



**User Guide for the  
Hp-22B13&Hp-22B20  
Hp-22D13&Hp-22D20**

Version 00

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## Target Audience

Administrators and Operators of Video Surveillance Products

## Document Version

Version 00

## Applicable Models


Hp-22B13 series, Hp-22B20 series, Hp-22D13 series and Hp-22D20 series

## Related Document

*Hp-22B13&Hp-22B20 Installation Guide*

*Hp-22D13&Hp-22D20 Installation Guide*

## Convention

Icon	Convention
	Notes
<i>italic</i>	Book or document name; Filling content
>	Connector between menus of different level
<b>BOLD</b>	Menu; Button; Option

# Contents

<b>1. Product Brief</b> .....	<b>1</b>
1.1 Appearance.....	1
1.2 Main Functions .....	1
<b>2. Start Up</b> .....	<b>3</b>
2.1 Client Installation Conditions .....	3
2.2 Initial Configuration .....	3
<b>3. Product Functions</b> .....	<b>6</b>
3.1 Live View.....	6
3.1.1 Toolbar Buttons on Main Menu.....	6
3.1.2 Image Adjustment.....	7
3.2 Motion Detection .....	10
3.2.1 Set Area.....	10
3.2.2 Clear Area.....	11
3.2.3 Disable Function .....	11
3.3 Privacy Mask.....	11
3.3.1 Set Area.....	11
3.3.2 Clear Area.....	11
3.3.3 Disable Function .....	11
3.4 Clipping Area Encode .....	11
3.5 ROI Encode.....	12
3.6 *Snapshot.....	12
3.7 *Recording .....	12
3.7.1 Playback .....	13
3.7.2 Download.....	13
3.8 Upgrade .....	13

3.8.1	Firmware Upgrade .....	13
3.8.2	IPCCTRL Upgrade.....	14
<b>4.</b>	<b>Parameter .....</b>	<b>15</b>
4.1	Network Access .....	15
4.1.1	Ethernet .....	15
4.1.2	PPPoE .....	15
4.2	Register to VMS .....	15
4.3	*BNC Output .....	16
4.4	User Management.....	17
4.5	Text Overlay.....	17
4.6	Camera Mode .....	18
4.6.1	Configure Parameter.....	18
4.6.2	Import/Export Configuration .....	19
4.7	Dual-Stream .....	19
<b>5.</b>	<b>Appendix: Glossary of Terms .....</b>	<b>21</b>

## 1. Product Brief

HD IP Camera (hereinafter referred to as Camera) is a remote video surveillance device based on IP network technology. It encodes and transmits HD video. Also, it can be deployed at any point of a surveillance network and transmits videos via public or private IP network. The device has built-in IR illumination module, which satisfies different video surveillance requirements better.


### 1.1 Appearance



Picture1-1 Hp-22D13/ Hp-22D20 Series



Picture1-2 Hp-22B13/ Hp-22B20 Series

 Note: -B series without end bracket

### 1.2 Main Functions

#### Live View

- Apply high-performance progressive scan sensor, with clear image and vivid color;
- High-performance video processing chip and efficient video encoding, providing HD video;
- Dual-stream to fit different network bandwidth;
- Configurable text overlay on video

#### IR Illumination

- Built-in IR illumination module to better satisfy different video surveillance requirements

#### Networking

Static address, DHCP or PPPoE;  
NAT traversal, DNS and multicast technology

**PoE**

PoE supported, realize network transmission and power supply only with a PoE switch

**Camera Parameter Adjustable**

Multiple camera parameters are adjustable to suit various surveillance requirements.

**Motion Detection**

User can set motion detection area in the surveillance scene. Once someone appears in the defined area, the system will trigger alarm.

**Privacy Mask**

Keep sensitive information private.

**ROI Encode**

Only encode specific area to ensure normal surveillance and constant resolution of key area under poor network.

**Clipping Area Encode**

Only encode specific area to ensure normal surveillance of key area under poor network.

**User Management**

Different permissions will be allocated to different accounts to ensure normal operation of device.

## 2. Start Up

Please refer to the Quick Start Guide in the packing for device installation and wiring.


### 2.1 Client Installation Conditions

Requirements of PC for installing the client:

