

# **ST8300 Series Network Video Server**

## **User Manual**










Release date: 2009/04/15

Revision: 1.0

**Package Content**

| <b>Name</b>             | <b>Quantity</b> |
|-------------------------|-----------------|
| Video server            | 1pcs            |
| 12V adapter             | 1pcs            |
| Software & manual CD    | 1pcs            |
| Bracket                 | 2pcs            |
| I/O terminal connectors | 1pcs            |

**Warning Before Installing**

-  Keep the device away from the water.
-  Keep the device away from the direct sunlight.
-  Keep the device away from the heat sources.
-  Don't put the device in high temperature and high humid environments.
-  Don't put the device in unsteady place.
-  Don't drop the device.
-  Don't put anything on the device.
-  Don't disassemble the device except put harddisk in.
-  If you need to put harddisk in, do fix the harddisk with filature.

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# 1 Product Specification

## 1.1 Product Summary

Thanks for choosing us.

This series network video server developed with Hi3511 DSP in H.264 arithmetic, which perform higher definition and fluency. The highest resolution can be 720P(1280\*720). And it is ok to have 2 SATA interface to connect harddisk for local recording. No PC is required since the built-in Web server has its own IP address. And it is easy to manage, config and monitor through Internet Explore.

## 1.2 Key Features

- Video Compression: H.264
- Audio Compression: G.722
- High definition: 720P:1280×720, D1: 704×576, CIF: 352×288, SVGA、XGA
- Support PAL/NTSC
- Bit rate: 32Kbps~8Mbps variable
- Delay time: less than 200 MSEL(0.20 second) in Lan system
- Built-in Web server, support IE browse、config、update
- DDNS, LAN, WAN
- Bidirectional talkback
- Dual stream
- Alarm 5 seconds previous recording, support alarm upload
- Support image snapshot, video recording
- Support two SATA harddisk interface, USB interface, SD card interface

## 1.3 Datasheet

|                          |  |
|--------------------------|--|
| Video Arithmetic         | H.264 1/2/4/8ch coding separately  |
| Frame Rate               | PAL:1-25fps NTSC: 1-30fps  |
| Audio Compression        | G.711 or G.722   |
| Resolution               | 720P:1280×720, D1: 704×576, Half D1: 704×288,CIF: 352×288, VGA@60HZ, VGA@75HZ, XGA@60HZ, XGA@75HZ  |
| Delay Time               | Less than 200 MSEL(0.20 second) in Lan system  |
| Image Adjustment         | Adjustment for Brightness, Contrast, Chroma, Saturation, and Image Quality Level   |
| Trigger Event and Action | Trigger Conditions: Time/Alarm Input/Video Moving Detecting<br>Video Lost Action: Electrical Relay Output Control Peripheral Equipment                           |
| Interface                | RS485, RS232   |
| Storage Interface        | USB, SD Card, 2 SATA interface(Optional)   |
| Built-in Web Server      | Support IE browse、config、update  |
| DDNS                     | Built-in DDNS client   |
| Protocol support         | TCP/IP、HTTP、UDP、RTP/RTCP、RTSP、DHCP、PPPOE、UPNP、SMTP、FTP、SIP、DDNS、DNS  |
| Network interface        | RJ45 10M/100M Mbps   |
| Video Input Interface    | High Definition: 1 channel, 1 YpbPr input; 1 V G A input<br>D1: 1, 2, 4 channel 1.0Vp-p/75Ω /BNC interface<br>CIF: 1, 2, 4, 8 channel 1.0Vp-p/75Ω /BNC interface |
| Video Output             | 1 channel analog video 1.0Vp-p/75Ω /BNCinterface   |
| Audio Input              | 1, 2 channel MIC input,1, 2, 4, 8 channel line-in inpput   |
| Audio Output             | 1, 2 channel earphone output,1, 2, 4, 8 channel line-in output   |
| Alarm input/output       | 4 channel alarm in, 4 channel alarm out  |
| Security                 | 3 level user and password  |
| Max. User                | 10 real-time user  |
| System                   | Built-in Linux   |
| System Requirements      | CPU: PIII+<br>Memory: 96M+<br>STD: 17 inch @1024×768   |
| Operating Temperature    | -10℃ ~ +55℃  |
| Operating Humidity       | ≤85%RH   |
| Product Dimension        | 275(L)mm*46.5(H)mm*157(W)mm (1/2/4ch)<br>485(L)mm *46.5(H)mm *261.5(W)mm (8ch,1U rack)<br>378(L)mm *46.5(H)mm *210(W)mm (8ch standard)                           |

