KEDACOM

User Manual for HD IP Camera of IPC Series

V2R2 (October, 2016)

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Target Audience

Administrators and Operators of Video Surveillance Products

Document Version

V2R2

Applicable Models

IPC113, IPC123, IPC143 series

IPC2251, IPC2451 series

IPC2152, IPC2252, IPC2452 series

IPC2110, IPC2210 series

IPC2131, IPC2132, IPC2231, IPC2431 series

IPC2111, IPC2211, IPC2411 series

Related Document

Quick Start Guide

Convention

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

UL Safety Instruction

CAUTION: Risk of Explosion if Battery is replaced by an Incorrect Type. Dispose of Used Batteries According to the Instructions.

Suitable for Mounting on Concrete or Other Non-Combustible Surface Only.

This product is intended to be supplied by a Listed Power Unit, output rated minimum 24Vac, 50/60HZ, 0.5A or 12Vdc, 0.8A or POE,0.5A,non-energy hazards and Tma=60Deg.C. complied with LPS.

a. the function of the ITE being investigated to IEC 60950-1 is considered not likely to require connection to an Ethernet network with outside plant routing, including campus environment; and

b. the installation instructions clearly state that the ITE is to be connected only to PoE networks without routing to the outside plant.

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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 / IPC123 / IPC143 series



Picture 2-2 IPC2251 series



Picture 2-3 IPC2451 series





Picture 2-4 IPC2152 / IPC2252 / IPC2452 series

ONote: Different sub-models may have some difference in their appearance. Device appearance is subject to the actual model.



Picture 2-5 IPC2110 / IPC2210 series



Picture 2-6 IPC2232 / IPC2431 series



Picture 2-7 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
- 👃 DirectX: 9.0c

We will take IE7.0 as an example.

3.2 Initial Configuration

After installation and wiring, electrify the camera.

3.2.1 Modify Parameter

1) Get IPCSearch from the attached CD.

earch	BroadSet	Modify Params	Reboot	gin Password I	Reset Batch pro	cessing				language	Setting Column	Cle
). II	p	Alias	Device Type	Mask	Gateway	MAC	Version	Serial nu	Runtime			
1	0.255.252.71	Camera	Camera	255.255.252.0	0.0.0	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.

TIVE Rebo	ot Factory Reset	Upgrade P	assword Modific	ation Load config	Reset the IP bl	ack and wh
ease select o	fevice(s) to be pro	cessed				
evice type	Camera	•	Refrest	version informati	on	
Alias	Devic	е Туре	Operation	Status	IP	1
						-
						-
e [Þ
Select all						
isername:	admin		1	lew Password:		
tail:			1	lew Password:		
icili.						

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.

vice:	Camera	1						
AC:	08-0D-	1D-2D	-6	9-31				
pe:	Camera							
Device Addres	s							
O Auto-obta	in devic	e add	re	ss(0)	per	DH	СР)
Custom d	evice ad	idress	(0	lose	DH	CP)		
IP Address:	Γ	ine fort	<u>°</u> 0	33	9709		8	247
Netmask:	[255	÷	224		0	÷	0
Gateway:	ſ	10	22	62		0		254
Modify add Enable LD IP Addre	is r	regist		33			2	248
🕐 Domain		platfor	m	com				
Port:	[5510						
						be r	abr	

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

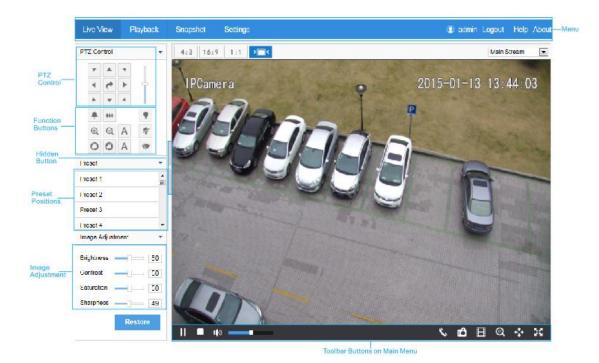
Picture 3-4 Web Client Login Interface

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	<u> </u>
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.



