Network Video Recorder

User Manual

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Chapter 1 Installation

1.1 NVR Installation

During installation of the NVR:

- > Ensure the device is installed in a well-ventilated, dust-free environment.
- > The device is designed for indoor use only.
- ▶ Keep all liquids away from the device.
- > Ensure environmental conditions meet factory specifications.
- > Power down the device before connecting and disconnecting accessories and peripherals.

1.2 Hard Disk Installation

Before you start:

Disconnect the power from the NVR before installing a hard disk drive(HDD). A factory recommended HDD should be used for this installation.

Tools Required: Screwdriver.

NVR with 4 or 8 HDD

Steps :

(1) Remove the cover from the NVR by unfastening the screws on the rear panel.



(2) Insert the hard disk along the slot and fasten it.



(3) Connect the power & data cable to the NVR and HDD.



(4) Close the cover and fasten it with the screws.



Chapter 2 Getting Started

2.1 Start up and Shutdown

2.1.1 Start up

Plug in the power cord, press the power switch, the power indicator light should turn bright. The device will begin to start. After the device starts up, the video output defaults to multiple screen output mode.

2.1.2 Shutdown

Option 1: Press the power key on front panel to shutdown the device(should be supported by the device).

Option 2: Click **Start** \rightarrow **Shutdown** \rightarrow **Confirm** (Prompt: It is recommended to use this way, in order to avoid damage to the device when suddenly powered off.)



Figure 2.1 Shutdown Menu

2.2 Login

If NVR first start-up or has logged out, you must login the device before operating the menu and other functions, as shown in figure 2.2.

	Login	
User Name	admin	~
Password		
	Login Cancle	

Figure 2.2 Login Interface

Steps:

- 1. Click **Start** button on the top of screen.
- 2. Click **Login** in the drop-down menu.
- 3. Input the **Password** in the pop-up interface(Default password: 888888).
- 4. Click Login to log in.

2.3 Using Guide

The Guide starts once login, as shown in figure 2.3.

	Guide	×
Language Setting		
Language/Language	English	~
10 10 AGC 202		
📕 Don't display next time	Back	Next Skip

Figure 2.3 Language Setting

Operating the Guide

1) The Guide can walk you through some basic settings of the NVR. If you don't want to use the Guide at that moment, click the \square button. You can also choose to use the Guide next time by leaving the "Next time no longer display" check-box unchecked.

2) Click Next button to enter the Display Setting window, as shown in figure 2.4.

	Guide			×
Display Setting				
Screen Resolution	1920×1080-P60		~	
📕 Don't display next time		Back	Next	Skip

Figure 2.4 Resolution Setting

3) After the display setting, click **Next** button to enter the Network Setting window, as shown in figure 2.5.

	Guide	×
Network Setting		
Network Card	Lani	•
	DHCP	
IP Address	192.168.1.189	
Mask	255.255.255.0	
Gateway	192.168.0.1	
🔲 Don't display next time	Back	xt Skip

Figure 2.5 Network Setting

4) After the network setting, click **Next** button to enter the QR Code interface, as shown in figure 2.6.



Figure 2.6 Qr Code

5) Click **Finish** to complete the Guide setup.

2.4 Menu operation

After the user login successfully, according to the interface of the upper toolbar to perform associated settings, as shown in figure 2.7.



Figure 2.7 Menu operation

2.4.1 Begin setup

Click the 📕 icon, it will pop-up the interface as show in figure 2.8.



Figure 2.8 Begin setup

1) Logout: Click Logout button, can exit the current user.

2) Guide: Click **Guide** button, it will pop-up boot wizard setting interface, simply configure language, display resolution, basic network parameters, and mobile phone app to access the QR Code display.

3) Reboot: Click Reboot button and confirm, the device will automatically reboot.

4) Shutdown: Click Shutdown button and confirm, the device will automatically shutdown.

Chapter 3 Live View

3.1 Introduction of Live View

Live view shows you the video image getting from each camera in real time. The NVR will automatically enters live view mode when powered on, as shown in figure 3.1.



Figure 3.1 Live View Interface

Channel Live View Icons

In the live view mode, there are hide icons on the screen of each channel, which shows when you move the mouse to the bottom of channel.

Icons	Description	Icons	Description
	Open/Close PTZ	\mathbf{G}	Open/Close smart detection display
loo a	Open/Close face display	D	Capture
这	Open/Close Voice intercom	*	Open/Close Channel Audio
	Manual Recording		Real-time Playback

Table 3.1 Live View Icon description

3.2 Operations in Live View Mode

In live view mode, there are many functions provided. The functions are listed below.

(1) Real-time alarm information

On the top right corner, there is a real-time alarm information, as shown in figure 3.2.



Figure 3.2 Alarming

Alarm Information			
Channel	Alarm Mode	Occurrence Time	
LAN2	Netwok Disconnected Alarm	2016:11:10 15:08:17	
0 - 0 - 0	Hard disk lost alarm	2016:11:10 15:08:20	
	Hard disk lost alarm	2016:11:10 15:08:20	
0 - 4 - 0	Hard disk lost alarm	2016:11:10 15:08:20	
	Hard disk lost alarm	2016:11:10 15:08:20	
	Hard disk lost alarm	2016:11:10 15:08:20	
	Hard disk lost alarm	2016:11:10 15:08:20	
	Hard disk lost alarm	2016:11:10 15:08:20	
1 - 4 - 0	Hard disk lost alarm	2016:11:10 15:08:20	
	Arming Dis	arming Confirm	

When you click **[**, it will pop-up the alarm information, as shown in figure 3.3.

Figure 3.3 Alarm Information

When you click **()**, it will hide the real-time alarm information.

(2) Other functions

Table 3.2	Other	Function	description
-----------	-------	----------	-------------

Icons	functions	Icons	Description
	1 Split Screen		4 Split Screen
	6 Split Screen		8 Split Screen
	9 Split Screen	16	16 Split Screen
25	25 Split Screen	36	36 Split Screen
64	64 Split Screen	4	Sound Adjust
5 •	Cruise on Setting		Linkage Preview
🗏 Main Stream	Display Main Stream	< >	Page Up/Page Down
	Last/Next Group		Capture all preview channel
	All preview channel manual record setting		

3.3 Using the Mouse in Live View



Figure 3.4 Right Click Menu

Name	Description
Full Screen	Quick enter full screen mode.
Tour On/Off	Open/Close cruise.
Start Recording On/Off	Open/Close manual record.
Channel Connecting	Quick enter IP Camera Management interface.
PTZ Ctrl	Open
Last Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
4 Split Screen	Select and enter 4 Split Screen mode.
6 Split Screen	Select and enter 6 Split Screen mode.
8 Split Screen	Select and enter 8 Split Screen mode.
9 Split Screen	Select and enter 9 Split Screen mode.
16 Split Screen	Enter 16 Split Screen mode.
25 Split Screen	Enter 25 Split Screen mode.
36 Split Screen	Enter 36 Split Screen mode.
64 Split Screen	Enter 64 Split Screen mode.

3.4 Right tool bar

(1) Images play mode

There are three kinds of play mode, as shown in figure 3.5, preview picture can show according to "device list", "organizational structure" and "channel round tour" preview as required, the default play mode is "device list", note that, "organizational structure" and "channel round tour" can be used only when they are configured in advance, see below the detailed operation, channel configuration section.

Device List	Struc	ture	Tour		-
🔻 📾 Device I	List				
🔹 🔻 🛲 Seqi	Jence1	-Seque	nce16		
📥 C	H1	CH1	192.168.	1.188	1
🕺 C	H2	CH2			
🕺 C	НЗ	CH3			
🕺 C	H4	CH4			
🕺 C	H5	CH5			
🕺 C	H6	CH6			
🕺 C	H7	CH7			
🕺 C	H8	CH8			
🕺 C	H9	CH9			
🕺 C	H10	CH10			
🕺 C	H11	CH11			
🕺 C	H12	CH12			
🕺 C	H13	CH13			
🕺 C	H14	CH14			
🕺 C	H15	CH15			
📩 C	H16	CH16			
🔹 🕨 🛲 Sequ	Jence1	7-Sequ	ence32		
🕨 🕨 🖬 Sequ	Jence3	3-Sequ	ence48		
🕨 🕨 🖬 Sequ	Jence4	9-Sequ	ence64		
17 B 10 B					1.5

Figure 3.5 Device List

(2) Disk information

Can real-time to view the hard disk status, it's convenient to view when connect multiple hard disk, as shown in figure 3.6.

etting	•
0 - 4 - 0 rmal (Recordir 1863GB 1861GB 7200 f <i>t</i> s) ng)
	etting 0 - 4 - 0 rrmal (Recordin 1863GB 1861GB 7200 f <i>l</i> s

Figure 3.6 HDD info

(3) Video parameter

May revise the brightness, contrast, saturation and hue of the channel that the current mouse selected, one click to restore the default value when necessary, as shown in figure 3.7.

HDD Info	Video Setting	-
Brightness	¢	• 0
Contrast	۰	• 0
Saturation	\$	■ 0
Hue	.	• 0
	Default	

Figure 3.7 Video

(4) PTZ/Preset/CRZ/Track

Please confirm whether the related parameters setting is correct before control the PTZ.After setting up parameters, select the channel to be controlled in the preview interface, then control the direction of the lens, focal length, focus, aperture amplification and narrow in PTZ operation interface, and adjust the speed of PTZ, as shown in figure 3.8. See below the detailed operation of PTZ control part.

PTZ	Preset	Cruise	Pattern
6			om 🕂
	AUTO 🕨	F	cus 🕂
	\checkmark		ris 🕂
Pan &	Tilt Speed		
Pan &	Tilt Speed		
Far	• ¥	iper	Light

Figure 3.8 PTZ

3.5 Channel Swap

Select a channel, drag to another channel, it will pop-up prompt dialog box, as shown in figure 3.9.

Select The Channel Swap Mode						
Window10	Channel10 OSD:CH10	IP:Unconfigured				
Window1	Channel1 OSD:CH1 I	P:Unconfigured				
Swap Connection	Swap Sequence	Swap Window				
	OK Cancel					

Figure 3.9 Channel Swap

There are three ways to exchange channels:

(1) Exchange channel connection, at the same time, all configuration swaps;

(2) Exchange channel order, exchange the preview position, the device list information changes at the same time;

(3) Exchange window position, exchange the preview position, the device list information no change at the same time.

Chapter 4 Playback

4.1 Real-time Playback

Purpose:

Playback the recorded video files of a specific channel in the live view mode.

Steps:

Choose a channel in live view mode and click the \square button in the bottom of the channel, as shown in figure 4.1.



Figure 4.1 Real Time Playback

4.2 Playback by Normal Search

4.2.1 Recording Playback

Click 🔳 icon to enter the Playback interface, as shown in figure 4.2.



Figure 4.2 Normal Playback Interface

Playback by time *Purpose:*

Playback video files recorded in specified time duration. Multi-channel simultaneous playback is supported.

Steps:

1) Enter playback interface.

2) Check the check-box of channel(s) in the channel list and then double-click to select a date on the calendar.