## 2 Physical Description



**1 channel high definition video encoder**



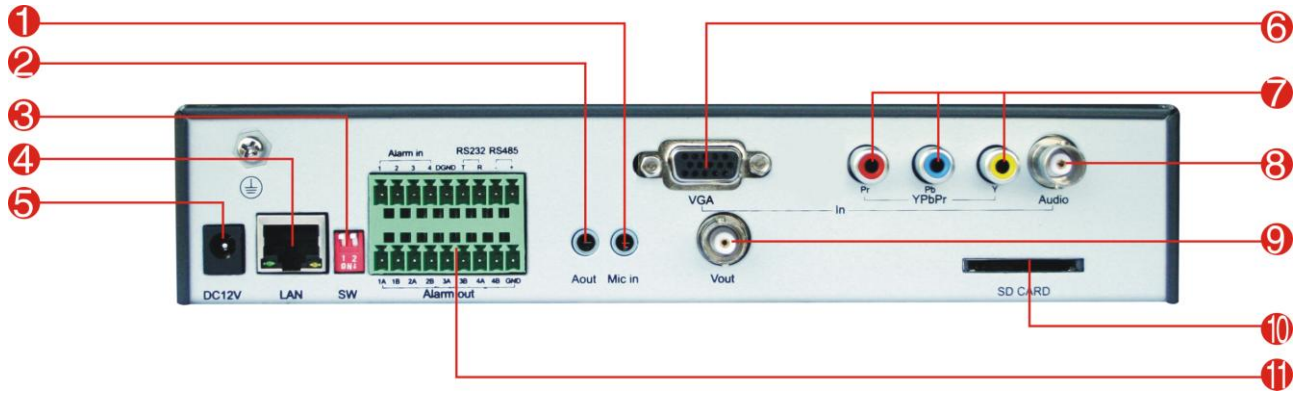
**2 channel D1/CIF video encoder**



**4 channel D1/CIF video encoder**



**8 channel CIF video encoder**



### 1 channel high definition video encoder back interface

1. Mic in: microphone audio in interface
2. AOUT: earphone audio out interface
3. SW: It is for factory update use. User please don't use this.
4. LAN: RJ45 network interface (Yellow LED flickering show network connection, green LED constant on show network data transfer state)
5. DC12V: Power in interface
6. VGA: high definition VGA video input interface
7. YpbPr video input interface
8. Audio: BNC audio input interface
9. Vout: analog video out interface
10. SD CARD: SD Card slot
11. Alarmin/Alarm out:

| Alarm Out   |   |             |   |             |   |             |   | Alarm In |   |   |   |     |
|-------------|---|-------------|---|-------------|---|-------------|---|----------|---|---|---|-----|
| 1           | 1 | 2           | 2 | 3           | 3 | 4           | 4 | 1        | 2 | 3 | 4 | G   |
| Alarm out 1 |   | Alarm out 2 |   | Alarm out 3 |   | Alarm out 4 |   | Alarm in |   |   |   | GND |

RS232: RS232 interface is to connect to PC to modify the IP of the server.

RS485:

|         |        |     |
|---------|--------|-----|
| +       | -      | G   |
| RS485 + | RS485- | GND |



### Front interface of encoder with hard disk

**【STATE】** : Red LED flicker when the server finish self-checking after power on.

**【TX/RX】** : Green LED flicker when Ethernet connected.

**【LINK】** : Yellow LED constant on when Ethernet connected.

**【HDD1】** : Red LED constant on when harddisk 1 connected. Red LED flicker when there are data transferring.

**【HDD2】** : Red LED constant on when harddisk 2 connected. Red LED flicker when there are data transferring.

**【USB】** : USB interface

**【RST】**: Reset button

Return to the factory default parameters guide:

1. Power off
2. Press the reset button without loosen
3. Power on
4. The STATE LED constant on
5. The reply click, loosen the reset button.

Now reset succeed. The STATE LED flicker.

## 3 How to use

### 3.1 System

Operating system: Windows2000server/professional/XP

Network protocol: TCP/IP

Client PC: P4/128MRAM/40GHD/video card support zoom/DirectX8.0+

### 3.2 Fix harddisk

1. If your device need to use harddisk, fix harddisk at first.
  - i. Open the casing with screwdriver.



- ii. Fix the haddisk with the bracket in the package. Connect the data line to the serial port of the encoder PCB. Refer the photo below which is with two haddisk fixed.



