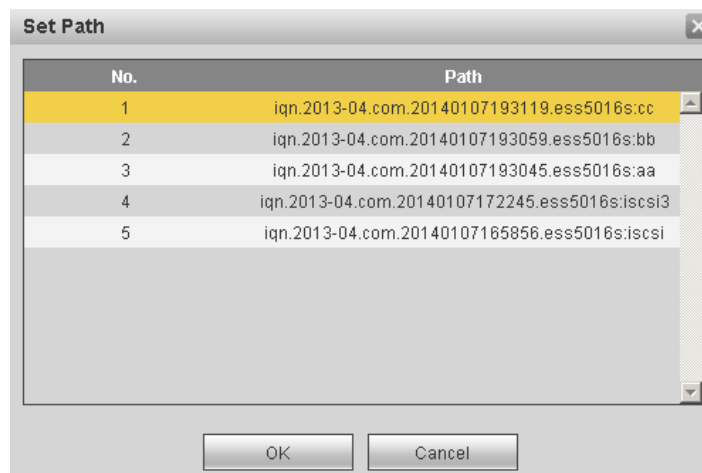


Figure 4-95

Input user name and password to set iSCSI path access right.

There are two situations:

- When you set the iSCSI server, you have set corresponding user name or password for a path. In this situation, you need to input user name or password to login.
- When you set the iSCSI server, you have not set the corresponding access right. In this situation, you can check the anonymous button or input customized user name.

Click add button, now you have added an iSCSI server. Click OK button, the setup is finish. The interface is shown as in Figure 4-96.

Parameter	Function
Device ID	It is to set device name.
Device No.	It is device channel number.
Language	You can select the language from the dropdown list. Please note the device needs to reboot to get the modification activated.
Video Standard	This is to display video standard such as PAL.
HDD full	Here is for you to select working mode when hard disk is full. There are two options: stop recording or rewrite. If current working HDD is overwritten or the current HDD is full while the next HDD is no empty, then system stops recording, If the current HDD is full and then next HDD is not empty, then system overwrites the previous files.
Pack duration	Here is for you to specify record duration. There are two ways for you to set. <ul style="list-style-type: none"> Time length: It is to pack according to time. The value ranges from 1 to 60 minutes. Default value is 60 minutes. File length: It is to pack according to file length. The default setup is 1024M. The value ranges from 128M to 2048M.
IPC Time Sync	You can input an interval here to synchronize the NVS time and IPC time.
Navigation bar	Check the box here, system displays the navigation bar on the interface.

4.4.5.1.2 Date and time

From main menu->Setup->System->General->Date and time, the date and time interface is shown as in Figure 4-98.

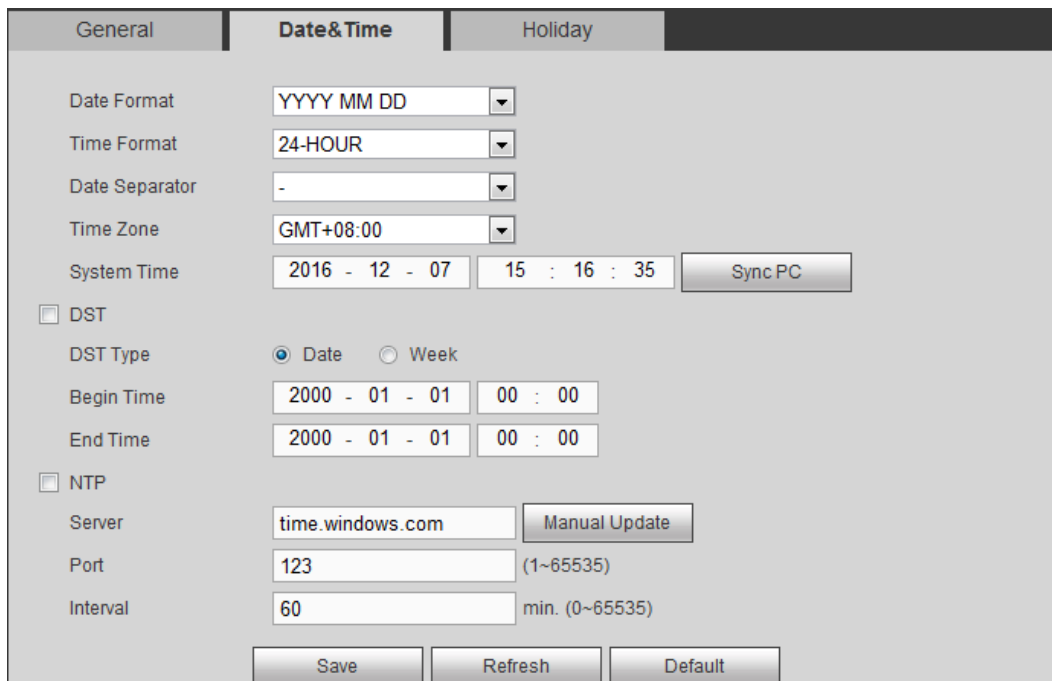


Figure 4-98

Please refer to the following sheet for detailed information.

Parameter	Function
Date format	Here you can select date format from the dropdown list.
Time Format	There are two options: 24-H and 12-H.
Time zone	The time zone of the device.
System time	It is to set system time. It becomes valid after you set.
Sync PC	You can click this button to save the system time as your PC current time.
DST	Here you can set day night save time begin time and end time. You can set according to the date format or according to the week format.
NTP	You can check the box to enable NTP function.
NTP server	You can set the time server address. <ul style="list-style-type: none"> ● Check the NTP box to enable this function. ● Host IP: Input the server IP that installed the NTP server. ● Manual update: Click it, you can sync NVS time with the NTP server manually. ● Port: System supports TCP transmission only. The port value is 123. ● Interval: It is to set the sync time interval between the NVS and the NTP server. The value ranges from 0 to 65535 minutes.
Port	It is to set the time server port.
Interval	It is to set the sync periods between the device and the time server.

4.4.5.1.3 Holiday Setup

Holiday setup interface is shown as in Figure 4-99.

From main menu->Setup->System->General->Holiday, here you can click Add box to add a new holiday and then click Save button to save.

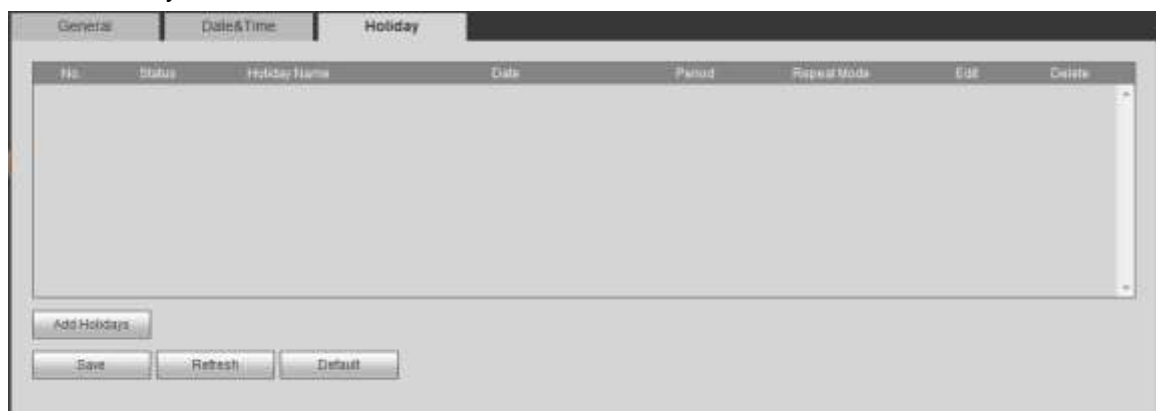


Figure 4-99

4.4.5.2 Display

Display interface includes TV adjust, Tour and zero-channel encoding.

4.4.5.2.1 TV Adjust

It is to set TV output region.

From main menu->Setup->System->TV adjust; you can see an interface shown as in Figure 4-100.

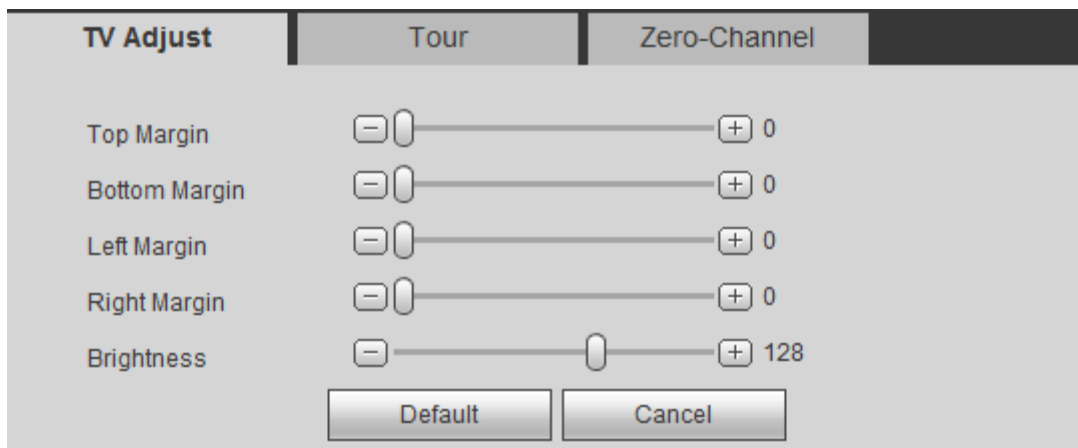


Figure 4-100

4.4.5.2.2 Tour

From main menu->Setup->System->Tour, the tour interface is shown as in Figure 4-101.

Here you can set tour interval, split mode, motion detect tour and alarm tour mode.

