

## Mega Pixel IP Camera

### User Manual



## **Introduction**

Thank you for purchasing our XL series IP cameras. This manual is to introduce how to set parameters of cameras and explain each function for you to use the camera effectively and stably.

Users should read this manual thoroughly before you install/utilize the cameras.

This manual is suitable for 2.0 Mega pixel CMOS IP camera and 1.3 Mega pixel CCD IP camera.

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# Chapter1 Product Overview

## 1.1 Main Features

- ◆ User can visit the mega pixel IP camera to perform real-time monitor and playback via IE
- ◆ Adopt standard H.264 video compression algorithm to satisfy the transmission of high definition video in narrow bandwidth network
- ◆ High sensitivity CCD or progressive CMOS sensor
- ◆ Support network monitor and audio talkback
- ◆ It supports max 16 users visit it at the same time
- ◆ Support infrared night vision (depending on specific models)
- ◆ Local PC storage and network storage permitted. It supports built-in SD slot and several network storage protocols. The maximum capacity of SD card is 32GB
- ◆ Support real-time encoding at a maximum definition of 1600x1200
- ◆ Support local or remote arming or disarming.
- ◆ Support warning detecting and gang video recording scheme. Send the snapped picture or alarm message by email or FTP server.
- ◆ Support video masking. Up to 4 video mask areas can be set.
- ◆ Support CDMA1X and GRPS Mobile network.
- ◆ Set motion detection to alarm for recording. It supports 4 detection areas.
- ◆ Support many network protocols, for example: HTTP, TCP/IP, UDP, SMTP, DDNS, DNS, SNTP, BOOTP, DHCP, FTP, RTSP, UPNP and SNMP.
- ◆ Bi-directional audio talkback and broadcast
- ◆ Support dynamic domain name service, LAN and Internet (ADSL, Cable Modem)
- ◆ Network self-adapting to match the network bandwidth for the bit rate and frame rate.
- ◆ Support sending alarm message for Video Lost, Motion Detection (sensitivity and area can be set) and Sensor Alarm.
- ◆ Support remote configuration, upgrade, failure detection and auto- inspection.

## 1.2 Basic Specification

|                   |   |
|-------------------|---|
| Image Sensor      | CMOS: 2M progressive scan CMOS sensor. Min 1.5Lux                                       |
|                   | CCD: 1.3M progressive scan CCD sensor. Min 0.01Lux                                      |
| Video Compression | H.264 Main Profile, MJPEG   |
| Dual Stream       | Primary and Secondary streaming H.264 & MJPEG   |
| Video Definition  | CMOS: 1600*1200, 1280*960, 1280*720, 800*600.   |
|                   | CCD: 1280*960, 1280*720, 640*480  |
| Video Parameters  | Brightness, Chroma, Saturation, gamma, Contrast, Acutance, Red, Blue and Image quality. |

|                            |   |
|----------------------------|---|
| Streaming Type             | Pure Video Streaming or Audio and Video streaming.  |
| Video Frame Rate           | CMOS: Primary stream-1~15fps(1600*1200),1~25fps(other resolutions)<br>Secondary stream-1~25fps  |
|                            | CCD: Primary stream-1~25fps Secondary stream-1~25fps  |
| Video Compression bit rate | 30Kbit/S~ 16MKbit/S   |
| Audio Input                | 1 channel linear input, input impedance 1 K Ohms  |
| Audio Compression          | G.726   |
| Audio Output               | 1 channel Linear output   |
| Audio Talkback Input       | Built-in MIC(depending on specific models), support bi-directional audio talk   |
| Title OSD                  | Support channel name, date/time and stream information overlay. OSD location is adjustable.   |
| SD Card Interface          | SD2.0 standard, maximum storage 32G. Support video storage and image snapping.  |
| System Interface           | 10Base-T/100Base-TX Ethernet Port<br>1 RS485<br>SD Slot   |
| Wireless Network           | “-W” means Wifi is supported<br>“-3GC, -3GW, -3GT” means 3G function is supported.<br>802.11b/g protocol, 2.4GHz, maximum wireless distance can be 100 meters<br>Support WEP, WPA, WPA2 Encryption Protocol |
| Alarm Input                | 1 channel on/off input, Support NO(open) or NC(closed)  |
| Alarm Output               | 1 channel on/off output, 120VAC 1A/24VDC 1A   |
| PoE                        | Support 802.3AF-class 0 protocol. “-E” means POE is supported.  |
| Power Supply               | DC 12V/1A or DC 12V/3A(refer to specific product model)   |
| Power Consumption          | 6-10W (refer to specific product model)   |
| Work Temperature           | -10℃ ~ 55℃  |
| Work Humidity              | 10% ~ 85%   |
| Storage Temperature        | -20℃ ~ 70℃  |

## 1.3 Hardware Requirement

 The lowest configuration for hardware

- ◆ CPU: Pentium 2.8 GHz
- ◆ Memory: 512 MB
- ◆ Graphic Card: TNT2
- ◆ Sound Card: Speaker, Two-way talk
- ◆ Hard Disk: Larger than 40G

 Recommended configuration for hardware

- ◆ CPU: Dual-core 2.6GMhz
- ◆ Memory: 1GB

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◆ Graphic Card: Nvidia Geforce FX5200 or ATI RADEON 7000(9000) series  
256MB video memory

 Operation System


◆ 32 bit Windows2000, Windows XP, Windows2003, Windows Vista and 64 bit  
Windows2003, Windows XP.

 Software

◆ IE 6.0 or Better

◆ DirectX8.0 or Better

◆ TCP/IP protocol

 PC system other requirement

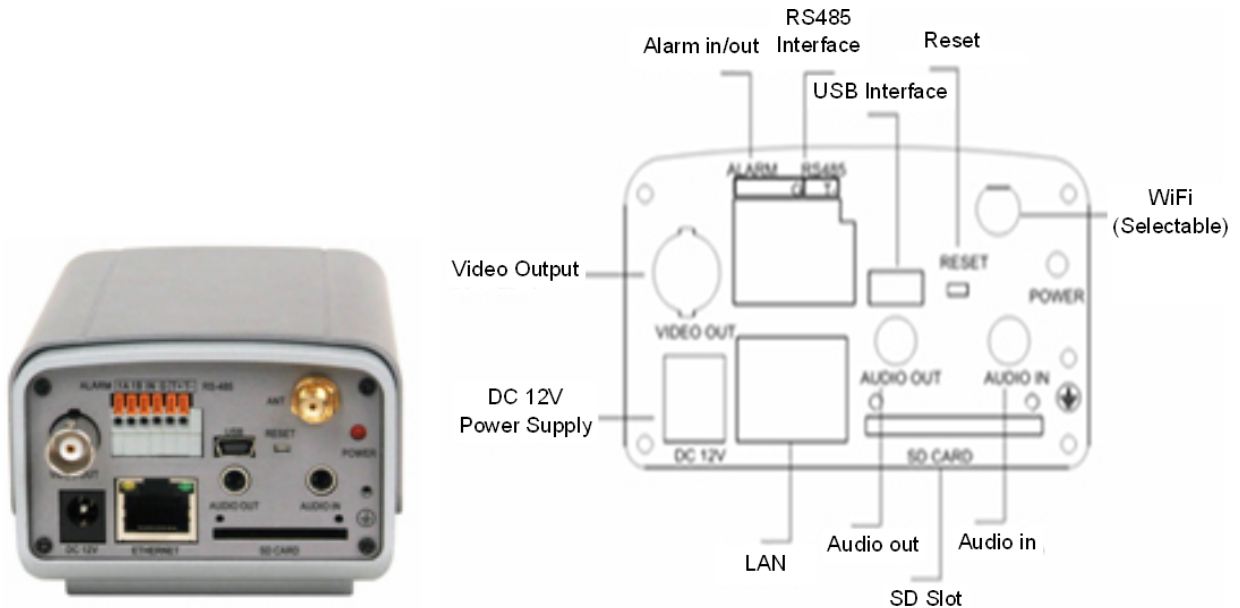
The PC graphics card is required to support conversion and zoom in & out of image color. The tested VGA are as follows: Nvidia Tnt/Tnt2, Geforce Mx200/400/420/440, Fx5200/5600 and its series; ATI Radeon 7000/7200/7500/8500/9000/9200/9500/9600 series, MatroxG450/550; INTEL845G/865G series. Please attend that the driving of graphics card must support hardware zoom in & out function.

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# Chapter2 Appearance and Installation

## 2.1 Interface Introduction

### 2.1.1 Box camera



**Note:**

The power input is DC12V, 1A. Don't use other power supply to avoid damaging the mega pixel IP camera.

Interface explanations:

DC12V: Power input, DC12V/1A

Video Output: Video Output interface

Alarm in/out: Alarm input and output. 1A and 1B connect to alarm output. IN connects to alarm input. G connects to signal ground

RS485 interface: RS485 Control interface. Left side connects to RS485 - and right side connects to RS485 +

USB interface: USB interface

Reset: Reset button. Restore parameters to factory settings. Please use this button with caution.

Wifi: Wireless antenna interface

Audio in: Audio Input

SD Slot: SD card slot

Audio out: Audio Output

LAN: Ethernet port

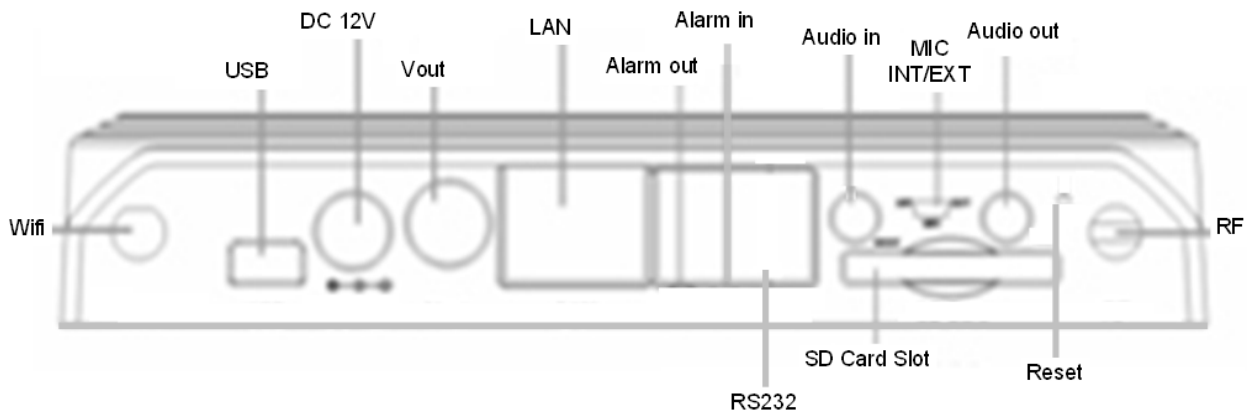
POWER: Power Indicator Light



## 2.1.2 Dome IP camera



*Back View of Dome IP Camera*



*Rear panel illustration of dome IP camera*

### Rear panel interface description

Wifi: Wireless antenna interface

USB: USB interface

DC12V: Power input, DC12V/1A

Vout: Video Output

LAN: Ethernet port

Alarm out: Alarm output. A and B connect to alarm output.

Alarm in: Alarm input. IN connects to alarm input. GND connects to signal ground.

Audio in: Audio Input

MIC INT/EXT: MIC input, INT means built-in MIC and EXT means external MIC.

Audio out: Audio output

RF: RF antenna port

Reset: Reset button. Restore parameters to factory settings. Please use this button with caution.

SD CARD: SD card slot

RS232: RS232 control interface. Left side is for receiving data and right side is for transmitting data.

## 2.1.3 IR Waterproof IP camera



***Infrared box IP camera (cable model)    Infrared box IP camera connection diagram***

Interface explanations:

DC 12V: Power input, DC12V/3A

LAN: Ethernet port

Audio in: Audio Input

Audio out: Audio Output

Reset: (Yellow) Reset button. Restore parameters to factory settings. Please use this button with caution.