2. Connect the video server to the network, or connect to PC directly.

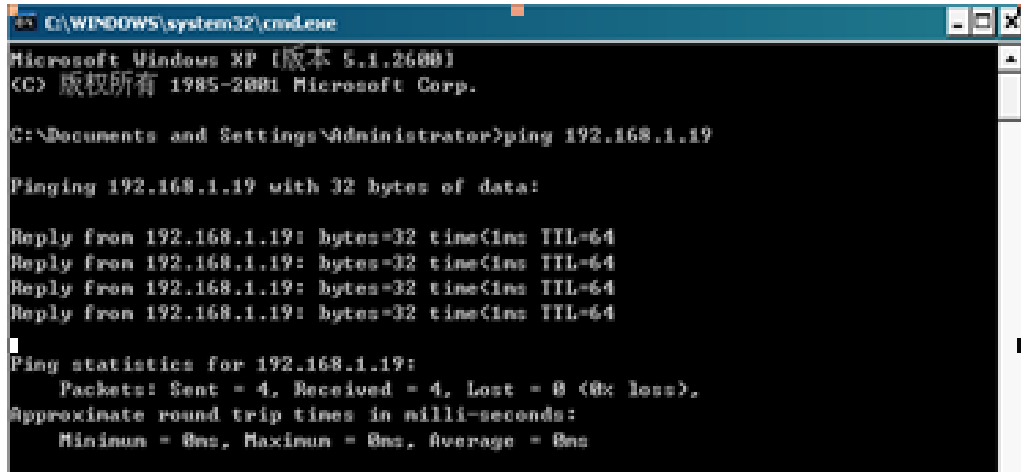
3. Connect the power on

Normally the LAN network connection state yellow LED will flicker in 5 seconds. The haddisk connection ok.

## 4 IE clients

### 4.1 Before you use IE clients

- 1) The default parameters refer Attachment 1. The default IP of video server is 192.168.1.19. And default Subnet Mask is 255.255.255.0. If you need to change the IP address, you need to change the IP address of the PC to be the same network segment and subnet mask the same at first. Change the IP address of the server guide: IE---settings---network parameters---IP address & port.
- 2) Test the video server start up well or not. Under the Windows System, operate as <Start →run →command> to open the command line dialog box. Ping “192.168.1.19”, as follows:



If it says “Request time out”, the server is not start up normally. Otherwise, the servers tarts up well.

- 3) When first time visit vider server by Internet Explore, set the safety level to be low to make sure the ActiveX been installed successfully. Guide: Internet Explore---Tools---Internet Option---Safety---custom level---set low level and establish.

## 4.2 Login

- 1) Input the IP address in IE. Default IP is http://192.168.1.19 Dialog box as below will be out.

**Login**

User name:

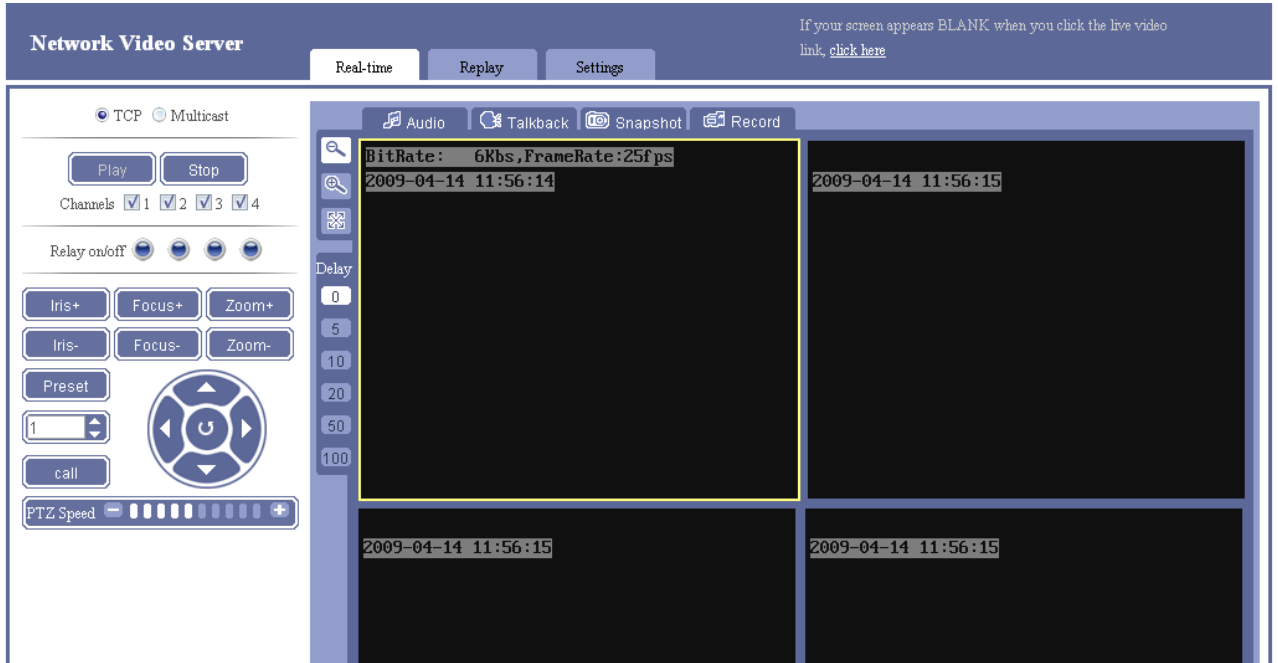
Password:

Note:

1. If your screen appears BLANK when you click the live video link, [click here](#) .
2. Works only with Internet Explore 6.0+

| Default User Name | Default Password |
|-------------------|------------------|
| 888888            | 888888           |

2) When click OK after input the user name and password, user will go into the real-time video page as below.