3) Click the \square button to start playback, as shown in figure 4.3.



Figure 4.3 Video Playback

Note:

If there are record files for that camera in that day, in the calendar, the icon for that day is displayed as 6778. Otherwise it is displayed as 6778

Playback Interface

You can use the toolbar in the bottom part of Playback interface to control playing progress, as shown in figure 4.4.



Figure 4.4 Playback Toolbar

Table 4.1	Detailed	Explanation	of Playback	Toolbar
		1		

Button	Operation	Button	Operation
► II	Play/Stop		Stop
\rightarrow	Playback forward	+	Playback backward
	Single frame)) ↓ ↓) ↓ ↓	30 seconds forward/backward
*	Speed Down	•	Speed Up
	1 Split Screen	==	4 Split Screen
	6 Split Screen		8 Split Screen
==	9 Split Screen	16	16 Split Screen
$\langle \rangle$	Page Up/Page Down	Ŧ	Backup
D	Capture	*	Hide/Show the progress bar
4 —	Sound Adjust		

4.2.2 Playback by Event Search

Purpose:

Playback record files on one or several channels searched out by event type (e.g. alarm detection, motion).

Steps:

1) Enter the Playback interface.

2) Select the Retrieving type: There are many types you can select, such as Count Alarm, Motion, Across the line, Regional, Alarm detection and object left/Loss etc. .

- 3) Click the **Query** button to get the search result information.
- 4) Click **b** button to playback the file.

4.2.3 Playback Pictures

Purpose:

The captured pictures stored in the HDDs of the device can be searched and viewed, as shown in figure 4.5.



Figure 4.5 Picture Playback

Steps:

- 1) Enter playback interface.
- 2) Select playback modes: Snapshot.
- 3) Select Search by day or Search by time.
- 4) Select Picture source: IPC Snapshot(preview snapshot) or Playback Snapshot.
- 5) Choose Condition: Meet random or Meet all.
- 6) Select Retrieving type.
- 7) Select Search Channel.
- 8) Click **Query** button to search for the capture picture.
- 9) Check the check-box after the picture listed, then click \mathbf{D} to view the picture.
- 10) The toolbar in the bottom of playback interface can be used to control playing process.

Table 4.2 Detailed Explanation of Playback Toolbar

Button	Function	Button	Function
	Play/Stop		Stop
\rightarrow	Next picture	+	Last picture

Note:

Click the check-box of the picture listed, then click Backup button, can enter the Snapshot back-up interface, as shown in figure 4.6.



Figure 4.6 Picture Backup Interface

4.2.4 Playback External File

Purpose:

Perform the following steps to look up and playback files in the external devices, as shown in figure 4.7.



Figure 4.7 External File Playback Interface

Steps:

- 1) Enter the playback interface.
- 2) Select playback modes: External file.
- 3) Click the **Refresh** button to refresh the file listed.

4) Select and click the \mathbf{D} button to playback it. And you can adjust the playback speed by clicking \mathbf{D} and \mathbf{M} .

Chapter 5 PTZ Controls

5.1 Configuring PTZ Settings

Follow the procedure to set the parameters for PTZ. The configuring of the PTZ parameters should be done before you control the PTZ camera.

Steps:

1) Enter the PTZ Setting interface, as shown in figure 5.1.

Start Previ	4 Daybad	k 8mart 8ea	rch Backup	Channel Setting	Disk Manager	System Setting	D Maintenance		🔊 ammon Dia	k0 - 4 - OMissing Al	09:55:37 2016-12-30
		Protocol	pelceD								
PTZ Setting			8640								
			No Parity								
			No Flow Control								
										Copy To	Save

Figure 5.1 PTZ General Setting Interface

- 2) Channel: Choose the channel.
- 3) **Protocol:** Choose the protocol for your PTZ.
- 4) **Decoder Address:** Choose the decoder address.
- 5) Baud Rate: Select the baud rate.
- 6) Data Bit: Select the data bit.
- 7) Stop Bit: Select the stop bit.
- 8) Parity: Select the verify, Non Parity by default.
- 9) Flow Control: Select the stream control, No Flow Control by default.
- 10) Click Save button to save the settings.

5.2 Setting PTZ Preset, Cruise & Pattern

Before you start:

Please make sure that the preset, cruise and pattern should be supported by PTZ protocols, as shown in figure 5.2.



Figure 5.2 PTZ Setting Interface

5.2.1 Customizing Preset

Follow the steps to set the Preset location which you want the PTZ camera to point to when an event takes place.

Steps:

1)Use the directional button to wheel the camera to the location where you want to set preset, and the zoom and focus operations can be recorded in the preset as well.

2) Click **Preset**, then enter the preset name in the preset text field, and click the **Setting** button to link the location to the preset. Repeat the above steps to save more presets.

You can click the Clear button to clear the location information of the preset.

5.2.2 Customizing Cruise

Purpose:

Cruise can be set to move the PTZ to different key points and have it stay there for a set duration before moving on to the next key point. The key points are corresponding to the presets. The presets can be set following the steps above in *Customizing Presets*.

Steps:

- 1) Select cruise No. in the drop-down list of cruise.
- 2) Click the Setting button to add key points for cruise, as shown in figure 5.3.

	Cruise Setting	9	×	
Preset	Cruise Time	Cruise Speed		
			<u> </u>	
Preset 1	Cruise Time	✓ Cruise Speed 1	~	
	Add Delete	Exit		

Figure 5.3 Cruise Setting

3) Configure key point parameters, such as the key point No., duration of staying for one key point and speed of cruise. The key point is corresponding to the preset. The Key Point No. determines the order at which the PTZ will follow while cycling through the cruise. The **Cruise time** refers to the time span to stay at the corresponding key point. The **Speed** defines the speed at which the PTZ will move from one key point to the next.

4) Click the **Add** button to add the next key point to the patrol.

5) After finish setting, click **Exit** button.

5.2.3 Customizing Pattern

Purpose:

Patterns can be set by recording the movement of the PTZ. You can call the pattern to make the PTZ movement according to the predefined path.

Steps:

1) Choose pattern number in the drop-down list.

2) Click the **Start recording** button and click corresponding buttons in the control panel to move the PTZ camera, and click the **Stop** button to stop it. The movement of the PTZ is recorded as the pattern.

Chapter 6 Backup

Purpose:

The record files can be backup to various devices, such as USB devices (USB flash drives, USB HDDs).



			1		0	
Start Pro	View Playback Smart re	etrieval File Backup Channel Set	ting Dick Menager System Settin	g Maintenance	. 15, 18, 17, 18, 18, 28, 21, 22	16:56:54 2016-11-10
Local backup						
	Select CH E All					
	CH33 - 36 E 17	■ 18 ■ 19 ■ 20 ■ 28 ■ 27 ■ 28	E 21 E 22 E 23 E 29 E 30 E 31	E 24 E 32		
	File Time 2010	/11/10.00:00:00 🖉 To 2016	л1ло 23:59:59 🗮			
	File Type 🔹 Vid	ea files ® Picture				
			MB Query File Size			
			Вгомзе			
					Start Back-up	Step Bacu-up

Figure 6.1 Backup Interface

6.1 Picture Backup

Start Preview	Playback Smart retrieval File Backup	Channel Setting Disk Manager System Se	1 D Maintenance	Nicelia	alarm Common dist 17:01:18 2016-11-22
Earl Press	Exercice (Construction) Exercice (Construction) Exercice (Construction) Science (Construction) Exercice (Construction) Exercice (Construction) Exercice (Construction) Exercice (Construction) Exercice (Construction)	Bit Bit <th></th> <th></th> <th>ydam Cannan dd 17: 01: 18 2016-11-22</th>			ydam Cannan dd 17: 01: 18 2016-11-22
					Start Back-up Step Bacu-up

Figure 6.2 Picture Backup Interface

Steps:

- 1) Select the Channel to backup.
- 2) Select the File Type:Picture.
- 3) Set the time of file to backup.
- 4) Click Query File Size button to view the file size.
- 5) Click Browse button to scan the USB device.
- 6) Click Start Back-up button to start the backup, show as following picture.
- 7) After finish, click **Confirm.**

6.2 Video File Backup

Start Previow Ployback Sma	rt retrieval	ing Disk Manager System Settin	g Maintenance	non disk0 - 2 - Missing alarm	17:19:17 2016-11-22
Local backup					
Select C41 W C11 - 32 W CH23 - 26 W	ANI 1 12 2 12 3 13 4 2 16 10 16 11 16 12 17 16 10 16 19 16 20 25 18 26 18 27 18 28	記5 記6 記7 第13 前14 第15 第21 前22 前23 第29 前30 第31	18 8 19 16 19 24 19 32		
	016/11/22 00:00:00 🔷 To 2016/	11/22 23:58:59			
	o is • Avi				
		MB Query File Size			
	n Juzhładb402 🗸	Browse			
				Start Back-up	Step Baca-up

Figure 6.3 Video Backup Interface

Steps:

- 1) Select the Channel to backup.
- 2) Set the time of file to backup.
- 3) Select the File Type:Video.
- 4) Select the File Format.
- 5) Click Query File Size button to view the file size.
- 6) Click Browse button to scan the USB device.
- 7) Click Stort Back-up button to start the backup, show as following picture.
- 8) After finish, click Confirm.

Chapter 7 Channel Setting

7.1 Adding IP Cameras

Purpose:

Before you can get live video or record the video files, you should add the network cameras to the connection list of the device.

Before you start:

Ensure the network connection is valid and correct, and the IP camera to add has already been activated.

Steps:

1) Click 🚨 icon, enter into the Channel Connecting interface, as shown in figure 7.1.

Start Previ	41 •• P	layback Smart Sea	rch Bar	ahup 😋	C Annel Setting	Disk Menager	System	Q1 Setting	Q Maintenant	e		🔊 mmen Diski - 3 -	- DMissing Ale 09:20:13 2016-12-30
Channel Connecting	Protoc	arch 🖉 18	Add All	IBH	Details	E Onvit	ImportEx	4944					Current Bandwidth: 4.656 Kbps
Channel Daramater	Channel						ation N	letwork Card			Channel	Address	Status
Channel Parameter													Connect Success
Schedule Setting						02640123591795	ieb8e45						
Manual Operation													
Channel Grouping													
											CHS		
Smert											CHI		
	Channel Par-	amotor											
	Protocol												
	Address	182 188 1 231											
	Part	5050									odmin		
		Constant Constant and											
												Cegy To	Save Cancel

Figure 7.1 Quick Adding IP Camera Interface

2) Click icon, it will automatically search all the IP cameras connected to the NVR.

3) Select the detected IP camera and click the button to add it directly, and you can click the **Search** button to refresh the online IP camera manually.

4) Or you can choose to custom add the IP camera by editing the parameters in the corresponding text field and then click the **Save** button to add it,as shown in figure 7.2.

Channel CH1 🖌 🗹 Enable Mode	
Protocol 18 V Network Typ	e TCP
Address 192.168.1.231	
Port 5050 User Name	admin
Device Information 02640123b91795eb6e45 Password	

Figure 7.2 Custom Adding IP Camera Interface

7.2 Channel Parameter

7.2.1 Display Setting

Purpose:

You can configure the OSD(On-screen Display) settings for the camera, including camera name, date /time, etc.

