Precautions:

Please read this manual carefully before installing and operating the camera.

- Please refer to the technical specs to confirm you are using a suitable power supply. Do not use power supply with higher/lower rating than specified.
- Do not attempt to disassemble the camera; in order to prevent electric shock, do not remove any screws or covers.
- There are no user-serviceable parts inside. Please contact the nearest service center if there is any technical failure.
- Avoid incorrect operation, shock vibration or heavy weight pressing which can damage the camera.
- Do not use corrosive detergent to clean the camera. If necessary, please use a soft dry cloth to wipe dirt. For tough contamination, use neutral detergent. Any cleanser for high grade furniture is applicable.
- Avoid aiming the camera directly towards extremely bright objects such as the sun, as it may permanently damage the image sensor.
- Please follow the installation instructions.
- Do not operate the camera in environments that exceeds the specified temperature, humidity or power.
- Keep away from any heat sources such as radiators, heat registers, stoves, etc.
- Do not expose the product to the direct airflow of an air conditioner.
- All pictures and examples used in the manual are for reference only.
- Please use our production under the following environmental standards:

Environmental Temperature:	- 35 ~ 60°C
Environmental Humidity:	<95% (no condensing)
Barometric Pressure:	86 ~ 106KPa

1. Product Overview

1.1 Features

1.1.1 Special Features:

● **PT Capabilities:** The camera is equipped with Pan/Tilt motors that allow movement range of 250° pan and 80° tilt.

● **Motorized Vari-Focal with auto-focus:** The camera is equipped with x4/10 optical zoom lens and features accurate auto focus algorithm.

● **Double stream:** The camera support dual stream video streaming for different requirements and applications.

● **Supported network protocols:** Support TCP/IP, PPPoE, DDNS, FTP, UPNP & Onvif

● **ROI function:** ROI (Region of interest) means that the marked ROI areas will be less compressed than other areas especially in low bitrate conditions.

● **OSD function:** On screen display of selected information.

● **All-weather outdoor design:**

➢ IP66 Protection standard

➢ TVS 3000V Protection standard

1.1.2 Function Introduction:

● **Movement proportional to zoom:** higher zoom values will automatically reduce the camera speed while on manual control.

● **Auto movement functions:**

➢ 256 presets slots.

➢ Auto scan with left/right boundaries

➢ 4 patterns

1.2 Technical Specs:

Specifications			I5PT-390IPx4/x10
Camera	Video	Effective Pixels	1080P(1920X1080)
		Electronic Shutter	1/25s ~ 1/30000s
		Day & Night	ICR
		Min. Illumination	0lux (IR ON)
	Image Enhancement	Image Settings	AWB, AGC Adjustable
			Selectable Exposure Modes
			Sharpness, Saturation, Brightness & Contrast Adjustable
		WDR Range	Digital WDR
		Noise Reduction	2D/3D-DNR
		Image Orientation	Mirror/Flip
		Motion Detection	Yes
Compression		Video Compression	H.264
		Resolution	50HZ:25fps(1920x1080) 60HZ:30fps(1920x1080)
		Bit rate	32kbps-8Mbps
		Encode Mode	VBR/CBR
		Image Quality	Six levels under VBR; Free adjustment under CBR
Housing		Iris	Auto Iris
		Water-proof	IP66
		Bracket	Wall Bracket
		Dimensions	153mm×93mm×130mm（L×W×H）
		Weight(gross)	920g
PTZ		Optical Zoom	10X
		IR Distance	50M
		Pan Rotation Range	0°~250 °
		Tilt Rotation Range	0°~60 °
		Pan Speed	0.5°~12 °/s
		Tilt Speed	0.5°~10 °/s
		Preset Position	255
Connectivity		Network	RJ45
		Power	DC Socket
Network		Remote Monitoring	IE Browsing
		User Access	Supports simultaneous monitoring for up to 4 users
		Network Protocol	TCP/IP, UDP, DHCP, RTSP, PPPoE, DDNS
		ONVIF	Yes
		Ethernet	100Mbps
Others		Power Supply	DC12V
		Work Environment	-30℃~60℃, 10%~90% Humidity

1.4 OSD Menu operation

● **Call up OSD menu**

Call Preset 95 to enter the main OSD menu; call Preset 96 to close the OSD menu or Select "Exit"

● **Confirm**

The "Left "and "Right "button is controlled by PTZ can change the required item, and the changed item is the confirmed one without further confirmation. You can directly click "Up" and "Down" button to go on your further operation. When setting the left and right boundary for scan and pattern, you can click the "Focus Far" for confirmation.

● **Cancel**

The "up" and "down" button controlled by PTZ carry out the request for Further action; meanwhile, it carries out the "Cancel" order for last operation.

2 Web Browse Operation Guide

2.1 Common Operations

Factory settings：

IP camera is a kind of network equipment, you need configure network IP address, gateway and other information reasonably, and camera with default IP address in factory, and user could change it according to their requirement.

Default IP address：192.168.0.99

Subnet mask：255.255.255.0

Gateway：192.168.0.1

WEB port：8000

Network parameters

Take the example of Windows XP operating system. Make sure the IP address in network

parameters of the user computer is in accordance with the one of the camera, they are in same segment, the IP address in the same LAN cannot be the same, otherwise, it will interfere with each other, causing the equipment couldn't operate normally.

After setting IP address, you could test whether it has been connected between the computer and the camera by using the PING order from clicking the "start"-"run" button in the bottom left corner. The format of the command: ping 192.168.0.99

If the screen shows like this:

```
pinging 192.168.0.99 with 32 bytes of data:
Reply from 192.168.0.99: bytes=32 time<1ms TTL=64
Reply from 192.168.0.99: bytes=32 time<1ms TTL=64
Reply from 192.168.0.99: bytes=32 time<1ms TTL=64
Reply from 192.168.0.99 bytes=32 time<1ms TTL=64

ping statistics for 192.168.0.99:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

As the picture shown above, it indicates that it has been successfully connected between the computer and the camera. However, if the screen shows like this:

```
pinging 192.168.0.99 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

ping statistics for 192.168.0.99
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

It indicates equipment is failure to install, you could check from the following aspects:
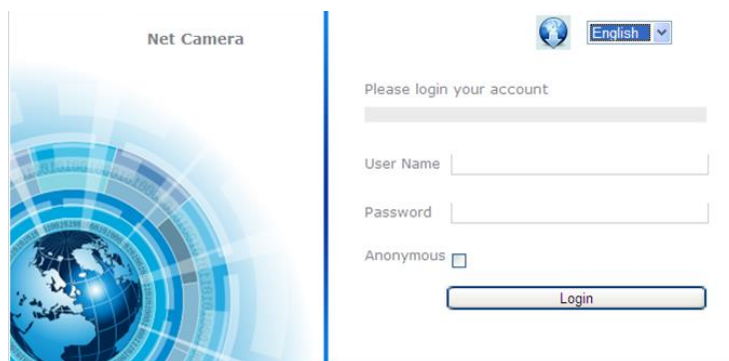
● If hardware connection is correct

- If computer TCP/IP is in the same segment as the camera

- If network forbid   ping order, please connect network administrator

2.2 Web Login

2.2.1 Login

Enter IP address (default: 192.168.0.99) to open the interface, dialog box as follows comes out:

Picture 2.2.1-1 login interface

◆ user name：Admin

◆ password：Admin

◆ Port：Default 8000

2.2.2 Download playing component

After you logged in, if the WEB browser indicates it is the first time of visiting or plug-in reminds you of the update of the new version. （See 2.2.2-1). Double-click this plug-in and it will remind you of the downloading process. Or you can double-click the icon at the top-right corner of the login interface. Double-click the downloaded WebPluginInstaller.exe and start install the playing plug-in for WEB browser, then confirm its installation as well as clicking the "Next "button until finished. You need to return to the WEB browser screen and refresh the display if you want to run this plug-in after installment, then you can watch the video.
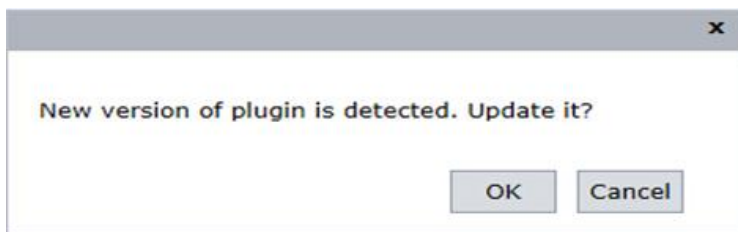
Picture 2.2.2-1   Plug-in installation
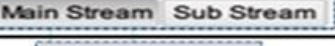
Note :
If you want to see the video through WEB browser, the plug-in must be installed. Currently this plug-in support Windows XP/2000-2014/Vista

The IP address again to the login screen after you have installed the plug-in and then input user name, code, and then click the "login "button to enter the "preview "screen. See 2.2.3-1
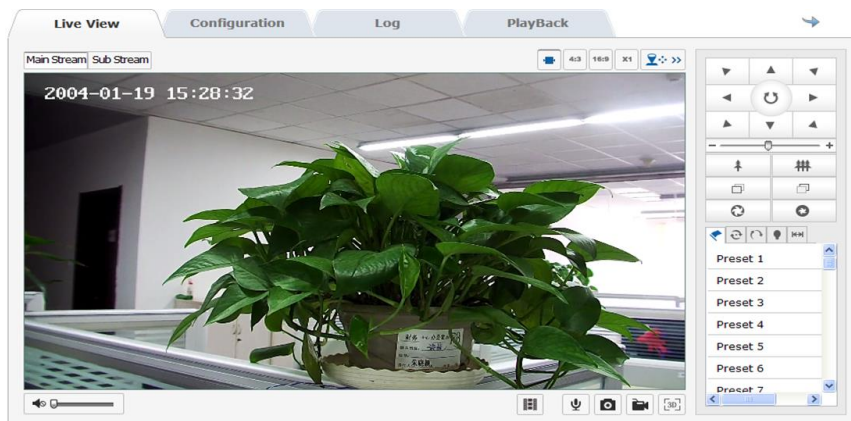
Picture 2.2.3-1 Preview screen

Icon	instruction
4:3	Preview screen 4:3 ratio
16:9	Preview screen 16:9 ratio
X1	Original preview screen size
◄■►	Self-adaptive preview screen
Main Stream Sub Stream	Choose main stream or sub stream
🔊━━○━━	Volume
🎤	Start Two-way Audio
📷	Capture
🎥	record
3D	3D positioning
⚲ ⁙ «	PTZ Control

Sheet 2.2.3-2 Preview screen information

ICON	Instruction
▼ ▲ ▼ / ◄ ↻ ► / ▲ ▼ ▲	Control the vertical and horizontal movement of the camera, and open or close the auto scan
✛ ###	ZOOM IN/OUT
▱ ▱	FOUCS
○ ●	IRIS
━━━○━━+	PTZ speed
⚑	Preset
↻	Sequence
↻	Pattern
💡	IR Setting
◄►◄	Auto scan

Sheet 2.2.3-3 PTZ control screen information

In the preview screen, you can control the preview, video recording, snapshot, intercom and the on/off of the sound. The size of the image can be adjusted according to the needs of the user to set its original size; we have "4:3""16:9"or "self-adaptation "mode.　Preview code stream can be set as "main stream" "sub stream". See 2.2.3-2

 Click "camera "can open the control screen of the camera. See 2.2.3-3

Operation methods for preset position

1. Enter the screen of setting preset position, and it will show the current preset position.

2. Setting preset position: select the number of preset position, and then operate the control panel of the camera, when the camera scene moves to the place you want to set, then click the "save "key to save this preset position.

3. Call the preset position: click "call "and the set preset position can be called.

4. Delete preset position: click "delete" can clear the information of preset position.

5. Special function preset position: this kind of preset position can be called, but it cannot be modified or deleted.

Picture 2.2.4 Sequence settings

Operation methods for pattern scanning

1. Enter the pattern scan screen, and it shows the current pattern scan path. See 2.2.3-5

2. Start recording the scanning: click start to record the pattern scan, and control the movement of the camera by the control panel.

3. Stop recording scanning: click save to save the scanning path.

4. Start and stop the pattern scan: click start to start the pattern scan, and click the stop key to stop the pattern scan.

5. Delete the pattern scan: click delete key to delete the pattern scan.
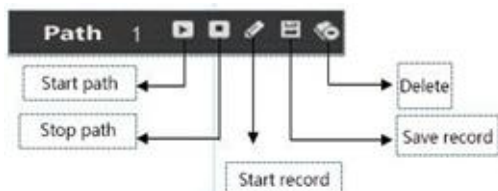
Picture 2.2.3-5 Pattern settings

Operation methods for IR LED

Enter the IR LED setting screen, user can set the power of the low beam lights as 1~10 gear, the power of high beam lights, low beam lights compensation, enable illumination, IR status setting.   See 2.2.3-6
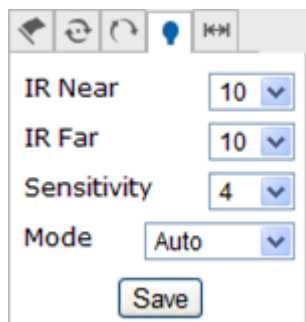
Picture 2.2.3-6 IR LED Setting Screen

Auto scanning setting

Enter the auto scan screen, user can set scan speed, left boundary, right boundary, start scanning, stop scanning. Auto scanning include 8 scanning paths.   See2.2.3-7
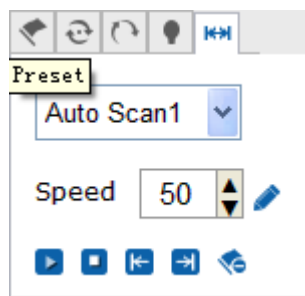
Picture 2.2.3-7 Auto scans settings

1. Scanning speed: from 1~100, the larger the gap between numbers, the more evident the effect.

2.The left boundary and right boundary of scanning: first make the camera to stop and then click the left boundary, and make the camera to stop and then click the right boundary, finally click the start key and the camera will move in the range of the left and right limit, and click the stop to stop the movement.

3. Other auto scanning path is as the same as the above setting methods

2.2.4 Playback

Click "playback" to enter the video searching playback screen. Playback screen can inquire, playback and download effective video saved in the SD card of the camera.

Select the inquire type, start and end time, click the "search "key, and the eligible video files will be displayed in the right box. Select it and double-click it to open, so the video files can be playback.   See 2.2.4-1.
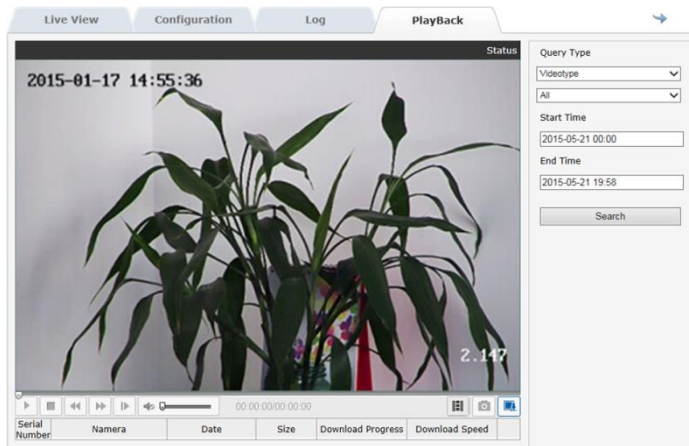
Picture 2.2.4-1 video playback

Note: playback function can be used under the circumstance when the camera is with SD card. If the camera has SD card, using it for the first time you must click the "storage "key to initialize the SD card and setting the video-recording plan.