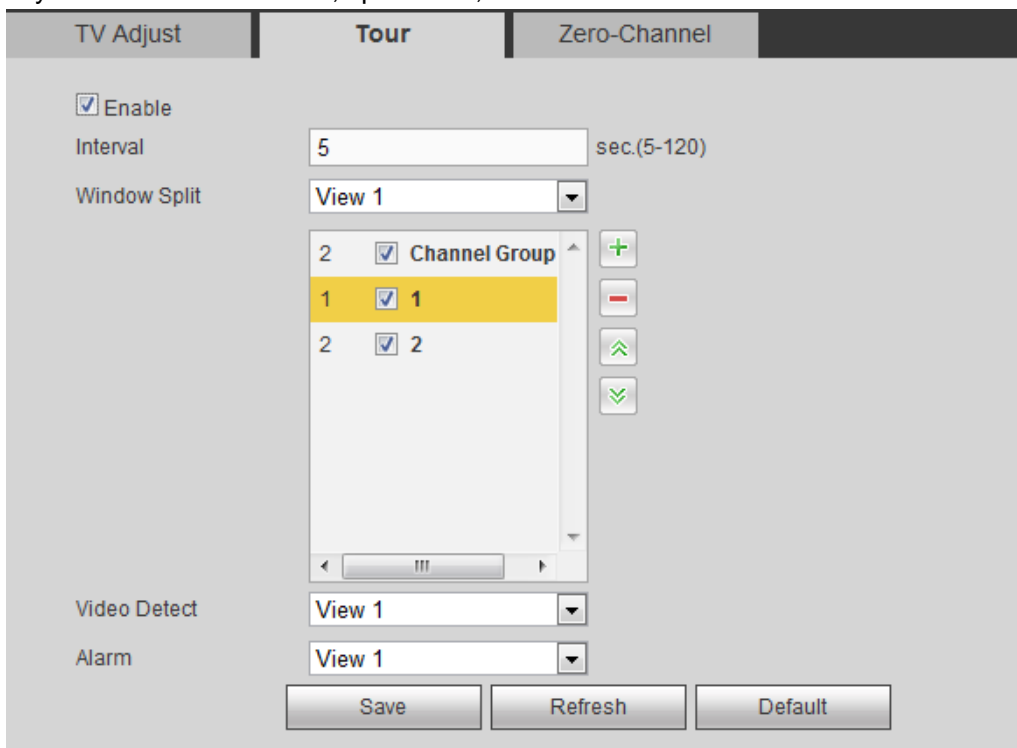


Figure 4-101

Please refer to the following sheet for detailed information.

Parameter	Function
Screen	Please select a screen number from the dropdown list.

number	
Enable tour	Check the box here to enable tour function.
Interval	Here is for you to adjust transparency. The value ranges from 5 to 120s. The default setup is 5s.
Split	Here you can set window mode and channel group. System can support 1/4/8/9/16/25/36-window according to device channel amount.
Motion tour/Alarm tour	Here you can set motion detect tour/alarm tour window mode. System supports 1/8-window now.

4.4.5.2.3 Zero-channel Encoding

From main menu->Setup->System->Zero-channel encoding, the interface is shown as in Figure 4-102.

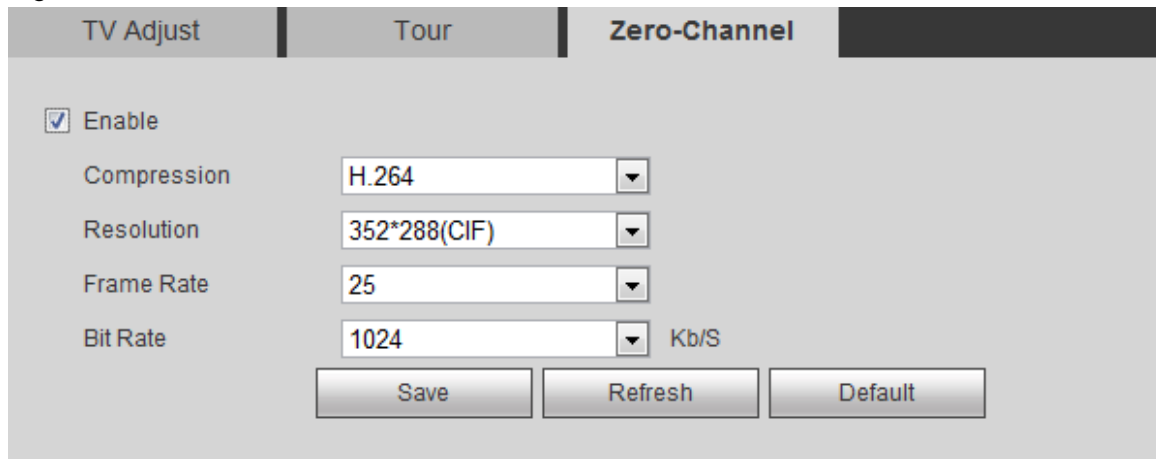



Figure 4-102

Please refer to the following sheet for detailed information.

Parameter	Function
Enable	This function is disabled by default. Check the box here to enable this function so that you can control the zero-channel encoding function at the WEB.
Compression	System default setup is H.264. You can set according to device capability.
Resolution	The resolution value may vary due to different device capabilities. Please select from the dropdown list.
Frame rate	The frame rate value may vary due to different device capabilities. Please select from the dropdown list.
Bit Rate	The default setup is 1024Kb/S. The bit rate value may vary due to different device capabilities and frame rate setups. Please select from the dropdown list.

After you enable zero-channel encoding function , click Preview button and then select

split mode  at the right corner of the main interface, system can display

multiple-video at one channel.

4.4.5.3 RS232

From main menu->Setup->System->RS232, the RS232 interface is shown as in Figure 4-103.

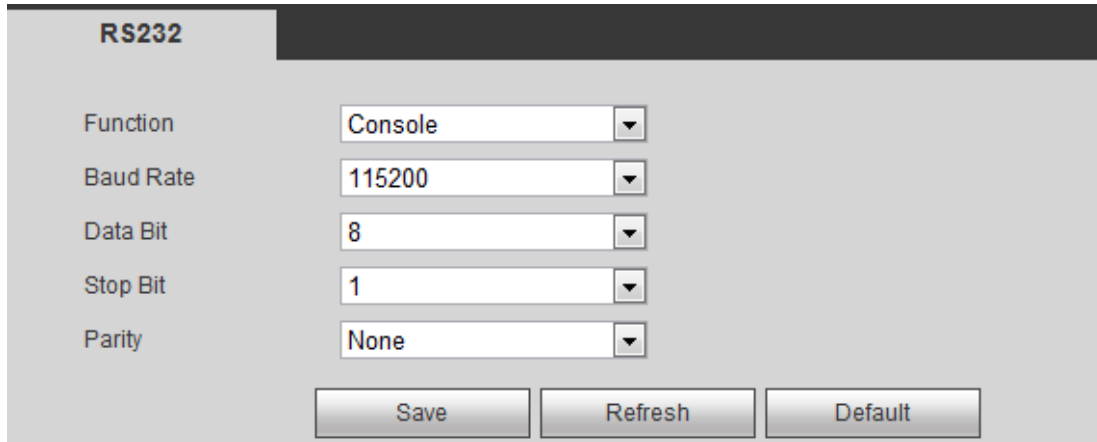


Figure 4-103

Please refer to the following sheet for detailed information.

Parameter	Function
Protocol	Select the corresponding dome protocol. Default setup is console. <ul style="list-style-type: none"> ● Console is for you to use the COM or mini-end software to debug. ● The control keyboard is for you to control the device via the special keyboard. ● Transparent COM (adapter) is to directly connect to the PC to transfer data. Protocol COM is for card overlay function. ● Network keyboard is for you to use the special keyboard to control the device. ● PTZ matrix is to connect to the peripheral matrix control.
Baud Rate	Select the baud rate. Default setup is 115200.
Data Bit	The value ranges from 5 to 8. Default setup is 8.
Stop bit	There are three options: 1/1.5/2. Default setup is 1.
Parity	There are five options: none/odd/even/space/mark. Default setup is none.

4.4.5.4 PTZ

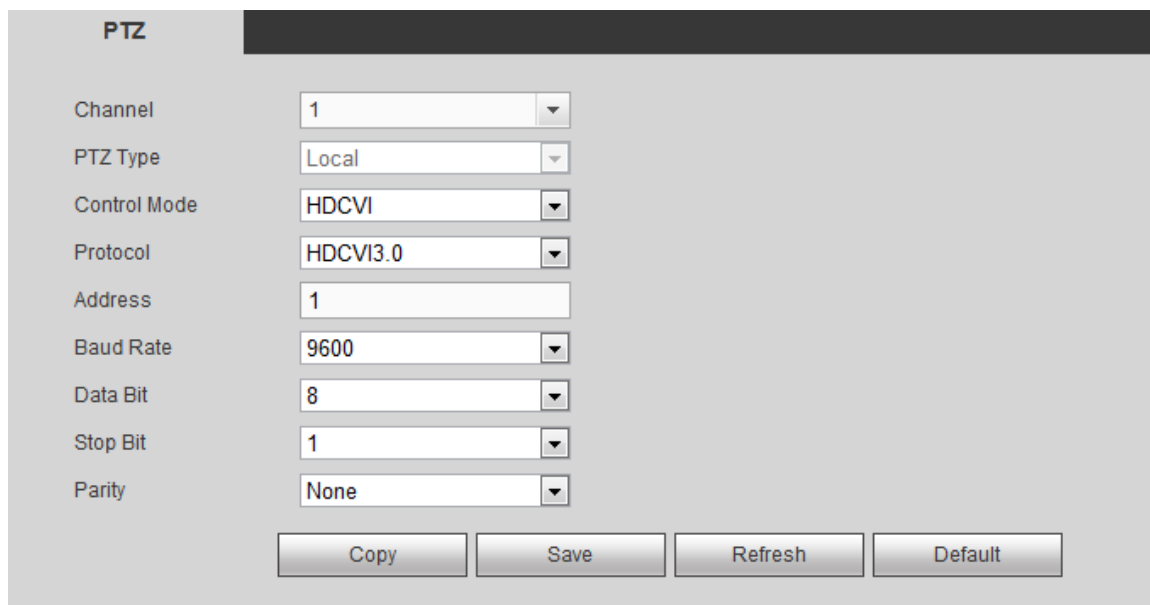
From main menu->Setup->System->PTZ, the PTZ interface is shown as in Figure 4-104 (local channel) and Figure 4-105 (remote channel).

Before setup, please check the following connections are right:

- PTZ and decoder connection is right. Decoder address setup is right.
- Decoder A (B) line connects with NVS A (B) line.

Click Save button after you complete setup, you can go back to the monitor interface to

control speed dome.



PTZ

Channel: 1

PTZ Type: Local

Control Mode: HDCVI

Protocol: HDCVI3.0

Address: 1

Baud Rate: 9600

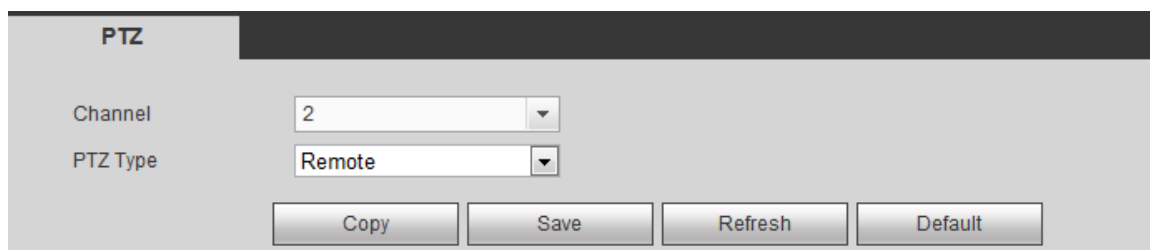
Data Bit: 8

Stop Bit: 1

Parity: None

Copy Save Refresh Default

Figure 4-104



PTZ

Channel: 2

PTZ Type: Remote

Copy Save Refresh Default

Figure 4-105

Please refer to the following sheet for detailed information.

