

		1 panorama unfolding view+3 de-warp windows
		1 panorama unfolding view +4 de warp windows
		1 panorama unfolding view +8 de warp windows



Figure 4-78

In Figure 4-78, you can adjust the color pane on the left pane or use your mouse to change the position of the small images on the right pane to realize fish eye de-warp.

4.3.7.2 Fish eye de-warp during playback

Step 1 On the main menu, click search button.

Step 2 Select 1-window playback mode and corresponding fish eye channel, click  to play.

Step 3 Right click the , you can go to the de-warp playback interface. For detailed information, please refer to chapter 4.3.7.1 fisheye de-warp during preview.

4.4 PTZ

Note

Before you control the PTZ, please make sure the PTZ decoder and the NVR network connection is OK and the corresponding settings are right.

4.4.1 PTZ Settings

Cable Connection

Please follow the procedures below to go on cable connection

- Connect the dome RS485 port to NVR RS485 port.
- Connect dome video output cable to NVR video input port.
- Connect power adapter to the dome.

In the main menu, from Setting->System->PTZ, you can see an interface is shown as in Figure 4-79.

Here you can set the following items:

- Channel: Select the current camera 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.
- Protocol: Select corresponding PTZ protocol(such as PELCOD)
- Address: Default address is 1.
- Baud rate: Select corresponding baud rate. Default value is 9600.
- Data bit: Select corresponding data bits. Default value is 8.
- Stop bit: Select corresponding stop bits. Default value is 1.
- Parity: There are three options: odd/even/none. Default setup is none.



Figure 4-79

If you are connecting to network PTZ, the PTZ type shall be remote. See Figure 4-80.

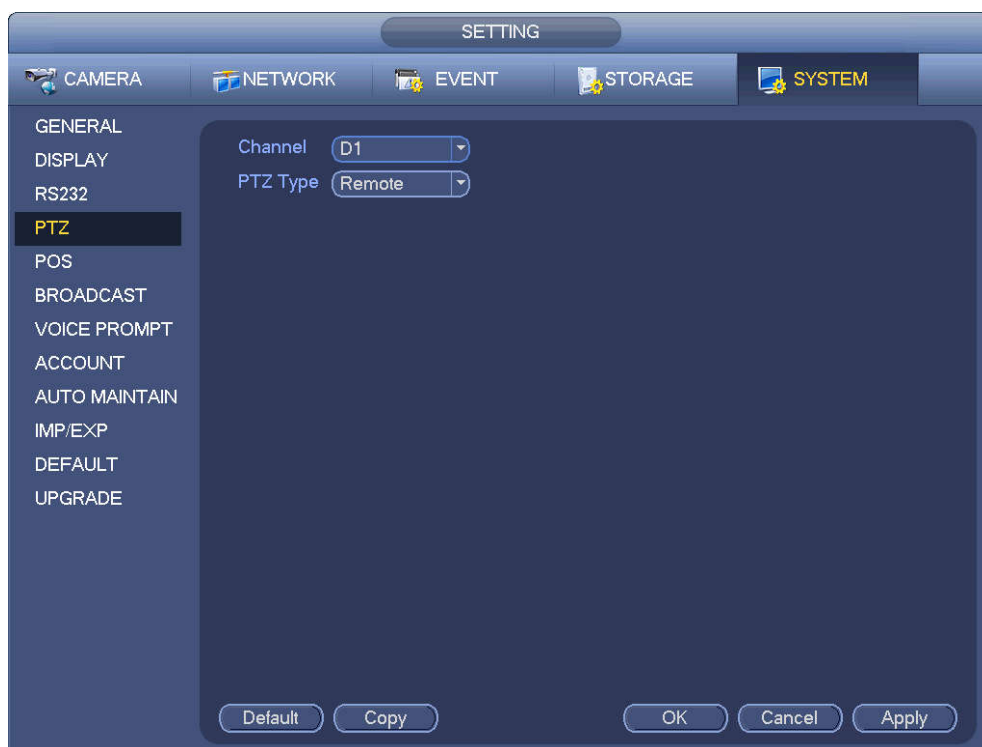


Figure 4-80

4.4.2 PTZ Control

After completing all the setting please click save button. Right click mouse (click “Fn” Button in the front panel or click “Fn” key in the remote control). The interface is shown as in Figure 4-81. Please note you can only go to the PTZ control interface when you are in 1-window display mode.

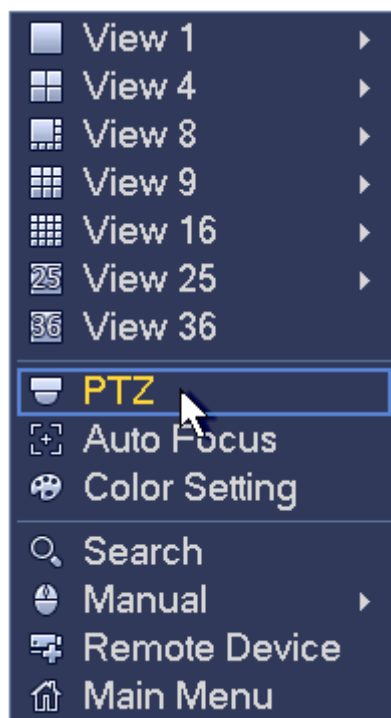


Figure 4-81

The PTZ setup is shown as in See Figure 4-82.

Please note the commend name is grey once device does not support this function.

The PTZ operation is only valid in one-window mode.

Here you can control PTZ direction, speed, zoom, focus, iris, preset, tour, scan, pattern aux function, light and wiper, rotation and etc.

Speed is to control PTZ movement speed. The value ranges from 1 to 8. The speed 8 is faster than speed 1. You can use the remote control to click the small keyboard to set.

You can click  and  of the zoom, focus and iris to zoom in/out, definition and brightness.

The PTZ rotation supports 8 directions. If you are using direction buttons on the front panel, there are only four directions: up/down/left/right.

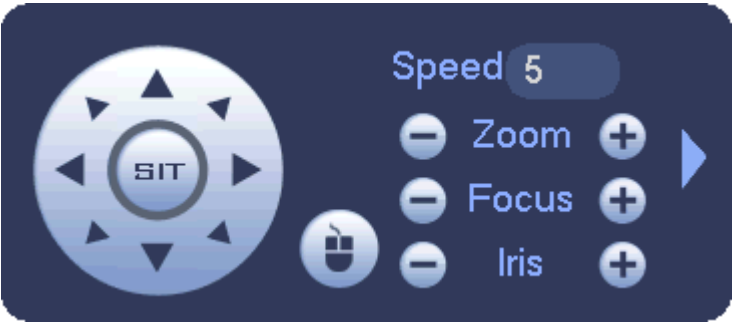


Figure 4-82

In the middle of the eight direction arrows, there is a 3D intelligent positioning key. See Figure 4-83. Please make sure your protocol supports this function and you need to use mouse to control.

Click this key, system goes back to the single screen mode. Drag the mouse in the screen to adjust section size. The dragged zone supports 4X to 16X speeds. It can realize PTZ automatically. The smaller zone you dragged, the higher the speed.



Figure 4-83

Name	Function key	function	Shortcut key	Function key	function	Shortcut key
Zoom		Near			Far	
Focus		Near			Far	
Iris		close			Open	

In Figure 4-82, click  to open the menu, you can set preset, tour, pattern, scan and etc. See Figure 4-84.



Figure 4-84

Please refer to the following sheet for detailed information.

Please note the above interface may vary due to different protocols. The button is grey and cannot be selected once the current function is null.

Right click mouse or click the ESC button at the front panel to go back to the Figure 4-82.

Icon	Function	Icon	Function
	Preset		Flip
	Tour		Reset
	Pattern		Aux
	Scan		Aux on-off button
	Rotate		Go to menu

4.4.2.1 PTZ Function Setup



Click , you can go to the following interface to set preset, tour, pattern, and scan. See Figure 4-85.



Figure 4-85

Preset Setup

In Figure 4-85, click preset button and use eight direction arrows to adjust camera to the proper position.

The interface is shown as in Figure 4-86.
 Click Set button and then input preset number.
 Click Set button to save current preset.



Figure 4-86

Tour Setup

In Figure 4-85, click tour button.

Input tour value and preset No. Click Add preset button to add current preset to the tour. See Figure 4-87.

Tips

Repeat the above steps to add more presets to the tour. Click Del preset button to remove it from the tour.
 Please note some protocols do not support delete preset function.



Figure 4-87

Pattern Setup

In Figure 4-85, click Pattern button and input pattern number.

Click Begin button to start direction operation. Or you can go back to Figure 4-82 to operate zoom/focus/iris/direction operation.

In Figure 4-85, click End button.



Figure 4-88

Scan Setup

In Figure 4-85, click Scan button.

Use direction buttons to set camera left limit and then click Left button.

Use direction buttons to set camera right limit and then click Right button. Now the scan setup process is complete.



Figure 4-89

4.4.2.2 Call PTZ Function

Call Preset

In Figure 4-84, input preset value and then click  to call a preset. Click  again to stop call.

Call Pattern

In Figure 4-84, input pattern value and then click  to call a pattern. Click  again to stop call.

Call Tour

In Figure 4-84, input tour value and then click  to call a tour. Click again  to stop call.

Call Scan

In Figure 4-84, input Scan value and then click  to call a tour. Click again  to stop call.

Rotate

In Figure 4-84, click  to enable the camera to rotate.

System supports preset, tour, pattern, scan, rotate, light and etc function.

Note:

- Preset, tour and pattern all need the value to be the control parameters. You can define it as you require.
- You need to refer to your camera user's manual for Aux definition. In some cases, it can be used for special process.

Aux

Click , system goes to the following interface. The options here are defined by the protocol. The aux number is corresponding to the aux on-off button of the decoder. See Figure 4-90.



Figure 4-90

4.5 Record File

Device adopts 24-hour continuous record by default. It supports customized record period and record type. Refer to chapter 4.1.4.6 Schedule for detailed information.

4.6 Playback and Search

4.6.1 Instant Playback

Please refer to chapter 4.3.2 for real-time playback information.

4.6.2 Search Interface

From Main menu->Search, or on the preview interface right click mouse and then select search item, you can go to the following interface. See Figure 4-91 or Figure 4-92.

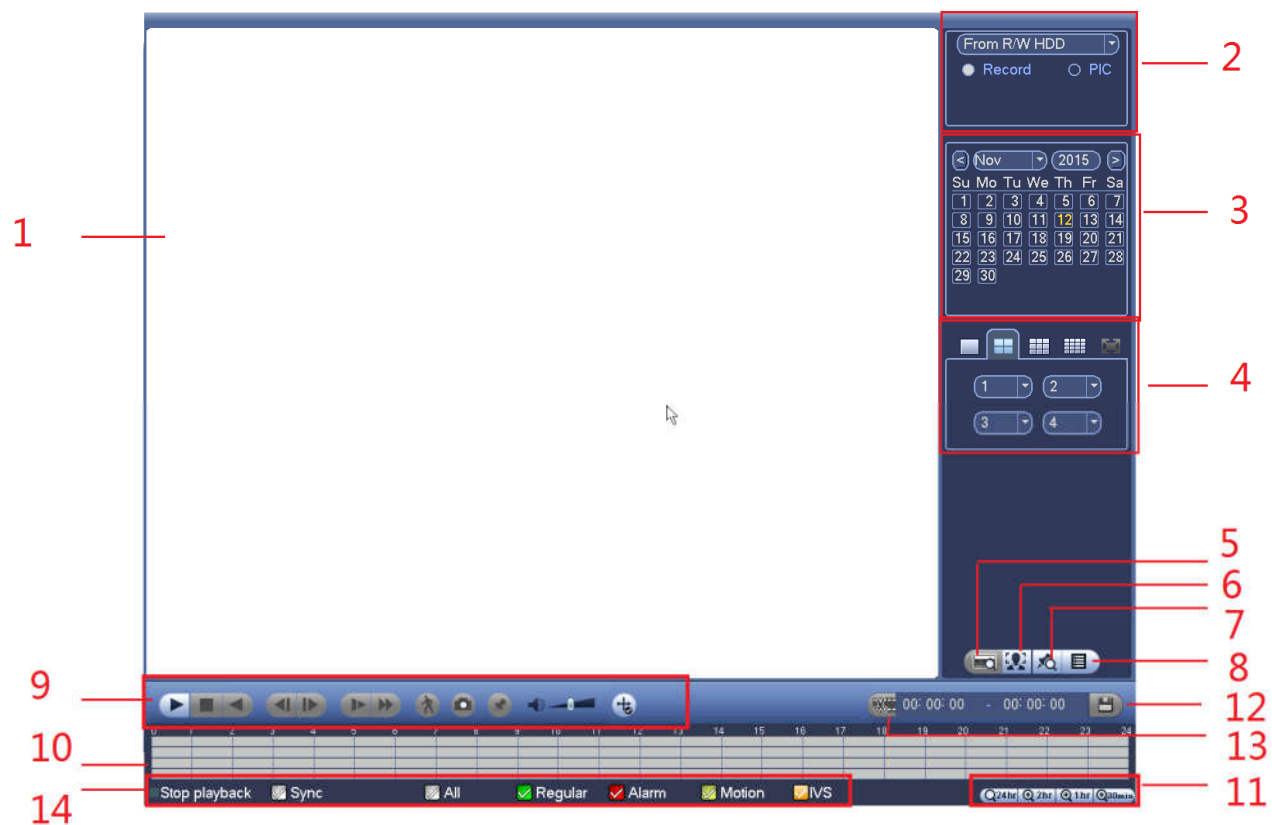


Figure 4-91

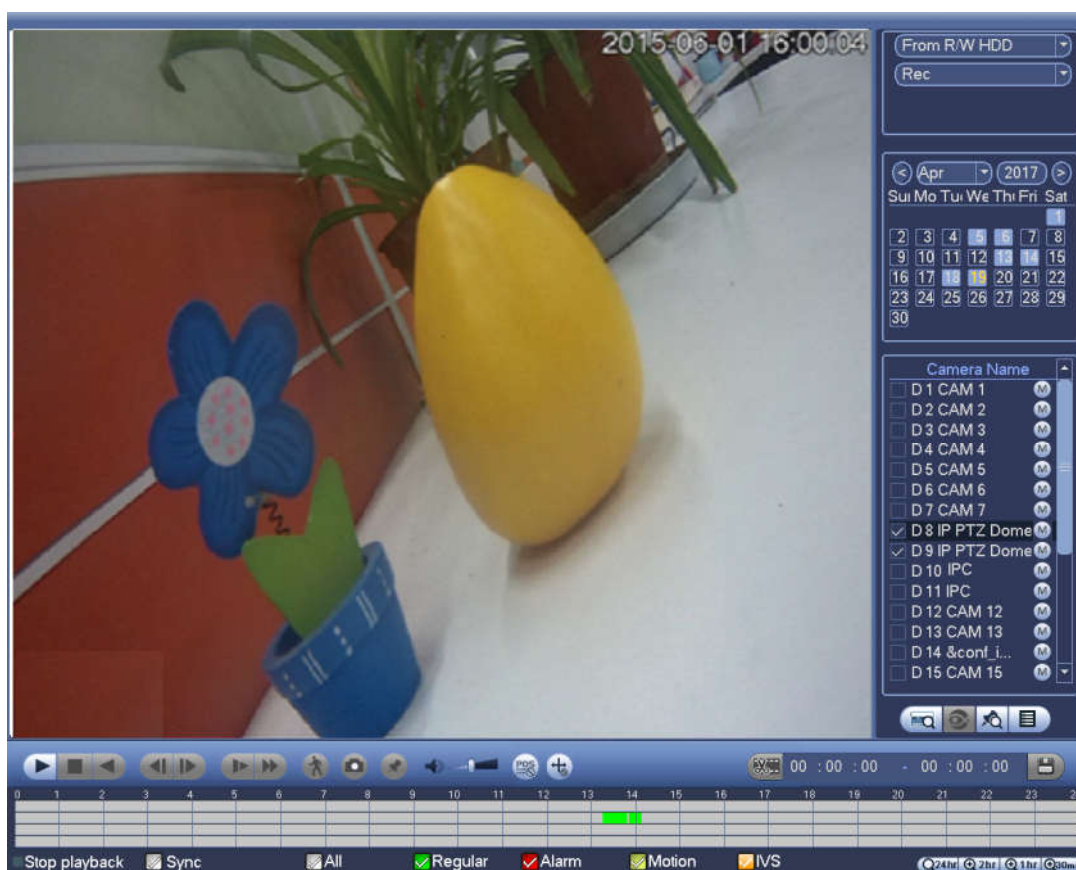


Figure 4-92

Please refer to the following sheet for more information.

SN	Name	Function
1	Display window	● Here is to display the searched picture or file. ● Support 1/4/9/16-window playback. (It depends on the product channel amount).
2	Search type	● Here you can select to search the picture or the recorded file. ● You can select to play from the read-write HDD, from peripheral device or from redundancy HDD. ● Before you select to play from the peripheral device, please connect the corresponding peripheral device. You can view all record files of the root directory of the peripheral device. Click the Browse button; you can select the file you want to play. Important ● Redundancy HDD does not support picture backup function, but it supports picture playback function. You can select to play from redundancy HDD if there are pictures on the redundancy HDD.
3	Calendar	● The blue highlighted date means there is picture or file. Otherwise, there is no picture or file. ● In any play mode, click the date you want to see, you can see the corresponding record file trace in the time bar.
4	Playback mode and channel selection pane.	● Playback mode:1/4/9/16. (It may vary due to different series.) ✧ In 1-window playback mode: you can select 1-X channels (X depends on the product channel amount). ✧ In 4-window playback mode: you can select 4 channels according to your requirement. ✧ In 9-window playback mode, you can switch between 1-8, 9-16 and etc channels. ✧ In 16-window playback mode, you can switch between 1-16, 17-32 and etc channels. ● The time bar will change once you modify the playback mode or the channel option.
5	Card number search	The card number search interface is shown as below. Here you can view card number/field setup bar. You can implement advanced search. Current series product supports this function.
6	Face list	You can search when it is in 1-channel playback mode. Click it, system can filter all human faces and generate human face list. Double click the file; system begins playback the record or image of the corresponding human face.
7	Mark file list button	Click it to go to mark file list interface. You can view all mark information of current channel by time. Please refer to chapter 4.6.4 for detailed information. Please note only the product of this icon supports mark function.

8	File list switch button	● Double click it, you can view the picture/record file list of current day. ● The file list is to display the first channel of the record file. ● The system can display max 128 files in one time. Use the ◀ and ▶ or the mouse to view the file. Select one item, and then double click the mouse or click the ENTER button to playback. ● You can input the period in the following interface to begin accurate search. ● File type: R—regular record; A—external alarm record; M—Motion detect record.  ● Lock file. Click the file you want to lock and click the button  to lock. The file you locked will not be overwritten. ● Search locked file: Click the button  to view the locked file.	
9	Playback control pane.	▶/	Play/Pause There are three ways for you to begin playback. ● The play button ● Double click the valid period of the time bar. ● Double click the item in the file list. In slow play mode, click it to switch between play/pause.
		■	Stop
		◀	Backward play In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. In backward play mode, click ▶/ to restore normal play.
		◀/▶	In playback mode, click it to play the next or the previous section. You can click continuously when you are watching the files from the same channel. In normal play mode, when you pause current play, you can click ◀ and ▶ to begin frame by frame playback. In frame by frame playback mode, click ▶/ to restore normal playback.
		▶·	Slow play In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc.
		»	Fast forward In playback mode, click to realize various fast play modes such as fast play 1, fast play 2 and etc.
		Note: The actual play speed has relationship with the software version.	
			Smart search
			The volume of the playback

			Click the snapshot button in the full-screen mode, the system can snapshot 1 picture. System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.
			Mark button. Please note this function is for some series product only. Please make sure there is a mark button in the playback control pane. You can refer to chapter 4.6.4 for detailed information.
			In 1-channel playback mode, click it to enable/disable display IVS rule information on the video.
10	Time bar	● It is to display the record type and its period in current search criteria. ● In 4-window playback mode, there are corresponding four time bars. In other playback mode, there is only one time bar. ● Use the mouse to click one point of the color zone in the time bar, system begins playback. ● The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file. ● The green color stands for the regular record file. The red color stands for the external alarm record file. The yellow stands for the motion detect record file.	
11	Time bar unit	● The option includes: 、、 和 . The smaller the unit, the larger the zoom rate. You can accurately set the time in the time bar to playback the record. ● The time bar is beginning with 0 o'clock when you are setting the configuration. The time bar zooms in the period of the current playback time when you are playing the file.	
12	Backup	● Select the file(s) you want to backup from the file list. You can check from the list. Then click the backup button, now you can see the backup menu. System supports customized path setup. After select or create new folder, click the Start button to begin the backup operation. The record file(s) will be saved in the specified folder. ● Check the file again you can cancel current selection. System max supports to display 32 files from one channel. ● After you clip on record file, click Backup button you can save it. ● For one device, if there is a backup in process, you cannot start a new backup operation.	
13	Clip	It is to edit the file. ● Please click  to play the file you want to edit. ● Select clip start time on the time bar and then Click  to start clip.	

		- Select clip stop time on the time bar and then click  to stop clip. - Click , system pops up file backup dialogue box for you to save. Please note: Clip function is for one-channel mode/multiple-channel mode. System max supports 1024 files backup at the same time. You cannot operate clip operation if there is any file has been checked in the file list.
14	Record type	In any play mode, the time bar will change once you modify the search type.
Other Functions		
15	Motion detection search	- When system is playing, you can select a zone in the window to begin motion detection search. Click the motion detect button to begin play. - Once the motion detect play has begun, click button again will terminate current motion detect file play. - There is no motion detect zone by default. - If you select to play other file in the file list, system switches to motion detect play of other file. - During the motion detect play process, you cannot implement operations such as change time bar, begin backward playback or frame by frame playback.
16	Other channel synchronization switch to play when playback	When playing the file, click the number button, system can switch to the same period of the corresponding channel to play.
17	Digital zoom	When the system is in full-screen playback mode, left click the mouse in the screen. Drag your mouse in the screen to select a section and then left click mouse to realize digital zoom. You can right click mouse to exit.
18	Manually switch channel when playback	During the file playback process, you can switch to other channel via the dropdown list or rolling the mouse. This function is null if there is no record file or system is in smart search process.