2.2.5 Log

Click "log" key to enter the log inquiring screen. Log screen can search, show and output the log information stored in SD card of the camera.

Select the type of the log, and set the start and end time of the log-search. And click the search key, and all the eligible log information will be displayed in the list. See 2.2.5-1. And click the "save" key, you can save the log information to your local computer.
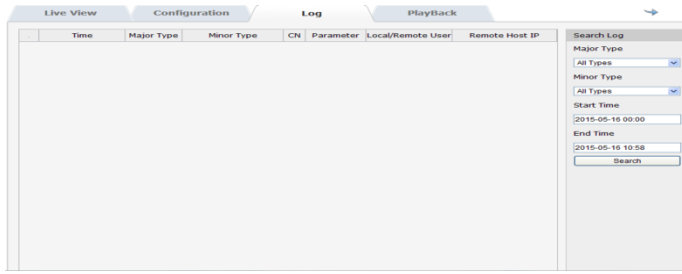
Picture 2.2.5-1 log record screen

2.2.6 Parameter Configuration

Click "configuration", enter configuration interface. Configuration—local configuration as picture 2.2.6-1, each item instruction as picture 2.2.6-2
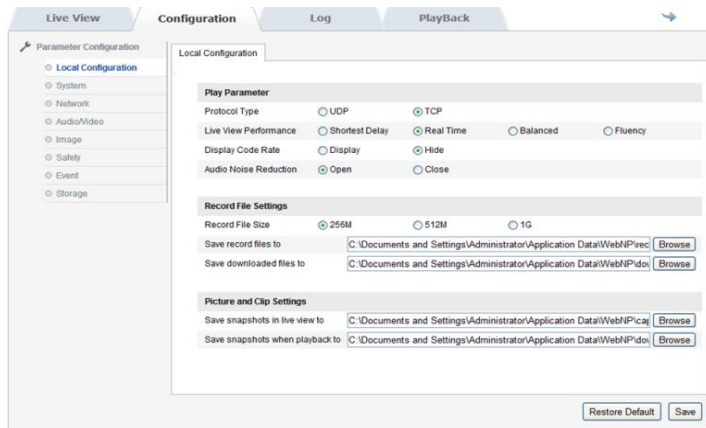
Picture 2.2.6-1

Parameter	Instruction
protocol	TCP、UDP optional
Live video performance	shortest-delay、real-time、balanced、fluency (optional)
Display Code Rate	display、hide (optional)
Audio noise reduction	open、close (optional)
Record file size	256M、512M、1G (optional)
Save record file to	according to the actual situation to set
Save downloaded file to	according to the actual situation to set
Save snapshots in live view to	according to the actual situation to set
Save snapshots when playback to	according to the actual situation to set

2.2.6-2 configuration information

SYSTEM → DEVICE INFORMATION

In Device Information screen, users can set Device Name、Model、Serial No.、Firmware Version、

Encoding Version、Number of Channels、 Number of HDDs、Number of Alarm input and output.

See picture 2.2.6-3
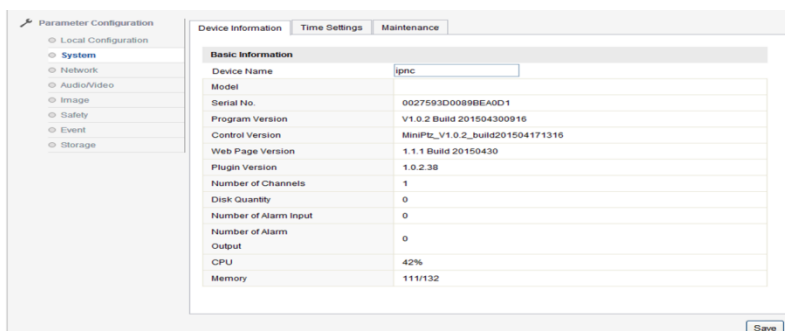
Picture 2.2.6-3 device information

System→Time settings

In the Time Settings screen, time sync is operational. "Time Zone" shows the current IP camera's time zone, and that can be set according to the actual situations. For "Time Sync", set NTP server address、 NTP port、 Internal, the device will be time sync every once in a while according to the setup. For "Manual Time Sync", set time and check "Sync with computer time", and then the time of the camera syncs with the local PC. After changing some parameters and click "save "to save the corresponding settings. See picture 2.2.4

Note：NTP port number is unchangeable
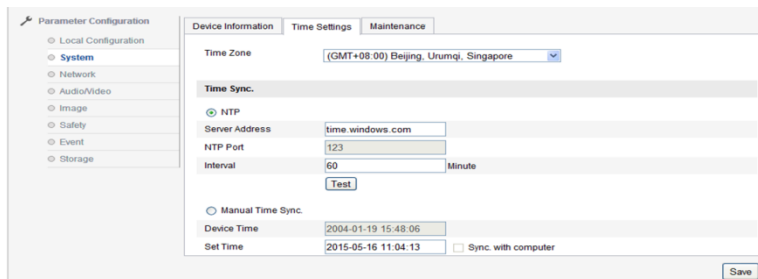
Picture 2.2.6-4 Time settings

System→Maintenance

Enter system maintenance interface, See picture 2.2.6-5

Click"reboot"reboot the device。 Click"restore"restore device parameter , easily restore the other parameters except IP address, subnet mask, gateway, 8000 port number, DNSS address and user name management information. Click "Default" will completely restore device parameter to default setting. Parameter import could lead to configuration file; parameter export could lead to configuration file. (Click then will show hint of after 59 seconds will automatically go to login interface)

Click "browse", choose local upgrade file or upgrade catalogue, then click "upgrade" to upgrade device version. "Status" shows the current upgrade progress, after the upgrade is complete, you will be prompted to upgrade successfully

Note: The upgrading process will be 1 to 10 minutes; please don't disconnect the Power to the device during the process.   The device reboots automatically after upgraded.
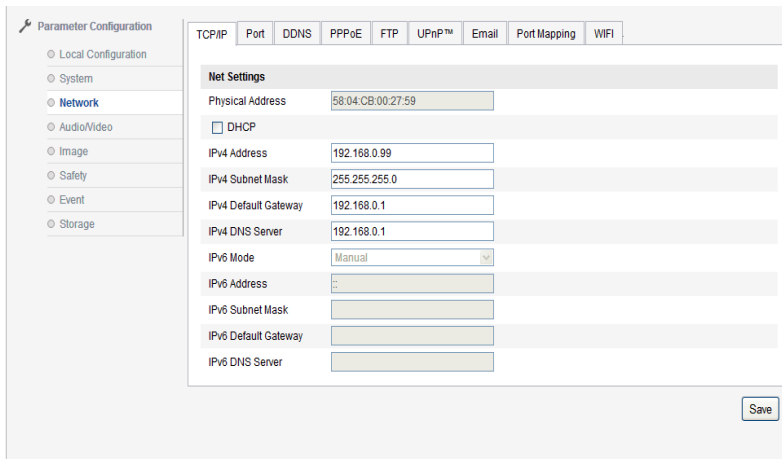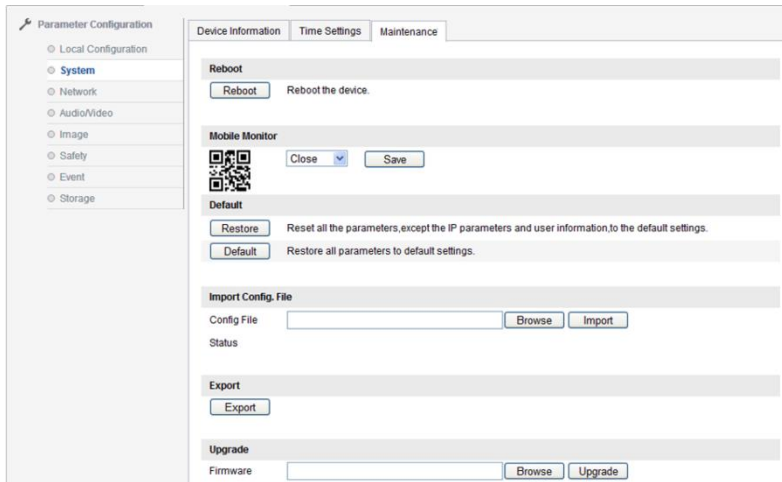
Picture 2.2.6-5 System maintenance interface

Network →TCP/IP

In "TCP/IP" screen, users can set "IPv4 Address","IPv4 Subnet Mask","IPv4 Default

Gateway","IPv4 DNS Server""IPv4 mode". Ticking "auto", the device will obtain IP address automatically. After changing some parameters you can click to save the corresponding settings. See picture 2.2.6-6
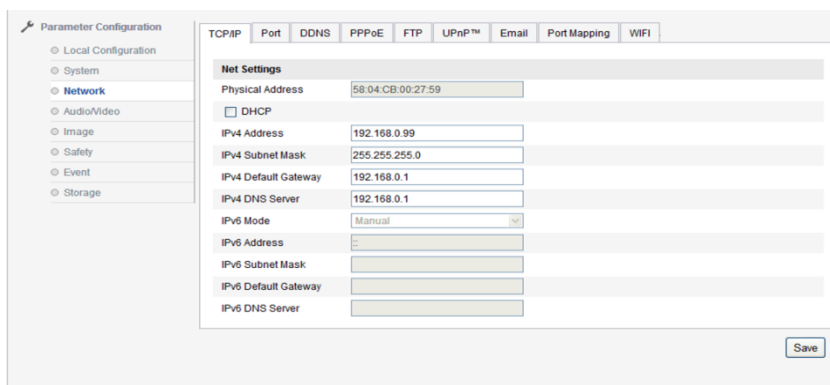
Picture 2.2.6-6 TCP/IP interface

System→port

"Port" screen includes: "HTTP Port" （the default is 80 ）、"RTSP Port"（the default is 554 ）、"HTTPS Port"(the default is 443).Through network access the device, users can set corresponding port as needed. After modifying the parameters, click to save the settings. See picture 2.2.6-7

Note：　Reboot the IP camera after modifying the parameters.

Network →DDNS
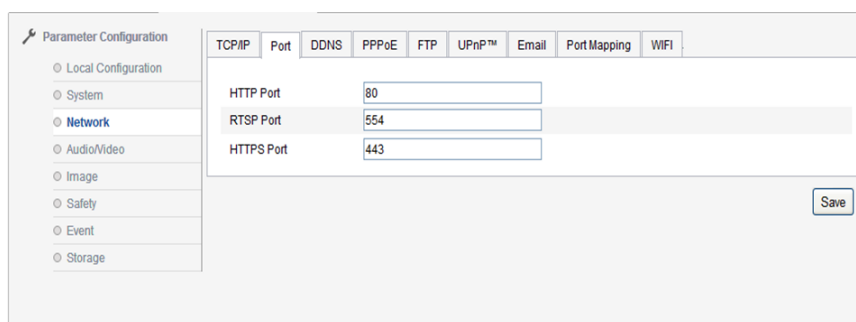
Picture 2.2.6-7 port configuration screen

Enter DDNS setting screen，indicates enable DDNS function。 DDS Type includes "Oray" or

"Noip"。 See picture 2.2.6-8

Oray need to fill Server address, default open, server address is DNS server address software operator, domain is the one which user apply for in software operator website, port can be set according to configuration, user name and password is which user registered.

Noip operation is same as Oray.

After modifying related parameter, need to click "save" to save settings
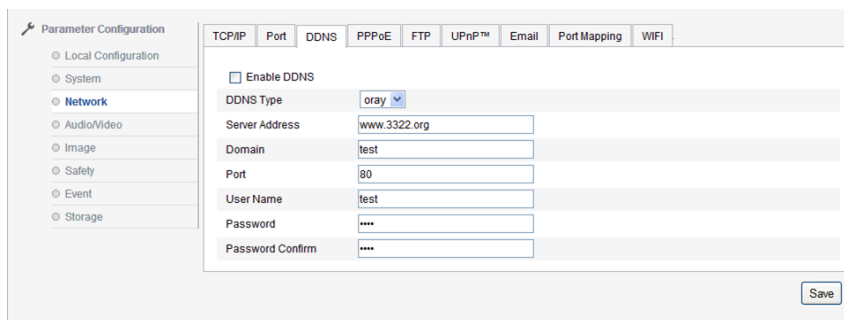
Network →PPPoE

Tick"enable PPPoE" indicates PPPoE function。 Input PPPoE user name and PPPoE password，click"save"restart, camera will gain a public IP address.

After modifying related parameter, need to click "save" to save settings. See picture 2.2.6-9
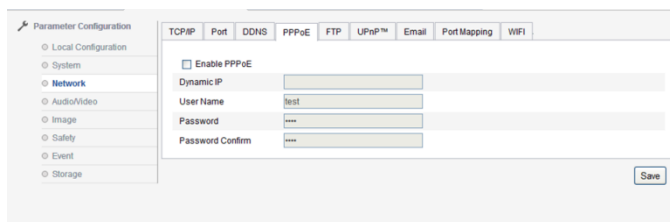
Picture 2.2.6-9 PPPoE configuration

Note：PPPoE configuration enable default gateway is invalid；Parameter in network settings is modified, need to reboot device.

Network→FTP

By setting FTP parameter, user could upload snapshot file to FTP server. See picture 2.2.6-10

Server address, port is the corresponding ones in FTP server. Directory structure could be set save path of file, "save in the root directory", "save in the parent directory", "save in the child directory", choosing parent directory including "use device name", "use device number" "use device IP address", child directory includes "use camera name", "use camera number"

After modifying related parameters, need to click "save" to save settings

Note：PPPoE configuration enable default gateway is invalid；Parameter in network settings is modified, need to reboot device.

Network→FTP

By setting FTP parameter, user could upload snapshot file to FTP server. See picture 2.2.6-10

Server address, port is the corresponding ones in FTP server. Directory structure could be set save path of file, "save in the root directory", "save in the parent directory", "save in the child directory", choosing parent directory including "use device name", "use device number" "use device IP address", child directory includes "use camera name", "use camera number"

After modifying related parameters, need to click "save" to save settings

Picture 2.2.6-10 FTP setting

Network→UpnP

UPnP enable，this function could make device automatically found in LAN. For a camera in internal network, UpnP function could make gateway or router auto port mapping, Camera could map monitored network port from the gateway or router to a internal network device, gateway or router network firewall module began to open this port to other computers on the Internet. Users don't need to do port mapping in router, the precondition is that the router supports UPnP, and open this function. See picture 2.2.6-11
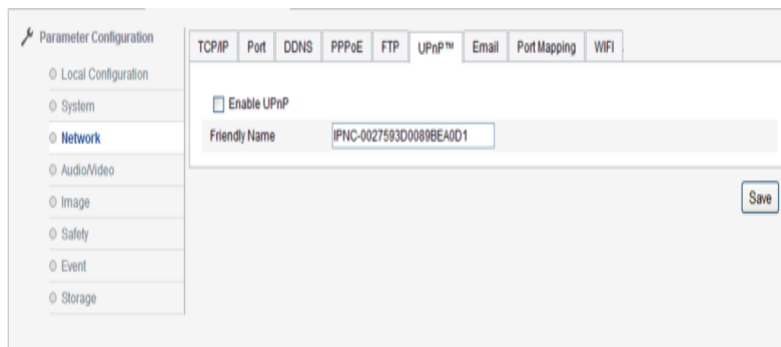
Picture 2.2.6-11 UPnP configuration

Network →Email

Enter email setting, fill sender , sender address, SMTP server, SMTP port 、Tick start SSL or authentication, user name, password and password confirm, receiver, receiver address, see picture 2.2.6-12

Note：Sender/receiver name could not be in Chinese, QQ mailbox port number is 25, other mailbox is 465, at the same time enable SSL, and user name is same as sender's name.