### 4.3 Parameters setting

#### 4.3.1 Real-time video

Refer photo above.

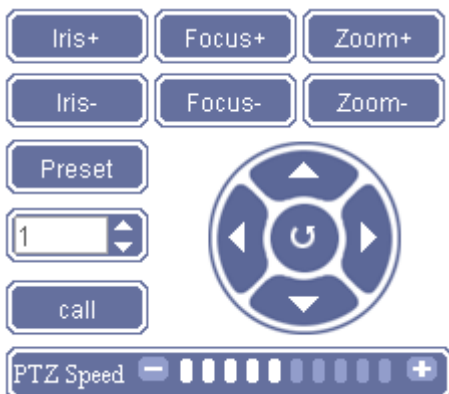
TCP  Multicast Choose based on you requirement.

Click play, all channel will play real-time video.

Click stop, all channel real-time video will disconnected.

Channels  1  2  3  4 Hook or cancel the channel, to connect or stop this channel's real-time video.

**PTZ control:** With the buttons below, can control the Iris, zoom, focus, preset point, PTZ control and PTZ speed control.





Click audio, can start and stop the audio. When audio is on, the audio button will be in orange.



Click Talkback, can start and stop the bidirectional talkback. When talkback is on, the talkback button will be in orange. Attention that audio should also keep on when talkback on.












Click Snapshot, can capture the image currently in \*.Bmp format. The image is filed on C:\temp and the file named with device name +time. For example, “c:\temp\Video Server\_13\_6\_37.bmp”



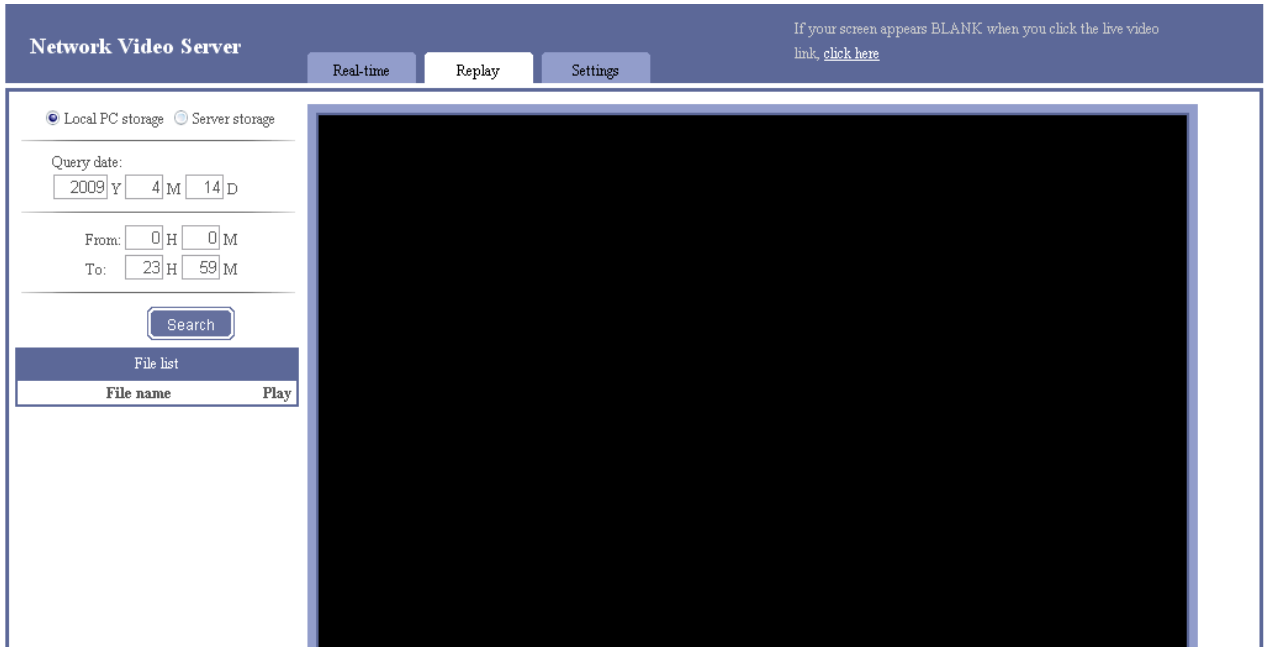
Click Record, this button will become orange and start recording. The recording file will be on disk D automatically in \*.Mp4 format. The file is named with IP address+channel number+time. For example, “d:\20090205\192.168.1.187\_1\_130640.mp4” When disk D is full, it will automatically record to the next disk. When all disk is full, it will cover the earliest recording automatically.

