H.264 Network Video Recorder

Quick Start Guide

Easy to Set your surveillance system

Ver.2.1

Caution

Please read this User manual carefully to ensure that you can use the device correctly and safely

This manual is suitable for 4 channel, 8 channel, 16 channel NVR. In this book, we take 100fps 4 channel NVR as a sample. All examples and pictures used are conforming to it.

➢ Please use the appropriate power adapter for the NVR
➢ Please use individual power instead of share electrical outlets with other electrical equipment.
➢ Please choose high quality hard disk which could meet the working demand of NVR.
➢ To protect the main chipset from thunder damage, please make sure the ground wire is correctly connected before using NVR.
➢ Do not expose NVR to rain or moisture.
➢ Avoid direct sunlight and stay away from heat source.
➢ Keep all liquid away from the NVR.
➢ Do not touch the power plug or case with wet hands as this could result electric shock.
➢ Do not put heavy objects on the NVR
➢ The NVR cannot be installed at the place with dust. And avoid potential mechanical vibration or impact.
➢ Do not disassemble or repair the NVR by yourself.
➢ Do not open the cover or insert any objects into NVR.
➢ Handle with care; avoid the collision or strong fall.

If the NVR run into hard objects accidentally, which leads to the NVR cannot work normally, please contact the authorized dealer to repair or replacement.

Operation Guide for H.264 4ch/ 8ch/16ch NVR

┌───┐
│ **ADVICES** │
│ Design and description of this product are subject to │
│ change or renewal without notice │
└───┘

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Chapter 1- Introduction

1.1 NVR Introduction

This NVR (Network Video Recorder) is designed especially for CCTV system. It adopts high performance video processing chips and embedded Linux system. Meanwhile, it utilizes many most advanced technologies, such as standard H.264 with low bit rate, Dual stream, SATA interface, VGA output, Mouse supported, IE browser supported with full remote control, mobile view(by phones), etc., which ensure its powerful functions and high stability. Due to these distinctive characteristics, it is widely used in banks, telecommunication, transportation, factories, warehouse, and irrigation and so on.

1.2 Main Features

Function	Description
Compression Format	H.264 High profile compression with low bit rate and better image quality
Live Surveillance	Support monitor, VGA and HDMI output Display the local record state and basic information
Video Function	Video quality, record resolution, video frame rate adjustable. Support different record modes: Record when power on, Manual, Schedule, Motion Detection, Alarm, Timing etc.
Video Storage	Support large capacity hard disk with SATA interface
Playback	Set recording search, recording play , video file storage Multi-mode playback mode
Backup	Support Backup from NVR to USB, removable hard disk, DVD writer; and backup from network to hard disk
Alarm	Alarm activate video record, tour, message, buzzer, email, ftp function Support external alarm signal input
Network	Support cloud access (www.dvrcenter.net),mobile view, Multi-kinds of browser remote view
Mouse Operation	Support USB mouse operation
PTZ configuration	Support RS485 decoder to control PTZ function Support various PTZ protocols, remote PTZ control through internet Support PTZ auto cruise tracks

Feature：

➢ H.264 High profile Video compression format

➢ G.711 Audio compression format

➢ Windows Style GUI, embedded real-time Linux operating system

➢ 4ch 720P, 8ch 1080P,16ch 720P resolution

➢ Full real-time Multi-operation(preview, record, playback, backup, network surveillance, mobile monitor)

➢ Support Dual stream network transmission(Main stream for local storage, sub-stream for network transmission)

➢ Support Cloud service, P2P function, easy for remote control access

➢ Support 3G & Wi-Fi extension

➢ Support Mobile phone view (Android\ iPhone\ iPad\ Blackberry\ Windows Phone)

➢ HDMI and VGA output at 1920×1080P resolution

➢ Support Multi-browser, including Windows IE\Firefox\Chrome\Safari

➢ USB 2.0 interface support backup, CD/DVD writer, software upgrade, mouse operation

➢ Support multi-kinds of language menu

➢ CMS Software Supported

1.3 NVR Remote controller

It uses two AAA size batteries and works after loading batteries as following:

Step1: Open the battery cover of the Remote controller.
Step2: Place batteries, please take care the poles (+ and -).
Step3: Replace the battery cover.

🖐 *Notice: Frequently defect checking as following*
  1. Check batteries poles.
  2. Check the remaining charge in the batteries.
  3. Check IR controller sensor is mask.
    If it doesn't still work, Please change a new remote controller to try, or contact your dealers.

The interface of Remote controller showed as below:

Serial number	Name	Function
1	POWER Button	Same as POWER button on the front panel
2	SEARCH Button	Enter playback mode
3	Numeric button	Code input/number input/channel switch "10+"(press 0 and 1-6 to switch from channel 11 to 16)
4	QUAD	Same function as QUAD button on the front panel
5	Direction button	Same function as direction button on the front panel
6	MUTE	Close the audio
7	INFO	Enter system information
8	◄◄	Previous file
8	►►	Next file
9	◄◄	Back Play
9	►►	Fast Play
10	●	Record
10	■	Stop Playback
11	►❚❚	Play/Pause
12	PTZ	PTZ control

1.4 Install the Hard Disk Drive

1 .Please don't remove the hard disk when the NVR power is turned on.

2. Loosen the screws on the right sides When NVR power is turned off, and then remove the top cover.

3. Connect the data and power cables of hard disk with the NVR motherboard. Fix the HDD to the bracket using 4 screws.

4. If the user has high demand on HDD, we suggest using the special hard disk for security and protection.

Chapter3-Basic Operation Instructions

3.1 Power On/Off your NVR

🖑 *Notice: 1.Before you power on the unit, please make sure all the connection is good.*

2. Proper startup and shutdown procedures are crucial to expanding the life of your NVR.

3. Suggest using UPS to protect the power supply under allowable conditions.

3.1.1 Power on your NVR

Plug the power supply and turn on the power supply switch. Power supply indicator light shining indicates turning on the NVR. After startup you will hear a beep. The default setting of video output is multiple window output modes. If the startup time is within the video setting time, the timing video recording function will start up automatically. Then the video indicator light of corresponding channel is shinning and the NVR is working normally.

3.1.2 Power off your NVR

There are two ways to shut down your NVR:

Option 1: Standard Shutdown (soft switch): Enter the main menu, click on Menu→Shutdown.

2: Manual Shutdown (hard switch): Pressing the power supply switch, plug off the power supply.

3.2 Login NVR

When the NVR boots up, the user must login and the system will provide the corresponding function according to the user authority. There are 2 user settings: **Admin** and **Guest**, No password. **Admin** is super user, **Guest**'s authority is Preview and video playback.
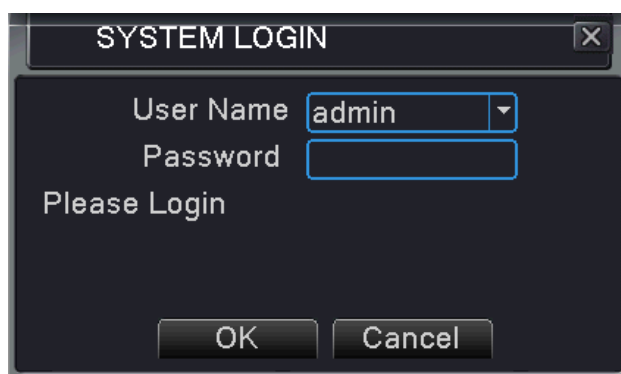

Pic.3.1

Password protection: There is no password, just knock the "ok" and you will enter.

After you set a password, if the password is continuous wrong three times, the alarm will start. If the password is continuous wrong five times, the account will be locked. (Through Reboot or after half an hour, the account will be unlocked automatically)