Picture 2.2.6-12 Email

Parameter		Instruction
Stream Type		Main stream/Sub stream
Video Type		Video stream
Resolution		1920*1080
Bitrate Type		Variable/Constant
Image quality		Lowest/low/lower/medium/highest/higher
Frame Rate		According to real condition
Max Bitrate		according to resolution to choose
Video Encoding		According to real need
I Frame Interval		Frame between former and back （1-100)

Sheet 2.2.6-16 Video configuration instruction

Network →Port Mapping

By starting port mapping to open port, see picture 2.2.6-13
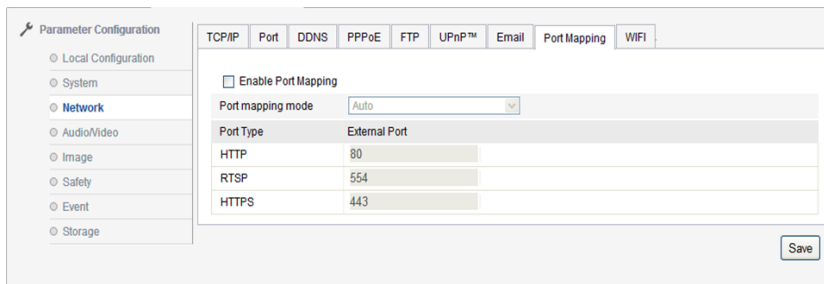
Sheet 2.2.6-17 audio settings

Parameter	Instruction
Audio Encoding	G.711ulaw
Audio Input	Mic in, Line in (optional)
Input volume	0~100(optional)

Picture 2.2.6-17 audio parameter instruction

Network →WIFI

Enable **WIFI** insert，set related　parameter to finish WIFI insert, see picture 2.2.6-14
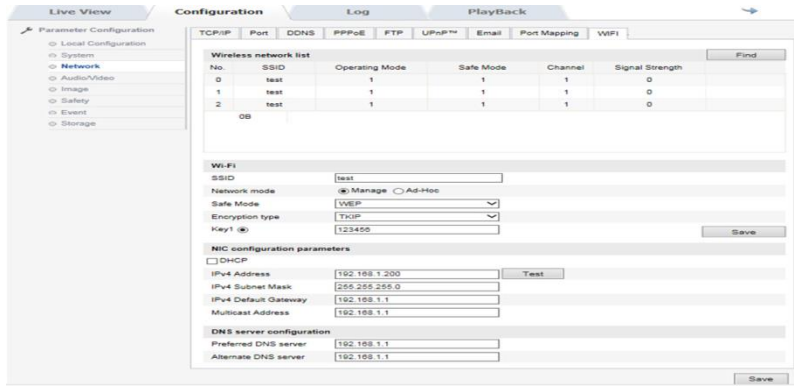
Picture 2.2.6-14 WIFI settings

Audio/Video→Video

Enter video setting screen, user could set camera scream, resolution and bitrates type and other parameters. See picture 2.2.6-15, video settings detailed information, see picture 2.2.6-16.
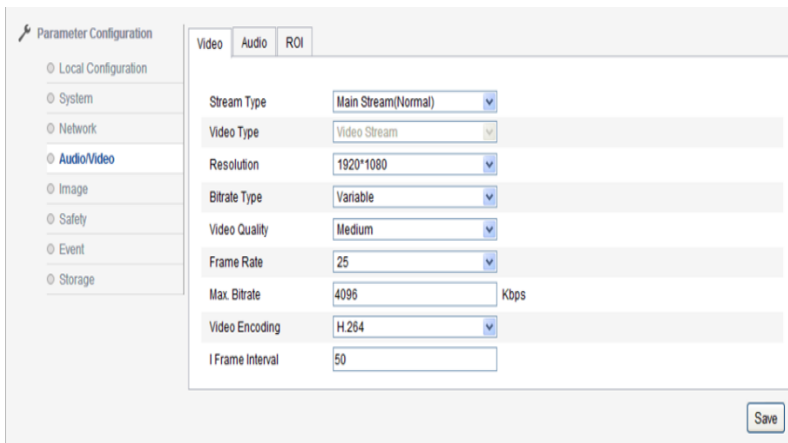
Picture 2.2.6-16 Video setting

Parameter	Instruction
Stream Type	Main stream/Sub stream
Video Type	Video stream
Resolution	1920*1080
Bitrate Type	Variable/Constant
Image quality	Lowest/low/lower/medium/highest/higher
Frame Rate	According to real condition
Max Bitrate	according to resolution to choose
Video Encoding	According to real need
I Frame Interval	Frame between former and back（1-100)

Audio/Video→Audio

In audio configuration, "audio encoding" version is the only kind named "G.711U".According to different model, hardware is different, "audio input" type: Line in and Mic in, if user use active pickup, choose Line in option, if for passive microphone, choose Mic in. "Input volume"is input source gain control value, the default value is 50, user could adjust 1-100 according to the actual volume needs

After modifying related parameter, need to click [save] to save settings. Audio configuration interface, see picture 2.2.6-17, audio configuration parameter shows in picture 2.2.6-17-1

Note: after modifying audio encoding, please reboot the device.

Parameter	Instruction
Audio Encoding	G.711ulaw
Audio Input	Mic in、 Line in(optional)
Input volume	0~100(optional)

Audio/Video→ROI

Stream concentration makes the drawing region clearer, suitable for condition of the lack of stream
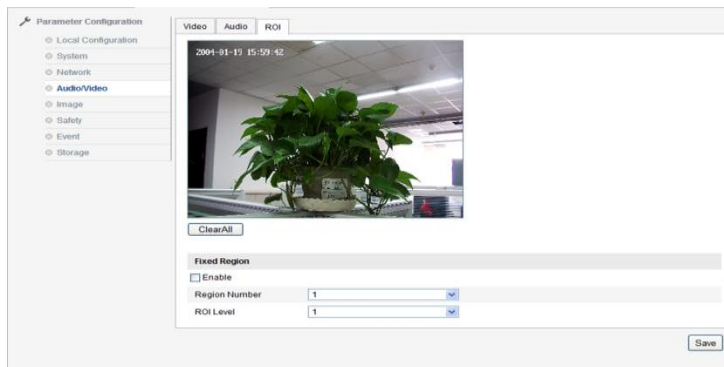
Picture 2.2.6-18 ROI

Image→Display

Enter image configuration interface, see picture 2.2.6-19, image configuration illustration see sheet 2.2.6-20
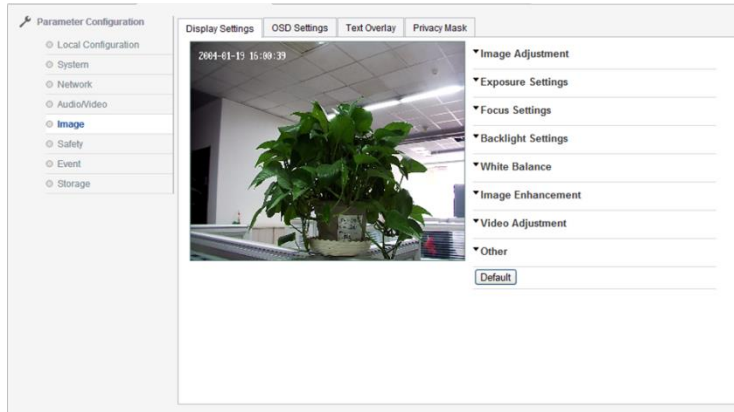
Picture 2.2.7-19 Display settings

Parameter	Instruction
Brightness	0-100
Contrast	0-100
Saturation	0-100
Sharpness	0-100
HUE	0-100
Exposure mode	Auto/manual
Exposure Bias	On/off
Compensation level	0-100
Gain limit	0-100
WDR	On/off
White balance	Auto/manual
Digital noise reduction	On/off
2D noise reduction	0-100
3D noise reduction	0-100
Mirror	off, up/down, left/right, center
Video standard	50Hz and 60Hz

Sheet 2.2.6-20 Image parameter

"Sharpness ": the higher, the image edge is clearer, while it could not be said the higher the sharpness, the better image quality, high sharpness can make the picture looks distorted.

"Focus mode:" in "auto" mode, device automatic focus according to the monitoring scene changing.　Semi-automatic", focus one time after control PTZ and zoom, if focus clearly, even scene change, camera will not focus again. "Manual": through preview interface to focus clearly.

"Min. Focus distance": the distance from lens to scene is nearer than the one of setting, camera could not focus clearly.

"Exposure mode": auto/manual; Iris; shutter, only exposure bias open, the compensation level could be adjustable.

"Video standard": 50Hz, 60Hz (optional). Video standard modify for adapting to part of camera, after modifying, device need to reboot, when user choose 50Hz, real-time frame is 25frame/sec, if for 60Hz, real-time frame is 30frame/sec.

"Mirror": direction of symmetry includes "left/right", "up/down", center, video adjustment option, it is used to switch symmetry direction of image.

"WDR": On/Off

"White balance"：Auto/MWB

"Digital noise reduction": it is used to adjust rank of noisy point in image, at the same time, it also reduce the detail of image.

"Default": click default, all the parameter in this display setting box will come back to factory default value.

Note: All the option in configuration of camera is all the model option, Real camera model only has part of option, please take reference for specific camera model. If you modify some parameter, please reboot camera.

Image→OSD menu setting

User could set channel name according to their needs, display name, date or not. Time format: 24-hour time system/12-hour time system. Date format:" XX-XX-XXXX(month-day-year) "," XXXX-XX-XX(year-month-day) ","XX-XX-XXXX(day-month-year)","XXXX year XX month XX day","XX month XX day XXXX year","XX day XX month XXXX year"optional。

After modifying parameter, need to click "save" to save settings. See picture 2.2.6-21
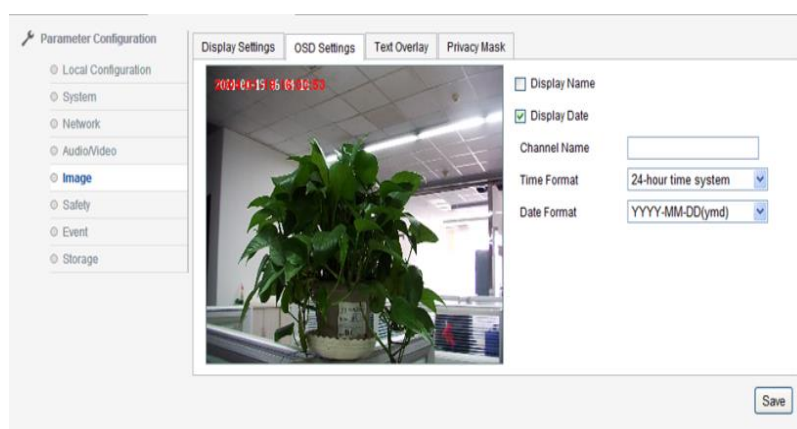
Picture 2.2.6-21 OSD Settings

Image→Text Overlay

Camera supports text overlay in the image, at most supports 40 characters content, see picture 2.2.6-22.

Input character in the box, then tick corresponding character number, then user could preview the input character. Through drag the mouse to choose displaying location which

shows the character, click "save", then character will show in the image.
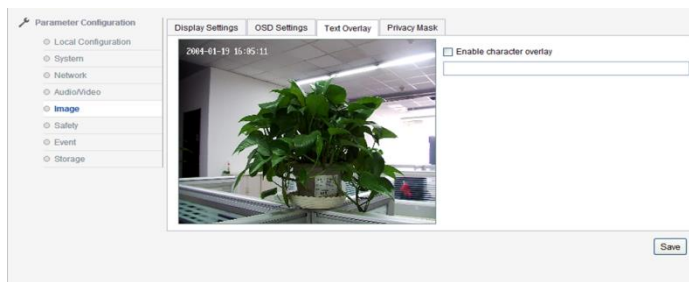
Picture 2.2.6-22 Text Overlay

Image →Privacy mask

User enable privacy mask, then according to their needs to set it, at most 4 area settable. See picture 2.2.6-23
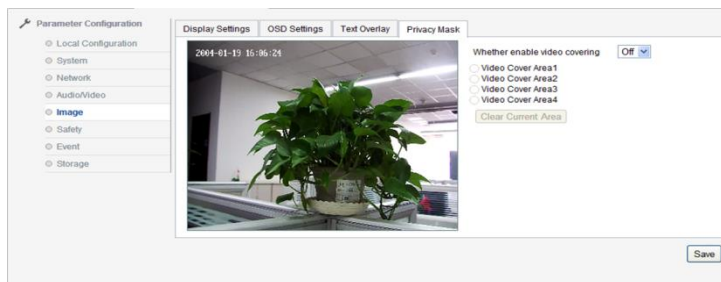
Picture 2.2.6-23 Privacy Mask

Safety → User

Enter Safety configuration interface, user could set user information, present administrator "admin", user could create other user according to needs, at most 8 users. See picture 2.2.6-23

User addition: click "addition", camera will display addition box, input user name, password, "user level": administrator, user, observer. Then click ok. See picture 2.2.6-24

User modify：Choose user name you want to modify, click "modify" to enter interface, in this box, user need to modify "user name", "password", See picture 2.2.6-25

Delete user: choose the user name which you want to delete, it will come out dialog box, click confirm to delete the user.
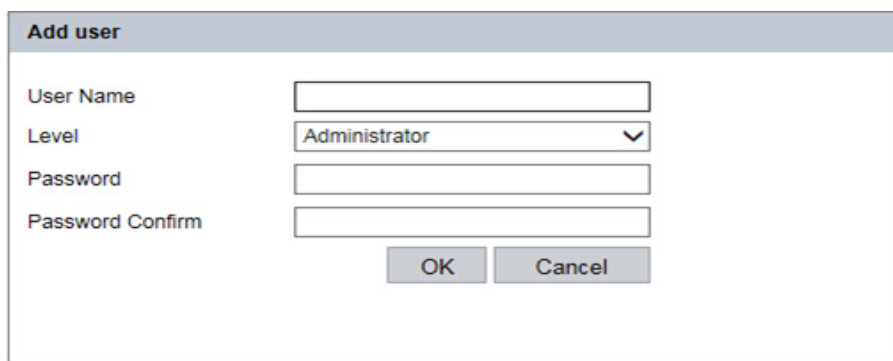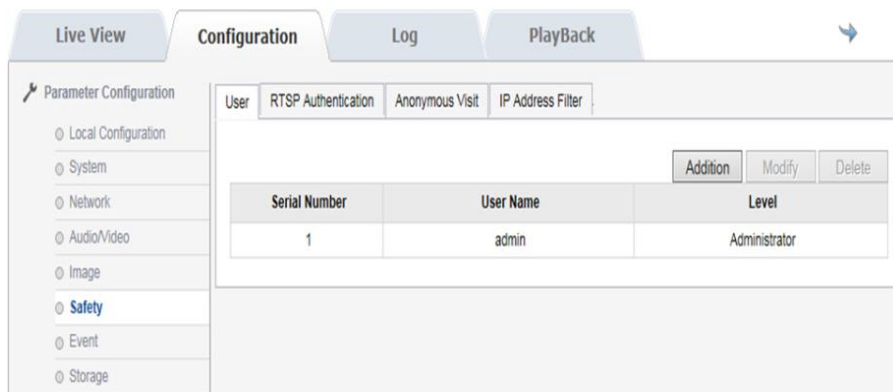
Picture 2.2.6-24　　　Addition
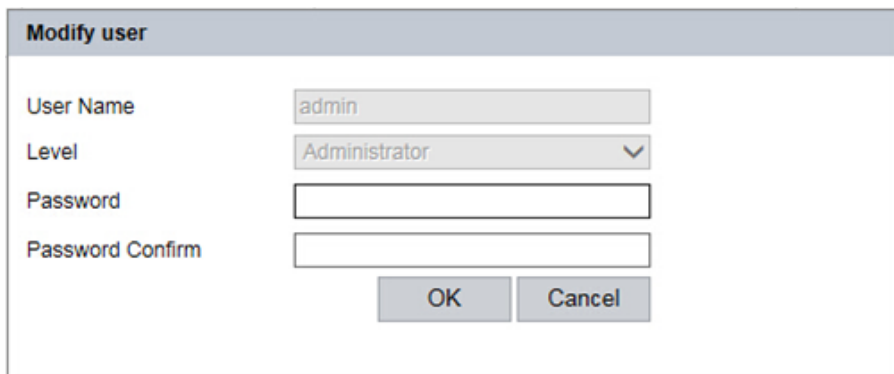
Picture 2.2.6-25　　Modify user

Security→RTSP　Authentication

The authentication is "disable" or "basic" as optional.