Note

All the operations here (such as playback speed, channel, time and progress) have relationship with hardware version. Some series NVRs do not support some functions or playback speeds.

4.6.2.1 Playback Control

The playback control interface is shown as below. See [错误!未找到引用源。](#).



Figure 4-93

Please refer to the following sheet for more information.

Icon	Function
	Play/Pause In slow play mode, click it to switch between play/pause.
	Backward play - In normal play mode, left click the button, the file begins backward play. Click it again to pause current play. - In backward play mode, click or to restore normal play.
	Display previous frame/next frame. - When pause the normal playback file, click or to playback frame by frame. - In frame by frame playback mode, click or to resume normal playback mode.
	Slow play In playback mode, click it to realize various slow play modes such as slow play 1, slow play 2, and etc.
	Fast forward In playback mode, click to realize various fast play modes such as fast play 1, fast play 2 and etc.
	Adjust the volume of the playback
	Smart search . You can refer to chapter 4.6.3 for detailed information.
	Click the snapshot button in the full-screen mode, the system can snapshot 1 picture. System supports custom snap picture saved path. Please connect the peripheral device first, click snap button on the full-screen mode, you can select or create path. Click Start button, the snapshot picture can be saved to the specified path.
	Mark button. Please note this function is for some series product only. Please make sure there is a mark button in the playback control pane. You can refer to chapter 4.6.4 for detailed information.
	Display/hide POS information. In 1-channel playback mode, you can click it to display/hide POS information on the video.

Icon	Function
	Note This function is for some series only. In 1-channel playback mode, click it to enable/disable display IVS rule information on the video.

4.6.2.2 Clip

This function allows you to clip some footages to a new file and then save to the USB device. See 错误! 未找到引用源。 . Please follow the steps listed below.

Step 1 Select a record first and then click  to playback.

Step 2 Select a time at the time bar and then click  to start clip,

Step 3 Select a time at the time bar and then click  to stop clip,

Step 4 Click , system pops up dialogue box to save the clip file.



Figure 4-94



Note

- Clip function is for one-channel/multiple-channel.
- Max save 1024 files at the same time.
- This function is not for the file already checked in the file list.

4.6.2.3 Record Backup

This function is to backup files you checked in the file list, or the file you just clip.

Click , enter the following interface. See Figure 4-95.

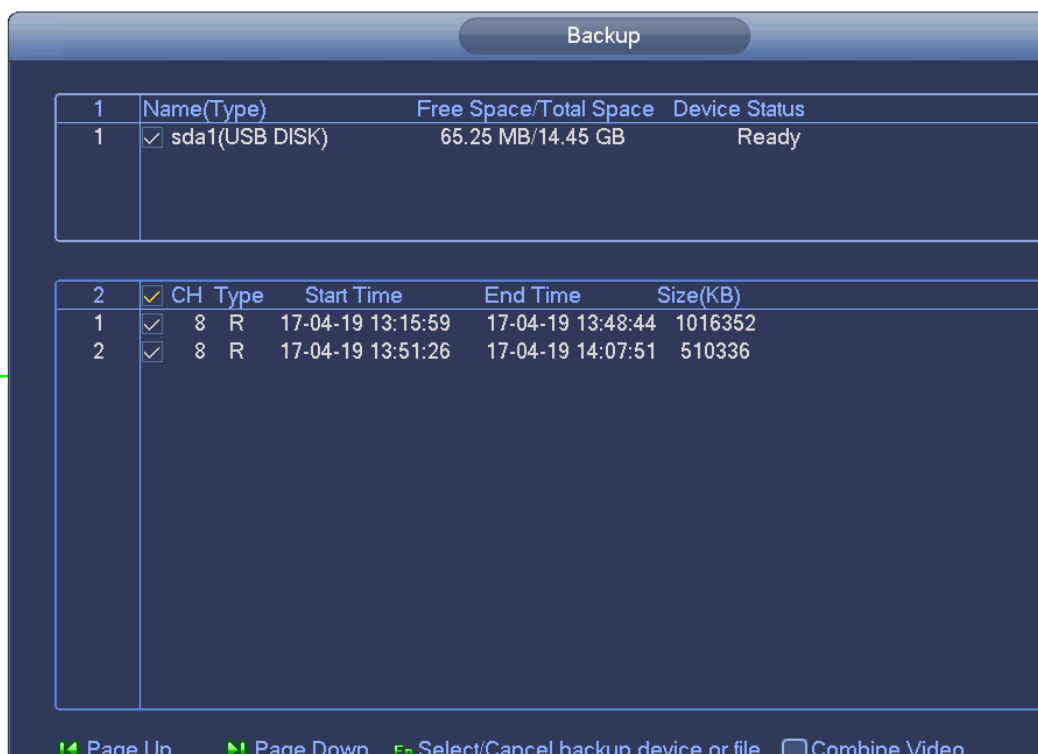


Figure 4-95

Click Backup to begin the process.

4.6.3 Smart Search Playback



Note

This function is for some series product only.

During playback process, it can analyze the motion detect zone in the scene and give the analysis result.

This function is for channel that already enabled motion detect function (main menu->Setting->Event->Video detect->Motion detect).

Please follow the steps listed below.

Step 1 Select a channel to playback video and then click . You can view the grids on the playback video.



Note

- This function is for one-channel playback mode.
- If you are in multiple-channel playback mode, double click a channel first to switch to one-channel playback mode.

Step 2 Left click mouse and then drag to select smart search zones(22*18 (PAL) , 22*15 (NTSC)).

Step 3 Click  to go to smart search and playback. System is going to playback all motion detect record footages.

Step 4 Click  again to stop smart search function.

4.6.4 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 (Figure 4-91 or Figure 4-92).

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 4-96.

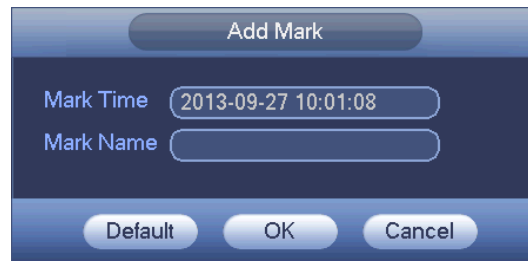
A dialog box titled "Add Mark" with a dark blue background. It contains two input fields: "Mark Time" with the value "2013-09-27 10:01:08" and "Mark Name" which is empty. At the bottom, there are three buttons: "Default", "OK", and "Cancel".

Figure 4-96

- Playback Mark

During 1-window playback mode, click mark file list button  in Figure 4-91 or Figure 4-92, you can go to mark file list interface. Double click one mark file, you can begin playback from the mark time.

- 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  on the Search interface (Figure 4-91 or Figure 4-92); you can go to Mark Manager interface. See Figure 4-97. System can manage all the record mark information of current channel by default. You can view all mark information of current channel by time.

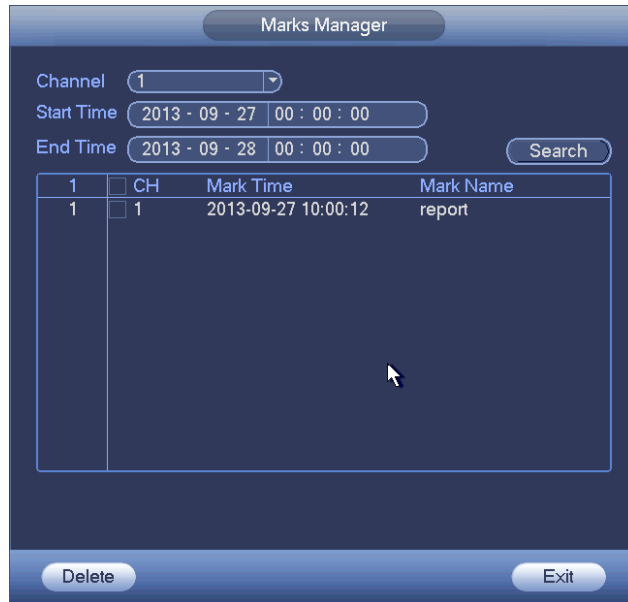


Figure 4-97

- **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.

4.6.5 Playback Image

Here you can search and play the image. Please follow the steps listed below.

Step 1 From main menu->Search, or on the preview window right click mouse and then click Search, you can go to the search interface.

Step 2 At the top right corner, select image and then input playback interval.

Step 3 Select date and channel, click  to play.

4.6.6 Splice Playback

For the large record file, you can use splice playback function to play the same file in several sections at the same time. It is very convenient for you to find the video footages you desire.

On the main menu, click Search button, or right click mouse and then select Search. You can go to Figure 4-91 or Figure 4-92

On the right pane, check the box to enable splice playback function, and then set channel, date, split mode. The splice playback interface is shown as below. Each section has a small triangle; you can adjust

it to set time. See Figure 4-98.



Figure 4-98



Note

Select split mode, so that the record can be spliced in several sections.

Select splice file.

- Click Playback, system playbacks from the first of current date by default.
- Click time bar, system playbacks from the time you click.
- Click , you can select on the file list.



Note

- The splice playback is for 1-window playback mode.
- System supports 1/4/8/16-split mode. Slight different may be found here. The 4-channel series product supports 4-split mode. The 8-channel series product support 8-split mode. The 16-channel or higher series product supports 16-split mode.
- The min period of each section is 5 minutes. For the record is less than 20 minutes, if you select 4-split mode (or more than 4-split mode), system can auto adjust so that the each section period is 5 minutes. In this situation, some channel may have no video.

4.6.7 Smart Playback

It is to search and playback the IVS file, human face file and plate recognition record.



Note

- There are two types to realize intelligent analytics function.
- ✧ Smart network camera supports intelligent functions: Some smart camera supports the intelligent functions. For NVR, it just displays the intelligent alarm information from the smart network camera and set or playback the record file.
- ✧ NVR supports intelligent functions: The connected network camera does not support intelligent video analytics function. The NVR supports the analytics function.
- This function is to playback the intelligent record file of the smart camera.

4.6.7.1 IVS File

IVS extracts the key information in video based on image processing and analysis, and matches it with the preset detection rules. You can screen out and play the videos matching the rules.

Step 1 From main menu->Operation->Smart Play->IVS.

Enter the IVS interface. See Figure 4-99.

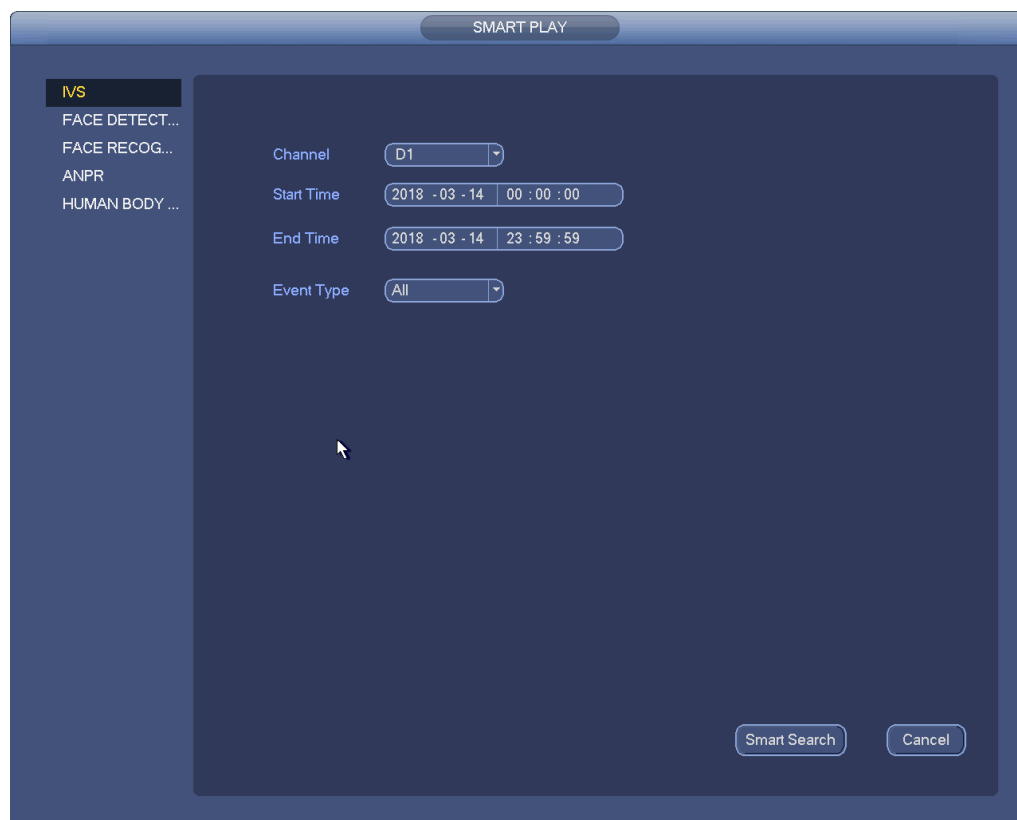


Figure 4-99

- Step 2 Select Channel, Start Time, End Time and Event Type. Click Smart Search. The search results are displayed. See Figure 4-100.

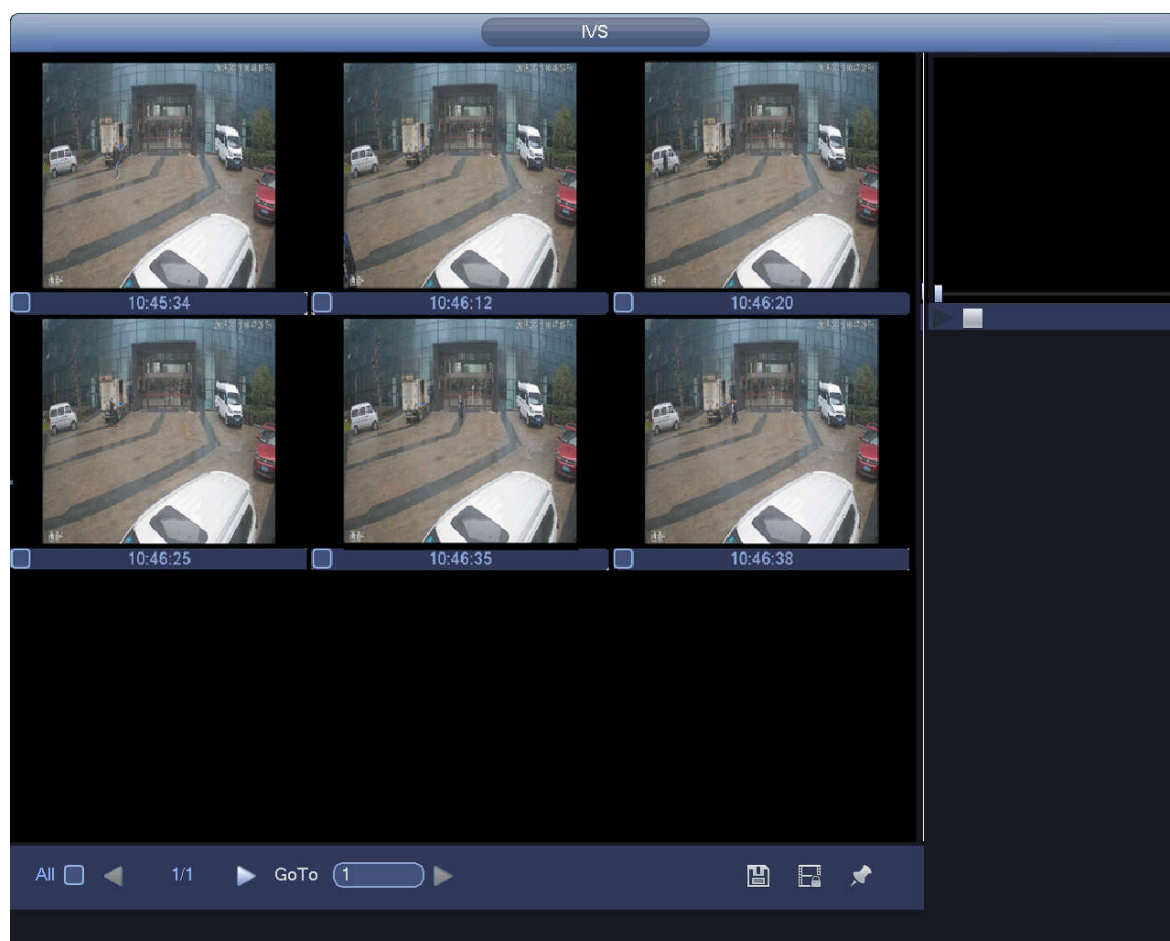


Figure 4-100

Step 3 Click the picture to play the video file.

- Select the file, click  and select the backup catalog in the backup interface. Select backup type and file type, choose the file and click Start to save the file to an external storage device. See Figure 4-101.



Figure 4-101

- Select the file and click  to lock the file. The locked file will not be overwritten.
- Select the file and click  to mark the time of the detected event.

4.6.7.2 Search Human Face (Optional)

Human face detection is to analyze the video from the camera and check there is any human face or not. It is to search and playback human face record.

- Step 1 From main menu->Operation->Smart Play->Face Detection.
Enter the Face Detection interface. See Figure 4-102.

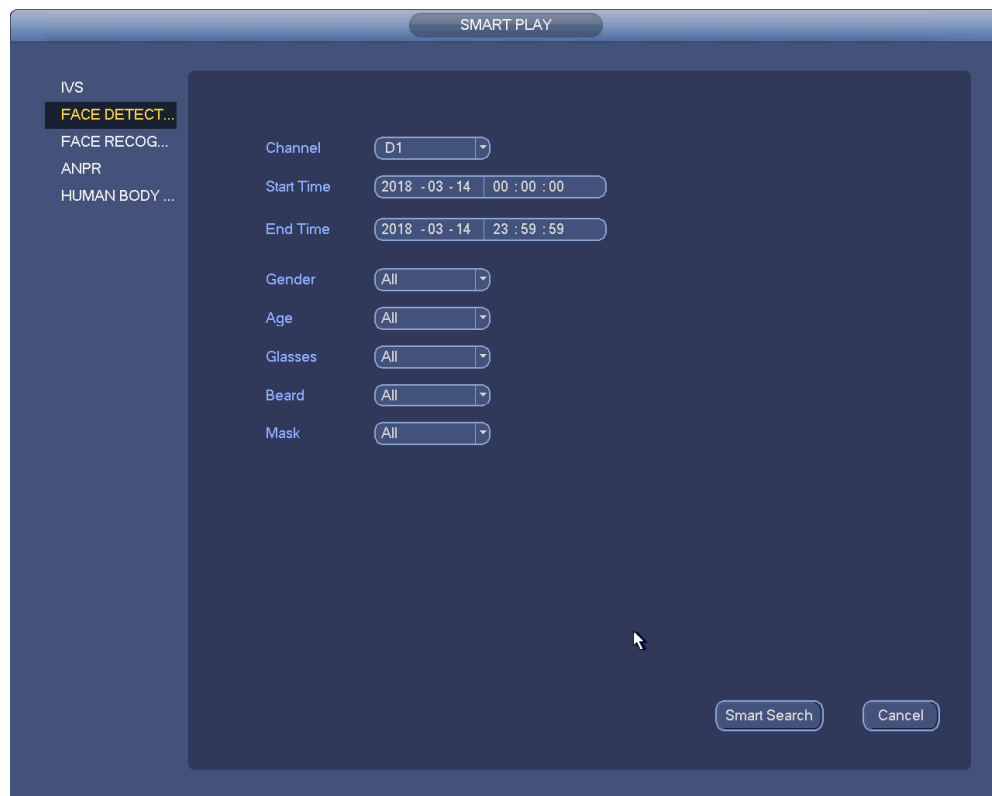


Figure 4-102

Step 2 Select Channel, Start Time and End Time, and choose the details for face detection as needed, such as gender, age, wearing glasses or not, wearing mask or not and with beard or not. Click Smart Search.

The search results are displayed. See Figure 4-103.