For your system security, please modify your password after first login.
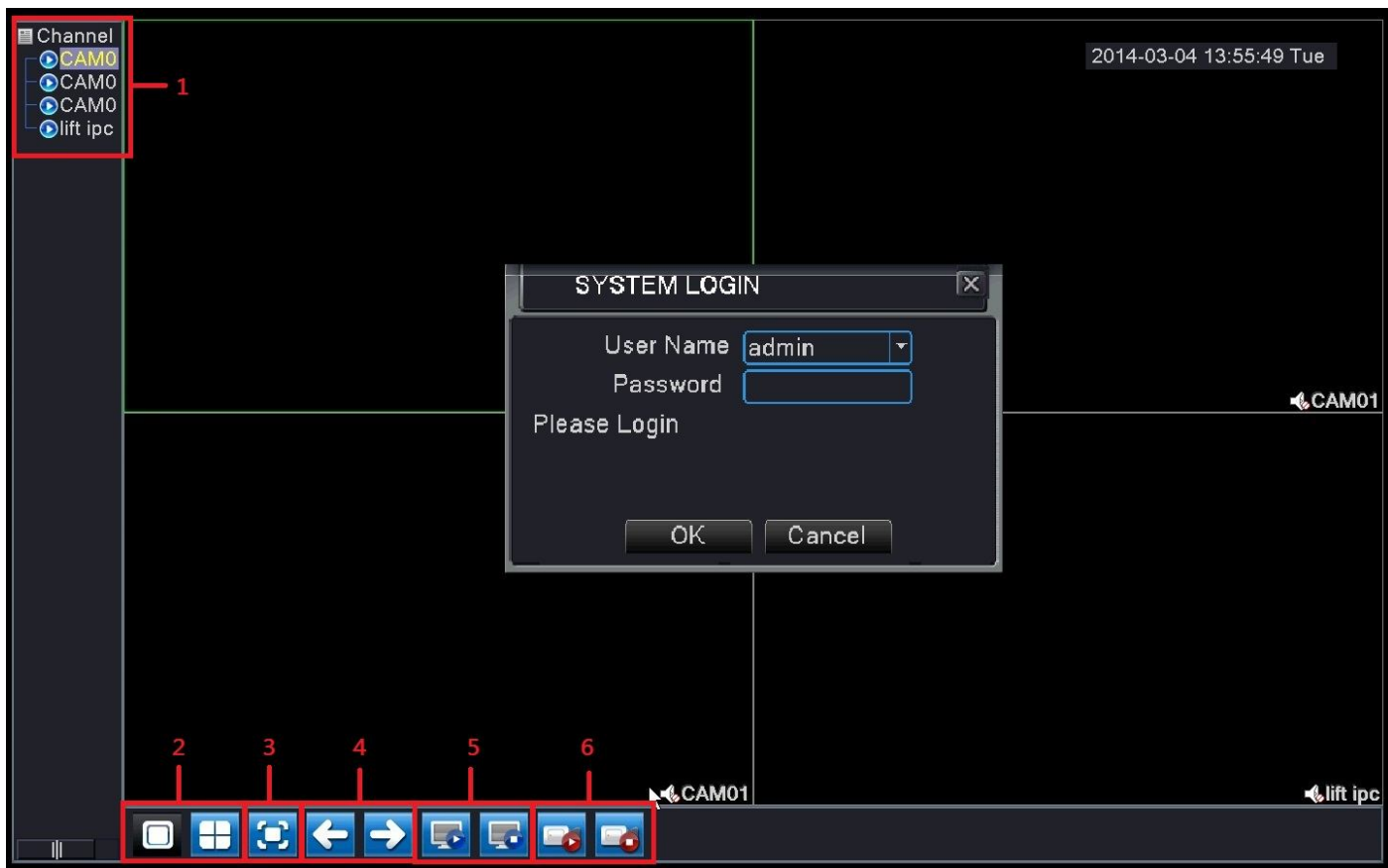
Pic.3.2 NVR login interface

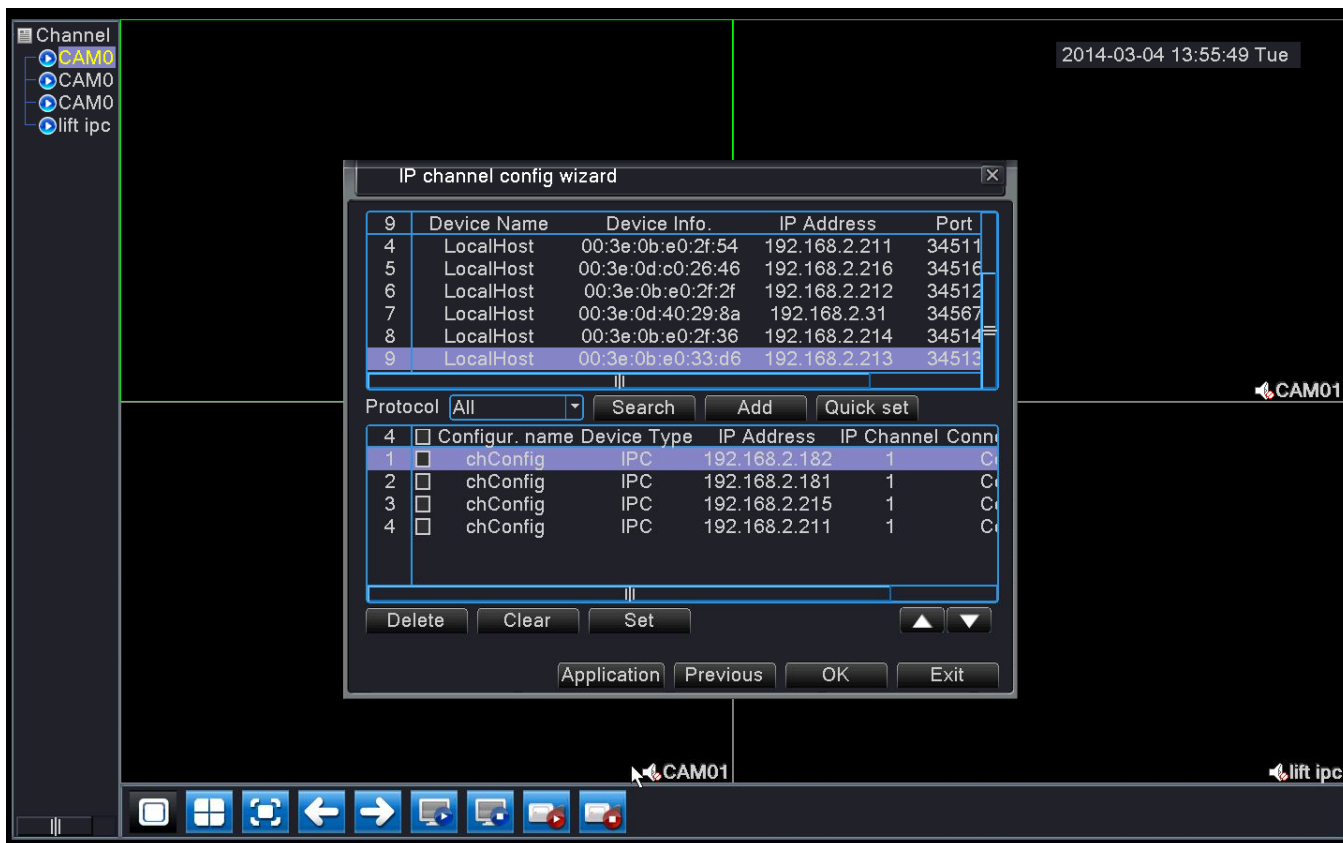| 1	**Channel name and status** Click "channel" can pack up, and right click the cannel can configure it	2	**Screen switch**
3	**Full screen display**	4	**Previous/Next page turning**
5	**All channel play**	6	**All channel record**