"Disable": close RTSP authentication.

"Basic": enable RTSP authentication and need to carry the authentication information when send RTSP require to the IP camera at the moment..

After modifying the parameters, click to "save" the settings. See Picture 2.2
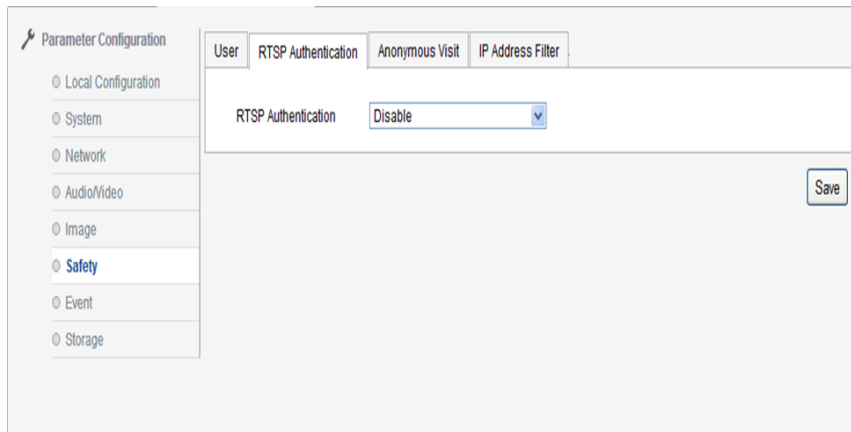
Picture 2.2.6-26   RTSP Setting screen

Security →Anonymous visit

Anonymous visit could choose "enable" and"disable", choosing enable will allow user anonymous login camera web interface.

Enable anonymous visit function, open camera web interface visit interface, login window will come out "anonymous"option

 Tick "anonymous", then click [login] button, user could login directly.

Anonymous visit only preview video, could not enter playback, log and configuration interface. See picture 2.2.6-27
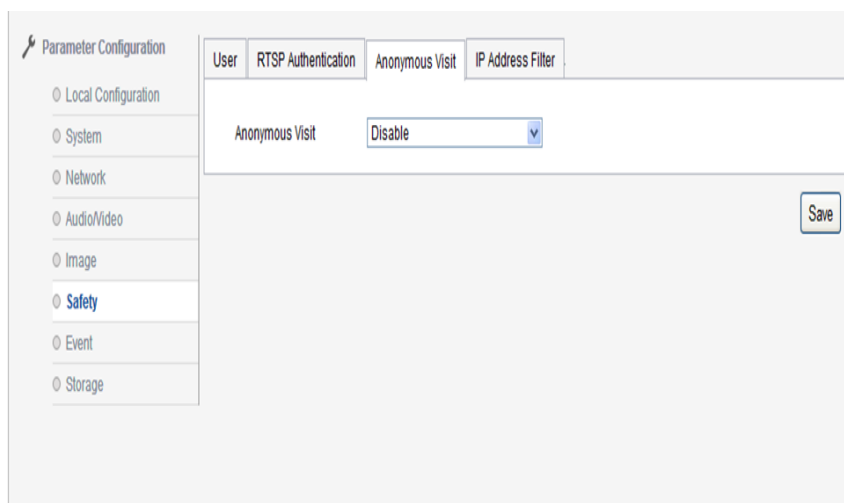
Security→IP address filter

User could tick "enable IP address filter" key to start the function.

"IP address filter type "include "black list", "white list", white list means the added IP address allow to visit the camera, black list means its forbidden User could click [Addition] to add new IP address, after addition, user could click [modify], [delete] and [clear] to operate IP address. See picture 2.2.6-28
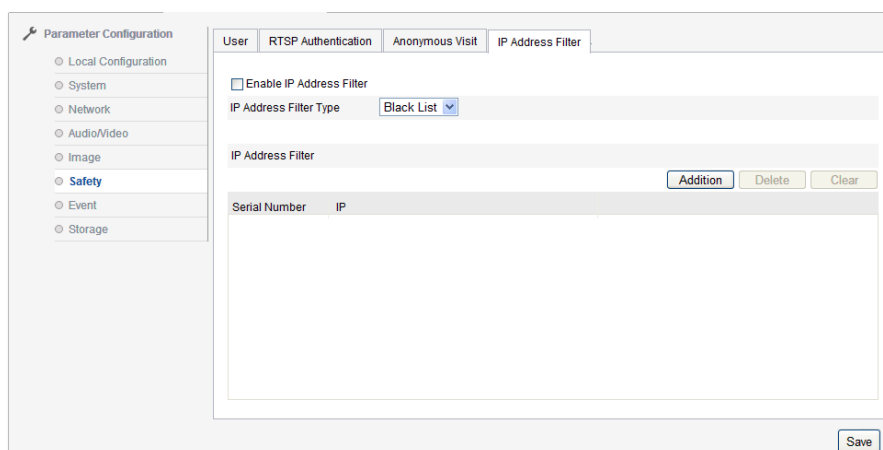
Picture 2.2.6-28 IP address Filter

Event→Motion detection

Area setting: click mouse left key and drag it, then release mouse left key, this will finish drawing area. When user finishes drawing all area, you can set arming schedule and linkage method.

Click "Clear all", will clear all drawing area.

Tick "enable motion detection" means start IP camera motion detection function. See picture 2.2.6-29

Sensitivity: 0-100 settable
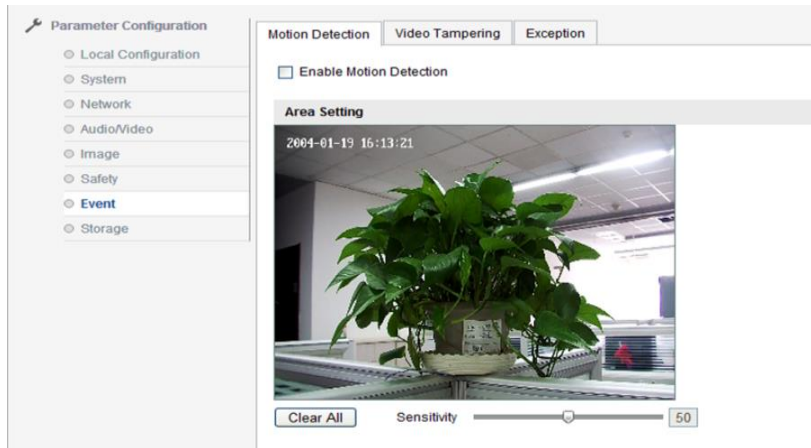
Picture 2.2.6-29 Motion Detection

"Arming schedule" shows the arming time of the current motion detection.

Click [edit] could edit the arming schedule, could set arming schedule for the whole week or some day in a week.

User could set start time and end time specific for 4 periods per day, see picture 2.2.6-30

Picture 2.2.6-30 Arming Schedule/Linkage Method

After finishing parameter setting, click [confirm] key to save the settings.

Event→Video Tampering

Tick "enable video tampering" indicates start IP camera video tampering, see picture 2.2.6-31

Area Setting: default the whole screen

Sensitivity: 0-100 settable

After related parameter revised, need to click [save] to save related settings.
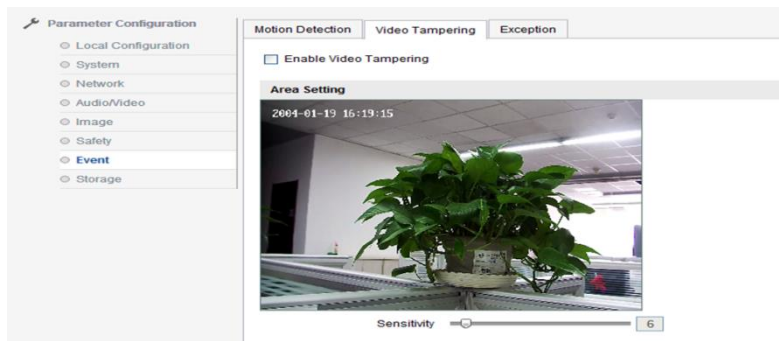
Picturer2.2.6-31 Video Tampering

Event→Exception

    "Exception Type" includes "HDD   FULL ","HDD Error", "Network Disconnected", "IP address conflict"

    "Normal Linkage" includes "Notify surveillance Center", "Capture"

    "Other Linkage" includes corresponding alarm output channel.

    After modifying related parameter, need to click [save] to save settings.
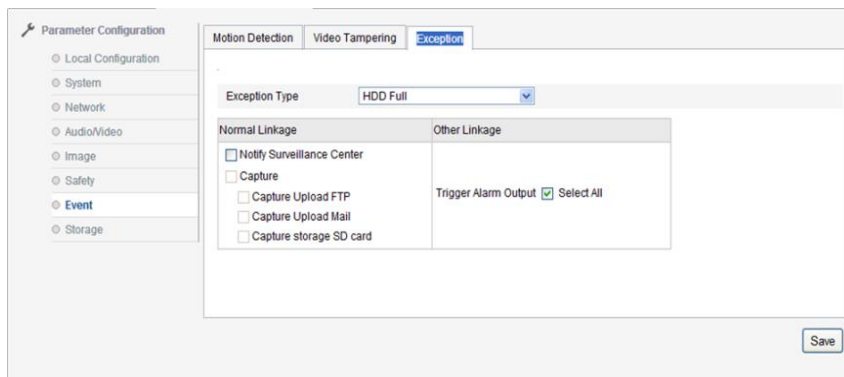
Picture 2.2.6-32 Exception

Storage→Record Schedule

    Tick "enable record schedule", click "Editor" could edit record schedule, appoint record period and choose type. See picture 2.2.6-33. For edit schedule, see picture 2.2.6-34

    Record time includes "all day", "section", if choose "section", user could choose time period specifically, supports 4 record period settings.

Record Type includes "Timing", "Motion Detection", "Alarm", "Motion Or Alarm", "Motion and Alarm", "Other".

Pre-record is the advanced record time before starting of record, 0-3sec (optional) and not limit.

Post-record is the delayed time of record, 5sec-10min (optional)

After modifying related parameter, need to click "confirm" to save settings

Note: Overwrite is measured according to 2Mbps, the bigger scream you choose, the shorter, he pre-record time is.
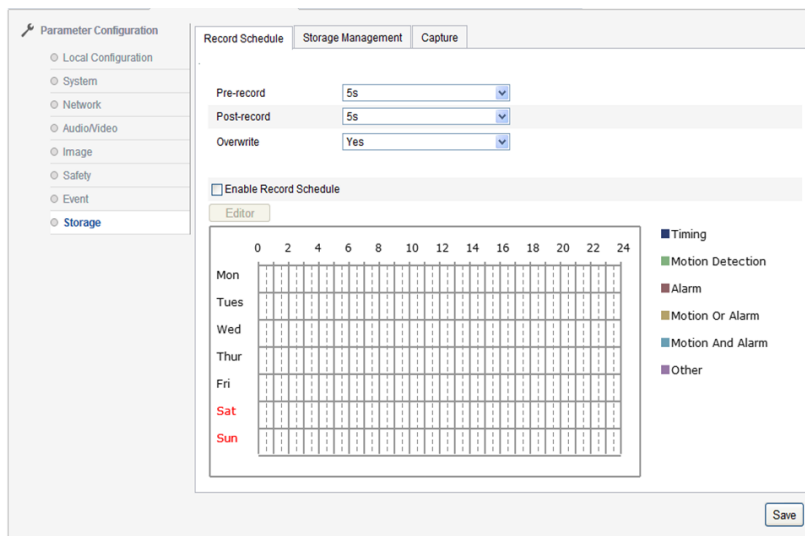
Picture 2.2.6-33 Record schedule
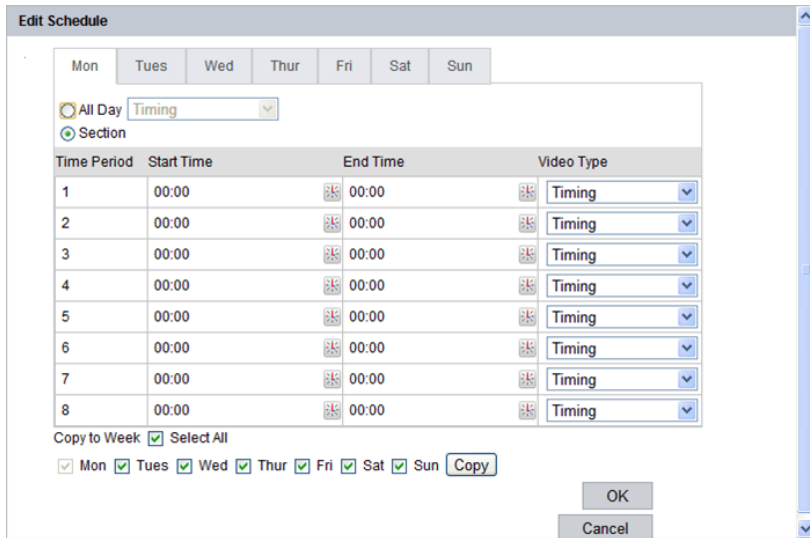
Picture 2.2.6.-34 Edit Schedule

Storage→Storage Management

Storage management is used to view the status and the capacity of the storage medium, and carry out format operation on the storage medium. Tick the inserted TF card, click the "format", will make the TF card format. As picture 2.2.6-35 shows