Picture 3-6 Web Client Interface

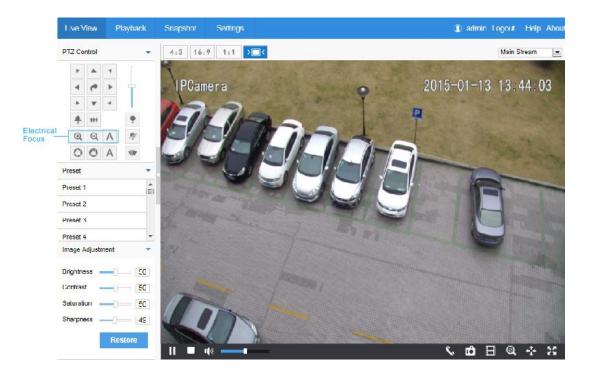
3.2.3 Focus

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



Picture 3-7 Focus

O Note:

Some models adopts electrical focusing lens, which may cause unclear focus at some special scenes. When confronted with such problem, please focus again or focus manually.

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

Play/Pause

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.



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 Setting**.

(i) 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.

al Setting				
Play				
Protocol	C TCP	UDP		
Performance	Real-time	Balanced	Smooth	
Enable Image Noise Reduction	V			
Noise Reduction Level		1		
Enable Vertical Synchronization	n 📃 (Enabling this fu	inction will increase th	e CPU Utilization.)	
Display Status Info				
Recording				
Packet size	© 256M	512M	💮 1G	
Local Recording Save Path	C:\IPCWeb\Rec			View
Clipping Save Path	C:\IPCWeb\Vide	eo\PlayBackCut		View
Download Save Path	C:\IPCWeb\Rec	Playback		View
Snapshot				
Local Snapshot Save Path	C:\IPCWeb\Pic\	Preview		View
Camera Snapshot Save Path	C:\IPCWeb\Pic\	PuGrab		View
Snapshot Save Path	C:\IPCWeb\Pic\	PlayBack		View
Download Plug-in				
Download Plug-in	Download Plug-	in		
	Save			
D ia (c)				
	ire 4-2 Snapsho	or setting		
EPTZ 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.

PTZ 💀

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.

Full Screen 🔀

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.

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.

(i) 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 selecting 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	1	to start the wiper. Click	1	aga	in to stop the wiper. The
wiper will stop at	utoma	atically after 10 brushes. C	Click	1	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.

Ethemise Gathering Audio Burge Enable Image: I	don Delection	Tampering	Guard Line	Defocus	Scene Change	En	ter Gu	ard Area	Ex	t Gus	ird Area	Object Left	
Area Betting	ject Removel	Gathering	Audio Surge										
I Area Betting Ent Image Type Normel Linkage Recording Linkage Recording Linkage Recording Linkage Ted Overlay Bispandt Linkage Type (Other Linkage)	Enable												
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Bensitivity	-				1000								
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Linkage Type(Normal Linkage)	Duration	6	Frit										
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Tue Wed Tue Pn Sat Sat S	Land H		8 10 12 1	4 10 18	20 22 24								
Wed Tu Sat													
Fri Sat Sat Sun													
Sat Sun Linkage Type(Normal Linkage) Acoustic Alarm C Report to C Management System Recording Linkage C Text Overlay C Snapshot C Email Notice C	Thu												
Sun Acoustic Alarm Ac													
Linkage Type(Normal Linkage) Acoustic Alarm Report to Management System Recording Linkage Text Overlay Snapshot Email Notice Linkage Type(Other Linkage)	1.100												
Acoustic Alema I Report to I Management Bystem I Recording Linkage I Text Overlay I Bnapshot I Email Notice I	Sun												
Acoustic Alema I Report to I Management Bystem I Recording Linkage I Text Overlay I Bnapshot I Email Notice I													
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Management System Recording Linkage C Text Overlay Snapshot Email Notice Linkage Type(Other Linkage)	Report to	5	E										
Recording Unkage Text Overlay Snepshot Text Notice Unkage Type(Other Linkage)													
Text Overlay Snapshot Email Notice Linkage Type(Other Linkage)													
Snapshot Compared and Compared													
Email Notice													
Linkage Type(Other Linkage)	Snapshot	E	3										
	Email Notic	e E	3										
	Linkage Type	Other Links	je)										
				-									

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 > Intelligent Function > 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.
- 7) Click "Save".