3.3 Login Guide（**Configuration wizard**）

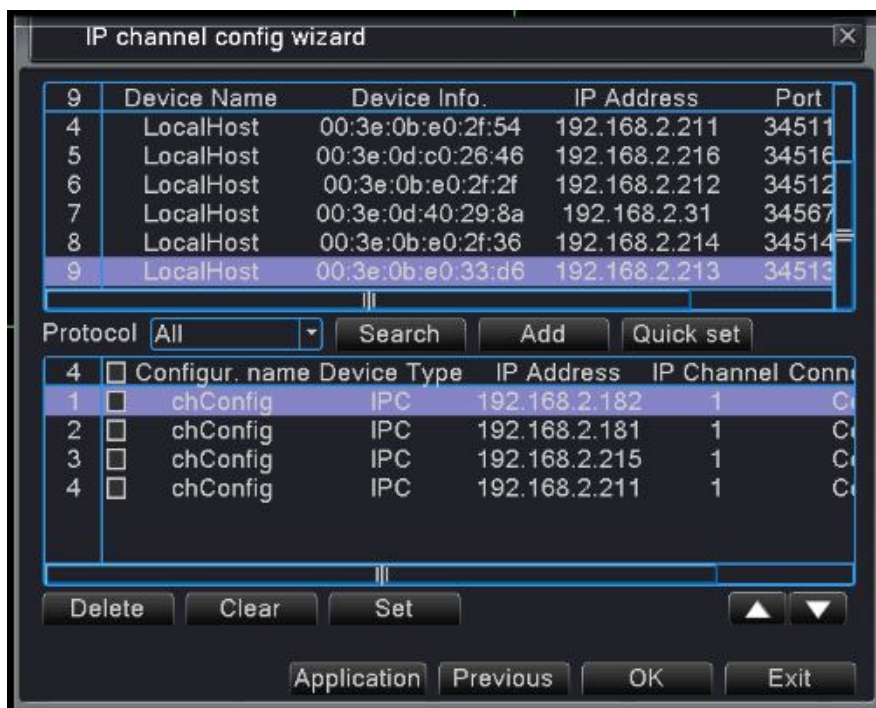After login, the system will pop up a Guide dialog box
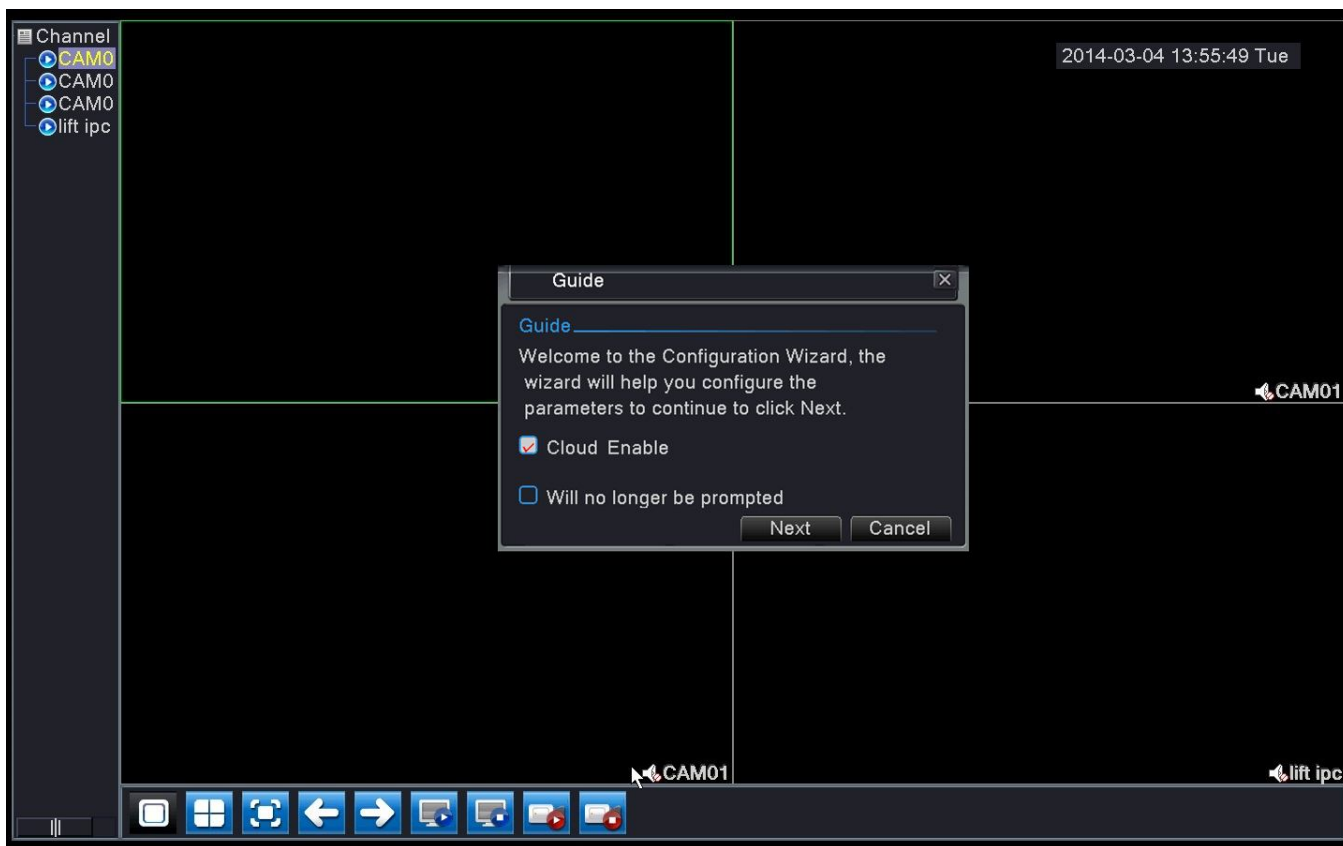
Pic.3.3 Login Guide

Click "Next", the system will guide you how to connect IPC.

Pic.3.4 IP Channel config wizard

If you already connect IPC in network (IPC should be in same network segment with NVR), the system will search its IP address automatically, For example as below:
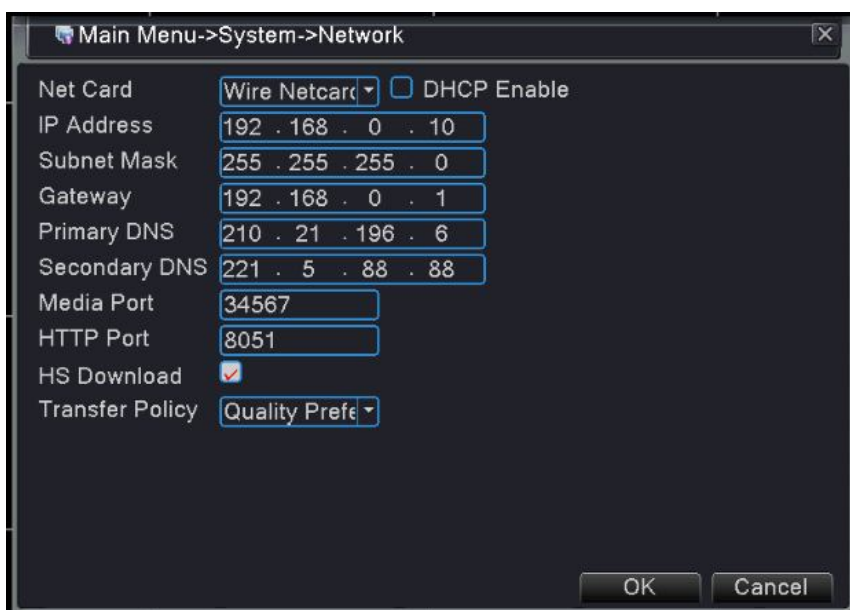

Pic.3.5 Search IP address

Click "Quick Set" Button, the system will add the IP Cameras automatically. Click "OK" to finish the setting. If you want to change to other device, click "Clear". Tick the device which system searched out, and click "OK", this IPC will connect successfully.

3.4 Network setup

To set the IP, the path is "Main menu" →"System" →"Network"

Pic.3.6 Network setup

🖑 ***Notice:*** NVR default IP address is "192.168.1.10".

Set the device IP and the router's IP in the same network segment.

For example, the router's IP address is "192.168.1.1",subnet mask is "255.255.255.0",so you should

set NVR's IP address as "192.168.1.X" (X range from 2-254). Generally the default gateway is the same as

router's IP address. Input the IP(192.18.1.10)in IE browser, you can login the device in the LAN.

【**Net Card**】:You can choose cable network card or wireless network card.
【**DHCP Enable**】:Obtain IP address automatically (not suggested).
　　🖑 ***Notice:*** DHCP server is preinstalled.
【**IP address**】: Set the IP address. Default: 192.168.1.10.
【**Subnet mask**】: Set the subnet mask code. Default: 255.255.255.0.
【**Gateway**】: Set the default gateway. Default: 192.168.1.1.
【**DNS setup**】: Domain Name Server. It translates the domain name into IP address. The IP address is offered
by network provider. The address must be set and reboot then it works.
【**Media port**】: Default: 34567.
【**HTTP port**】: Default: 80.
【**HS Download**】: HS Download
【**Transfer Policy**】:There are three strategies: self-adaption, image quality precedence and fluency precedence.
The code stream will adjust according to the setup. Self-adaption is the tradeoff between the image quality
precedence and fluency precedence. Fluency precedence and self-adaption are valid only when the assistant
code stream is turned on. Otherwise image quality precedence is valid.

