KEDACOM

User Manual for HD IP Camera of IPC Series

Version 02

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Target Audience

Administrators and Operators of Video Surveillance Products

Document Version

Version 02

Applicable Models

IPC113 series, IPC123 series

IPC2151 series, IPC2251 series

IPC2152 series, IPC2252 series

IPC2110 series, IPC2210 series

IPC2111 series, IPC2211 series, IPC2411 series

Related Document

Quick Start Guide

Convention

lcon	Convention			
í	i Notes			
italic	Book or document name; Filling content			
>	> Connector between menus of different level			
BOLD				

			Contents	
© 2	015 Su	uzhou l	Keda Technology Co., Ltd. All rights reserved	2
Not	tice			2
Tar	get Au	Idience)	3
1.	Prod	luct Bri	ef	1
2.	Арре	earance	e	2
3.	Start	t Up		3
	3.1	-	nt Installation Conditions	
	3.2		al Configuration	
	-	5.2.1	Modify Parameter	
		5.2.2	Login Web Client	
	-		-	
	-	3.2.3	Focus	
4.	Prod	luct Fu	nctions	8
	4.1	Live	View	8
	4	.1.1	Toolbar Buttons	8
	4	.1.2	Image Adjustment	10
	4	.1.3	Auxiliary Function	12
	4.2	Moti	on Detection	12
	4	.2.1	Set Area	13
	4	.2.2	Clear Area	13
	4	.2.3	Disable Function	13
	4.3	Terr	pering Alarm	
	4.4	Alar	m Linkage	
	4	.4.1	Motion Detection Alarm Linkage	
		.4.2	Tempering Alarm Linkage	
		.4.3	Alarm Input Linkage	
	4	.4.3	niann input Linkaye	

	4	4.4.4	Abnormality Linkage	16
	4.5	Priva	acy Mask	16
	2	4.5.1	Set Area	17
	2	4.5.2	Clear Area	17
	2	4.5.3	Disable Function	17
	4.6	Enco	oding Clipping	17
	2	4.6.1	Set Area	18
	2	4.6.2	Clear Area	18
	4.7	ROI.		18
	2	4.7.1	Set Area	19
	2	4.7.2	Clear Area	19
	4.8	SDI	Output	19
	4.9	Snap	oshot	20
	4.10	Play	back	20
	2	4.10.1	Playback	21
	2	4.10.2	Download	21
	4.11	Upgı	rade	21
	2	4.11.1	Firmware Upgrade	21
	2	4.11.2	Web Client Upgrade	23
5.	Sett	ings		24
	5.1	Netw	vork Access	24
	Ę	5.1.1	Ethernet	24
	Ę	5.1.2	PPPoE	24
	5.2	Regi	ster to VMS	25
	5.3	BNC	Output	25
	5.4	User	Security	26

6.	Appendi	x: Glossary of Terms	31
	5.6 N	fulti-stream	28
	5.5 T	ext Overlay	27
	5.4.2	IP Filter	26
	5.4.1	User Management	26

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.

Some features of the HD IP camera:

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 image;

Dual-stream to fit different network bandwidth;

Configurable text overlay on video image;

Alarm

With audio and alarm connectors, realize functions of talkback and alarm;

Motion detection and alarm linkage, make video surveillance intelligent;

Support alarm linkage edit: Alarm Text Overlay, Device Output, Live View Display and etc.

Networking

Static address, DHCP or PPPoE;

NAT traversal, DNS and multicast technology

Storage

With SD card slot, when the network breaks down, video can be stored in local SD card;

Support local snapshot, default format is .JPG;

Support local recording, user can query and playback recording on PC.

2. Appearance



Picture 2-1 IPC113 and IPC123 series



Picture 2-2 IPC2151 and IPC2251 series



Picture 2-3 IPC2152 and IPC2252 series



Picture 2-4 IPC2110 and IPC2210 series



Picture 2-5 IPC2111/ IPC2211/ IPC2411 series

3. Start Up

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

3.1 Client Installation Conditions

Requirements of PC for installing the client:

- Operating System: Windows XP or newer versions
- Browser: IE7.0 and above versions, Firefox, Google Chrome (41 and below)
- Processor: 3.3 GHz CORE®i3 series or other equivalent processors
- RAM Memory: 4GB or above
- \rm DirectX: 9.0c

We will take IE7.0 as an example.