"HDD No." shows the serial number of the storage medium. "Capacity": shows the total capacity of a storage medium. "Free space", shows remaining space of a storage medium."Status": shows the current status of the storage medium. "Format": format operation of the storage medium.
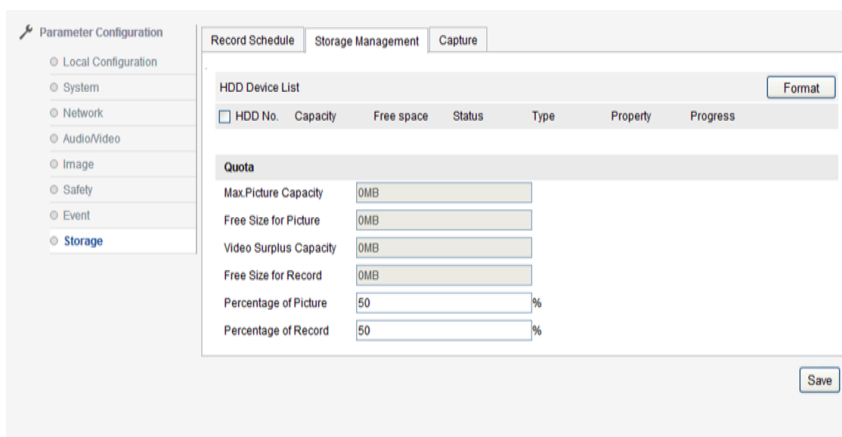
Picture 2.2.6-35 Storage management

Storage→Capture

Through parameter configuration setting capture parameter, capture way is only for timing snapshot. As picture 2.2.6-36 shows
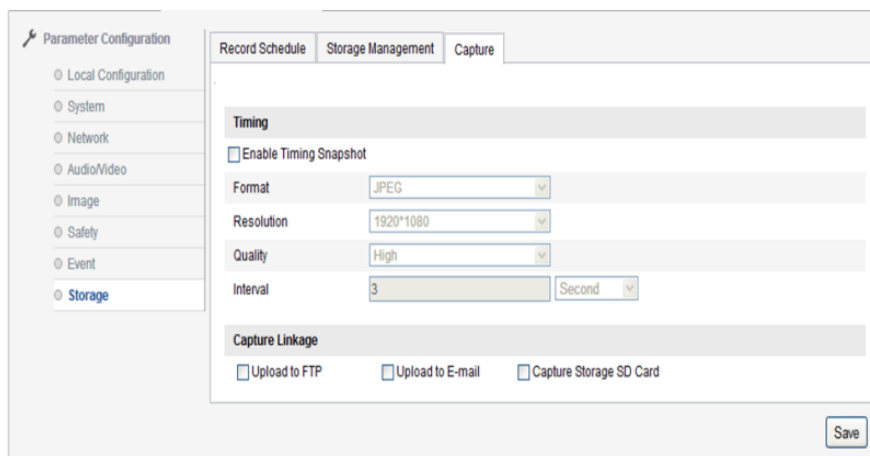
"Format" could support JPEG format snapshot, "Resolution" is present main stream's resolution.

"Quality" could choose High/Middle/Low

"Interval" could set according to interval, unit:
"millisecond", "second", "minute", "hour", "day" (optional), interval range 1-604800 millisecond.

After related parameter modify, click [save] to save settings.

Picture 2.2.6–36 Capture

3 OSD MENU FUNCTION

```
┌─────────────────────────┐
│      MAIN MENU          │
├─────────────────────────┤
│    [INFORMATION]        │
│                         │
│      CAMERA             │
│                         │
│      IMAGE              │
│                         │
│      MOTION             │
└─────────────────────────┘
```
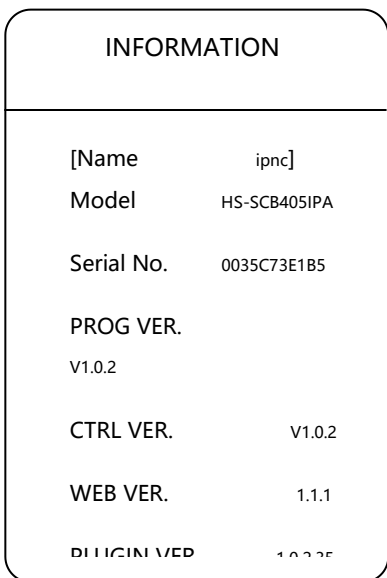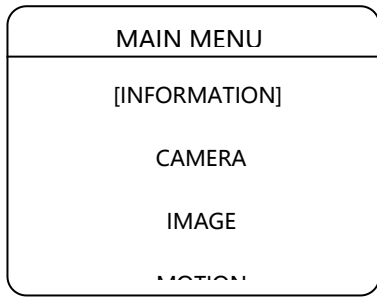
User could review camera system information according to their need, it include: device name, device model, serial number, device version, control version, web page version, plug-in version, supply voltage. Method as follows:

Click up/down to "information", click up/down to choose, click left/right enter information OSD to check

```
┌─────────────────────────┐
│      INFORMATION        │
├─────────────────────────┤
│  [Name        ipnc]     │
│  Model     HS-SCB405IPA │
│                         │
│  Serial No.  0035C73E1B5│
│                         │
│  PROG VER.              │
│  V1.0.2                 │
│                         │
│  CTRL VER.       V1.0.2 │
│                         │
│  WEB VER.         1.1.1 │
│  PLUGIN VER      1.0.2.35│
└─────────────────────────┘
```

3.2.1 LANGUAGE

```
┌─────────────────────────┐
│        MAIN MENU        │
├─────────────────────────┤
│                         │
│      [INFORMATION]      │
│                         │
│         CAMERA          │
│                         │
│          IMAGE          │
│                         │
│         MOTION          │
│                         │
└─────────────────────────┘
```
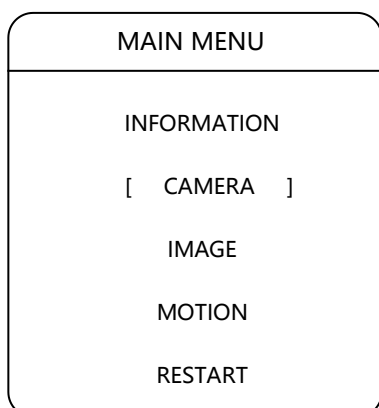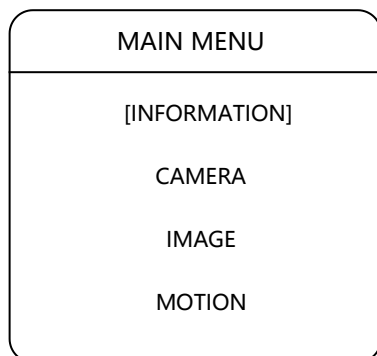
User could set language by PTZ, device support Chinese/English. Default language is Chinese. User could set according to their requirement, method as follows:

Click up/down to "language", click left/right key enter setting mode, click left/right to choose language, click up/down to operate next item.

```
            │
            ▼
```

```
┌─────────────────────────┐
│        MAIN MENU        │
├─────────────────────────┤
│                         │
│       INFORMATION       │
│                         │
│       [  CAMERA   ]     │
│                         │
│          IMAGE          │
│                         │
│         MOTION          │
│                         │
│         RESTART         │
│                         │
└─────────────────────────┘
```

```
                    │
                    ▼
┌─────────────────────────────┐
│          LANGUAGE           │
├─────────────────────────────┤
│                             │
│                             │
│   LANGUAGE     CHINESE]      │
│                             │
│          BACK               │
│                             │
│          EXIT               │
└─────────────────────────────┘
```

3.2.2 IR LED

```
╭─────────────────────────╮
│        MAIN MENU        │
├─────────────────────────┤
│                         │
│       INFORMATION       │
│                         │
│     [   CAMERA    ]     │
│                         │
│         IMAGE           │
│                         │
│         MOTION          │
│                         │
│         RESTART         │
╰─────────────────────────╯
```

↓

```
╭─────────────────────────╮
│         CAMEAR          │
├─────────────────────────┤
│                         │
│        LANGUAGE         │
│                         │
│     [    IR LED     ]   │
│                         │
│          IDLE           │
│                         │
│          MASK           │
│                         │
│          ALARM          │
│       PTZ DISPLAY       │
╰─────────────────────────╯
```

↓

```
╭─────────────────────────╮
│          IR LED         │
├─────────────────────────┤
│ [ILLUMINATION      34]  │
│                         │
│ MODE              AUTO  │
│                         │
│ SENSITIVITY          4  │
│                         │
│ SWITCH DELAY         5  │
│                         │
│ NEAR POWER          10  │
```
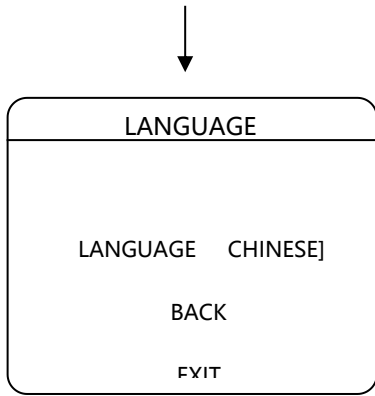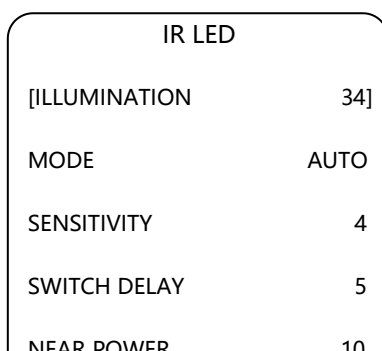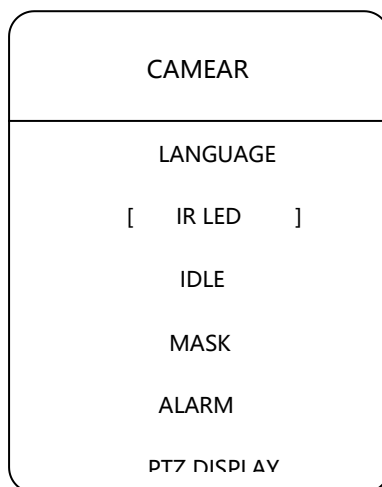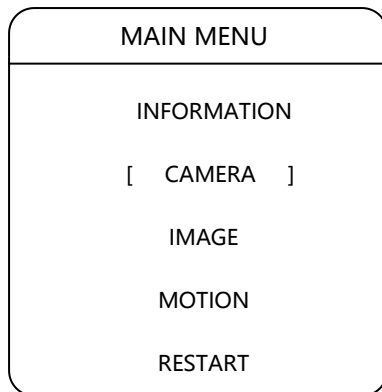
User could set IR LED working mode by camera PTZ setting function

1.Environment：

Device could automatically adjust luminance according to surrounding environment.

2.Open mode：

Auto：IR LED automatically open and close according to light and dark.

Open：IR LED force to open

Close：IR LED force to close

3.Sensitivity：When IR LED open mode choose auto, the smaller the number is, the lower light of the environment will be when the IR LED on.

4.Switch delay：Filter handover delay time is 1-60s.

5.Near power：1-10 adjustable

6.Far power：1-10 adjustable

7.Near Compensation：Set near compensation rank 0-3, IR LED near light open, far light according to power to set open

41

3.2.3 IDLE

```
         MAIN MENU

         INFORMATION

      [    CAMERA    ]

           IMAGE

           MOTION

          RESTART
```
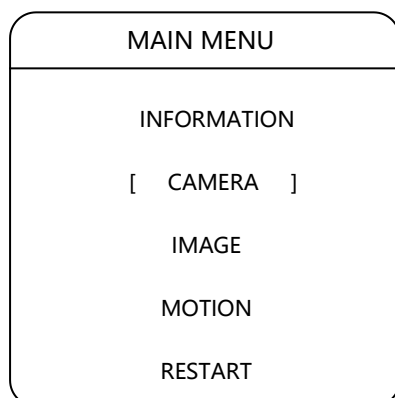
User could set idle by OSD menu, can set idle action and time.

1. Action

Click up/down key to "action", click left/right key enter setting mode, click left/right key to choose idle action, action include: no action, preset 1, auto scan, auto cruse, pattern, click up/down key to operate next operation.

2. Delay

Click up/down key to "delay", click left/right enter setting mode, click left/right key to enter setting mode, click left/right key to operate time choice—1min, 5min,10min, click up/down key for next step.

↓

```
┌─────────────────────────┐
│         CAMERA          │
├─────────────────────────┤
│                         │
│        LANGUAGE         │
│                         │
│         IR LED          │
│                         │
│          IDLE           │
│                         │
│          MASK           │
│                         │
│         ALARM           │
│                         │
│       PTZ DISPLAY       │
└─────────────────────────┘
```

↓

```
┌─────────────────────────┐
│          IDLE           │
├─────────────────────────┤
│  ACTION          OFF    │
│                         │
│  DALAY                  │
│  10MIN                  │
│                         │
│          BACK           │
└─────────────────────────┘
```

3.2.4 MASK

```
┌─────────────────────────┐
│        MAIN MENU        │
├─────────────────────────┤
│                         │
│      INFORMATION        │
│                         │
│    [   CAMERA   ]       │
│                         │
│        IMAGE            │
│                         │
│        MOTION           │
│                         │
│       RESTART           │
│                         │
└─────────────────────────┘
```
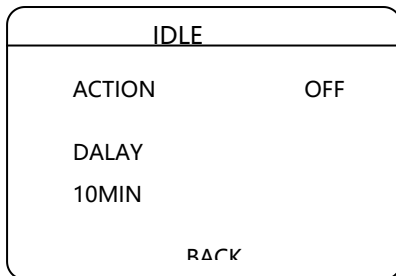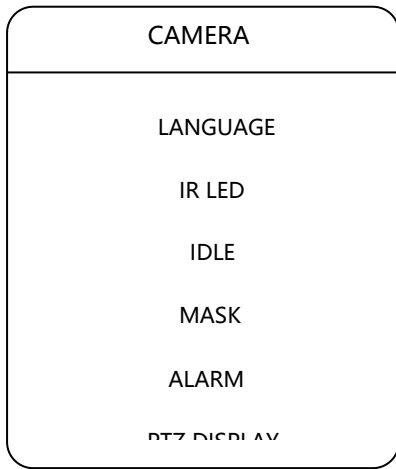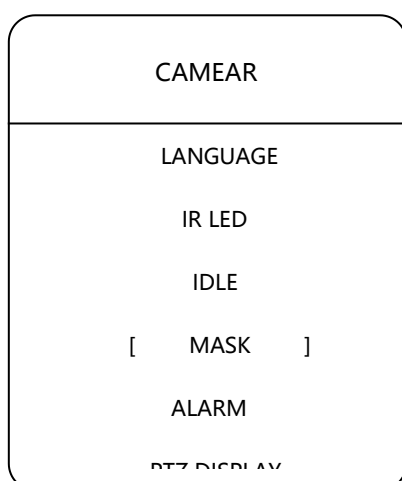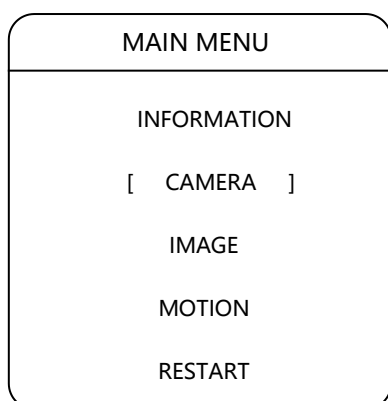
Camera supports mask protection, at most support 4 mask area.