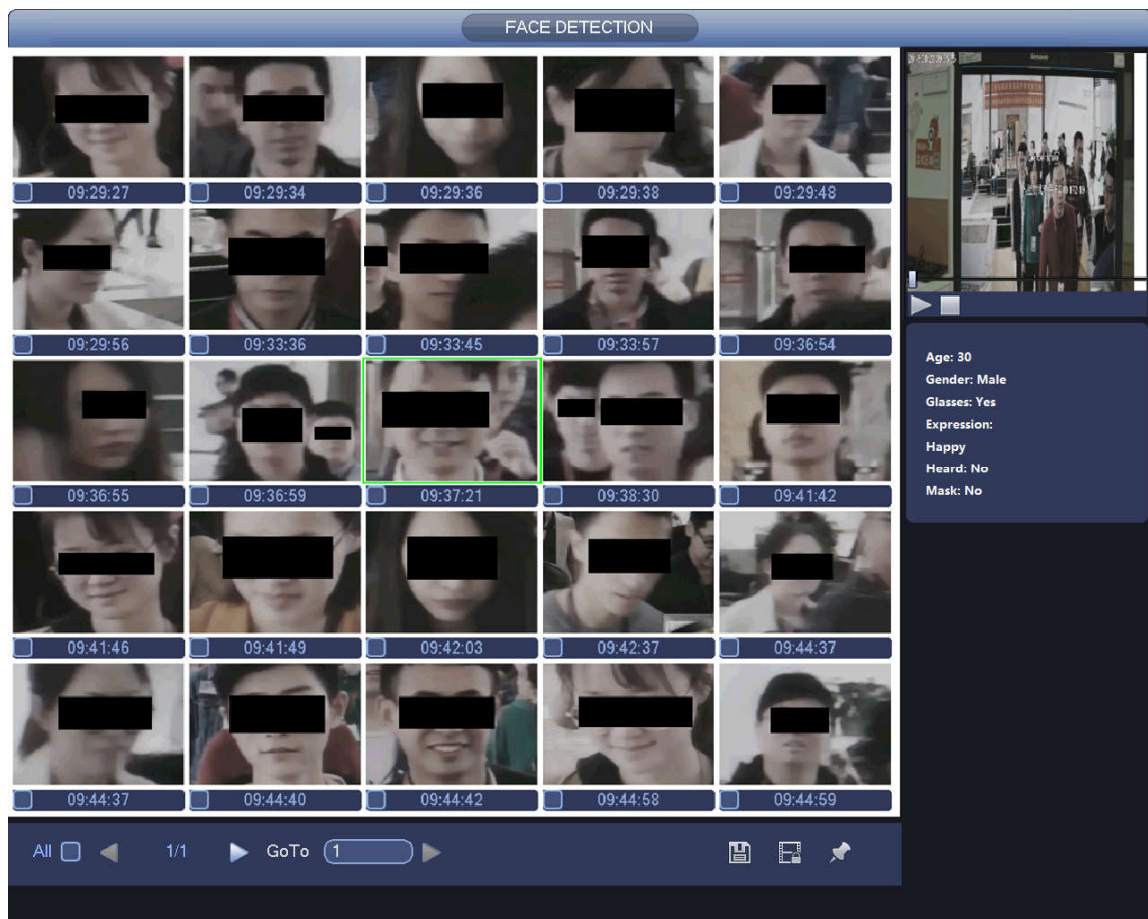


Figure 4-103

 NOTE

The black blocks in the above picture is for privacy protection which will not appear in actual snapped images.

Step 3 Click the image; you can view the record file.

- Select the file, click  and select the backup catalog in the backup interface. Select backup type and file type, choose the file and click Start to save the file to an external storage device.
- Select a file and then click , you can lock current file in case it will be overwritten in the future
- Select a file and then click , you can mark the time of the detected event.
- For more details, please refer to face properties and human details.

4.6.7.3 Plate Recognition

It is to search and playback the record file containing the plate number.

Step 1 From main menu->Operation->Smart Play->ANPR.

Enter the ANPR interface. See Figure 4-104.

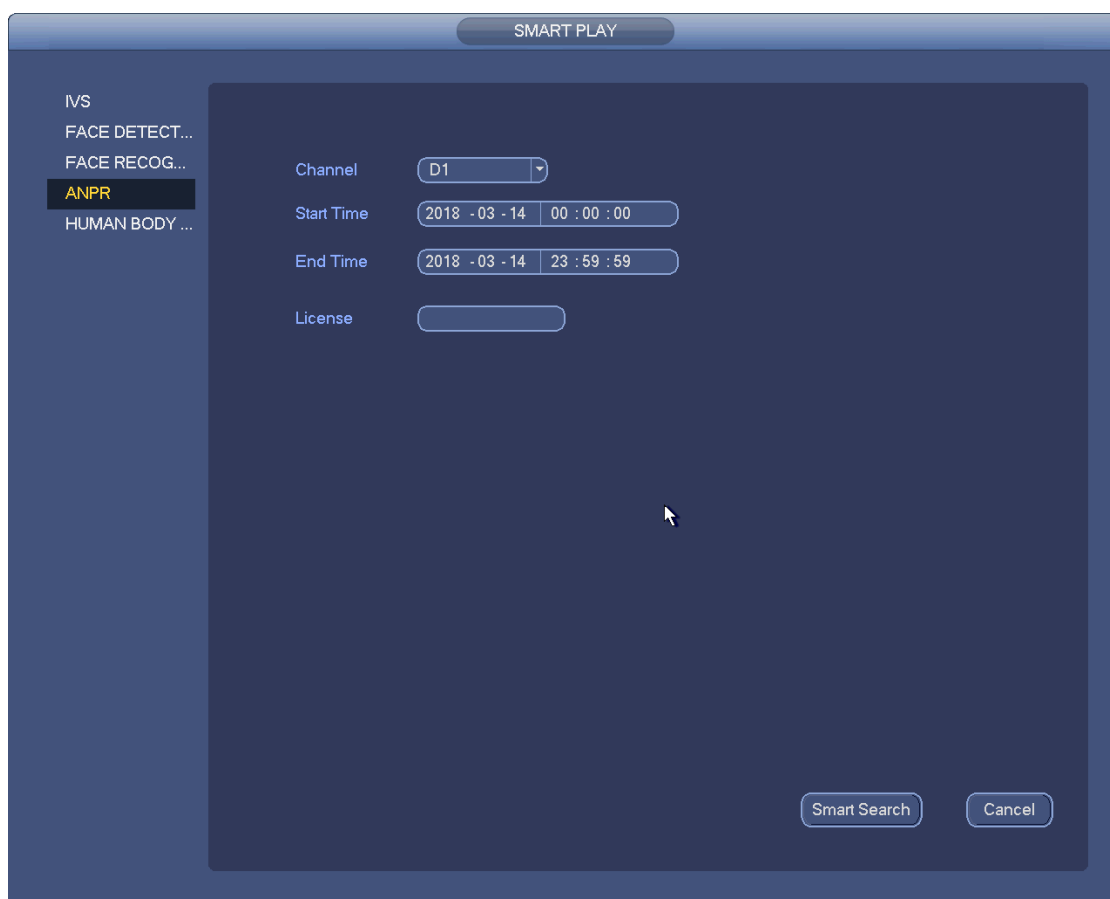


Figure 4-104

Step 2 Set plate number, channel number, start time, end time.

 Note

Device supports fuzzy plate number search function.

Device searches all plate numbers by default if you do not input plate number information.

Step 3 Click Smart Search.

Device displays the corresponding image. See Figure 4-105.

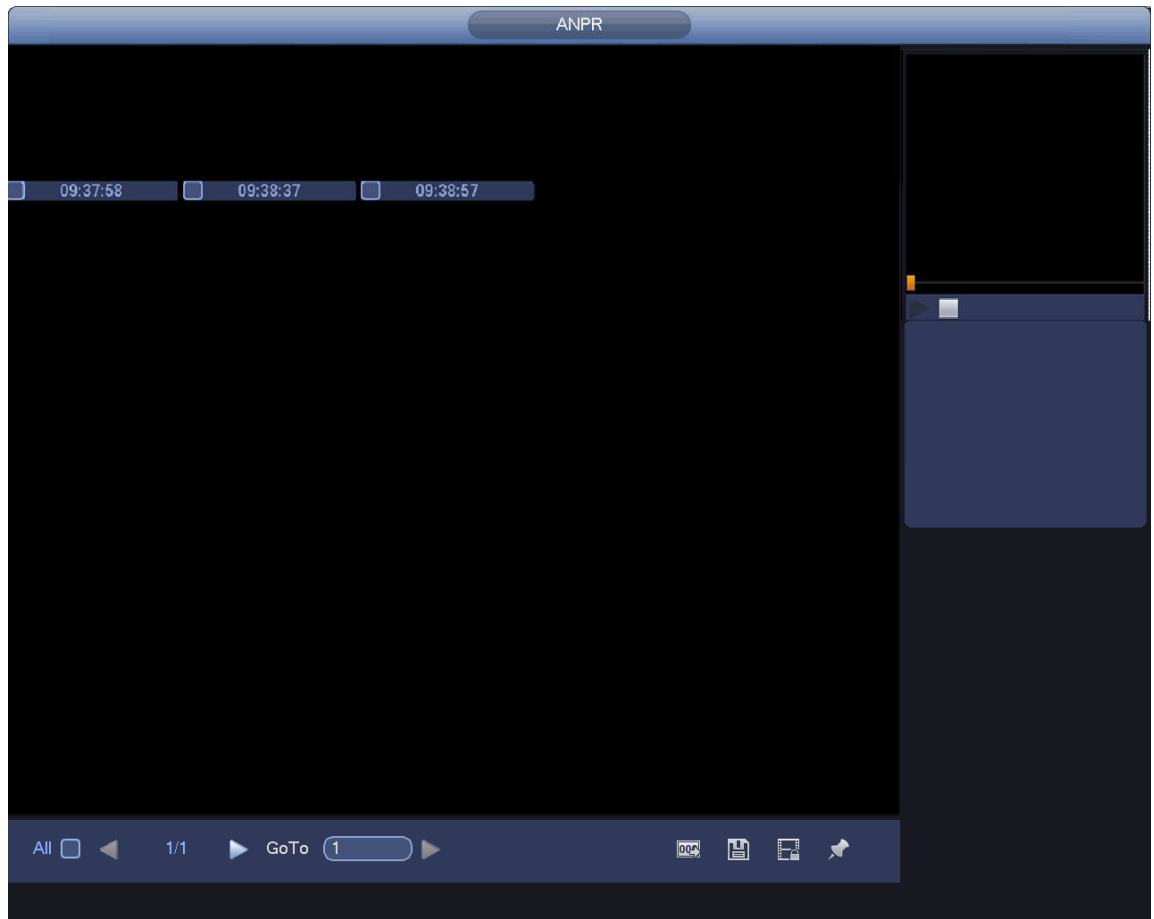


Figure 4-105

Step 4 Click the image; you can view the record file.

- Click . Select Device Name and Address in the Browse interface and click OK to export plate information. See Figure 4-106.

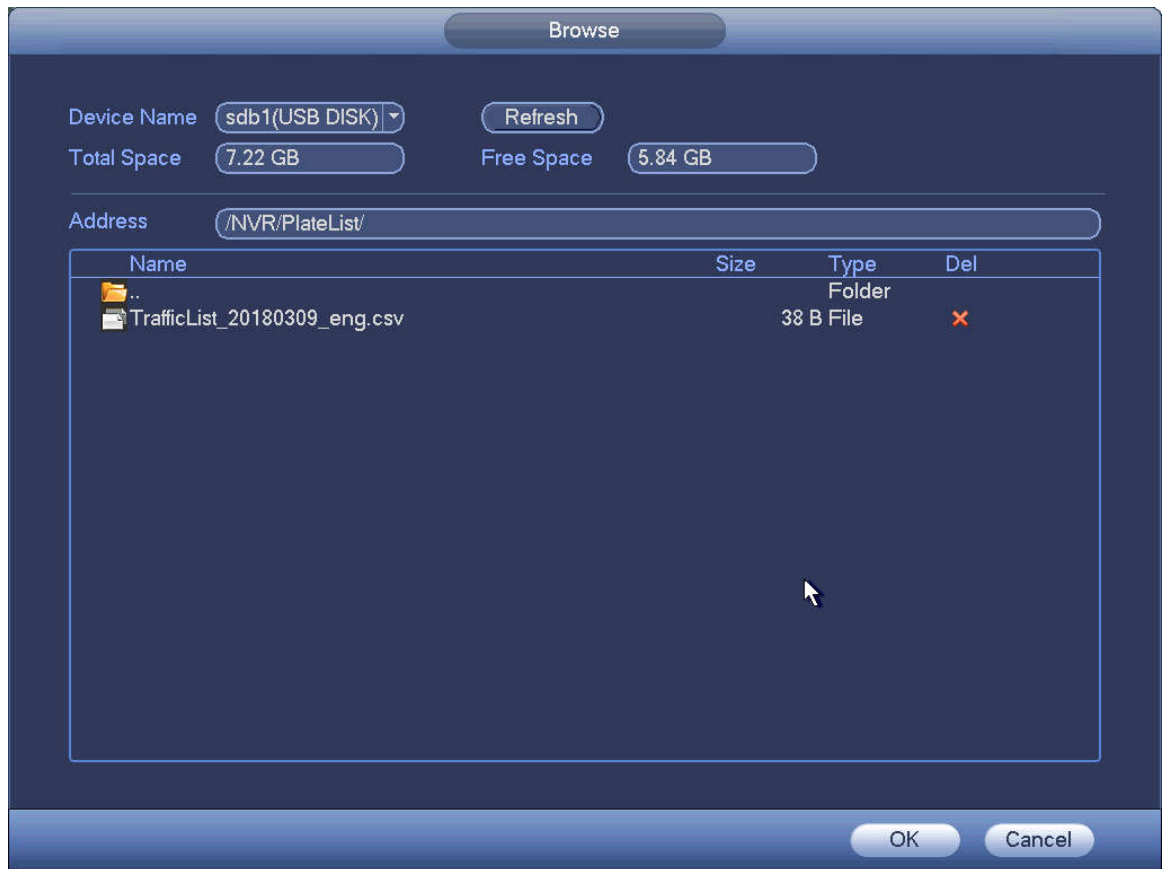


Figure 4-106

- Select a file and then click , you can save current file to peripheral storage device.
- Select a file and then click , you can lock current file in case it will be overwritten in the future
- Select a file and then click , you can mark the time of the detected event.

4.6.8 File List

Click , system displays file list. It displays the first channel of the record. See Figure 4-107.

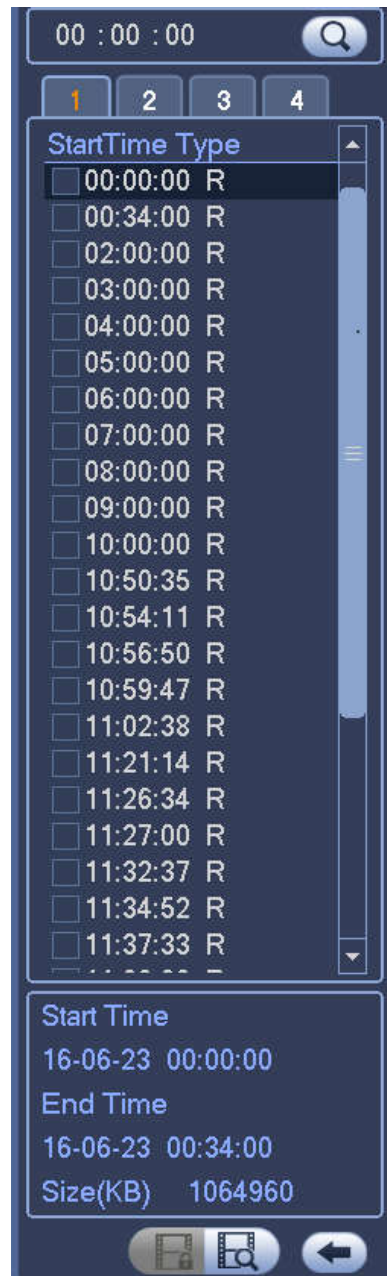


Figure 4-107

- Check a file name, double click file or click  to play.
- Input accurate time at the top column, you can search records of current day.
- System max displays 128 record files in one list.
- Click  to go back to the calendar/channel selection interface.

Lock or Unlock File

In Figure 4-107, select a file first and then click . You can lock it in case it is overwritten in the future.

Note

NVR cannot lock a file when it is writing or overwriting.

Click  you can view the locked file. See Figure 4-108.

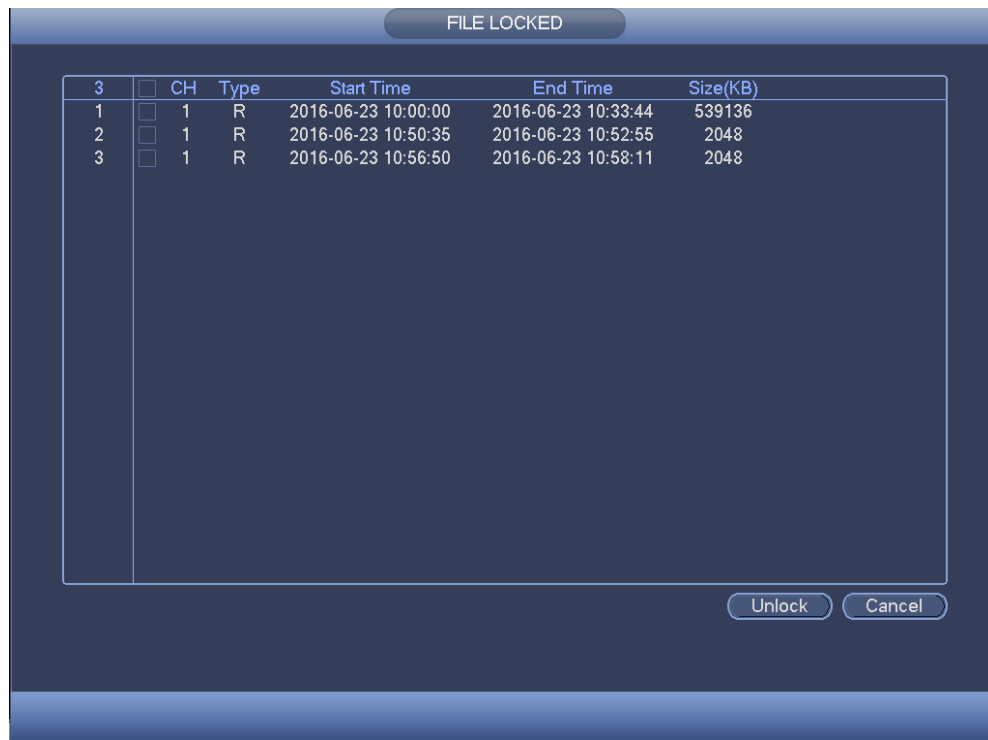


Figure 4-108

Select a file in the above figure and then click Unlock, you can unlock it.

4.6.9 Other Aux Functions

4.6.9.1 Digital Zoom

In 1-window playback mode, left click mouse to select any zone on the screen, you can zoom in current zone. Right click mouse to exit.

4.6.9.2 Switch Channel

During playback mode, select from the dropdown list to switch playback channel. This function is not for the channel of no record. The smart search channel does not support this function either.

4.7 Event Manager

4.7.1 Video Detect

The video detect adopts the computer image and graphics process technology. It can analyze the video and check there is considerable changing degree or not. Once video has changed considerably (such as there is any moving object, video is distorted), system can trigger the corresponding alarm activation operations.

In the main menu, from Setting to Detect, you can see motion detect interface. See Figure 4-109. There are four detection types: motion detection, video loss, tampering and scene changing.

4.7.1.1 Motion Detect

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

Detection menu is shown as below. See Figure 4-109.

- Event type: From the dropdown list you can select motion detection type.
- Channel: Select a channel from the dropdown list to set motion detect function.

- Enable: Check the box here to enable motion detect function.
 - Region: Click select button, the interface is shown as in Figure 4-110. 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 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.
 - Sensitivity: System supports 6 levels. The sixth level has the highest sensitivity.
 - Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seen as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
 - Period: Click set button, you can see an interface is shown as in Figure 4-112. Here you can set motion detect period. System only enables motion detect operation in the specified periods. It is not for video loss or the tampering. There are two ways for you to set periods. Please note system only supports 6 periods in one day.
- ✧ In Figure 4-112, Select icon  of several dates, all checked items can be edited together. Now the icon is shown as . Click  to delete a record type from one period.
- ✧ In Figure 4-112. Click button  after one date or a holiday, you can see an interface shown as in Figure 4-113. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.
- Alarm output: when an alarm occurs, system enables peripheral alarm devices.
 - Latch: when motion detection complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
 - 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 network (including alarm center) if you enabled current function.
 - Send email: System can send out email to alert you when an alarm occurs.
 - Record channel: System auto activates motion detection channel(s) to record once an alarm occurs. Please make sure you have set MD record in Schedule interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
 - PTZ activation: Here you can set PTZ movement when an alarm occurs. Such as go to preset, tour & pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-111.

- Record Delay: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
- Tour: Here you can enable tour function when alarm occurs. System one-window tour.
- Snapshot: You can enable this function to snapshot image when a motion detect alarm occurs.
- Video matrix Check the box here to enable this function. When an alarm occurs, SPOT OUT port displays device video output. It displays video (1-window tour) from alarm activation channel you select at the Record channel item.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when alarm occurs.

Please highlight icon  to select the corresponding function. After all the setups please click save button, system goes back to the previous menu.

Note:

In motion detection mode, you cannot use copy/paste to set channel setup since the video in each channel may not be the same.

In Figure 4-110, you can left click mouse and then drag it to set a region for motion detection. Click Fn to switch between arm/withdraw motion detection. After setting, click enter button to exit.



