ANSON
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Network Video Recorder
User Manual

Dear customer, thank you for choosing to purchase and use our product! If while using this product you encounter any technical problems or problems with quality, please contact us. We are ready to serve you. In order that you can use this company's product more conveniently, please carefully review the repair warranty.

1. Service Contract

Full machine purchase can be refunded within 7 days and replaced in first three months. The software can receive free upgrades in the first year, and in the first year can also receive limited repair service for this product.

2. Requirements for return or replacement

The product outward appearance should have no scratches, be dirty, wrinkled, or have alterations of any kind. Invoice, warranty and product certificate are needed.

3. In the event of the following situations, regardless of expiration Date, location, repair or part replacement, our company must receive payment, and is not liable for any payment to the consumer. All resulting loses will be the consumer's responsibility:

In cases of use causing the product's malfunction or damage, or if the environment is not suitable for the product's usage and causes malfunction or damage;

In cases of natural disasters, as defined by law, or unavoidable circumstances that are not related to the product's quality that cause the product's malfunction or damage;

In cases that the consumer's purchase receipt and the product ID number/model number written on the repair card are inconsistent;

In cases that the consumer's use, care, protection inadvertently cause the machine's malfunction or damage;

In cases that the product's up-to-standard certificate is damaged;

In cases that there is no purchase receipt or repair card;

In cases that the repair warranty has already expired.

4. No other warranties, other than this company's repair warranty or the national new three rules is effective.

5. In order to ensure consumer's rights, please carefully read the repair warranty content.

Product model & serial number:

1. Introduction

1.1 Introduction

This series digitalized NVR is combined with multi-technique, such as DVS, built-in system, storage, network and intelligent; also a multi-window and multi-tasking NVR with Pentaplex function: preview, recording, playback, backup, network transmission.

With professional and high-performance intelligent audio & video solution, user-friendly GUI and practical industrial designs, this series NVR is capable of customizing online and is quite suitable for large engineering video surveillance project such as bank, green city and so on.

1.2 Main Features

Terminal device
Support MegaPixel network IP camera 720P, 1080P, VGA;8x9xDVR interfacessupport detecting.
Preview
Support 1080x1024 and 1920x1080 high-definition preview output, HD 1080P(1920x1080)/ HD 720P(1280x720) real-time, and simultaneous output with HDMI and VGA.
Support video parameter configuration according different time.
Variety of prompts: channel name/system time/ record state/motion detection/alarm state/device exception/ background operation prompts (backup, remote upgrade, playback).
Support video standard: PAL/NTSC.
Support audio stream input.
Support synchronized video and audio record, or individual video stream record.
Support multi-level selection of record quality and self-defined video resolution, bit rate and frame rate.
Support multi-area motion detection

Support OSD of channel name and time
Support video mask
Support single screen or multi-screen preview.
Record
Support manual record, schedule record, motion record and event linkage record; different mode can use different configuration, including record quality, video resolution, bit rate and frame rate.
Schedule record mode can be set to the minimum 30 minutes. Week-record of 336 times have independent configuration.
Alarm triggered record, motion detection triggered record and time of lag record can be user-defined, and the maximum time is 300 seconds
Storage
The streaming file system supports divided group management (to increase the existing time of important file)
Normal grouping can store all types of video information.
Alarm grouping can ensure the independent storage of alarm record.
Redundancy grouping can ensure the dual-backup storage of important channel video.
Backup grouping can ensure the independent storage of backup video.
Support three kinds of data elimination mechanism: automatic, full recording and the specified time.
Storing sequentially, HDD write-direct and auto-sleeping increase the HDD life.
Support auto-avoiding of hard disk damage technology.
Support encrypted data storage technology.
Support high-speed formatting HDD.
Play back
NVR supports 4 channel 1080 (6M) real-time playback, and 16x fast forward, fast rewind.
Calendar automatically displays the state of record.
Support playing the specified video through screening record type.
Support playing the video in specified grouping disk.
Support full-screen playing mode.

Support viewing mode.
Support 4:3 display mode.
Support one-key rescue system.
Support snap shot in video preview mode.

Backup
Support USB storage device, DVD device and built-in backup DVD.
Support variety of screening methods.
Support background backup mode to ensure zero-wait.
Support local play of backup video in; file management support external USB storage device and checking snap shot in local HDD.
Support popular player.

Alarm
Support 4 alarm-in and1 alarm-out.
Support net-based alarm management.
Support 336 independent defense schedules per week.
Support variety of linkage handling: screen display, linkage beep, linkage recording, linkage alarm output, report to alarm center, linkage PTZ, and linkage email.
Support linkage matrix output port.
Support exception alarm including HDD error, video loss, IP conflict, disconnection, hard disk full and save error

Control
Support the controlling of PTZ or dome, multiple PT protocols and auto-display control window according to the selected protocol.
Support the fast-focus adjustment and focus control by mouse.
SupportPTZ or dome preset, cruise, track setting.

Network
10M/100M auto-adjust network interface.
Support HTTP/FTP/RTSP/RTCP/SADP/SMTP protocol, email subscribing alarm information.

Support TCP/UDP protocol, PPPoE, dynamic access to IP address (DHCP).
Support DDNS.
Support network protocol stack dynamic loading and seamless access to the mainstream platform.
Support real-time preview, remote downloading and playback by installing IE ActiveX; support 4-channel 1080P remote real-time monitoring.
Support remote PTZ control, remote device configuration, remote device state and log acquiring, remote reboot, remote upgrade.

User management
Support 3levels of 16 users' management.Advanced management mode supports rights control for individual channel.
Support IP or MAC binding to user.

Log
Support the local and remote log export.

Device management
Auto-recovery: when the mastercontroller or codec is in the wrong working state, the device can auto-reboot and record the error code to device log.
Support customized technology, including advanced user management, advanced alarm, advanced image parameter configuration, alarm linkage email, advanced record parameter configuration, central server configuration, alarm server configuration,advanced storage management, automatic maintenance configuration, and PTZ mode.User can configure the desired NVR according to the using scenarios.
Support the import and export of device configuration.

Device structure
Panel is usedof ABS material which is environmentally, one-touch shuttle button, intelligent LED prompt Easy installation of rear panel interface.
Interface lightning protection and anti-static design follow ITU-TK_2.
Redundant design with power: a. reverse protection; b. over-current protection; c. over-voltage protection.
Note: Some products have different features, Please refer to "6.1 Specif

2 Installation

2.1 Package Content

After purchasing NVR product, unpack it and unload it on a flat floor or a place where it is to be located, and refer to the "Package contents" for counting device fittings

2.2 Front Panel Operation

2.2.1 NVR panel operation

Table2 instruction for NVR front panel keys:

NO.	Type	Name	Description
①	Button	Number	0-9: 1. Input number; 2. One key channel selection in preview mode. (9~16cannot select one key channel swith)
②	Arrow Buttons	Arrow Buttons: 【▲】【▼】 【◄】【►】	1.When in menu mode, press 【◄】, 【►】 to move to selection boxes, press 【▲】, 【▼】 to select submenu parameters.
			2. User can switch ActiveX on screen
		⊙	1.Press it to confirm operations in menu mode
			Press it to select different record types in setting schedule
		Fn	Preview mode: press it to switch from single split to multi splits; Setting mode: press it to change motion detection area and mask parameters when setting; Playback: switch from full screen to normal mode.

|			
③	Main Functions Power	▶❚❚	Play/Pause
			One key file search.
		●	One key start/stop recording.
		PTZ	1. One key PTZ control when in the PTZ mode. 2. In keyboard control mode, press it to control PTZ via arrow buttons
			Preview mode: hide the tool bar (tool bar in suspension mode)
		⏎	Setting mode: 1)Return to upper menu and exit setting. 2)Switch to [ESC] button in the dialogue window.
			Playback mode: 1)Press it to exit playback screen when in the pause mode.
		×	One key system setup.
		B	Clear alarm.
		⊞	Backup record.
④		⏻	Press it to power on/off device. Hold pressing 3 seconds to shut down forcely.

2.3 Rear Panel Operation

2.3.1 NVR rear panel operation

NVR rear panel operation

NO.	Interface	Description
1	Voice talk	1 audio output: RCA port (2Vp-p, 600Ω)
2	Audio output	1 audio output: RCA port(2Vp-p, 600Ω)

3	HDMI output	1 standard HDMI output,DIN-15 port.
4	VGA output	1: DIN-15
5	Interface (net)	1: Rj45 10/100M self-adaptive
6	USB interface	2: USB 2.0 interface, 2 ports
7	RS422	R+ R-
8	ALARM IN	4 channel
9	ALARM OUT	1 channel
10	SATA interface	2 SATA ports, up to 2T
11	Power	DC 12V/5A
12	Password reset	Superuser password reset

2.4 Remote Control Instruction

NO.	Key Name	Description
1	Power	Power on/off;
2	Function Buttons	CH/EN: Switch in English and Chinese, ID: Set remote address ID.
3	Numbers	Input password, numbers or switch among relevant channels.
4	Function Buttons	DEL: Delete.
5	Play Control Buttons	◼: Stop; ◉: Record; ◼: Play/Pause ◀◀: Play in slow mode, ▶▶: Fast forword, ◀◀◀: Go to previous section, ▶▶▶: Go to next setion.
6	Direction Key	The same as arrow button of front panel
7	Function Buttons	◼: Snapshot; ◼: Switch from single screen and multi-screen. FN: Auxiliaries, same as the [Fn] button of front panel. ESC: Return to previous menu, same as the [⏎] button.
8	Image Adjustment Buttons	◼: Increase/ reduce brightness; ◼: Increase/reduce contrast.