4.2.2 Clear Area

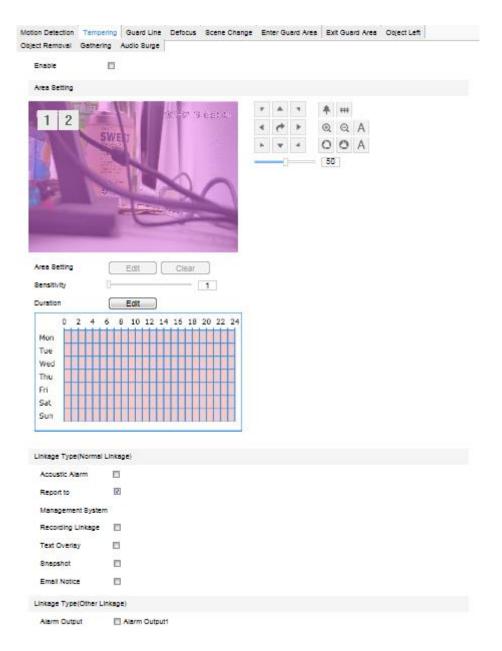
Start from an undefined square and draw an area that contains the defined area, or click the defined squares one by one to clear setting, or click "**Clear**" to clear setting. Save to make settings effective.

4.2.3 Disable Function

To disable this function, uncheck the checkbox VEnable.

4.3 Tampering Alarm

Go to **Settings>Event>Intelligent Function>Tampering Alarm**. Please refer to **4.2 Motion Detection**.



Picture 4-4 Tampering Alarm

4.4 *Guard Line

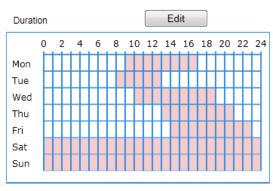
Enable this function in the interface to detect specified area at real time. Once any object enters the guard line, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Guard Line**.

		Guard Line Audio Surge		Scene Change	Enter	r Gui	ard Area	Ex	t Gue	ird Area	Object Left	
inable	Gautering 🗹											
inable	1921											
ves Setting												
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Area Setting	2		dit) (Clear								
Sensitivity			-0-	50								
Duration		E E	idit)									
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Wed												
Thu												
Fri												
Sat Sun												
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inkage Type	(Normal Link	age)										
Acoustic Ala	arma											
Report to M	anagement &	Bystem 🕅										
Recording I	Jnkage											
	10.25											
250650670	M											
Text Overla Snapshot	Y											

Picture 4-5 Guard Line

Setting steps:

- 1) Check "Enable";
- Select a number from the dropdown list of Guard Line and once one number only. After saving it, user can set another one and max 4 guard lines are allowed;
- Select a direction from the dropdown list of Guard Line Direction, "A→", "B→" or "A→&&B→". Take "A→" as an example, when selecting this direction, only moving objects from A to B will be detected and trigger an alarm;
- Select a scene from the dropdown list of Scene Mode, "Horizontal scene" or "Vertical scene";
- 5) Target Filter: to set target area. Click "Edit" and drag the mouse in the scene to draw a rectangle. Click "Stop" after finishing and drag the slide bar of "Max and Min Target Ratio" (1% by default). Moving objects exceeding max and less than min will not trigger an alarm when they pass the guard line(s);
- 6) Area Setting: to set guard lines. Click "Edit" and drag the mouse in the scene to draw a guard line. User can click its starting point or end point to adjust its length and angle, and drag the slide bar of "Sensitivity" to set the guide line's sensitivity to moving objects;
- 7) **Duration**: Click "Edit" and set durations in the popup window of "**Edit Time**". After finishing, the durations in the timetable below will turn white.
- 8) Check "Linkage Type" and "Save" to make settings take effect.



Linkage Method/Common Linkage	2)
Linkage Method(Common Linkage	3)
Acoustic Alarm	
Report to Managament System	
Recording Linkage	
Text Overlay	
Snapshot	
Email Notification	
Linkage Method(Other Linkage)	
Alarm Output	Alarm Output1
	Save

Picture 4-6 Guard line duration

4.5 *Defocus

Enable this function to detect if the image is clear and to trigger some alarm linkages. Go to **Settings > Event > Intelligent Function > Defocus**.

