

16 / 36 / 64 CH Linux NVR

Network Video Recorder

User's Manual



Network video recording system

2015 OCT V3.0





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Foreword 【Notices】



WARNING

- Do not expose the DVR under the sunlight, heat or wet environment while installation. As it could decrease the performance of DVR and damage the machine.
- Do not touch the power plug or case with wet hands as this could result electric shock.
- Do not forcedly bend or put heavy object on power cable as this could result in injury to personal or equipment.
- Do not operate with *damaged power cord* or *loose electrical outlet* as this could result in electric shock or accident.
- Please use individual power instead of *share electrical outlets with other electrical equipment as this could result in damage or accident.*
- Do not attempt to service this DVR by yourself as it may expose you to dangerous voltage or other hazards. Please refer all service to the qualified servicing distributor.
- Please do not remove the machine housing during operation. It may cause electric shock or accidental injury.



CAUTION

- Do not place the machine on an uneven surface or it would decrease the DVR efficiency or malfunction.
- Avoid any shock or bumping of the DVR while recording. Improper handling could damage the system.

	CAUTION	
	Make sure the voltage selector switch is set to appropriate setting before plug in!	



I. 【Specification List】

Hardware Specification		
Processor	Intel® Core™CPU Core i5 4660	
Memory	4GB DDR3 RAM,1GB Flash(DOM)	
HDD Capacity	Support 5 units of 3.5 in. 3T HDD in box, can support up to 9 units of 3.5 in. HDD with extension card.	
Lan Port	1 x Gigabit RJ-45 Ethernet Port	
LED Indicators	HDD, Power, Network LEDs	
USB	6 x USB 2.0	
Buttons	Power Button	
Alarm Buzzer	System warning	
Power supply	Input : 100-240V AC,50/60Hz, Output : 520W	
Video Output	1 x HD OUT / 1 x VGA D-Sub / 1 x DVI-D	
Support Channel	16CH / 36CH / 64CH	
Weight	14Kg	
Dimension	430 x 178 x 563mm	
Operating Environments	Temperature: 0 ~ 40 °C Humidity: 90%	
Software Specification		
Recording	Supported Camera Models	VIT and VIH Series(can connect to VDH-412VS)
	Number of Channels Supported(Recording)	Up to 64 IP CAM
	Recording Mode	Continuous/by hand/by schedule/alarm/multi-alarm
	Buffer Storage for Alarm Images (before and after events)	Pre-recording: Up to 300 sec Post-recording: Up to 300 sec
	Recording Performance	Up to 30 fps at 720P or 23fps at 1080P for each channel * Real performance may vary in different environment
Local Display	Display Mode	Split-screen display model for 1, 4, 9, 16, 25, 36 or 64 channels, auto channel touring
	Local Monitoring Enhancement	Full screen display, event notification, PTZ control, digital zoom
	Local Playback	Max 4-view playback from multiple NVR servers simultaneously
	Search Mode for Local Playback	By date & time



	Playback Control	Play, pause, stop, reverse play, next/ previous video file, different speed control
	Export	Convert multiple recording files to the external USB device instantly
Remote Monitoring	Display Mode	Split-screen display model for 1, 4, 9, 16, 25, 36, 49 or 64 channels.
	Video Setting	Resolution, Quality, Frame Rate
Remote Playback (coming soon)	Playback Channel	Max 4-view playback from multiple NVR servers simultaneously
	Search Mode	By date & time
	Playback Mode	Play, pause, stop, reverse play, next/ previous frame, next/ previous video file, different speed control
	Playback Enhancement	Full screen display, video snapshot, digital zoom
	Export	264 compression format
	Download	Download recordings via the web
Advanced Event Management	Events	Motion detection and alarm features must equip with VDH-412S
	Actions	Video recording, email alert, buzzer, PTZ camera control, alarm output, and user-defined action
Security Control	Authority Management	Different user groups and rights can be assigned to different users
	Auto Logoff	Automatic user logoff from idling configuration pages
	Event Logs	Detailed event logs
	On-line Users List	Record of the users currently logged on and previously logged
Network Services	Support	HTTP, TCP/IP, SMTP, DHCP, Static IP, DNS, DDNS, FTP, NTP, UPnP
Language Support	Language	English/Simplified Chinese/Traditional Chinese/Russian

★Product specifications are subject to change without notice; please contact us for the latest information.



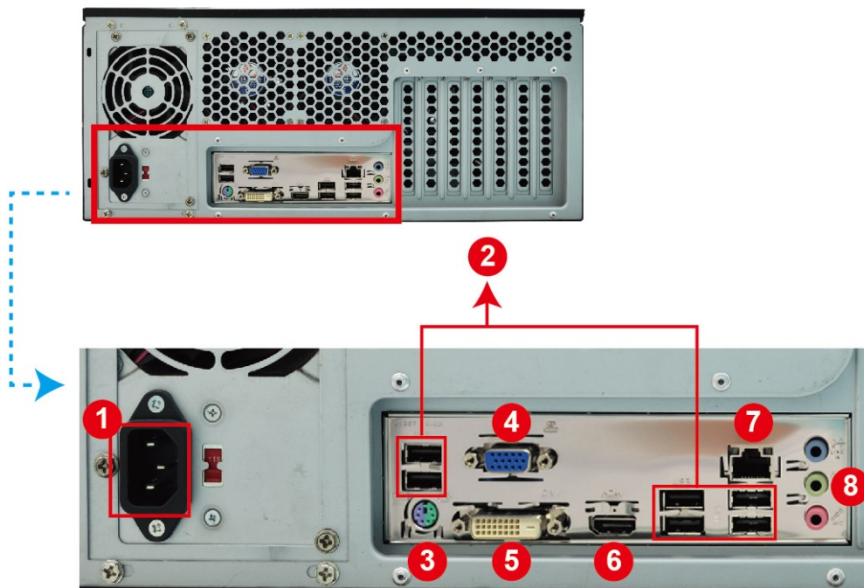
II. 【Read before use】

2.1 Front panel introduction :



1. Power
2. USB 2.0
3. Reset

2.2 Rear panel introduction :

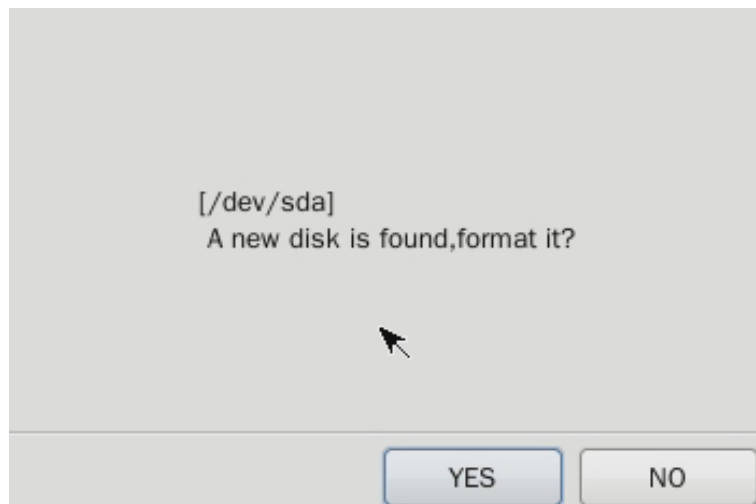


1. Power input.
2. USB2.0 port x 6
3. P/S2 port(can be accessed by keyboard or mouse)
4. D-Sub5. HD Out
5. DVI
6. HD Out
7. RJ-45
8. Audio output hole.



【Installation manual】

- 1 · At the first turn-on, if fail to enter, please select SATA DOM as the first prior turn-on device in BIOS.
- 2 · At the first entrance into system, if tip for HDD formatting, when you need recording, please click “yes”, if no need, please click ”no”. Notice! After HDD formatting, the existing DATA will be non-recoverable. If no tip, it indicates the HDD has been formatted before shipment.





III. 【Software instruction】

1. Login

After installation and restart to enter the operation interface, if you proceed any operation, system will pop-up the dialogue box to tip login (some version will default and not to tip. If the user needs the tip, he may enter the function list for user and cancel the system permission right under the item of “default”


Please enter username and password:

Username

Password

OK CANCEL

User name of default administrator is : **admin** password is **admin** . **Input the username and click “confirm” to finish login** and you can proceed with customized settings for software.

Click  to lock , you need to input user name and password to login again.