9	Function Buttons	PTZ: Enable PTZ control, same as the [PTZ] button of front panel. SET: Set parameters, same as the [×] button of front panel. ◉: Clear alarm, same as the [⏎] button of front panel.

Note 1: Remote control address must be consistent with <Toolbar>→<System Configure>→<SYSTEM>→ <Set System Parameters>→〖Device Id〗, otherwise user cannotcontrol the device.

Note 2: The factory defaulted remote control can control any number of devices (After removed the battery, remote control resume to factory settings).

2.5 Rear Panel Connection

2.5.1 NVR Connection

Power Input
◼ Confirm that NVR power inputis match with power supply voltage. Connect power cable to power input interface of NVR, and the power LED will light.

Network Input
◼ The network input interface is standard RJ45 which is easy to connect LAN or WAN. Confirm that the network band width is enough for transmitting high definition image smoothly.

Alarm Input and Output
The alarm input device should be the type of GND connected alarm or voltage input alarm, which can be set as N/O. or N/C.
The requirement of signal input level for voltage input alarm type is: low level: 0~2V; high level: 5~15V.
▦Description: from left to right in the up line are 1~4 alarm output and GND; from left to right in the bottom line are alarm output+ alarm output-

Keyboard Input
Connect the keyboard control interface to 422RX+ and RX- interface of rear panel.

Edition box (soft-keyboard)		Esc: Exit; Caps/Shift: Switch to keyboard; Back: cancel the upper character; Del: cancel the next character
Listing box		Double-click the mouse left button to complete the listing movementbetween 2 box, or click ⬅ , ➡ .

3.2.2 Mouse Instruction

Mouse Operation	Description
Click the left button	Click left button to access to menu content
	Implement the indicated operation
	Click the options of check box
	Click the number box or edition box to pop-up keyboard area; click the keyboard to complete input directly.
Double-click the mouse left button	Double-click the left button to switch the preview, single image/multi-screen display.
	Double-click the left button to switch the playback, single image/multi-screen display.
Click the mouse right button	Preview mode, click the right button to pop-up / the hide desktop menu.
	Playback mode, click the right button to set the backup scale line.
	In part of dialog interface, click the right button to exit the interface.
	Enter<System Configure>, click the right button to switch to<Save and Exit>.
Mouse Wheel	When option box is in the activate state, slide mouse wheel to switch the options (option can loop switch).
	Preview mode, slide mouse wheel to switch the time display color.
Hold down the leftbuttonand drag	Click the area of video block, dynamic testing and schedule region to complete the positioning.
	Drag the slider of scroll bar or slide bar.
	Preview mode, users can drag the time to change the time display position.
	Playback mode, users can view videos fastly by draging play scale line.

	When modify the setting of "channel name and time", user can directly drag the "Channel character" and "the system show time" to the desired location.
Special Function (PTZ Control)	Single-screenin preview mode, when mouse move to the screen edge, user can control PTZ to move around directly.
	Single-screenin preview mode, slide the mouse wheel to adjust focus quickly.

4. Operation

4.1 Startup

Startup
The power LED will light after powering on correctly. Please refer to "2.6Rear Panel Connection"for details of connection method".
When started up, device will be in theprocess of " initialize codec system", "initialize storage system," "load bitmap resource", "Start software" in turn, if any exception occurs, please contact administrator.
After started up, with direction, users can use Admin to login to set network parameters and add detection to terminal device. If exit direction, user can login to default user directlyThefactory defaultedauthorityincludes only channel image preview.If you need to modifyauthority, please refer to "4.11User Management".

Note1: It costs about 60 seconds to startup, please wait for a moment.

Note2: Default user no password; default password for Admin is 888888. Admin password can be modified by entering<Toolbar>→<System Configure>→<User Management>. And admin password can be restored to factory default by shot-circuit the JP10 on main board.

System Settings
Language: Please enter<Tool Bar>→<System Configure>→<Local display>→<Device Parameters>→〔Language〕 to set language.

Monitor/HDMI
Video output interface: HDMI and VGA. They can work simultaneously.
HDMI interface.
VGA output interface

3. Menu Description

3.1 Menu Structure

Tool bar: System configuration, playback, backup, PTZ control, manual snapshot, record control, alarm setting, file management, main display configuration, IP channel management, turn on/off auto, clear alarm and shut down system.
Turn on/off auto is automatic search and add IPC function, please refer"IP management" for details.
System configuration: local display, image setting, record setting, alarm setting, exception handling, PTZ setting, storage management, user management, system maintenance, function customization, and system information.
Note: There are relevant setting options under the each configuration menu. When setting, it will be more options under advanced mode than non-advanced mode, which according to the situation.

3.2 Menu Operations

3.2.1 Menu Instruction

After start-up system, <Tool Bar> will pop up in the preview screen.
Note: When tool bar is in suspension mode, right click mouse (or press 【ENTER】 on the front panel) to hide or display < Tool Bar>.
When the mouse is suspends on <Tool Bar>, the functional information of the icon will appear. Click the button

to enter the relevantwindows. Refer"3.1 Menu Structure" for details.
Press panel or remote control button to enter relevant windows. Refer"2.2 Panel Operation" and "Remote Control" for details.
Menu Operation: menu move, select, exit
In the menu, the highlight rectangle box or icon is called "Focus"
User can use 【▲】, 【▼】 button to move menu between focus.
Click [ENTER] button to enter focus menu or to active focus button function.
When ress [ESC] to exit the current menu and return to the upper menu, focus will move to [Cancel] button or exit the current screen without being saved.
Note1: Enter< Tool Bar>→<System Configuration>screen, click 【▲】, 【▼】 button to switch page options; click 【◄】, 【►】 to switch page options.
Note 2: Enter<Toolbar>→<System Configure>interface, click 【ESC】 to switch to <Save and Exit> interface. Select 〖Application〗 to save the modified setting, select 〖OK〗 to save the modified settings and exit<System Configure>interface, select 〖Cancel〗 to cancel the modified setting and exit.
Menu Type

Type	Example	Description
Menu settings (Selection box)	1200*1024@60Hz	Provide multiple options, but user can only select one. Click 【◄】, 【►】 to select, or use Mouse Wheel.
Check box		Provide multiple options, click 【▲】, 【▼】 to switch, click 【ENTER】 to confirm the checked option. User can also use mouse to select one or more.
Number edit box		Provide a numeric keyboard, user can use mouse or panel to input number directly, click 【EDIT / DEL】 to delete the characters.
Button		At next-level menu, press 〖confirm〗 to save the setting parameter and return to upper menu, press 【ESC】 or select 〖Cancel〗 to give up the setting parameter and return to upper menu.

Video Input: Please enter<Tool Bar>→<System Configure>→<Local Display>→<Device Parameters>→〖Video Input〗to set video standard. It supports PAL, SECAM, NTSC currently. Please select relevant values according to the video parameters.

Date/Time: Please enter<Tool Bar>→<System Configure>→<SYSTEM>→<Device Parameters>to set date and time.

VGA Resolution: Please enter<Tool Bar>→<System Menu>→<SYSTEM>→<Display>→<Resolution>to set VGA Resolution and refresh rate. It supports1280x1024, 1920x1080 currently. Please select relevant values according to VGA parameters.

4.2 Log out/ Shut down

Enter<Tool Bar>→<Shut down> to [Logout],[Shut down] or [Reboot]. Select [Logout] to login with Default user.

Note: Holding Press Panel 〖 ⏻ 〗 button or remote 〖POWER〗button to turn off directly.

4.3 Preview

Enter into the system, monitoring screen is divided into: channel video preview area/System Stateindication/toolbar.

Note: If the toolbar is suspending, user can drag the toolbar with the mouse to anywhere within the screen.

4.3.1 System Status Indication

In Preview screen, all the system statusare displayed by icon directly.

Icon	Status Instruction	Icon	Status Instruction
◙	Exception indication including: IP conflict, illegal access, disconnection, hard disk full, disk group exception, access,HDD error, refer to "4.5.3Exception alarm" for details.	🏃	Motion detection indication
		◙	Background playback indication
		◙	Background backup indication
		◙	Background system remote upgrade indication

●	Alarm linkage record indication	○	Manual record indication
●	Normal record indication	●	Motion record indication
◉	Alarm output indication	◉	Alarm input indication

4.3.2 Preview Settings

View Mode Switching

In preview status, the screen has live view area,channel or system status information and tool bar.(Please refer to 4.3.1 for details)

When main display is 1280*1024, video preview mode includes "1 split"/"4split"/"6 split"/"9 split" monitoring; when main display solution is 1920*1080, video preview mode includes "1 split"/"3 split"/"6 split"/"9 split" monitoring. Channelimage surrounded withhighlight green borderis the focal image,mouse-click the image to switch to other. If user accesses the audio output device, they can connect the channel preview voice directly.