1. Mask setting

Click up/down to choose mask setting, click left/right to enter, click focus far to confirm, when grey box comes out, grey box size is adjustable, click left or up to be smaller, click right/down to be bigger. After setting focus far confirm and return previous page.

```
┌─────────────────────────┐
│                         │
│         CAMEAR          │
├─────────────────────────┤
│                         │
│       LANGUAGE          │
│                         │
│        IR LED           │
│                         │
│         IDLE            │
│                         │
│     [    MASK    ]      │
│                         │
│        ALARM            │
│                         │
│      PTZ DISPLAY        │
└─────────────────────────┘
```

```
         │
         │
         ▼

  ┌─────────────────────┐
  │        MASK         │
  │                     │
  │ [MASK No.        1] │
  ├─────────────────────┤
  │  ENABLE       OFF   │
  │                     │
  │     MAST SET        │
  │                     │
  │       BACK          │
  └─────────────────────┘
```

3.2.5 ALARM

```
  ┌─────────────────────┐
  │     MAIN MENU       │
  ├─────────────────────┤
  │    INFORMATION      │
  │                     │
  │  [   CAMERA   ]     │
  │                     │
  │      IMAGE          │
  │                     │
  │     MOTION          │
  │                     │
  │     RESTART         │
  └─────────────────────┘
```

Camera supports 7 alarms in, 1 alarm out. Device receive the alarm signal which could trigger auto function (turn to preset, run pattern path, etc.), at the same time device link to alarm output. Alarm function setting method as follows:

1．Input status

Click up/down to "input status", click left/right to operate" input status" setting. Alarm input status could be set N/O and N/C.

N/O：When channel close, it indicates device receive valid signal.

N/C：When channel open, it indicates device receive valid alarm signal.

2．Alarm mode

Click up/down to "alarm mode", click left/right to operate setting, alarm mode: on/off.

```
                    │
                    │
                    ▼
        ┌─────────────────────┐
        │        CAMERA        │
        ├─────────────────────┤
        │                     │
        │      LANGUAGE       │
        │                     │
        │       IR LED        │
        │                     │
        │        IDLE         │
        │                     │
        │        MASK         │
        │                     │
        │       ALARM         │
        │                     │
        │     PTZ DISPLAY     │
        │                     │
        └─────────────────────┘

                    │
                    │
                    ▼
        ┌─────────────────────┐
        │        ALARM        │
        ├─────────────────────┤
        │                     │
        │  INPUT MODE   N/O   │
        │  ALARM MODE      OFF│
        │                     │
        │  ACTION          OFF│
        │                     │
        │  ALARM OUT       OFF│
        │                     │
        │  RESET DELAY  30SEC │
        │                     │
        │        BACK         │
        └─────────────────────┘
```

3.2.6 PTZ DISPLAY

```
┌─────────────────────────┐
│        MAIN MENU        │
├─────────────────────────┤
│                         │
│       INFORMATION       │
│                         │
│      [   CAMERA   ]      │
│                         │
│         IMAGE           │
│                         │
│         MOTION          │
│                         │
│         RESTART         │
│                         │
└─────────────────────────┘
```
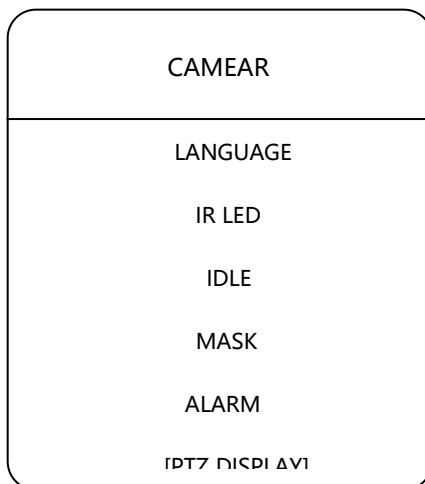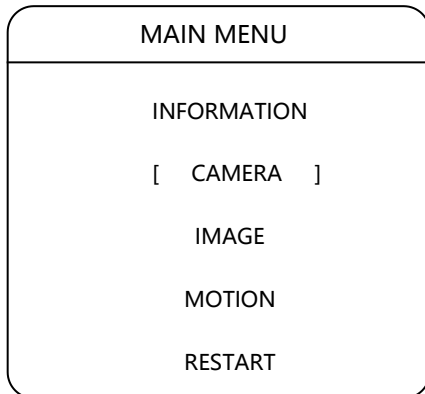
Camera supports PTZ function, PTZ display includes on/off option.

Method as follows:

Click up/down to choose, enter PTZ display, click left/right to choose on/off, and then click up/down to confirm.

```
            │
            ↓
┌─────────────────────────┐
│         CAMEAR          │
├─────────────────────────┤
│                         │
│        LANGUAGE         │
│                         │
│         IR LED          │
│                         │
│          IDLE           │
│                         │
│          MASK           │
│                         │
│         ALARM           │
│                         │
│      [PTZ DISPLAY]      │
└─────────────────────────┘
```

```
          ↓

┌─────────────────────────┐
│        PTZDISPLAY       │
├─────────────────────────┤
│  PTZ DISPLAY      ON     │
│            BACK          │
│                         │
│            EXIT          │
│                         │
└─────────────────────────┘
```

3.3.1 IMAGE

```
┌─────────────────────────┐
│        MAIN MENU        │
├─────────────────────────┤
│       INFORMATION       │
│                         │
│         CAMERA          │
│                         │
│      [   IMAGE    ]      │
│                         │
│         MOTION          │
│                         │
│         RESTART         │
└─────────────────────────┘
```
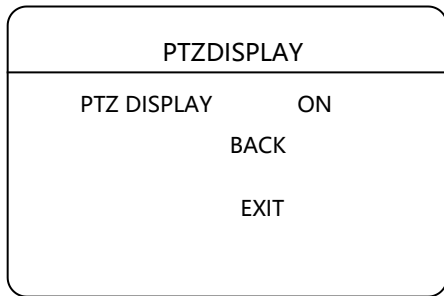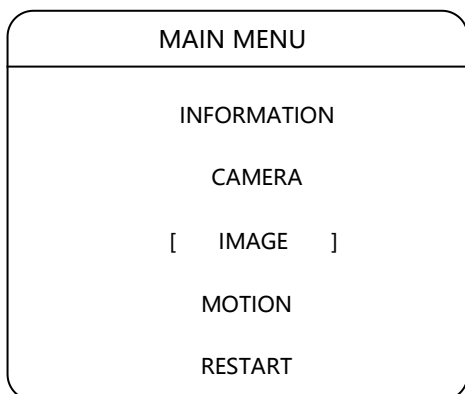
Camera supports image setting function, click up/down to choose image, click left/right to enter image adjustment option, method as follows:

1. Brightness

Image overall brightness adjustment, 1-100 adjustable

2. Contrast

Image overall brightness contrast, 0-100 adjustable

```
              │
              ▼
┌─────────────────────────────┐
│            IMAGE            │
├─────────────────────────────┤
│     [IMAGE ADJUSTMENT]      │
│                             │
│          EXPOSURE           │
│                             │
│           FOCUS             │
│                             │
│            WDR              │
│                             │
│        WHITE BALANCE        │
│                             │
│      IMAGE ENHANCEMENT      │
│                             │
│       VIDEO ADJUSTMENT      │
└─────────────────────────────┘


              │
              ▼
┌─────────────────────────────┐
│            IMAGE            │
├─────────────────────────────┤
│  [BRIGHTNESS        50]     │
│                             │
│  CONTRAST           50      │
│                             │
│  SATURATION         50      │
│                             │
│  SHARPNESS          50      │
│                             │
│  HUE                50      │
└─────────────────────────────┘
```

3.3.2 EXPOSURE

```
        MAIN MENU

      INFORMATION

        CAMERA

      [    IMAGE    ]

        MOTION

        RESTART
```

↓

```
          IMAGE

      IMAGE ADJUSTMENT

    [        EXPOSURE        ]

          FOCUS

          WDR

      WHITE    BALANCE

    IMAGE ENHANCEMENT

    VIDEO ADJUSTMENT
```
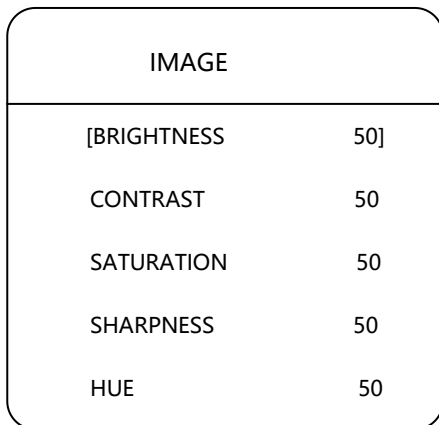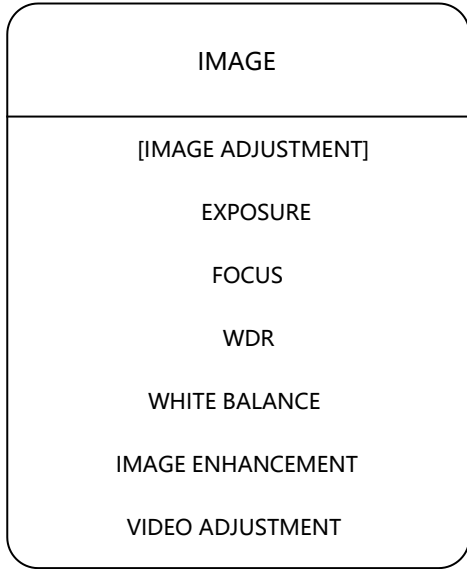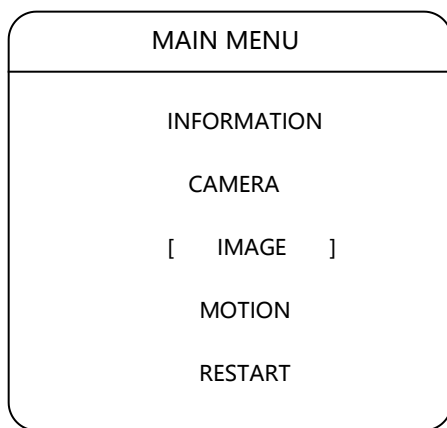
Camera supports exposure function, exposure settings includes exposure mode, iris, shutter, gain, exposure bias, compensation level, gain limit.

1. Exposure Mode

   Auto/Manual/Iris priority/Shutter priority

2. Exposure Bias

   On/off

3. Compensation level

   0-100(optional)

4. Gain Limit

   0-100(optional)

```
        ↓
┌─────────────────────┐
│      EXPOSURE       │
├─────────────────────┤
│ [MODE        AUTO]  │
│                     │
│ IRIS          f2.0  │
│                     │
│ SHUTTER       1/25  │
│                     │
│ GAIN           50   │
│                     │
│ EXPOSURE BIAS  OFF  │
│                     │
│ LEVEL          50   │
└─────────────────────┘
```

3.3.3 FOCUS

```
┌─────────────────────┐
│     MAIN MENU       │
├─────────────────────┤
│    INFORMATION      │
│                     │
│     CAMERA          │
│                     │
│  [   IMAGE    ]      │
│                     │
│     MOTION          │
│                     │
│    RESTART          │
└─────────────────────┘
```

Camera supports setting function, focus setting include focus mode and focus length, specific as follows:

1. Focus mode

Auto/Manual/Semi-auto

```
                    │
                    │
                    ▼

┌─────────────────────────────────┐
│              IMAGE              │
├─────────────────────────────────┤
│                                 │
│        [IMAGEADJUSTMENT]        │
│                                 │
│            EXPOSURE             │
│                                 │
│   [          FOCUS          ]   │
│                                 │
│              WDR                │
│                                 │
│         WHITE BALANCE           │
│                                 │
│       IMAGE ENHANCEMENT         │
│                                 │
│        VIDEO ADJUSTMENT         │
│                                 │
└─────────────────────────────────┘



                    │
                    │
                    ▼

┌─────────────────────────────────┐
│              FOCUS              │
├─────────────────────────────────┤         52
│  FOCUSMODE          AUTO        │
│                                 │
│  FOCUS DISTANCE     1.5M        │
│                                 │
│            BACK                 │
│                                 │
└─────────────────────────────────┘
```

3.3.4 WDR

```
┌─────────────────────────────┐
│          MAIN MENU          │
├─────────────────────────────┤
│                             │
│        INFORMATION          │
│                             │
│          CAMERA             │
│                             │
│      [     IMAGE      ]     │
│                             │
│          MOTION             │
│                             │
│          RESTART            │
│                             │
└─────────────────────────────┘
```
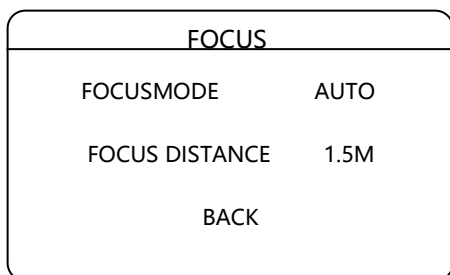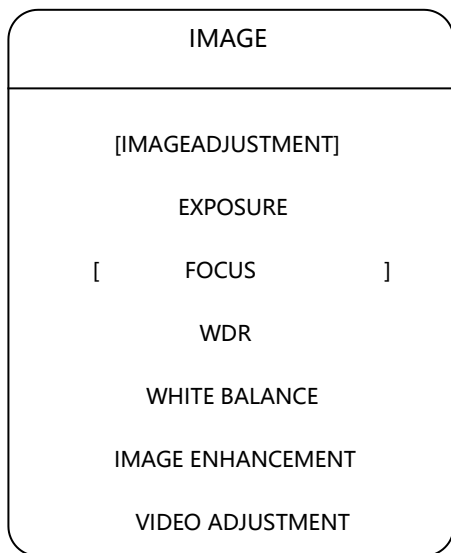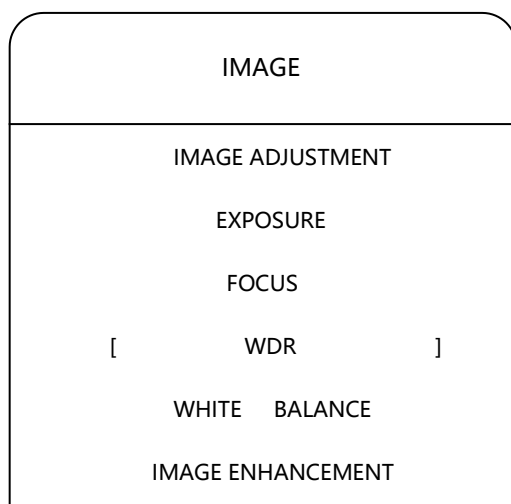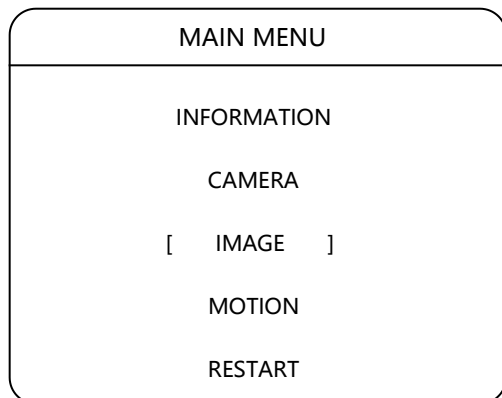
Camera supports WDR function, WDR option includes on and off, WDR rank is 0-100

```
┌─────────────────────────────┐
│            IMAGE            │
├─────────────────────────────┤
│                             │
│      IMAGE ADJUSTMENT       │
│                             │
│         EXPOSURE            │
│                             │
│          FOCUS              │
│                             │
│      [         WDR        ] │
│                             │
│      WHITE    BALANCE       │
│                             │
│     IMAGE ENHANCEMENT       │
```