Please enter username and password:

Username

Password

OK CANCEL



IV. 【NVR function description by area】




- 1 , exit (exit system , auto power off)
- 2 , channel switch option (1 , 2 , 4 , 9 , 16 , 25 , 36 channel switch)
- 3 , the video display area(select the corresponding camera, double-click for amplification of single channel and return to multi-screen)
- 4 , tool bar menu (enter system setup, camera setting, network setting, option of playback control., etc.)
- 5 , the time status bar (display the current system time)
- 6 , ticker display (display power on the welcome icon, users are free to modify)
- 7 , HDD status display.
- 8 , PTZ control button (control the movement of cloud platform)

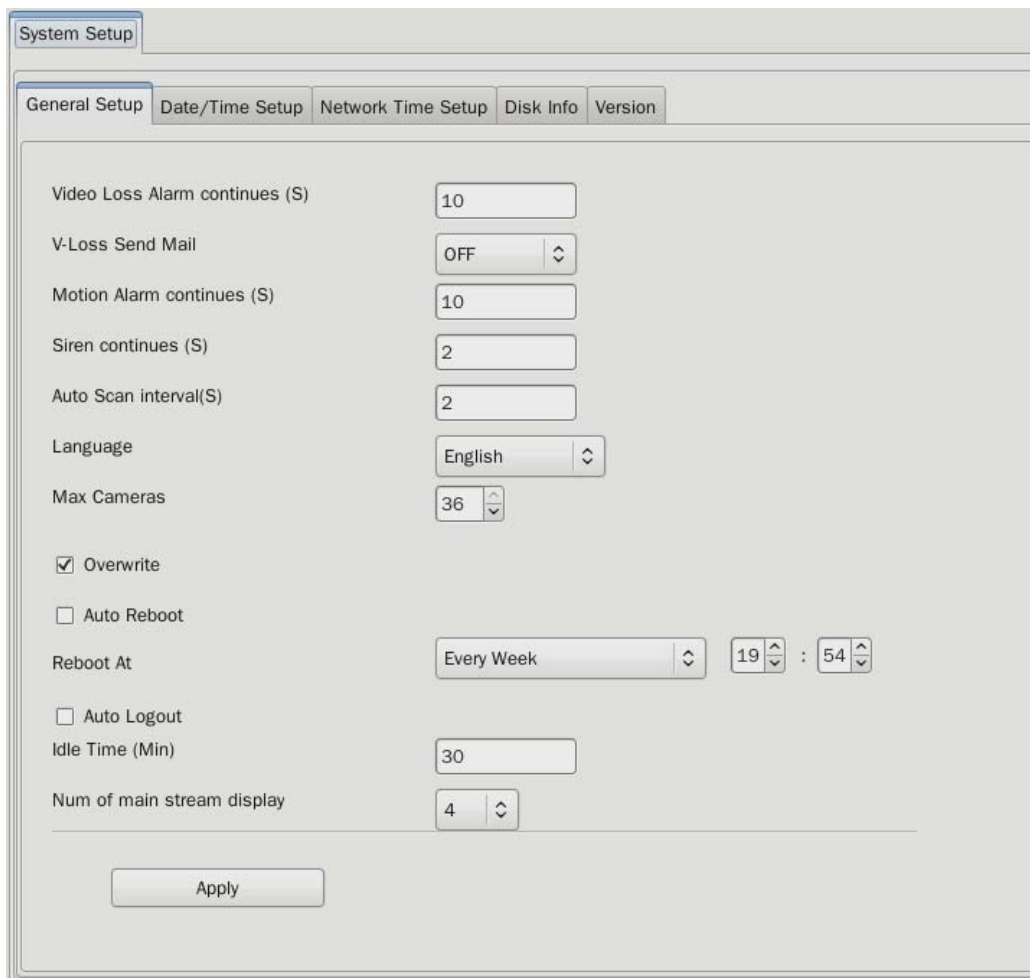


V. 【Set-up of interface operation】

6.1 System Setup

6.1.1 General Setup:

Click the setting button  to enter setting interface. You may setup the flow time of video loss, alarm/audio alarm ; setup the shift time length of video image switch; start the loop video to set up the restart time each day; camera can switch to simple Chinese, traditional Chinese and English; you can choose PAL or NTSC. (REMARK: mode switch of PAL/NTSC needs to reboot) click on **apply** to save.



The screenshot shows the 'System Setup' window with the 'General Setup' tab selected. The settings are as follows:

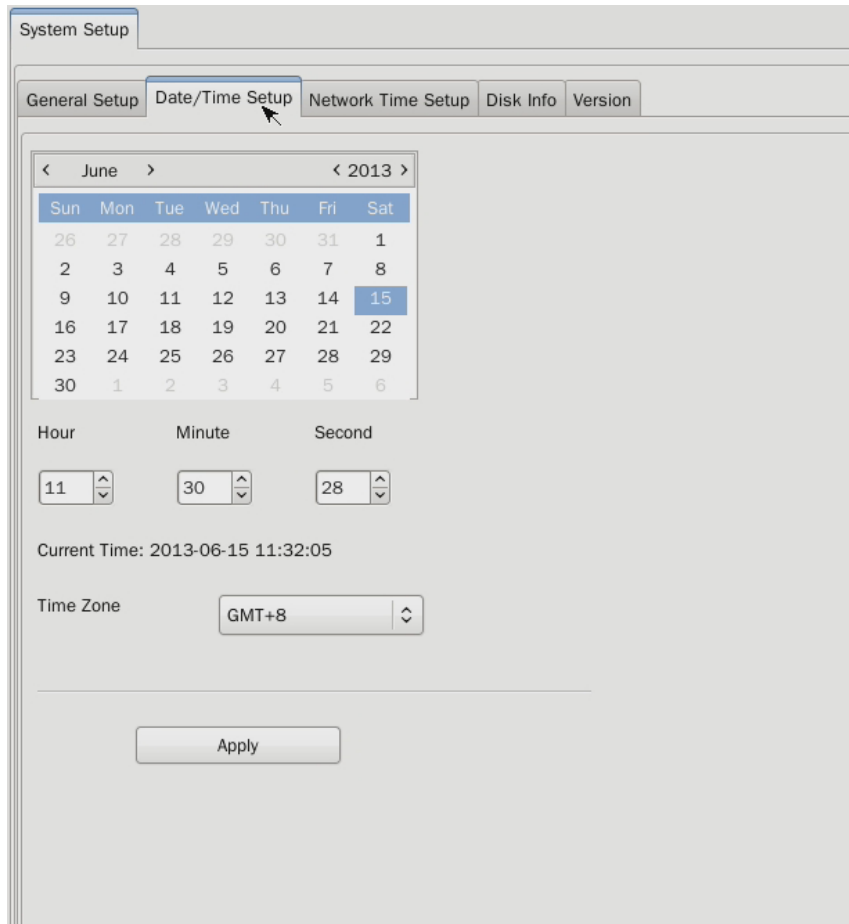
Setting	Value
Video Loss Alarm continues (S)	10
V-Loss Send Mail	OFF
Motion Alarm continues (S)	10
Siren continues (S)	2
Auto Scan interval(S)	2
Language	English
Max Cameras	36
<input checked="" type="checkbox"/> Overwrite	
<input type="checkbox"/> Auto Reboot	
Reboot At	Every Week 19 : 54
<input type="checkbox"/> Auto Logout	
Idle Time (Min)	30
Num of main stream display	4

An 'Apply' button is located at the bottom of the window.



6.1.2 Date/ Time Setup

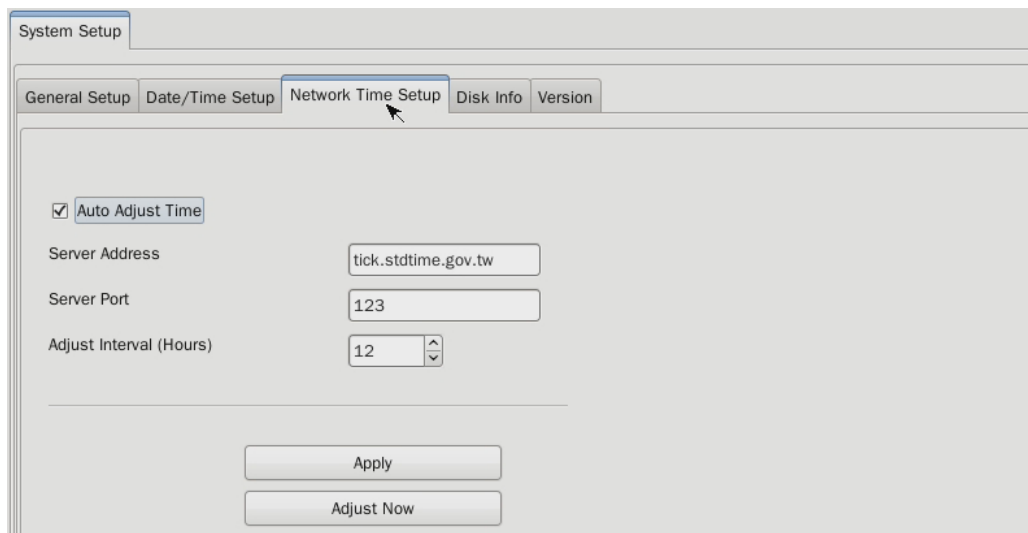
Set the current time,  and then save it. Refer to the following figure.