Note 1: Use number keys 〖1〗- 〖8〗 can select the channel image to enlarge it for monitoring directly.

Note 2: In preview status, the channel image arounded with red box is linkage record channel image triggeredby alarm input.

Image Parameters Settings

Enter<Tool Bar>→<System Configure>→<Image setting>→[Image Parameters] to set parameter information. The Brightness, Contrast, Chroma, Saturation of image can set four kinds of different parameters and can be used in four different periods of time on one day.

Note1: Enter<Toolbar>→<System Configure>→<Device Management>→<function customization>, only enable "advanced image parameter configurationcan set different image parameters according to different time.

Image Parameters Settings

Enter<Tool Bar>→<System Configure>→<Image setting>→[Image Parameters] to set parameter information. The Brightness, Contrast, Chroma, Saturation of image can set four kinds of different parameters and can be used in four different periods of time on one day.

Note: Enter<Toolbar>→<System Configure>→<Device Management>→<function customization>, only enable "advanced image parameter configurationcan set different image parameters according to different time.
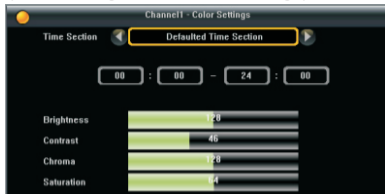
OSD Settings

The location of channel overlappingcharacter and time can enter<Toolbar>→<System Configure>→<Image Setting>→〖Overlapping Information〗to set. Click〖Setting〗intosetting screen, use mouse to drag "Channel character" and "system dispalytime" totarget location directly.

Channel overlapping character can be modified in IE,please refer to "Table V1 IE increased settings".

Main Monitor and Rotation settings

Main display: the output image of HDMI and VGA. Click 🔘 on the<Toolbar>to enter "Configuration" page.

There are three kinds of display methods: Normal preview, monitoring rotation, alarm rotation. The highest priority one is "alarming rotation", the followed one is "monitoringrotation", then" preview". When alarm occurs, all monitoring rotationsare disabled, and system starts alarm rotation immediately.

Preview: display monitoring screen statically, user can customize the sub-screen mode and channel sequence of monitoring screen.

The device support preview sub-screen hereinafter: "1/4/6/9 splits". When the preview sub-screen is less than video channel number,user can click ⊞and ⊞ to switch to the previous and next screen.

Note: When the mouse moves to the top of preview screen, it will display ⊞ button to switch sub-screen. When moves to the top left or top right, it will display ⊞ and ⊞ buttom, can be use to switch to next or last sub-screen. It supports two methods of setting.Method 1: enter<Toolbar>→<Main Monitor Setting>click ⋮ beside on"9 splits", it will pop-up a channel sub-screen, as the following left figure. Use the mouse to point the left sequence number, click the right channel number, then the corresponding channel has been moved to sequence number. Method 2: drag one channel to another channel position, and the two channels can be reversed.

Alarm rotation: Whenalarm occurs, main display auto-switchesto video monitoring channel of alarm linkage record, user can customize the remaining time of alarm monitoring image-<Toolbar>→<Main Display Setting>→<rotation setting>→〖display delay time〗, when〖display delay time〗is set for "on", main display will keep displaying alarm rotation image unless administrator clear alarm.

Note 1: When alarm rotation occurs, the monitoring screen of main displaywill auto-select appropriate sub-screen mode (more than or equal to the triggered channel number) to display. For example, when the alarm triggered channel number is 5, system will auto-select six sub-screen.

Note 2: The monitoring channel Participatedalarm rotationis the record channel of alarm input linkage, please refer to "4.5.1Alarm Input ".

Monitoring rotation: main display auto-switches the monitoring image. User can customize the segmentation method and resort time of customized Sequence.

🔘: Start monitoring rotation. 🔘: Stop monitoring rotation.

⊞: Switch to previous screen.

⊞: Switch to next screen.

⊟: Setting, as the following left figure

User can select different sub-screen mode to compose rotation sequence according to rotation requirement, each sub-screen image can select desired video channel.

Rotation interval: The resort time of different customized Sequence.

Channel position setting: One channel in the screen can be set to any position the user want. One customized sequenceselects which sub-screen mode to adopt , then modify the channels and position in sub-screen they are needed to display.The setting method is same with "preview channel sequence setting".

4.3.3 Preview Screen Lock

Manual Screen Lock
Enter <Toolbar>-<Shut down system> to select [Logout].
Automatic Screen Lock
Enter <Toolbar>-<System configure>-<Local display>-<Device parameters> to set "Autolock period".
During setting, if no mouse, keyboard or remote control operation, system will logout automatically, and login with Default.
Note: when use preview lock, user need close default user's preview authority.

4.4 Camera Control

4.4.1 PTZ Control

PTZ parameters setting
Enter<Toolbar>-<System Configure>-< PTZ setting> to set camera channel, protocol, address, baud rate.
Note 1: PTZ parameters is PTZ parameters of terminal device configuration. It needs connect PTZ to the terminal device, and control it by NVR.
Note2: The different PTZ controlled by one DVR should have corresponding PTZ ID. There are 256 PTZ ID supported currently.
PTZ Tour
When single channel preview, the icon will appear after moving mouse to the middle top of the image. The effect of clicking it is the same as clicking the up direction button in PTZ control interface.The down icon will appear when moving the mouse to the bottom of the image.Clicking it is the same as clicking the down direction button.
Note: PTZ Tour effect only when the channel's PTZ protocol, address, baud rate and so on have been set.

PTZ basic operation
In preview screen, select the target channel (In multi-screen preview mode, the selected channel is with highlight green border); or using panel or remoter〖Numbers〗key to select directly, and then enter<Toolbar>→<PTZ control>to the PTZ control screen, as the following left figure. Clicking and dragging the title bar of the interface will move the PTZ control interface to every position in screen.

	Control direction of PTZ. When protocol is supported, direction key supports left-up, left-down, right-up, right-down. ▣: switch current PTZ control channel between multi-sceen and single.
▐▌▐▌▐▌▐	Set PTZ move speed.
◉◉	Click to zoom-in and zoom-out (it is disabled for auto-focus camera)
◉◉	Click to focus-in and focus-out (it is disabled for auto-focus camera)
◉◉	Click to make the image brighter or darker(it is disabled for auto-Iris camera) Set aux function of PTZ, on/off
Aux Function	Different PTZ protocols responds to different aux functions, the auxiliaries including: lights, brush, power supply etc. Please refer to your PTZ user manual

Preset setting
Device support 256 PTZ ID currently. Setting steps as follows:
1. Select the preset number in preset display box you want to set or input the preset number in edit box.
2. Position the camera as desired position including direction, focus, iris and zoom value, click〖set〗to save the preset.
Please repeat steps 1 and 2if add other presets.
Call preset
Select the preset number in preset display box you want to call or input the preset number in edit box, click〖callback〗to access the set preset.
The preset set button, call-back button will be hid if the preset is not supported by current protocol.
Set cruise
Cruise is a camera running route that passes through multiple presets, each preset includes the remaining preset

and resort time. As the following setting steps:

1. Select preset number in the window, and click [set] into the cruise screen as the left figure;
2. Set cruise point 1: selectpreset number or input the preset number in left display box you want to call, click [Join]. Click preview button after selected preset number, PTZ will move to the position of the preset.
3. Repeat step 2 to set otherpresets till finishing
   After completed the operation, click [preview]to view the cruise line setting; Click [save]to save setting. Click: [reset] to delete all preset points in this cruise line.

Call cruise

Select thecruise number you want to call, click 〖callback〗to access the set cruise line, click 〖stop〗to cancel the calling.

Cruise number is different supported by varied PTZ protocol, please consult your PTZ user's manual.

The cruise call-back, stop, set button etc. at interface will be hid if the cruise is not supported by the selected protocol.

Set track

Track is a continuous running route of camera.As thefollowing setting steps:

1. Select the track number in the window, and click [Set] into the screen, as the left figure;
2. Select [Start Track Recording], click [confirm] to enter the track setting.
3. Various control operations to PTZ.
4. After completed the operation, re-click [set] into the track screen, select "End Track Recording", click [confirm] to complete the setting.

Call track

Select the track number, click [callback] to access the set track, click [Stop] to cancel it.

Different PTZ protocol supports different track number,please consult your PTZ usermanual.

The track call-back, stop, set button etc at interface will be hid if the track is not supported by the selected protocol.

4.4.2 Video Mask

Enter<Toolbar>→<System Configure>→<Image setting>→<Video mask>to set.