Parameter	Function
Channel	Select speed dome connected channel.
PTZ type	There are two types: local/remote. Please select local mode if you are connect RS485 cable to connect to the Speed dome (PTZ). Please select remote mode if you are connecting to the network PTZ camera.
Control mode	You can select control mode from the dropdown list. There are two options: Serial/HDCVI. For HDCVI series product, please select HDCVI. The control signal is sent to the PTZ via the coaxial cable. For the serial mode, the control signal is sent to the PTZ via the RS485 port.
Protocol	Please select protocol from the dropdown list.
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you can not control the speed dome.
Baud Rate	Select the dome baud rate. Default setup is 9600.

Parameter	Function
Data Bit	Default setup is 8. Please set according to the speed dome dial switch setup.
Stop bit	Default setup is 1. Please set according to the speed dome dial switch setup.
Parity	Default setup is none. Please set according to the speed dome dial switch setup.

4.4.5.5 POS

The ATM/POS function is for financial areas. It includes Sniffer, information analysis and title overlay function. The Sniffer mode includes COM and network.

4.4.5.5.1 COM Type

The COM interface is shown as below. See Figure 4-106.

- Protocol: Please select from the dropdown list according to your actual situation.
- Overlay channel: Please select the channel you want to overlay the card number.
- Overlay mode: There are two options: preview and encode. Preview means overlay the card number in the local monitor video. Encode means overlay the card number in the record file.
- Overlay Position: Here you can select the proper overlay position from the dropdown list.

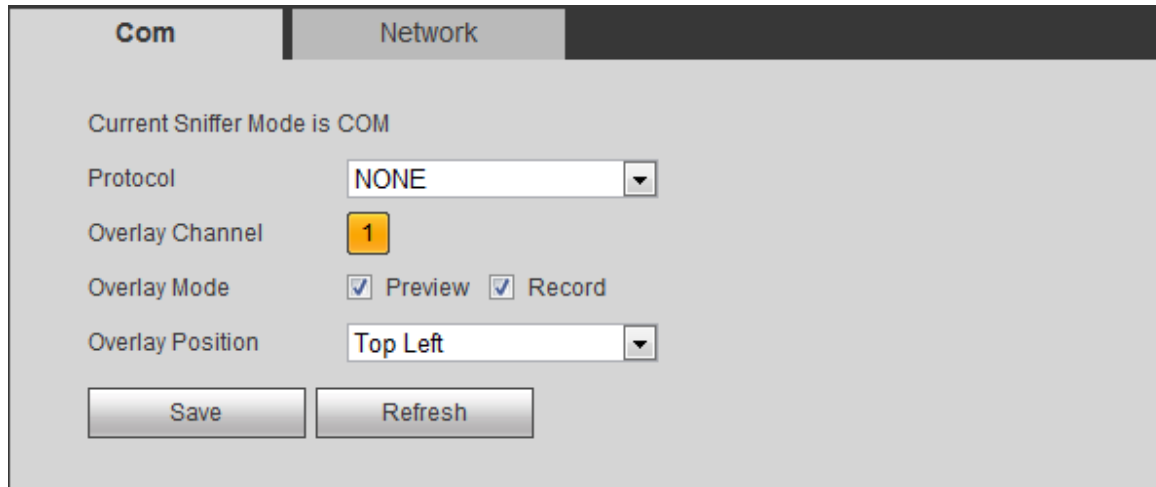


Figure 4-106

4.4.5.5.2 Network Type

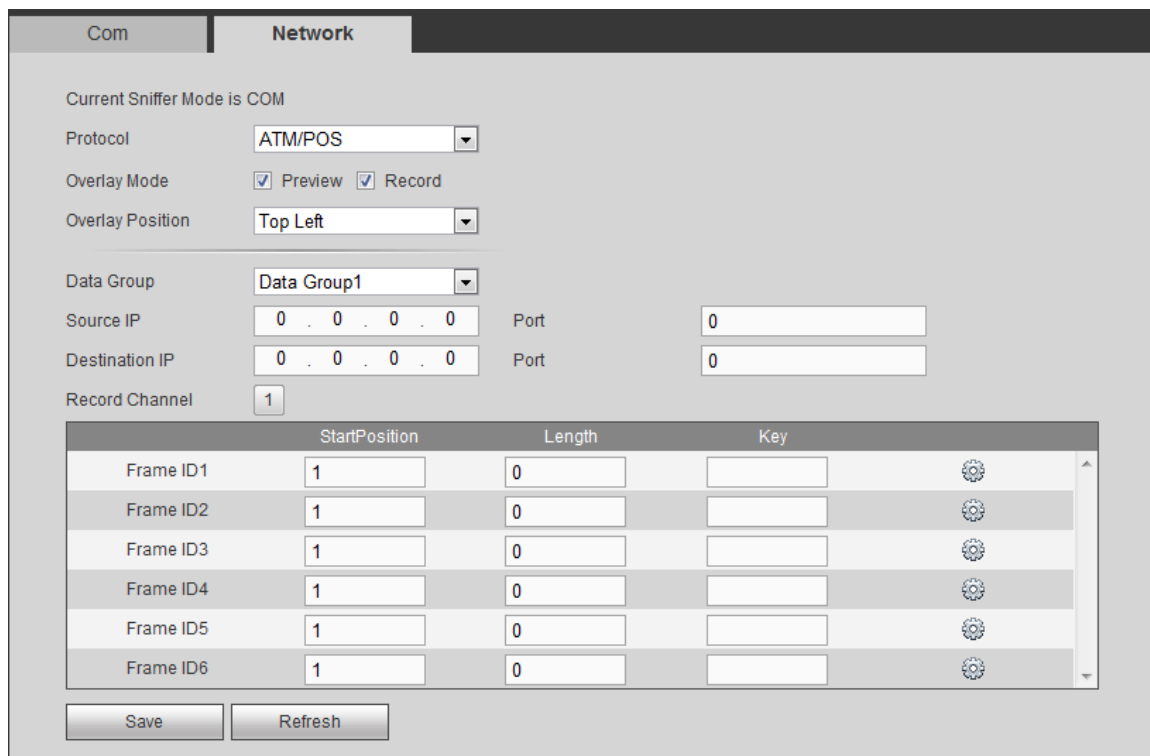
The network type interface is shown as below. See Figure 4-107.

Here we take the ATM/POS protocol to continue.

There are two types: with or without the protocol according to client's requirements.

With the protocol

For ATM/POS with the protocol, you just need to set the source IP, destination IP (sometimes you need to input corresponding port number).



Current Sniffer Mode is COM

Protocol:

Overlay Mode: ☒ Preview ☒ Record

Overlay Position:

Data Group:

Source IP: Port:

Destination IP: Port:

Record Channel:

	StartPosition	Length	Key	
Frame ID1	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text"/>	
Frame ID2	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text"/>	
Frame ID3	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text"/>	
Frame ID4	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text"/>	
Frame ID5	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text"/>	
Frame ID6	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="text"/>	

Figure 4-107

Without the protocol

For the ATM/POS without the protocol, the interface is shown as in Figure 4-108.

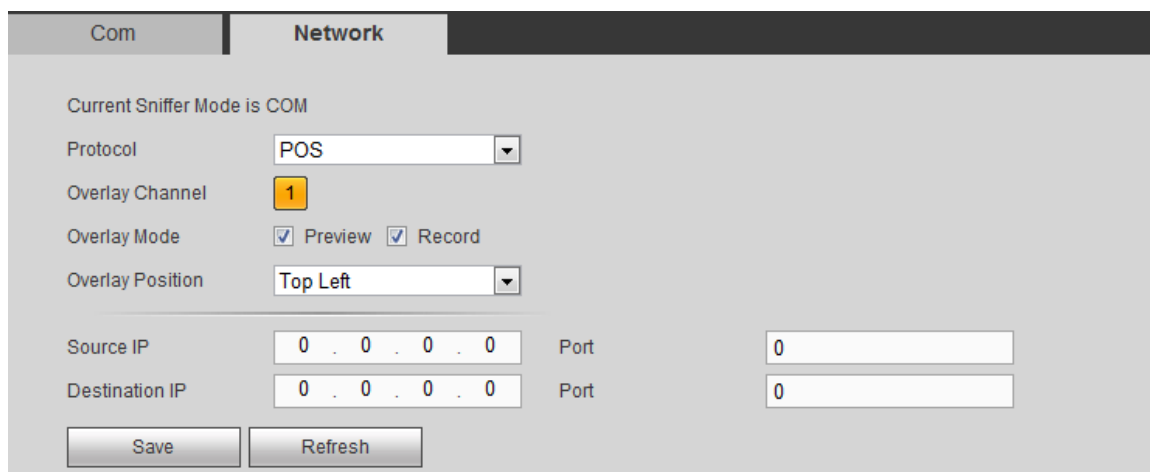
Source IP refers to host IP address that sends out information (usually it is the device host.)

Destination IP refers to other systems that receive information.

Usually you do not need to set source port and target port.

There are total four groups IP. The record channel applies to one group (optional) only.

Six frame ID groups verification can guarantee information validity and legal.



Current Sniffer Mode is COM

Protocol:

Overlay Channel:

Overlay Mode: ☒ Preview ☒ Record

Overlay Position:

Source IP: Port:

Destination IP: Port:

Figure 4-108

4.4.5.6 Account

Note:

- For the user name, the string max length is 31-byte, and for the user group, the string max length is 15-byte. The backspace in front of or at the back of the string is invalid. There can be backspace in the middle. The string includes the valid character, letter, number, underline, subtraction sign, and dot.
- The default user amount is 64 and the default group amount is 20. System account adopts two-level management: group and user. No limit to group or user amount.
- For group or user management, there are two levels: admin and user. The user name shall be unique and one user shall only belong to one group.

4.4.5.6.1 User name

From main menu->Setup->System->Account->User, in this interface you can add/remove user and modify user name. See Figure 4-109.



Figure 4-109

Add user: It is to add a name to group and set the user rights. See Figure 4-110.