3.2 Initial Configuration

After installation and wiring, power on.

3.2.1 Modify Parameter

1) Get IPCSearch from the attached CD.

Sean	ch BroadSet	Modify Params	Reboot	gin Password	Reset Batch pro-	cessing				language	Setting Column	Cle
No.	IP	Alias	Device Type	Mask	Gateway	MAC	Version	Serial nu	Runtime			
1	10.255.252.71	Camera	Camera	255.255.252.0	0.0.00	00-14-10-0E-EC	7.1.3.239	1519006	6 hr. 2 min. 57 sec.			

Picture 3-1 IPCSearch

i Note: IPCSearch is green software free from installation. Camera name is subject to the search

result.

- 2) Run IPCSearch: it will search devices in LAN automatically and display the list as shown in Picture 3-1.
- Select the device and click "Batch processing". In the popup interface, set admin user's password and the email address to find back the password. Click "Active" and wait for rebooting.

CTIVE Rebo	ot Factory Reset	Upgrade P	assword Modific	ation Load config	Reset the IP b	lack and wh
lease select d	evice(s) to be proc	essed				
evice type	Camera	•	Refrest	version information	n	
Alias	Device	Туре	Operation	Status	IP	١
Select all			1			+
Jsername:	admin		1	lew Password:		
Mail:			1	lew Password:		

Picture 3-2 Batch processing

 Select a camera to be configured, click "Modify Params" or right click the mouse. Interface is shown in Picture 3-3. During the modification, the user name (admin) and the password set before activation should be entered.

Device:								
		Camera						
IAC:	08-0	D-1D-2D	-6	9-31				
ype:	Cam	era						
Device Ad	idress							
🔘 Auto-	-obtain de	vice add	re	ss(0	рег	DH	СР)
O Custo	om device	address	s(C	lose	DH	CP)		
IP Addr	ress:	10	8	33		1	8	247
Netmas	sk:	255	ě	224		0	£	0
Gatew	ay:	10	23	62		0	8	254
	y address le LDS	of regis	ter	serv	/er			
@ IP A	ddress	10	2	33	35	1	- 22	248
() Dor	main	platfor	m	com				
Port:		5510						
ïp:)nce save nto operatio		The dev	ice	wou	blu	be r	ebo	oot to brin

Picture3-3 Modify Parameter

3.2.2 Login Web Client

 After modification, camera 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 3-4.

User Name	۲
Password	
	Login

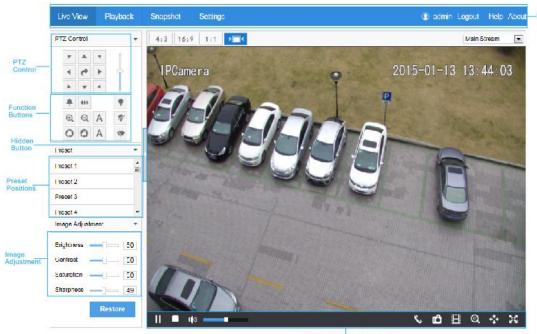
Picture 3-4 Web Client Login Interface

ONote: If log in the non-activated device through web client for the first time, user can set admin password and activate the device in the login interface, as shown below. Complicated password is recommended, e.g. combination of letters and digits above 8 bits.

User Name	admin
Password	
Password	
Confirm Password	
Claim Email	When admin's password gets lost, find it back through this email. Make sure this email address is safe and valid.
	Active

Picture 3-5 First login through web client

 Enter user name and password: when log in successfully for the first time, download and install the plug-in. Close browser when installing and re-login afterwards. Interface after login is shown in Picture 3-6.



Toolbar Buttons on Main Menu

Picture 3-6 Web Client Interface

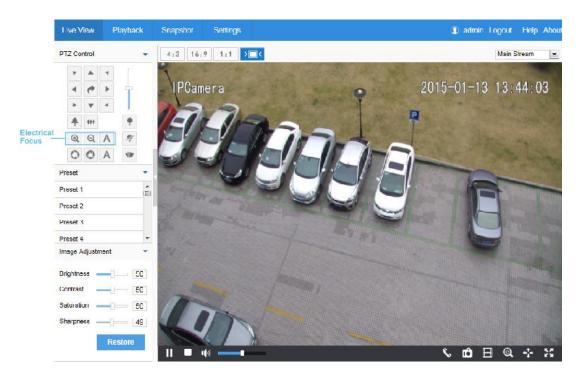
3.2.3 Focus

It is the process of imaging the target object clearly. Please focus according to the lens type of camera:

Mechanical Focus: View live video on web client and adjust the focus knob on the lens till the image is clear enough.