Figure 4-109

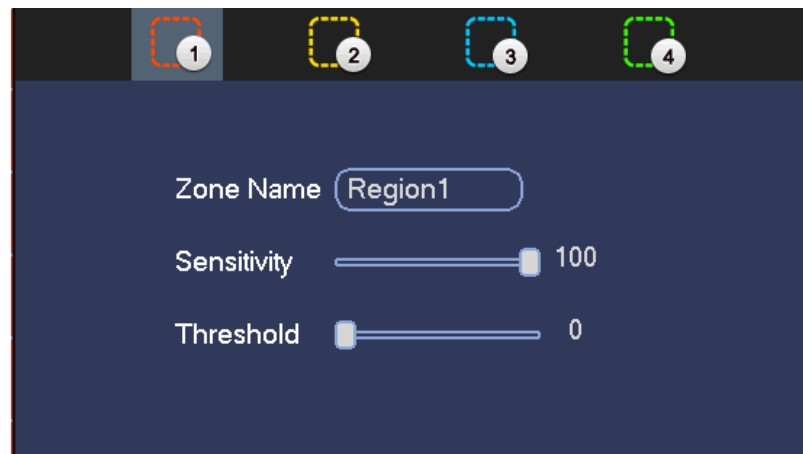


Figure 4-110



Figure 4-111

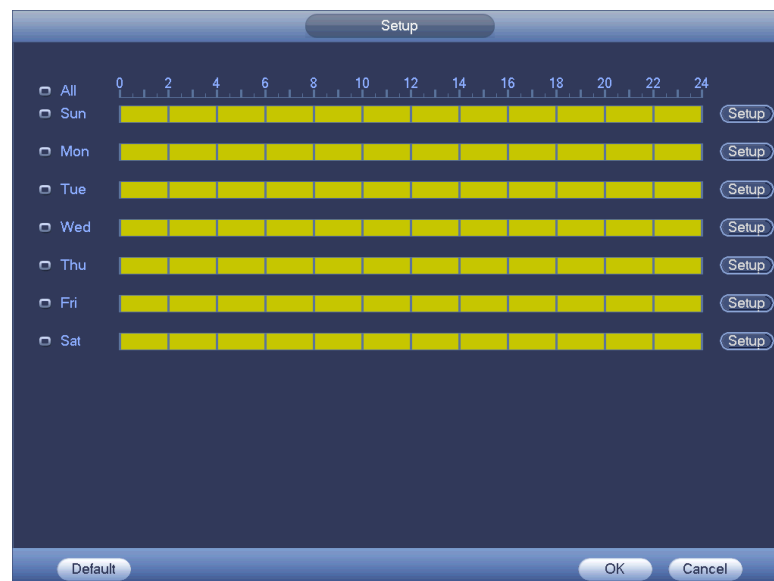


Figure 4-112



Figure 4-113

Motion detect here only has relationship with the sensitivity and region setup. It has no relationship with other setups.

4.7.1.2 Tampering

When someone viciously masks the lens, or the output video is in one-color due to the environments light change, the system can alert you to guarantee video continuity. Tampering interface is shown as in Figure 4-114. You can enable “Alarm output” or “Show message” function when tampering alarm occurs.

- Sensitivity: The value ranges from 1 to 6. It mainly concerns the brightness. The level 6 has the higher sensitivity than level 1. The default setup is 3.

Tips:

You can enable preset/tour/pattern activation operation when video loss occurs.

Please refer to chapter 4.7.1.1 motion detection for detailed information.



Note

- In Detect interface, copy/paste function is only valid for the same type, which means you cannot copy a channel setup in video loss mode to tampering mode.
- About Default function. Since detection channel and detection type may not be the same, system can only restore default setup of current detect type. For example, if you click Default button at the tampering interface, you can only restore default tampering setup. It is null for other detect types.
- System only enables tampering function during the period you set here. It is null for motion detect or video loss type.



Figure 4-114

4.7.1.3 Video Loss

After connected the system to the remote device, system can generate an alarm once the remote device has lost the video. System can trigger the corresponding alarm operations.

In Figure 4-109, select video loss from the type list. You can see the interface is shown as in Figure 4-115. This function allows you to be informed when video loss phenomenon occurred. You can enable alarm output channel and then enable show message function.

You can refer to chapter 4.7.1.1 Motion detect for detailed information.

Tips:

You can enable preset/tour/pattern activation operation when video loss occurs.



Figure 4-115

4.7.1.4 Scene Changing

When the detected scene has changed, system can generate an alarm.

From main menu->Setting->Event->Video detect->Scene change, the interface is shown as in Figure 4-116.

Please refer to chapter 4.7.1.1 Motion detect for detailed information.



Figure 4-116

4.7.2 Smart Plan

The smart plan is for the smart network camera. If you do not set a rule here, you cannot use the intelligent functions in IVS (Chapter 4.7.3), Face detection (Chapter 4.7.4) and People counting (Chapter 4.7.5) when you are connecting to a smart network camera.

There are two types to realize intelligent analytics function.



Note

- Smart network camera supports intelligent functions: Some smart camera supports the intelligent functions. For NVR, it just displays the intelligent alarm information from the smart network camera and set or playback the record file.
- NVR supports intelligent functions: The connected network camera does not support intelligent video analytics function. The NVR supports the analytics function.

In this interface, you can quickly add an intelligent rule for one preset. The intelligent rule includes human face detection, behavior analytics and people counting.

From main menu->Setting->Event->Smart plan, the interface is shown as below. See Figure 4-117.



Figure 4-117

Please select a channel number and a preset. Click Add.

The preset is now on the list. See Figure 4-118.



Note

Some smart camera does not need to add the preset. Please refer to the actual product for detailed information.

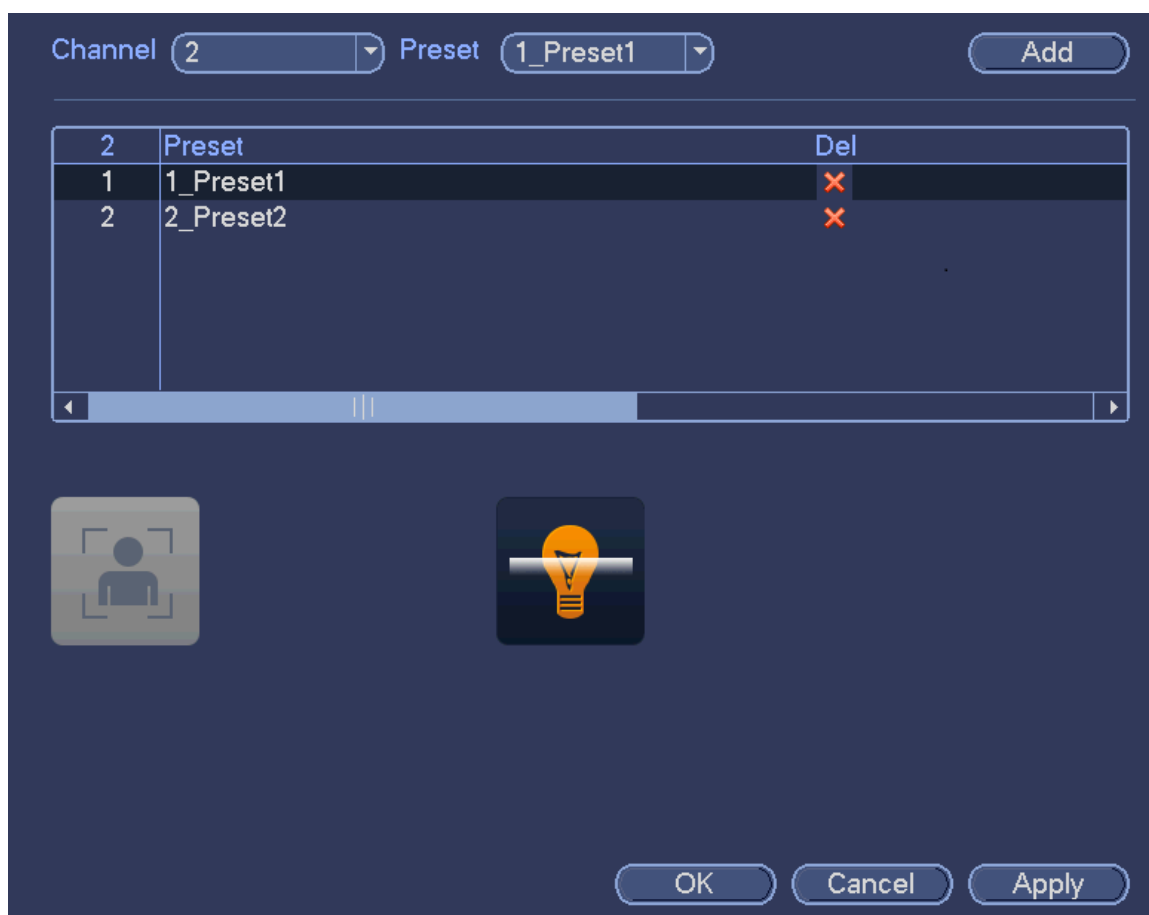


Figure 4-118

Select a smart plant from the dropdown list and then click the corresponding intelligent plan icon. See Figure 4-118.



Note

- The NVR supports general behavior analytics (IVS), human face detection, heat map, and people counting. Different network camera supports different smart plans. Please refer to the actual product for detailed information.
- The general behavior analytics (IVS) and human face detection function cannot be valid at the same time. For example, when add the IVS plan to the preset 1, the human face detection icon becomes grey.

Click OK to complete the setup.

4.7.3 IVS (General Behavior Analytics) (Optional)

The general behavior analysis refers to the system to analyze and process the video and extract the key information from the video. Once the video can match the previously set detection rule, system can trigger the corresponding alarm operations.



Note

- This function is for some series product only. Please refer to the actual product for detailed information.
- The IVS function and the human face detection function cannot be valid at the same time.

The IVS function environment shall meet the following requirements:

- The object total size shall not be more than 10% of the whole video.
- The object size on the video shall not be more than 10pixels*10 pixels. The abandoned object size shall be more than 15pixels*15 pixels (CIF resolution). The object width shall not be more than 1/3 of the video height and width. The recommended height is 10% of the video.
- The object and the background brightness different shall be more than 10 grey levels.
- The object shall remain on the video for more than 2 seconds. The moving distance is larger than its own width and shall not be smaller than 15pixels (CIF resolution).
- The surveillance environment shall not be too complicated. The IVS function is not suitable for the environment of too many objects or the changing light.
- The surveillance environment shall not contain glasses, reflection light from the ground, and water. Free of tree branches, shadow, mosquito and bugs. Do not use the IVS function in the backlight environment, avoid direct sunlight.

From main menu->Setting->Event->Behavior Analytics, you can go to the behavior analytics interface. Here you can set general behavior analytics rule. System can generate an alarm as the mode you previously set once there is any object violates the rule. See Figure 4-119.



Figure 4-119

Select a channel from the dropdown list.

Click Add button to add a rule and then select a rule type from the dropdown list.

Set corresponding parameters.

Click Apply button to complete the setup.

4.7.3.1 Tripwire (Optional)

System generates an alarm once there is any object crossing the tripwire in the specified direction.

- The tripwire supports customized setup. It can be a straight line or a curve.
- Support one-direction or dual-direction detection.

- Support several tripwires at the same scene suitable for complicated environment.
- Support object size filter.

From main menu->Setting->Event->Behavior analytics, the interface is shown as below. See Figure 4-120.



Figure 4-120

Click Draw button  to draw the tripwire. See Figure 4-121.

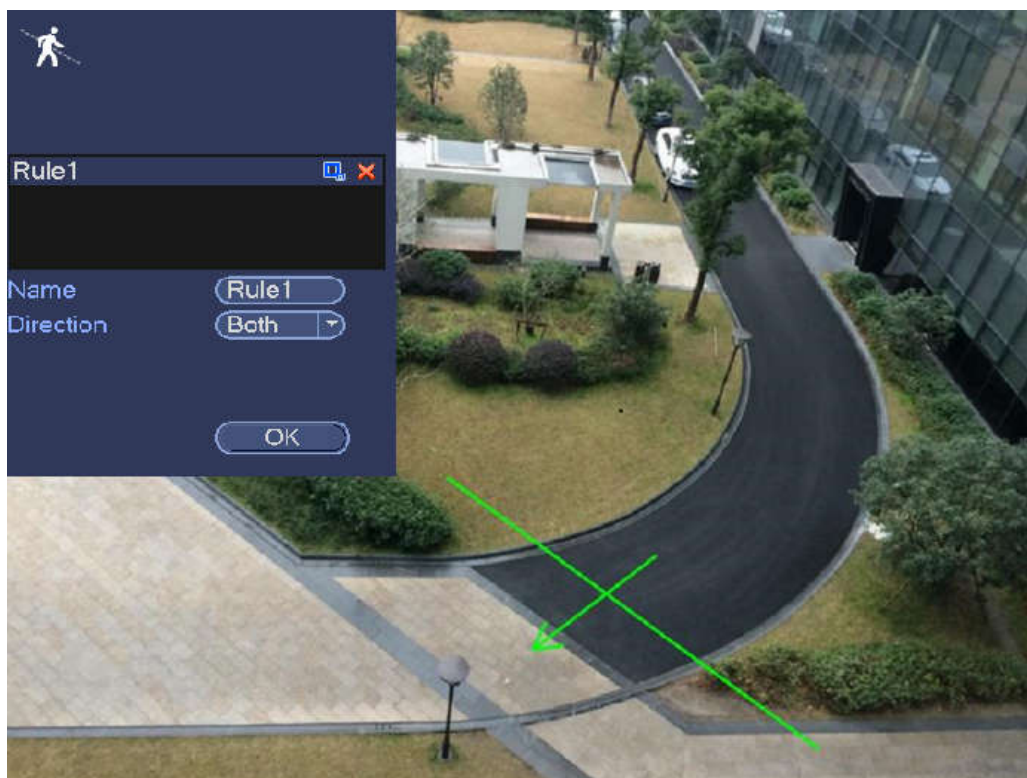


Figure 4-121

Select direction, and then input customized rule name.

- Preset: Select a preset you want to use behavior analytics.
- Name: Input customized rule name.
- Direction (A→B/B→A/A↔B): System can generate an alarm once there is any object crossing in the specified direction.

- Target filter: Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a tripwire. The tripwire can be a direct line, curve or polygon. Right click mouse to complete.

Tips

Click  to delete the corresponding rule.

Click , you can see the following interface. See Figure 4-122.

You can refer to the following information to set other parameters.

- Channel: Select a channel from the dropdown list to set tripwire function.
- Enable: Check the box here to enable tripwire function.
- Rule: input customized rule name here.
- Period: Click set button, you can see an interface is shown as in Figure 4-112. Here you can set tripwire period. System only enables tripwire operation in the specified periods. There are two ways for you to set periods. Please note system only supports 6 periods in one day.

✧ In Figure 4-112, Select icon  of several dates, all checked items can be edited together.

Now the icon is shown as . Click  to delete a record type from one period.

✧ In Figure 4-112. Click button  after one date or a holiday, you can see an interface shown as in Figure 4-113.

- Alarm output: when an alarm occurs, system enables peripheral alarm devices.
- Latch: when tripwire complete, system auto delays detecting for a specified time. The value ranges from 1-300(Unit: second)
- 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 network (including alarm center) if you enabled current function.
- Send email: System can send out email to alert you when an alarm occurs.
- Record channel: System auto activates tripwire channel(s) to record once an alarm occurs. Please make sure you have set intelligent record in Schedule interface(Main Menu->Setting->Schedule) and schedule record in manual record interface(Main Menu->Advanced->Manual Record)
- PTZ activation: Here you can set PTZ movement when an alarm occurs. Such as go to preset, tour & pattern when there is an alarm. Click “select” button, you can see an interface is shown as in Figure 4-111.
- Record Delay: System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
- Tour: Here you can enable tour function when an alarm occurs. System one-window tour.
- Snapshot: You can enable this function to snapshot image when a motion detect alarm occurs.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.



Figure 4-122

PTZ Activation

D1	None	1
D3	None	1
D5	None	1
D7	None	1
D9	None	1
D11	None	1
D13	None	1
D15	None	1
D17	None	1
D19	None	1
D21	None	1
D23	None	1
D2	None	1
D4	None	1
D6	None	1
D8	None	1
D10	None	1
D12	None	1
D14	None	1
D16	None	1
D18	None	1
D20	None	1
D22	None	1
D24	None	1

OK Cancel

Figure 4-123

Setup

	0	2	4	6	8	10	12	14	16	18	20	22	24	
☐ All														
☐ Sun	[Yellow Bar]													Setup
☐ Mon	[Yellow Bar]													Setup
☐ Tue	[Yellow Bar]													Setup
☐ Wed	[Yellow Bar]													Setup
☐ Thu	[Yellow Bar]													Setup
☐ Fri	[Yellow Bar]													Setup
☐ Sat	[Yellow Bar]													Setup

Default OK Cancel

Figure 4-124

Time Period

Current Date: Sun

Period 1 00 : 00 - 24 : 00 ☒

Period 2 00 : 00 - 24 : 00 ☐

Period 3 00 : 00 - 24 : 00 ☐

Period 4 00 : 00 - 24 : 00 ☐

Period 5 00 : 00 - 24 : 00 ☐

Period 6 00 : 00 - 24 : 00 ☐

Copy

☐ All ☒ Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat

Save

Figure 4-125

After you set the corresponding parameters, click OK button in Figure 4-122., and then click the Apply button in Figure 4-120 to complete the setup.

4.7.3.2 Intrusion (Cross warning zone) (Optional)

System generates an alarm once there is any object entering or exiting the zone in the specified direction. From main menu->Setting->Event->Behavior analytics, click Add button and then select type as intrusion, the interface is shown as below. See Figure 4-126.

- System supports customized area shape and amount.
- Support enter/leave/both detection.
- Can detect the moving object operation in the specified zone, customized trigger amount and staying time.
- Support objects filter function.



Figure 4-126

Click draw button  to draw the zone. See Figure 4-127.

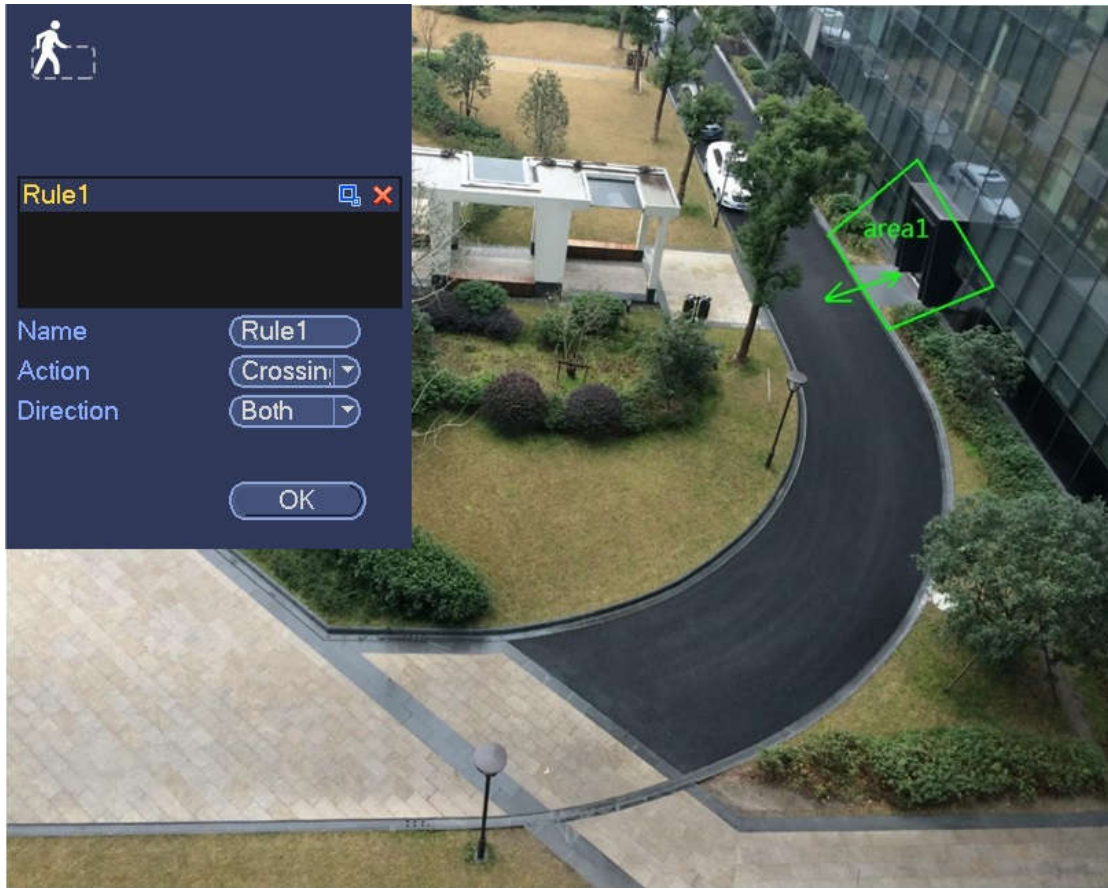


Figure 4-127

Select direction, and then input customized rule name.

- Preset: Select a preset you want to use behavior analytics.
- Name: Input customized rule name.
- Direction (A→B/B→A/A↔B): System can generate an alarm once there is any object crossing in the specified direction.
- Target filter: Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a warning zone. Right click mouse to complete the setup.

Tips

Click  to delete the corresponding rule.

Click , you can refer to chapter 4.7.3.1 to set other parameters.

Click Apply to complete the setup.

4.7.3.3 Abandoned Object Detect (Optional)

System generates an alarm when there is abandoned object in the specified zone.

From main menu->Setting->Event->Behavior analytics, select the type as abandoned object, the object interface is shown as below. See Figure 4-128.

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



Figure 4-128

Click draw button  to draw the zone. See Figure 4-129.