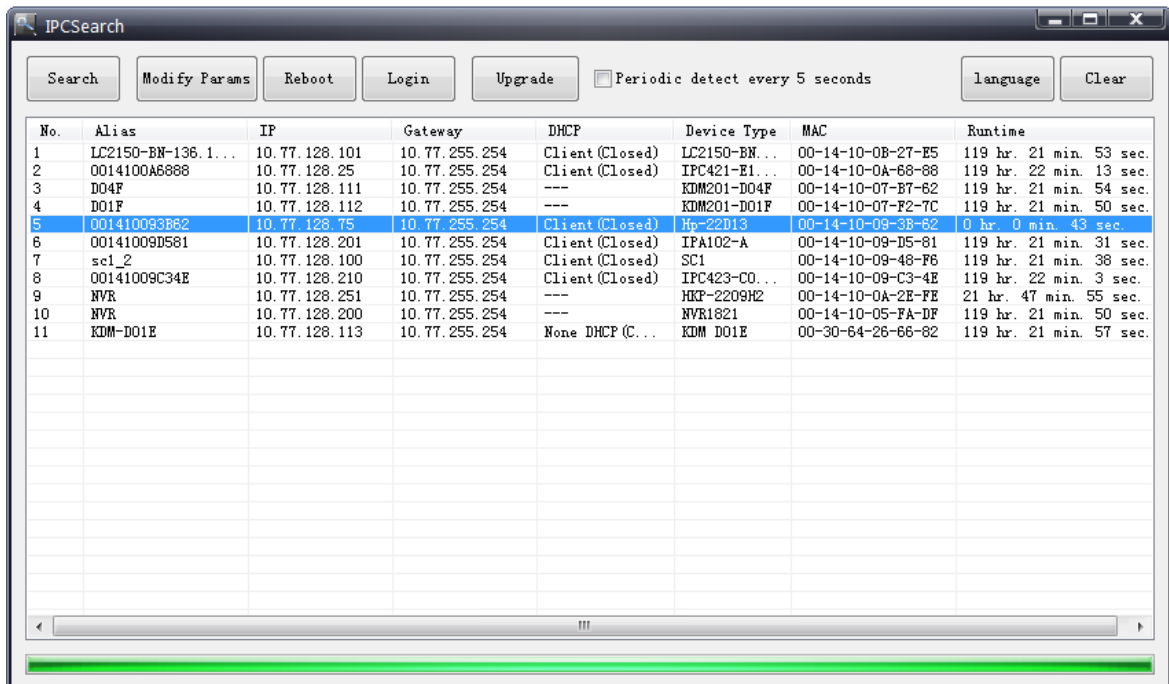
- ✚ Operating System: Windows XP or newer versions
- ✚ Browser: IE6.0 or newer versions
- ✚ Processor: 2.0 GHz CORE®2 series or other equivalent processors
- ✚ RAM Memory: 2GB or above
- ✚ DirectX: 9.0c

### 2.2 Initial Configuration

- 1) Power on the camera after installing and wiring.
- 2) Get IPCSearch from the attached CD.

 Note: IPCSearch is green software free from installation.

- 3) RunIPCSearch: it will search devices in LAN automatically and display the list as shown in Picture 2-1.



The screenshot shows the IPCSearch application window with a table of detected devices. The table has columns for No., Alias, IP, Gateway, DHCP, Device Type, MAC, and Runtime. Row 5 is highlighted in blue.

No.	Alias	IP	Gateway	DHCP	Device Type	MAC	Runtime
1	LC2150-BN-136.1...	10.77.128.101	10.77.255.254	Client (Closed)	LC2150-BN...	00-14-10-0B-27-E5	119 hr. 21 min. 53 sec.
2	0014100A6888	10.77.128.25	10.77.255.254	Client (Closed)	IPC421-E1...	00-14-10-0A-68-88	119 hr. 22 min. 13 sec.
3	D04F	10.77.128.111	10.77.255.254	---	KDM201-D04F	00-14-10-07-B7-62	119 hr. 21 min. 54 sec.
4	D01F	10.77.128.112	10.77.255.254	---	KDM201-D01F	00-14-10-07-F2-7C	119 hr. 21 min. 50 sec.
5	001410093B62	10.77.128.75	10.77.255.254	Client (Closed)	Hp-22D13	00-14-10-09-3B-82	0 hr. 0 min. 43 sec.
6	00141009D581	10.77.128.201	10.77.255.254	Client (Closed)	IPA102-A	00-14-10-09-D5-81	119 hr. 21 min. 31 sec.
7	scl_2	10.77.128.100	10.77.255.254	Client (Closed)	SC1	00-14-10-09-48-F6	119 hr. 21 min. 38 sec.
8	00141009C34E	10.77.128.210	10.77.255.254	Client (Closed)	IPC423-CO...	00-14-10-09-C3-4E	119 hr. 22 min. 3 sec.
9	NVR	10.77.128.251	10.77.255.254	---	HKP-2209H2	00-14-10-0A-2E-FE	21 hr. 47 min. 55 sec.
10	NVR	10.77.128.200	10.77.255.254	---	NVR1821	00-14-10-05-FA-DF	119 hr. 21 min. 50 sec.
11	KDM-D01E	10.77.128.113	10.77.255.254	None DHCP (C...	KDM D01E	00-30-64-26-66-82	119 hr. 21 min. 57 sec.

Picture2-1IPCSearch

- 4) Select a camera to be configured, click **Modify Params** or right click the mouse. Interface is shown in Picture 2-2.

Modify Params

Device: 001410093B62  
MAC: 00-14-10-09-3B-62  
Type: Hp-22S13

Device Address

Auto-obtain device address(Open DHCP)  
 Custom device address(Close DHCP)

IP Address: 10 . 77 . 128 . 78  
Netmask: 255 . 255 . 0 . 0  
Gateway: 10 . 77 . 255 . 254

Modify address of register server

Enable LDS  
 IP Address 10 . 77 . 128 . 220  
 Domain platform.com  
Port: 5510

Tip:  
Once save changed, The device would be reboot to bring into operation.