3.4 Channel manage

Channel manage including **Digital channels, Channel status,** and **Channel type**
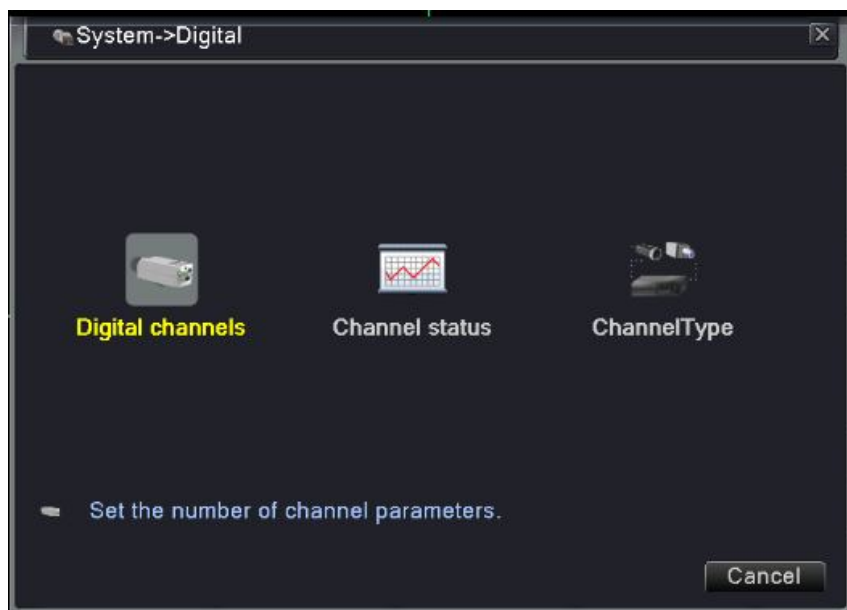
Pic.3.7 The channel Manage interface of NVR
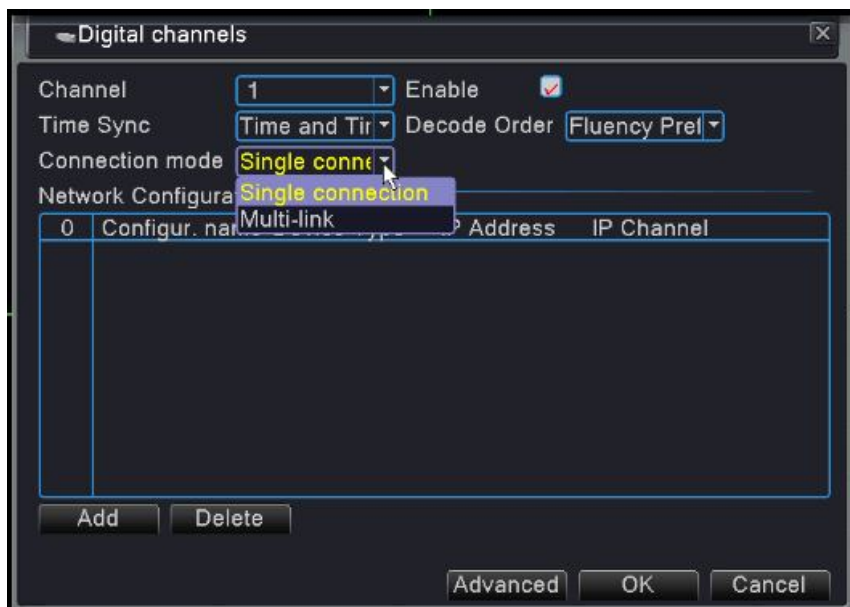
Pic.3.8 Single link page and Multi-link page of digital channel

【**Channel**】**:** Select channel title

【**Enable**】**:** Open digital channel, tick enable, then can do related settings

【**Time Synchronization**】**:**Tick it means the time of this channel is same with device.

【**Connection Mode**】**:** Can be singe connect or multi-ink connect

Multi-link mode can connect to several devices, devices will be tour displayed one by one, and tour interval

can be set, no less then 10s;

【**Delete**】**:** If the user wants to change device, select the existing device, click delete will be ok.

【**Add**】**:** Click "add" will pop up below page to add new device
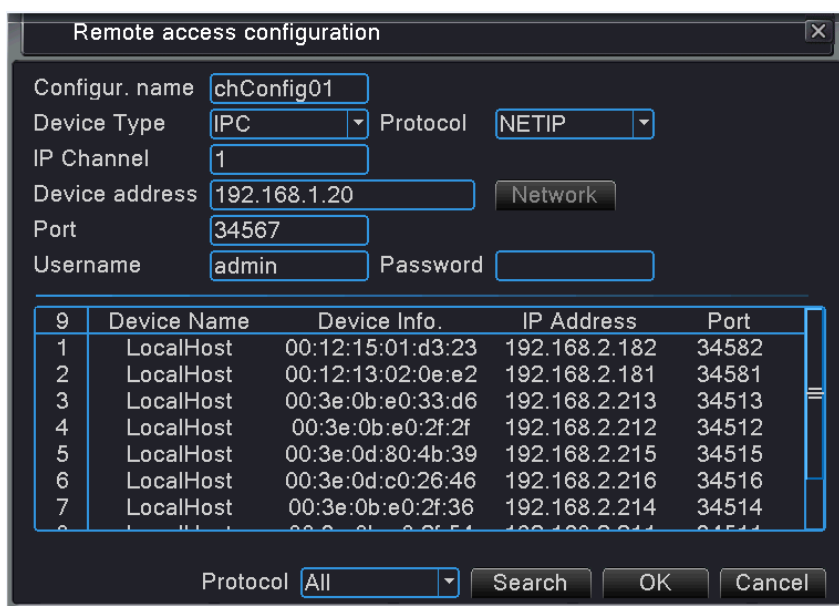
Pic.3.9 Remote channel configuration interface

【**Configure Name**】**:** Device is with default configure title, user can revise it if necessary;

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【**Device Type**】**:** 3 types: IPC、DVR、HVR，user can choose, default is IPC;

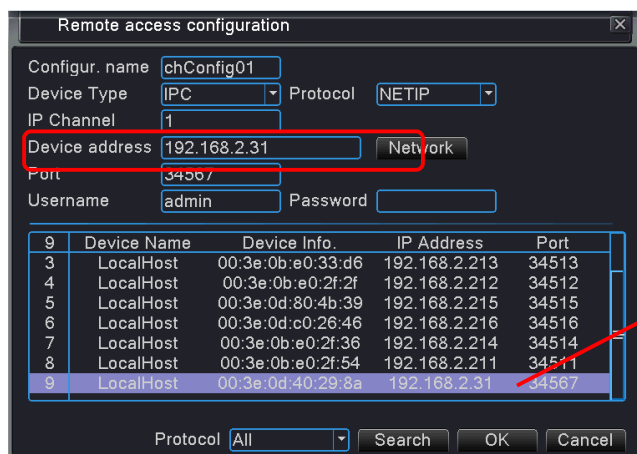【**Protocol**】**:** NTPIP or ONVIF

【**Remote channel**】**:** User can input remote channel title from the device that you want to connect remotely

【**Device address**】**:** IP address of device.

【**Port**】**:** Default is 34567

【**User name**】**:** Default is admin

☞ *Notice:* Click "Search" will show all the devices that searched out, user can choose any of the devices
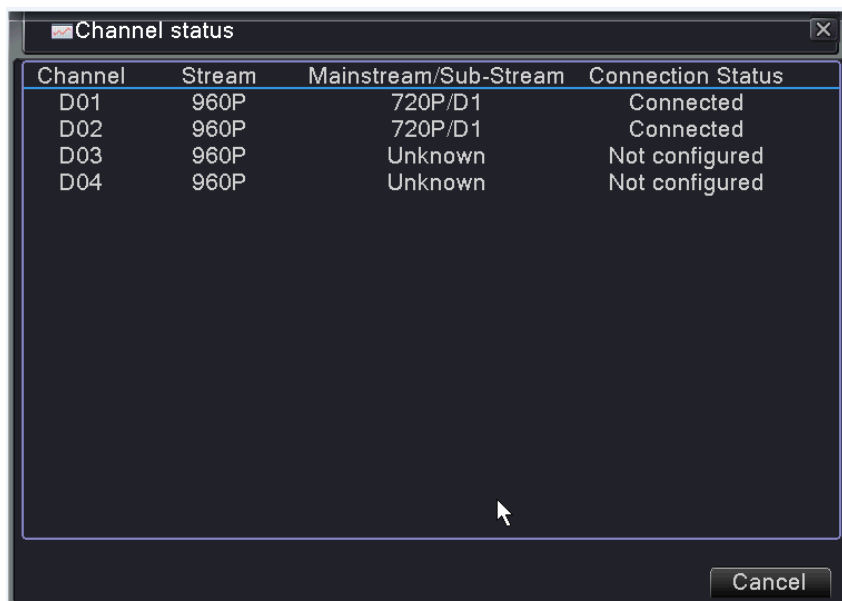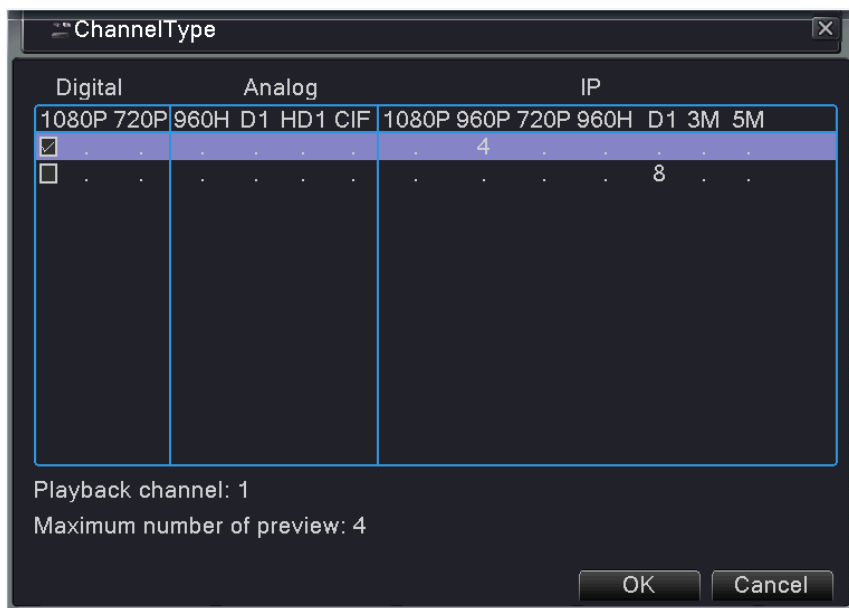
that you like.