Click record again, it change to be white and stop recording.

【Video window size】: Click 、、 , can zoom in zoom out, full screen the video window. The selected size button will become white background. When full screen, click right of the mouse to come back.

【Delay】: Click 、、、、、 to change the delay level. When the number is bigger, the delay will be longer but more fluent. The selected level number will become white background.

### 4.3.2 Replay



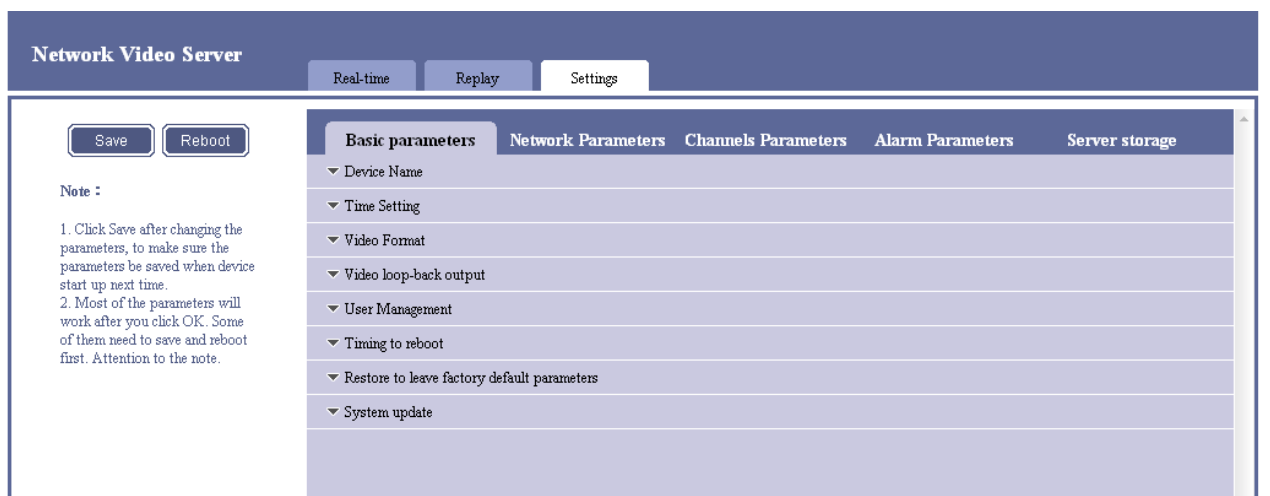
Local PC storage: Replay the recording file in PC disk.

Server storage: Replay the recording file in built-in disk in video server.

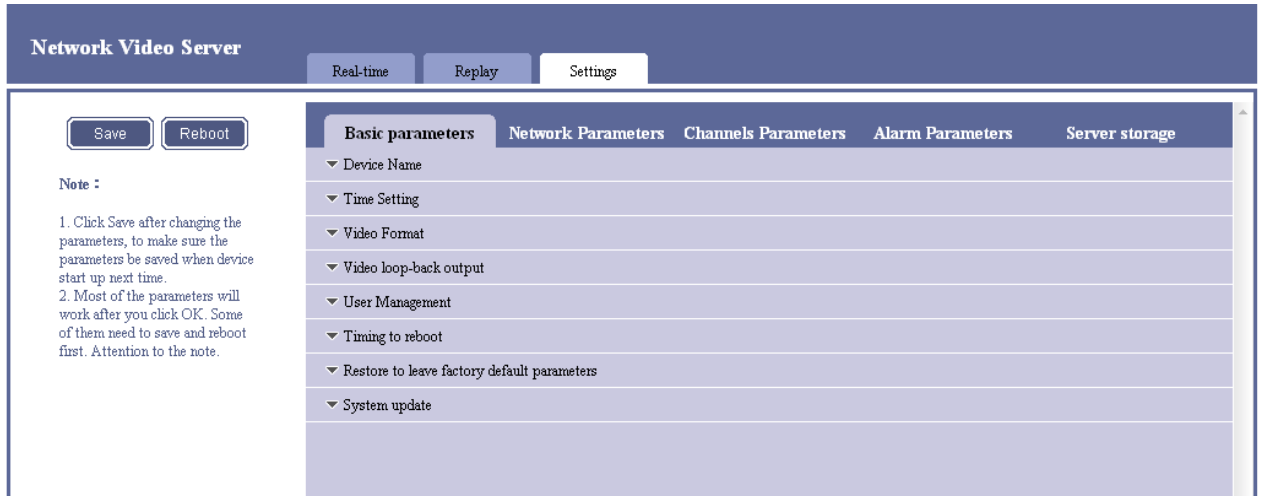
Input the query date and time and click search, the recording will be in file list. Choose the file and click play, the recording will replay.