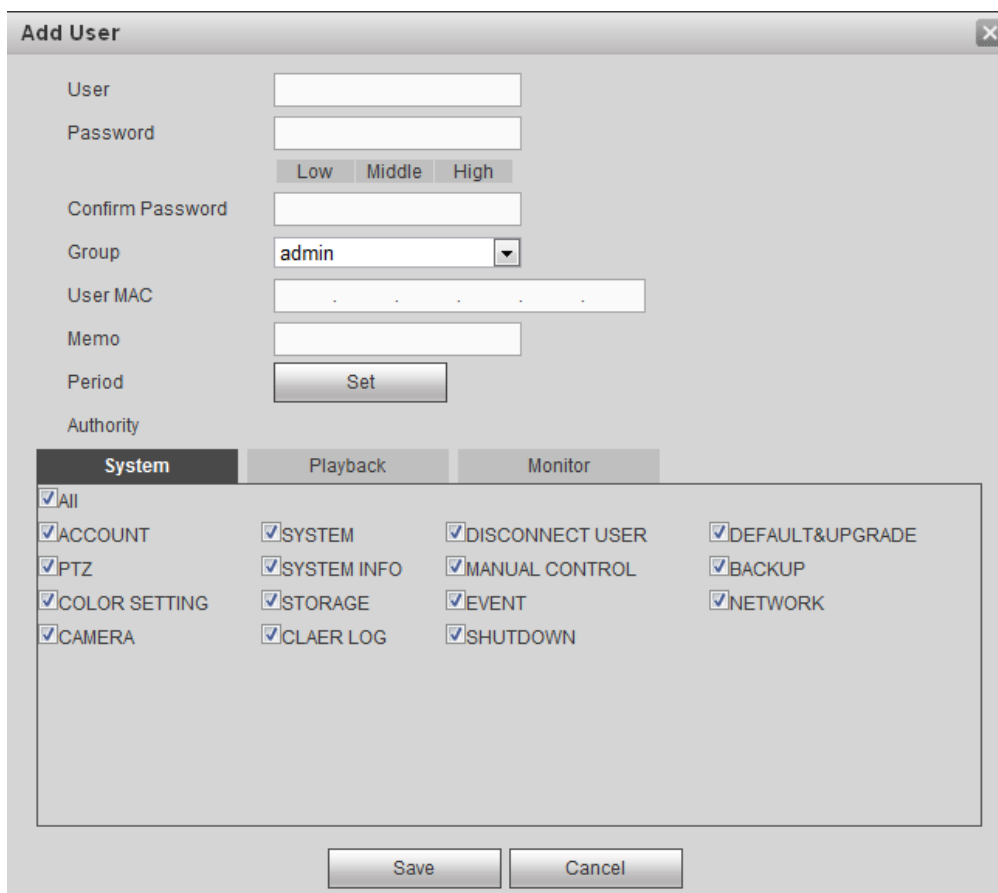
There are three default users: admin (password: admin)/888888(password: 888888) and hidden user "default".

Hidden user "default" is for system interior use only and can not be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

Here you can input the user name and password and then select one group for current user.

Please note the user rights shall not exceed the group right setup.

For convenient setup, please make sure the general user has the lower rights setup than the admin.



Add User

User:

Password: Low Middle High

Confirm Password:

Group:

User MAC:

Memo:

Period:

Authority

System	Playback	Monitor
<input checked="" type="checkbox"/> All		
<input checked="" type="checkbox"/> ACCOUNT	<input checked="" type="checkbox"/> SYSTEM	<input checked="" type="checkbox"/> DISCONNECT USER
<input checked="" type="checkbox"/> PTZ	<input checked="" type="checkbox"/> SYSTEM INFO	<input checked="" type="checkbox"/> MANUAL CONTROL
<input checked="" type="checkbox"/> COLOR SETTING	<input checked="" type="checkbox"/> STORAGE	<input checked="" type="checkbox"/> EVENT
<input checked="" type="checkbox"/> CAMERA	<input checked="" type="checkbox"/> CLEAR LOG	<input checked="" type="checkbox"/> SHUTDOWN
		<input checked="" type="checkbox"/> DEFAULT&UPGRADE
		<input checked="" type="checkbox"/> BACKUP
		<input checked="" type="checkbox"/> NETWORK

Figure 4-110

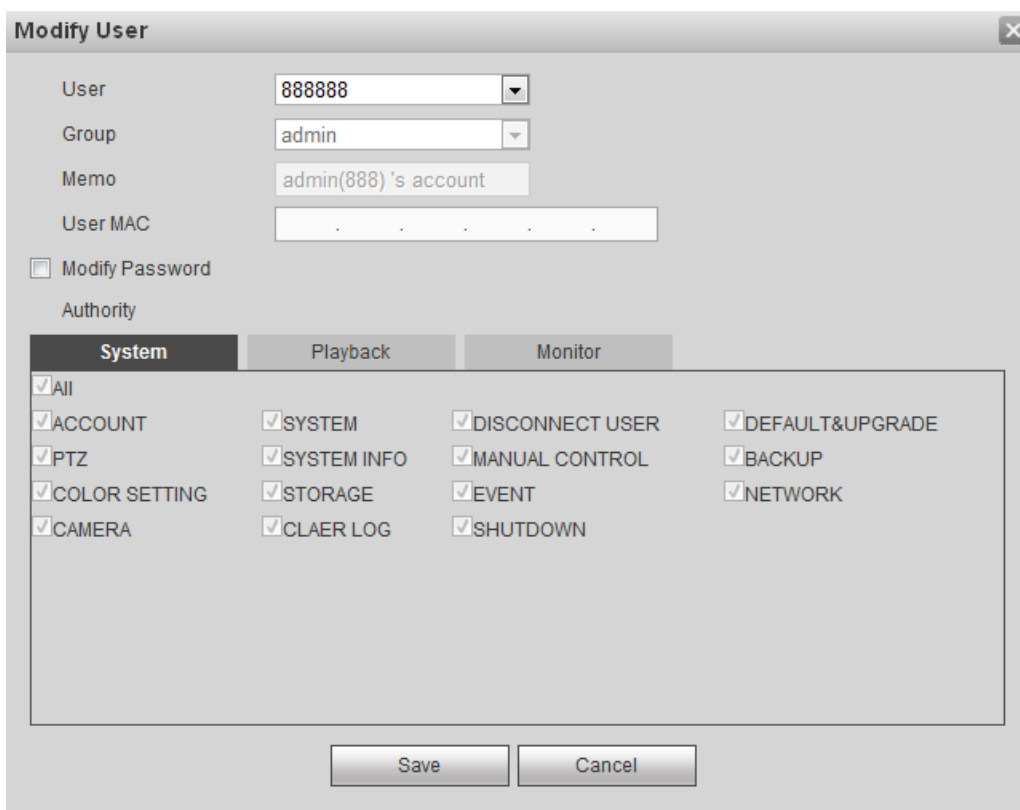
Modify user

It is to modify the user property, belonging group, password and rights. See Figure 4-111.

Modify password

It is to modify the user password. You need to input the old password and then input the new password twice to confirm the new setup. Please click the OK button to save.

Please note, the password ranges from 1-digit to 32-digit. The space at the front or the end is null. The password can contain the space in the middle. For the user of the account rights, he can modify the password of other users.



Modify User

User: 888888

Group: admin

Memo: admin(888)'s account

User MAC: - - - - -

☐ Modify Password

Authority

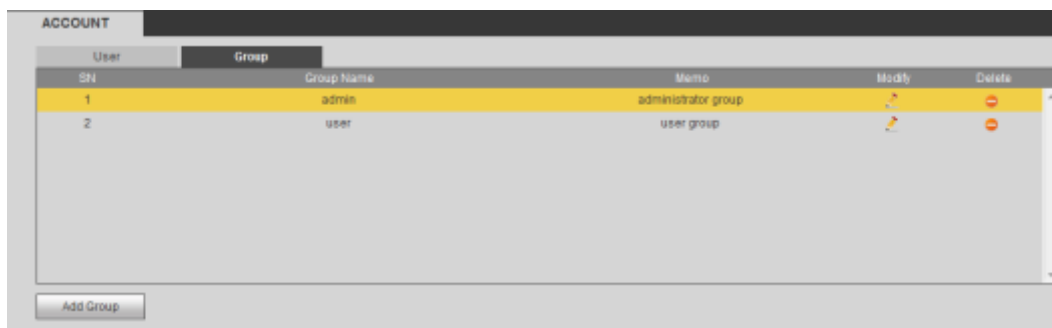
System	Playback	Monitor
<input checked="" type="checkbox"/> All		
<input checked="" type="checkbox"/> ACCOUNT	<input checked="" type="checkbox"/> SYSTEM	<input checked="" type="checkbox"/> DISCONNECT USER
<input checked="" type="checkbox"/> PTZ	<input checked="" type="checkbox"/> SYSTEM INFO	<input checked="" type="checkbox"/> MANUAL CONTROL
<input checked="" type="checkbox"/> COLOR SETTING	<input checked="" type="checkbox"/> STORAGE	<input checked="" type="checkbox"/> EVENT
<input checked="" type="checkbox"/> CAMERA	<input checked="" type="checkbox"/> CLAER LOG	<input checked="" type="checkbox"/> SHUTDOWN
		<input checked="" type="checkbox"/> DEFAULT&UPGRADE
		<input checked="" type="checkbox"/> BACKUP
		<input checked="" type="checkbox"/> NETWORK

Save Cancel

Figure 4-111

4.4.5.6.2 Group

The group management interface can add/remove group, modify group password and etc. From main menu->Setup->System->Account->Group, the interface is shown as in Figure 4-112.

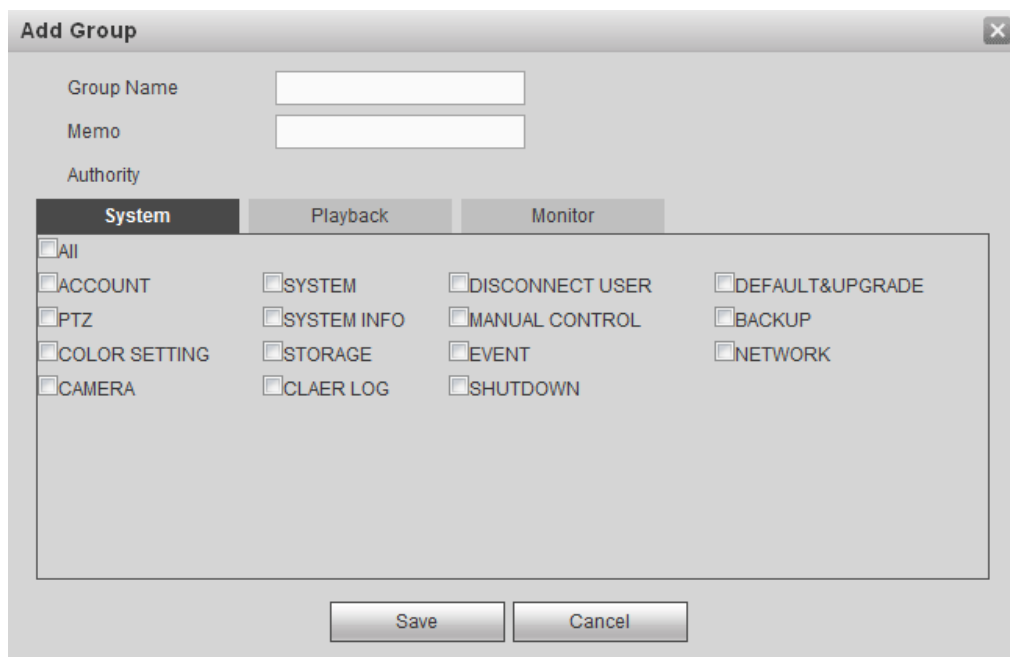


SN	Group Name	Memo	Modify	Delete
1	admin	administrator group		
2	user	user group		

Add Group

Figure 4-112

Add group: It is to add group and set its corresponding rights. See Figure 4-113. Please input the group name and then check the box to select the corresponding rights. It includes: shutdown/reboot device, live view, record control, PTZ control and etc.