Мо	tion Detection	Tampering	Guard Line	Defocus	Scene Change	Enter Guard Area	Exit Guard Area	Object Left
Ob	ject Removal	Gathering	Audio Surge					
	Enable							
	Sensitivity				1			
	Linkage Type	(Normal Link	age)					
	Report to M	anagement	System 📝					
	Acoustic Ala	arm						
	Text Overla	у						
	Email Notice	e						
	Linkage Type	(Other Linka	ge)					
	Alarm Outpo	ut	Alar	m Output1				
			5	ave				

Picture 4-7 Defocus

Setting steps:

- 1) Check "Enable".
- 2) Drag the slide bar of "**Sensitivity**". The larger the number is, the more sensitive the image is.
- 3) Check Linkage Type and click "Save".

4.6 *Scene Change

Enable this function to detect if the image scene is changed and to trigger some alarm linkages. Go to **Settings > Event > Intelligent Function > Scene Change.**

Motion Detection	Tampering	Guard Line	Defocus	Scene Change	Enter Guard Area	Exit Guard Area	Object Left
Object Removal	Gathering	Audio Surge					
Enable							
Sensitivity				1			
Duration		E	Edit				
0	246	8 10 12 1	4 16 18	20 22 24			
Mon Tue							
Wed							
Thu							
Fri							
Sat							
Sun							
Linkara Tira	///						
Linkage Type							
Report to M	lanagement :	System 🔽					
Acoustic Al	arm						
Text Overla	у						
Recording I	Linkage						
Snapshot							
Email Notic	e						
Linkage Type	e(Other Linka	ige)					
Alarm Outp	ut	Ala	rm Output1				

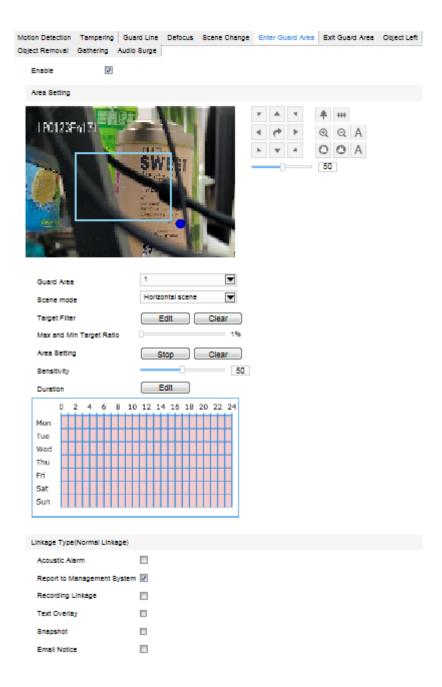
Picture 4-8 Scene Change

Setting steps:

- 1) Check "Enable".
- 2) Drag the slide bar of "**Sensitivity**" to adjust scene change sensitivity. The larger the number is, the more sensitive the scene change detection is.
- 3) **Duration**: Click "**Edit**" and set durations in the popup window of "**Edit Time**". After finishing, the durations in the timetable below will turn white.
- 4) Check Linkage Type and click "Save".

4.7 *Enter Guard Area

Enable this function and edit guard area. Once any object enters the area, an alarm will be triggered. Go to Settings > Event > Intelligent Function > Enter Guard Area.



Picture 4-9 Enter Guard Area

Setting steps:

- 1) Check "Enable";
- Select a number from the dropdown list of Guard Line and once one number only. After saving it, user can set another one and max 4 guard lines are allowed;
- Select a scene from the dropdown list of Scene Mode, "Horizontal scene" or "Vertical scene";
- 4) Target Filter: to set target area. Refer to that of Guard Line;
- 5) Area Setting: to set guard lines. Click "Edit" and click mouse to draw a closed area made up of 3 to 6 points in the scene. Right click or click the starting point or end

point to close the area, and drag the slide bar of "**Sensitivity**" to set the sensitivity of the guard area to moving objects;

- 6) Duration: Refer to that of Guard Line;
- 7) Check "Linkage Type" and "Save" to make settings take effect.

4.8 *Exit Guard Area

Enable this function and edit guard area. Once any moving object leaves the area, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Exit Guard Area**. Setting steps can be referred to in **Enter Guard Area**.

4.9 *Object Left

Enable this function and edit guard area. When any object is left in the area, an alarm will be triggered. Setting steps can be referred to in Trespass.