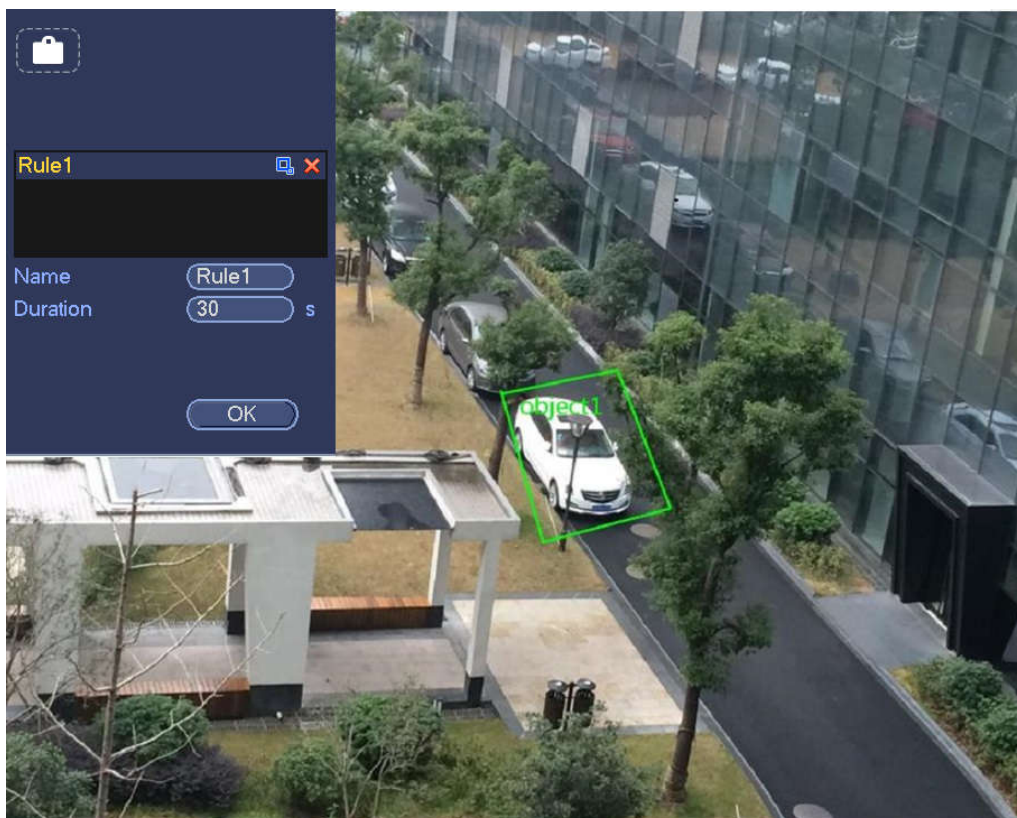


Figure 4-129

- Preset: Select a preset you want to use behavior analytics.
- Name: Input customized rule name.
- Duration: System can generate an alarm once the object is in the zone for the specified period.
- Target filter: Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a zone, until you draw a rectangle, you can right click mouse.

Tips

Click  to delete the corresponding rule.

Click , you can refer to the chapter 4.7.3.1 to set other parameters.

Click Apply to complete the setup.

4.7.3.4 Missing Object Detection (Optional)

System generates an alarm when there is missing object in the specified zone.

From main menu->Setting->Event->Behavior analytics, select the type as abandoned object, the object interface is shown as below. See Figure 4-130.

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



Figure 4-130

Click Draw button  to draw a zone. See Figure 4-131.

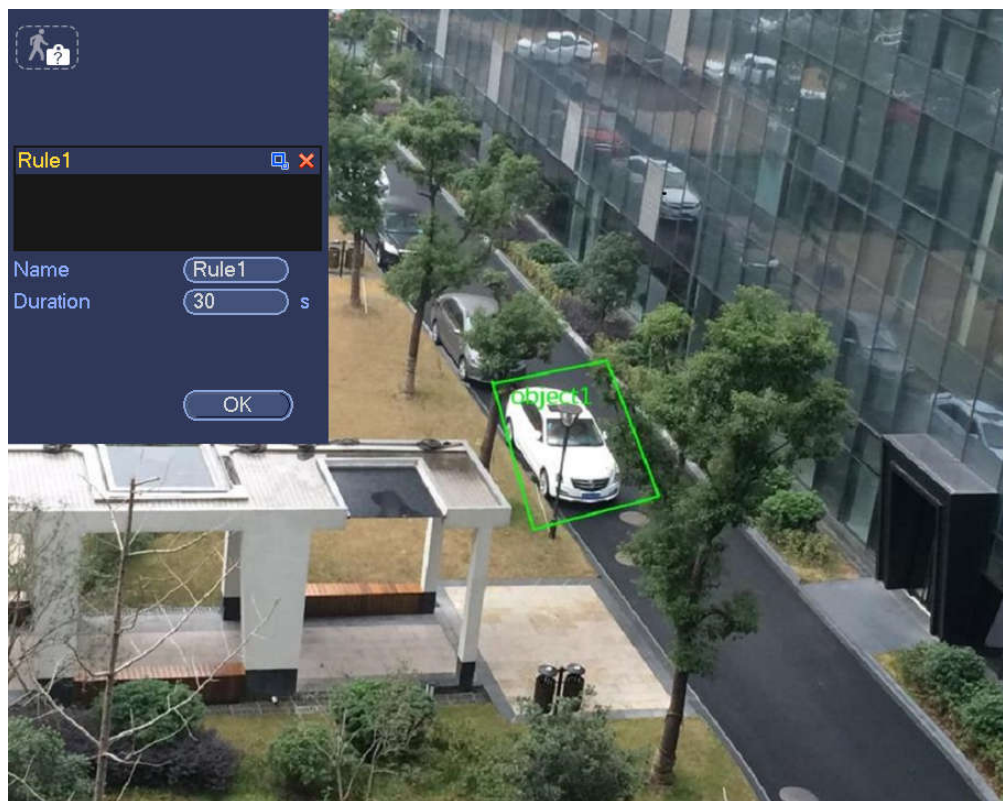


Figure 4-131

- **Preset:** Select a preset you want to use behavior analytics.
- **Name:** Input customized rule name.
- **Duration:** System can generate an alarm once the object in the zone is missing for the specified period.

- **Target filter:** Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a zone, until you draw a rectangle, you can right click mouse.

Tips

Click  to delete the corresponding rule.

Click , you can refer to the chapter 4.7.3.1 to set other parameters.

Click Apply to complete the setup.

4.7.3.5 Loitering Detection (Optional)

System can generate an alarm once the object is staying in the specified zone longer than the threshold.
From main menu->Setting->Event->Behavior analytics, select the type as loitering, the object interface is shown as below. See Figure 4-132.

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



Figure 4-132

Click draw button  to draw the zone. See Figure 4-133.

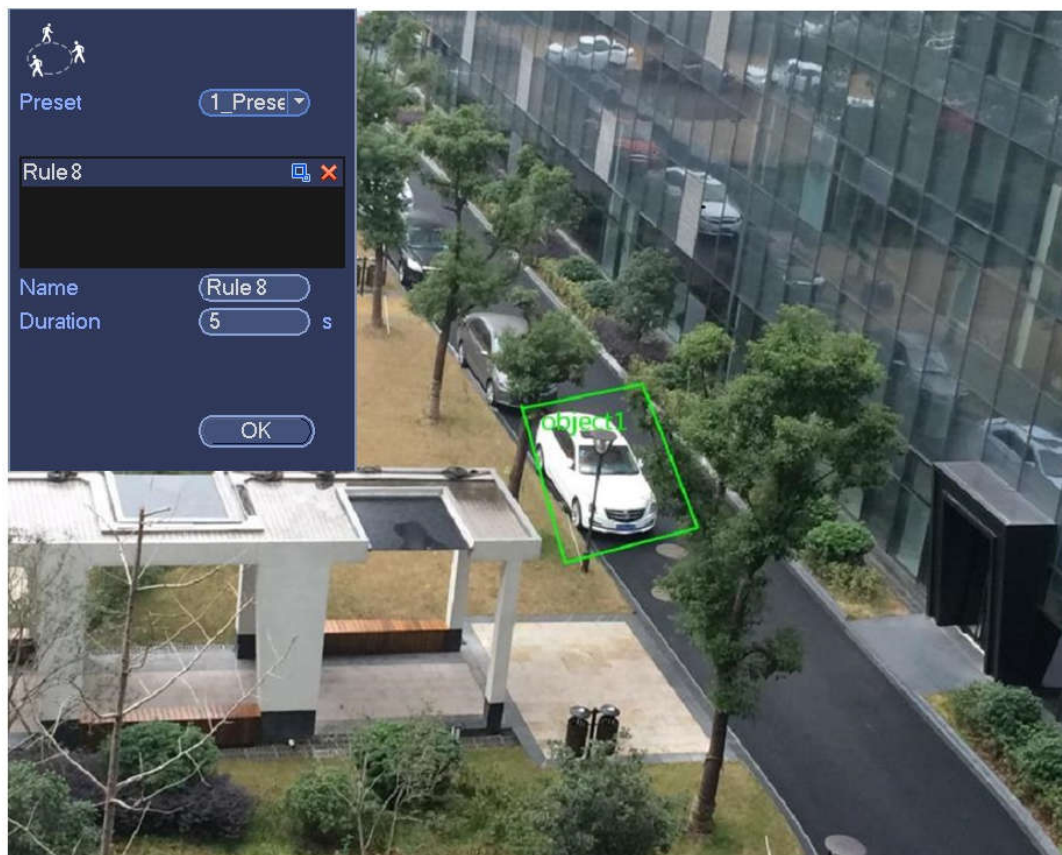


Figure 4-133

- Preset: Select a preset you want to use behavior analytics.
- Name: Input customized rule name.
- Duration: System can generate an alarm once the object is in the zone for the specified period.
- Target filter: Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a zone, until you draw a rectangle, you can right click mouse.

Tips

Click  to delete the corresponding rule.

Click , you can refer to the chapter 4.7.3.1 to set other parameters.

Click Apply to complete the setup.

4.7.3.6 Crowd Gathering Detection (Optional)

System can generate an alarm once the people amount gathering in the specified zone is larger than the threshold.

From main menu->Setting->Event->Behavior analytics, select the type as crowd gathering detect, the interface is shown as below. See Figure 4-134.

- Customized zone and amount setup.
- Duration setup.
- Sensitivity setup.
- Min gathering zone setup.



Figure 4-134

Click draw button  to draw the zone. See Figure 4-135.

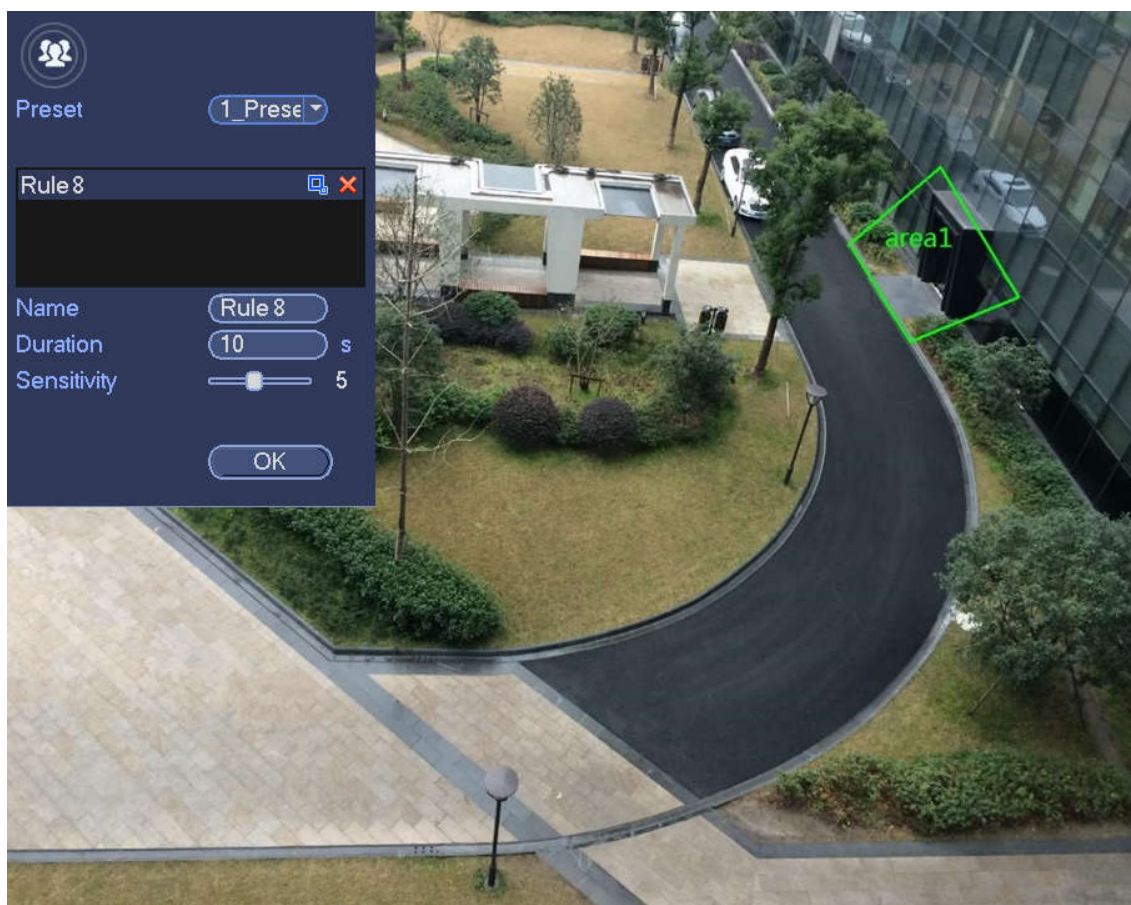


Figure 4-135

- Preset: Select a preset you want to use behavior analytics.
- Name: Input customized rule name.
- Duration: System can generate an alarm once the object is in the zone for the specified period.
- Sensitivity: It is to set alarm sensitivity. The value ranges from 1 to 10. The default setup is 5.
- Target filter: Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a zone, until you draw a rectangle, you can right click mouse.

Tips

Click  to delete the corresponding rule.

Click , you can refer to the chapter 4.7.3.1 to set other parameters.

Click Apply to complete the setup.

4.7.3.7 Fast moving (Optional)

It is to detect the fast moving object in the specified zone.

From main menu->Setting->Event->Behavior analytics, select the type as fast moving, the interface is shown as below. See Figure 4-136.



Figure 4-136

Click draw button  to draw the zone. See Figure 4-137.

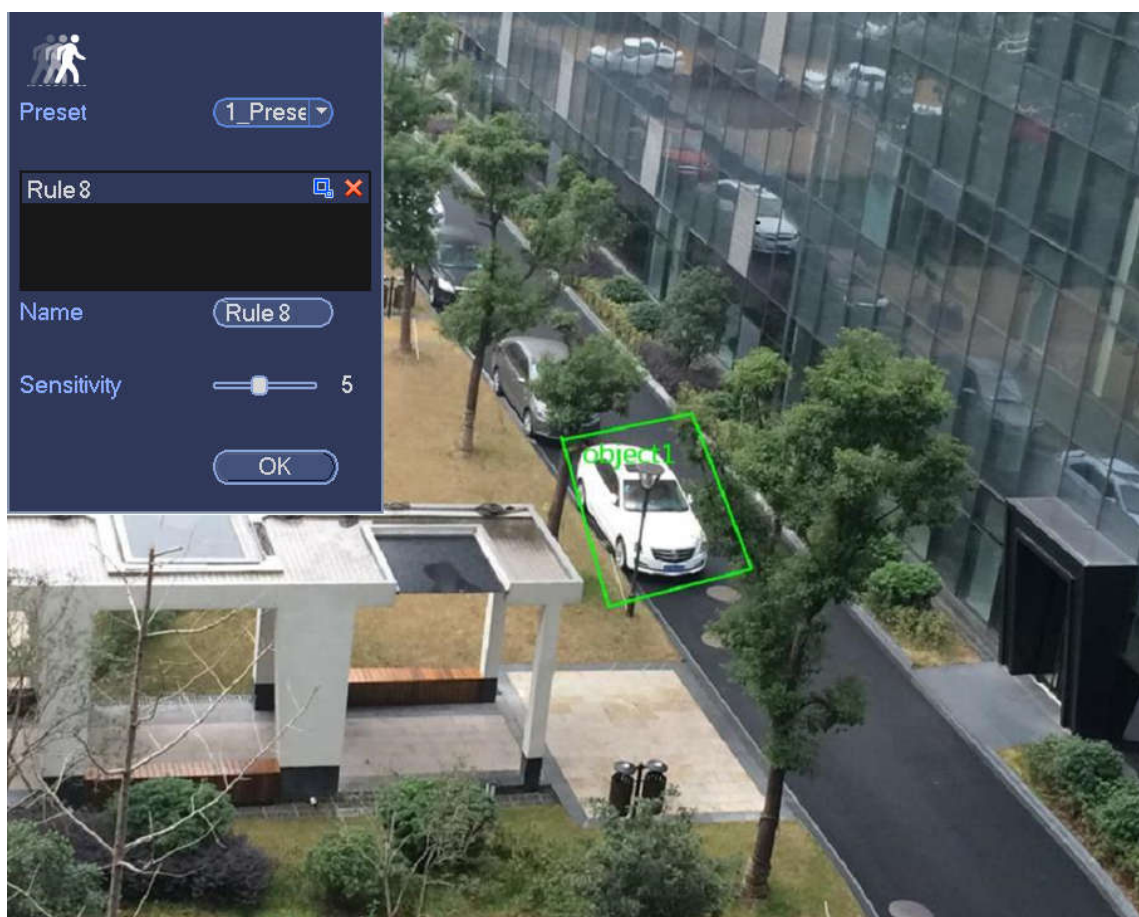


Figure 4-137

- Preset: Select a preset you want to use behavior analytics.
- Name: Input customized rule name.
- Sensitivity: It is to set alarm sensitivity. The value ranges from 1 to 10. The default setup is 5.
- Target filter: Click , you can set filter object size. 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.

Now you can draw a rule. Left click mouse to draw a zone, until you draw a rectangle, you can right click mouse.

Tips

Click  to delete the corresponding rule.

Click , you can refer to the chapter 4.7.3.1 to set other parameters.

Click Apply to complete the setup.

4.7.3.8 Global Setup (Optional)

After set one horizontal gauge and three vertical gauge and the actual distances between each gauge, the system can estimate the network camera internal parameters (internal geometrical features and optical properties) and external parameters (the network camera position and direction on the actual environment), it can confirm the actual distance on the current surveillance environment.

From main menu->Setting->Event->IVS (Behavior analytics), enter the following interface. See Figure



Figure 4-138

Click Global config button, the interface is shown as below. See Figure 4-139.

- Channel: Please select a channel from the dropdown list.
- Preset: Select a preset you want to set the rule. Please note, you need to add a preset first, otherwise, you cannot see the preset dropdown list. If there is no preset, you can draw a rule in current channel.
- Calibration zone:
 - ✧ Click Add zone , you can draw a calibration zone at the left pane of the interface. Select a zone and then click Delete zone button; you can remove the selected zone.
 - ✧ Select gauge type (horizontal/tilt), you can set the corresponding length. You can draw three tilt gauges and one horizontal gauge at the left pane of the interface.
 - Select Width/Height and then click Verify, you can draw a line in the calibration zone, and then you can see its actual length.
 - Refresh preset: Click it to get the latest preset setup.

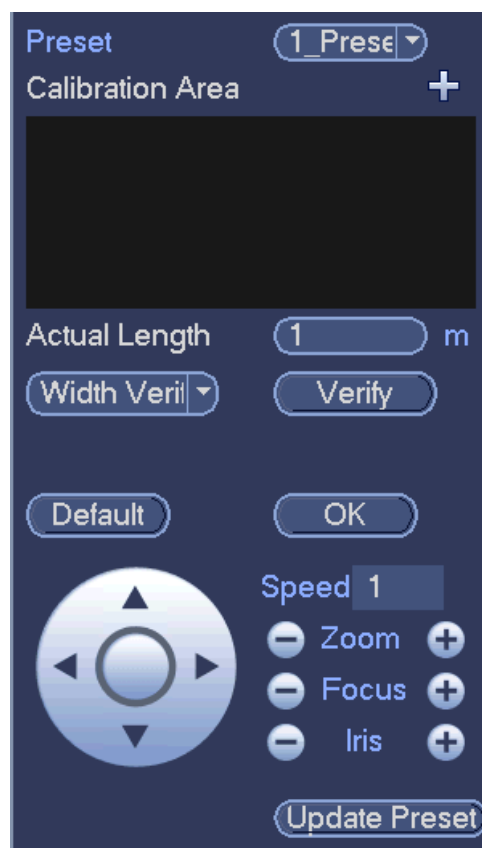


Figure 4-139

4.7.4 Face Detect (Optional)

System processes and analyzes the video from the camera. System can generate an alarm when it detects there is any human face information.

From main menu->Setting->Event->Face detect, the interface is shown as in Figure 4-140.

- Face ROI: Check the box here, system can enhance the human face display pane.



Note

Make sure the connected camera supports human face detect function if you want to use face ROI function.

- Log: Check the box here, system can record face detect log.

You can refer to the chapter 4.7.1.1 Motion detect to set other parameters.



Figure 4-140

4.7.5 People Counting (Optional)

System adopts video image and graphics analysis technology. System can calculate the entry/exit people amount in the specified zone on the video. It can generate an alarm when the amount has exceeded the threshold.

From main menu->Setting->Event->People counting, you can see an interface shown as in Figure 4-141.

- **Enable:** Check the box to enable people counting function.
- **OSD overlay:** Check the box here; you can view the people amount on the surveillance video.
- **Rule setup:** Click Set button, you can set people counting zone, name, and direction (entry/exit).
- **Entry No.:** It is to set people entry amount. System can generate an alarm once the amount has exceeded the threshold.
- **Exit No.:** It is to set people exit amount. System can generate an alarm once the amount has exceeded the threshold.
- **Remaining No.:** It is to set people staying amount in the zone. System can generate an alarm once the amount has exceeded the threshold.

You can refer to the chapter 4.7.1.1 motion detect to set other parameters.

Click OK to complete the setup.



Figure 4-141

After you set the people counting function, from main menu->Info->Event->People counting, you can view people counting statistics report. Please refer to chapter 4.7.1.1 Motion detect for detailed information.

4.7.6 Heat Map

Heat map technology can monitor the active objects distribution status on the specified zone during a period of time, and use the different colors to display on the heat map.

- Step 1 From main menu->Setting->Event->Heat map.
Enter heat map interface. See Figure 4-142.