Note that if you want to search the 24 hour's file, you need to input such as from 0:0 to 23:59, other than from 0:00 to 0:00.

### 4.3.3 Settings

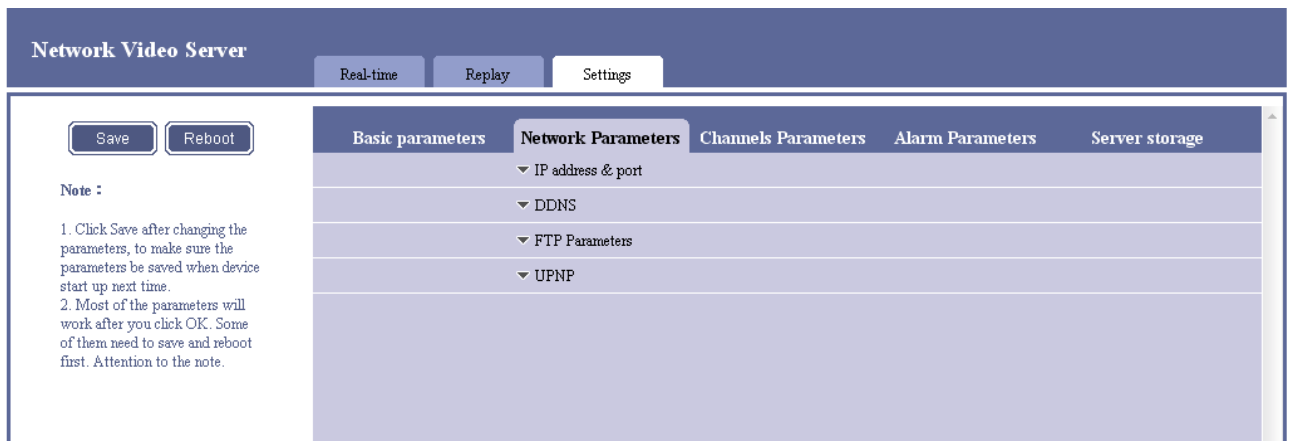


### 4.3.3.1 Basic parameters



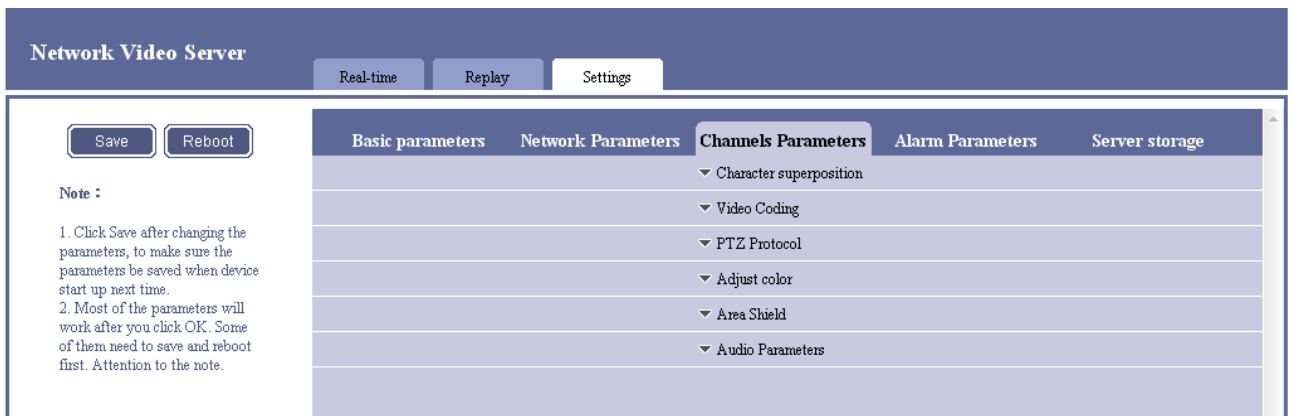
Click every item, it will outspread the parameter setting details. Set with the guide is ok.

