IP Camera User's Manual

Table of Contents

1 Download and install ActiveX

When you first log in to our IP camera, you may see a prompt box as below via Windows OS. You need to install ActiveX Control when you visit IP camera for the first time through IE browser.

ActiveX installing method: automatic download installation.
Input the IP address of IP camera in Internet Explore to enter.
Click **Install** to download the ActiveX:

Figure 1

Note: ActiveX will be installed automatically.

Suggestion: change the security level of IE:
Please change the security level of IE, IE tools-> Internet options->Security->Custom level.
As Figure 2, and change the parameters as Figure 3, Figure 4:
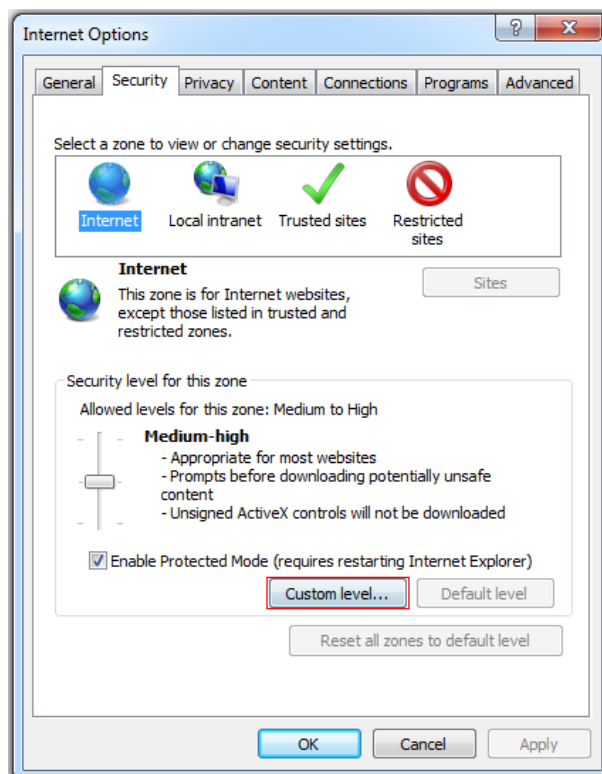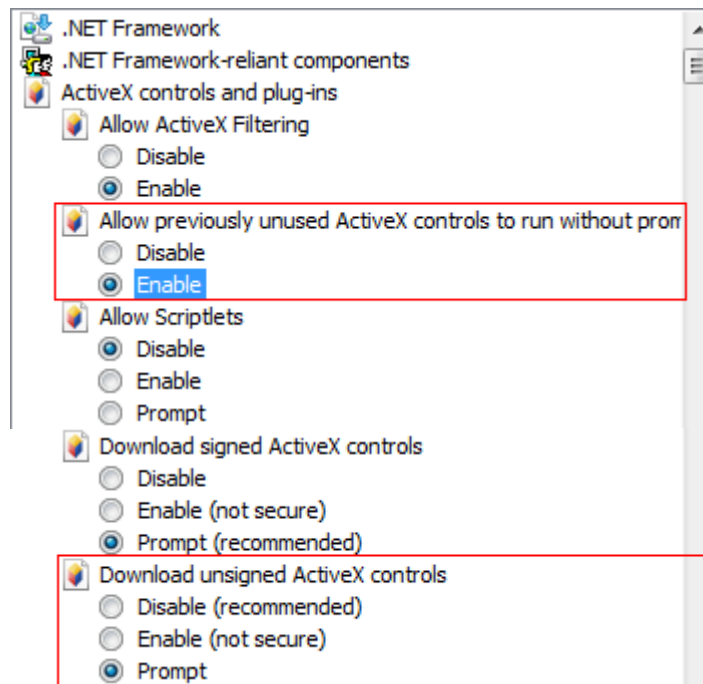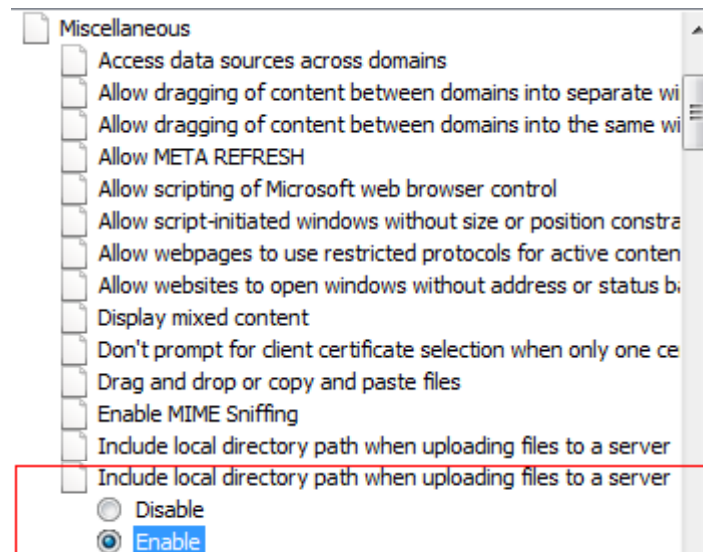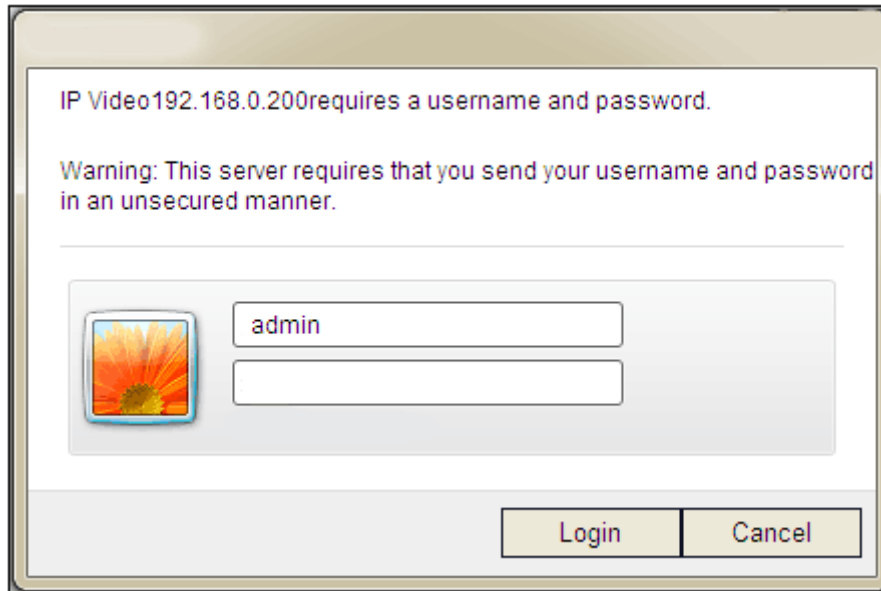
Figure 2

Figure 3

Figure 4

2   Login

Reopen Internet Explorer after ActiveX installation is complete, enter IP address of the IP camera to turn to login page, enter username and password (default setting is admin/pass), click login to enter into main interface see Figure 5:
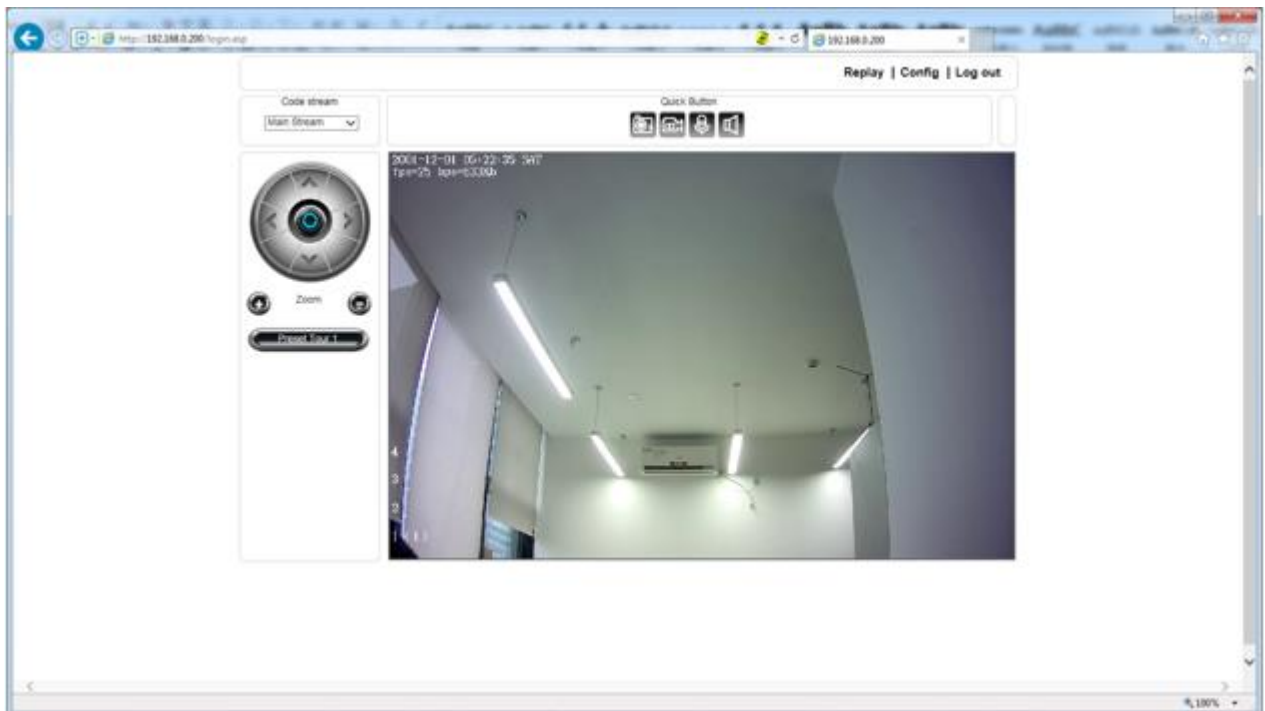
Figure 5

3   Live Preview

See Figure 6 for the interface of Live Preview:

Figure 6

In the live view interface, users can do operations including snapping, recording, playback, call, listen, clear alarm, log search, local zoom of image, full-screen viewing, PTZ and lens control.