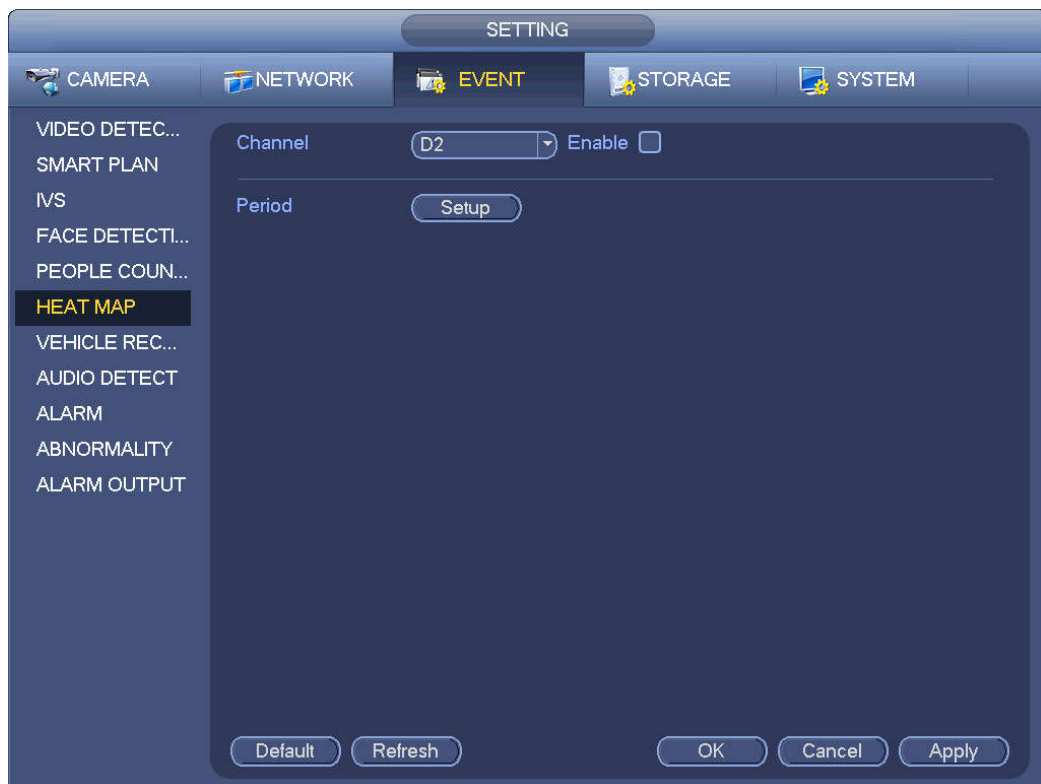


Figure 4-142

Step 2 Select a channel number and then check the box to enable the function.

Step 3 Click Setup button.

Enter setup interface. See Figure 4-143.



Figure 4-143

Step 4 Set arm/disarm period. Refer to chapter 4.7.1.1 Motion detect for detailed setup information.

Step 5 Click Apply button to complete setup.

Note

After set the heat map parameters, go to main menu->Info->Event->Heat map to view heat map report. Refer to chapter 4.10.2.3.3 for detailed setup information.

4.7.7 Plate Recognition

4.7.7.1 Plate recognition settings

Device can generate an alarm when it detects the corresponding plate information.

Please follow the steps listed below.

Step 1 From main menu->Setup->Event->Vehicle Recognition-> Vehicle Recognition.
Enter Vehicle Recognition interface. See Figure 4-144.



Figure 4-144

Step 2 Check Enable to enable plate recognition function.

Step 3 Select a channel number and then click the Rule to set the plate recognition name and detection zone.

Step 4 Click Regular, blacklist, whitelist to set.

Note

Before use blacklist alarm or whitelist alarm function, please add the corresponding plate information. Refer to chapter 4.7.7.2 B/W list for detailed information.

- Regular: In this interface, device triggers an alarm when it detects all plate numbers.
- Blacklist: In this interface, device triggers an alarm when it detects plate number in the blacklist.

- **Whitelist:** In this interface, device triggers an alarm when it detects plate number in the whitelist.

4.7.7.2 B/W List

It is to set the blacklist and the whitelist. It includes add, delete, import, export blacklist/whitelist.

After setting the blacklist/whitelist, in the plate snapshot list on the preview interface, the blacklist plate number is red, the whitelist plate number is green, the regular plate number is white.

Add blacklist/whitelist

Step 1 From main menu->Setting->Event->Vehicle Recognition->B/W list.

Enter B/W list interface. See Figure 4-145.



Figure 4-145

Step 2 Set plate number and then select type as blacklist or whitelist.

Step 3 Click Add button.

Delete blacklist/whitelist

Set type as blacklist, whitelist or all, click Search button, device displays the corresponding information.

- Check the box before the plate number and then click Delete or  to delete a plate number.
- Click Clear to delete all plate information in the blacklist/whitelist.

Import/export blacklist/whitelist

Device supports blacklist/whitelist import/export function via the USB device. The import file supports .csv

and.xlsx. The export file is .csv.

- Import blacklist/whitelist: Set the type as blacklist or whitelist and then click Import button. Select the corresponding file and then click Open button to import.
- Export blacklist/whitelist: Set the type as blacklist or whitelist and then click Export button. The Browse interface is displayed. See Figure 4-146. Select the file save path, enter the encryption password, and then click Save.



Figure 4-146

NOTE

Backup encryption is enabled by default when exporting the black/white list.

- If file backup encryption is enabled, the extension name of the exported file is .backup.
- If the backup encryption is disabled, the extension name of the exported file is .csv. It might lead to data leakage.

4.7.8 Audio Detect (Optional)

System can generate an alarm once it detect the audio is not clear, the tone color has changed or the is abnormal or audio volume changes.

From main menu->Setting->Event->Audio detect, you can see an interface shown as in Figure 4-147.

- Input abnormal: Check the box here, system can generate an alarm once the audio input is abnormal.
- Intensity change: Check the box here, system can generate an alarm once the audio volume becomes strong.
- Sensitivity: It refers to the audio recognition sensitivity. The higher the value is, the higher the sensitivity is.

- Threshold: It is to set intensity change threshold. The smaller the value is, the higher the sensitivity is.
 - Log: Check the box here, system can record audio detect alarm log.
- Refer to the chapter 4.7.1.1 Motion Detect to set other parameters.



Figure 4-147

4.7.9 Alarm Settings

In the main menu, from Setting->Event->Alarm, you can see alarm setup interface.

- Alarm in: Here is for you to select channel number.

In the main menu, from Setting->Event->Alarm, you can see alarm setup interface. See Figure 4-148.

There are four alarm types. See Figure 4-148 to Figure 4-151.

- ✧ Local alarm: After connect the alarm device to the NVR alarm input port, system can trigger the corresponding alarm operations when there is alarm signal from the alarm input port to the NVR.
- ✧ Network alarm: NVR trigger corresponding alarm operations when it receives the alarm signal via the network transmission.
- ✧ IPC external alarm: When the network camera connected peripheral device has triggered an alarm, it can upload the alarm signal to the NVR via the network transmission. The system can trigger the corresponding alarm operations.
- ✧ IPC offline alarm: When the network connection between the NVR and the network camera is off, the system can trigger the corresponding alarm operations.
- Enable: Please you need to highlight this button to enable current function.
- Type: normal open or normal close.
- Period: Click set button, you can see an interface is shown as in Figure 4-153. There are two ways for you to set periods. There are max 6 periods in one day. There are four record types: regular,

motion detection (MD), Alarm, MD & alarm.

✧ In Figure 4-153, Select icon  of several dates, all checked items can be edited together.

Now the icon is shown as . Click  to delete a record type from one period.

✧ In Figure 4-153. Click button  after one date or a holiday, you can see an interface shown as in Figure 4-154. There are four record types: regular, motion detection (MD), Alarm, MD & alarm.

- PTZ activation: When an alarm occurred, system can activate the PTZ operation. The PTZ activation lasts an anti-dither period. See Figure 4-152.
- Anti-dither: Here you can set anti-dither time. The value ranges from 5 to 600s. The anti-dither time refers to the alarm signal lasts time. It can be seen as the alarm signal activation stays such as the buzzer, tour, PTZ activation, snapshot, channel record. The stay time here does not include the latch time. During the alarm process, the alarm signal can begin an anti-dither time if system detects the local alarm again. The screen prompt, alarm upload, email and etc will not be activated. For example, if you set the anti-dither time as 10 second, you can see the each activation may last 10s if the local alarm is activated. During the process, if system detects another local alarm signal at the fifth second, the buzzer, tour, PTZ activation, snapshot, record channel will begin another 10s while the screen prompt, alarm upload, email will not be activated again. After 10s, if system detects another alarm signal, it can generate an alarm since the anti-dither time is out.
- Alarm output: The number here is the device alarm output port. You can select the corresponding ports(s) so that system can activate the corresponding alarm device(s) when an alarm occurred.
- Latch: When the anti-dither time ended, the channel alarm you select in the alarm output may last the specified period. The value ranges from 1 to 300 seconds. This function is not for other alarm activation operations. The latch is still valid even you disable the alarm event function directly.
- 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 network (including alarm center and the WEB) if you enabled current function. System only uploads the alarm channel status. You can go to the WEB and then go to the Alarm interface to set alarm event and alarm operation. Please go to the Network interface to set alarm center information.
- Send email: System can send out the alarm signal via the email to alert you when alarm occurs. Once you enable the snap function, system can also send out an image as the attachment. Please go to the Main Menu->Setting->Network->Email interface to set.
- Record channel: you can select proper channel to record alarm video (Multiple choices).
 - ✧ You need to set alarm record mode as Schedule in Record interface (Main Menu->Advanced->Record). Please note the manual record has the highest priority. System record all the time no matter there is an alarm or not if you select Manual mode.
 - ✧ Now you can go to the Schedule interface (Main Menu->Setting->Schedule) to set the record type, corresponding channel number, week and date. You can select the record type: Regular/MD/Alarm/MD&Alarm. Please note, you cannot select the MD&Alarm and MD(or Alarm) at the same time.
 - ✧ Now you can go to the Encode interface to select the alarm record and set the encode parameter (Main Menu->Setting->Encode).

- ✧ Finally, you can set the alarm input as the local alarm and then select the record channel. The select channel begins alarm record when an alarm occurred. Please note system begins the alarm record instead of the MD record if the local alarm and MD event occurred at the same time.
- **Tour:** Here you can enable tour function when an alarm occurs. System supports 1/8-window tour. Please go to chapter 4.3.6.2 Display for tour interval setup. Please note the tour setup here has higher priority than the tour setup you set in the Display interface. Once there two tours are both enabled, system can enable the alarm tour as you set here when an alarm occurred. If there is no alarm, system implements the tour setup in the Display interface.
- **Snapshot:** You can enable this function to snapshot image when an alarm occurs.
- **Buzzer:** Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.



Figure 4-148

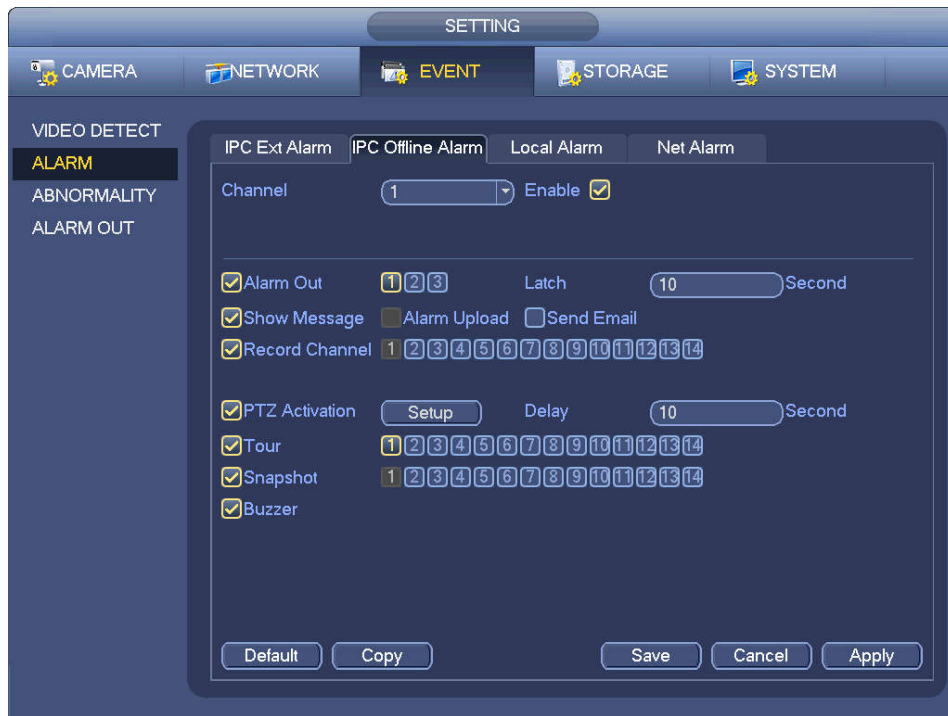


Figure 4-149



Figure 4-150



Figure 4-151



Figure 4-152

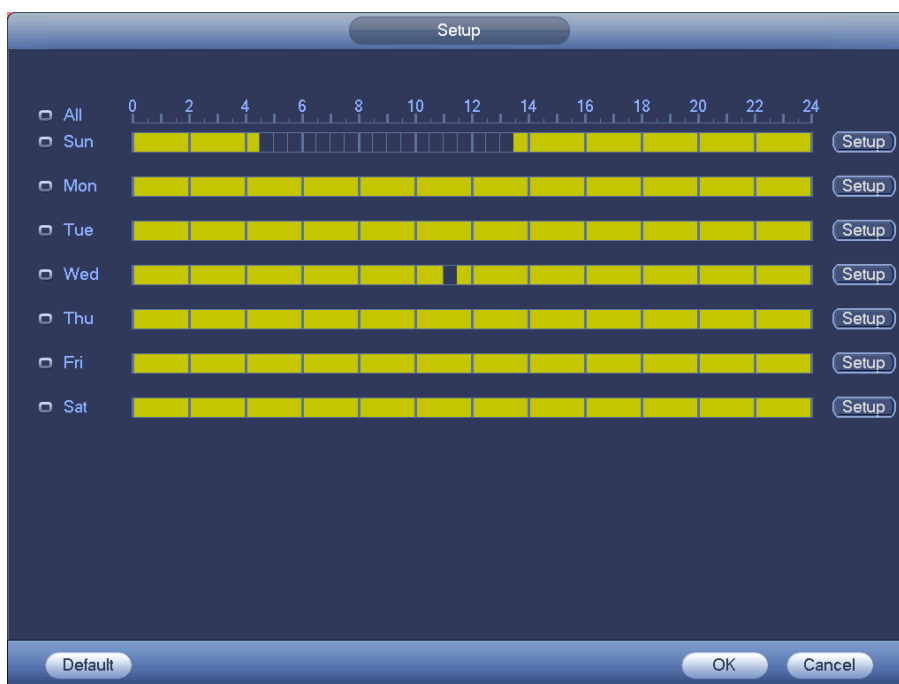


Figure 4-153



Figure 4-154

Please highlight icon  to select the corresponding function. After setting all the setups please click save button.

4.7.10 Abnormality

There are three types: Disk/Network/User.

- ✧ Disk: Disk error, no disk, no space. See Figure 4-155.
- ✧ Network: Disconnection, IP conflict, MAC conflict. See Figure 4-156.
- ✧ User: Illegal login. Figure 4-157.

- Alarm output: Please select alarm activation output port (multiple choices).
- Less than: System can alarm you when the HDD space is less than the threshold you set here (For HDD no space type only).
- Attempts: In user interface, select illegal login from the dropdown list. Here you can set login attempts. The value ranges from 1 to 10.
- Lock time: In user interface, select illegal login from the dropdown list. Here you can set account lock time. The value ranges from 1 to 30 minutes.
- Latch: Here you can set corresponding delaying time. The value ranges from 1s-300s. System automatically delays specified seconds in turning off alarm and activated output after external alarm cancelled.
- Show message: system can pop up the message in the local screen to alert you when alarm occurs.
- Alarm upload: System can upload the alarm signal to the network (including alarm center) if you enabled current function. For disconnection event, IP conflict event and MAC conflict event, this function is null.
- Send email: System can send out email to alert you when alarm occurs.
- Buzzer: Highlight the icon to enable this function. The buzzer beeps when an alarm occurs.



Figure 4-155



Figure 4-156



Figure 4-157

4.7.11 Alarm output

From Main menu->Setting->Event->Alarm output, you can see an interface shown as in Figure 4-158.

Here is for you to set proper alarm output (Auto/manual/stop). Connect the alarm device to the system alarm output port, and set the mode as auto, system can trigger the corresponding operations when an alarm occurs.

- Auto: Once an alarm event occurs, system can generate an alarm.
- Manual: Alarm device is always on the alarming mode.
- Stop: Disable alarm output function.

Click OK button of the alarm reset, you can clear all alarm output status.



Figure 4-158

Please highlight icon  to select the corresponding alarm output. After all the setups please click OK button.

4.7.12 POS

Connect the device with the POS, the device can receive the POS information and overlay corresponding info on the video.



Note

- For the local-end, this function supports 1/4-window display and 1-window playback.
- This function is for the cashier of the supermarket and etc. The device can get the information from the POS and then overlay the txt information on the video.

Step 1 From main menu->Setting->System->POS, the interface is shown as below. See Figure 4-159.

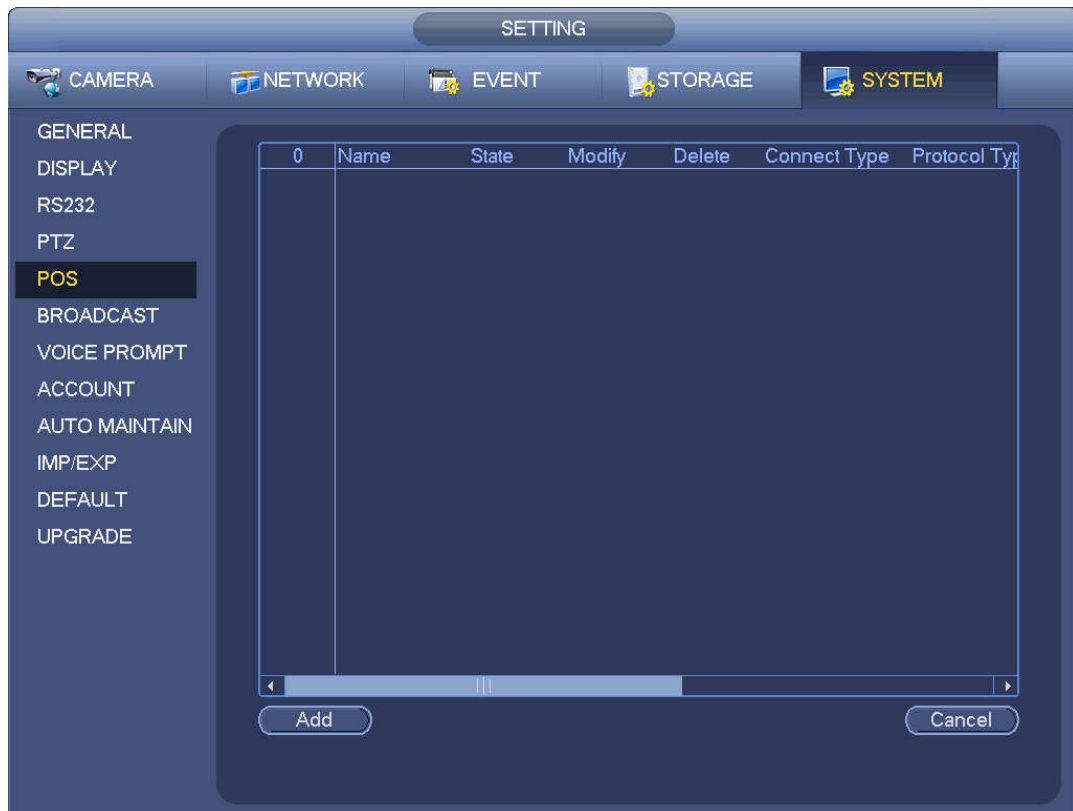


Figure 4-159

Step 2 Click Add button, the interface is shown as below. See Figure 4-160.

Set parameters.

- Enable: Check the box to enable POS function.
- Name: Set POS name.

1. Click 
2. Input POS name on the pop-up dialogue box.
3. Click OK button.

Note

The POS name shall be unique.

System max supports 64 English letters.

- Event: Set POS arm/disarm period, record channel and etc. Click Setup to go to the interface. For detailed information, please refer to chapter 4.7.1.1 motion detect.
- Privacy: After enable this function, once the overlay information contain the privacy character, it displays as *. For example, the privacy character is 12,56,89, the local preview and WEB surveillance information is shown as **34**7** if the overlay information is 123456789. For detailed information, please refer to chapter 4.7.12.1 privacy setup.
- Protocol type: The default setup is POS.
- Connection type: It is to set and NVR connection mode. It includes UDP,TCP,RS232,RS485. After set the connection type, please click the Setup button to set the corresponding parameters. For detailed information, please refer to chapter 4.7.12.2 connection type.
- Convert: It is to set font type.
- Overlay: It is to set overlay mode. It includes turn and roll.

- ✧ Turn: Once the overlay information has reached 8 lines, NVR turn to the next page.
- ✧ Roll: Once the overlay information has reached 8 lines, NVR displays the next new line and delete the oldest line.
- Network overtime: Once there is no POS data for the specified period, NVR automatically deletes POS information after specified period.
- Font size: The overlay font size.
- Color: The overlay font color.
- POS Info: Check the box to overlay information on the local preview window.
- Advanced: Click  to enter advanced settings interface.
- Transaction start/transaction end: It is to set transaction start and end character. The overlay information only displays the character after the start string and before the end string. For example, the start character is 12 and the end character is 90, NVR displays 34567 on local preview and Web preview interface if the sending out information is 123456789.
- Line delimiter: After set the line delimiter, the overlay information after the delimiter is displayed in the new line. For example, the line delimiter is 45 and the overlay information is 123456789, NVR displays 123 in the first line and displays 6789 in the second line.
- Hex: Check the Hex to switch ASCII code.
- Case insensitive: Check the box to enable case insensitive function.
 - ✧ When this function is enabled, set the start character as “aa”, NVR cannot distinguish the upper and lower case when sending out information “11aA23456”. The NVR overlays information is “23456” on local surveillance and Web preview.
 - ✧ When this function is disabled, set the start character as “aa”, NVR can distinguish the upper and lower case when sending out information “11aA23456”. The NVR does not overlay information local surveillance and Web preview.