4.10 *Object Removal

Enable this function and edit guard area. When any object is taken from the area, an alarm will be triggered. Go to **Settings** > **Event** > **Intelligent Function** > **Object Removal**. Setting steps can be referred to in **Enter Guard Area**.

4.11 *Gathering

Enable this function and edit guard area. When moving object exceeds the set sensitivity, an alarm will be triggered. If setting the sensitivity as 50%, when 50% or more of the area is covered by moving objects, an alarm will be triggered. Go to **Settings > Event > Intelligent Function > Gathering**. Setting steps can be referred to in **Enter Guard Area**.

4.12 *Audio Surge

Enable this function and when the voice surges, an alarm will be triggered. The higher the **Voice Intensity Threshold** is, the more sensitive the system is when **Voice Mutation** occurs. Go to **Settings** > **Event** > **Intelligent Function** > **Audio Surge**. Setting steps can be referred to in **Scene Change**.

Motion Detection		Guard Line	Defocus	Scene Change	Enter Guard Area	Exit Guard Area	Object Left
Object Removal	Gathering Au	udio Surge					
Audio Input A	bnormality						
Enable		1					
Voice Mutatio	n						
Voice Inten	sity Threshold			50			
Duration		E	dit				
Mon Tue Wed Thu Fri Sat Sun I			4 16 18 4 1 1	20 22 24			
Linkage Type	(Normal Linkage	e)					
Acoustic Ala	arm						
Report to M	lanagement Sys	tem 🗵					
Recording L	Linkage						
Text Overla	у						
Snapshot							
Email Notic	e						
Linkage Type	(Other Linkage)						
Alarm Outp	ut	Alam	n Output1				

Picture 4-10 Audio Surge

4.13 *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 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.

4.13.1 Motion Detection Alarm Linkage

- Enable Motion Detection, and set the detection area and sensitivity. Please refer to 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.

4.13.2 Tampering Alarm Linkage

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

4.13.3 Alarm Input Linkage

The camera supports on/off alarming device.

Ala	irm Input			
	Enable)		
	Paralle	Port Extension	0	• 🧿
	Alarm	Input ID	1	
	Alarm	Name	Alarm1	
	Alarm	Туре	Always Enabled	•
	Duratio	on	Edit	
	Linkage	Method(Common Linkage	e)	
	Report	to Managament System		
	Text O	verlay		
	Acoust	tic Alarm		
	Record	ding Linkage		
	Snaps	hot		
	Email I	Notification		
	Linkage	Method(Other Linkage)		
	Alarm	Output	Alarm Output1	
			Save	

Picture 4-11 Alarm Input

- 1) 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.
- 4) 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 Type".
- 6) Click "Save".

4.13.4 Abnormality Linkage

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

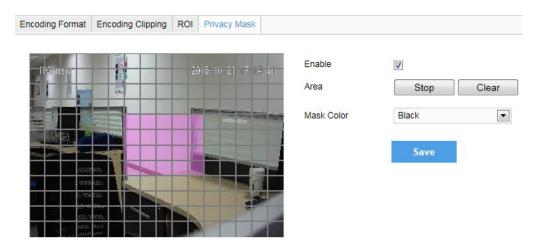
Abnormaility Linkage		
Enable		
Abnormaility Type	Disk Full	•
Linkage Method(Common Linkag	e)	
Report to Managament System		
Text Overlay		
Acoustic Alarm		
Email Notification		
Linkage Method(Other Linkage)		
Alarm Output	Alarm Output1	
	Save	

Picture 4-12 Abnormality Linkage

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

4.14 Privacy Mask

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



Picture 4-13 Privacy Mask

4.14.1 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.

4.14.2 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.

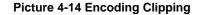
4.14.3 Disable Function

To disable this function, uncheck **Enable**.

4.15 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.

And	1918amer? 2015=10-21 17115383	Encoding Format	Encoding Clipping	ROI P	Privacy Mask	
Area	Area	IP@amerg		2015	-10-21 17:15:33	Enable
						Area
				F		
	0.02000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.0000 0.0000 0.0000 0.0000 0.0000 0.0000 0					
			A DECEMBER OF THE OWNER OWNE	_		



4.15.1 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.

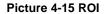
4.15.2 Clear Area

Click "Clear" to clear edition and reset area.