- Main Stream: call the main stream of camera to get the best quality.
- Sub Stream: call the sub stream of camera, with low resolution, suitable for bad network or Internet.
- Snap: click snap ▣, snap the current image and save it in .JPG format automatically to the storage directory of snapped images.
- Record: manual image recording, automatically record current images and save them in .264 format to the storage directory of recorded images after the recording function is turned on. Displayed status after recording starts: ▣
- Call: after turn on the audio talkback switch, the talkback between PC and IP camera can be performed given that audio talkback device is installed to the IP camera. The displayed status after audio turns on: ▣
- Listen: after switch on the monitoring switch, PC can monitor the sound at the device end. The displayed status after monitoring starts: ▣
  Double-click to display full screen image.
- Full: double-click to display in full-screen image, right click or click esc to exit full screen mode.
- PTZ: allows adjust zoom, can set preset tour.

4   Replay
Click **Replay** to enter into video playback page, see Figure 7.

Figure 7
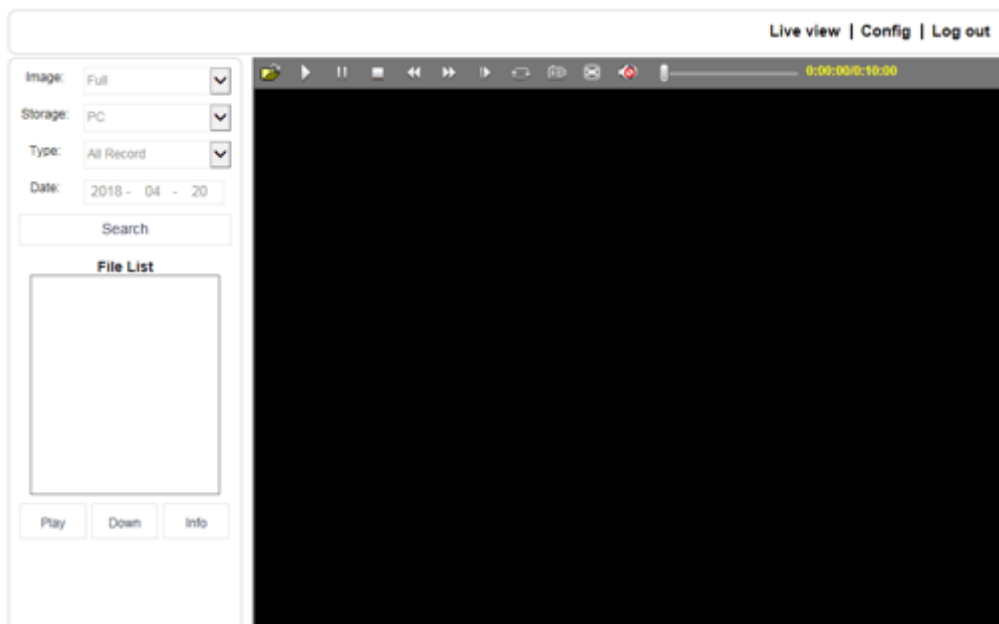
5 System
5.1 System config
Click **Config** to enter system settings, see Figure 8.

Figure 8
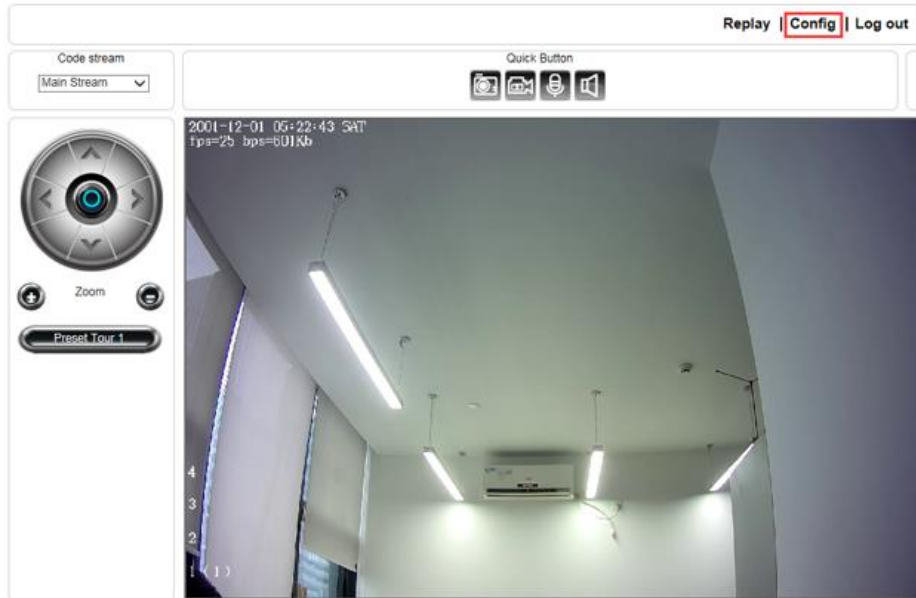
See Figure 9 for the interface of system settings:

Figure 9
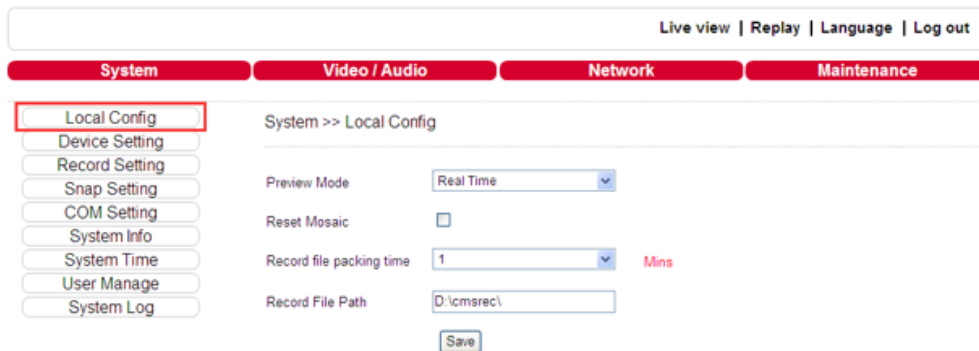
- Preview Mode: users can choose real time priority or fluency priority mode according to their needs.
- Reset Mosaic: select this option to make image quality better, but CPU usage rate will be higher at the same time.
- Record file packing time: set packing time of record files for local PC when it is recording.
- Record File Path: set the storage directory for local records and snapped files.
- After these parameters were set, please click [Save] to make them valid.

Tips: If the file cannot be saved or file path cannot be modified.
- When open IE browser, select to run as administrator.
- Use administrator account login computer directly.

5.2 Video/Audio Settings
5.2.1 See Figure 10 for the interface of Audio Parameter.

Figure 10
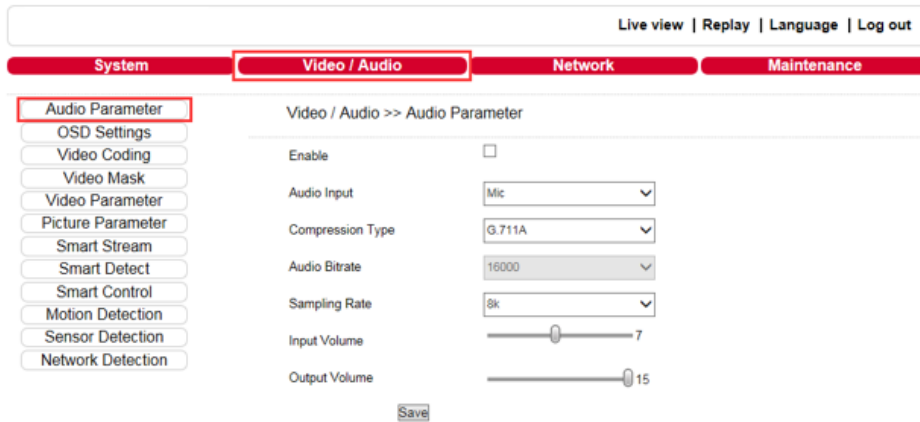
- Enable: turn on or turn off the audio of IP camera, when there is no need for audio, close audio input to save DSP resource and network resource. Audio is disabled by default.
- Audio Input: MIC or Line In input selectable.
- Compression Type: support three types of audio compression format: G.726, G.711A, and G.711U.
- Sampling Rate: support audio sample rates of 8k and 32k.
- Input Volume: adjust the device's input volume to control the volume of listen.
- Output Volume: adjust the device's output volume to control the volume of call.

After parameters were set, please click Save to make them valid.

5.3 Video Settings
5.3.1 Text Overlay
See Figure 11 for the interface of **OSD Settings**:

Figure 11
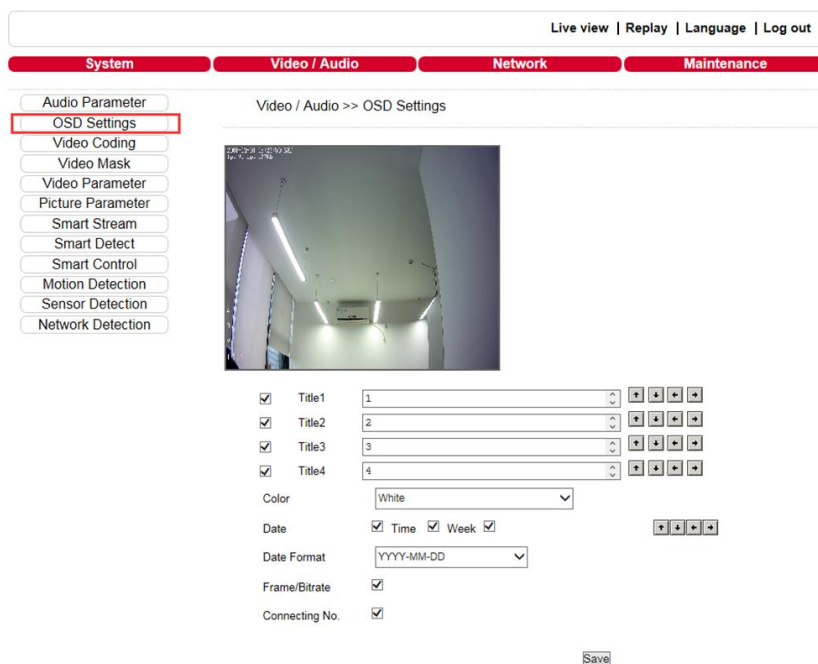
- Title: the name of video channel, displayed at the bottom left of image (movable), maximum characters allowed: 32.
- Color: to select text colors.
- OSD: display or not to display Title, Date, Time, Week, Date Format and Frame/Bitrate of channels.
- Position: can adjust the display position of video title and Date, Time, Week.