Video maskarea setting: Click [Set] into the settingscreen, which is divided into 16 X 12 small boxes: Green box represents the current focus area, gray filled boxisthe area of denfence on, and transparent non-grayboxis the area of defence off. User can set defencearea by dragging mouse with left key pressed. After completed the setting, User can cancel the defence box on the defence area by left clicking the mouse, and press 〖ESC〗or click mouse right button to exit. Four areas can be set per channel.

Note: After the setting, the related area of preview video and video filewill be masked.

4.4.3 Motion Detection Settings

Motion detection setting includesDefence time setting, sensitivity setting (high, middle and low), area setting and linkage setting triggered by moving, user can select target area according to the requirement.Enter<Toolbar>→<System Configure> →<Moving Detection>to set.

Motionarea setting: Click [Area Setting] into the settingscreen, the settingarea is divided into 16 X 12 small boxes: Green box represents the current focus area, the transparent non-green box isthe area of defence on and black filled is the area of defence off. User can set defencearea by dragging the mouse. After finished the setting, press 〖ESC〗key or click the right mouse button to exit.

Defence time setting: select "whole day defence" or "customizeddefence time table." "Schedule" can free toselect a day or the day of a period of time, system provides a record option for hours everyday or a week day(0.5 hours is the smallest unit) for setting.

Linkage handling: set the linkage handling triggered by motion detection. Consist ofBeep, Report to Alarm Center, Email linkage, PTZ linkage,Channel Record,Linkage Alarm Output, and Linkage Screen Display.

Channel snapshot: linkage capture the specified channel image. Snapshot number: 1 ~ 60 times; snapshot interval: 5~30 seconds.

Channel Record: specified linkage channel start motionrecord.

Note 1: Linkage "channel video" needs to set record schedule.

Note 2: When use panel or remote control to choose the area of defence on, user can press 〖ENTER〗to switch

the focus box stateto defence state, then press 【FN】, copy the current state to the neighboring gird by press 【Direction: up /down /left /Right】, press 【FN】again to exit the area setting.

4.5 Alarm

4.5.1 Alarm Input

Enter <Toolbar>-<System Configure>-<Alarm>-<Alarm Input>
Alarm Input Configuration
Alarm Input type includes open circuit and closed circuit. Please select the appropriate attributeaccording to the connected alarm device and control method.
Open circuit: open usually, connectthe circuit when the alarm signal is triggered;
Closed circuit:disconnect the circuit when the alarm signal is triggered.
Defence time: User can set whole-day defence, or enable customized schedule, as the following left figure. The devicewill not handle the alarm generated in the time of defence off.
The triggered linkage handling, as follows: Linkagescreen indication, beep, channel record, alarm output linkage, report to the alarm center, PTZ linkage, and email linkage.
Linkage screen indication: enable alarm rotation in the main display.
Linkage record: when alarm occurs, the specified channels enable alarm record.
Note 1: Alarm name can be edited by IE or the client management software, please refer to "Table V-1 IE increased settings".
Note 2: Device can be defenced on or defenced off by 1 key, enter<Toolbar>→<clear alarm>to set.

4.5.2 Alarm Output

Enter<Toolbar>-<System Configure>-<Alarm Setting>-<Alarm Output> screen.

User can set the handling mode of triggered alarm outputto keepalarm output state or to stop alarm automatically after the specified period.
Note: Alarm output name can be edited by IE or client management software, please refer to "Table V-1 IE increased settings".

4.5.3 Exception alarm

Enter <Toolbar>-<System Configure>-<Exception Handling> screen.
Exception handling includes:
IP conflict: IP address conflicts with other devices or PC.
Illegal access: user fails to login continuously 3 times or more in 30 minutes.
Disconnection: cable is disconnected.
Disk group full: if any disk group is full in common, alarm, redundancy, backup.
Exceptions of disk group: from partition binding to non-partition of Part disk group, system will indicate to alarm and confirm whether need to reboot.
HDD Error: includeHDD loss, access failure, system will indicate to alarm and confirm whether need to reboot.
As for different exceptions, you can set different linkage handlings.IP conflict,Illegal access,Diskgroup, full, Exceptions of disk group,HDD Error linkage handlingsconsist of Beep,Overlap information, Report to Alarm Center, Email linkage, linkage Alarm Output; disconnection linkage handlings includes Beep, Overlap Information, and Linkage Alarm Output.
Overlapinformation:click 【◎】 to pop-up theexception information, as the left figure.

4.5.4 Clear Alarm

Enter<Toolbar>and click 【🔔】 into the clear alarm screen to indicate current occurredalarm information.Click [Clear Alarm] to clear all the alarm.
Note: When[ClearAlarm] shows 🔔 (yellow display), the device is in the state of defence off. If alarm output occurs,

device won't react to it.If user wantto change the state of defence on, please enter[clear alarm] screen and select [One Key Defence].

4.6 Record

Please confirm that HDD has installed and initialization has completed beforeopen record.

Record State / type include the following: non-record, schedule record, manual record, alarm triggered recordand motion detection triggered record. Alarm triggered record has the highest priority, followed by manual record, schedule record again.

Enter<Toolbar>-<System Configure>-<Record>to set record parameters. Basic configuration corresponding to all types of record, including stream, record resolution, frame rate and prerecord schedule.

4.6.1 HDD Initialization

This section is a brief introduction of HDDinitialization. As for other advanced storage settings, please refer to "4.12.3 Storage Management".

Device contains 4 types of disk groups: Common/Alarm/Redundancy/Backup, each of which can store different recording data. Common disk group can store any type of video of all channels. Alarm disk group can store alarm triggered video of specified channels to ensure the independent storage. Redundant disk group can store redundant video of specified channels,this meansthe alarm triggered video and common video will also be backed up to redundant disk group to improve the record reliability. The backup disk group store backup date.

Each connected HDD will be kept 10Gfree space for system partition, the rest can be divided into several user partitions with different sizes, and different partitions can be allocated to specified disk group according to requirement.

Note 1: the maximum number of device HDD interface is 2,each of them contains 1 primary partition and no more than 4 user partitions.

Note 2: enter<Toolbar>→<System Configure>→<MAINTAIN>→<Customization>, activate "Advanced Storage

Management ",then user can set the disk group of "alarm, redundancy, and backup".

Note 3: the capacity of HDD is need to be more than 80G.

Access to new HDD

When turn on the device, system will automatically identifies the basic information of the connected HDD and prompts to initialize with choices of auto adding to a specified diskgroup or custom.If user choose the former, the HDD will automatically divide 10G reserved partition and one logic partition which will be added to the specified diskgroup.If user choose"custom", the HDD will automatically divide 10G reserved partition and one extended partition.For more information about HDD Management, please refer to "4.12.3Storage Management".

Note 1: If access theHDD used on other different types of devices, system handle the HDD as a new HDD. Initialization will delete the original data and partition list, please make sure before the next operation.

Note 2: During the initialization of the disk group, if the storage mode is normal mode, selected item only contains common disk group, if the storage mode is advanced mode, selected itemscontain:common disk group, alarm disk group, redundancy and backup disk group disk group.

Access the used HDD

If access the HDD used on same type of device, after the startup, system will automatically identify the HDD's partition and disk group settings.

Note: If device A activates "Advanced Storage Management" and binds some partitions to "alarm/redundant/backup" disk group, device B deactivates " Advanced Storage Management", when move the HDD from device A to device B, system will auto-delete the binding relationship between partition and "Alarm/redundancy/backup" disk groupbeyond retrieve, then the partition turns to "available partition" and can be added to any specified diskgroup..

4.6.2 Schedule and motion detection record

Schedule record setting

Enter <Toolbar>→<System Configure>→<Recording setting>→<Basic Configure>to set stream type and Video

Quality of specified channels.This video configuration includes schedule record, manual record, motion record and alarm record.

Note 1: Record quality includes: High quality/Standard quality/Normal quality/Custom, select 〖Custom〗to set "resolution, bit rate type, frame rate" and so on.

Note 2: record parameters is obtained from terminal device, which is the same as the terminal parameters.

Schedule and motion detection record setting

"Record Schedule" can free to selecta week day or the day of a period of time for setting.
Different color boxes identifydifferent record types.

4.6.3 Alarm triggered record.

Turn on alarm triggered record.
Alarm triggered record need to set alarm defence time and enable "linkage channel record", please refer to " 4.5.1 alarm output" for details.

4.6.4 Manual record

Turn on manual record
Enter <Toolbar>→<Record Control>, User can customize each channel's record type:
Auto: implement schedule record;
Manual: implement manual record;
Turn off: turn off all types of record of the channel.

4.7 Playback

Enter <Toolbar>-<Playback> screen, as the following left figure.

The top left(region 1) is display area of playback video.
The upper right (region 2) is channel selection area.
Region 3 is system calendar, yellow font identify that there are recordin the day.
Region 4 is playback control area.
Region 5 is timeline display area of channel record.