### 4.3.3.2 Network parameters



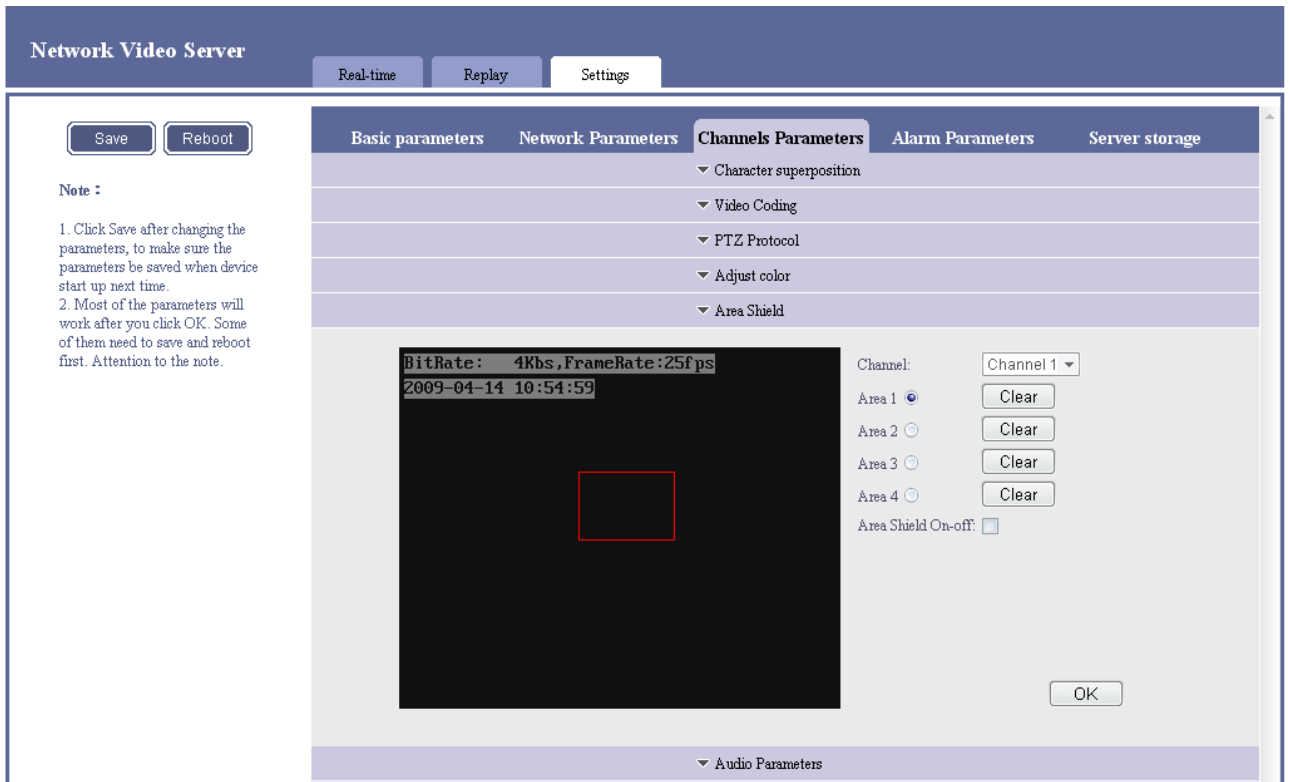
Click every item, it will outspread the parameter setting details. Set with the guide is ok.

### 4.3.3.3 Channels parameters



Click every item, it will outspread the parameter setting details. Set with the guide is ok.

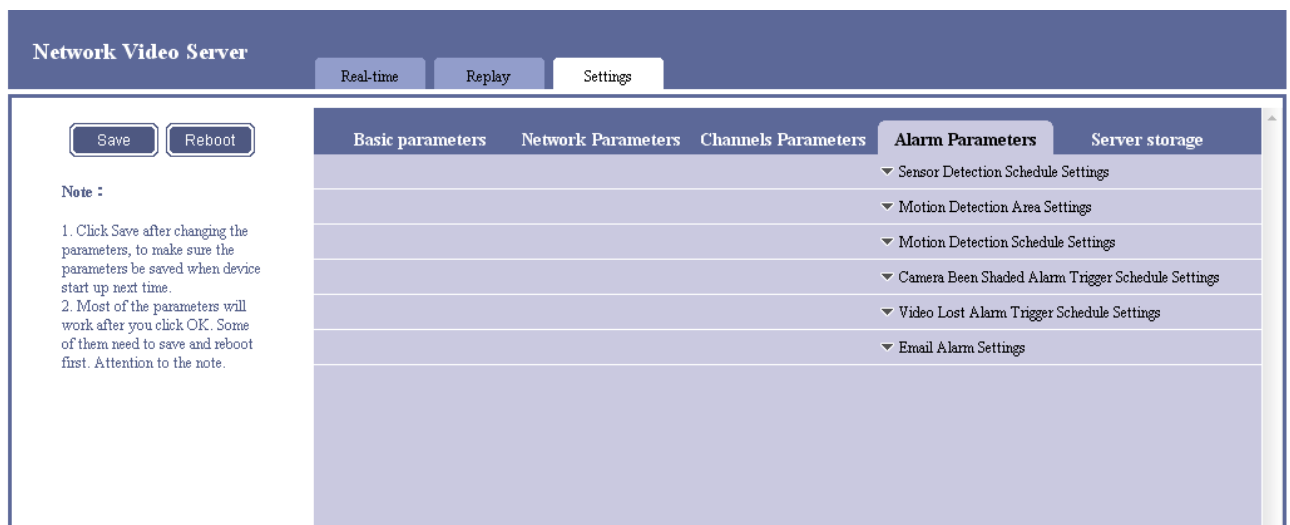
Area Shield: Click Area shield, dialog box as below will be outspreaded.