Electrical Focus: Click A in function buttons area of the web client, as the

picture shows. Or click or for near or far focus. View live video on web client and adjust focus till the image is clear.



Picture 3-7 Focus

4. Product Functions

By the web client, user 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 Web Client means the model doesn't support the function.

4.1 Live View

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



Picture4-1 Toolbar Buttons



Click this button to play or pause a viewing.



Click this button to stop live view.



Click this button to call camera, and click again to stop calling. Not all cameras support this function.



Click this button to snapshot an image.

Snapshot includes Camera Snapshot 🛋 and Local Snapshot 🧖. User can set in Settings>Local.

4.1.1 Toolbar Buttons



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 **Settings>Local**.

Note: 1) Camera Snapshot: Camera 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	1				
Play					
Protoc	ol	C TCP	O UDP		
Perfor	mance	Real-time	Balanced	Smooth	
Enable	Image Noise Reduction	✓			
Noise	Reduction Level	[1		
Enable	Vertical Synchronization	(Enabling this funct	ion will increase the CF	PU Utilization.)	
Displa	y Status Info				
Recordi	g				
Packe	t size	© 256M	512M	💮 1G	
Local	Recording Save Path	C:\IPCWeb\Rec			View
Clippin	ng Save Path	C:\IPCWeb\Video\F	PlayBackCut		View
Down	oad Save Path	C:\IPCWeb\RecPla	yback		View
Snapsh	ot				
Local	Snapshot Save Path	C:\IPCWeb\Pic\Pre	view		View
Came	ra Snapshot Save Path	C:\IPCWeb\Pic\Pu	Grab		View
Snaps	hot Save Path	C:\IPCWeb\Pic\Pla	yBack		View
Downloa	ad Plug-in				
Down	oad Plug-in	Download Plug-in			
		Save			
	Pictu	re 4-2 Snapshot S	Setting		
E	PTZ Q				

Click this button to enable the e-PTZ function. Left click and drag toward lower right to draw an area. The pixels of this area will be amplified and will cover the whole

screen. Left click and drag toward upper left to draw an area, then image will recover.



Click the button to zoom. Left click and drag toward lower right to draw an area. The pixels of this area will be amplified and will cover the whole screen. Left click and drag toward upper left to draw an area, then the image will recover. Double click a point in the image and the point will be centered.



Click this button to display full screen. Double click or press Esc to exit.

4.1.2 **Image Adjustment**

4.1.2.1 **Brightness**

Due to low light situation, the image will look completely or partially dark and hard to recognize. Web client 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.



Click 💌 to enable IR lamp. Click 🖉 to disable it.

Increase Image Brightness

Go to Settings>Camera>Image>Image Adjustment, drag Brightness slide bar to adjust image brightness.

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 will be.

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

Go to Settings>Camera>Image>Exposure, user can set shutter mode as auto or manual, and set Shutter Lower Limit.

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 for default values, or select Auto and set Gain Upper Limit in **Settings>Camera>Image**. If user selects "Manual", drag the slide bar to adjust gain level.

*Enable WDR

WDR can provide optimal exposure in intense backlight conditions.

Go to **Settings>Camera>Image>Image Enhancement**, enable WDR in the drop-down list of **Dynamic Adjustment** and drag the **WDR Sensitivity** slide bar to adjust.

4.1.2.2 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.

Go to **Settings>Camera>Image>White Balance**, select white balance mode from the drop-down list.

If select "**Manual**", drag the slide bar of White Balance R Gain (Red Gain) and White Balance B Gain (Blue Gain) to adjust image color.

4.1.2.3 Night Cut

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

Go to Settings>Camera>Image>Night Cut, select Night Cut mode.

Day

Select Day mode, disable IR lamp (only some models support), and the image is colored.