6.1.3 Network Time Setup:

Start auto calibration and setup the server address, port, time intervals and then click on “apply”, “immediate calibration”. And then click return.

As the following figure:





6.1.4 Disk Info:

View the situation of hard drive mounting and usage

The screenshot shows the 'System Setup' window with the 'Disk Info' tab selected. The window contains a table with the following data:

NO.	Mount point	Device
1	/disks/1	/dev/sdb1
2	/disks/2	/dev/sdc1

Below the table, there is a section for 'Filesystem' and 'Size' information:

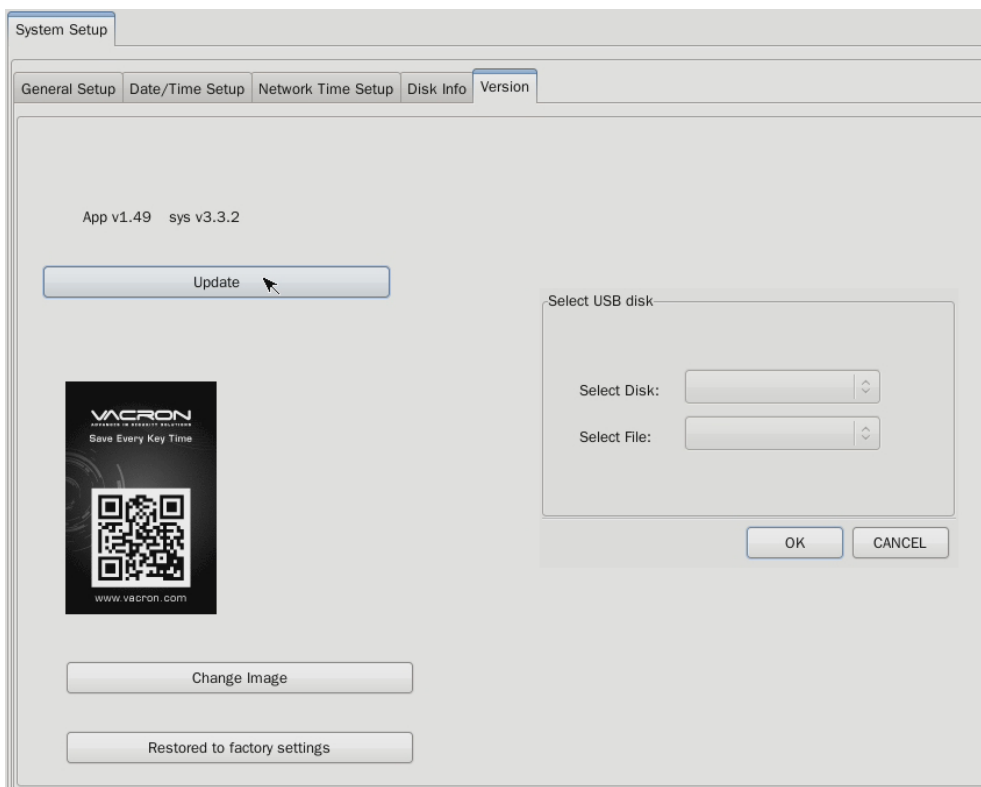
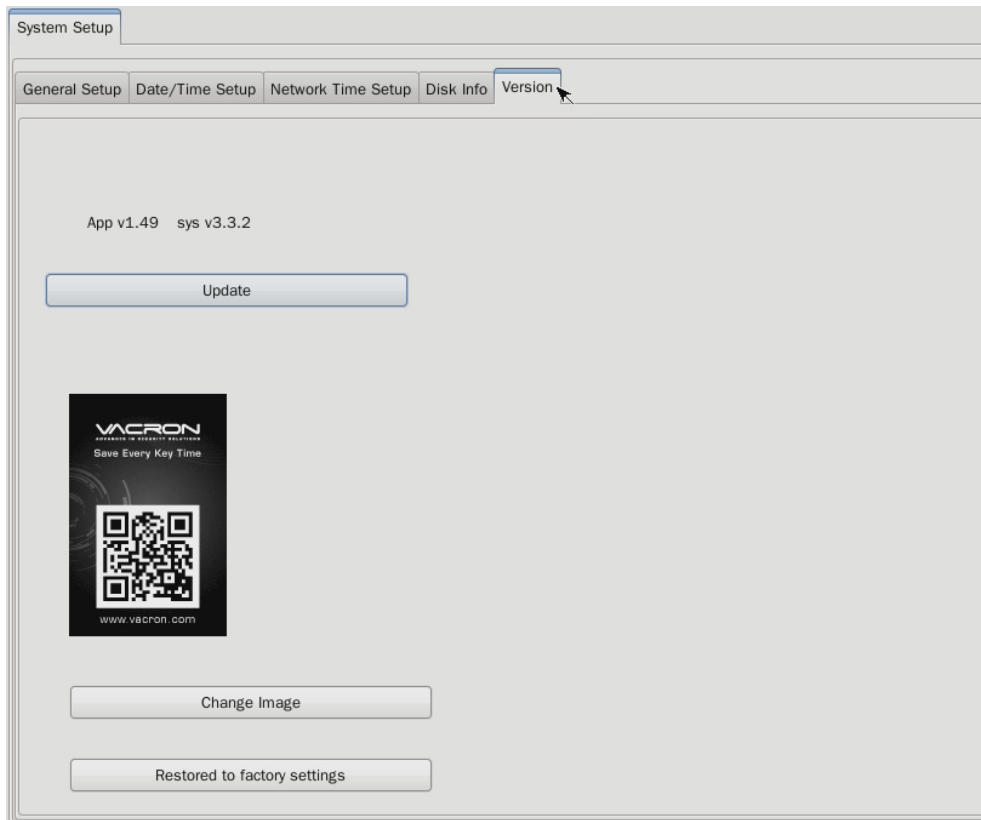
Filesystem	Size
/dev/sdb1	917



6.1.5 Version information


Enter to find the current software version. You may upgrade and renew the marquee pictures.

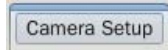
As the follows:





6.2 setting of cameras

6.2.1 Click on setting button  to enter into the interface of setup. click on



, you may turn on the different channels and set up the IP address/corresponding network port/user name and password(if the setup and network are no problem, camera will display on the corresponding channel)click on




to apply. As the following figure :

The screenshot shows the 'Camera Setup' interface. On the left is a table with columns: NO., Enable, IP Address, Port, and NAME. The table lists 25 channels (CH1 to CH25) with 'Enable' set to 'NO' and 'IP Address' set to '192.168.1.201' and 'Port' set to '80'. On the right is the configuration panel for 'IP Camera' with tabs for 'IP Camera', 'Schedule', 'Motion Detect', and 'Auto Preset'. The 'IP Camera' tab is active, showing options for 'Enable', 'Record Audio', and 'Auto synchronize with NVR time', all checked. Below these are fields for 'IP Camera Type' (IP620), 'Address' (192.168.1.201), 'Port' (80), 'Username' (admin), 'Password' (masked with dots), and 'Camera Name' (CH1). At the bottom of the configuration panel are 'Configuration' and 'Apply' buttons. Below the configuration panel is a table with columns: NAME, MAC Address, IP Address, Netmask, Gateway, Video Port, and Web Port. At the bottom of the interface are 'Search', 'Update IP', 'Copy address', and 'BACK' buttons.

6.2.1.1

If the user needs to revise the parameters of network camera (resolution, FPS,IP

parameters and camera name., etc), please choose  to enter the setup of

parameters. You may revise the resolution of main stream, FPS and bit rate, etc. as the following figure:



The screenshot shows the 'Profile' tab selected in a configuration window. The 'Camera' field is set to 'IP620'. The 'Stream Type' is 'Dual', 'Codec' is 'Dual H.264', and 'Resolution' is 'H.264:1080,H.264:VGA'. 'Local Display Video' is set to 'OFF'. Below this, the 'Stream1' tab is active, showing 'Frame Rate' at 23 fps, 'Bit Rate' at 2000 kbps, and 'Rate Control' set to a default value. An 'Overlay' section is also visible, with 'Date' and 'Time' checked, 'Text' unchecked, and 'Text Position' set to 'Top-Right'. The 'Text' field contains 'test1'. An 'Apply' button is at the bottom.