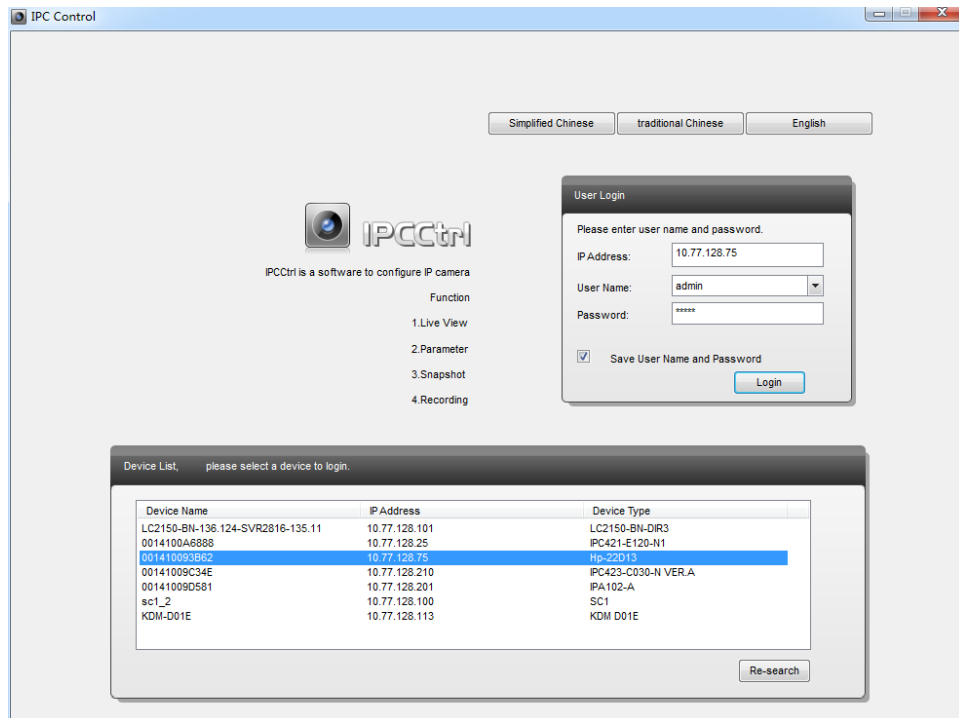
OK Cancel

U

**Picture2-2Modify Parameter**

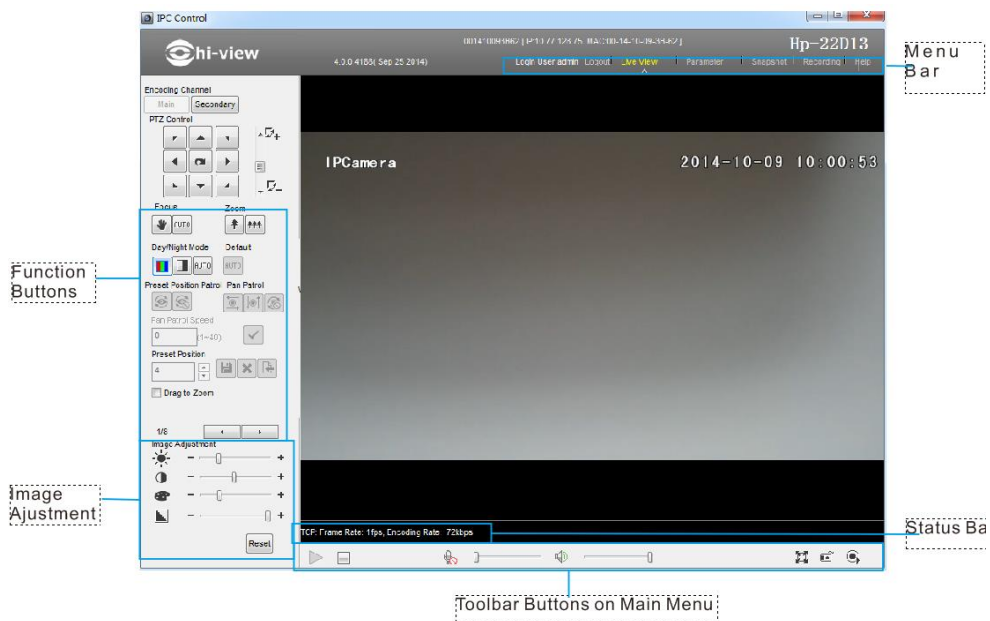
- 5) After modification, **Modify Params** will be disabled and the device will reboot automatically. Please wait patiently. After reboot, the button will be enabled again. Please select this device again and click **Login** or double click device name to enter web client. Interface is shown in Picture 2-3.





Picture2-3IPCCtrl Login Interface

- 6) Enter user name and password:  
 IPCCtrlacountsconsist ofbothadmin and guest users:  
 admin: can perform full operations.  
 guest: can perform operations, for example, live video view, image search, video record search, video playback, etc. guest can neither configure parameters, delete videos or snapshots, nor operate user management or equipment maintenance.
- 7) Interface after login is shown in Picture 2-4.