Pic.3.10 Configure IPC address

Channel Status

Channel status is to show the status of all the digital channels existing, status including Stream,

Mainstream/Sub-Stream, Connection Status.

Pic.3.11 Channel status

Channel type:

Pic.3.12 Channel type

Different NVR model can support different type.

3.5 Preview

You can right click mouse to choose the switch between the windows.

The system date, time and channel name are shown in each viewing window. The surveillance video and the alarm status are shown in each window.

1	🔲	Recording status	3	❓	Video loss
2	📶	Motion detection	4	🔒	Camera lock

3.6 Record configuration

Set recording parameters, the system default setting is 24 hours consecutive recording. You can enter main menu→record function→record configuration to set.

👆 **Notice**: *There is at least one read-write hard disk in NVR.*
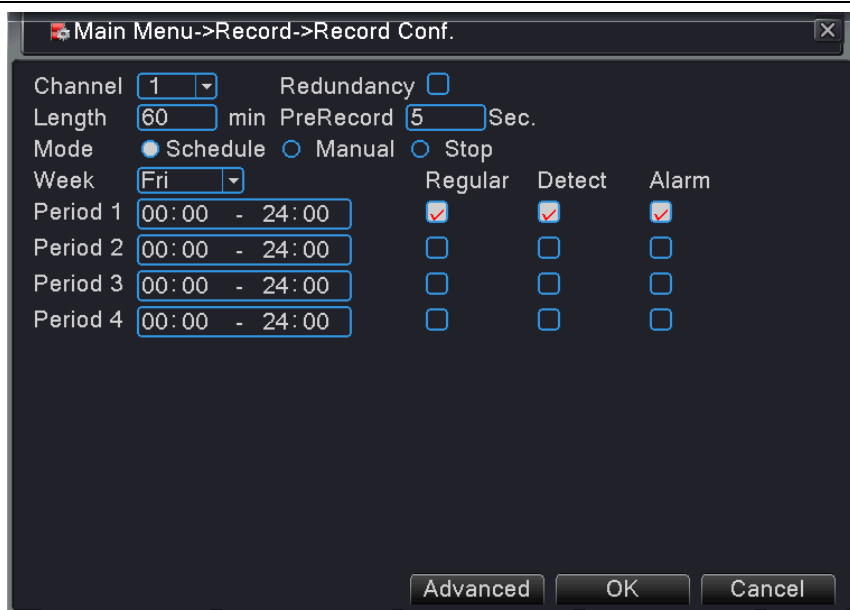
Pic.3.13 Record configuration

Record configuration set the record plan for each channel.

【Channel】: Choose the corresponding channel number to set the channel. Choose "all" option to set all channels.

【Redundancy】: Choose the redundancy function to make the recording files double backup. Double backup is writing the video files in two hard disks. When you do the double backup, make sure that there are two hard disks installed. One is read-write disk and the other is redundant disk.

【Length】: Set the time length of each video file.(default value is 60min).

【Pre Record】: Record 1-30 seconds before the action occurs.

【Record Mode】: Schedule, Manual or Stop.

【Schedule】：Record according to the set record type (regular, detection and alarm) and time section.

【Manual】: After choosing manual button, the related channel will do the regular recording whatever the state of current channel is.

【Stop】：Click the stop button and the channel stops recording

【Week】: Set Monday to Sunday or full week to record

【Period】: Set the time section of regular recording, the recording will start only in the set range.

【Recording type】: Regular, detection or alarm.

【Regular】：Perform the regular recording in the set time section. The video file type is "R"

【Detect】：Trigger the "motion detect", "video blind" or "video loss" signal. The above alarm function is set as follows: when starting recording, the "detection recording" state is on. The video file type is "M".

【Alarm】：Trigger the external alarm signal in the set time section. The above alarm function is set as follows: when starting recording, the "detection recording" state is on. The video file type is "A".

3.7 Playback

Playback: Access playback mode, Set recording search, recording play, video file storage

☞ **Notice**: *The hard disk that saves the video files must be set as read-write or read-only state.*
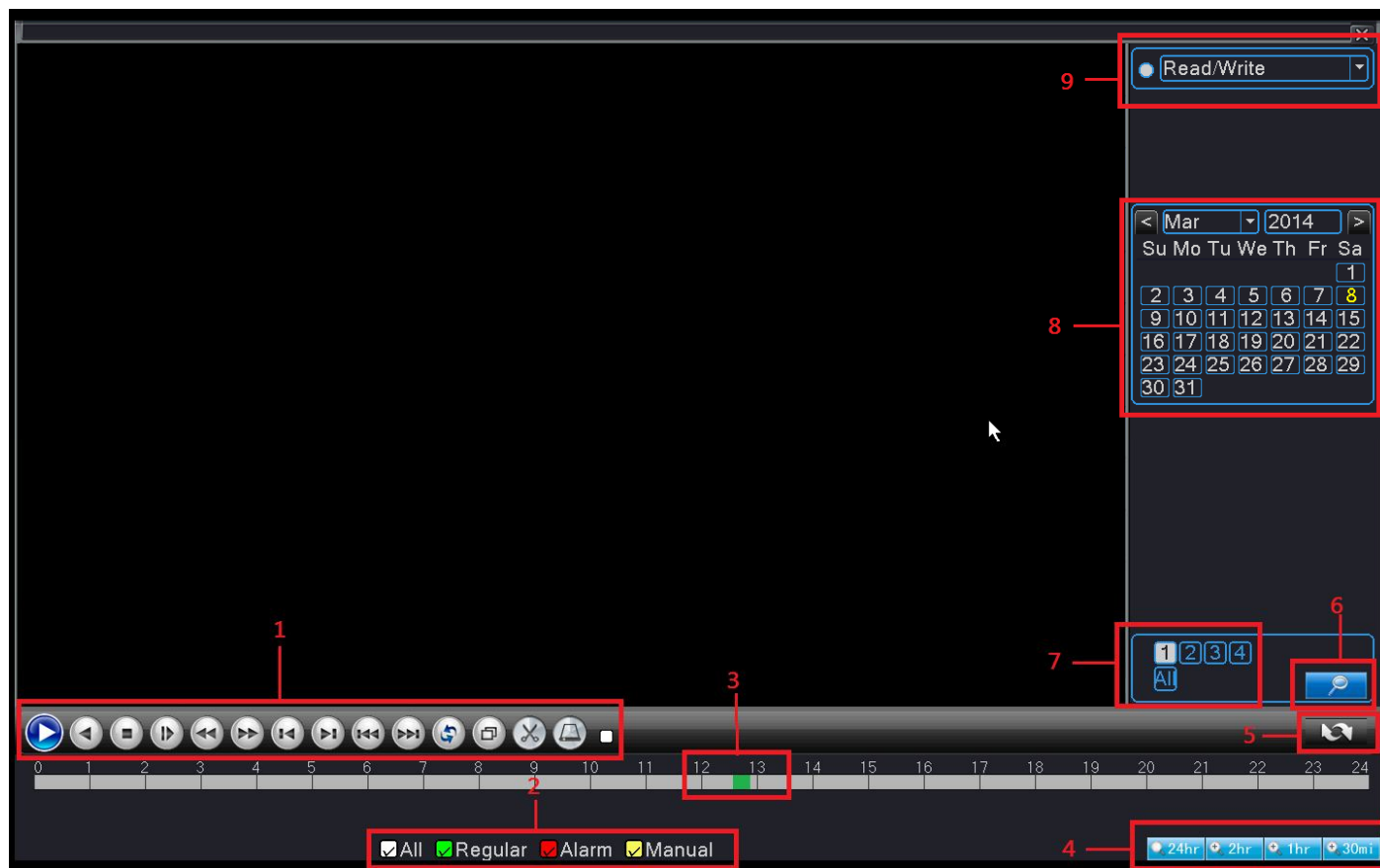
Pic.3.14 Playback interface

1	Playback control	2	Video mode	3	Time progress bar	4	Time interval choosing
5	Switch by time, file mode	6	File searching	7	Channel choosing	8	Date choosing
9	Storage device choosing	10	File information	11	Listed files	12	Time searching

【Playback control】See detail in below chart

| Key	Functions	Key	Functions
	Play/Pause		Backward play
	Stop		Slow play
	Fast backward		Fast forward
	Previous frame		Next frame
	Previous file		Next file
	Repeat Play		Full screen

	Edit		Record backup

✋ *Notice: Play under frame by frame, the playback status should be paused firstly.*