4.16 ROI

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

Encoding Format	Encoding Clipping	ROI	Privacy Mask			
		2	015-10-21 17:16:13	Enable		
11				Edit	Edit	Clear
		li		Grade	Low	-
		-			Save	
1018		1			Save	
999 K 98 A3	star In					
188 - 1993 1880 - 1995						



4.16.1 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.

4.16.2 Clear Area

Click "Clear" to clear edition and reset area.

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

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

4.17 *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 [Dual-S	Stream	•	Effective after reboot
Stream Type	e	Main S	Stream	•	
Resolution		1280*	720	•]
Bit Rate Typ	e	CBR		•]
Image Quali	ty	Middle)	Ŧ	
Frame Rate		20			1~25 Upper Limit
Bit Rate Upp	oer 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 4-16 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.

nage Quality				
1 2 28 2015-10-21 17:17:45	Image Adjustment			•
	Brightness	0	50	
	Contrast	0	50	
	Saturation	0	50	
	Sharpness		50	
A GARNES	Exposure			4
AL VALLES	White Balance			4
	Night Cut			4
	IR			4
Effect parameters	Image Enhancemen	t	5	4
	Rotate and BNC			٠
	Corridor Mode	Disable	•	
	Mirror Mode	Disable	•	
	BNC Output	PAL [•	

Picture 4-17 Image Quality

4.18 *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 \pm to download

4.19 *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.)

(i) 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 4-18 Recording

4.19.1 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.

4.19.2 Download

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

4.20 Upgrade

4.20.1 Firmware Upgrade

Contact dealer for upgrade file.

Method 1

1) Go to Settings>System>System Maintenance>Upgrade, as shown below.

System Maintenance	
Reboot	
Reboot	Reboot
Auto Maintenance	
Enable	
Maintenance Cycle	Everyday 💌
Maintenance Time	00:00:00 Save
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 4-19 Firmware 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.

ONote: 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.

4.20.2 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	NS 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	
E	nable		l	1			
D	HCP		0.0.0.0				
U	ser Name		root				
P	assword			••••			
						_	
				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	
Registered VMS	
Enable	
VMS Method	IP Address
VMS Address (IPv4)	224.1.1.1
VMS Port Number	5510 1~65535
Camera UUID	000000000000000000000000000000000000000
Camera Password	••••••
Send NAT Probe Packets	
VSIP Service	
Auto Networking	
	Save

Picture 5-3 Register to VMS

5.3 Car Plate Mode

5.3.1 * Car Plate Mode

Some models support car plate mode. After enabling car plate mode, the camera will adjust shutter and gain automatically to ensure that the plates of the passing cars are clear and recognizable.

Setting steps:

 Go to Settings > System > System Maintenance > Advanced Configuration and click "Configuration". In the popup window, input user name and password to enter the interface of "Advanced Configuration". Enable "Dynamic Plug-in" and click "Save".

Advanced User			
User Name	admin		
Password	•••••		
		Confirm	Cancel
Advanced Configuration			
Network Adaptation			^
Smooth Transmission	Close	Yes (Will occupy system resources)	
Smooth Sending Bandwidth Limi		his value, subject to actural bandwidth)	
Encoding bit rate mode	Video stream ne	twork b	
Function Switch			
AEC supported	Close	Support (System will to down)	=
Audio Features	Close	 Support (Restart to take effect) 	
Dynamic Plug-in	Close	a Enable	
Stream extension head	Close	Enable	
Dual IP	Close	 Enable (Restart to take effect) 	
Working Mode			-
		Save	Close

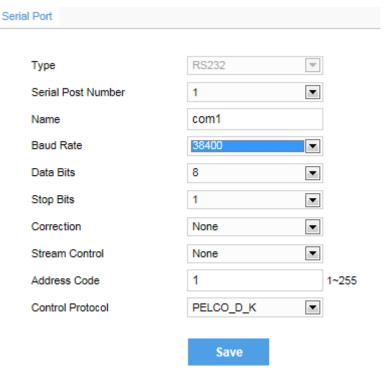
Picture 5-4 Advanced Configuration

 Go to Settings > System > System Maintenance > Dynamic Plug-in. Select "car plate LED" from the dropdown list of Dynamic content Plug-in and check "Enable". Click "Save".