Picture2-4IPCCtrl Interface

## 3. Product Functions

IPCCtrl can not only view live video, but also perform local snapshot and recording.

**i** Note: Functions of different cameras may differ, and this Manual will take camera with more functions as example. User operation is subject to the actual functions of the model. Disabled button in IPCCtrl means the model doesn't support the function.

### 3.1 Live View

The default interface after user login is live video view, or user can click Live View to enter the interface.

#### 3.1.1 Toolbar Buttons on Main Menu



Picture3-1 Toolbar Buttons on Main Menu

**View** 

Click this button to play live video.

**Stop** 

Click this button to stop live view.



**Full Screen** 

Click this button to display full screen.

When Drag to Zoom is disabled, double click the live video to display full screen directly, and double click again to exit.

**Snapshot**  / 

Click this button to snapshot an image.

Snapshot includes PU Snapshot  and Local Snapshot . User can set in Parameter>Local Setting.

 Notes:

- 1) PU Snapshot: PU Snapshots an image and sends it to local client in .JPG format. The image quality is good, but there is some time delay caused by network.
- 2) Local Snapshot: Client snapshots an image and save it locally. The image quality is ordinary, but there isn't any time delay.

**Local Setting**

Path for PU Snapshot:	C:\IPC Control\PuSnapShot	Modify Path
Path for Recording:	C:\IPC Control\Video	Modify Path
Path for Local Snapshot:	C:\IPC Control\Picture	Modify Path
Download PU Snapshot Path:	C:\IPC Control\DownloadedPicture	Modify Path
Download Recording Path:	C:\IPC Control\DownloadedVideo	Modify Path

**Image Adjustment**

Move Image Pixels up by:  (0~32)      Move Image Pixels left by:  (0~32)

Move Image Pixels down by:  (0~32)      Move Image Pixels right by:  (0~32)

All the parameters must be in multiples of 4.

**Decoder**

Smoothness:  (1~20) \*

Noise Reduction  (level 0~4)

VSync      Vsync(it will increase CPU utilization, so use it only when necessary.)

Snapshot type:  ▼

Stream Type:  ▼

PTZ(ON) \*

\* Setting will only take effect after reboot IPCCtrl.

Save      Reset

### Picture3-2Snapshot Setting

User can set or modify save path for PU Snapshot and Local Snapshot in Parameter>Local Setting, as shown in Picture 3-2.

### Recording

Click this button to start recording and click again to stop recording. Recording is saved on local PC. User can set or modify save path in Parameter>Local Setting.

#### 3.1.2 Image Adjustment

##### 3.1.2.1 Brightness

Due to low light situation, the image will look completely or partially dark and hard to recognize. IPCCtrl provides the following functions to increase image brightness and ensure surveillance quality.

##### Enable IR Lamp

In low light situation, IR lamp can be started to get better surveillance images.

##### Increase Image Brightness

In Image Adjustment part, user can drag Brightness slide bar to adjust image brightness.


Or, enable Camera Mode to make camera transfer to preset value in a defined period of time.

### Slower Shutter Speed

Camera shutter speed means the cycle of the sensor calculating light input amount. Therefore, the slower the speed is, the brighter the image is.


 Note: If the target object is moving fast, this method is not applicable.

Set Max. Auto Shutter and Min. Auto Shutter in Parameter>Video Parameter>Basic Setting.

Click  (Manual) on Page 2 of function buttons to select shutter speed, measured in second (s).

### Increase Gain

Camera gain means the light sensitivity of a sensor. A high gain may reduce light exposure for low light situation.

 Note: However, the higher the gain is, the worse the image will be. User is advised to select Auto, applying default values, or set Max. Auto Gain (range 6-42 dB) in Parameter>Video Parameter>Basic Setting

### Enable WDR

WDR can provide optimal exposure in intense backlight conditions.

On Page 2 of function buttons, click  to enable WDR and  to disable WDR.

#### 3.1.2.2 White Balance Adjustment

The basic conception of White Balance is “to make all colors white regardless of the color temperature of the light source”. It can compensate color rendition in pictures taken in specific light source.

On Page 2 of function buttons, select White Balance Mode, Auto, Light or Manual.

After selecting Manual, enter Red Gain and Blue Gain respectively to adjust image colors.

### 3.1.2.3 Day/Night Mode


Day (Night) Mode means disabling (enabling) IR lamp, and the image shifts to color (B/W), thus to get optimal images for day (sufficient light source) and night (insufficient light source) conditions.

 Note: When a device without IR lamp enables Night Mode means the image shifts to B/W.


#### Day Mode

On Page 1 of function buttons, click  (Day Mode) to disable IR lamp and the image shifts to color.

#### Night Mode

Click  (Night Mode) to enable IR lamp and the image shifts to B/W.

#### Auto


Click  (Auto) and the system will shift Day/Night Mode automatically according to pre-set value. Notes for different devices are as follows:

- Camera with IR lamp will shift to Day Mode or Night Mode automatically according to IR Sensitivity, which can be set on Page 4 of function buttons.
- Camera without IR lamp will shift to Day Mode or Night Mode automatically according to Color to B/W value and B/W to Color value, which can be set on Page 6 of function buttons.