GND: (Grey, brown) Signal ground, alarm ground and RS485 ground

Alarm in: (Red) on/off alarm input

Alarm outA: (Orange) on/off alarm output A

Alarm outB: (Purple) on/off alarm output B

RS485 +: (Green) RS485 control interface +

RS485 -: (Blue) RS485 control interface -

## **2.1.4 Speed Dome IP camera**



***High speed dome IP camera***



***Connection cables***

Connection cable ports description:

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DC IN: Power input (input voltage depends on specific models)

LAN: Ethernet port;

Audio in: Audio Input

Audio out: Audio Output

Reset: (Yellow) Reset button. Restore parameters to factory settings. Please use this button with caution.

GND: (Grey, brown) Signal ground, alarm ground and RS485 ground

Alarm in: (Red) on/off alarm input

Alarm outA: (Orange) on/off alarm output A

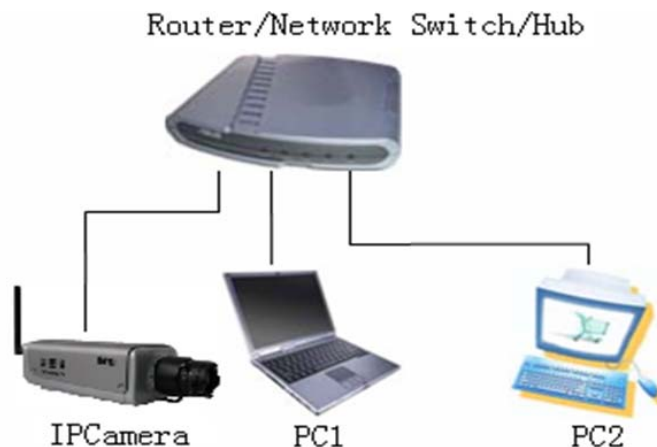
Alarm outB: (Purple) on/off alarm output B

RS485 +: (Green) RS485 control interface +

RS485 -: (Blue) RS485 control interface -

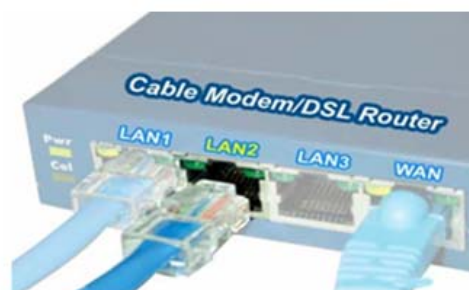
## 2.2 Hardware Installation

### 2.2.1 Connection via IP switch



Step1: Connect power supply (DC 12V)

Step2: Connect LAN port with router/network switch/ hub via RJ45 cable.



### 2.2.2 Connect via crossover cable

Connect power supply. Then, connect IP camera to PC with crossover cable as below:



The Light of LAN port will turn green within 5 seconds under the normal network situation after power on to indicate the physical connection of IP camera has been done successfully.

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# Chapter3 Search Device

## 3.1 Search Device and Modify Network Parameters

Run “SearchNVS” to find the default IP and modify mega pixel IP camera network parameters according to clients’ local PC IP gateway (Such as IP address, subnet mask, gateway and so on)

### 3.1.1 Run SearchNVS software

How to run “SearchNVS”:

1. Find the NVSCenter software in **【Application】** file from the CD and then install it.
2. Click **【Start】** --- **【all programs】** --- **【NVS Center】** --- **【Search NVS】** to run it.

**Note:**

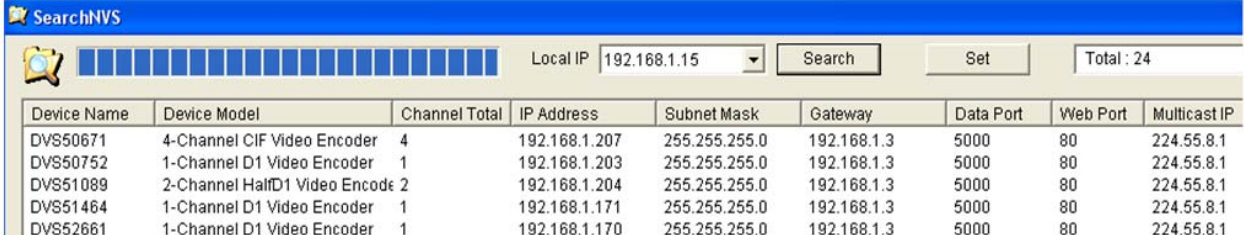
The default factory settings of the IP Camera are as follows:

IP: 192.168.55.160

Subnet mask: 255.255.255.0

User name: admin; Password: admin

Run the SearchNVS software to search and modify IP Camera network parameters. It is multicast protocol. But the firewall forbids the multicast data packet. So please close the firewall first.



The screenshot shows the SearchNVS application window. At the top, there is a 'Local IP' dropdown menu set to '192.168.1.15', a 'Search' button, a 'Set' button, and a 'Total: 24' indicator. Below this is a table with the following columns: Device Name, Device Model, Channel Total, IP Address, Subnet Mask, Gateway, Data Port, Web Port, and Multicast IP. The table contains five rows of data:

| Device Name | Device Model                   | Channel Total | IP Address    | Subnet Mask   | Gateway     | Data Port | Web Port | Multicast IP |
|-------------|--------------------------------|---------------|---------------|---------------|-------------|-----------|----------|--------------|
| DVS50671    | 4-Channel CIF Video Encoder    | 4             | 192.168.1.207 | 255.255.255.0 | 192.168.1.3 | 5000      | 80       | 224.55.8.1   |
| DVS50752    | 1-Channel D1 Video Encoder     | 1             | 192.168.1.203 | 255.255.255.0 | 192.168.1.3 | 5000      | 80       | 224.55.8.1   |
| DVS51089    | 2-Channel HalfD1 Video Encoder | 2             | 192.168.1.204 | 255.255.255.0 | 192.168.1.3 | 5000      | 80       | 224.55.8.1   |
| DVS51464    | 1-Channel D1 Video Encoder     | 1             | 192.168.1.171 | 255.255.255.0 | 192.168.1.3 | 5000      | 80       | 224.55.8.1   |
| DVS52661    | 1-Channel D1 Video Encoder     | 1             | 192.168.1.170 | 255.255.255.0 | 192.168.1.3 | 5000      | 80       | 224.55.8.1   |

**【Local IP】** Display the local PC IP. If your PC is NIC or multi-addressed local IP, please select one IP address to connect NVS.

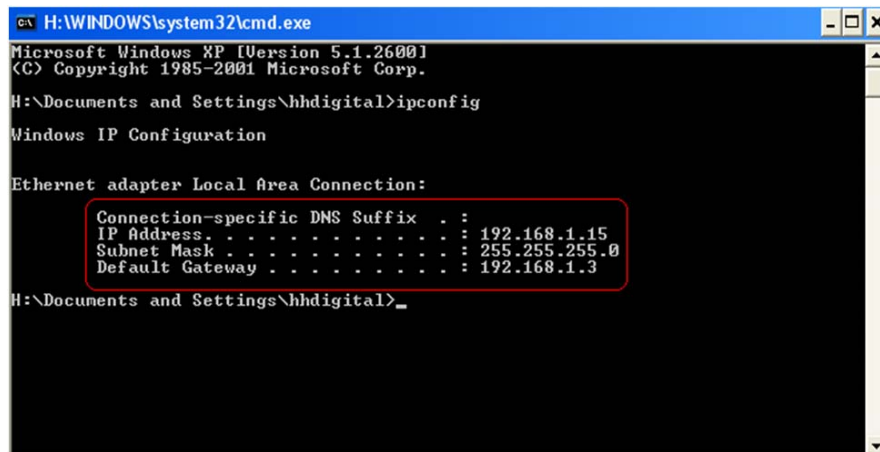
The main window indicates that your PC has found the IP camera in LAN. If there are several IP cameras in your LAN, you can determine which camera is the one you purchased through “device name” in the main window. There is a unique device ID number in your package. The default device name is “NVS + device ID number”.

### 3.1.2 Set IP address

The gateway of your IP camera and local PC must be the same so that you can visit the IP camera. So we need to set the IP address for the IP camera before using.

To get your local PC IP configuration information: Click “start” and choose “run”,

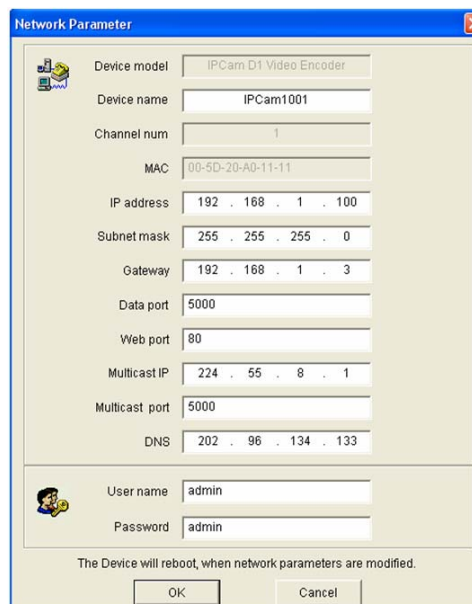
then, input “command” or “cmd”(Windows 2000/XP system). Click “confirm” and then input “ipconfig” and press “Enter” button, you will get the following information:



Now please remember the above IP Address, Subnet Mask, Default Gateway, then, set the IP address of mega pixel ip camera according to your local PC IP address. For example: 192.168.1.100.

Please make sure the Default Gateway and Subnet Mask should be the same as your PC. And its IP should not be conflict with other PC or IP devices.

Click **【Set】** to get the following window:



Modify related network parameters and click “OK”, then, the IP camera will save the parameters and restart.

## 3.2 Check Connection

Check to see whether the IP camera is running and properly connected. Click “Start”→ “Run”→ input “cmd” and press “Enter” Key to open command window. Input: ping 192.168.1.100 and click “Enter” button, then, the interface as below will be shown:

```
H:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

H:\Documents and Settings\hhdigital>ping 192.168.1.100
Pinging 192.168.1.100 with 32 bytes of data:

Reply from 192.168.1.100: bytes=32 time<1ms TTL=64
Reply from 192.168.1.100: bytes=32 time<1ms TTL=64
Reply from 192.168.1.100: bytes=32 time<1ms TTL=64
Reply from 192.168.1.100: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.1.100:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

H:\Documents and Settings\hhdigital>
```

If the command can generate a reply, meaning the IP camera works normally and is connected to network correctly. If not, please confirm the IP address and gateway settings, and check the network cables.

Then, use SearchNVS software to search and modify network parameters (such as IP address, subnet mask and gateway etc. according to clients' local IP information).

# Chapter4 Introduction of IE

## 4.1 Install ActiveX and Login Device

You need to install ActiveX when you visit mega pixel IP camera for the first time through Internet Explorer.

How to install ActiveX:

Download the ActiveX from Internet Explore: input the IP address of mega pixel IP camera in Internet Explore. Then, login interface will appear as follows:



Click "File" to download the ActiveX.

A new dialogue box pops up, click **【Run】** or **【Save】** to download ActiveX, after download it, double-click the downloaded file "xdview.exe" to install it as follows:



### **Note:**

ActiveX has to be installed.

Close current Internet Explorer and click "Install" button to install the ActiveX. After it is installed, "Install OK!" will be shown.