6.2.1.2

Select "Network", you may revise the IP address of network cameras. As the following figure:

The screenshot shows the 'Network' tab selected in the configuration window. It features a checkbox for 'Enable DHCP' which is unchecked. Below are four text input fields: 'IP Address' (192.168.10.248), 'Netmask' (255.255.255.0), 'Gateway' (192.168.10.98), and 'DNS1' (168.95.1.1). An 'Apply' button is located at the bottom of the network settings section.



6.2.1.3 Select “time/date” to revise the time date. As the following figure:

Profile Network **Date/Time** ptz set audio set Motion Detect Color

Set Time

Set None Set Manually Synchronize with NVR time

< June > < 2013 >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	1	2	3	4	5	6

Current Time: 2013-06-15 11:59:20

Synchronize with NTP server

NTP server: ntp.ucsd.edu

Time Zone: GMT+08

Hour: 11 Minute: 57 Second: 4

Date Format: DD/MM/YYYY Time Format: 24Hrs

Date Position: Bottom-Right Time Position: Bottom-Right

Apply

6.2.1.4 Select PTZ setting (only support IP speed dome). You can select protocol as Pelco P and Pelco D. IP address is up to 4, **baud rate** can choose **1200,2400, 4800, 9600, 19200** and speed can support up to **23**. As the following figure:

Profile Network Date/Time **ptz set** audio set Motion Detect Color

ptz protocol: OFF

ptz addr: 1

Baudrate: 9600

ptz speed: 16

Apply

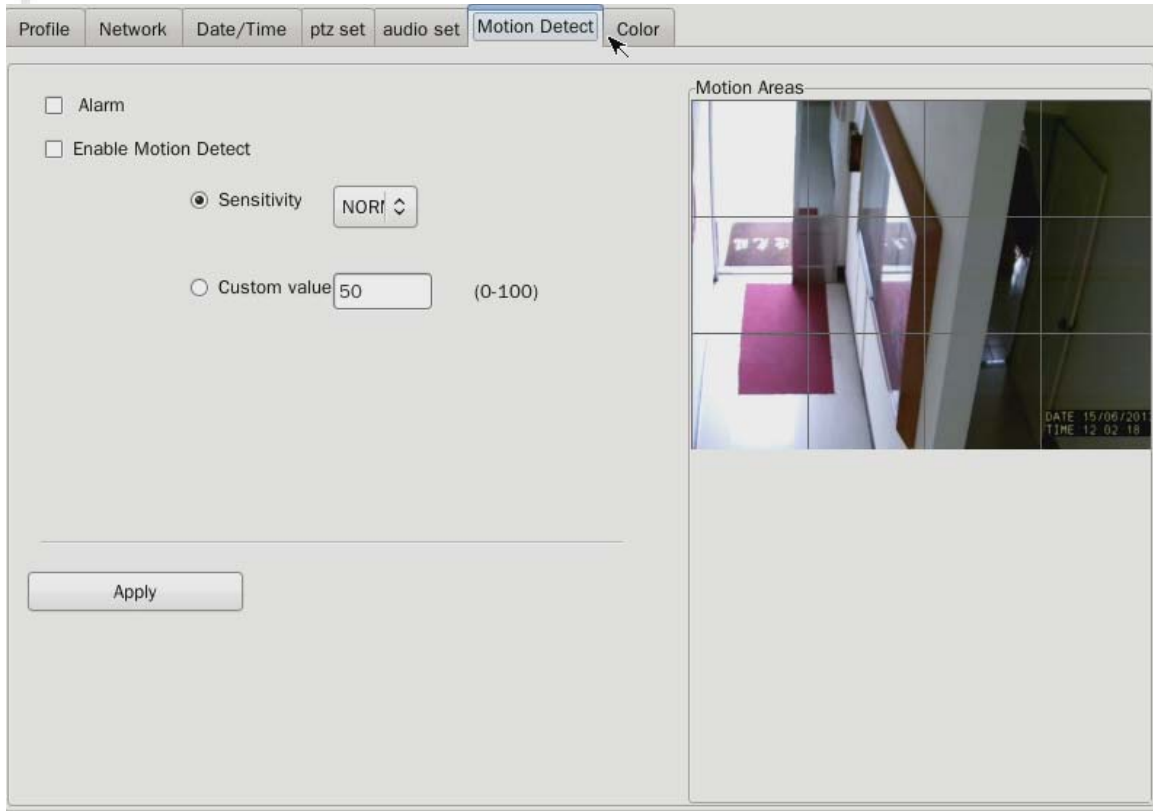


6.2.1.5 Select audio setting. You can choose turn on or off, mode can choose micro phone, horn or both. There are G.771 and PCM sound encoding. Sample sounds is 8K by default. You can select a higher level as 16K. Volume size defaults to 50, the output volume for 75, and noise level is 50

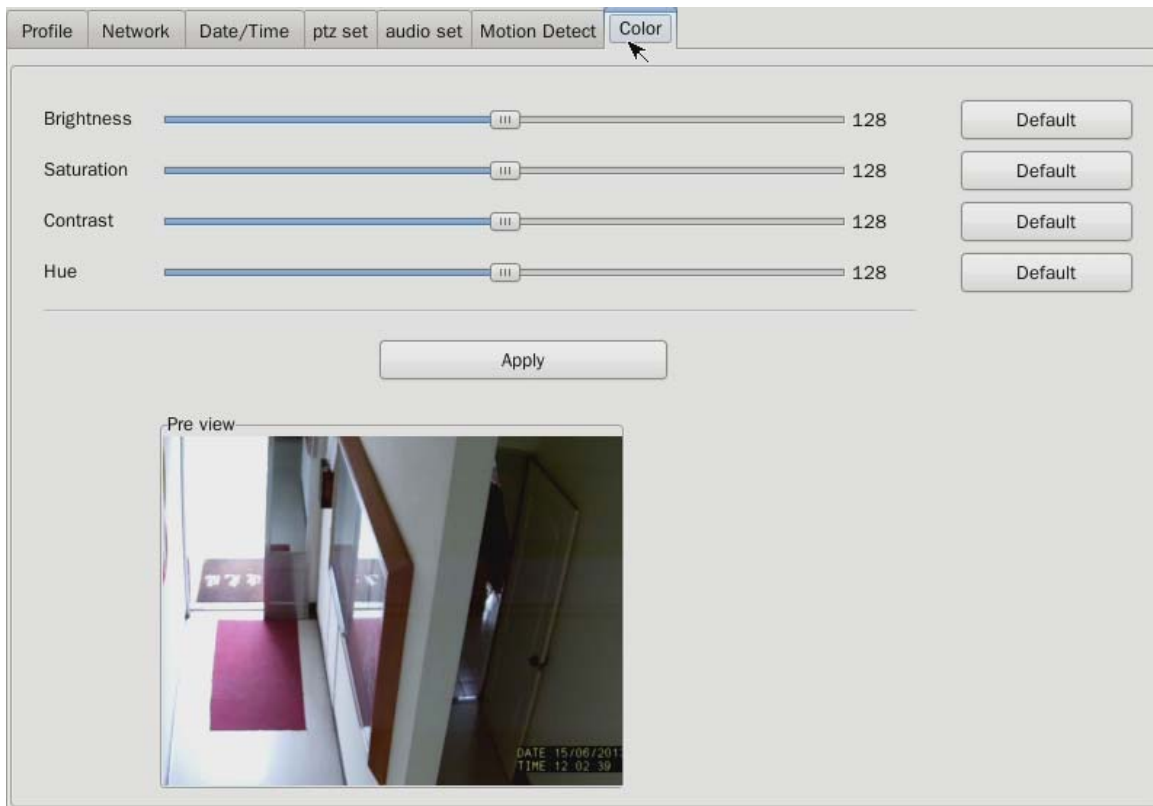
As the following figure :

Setting	Value	Range
audio enable	Enable	
audio mode	Both Mic & Speaker	
audio encode	G.711	
audio samplerate	8KHz	
audio involume	50	(0-100)
audio outvolume	75	(0-100)
alarmlevel	50	(0-100)



6.2.1.6 Select motion detection, motion detection (currently supports Video-Server and VIT-series machines) (VIT series IP CAM firmware must be updated to B563 above version) to check the alarm, alarm sound from sound card output and motion detection feature. You can set the sensitivity to low, medium, high, or defined by the user's own figure of 0-100. Number 12 on the image segmentation and selection area, click after you enter this, red lines will provide identification. As the following figure:

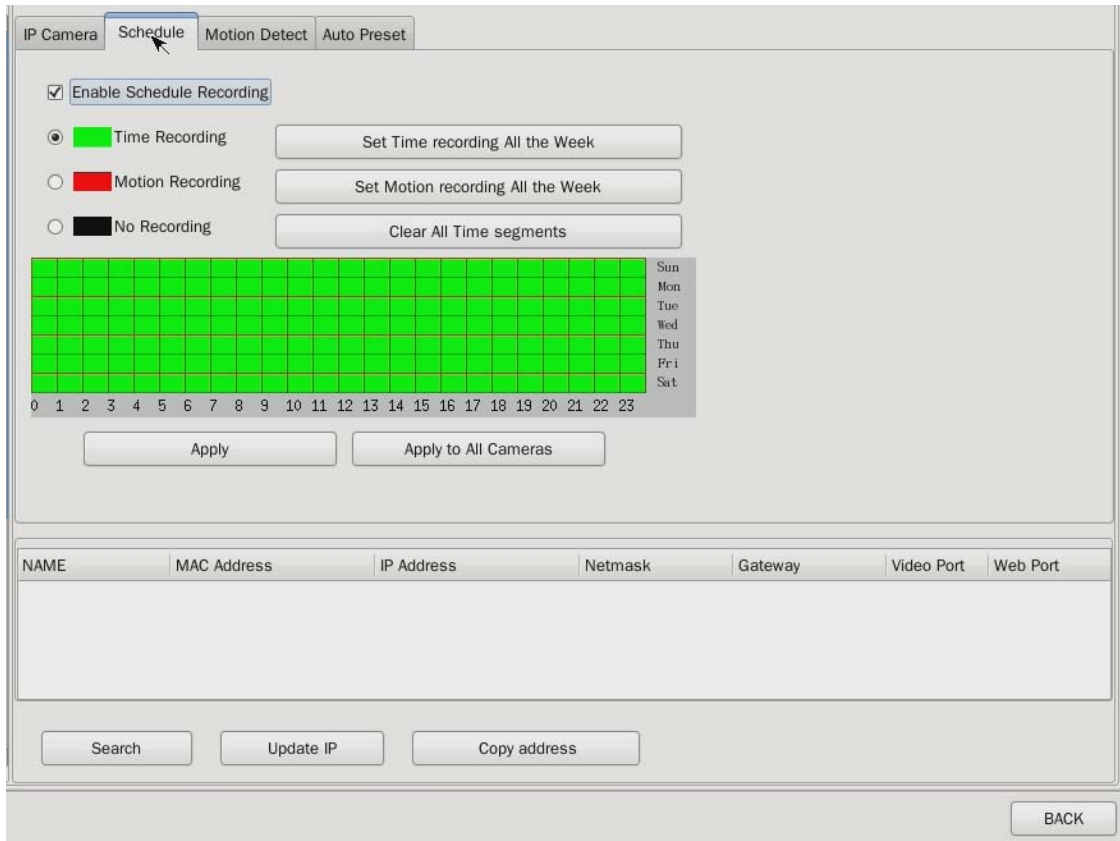


6.2.1.7 Select color to adjust brightness, color, contrast and saturation. Allow users to adjust the default value for reset. As shown in figure:





6.2.2 In the settings menu, select “video program” to revise the video status of NVR as full time video, motion detection or non-video. Click on  to setup one single channel or click on  to set up for all channels. As the following figure:



6.2.3 Select “**motion detection**” in the camera settings. You may set up motion detection, sensitiveness, start video and sending e-mail, etc. As the following figure:




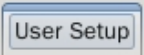
The screenshot shows the 'Motion Detect' tab in the camera settings. It includes a list of checkboxes for 'Enable Motion Detect', 'Enable Siren', 'Notify Client', 'Record', and 'Send Mail'. Below the checkboxes are 'Apply' and 'Apply to All Cameras' buttons. At the bottom, there is a table with columns for NAME, MAC Address, IP Address, Netmask, Gateway, Video Port, and Web Port, and buttons for Search, Update IP, and Copy address.

6.2.4 In the camera settings, select automatic cruise (only support high speed dome). The default point can support up to 32 and stay for the high energy set 15 seconds. 32 default points default in a closed state. When you want to set the 5 default point, every arrival time needs to be clearly defined and select to open status, As the following figure :

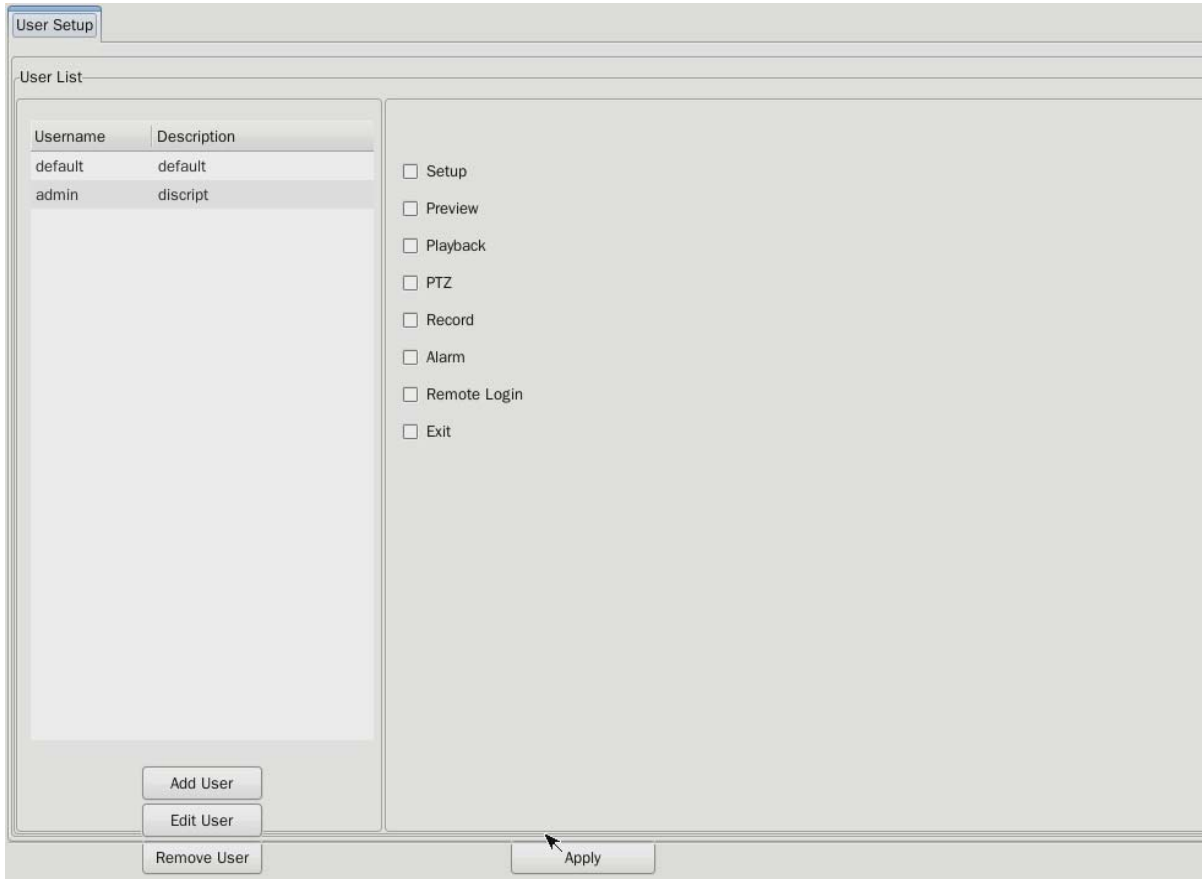
The screenshot shows the 'Auto Preset' tab in the camera settings. It features three dropdown menus for 'Preset' (set to 1), 'stay time' (set to 1), and 'Enable' (set to OFF). An 'Apply' button is located below these settings. At the bottom, there is a table with columns for NAME, MAC Address, IP Address, Netmask, Gateway, Video Port, and Web Port, and buttons for Search, Update IP, and Copy address.



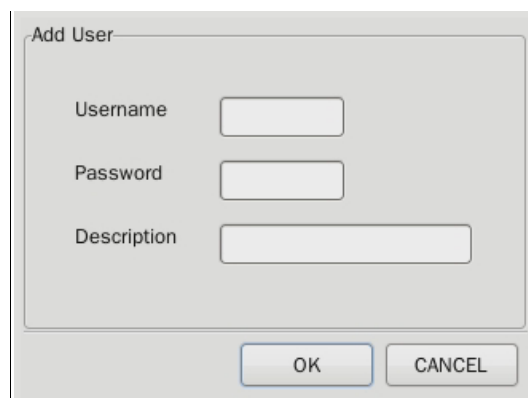
6.3 User Setup:

Click on  to enter the setting interface. select , you may increase users, edit users and delete users. Only the user with administrator permission can carry out the revision.