Also, user can enable Camera Mode to make camera shift to Night Mode automatically in a defined period of time.

### 3.1.2.4 Noise Reduction

When there are many noise points caused by environment and camera lens, Noise Reduction function can be enabled to adjust images.

On Page 6 of function buttons, set Noise Reduction value and click  to save setting.

### 3.1.2.5 Auto Adjustment

Auto Adjustment applies default settings of the camera block, which are suitable for most conditions.

On Page 1 of function buttons, click  (All auto adjustments), and all parameters will restore to default values.

Also, user can set Focus, Shutter and other parameter as Auto alone.

### 3.1.2.6 Video Freeze

On Page 5 of function buttons, select this function and the video will display the last frame image before clicking. Click  to disable freeze.

### 3.1.2.7 Drag to Zoom

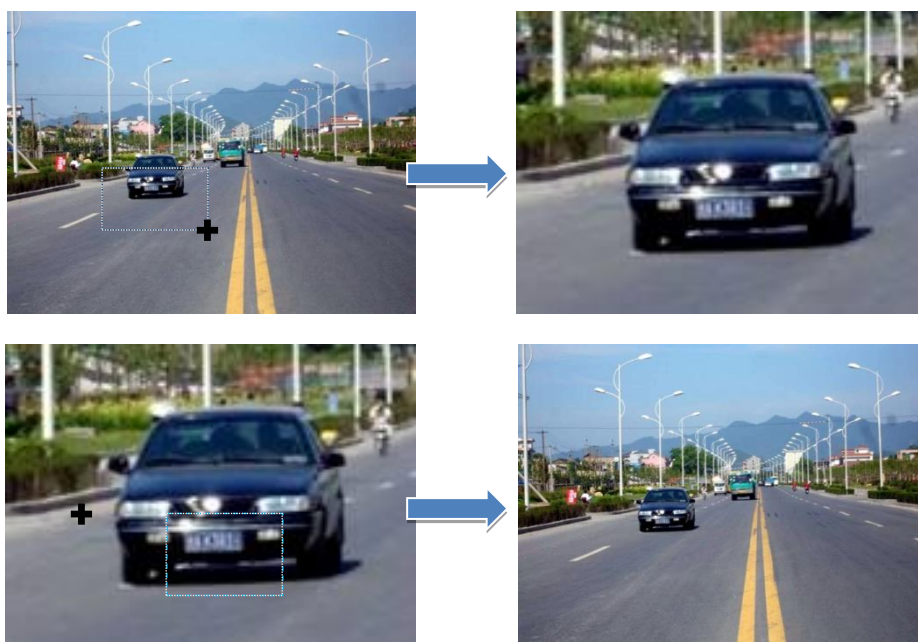
**Definition:** Drag to Zoom function centers the selected area and zooms in the area to full screen.

**Enable:** Right click the image and click Drag to Zoom on the popup menu to enable the function; or check Drag to Zoom on the bottom of Page 1 of function buttons.

**Start:** Drag an area (left to right) with mouse to zoom in and center it.

**Cancel:** Drag a reverse rectangle (right to left) with mouse to cancel zoom and center.

**Disable:** Right click the image and click Drag to Zoom on the popup menu to disable the function; or uncheck Drag to Zoom on the bottom of Page 1 of function buttons.



Picture3-3Drag to Zoom

## 3.2 Motion Detection

Detect movements in the defined area. Once the movement exceeds the defined sensitivity, an alarm will be triggered by IPCCtrl.

### 3.2.1 Set Area

Motion detection of Full Area and maximum 4 user-defined areas

- 1) Check Parameter>Video Parameter>Intelligent Alarm to set motion detection area.
- 2) Check Enable Intelligent Alarm, and select Motion Detection. Detection area can be full area or specific area. If user selects specific area, the user should define detection area on the below image.
- 3) Click a square and it will turn purple red. Start from this square and draw an area to be the detection area, which will turn purple red.
- 4) Click **Save** under the view window or click **Reset** to reset the area.

### 3.2.2 Clear Area

Start from an undefined square and draw an area that contains the defined area, or click the defined squares one by one to clear setting. Save to make settings effective.

### 3.2.3 Disable Function

To disable this function, uncheck the checkbox  Enable Intelligent Alarm.

## 3.3 Privacy Mask

Mask sensitive and private part of the image so as to keep sensitive information private.

### 3.3.1 Set Area

The image is divided into 16 columns and 12 rows of small squares. The maximum masking area can be 24 squares. The maximum number of Privacy Mask area is 4.

- 1) Check Parameter>Video Parameter>Privacy Mask to set privacy mask area.
- 2) Check Enable Privacy Mask.
- 3) Click a square and it will turn purple red. Start from this square and draw an area to be the masking area, which will turn purple red.
- 4) Click **Save** under the view window or click **Reset** to reset the area.

### 3.3.2 Clear Area

Start from an undefined square and draw an area that contains the defined area, or click the defined squares one by one to clear setting. Save to make settings effective.