53

```
            ↓
┌─────────────────────────────┐
│             WDR             │
├─────────────────────────────┤
│  [WDR              OFF]      │
│                             │
│    LEVEL            0        │
│                             │
│          BACK               │
│                             │
└─────────────────────────────┘
```

3.3.5 WHITE BALANCE

```
        MAIN MENU
    _____

        INFORMATION

          CAMERA

      [     IMAGE     ]

          MOTION

          RESTART
```
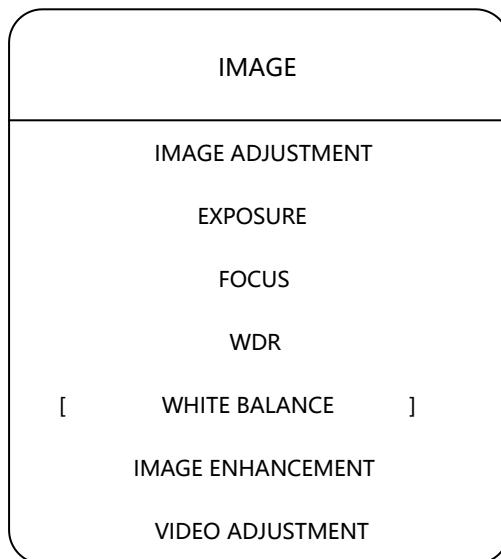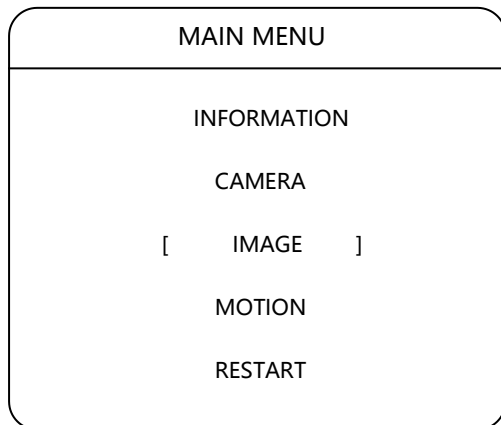
Camera support white balance function, white balance includes auto and manual, for manual, user could adjust R gain and B gain.

R gain rank: 0-100

B gain rank: 0-100

↓

```
          IMAGE
    _____

     IMAGE ADJUSTMENT

         EXPOSURE

          FOCUS

           WDR

   [      WHITE BALANCE      ]

    IMAGE ENHANCEMENT

     VIDEO ADJUSTMENT
```

↓

```
┌─────────────────────────────────┐
│         WHITE BALANCE           │
├─────────────────────────────────┤
│   WHITE BALANCE        AUTO]    │
│                                 │
│   R GAIN          ──|──50       │
│                                 │
│   B GAIN          ──|──50       │
│                                 │
└─────────────────────────────────┘
```

3.3.6 IMAGE ENHANCEMENT

```
┌─────────────────────────────┐   ┌────────────────────────────────────────────┐
│        MAIN MENU            │   │  1. Digital noise reduction                  │
├─────────────────────────────┤   │                                              │
│      INFORMATION            │   │  2D noise reduction：Rank 0-100              │
│                             │   │                                              │
│        CAMERA               │   │                                              │
│                             │   │  3D noise reduction：Rank 0-100              │
│     [    IMAGE    ]         │   │                                              │
│                             │   │    Integration PTZ Camera support digital    │
│        MOTION               │   │  noise reduction                             │
│                             │   │                                              │
│        RESTART              │   │  function, it includes open and close.  。    │
│                             │   │                                              │
└─────────────────────────────┘   │                                              │
                                  │                                              │
                                  │                                              │
                                  │                                              │
                                  │                                              │
                                  └────────────────────────────────────────────┘
```

```
                    ↓

┌─────────────────────────────────┐
│             IMAGE               │
├─────────────────────────────────┤
│                                 │
│        IMAGE ADJUSTMENT         │
│                                 │
│           EXPOSURE              │
│                                 │
│            FOCUS                │
│                                 │
│             WDR                 │
│                                 │
│        WHITE BALANCE            │
│                                 │
│      [IMAGE ENHANCEMENT]        │
│                                 │
│        VIDEO ADJUSTMENT         │
│                                 │
└─────────────────────────────────┘
```

```
                    ↓

┌─────────────────────────────────┐
│        IMAGEENHANCEMEN          │
├─────────────────────────────────┤
│   [NOISE REDUCTION        ON]   │
│                                 │
│   2NDR              ──|──50     │
│                                 │
│   3NDR              ──|──50     │
│                                 │
└─────────────────────────────────┘
```

3.3.7 IMAGE ADJUSTMENT

```
+-----------------------------+
|         MAIN MENU           |
+-----------------------------+
|                             |
|        INFORMATION          |
|                             |
|          CAMERA             |
|                             |
|       [   IMAGE   ]         |
|                             |
|          MOTION             |
|                             |
|          RESTART            |
|                             |
+-----------------------------+
```
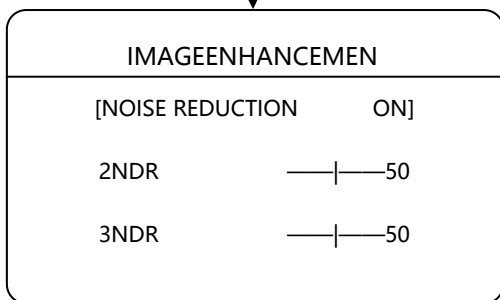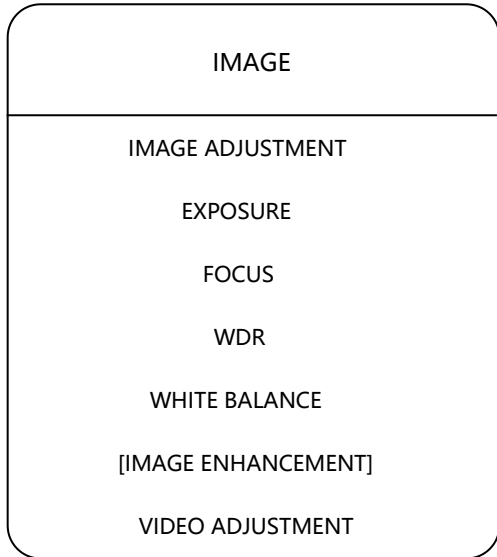
```
+-----------------------------+
|            IMAGE            |
+-----------------------------+
|                             |
|      IMAGE ADJUSTMENT       |
|                             |
|         EXPOSURE            |
|                             |
|           FOCUS             |
|                             |
|            WDR              |
|                             |
|       WHITE BALANCE         |
|                             |
|     IMAGE ENHANCEMENT       |
|                             |
|      [VIDEO ADJUSTMENT]     |
+-----------------------------+
```
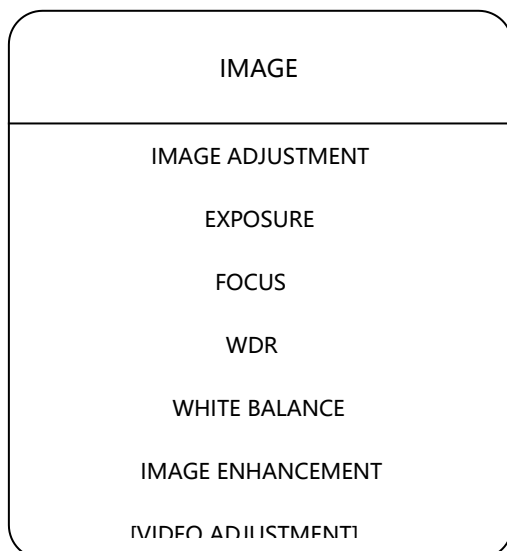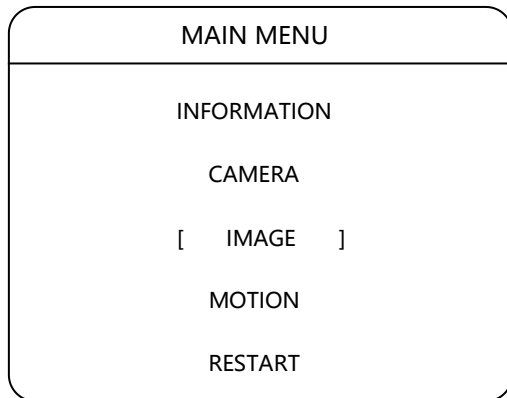
Through device image Adjustment menu, user could operate a serious setting to enhance image effect.   Method is as follows:

1. Digital noise reduction

   Click up/down to digital noise reduction, click left /right to open or close digital noise reduction.

2.2D noise reduction

   Click up/down to 2D noise reduction; click left/right to set rank range, this option only could be set when digital noise reduction open, value is 0-100 settable.

3.3D noise reduction

   Click up/down to 3D noise reduction; click left/right to set rank range, this option only could be set when digital noise reduction open, value is 0-100 settable.

```
              │
              │
              ↓

┌─────────────────────────────────┐
│       VIDEO ADJUSTMENT          │
├─────────────────────────────────┤
│  [MIRROR            OFF]        │
│                                 │
│           BACK                  │
│                                 │
│           EXIT                  │
│                                 │
└─────────────────────────────────┘
```

3.3.8 DEFAULT
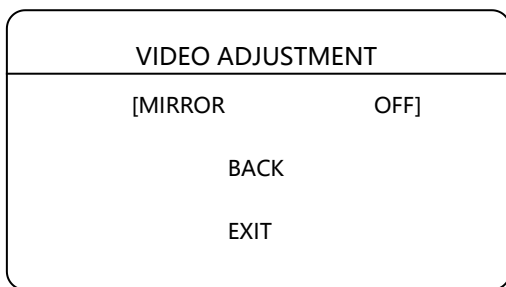
```
┌─────────────────────────────────┐
│          MAIN MENU              │
├─────────────────────────────────┤
│        INFORMATION              │
│                                 │
│          CAMERA                 │
│                                 │
│       [    IMAGE    ]           │
│                                 │
│          MOTION                 │
│                                 │
│          RESTART                │
└─────────────────────────────────┘
```
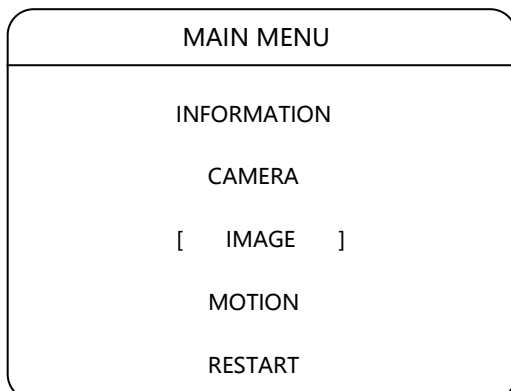
Through operating camera default setting menu, user could restore modified camera image parameter, method is as follows:

Click up/down to "default", click left/right to setting interface.

1. Confirm

Click left/right, camera will restore all the settings to factory default value.

2. Cancel

Click left/right, camera will reserve user settings, and back to previous menu.

```
              ↓
┌─────────────────────────────┐
│            IMAGE            │
├─────────────────────────────┤
│                             │
│       IMAGE ADJUSTMENT       │
│                             │
│           EXPOSURE           │
│                             │
│            FOCUS             │
│                             │
│             WDR              │
│                             │
│         WHITE BALANCE        │
│                             │
│      IMAGE ENHANCEMENT       │
│                             │
│       VIDEO ADJUSTMENT       │
└─────────────────────────────┘
```

```
              ↓
┌─────────────────────────────┐
│           DEFAULT           │
├─────────────────────────────┤
│  RESTORE DEFAULT SETTINGS ?  │
│                             │
│  [            OK          ]  │
│                             │
│           CANCEL            │
└─────────────────────────────┘
```

3.4.1 SCAN

```
┌─────────────────────────────┐
│        MAIN MENU            │
├─────────────────────────────┤
│        INFORMATION          │
│                             │
│          CAMERA             │
│                             │
│          IMAGE              │
│                             │
│      [   MOTION   ]         │
│                             │
│         RESTART             │
└─────────────────────────────┘
```

↓

```
┌─────────────────────────────┐
│          MOTION            │
├─────────────────────────────┤
│      [   SCAN     ]         │
│                             │
│        SEQUENCE             │
│                             │
│        PATTERN              │
│                             │
│          BACK               │
└─────────────────────────────┘
```
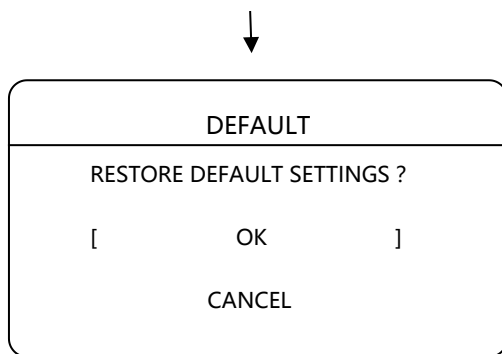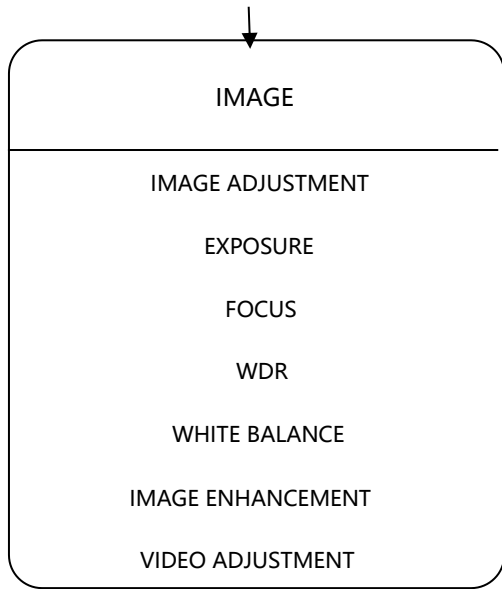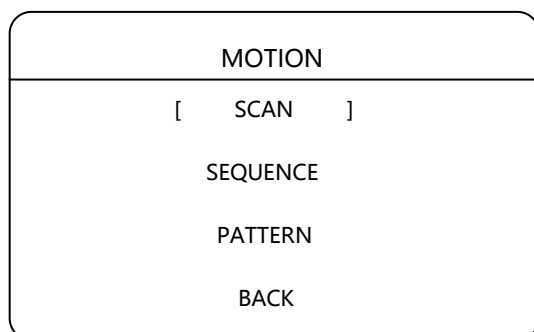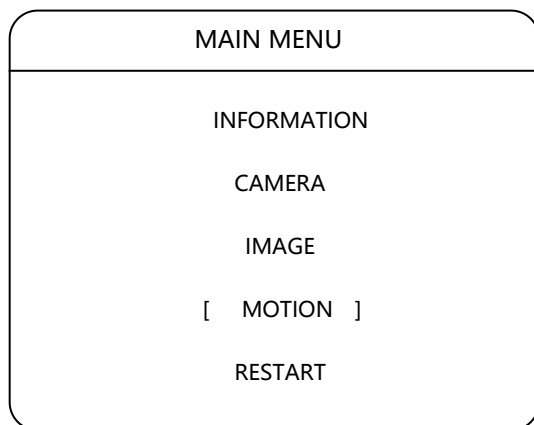
Auto scan function is repeated movement; it supports 8 groups auto scan path. Setting method is as follows:

1. Set scan number

Click up/down to scan number, click left/right to number setting model, click up/down for next step.