4.7.12.1 Privacy Setup

Step 1 Click Setup

Enter Setup interface. See Figure 4-160,

Config

Enable ☐

Name

Connect Type

Protocol Type

Transaction Start

Transaction End

Line Delimiter

Ignored String

☐ Case Insensitive

Network Overtime (5s-900s)

Time Display (5s-600s)

Figure 4-160

Step 2 Set privacy information.

Step 3 Click OK button.

4.7.12.2 Connection type

- **Connection type is UDP or TCP.**

Step 1 Click Setup.

Enter Setup interface. See Figure 4-161.

IP Address

Source IP Port

Destination IP Port

Figure 4-161

Step 2 Source IP and port refers to POS IP address and port.

Note

Destination IP and port refers to NVR IP address and port. System can auto get and display.

Step 3 Click OK to complete setup.

- **Connection mode is RS232 or RS485.**

Step 1 Click Setup.

Enter Setup interface. See Figure 4-162.



Figure 4-162

Step 2 Set address, baud rate, data bit, stop bit and parity.

Note

Make sure the parameters here are the same with the POS setup.

Step 3 Click OK to complete setup.

4.8 Network

4.8.1 Network Settings

4.8.1.1 TCP/IP

The single network adapter interface is shown as in Figure 4-163 and the dual network adapters interface is shown as in Figure 4-164.

- **Network Mode** : Includes multiple access, fault tolerance, and load balancing
 - ✧ **Multiple-address mode**: eth0 and eth1 operate separately. You can use the services such as HTTP, RTP service via etho0 or the eth1. Usually you need to set one default card (default setup is etho) to request the auto network service form the device-end such as DHCP, email, FTP and etc. In multiple-address mode, system network status is shown as offline once one card is offline.

- ✧ Network fault-tolerance: In this mode, device uses bond0 to communicate with the external devices. You can focus on one host IP address. At the same time, you need to set one master card. Usually there is only one running card (master card). System can enable alternate card when the master card is malfunction. The system is shown as offline once these two cards are both offline. Please note these two cards shall be in the same LAN.
 - ✧ Load balance: In this mode, device uses bond0 to communicate with the external device. The eth0 and eth1 are both working now and bearing the network load. Their network load are general the same. The system is shown as offline once these two cards are both offline. Please note these two cards shall be in the same LAN.
 - Default Network Card: Please select eth0/eth1/bond0(optional) after enable multiple-access function
 - Main Network Card: Please select eth0/eth1 (optional).after enable multiple access function.
- Note: The dual-Ethernet port series support the above three configurations and supports functions as multiple-access, fault-tolerance and load balancing.**
- IP Version: There are two options: IPv4 and IPv6. Right now, system supports these two IP address format and you can access via them.
 - MAC address: The host in the LAN can get a unique MAC address. It is for you to access in the LAN. It is read-only.
 - IP address: Here you can use up/down button (▲▼) or input the corresponding number to input IP address. Then you can set the corresponding subnet mask the default gateway.
 - Default gateway: Here you can input the default gateway. Please note system needs to check the validity of all IPv6 addresses. The IP address and the default gateway shall be in the same IP section. That is to say, the specified length of the subnet prefix shall have the same string.
 - DHCP: It is to auto search IP. When enable DHCP function, you cannot modify IP/Subnet mask /Gateway. These values are from DHCP function. If you have not enabled DHCP function, IP/Subnet mask/Gateway display as zero. You need to disable DHCP function to view current IP information. Besides, when PPPoE is operating, you cannot modify IP/Subnet mask /Gateway.
 - MTU: It is to set MTU value of the network adapter. The value ranges from 1280-7200 bytes. The default setup is 1500 bytes. Please note MTU modification may result in network adapter reboot and network becomes off. That is to say, MTU modification can affect current network service. System may pop up dialog box for you to confirm setup when you want to change MTU setup. Click OK button to confirm current reboot, or you can click Cancel button to terminate current modification. Before the modification, you can check the MTU of the gateway; the MTU of the NVR shall be the same as or is lower than the MTU of the gateway. In this way, you can reduce packets and enhance network transmission efficiency.

The following MTU value is for reference only.

- ✧ 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.
- Preferred DNS server: DNS server IP address.
- Alternate DNS server: DNS server alternate address.
- Transfer mode: Here you can select the priority between fluency/video qualities.
- LAN download: 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.

- LAN download: 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.

After completing all the setups please click save button, system goes back to the previous menu.

The screenshot shows the 'Setup' window with the 'NETWORK' tab selected. The left sidebar lists various network settings, with 'TCP/IP' currently selected. The main area displays the following configuration options:

- MTU:** 1500
- LAN Download:** ☐
- IP Version:** IPv4
- MAC Address:** 90:02:A9:B9:5B:E0
- IP Address:** 10 . 15 . 6 . 141
- Subnet Mask:** 255 . 255 . 0 . 0
- Default Gateway:** 10 . 15 . 0 . 1
- Preferred DNS:** 8 . 8 . 8 . 8
- Alternate DNS:** 8 . 8 . 4 . 4
- DHCP:** ☐

At the bottom, there are buttons for 'Default', 'Save', 'Cancel', and 'Apply'.

Figure 4-163

The screenshot shows the 'SETTING' window with the 'NETWORK' tab selected. The left sidebar lists various network settings, with 'TCP/IP' currently selected. The main area displays the following configuration options:

- Net Mode:** Multi-address
- Default Ethernet Port:** Ethernet1
- Ethernet Card:** Ethernet1
- IP Version:** IPv4
- MAC Address:** 20:13:10:13:16:33
- Mode:** ☒ STATIC ☐ DHCP
- IP Address:** 10 . 15 . 6 . 145
- Subnet Mask:** 255 . 255 . 0 . 0
- Default Gateway:** 10 . 15 . 0 . 1
- Preferred DNS:** 10 . 1 . 2 . 80
- Alternate DNS:** 10 . 1 . 2 . 81
- MTU:** 1500
- LAN Download:** ☐

At the bottom, there are buttons for 'Default', 'Save', 'Cancel', and 'Apply'.

Figure 4-164

4.8.1.2 Port

The connection setup interface is shown as in Figure 4-165.

- Max connection: The max client login amount (such as WEB, platform, cellphone and etc). The value ranges from 1 to 128(default).
- TCP port: Default value is 37777.
- UDP port: Default value is 37778.
- HTTP port: Default value is 80.
- HTTPS port: Select the Enable check box and configure the port according to your actual needs. The default value is 443. After HTTPS is enabled, HTTP will be switched to HTTPS by force to transmit data in a safer way.
- RTSP port: Default value is 554.



CAUTION

System needs to reboot after you changed and saved any setup of the above ports. Make sure the port values here do not conflict.



Figure 4-165

4.8.1.3 Wi-Fi AP

Note

This function is available only for NVR devices with built-in Wi-Fi module. See the actual situation.

4.8.1.3.1 General Settings

The Wi-Fi AP interface is shown as below. See Figure 4-166. Here you can set Wi-Fi hotspot, so that the network camera can use the hotspot to connect to the network.

- 2.4GHz: Please check the box to enable the function.
- SSID: It is to set SSID name. You can use this name to search the device.
- Password: It is to set SSID password. You can use this password to connect to the network.

- Encryption Type: Select encryption type from the dropdown list.
- Channel: Please select a channel from the dropdown list. The default setup is auto.
- Gain: There are three options: High/middle/low. Please select from the dropdown list.



Figure 4-166

4.8.1.3.2 Advanced

Click Advanced and you can see an interface shown as below. See Figure 4-167.

- IP Address: Input Wi-Fi AP IP address.
- Subnet Mask: Input Wi-Fi AP subnet mask.
- Default Gateway: Input Wi-Fi AP gateway.
- Start IP/End IP: Input start IP and end IP of the network cameras. The NVR can allocate the IP addresses in the range you specified here.
- Upgrade: Click it to upgrade Wi-Fi AP module.



Figure 4-167

4.8.1.4 Wi-Fi

The Wi-Fi interface is shown as below. See Figure 4-168.

- **Enable:** Check the box here to enable Wi-Fi function.
- **Refresh:** You can click it to search the hotspot list again. It can automatically add the information such as the password if you have set it before.
- **Disconnect:** Here you can click it to turn off the connection.
- **Connect:** Here you can click it to connect to the hotspot. System needs to turn off current connection and then connect to a new hotspot if there is connection of you selected one.

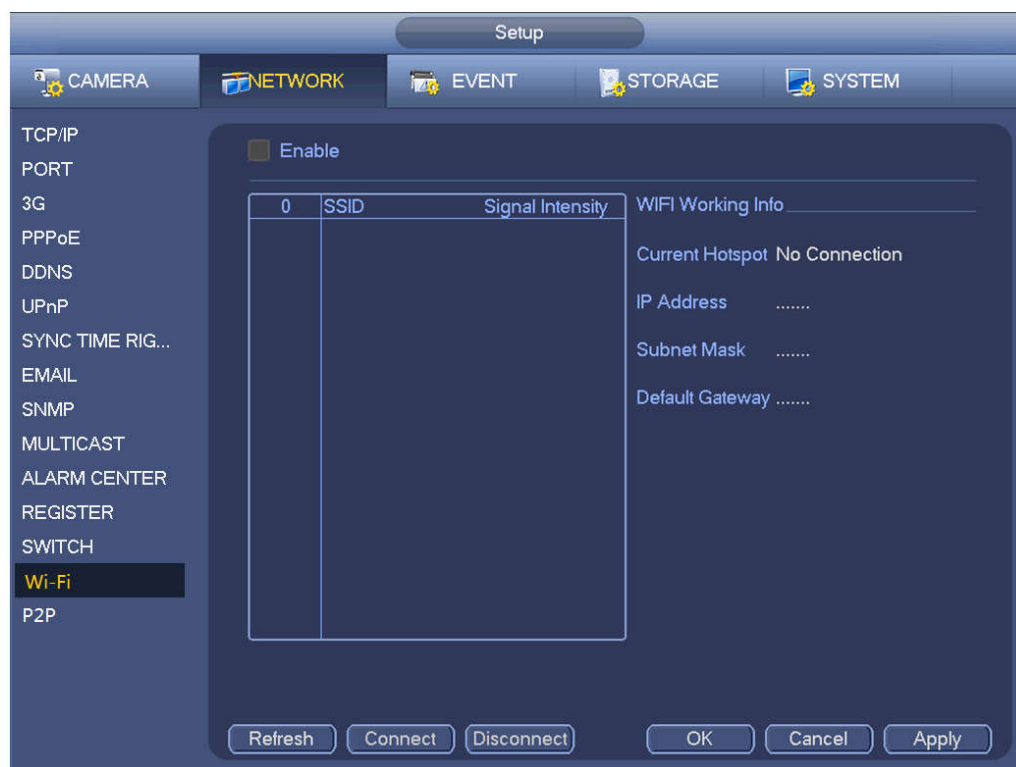


Figure 4-168

- Wi-Fi working status: Here you can view current connection status.

Please note:

- After successful connection, you can see Wi-Fi connection icon at the top right corner of the preview interface.
- When the hotspot verification type is WEP, system displays as AUTO since the device cannot detect its encryption type.
- System does not support verification type WPA and WPA2. The display may become abnormal for the verification type and encryption type.

After device successfully connected to the Wi-Fi, you can view the hotspot name, IP address, subnet mask, default gateway and etc. Right now system support TOTOLINK_N2200UP module.

4.8.1.5 Repeater

The device supports repeater function for front-end IPCs to effectively extend video transmission distance and range.



NOTE

Only some devices support this function.

Repeater is available for devices with built-in Wi-Fi module and the front-end IPC shall support repeater.

Binding Repeater

Step 1 Turn on the NVR device and IPCs, and then directly connect all the IPCs to the NVR device via Wi-Fi.

Step 2 Enter from main menu > Setting > Network > Repeater.

Step1 The Repeater interface is displayed. See Figure 4-169.

 NOTE

When the connection line is green, the channel has conneted to Wi-Fi IPC successfully.



Figure 4-169

- Step 3 Click  after the channel you want to set the repeater function.
System displays the icon to add channel. See Figure 4-170.



Figure 4-170

Step 4 Click  and select the channel you want to add.

After the adding is successful, system displays the following interface. See Figure 4-171.



Figure 4-171

 NOTE

To take Figure 4-171 as an example, the IPC connected to CH1 is the primary repeater and the IPC connected to CH2 is the secondary repeater. Each primary repeater can connect 2 Wi-Fi IPCs at most in series or in parallel.

- When connecting IPCs in series, the IPC in CH2 works as a secondary repeater to connect the IPC in CH3. See Figure 4-172.
- When connecting IPCs in parallel, the IPC in CH1 works as a primary repeater to connect the IPCs in CH2 and CH3. See Figure 4-173.



Figure 4-172



Figure 4-173

Step 5 Click Apply or OK to save the configuration.

Unbinding Repeater

If you want to unbind the repeater, click the corresponding channel and the IPC in this channel will connect to the NVR device directly.



NOTE

You can delete repeater IPC only from the last level

4.8.1.6 3G

3G setup interface is shown as below. See Figure 4-174.

Please refer to the following contents for the parameter information.

- Pane 1: Display 3G signal intensity after you enabled 3G function.
- Pane 2: Display 3G module configuration information after you enabled 3G function.
- Pane 3: Display 3G module status information after you enabled 3G function.

It is to display current wireless network signal intensity such as EVDO, CDMA1x, WCDMA, WCDMA, EDGE and etc.

- 3G module: It is to display current wireless network adapter name.
- 3G Enable/Disable: Check the box here to enable 3G module.
- Network type: There are various network types for different 3G network modules. You can select according to your requirements.
- APN: It is the wireless connection server. It is to set you access the wireless network via which method.
- AUTH: It is the authentication mode. It supports PAP/CHAP.
- Dial number: Please input 3G network dialup number you got from your ISP.
- User name: It is the user name for you to login the 3G network.
- Password: It is the password for you to login the 3G network.
- Pulse interval: You can set dialup duration. Once you disable the extra stream, the connection time begins. For example, if you input 5 seconds here, then 3G network connection period is 5 seconds. The device automatically disconnect when time is up. If there is no extra stream, 3G network connection is valid all the time. **If the alive time is 0, then the 3G network connection is valid all the time.**
- Dial: Here you can enable or disable 3G network connection/disconnection manually.
- 3G wireless network: Here is to display wireless network status, SIM card status, dial status. If the 3G connection is OK, then you can see the device IP address the wireless network automatically allocates.

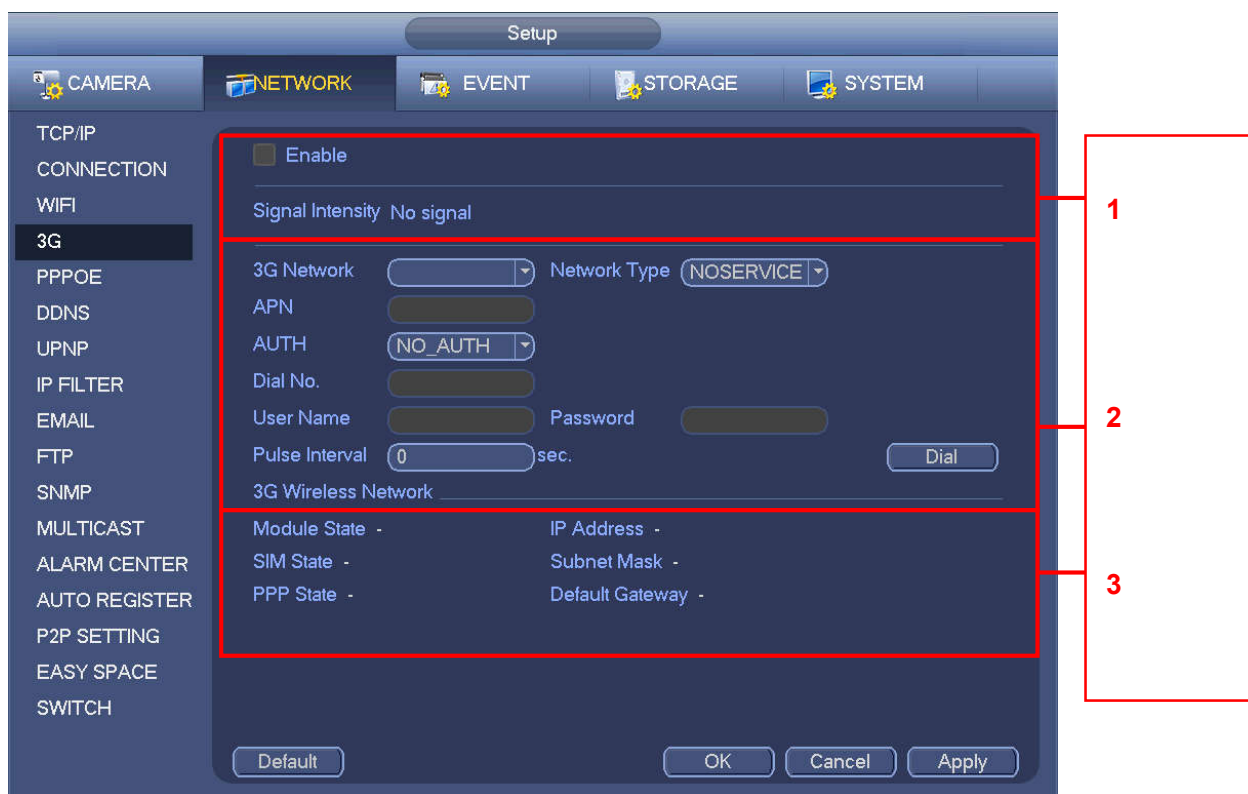


Figure 4-174

4.8.1.7 PPPoE

PPPoE interface is shown as in Figure 4-175.

Input "PPPoE name" and "PPPoE password" you get from your ISP (Internet service provider).

Click save button, you need to restart to activate your configuration.

After rebooting, NVR will connect to internet automatically. The IP in the PPPoE is the NVR dynamic value. You can access this IP to visit the unit.



Figure 4-175

4.8.1.8 DDNS

DDNS (Dynamic Domain Name Server) is to dynamically refresh the DNS domain name and IP address if the device IP address has changed frequently. The user can use the domain to access the device.

Preparation

Before the operation, make sure the device supports DNS type and go to the DDNS service provider website to register the domain name via the PC.



NOTE

After you register the device and log in the DDNS website, you can view all connected device information of the current user.

- Step 1 Enter from main menu > Setup > Network > DDNS.
DDNS setup interface is shown as in Figure 4-176.

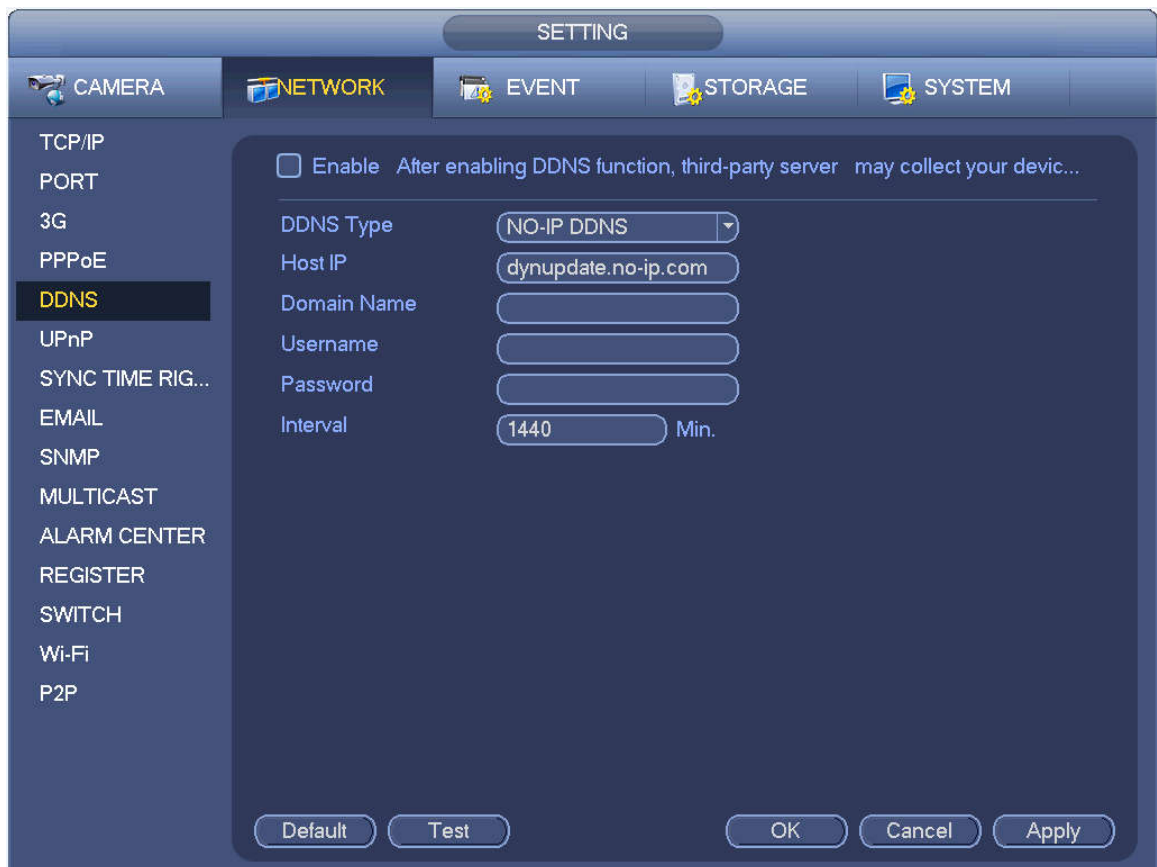


Figure 4-176

Step 2 Select the Enable check box to enable DDNS function.