### 3.3.3 Disable Function

To disable this function, uncheck the checkbox  Enable Privacy Mask.

## 3.4 Clipping Area Encode

After user defines the encoding area, the system will encode and display the clipping area only, so as to save system resources and network bandwidth.

In the interface Parameter>Video Parameter>Clipping Area Encode, drag an area with mouse, click **Save** under the view window or click **Reset** to reset the area.

### 3.5 ROI Encode

Only encode specific area to ensure normal surveillance and constant resolution of key area under poor network. The resolution of the area must be greater than 704×576 and less than the current resolution.

In the interface Parameter>Video Parameter>ROI Encode, drag an area with mouse, click **Save** under the view window or click **Reset** to reset the area.

**i** Note: When ROI Encode is enabled, if user modifies image resolution or aspect ratio (stand screen/widescreen), the device will quit ROI Encode automatically.

### 3.6 \*Snapshot

Click **Snapshot** to enter snapshot management interface. User can perform operations on snapshots in SD card, such as view, delete and download.

**i** Note: If the Snapshot interface is disabled, please confirm the SD card is inserted and then reboot client.

#### Operation Steps

- 1) Search snapshots: search those pictures within the defined duration from the SD card.
- 2) On the snapshot list, select searched picture and perform operations such as view, delete and download.

### 3.7 \*Recording

Click **Recording** to enter recording management interface. User can perform operations on recordings in SD card, such as playback, delete and download. (A SD card must be inserted in the camera.)

**i** Note: If the Recording interface is disabled, please confirm the SD card is inserted and then reboot client.

**i** Note: Record Mode includes: Start Recording When Disconnected, Recording All the Time, and Stop Recording, configurable in Parameter>Recording Parameter.



**Recording Parameter**

Record Mode (Takes Immediate Effect)

Main-Stream Starts Recording When Disconnected  
 Automatically(Sec. Stream Record When Disconnected)  
 Main Stream Recording  
 Sec. Stream Recording  
 Stop Recording

Pre-Record Time:  s

Total Space of SD Card:  GB

Available Space of SD Card:  MB

Note: when no space is available in SD card, the oldest recording will be overwritten.

**Picture3-4Recording**

### 3.7.1 Playback

- 1) Select Recording Duration from Calendar.
- 2) If there is background color on a date, it means there is recording on that day. Select duration of the date and the video will be displayed directly in the right window.

### 3.7.2 Download

Select Recording Duration from calendar and download recording to local PC, download path configurable.

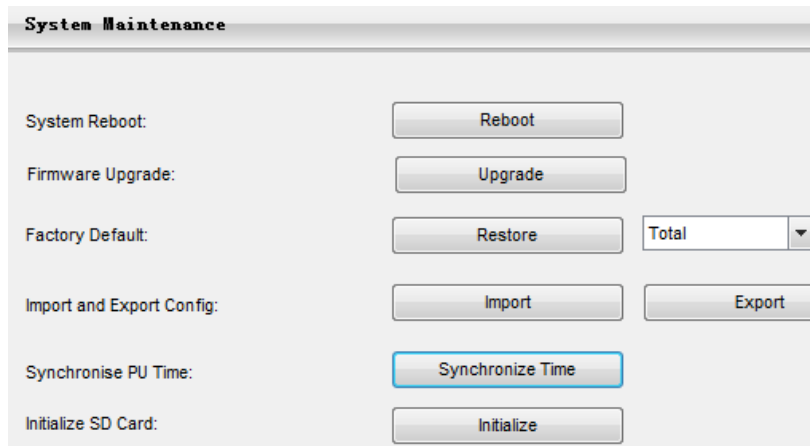
## 3.8 Upgrade

### 3.8.1 Firmware Upgrade

Contact dealer for upgrade file.

#### Method1

- 1) Enter IPCCtrl interface Parameter>System Maintenance> Upgrade, as shown in Picture 3-5.



**Picture3-5Firmware Upgrade**

- 2) Select local upgrade file (<\*.pkg> or <\*.img> format).
- 3) During upgrading, please do nothing but waiting.
- 4) After upgrading, please download ActiveX control again. After finishing it, reboot browser.

**i** Note: Please click “Upgrade” during system upgrading, and the upgrade file is usually in <\*.pkg> or <\*.img> format.

#### **Method2**

- 1) RunIPCSearch.
- 2) Click **Upgrade** to upgrade firmware of cameras of the same model simultaneously.

#### **3.8.2 IPCCtrlUpgrade**

After firmware upgrade, please login web client again. The page will prompt to download a new ActiveX control. After downloading it, client upgrade will be completed. Login again to enter the latest IPCCtrl.

**i** Note: For detailed operation instructions of IPCCtrl, please refer to the help document.

## 4. Parameter

### 4.1 Network Access

2.2 Initial Configuration has introduced how to modify parameters via IPCSearch to make camera access network. Camera accepts multiple network access methods (via Ethernet and PPPoE). The following introduces how to configure camera network parameters in IPCCtrl.

#### 4.1.1 Ethernet

Open Parameter>Network Setting>Ethernet Parameter, as shown in Picture 4-1 to configure IP address, subnet mask and default gateway.