Steps:

1) Enter the OSD Configuration interface.

Channel Setting ->Channel Parameter ->Display Setting

- 2) Select the channel of camera to configure OSD settings.
- 3) Local Channel Name setting.
- Check the check-box before Show Local Channel Name, then enter the Local Channel Name in the text field.
- Click Save button, the name that enter will show on the screen. You can use the mouse to click and drag the text frame on the window to adjust the OSD position.
- 4) IP Camera Name setting(should be supported by the camera).
- Check the check-box before Show Channel Name, then enter the Channel Name in the text field.
- Click Save button, the name that enter will show on the screen, You can use the mouse to click and drag the text frame on the window to adjust the OSD position, as shown in figure 7.3.



Figure 7.3 OSD Configuration Interface

5) Select the Date & Time Format(should be supported by the camera).

6) Image Setting: Adjust the Brightness, Contrast, Saturation and Hue of the channel, as shown in figure 7.4.

	Video Para	
Brightness	-	- 0
Contrast	-	- 0
Saturation	-	- 0
Hue	-	- 0
	Confirm Restore def	ault



Camera Lens Parameters Setting: Set the channel Camera Lens Parameters, as shown in figure 7.5.

		Ler	ns Parameters		×
Day/Night				Exposure	
Day/Night	External Trig	~		Auto	Manual
Trigger Level	Default	~		Gain Control	Higher 💙
					1/30(1/25)
IRCUT Trigger	Forward	$\overline{\mathbf{v}}$		Iris	
Advanced Setting				Lens Iris	Manual 🗸
Picture Mode	Standard	~			
Mirror	Off	~			
WDB	0#	 •		Gama	
		I		Gama Model	Curve_2_0
3DNR	Low	`		Power Freque	
Sharpness	128		(0-255)	i owei riedue	
				ок	Cancel

Figure 7.5 Camera Lens Parameters Setting Interface

Click Save button to save the settings.

7.2.2 Video Encoding

Purpose:

Sometimes you need to edit the channel Camera Encoding parameters for better image.

Steps:

1) Enter the Recording Parameters interface, as shown in figure 7.6.



Figure 7.6 Video Encoding

- 2) Select the channel of camera to configure the encoding type.
- 3) Encoding Type: Select Main Stream or Sub Stream.
- 4) Resolution: Select the video resolution.
- 5) Bit-Rate Type: CBR & VBR can be selected.
- 6) Bit-rate: Set the Bit-Rate.
- 7) Frame Rate: Select the frame rate.
- 8) Select Video Quality, default: Best.
- 9) Click Save button to save the settings.

7.2.3 Capture

Can set the resolution of the local capture and relevant parameters. The interface is shown in figure 7.7.



Figure 7.7 Capture

7.2.4 Motion

Motion detection interface is shown in figure 7.8, can set the related parameters of motion detection.



Figure 7.8 Motion

(1) **Detection Modes:** The default is "Front Detect", when NVR support smart (smart detection), can switch mode to "Local Detect";

(2) **Sensitivity/proportion:** Can increase the accuracy of the motion detection trigger after setting up reasonably;

(3) **Zone setting:** Hold the left mouse button directly in the picture, drag to the area that needs motion detection, the red plaid area is the selected motion detection area, as shown in figure 7.9;



Figure 7.9 Zone Setting

(4) Arming schedule: Set the schedule that needs arming, as shown in figure 7.10;

				Arming Sch	edule		×
Week:	Monday		•				
Period1	00:00		÷	23:59			
Period2							
E Period3							
Period4							
E Period5							
🗏 Period6							
E Period7							
E Period8							
Сору То	E All						
	🗏 Monday	🔳 Tuesday		🛿 Wednesday	🗏 Thursday	🔳 Saturday	🔳 Sunday
				ок	Cancel		

Figure 7.10 Arming Schedule

(5) Linkage mode: Choose the mode that needs linkage, as shown in figure 7.11.

							Linka	ge Setti								
041 22			2		1 3				8 5		8		87		8	
CITI - J2	9		10		11				1		11		1		III 16	
	■ 17		18		81				2		2:		E 2		24	
	25		26		2				2		1 31		1 3		32	
0111 22	21		■ 2		11 3				8		8 6		87		8 1	
GHT - 32																
CH33 - 64																
CH1 - 32																
CH33 - 64																
	Disa 1 I	ble All NO Linkage				NO Linkage	.			NO Linkage				NO Linkage		
		10 Linkage				NO Linkage	•			NO Linkage	-			NO Linkage	-	
CH1 - 32		10 Linkage	-	1		NO Linkage	P h			NO Linkage	1-			NO Linkage		
		40 Linkage				NO Linkage	•			NO Linkage	-			NO Linkage		
		10 Linkage				NO Linkage	•			NO Linkage	1-			NO Linkage	-	
CH33 - 64		NO Linkage	•			NO Linkage	•			NO Linkage	-			NO Linkage	~	
		10 Linkage	•			NO Linkage	-			NO Linkage				NO Linkage	~	
							ni.			NOLinkage				MALINA	1	1

Figure 7.11 Linkage

- (6) Full screen frame: One click to set the whole screen area for motion detection area;
- (7) Full screen clear: One click to clear the motion detection area on the screen set before.

7.2.5 Video Loss

Video loss configuration screen, as shown in figure 7.12.



Figure 7.12 Video Loss

- (1) **Channel:** Choose the channel number;
- (2) Arming Schedule: Set the arming schedule of video loss, as shown in figure 7.13.

		Arming Schedule		×
Week:	Monday			
🗷 Period1	00:00	23:59		
E Period2				
🗏 Period3				
🔳 Period4				
🗏 Period5				
🗏 Period6		× 00:00		
🗏 Period7				
🗏 Period8		00:00		
Сору То	II All			
	🗏 Monday 📄 Tuesda	y 🔲 Wednesday 🗐 Thursd	lay 🗏 Friday 🔳 Saturday	🗏 Sunday
		OK Can	cel	

Figure 7.13 Arming Schedule

(3) Linkage: Set the linkage mode, as shown in figure 7.14.

	sable All														
	NO Linkage	-			NO Linkage		1		NO Linkage	• 1		NO Linkage	•		
	NO Linkage	-1			NO Linkage	•	1		NO Linkage	•1		NO Linkage	•		
CH1 - 32	NO Linkage				NO Linkage	-	1		NO Linkage	•1		NO Linkage			
	NO Linkage	-1			NO Linkage	-	1		NO Linkage	• 1		NO Linkage	•	-	
	NO Linkage	-			NO Linkage	-	1 🖌		NO Linkage	• 1		NO Linkage	•		
CH33 - 64	NO Linkage				NO Linkage	•	1		NO Linkage	•		NO Linkage			
	NO Linkage				NO Linkage	-	1		NO Linkage	•		NO Linkage	•	-	
	NO Linkage				NO Linkage				NO Linkage	~ 1		NO Linkage			

Figure7.14 Linkage

7.2.6 Video Tampering

Purpose:

Trigger alarm when the lens is covered and take alarm response action(s).

Steps:

1) Enter Video Mask Alarm interface of channel parameter and choose a channel you want to setup Video Mask Alarm, as shown in figure 7.15.



Figure 7.15 Video Tampering

- 2) Set the video mask alarm handling action of the channel.
 - > Check the check-box of **Enable Video Tampering Alarm**.
 - Select the sensitivity.
 - > Use the mouse to draw an area you want to detect video mask.
- 3) Setup the alarm schedule of the channel, as shown in figure 7.16.

			Arming Sc	hedule			×
Week:	Monday		•				
🗹 Period1	00:00		23:59	1			
E Period2							
E Period3							
E Period4			• 00:00				
🗏 Period5			00:00				
🗏 Period6							
				4			
Period8							
	Monday 📕	🔲 Tuesday	🖩 Wednesday	📕 Thursday	🗐 Saturday	🔳 Sunday	
			ок	Cancel			

Figure 7.16 Arming Schedule

4) Setup the linkage operation of the channel, as shown in figure 7.17.

Linkage												
	sable All											
	NO Linkage	•		NO Linkage	\mathbf{P}		NO Linkage			NO Linkage	•	
	NO Linkage	•		NO Linkage	\mathbf{P}		NO Linkage		~	NO Linkage	•	~
CH1 - 32	NO Linkage	-		NO Linkage			NO Linkage	-		NO Linkage	-	~
	NO Linkage	-		NO Linkage	P		NO Linkage	•	~	NO Linkage	•	•
	NO Linkage			NO Linkage			NO Linkage			NO Linkage	•	
CH33 - 64	NO Linkage	-		NO Linkage	-		NO Linkage			NO Linkage	•	~
	NO Linkage	-		NO Linkage	-		NO Linkage			NO Linkage	-	-

Figure 7.17 Linkage

5) Click **Save** button to save the settings.

7.2.7 Video Mask

Purpose:

You are allowed to configure the four-sided privacy mask zones that cannot be viewed by the operator. The privacy mask can prevent certain surveillance areas to be viewed or recorded. *Steps:*

1) Enter the Privacy Mask Settings interface, as shown in figure 7.18.



Figure 7.18 Video Mask

2) Select the camera to set privacy mask.

3) Click the check-box of **Enable Privacy Mask** to enable this feature.

4) Use the mouse to draw a zone on the window, up to 4 privacy mask zones can be configured and the size of each area can be adjusted.

5) The configured privacy mask zones on the window can be cleared by clicking the **w** button.

6) Click the **Save** button to save the settings.

7.3 Schedule Setting

7.3.1 Configuring Parameters

Before you start:

Make sure that the HDD has already been installed. If not, please install a HDD.

Steps:

1) Enter the Record settings interface to configure the recording parameters, as shown in figure 7.19.

Start Previ	e EE Kain Friedrich Friedrich Canadal Emilion Dink Manager Synthe Setting Manakasere	Starm Channel(), 2, 3, 4, 5, 17:04:46 2016-11-10
Channel Connecting	Receding Setting Capture Timileg	
Channel Parameter		
Plan Setting		
Manual Operation	Record Mode Alarm Recording *	
Channel Grouping		
Smart Detection	Recording lines	
	Tue	
	Med.	
	Sur Contraction Contra	
	Pre Record No pre roard v	
	Recording Delay so delay	
		Cepy to Save Cancel

Figure 7.19 Record Setting Interface

- Select the Channel you want to configure.
- Select the Record Mode.
- Click **Setting** button to set the record time, as shown in figure 7.20.

				Schedule	plan			×
Week:	Mon.		•					
🗹 Period1	00:00		Ð	23:59		Ð		
E Period2	00:00			23:59				
🗏 Period3	00:00		1	23:59				
🗏 Period4	00:00							
E Period5	00:00							
🗏 Period6	00:00							
🗏 Period7	00:00							
🗏 Period8	00:00							
Copy to	🗏 Select All							
	🗏 Mon.	🗏 Tue.	-	Wed.	🖺 Thu.	🔳 Fri.	🔲 Sat.	🔲 Sun.
				Cartin	Canad			
				Comm	Gancel			

Figure 7.20 Arming Schedule

- > Pre-Record: The time you set to record before the scheduled time or event.
- Recording Delay: The time you set to record after the scheduled time or event.
 *Note:*Use the Copy to to do the same setting to the channel needed.