After parameters were set, please click [Save] to make them valid.

5.3.2 Video Coding

See Figure 12 for the interface of **Video Coding**:

Figure 12
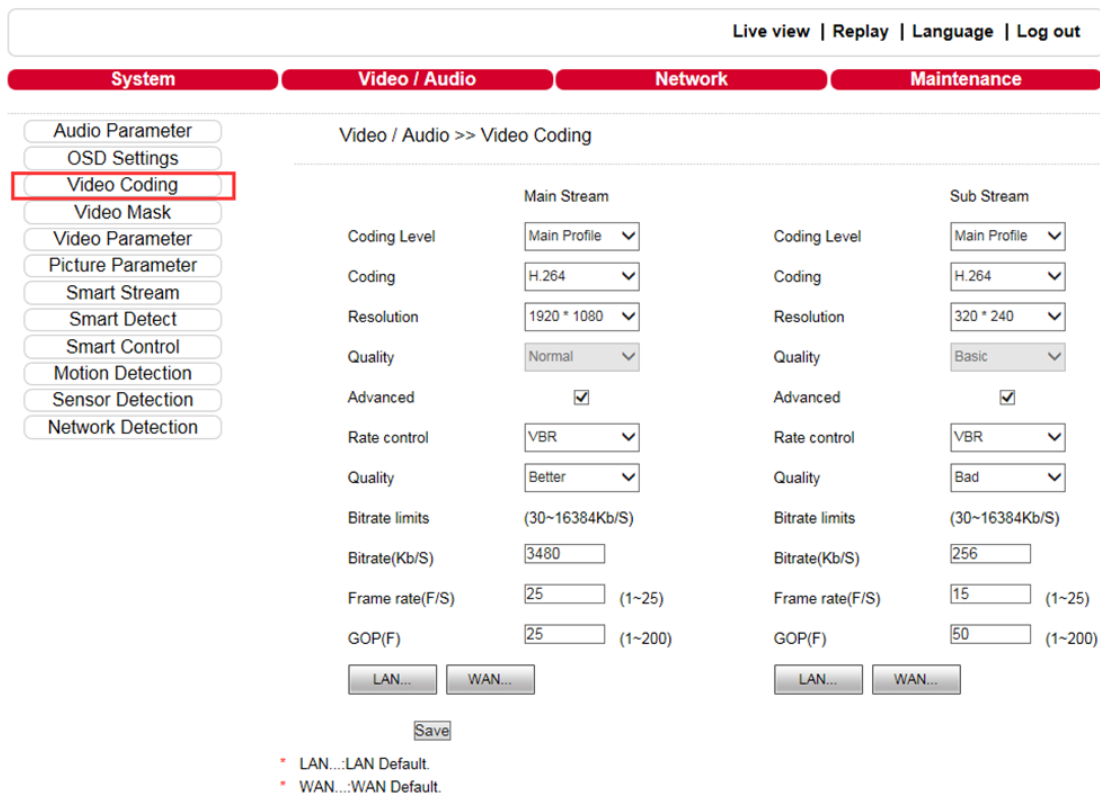
- Coding Level: baseline and Main profile available, only for H.264 compression format.
  Baseline is suitable for low delay, and the situation have requirement on real time. Main profile is suitable for better quality.
- Coding: H.264 and MJPEG.
- Resolution: set resolution of images.
a. 720P support:
- Preferred Stream: 1280*1024 / 1280*960 / 1280*720.
- Alternate Stream: 720*576 / 640*480 / 640*352 / 320*240.
b. 1080P support:
- Preferred Stream: 1920*1080 / 1280*960 / 1280*720.
- Alternate Stream 720*576 / 640*480 / 640*352 / 320*240.
- Quality: to select suitable quality according to requirement: Fine, Normal, and Basic. The parameters can also be user-defined by choosing **advanced**.
- Rate control: CBR and VBR are optional. CBR adopts constant encoding bitrate, VBR adopts variable encoding bitrate.
- Quality:

a. Under CBR setting: set the bitrate range through **Image Quality.** If self-adaption is selected, it means the bitrate is controlled by the software. Another option is ±10%～±50%, ±10% means the bitrate range from -10% to +10% of the bitrate value.

b. Under VBR setting: set image quality through **Image Quality**, 6 levels are available, from best to worst.

• Bitrate: the range of preferred and alternate stream is 30~16384Kbps. Higher bitrate setting can generate better image quality, but it occupies more bandwidth, please adjust the setting according to your actual bandwidth.

a. Under CBR setting, **Bitrate** is the constant bitrate of encoding.

b. Under VBR setting, **Bitrate** is the variable bitrate of encoding.

• Frame rate: set encoding frame rate per second. Under poor network condition, frame rate can be reduced to control encoding bitrate to make motion images flow more smoothly.

• GOP: adjustable between 1～200 (Preferred Stream), 1～200 (Alternate Stream). Smaller I frame interval means higher bitrate and better image quality. It is recommended to set the frame interval as above 25.

• LAN default value:

a. Main stream:

- H.264 Coding: GOP: 75, frame rate: 25, rate control: VBR, image quality: better 720P: 2048kps, 1080P: 4096kps.
- MJPEG Coding: GOP: 75, frame rate: 25, rate control: VBR, image quality: better 720P: 9216kbps, 1080P: 10240kbps.

b. Sub Stream:

- H.264 Coding: GOP: 50, frame rate: 25, bitrate: VBR, 512kbps, image quality: Bad.
- MJPEG Coding: GOP: 50, frame rate: 25, bitrate: VBR, 4096kbps, image quality: Bad.

• WAN default value:

- H.264 Coding: GOP: 25, frame rate: 5, bitrate: CBR, 384kbps, image quality: Bad.
- MJPEG Coding: GOP: 25, frame rate: 5, bitrate: CBR, 4096kbps, image quality: Bad.

After these parameters were set, please click 〔Save〕 to make them valid.

After changing the coding level, resolution and coding, device will restart.

Note: Non-professional users, please use **Advanced Settings** with caution.

5.3.3 Video Mask

See Figure 13 for the interface of **Video Mask**:

Figure 13
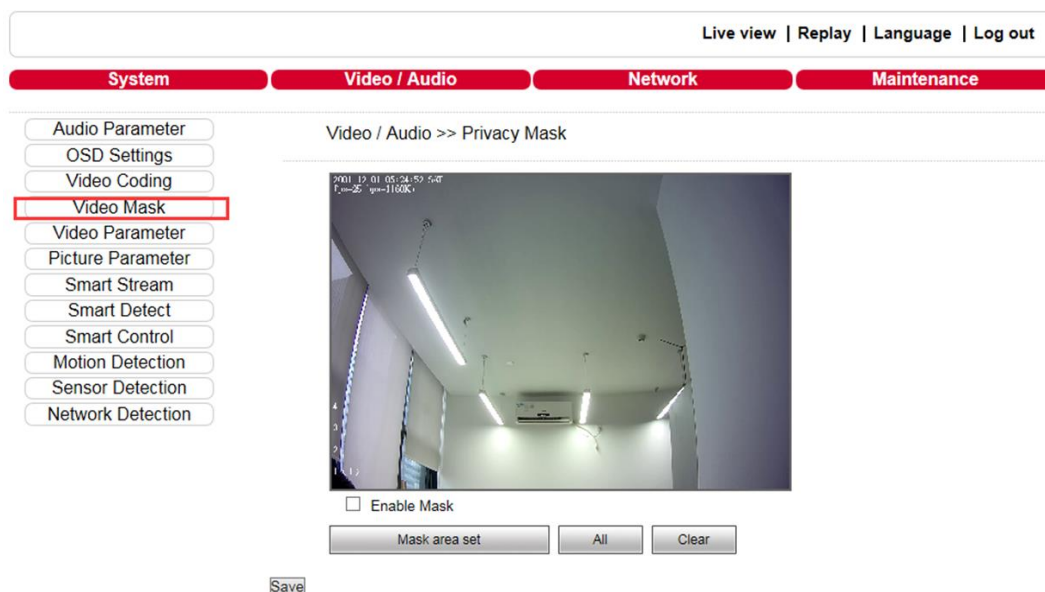
- Enable Mask: enable or disable video masking.
- Mask area set: click and move cursor to set image masking area, an image can be entirely or partially masked, maximum 4 areas are supported.
- All: mask the whole image.
- Clear: clear masked areas.

After these parameters were set, please click Save to make them valid.

5.3.4 Video Parameter
See Figure 14 for the interface of **Video Parameter**:

Figure 14

System   **Video / Audio**   **Network**   **Maintenance**

Audio Parameter
OSD Settings
Video Coding
Video Mask
Video Parameter
Picture Parameter
Smart Stream
Smart Detect
Smart Control
Motion Detection
Sensor Detection
Network Detection