Open Internet Explorer and input IP address of one IP Camera. For example: 192.168.55.160. Then, the below interface will be shown:



## System Login

## Notice



**USER LOGIN**

User name

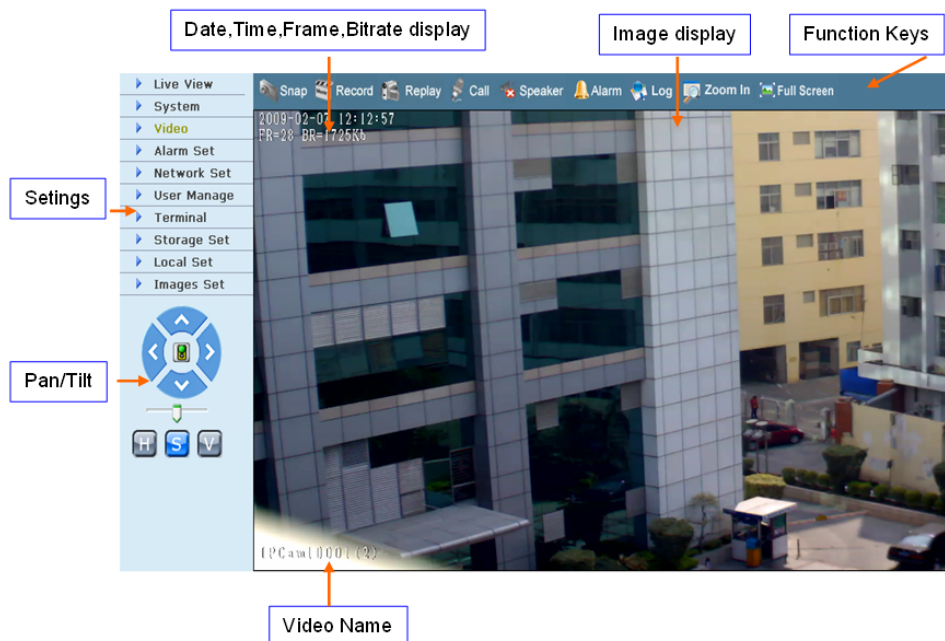
Password

For initial access or issues with viewing the camera image, please click the link below to download the ActiveX setup file. Once the file is decompressed and installed, please login to the camera again.

After installing the OCX successfully, please delete cookies in computer when user logins error, IE tool-->Internet option-->browser history (delete temporary file, history, COOKIE...) or confirm the username and password.

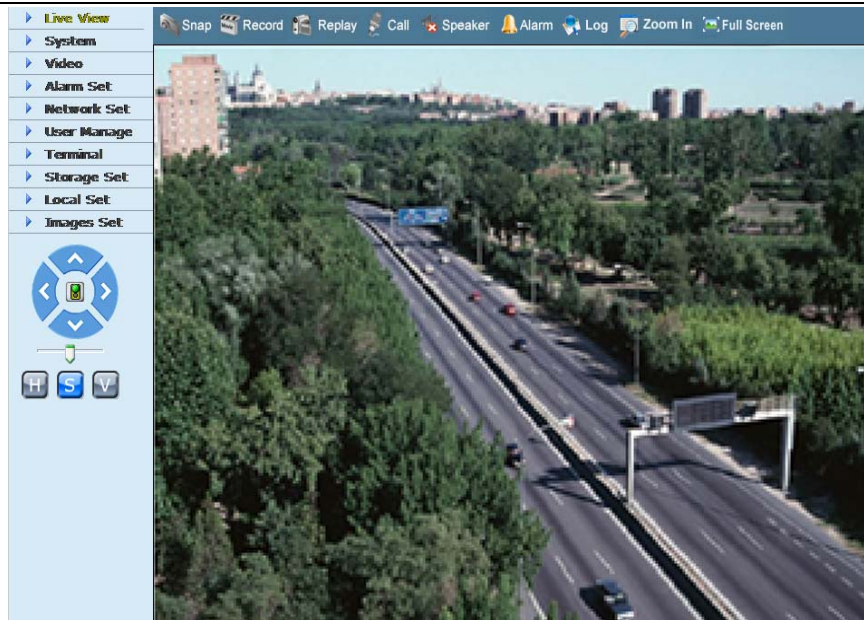
Download OCX Setup File [File](#)

Input User name (Default: admin), Password (Default: admin), click "Submit" to enter the live view interface:




## 4.2 Live Preview

Live view page is shown as below:





In the Liveview interface, users can do operations like Snap, Record, Playback, Talkback, Monitoring, Clear Alarm, Log Search, Local Zoom of Image, Full-screen Viewing, Lightness and Color Adjustment and Lens Control etc.

[Snap]: Click “Snap” to snap the current image and save it in .JPG format automatically to the storage directory of snapped images.

[Record]: Manual image recording. Record current images automatically and save them in H.264 format to the storage directory of recorded images after the recording function turned on. Displayed status after recording starts: 

[Playback]: Click “Playback”, the playback page will pop up for searching and playback of recorded files or snapped pictures.

[Talkback]: 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: 

[Monitoring]: You can monitor sound at the device end after the monitor is switched on. The displayed status after monitoring starts is .

[Alarm]: When there is an alarm, double-click [Alarm] to cancel the alarm manually.

[Log]: Allow users to search for operations and alarm log. The maximum capacity is 512 entries of message, when the number of entries exceeds 512, system will delete records of the earliest date automatically.

[Zoom In]: This feature allows the manual drag and drop of video display area to realize partial zoom in.

[Full Screen]: Display images in full-screen, right click to exit full screen mode.

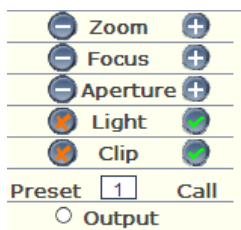
[PTZ Control]: Allow four-directional rotation, automatic adjustment of PTZ rotation speed.

[Lens Control]: Allow PTZ operations like Zoom, Focus, Aperture, Light, Brush, Preset, and Recall.

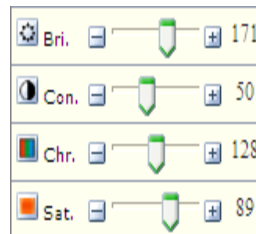
[Video Parameters]: Adjust the lightness, contrast, chroma and saturation of video.



**PTZ Control**



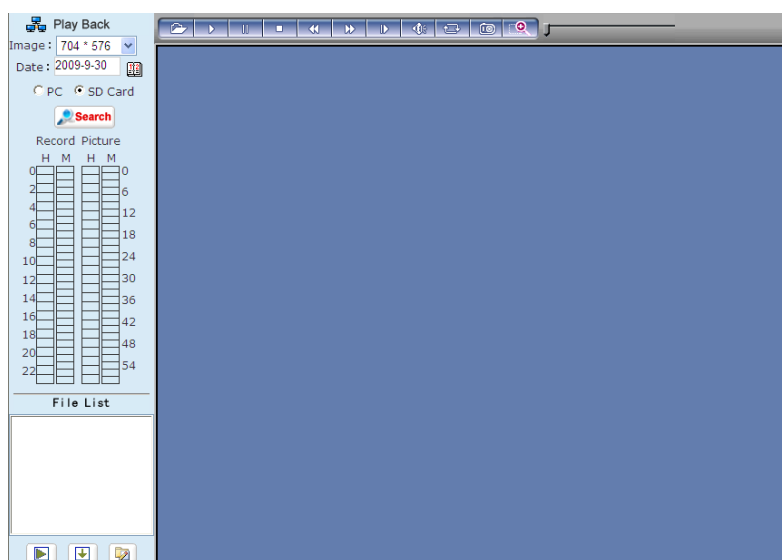
**Lens Control**



**Video Parameters**

## 4.3 Record playback

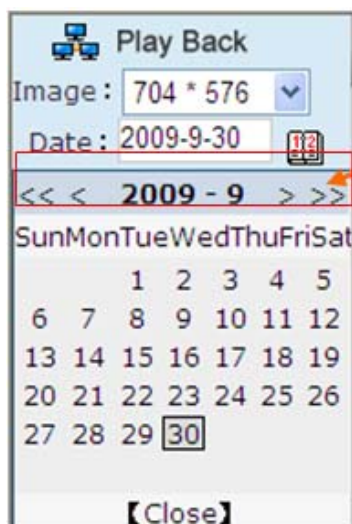
Click [Playback] button  **Replay** to enter into video playback page as follow:



User can search for record files or snapped pictures in local PC or storage device according to date.

[Date]: User can select certain date to search record files or snapped pictures.

Click "date" button , then, data selection page will pop up as follow:



- Click " << " icon to turn to previous year↵
- Click " >> " icon to turn to next year↵
- Click " < " icon to turn to previous month↵
- Click " > " icon to turn to next month↵

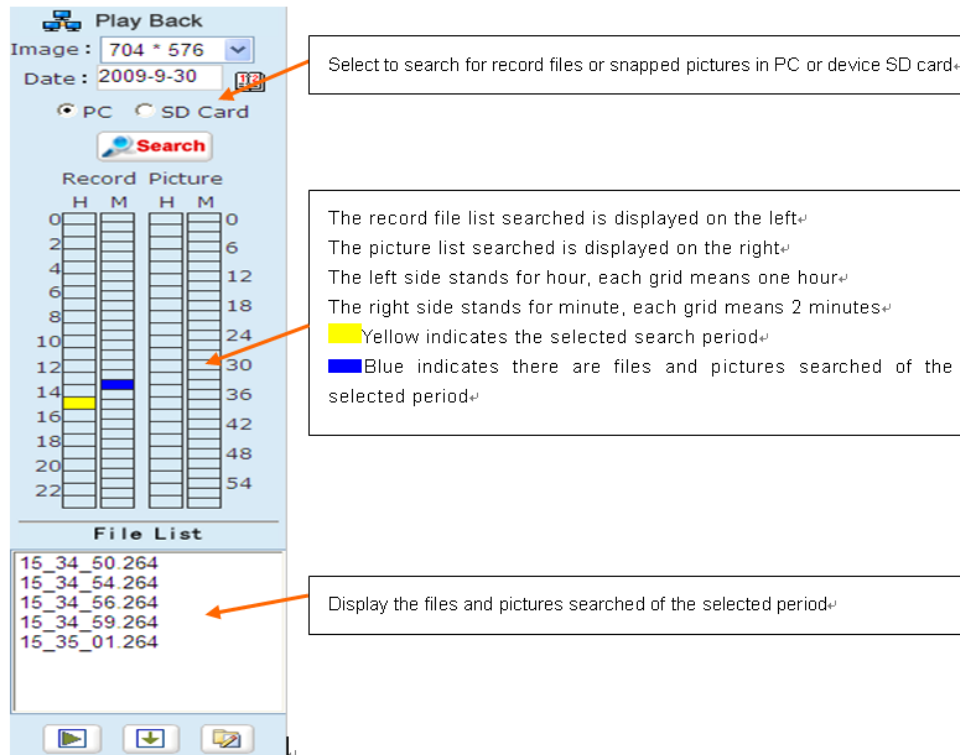
[Local]: User can select certain date to perform record file or snapped picture


(stored in local PC) searching.

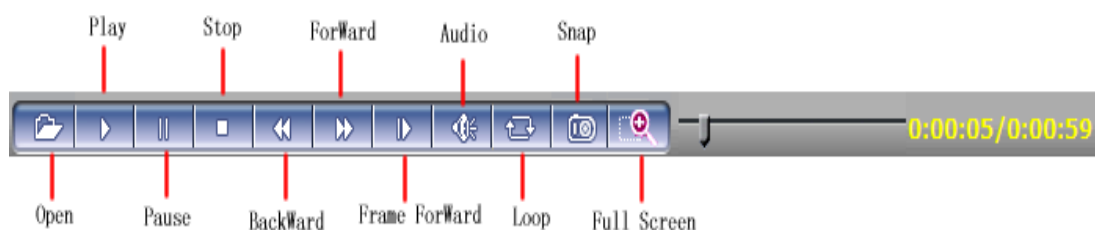
[Device]: User can select certain date to perform recorded image file or snapped picture (stored in device SD card).


[File List]: Show the record files or snapped pictures.