3.8 Backup

You can back up the video files to external storage through setup

✋ *Notice: You need to install storage device before backup. If the backup is terminated, the files already backup can playback individually.*
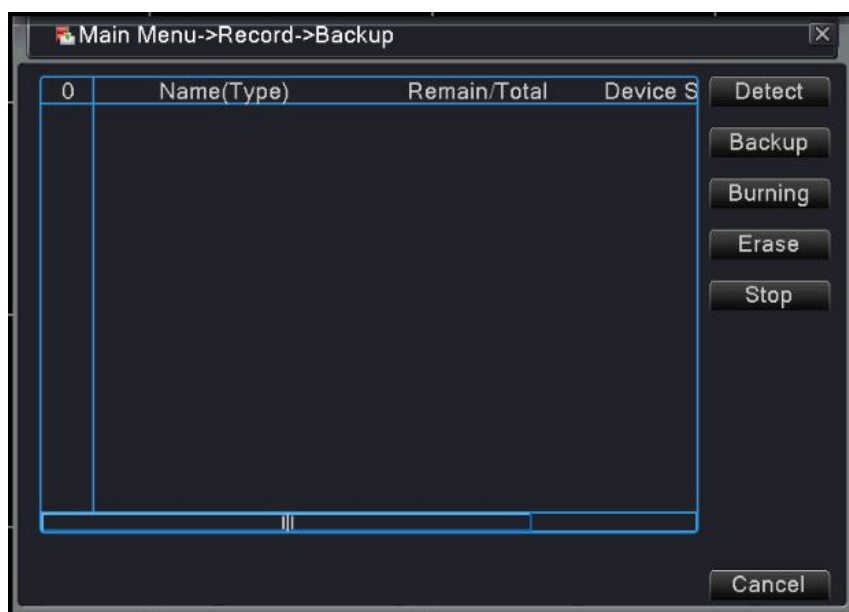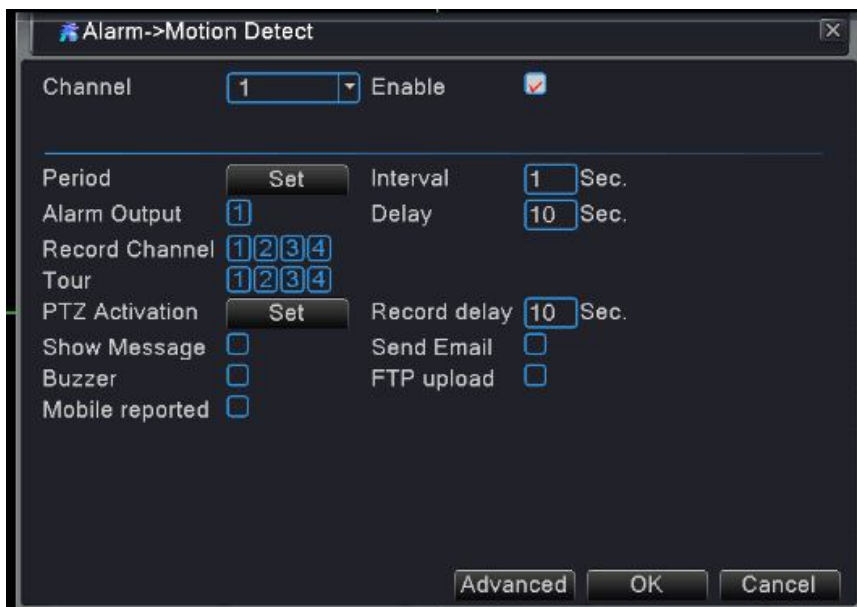

Pic.3.15 Backup1

【**Detect**】: Detect the storage device connected with the NVR

【**Backup**】: Click backup button and you can choose the backup files according to the type, channel and time.

3.9 Motion Detection

When system detects the motion signal that reaches the set sensitivity, the motion detect alarm is on and the linkage function is turned on.
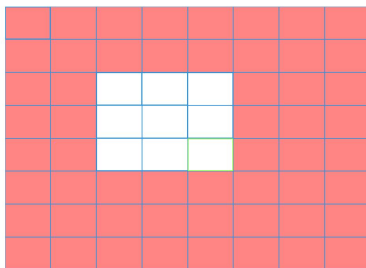
Pic.3.16 Motion Detect

【Channel】: Choose the channel for motion detection.

【Enable】: Tick enable means the motion detect function is on.

【Sensitivity】: Choose from the six levels (Lowest, Lower, Middle, High, Higher, Highest) to set the sensitivity.

☞ *Notice: Only the motion detect under Hybrid mode/Full analog mode have can set the sensitivity, and only the analog channel can set region.*

【Region】: Clicks set and enter the setting area. The area is divided into PAL16X12. Red block is motion detect defensive area, White block is unfenced area. You can set the area by mouse, drag the mouse and draw the area. Default: all selected blocks are detection area.

Pic.3.17 Motion detect area setting

【Period】: Trigger the motion detect signal in the set time section. You can set according to week or set uniformly. Each day is divided into four time sections. ☑ Means the setting is valid.
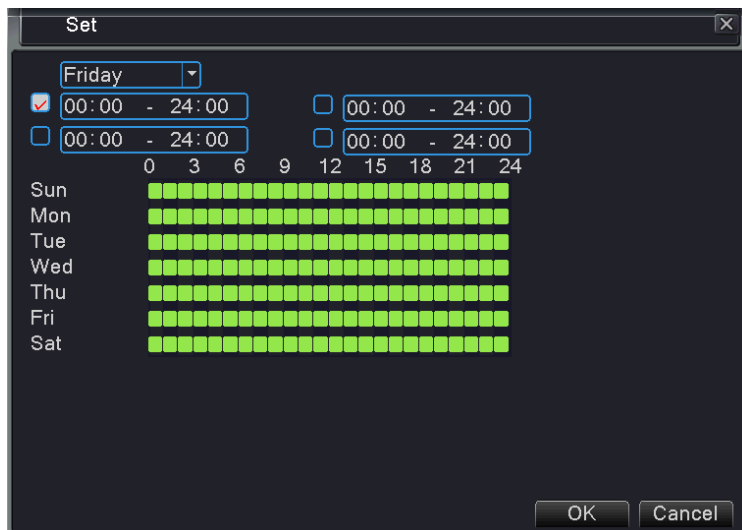
Pic.3.18 Set motion detection time

【**Interval**】**:** Only one alarm signal is triggered even there are several motion detect signals in the set interval

【**Alarm Output**】**:** Start the external equipment of corresponding linkage alarm when the motion detect alarm is turned on

【**Delay**】**:** Alarm lasts a few seconds when the alarm state is turned off. The time range is 10-300 seconds

【**Record Channel**】**:**Choose the recording channel; Trigger the video signal when alarm is turned on.

【**Tour**】**:** Tick tour means that the selective channel is single window alternate patrol preview. The interval is set in the main menu→system→tour

【**PTZ Activation**】**:**When alarms on, set PTZ activation.

3.10 PTZ Control

PTZ Control: Functions including PTZ direction control, step, zoom, focus, iris, setup operation, patrol between spots, trail patrol, boundary scan, assistant switch, light switch, level rotation and so on etc.

☝ *Notice: 1.Before operation, please make sure the Decoder 485+,485- line well connected with NVR 485+,485- line.*
2. before operation, click main menu-> system-> PTZ config to set the PTZ parameters.
3. The PTZ functions are decided by the PTZ protocols.
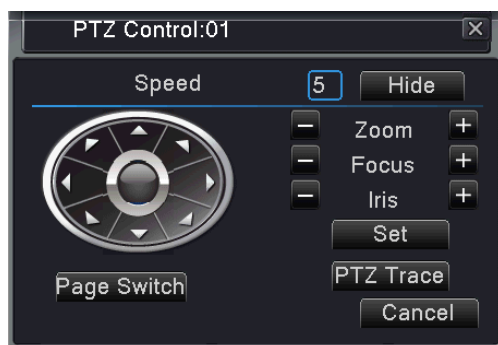
Pic.3.19 PTZ control interface

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【**Speed**】**:** Set the PTZ rotation range, Default range 1-8.

【**Zoom**】**:** Click－/＋ button to adjust the zoom of cameras.

【**Focus**】**:** Click－/＋ button to adjust the focus of cameras.

【**Iris**】**:** Click－/＋ button to adjust the Iris of cameras.

【**Hide**】**:** Current interface will be temporarily hidden after click it.

【**Direction control**】**:** Control the PTZ rotation. 8 directions control is supportive.

【**PTZ Trace**】**:** Full screen show channel image. Press the left mouse button, can control PTZ to rotate. Press the left mouse button and rotate the mouse, can adjust the zoom of cameras.

【**Set**】**:** Enter the function operation menu.

【**Page switch**】**:** Switch between different setting pages.

Chapter 4-Network access settings and cloud technology introduction

4.1 LAN access settings

4.1.1. Network connection

1. Before the WEB operation, need to connect this device with the network.

2.Enter NVR "main menu" →"system" → "network" to set correct IP address, subnet mask ,DNS and gateway port, default is ok (the IP segment of the device should be the same with that on PC computer, if disconnected, please check device IP was successfully connected .)