7.3.2 Timing Capture

Timing capture setting interface, as shown in figure 7.21.

Start Previo	4 📴 🔯 🗁 📸 📥 छ 🔯	▼ 10-3-8Missing Alarms Com 09:37:31 2016-12-30
Channel Connecting	Recording Setting Timing Capture	
Channel Parameter		
Schedule Setting		
Manual Operation		
Channel Grouping		
Smart	Coplare Schedule String	
	Z L I <th></th>	
		Cepy To Save Cancel

Figure 7.21 Timing Capture Interface

- (1) **Channel:** Set the channel number;
- (2) **Timing capture:** Check to enable the timing capture;

(3) **Capture Schedule:** Set time intervals of timing capture according to the need, as shown in figure 7.22.

			Schedul	e plan			×
Week:	Mon.	•					
🗹 Period1	00:00	23:	59				
🗏 Period2	00:00	23:	59				
E Period3	00:00	23:	59				
E Period4	00:00						
E Period5	00:00						
E Period6	00:00						
E Period7	00:00						
E Period8	00:00						
	E Select All						
	🗏 Mon.	≣ wa		🗐 Thu.			
		Co	nfirm	Canc	el		



*Note:*Use the **Copy to** to do the same setting to the channel needed.

7.4 Manual Operation

7.4.1 Manual Recording

The Manual Recording Interface, as shown in Figure 7.23.

Start Preview	Playback Smart Search	Backup Channel Setting	Disk Manager System	Setting Maintenance		OMissing Narm Common Di	09:38:12 2016-12-30
	Manual Rec Capture M	enuol Narm					
	Manual Reo E All						
Manual Operation	CHII-32 8	810 811 818 819	E 12 E 1 E 20 E 2	13 E 14 21 E 22			
	CH33-64 E 25						
							Save

Figure 7.23 Manual Recording

7.4.2 Capture

The Capture Interface, as shown in Figure 7.24.

Start Previo	Playback Smart Searc	h Backup Channel Settir	9 Disk Manager System Setting	O Maintenance	D g Alarm Commos Diske-1-	09:40:38 2016-12-30
Channel Connecting	Manual Rec Capture	Manual Alarm				
Channel Parameter						
Schedule Setting	Capture E All					
Manual Operation	CH1 - 32 9	m 10 m 11 m 18 m 19	E 12 E 13 E 20 E 21			
Channel Grouping	CH33-66 E 25					
Smert						

Figure 7.24 Capture

7.4.3 Manual Alarm

The Manual Alarm Interface, as shown in Figure 7.25.

Start Previ	бц ан Р	layback	Smart Search	Backup	Channel Setting	Dizk Menage	System Setting	Maintenance		Common D	isk0 - 4 - OMissi	09:41:11 2016-12-30
		Manual Rec	Capture	Manual Alarm								
				Sulput No.								
Manual Operation				call								
Channel Grouping			Li Li	ical3								
										Trigger	All Trigger	Delete All

Figure 7.25 Manual Alarm

7.5 Channel Grouping

7.5.1 Structure

The role of setting organizational structure is to group the channel and preview, can group according to a standard, as shown in figure 7.26, that is group according to the region, the same channel can be divided into different groups according to the needs.

Start Pre	A E E E E E	Channel Setting Disk Manager System Betting	C Maintenance	Missing Alarm Cammon Di 09:43:15 2016-12-30
Start Pre- Channel Connecting Channel Parameter Bubeduki Sating Manuel Operation Channel Greening Simut	Product Band Dariet Bandry Product Inter Bandry Product Inter Inter Product Inter	Sandhillen Out Marger Synth Tetra	Image: second	V Blong Alex Commo D 2016-12-30
			»» « •	
				Sine

Figure 7.26 Organizational structure

Icon function is shown in table 3.1:

Table 3.1Icon	function
---------------	----------

Icon	Functional description	Functional description Icon Functional description					
+	Create group	×	Delete group				
- P	Modify the group name		Add group				
~~~	Remove the channel	<b>↑</b>	Move up				
↓		Move dow	'n				

## 7.5.2 Tour

Tour setting is similar to above organizational structure settings, also be grouped according to a certain standard, it's convenient for preview to conduct loop rotation operation, the setting interface is shown in figure 7.27.

------

------



Figure7.27 Tour

## Chapter 8 Disk management

Click Click icon, entering into the disk backup interface, there are three modules in this interface, the following instructions, respectively.

8.1 Storage Management

The information on the page explains in detail the situation of the current NVR receive the hard disk, as shown in figure 8.1, the device connects 1 hard disk, and is in normal state video recording.

Start Previow	Playback	Smart Search Backu	Channel Set	ing Disk Manager Syst	ton Setting M	<b>¢</b> Naintenance			() and	Disk1 - 0 - 0	Missing Alan	09: 201	12:22 6-12-31
Storage Management													
Disk Grouping													
Advanced Configuration	Physical No			Model			Information	Record	fissing Alarr		Delete		
Disk Location Map													
				ST2000VX000-1ES1			B						
										Create	Ferr	n#5	Save

Figure 8.1 Storage management

(1) **Processing after finish recording:** there are "Auto override" and "Stop Recording" two ways, the default is "Auto override";

(2) **SMART processing:** there are "Ignore error continue recording to video" and "Error happen, stop recording" two ways;

(3) **SMART information :** click  $\blacksquare$  icon will pop-up the SMART information list of current hard disk;

(4) **Missing alarm**: Detect that the SATA port will give an alarm if there is no hard disk connected;

(5) Format: Check the hard disk which needs to be formatted, then click the



**button**. (Note: when the status is "Need to be formatted", only when the corresponding hard disk only when finish formatting corresponding hard disk, can the hard disk continue video, note: please don't do other operation in the process of formatting)

## 8.2 Disk Group

(1) Auto grouping

The system default is video in accordance with the "Auto grouping", that is to say, all channel video defaulted to write video data in a hard disk, switch to next hard disk after finish video, if the NVR connect only one hard disk, namely, in accordance with the type of storage

management page in the "video post-processing" selected, cover the history video or stop video.

Note that, when the channel of device video is more than 32CH and connect multiple hard disk, to ensure the efficiency and performance of hard disk, default to video in 2 hard disk, video in one hard disk first 32CH of the video channel, the remaining channel video in another hard disk video.

#### (2) Manual Grouping

Manual grouping function is to group the channel, the channel of different group can video in different hard disk, and each channel can be set quotas, as shown in figure 8.2.



#### Figure 8.2 Manual Grouping

Above the middle column function button respectively are "Create a group", "delete the group", "quota setting", "Right move to add channels to group", "Left move to delete channels to group", note that, the channel preview without being added into the group won't video, the hard disk without being grouped is free hard disk, there would be no writing data.

Note: when manually group, it may clear the history video in the hard disk, please be careful when operating, to avoid irreparable harm.

## 8.3 Advanced Configuration

Advanced configuration, as shown in figure 8.3, check in the hard disk mode "enable RAID", can enable the clone function, when one of the hard disk is damaged, it will automatically copy the current video to other hard disk, to ensure that the file will not lost.

			HDD Quo	ta				×
🖲 Disable	e Quota		Enable Quota					
	500		Space Occupied610 ME		1000	] GB	Space Occupied0 MB	
	0	GB	Space Occupied0 MB	CH4	0	GB	Space Occupied0 MB	
CHE		ിക	Sease Occupied0 MP	СЦВ		امە	Serve Occupied0 MP	
	<u>u</u>	] db	Space Occupiedo MD	CITO	<u>u</u>	Jup	Space Occupiedo MD	
		GB	Space Occupied0 MB	CH8		GB	Space Occupied0 MB	
Amount					1500GB			
HDD Grou	up Space				1861.93 GB			
Space Wi	thin Group				610 MB			
Space Wi	thout Group				0 MB			
Total HDI	) Free Space				1861.00 GB			
			OK	Can	cel			

Figure 8.3 Advanced configuration

## 8.4 Disk Location Map

This page shows the product main board picture, as shown in figure 8.4, it identified the corresponding physical serial number of sata port, if certain hard dis need to replace, just compare the image to find corresponding sata hard drive. (Note: photos are for reference only, the specific is in kind prevail)



Figure 8.4 Disk location map

# Chapter 9 System maintenance

Click Maintenance interface, this part includes six parts altogether, note the following instructions:

## 9.1 System Information

Can view the device information, stream info and online users.

### 9.1.1 Device Information

Device information interface, as shown in figure 9.1, can view the versions of hardware and software.

Start Previe	l Dia Constant Sea	rch Backup Channel Setti	ng Disk.Manager System Setting	Maintenance	Iam Common Dick0 - 2 - 0M	09: 58: 50 2016-12-30
System Information	Device Information	tream Information Online User				

Figure 9.1 Device information

## 9.1.2 Stream Information

View the stream status of the current device, as shown in figure 9.2.

Start Preview	Playback Smart	t Search Bockup Channel Setting	Disk Manager System Setting	) Jinco	2 20mmon Disk1 - D - OMissing /	09: 59: 21 2016-12-30
System Information		Stream Information Online User				
					Sub Stream	
		4096 kb/z	583 kp/s	1757 MB/H	241 M8/H	
		0 kb/s	0 kp/s	0 MBNI	0 MRUH	
Auto Maintenance			0 kp/s	0 MB/H	0 MB/H	
			0 kp/s	0 MB/H	0 MB/H	
			0 kp/z	0 MB/H	0 MB/H	
			0 kp/s	0 MEDI	0 M0/H	
				0 MB/H	0 MB/H	
				0 MB/H	0 MB/H	
			0 kp/s	0 MB/H	0 MB/H	
				0 MB/H	0 MEUH	
				0 MR04	0 MEUH	
				0 MB/H	0 MB/H	
				0 MB/H	0 MB/H	
				0 MB/H	0 MEJH	
				0 MELTE	0 MEUH	
				0 MB/H	0 MR/H	
				0 MB/H	0 MB/H	
			0 kpJz	0 MB/H	0 MB/H	
				0 MB/H	0 MEUH	
				0 MB01	0 MB/H	
				0 MB/H	0 MB/H	
			0 kp/s	0 MB/H	0 MB/H	
				0 MB/H	0 MB/H	
			fl kols	0 MR01	а мля 🔰 🗎	
						Refresh

Figure 9.2 Stream information

## 9.1.3 Online Users

View the information of current logged in user, as shown in figure 9.3, including: user name, login time, login IP, login method, and so on.



Figure 9.3 Online users

## 9.2 Log Information

Click Search icon, the interface is shown in figure 9.4, can view the system log.

Start Preview	Playback Smart Search	Backup Channel Setting	Disk Manager System Settin	g Mainteaance		Alarma Common DistB-2- 2016-12-30
System Information		All Type	Sub Type All Sub Typ End Time 2016/12/30	c Chennel	All Chancels	Bearch Expert result
Config Management						
Auto Maintenance						
Network Monitoring						
				Page Home Page Page Up	Page Dawn End Page Skip to	

#### Figure 9.4 Log Information

(1) Log main types: can choose "operation", "abnormal", "alarm", "all types";

(2) **Sub type:** there is only one option of the current version;

(3) **Start time:** set the start time;

(4) **End time:** set the end time;

(5) **Export all log:** the log information can be imported into the storage devices;

(6) **Export the query results :** can import the current query log information into the storage devices according to the needs.

## 9.3 Configuration Management

As shown in figure 9.5, can export the configuration, import configuration and restore the default operation.



Figure 9.5 Configuration management

## 9.4 System Upgrade

As shown in figure 9.6, it can be divided into "Local upgrade" and "Upgrade IPC".

Start Preview	Parte Bart Start Barty Caland String Dia Manager Byten String Manager	Common Dist8 - 2 - 0Missing	10:33:51 2017-01-03
System Information	Lecal Upgrafe TC		
Log Information			
Config Management			
System Upgrade	Upgrade File: Browse		
Auto Maintenance			
Network Manifering			
			Upgrade

Figure 9.6 System upgrade

(1) **Local upgrade:** click "browse", select to upgrade the file, and then, the system will automatically restart after upgrading;

(2) Upgrade IPC: click "search", select IPC, click upgrade, then complete the IPC upgrading.

Note: when upgrading IPC, the common.sh file and upgrade package need to be put in the same directory, otherwise unable to upgrade.

_____

## 9.5 Auto Maintenance

Can set the maintenance mode, as shown in figure 9.7.

Start Preview	Playback Smart Search	Backup Channel Setting Disk Manager System	m Setting Maintenance	Marm Common Die	10:10:26 2016-12-30
System Internation					
Log Information					
Config Management					
System Upgrade					
Auto Maintenance					
Network Monitoring					
					ave Cancel

Figure 9.7 Auto maintenance

## 9.6 Network Monitoring

## 9.6.1 Network Flow

As shown in figure 9.8, can monitor the network traffic of the current device.

Start Preview	Playback Smar	t Search Backup	Channel Setting Disk Man	ager System Setting	<b>Q</b> Maintenance		<	•	Common D	10:11:0 2016-12-	03 30
System Information	Network Flow N	etwork Test									
Log Information											
Canfig Management	512Mbps										
System Upgrade											
Auto Maintenance											
Network Monitoring											
		I I I		I	II			I			
						🕂 Recei					
		Monitor Status				Netwo					
	LANT			9E:SF:BA02:	14:9C	100M	Full Duplex				
	LANZ	ancess	Wormal	PE-SF-BA-UZ-1	N.50	10004	ir un ouplex				

Figure 9.8 Network Flow

## 9.6.2 Network Test

The Network Test interface, as shown in figure 9.9.

-----

-----

Start Preview	Paybak Seart Starts Bactup Cakanel Setting Data Masager Synthe General	Sub1-1-BMGssing Alarm or 10:12:07 2016-12-30
System Information	Noheart File Network Tert	
Log Information		
Config Management System Upgrade		
Auto Maintenance	Destination Add	
Network Monitoring	Network Woreshall Buckup	
	Storage Path	
	Current Network Cand LAN1 192.168.1.189 9E.5F 8A-52.54.9C Vincibust Backup	

Figure 9.9 Network Test

(1) NIC choice: choose the network card, the default is network card 1;

(2) **Destination address:** input the network address that needs to be tested;

(3) **Network caught back up:** click "browse", set up storage paths, click "caught backup", then complete the backup.

# Chapter 10 System configuration

Click content icon, enter the system configuration interface, the interface has seven modules,

the following description respectively.

## **10.1 Time Setting**

Time settings interface, as shown in figure 10.1, can set the device time, time zone selection.

Start Prev	14 DE Co.	rch Backup Channel S	etting Disk Manager	System Softing	<b>D</b> Maintenance	Ding Alarm	ommon Dist0- 2016-12-30
Time Setting Chasnel Zero Setting Network Setting		12-30 08:45:10			Modity		
User Management User Management PT2 Setting Device Setting	Time Zone UTC +01 18 Time Zone Adjustn 18 Enable DST	3.00)Beijing. Hengkong Special Admin nent UTC +08:00	istrative Region, Urumqi, Si 00	ngapore T			
		January V first January V first BD minutes	© Date ¥ Sunday ¥ Sunday	v 00.00			
		est [24					
							Save

Figure 10.1 Time setting

(1)**Device time:** can manually modify the device time, set the time, click **Modify**, then save time;

(2) Synchronization to the front end: after the modified device time comes into effect, the time of channel IPC front end synchronous update;

(3) **Time zone:** switch time zones, the page will pop up a new date and time, there is daylight saving time function part time zone, the time zone is with functions of fine-tuning;

(4) **Enable daylight saving time:** click to enable daylight saving time, just need to finish setting the start and end time;

(5) **NTP time modifying:** after enable the function (the device need to access network).

## **10.2 Channel Zero Setting**

### **10.2.1 Global Setting**

Global setting interface is shown in figure 10.2, then set the related channel information after enable the parameter configuration.

Start Preview	Pizzak Beurlisarak Eastur Channel Setting Disk Manager Muniterance	© ng Alarm Common Disk1 - 1 09:46:50 2016-12-30
Time Setting	Global Stelling Channel Setting	
Channel Zero Setting		
Network Setting	W Enable	
Alarm Management		
User Management		
PTZ Setting		
Device Setting	Birnesi iyir Len	

Figure 10.2 Parameter configuration

- (1) **Resolution:** Set the video resolution;
- (2) **Bit-Rate Type:** Choose the bit rate type, the default is CBR;
- (3) **Bit-Rate:** Set the bit rate upper limit;
- (4) Video frame rate: set the frame rate according to the requirements.

### **10.2.2 Channel Setting**

The Channel setting Interface, is shown in figure 10.3.

Start Preview Playback Smart Search Backw	yp Channel Setting Disk Manager System Belling Mainteance	Cemmos Dikle-e-em 09: 47: 40 2016-12-30
Time Setting Global Setting Channel Setting		
Channel Zero Setting		
Network Setting Channel No. Channel Name		
Alarm Management		
User Management		
PTZ Setting		
Device Setting		
	•	