Add Group

Group Name:

Memo:

Authority:

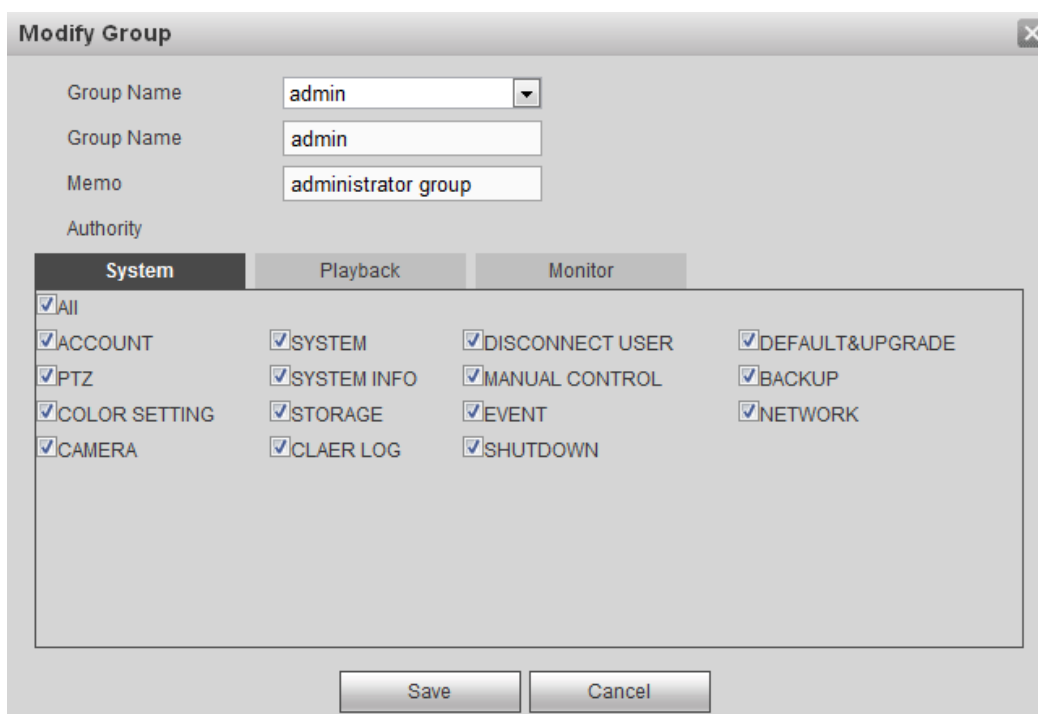
System	Playback	Monitor
<input type="checkbox"/> All		
<input type="checkbox"/> ACCOUNT	<input type="checkbox"/> SYSTEM	<input type="checkbox"/> DISCONNECT USER
<input type="checkbox"/> PTZ	<input type="checkbox"/> SYSTEM INFO	<input type="checkbox"/> MANUAL CONTROL
<input type="checkbox"/> COLOR SETTING	<input type="checkbox"/> STORAGE	<input type="checkbox"/> EVENT
<input type="checkbox"/> CAMERA	<input type="checkbox"/> CLAER LOG	<input type="checkbox"/> SHUTDOWN
		<input type="checkbox"/> DEFAULT&UPGRADE
		<input type="checkbox"/> BACKUP
		<input type="checkbox"/> NETWORK

Save Cancel

Figure 4-113

Modify group

Click the modify group button, you can see an interface is shown as in Figure 4-114. Here you can modify group information such as remarks and rights.



Modify Group

Group Name:

Group Name:

Memo:

Authority:

System	Playback	Monitor
<input checked="" type="checkbox"/> All		
<input checked="" type="checkbox"/> ACCOUNT	<input checked="" type="checkbox"/> SYSTEM	<input checked="" type="checkbox"/> DISCONNECT USER
<input checked="" type="checkbox"/> PTZ	<input checked="" type="checkbox"/> SYSTEM INFO	<input checked="" type="checkbox"/> MANUAL CONTROL
<input checked="" type="checkbox"/> COLOR SETTING	<input checked="" type="checkbox"/> STORAGE	<input checked="" type="checkbox"/> EVENT
<input checked="" type="checkbox"/> CAMERA	<input checked="" type="checkbox"/> CLAER LOG	<input checked="" type="checkbox"/> SHUTDOWN
		<input checked="" type="checkbox"/> DEFAULT&UPGRADE
		<input checked="" type="checkbox"/> BACKUP
		<input checked="" type="checkbox"/> NETWORK

Save Cancel

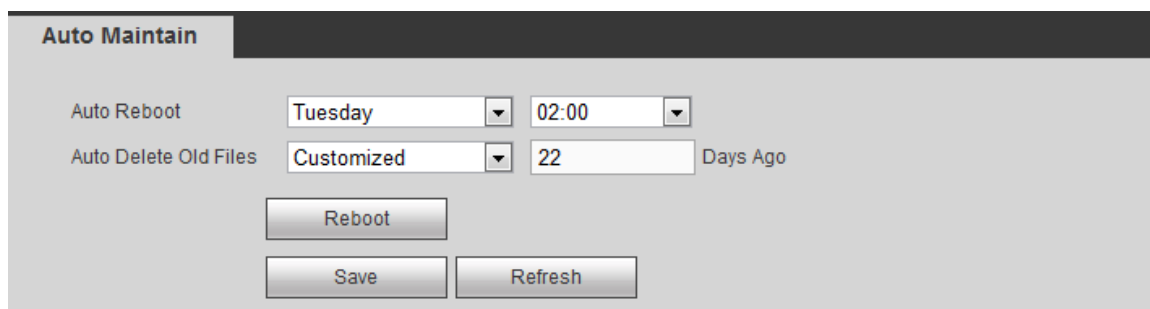
Figure 4-114

4.4.5.7 Auto maintain

From main menu->Setting->System->Auto maintain, the interface is shown as in Figure

4-115.

Here you can select auto reboot and auto delete old files interval from the dropdown list. If you want to use the auto delete old files function, you need to set the file period. Click Manual reboot button, you can restart device manually.



Auto Maintain

Auto Reboot: Tuesday 02:00


Auto Delete Old Files: Customized 22 Days Ago

Buttons: Reboot, Save, Refresh

Figure 4-115

4.4.5.8 Import/Export

From main menu->Setting->System->Import/Export, the interface is shown as in Figure 4-116.



Import&Export

Import Config File: [Text Input] [Browse] [Config Import]

[Config Export]

Figure 4-116

Please refer to the following sheet for detailed information.

Parameter	Function
Import	It is to import the local setup files to the system.
Export	It is to export the corresponding WEB setup to your local PC.

4.4.5.9 Default

From main menu->Setting->System->Default, the default setup interface is shown as in Figure 4-117.

Here you can select Channel/Network/Event/Storage/System. Or you can check the All box to select all items.

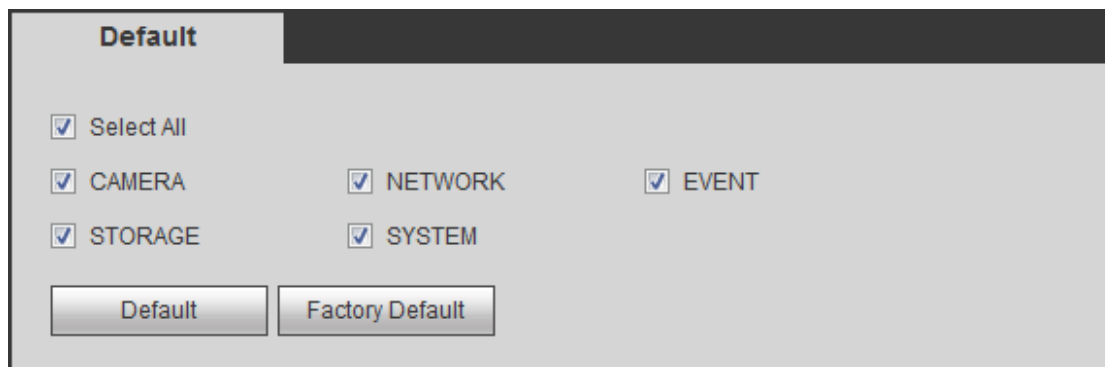


Figure 4-117

4.4.5.10 Upgrade

From main menu->Setting->System->Upgrade, the upgrade interface is shown as in Figure 4-118.

Please select the upgrade file and then click the update button to begin update. Please note the file name shall be as *.bin. During the upgrade process, do not unplug the power cable, network cable, or shutdown the device.

Important

Improper upgrade program may result in device malfunction!



Figure 4-118

4.5 Playback

Click Playback button, you can see an interface is shown as in Figure 4-119.

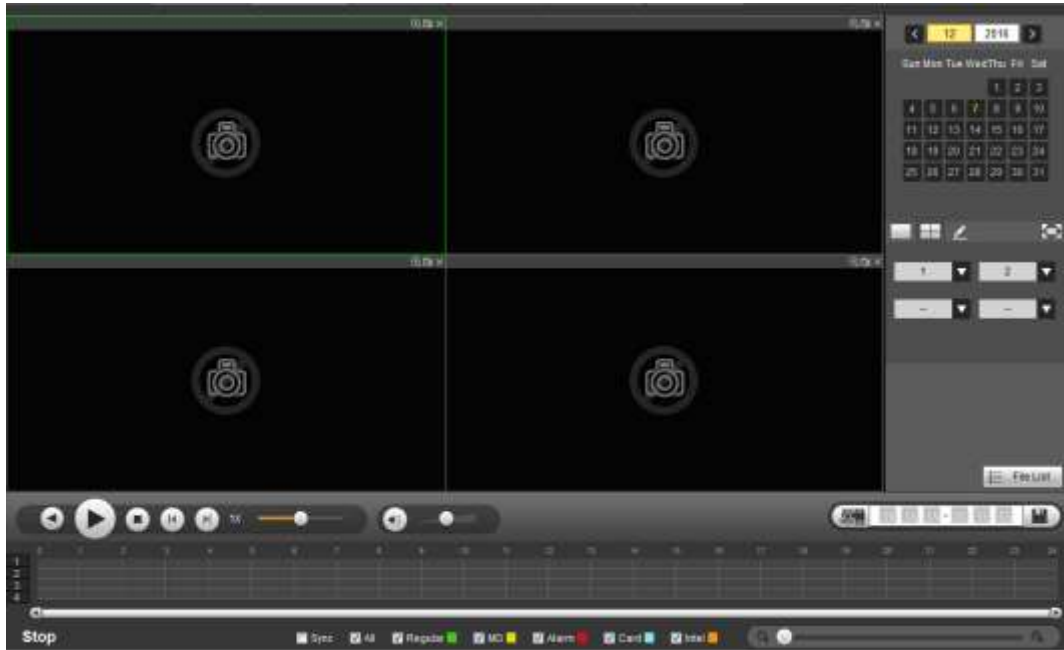


Figure 4-119


4.5.1 Search Record

Please set record type, record date, window display mode and channel name.