4.7.1 Record Research

The condition of searching record includes: corresponding channels, correspondingsystem date, corresponding disk group (normal, alarm, redundancy), recordtype(normal, manual, alarm, motion, all). User can filter the record according to different requirements.

Setting: selecttarget channel in region 2; select system date in region 3; select disk group on the left of region 5; select record type on the bottom of region 5; then, the center of region 5 displays the specified record automatically.

Icon	Instruction	Icon	Instruction
	Select record of common and alarm disk group		Zoom in playback timeline
	Select record of backup disk group		Zoom out playback timeline
	Select record of redundant disk group		Set playback timeline back to defaulted value
	Switch channel list to previous screen		Switch channel list to next screen
	Move to timeline origin(It is valid when timeline zooms in)		Move to end of timeline(it is valid when timeline zooms in)
	Timeline page up(It is valid when timeline zooms in)		Timeline page down(it is valid when timeline zooms in)

4.7.2Playback Control

Double-click mouse in timeline area toselect a play tick (yellow): identifythe start time. Click 〖 〗to start playing.
Note: Use 〖EDIT〗toenter "Set - Play time" for setting the start time. As the following left figure.
Clicking "time display box" on the top of timeline can also show "set-Play time" screen.
Playback control

Icon	Instruction
	1.When player is in normal mode, it control play speed decrease, following 16X, 8X, 1X, 1/2X, 1/4X, 1/8X 2.When player is in pause status, it is key-frame-backward 3.When player is in fast view mode, it control view step time increase
	Control play direction in backward
	Pause
	Playback Snapshot
	Backup shortcut key, refer to "4.8BackUp"
	Exit
	Mute

Icon	Instruction
	1. When player is in normal mode, it control play speed increase, following 1/8X, 1/4X, 1/2X, 1X, 8X, 16X 2.When player is in pause status, it key-frame-forward
	1.Begin to play 2.Control play direction in forward
	Stop
	Fast view mode key, refer to next chapter for details
	Switch playback sub-screen mode, among single split/4 splits
	Full-screen key to display only channel video. In full-screen state, click the key to switch back
	Switch playback video display in 4:3 resolution or full-window resolution

hen playback, the channel image arounded with green box shall be focus image, user can use the left mouse button to click it for switching. If userhas accessed audio output device, they can connect the channel playback voice of focus image directly.

4.7.3 Fast playback

Fixed time viewing
Click[ ], user can see the interval box of fast view mode: after setting, user can fast view the video by the setting interval time.
Custom viewing
Double-click mouse in timeline area toselect a play tick,drag the play tick to view video quickly.

4.8 Backup

Enter<Toolbar>-<Backup>, as the following left figure:
In the backup screen, click button into the backup screen directly. In the area of playback timeline , click the right mouse button, then the backup line(black) appears, click the right mouse button again on other time lines, the other backup line appear, click [ ] to pop the backup, the backup data shall be the recodingdata selected by two backup scale lines. System will detect and show all of the backup device firstly, select the data type, video type, disk group selection, channel selection , backup time and backup device that need to be backed up, click 〖Start〗key to start the backup of recording data.

Note 1: in the playback screen, user can cancel the setting of scale lines by clicking the right mouse.

Note 2: When user enters into the backup screen from playback screen, the video type, disk group selection, and channel selection on backup screen all use the filter criteria of playback.

Note 3: If there is no backup device found, a prompt will appear to remind users of connecting USB device well. Data Type: H.264 Raw, H.264 MP4 and H.264 AVI format. When backup in MP4 type, user need to use MP4 player. After installed player active, user can use Windows Media Player to play video
User can click 〖update〗to refresh the capacity of all the selected video after re-select the type or time of video. When in the process of backup, the screen will show the current processing information.

Note: in the process of backup, click [Hide] to switch to the preview screen. In preview screen, click to go back to the backup screen.

4.9 Picture and File Management

4.9.1 Snapshot

Snapshot includes preview snapshot and playback snapshot.
Preview snapshot: Click 〖 〗on<Toolbar>, user can capturemonitoringpicture of focus channel(channel

surrounded by green box) to store into jpg format.

Playback snapshot: Click 〖 🔳 〗 on playback control area, user can capture playback picture of focus channel (channel surrounded by green box)to store into bmp format.

Note: the snapshots are stored on HDD system partition.

4.9.2 File Management

Local Picture Document

Enter<Toolbar>→<File Management>,as the following figure.Select "Local Device "in region 2, local device only stores snapshots.

Search Settings: Select the targetresearch channel in region 3; select system date in region 4, the yellow characters identify that there are files on the day. Click [Search] in region 5, then the list of pictures will display in region 6.

View pictures: Double-click the file in region 6 toview the picture directly, click 〖 🔳 〗 , 〖 🔳 〗 inregion 7 toview the previous and next picture.

Note 1: Double-click viewing pictures to enlarge the picture.

Lock pictures: Click 〖Lock〗 to lock the viewing picture in region 1, and the picture will not be eliminated (if the HDD partition is full, it will not be deleted).

Note 2: The status of locked pictures appears as "L" in list.

Export Pictures: Select the target pictures in region 6, click 〖Export〗 to export the pictures to external storage device, including USB storage devices and CD / DVD devices.

File management of external devices

Enter <Toolbar>-<File Management> to view pictures and video files stored in external devices, select "External Device "in region 2.As the following figure.

Search setting: Select file type in region 3, click 〖update〗 in region 4, then the searched files list will appear in region 5.

View Picture / Video: Double-click the file in region 5;you can view pictureor video.

Click 〖 🔳 〗 , 〖 🔳 〗 to view pictures in region 6, and user can view the previousor next picture.

When view the video of MP4 format, the function keys in region 6 includes slow/fast/play/pause/stop playing.

When in pause state, click 〖 🔳 〗 can be single-frame-forward playing.

When view the video of 264format, the function keys in region 6includes play/pause/stop playing.

Note 1: Double-click the pictures and video region to enlarge them.

Note 2: Drag the progress bar below the video tofast view video

4.10 IP Channel Management

Enter <Toolbar>-<IP Channel> screen, as the following figure.In region 1 areadded bindingfront-end video sources, including device type, device channel and display status. The function area is in region 2, there are device, diagnose, edit, and delete.

Add device

Enter <Add Device> to select add new device, the accessible front-end device (IPC&DVR) will appear on the list. Click one front-end device to add and preview.

Plus, it supports adding specified device. Select " add specifieddevice", press "add" button, and input front-end device IP address or domain name, user name and password to bind front-end device.

Note: if no front-end device in the list, user can refresh the list to check.

Preview

In <Add Device> screen, select add device, select video source in the list, and press preview button to preview front-end source video.

Delete

Select binding channel and press delete button to delete front-end device.

Edit

Select binding channel and press edit button to edit network parameters of binding front-end device. It includes LAN/WIFI, static IP/DHCP, address, subnet mask, and DDNS.

Note: when adding device, user also can edit front-end device.

Diagnose
Select binding channel and press diagnose button, the video source result will appear. It includes connected, disconnected, IP conflict, exception, IP Filter, MAC Filter, login time out and so on.

4.11 User Manager

Factory default users include "Administrator:Admin, password:888888" and "userDefault, password is blank." Administrator can add, delete users and manage other users.

Add user
Enter<Toolbar>→<System Configure>→<User>→<User Manager>, click 〖Add〗to enter the following screen.
Note: If the user has " Email Notify" authority, the " Email Linkage"informationwill be sent to the user's mailbox.
Binding MAC Address:If user enables "Binding MAC Address ", the user can accessesremotely to the device only in the PC with the bind physical address, cannot access remotely in the PC without the binding physical address.
Enabled or disable:Enable or disablethe added user.
Note: The system supports a maximum of 16 users.

Delete User
Login with "Admin", user can delete other users except "Admin" and "Default".

Edit User
Login with "Admin", user can edit all theusers. Other users can login and modify their own user informationincludes password and email.

Authoritysettings
"Admin" can edit all other users.
Users' authorityinclude local and remote authority, the authoritycan be customized associated withchannel.

User Online
Prompt the login user information.
While user log in, user name, login type, login time, network flux of video preview will be displayed in the list of online users.

Disconnect: Select the client login information, click to disconnect the link , then the device will disconnect the remote link with the user automatically .
IP Filter: Set IP white list. While enable the IP filter, only the users on the PC with valid IP address in the white list can remotely log into the device.

4.12 System Management

4.12.1 Device Maintenance

Enter<Toolbar>→<SystemConfigure>→<Device Maintenance>→<Parameter Management>,it includes: " recover factory setting", " export device parameter", " Import device parameter" and " system upgrade".
Recover to factory setting
〖recover factory setting〗: All the parameters are recovered to default values except some parts ofparameters (refer to "6.3Setting Parameters").
Import and Export of device parameters
Click 〖export device parameter〗 to export the device parameters to USB device, then click 〖Import device parameters〗 to Import the parameter files in USB to other devices.
System upgrade
The device supports upgrade method currently: Local USB/IE update software
USB update: Please ensure the USB device is connected well and the upgrade file has been copied in the root directory of USB device. Enter <Toolbar>→<System configure>→<Device management>→<Parameters management>, click [system upgrade] and followthe instruction
The device will restart after the successful upgrade. User can select reboot later or immediately.
IE update: Please refer to"5.2.2Device configuration".
Auto-maintenance
Auto-maintenancemeans auto-reboot,it can clear redundant data and release system resource.