4.1.2. Login

Step 1: After connecting successfully, you can login to view.

Open a web browser input the IP address of the login device in the address bar. For example the device IP address is 192.168.1.10; HTTP port is 80. Then input http://192.168.1.10 in the address bar and connect. If HTTP port is not 80, such as 81, then need to add port when viewing, as: http://192.168.1.10:81

If the PC connects the device at first time, when open system, the security warning will pop up whether to accept the WEB control web, please choose to accept the user, the system will automatically identify the installation. (If the system is prohibited to download, please confirm whether you have other prohibited controls to download plug-ins, and reduce the IE security level, permit unsigned plug-in to operate. The following interface will pop up after successfully connected.

| User Name | |
| Password | |
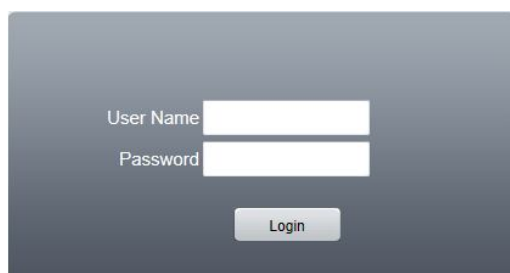
Login

Pic.4.1 WEB Login interface

Step 2: Login. Enter the user name and password, the administrator user name of factory default is admin, password is blank. After login, please promptly modify the administrator password.

Login is successful, display the interface as shown below.
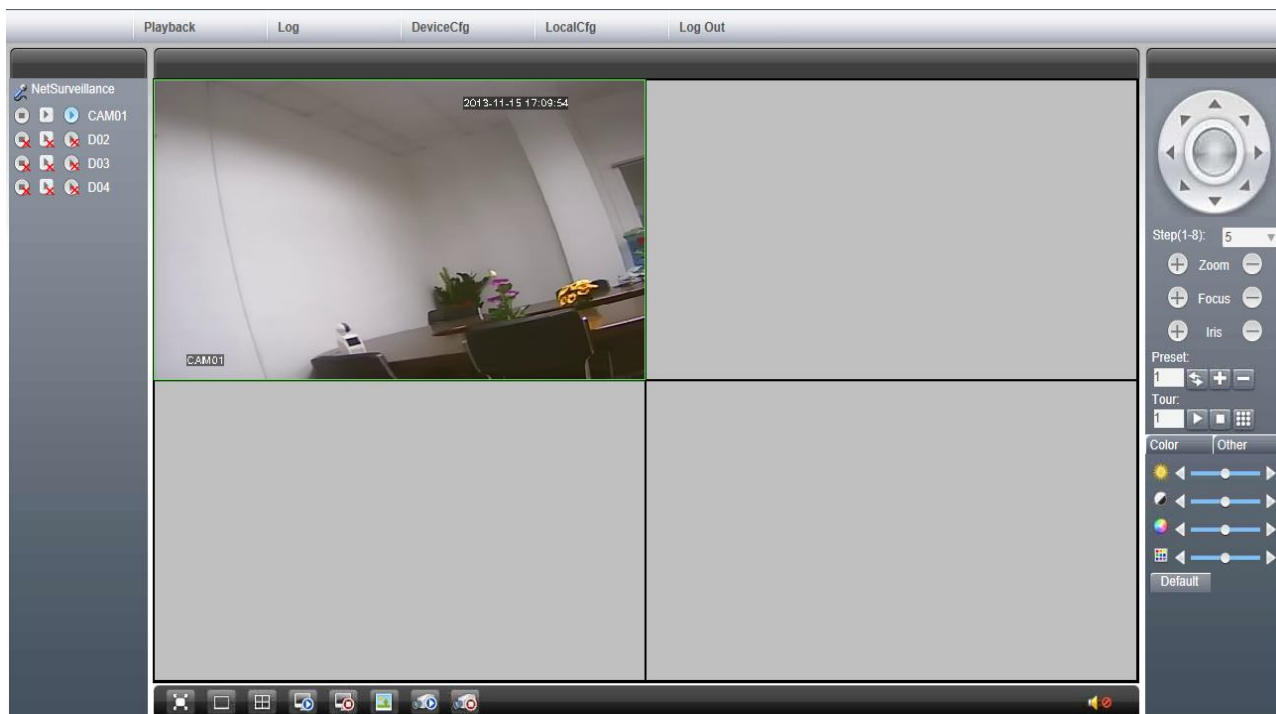

Pic.4.2 WEB control interface

4.2 Cloud technology functions and using introduction

Cloud technology is the latest network remote access technology; Using cloud technology, you don't need to set the complex network settings to achieve remote access easily.
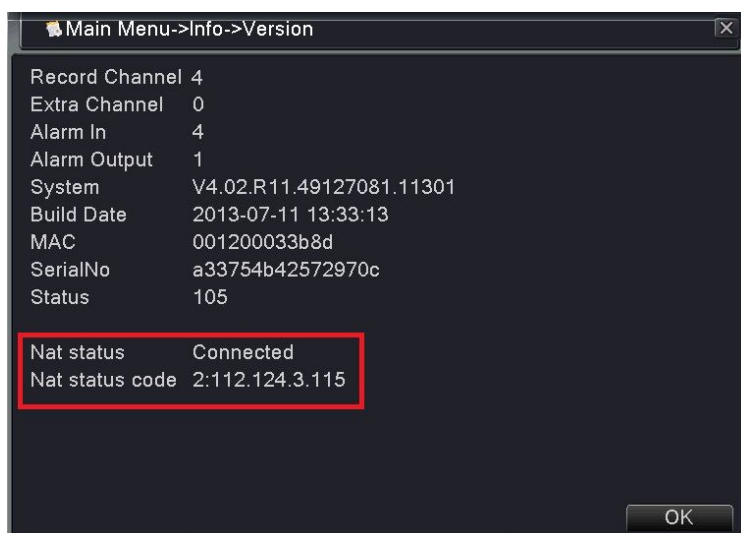
☞ *Notice: Some of the models don't have this function, according to the real products*

Before using cloud technology, Make sure your device connect to WAN successfully. You can check the connection status of cloud technology from version submenu.
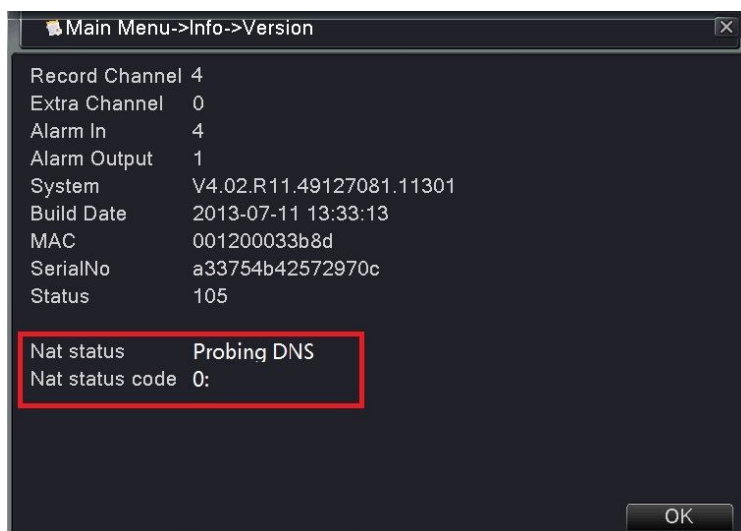
Pic.4.3 Connect failed interface

Pic.4.4 Connect successfully interface

Open web browser, enter cloud access website: www.dvrcenter.net . Login interface as picture 4.5:


Pic.4.5 login

There are two ways to remote control the device with cloud technology: (1) By device serial No. (2) By user.

4.2.1. Login by Device serial no.

Input Serial No. of NVR and verify code can do remote access (way to get Serial No: "main menu" →"info" →"version")

4.2.2. Login by User

Customers use their registered user name and password to log in (first time use need to register). After login, needs to add the device (enter "device management" page can finish adding device); after finish adding device, the added device will appear in the left column of "my devices". Click on the current equipment for preview, playback, configuration and operation
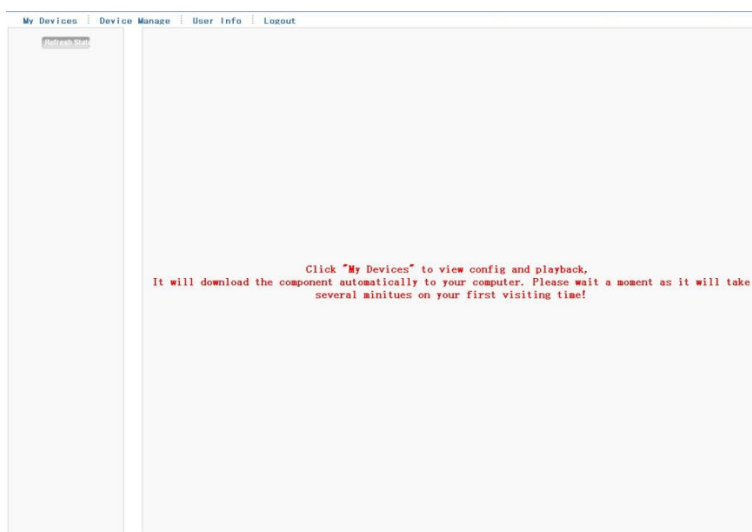
Pic.4.6 Remote operation

4.3 Client CMS software operation

CMS software is used on the same PC, support control multiple NVRs at the same time.