Night

Select Night mode, enable IR lamp (only some models support), and the image is black and white.

Auto (Gain Triggered)

Select Auto mode and configure sensitivity and switch time, then the system will switch Day/Night modes automatically.

Scheduled Day/Night

In this mode, camera switches to day/night mode automatically in a specified period of time.

When select Scheduled Day/Night mode, click Edit Time, and check Start Time and End Time in the popup interface.

Alarm Triggered Cut

In this mode, night cut is triggered by alarm input.

4.1.2.4 Noise Reduction

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

Go to **Settings>Camera>Image>Image Enhancement**, enable 3D Noise Reduction. When user selects "Disable", the function will be disabled. When select "Enable", user can drag the slide bar to adjust 3D noise reduction level.

4.1.3 Auxiliary Function

*Wiper

Wiper is used to clean the dome housing. In the PTZ control part of the Live View

interface, Click to start the wiper. Click again to stop the wiper. The wiper will stop automatically after 10 brushes. Click to enable wiper again if necessary.

4.2 Motion Detection

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

13

4

Motion Detection Tempering Alarm

2010-10-21 17:1110:00	Enable	
	Area Setting	Stop Clear All
	Sensitivity	
	Duration	Edit
	Linkage Type(Normal	Lin <mark>kage)</mark>
	Acoustic Alarm	
	Report to	
	Management System	n
	Recording Linkage	V
	Text Overlay	V
	Snapshot	
	Email Notice	
	Linkage Type(Other Li	nkage)
	Alarm Output	Alarm Output1
		Save

Picture 4-3 Motion Detection

4.2.1 Set Area

Motion detection supports full area detection and maximum 4 user-defined areas.

- 1) Go to Settings>Event>Video Analysis>Motion Detection, check "Enable".
- 2) Click "Edit" and the image will be divided into 16 columns and 12 rows of squares. Click a square and drag an area from it, then the area will turn purple and is the motion detection area. A camera can support maximum 4 areas.
- 3) Drag the slide bar to adjust Sensitivity.
- 4) Click "Edit". On the popup page, check durations and set start time and end time.
- 5) Click "Copy" to copy the defined motion detection time to a certain day or the whole week.
- 6) Select "Linkage Type". It is the alarm output method when an alarm is detected in the defined area.

4.2.2 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, or click "Clear" to clear setting. Save to make settings effective.

4.2.3 Disable Function

To disable this function, uncheck the checkbox Enable.

4.3 Tempering Alarm

Go to Settings>Event>Video Analysis>Tempering Alarm. Please refer to 4.2 Motion

Detection.

14

Motion Detection	Tempering Alarm
------------------	-----------------

2015-10-21 17:12:10		v	
	Area Setting	Stop C	lear
	Sensitivity		= [1]
	Duration	Edit	
	Linkage Type(Normal L	inkage)	
	Acoustic Alarm		
	Report to		
	Management System		
	Recording Linkage		
	Text Overlay		
	Snapshot		
	Email Notice		
	Linkage Type(Other Lin	kage)	
	Alarm Output	Alarm Output1	
		Save	

Picture 4-4 Shield Area Alarm

4.4 Alarm Linkage

Alarm Linkage is the system reaction after an alarm signal is received. It is to raise watch man's attention to handle the event.

- The alarm signal comes from Motion Detection (details in Chapter 4.2) or Alarm Input Device (such as smoke detector) in the surveillance area.
- Alarm Linkage reaction includes Alarm Text Overlay, Snapshot or triggering alarm output device (such as alarm bell). Explanations are as follows:
- **Report to Management System**: when alarm is triggered, report to the central surveillance system.

Text Overlay: when alarm is triggered, display alarm text on screen.

Acoustic Alarm: when alarm is triggered, make a warning sound.

Recording Linkage: when alarm is triggered, start to record video automatically.

Snapshot: when alarm is triggered, take a snapshot of the alarm event.

Alarm Output: when alarm is triggered, link to the alarm output device.

4.4.1 Motion Detection Alarm Linkage

- Enable Motion Detection, and set the detection area and sensitivity. Please refer to Chapter 4.2 Motion Detection for details.
- Check the Linkage Type for motion detection. For example, if user checks Snapshot, when alarm is triggered, the system will take a snapshot. In Settings>Storage>Snapshot interface, user can set picture format, resolution, interval and quantity.