Video / Audio >> Video Parameter
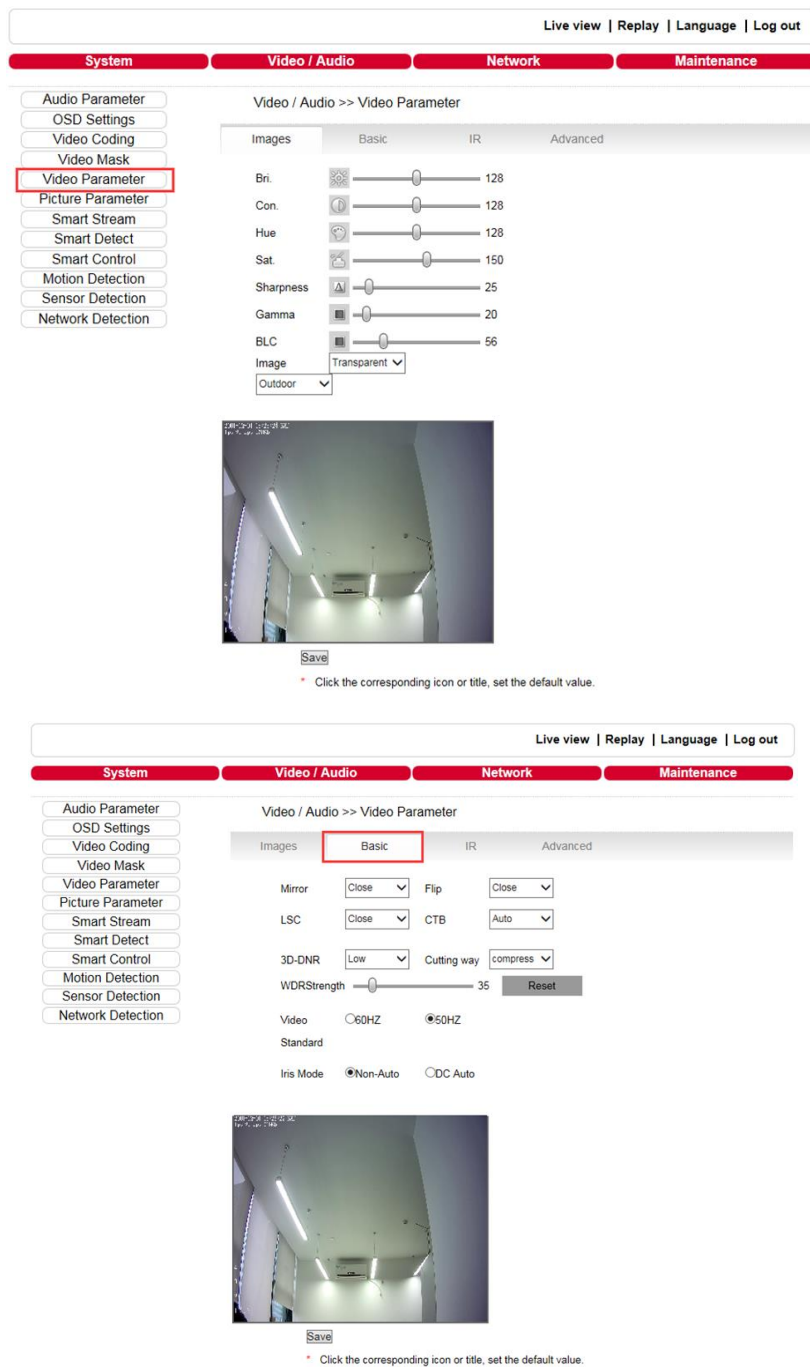
Images   Basic   IR   Advanced

IR mode	IR Detection
	High Level
Black-Color	4	S
Color-Black	0	S
ICR	Low Level
IR	Auto
IR Direction	High Level

Save

* Click the corresponding icon or title, set the default value.

Rotation	Non-Rotation
AGain	■ ——O—— 160	Auto
DGain	■ —O———— 80	Auto
Exposure Time	25	Auto
WB	Auto
AntiFogging	⦿Close ○Open
AntiFalseColor	O———— 0
Image Stabilizer	⦿Close ○Open

Save

* Click the corresponding icon or title, set the default value.

- Images Color: adjust the Brightness, Contrast, Hue, Saturation, Acutance, and Gamma of video. Image mode: Transparent and True Color.
- Basic
a. Mirror: set mirror, horizontally rotate the video.
b. Flip: set flip, vertically rotate the video.
c. 60HZ or 50HZ: in indoor environment, if the flashing of lamps results in the flickering of images, please select 50HZ or 60HZ according to the power frequency. 50HZ is suitable for PAL system, 60HZ is suitable for NTSC system.

d. CTB: set CTB, IPC will automatically turns on D/N function according to the image's situation.

e. WDR: set WDR，enhance the image quality in areas with strong light source (sunlight, lamps or reflectors, etc.) , shadow of high-brightness, backlight.

f. 3D-DNR: set 3D NR to get a clearer picture in low light environment, effectively eliminate video noise and color noise in low light conditions.

g. WB: you can choose manual WB or AWB mode to adjust white balance, default is AWB open.

h. Iris:

- Set Non-Auto Iris, Can be used with non-auto iris lens.
- Set DC Auto Iris, Adjust the control level of auto-iris to control the luminous flux.

Auto Iris Shading: for the first time using auto iris, please redress the iris in the light box.

- IR

a. IR Mode: this function is only for camera with infrared function, it supports 3 kinds of detection mode, suitable for different infrared light board and situation.

- **Time Detection**: for this mode, set the time to turn day mode and B/W mode, this mode have first priority.
- **Video Detection**: for this mode, the sensor will detect the value of lux. It determines whether to turn to B/W mode or not. The larger the value is, the more sensitive it is to turn to B/W mode.
- **IR Detection**: for this mode, the photo-resistor will detect the value of lux. To suit different infrared light board, it supports 3 kinds of mode:
  ▪ Low level mode, when the device get low level voltage from Infrared light board, the device will turn to B/W mode.
  ▪ High level mode, when the device get high level voltage from infrared light board, the device will turn to B/W mode.
  ▪ Auto detection mode, when the device is power on, it will take sample of light, then just it is day mode or B/W mode, and it also get the value of voltage from infrared light board, combination the two value and take them as the condition to turn to day mode or B/W Mode.

b. Black-color: the video from Black-White to color when the detection becomes effective.

c. Color-black: the video from color to Black-White when the detection becomes effective.

Note: The two time control only in the IR Detection mode.

d. ICR Setting the control level of the IR-CUT according to the IR-CUT control level.

e. IR this function suit for the camera with IR-CUT and infrared light board. eg: for ICR, when set low level, it means when the device send a low level voltage to IR-CUT module, the IR-CUT will turn to B/W mode.

- Advanced

a. Rotation: supports 90 degrees and 270 degrees rotation.

b. Gain value: change the value of AGC. It can adjust the effect of image in low light-level.

c. Exposure: set the value of shutter to control exposure time.

d. WB: can select manual WB or AWB mode to adjust white balance, AWB is default open.

e. AntiFogging: set anti fogging function. When the density of fog up to a high value, the ISP will change the brightness and contrast to improve the quality of image.

f. AntiFalseColor: set anti false color function, can cancel the Moore profile effect in high frequency part.

After these parameters were set, please click [Save] to make them valid.

5.3.5 Picture Parameter
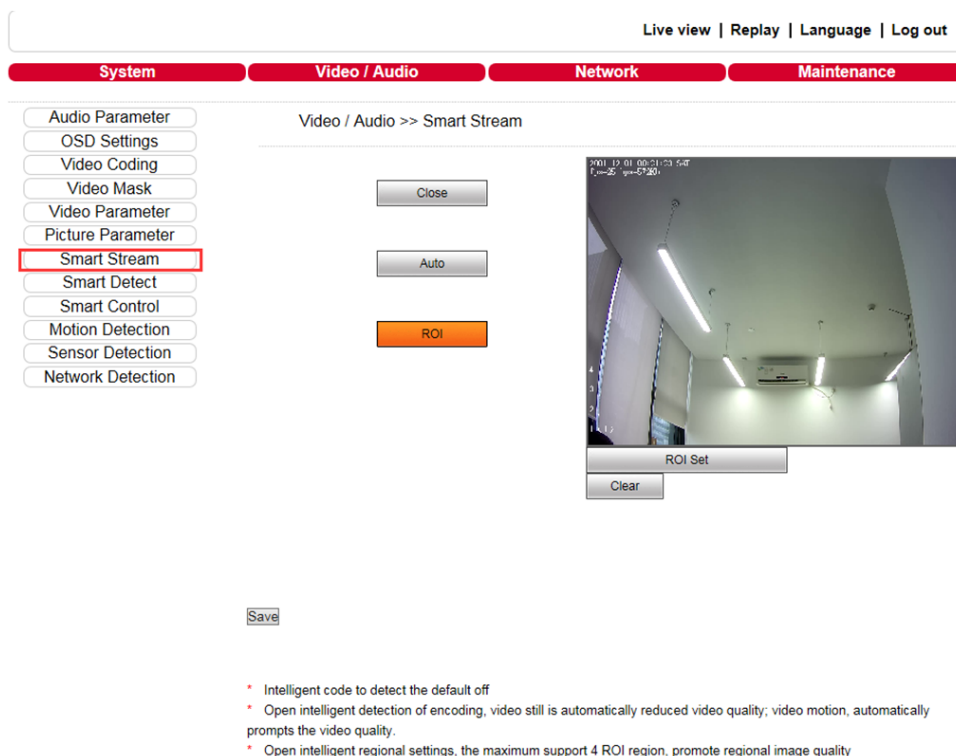See Figure 15 for the interface of **Picture Parameter**:

Figure 15
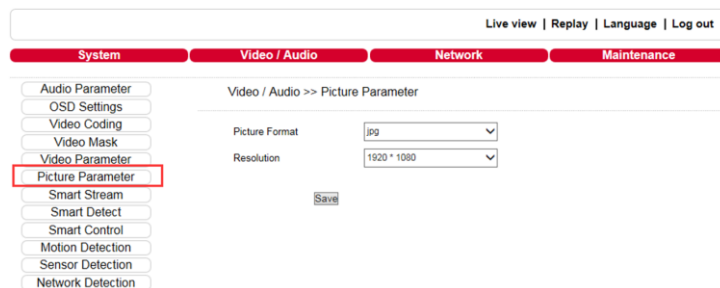
- Picture: currently supports images of JPG format only, megapixel camera definition is the same as set in video definition.

After these parameters were set, please click [Save] to make them valid.

5.4   Smart
5.4.1 Smart Stream

Figure 16

Smart Stream, when this function is enabled, IP Camera will control the stream bitrate according to the real IP Camera scenes. And user can set the ROI, IPC will improve image quality in ROI. This will reduce hard disk storage space, reduce the bandwidth requirements and increase recording length.

- Close: open or close Smart Stream function, default **Close**, like Figure 16, while select **Auto** or **ROI**, smart stream will be opened, like Figure 17:
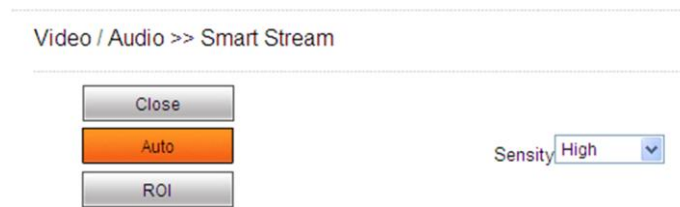
Figure 17

Close

Figure 18

Video / Audio >> Smart Stream

Close
Auto
ROI
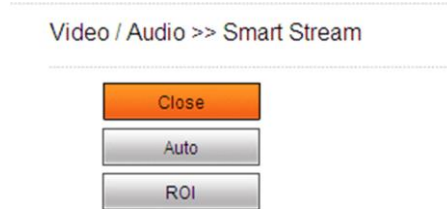
Auto: the selected region of interest for intelligent control stream. The area is set to remain high definition. The area has not been set, and the device will automatically reduce the stream.