The way to search for record files or snapped pictures of a specific period:

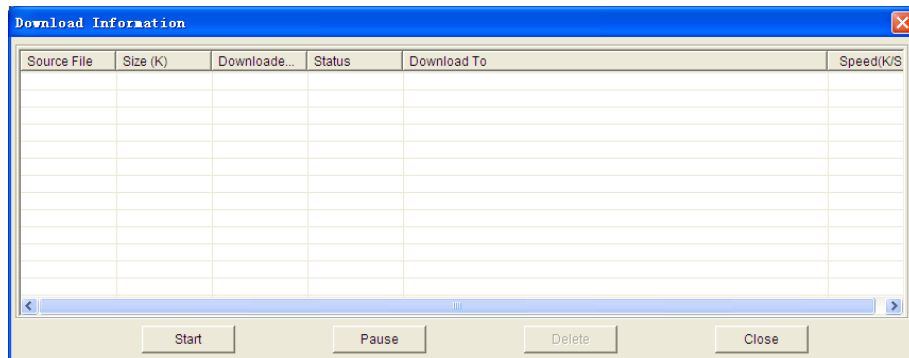


[Play]: Choose the record file or snapped picture in file list, right click the file or picture or click “play” button  to play. The contents will be displayed in the window on the right. Users can view the play information and control the process, see below picture:



[Download]: Select the record files or snapped pictures searched from SD card in the file list, click “download” button  to download the files to PC.

[Download information]: User can view the information downloaded after click “Download”, see below picture:

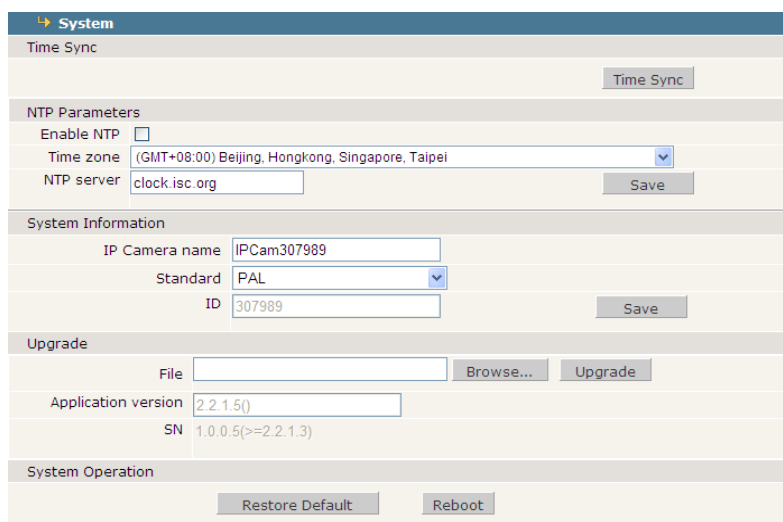


Click [Pause] to pause download manually. Click [Start] to continue to download the unfinished files. Click [Delete] to delete the downloaded files. Click [Close] to close the download information interface.

## 4.4 Set System Parameters

### 4.4.1 System Settings

See below picture for the interface of “System Settings”:



[System Clock]: click “synchronize with system” to synchronize the date and time of IP camera with those of the PC.

[Network Clock Setup]: after starting the function, switch on NTP switch and select time zone, save it to turn to [Liveview], the system time that has been automatically corrected by NTP server can be displayed.

[System Information]: Display device name, device number, etc. Device name can be user-defined.

[Reset]: All device parameters (including network parameters, excluding physical address) will be recovered as factory setting values.

[Reboot]: Click [Reboot], the IP camera will restart automatically after 5 seconds.

[Upgrade]: Click “Review” button and select a correct upgrade file (kernel file, suffix.uot). Click [upgrade], and then, you can upgrade your system. The completion rate will be displayed during this process. After upgraded, IP camera will be restarted automatically. Re-log in device, enter into system setup page and check to see whether

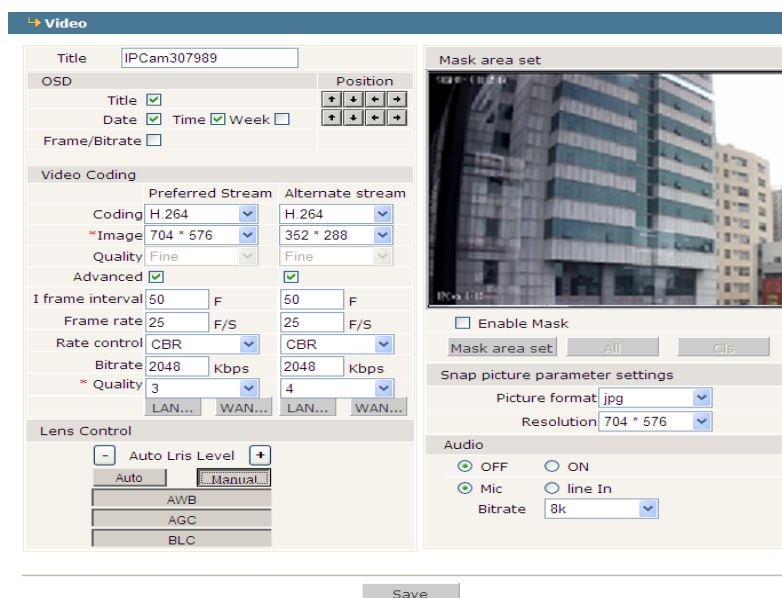
the kernel edition is the upgraded edition. For example: kernel edition of the current IP camera is (V2.2.1.2), the latest edition obtained from supplier is (V2.2.1.3), then, the kernel edition after upgrade should be V2.2.1.3.

**Note:**

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

## 4.4.2 Video Settings

See below picture for the interface of "Video Settings":



**Video interface of CCD model**

[Video Name]: The name of video channel, displayed at the bottom left of image (movable). The maximum characters allowed are 32.

[Title Overlay]: Select to display name, date, time, week and frame rate/ bitrate of channels or not.

[Position Adjustment]: Adjust the display position of video title.

[Preferred and alternate streams]: Set up video parameters for preferred and alternate streams.

[Coding algorithm]: H.264 and MJPEG.

[Definition]: set definition of images. Modes supported are:

PAL mode – four definition format: D1 (704\*576)/Half-D1 (704\*288)/CIF (352\*288)/QCIF (176\*144)

NTSC mode – four definition format: D1 (704\*480)/Half-D1 (704\*240)/CIF (352\*240)/QCIF (176\*120)

[Image Quality]: Users can choose the quality from Best, Good and Normal according to their needs. The parameters can also be user-defined by checking [advanced settings] checkbox.

[I frame interval]: Adjustable between 5~200. Smaller I frame interval means higher image bitrate and better image quality. It is recommended to set the I frame interval larger than 25.

---

[Frame Rate]: Set encoding frame rate per second. In poor network condition, frame rate can be reduced to control encoding bitrate to make motion images more smoothly.

[CBR/VBR]: CBR and VBR are optional. CBR adopts constant encoding bitrate and VBR adopts variable encoding bitrate.

[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.

When CBR is selected, [Bitrate] is the constant bitrate of encoding.

When VBR is selected, [Bitrate] is the variable bitrate of encoding.

[Image Quality]: Under CBR setting: set the bitrate range via "Image Quality". 1 means it is controlled by the software. Bitrate range 2~6 means corresponding bitrate range is  $\pm 10\% \sim \pm 50\%$ .

Under VBR setting: set image quality via "Image Quality". Smaller value of image quality means better quality and higher bitrate when the bitrate doesn't exceed the set value.

[LAN default value]: I frame interval: 100, frame rate: 25, bitrate: VBR, 2048kbps, image quality: 2.

[WAN default value]: I frame interval: 25, frame rate: 5, bitrate: CBR, 384kbps, image quality: 4.

**Note:**

You would better not to set "Advanced Settings" if you are not a professional.

[Auto Iris Level]: Adjust the control level of auto-iris to control the illumination of lens iris. "-": reduce illumination of auto-iris. "+": increase illumination of auto-iris. Works only on auto-iris lens.

[Auto]: Select this button when using auto-iris lens.

[Manual]: Select this button when using manual-iris lens.

[Auto White Balance]: Select this button to realize automatic adjustment of white balance.

[Auto Gain Control]: Enable auto gain will improve the effect of images under low illumination.

[Back Light Compensation]: When there is strong light behind the monitored objects, illumination compensation will be provided in the required range to get better image quality.

[Video Masking On/Off]: Enable or disable video masking.

[Masking Area Setup]: Right-click and move cursor to set image masking area. An image can be entirely or partially masked, maximum 4 areas supported.

[All]: Mask the whole image.

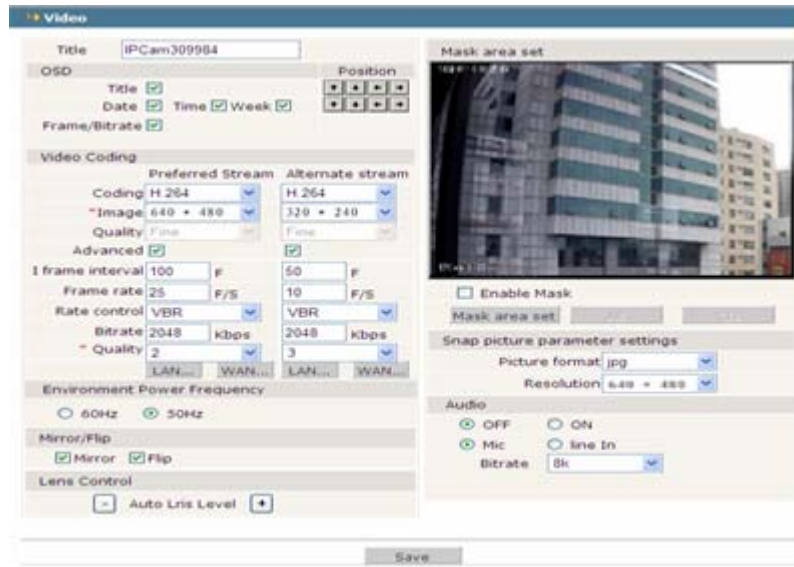
[Clear]: Clear masked areas.

[Parameter setup for snapshot function]: Supports only images of JPG format currently. Definition is the same as the settings in [video definition].

[Audio on/off]: Turn on or turn off the audio of IP camera. Users can choose MIC or linear input. When there is no need for audio, close audio input to save DSP resource

and network resource. Audio is disabled by default.

[Sample rate]: Supports audio sample rates of 8k and 32k.



**Video interface of CMOS model**

[Definition]: Set image definition. Supported definitions are VGA (640\*480), QVGA (320\*240) and QQVGA (160\*128).

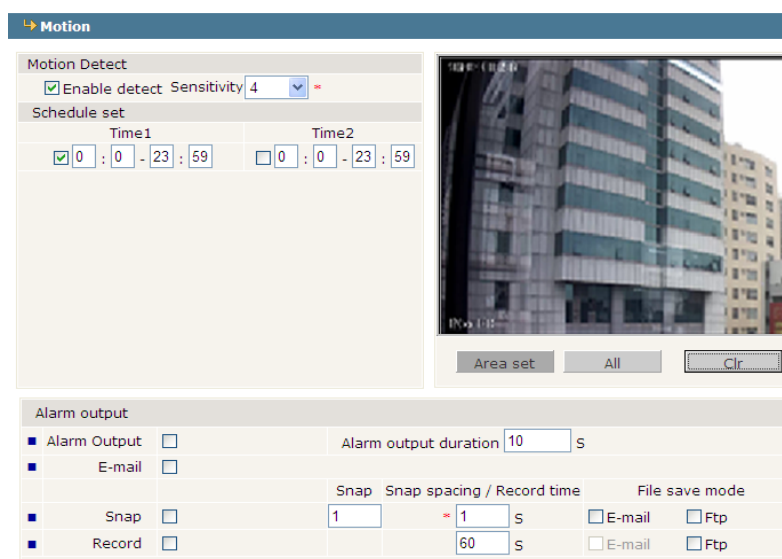
[Power Frequency]: Environment power frequency of the device. In indoor environment, if the flashing of lamps results in the flickering of images, please choose 50HZ or 60HZ according to the power frequency.