		Save

Figure 10.3 Channel configuration

## **10.3 Network Setting**

The module has 5 pages, the following description respectively.

### 10.3.1 Basic Setting

The network Setting interface is shown in figure 10.4, then can set the IP parameters.

Start Previo	4 Dayback	Smart Search Backup	Channel Setting Disk Mana	ger System Setting M	<b>¢</b> Kaintenance	Sarm Common Diski - 6 - 6M	09:48:28 2016-12-30
Time Setting	Basic Setti	ng DDNS Setting Email Set	ing Advanced Setting Manage	ment Platform			
Channel Zero Setting							
Network Setting		ard LAN1					
Alarm Management							
User Management							
PTZ Setting							
Device Setting							
	Galandy	192.168.0.1					
	DNS1						
		222 222 222 222					
							Gave

Figure10.4 Basic Setting

(1) Network card: According to the need can choose a different card type;

(2) **Physical address :** Show the physical address of the the current network interface, unchangeable;

(3) Automatic obtain the IP address: that is DHCP function, when open it, IP/mask/the gateway can not be set, if the current DHCP is effective, then it will obtain new IP/mask/gateway the router assigned (remote login need to use the new IP address), if it doesn't take effect, IP/mask/gateway will still show the previous address (can use the old IP address to remotely login equipment);

(4) **IP address:** Set the IP address, the default IP of the network card 1 is 192.168.1.189, the default IP of the network card 2 is 192.168.2.189;

(5) Mask: Set the mask;

(6) Gateway: Set the gateway address.

#### 10.3.2 DDNS Setting

The default is "disable DNS" status, Each set column can not be set, it needs to switch to the "enable DNS" status, as shown in figure 10.5, note that, this function need to ensure that device can normal access network when using.

Start Pro-	4 De Sma	t Search Backup	Channel Setting Dick Manager	System Betting Maintenance	🔊 ış Alarm Cemmes Disk1 - 3	09:48:56 2016-12-30
Time Setting	Basic Setting	ONS Setting Email Setting	Advanced Setting Managemen	t Platform		
Channel Zero Setting						
Network Setting						
Alarm Management						
User Management		members.3322.org				
PTZ Setting						
Device Setting						
						Save

Figure10.5 DDNS Setting

(1) Server type: there are 5 types of the defaulted list;

(2) Server domain name: Each server type is corresponding to the existing default server domain name;

(3) Port: Each server type is corresponding to the existing default port;

(4) The user name and password: Manually enter the correct user name and password;

(5) **Device domain name:** Manually enter the correct domain name (After the function is OK, you can use the domain name remote access device);

(6) **Update interval:** Set the update interval time.

#### 10.3.3 Email Setting

The settings in this page is used with "linkage configuration" in the "mail linkage " function, the sender email address and password, the recipient email address, SMTP server address and port information need to input correctly in the corresponding field according to the requirements of the format, there are other additional features on the page, as shown in figure 10.6.

Start Pres	<b>7</b> 4 Arew Pi	Layback S	imart Search	Backup	Channel Setting	Disk Manager	System Setting	<b>D</b> Maintenance		< •	Common Disk0 - 0 - 0	09:49:27 2016-12-30
Time Setting		Basic Setting	DDNS Setting	Email Setting	Advanced Setting	Managemer	at Platform					
Channel Zero Setting												
Network Setting												
Alarm Management												
Hier Management												
										⊠	÷	
PTZ Setting			Receiver2								U 10	
Device Setting			Receivers									
												Save

#### Figure 10.6 Email setting

(1) Fill in the multiple recipient mailbox, the sender email address will send E-mail to multiple recipients mailbox at the same time ;

(2) Check Attachment function, the mail the recipient received in his mailbox is with attachments, the attachment content is linkage capture file of the corresponding channel (zip format);

(3) Click the "test mail" corresponding field  $\square$  icon, Let the sender mailbox to send mail to the recipient's mailbox, the success or failure will pop-up tips.

Notice: use Email linkage function need to ensure a good network environment, then the device can smoothly access external network.

#### **10.3.4 Advanced Setting**

The Advanced Setting interface, as shown in figure 10.7.

Start Pre-	74 📴 🕅	th Beckup Chu	Innel Setting Disk Manager	System Setting	<b>Ö</b> Maintenance	Summon Disk9 - 4 - 9Missing Al 09: 50: 08 2016-12-30
Time Setting	Basic Setting DDNS S	etting Email Setting	dvanced Setting Managemen	nt Platform		
Channel Zero Setting						
Network Setting						
Alarm Management	PPPoE User Name		Devio	Dynamic IP		
User Management						
PTZ Settion						
TTC Groniy	Port Type	External Port	External IP Address	Internal Port	UPnP Status	
Device Setting					Ineffective	
	RTMP Port				Instluctive	
	HTTP Port				Instluctive	
						Save

Figure 10.7 Advanced Setting

### (1) Enable PPPoE

Need to fill in the correct PPPoE user name and password, if the network connect, can obtain the dynamic address of the device.

(2) Enable UPnP

Defaulted RTSP  $\$  RTMP  $\$  HTTP port numbers are respectively 554  $\$  1935 and 80, port numbers can be modified (modifying the internal port need to restart the device to take effect), UPnP status is defaulted to ineffective state, it will obtain the external IP address after take effect.

### **10.3.5 Management Platform**

This page is the enable interface of the platform agreement, as shown in figure 10.8, defaulted to enable Fseye and Web Server protocol (Support the device remotely login), other services enable according to the need. note that, enable/disable parts of service need to restart the device.



#### Figure 10.8 Management platform

(1) Click Modify icon, can modify Fseye protocol parameters configuration, as shown in figure 10.9.

	Fseye		×
Part	E.	000	
, or	<u></u>		
■ #EashlaSarChaok			
ОК		Cancel	

#### Figure10.9 Modify

(2) Click **GR Code** icon, can view Fseye QR code, as shown in figure 10.10.



Figure 10.10 QR code

## **10.4 Alarm Management**

There are 4 pages of this module, the following instructions respectively.

## 10.4.1 Alarm Input

The Alarm input interface, as shown in figure 10.11.

Burt Prev	A DE EX Exact Sure Backup Cakana Sering Dia Manager Mainteance Mainteance	<b>D</b> -8-6Mirzing Alarm Cannal 09:51:19 2016-12-30
	Alarm Input Alarm Cutput Alanamal Setting Linkaga Betting	
Alarm Management		
	Abare input Name Incal_or_port	
	E Alami Handilay Aming Bahadul Eutong Lakkeya Eutong	
		Copy To Save Cancel

Figure 10.11 Alarm input

- (1) Alarm input: Select channel;
- (2) Alarm input name: edit alarm name;
- (3) Alarm status: set the alarm state, the default value is always open;
- (4) Arming schedule: set the arming schedule, as shown in figure 10.12;

			Arming Sch	edule				×
Week:	Monday	•						
🛛 Period1	00:00	•	23:59		•			
E Period2								
🗏 Period4								
🗏 Period5								
🗏 Period6								
E Period8								
Сору То	🗏 All							
	🗏 Monday		] Wednesday	🗏 Thursday		🗏 Saturday	🗏 Sunday	
			ок	Cancel				

Figure10.12 Arming schedule

(5) Linkage mode: choose the type of alarm linkage, as shown in figure 10.13;

							-	T Clink.	ige sem	"9						
Alarm Output:																
0111 00																
CHI - 32	<b>9</b>		■ 10		<b>B</b> 1					- 11		⊞ 14			<b>B</b> 1	
CH33 - 64	■ 17		18		II 11					E 2		E 22			E 2	
	E 25		E 26		11 23					2		III 30	<b>III</b> 3		III 3	
CH1 - 32	1		E 2		III 3		-	4								
	E 17		= 10									E 14				
CH33 - 64	E 25		m 26		III 23							III 30				
Capture			<b>m</b> 2		щэ					m s		пε			mo	
CH1 - 32	<b>m</b> 9		m 10									1114				
	E 17		III 18		E 11					E 2		Ⅲ 22			<b>E</b> 2	
CH33-64																
		E All														
		Linkage				NO Linkage		ĽĽ			NO Linkage			NO Linkage		×
								<b>-</b>								<b>~</b>
CH1 - 32	9 NC	Linkage	~			NO Linkage		• 1			NO Linkage	-		NO Linkage		~
	13 NO	Linkage				NO Linkage		•1			NO Linkage	-		NO Linkage	ŀ	~
	17 10	Linkage				NO Linkage		•			NO Linkage	-		NO Linkage		
								DO			NO Linkage				Τ.	
	21 NO	Linkage						<b>™</b> ]]1						NU Linkage		
	21 NG 25 NG	Linkage Linkage				NO Linkage NO Linkage		•			NO Linkage	Ti		NO Linkage		

Figure 10.13 Linkage mode (6) **Copy to:** copy the above configuration to other channels;

### 10.4.2 Alarm Output

The Alarm Output interface, as shown in figure 10.14.

Start Pre-	AL EE RA Entre Sarch Backup Channe Serling Data Managers Mainteasure	2-0Missing Narm Common 11:17:03 2017-01-09
Time Setting	Alam laput Alam Ordent Abnormal Setting Linkage Setting	
Channel Zero Setting		
Network Setting		
Alarm Management	Alors Dohot Nama	
User Management		
PTZ Setting	Alarm Output Delay Self-Dafine V 0 5	
Device Setting	Arming Schedule Setting	
		Copy To Save Cancel

Figure 10.14 Alarm Output

- (1) Alarm output: choose the channel number that needs to set;
- (2) Alarm output name: set the alarm output name;
- (2) Output alarm delay: choose the alarm output delay time or custom settings;

(3) **Arming schedule:** choose the time interval that needs arming schedule, as shown in figure 10.15.

				Arming Sch	edule				×
Week:	Monday		~						
Period1	00:00			23:59					
E Period2									
E Period3									
E Period4									
E Period5									
🗏 Period6									
E Period7									
E Period8									
Сору То	E All								
	📕 Monday	🔳 Tuesday		Wednesday	🔳 Thursday	E F	🗏 Saturday	🔳 Sunday	
				ок	Cancel				

#### Figure 10.15 Arming schedule

(4) **Copy to:** copy the above configuration to other channels.

### **10.4.3 Abnormal Setting**

The Abnormal Setting interface, as shown in figure 10.16.



Figure10.16 Abnormal Setting

(1) **Anomaly type:** there are 6 type for choice, respectively are "Hard Disk Full", "No Hard Disk", "The network hard disk dropped", "HDD Smart Faulty", "Network Disconnected" "IP Address Conflict";

(2)**Trigger mode:** all types of trigger mode default to open" alarm on monitor" and "upload to center", "The network hard disk dropped" default to open "voice alarm".

## 10.4.4 Linkage Setting

You can query/add/modify/delete on this page all alarm types and all channel linkage configuration information, as shown in figure 10.17.

Start Preview	Playback	Smart Sear	reh Backup	Channel Setting	Disk Manager	System Setting	<b>D</b> Maintenance		🔊 -g Alerm Common DiekD -	10:46:33 2017-01-03
	Alarm legut	Alarm Gul	tput Abnormal Setti	0 Linkage Setting	1					
							All		Search	
Alarm Management								Details		
	1 4		Remotel							
User Management	2 4	Jarm Input	Remste2	Recording						
	4 4	lerm locut	Remeted	Recording						
		Jerm Input	Remote5	Recording						
Device Setting	6 A1	Jarm Input	Remoteli	Recording						
	7 AI	Jarm Input	Remote7	Recording						
	8 AI	Jarm Input	Remote8	Recording						
		Jerm Input	Remote9	Recording						
	13 AI		Remote13	Recording						
	14 AI	Jarm Input	Remote14	Recording						
			Remote18	Recording						
			Remote19							
		Jarm Input	Remote21	Recording						
			Remote22	Recording						
									Add Modily	Delete

### Figure10.17 Linkage Setting

(1) Alarm type: set the alarm type, including "alarm input", "motion detection", "video mask"

- (2) Alarm source: choose the alarm channel;
- (3) Retrieve: click search icon, then it can show alarm information.;
- (4) Add: click down in figure 10.18;

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						A	arm	Link	age Sett	ing								
	© A © T	larm Input arget Count			е м е о	lotion bject Left/Lo				e 1 0 1	/ideo Tampe .ine Crossing			8 V 8 A 8 F	/ideo Loss Area Detection Face Detectio			
Linkage		ound Alarm mail Linkage			⊕ F EE S	re Detection ound Alarm					/QD Jarm On Moi	nitor		00 100	icene Change Jpload To Ce	: nter		
Alarm Output:																		
Proview CH1 - 32 CH33 - 64	E A E 1 E 9 E 1		■ 2 ■ 10 ■ 18 ■ 26		■ 3 ■ 1 ■ 1	1	E 4 E 1 E 2	2		■ 5 ■ 1 ■ 2	3	E 6 E 14 E 22		E 7 E 1 E 2	5 3		3 16 24	
Recording CHI - 32 CH33 - 64	E A E 1 E 9 E 1 E 2		E 20 E 2 E 10 E 18 E 26					2 0 8			9 3 11 9	E 6 E 14 E 22 E 30			5 3 1		3 3 16 24 32	
Capture CH1 - 32 CH33 - 64	E A E 1 E 9 E 1 E 2		■ 2 ■ 18 ■ 18 ■ 26		■ 3 ■ 1 ■ 1 ■ 2			2 0 8		■ 5 ■ 1 ■ 2 ■ 2	3 11 19	<ul> <li>■ 6</li> <li>■ 14</li> <li>■ 22</li> <li>■ 30</li> </ul>		E 7 E 1 E 2 E 3	5 3 1		3 16 24 32	
		able All	<b>_</b>	Ū		NOListan		រាព			NO Linkson				NO Linkson			
		NO Linkage	-			NO Linkage	ŀ	10			NO Linkage				NO Linkage		- -	
CH1 - 32		NO Linkage	~	•		NO Linkage	ŀ				NO Linkage				NO Linkage		•	
		NO Linkage	-	•		NO Linkage	\·	1			NO Linkage				NO Linkage		<b>•</b> [	
		NO Linkage	~	•		NO Linkage	`	1			NO Linkage				NO Linkage		•	
CH33 - 64		NO Linkage	•			NO Linkage		1			NO Linkage				NO Linkage		<u> </u>	
		NO Linkage	_			NO Linkage	•	1			NO Linkage				NO Linkage		<b>•</b> ]1	
							ок			Gano	el							

#### Figure10.18 Add

(5) **Modify:** select a set of alarm information, click **Modify** icon, can modify the alarm configuration, as shown in figure 10.19;

					A	ann	лпкадо	0000	my							
0111 22																
uni - 32																
	■ 17		II 18	- 11					E 2		■ 22		E 2		■ 24	
	E 25		III 26			<b>m</b> 2	8		III 2	9	III 30		H 3	1	III 32	