**Ethernet Parameter**

DHCP

IP Address: 10 . 61 . 0 . 138

Subnet Mask: 255 . 224 . 0 . 0

Default Gateway: 10 . 62 . 0 . 254

Preferred DNS Address: 0 . 0 . 0 . 0

Alternate DNS Address: 0 . 0 . 0 . 0

Save Reset

Picture4-1 Ethernet Parameter

#### 4.1.2 PPPoE

Open Parameter>Network Setting>PPPoE Parameter, as shown in Picture 4-2 to enter user name and password, and save.

Enable PPPoE

User Name: root

Password: \*\*\*\*

Auto Dial-up

Auto Redial Interval(s): 1

Auto Redial Retry Time: 3

Save Reset

Picture4-2 PPPoE Parameter

### 4.2 Register to VMS

Open Parameter>System Setting>Register to VMS as shown in Picture 4-3 to enter VMS address and port. Save settings and reboot device.

**Register to VMS**

Register VMS\*     LB\*

LB Server Address:     IP:    0 . 0 . 0 . 0 . 0

LB Server Port:     Domain Name:    5511

Register VMS Port:    5510

---

VMS Exclusive Channel:    0    \* (Available IPC channel: 8)

Connection Link Interval(s):    10

Connection Link Time:    6

Send the NAT Probe Packet:     Enable

Auto Networking:     Enable

(For Administrator Use Only)

Device UUID:    00201607227620000000000000000000

UUID Password:    \*\*\*\*\*

\* Setting will only take effect after reboot!

Picture4-3Register to VMS

### 4.3 \*BNC Output

Camera with BNC output can output analog image directly when local display function is enabled.

Open Parameter>Video Parameter>Camera Parameter, select 'Start' from the BNC Output drop-down list and set the CVBS Video Mode, as shown below.

**VideoSetting:**

PTZ Protocol:    PELCO\_D\_K

Camera Address Code(0-127):    1

Video Aspect Ratio:    WideScreen Displa

**BNC Output:    Start**

COM No.:    COM1

CVBS Video Mode:    PAL    \*

Video Standard:     CVBS     SDI

YUV:     Enable

\* Setting will only take effect after reboot!

Picture4-4BNC Output

## 4.4 User Management

Admin user has the authorization to modify passwords of IPCCtrl admin user and guest user.


Modification method:

- 1) Open Parameter>System Setting>User Management
- 2) Check the checkbox  of the item to be modified, the password area will be enabled and editable.
- 3) Enter new password.
- 4) Confirm new password.
- 5) Click Save to validate setting, and Reset to quit modification.

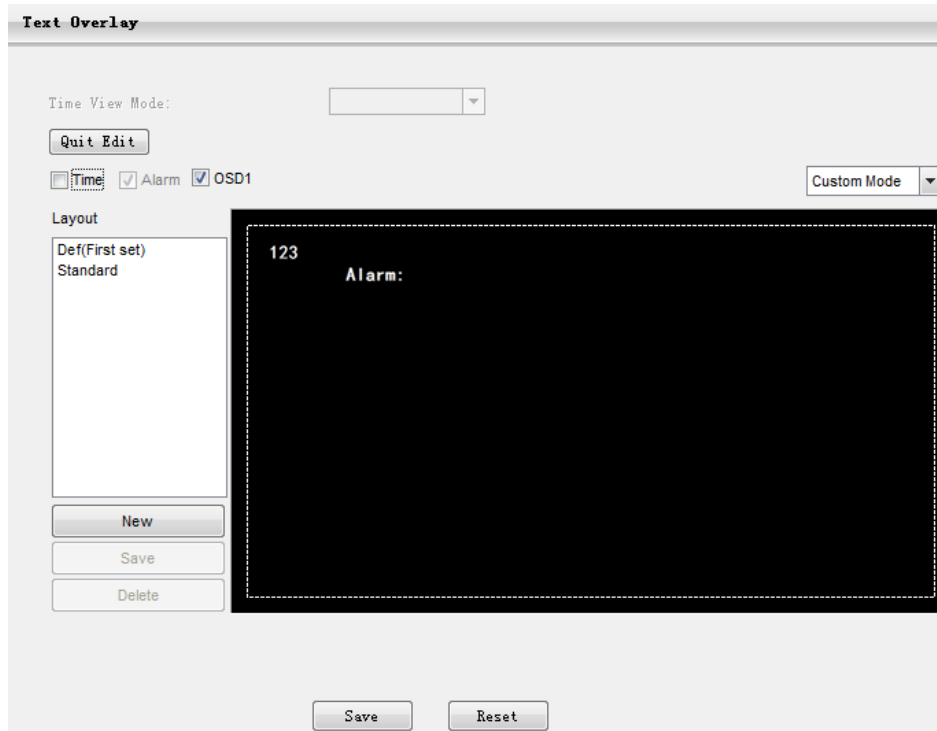
## 4.5 Text Overlay

Display preset text on the surveillance window, configuration steps as follows:

- 1) Open Parameter>Video Parameter>Text Overlay
- 2) Check Edit Text checkbox, as Picture 4-5 shows.
- 3) User can create and save multiple OSD layouts. Click Create and input layout name. Select this layout from the list and edit it.
- 4) Check text types to be overlaid, time and user-defined OSD selectable.