- Select Date

You can click the date on the right pane to select the date. The green highlighted date is system current date and the blue highlighted date means it has record files.

- Window Split

Select window split mode. Click  to display in full screen. Click ESC button to exit. See Figure 4-120.

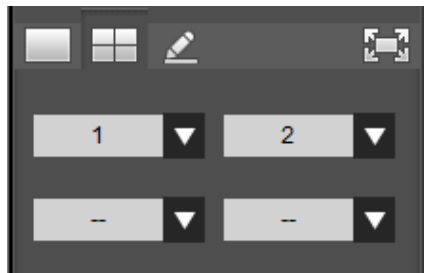


Figure 4-120

- Customized playback

Click , you can see the following interface. See Figure 4-121.

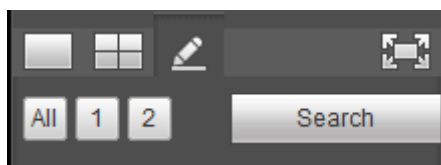





Figure 4-121

Now you can select one or more channel(s) and then click  to search record(s).

System supports one or more channels. The window split mode can auto adjust according to the channel amount. System max supports 16-split.

Click  button to select all channels at the same time.

Click , system begins playback.

- Select Channel

1~n(n depends on your product channel amount) means main stream and A1~An ((n depends on your product channel amount)) means sub stream.

- Select Record Type

Please note some series product supports intelligent record.

Check the corresponding box to select record type. See Figure 4-122.




Figure 4-122


- File clip

It is to clip some footages to save in the USB device or peripheral device. The interface is shown as in Figure 4-123.



Figure 4-123

Select a file first and then click  to playback.

Click  and there are two ways for you to set start time and end time See Figure 4-124.

✧ You can input start time and end time at the text column.

✧ Drag the two triangles icons at the time bar to set start time and end time.



Figure 4-124

Click  to save the file.

The file will be saved at the path you set in chapter 4.4.1.3.4 (main menu->Setup->Camera->Encode->Path).

Note

- Clip function is for one-channel/multiple-channel.
- Max save 1024 files at the same time.

4.5.2 Mark Playback

Please make sure your purchased device support this function. You can use this function only if you can see the mark playback icon on the Search interface.

When you are playback record, you can mark the record when there is important information. After playback, you can use time or the mark key words to search corresponding record and then play. It is very easy for you to get the important video information.

- Add Mark

When system is playback, click Mark button , you can go to the following interface. See Figure 4-125.

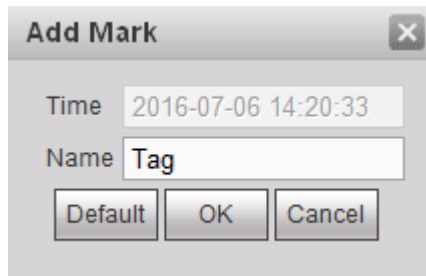


Figure 4-125

Input a name and then click OK button. You can view current file in the mark file list.

- Playback Mark

During 1-window playback mode, click Mark file list button, you can go to mark file list interface. Double click one mark file, you can begin playback from the mark time. See Figure 4-126.



Figure 4-126

- Play before mark time

Here you can set to begin playback from previous N seconds of the mark time.

Note

Usually, system can playbacks previous N seconds record if there is such kind of record file. Otherwise, system playbacks from the previous X seconds when there is such as kind of record.

- Mark Manager

Click the mark manager button in Figure 4-126; you can go to Mark Manager interface. See Figure 4-127. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.

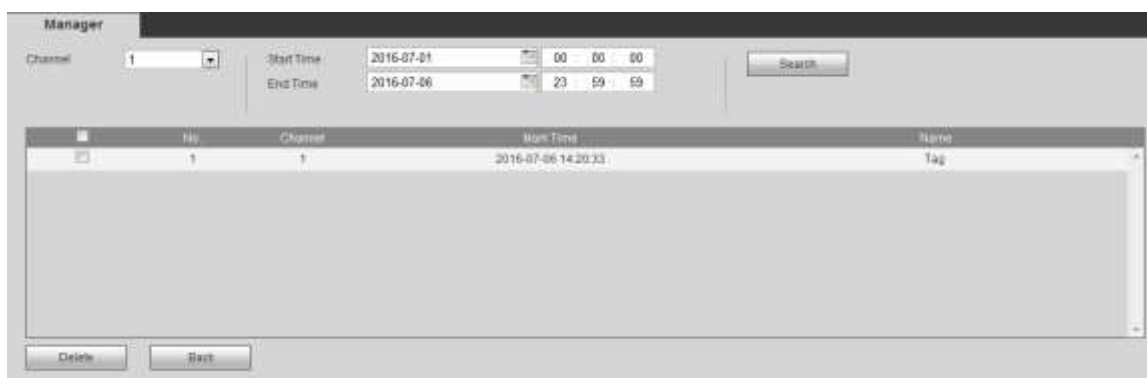


Figure 4-127

- **Modify**

Double click one mark information item, you can see system pops up a dialogue box for you to change mark information. You can only change mark name here.

- **Delete**

Here you can check the mark information item you want to delete and then click Delete button, you can remove one mark item. .

Note

- After you go to the mark management interface, system needs to pause current playback. System resume playback after you exit mark management interface.
- If the mark file you want to playback has been removed, system begins playback from the first file in the list.

4.5.3 File List

Click File list button, you can see the corresponding file(s) in the list. See Figure 4-128.

File type includes: R=regular alarm, A=external alarm, M=Motion detect alarm, Intel-intelligent alarm.

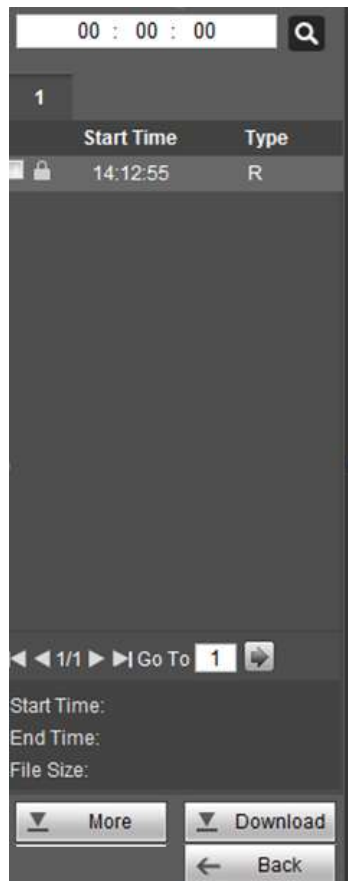


Figure 4-128

4.5.4 Playback

Select a file you want to play and then click Play button, system can begin playback. You can select to playback in full-screen. Please note for one channel, system can not playback and download at the same time. You can use the playback control bar to

implement various operations such as play, pause, stop, slow play, fast play and etc.

4.5.5 Download

Select the file(s) you want to download and then click download button, you can see an interface shown as in Figure 4-129. The Download button becomes Stop button and there is a process bar for your reference. Please go to you default file saved path to view the files.



Figure 4-129

4.5.6 Load more

It is for you to search record or picture. You can select record channel, record type and record time to download. Or you can use watermark function to verify file.

4.5.6.1 Download By File

Select channel, record type, bit stream type and then input start time and end time. Click Search button, the download by file interface is shown as in Figure 4-130.

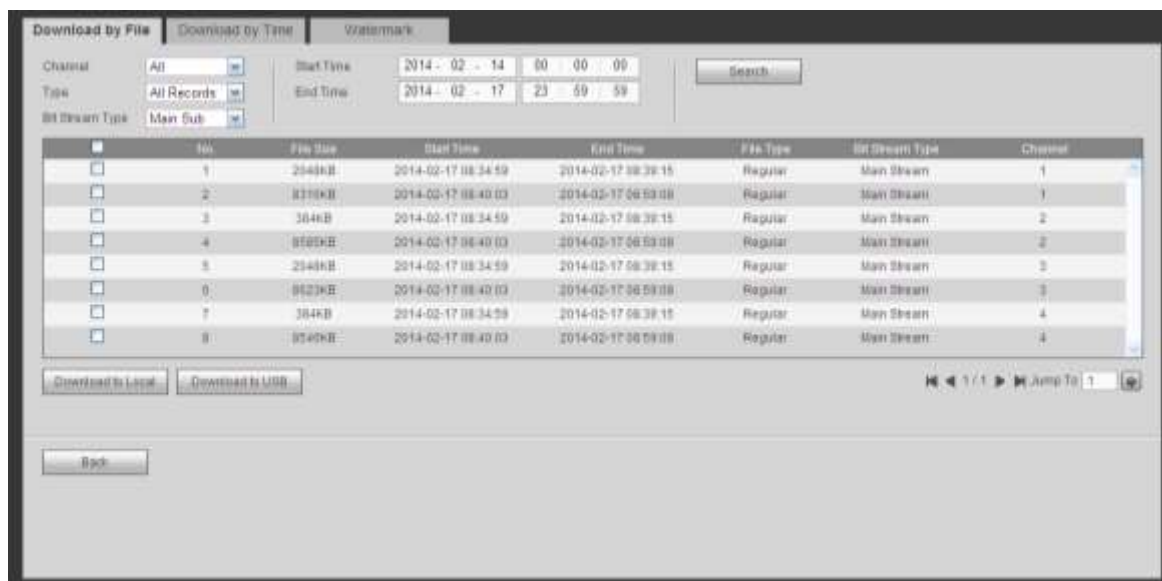


Figure 4-130

Check the file(s) you want to download and there are two options for you to save the file(s).

- Download to local

Click Download to local, system pops up the following interface for you to set record format and saved path. See Figure 4-131.

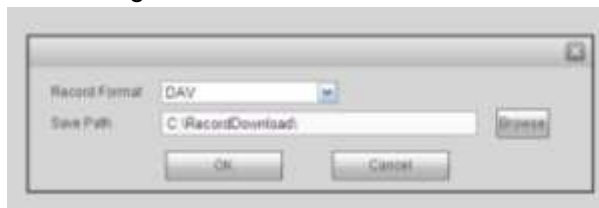


Figure 4-131

You can click OK to download and view the download process. After the download operation, you can see corresponding dialog box.