Figure 19

Video / Audio >> Smart Stream

Close
Auto
ROI

Sensity High
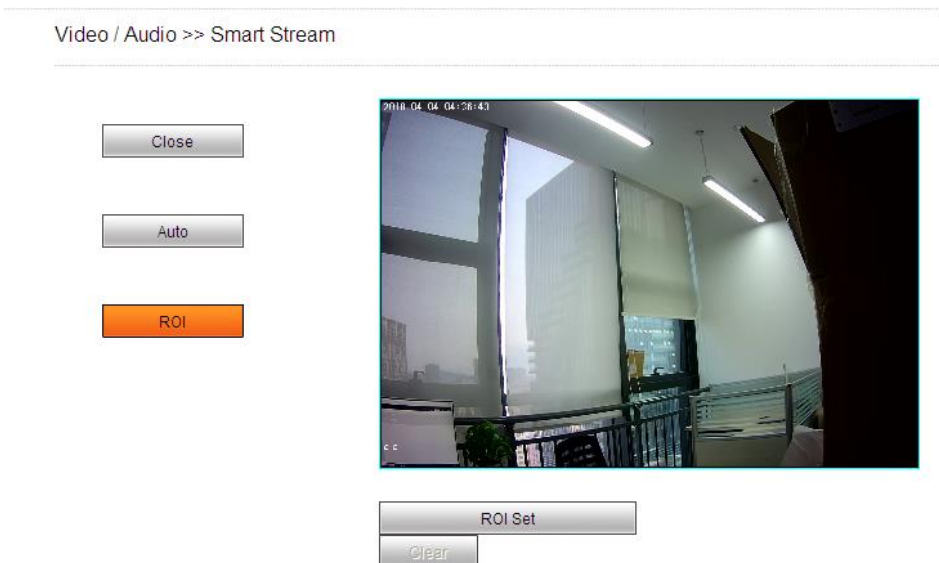
Detection sensitivity: the detection sensitivity is divided into low, medium and high. Default level is high.

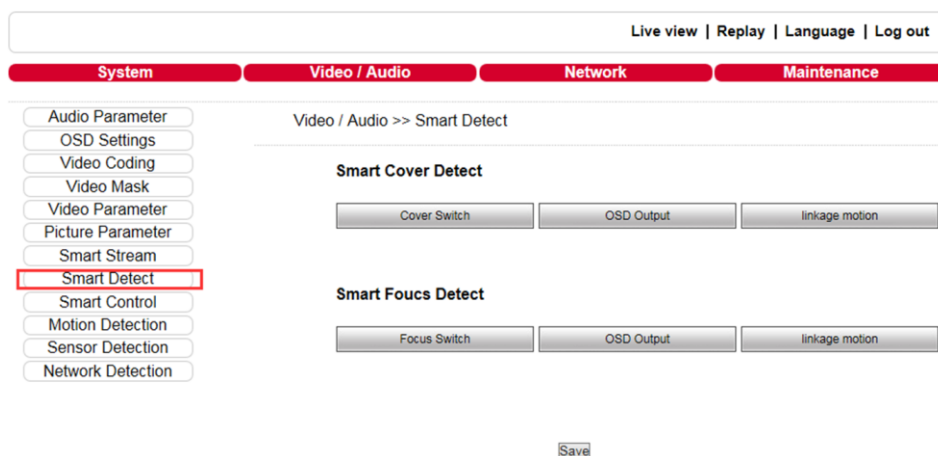ROI: to set a regional intelligence streams, up to four regions of interest, like Figure 20

Figure 20

Video / Audio >> Smart Stream

Close

Auto

ROI

ROI Set
Clear

5.4.2 Smart Detect
Detection methods: smart cover detect and smart focus detect, see Figure 21.
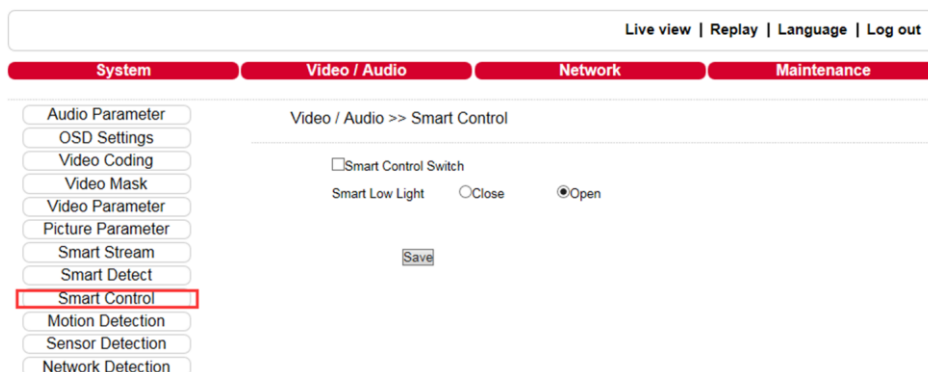
Figure 21

- Smart Cover Detect: start occlusion detection, when device detects the current real-time video is blocked, the device will automatically handle the corresponding event.
a. Cover Switch: open/close smart cover detect.
b. OSD Output: when the cover alarm is triggered, the screen output prompt, this feature must be enabled screen output switch. After an alarm message appears, it will automatically disappear after 2 minutes if not manually cleared.
c. Linkage motion: motion detection alarm needs to be enabled, after opening association when the video is blocked and the entry into force of motion alarms, video tampering effect.
- Smart Focus Detect: start out of focus detection, the device detects the lens out of focus, it will automatically handle the corresponding event.
a. Focus switch: open/close smart focus detect.
b. OSD Output: upon detection of the lens being out of focus, the linkage screen output prompt, this feature must be enabled screen output switch. Screen prompt will disappear after a shot clear tone.
c. Linkage motion: motion detection alarm needs to be enabled, after opening associated lens out of focus when it is detected and motion alarm is in effect, out of focus alarm.

After parameters were set, please click [Save] to make them valid.

5.4.3 Smart Control
See Figure 22 for the interface of **Smart Control**:

Figure 22

- Smart Control Switch: open/close smart control.
- Smart Low Light: open smart low-light, low-light environments will enhance video effect.

Other alarms reference 5.7.

5.5 Network Settings
5.5.1 Basic Setting
See Figure 23 for the interface of **Basic setting**:

Figure 23

- Data port: default value is 5000 (It is recommended not to change it).
- Web port: default value is 80 (It is recommended not to change it).
- ONVIF port: default value is 2000 (It is recommended not to change it).

After these parameters were set, please click [Save] and the device will reboot to make the parameters valid.

5.5.2 LAN Setting
See Figure 24 for the interface of **LAN setting**:

Figure 24

- DHCP Enable: if DHCP function of the router is enabled, IP camera will automatically fetch IP address from the router.

- IP: set the camera's IP address.
- Subnet mask: default value is 255.255.255.0 It is recommended not to change it).
- Gateway: set the gateway IP of IP camera, for example when the device is connected to public network via a router, the gateway IP is the router IP.
- DNS: the default DNS address is use 8.8.8.8.
- MAC: the physical address of IP camera (It is recommended not to change it).

Note: after revise and save parameters, the device will restart. If it is applied in LAN, please pay attention to avoid IP collision.

5.5.3 PPPOE Setting
See Figure 27 for the interface of **PPPOE setting**:

Figure 27

- Enable: enable or disable PPPOE dial-up function.
- IP: after successful setting of device dial-up, it will display the public IP Address.
- Username: ADSL dial-up account, obtain from the IP service provider.
- Password: ADSL dial-up password, obtain from the IP service provider.
- Online time: start timing after dial-up to see the online duration after successful dial-up.

After these parameters were set, please click [Save] to make them valid.

5.5.4 UPNP setting
See Figure 28 for the interface of **UPNP setting**:

Figure 28

Auto-mapping of port, when IP camera is connected to a router with UPNP function enabled, the router will automatically map the port in UPNP settings to public network, manual port mapping by users is not necessary.

- Network card: select the type of NIC connecting UPNP router. For WIFI models, when IP camera is connected to router via WIFI network, select wireless mode.
- Mode: designate mode and auto mode.
- Designate mode means to specify data mapping port and web mapping port to router.
- Auto mode means data mapping port and web mapping port are set up by router.
- Server URL: IP address of the router with UPNP function.
- Data port map No.: data mapping port of user-specified device on the router (works only under specified mode).
- Web port map No.: web mapping port of user-specified device on the router (works only under specified mode).
- Data mapping status: when UPNP function runs successfully, the status bar will echo the data port mapped to the router by the device.
- Web mapping status: when UPNP function runs successfully, the status bar will echo the web port mapped to the router by the device.

After these parameters were set, please click [Save] to make them valid.

5.5.5 Email setting

See Figure 29 for the interface of **UPNP setting**:

Figure 29
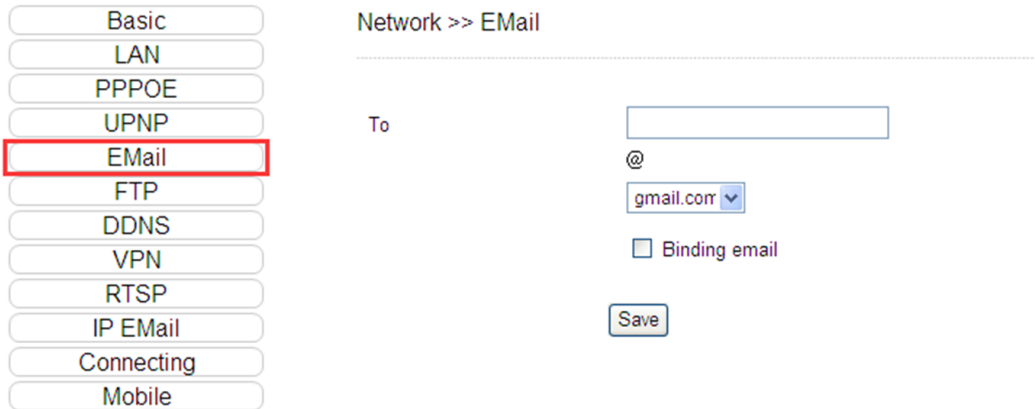
To set the mailbox addresses and parameters of alarm mails and public network IP mails.
- To: mailbox that will receive the mails.
- From: mailbox that will send the mails.
- Password: the login password of the mailbox that will send the mails.
- MAIL title: title of the mails.
- SMTP Port: port of SMTP, every mail server have different port. For example, the server port of Gmail is 465.
a. Commonly used mail server configuration:
b. Gmail mail server:
- SMTP server: smtp.gmail.com
- SMTP user name: username@gmail.com
- SMTP port: 465
- SSL: enabled
- SSL: disabled

5.5.6 FTP setting
See Figure 30 for the interface of **FTP setting**:

Figure 30

FTP server sends the record files and snapped images generated after alarm is triggered in FTP mode to specified FTP server. It supports 2 FTP servers, when the preferred one goes wrong, system will switch to the alternate one.