4.4.2 Tempering Alarm Linkage

- 1) Enable Tempering Alarm, and set the area and sensitivity. The method is the same as that of Motion Detection.
- 2) Check Linkage Type.
- 3) Click "Save" to finish setting.

4.4.3 Alarm Input Linkage

The camera supports on/off alarming device.

Alarm Input	
Enable	
Parallel Port Extension	0 🔹 📀
Alarm Input ID	1
Alarm Name	Alarm1
Alarm Type	Always Enabled
Duration	Edit
Linkage Method(Common Linkag	e)
Report to Managament System	
Text Overlay	
Acoustic Alarm	
Recording Linkage	
Snapshot	
Email Notification	
Linkage Method(Other Linkage)	
Alarm Output	Alarm Output1
	Save

Picture 4-5 Alarm Input

- Make sure the alarm input device is always enabled or disabled, and that it is rightly connected to the alarm input port of camera.
- 2) Go to **Settings>Event>Alarm Input**, and select an alarm input ID from the dropdown list (in accordance with the alarm input port).
- 3) Input alarm name, and select "Always Enabled" or "Always Disabled" from the dropdown list of alarm type.
- Click "Edit" and set durations at the popup interface. Check durations and set "Start Time" and "End Time". Check the week day(s) to copy the setting to the day(s).
- 5) Check "Linkage Method".
- 6) Click "Save" to finish setting.

4.4.4 Abnormality Linkage

It is triggered when something abnormal happens. Abnormality includes Disk Full, Disk Error and Internet Disconnected.

Abnormaility Linkage	
Enable	
Abnormaility Type	Disk Full
Linkage Method(Common Linkag	e)
Report to Managament System	
Text Overlay	
Acoustic Alarm	
Email Notification	
Linkage Method(Other Linkage)	
Alarm Output	Alarm Output1
	Save

Picture 4-6 Abnormality Linkage

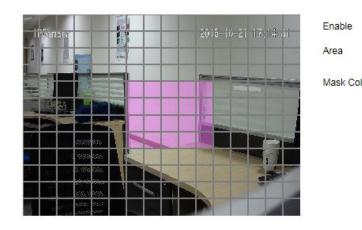
- 1) Select Abnormality Type from the dropdown list.
- 2) Check "Linkage Method".
- 3) Click "Save".

4.5 Privacy Mask

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

17

Encoding Format Encoding Clipping ROI Privacy Mask



	V	
	Stop	Clear
lor	Black	
	Save	

Picture 4-7 Privacy Mask

4.5.1 Set Area

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

- 1) Go to Settings>Camera>Video >Privacy Mask, and check "Enable".
- Click "Edit", and the image is divided into 16 columns and 12 rows of small squares. Click any square and drag an area from this square, then this area is the privacy mask area, which is in purple red.
- 3) Select Mask Color from the drop-down list.
- 4) Click "Save" to make settings effective.

4.5.2 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, or click "Clear" directly. Click "Save" to make settings effective.

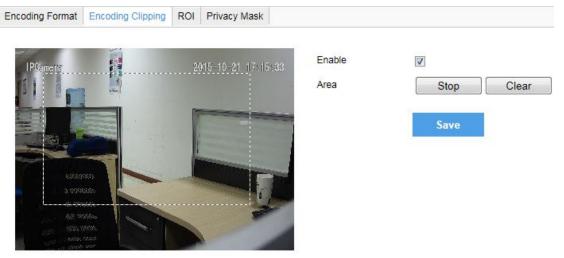
4.5.3 Disable Function

To disable this function, uncheck MEnable.

4.6 Encoding Clipping

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.

18



Picture 4-8 Encoding Clipping

4.6.1 Set Area

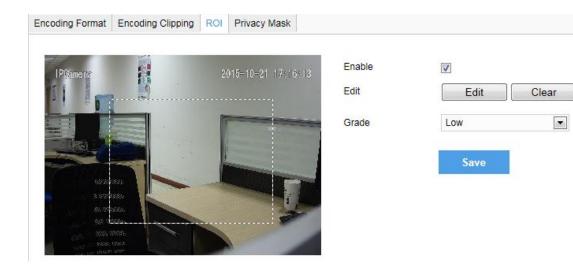
Go to **Settings>Camera>Video >Encoding Clipping**, and check "**Enable**". Click "**Edit**", and drag an area as the clipping area. Click "**Save**" to make settings effective.