AS for maintenance mode,user can select "daily regular maintenance" / "weekly regular maintenance" / "one-time maintenance".

After selects the maintenance mode and time, system will complete the auto-rebootingin specified time.

Note: Enter<Toolbar>→<System configure>→<Device maintenance>→<Customization>,enable "Auto-maintenance configuration" to take it effect.

4.12.2 Function settings

Enter <Toolbar>-<System configure>-<Function settings> screen to select enable or not all kinds of advanced configuration or management.

Advanced User Management: it supports individual channel rights control.

Advanced Alarm Setting: it supports alarm defencetime user-defined.

Advanced Video Setting: it supports video parameter configurationaccording to different time.

Email linkage alarm: it supports alarm event notification by Email.

Advanced Record Setting: supports the setting of common record, manual record, event record separately after ordering this function.

Center Management Server:the devices supports management server initiative-registered to CMS, User can call device use client software.

Alarm Server: supports reporting alarm event to alarm server.

Advanced Storage Setting: supports "alarm, redundant, and backup disk group" setting.

Auto Maintenance: supports automatic maintenance function.

Keyboard Control PTZ mode: supports keyboard PTZ control.

4.12.3 Storage Management

Enter<Toolbar>→<System Configure>→<Storage> to manage HDD and disk group.

Acquire HDD information, uninstall HDD.

System can acquire HDD information, including: HDD type, total capacity, rest capacity, HDD status, physical location.

Physical location is corresponding to the label of various SATA interface on mainboard.

Uninstall HDD: It's used to HDD hot-plug. Select target HDD, click 〖Uninstall Hard Disk〗to uninstall the HDD. After completedthe uninstallation, user can unplug the corresponding SATA interface.

Partition Management

Partition Management includes: "Create partition", "delete partition" and "Format partition".

Create partition: All the HDD partitions arecreatedautomatically. Select unassigned area of HDD,click 〖create partition〗, input the partition size, click 〖ok〗to complete the creation.

Note: Device support max 2 disks,each disk support one system partition and four user partitions.

Delete partitions: Select the partition,click 〖delete partition〗, the original partitionwill be deleted,the area size change to unassigned area.

Format partition: format partition operation will lose video data of the partition, please confirm.

Disk group management

The system contains 4 types of disk groups: "common disk group" / "alarm disk group" / "redundant disk group " / "backup disk group."

Common disk group can store all type of video data of all channels.

Alarm disk group can store alarm triggered video data of specified channels to ensure the independent storage.

Note: Combining "Disk group settings" can make the life cycle of alarm record is higher than others.

Redundant disk group can store redundant video data of specified channels,this meansthe alarm triggered video data and common video will also be backed up to redundant disk group to improve the record reliability. It is the second protect ofimportant data.

The backup disk group store backup video date, which is the third protect of important data.

Disk Group Management includes: "Disk group settings", "ChannelSettings" and "Partition Management". Disk group settings: set data remaining time. When select " Max Time", system will keep saving the record unless the HDD group is full,When HDD group is full, system will eliminate the earlier video data first (system time and disk group settings need to be unchanged). When select "Stop till full", system will keep saving the video data unless

the HDD group is full, when HDD group is full, system stop record.

Channel Settings: Specify the associated channels of alarm disk group and redundant disk group.

Partition Management: add the current available partitions to specified disk group; or cancel the binding between the partition and specified disk group. Select ▮/dev/sdb5▮ in partitionor double-click the left mouse button to make the partitions move between "Usable Partition"list boxes and "Used Partition" list boxes.

Note: Whenparts of partition on specified HDD bound with disk group, the HDD cannot create partition and cannot delete partition.

4.12.4 System Information

Enter<Toolbar>→<System configure>→<System information> to view the following information.

Basic Information

Basic information mainly includes some external interfaceinformation,device model and device serial Number and device version and so on.

Stream Information

Stream information will show current main-stream information and sub-stream information of all channels.

Log Viewing

Log type include: All/System Operation/Configure Operation/Recording Operation/User Management/Alarm Event/Exception Event/Storage Management/Network Event.

Select the time range.

Click 〖Search〗, the screen will display the result of search. Click 〖Export〗to save all the queried logs as"*.txt" document.

Note 1: If the queried result includes video information, user can click 〖 〗 on the right of item to play video.

Note 2: The maximum number of logs device supported currently is 10000. The storage mode adopts overwrite mode: continuously overwrite the oldest data when the database is full.

5. Network

5.1 Network Settings

If the device is used as network monitoring, the network must be set for properwork. Enter<Toolbar>→< System Configure>→<System>→<Network Settings>, select <connection>, there are three connection types, as the following:

Static IP: If this type selected, please type in IP address, subnet mask, and gateway information. User canuser "ping" order to check the network connection status.

DHCP: If this type selected, a DHCP server should be set in network. A dynamic IP will be assigned automatically and subnet mask and gateway information displayed on corresponding column. 〖update〗 to get the new IP, subnet-mask, gateway.

PPPOE: Click [set] ton enter XDSL parameters setting screen, type in user name and passwork and click [update] to confirm. System will dial automatically. After accomplishing dialing, the IP address will be assigned and displayed automatically on IP address column.

MAC: display the defaulted factory physical address, cannot be modified.

Mian DNS server: Set main domain name server address.

Sub DNS server: Set sub domain name server address.

HTTP port: It is the port number of browsing through IE. Default is 80.

Command port: It is the first entry port for communication between web client and device, which is mainly used for controlling of log-in, log-out, real-time preview, remote playback, and remote download, etc. Defaulted is 5050.

Media Port: It is for media stream transmitting including real-time stream, voice stream and file stream etc. The default number is 6050.

Mobile port: port is the channel of mobile phone when the data transmission, all the media and signaling data transmitted by this port.The defaultnumber is 8050.

UPNP Port: project device interface to router, external network will access to front-end device via router address and projection.

Dynamic DNS: enter the Dynamic DNS setup page, select the domain name server, inputyour domain name, registered user name and password, set update time. After set the domain, user can access the device byinputting your domain name.

Sub-stream

Enter [Sub-stream configuration] screen to set relevant channels, frame rate and data rate.

Note 1: different sub-stream types according to different binding front-end devices. 200W, 130W high-definition network camera sub-stream type is VGA sub-stream. 100W, 960H, DVR sub-stream is CIF sub-stream.

Note 2: modifying sub-stream parameters will affect multi-screen preview and IE sub-stream preview.

Server Management

Center server: center server supports device register, heart-beating check, subscribe alarm and so on.

Alarm server: supports reporting alarm event to alarm server

Email server: SMTP server.

Note 1: all server address can use IP address or domain name.

Note 2: enter <Toolbar>-<System configure>-<Device management>-<Function customization> screen to enable relevant advanced configuration to set above server.

5.2 Web Client Operation

Start IE browser, type in IP address, the login screen will appear.

Note1: If PPPoE or DHCP is selected, user has to check IP address again after restarting device.

Note2: If it is the first time login through IE, please install the Active X of IE and type in user name and password. Default user name and password are: Admin (case sensitive).

5.2.1 Web Screen Description

Web screen as the left figure, on the top the address column is device IP address, on the bottom of the column

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is device control menu including device parameters, voice talk, file management, remote playback, local settings, screens switch and so on. Next column is login authority button: logout, reboot, and clear alarm. Left side of main display is device name and channel, middle is preview, right is PTZ control.

Toolbar

Device parameters: read and modify device parameter; please refer to "5.2.2Device configuration"

Voice Talk: web client and device enable two-way voice talk; please refer to "5.2.3Voice Talk"

File Management: search and playback local video files; please refer to "5.2.4File Management"

Remote playback: search and playbackdevice video files; please refer to "5.2.5Remote Playback" Local storage: set the storage directory of video files.

Local settings: local recording menu settings.

🔳🔳🔳🔳 : click to switch image view modes among different sub-screen.

User: Admin   Logout Reboot Clear : Display the current login user; user logout, device reboot, IE clear alarm.

Device alarm: IO alarm,IO input 2 : Indication region, as follows:

When network connection is broken or abnormal, the alarm notification of "No heartbeat of device, please check the network" will be displayed in the right up side of the main screen. After recovery of network, the preview will be displayed automatically.

When alarm output link to center, if alarm occurs, the notification of "Device alarm: IQ alarm, IQ input 2" will be displayed in the right up side of the main screen, which includes alarm input number.

When alarms of motion detection with remote notification occur, the alarm notification with the alarm channel number contained such as "Device alarm:motion detection, channel 1" will be displayed in the right upside of main screen.