[Video Mirror/Rollover]: Set video mirror (vertical mirror of images) and rollover (horizontal rollover of images).

### 4.4.3 Alarm Settings

#### 1. Motion detection

See below picture for the interface of IP camera “Motion detection”:



In this page, users can set features like motion detection on/off, sensitivity,



detection time, linkage alarm output, alarm output duration, E-mail sending when alarm is triggered and linkage snapping/recording etc.

[Detection On/Off]: Enable or disable motion detection.

[Sensitivity]: Sensitivity range is 1~5. Greater value means higher sensitivity.

[Detection time setup]: Set the period of time for motion detection. Two periods are allowed.

[Linkage Alarm 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.

[E-mail sending]: Send video loss detection alarm information to users via E-mail. Details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: 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, then, when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.

[Linkage recording]: When alarm is triggered, the device SD card will be driven to record video. The record files can be saved via E-mail sending or FTP uploading.

[Set detective area]: Left click and drive the mouse to set the surveillance areas (4 areas at most).

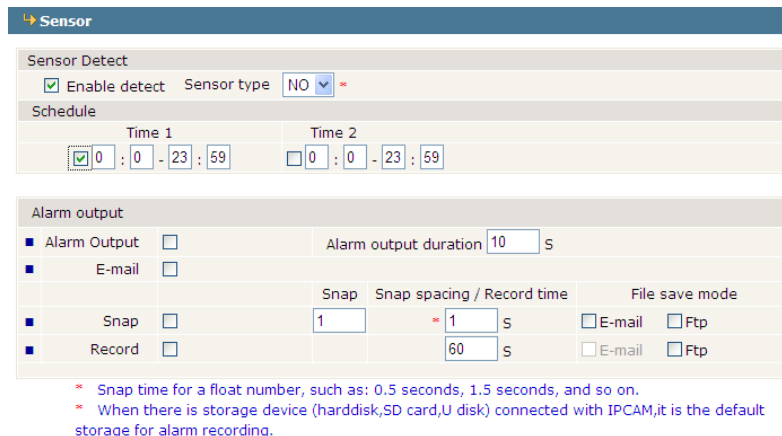
[All]: Set the whole video as motion detection area.

[Clear]: Clear all motion detection areas.

Click [save] to make the parameters effective after all the settings as above are done.

## 2. Sensor Alarm

See below picture for the interface of IP camera “Sensor Alarm”:



| Sensor Detect                                       |  |                                 |                              |
|---|--|---------------------------------|------------------------------|
| <input checked="" type="checkbox"/> Enable detect   | Sensor type                              | NO                              | *                            |
| Schedule  |  |                                 |                              |
| Time 1  | Time 2                                   |                                 |                              |
| <input checked="" type="checkbox"/> 0 : 0 : 23 : 59 | <input type="checkbox"/> 0 : 0 : 23 : 59 |                                 |                              |
| Alarm output  |  |                                 |                              |
| <input checked="" type="checkbox"/> Alarm Output    | <input type="checkbox"/>                 | Alarm output duration           | 10 s                         |
| <input checked="" type="checkbox"/> E-mail          | <input type="checkbox"/>                 |                                 |                              |
| Snap / Record                                       |  |                                 |                              |
| <input checked="" type="checkbox"/> Snap            | <input type="checkbox"/>                 | Snap                            | Snap spacing / Record time   |
| <input checked="" type="checkbox"/> Record          | <input type="checkbox"/>                 | 1                               | * 1 s                        |
|   |  |                                 | 60 s                         |
|   |  | File save mode                  |                              |
|   |  | <input type="checkbox"/> E-mail | <input type="checkbox"/> Ftp |
|   |  | <input type="checkbox"/> E-mail | <input type="checkbox"/> Ftp |

\* Snap time for a float number, such as: 0.5 seconds, 1.5 seconds, and so on.  
\* When there is storage device (harddisk,SD card,U disk) connected with IPCAM,it is the default storage for alarm recording.

Set sensor alarm parameters here: detection on/off, sensor type, detection time, linkage alarm output, linkage output duration, E-mail sending when alarm is triggered and linkage snapping/recording etc.

[Detection On/Off]: Enable or disable sensor alarm detection.

---

[Sensor Mode]: NO and NC mode.

[Detection time setup]: Set the period of time for sensor alarm detection. Two periods are allowed.

[Linkage Alarm 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.

[E-mail sending]: Send sensor alarm information to users via E-mail. Details about E-mail settings please refer to [Network Settings].

[Linkage Snapping]: 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, then, when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.

[Linkage recording]: When alarm is triggered, the device SD card will be driven to record video. The record files can be saved via E-mail sending or FTP uploading.

Click [save] to make the parameters effective after all the settings as above are done.

### 3. Network Failure Alarm

See below picture for the interface of IP camera “Network Failure Alarm”:

| Network fault alarm detect          |               |                       |                            |                          |        |                          |     |
|-------------------------------------|---------------|-----------------------|----------------------------|--------------------------|--------|--------------------------|-----|
| <input checked="" type="checkbox"/> | Enable detect |                       |                            |                          |        |                          |     |
| Alarm output                        |               |                       |                            |                          |        |                          |     |
| <input type="checkbox"/>            | Alarm output  | Alarm output duration | 10 s                       |                          |        |                          |     |
| <input type="checkbox"/>            | E-mail        |                       |                            |                          |        |                          |     |
|                                     |               | Snap                  | Snap spacing / Record time | File save mode           |        |                          |     |
| <input type="checkbox"/>            | Snap          | 1                     | * 1 s                      | <input type="checkbox"/> | E-mail | <input type="checkbox"/> | Ftp |
| <input type="checkbox"/>            | Record        |                       | 60 s                       | <input type="checkbox"/> | E-mail | <input type="checkbox"/> | Ftp |

\* Snap time for a float number, such as: 0.5 seconds, 1.5 seconds, and so on.  
\* When there is storage device (harddisk,SD card,U disk) connected with IPCAM,it is the default storage for alarm recording.

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

[Detection On/Off]: Enable or disable network failure alarm detection.

[Linkage Alarm 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.

[E-mail sending]: Send network failure alarm information to users via E-mail. Details about E-mail setting please refer to [Network Settings].

[Linkage Snapping]: 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, then, when there is an alarm, 10 pictures will be snapped and the interval between each picture is 1 second.

[Linkage recording]: When alarm is triggered, the device SD card will be driven to record video. The record files can be saved via E-mail sending or FTP uploading.

**Note:**

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.

Click [save] to make the parameters effective after all the settings as above are done.

## 4.4.4 Network Settings

### 1. Basic settings

See below picture for the interface of IP camera “Network Settings”:

| Network                   |  |
|---------------------------|--|
| <b>Basic Parameters</b>   |  |
| Enable DHCP               | <input type="checkbox"/>   |
| IP address                | 192.168.55.160   |
| Subnet mask               | 255.255.255.0  |
| GateWay                   | 192.168.55.1   |
| MAC                       | 00-4a-20-a4-b0-2d <input type="checkbox"/>                             |
| Data port No.             | 5000   |
| HTTP port No.             | 80   |
| Preferred DNS             | 202.96.134.133   |
| Alternate DNS             | 202.106.0.20   |
| <b>WiFi Parameters</b>    |  |
| Enable WiFi               | <input type="checkbox"/>   |
| IP address                | 192.168.1.160  |
| Subnet mask               | 255.255.255.0  |
| GateWay                   | 192.168.1.1  |
| SSID                      |  |
| Password                  |  |
| type of encryption        | WEP  |
| Auxiliary encryption      | Open System  |
| Frequency band            | Auto   |
| Mode                      | Auto   |
| <b>DDNS Parameters</b>    |  |
| Enable DDNS               | <input checked="" type="checkbox"/> <a href="#">Link to mvddns.net</a> |
| DDNS provider             | mvddns.net   |
| DDNS regName              | test1  |
| DDNS password             | ••••••••   |
| DDNS domain               | test1.mvddns.net   |
| DDNS server URL           | www.mvddns.net   |
| DDNS server Port          | 30000  |
| Data port map No.         | 5000   |
| HTTP port map No.         | 80   |
| Domain E.C.:              | test1.mvddns.net   |
| <b>PPPOE Parameters</b>   |  |
| Enable PPPOE              | <input type="checkbox"/>   |
| PPPOE URL                 |  |
| PPPOE username            |  |
| PPPOE password            |  |
| Online time               | 0minutes   |
| <b>Connect Parameters</b> |  |
| Auto connect              | <input type="checkbox"/>   |
| Center URL                | 192.168.55.4   |
| Center port No.           | 6000   |

[Basic Parameters]

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

IP Address: Set the device IP of IP camera

Subnet mask: Default value is 255.255.255.0 (users are 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.

Physical address: the MAC address of IP camera (users are recommended not to change it).

Data port: Default value is 5000.

Web port: Default value is 80.

---

DNS address: Please use DDNS function to set the DNS address as your local DNS address.

**Note:**

After revise and save parameters, the device will restart. If it is applied in LAN, please pay attention to avoid its IP conflicting with the IP addresses of other devices or PC in the LAN.

[WiFi settings]

**Note:**

Apply to models with WiFi function only.

A wireless router needs to be deployed in order to use the WiFi function of IP camera. Take TP-Link WR340G 54M wireless router as an example. The content and steps of the settings are as follows:

1. Network parameters setup for wireless router

First enter into the wireless router “network parameter” page under the menu “LAN Setting” and set the IP of wireless router.

2. Turn to the “basic settings” page under “wireless parameters” menu

(1) Set SSID

This SSID is for identity validation of wireless network. It must be the same as the SSID setting of the IP camera.

(2) Frequency range

It is determined by the frequency range of the network, which should be 1~13. The default value is 6.

**Note:**

If your neighbor also uses wireless network and its frequency is 6, you should consider revise this parameter to 1 or 13 to reduce the radio interference between the two routers.

(3) Mode

Set the working mode of wireless router. The mode must be compatible with the supported modes of IP camera.

Wireless modes supported by IP camera are 802.11b/g protocol (low power WiFi model) and 802.11a/b/g/n protocol (high power WiFi model).

(4) Enable WiFi function (compulsory)

(5) Open security setting (optional): Enable the security certification of wireless router. If it is enabled, users need to select the corresponding security mode (encryption mode) and set up authentication password.

(6) Select security type (encryption mode): WEP, WPA and WPA2

(7) Security options

WEP security type: developing system, sharing key and auto-selection

WPA, WPA2 security type: TKIP and AES

(8) Set key (authentication password)

3. WiFi function settings of IP camera:

(1) Wireless network on/off

---

Switch this function on to enable WiFi function of IP camera.

(2) IP address

Set the wireless IP address of IP camera, e.g. 192.168.1.160.

(3) Gateway

Set the IP address of current wireless gateway, e.g. 192.168.1.1.

(4) SSID number:

It is the login name of WiFi for identity authentication. It must be the same as the SSID number of the wireless router.

(5) Password

It is the login name of WiFi for identity authentication. It must be the same as the key of the wireless gateway (router/AP).

(6) Master authentication encryption type

There are three encryption types: WEP, WPA and WPA2. It must be the same as the security type setting of wireless gateway (router/AP).

(7) Auxiliary encryption mode

WEP security type: developing system, sharing key and auto-selection

WPA, WPA2 security type: TKIP and AES

It must be the same as the security option setting of wireless gateway (router/AP).

Save all parameters after all the settings are done. Then, disconnect the network cable. IP camera can be visited via wireless IP, such as 192.168.1.160.

**Note:**

The wireless network IP address and cable network IP address cannot be in the same segment.

The WiFi switch appears to be grey when IP camera doesn't have WiFi function.

[DDNS settings]

Bind the device with a fixed domain name by DDNS setting so that visiting to the device can be realized no matter how the public IP changes (refer to Appendix C for detailed steps).

DDNS On/Off: Enable or disable DDNS function.

Link mvddns.net: Click this link to turn to [www.mvddns.net](http://www.mvddns.net). Users can sign up on this website.