- Download to USB

Connect the corresponding peripheral device, and then click Download to USB button, you can see the following interface. See Figure 4-132.

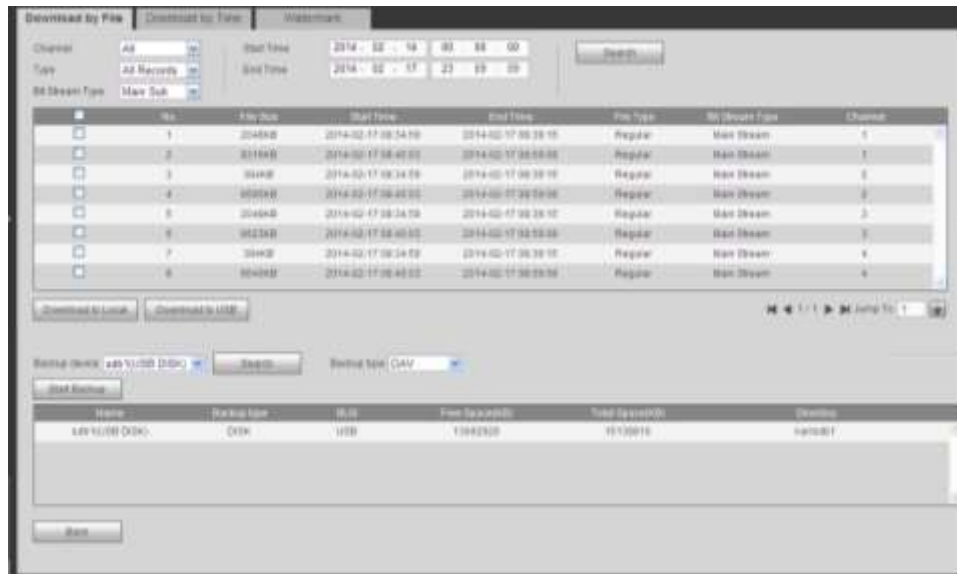


Figure 4-132

Select Backup device and backup type first and then click Start backup button.
After the download operation, you can see corresponding dialogue box.

4.5.6.2 Download by Time

Select channel, bit stream type, start time and end time.

Click Download to Local button, you can see download by time interface is shown as in Figure 4-133.

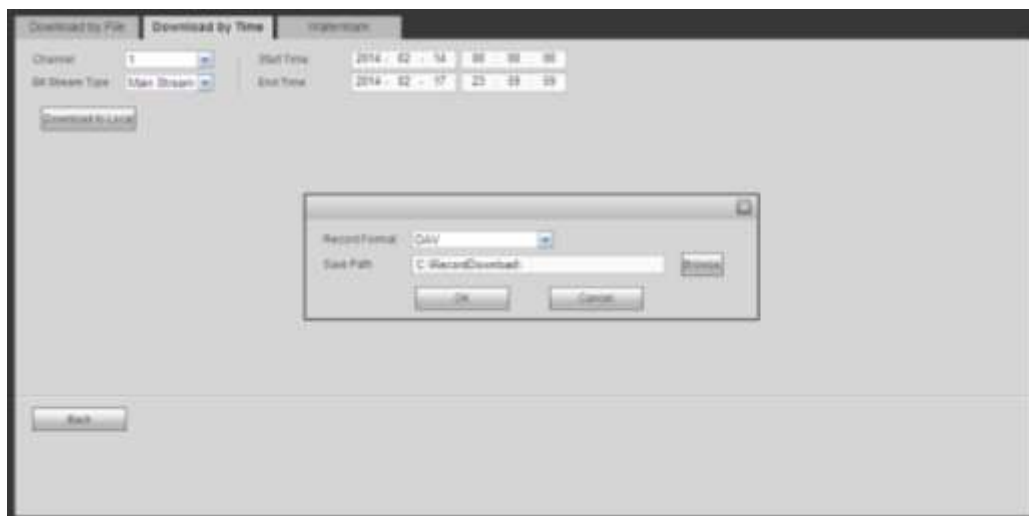


Figure 4-133

Set record format and saved path, you can click OK to download and view the download process. After the download operation, you can see corresponding dialog box.

4.5.6.3 Watermark

Watermark interface is shown as In Figure 4-134. Please select a file and then click Verify button to see the file has been tampered with or not

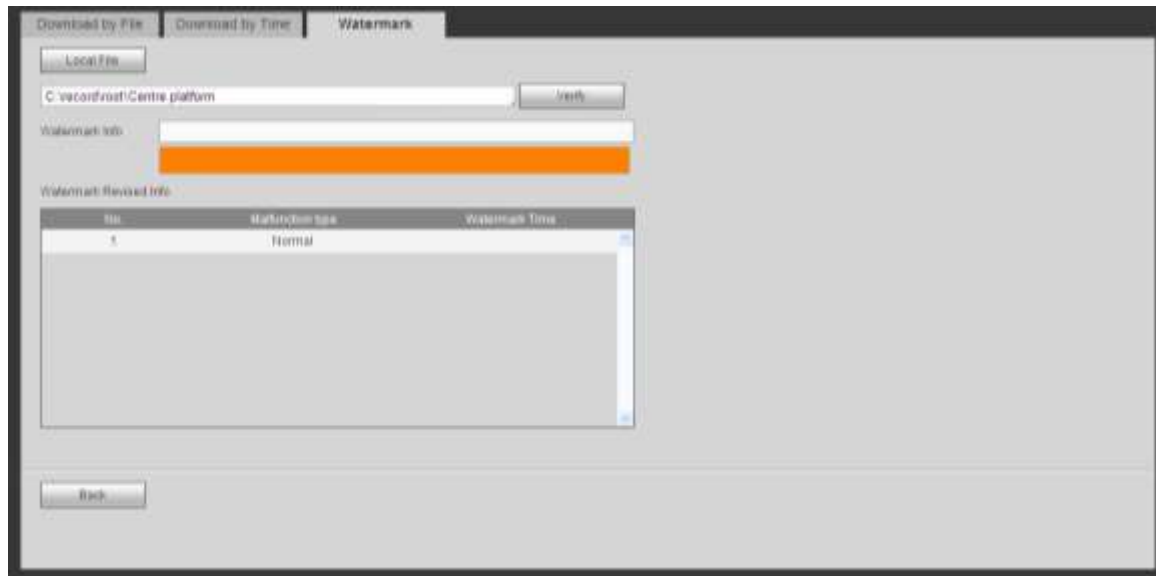


Figure 4-134

4.6 Alarm

Click alarm function, you can see an interface is shown as Figure 4-135.

Here you can set device alarm type and alarm sound setup (Please make sure you have enabled audio function of corresponding alarm events.).

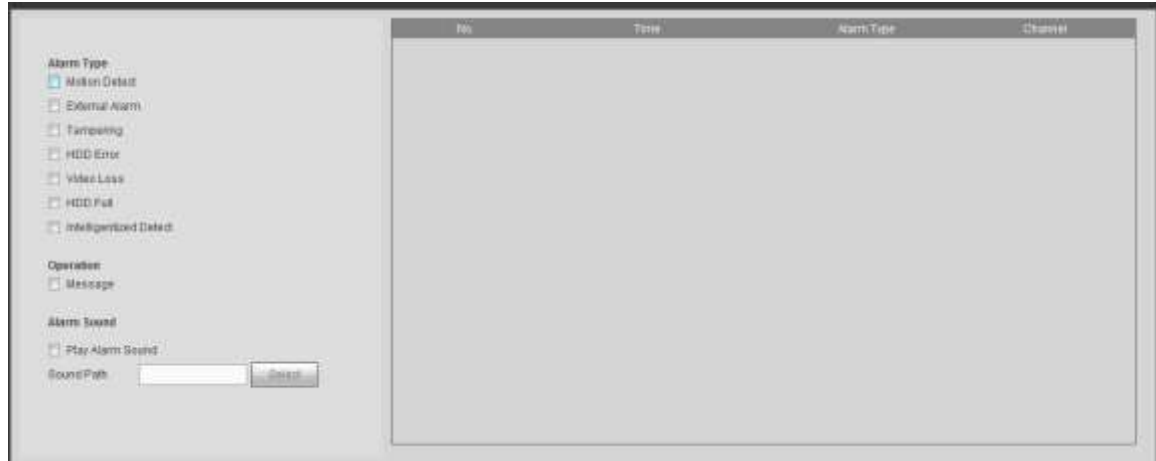


Figure 4-135

Please refer to the following sheet for detailed information.

Type	Parameter	Function
Alarm Type	Video loss	System alarms when video loss occurs.
	Motion detection	System alarms when motion detection alarm occurs.
	Tampering	System alarms when camera is viciously masking.
	Disk full	System alarms when disk is full.
	Disk error	System alarms when disk error occurs.

Type	Parameter	Function
	External alarm	Alarm input device sends out alarm.
	Intelligent alarm	The IVS rule you set in smart plan can trigger intelligent alarm.
Operation	Prompt	Check the box here, system can automatically pops up an alarm icon on the Alarm button in the main interface when there is an alarm.
Alarm Sound	Play alarm sound	System sends out alarm sound when an alarm occurs. You can specify as you wish.
	Sound path	Here you can specify alarm sound file.

4.7 Information

4.7.1 Version

From main menu->Info->Version, the version interface is shown as in Figure 4-136. Here you can view record channel, alarm input/output information, software version, release date and etc. Please note the following information is for reference only.

VERSION	
Device Type:	NVS
Record Channel:	2
Alarm In:	4
Alarm Out:	2
Hardware Version:	V1.0
SN:	0
Web:	3.2.7.74370
Onvif Server Version:	2.4.1
Onvif Client Version:	2.4.1
System Version:	3.210.0001.6, Build Date: 2016-12-02

Figure 4-136

4.7.2 Log

From main menu->Info->Log, here you can view system log. See Figure 4-137.