As the following figure:



Click on “**Add User**” will pop-up the following dialogue box. In the white dialog box, you can increase new “**Username**”, “**Password**” and “**Description**”. The right side will come out the permission option of browsing, playback, management and remote access for new user.





Click on “**Edit User**” will pop-up the following dialogue box. In the white dialog box,




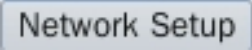
you can increase new **“Username”** , **“Password ”** and **“Description”**. The right side will come out the permission option of browsing, playback, management and remote access for new user.

Dialog box titled "Edit User" with the following fields and buttons:

- Username:
- Password:
- Description:
- Buttons: OK, CANCEL

Click on  to save. After setting, click on  to exit.

6.4 Network Setup

Click on  to enter setting interface. Select  , if you need to connect by client in the local area network, please set up **IP address**, **subnet mask** and **gateway**. If you need to link internet, please set up **domain name server**.

Network Setup window showing the following configuration:

- IP Address: 192.168.10.102
- Netmask: 255.255.255.0
- Gateway: 192.168.10.98
- DNS1: 168.95.1.1
- DNS2:
- Buttons: Apply



6.4.2 Port Setup:

Software default page **communication ports: 80, video communication ports: 5500** (CMS remote ports use shall correspond), **hand controlled communication port: 5577 (no function).**

As the following figure :

The screenshot shows the 'Network Setup' interface with the 'Port Setup' tab selected. The 'Web Port' is set to 80, 'Video Port' is 5500, and 'Mobile Port' is 5577. An 'Apply' button is at the bottom.

Port Type	Port Number
Web Port	80
Video Port	5500
Mobile Port	5577

6.4.3 ADSL Setup:

Enter the **user account**, the **user's password**, select the **link**, **confirm**, display **status**. As shown in figure:

The screenshot shows the 'Network Setup' interface with the 'ADSL Setup' tab selected. The 'Username' field contains 'sz3lmc48@163.gd' and the 'Password' field is masked with dots. There is an unchecked 'Connect' checkbox and 'Apply' and 'Status' buttons at the bottom.

Field	Value
Username	sz3lmc48@163.gd
Password	●●●●●●●●



6.4.4 DDNS Setup:

Select a **DDNS service provider**, software defaults to www.3322.org, **input domain name**, **user-ID**, **login password**, select the **link**, and press to **confirm**. As shown in figure:

The screenshot shows the 'Network Setup' window with the 'DDNS Setup' tab selected. The configuration fields are as follows:

DDNS Server	www.3322.org
DDNS	jiaweizhong.3322.org
Username	jiaweizhong
DDNS Password	●●●●●●
	<input type="checkbox"/> Connect

An 'Apply' button is located at the bottom of the form.

6.4.5 E-mail Setup:

Set up the time length of mail sent, input the mail address and then confirm. As the following figure:

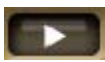
The screenshot shows the 'Network Setup' window with the 'E-Mail Setup' tab selected. The configuration fields are as follows:

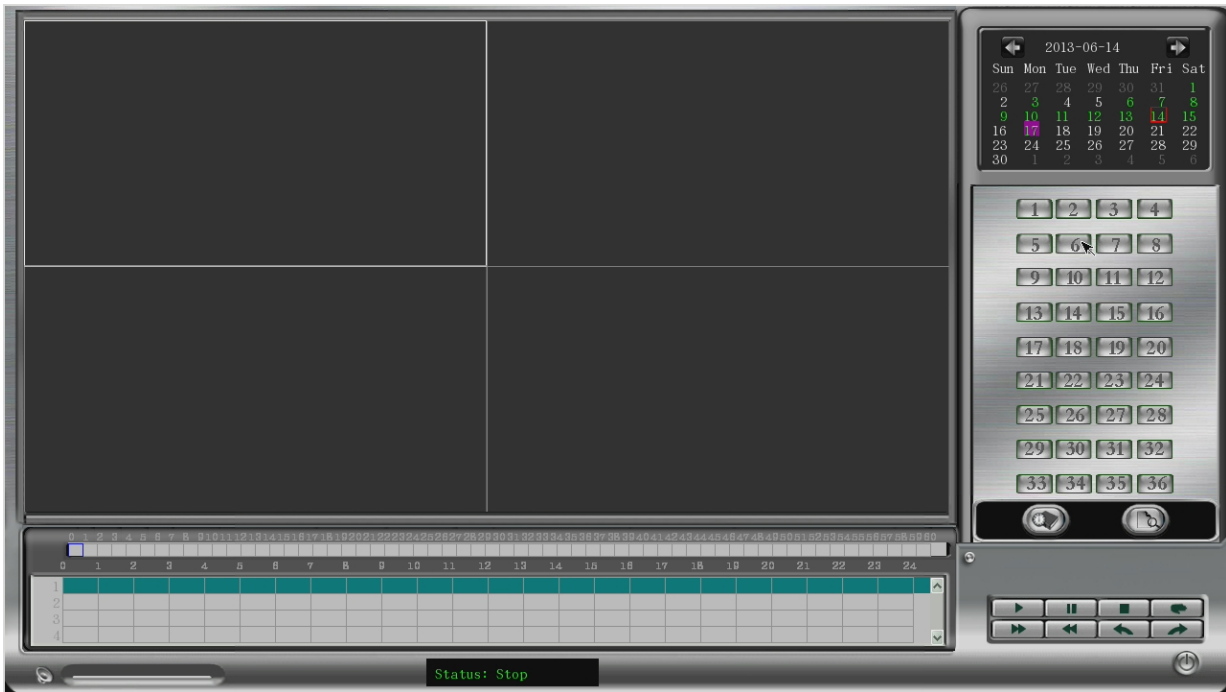
NVR Name	PC200-Test
Send Interval(s)	10
Receiver	xxxxxxx@yahoo.com.tw

An 'Apply' button is located at the bottom of the form.

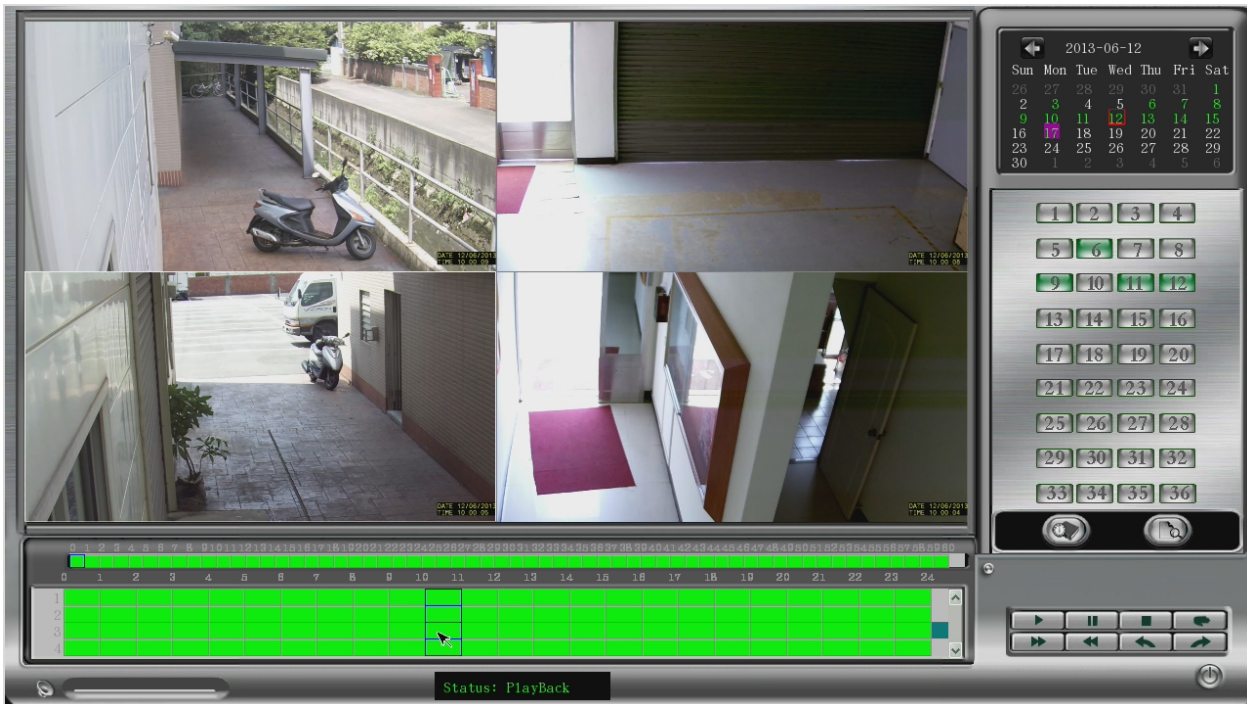


6.5 Playback

Click on playback button  , playback interface will show up (playback channels are up to 4) , as the following figure : Click on the channel with record as the following figure :



Click on the channels to check, display area to show the video you select. As the following figure:



Set the time mode (default), file mode, time mode:

Firstly select the recording date, display split box and then select the camera number



to playback. Click on the camera twice or hold down the mouse left button to draw into the split box. Then you can playback the video file.