CH1 - 32	21		E 2										= 7		E 8	
							2			3	U 14					
			E 76								III 20			3 1	E 29	
Capture				in s		in a			ms		Пĸ		<b>m</b> 7		m o	
CH1 - 32			m 10								11 14				m 16	
	E 17		E 18						<b>m</b> 2		1 22		E 2		E 24	
CH33 - 64	25		E 26								1 30		11 3		E 32	
·iz Linkage																
		NU Linkage			NU Linkage					NU Linkage	-			NU Linkage		
		NO Linkage													<b>~</b>	
CH1 - 32		NO Linkage	~		NO Linkage					NO Linkage	~			NO Linkage	~	
		NO Linkage	~		NO Linkage					NO Linkage	~			NO Linkage	~	
		NO Linkage			NO Linkage					NO Linkage	~			NO Linkage	~	
		NO Linkage			NO Linkage					NO Linkage				NO Linkage		
		NO Linkage			NO Linkage					NO Linkage	~			NO Linkage	~	
					NOLISTON		16			NO Linkage		ī.		NO 1	i.	

Figure 10.19 Modify

(6) **Delete information**: select a set of alarm information, click **Delete** icon, delete the information.

## **10.5 User Management**

User management interface is shown in figure 10.20, you can modify the user information and users permission.

_____

:=	<b>*</b> 4		<b>i</b>		ô		τ <mark>ο</mark> '	\$		۲	c	09:53:03
Start	Preview	Playback.	Smart Search	Backup	Channel Setting	Disk Manager	System Setting	Maintenance				2016-12-30
Channel Zero S	Setting											
Uzer Manope												
									User Permission	Delete User	Add User	Madily User

Figure 10.20 User management

(1) Modify Users: modify the selected users information, as shown in figure 10.21;

Modify	y User	×
User Name		
Password		
Confirm Password		
User Type	Operator	~
ОК	Cancel	

Figure 10.21 Modify users

(2) Add Users : add a new user, as shown in figure 10.22, fill in the user name and password;

	Add User X
User Name	
Password	
Confirm Passw	ord
User Type	Operator 🗸
ОК	Cancel

Figure 10.22 Add User

- (3) Delete users: can delete the selected users (except admin and default users);
- (4) User Permission: set the selected users permission, as shown in figure 10.23.

				User Permiss	ion				>
Local Autho									
🔳 Local Log	g Search		al Parameter :	Getting 🔳	Local Channel	l Management	🔳 Local Bidi	rectional-Talk	
🗏 Local Se	nior Managen		al Shutdown /	Reboot					
Remote Aut	thority								
🔳 Remote l		🔳 Remo	te Parameter	Setting 🔳	Remote Channi	el Managemen	t 🔳 Remote \$	Serial Port Co	ntrol
🗏 Remote I	Bidirectional-1	falk 🔳 Remo	ite Senior Mar	agement 🔳	Remote Shutdo	wn / Reboot			
Multi-Chann	el Config			P	review				•
Preview	IA 🗵								
	1		2 3	₹ 4		2 6	2 7	2 8	
CH1 - 32	9 🛛	🗾 10	💟 11	🗾 12	💹 13	🗾 14	2 15	🗾 16	
01122 64	_ 🗹 17	🗾 18	2 19	20	🗹 21	22	23	24	
04	25	26	27	28	29	2 30	2 31	2 32	
				ок	Cancel				

Figure 10.23 User Permission

## 10.6 PTZ Setting

This page is PTZ parameter setting interface, as shown in figure 10.24, only when the parameter is set correctly, can the PTZ run normally.

Start Prev	a Playbac	sk Smart Se	arch Backup	Channel Setting Disk	Manager System Betting	<b>D</b> aintenance	Samman Dist	0 – 4 – OMissing Al	09: 55: 37 2016-12-30
Time Setting		DO LOF Denies							
Channel Zero Setting									
Network Setting		Channel							
Alarm Management									
User Management									
PTZ Setting									
Dervice Settion									
			No Parity						
			No Flow Control						
								Copy To	Sam

Figure10.24 PTZ Setting

- (1) **485 device:** show the accessed 485 devices;
- (2) Channel: choose the channel number;
- (3) **Protocol:** 2 protocol optional, pelecoD and pelcoP;
- (4) **Decoder address:** choose the decoder address;
- (5) **Baud rate:** Select baud rate;
- (6) Data bits: set data bits;
- (7) **Stop bit:** set stop bits;
- (8) Parity: No Parity, Odd Parity, Even Parity, the default value is No Parity;

(9) **Flow control:** no flow control, software flow control, hardware flow control optional, the default value is no flow control.

## **10.7 Device Setting**

The Device Setting interface, as shown in figure 10.25.

ii 🕯	<b>a</b> [			ô		т <mark>о</mark> т	•		Common Disk1 - 4 - OMiss	09: 56: 24
Start Pre-	nie₩ Pla	yyback Smart Searc	sh Backup	Channel Setting	Disk Manager	System Setting	Maintenance			2010 11 50
Time Setting										
Channel Zero Setting										
Network Setting										
Alerm Management										
User Management										
PT2 Setting										
Device Setting										
-										
			English							
			1920x1080-P60							
			54CH Preview + OCH Sr							
			Channel No.0SD+IP							
			5 minutes							
			None							
			Setting							
				\$-						
										Save

Figure 10.25 Device Setting

(1) **Device ID:** namely device number, default to 0;

(2) **Device name:** can edit the device name, default to blank;

(3) Serial No: show the product serial number;

(4) The total number of channels: show the max preview channel number, different model support different max channels;

(5) The number of hard disk: show the number of hard disk access;

(6) Alarm input: namely the alarm input channel;

(7) Alarm output: namely alarm output channels;

(8) **Select language :** can modify the system language of NVR, need to restart to take effect;

(9) **Resolution:** can modify the local monitor resolution of NVR (need monitor support), it come into effect immediately after modified;

(10) Ability to preview: preview max same screen display channels the device supported and the max intelligent detection channel numbers (different models of NVR, different ability), need to restart to take effect;

(11) **Channel information display :** there are 4 kinds of display mode, the preview interface device list refresh in time after modify successfully;

(12) **Real-time playback time :** there are 5 kinds of time choice, it come into effect immediately after modified;

(13) **485 device:** set the 485 control mode, default to None;

(14) **IPC protocol management :** selective to enable the protocol, click "setting", as shown in figure 10.26;

Р	Protocol	No.
	18	<b>Z</b> 1
	18H	<b>V</b> 2
	Onvif	<b>V</b> 3
	Rtsp	<b>2</b> 4
	Onvif Rtsp	2] 3 2] 4

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Figure10.26 IPC protocol management

- (15) Auxiliary User: Open/close function, default to close, restart device to open;
- (16) Mouse Speed: adjust the speed of the mouse, it come into effect immediately.

# Chapter 11 Intelligent Analysis

Intelligent analysis is the vital function of 2.0NVR, and this chapter will give clear and specific instructions in terms of intelligent performance, process and parameter configuration.

## **11.1 Brief Introduction**

The current intelligent performance of NVR2.0 includes:

- (1) Behavior analysis: target count, item detection, regional testing, virtual warning line
- (2) License plate recognition
- (3) Face detection
- (4) Sound alarm: baby crying, screaming, gunshots, explosions
- (5) Fire detection
- (6) Video diagnosis: color cast, too bright, too dark, fuzzy, video loss
- (7) Scene change detection

The behavior analysis can support both front-end and local detection modes (based on the actual capacity of the product); scene changes only support the local detection mode; other intelligent features only support the front-end detection mode. That is, if the front-end IPC has no behavior analysis function, some models of the NVR local end can still conduct behavior analysis; However, if the front-end IPC has no license plate recognition, face detection, abnormal sound alarm, flame detection, video diagnosis and other functions, these features are not supported by the local end of the NVR too.

Note that some intelligent functions can not be enabled at the same time (depending on the capabilities of the front end IPC):

(1) Abnormal sound alarm and any other intelligent functions are not in conflict;

(2) If license plate recognition is being processed, all other intelligent functions, except for abnormal sound alarms, must be disabled;

(3) If face detection is turned on, all other intelligent functions except the abnormal sound alarm must be disabled;

(4) Behavior analysis, abnormal sound alarm, flame detection, video diagnosis and scene change detection can be processed at the same time;

### **11.2 Enable Smart Analysis**

Some models (such as R79-0164K) do not enable intelligent analysis by default. To enable intelligent analysis, first open the device parameters interface and set the preview capability to the mode with intelligent analysis, as shown in Figure 11.1.



Note: Currently NVR2.0 intelligent function only supports I8H protocol, so only when I8H protocol accesses IPC can the front-end detection be turned on.

## **11.3 Function Configuration**

## 11.3.1 Detection Mode

As shown in Figure 5.2, there are "IPC front-end detection" and "NVR local detection" mode, the default is the former. The IPC front-end detection mode requires the IPC front-end to support intelligent detection. If IPC front-end detection is not supported, the NVR Local Detection mode is then selected.

Start Preview	Playback	Smart Search Backup	Channel Setting Disk Manager	System Setting	<b>D</b> Maintenance			Alarm	14:37:27 2017-01-03
	Detect Mode	Target Count Object Left/Lor	t Area Detection Line Crossing	Sound Marm	Face Detection	Fire Detection	YQD Scene Change		
	Channel1	Front Detect	Local Detect						
									Save

Figure11.2 Detection Mode

### 11.3.2 Behavior Analysis

Behavior analysis includes the following functions: target counting, object detection, area detection, virtual warning line.

The target triggering rule is based on the center of the target's lower edge (except height limit detection), which is generally the position of the human foot. So when setting the detection line or detection area, the line / area should not be suspended in the air

The minimum height of the target should not be less than 1/32 of the image height; the minimum width should not be less than 1/64 of the image width; the maximum width of the proposed object should not exceed 1/4 of the image width; the maximum height should not exceed 1/2 of the image height;

Set the detection line or the detection area, do not appear too close to the target location; It also requires the scope view of camera can not be too small, the target can not be too large. Precautions:

(1) Camera installation: to install vertically, to maintain static, to avoid occlusion of vision, to make height appropriate (higher than two meters);

(2) Scene selection: to ensure adequate lighting, reduce the complexity of the scene, try avoid areas that may affect the accuracy, such as the detection area where there are leaves shaking, severe shadows, birds, insects and more, try to avoid Glass, floor tiles, lake and other reflective scene selection;

(3) Alert area requirements: the warning area used for intelligent analysis is required to exceed more than 1/8 of the video screen area; if it is cordon, the distance between the sides of the line should exceed the image width or 1/4 of the height.

#### • Target counting

The purpose of this page is to configure the relevant parameters so that the target count alarm occurs when a moving object whose proportion is larger strides the set detection line to obtain the number set by the detection rules, as shown in figure 11.3. The following describes the parameters of the pages on the set method.



Figure11.3 Target counting

(1) **Channel**: Select the channel;

(2) **Detection mode**: divided into front-end and local, the two models to the actual capacity of the product subject, selecting the front-end mode requires front-end access to IPC support, selecting the local model requires equipment support;

(3) **Enable**: Check to enable the target count;

(4) **Preview**: When enabled, you can see the detection line and the statistical result in the preview interface.

(5) **Detection line**: each screen can be set up to four detection lines, directly on the screen drag the left mouse button to draw the line, release the left button, right-click to complete the drawing line, the completion of the detection line on both sides were AB Area, the upper side will display the statistical results;

(6) **A-> B**: acquiesce is A area to B area to increase counting, A / B area location on both sides of detection line can be exchanged;

(7) **B-> A**: "Increment Count" or "Flow Count Result = 'A-> Count of B' + 'B-> Count of A'", "Count Down" > Count of B '-' B-> Count of A ", 'Ignore' or 'Count of flow statistics' ='

(8) **Proportion**: only when size of Moving objects in the screen is larger than the size of the set can it be used as a "target", when setting the center of the screen will appear a yellow dotted rectangle frame as a reference;

(9) **Traffic Statistics**: When enabled, you can set the "Traffic Statistics Interval and Alarm Threshold".

(10) **total statistics**: After the opening you can be set "statistical time and total alarm threshold";

(11) **deployment plan**: that is, set the deployment time, the default is all-day deployment;

(12) **Linkage processing**: You can enter the linkage configuration page when the alarm is triggered, and perform the linkage configuration operation;

(13) **Erase line**: one click to clear the screen to set the history setting line.