Sy	stem Maintenance	Dynamic Plug-in	Network test	
	Dynamic content F	Plug-in1		
	Dynamic conten	t Plug-in	r plate LED 💌	Test
	Enable	V		
			Save	

Picture 5-5 Dynamic Plug-in

3) Go to Settings > System > Serial Port. Select "38400" from the list of Baud Rate and click "Save".



Picture 5-6 Baud Rate

4) Go to Settings > Camera > Image and set parameters in the Supplementary Lamp area. Mode options include Auto/ Manual/ Disable. Drag the slide bar of Brightness of the supplementary lamp and Threshold of triggering supplementary lamp. When the mode is auto, dragging the slide bar of Threshold will not affect supplementary lamp brightness.

Set supplementary lamp brightness: capturing car plate numbers usually needs help of supplementary lamp to ensure image brightness, especially when capturing at night. Default values of **Brightness** and **Threshold** are recommended.

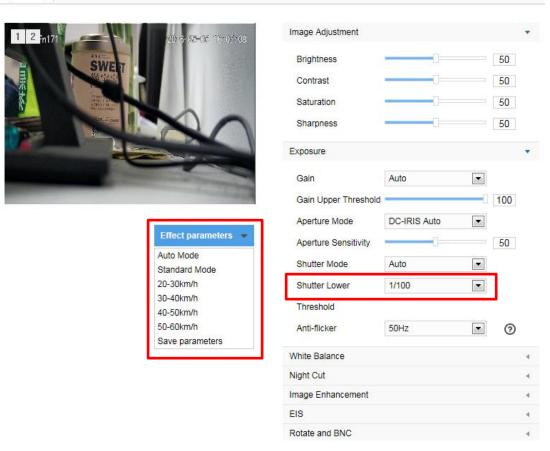
Image Quality		
1 2 m171 2016-92+08 13145134	Image Adjustment	•
SWEET	Brightness	50
	Contrast	50
	Saturation	50
	Sharpness	50
	Exposure	14
	White Balance	4
	Night Cut	
	Image Enhancement	4
Effect parameters	EIS	
Lifect parameters	Rotate and BNC	4
	Supplementary Lamp	
	Mode Auto	
	Brightness	32
	Threshold	22

Picture 5-7 Supplementary Lamp setting

5.3.2 *Car Speed

Some models support car speed mode. Set car speed range: select according to the actual car speed range in the scene. Suggest using default values of **Shutter Lower Threshold** and **Gain Upper Threshold**. Adjust parameters when the image is too dim or too bright.

Image Quality



Picture 5-8 Enable car speed mode

5.4 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.

Image Quality				
1 2 g 2015-10-21 17 22:30	Image Adjustment			*
	Brightness	0	50	
	Contrast		50	
	Saturation		50	
	Sharpness	0	50	
	Exposure			4
in a statute	White Balance			4
	Night Cut			÷.
	IR			÷.
Effect parameters	Image Enhancement			4
	Rotate and BNC			
	Corridor Mode	Disable		
	Mirror Mode	Disable		
	BNC Output	PAL		

Picture 5-9 BNC Output

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

5.5 User Security

5.5.1 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.

5.5.2 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.

5.6 Text Overlay

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

1) Go to Settings>Camera>OSD, as shown below.

DSD							
Content							
🗹 Time 🔽 Lab	le 🔽 Álarm 🔽 D	TZ 🔽 OSD1	🔽 0SD2	🔽 0SD3	▼ OSD4	▼ OSD5	▼ OSD6
IPCamer	а			20	15-08-	-24 13	: 38 : 01
Alarm:							
	OSD	5					
		-	OSD3				OSD1
	000	4			050		
OSD6	OSD	4			001		
Load Adv	anced Save						

Picture 5-10 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		
	OK	Cancel

Picture 5-11 Advanced Setting of OSD

5.7 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;

Advanced Configuration			
Smooth Transmission	Close	 Yes (Will occupy system resources) 	*
Smooth Sending Bandwidth Limit	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 5-12 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 5-13. 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.

En	coding Format	Encoding Clipping	ROI	Privacy Mask		
	Encoding Form	nat				
	Multi-Stream	1	Dual-S	Stream	•	Effective after reboot
	Stream Type	•	Main S	Stream	•	
	Resolution		1280*7	720	•	
	Bit Rate Typ	e	CBR		▼	
	Image Qualit	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 5-13 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.