 NOTE

When DDNS is enabled, the third-party server might collect your device information.

Step 3 Configure the DDNS parameters according to practical situation.

- Type/address:
 - ✧ Dyn dns DDNS is members.dyndns.org.
 - ✧ NO-IP DDNS is dynupdate.no-ip.com.
 - ✧ CN99 DDNS is members.3322.org.
- Domain: The domain name registered on the DDNS service provider website.
- User name/password: Input the user name and password got from the DDNS service provider. Make sure you have logged in the DDNS service provider website to register an account (user name and password).
- Interval: After DDNS boots up, it sends out refresh query regularly. The unit is minute.

Step 4 Click Apply or Save to complete setup.

Step 5 Open a browser and input domain name, click Enter key.

The setting is right if you can view device WEB interface. Otherwise, please check the parameters.

4.8.1.9 UPnP

The UPNP protocol is to establish a mapping relationship between the LAN and the WAN. Please input the router IP address in the LAN in Figure 4-163. See Figure 4-177.

- UPNP on/off :Turn on or off the UPNP function of the device.

- Status: When the UPNP is offline, it shows as “Unknown”. When the UPNP works it shows “Success”
- Router LAN IP: It is the router IP in the LAN.
- WAN IP: It is the router IP in the WAN.
- Port Mapping list: The port mapping list here is the one to one relationship with the router’s port mapping setting.
- List:
 - ✧ 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.
- Default: UPNP default port setting is the HTTP, TCP and UDP of the NVR.
- Add to the list: Click it to add the mapping relationship.
- Delete: Click it to remove one mapping item.

Double click one item; you can change the corresponding mapping information. See Figure 4-178.

Important:

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.

For the TCP and UDP, please make sure the internal port and external port are the same to guarantee the proper data transmission.



Figure 4-177

The image shows a 'PORT INFO' dialog box with a dark blue header and footer. The header contains the title 'PORT INFO' in white. The main area has a dark blue background with white text labels and light blue input fields. The labels are 'Service Name', 'Protocol', 'Internal Port', and 'External Port'. The input fields contain 'HTTP', 'TCP', '80', and '80' respectively. The 'Protocol' field is a dropdown menu. At the bottom, there are two buttons: 'OK' and 'Cancel'.

Field	Value
Service Name	HTTP
Protocol	TCP
Internal Port	80
External Port	80

Figure 4-178

4.8.1.10 Email

The email interface is shown as below. See Figure 4-179.

- SMTP server: Please input your email SMTP server IP here.
- Port: Please input corresponding port value here.
- User name: Please input the user name to login the sender email box.
- Password: Please input the corresponding password here.
- Sender: Please input sender email box here.
- Title: Please input email subject here. System support English character and Arabic number. Max 32-digit.
- Receiver: Please input receiver email address here. System max supports 3 email boxes. System automatically filters same addresses if you input one receiver repeatedly.
- SSL enable: System supports SSL encryption box.
- Interval: The send interval ranges from 0 to 3600 seconds. 0 means there is no interval.
- Health email enable: Please check the box here to enable this function. This function allows the system to send out the test email to check the connection is OK or not.
- Interval: Please check the above box to enable this function and then set the corresponding interval. System can send out the email regularly as you set here. Click the Test button, you can see the corresponding dialogue box to see the email connection is OK or not.

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.

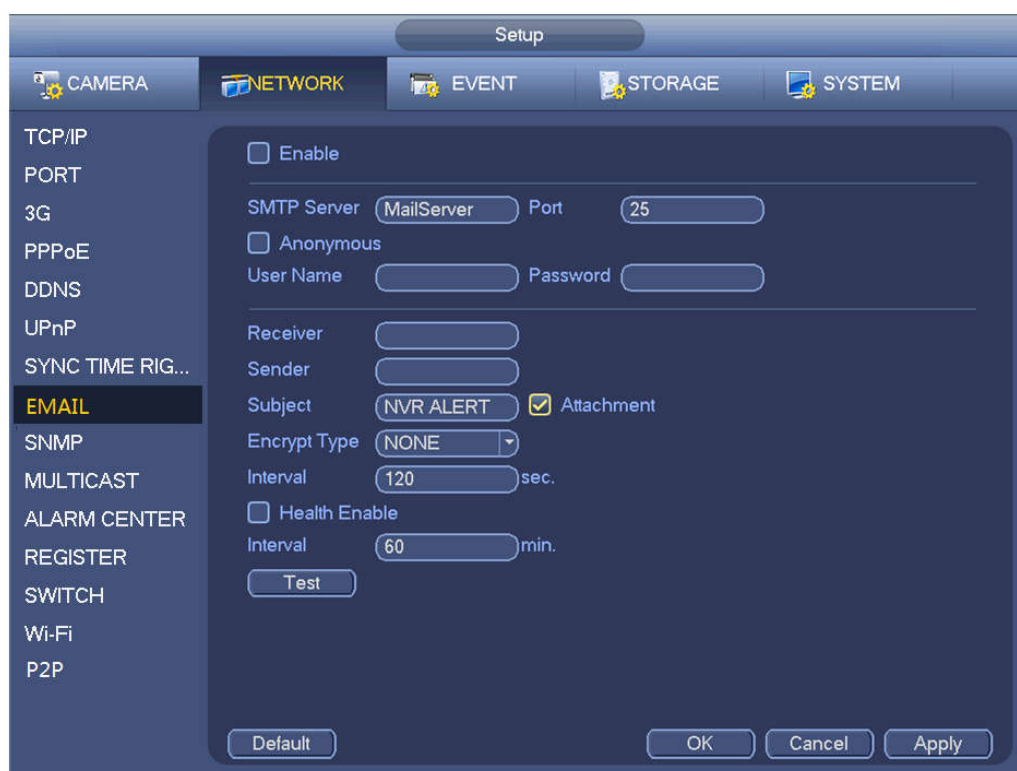


Figure 4-179

4.8.1.11 SNMP

SNMP is an abbreviation of Simple Network Management Protocol. It provides the basic network management frame of the network management system. SNMP is widely used in various scenarios, network devices, software and systems.

Preparation:

- Install SNMP monitor and management tool, such as MIB Builder and MG-SOFT MIB Browser.
- Obtain the corresponding MIB file from the technical support.

Step 1 Enter from main menu > Setup > Network > SNMP.

The SNMP interface is displayed. See Figure 4-180.



Figure 4-180

Step 2 Select the SNMP check box.

Step 3 Configure the parameters. For details, see the following table.

Parameter	Description
Version	Select the check box of the corresponding version.  NOTE System selects V3 by default. There might be risks for V1 and V2.
SNMP Port	Enter the SNMP port number.
Read Community/Write Community	The read community/write community string supported by the program.
Trap Address	Enter the IP address of the PC installed with MG-SOFT MIB Browser. It is the destination address to receive trap information from the device.
Trap Port	The destination port to receive trap information from the device.
Read Only User	Enter the read only username to access the NVR device.
Read/Write User	Enter the read/write username to access the NVR device.
Authentication	It includes MD5 and SHA. System automatically recognizes it after it is enabled.
Password	Enter the password for encryption and authentication. The password shall be no less than 8 characters.
Encryption Type	Select the encryption type. The default type is CBC-DES.

Step 4 Click OK to complete the configuration.

Step 5 View device info.

1) Run MIB Builder and MG-SOFT MIB Browser.

- 2) Compile the two MIB files with MIB Builder.
- 3) Load the compiled module to the software with MG-SOFT MIB Browser.
- 4) Enter the PC IP address into MG-SOFT MIB Browser and select the version to search.
- 5) Expand the tree list in MG-SOFT MIB Browser to view the device configuration information, such as channel number and program version.

4.8.1.12 Multicast

When multiple users preview the video of a channel through the network at the same time, due to network bandwidth limitation, they might be unable to preview. You can set a multicast IP for NVR device (224.0.0.0 - 238.255.255.255) and adopt the way of multicast protocol access to solve the problem.

Step 6 Enter from main menu > Setup > Network > Multicast.

The Multicast interface is shown as in Figure 4-181.

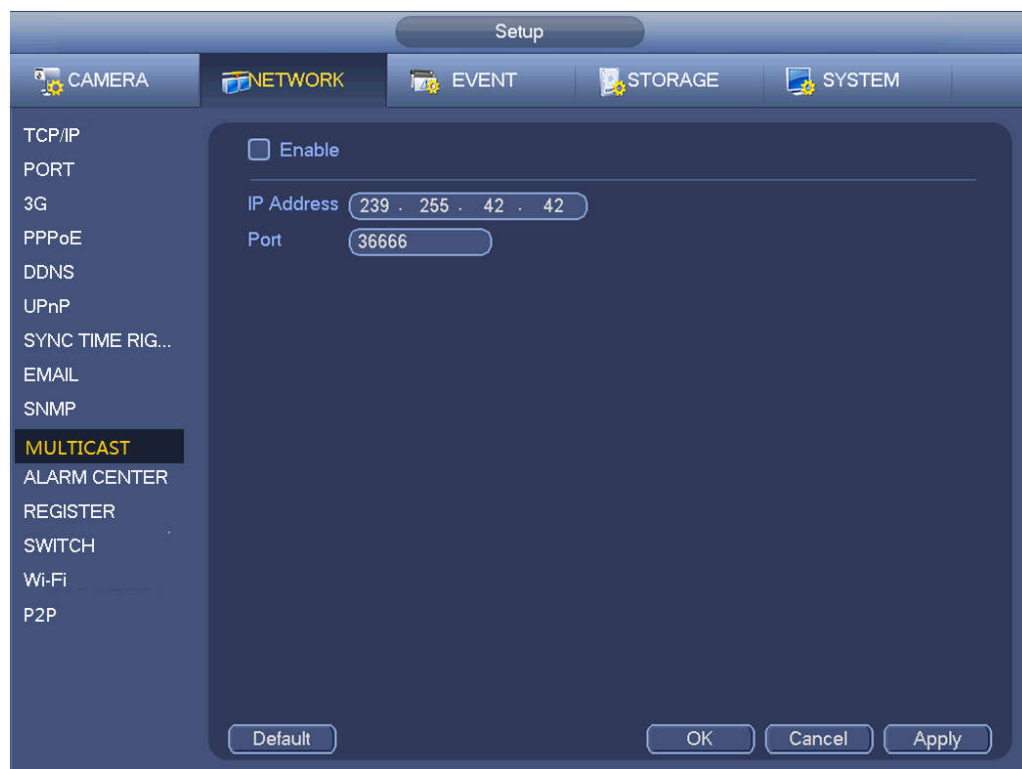


Figure 4-181

Step 7 Select the Enable check box to enable this function.

Step 8 Configure the parameters. For details, see the following table.

Parameter	Description
IP Address	Enter the multicast IP address to access the device (224.0.1.0-238.255.255.255).
Port	Enter the multicast port number to access the device (1025-65000).

Step 9 Click Apply or OK to complete the setting.

After configuring the multicast, you can log in Web with multicast.

Log in Web. In the Type drop-down list, select Milticast. See Figure 4-182. System will automatically obtain the multicast address and join the muiticast goup. Open the monitor and you can view the video in multicast way.

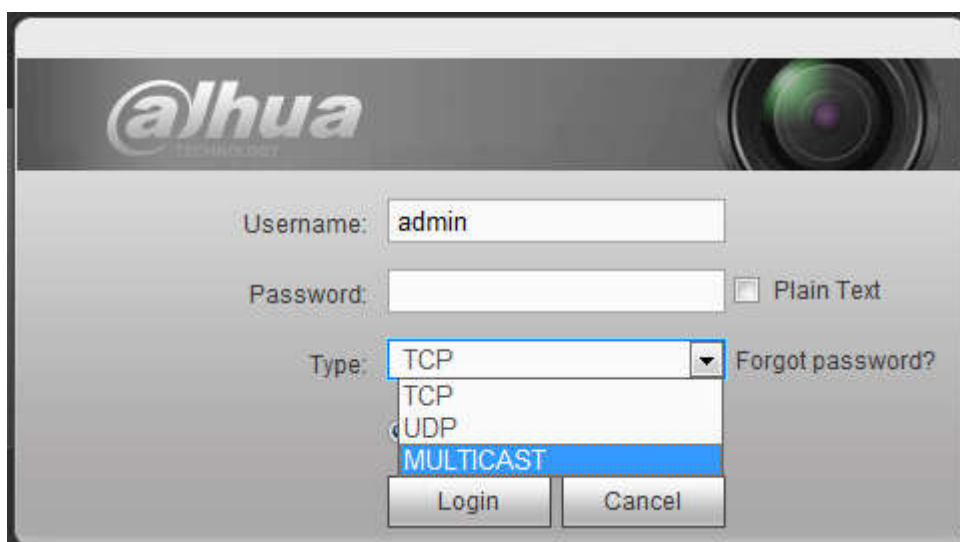


Figure 4-182

4.8.1.13 Alarm Centre

This interface is reserved for you to develop. See Figure 4-183.

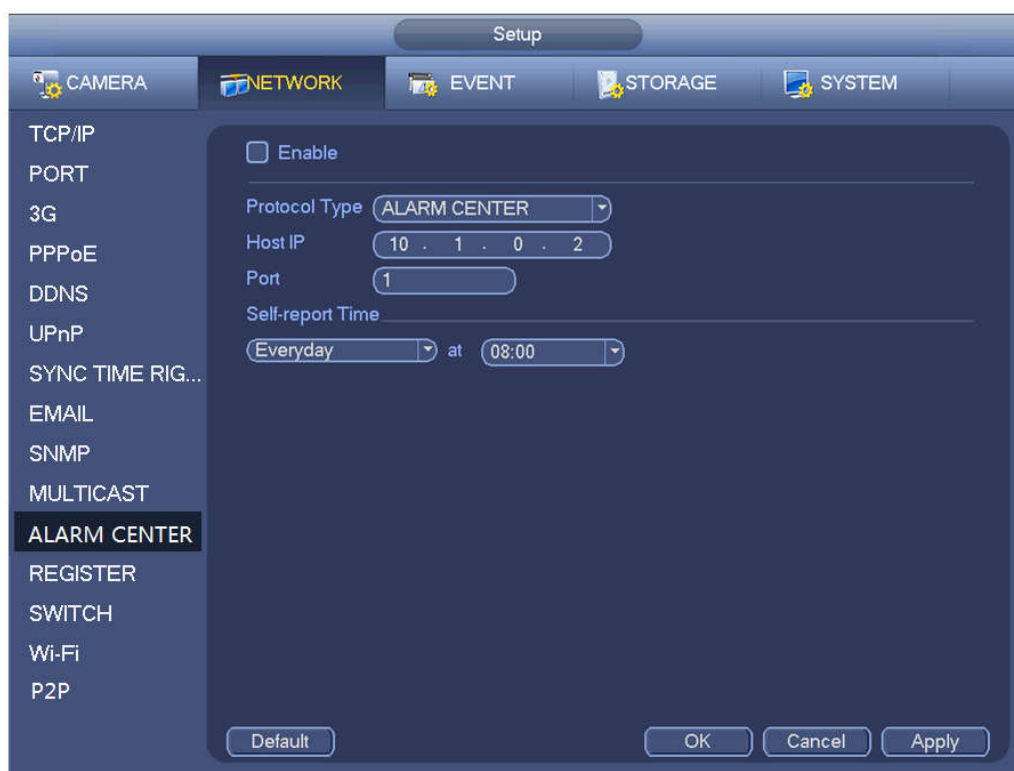


Figure 4-183

4.8.1.14 Auto register

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 NVR 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.

1) The setup interface is shown as in Figure 4-184.

Important

Do not input network default port such as TCP port number.



Figure 4-184

2) The proxy server software developed from the SDK. Please open the software and input the global setup. Please make sure the auto connection port here is the same as the port you set in the previous step.

3) Now you can add device. Please do not input default port number such as the TCP port in the mapping port number. The device ID here shall be the same with the ID you input in Figure 4-184. Click Add button to complete the setup.

4) Now you can boot up the proxy server. When you see the network status is Y, it means your registration is OK. You can view the proxy server when the device is online.

Important

The server IP address can also be domain. But you need to register a domain name before you run proxy device server.

4.8.1.15 P2P

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->Setting->Network->P2P, you can go to the following interface, the P2P interface is shown as in Figure 4-185.

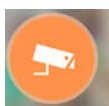


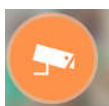
Figure 4-185

Here we use cell phone APP to continue.

Step 1 Use cell phone to scan the QR code and download the APP.

Step 2 After installation, run the APP and Live Preview, enter the main interface. Now you can add device to the APP.



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

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

3. 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 4-186.

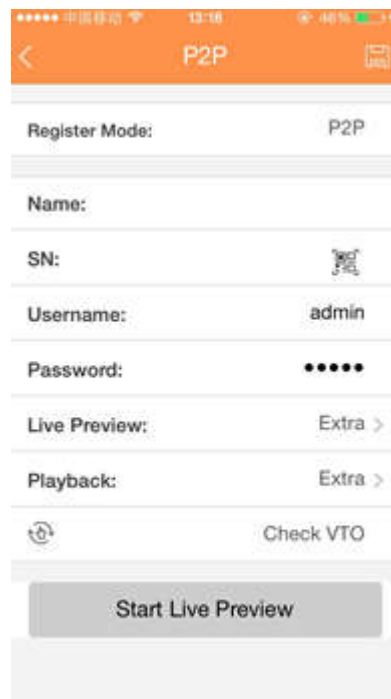


Figure 4-186

4.8.1.16 Easy Space

This function allows you to upload motion detect record or snapshot image to the dropbox and etc.

The easy space interface is shown as below. See Figure 4-187.

Please select the easy space address from the dropdown list and then input corresponding user name and password.

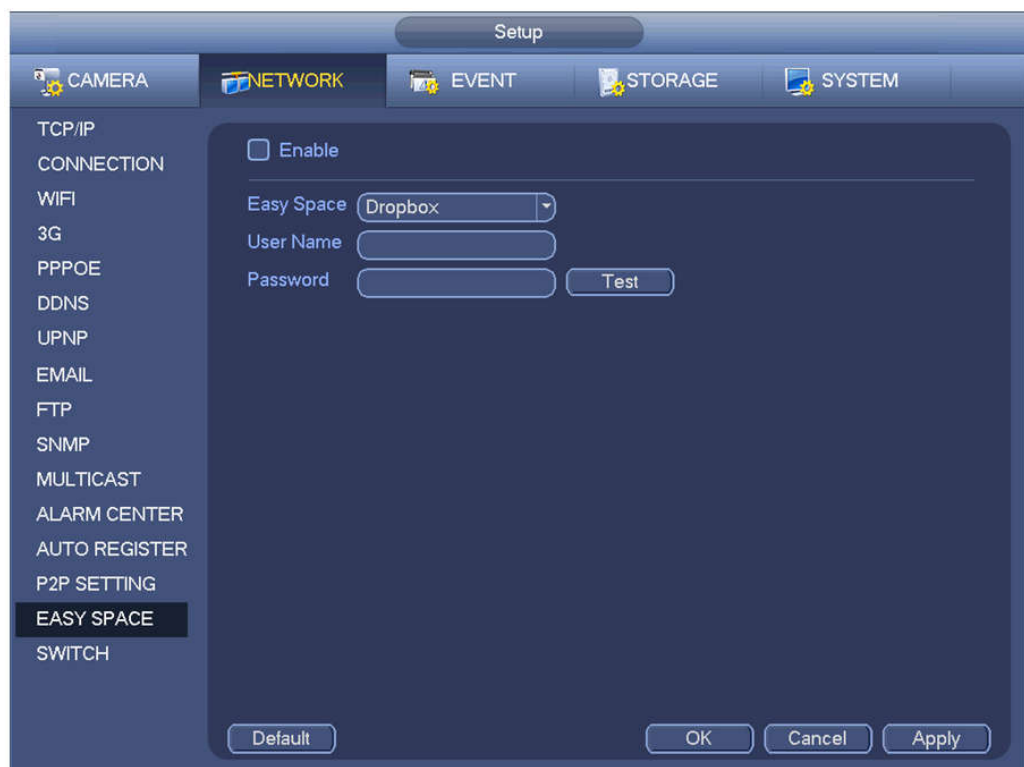


Figure 4-187

Note:

- The uploaded file is for sub stream only. Please go to record control interface (main stream->setting->Storage->Record) and then select sub stream.
- The easy space function uses upload bandwidth. Usually the recommended upload bandwidth shall be more than 512kbps and please make sure the network is stable.
- The easy space upload data adopts safe SSL encryption connection. Please enable 1-channel to upload in case this function occupies too much CPU.

4.8.1.17 SWITCH

When connect a network camera to the PoE port of the NVR, NVR can automatically allocate the IP address according to the specified IP segment. The network camera can automatically register to the NVR.

It is for you to set IP address, subnet mask, gateway and etc of the Switch. See Figure 4-188.



Caution

- This function is for product of PoE port.
- Do not connect switch to the PoE port, otherwise the connection may fail.
- The SWITCH function of the NVR is enabled by default. The IP segment is 10.1.1.1. Usually we recommend the default setup.
- For the camera from the third party, make sure the camera supports ONVIF and DHCP function is enabled.



Figure 4-188

Refer to the following table for PoE notice.

Type	Note
------	------