The following figure shows video from 7:00~8:00 in the first split box. Select this split bar and it will turn into deep green. Select the time period, the rim will become blue (unit: hour).





In the meantime, minute time bar will show the actual video length (unit: minute).

The following figure shows manual recording from 19~41 minute. No record at 42 minute, alarm recording at 43 minute, manual recording from 44~60 minute. Select one minute of them, the rim of that minute will become blue and playback the video (note: full time recording is green, no recording is black, alarm and motion detection recording is red)



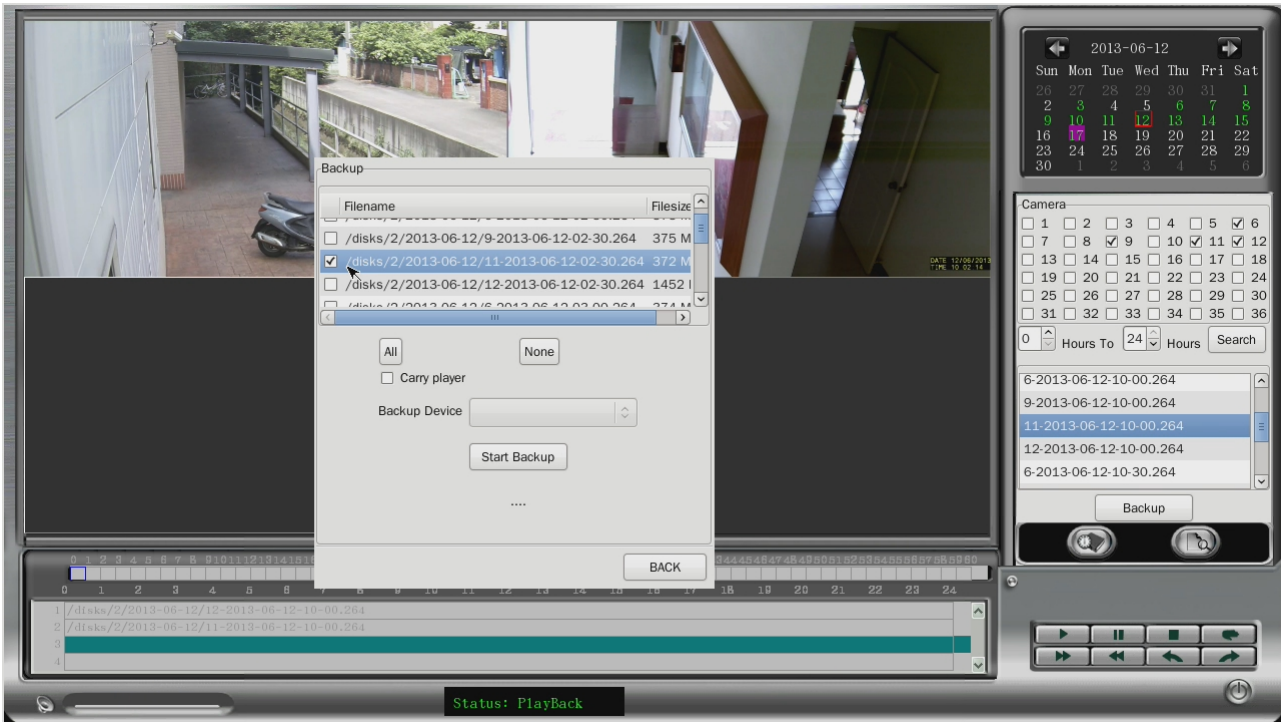
6.5.2 file mode:

Entering playback (defaults to be time mode), click on  to enter the mode of playback. After the channel numbers showing out, set up the time period and click on search to come out files. Click on playback  .

The screenshot shows the VACRON software interface. At the top, there are two video preview windows. The left window shows an outdoor scene with a motorcycle. The right window shows an indoor hallway. Below the preview windows is a large black area, likely for a selected video file. At the bottom, there is a timeline and a list of video files. The right side of the interface contains a calendar for June 12, 2013, and a camera selection grid. The file list shows several files, with '11-2013-06-12-10-00.264' selected. The status bar at the bottom indicates 'Status: Playback'.



6.5.2.1 Insert USB to back up.As the following figure:




Playback buttons description :


 : Play

 : Pause

 : Fast forward

 : Backward reverse

 : 2、4 times fast forward



 : 1/2、1/4、1/8 slow motion

 : Stop

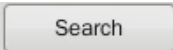
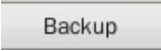
 : Screenshot

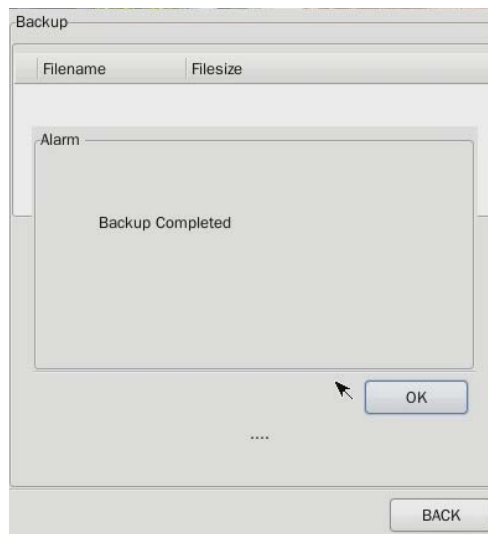


6.6 Screenshot

Click screen shot icon  or click screenshot button of the playback interface  to catch the current BMP picture from the monitoring or playback split box. As the following figure:




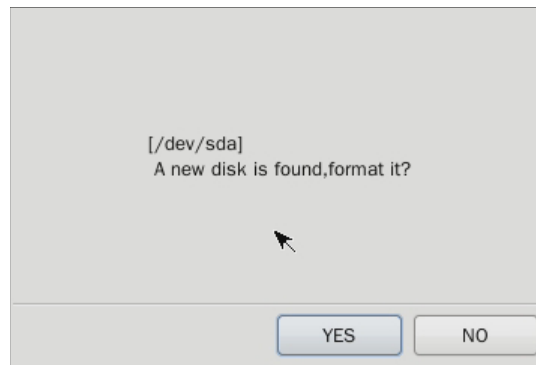
In the blank dialog box of picture folder will display the time, lens information of BMP pictures through screenshot. User can choose the time and channel to click  to search previous pictures. After selecting specific picture, click  to backup the current picture. As the following figure:





6.7 Exit from system

Click  system-exit system to pop up dialog box. As the following figure:



After confirmation, system will automatically shut down



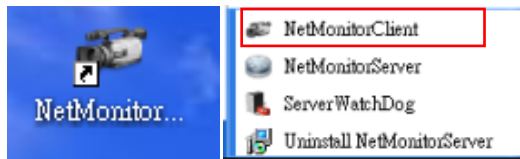
VI. [Windows CMS remote monitoring software]