Please take out the CD-ROM in the accessories, copy the CMS installation software in the CD-ROM After installation on the local PC, double click the "CMS", open the control interface appears in Picture 4.7, default without password, the client can set the login password **(Note: The password is password of CMS client, non-NVR login password)**.

Pic.4.7 CMS login

After enter into CMS interface, shown in Picture 4.8:
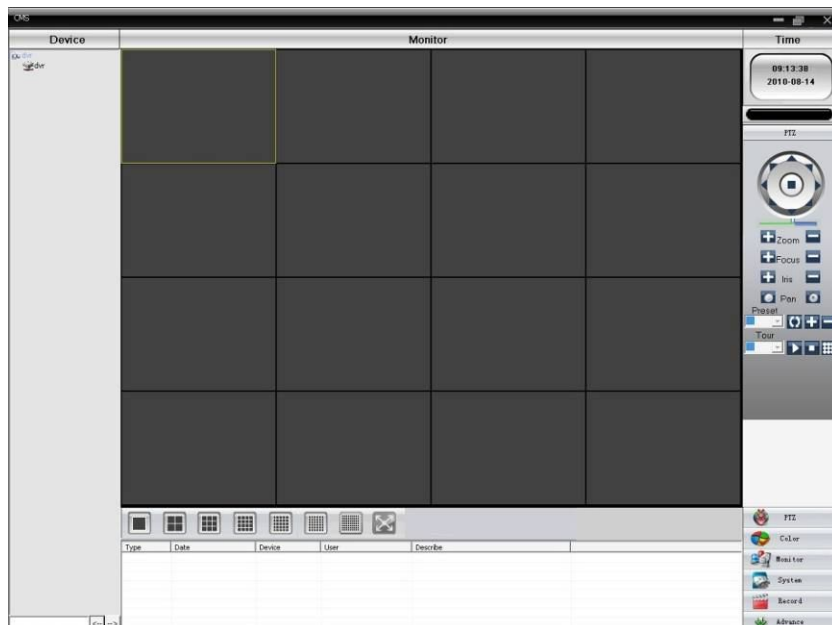
Pic.4.8 CMS control interface

Click the right corner of "System" settings, switch to the control of management options as below:


Pic.4.9 manage

First click ☐to add a domain, region name are free to take, after determining the list of selected regional areas to create a domain name, select ☐ add device as shown below:

Pic.4.10 edit

As the follow prompts to input required information of the NVR device, confirmed and added successful, repeat the above operation, can add multiple NVR equipments, management and monitoring operations.

If you want to modify the equipments which have been added before, selected the needed NVR at first, then click the ✏ icon to modify the parameters, but also can delete the NVRs which have been added on the regional list through click 🗑 deletion.

After completed these steps to add NVR, click the label at the right corner for real-time monitoring, switch to multi-monitor screen interface, double-click the top left column of the NVR channel device can carry out real-time monitoring.
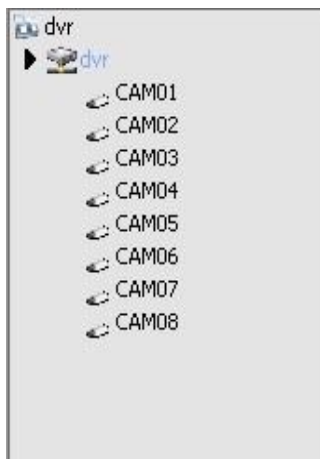
Pic.4.11 device

4.4 Mobile Phone Monitoring

This device supports the user to use the phone for remote video surveillance operation. Use extra stream technology to do mobile phone monitoring. Support channel switching and multi-channel monitoring simultaneously. (Android phone system as an example).

Step 1: NVR settings. The "main menu"→"record", enable extra stream;

Step 2: Install the matching mobile phone monitoring software. Obtain corresponding client software from the optical disc (the client software of Android smart phone is vMEyeCloud.apk) and install it on the phone;

Step 3: After successful installation, find and run the corresponding client software from "start"→"program" of the mobile phone (it is vMEyeCloud on Android mobile phone), as picture 4.12;
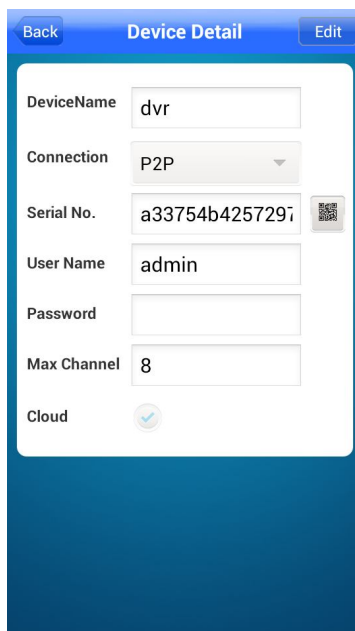

By user   By Device

Pic.4.12 Mobile client interface 1

Step 4: click the device list on picture 4.12, Add device, enter device name, serial No., user name, password.

By Device Serial No.

Pic.4.13 Mobile client interface 2
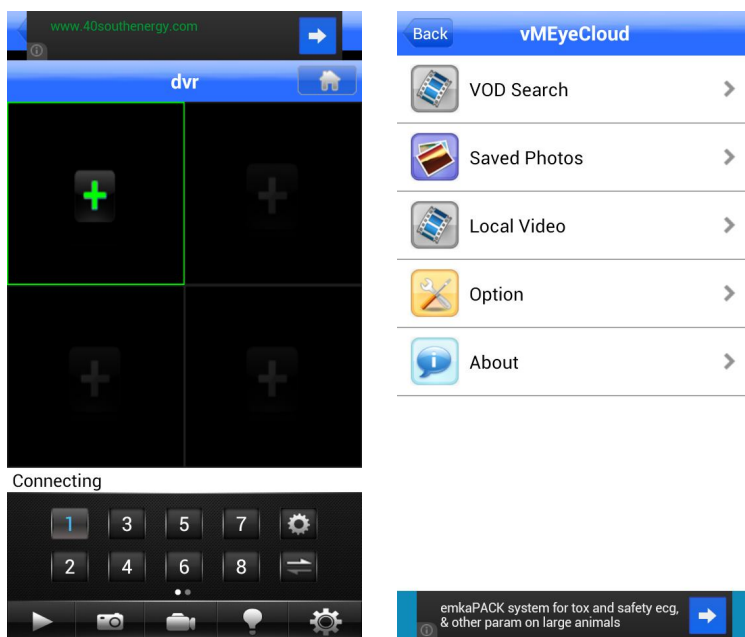
Device Name: Set by user;

User name: Input user name to login NVR;

Password: Input password to login NVR;

Serial No.: NVR device No.;

Port: default port is 34567;

Click OK after finish adding, shown below. Choose the channel which needs to be monitored, preview screen will display properly.

Display screen   setting interface

Pic.4.14 Mobile client interface 2

Note: If the NVR is in LAN when monitoring, the mobile phone needs to connect wireless router to access the device;

The corresponding client software for different mobile phone system is shown as below (please refer auxiliary software in the optical disk because of different version):

Mobile phone client of the third version of Symbian S60 is: vMEYE_SB_S60_3rd.sisx

Mobile phone client of the fifth version of Symbian S60 is: vMEYE_SB_S60_5rd.sisx

Mobile phone client of Android system is: vMEyeCloud.apk

Mobile phone client of Blackberry system is: vMEYE_RIM.cod

Mobile phone client of Apple system is: vMEye (please search and install in Appstore)

Note: Mobile phone monitoring software can also support cloud technology access.

Chapter 5- Maintenance

5.1 Maintenance

1. Please brush printed circuit boards, connectors, fans, machine box and so on regularly.

2. Please keep the grounding well done to prevent the video or audio signal interfered and the NVR from static or inductive electricity.

3. Do not pull out the video signal line or RS-232 port or RS-485 port with the power on.

4. Do not use the TV in the local video output port (VOUT) of DVR. It will damage the video output circuit easily.

5. Do not turn off the switch directly. Please use the turn-off function in the menu or press the turn-off button in the panel (3 seconds or longer) to protect the hard disk.

6. Please keep the DVR away from heat resource.

7. Please keep the DVR ventilated for better heat radiator.

Thank you for choosing our NVR!