- Server URL: the IP address or HTTP address of FTP server.
- Server Port: port of FTP server, the default port is 21.
- FTP Catalog: path on remote FTP server, if the path does not exist or has not been filled in, the device will create a file folder under the root directory of FTP server.
- User name and Password: user name and password of FTP server.

Note: To upload the record files and snapped images, you must have the authority to write on the FTP server.

5.5.7 DDNS setting
See Figure 31 for the interface of **DDNS setting**:

Figure 31

Bind the device with a fixed domain name by DNNS setting so that visiting to the device can be realized no matter how the public IP changes.(refer to appendix 3 for detailed steps)
- Enable: enable or disable DDNS function.
- Service Provider: support dyndns.org.
- User Name: user name registered in DDNS server.
- Password: user password registered in DDNS server.
- Domain: the domain name set up by users.
- Server URL: DDNS server address. When DDNS address is the domain name, please set the DNS address in basic parameters correctly.
- Server Port: default value is 30000, this is the DDNS server's port (It is recommended not to change it).
- Data port map No.: fill in the external data port mapped by the IP camera on the router that is connected to public website.
- Web port map No.: fill in the external web port mapped by the IP camera on the router that is connected to public website.
- Update Interval: select the upgrade interval time, eg: 30 minutes, so the IP camera will upgrade the WAN IP to the DDNS every 30 minutes.

After these parameters were set, please click [Save] to make them valid.

5.5.8 VPN setting

See Figure 32 for the interface of **VPN setting**:

Figure 32

- Enable: enable or disable VPN function.
- Server URL: IP address or domain of VPN server.
- User Name: user registered in VPN server.
- Password: user password registered in VPN server.
- IP: display IP after successful VPN dial-up.
- Status: display the status of dial-up.

After these parameters were set, please click [Save] to make them valid.

5.5.9 RTSP setting

See Figure 33 for the interface of **RTSP setting**:

Figure 33

- Enable: check RTSP switch to enable RTSP function. RTSP function is enabled as default.
- Enable Authentication: check encryption switch, disabled as default, when enable encryption, the password is required when using VLC player connect to camera.
- a. Open: rtsp: //ip/av0_0&user=admin&password=pass.
- b. Close：rtsp: //ip/av0_0(&user=admin&password=pass), ( ) optional content.
  av0_0 ,frist"0" shows channel:0,1,2,3，represent the channel :1, 2, 3, 4; IP camera has only one channel, fill in"0"; the second "0" shows main / sub stream, 0: main stream, 1: sub stream; if the authentication mode is changed, the camera reboot.
- RTSP port: default port is 554.
  With RTSP function enabled, users can review the audio and video streams in real time via players that supports standard RTSP protocol.
- Communication: multicast function is enabled as default.
- Multicast Server Address: when the camera supports multicast, the camera will be the multicast server. And it will have the multicast address,239.0.0.0 as default address.
  Multicast port, video of main stream and sub stream using port 5010 and 5020, audio of main stream and sub stream using port 5012 and 5022.

After these parameters were set, please click [Save] to make them valid.

5.5.10 Public IP noticed by email

See Figure 34 for the interface of **Public IP noticed by email**:

Figure 34

- Enable: check this switch to enable public IP mail notification function.
- Update Interval: select the interval of public IP mail notifications.
  After this function is enabled, when the device detects public IP changed, it will send notification mail to the mail address that is set in mail setting.

After these parameters were set, please click [Save] to make them valid.

5.5.11 Connect setting

See Figure 35 for the interface of **Connect setting**:
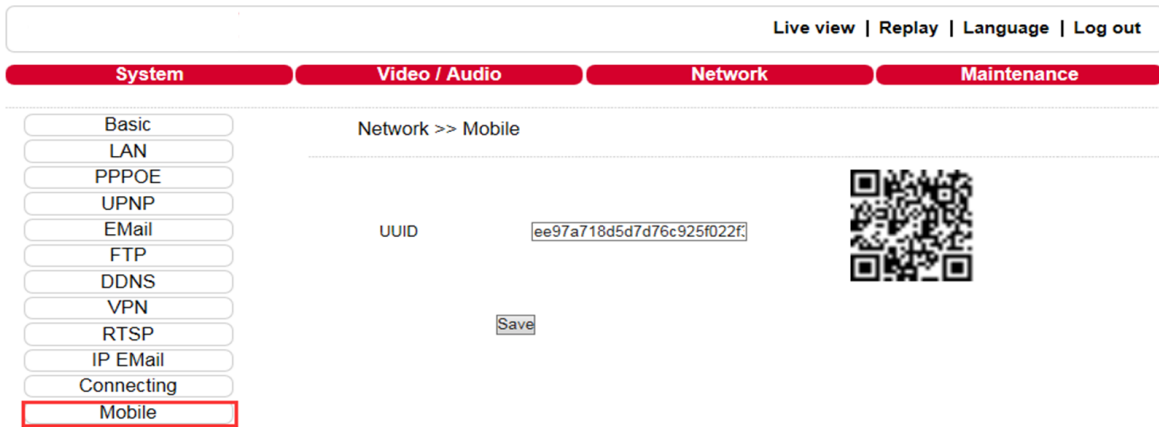
Figure 35

- Enable: enable or disable active connection of the device to surveillance center.
- Server URL: the address of surveillance center.
- Server Port: the port of surveillance center, e.g. 5000.

After setting all the network parameters, click [Save] to make the parameters valid.

5.5.12 Mobile

UUID mobile terminal APP search UUID to label equipment. LAN custom fill in a string 1-32 numbers, letters or a combination of both can be used; internet use UUID provided by the manufacturer.
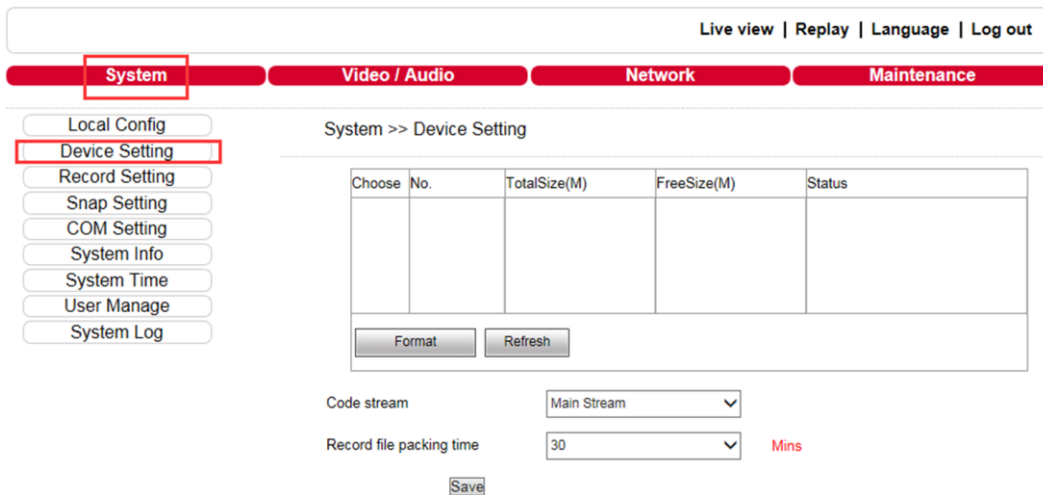
66-UM-ESeries-OOE-1

Figure 36

5.6 Storage Settings
This function is optional, can be purchased according to requirement.

5.6.1 Device Setting
See Figure 37 for the interface of **Device Setting**:

Figure 37

- Storage Device: view information of SD card, including No., Total Size, Free Size and Status. Users can also click **Format** button to format SD card, during the formatting process, please click **Refresh** button to display formatting completion percentage.
- Code stream: set record stream for SD card, main stream and sub stream are selectable.
- Record file packet time: set packing time for record file .10M means recording files will be packed every 10 minutes.

Note:
- Hot-plugging is not recommended for SD card. Compulsory hot-plugging may damage the SD card, and may cause data loss or abnormal operation.
- Do not cut off the power of the device during formatting process.
- Ext2 file is used to format system by default.
- IP Camera does not support the storage that formatted into several partitions. So if need to format it on PC before using it, please format it into one partition.

After setting all the parameters, click [Save] to make the parameters valid.

5.6.2 Record Setting

See Figure 38 for the interface of **Record Setting**:

Figure 38

* Schedule Record: set the period of scheduled recording. Two periods are allowed.
* File storage mode: set the save scheduled recorded files to FTP server via FTP uploading. FTP server can be set up in FTP settings.

After setting all the parameters, click [Save] to make them valid.

Note: Record files are saved in FTP server. SD card is needed for cache memory support. Otherwise, record files will be overwritten by new files due to insufficient cache memory space.

5.6.3 Snap Setting

See Figure 39 for the interface of **Snap Setting**:

Figure 39

* Snap Interval: set the interval of IP camera picture snapping, minimum interval is 1 second.
* Schedule Snap: set the period of scheduled snapping, two periods are allowed.
* File save mode: IP camera snapped pictures can be saved via E-mail sending or FTP uploading. E-Mail server can be set up in Mail Settings, FTP server can be set up in FTP Settings.

Note: when uploading picture via E-mail, up to 30 seconds interval time is recommended. If snapshots is too frequent, SMTP server will block the email.

After setting all the parameters, click [Save] to make the parameters valid.

5.7 Alarm Settings

This function is optional, can be purchased according to requirement.

5.7.1 Motion detection

See Figure 40 for the interface of **Motion detection**:

Figure 40

In this page, motion detection on/off, sensitivity, detection time, linkage alarm output, alarm output duration, E-mail sending when alarm been triggered, linkage snapping/recording features can be set.