In accordance with the above settings, every 30s account for 150 times the number of objects through the detection line 2, trigger the alarm, as shown in figure 11.4 and 11.5 is the pre-alarm and alarm occurs when the real-time preview screen.



Figure 11.4 Pre-alarm



Figure 11.5 Alarming

## ♦ Goods detection

The purpose of this page is to configure the relevant parameters, so that more than the proportion of objects in the set detection area lost / left over time detection time that goods detection alarm. As shown in figure 11.6, the following describes the main parameters on the page set method.



Figure11.6 Goods detection

(1) **Channel:** Select the channel;

(2) **Detect Mode:** divided into front-end and local, two models to the actual capacity of the product subject, select the front-end mode requires front-end access to IPC support, select the local mode requires device support.

(3) **Enable:** Check to enable the target count;

(4) **Display In Preview:** When enabled, you can see the detection line and the statistical result in the preview interface.

(5) **Detect Area:** Each screen can be set up to 4 detection area, drag the mouse directly on the screen to draw the line, release the left button, move the mouse again to form a second left-click line, and then click Right after the automatic closure of the formation of the region is the detection area (to set up a qualified area at least manually draw two lines);

(6) **Detection Type:** "lost items", "items left behind", "missing items or items left behind" 3 types;

(7) **Proportion:** moving objects in the screen than the size of the set when the size can be used as "items";

(8) **Detection time:** detected items lost / left more than this time to trigger the alarm;

In accordance with the above settings, in the channel screen, the proportion of more than 150 items in the detection area disappeared more than 30s, triggered object detection alarm, alarm before and after the real-time preview screen, respectively, as shown in figure 11.7 and figure 11.8. (Which identifies the blue rectangle that is missing the area where the goods)



Figure11.7 Pre-alarm



Figure 11.8 Alarming

## • Area Detection

The purpose of this page is to configure the relevant parameters, so that more than the proportion of moving objects, enter / leave / hovering in the set detection area, over time detection zone detection alarm occurs. Interface shown in figure 11.9, the following page describes the main parameters of the setting method.



Figure 11.9 Area Detection

(1) **Channel:** Select the channel;

(2) **Detect Mode:** divided into front-end and local, the two models to the actual capacity of the product subject, select the front-end mode requires front-end access to IPC support, select the local mode requires the device support;

(3) **Enable:** Set whether to enable zone detection function;

(4) **Display In Preview:** Set whether to display the set rules and test results in the preview interface;

(5) **Detect area:** the screen with the mouse to draw the area;

(6) **Detection types:** there are "target to enter", "target to leave", "target to enter or leave", "target wandering" 4;

(7) **Proportion:** moving objects in the screen than the size of the set when the size can be used as a "target";

(8) **Detect time:** detect the target activity more than this time to trigger the alarm;

According to the above setting, the moving object (automobile) occupying over 150 in the channel picture has entered the detection area for more than 5s, triggering an area detection alarm, as shown in Figure 11.10, which is the preview real-time picture Color rectangular box that is identified into the area of the target).



Figure 11.10 Area Detection

• Line Crossing

The purpose of this page is to configure the relevant parameters, so that more than the proportion of moving objects, across the set of test lines, the virtual alarm immediately alarm line. The following describes the main parameters of the page setting method.



Figure 11.11 Line Crossing

(1) **Channel:** Select the channel;

(2) **Detect Mode:** divided into front-end and local, two models to the actual capacity of the product subject, select the front-end mode requires front-end access to IPC support, select the local mode requires the device support;

(3) **Enable:** Set whether to enable zone detection function.

(4) **Display In Preview:** Set whether to display the set rules and test results in the preview interface;

(5) **Detect Line:** on the screen with the mouse to draw the test line, a key exchange A / B;

(6) **Detection Type:** There are two types: "A-> B alarm" and "A <-> B alarm"

(7) **Proportion:** Filter out less than the proportion of the set of moving objects.

According to the above settings, in this picture of a channel, accounted for more than 30 of the moving object, across the detection line from A region to B area, triggered area detection alarm, as shown in figure 11.12 is the alarm occurs real-time preview images (where the detection line or the red and green are blinking alternately, and the alarm is triggered, And the blue rectangle moves with the target crossing the cordon).



Figure 11.12 Line Crossing

## 11.3.3 Voice Alarm

Voice alarm configuration page shown in figure 11.13, detection sensitivity is divided into three levels of high, medium and low; the higher the sensitivity, the easier the sound is detected, the easier the alarm; when you choose to turn off, that stop the corresponding abnormal sound detection.



Figure 11.13 Voice Alarm

(1) **Channel**: select the channel;

(2) **Detect mode**: only supports the front-end detection mode, need front-end access IPC support;

(3) **Detect type**: baby crying, screaming, gunshots, explosions.

Note: Here the sensitivity and sound size and similarity, when the front-end ipc detected more than one of several sound effects will trigger the alarm.

#### **11.3.4 Face Detection**

It supports the detection of static and dynamic faces. It is recommended to set the range of the detected face as accurately as possible according to the actual scene. This will speed up the detection speed and reduce the false detection of the face detection interface as shown in figure 11.14.



Figure 11.14 Face Detection

(1) **Channel**: Select the channel;

(2) **Detect mode**: only supports the front-end detection mode, need front-end access IPC support;

(3) **Enable:** Check to enable face detection.

Proportion: set the minimum proportion and the largest proportion;

When the face size somewhere in between, the system will detect, as shown in figure 11.15.



Figure 11.15 Alarming

Note:

(1) if the indoor light slants dark, or the presence of backlight, camera needs to support the low illumination, wide dynamic, and other functions.

(2) when used for night capture, or captured scene light changes drastically, it needs to support automatic aperture.

## **11.3.5** Fire Detection

Fire detection interface is shown in figure 11.16.



Figure 11.16 Fire Detection

(1) Channel: choose channel;

(2) Detect patterns: only supports the front-end detection mode, need front end access IPC support;

(3) Enable: whether to enable fire detection function;

(4) Sensitivity: set the sensitivity of fire detection, the higher the value, the higher the sensitivity of the flame detection.

Set the detection area: use the mouse to click the channel screen need marking area, hold the left mouse button to be not moved to extend the line; Every click the left mouse button can drawn a twist line, right-click to end automatically connected into a closed area, as shown in figure 11.17.



Figure11.17 Fire Alarming

Note:

(1) Using the fire detection function, must be on the premise that the IPC is color mode;

(2) Recommended application scenario is forest, warehouse, workshop, etc. Unattended or sparsely populated environment;

(3) Support to detect red/yellow flame, the detection rate  $\ge 95\%$ ;

(4) Support for indoor and outdoor environment of fire detection.

#### **11.3.6 Video Diagnostic**

This function is part of the image quality evaluation, intelligently analysis, judgment, and alarm when there is video image quality problems that exist in video diagnostic configuration interface is shown in figure 11.18.



Figure 11.18 VQD

(1) **Channel**: choose channel;

(2) **Detect mode**: only supports the front-end detection mode, need front end access IPC support;

(3) **Enable**: set whether to enable video diagnose function;

(4) check the video parameters that need diagnose and set the parameter values, the higher the parameter value, the higher the sensitivity of diagnosis, the diagnosis of the image parameters is as below:

Image color cast: diagnose the failure that the video image color cast cause by the color balance failure, poor contact video circuits, signal interference, and even a certain color missing fault;

Brightness is too dark: diagnose the too dark image caused by camera gain abnormal, improper exposure, low illumination;

Brightness is too bright: diagnose the too bright picture caused by camera gain abnormal, improper exposure, strong light exposure;

Image fuzzy: diagnosis the status that the edge is not clear caused by not accurate focusing ; Video loss: image gets black.

### 11.3.7 Scene Change

Figure 11.19 shows the situation where the front-end IPC detects a change in the screen caused by human or environmental factors, such as the camera being deflected, the camera being blocked, and the camera's angle or position being changed.



Figure 11.19 Scene Change

(1) **Channel:** select the channel;

(2) **Detect mode:** only local detection mode is supported, and local device support is required;

(3) **Enable:** set whether to turn on scene change function.

## 11.4 Arming plan and linkage processing

## 11.4.1 Arming Plan

Click the Setup button of the Arming Schedule to schedule the arming schedule. Arming time can be set using the copy function for a whole week or a certain day of the week a period of time, set up after the click OK to save, as shown in figure 11.20.

			Arming Sch	edule		×
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🗷 Period1	00:00		23:59			
E Period2						
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	🗏 Monday 📰 Tuesday		Wednesday	🔳 Thursday	🔳 Saturday	🔳 Sunday
			ок	Cancel		

Figure 11.20 Arming plan
## 11.4.2 Alarm Linkage Setting

Click the linkage setting button, and select the alarm linkage in the pop-up linkage configuration interface, as shown in Figure 11.21.



Figure 11.21 Alarming Linkage Setting

(1) Linkage: select mail linkage, sound alarm, monitor alarm, upload center in four ways;The following four ways:

a) Mail linkage: this method needs to set a valid mail box in the Email parameter of the device, and fill in a valid mail sending and receiving server and port number. With this condition, if the alarm is triggered, the mailbox will be received in real time. alarm information;

b) Audible alarm: check to indicate that the buzzer will sound when alarm occurs;

c) Monitor alarm: the alarm information will be displayed in the alarm information field of the local device in real time.

d) Upload Center: The alarm information will be displayed in real time on the Web end or platform alarm information bar of the device.

(2) Alarm output: When the alarm output is triggered by the device,

(3) Preview linkage: select one, several or all selected channel linkage, in the preview interface to open the preview linkage, if the alarm triggered, the selected channel screen will automatically pop up;

(4) Recording linkage: select one, several or all selected channel linkage, alarm triggered, the selected channel will be real-time video;

(5) Capture: select one, a few or all selected channel linkage, alarm trigger, the selected channel will be real-time capture;

(6) PTZ Linkage: PTZ equipment needs to be connected to the equipment. When the alarm is triggered, the preset point, cruise or trajectory alarm of the PTZ equipment can be linked, or click Cancel to cancel the PTZ linkage.

Set the linkage mode, click "OK" to save.

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## 11.5 Smart Search

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Intelligent retrieval includes face retrieval and vehicle retrieval, which are used to search for test records.

Click "Face Search", the interface is shown in Figure 11.22, select the channel and time period to search, click "Search".

Fits Store     Side (CH)     0.01     0.2     0.3     0.4     0.5     0.4     0.1     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.14     0.15     0.15     0.14     0.15     0.15     0.14     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15     0.15	Start	revie-	Playback	Smart Search	Backup	Channel Set	ting Disk Man	nger System S	t otting Mainte	nanco		~ 0	Alarm	08:51:51
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0.0     0.10     0.11     0.12     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14     0.14			011 - 32											
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Figure 11.22 Face Search