M0320
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IP Camera User Manual

For

INC-MP Series

INS-MP1300

Megapixel IP Camera

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Directory

Introduction

ILDVR INC-MP series megapixel P camera integrates the traditional camera and network video technology. It adopts video and audio data collection, compression, transmission and storage together. It can be used alone with SD card record or used in a network environment. It can connect to network directly without any auxiliary device.

ILDVR IP cameras use H.264 video compression technology and G.711/OggVorbis audio compression technology, which maximally guarantee the audio and video quality.

Key features:

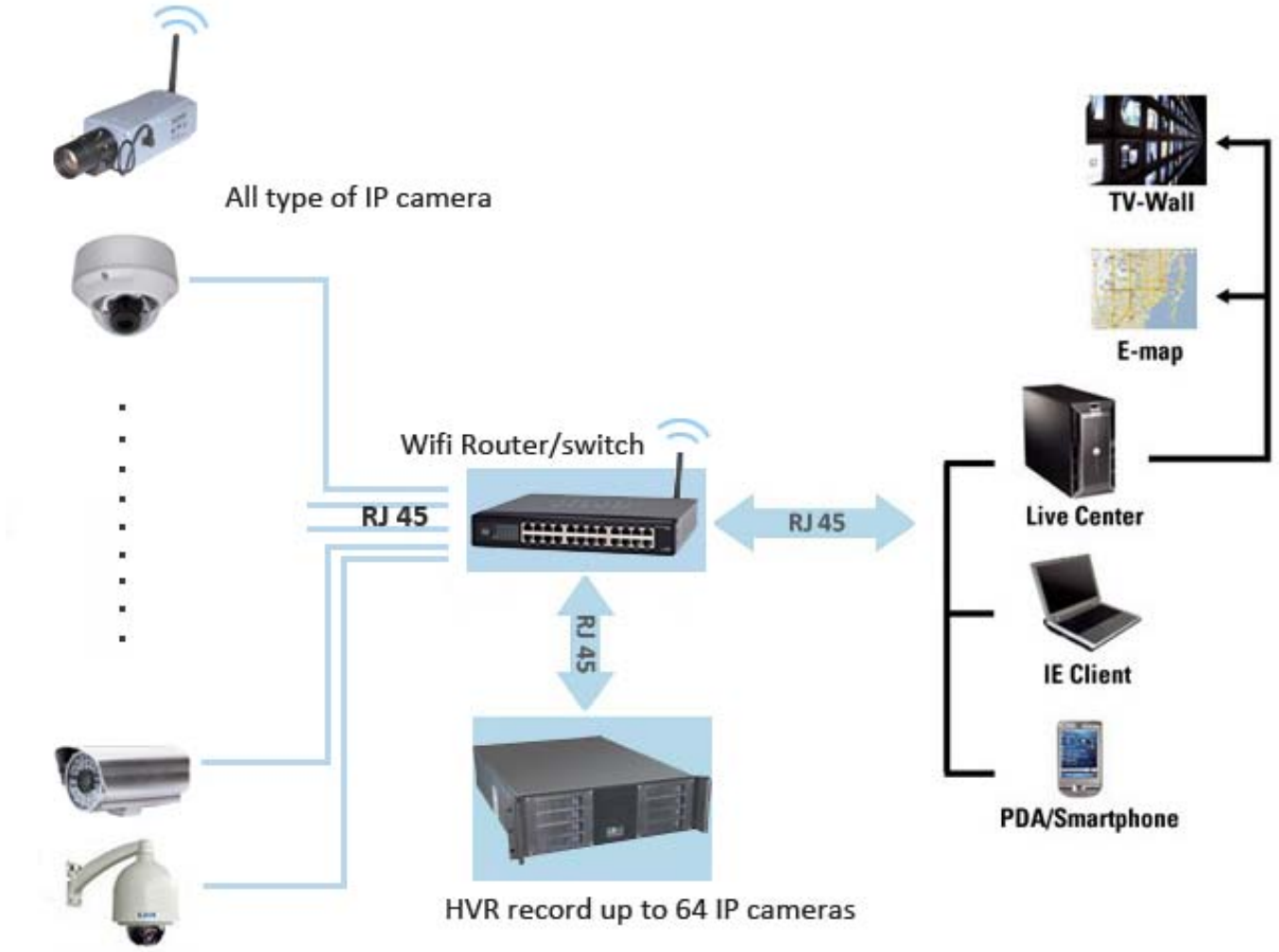
- Advanced H.264 compression with high compression ratio. Support both variable bit rate and variable frame rate.
- Compressed video and audio are synchronous. You can select either mixed stream or only video stream.
- Support SD card local record, up to 64GB.
- Alarm Function includes sensor alarm, Motion Detection, video tampering, network offline, IP address conflict, Storage exception etc.
- Multi-level user management leads to high system safety. Up to 16 users.
- Support dynamic DNS (DDNS)
- Support Email Alarm Notification
- Remote management, maintenance and upgrade the firmware.
- Support bi-direction voice talk or one-way voice broadcast.
- Built-in web server, support IE browser preview and record.
- Multi-purpose design. Weatherproof , vandal-proof and multiple power supply: DC12V/AC24V/POE (48V)
- Wide range of product lines, pixels from 1.3M (1280*960) to 5.0M(2560*1920)