DDNS service provider: mvddns.net, 3322.org and user ddns server are selectable.

DDNS User Name: User name registered in DDNS server.

DDNS Password: User password registered in DDNS server.

DDNS Domain Name: The domain name set up by users, e.g.: test1.mvddns.net.

DDNS Address: DDNS server address. When DDNS address is the domain name, please set the DNS address in [Basic Parameters] correctly.

DDNS port: Default value is 30000 (users are recommended not to change it).

Data mapping port: Fill in the external data port mapped by the IP camera on the router that is connected to public website.

Web mapping port: Fill in the external web port mapped by the IP camera on the

---

router that is connected to public website.

[PPPOE settings]

PPPOE on/off: Enable or disable PPPOE dial-up function.

PPPOE address: It will display the public IP address after device dial-up is set up successfully.

PPPOE user name: ADSL dial-up account, obtained from the IP service provider.

PPPOE password: ADSL dial-up password, obtained from the IP service provider.

On-line duration: Start timing after dial-up to see the online duration after successful dial-up.

[Active connection mode]

Active connection switch: Enable or disable active connection of the device to surveillance center.

Central server address: The address of surveillance center (e.g. 192.168.55.8).

Central server port: The port of surveillance center (e.g. 6000).

After all the network parameters are set, click [save] to make the parameters effective.

## 2. Advanced settings

See below picture for the interface of IP camera “Advanced Settings”:

[Mail settings]

To set the mailbox addresses and parameters of alarm mails and public network IP mails.

SMTP server: The SMTP server of sender mail box. The address format of mail servers varies from provider to provider, e.g. the SMTP server of 163 mailbox is smtp.163.com.

Mail sending address: Mailbox that sends mails.

Mail receiving address: Mailbox that receives mails.

SMTP user name: The login user name of the mailbox that sends mails.

SMTP password: The login password of the mailbox that sends mails.

Mail title: Title of mails.

---

SMTP Port: SMTP port. Different mail servers have different ports. For example, the server port of Gmail is 465.

Commonly used mail server configuration:

**Gmail mail server:**

SMTP server: smtp.gmail.com  
SMTP user name: username@gmail.com  
SMTP port: 465  
SSL: enabled

**Yahoo mail server:**

SMTP server: smtp.mail.yahoo.com  
SMTP user name: username@yahoo.com or username@yahoo.com.cn  
SMTP port: 465  
SSL: enabled

**163 mail server:**

SMTP server: smtp.163.com  
SMTP user name: username  
SMTP port: 25  
SSL: disabled  
[FTP settings]

FTP server sends the record files and snapped images generated after alarm is triggered in FTP mode to specified FTP server. 2 FTP servers are supported. When the selected one goes wrong, system will switch to the alternate one.

FTP URL: The IP address or HTTP address of FTP server.

FTP port: Port of FTP server. The default port is 21.

Remote path: Path on remote FTP server. If the path doesn't exist or has not been filled in, the device will create a file folder under the root directory of FTP server.

FTP user name and password: User name and password of FTP server.

**Note:**

Users must have the authority to write on the FTP server in order to upload record files and snapped images.

[UPNP settings]

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.

UPNP NIC: Select the type of NIC connecting UPNP router. For WiFi models, when IP camera is connected to router via WiFi network, select "wireless" mode.

UPNP Modes: Specified mode and auto mode.

Specified 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.

UPNP server: IP address of the router with UPNP.

---

Data mapping port: Data mapping port of user-specified device on the router (works only under specified mode).

Web mapping port: Web mapping port of user-specified device on the router (works only under specified mode).

Data mapping port status: When UPNP function runs successfully, the status bar will echo the data port mapped to the router by the device.

Web mapping port status: When UPNP function runs successfully, the status bar will echo the web port mapped to the router by the device.

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

[RTSP settings]

RTSP on/off: Check RTSP switch to enable RTSP function.

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 (e.g. VLC, Quicktime).

[Public IP mail notification]

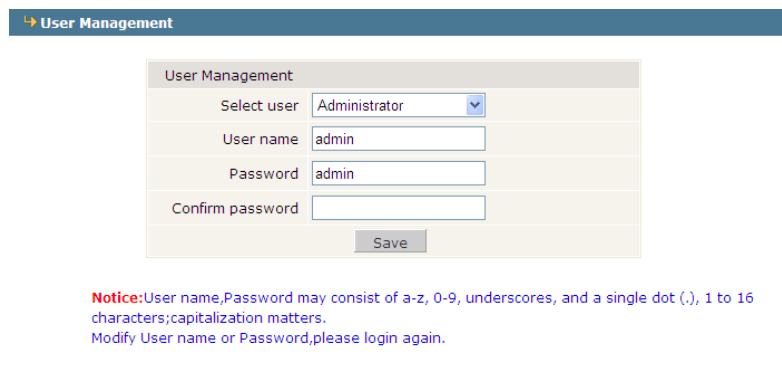
Mail notification on/off: Check this switch to enable public IP mail notification function.

Interval: Select the interval of public IP mail notifications.

After enable this function, when the device starts or detects public IP change, it will send notification mail to the mail address set in “mail settings”.

## 4.5 User Management

See below for IP camera user manager settings interface:



You can set three users for every camera, one is Administrator and the others are general users.

Administrator authority: It can operate and set all functions and parameters of IP camera

General user authority: (1) It can perform operations like snapping, recording, playback, talkback, monitoring, alarm clearing, log searching, zooming and full-screen reviewing; (2) It can do settings like visit setting, image lightness and color adjustment, PTZ and lens control, etc.

**Note:**

User name and password must be 1-16-character-strings consisted of letters,



numbers, underlines or dots. The characters are case sensitive.

Default user name of administrator: **admin**

Password: **admin**

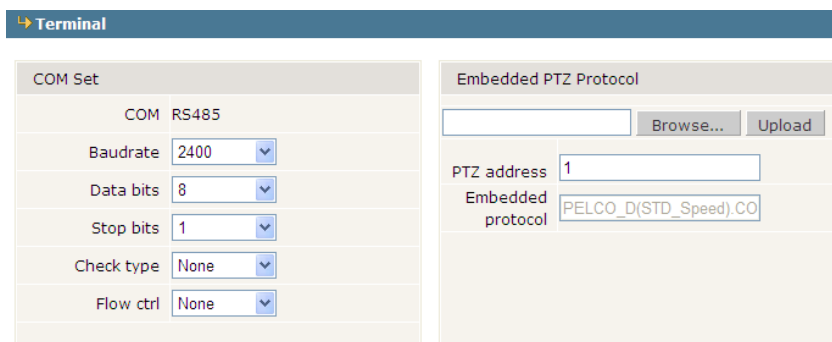
Default user name of general user: **user 1 \user 2**

Password: **user 1 \user 2**

Note: user name and password are case sensitive.

## 4.6 Front-end Settings

See below picture for the interface of IP camera “Front-end Settings”:



[Serial port settings]: 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). The corresponding protocol need to be downloaded.

### **Note:**

Only when the parameters and protocols are correctly set that the control of add-on communication control device can be implemented.

[PTZ decoder protocol]

Decoder address: 1~255.

Built-in protocol: Echo the built-in protocol name of current IP camera.

PTZ decoder protocol files uploading: To upload the decoder/dome camera communication protocol selected by users. The system supports hundreds of decoder /dome camera communication protocols. It can also be defined by users according to the standard format of protocols.

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

## 4.7 Storage Device

### 4.7.1 Device Management

See below picture for the interface of IP camera “Device Management”:

→ Device Config

**Storage device Info**

| ChooseNO. | TotalSize(M) | FreeSize(M) | State |
|-----------|--------------|-------------|-------|
|           |              |             |       |
|           |              |             |       |
|           |              |             |       |
|           |              |             |       |

**Storage device record parameters**

Code stream: Preferred Stream      Record file packet time: 1 M

**Other parameters**

Overwrite old files when disk is full

Auto search the storage device when start

\* When the device is not linked to the storage device (hard drive, SD Card, U disk), the device does not have function to store, But the video files, pictures can sent to the mail server to upload and Ftp  
 \* SD card hot-swap is not recommended.it may damage the SD card files.

[Storage Device information]: View information of SD card here, including total capacity, free capacity, and formatting status. User can also click [Formatting] button to format SD card. During the formatting process, please click [Refresh] button to the display formatting completion percentage.

[Device Recording Parameters]

Stream selection: Set record stream for SD card. Preferred stream and alternate stream are selectable.

Record files packing interval: Set packing intervals for each segment of record file when SD card is recording. 1 means files will be packed every 1 minute.

[Other Parameters]

Automatically delete old files when storage device is full: When the storage capacity of SD card is used up, the device will delete old files automatically. The way to delete old files is first delete the files of the earliest date. If the space is still not enough, then delete the files of the earliest date but one, then, go on like this if necessary. If the record files are record on the current date, then first delete the files of the earliest hour. But files of the current hour cannot be deleted. If the SD card gets full in one hour, the device will stop recording and snapping images. After the one-hour session ends, system will delete the files of the hour and continue to record and snap pictures.

Scan the disk when device starts: Check storage device or not when IP camera starts.

**Note:**

Hot-plugging is not recommended for SD card. Compulsory hot-plugging may damage the SD card, causing data loss or abnormal operation.

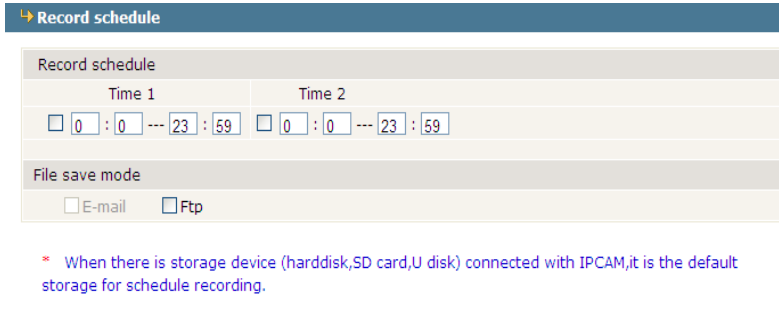
Do not cut off the power of the device during formatting process.

Ext2 file is used to format system by default.

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

## 4.7.2 Record Schedule

See below picture for the interface of IP camera “Record Schedule”:



[Device Record Schedule]: Set record schedule. Two periods are allowed.

[Record file storage mode]: Set to save record files to FTP server via FTP uploading. FTP server can be set up in [FTP settings].

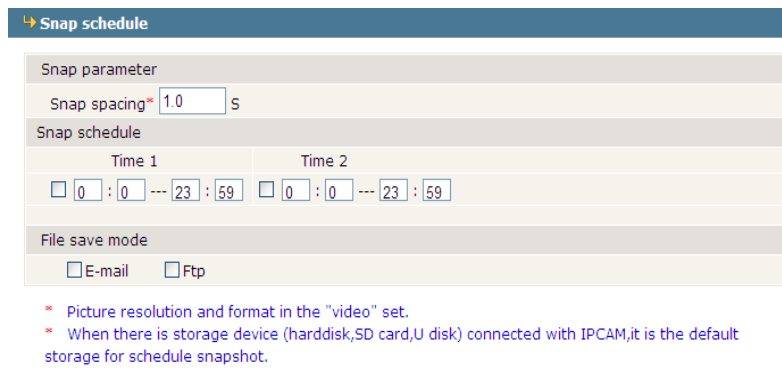
**Note:**

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

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

### 4.7.3 Snap Schedule

See below picture for the interface of IP camera “Snap Schedule”:



[Picture snapping parameters of the device]: Set the interval of IP camera picture snapping. Minimum interval is 1 second.

[Device Snap Schedule]: Set snapping shedule. Two periods are allowed.

[Snapped files saving 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].