 Note: Different models may support different numbers of OSD. Configuration is subject to actual camera model.

- 5) Double click user-defined OSD to input text content. Each OSD supports maximally 3 lines of text. User can check  Align Right checkbox to align texts on the right, or the default setting is "align left".
- 6) Drag text to the ideal position in the view window.
- 7) Click Save to validate settings, and Reset to quit edit.



Picture4-5Text Overlay

## 4.6 Camera Mode

Open path: Parameter>Video Parameter>Camera Mode

After enabling Camera Mode, user can define maximally 8 different non-overlapping durations, and all parameters will be adjusted to the preset values automatically.

### 4.6.1 Configure Parameter

#### 4.6.1.1 Night Mode

After enabling this function, device will shift to Night Mode in the defined duration automatically. The IR lamp will be enabled and the image will turn B/W.

#### 4.6.1.2 Shutter, Gain, Auto

Shutter and Gain values configurable

Or enable Auto mode to apply set Shutter and Gain automatically.

#### 4.6.1.3 Brightness, Contrast, Saturation, Sharpness

Brightness, Contrast, Saturation and Sharpness values configurable

Brightness, Contrast, Saturation and Sharpness range: 0-255.

#### 4.6.1.4 Frame Rate, Encoding Rate

Frame Rate and Encoding Rate configurable

**Camera Mode**

Enable Camera Mode Import Export

Condition	IR Mode	Time Mode	Start Time	End Time
	<input type="checkbox"/> Enable	<input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable	0:00:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00	0:00:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00 0:00:00
	Force DN <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable	Wide Dynamic <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable <input type="checkbox"/> Enable	Priority <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Auto Mode <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable <input checked="" type="checkbox"/> Enable
	Shutter	Gain	Aperture(0~0)	Brightness
	1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10	12db 12db 12db 12db 12db 12db 12db 12db	0 0 0 0 0 0 0 0	125 125 125 125 125 125 125 125
	Contrast	Saturation	Sharpness	Frame Rate
	128 128 128 128 128 128 128 128	64 64 64 64 64 64 64 64	250 250 250 250 250 250 250 250	25 f/s 25 f/s 25 f/s 25 f/s 25 f/s 25 f/s 25 f/s 25 f/s
	Encoding			
	1024 1024 1024 1024 1024 1024 1024 1024			

Auto Gain And Shutter

Auto Gain  (0~148)

Picture4-6Camera Mode

#### 4.6.2 Import/Export Configuration

After completing configuration of camera mode, click **Export** to export and save the configuration; click **Import** to import local configuration file instead of manual configuration.

### 4.7 Dual-Stream

Camera supports dual-stream encoding. Dual-stream means the same video source is encoded in 2 streams of video with different resolutions. User can select different resolution to view or record according to the bandwidth conditions.

Open Parameter>Video Parameter>Main Stream Encode, as shown in Picture 4-7 to check Enable Sec. Stream checkbox. After enabling, user can configure secondary stream parameters in Parameter>Video Parameter>Secondary Stream Encode.

Main Stream	
Encoding Format:	H264
Encoding Bit-Rate(64~8192 kbps):	4096
Resolution:	1920*1080
Encoding Frame Rate(fps):	25
Max. Quantization (1~51):	50
Min. Quantization (1~51):	15
Max. Key Frame Interval (1~2500 Frame):	75
Enable Sec. Stream:	<input checked="" type="checkbox"/> Enable *
Bit-Rate Control:	CBR
Video Standard:	NONE
Encoding Level:	M
(For Administrator Use Only)	
Stream Transmit Address:	172 . 16 . 15 . 41
Stream Transmit Port:	60000
Default Stream Transmit:	<input type="checkbox"/> Enable *
Enable Stream Transmit:	<input type="checkbox"/> Enable
* Setting will only take effect after reboot!	
Save      Reset	

Picture4-7Main Stream Encoding

**i** Note: For detailed operation instructions of the client IPCCtrl, please refer to the help document.



## 5. Appendix: Glossary of Terms

Term	Explanation
<b>720P</b>	Resolution of 1280*720 pixels
<b>CIF</b>	Resolution of 352*288 pixels
<b>QCIF</b>	Resolution of 176*144 pixels
<b>PU</b>	Periphery Unit, such as camera and encoder used for video surveillance
<b>ROI</b>	Region Of Interest
<b>Key Frame Interval</b>	Key Frame defines the important frame when change happens in a video. This frame will be completely encoded. Key Frame Interval defines the maximum frames during the interval between key frames. If the video changes quite frequently, shorter Key Frame Interval will make video more real, but it will take more bandwidth.
<b>Quantization</b>	Set Min. and Max. Quantization, and image compression quantization will fluctuate in the range. During image compression, larger quantization brings higher compression ratio and higher distortion ratio. On the contrary, smaller quantization brings lower compression ratio and better image recovery, but meanwhile takes more bandwidth.