Default settings

Default IP address is 192.168.1.200, subnet mask 255.255.255.0, gateway 192.168.1.1

User ID is “admin”, password is “12345”, video port is “8000” and web port is “80”

Typical network connection diagram:

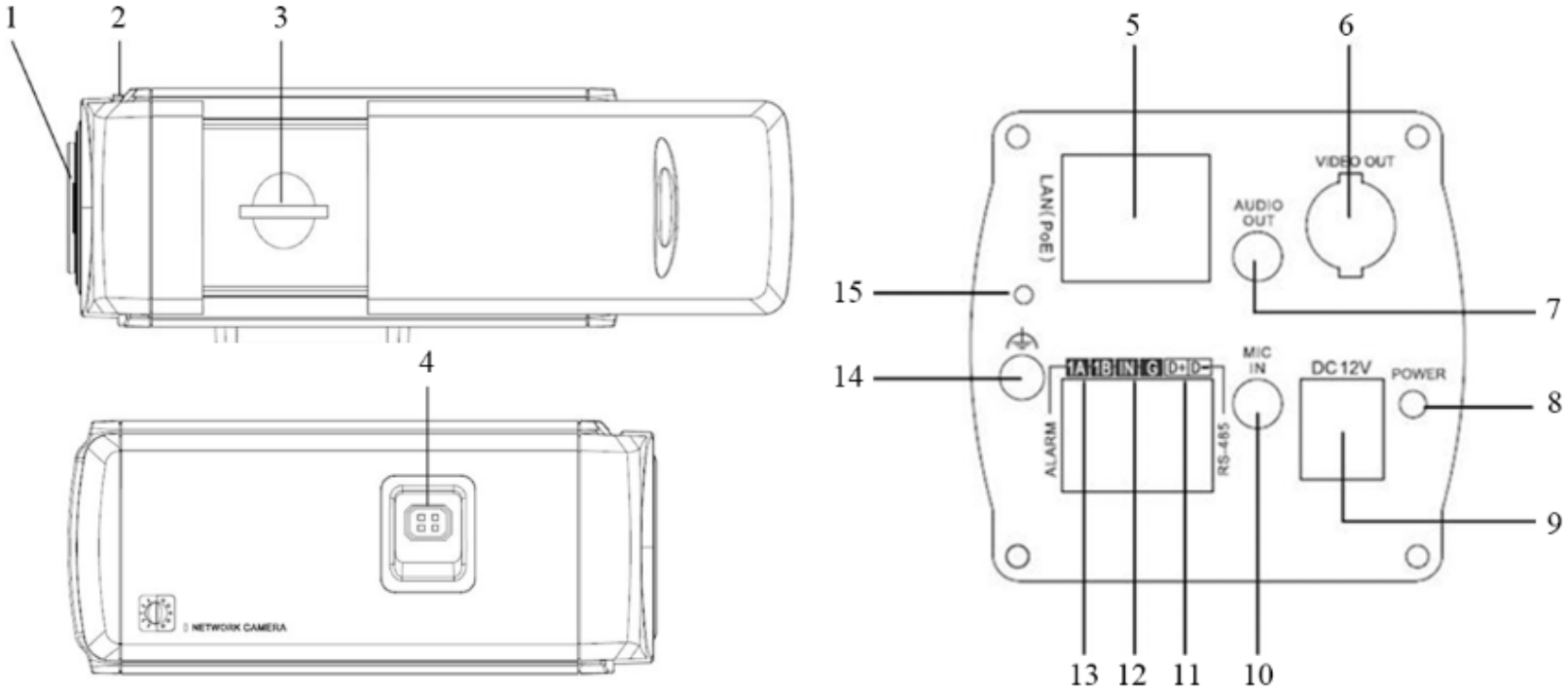


1 Physical Interface Description

1.1 Box Camera

1.1.1 INC-MP20A

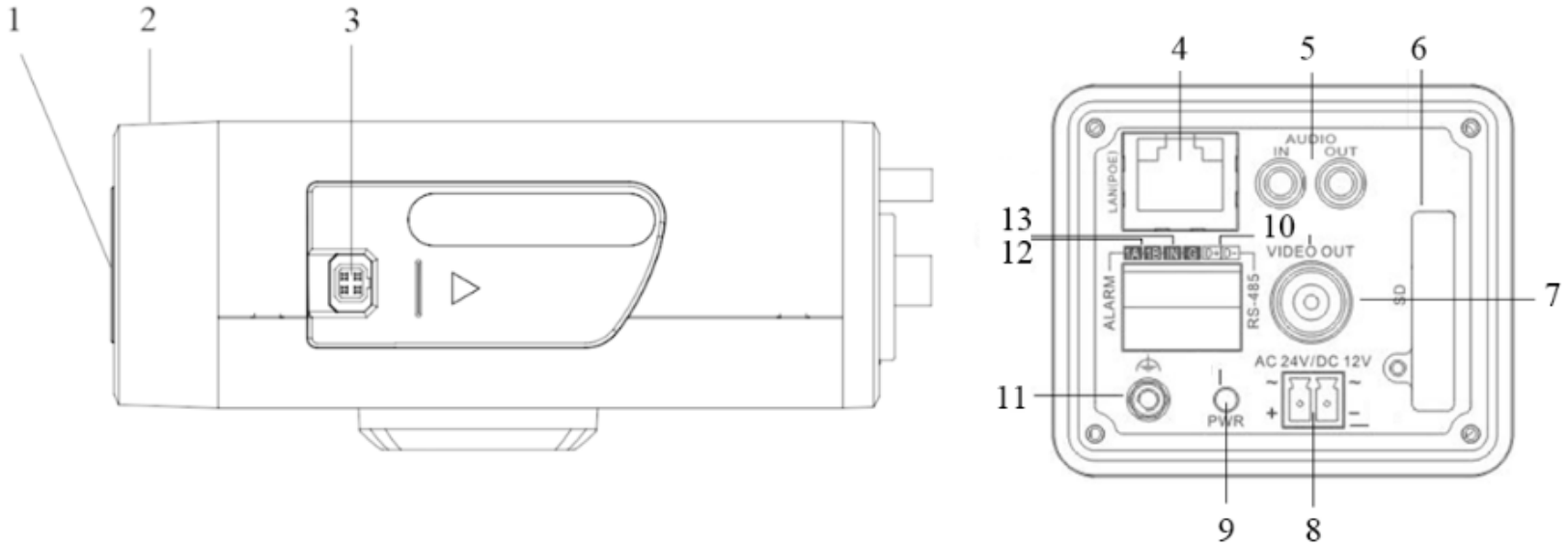
Camera description:



Item	Description	Item	Description
1	Lens mount	9	Power supply
2	Back Focus Ring	10	MIC IN: Audio input interface
3	SD: SD card slot	11	D+, D-: RS-485 interface
4	Auto iris interface	12	IN, G: Alarm input interface
5	10M/100M self-adaptive Ethernet interface	13	1A, 1B: Alarm output interface
6	VIDEO OUT: Video output interface	14	Ground
7	AUDIO OUT: Audio output interface	15	RESET: Reset the camera
8	PWR: Power LED indicator	9	Power supply

1.1.2 INC-MP13CD

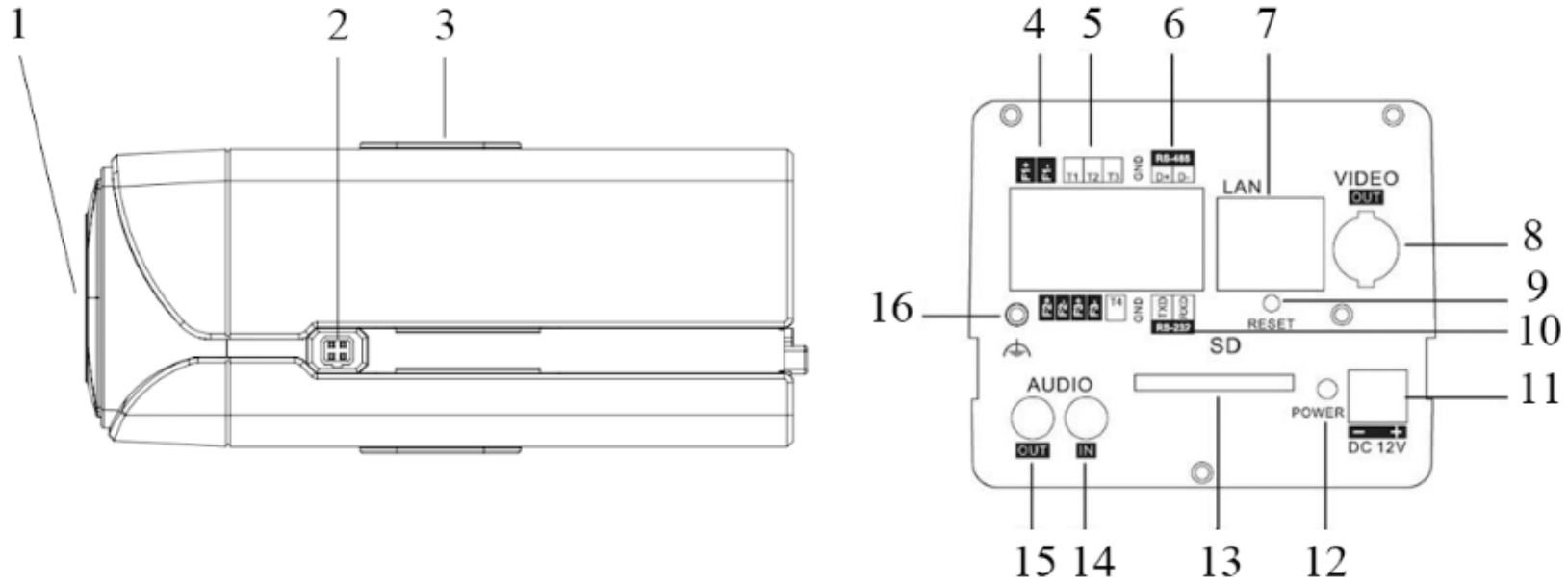
Camera description:



Item	Description	Item	Description
1	CS Lens mount	8	Power supply
2	Back Focus Ring	9	PWR: Power LED indicator
3	Auto iris interface	10	D+, D-: RS-485 interface
4	10M/100M self-adaptive Ethernet interface	11	Ground
5	AUDIO IN: Audio input interface AUDIO OUT: Audio output interface	12	1A, 1B: Alarm output interface
6	SD: SD card slot	13	IN, G: Alarm input interface
7	VIDEO OUT: Video output interface		

1.1.3 INC-MP20CD and INC-MP50N

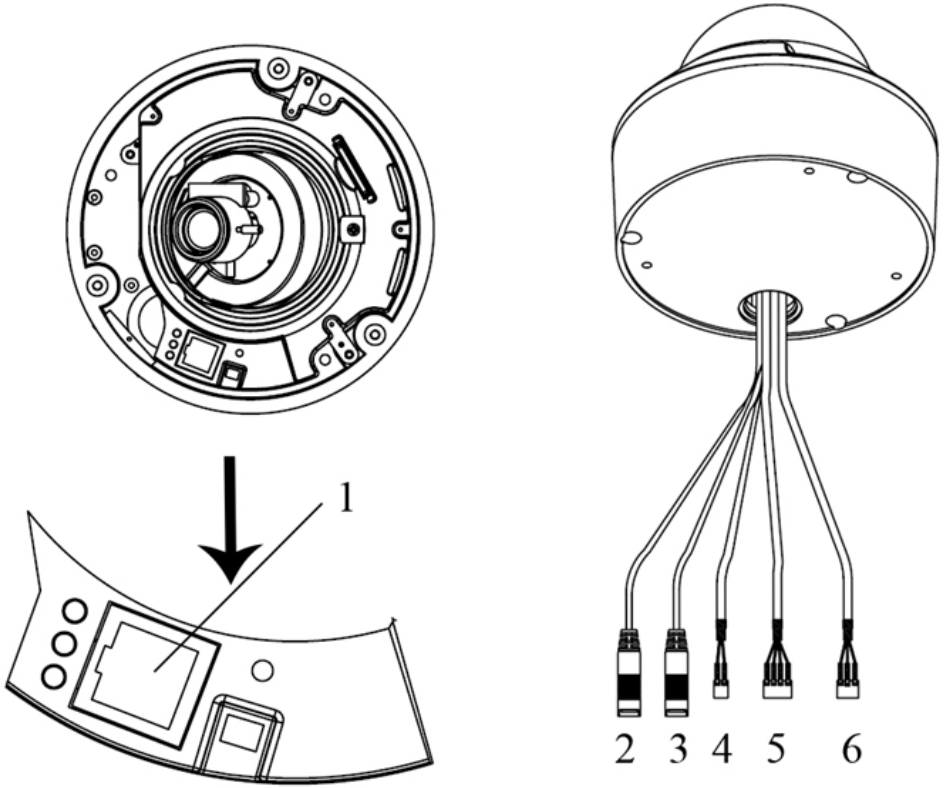
Camera description:



Item	Description	Item	Description
1	CS Lens mount	9	RESET: Reset the camera
2	Auto iris interface	10	TXD, RXD, GND: RS-232 interface
3	Bracket mounting holes	11	Power supply
4	F1+ F1-, F2+ F2- ,F3+ F3- (ALARM OUT): Alarm output interface	12	PWR: Power LED indicator
5	T1,T2,T3, T4,GND (ALARM IN): Alarm input interface	13	SD: SD card slot
6	D+, D-: RS-485 interface	14	AUDIO IN: Audio input interface
7	10M/100M self-adaptive Ethernet interface	15	AUDIO OUT: Audio output interface
8	VIDEO OUT/HDMI: Video output interface	16	Ground