4.6.2 Clear Area

Click "Clear" to clear edition and reset area.

4.7 ROI

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



Picture 4-9 ROI

4.7.1 Set Area

Go to **Settings>Camera>Video >ROI**, and check "**Enable**". Click "**Edit**", and drag an area as the clipping area. Select encoding grade from the dropdown list. Click "**Save**" to make settings effective.

4.7.2 Clear Area

Click "Clear" to clear edition and reset area.

() Note: When ROI Encode is enabled, if user modifies image resolution or aspect ratio (standard

screen/widescreen), the device will quit ROI Encode automatically.

4.8 SDI Output

For cameras with HD-SDI output function, when the resolution is 1080P, frame rate supports 25 fps, 30 fps, 50 fps and 60 fps; when the resolution is 1080i, frame rate supports 50 fps and 60 fps; when the resolution is 720P, frame rate supports 50 fps and 60 fps. Go to **Settings>Camera>Video>Encoding Format** and set.

Encoding Format	Encoding Clipping	ROI	Privacy Mask		
Encoding Form	nat				
Multi-Stream	n l	Dual-S	Stream	-	Effective after reboot
Stream Type	e	Main S	Stream	•	
Resolution		1280*	720	•	
Bit Rate Typ	e	CBR		•	
Image Quali	ty	Middle	•	-	
Frame Rate		20			1~25 Upper Limit
Bit Rate Upp	per Limit	4096			64~8192 (Kbps)
Encoding Fo	ormat	H.264		•	
Encoding Co	omplexity	Low		•	
Max Key Fra	ame Interval	75			1~250
		S	ave		

Picture 4-10 Encoding Format

ONote: Settings on resolution and frame rate are also effective to SDI output.

When user wants to set resolution as 1080i, please go to **Settings>Camera>Image>Image Quality**, and select "Interlacing (same as main stream resolution)" in **Rotate and BNC** part.

Image Quality

1 2	Image Adjustment		•
	Brightness	50	
	Contrast	50	
	Saturation	50	
	Sharpness	50	
R GARREN	Exposure		4
en vierer	White Balance		4
100 100 100 100 100 100 100 100 100 100	Night Cut		
The start store	IR		
Effect parame	Image Enhancement		
	Rotate and BNC		•
	Corridor Mode	Disable	
	Mirror Mode	Disable	
	BNC Output	PAL	J

Picture 4-11 Image Quality

4.9 Snapshot

Click "**Snapshot**" to enter snapshot management interface. User can view or download snapshots in SD card.

• Note: If the Snapshot interface is disabled, please confirm the SD card is inserted and then login client again.

Operation Steps

- 1) Search snapshots: search snapshots in accordance with the duration and format from the SD card.
- 2) On the snapshot list, select searched picture and click $\frac{1}{2}$ to download

4.10 Playback

Click "**Playback**" to enter recording management interface. User can playback, clip and download recordings in SD card. (A SD card must be inserted in the camera.)

• Note: If the Playback interface is disabled, please confirm the SD card is inserted and then login client again.

• Note: User can set recording durations in Settings>Storage>Recording. Check "Enable" and click "Edit" to set durations.

Recording		
Recording Configuration		
Recording Type	Main Stream	
Code Stream Format	ES (VSIP/Onvif)	Effective after reboot.
Prerecord	30 s	
Recording Delay	20 s	
Scheduled Recording		
Enable		
Time Table	Edit	
	Save	

Picture 4-12 Recording

4.10.1 Playback

- 1) Select recording duration from the calendar.
- 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.

4.10.2 Download

Select recording duration from calendar and download recording to local PC. Download path can be configured in **Settings>Local Setting>Local Setting**.

4.11 Upgrade

4.11.1 Firmware Upgrade

Contact dealer for upgrade file.

Method 1

Go to Settings>System>System Maintenance>Upgrade, as shown in Picture 4-13.