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

## 4.8 Local Settings

See below picture for the interface of IP camera “Local Set”:

| Local Set                       |   |
|---------------------------------|---|
| PC live view parameter settings |   |
| Code stream                     | Preferred Stream  |
| Preview mode                    | Real time   |
| Reset Mosaic                    | <input type="checkbox"/>  |
| PC Storage parameter            |   |
| Record file packet time         | 10 M  |
| Record file path                | C:\XDNVS\ <small>(Non-essential cases. Please keep the default path [C:\XDNVS])</small> |

[PC live preview parameters setup]

Stream selection: Set video stream for PC live preview. Preferred stream and alternate stream are selectable. The parameters of preferred and alternate stream can be set up in [Video Settings].

Preview mode: User can choose real-time priority or fluency priority mode according to their needs.

[Anti-crack]: Select this option to make image quality better. But CPU usage rate will be higher at the same time.

[PC record storage settings]

Record files packing time: Set packing time of record files for local PC when it is recording.

Record/snapped files storage directory: Set the storage directory for local records and snapped files, the default path is C:\XDNVS.

---

# Appendix A: Network Interface for IP Camera

Network port of IP Camera:

|               |   |   |
|---------------|---|---|
| TCP           | 80(Web port)                            | 5000(Communication port, Audio/Video data transmitting Port, Talk data transmitting Port) |
| UDP           | 5000                                    | Audio/Video data transmitting Port  |
| Multiple port | Multiple original port + Channel Number |   |

---

# Appendix B: Default Network Parameters

## 1. Default Wired Network Parameters:

Data Port: 5000

Web Port: 80

IP Address: 192.168.0.8

Subnet Mask: 255.255.255.0

Gateway: 192.168.0.1

DHCP: OFF

## 2. Default Wireless Network Parameters:

IP Address: 192.168.1.8

Subnet Mask: 255.255.255.0

Gateway: 192.168.1.1

Frequency: Auto

Mode: Auto

---

# Appendix C: Visit IP Camera under Different Network Environment

You can use your laptop or PC to connect the IP camera through LAN or Internet, the following will show you how to use IP Camera under different network environment.

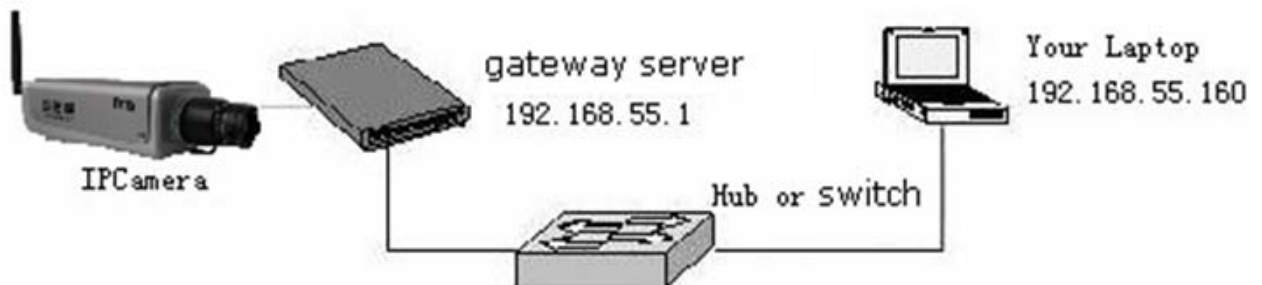
## 1. LAN

There are two ways to connect the IP camera in the LAN: static local IP and dynamic local IP.

### (1). Static local IP

Static local IP: refer to your network administrator to assign a local IP address.

The link drawing is as the following:



The network settings are as below:

| Network            |  |
|--------------------|--|
| Basic Parameters   |  |
| Enable DHCP        | <input type="checkbox"/>                   |
| IP address         | 192.168.0.163                              |
| Subnet mask        | 255.255.255.0                              |
| GateWay            | 192.168.0.1                                |
| MAC                | 00-4a-20-b0-c5-fa <input type="checkbox"/> |
| Data port No.      | 5000                                       |
| HTTP port No.      | 80   |
| Preferred DNS      | 221.5.203.98                               |
| Alternate DNS      | 221.7.92.98                                |
| WiFi Parameters    |  |
| Enable WiFi        | <input type="checkbox"/>                   |
| IP address         | 192.168.1.2                                |
| Subnet mask        | 255.255.255.0                              |
| GateWay            | 192.168.1.1                                |
| SSID               | 111111                                     |
| type of encryption | NONE                                       |
| Frequency band     | Auto                                       |
| Mode               | Auto                                       |

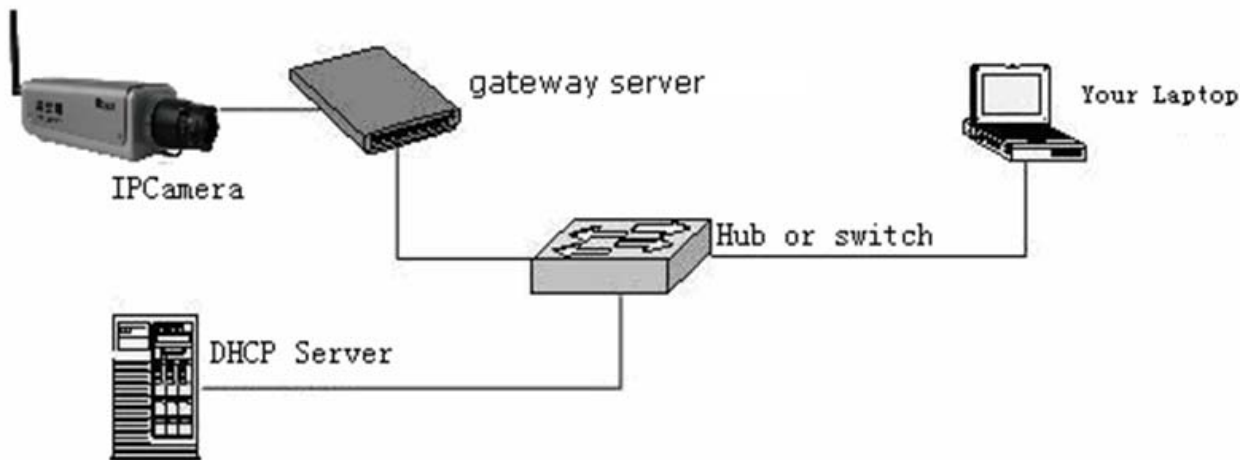
If you want to use the WiFi function, you have to set the IP address, subnet mask and gateway etc in “WiFi Parameters” according to your wireless router.

### Setting Steps:

1. Login IP camera via IE browser;  
Fill local IP address which assigned by the network administrator, for example: 192.168.0.8;  
Fill subnet mask, for example: 255.255.255.0;  
Fill gateway address, for example: 192.168.0.1;
2. Click "Save" to restart IP camera after the above settings are done.

## (2). Dynamic local IP

Refer to the identical local area network through the DHCP server to obtain the IP address. The link drawing is as the following:



Check "Enable DHCP" in network setting:

| Network          |  |
|------------------|--|
| Basic Parameters |  |
| Enable DHCP      | <input checked="" type="checkbox"/>        |
| IP address       | 192.168.0.163                              |
| Subnet mask      | 255.255.255.0                              |
| GateWay          | 192.168.0.1                                |
| MAC              | 00-4a-20-b0-c5-fa <input type="checkbox"/> |
| Data port No.    | 5000                                       |
| HTTP port No.    | 80   |
| Preferred DNS    | 221.5.203.98                               |
| Alternate DNS    | 221.7.92.98                                |

Click [Save] to restart IP camera, then, the settings become effective.

## 2. Internet

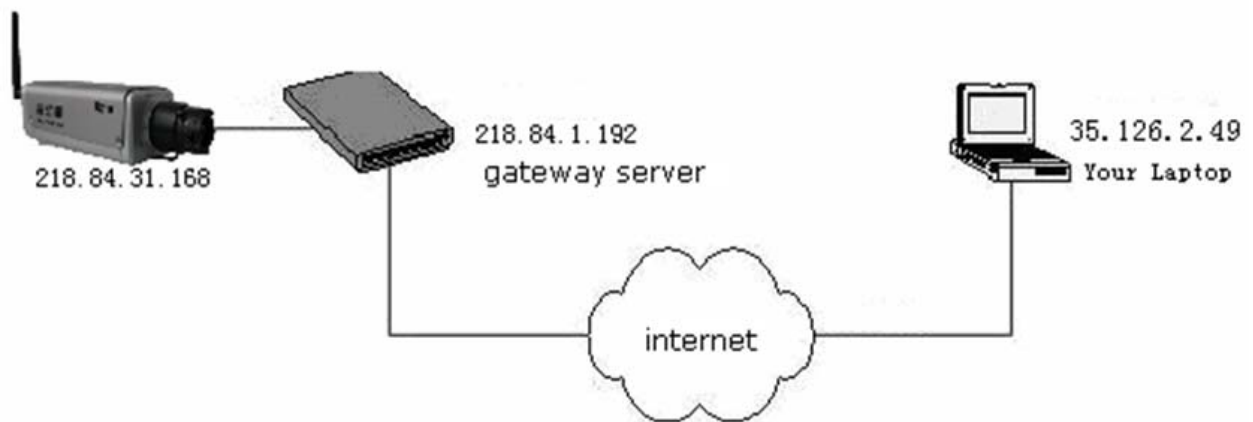
You can connect the IP camera with Internet through three ways: Fixed IP mode, ADSL and router sharing access to the internet mode, ADSL and IP camera's PPPoE access to the internet mode. After IP cameras connect with the Internet, user can visit the camera on WAN via dynamic domain name or IP address (static IP with port



forwarding form) directly.

## (1). Fixed IP mode

The linking drawing as the following:



Check “Enable DHCP” in network setting:

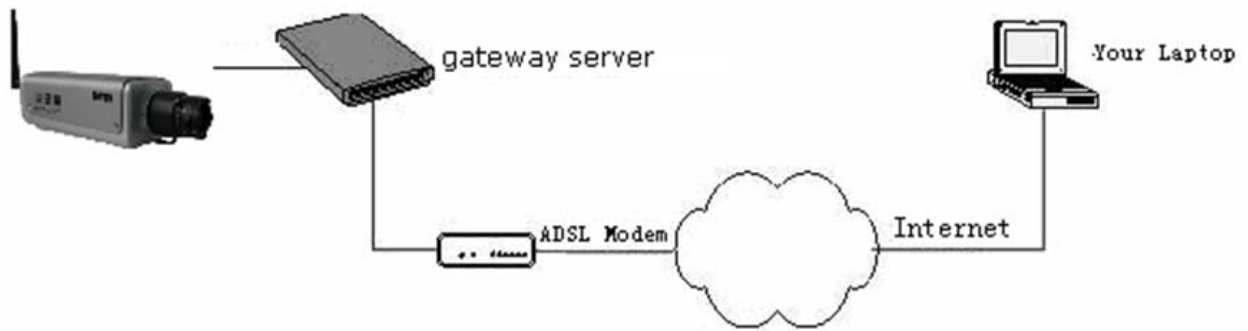
| Network          |  |
|------------------|--|
| Basic Parameters |  |
| Enable DHCP      | <input checked="" type="checkbox"/>        |
| IP address       | 192.168.0.163                              |
| Subnet mask      | 255.255.255.0                              |
| GateWay          | 192.168.0.1                                |
| MAC              | 00-4a-20-b0-c5-fa <input type="checkbox"/> |
| Data port No.    | 5000                                       |
| HTTP port No.    | 80   |
| Preferred DNS    | 221.5.203.98                               |
| Alternate DNS    | 221.7.92.98                                |

### Steps:

1. Login IP camera via IE browser, and change **network** setting;
2. Input the IP address which applies from the network server. For example, 218.84.31.168;
3. Input the correct subnet mask, for example: 255.255.255.192;
4. Input the correct gateway address, for example: 218.84.31.131;
5. Click “Save” to restart IP camera after the above settings are done.