2. Set scan speed

Click up/down to "scan speed", click left/right to enter scan speed setting, click left/right to choose speed, 1-100 settable, click up/down to next step.

3. Set left boundary

Click up/down to left boundary setting, click left/right to enter right boundary setting, user could control device to expected position then click focus, then present position is recorded as left boundary.

4. Set right boundary

Click up/down to right boundary setting, click left/right to boundary setting mode, user could control device to expected position, then click focus, then present position is recorded as right boundary.

5. Enable scan

Click up/down to start scan, click

```
                    ↓
      ┌──────────────────────────┐
      │           SCAN           │
      ├──────────────────────────┤
      │  [SCAN No.           1]  │
      │  SCAN SPEED          14   │
      │  LEFT LIMIT SET           │
      │  RIGHT LIMIT SET          │
      │  SCAN START               │
      │          BACK             │
      └──────────────────────────┘
```

3.4.2 SEQUENCE

```
      ┌──────────────────────────┐
      │        MAIN MENU         │
      ├──────────────────────────┤
      │       INFORMATION         │
      │         CAMERA            │
      │          IMAGE            │
      │      [   MOTION   ]       │
```
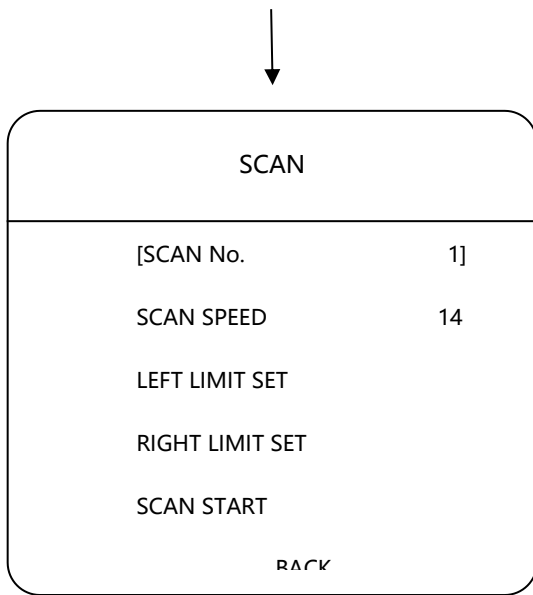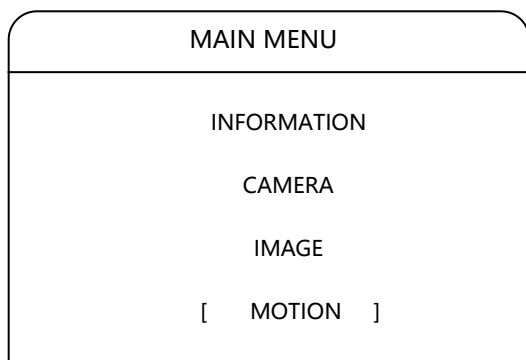
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Auto sequence means device auto switch at appointed preset spot, user could set time interval. Device support 8 groups sequence path, each path at most support 32 preset. Setting method as follows:

1. Set sequence group number

```
                    │
                    ▼

    ┌─────────────────────────────┐
    │           MOTION            │
    ├─────────────────────────────┤
    │            SCAN             │
    │                             │
    │      [    SEQUENCE    ]      │
    │                             │
    │           PATTERN           │
    │                             │
    │            BACK             │
    └─────────────────────────────┘



                    │
                    ▼

    ┌─────────────────────────────┐
    │           MOTION            │
    ├─────────────────────────────┤
    │  [SEQUENCE No.         1]    │
    │                             │
    │  START PRESET         1      │
    │                             │
    │  STOP PRESET          10     │
    │                             │
    │  DURATION             5sec   │
    │                             │
    │  SEQUENCE START              │
    └─────────────────────────────┘
```

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3.4.3 PATTERN

```
┌─────────────────────────────────────┐
│            MAIN MENU                 │
│─────────────────────────────────────│
│                                      │
│          INFORMATION                 │
│                                      │
│            CAMERA                    │
│                                      │
│             IMAGE                    │
│                                      │
│        [     MOTION     ]            │
│                                      │
│            RESTART                   │
│                                      │
└─────────────────────────────────────┘
```
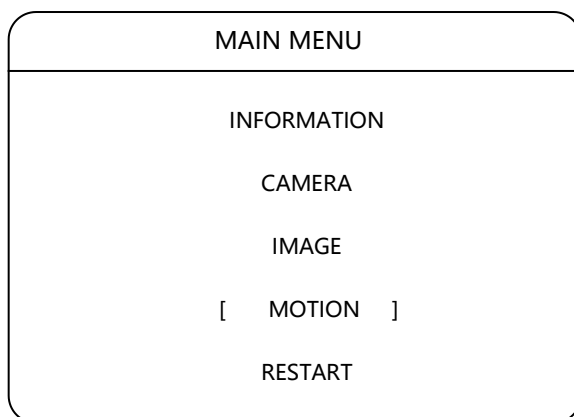
The pattern means camera could operate a series of motion, such as pan/tile rotating, zoom, etc. User could start pattern to playback all operation. The camera supports 4 pattern tours and each pattern cover at most 10 Minutes of 500 commands. Please check the following steps to set up a pattern:

1. Pattern No.

Click up/down key to"Pattern No.", click up/down to set pattern number, click left/right to choose.

2. Enable pattern

Click up/down to "enable pattern

path", click left/right to start

corresponding pattern path number.

2. Pattern Start

Click up/down to "Pattern start", click left/right to start corresponding pattern no.

3. Set Pattern Tour

```
┌─────────────────────────────┐
│          MOTION             │
├─────────────────────────────┤
│          SCAN               │
│                             │
│        SEQUENCE             │
│                             │
│      [    PATTERN    ]      │
│                             │
│          BACK               │
│                             │
│          EXIT               │
└─────────────────────────────┘
```

↓

```
┌─────────────────────────────┐
│         PATTERN             │
├─────────────────────────────┤
│  [PATTERN No.               │
│  1]                         │
│                             │
│   PATTERN SET               │
│                             │
│   PATTERN DELETE            │
│                             │
│   PATTERN START             │
└─────────────────────────────┘
```

3.5 RESTART

```
┌─────────────────────────────┐
│         MAIN MENU           │
├─────────────────────────────┤ 65
│                             │
│        INFORMATION          │
│                             │
│          CAMERA             │
│                             │
│          IMAGE              │
└─────────────────────────────┘
```
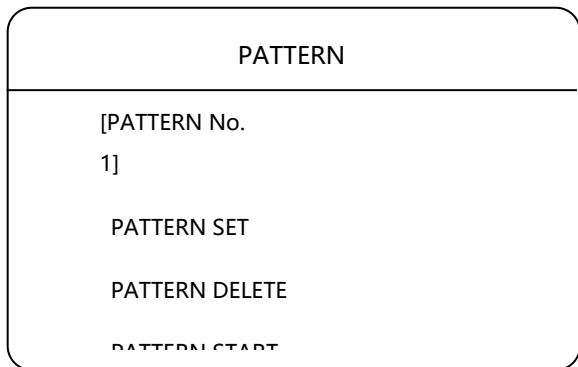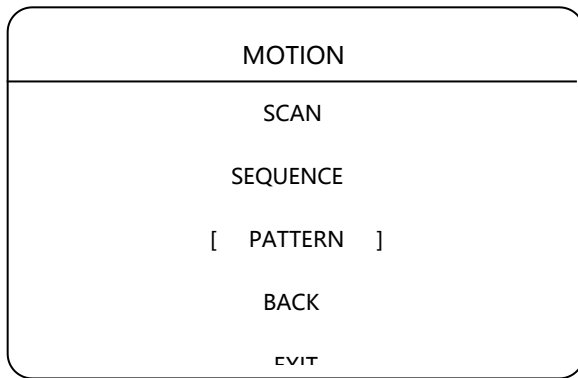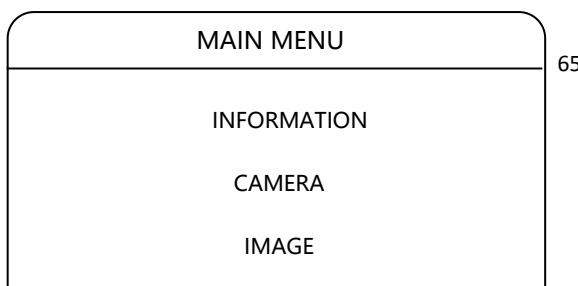
Camera allows user remote control restore itself by OSD menu, operation method: open OSD menu, click up/down to "restart", click left /right key to enter restart confirmation menu, click up/down key to "ok", click left/down key to restart. If click up/down key to "cancel", click left/right to cancel restart, interface return previous OSD interface.

```
┌─────────────────────────────┐
│           RESTART           │
├─────────────────────────────┤
│        RESTART SYSTEM       │
│                             │
│      [        OK        ]   │
│                             │
│           CANCEL            │
│                             │
└─────────────────────────────┘
```

3.6 DEFAULT
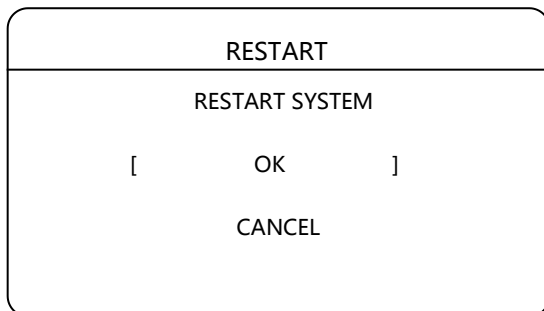
```
┌─────────────────────────────┐
│          MAIN MENU          │
│ ─────────────────────────── │
│                             │
│         INFORMATION         │
│                             │
│           CAMERA            │
│                             │
│            IMAGE            │
│                             │
│           MOTION            │
│                             │
│           RESTART           │
│                             │
│      [   DEFAULT    ]       │
│                             │
│            EXIT             │
│                             │
└─────────────────────────────┘
```
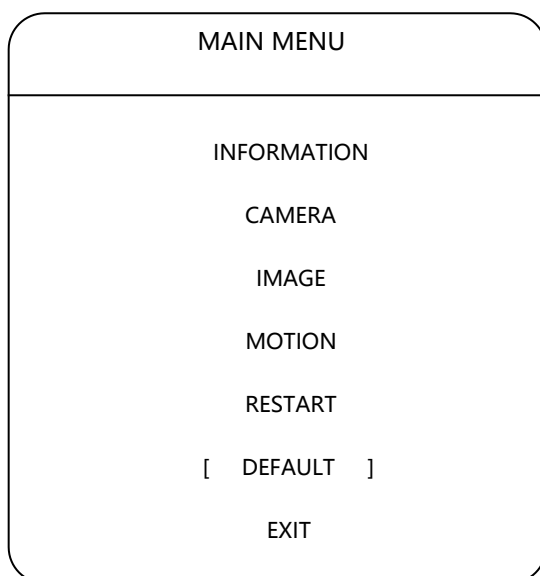
Camera default function has restore and default, instruction as follows:
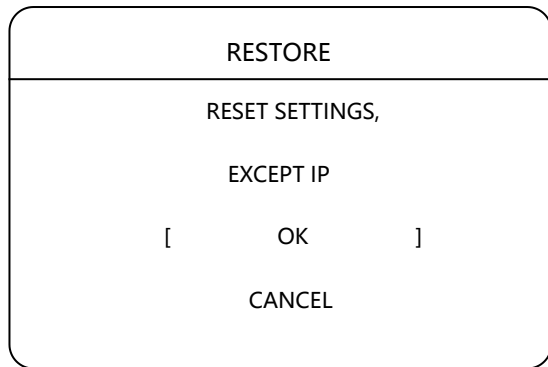
1. Restore

Restore all configuration information to factory default setting. (Except gateway, IP, subnet mask, DNS server)

2. Default

Restore all setting completely to factory default setting status.

3. Operation method

Open camera OSD menu, click up/down key to "default setting", click left/down key to default setting, then click up/down to restore or default. Click left/down, device will restore setting. If click up/down to "BACK/EXIT", then return previous OSD menu or exit OSD menu

```
┌─────────────────────────────────┐
│         DEFAULT SETTING         │
│ ───────────────────────────── │
│      [        RESTORE        ]  │
│                                 │
│             DEFAULT             │
│                                 │
│              BACK               │
│                                 │
│              EXIT               │
└─────────────────────────────────┘
```

```
                  │
                  │
                  │
                  │
                  ▼
```

```
┌─────────────────────────────────┐
│             RESTORE             │
│ ───────────────────────────── │
│         RESET SETTINGS,         │
│                                 │
│           EXCEPT IP             │
│                                 │
│       [        OK        ]      │
│                                 │
│            CANCEL               │
└─────────────────────────────────┘
```
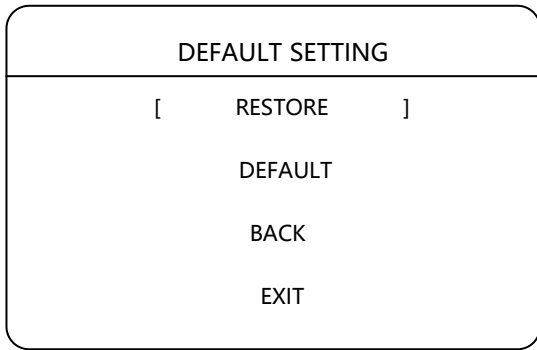
4 APPENDIXES

Lighting protection and Anti-surge

This product uses the gas discharge tube of TVS diode and protection circuit, can effectively prevent the 3.0 kV following transient lightning and surge lamp all types of pulse signal to the damage of equipment. However, for outdoor installation according to the actual situation on the premise of guarantee the electrical safety to do the necessary protective measures:

● Signal transmission line must be with the high voltage equipment goods between high voltage cables to keep a distance of at least 50 meters

● Choose as far as possible outside wiring along the roof line

● for open field must adopt sealing pipe buried wiring way, and the steel pipe by one-point earthling, absolutely forbidden by wiring overhead way

●in strong thunderstorms or high induction voltage region (e.g., high voltage transformer substation), must be taken to add extra high power lightning protection equipment and installation of lightning rod and other measures

● Lightning protection and grounding design of outdoor installation and wiring must be combined with the construction of lightning protection requirements into consideration, and conform to the requirements of relevant national standards and industry standards.

● the system must be equipped on potential grounding. Grounding device must meet the system anti-interference and electrical safety requirements, and shall not be short term or mixed with strong power grid zero line. System separate grounding, grounding resistance is not greater than 4Ω.