System Maintenance	
Debest	
Reboot	
Reboot	Reboot
Auto Maintenance	
Enable	
Maintenance Cycle	Everyday 💌
Maintenance Time	00:00:00 🔤
Upgrade	
Upgrade	Upgrade
Configuration Management	
Partial Restoration	Partial Restoration All parameters restore to factory default except camera IP
	address and protocols.
Complete Restoration	Complete Restoration Restore to factory default
Configuration Export	Export Export all settings to a file.
Import Parameter	Import All parameters are imported from the file except the network,
	device name and OSD setting.
Advanced Configuration	
Advanced Configuration	Configuration
	Picture 4-13 Firmware Upgrade
2) Select loca	I 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.

• Note: Please click "Upgrade" when upgrading, and the upgrade file is usually in <*.pkg> format.

Method 2

- 1) Run IPCSearch.
- Click "Upgrade" to upgrade firmware of cameras of the same model simultaneously.

4.11.2 Web Client Upgrade

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 Web Client.

ONote: For detailed operation instructions of Web Client, please refer to the help document.

5. Settings

5.1 Network Access

3.2 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 Web Client.

5.1.1 Ethernet

Go to **Settings>Network>IP and Port>IP Address**, as shown in Picture 4-1 to configure IP address, subnet mask and default gateway.

LAN	Port		
	IP Version	IPV4	
	Mode	Static	▼
	IP Address	10.61.1.81	
	Subnet Mask	255.224.0.0	
	Default Gateway	10.62.0.254	
	Multicast Address	0.0.0.0	
	MAC Address	00-14-10-0F-41-09	
	MTU	1500	
C	ONS Server Setting		
	Automatically Obtain DNS		
	Preferred DNS Server		
	Alternate DNS Server		
		Save	

Picture 5-1 Ethernet Parameter

5.1.2 PPPoE

Go to **Settings>Network>Other Protocols>PPPoE**, as shown in Picture 5-2 to enter user name and password, and save.

DDNS PPPoE	K-SNMP	802.1X	QoS	UPnP	SMTP
Enable			1		
DHCP			0.0.0.0)	
User Name		[root		
Password		[••••		
			S	ave	

Picture 5-2 PPPoE Setting

5.2 Register to VMS

Go to **Settings>Network>Access Protocol>VSIP**, as shown in Picture 5-3 to enter VMS address and port. Save settings and reboot device.

VSIP	ONVIF	GB28181					
R	egistered \	MS					
	Enable			v			
	VMS Meth	bod		IP Address	▼		
	VMS Addr	ess (IPv4)		224.1.1.1			
	VMS Port	Number		5510		1~65535	
	Camera U	UID		000000000000000000000000000000000000000	00000000	000000000000	
	Camera P	assword		•••••	•••••	•••••	
	Send NAT	Probe Pack	ets				
V	SIP Servic	e					
	Auto Netw	orking					
				Save			

Picture 5-3 Register to VMS

5.3 BNC Output

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

Go to **Settings>Camera>Image>Rotate and BNC**, select BNC output mode from the drop-down list, as shown below.

1 2	2015-10-21 17 22:30	Image Adjustment			
		Brightness		50	
	1	Contrast		50	
		Saturation		50	
		Sharpness		50	
		Exposure			1
ar status ter statu	~ ~	White Balance			
		Night Cut			
Contract and the second second		IR			
	Effect parameters	Image Enhancement			1
	Encorparametera	Rotate and BNC			
		Corridor Mode	Disable		
		Mirror Mode	Disable		
		BNC Output	PAL		

Picture 5-4 BNC Output

• Note: For cameras with HD-SDI output, when BNC is enabled, the web client will stop image output.

5.4 User Security

5.4.1 User Management

Go to Settings>System>User Security>User.

Add:

Click "Add", and enter user name and password in the popup interface. Select user type from the dropdown list, and assign operation rights to newly added user from the Authorization List. After setting, click "Confirm".

Delete:

Select user IP and click "Delete" to delete the user.

Modify:

Select user IP and click "Modify" to modify in the popup interface.

5.4.2 IP Filter

By setting IP address filtering, user can manage access limitation to the web client.

White List includes IP addresses able to access to the client, while Black List includes IP addresses unable to access to the client.

Enable IP Filter:

Select filter method from the dropdown list according to request, or select "Disable" to disable IP filter.