Preview.

It contains the adjustment, audio preview, record, snapshot of channel image parameter

🔳, 🔳: Adjust image contrast up/down.

🔳, 🔳: Adjust brightness up/down.

🔳 : Start/stop web client voice monitoring. The icon will turn to green when recording.

: Start/ stop web client recording. The icon will turn to green when recording.

: Click to snapshot.

: Click to stop preview.

Note: Click "Local storage" to set the storage directory of record files and pictures captured.

Channel directory tree

Click the preview channel first (region 3), in the channel directory tree, double-click the target channel, when the front icon becomes blue,it can display the imagenormally.
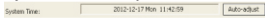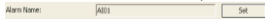
PTZ

PTZ operation is similar with device; refer to "4.4.1PTZ Control"

5.2.2 Device Configuration

Note: web client device parameters function is the same as local device function, please refer to "Table 5-1 IE increased settings".

Table 5-1 IE increased settings

Rroute	Content
<Device parameter>→<System settings>→<Device parameters>	Device name can be customized and updated to device
<Device parameter>→<System settings>→<Device parameters>	Auto-adjustment can modify the device time to PC time
	Auto-adjust
<Device parameters>→<Image settings>→<Image setting>	Channel name can be customized and updated to device
<Device parameters>→<Alarm settings>→<Alarm input>	Alarm name can be customized and updated to device
<Device parameters>→<Alarm	Alarm output name can be customized and updated to device

settings>→<Alarm output>	Alarm Name: A001 Set
<Device parameters>→<System information>→<Binding channel>	Front-end video source including preview, add, edit, delete and so on

5.2.3 Voice Talk

Click in the Tool Bar to enable voice talk between Client Web and device. A microphone should be connected to device through the line-in interface. Click again to stop talking.

5.2.4 File Management

Click , the web screen will appear. It includes file search and playback

File Search

The file search part is on the right upper side of the screen, please set target, type, start time and end time there. Then click 〖query〗 to start searching. The result will list on the table. Specify the files in the table list and click on the playing control button or download button to do the relevant operations.

File Playback

The play control screen is on the left side of the screen. It includes image display area, play control bar, and channel information.

Click 〖play〗, the selected video files will be displayed in time order.

The progress of playing is shown as the figure below: 00:58 / 29:58

The playing control bar is shown as the figure below:

Function description:

Play;

Pause;

Stop;

Go to next frame;

⏩ Fast play option(The speed of playing will be doubled by each clicking. It includes2X, 4X, 8X, 16X);
⏪ Slow play option(The speed of playing will be half down by each clicking. It includes 1/2X, 1/4X, 1/8X, 1/16X);
◑ Enhance contrast;
◐ Reduce contrast;
☀ Enhance brightness;
🔅 Reduce brightness;
🔊 Turn on/off voice;
◀ Go to previous file;
▶ Go to next file(◀ and ▶ is enabled only when multiple record files being selected to play)
📷 Snapshot(the storage directory can be set on the pop-up screen by clicking 💾Local Storage)
The information of the record file selected will be displayed in the area shown as the figure below. It includes device's IP address, current play speed, channel number and start/end time of the record file.

Target: 172.1.10.220   Play Speed: normal
Channel: 1
Time:

5.2.5 Remote Playback

Click 🌐 to enter remote recording research, playback and download.
Recording research: select the record channel and record date on the icon's right region, click [query] below the calendar to query the recording files. The Search results will be displayed in the timeline area directly.
Note: User can select the disk group type on the left of timeline, select record type on the bottom of timeline, the timeline will auto-display the suitable search results.
Video playback: Double-click timeline to select the start time, click [▶] to start playing.
Video Download: Right-click timeline to select the start time and end time, click [💾] to start downloading the selected video files.
Note: web remote playback operation is the same as device operation.

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6. Appendix

6.1 Specification

Table 6-1 NVR Specification

Product type		1U NVR
External interface	VGA output	DIN-15 port, 1280×1024@60Hz, 1920x1080@60Hz
	HDMI output	HDMI interface*1, 1280×1024@60Hz, 1920x1080@60Hz
	Voice talk	1 audio input;RCA port, (2Vp-p, 600Ω);
	Audio output	1 Audio output, RCA port(2Vp-p, 600Ω);
	USB interface	2: USB 2.0 interface, 2 ports in the back or one in the front and one in the back
	RS422	1 RS485 control R+ R-
	Network interface	Rj45, 10/100 M self-adaption
	Superuser password reset	1 in the back
	Alarm input	4 channel, NO/NC type
	Alarm output	1 channel, NO output
	Keyboard/remote control	Keyboard/ remote control
	SATA interface	2x SATA HDD, up to 2T
	LED light	4 led lights on the panel

Audio parameters		
	Audio standard	PAL/NTSC/SECAM
	Video compression resolution	1080P(1920*1080), SXGA(1280*1024), QVGA(1280*960), HD720P(1280*720), XVGA(1024*768), SVGA(800*600), VGA(640*480), SD1(960*576), D1(704*576), CIF(352*288)

	Frame rate	1~25F/S/CH(PAL), 1~30F/S/CH(NTSC)real-time
	Video output bitrate	128kbps-10240kbps
	Sub code resolution	VGA: 640*480; CIF: 352×288
	Sub code rate	VGA: 1-25 fps, stream 128-5120 kbps; CIF:1-15fps, stream 32kbps-512kbps
	Playback function	Support 4 channel playback synchronously, forward/backward/slow play single frame
	Playback speed	Forward: 1/8X, 1/4X, 2X, 4X, 8X, 16X; Backward: 2X, 4X, 8X, 16X

Working mode		It is real multi-window and multi-tasking stand alone DVR with pentaplex function: preview, recording, playback, backup, network transmission
Storage device	Harddisk	Support 2T SATA HDDx8
	Backup device	DVD record, USB flash driver, USB HDD
	Burner	External USB burner
User interface	WEB	Support image preview,playback and device , Managementbased on IE browser
	Client	Support image browser, playback and device management NVMS based on client software
	TELNET	Support TELNET-based devices management
	GUI	Supportuser-friendly GUI with tooltips, multiple languages, menu comments. Multiple control methods: mouse, IR remote control, front panel and keyboard
Network protocol	PPPOE	Support PPPOE client
	DHCP	Support DHCP client
	IP/TCP/UDP	Support Ipv4, TCP/UDP, RTP/RTCP/RTSP,SMTP/NTP
	DNS/DDNS	Support(DYNDNS, 3322)
	Other	SMTP, NTP
	Device communication	RTSP protocol, RTP / RTCP media transport protocol and HTTP+XML

	protocol	control protocol supported. Protocol stack dynamic loading supported
Environmental	Operating voltage	DC 12V 5A,external adaptor
	Operating temperature	-10℃-+50℃
	Operating humidity	10%~90%RH
	Power consumption	<10W(without HDD)

6.2 Appendix 2: Methods of NVR calculating HDD Capacity.

Calculate the maximum NVR capacity of the build-in hard disk.

Timing Record:

Step 1: Calculate the maximum capacity of the hard disk needed in selected channel per hour, suppose as S_i(MByte), (i is the channel number), and suppose the bit rate of the channel selected as D(Kbit/s), the formula f calculation is:

$S_i = (D*3600)/(8*1024) = D * 0.439453125$ MB

Step 2: Confirm the storage time length, suppose as T hours. The total maximum capacity of the hard disk needed in selected channel for hours, suppose as S_t is:

$S_t = T * S1$

Step 3: Confirm the total numbers of the channels, suppose as n. The total maximum capacityof the hard disk needed, suppose as S_c is:

$S_c = S1 + S2 + ... + Sn$

Alarm Record:

Suppose the rate of alarming as α%, the capacity of the hard disk needed in alarm record supposed as S_a is:

$S_a = S_c * α\%$

Calculate the compression bit rate for record T hours.