7.1 Log on to remote monitoring software



Please click on the mouse left button twice to install system to

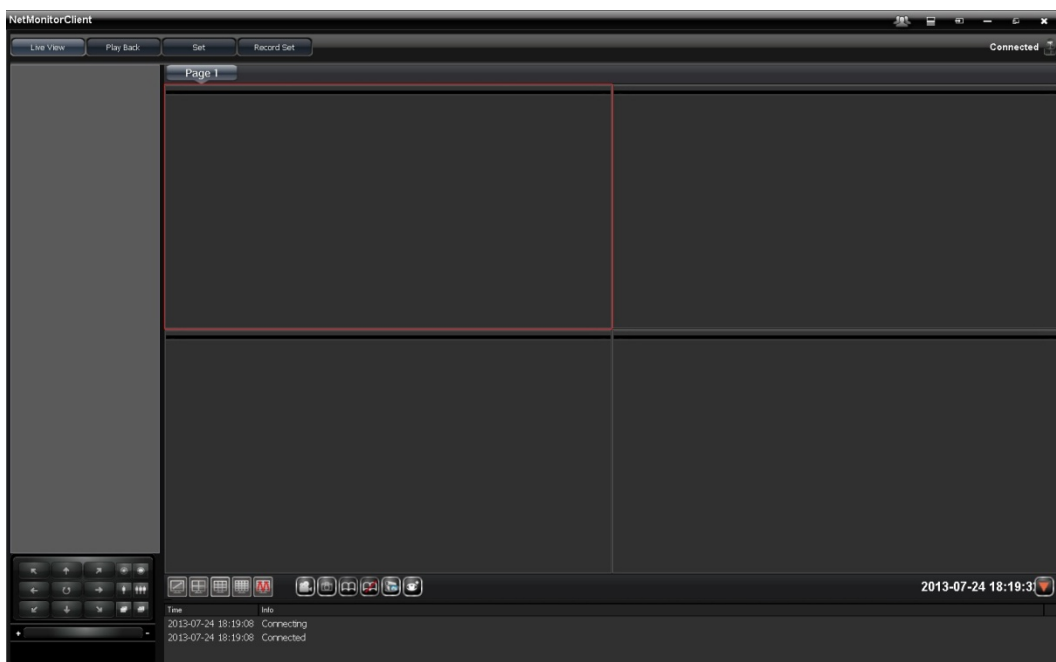
Microsoft on your computer (currently supports XP, 32-bit Vista, 32 bit WIN7). Then on your desktop after the installation or Assembly to see NetMonitorClient.exe perform the following figure



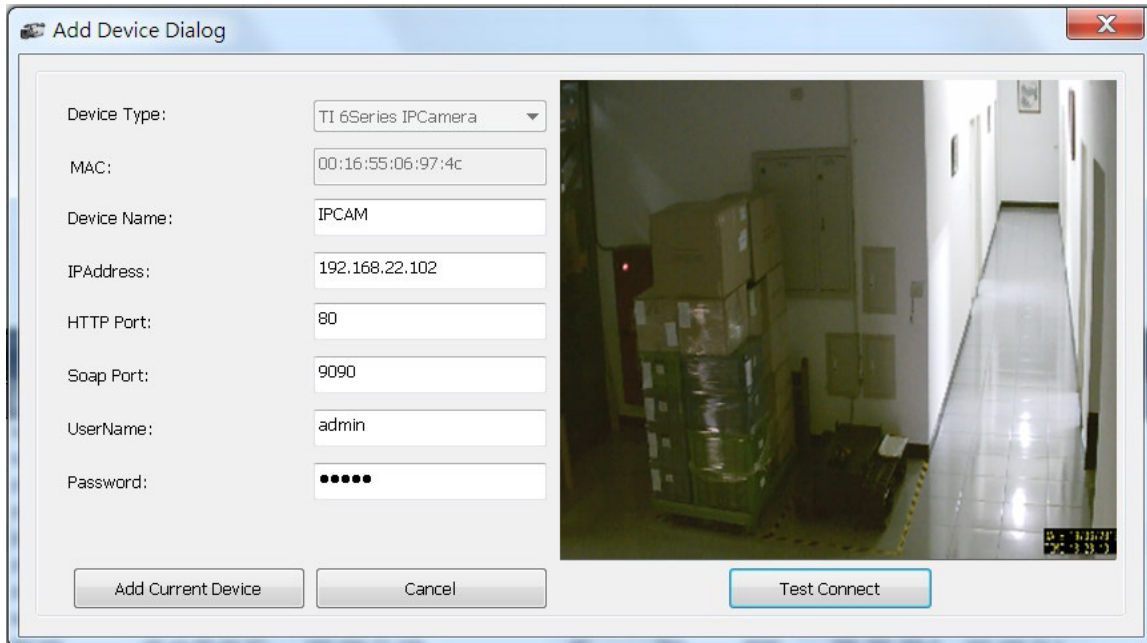
Login window appears after implementation, as shown in Figure; please enter the correct account number and password, software defaults to the account: admin password: admin, as the following figure



Enter the main screen as shown in figure. Click set to make all the necessary setups to join into PC200 as show in the following figure:

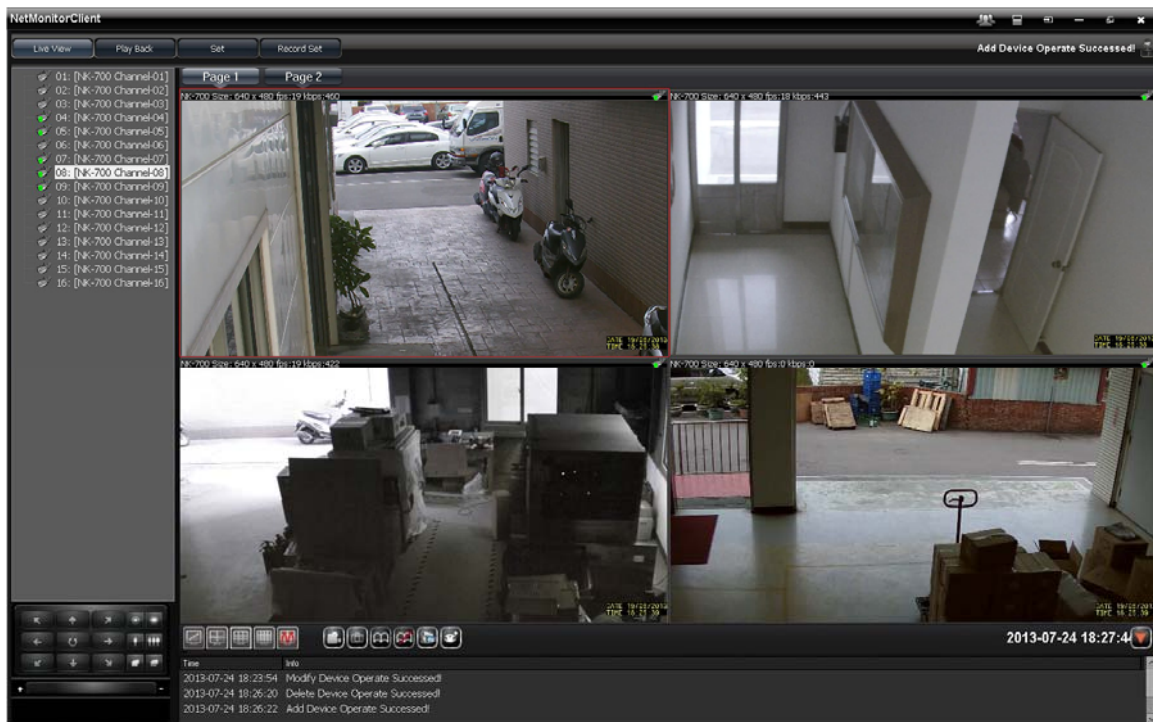


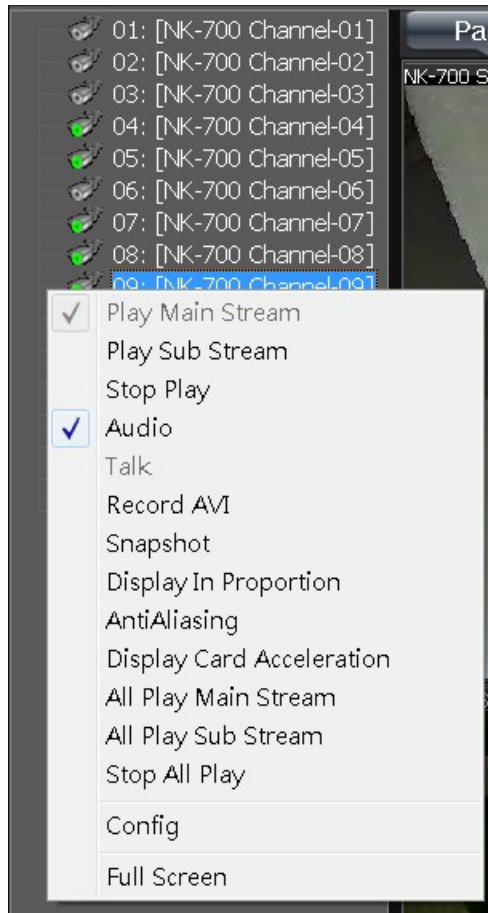
7.2 Add NVR



Click the **"Add current device"** and back to **"real-time"** viewing. Then you have set the number of channels into the list,

To see the picture, please click twice on the number of cameras so that the camera icon will turn into green. Then you can now display the picture. As the following figure





Click the right button of mouse to show your favorite settings by the function of listing.



For More Information
Please check VACRON Website
<http://www.vacron.com>

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