Add Black/White List:

After select filter method, click "Add" and input IP address in the popup interface, and click "Confirm".

Modify Black/White List:

Select the IP address from the list and click "Modify" to modify the IP address in the popup interface, and click "Confirm".

Delete Black/White List:

Select the IP address from the list and click "Delete" to delete the IP address. Click "Delete All" to clear all the IP addresses.

5.5 Text Overlay

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

1) Go to **Settings>Camera>OSD**, as shown in Picture 5-5.

SD							
Content							
🔽 Time 🔽 Lable	🔽 Alarm 🔽 PTZ	🔽 OSD1	▼ OSD2	☑ OSD3	▼ OSD4	☑ OSD5	🔽 OSD6
				0.0	45 00	04.40	22.04
IPCamera Alarm:				20	15-08-	-24 13	:38:01
	OSD5						
			OSD3				OSD1
OSD6	0SD4				050	02	
Load Advance	ad Save						

Picture 5-5 OSD

- 2) Check the options and preview the result in the window. For example, if user checks "**Time**", time will be displayed in the window.
- 3) Edit positions: drag the items in the window with mouse to change their positions.

- Edit OSD texts: for example, if user checks OSD1, double click OSD1 textbox and input characters in the popup interface. Click "OK".
- 5) Click "Save" to save OSD setting.
- 6) Click "Load" to load default font or China GB font.
- 7) Click "Advanced" to set "Format", "Font" and "Margin".

Format	Font	
Time Format: YYYY-MM-DD 💌	Type:	SimHei 💌
🗖 Display Time in 2 Lines	Size:	Large 💌
Alarm in front of tag	Color:	While 💌
		Custom
Margin		
Horizontal: 1		
Vertical: 1		
	07	- Court
	OK	Cancel

Picture 5-6 Advanced Setting of OSD

5.6 Multi-stream

Camera supports multiple streams encoding and decoding. Multi-stream means the same video source is encoded into different streams of videos with different resolutions. User can select proper resolution to view or record according to the network bandwidth.

Note: Different camera models may have different numbers of streams.

Operation steps:

- 1) Go to Settings>System>System Maintenance; click "Configuration" under "Advanced Configuration", and input password;
- 2) Select working mode from the dropdown list;

29

Advanced Configuration			
Smooth Transmission	Close	 Yes (Will occupy system resources) 	^
Smooth Sending Bandwidth Limit			
0 0~16384 (Kbps) (When c	ode rate exceeds this	value, subject to actural bandwidth)	
Function Switch			
AEC supported	Close	 Support (System will to down) 	
OSD Active Content	Close	Enable	
Stream extension head	Close	enable	
Working Mode			
Mode selection	60 frames model 60 frames model	Restart to take effect 🧿	E
Audio Noise Reduction	Four flow patterns		
Collect Audio Stream	Close 💌	Yes (Will occupy system resources)	
Decode Audio Stream	Close 💌	Yes (Will occupy system resources)	-
		Save Close	

Picture 5-7 Advanced Configuration

- 3) Click "Save" and reboot camera to make setting take effect. After reboot, re-login;
- 4) Go to Settings>Camera>Video>Encoding Format, as shown in Picture 5-8. In Multi-stream option, select Single Stream, Dual-stream, Triple-stream or Quad-stream from the dropdown list, and the selection takes effect after reboot. After enable, user can set parameters below the option accordingly.

Encoding Format	Encoding Clipping	ROI	Privacy Mask		
Encoding Form	nat				
Multi-Stream		Dual-Stream		▼	Effective after reboot
Stream Type	• [Main Stream		•	
Resolution	[1280*720		•	
Bit Rate Typ	e	CBR		▼	
Image Qualit	ty	Middle			
Frame Rate		20			1~25 Upper Limit
Bit Rate Upper Limit		4096			64~8192 (Kbps)
Encoding Format		H.264			
Encoding Complexity		Low			
Max Key Fra	me Interval	75			1~250
		S	ave		

Picture 5-8 Stream Type

6. Appendix: Glossary of Terms

Term	Explanation		
720P	Resolution of 1280*720 pixels		
CIF	Resolution of 352*288 pixels		
QCIF	Resolution of 176*144 pixels		
ROI	Region Of Interest		
Key Frame Interval	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.		
Quantization	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.		