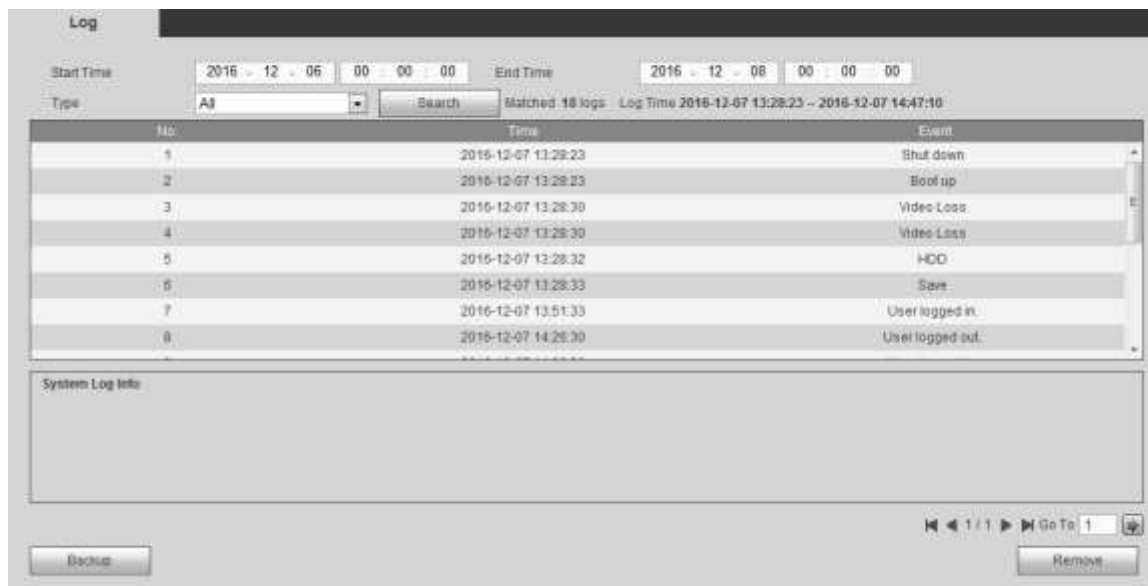


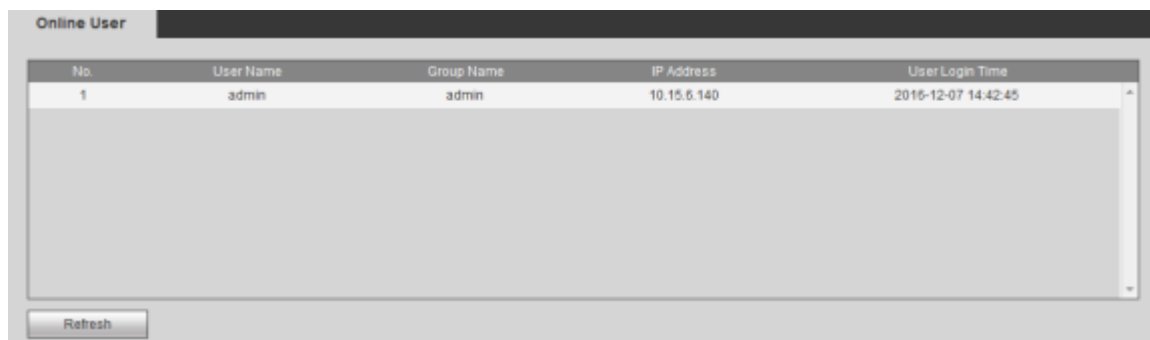
Figure 4-137

Please refer to the following sheet for log parameter information.

Parameter	Function
Type	Log types include: system operation, configuration operation, data operation, event operation, and record operation, and user management, log clear.
Start time	Set the start time of the requested log.
End time	Set the end time of the requested log.
Search	You can select log type from the drop down list and then click search button to view the list. You can click the stop button to terminate current search operation.
Detailed information	You can select one item to view the detailed information.
Clear	You can click this button to delete all displayed log files. Please note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

4.7.3 Online User

From main menu->Info->Online user the online user interface is shown as in Figure 4-138. Click Refresh to get the latest online user information.



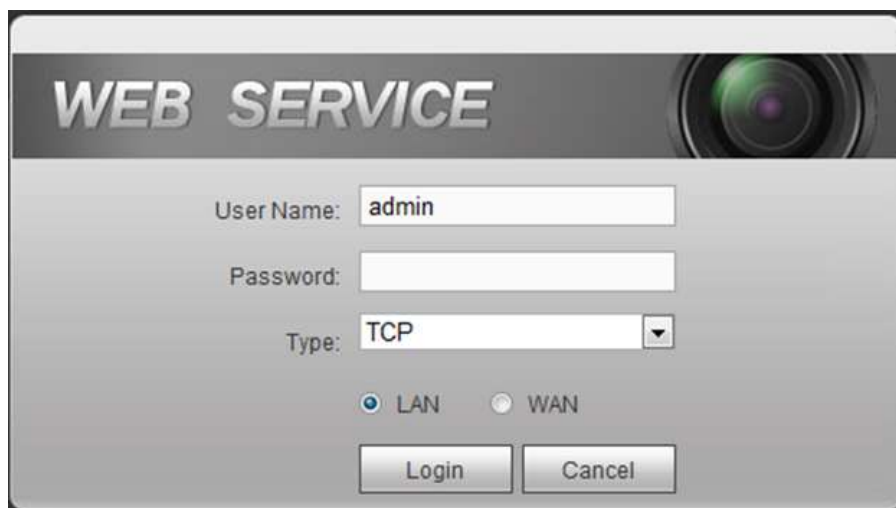
No.	User Name	Group Name	IP Address	User Login Time
1	admin	admin	10.15.6.140	2016-12-07 14:42:45

Refresh

Figure 4-138

4.8 Log out

Click log out button, system goes back to log in interface. See Figure 4-139. You need to input user name and password to login again.



WEB SERVICE

User Name:

Password:

Type: ▼

☒ LAN ☐ WAN

Figure 4-139

4.9 Un-install Web Control

You can use web un-install tool “uninstall web.bat” to un-install web control.

Please note, before you un-installation, please close all web pages, otherwise the un-installation might result in error.

5 SmartPSS

Besides Web, you can use our Smart PSS to login the device.

For detailed information, please refer to *Smart PSS user's manual*.

6 FAQ

1. NVS can not boot up properly.

There are following possibilities:

- Input power is not correct.
- Power connection is not correct.
- Power switch button is damaged.
- Program upgrade is wrong.
- HDD malfunction or something wrong with HDD ribbon.
- Seagate DB35.1, DB35.2, SV35 or Maxtor 17-g has compatibility problem.
Please upgrade to the latest version to solve this problem.
- Front panel error.
- Main board is damaged.

2. NVS often automatically shuts down or stops running.

There are following possibilities:

- Input voltage is not stable or it is too low.
- HDD malfunction or something wrong with the ribbon.
- Button power is not enough.
- Front video signal is not stable.
- Working environment is too harsh, too much dust.
- Hardware malfunction.

3. System can not detect SD card.

There are following possibilities:

- SD card is damaged.
- Main board SATA port is broken.

4. There is no video output whether it is one-channel, multiple-channel or all-channel output.

There are following possibilities:

- Program is not compatible. Please upgrade to the latest version.
- Brightness is 0. Please restore factory default setup.
- There is no video input signal or it is too weak.
- Check privacy mask setup or your screen saver.
- NVS hardware malfunctions.

5. Real-time video color is distorted.

There are following possibilities:

- When using BNC output, NTSC and PAL setup is not correct. The real-time video becomes black and white.
- NVS and monitor resistance is not compatible.
- Video transmission is too long or degrading is too huge.

- NVS color or brightness setup is not correct.

6. Can not search records via WEB.

There are following possibilities:

- SD card is damaged.
- Upgraded program is not compatible.
- The recorded file has been overwritten.
- Record function has been disabled.

8. There is no audio when monitor.

There are following possibilities:

- It is not a power picker.
- It is not a power acoustics.
- Audio cable is damaged.
- NVS hardware malfunctions.

9. There is audio when monitor but there is no audio when system playback.

There are following possibilities:

- Setup is not correct. Please enable audio function
- Corresponding channel has no video input. Playback is not continuous when the screen is blue.

10. Time display is not correct.

There are following possibilities:

- Setup is not correct
- Battery contact is not correct or voltage is too low.
- Crystal is broken.

11. NVS can not control PTZ.

There are following possibilities:

- Front panel PTZ error
- PTZ decoder setup, connection or installation is not correct.
- Cable connection is not correct.
- PTZ setup is not correct.
- PTZ decoder and NVS protocol is not compatible.
- PTZ decoder and NVS address is not compatible.
- When there are several decoders, please add 120 Ohm between the PTZ decoder A/B cables furthest end to delete the reverberation or impedance matching. Otherwise the PTZ control is not stable.
- The distance is too far.

12. Motion detection function does not work.

There are following possibilities:

- Period setup is not correct.
- Motion detection zone setup is not correct.
- Sensitivity is too low.
- For some versions, there is hardware limit.

13. Can not log in client-end or web.

There are following possibilities:

- For Windows 98 or Windows ME user, please update your system to Windows 2000 sp4. Or you can install client-end software of lower version. Please note right now, our NVS is not compatible with Windows VISTA control.
- ActiveX control has been disabled.
- No dx8.1 or higher. Please upgrade display card driver.
- Network connection error.
- Network setup error.
- Password or user name is invalid.
- Client-end is not compatible with NVS program.

14. There is only mosaic, no video when preview or playback video file remotely.

There are following possibilities:

- Network fluency is not good.
- Client-end resources are limit.
- There is multiple-cast group setup in NVS. This mode can result in mosaic. Usually we do not recommend this mode.
- There is privacy mask or channel protection setup.
- Current user has no right to monitor.
- NVS local video output quality is not good.

15. Network connection is not stable.

There are following possibilities:

- Network is not stable.
- IP address conflict.
- MAC address conflict.
- PC or NVS network card is not good.

17. Keyboard can not control NVS.

There are following possibilities:

- NVS serial port setup is not correct
- Address is not correct
- When there are several switchers, power supply is not enough.
- Transmission distance is too far.

21. Record storage period is not enough.

There are following possibilities:

- Camera quality is too low. Lens is dirty. Camera is installed against the light. Camera aperture setup is not correct.
- HDD capacity is not enough.
- HDD is damaged.

22. Can not playback the downloaded file.

There are following possibilities:

- There is no media player.
- No DXB8.1 or higher graphic acceleration software.
- There is no DivX503Bundle.exe control when you play the file transformed to AVI via media player.
- No DivX503Bundle.exe or ffdshow-2004 1012 .exe in Windows XP OS.

23. Forgot menu password

Please contact your local service engineer or our sales person for help. We can guide you to solve this problem.

After I successfully connected the WIFI, I can not connect to the device wireless IP address.

There are following possibilities:

- There are too many wireless routers, and their frequency settings are the same. Please set the router frequency first.
- NVS wire IP and wirelesses IP are in the same IP segment.

Daily Maintenance

- Please use the brush to clean the board, socket connector and the chassis regularly.
- The device shall be soundly earthed in case there is audio/video disturbance. Keep the device away from the static voltage or induced voltage.
- Please unplug the power cable before you remove the audio/video signal cable, RS232 or RS485 cable.
- Do not connect the TV to the local video output port (VOUT).It may result in video output circuit.
- Always shut down the device properly. Please use the shutdown function in the menu, or you can press the power button in the front panel for at least three seconds to shut down the device. Otherwise it may result in HDD malfunction.
- Please make sure the device is away from the direct sunlight or other heating sources. Please keep the sound ventilation.
- Please check and maintain the device regularly.

Note:

- This manual is for reference only. Slight difference may be found in the user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website or contact your local retailer for more information.

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