## (2). ADSL and router sharing access to the internet mode

The link drawing is as the following:



Input the username and password which applied in the DDNS server on the DDNS setting items and forward ports on the router. User can visit the camera on WAN via dynamic domain name directly. The network settings are as below:

| Network                   |  |
|---------------------------|--|
| <b>Basic Parameters</b>   |  |
| Enable DHCP               | <input checked="" type="checkbox"/>                                    |
| IP address                | 192.168.0.163  |
| Subnet mask               | 255.255.255.0  |
| GateWay                   | 192.168.0.1  |
| MAC                       | 00-4a-20-b0-c5-fa <input type="checkbox"/>                             |
| Data port No.             | 5000   |
| HTTP port No.             | 80   |
| Preferred DNS             | 221.5.203.98   |
| Alternate DNS             | 221.7.92.98  |
| <b>WiFi Parameters</b>    |  |
| Enable WiFi               | <input type="checkbox"/>   |
| IP address                | 192.168.1.2  |
| Subnet mask               | 255.255.255.0  |
| GateWay                   | 192.168.1.1  |
| SSID                      | 111111   |
| type of encryption        | NONE   |
| Frequency band            | Auto   |
| Mode                      | Auto   |
| <b>DDNS Parameters</b>    |  |
| Enable DDNS               | <input checked="" type="checkbox"/> <a href="#">Link to mvddns.net</a> |
| DDNS provider             | mvddns.net   |
| DDNS regName              | IPCam1001  |
| DDNS password             | ••••••••   |
| DDNS domain               | IPCam1001.mvddns.net   |
| DDNS server URL           | www.mvddns.net   |
| DDNS server Port          | 30000  |
| Data port map No.         | 5000   |
| HTTP port map No.         | 80   |
| Domain E.C.:              | test1.mvddns.net   |
| <b>PPPOE Parameters</b>   |  |
| Enable PPPOE              | <input type="checkbox"/>   |
| PPPOE URL                 |  |
| PPPOE username            |  |
| PPPOE password            |  |
| Online time               | 0minutes   |
| <b>Connect Parameters</b> |  |
| Auto connect              | <input type="checkbox"/>   |
| Center URL                | 192.168.55.4   |
| Center port No.           | 6000   |

Save

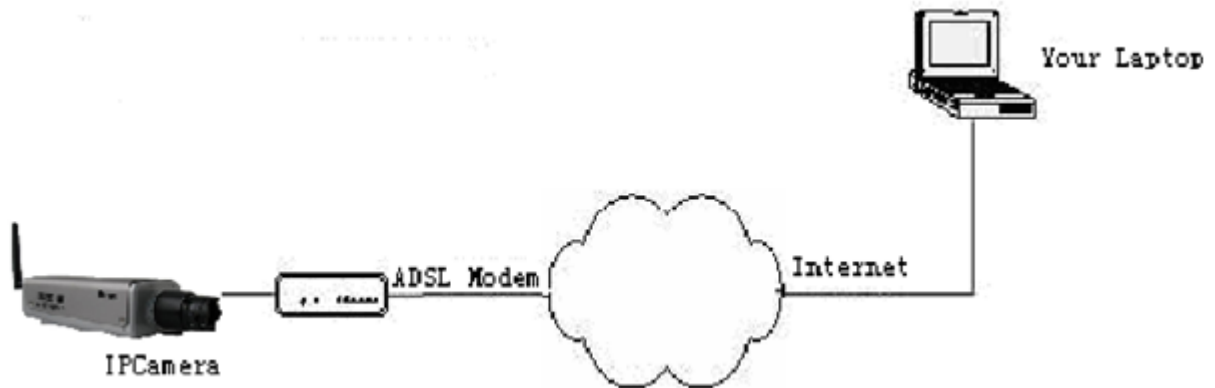
### Steps:

1. Login DDNS server, then, register username and password;
2. Select DDNS server from the drop down list, for example: <http://www.mvddns.net>;
3. Input the Registration name and password;
4. Input domain name address which applied by the DDNS server, for example: [test1.mvddns.net](http://test1.mvddns.net);
5. Input the DDNS IP address, for example: [www.mvddns.net](http://www.mvddns.net);
6. Input the DDNS server port, default port:30000;
7. Input the public data port No. assigned by port forwarding. Default port: 5000;
8. Input the public WEB port No. assigned by port forwarding. Default port: 80;
9. Click [Save] to restart IP camera after the above settings are done.

### (3). ADSL and IP camera's PPPoE access to the internet

## mode

The link drawing is as the following:



Input the username and password which applied in the DDNS server on the DDNS setting items. Then, input the PPPoE username and password which applied by network provider on the PPPoE setting items.

The DDNS parameter settings are same as above.

To the network setting, please refer to the following:

| DDNS Parameters  |  |
|--|--|
| Enable DDNS  | <input checked="" type="checkbox"/> <a href="#">Link to mvddns.net</a> |
| DDNS provider  | <input type="text" value="mvddns.net"/>                                |
| DDNS regName   | <input type="text" value="IPCam1001"/>                                 |
| DDNS password  | <input type="password" value="••••••••"/>                              |
| DDNS domain  | <input type="text" value="IPCam1001.mvddns.net"/>                      |
| DDNS server URL  | <input type="text" value="www.mvddns.net"/>                            |
| DDNS server Port   | <input type="text" value="30000"/>                                     |
| Data port map No.  | <input type="text" value="5000"/>                                      |
| HTTP port map No.  | <input type="text" value="80"/>  |
| Example: <a href="http://IPCam1001.mvddns.net">http://IPCam1001.mvddns.net</a> |  |
| PPPOE Parameters   |  |
| Enable PPPOE   | <input checked="" type="checkbox"/>                                    |
| PPPOE URL  | <input type="text" value="219.133.179.242"/>                           |
| PPPOE username   | <input type="text" value="SZ20129800@163.gd"/>                         |
| PPPOE password   | <input type="password" value="••••••••"/>                              |
| Online time  | <input type="text" value="0minutes"/>                                  |

The PPPoE settings: You have to input the correct PPPoE username and password applied by the network provider.

---

# Appendix D: FAQ

## 1. Forget Password

Answer: **【RESET】** on the IP Camera back, press it to retrieve all parameter to default (Factory Setting). Both the default user name and password are admin.

### **Note:**

Please don't press **【RESET】** button if you are not a professional operator. After reset, all parameters will be restored to factory settings except for the MAC address.

## 2. IP camera audio/video function fails after abnormalities or abnormal power cut occur during upgrade, core edition is V4.0.0.0 (Backup file)

Solution: Connect the power cord and network cable of IP camera and press on RESET button, then, release it after 10 seconds. System will run the back-up program automatically. Upgrade system after enter into the back-up program. When upgrade completes, the IP camera will work normally. The back-up program offers only upgrade and parameter setup functions, audio and video functions are not available.

## 3. No image in IE Browser

Reason: Haven't installed ActiveX.

Answer: You need to install ActiveX Control when you visit IP Camera for the first time.

Click "file" to download ocx. Click **【Run】** or **【Save】** to download ActiveX when a new dialogue box appears. After download it, double-click the downloaded file "xdview.exe" to install ActiveX. When "Install OK!" appears, installation is done.

## 4. Why failed to login IP Camera after upgrade through IE Browser?

Answer: Delete the cookies of IE. Follow these steps: Click Tool->Internet options->Internet temporary file->Delete to delete all offline contents. Confirm and restart IE to login IP Camera.

## 5. Why the image is not fluent?

Reason 1: The video frame rate is too low

Answer: Improve the video frame rate

Reason 2: Many users are viewing the image

Answer: Close some clients or reduce the compression bit rate.

Reason 3: The bandwidth is too low

Answer: Reduce the video frame rate or video compression bit rate

## 6. Can't visit IP Camera via IE browser.

Reason 1: Network is disconnected

Answer: If it is an error of network connection, do the following steps: Connect PC to network to test whether they work normally. Check whether there is cable failure or network failure caused by PC virus until PCs can be connected with the command of Ping.

Reason 2: IP Address was occupied by other device

Answer: Cut off the connection of IP Camera and network and connect IP Camera to PC directly, and then set IP address again according to recommendatory operation.

---

Reason 3: IP address lies in different subnet?

Answer: Check the IP and subnet mask, test the settings of gateway.

Reason 4: The physical address of network is conflict with IP Camera.

Answer: Please modify the physical address of IP Camera.

Reason 5: The web port is modified to others?

Answer: Please contact administrators of network to obtain relevant port information.

Reason 6: When the causes can not be found

Answer: Please reset IP Camera to default state, and then connect to IP Camera (System default IP address: 192.168.55.160; mask address: 255.255.255.0).

7. Speaker without sound

Reason 1: No Audio input connected

Answer: Check the Audio connection of the host.

Reason 2: The audio option of IP Camera is off

Answer: Check the Audio in opinion in Audio parameter settings to see if you have opened the audio.

8. Audio sounds bad

Reason: When there are many noises and the distortion is very serious, please check the input signal level. It should be linear input to match with the signal level of IP Camera. Otherwise, it will result in the saturation distortion.

Answer: Please adopt the proper linear input suitable for the IP Camera.

9. Search NVS software can't find device

Reason: Search NVS software adopts multicast protocol to perform searching. But the firewall forbids multicast data packet.

Solution: Disable the firewall.

10. How to deal with the image abnormality?

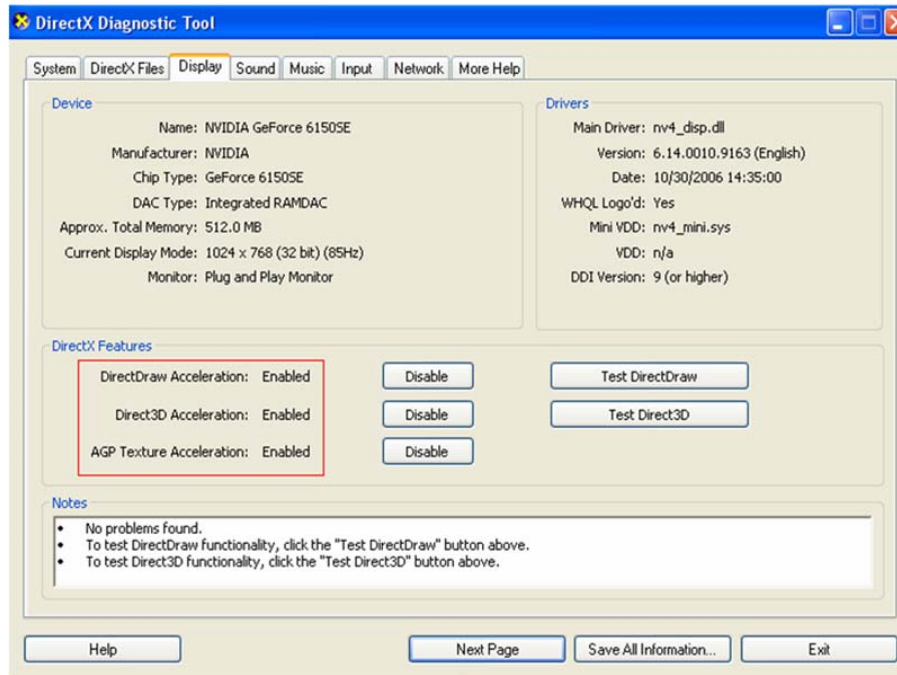
Reason 1: Computer system issue

DirectX is off. Image shows slowly and color is abnormal.

Reason 2: Hardware issue

Graphic card does not support it. The image is speed up and hardware Zoom function (It has to change the Graphic card for hardware problem).

Answer: install DirectX image drive, Start→Run→input "DXDIAG" as follows:



**Note:**

Enable DirectDraw speedup, Direct3D speedup and AGP veins speedup in DirectX function. It means fail to install DirectX or hardware doesn't support if they can not be enabled.

11. Image size is smaller when resolution is set to be 1600\*1200

Reason: Caused by the computer resolution.

Answer: Change the computer resolution to be larger.