- Motion Detection Area: left click and scroll the mouse to set the surveillance areas (4 areas at most).
- All: set the whole video as motion detection area.
- Clear: clear all motion detection areas.
- Sensitivity: sensitivity range is 1~5, greater value means higher sensitivity.
- Enable: enable or disable motion detection.

- Time: set the period of time for motion detection, two periods are allowed.
- Linkage alarm output: support Email, IO output, snapshot and record.
- E-mail: send motion detection alarm messages to users via E-mail. Please refer to network settings for E-mail setting details.
- IO output: enable or disable alarm output.
- Alarm Output duration: set the duration after being triggered (in seconds), the range of the duration is 0~86400s. 0 means that there is no limit for alarm output.
- Snapshot: when alarm is triggered, the device SD card will be driven to snap pictures. The pictures can be send via FTP. For snapping parameters, if the number of pictures snapped at one time is set as 10, and the snapping interval is 1 second, that means when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.
- Record: when alarm is triggered, the device SD card will be driven to record files. The record files can be saved to FTP server.

After setting all the parameters, click [Save] to make the parameters valid.

Note: Record file packet time equals duration of alarm add the record time set in linkage recording.

5.7.2 Sensor Detection

See Figure 41 for the interface of **Sensor Setting**:

Figure 41

Set sensor alarm parameters: enable detect, sensor type, detect time, linkage alarm output, linkage output duration, E-mail sending when alarm has been triggered, linkage snapping/recording, and etc.

- Enable: enable or disable sensor alarm detection.
- Type: NO and NC mode.
- Time: set the period of time for sensor alarm detection. Two periods are allowed.
- Linkage Alarm output: support Email, FTP, IO output, snapshot and record.
- E-mail: send sensor alarm message to users via E-mail. Please refer to network settings for E-mail

setting details.
- IO output: enable or disable linkage alarm output.
- Alarm output duration: set the duration after being triggered (in seconds), the range of the duration is 0~86400s. 0 means that there is no limit for alarm output.
- Snapshot: when alarm is triggered, the device SD card will be driven to snap pictures. The pictures can be saved via E-mail sending or FTP uploading. For snapping parameters, if the number of pictures snapped at one time is set as 10, and the snapping interval is 1 second, which means when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.
- Record: when alarm is triggered, the device SD card will be driven to record files. The record files can be saved to FTP server.

After setting all the parameters, click [Save] to make the parameters valid.

Note: Record file packet time equals duration of alarm add the record time set in linkage recording.

5.7.3 Network Detection

See Figure 42 for the interface of **Network detection**:

Figure 42

Set network failure alarm parameters: detection on/off, linkage alarm, alarm output duration, E-mail sending when alarm has been triggered, linkage snapping/recording, etc.

- Enable: enable or disable network failure alarm detection.
- Linkage Alarm output: support IO output, snapshot and record.
- IO output: enable or disable linkage alarm output.
- Alarm output duration: set the duration of the linkage alarm output after being triggered (in seconds), the range of the duration is 0~86400s. 0 means that there is no limit for alarm output.
- Snap: when alarm is triggered, the device SD card will be driven to snap pictures. The pictures can be saved via E-mail sending or FTP uploading. For snapping parameters, if the number of pictures snapped at one time is set as 10, and the snapping interval is 1 second, that means when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.
- Record: when alarm is triggered, the device SD card will be driven to record files. The record files can be saved to FTP.

After setting all the parameters, click [Save] to make the parameters valid.

Note:

- Record file packet time equals duration of alarm add the record time set in linkage recording.
- When network failure occurs, E-mail sending and FTP uploading cannot be performed, the pictures and recorded files will be stored in SD card. E-mail sending and FTP uploading will resume after network is recovered.

5.8 COM Setting

See Figure 43 for the interface of **COM Setting**:

Figure 43
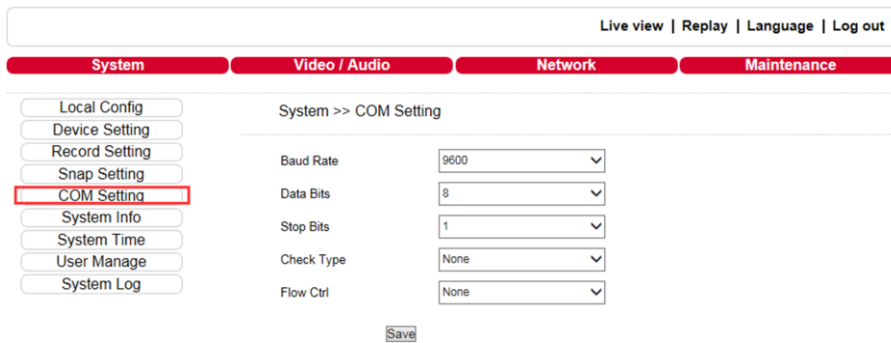
- COM Setting: when IP camera is connected to RS485 (or RS232) communication or control device (e.g. PTZ decoder, dome camera), the parameters of RS485 (or RS232) need to be set according to the settings of the communication control device (address, protocol, baud rate), and the corresponding protocol need to be downloaded.

Note: To enable control of add-on communication control device, the parameters and protocol must be correctly set

5.9 System Setting
5.9.1 System Info

See Figure 44 for the interface of **System Info**:

Figure 44
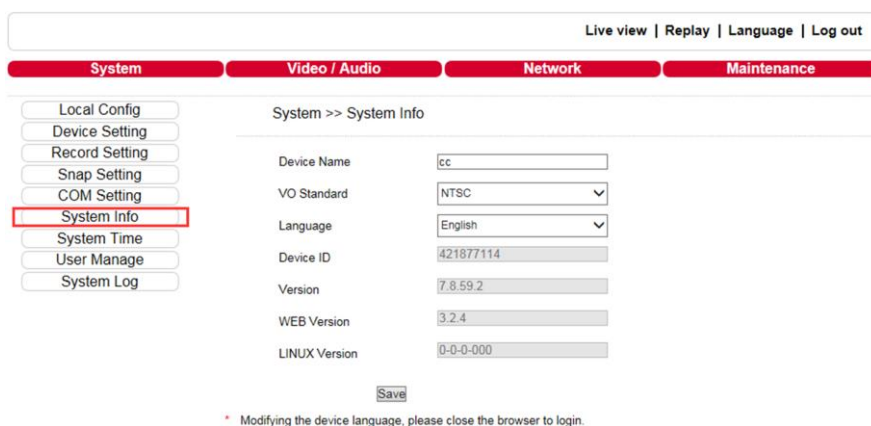
- System: display device name, VO standard, language device ID, version, the device name can be defined.
- Language: support Chinese and English. After changing the language, please reopen the IE browser to login the camera again.
-

After setting all the parameters, click [Save] to make the parameters valid.

5.9.2 System Time

See Figure 45 for the interface of **System Time**:

Figure 45

- System time: supports three method to upgrade the device's time.
- NTP Server: after starting the function, switch on NTP switch and select time zone, and click save. The camera will send the query to NTP server. After getting the message from NTP server, the camera will upgrade the system time, and the system time will be displayed in live view.
- Synchronize with Local Computer: after starting the function, the date and time of IP camera will be synchronized with the local PC.
- Set the Time Manually: select this option to modify the time manually.

After setting all the parameters, click Save to make the parameters valid.

5.9.3 User Manage

See Figure 46 for the interface of **User Manage**:

Figure 46

Three users can be set for every camera, one is administrator, and the others are general users.

- Administrator authority: can operate and set all the functions and parameters of IP camera.
- General user authority:
a. Can perform snapping, recording, playback, talkback, monitoring, alarm clearing, log searching, zooming and full-screen reviewing.
b. Can perform operations like visit setting, image lightness and color adjustment, PTZ and lens control, etc.

Default user name of administrator: **admin**   Password: pass
Default user name of general user: **user 1 \ user 2**   Password: **user 1 \ user 2**
Note: user name and password are case sensitive.

Note: user name and password must be 1-16 character-strings consisting of letters, numbers, underlines or dots. The characters are case sensitive.

5.9.4 Upgrade
See Figure 47 for the interface of **Upgrade**:

Figure 47
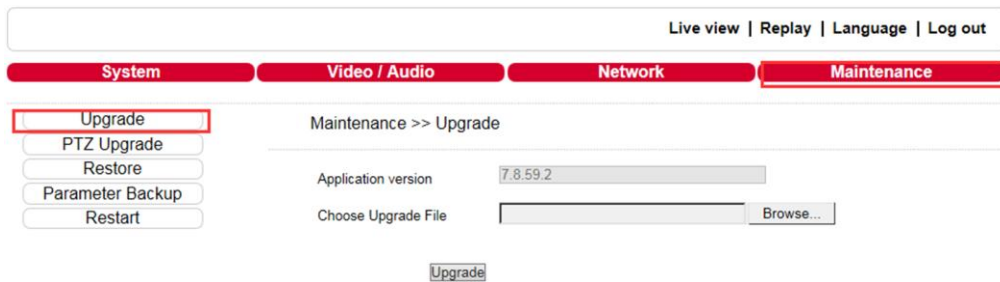
To upgrade the system, click **Browse** button, select correct file of upgrade (kernel file, suffix. uot), and click **upgrade**. The completion rate will be displayed during this process. After upgrade completes, IP camera will restart automatically. Re-log in device, enter into system settings page, check to see if the kernel edition is the upgraded edition.

Note: Don't cut off the power and internet connection while upgrading.

5.9.5 PTZ Upgrade
See Figure 48 for the interface of **PTZ Upgrade**:

Figure 48
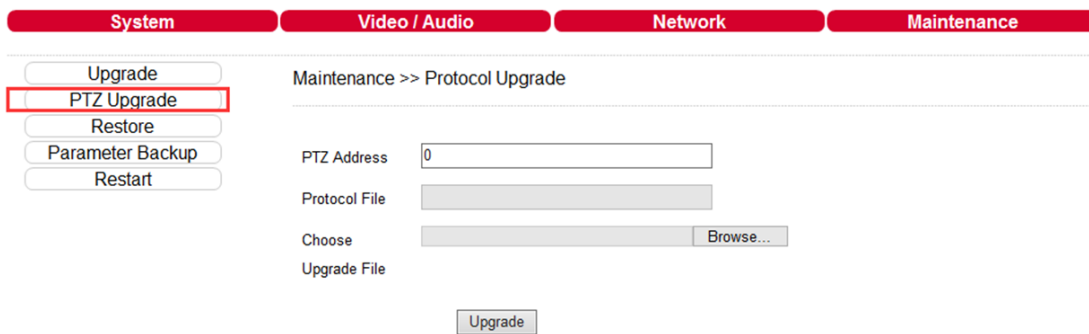
- PTZ address: 1~255.
- Protocol file: echo the built-in protocol name of current IP camera, PELCO-D (STD-Speed). COD as default.