Timing Record:

Step 1: Suppose the capacity of the hard disk as S, the total numbers of the channel as n. The capacity of hard disk needed per channel supposed as D_i is:

$Di = S / n$

Step 2: Suppose the total record time as T hours. The capacity of the hard disk needed per hour per channel supposed as Dt is:

$Dt = Di / T$

Step 3: The bit rate of all the channels supposed as Dc is:

$Dc = Dt *(8*1024)/3600 = Dt * 2.2756 (Kbit/s)$

Alarm Record:

Suppose the rate of alarming as α%, capacity of hard disk as S, the total numbers of the channel as n. The capacity of hard disk needed per channel supposed as Di is:

$Di =(S / n)*α\%$

Step 2: suppose the time length of record as T (hours). The capacity of hard disk needed per hour per channel supposed as Dt is:

$Dt = Di/T$

Step 3: The bit rate of all chanels supposed as Dc is:

$Dc = Dt *(8*1024)/3600 = Dt * 2.2756(Kbit/s)$

6.3 Appendix: system setting parameters

Table 6-2 system setting parameters

Menu Class 1	Menu Class 2	Menu Class 3	Menu options	Factory default values	default	ex-import
		Device Name	It can be set through IE or client software, Support multiple languages	NVR	NO	YES
		Device ID	[1,99] the device number which is corresponding to remote control	1	NO	NO
		Auto Screen Locker	1 min\5 min\10 min\30 min\customized\never	Never	YES	YES
SYSTEM	Basic	Video Standard	PAL, NTSC, SECAM	PAL	NO	YES
		Language	Support multiple languages	Chinese	NO	YES
		System time	N/A	N/A	N/A	N/A
		Date Format	YYYY-MM-DD W hh:mmss YYYY-MM-DD hh:mmss MM-DD-YYYY W hh:mmss MM-DD-YYYY hh:mmss	YYYY-MM-DD W hh:mmss	YES	YES
		Time format	12 Hour System/24 Hour System	24 hour standard	YES	YES
		Summer Time	Enable, disable	Disable	NO	YES
	Display	Menu Transparency	Non-transparent/4:1/3:1	Non-transparent	YES	YES
		Resolution	1280X1024@60HZ, 1920x1080@self-adaption	1280x1024@60HZ	YES	YES
		Connection	Static IP/DHCP/PPPOE	Static IP	NO	YES
		IP Address		192.168.0.1	NO	NO
		Subnet Mask	When static IP, it can configure, if another situation, it can display only.	255.255.255.0	NO	NO
		Gateway		192.168.0.1	NO	NO
		MAC Address	Display MACaddress; cannot be modified	Factory default	N/A	N/A
		PPPOE user, password	Account up to 16 characters, password up to 32 characters	Factory blank	YES	YES
		Primary DNS	Digital soft keyboard settings	1.0.0.0	NO	NO
		Secondary DNS	Digital soft keyboard settings	1.0.0.0	NO	NO
		HTTP Port	[1,65535], and command port, media port, mobile port can be repeated	80	YES	YES
		Command Port	[1024,65535], and HTTP port, media port, mobile portcan not be repeated	5050	YES	YES

Network	Media Port	[1024,65535], and HTTP port, media port, mobile portcan not be repeated	6050	YES	YES
	Mobile Port	[1024,65535] ,and HTTP port, command port, media port can not be repeated	8050	YES	YES
	Domain name server	Members.3322.org Members.3322.org(static) Members.dyndns.org Members.dyndns.org(static) Cgi.tzo.com Members.easydns.com www.justlinux.com Update.ods.org www.zoneedit.com www.hn.org Members.dhs.org www.dyns.cx Customization	Members. 3322.org	YES	YES
	User domain name	Soft keyboard settings	Factory blank	YES	YES
	User name	Soft keyboard settings	Factory blank	YES	YES
	Password	Soft keyboard settings	Factory blank	YES	YES
	Update time	None updated, 1minutes, 5 minutes, 10 minutes, 15 minutes, 30 minutes	30 minutes	YES	YES
	IP Channel	Channel 1~8	Channel 1	YES	YES
	Channel name	Can be set through IE or client software	NA	NA	NA
	Camera Mosaic	Enable, disable	NA	NA	NA
	Video Loss	Enable, disable	NA	NA	NA
	Motion	Disable, high sensibility,	NA	NA	NA

Image setting	Video	detection	middle sensibility, low sensibility			
		Image parameters	Brightness:[0,255] contrast:[0,127], saturation:[0,127], chroma:[0,255]	NA	NA	NA
		Overlapping information	Channel name, time, channel name and time, none overlapping	Channel name and time	YES	YES
		Overlapping information-setting	Set location by dragging mouse	Channel name:(10, 10) time:(600, 10)	YES	YES
	PTZ	IP channel	Channel 1~8	Channel 1	YES	YES
		PTZ protocol	PelcoP, PelcoD......	PelcoD	YES	YES
		PTZ address	Range: [0, 255]	Default address is corresponding to channel number	YES	YES
		PTZ Baud Rate	1200, 2400, 4800, 9600	9600	YES	YES
		Copy setting	All channels, channel 1, channel 2......channel 16. Note: only copy PTZ protocol and baud rate.	All channels	N/A	N/A
	Alarm Input	Device Type	Open circuit,Closed Circuit	Open circuit	YES	YES
		Alarm name	It can be set through IE or client software, support multiple languages.	Ai01, AI02......AI16	NO	NO
		Defence time	Whole day defence, customize time table	Whole day defence	YES	YES
		Screen Display	Disable, enable	Disable	YES	YES
		Linkage screen display setting	Disable, enable	Main monitor	YES	YES
		Linkage beep	Disable, enable	Enable	YES	YES
		Linkage record	Disable, enable	Enable,default alarm input number is corresponding to channel number	YES	YES

Alarm		Linkage output	Disable, enable	Enable	YES	YES
		Linkage alarm output	Disable, enable	Enable; defaulted linkage of all alarm output	YES	YES
		Linkage upload alarm	Disable, enable	Disable	YES	YES
		Linkage PTZ	Disable, enable	Disable	YES	YES
		Linkage PTZ-setting	Set concrete action of PTZ linkage	No-action	YES	YES
		Linkage EMAIL	Disable, enable	Disable	YES	YES
		Copy setting	All alarm input, alarm input 1......alarm input N.Note: alarm name can not be copied.	All alarm input	N/A	N/A
	Alarm output	Alarm output name	It can be set through IE or client software, support multiple languages.	AO01	NO	NO
		Defence time	Whole day defence, customize time table	Whole day defence	YES	YES
		Handling mode	5minutes, 10 minutes, all the time, customized resort time	5 minutes	YES	YES
	Exception	Type	HDD error, IP conflict, illegal access, network cut, disk group full, exception of disk group	N/A	N/A	N/A
		Linkage handling-HDD error	Beep, overlapping information, report to alarm center, email linkage, linkage alarm output	Overlapping information	YES	YES
		Linkage handling-IP conflict		Overlapping information	YES	YES
		Linkage handling-illegal access		Overlapping information	YES	YES
		Linkage handling-network cut	Beep, overlapping information, report to alarm center, linkage alarm output	Overlapping information	YES	YES
		Linkage handling-disk group full	Beep, overlapping information, report to alarm center,	Overlapping information	YES	YES
		Linkage handling-	email linkage,	Overlapping	YES	YES

		disk group exception	linkage alarm output	information		
Record	Basic Configure	IP channel	Channel 1~8	NA	NA	NA
		Stream type	Composite stream, video stream	NA	NA	NA
		Video Quality	: High quality, standard quality, common quality, custom	NA	NA	NA
		Frame rate	1~full frame rate	NA	NA	NA
		Bit rate	32kbit/s, 48kbit/s, 64kbit/s, 128kbit/s, 256kbit/s, 512kbit/s, 126kbit/s~5120kbit	NA	NA	NA
	Record Schedule	Set recording schedule	Scale is 30 minutes, can copy or set the whole day record type by dragging	Whole day timing record	YES	YES
		Copy setting	All channels, channel 1......channel N	All channel	YES	YES
Network setting	Server	CMS	Auto-handle domain name or IP	192.168.0.10	YES	YES
		Port	[1024,65535]	3031	YES	YES
		Register Interval	5s, 10s, 15s, 20s	10s	YES	YES
		Alarm server	Auto-handle domain name or IP	192.168.0.20	YES	YES
		Port	[1024,65535]	8000	YES	YES
		Email Server	Auto-handle domain name or IP , support maximum of 64 characters	Factory blank	YES	YES
		Account	Support maximum of 64 characters	Factory blank	YES	YES
		Password	Support maximum of 32 characters	Factory blank	YES	YES
		SMTP Port	[0 , 65535]	25	YES	YES
		SMTP Authorization	LOGIN, PLAIN , NONE	LOGIN	YES	YES
		SMTP SSL	Disable, Enable	Disable	YES	YES
System maintenance	Maintenance	Maintenance Mode	disable, each day, each week, single time	Disable	YES	YES
		Advanced user	Disable, enable	Disable	NO	NO

		management				
		Advanced Alarm Setting	Disable, enable	Disable	NO	NO
		Advanced Video Setting	Disable, enable	Disable	NO	NO
	Customization	Email Server	Disable, enable	Disable	NO	NO
		Advanced Record Setting	Disable, enable	Disable	NO	NO
		Mangement Server	Disable, enable	Disable	NO	NO
		Alarm Server	Disable, enable	Disable	NO	NO
		NTP server	Disable, enable	Disable	NO	NO
		Auto Maintenance	Disable, enable	Disable	NO	NO
		PTZ Keyboard control	Disable, enable	Disable	NO	NO

6.3.1 Install mobile phone program.

6.3.2 Phone monitor

After power on, in the preview screen, put in user name and password to login.
As the left following figure, enter [System setting]-[Network setting] to set [phone port], default number 8050.
Modified phone port value will take effect after being saved.
Enter [Network setting]-[CIF sub-stream] to set frame rate, bit rate.
Choose parameters according to bandwidth, usually 5 split/s, 128kbit/s.