The area shield place will be black. This function can be used to protect some area in the video. Such as when be used on ATM, the password input area can set area shield.

Hook the Area shield on-off first. Press the left of mouse and choose the area to be shielded. Maximum can choose a quarter of full video area one time. Maximum can set 4 area. Click ok to save. Click clear, this area shield will be cleared.

#### 4.3.3.4 Alarm parameters



Click every item, it will outspread the parameter setting details. Set with the guide is ok.

### 4.3.3.5 Server storage settings

The screenshot shows the 'Network Video Server' settings interface. At the top, there are three tabs: 'Real-time', 'Replay', and 'Settings'. The 'Settings' tab is active. Below the tabs, there are two buttons: 'Save' and 'Reboot'. To the left of the main settings area, there is a 'Note' section with two numbered instructions. The main settings area is a table with five columns: 'Basic parameters', 'Network Parameters', 'Channels Parameters', 'Alarm Parameters', and 'Server storage'. The 'Server storage' column is expanded, showing four sub-items: 'Server-end timing to record', 'Server-end timing to snapshot', 'Server-end snapshot parameters', and 'Server-end storage device'.

**Network Video Server**

Real-time    Replay    Settings

Save    Reboot

**Note :**

1. Click Save after changing the parameters, to make sure the parameters be saved when device start up next time.
2. Most of the parameters will work after you click OK. Some of them need to save and reboot first. Attention to the note.

| Basic parameters | Network Parameters | Channels Parameters | Alarm Parameters | Server storage                   |
|------------------|--------------------|---------------------|------------------|----------------------------------|
|                  |                    |                     |                  | ▼ Server-end timing to record    |
|                  |                    |                     |                  | ▼ Server-end timing to snapshot  |
|                  |                    |                     |                  | ▼ Server-end snapshot parameters |
|                  |                    |                     |                  | ▼ Server-end storage device      |

Click every item, it will outspread the parameter setting details. Set with the guide is ok.



**Attachment 1 Factory default parameters**

| <b>Default Factory Parameter Setting</b> |                      |
|--|----------------------|
| <b>Parameter</b>                         | <b>Default</b>       |
| <b>IP Address</b>                        | <b>192.168.1.19</b>  |
| <b>Subnet Mask</b>                       | <b>255.255.255.0</b> |
| <b>Gateway</b>                           | <b>192.168.1.1</b>   |
| <b>Multicast Address</b>                 | <b>235.1.1.1</b>     |
| <b>Multicast Port</b>                    | <b>6500</b>          |
| <b>DDNS</b>                              | <b>OFF</b>           |
| <b>Motion Detection</b>                  | <b>OFF</b>           |
| <b>Sensor Alarm</b>                      | <b>OFF</b>           |
| <b>PPPOE</b>                             | <b>OFF</b>           |
| <b>Remote Host Port</b>                  | <b>3004</b>          |
| <b>Alarm Host Port</b>                   | <b>9000</b>          |
| <b>DNS Server Port</b>                   | <b>8080</b>          |
| <b>Transfer Starting Port</b>            | <b>3000</b>          |
| <b>Data Control Port</b>                 | <b>3001</b>          |
| <b>Remote Transfer Port</b>              | <b>3002</b>          |
| <b>Web Port</b>                          | <b>80</b>            |

| <b>Default User Name &amp; Password</b> |                  |                 |
|---|------------------|-----------------|
| <b>Parameter</b>                        | <b>User Name</b> | <b>Password</b> |
| <b>Imagineworld Software</b>            | <b>Admin</b>     | <b>(Null)</b>   |
| <b>Internet Explorer View</b>           | <b>888888</b>    | <b>888888</b>   |
| <b>Administrator User</b>               | <b>888888</b>    | <b>888888</b>   |
| <b>High Operator</b>                    | <b>1</b>         | <b>1</b>        |
| <b>Operator</b>                         | <b>2</b>         | <b>2</b>        |

**The central management software user manual refer Imagineworldclients user manual.**