- Choose Upgrade File: can upload the selected decoder/dome camera communication protocol. The system supports hundreds of decoder/dome camera communication protocols, it can also be defined according to the standard format of protocols.

After setting all the parameters, click save to make the parameters valid.

5.9.6 Restore
See Figure 49 for the interface of **Restore**:

Figure 49
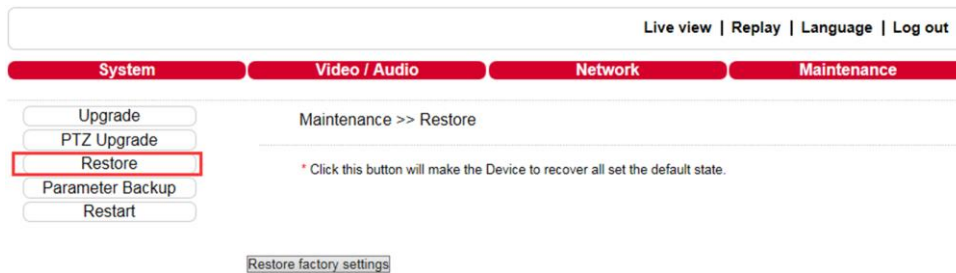
All device parameters (including network parameters, excluding physical address) will be recovered as factory setting values.

5.9.7 Restart
See Figure 50 for the interface of **Restart**:

Figure 50
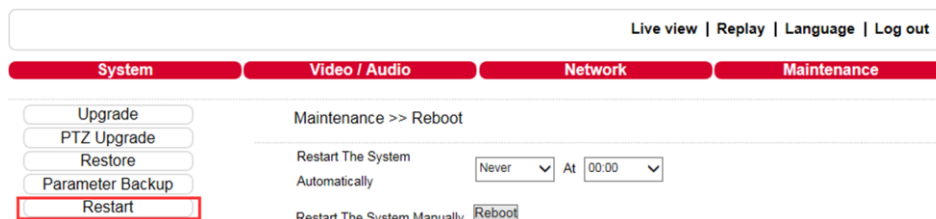
Click **Reboot** and a box will pop up. Enter the password to restart the IP camera.

5.9.8 System log
See Figure 51 for the interface of **System log**:

Figure 51
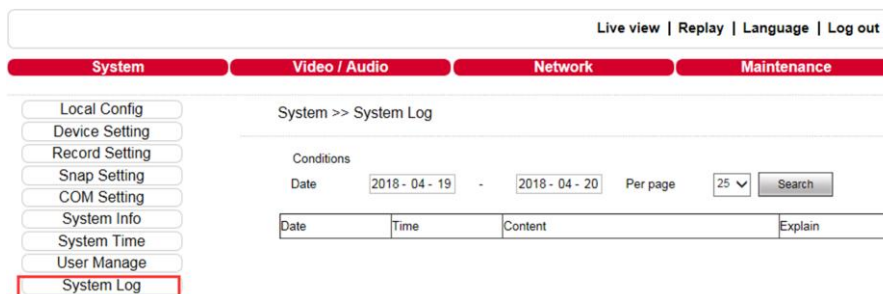
Search: supports operation log and alarm log searching, the maximum capacity is 512 entries of message. When the number of entries exceeds 512, system will delete records of the earliest date automatically.

Appendix 1 Network Interface of IP Camera

The default network ports of IP camera are:

	80	Web port
TCP	5000	Communication port, audio/video data transmission port, talkback data transmission port
UDP	5000	Audio/video data transmission port
Multi-cast port	Multicast original port + channel number	
ONVIF	2000	

Appendix 2 Default Network Parameters

Default network parameters

```
Cabled Network:
    IP Address: 192.168.0.200      Data Port: 5000
    Subnet mask: 255.255.255.0     Web Port: 80
    Gateway: 192.168.0.1            DHCP: Off
                    Wireless Network:
    IP Address: 192.168.0.160      Frequency: Auto
    Gateway: 192.168.0.1            Mode: Auto
    Subnet mask: 255.255.255.0
```

Appendix 3 FAQs

• Fail to visit IP camera via IE browser

a. Possible Reason 1: network is disconnected.
   Solution: connect your PC to network, check whether it works properly or not.
   Check whether there is cable failure or network failure caused by PC virus, until PCs can be connected with the command of Ping.

b. Possible reason 2: IP address has been occupied by other devices.
   Solution: stop the connection between IP camera and network, hook up IP camera to PC separately, reset IP address according to recommended proper operations.

c. Possible reason 3: IP addresses are in different subnets.
   Solution: check IP address, subnet masking address of the DVS and the settings of gateway.

d. Possible reason 4: physical address of network conflicts with IP camera.
   Solution: modify the physical address of IP camera.

e. Possible Reason 5: web port has been modified.
   Solution: contact network administrator to obtain related information.

f. Possible Reason 6: unknown.
   Solution: press **RESET** to restore default settings. Afterwards, connect it again. The default IP address is 192.168.0.200, subnet mask is 255.255.255.0 (Some special versions, the default IP address is 192.168.0.200, subnet mask is 255.255.255.0).

• No video image displayed in IE browser
   Possible reason: ActiveX not installed.
   Solution: ActiveX must be installed when visiting IP camera for the first time via internet explorer. How to install: visit IP camera, click **file**, file download dialog will pop up, select **Run** or **Save** to download. Please refer to ActiveX installation guide to install the ActiveX.

• Fail to upgrade IP camera via IE
   Possible reason: security level of IE is high.
   Solution: change IE Browser Setting.
   Steps: Open **IE，IE tools**-> **Internet options**->**Security**->**Custom level** as Figure 52, and change the **Other** parameters as Figure 53.
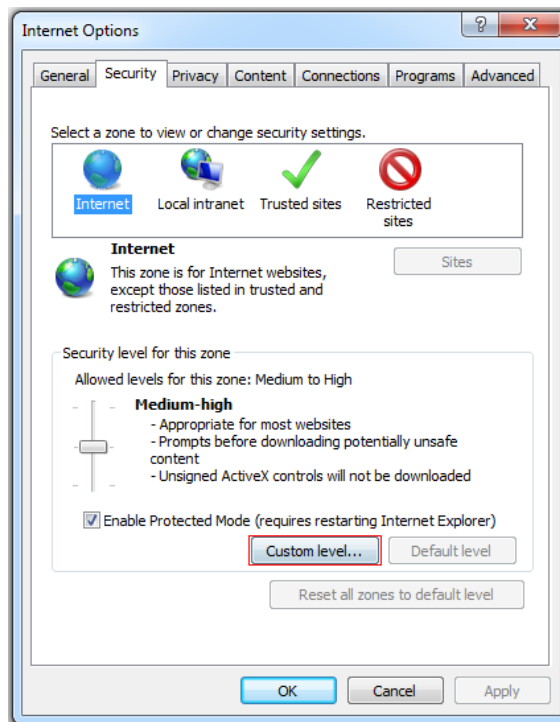
Figure 52

Figure 53
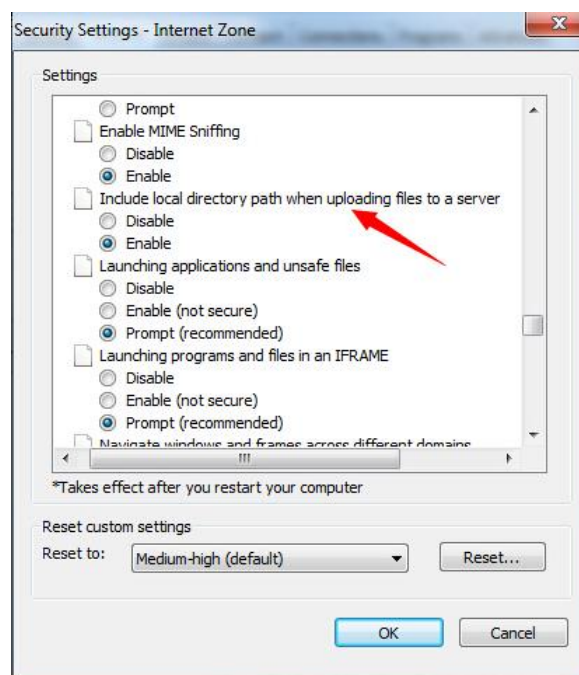
- Fail to visit IP camera via IE after upgrade

  Solution: delete the caching of browser.

  Steps: open IE—click **Tools**—select **Internet Options**—click **delete files** button in **Internet temporary files**, select **delete all offline contents**, then click **OK** and re-log in IP camera.

- The images are not smooth

a. Possible reason 1: the frame rate of IP camera is too low.

  Solution: increase the video frame rate.

b. Possible reason 2: too many users are viewing the images.
   Solution: block some clients or reduce the video frame rate.
c. Possible reason 3: the bandwidth is low.
   Solution: reduce video frame rate or video compression bitrate.
- Forgot Password
  Solution: there is a **RESET** button on the back panel of the IP camera, press it for 1-2seconds, then release it for 1-2 seconds. Repeat 3 times. Camera will restore all default parameters (Factory Settings), user name and password are "admin" and "pass".

Note: please don't press RESET if you are not a professional operator. After reset, all parameters will restore factory settings (except for the physical network address).

- There is no sound while monitoring
a. Possible Reason 1: no audio input connection.
   Solution: check audio connection of the host.
b. Possible Reason 2: the audio option of IP camera is off.
   Solution: check audio parameter settings to see if you have opened the audio.
- Device search software cannot find device
  Possible reason: device search software adopts multicast protocol to perform searching. But the firewall forbids multicast data packet.
  Solution: disable the firewall.
- Image processing does not work properly
a. Possible Reason 1: system issue, DirectX function is disabled, which will cause slow display of images and abnormal color.
b. Possible Reason 2: hardware issue, graphics card does not support image acceleration and hardware zooming functions. (For hardware issue, the only solution is to replace graphics card).
   Solution: install DirectX image drive, then Start→Run→input DXDIAG as follows:

Note: Enable DirectDraw speedup, Direct3D speedup, AGP veins speedup in DirectX function. If cannot be enabled, that means DirectX installation fails or hardware not supported.