1.2 Dome Camera

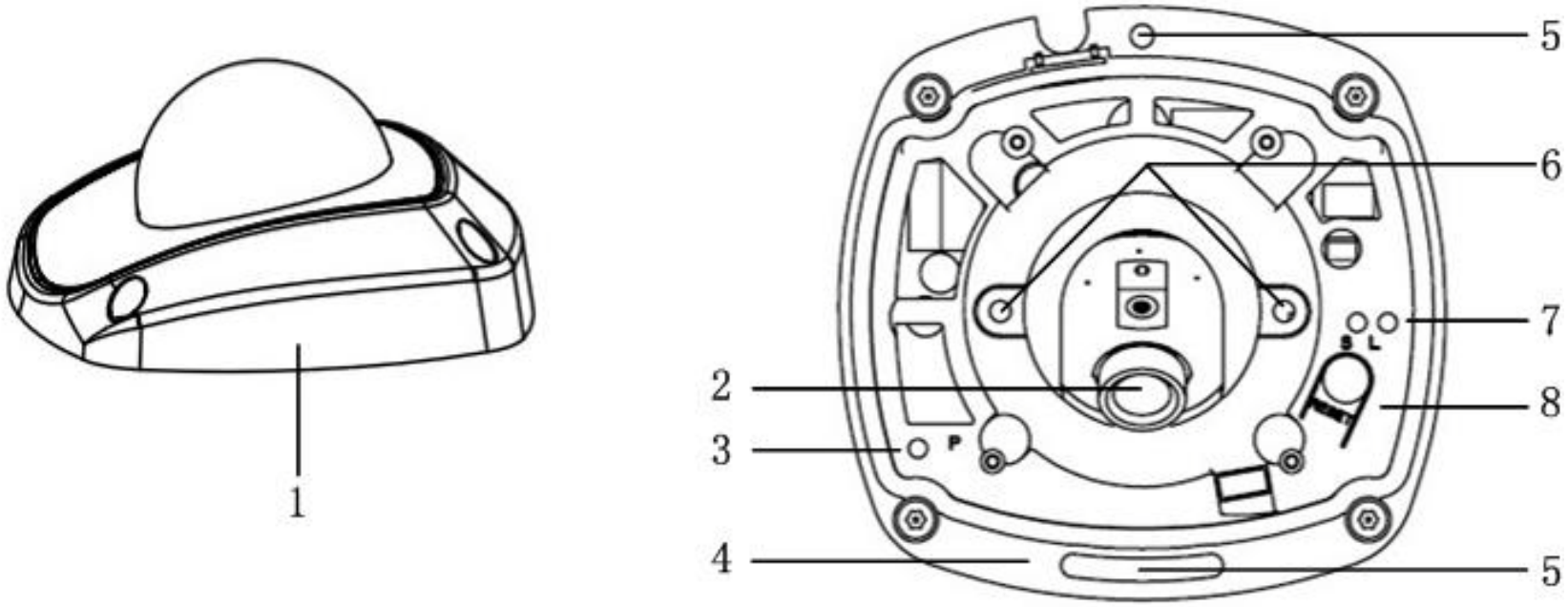
INC-MP20V and INC-MP50V



Item	Description	Item	Description
1	10M/100M self-adaptive Ethernet interface	4	D+, D-: RS-485 interface
2	AUDIO IN: Audio input interface	5	ALARM IN, G: Alarm input interface 1A, 1B: Alarm output interface
3	AUDIO OUT: Audio output interface	6	Power supply

1.3 Mini dome camera

INC-MP20VM



Item	Description
1	Back box
2	Lens
3	P: Power LED indicator, It turns solid red when power is applied to the unit.
4	Bottom board
5	Bottom board set screw hole
6	Lens set screw
7	S & L: Network status LED indicator. When the network is connected, the “S” LED turns solid orange, while the “L” LED flickers in green.
8	RESET: Reset all parameters to factory default settings.

2. Hardware Installation

2.1 Prepare Audio Connector

The IP cameras use standard 3.5mm Stereo Jack connector but the audio type is mono audio, please refer to following picture to make your audio connector.

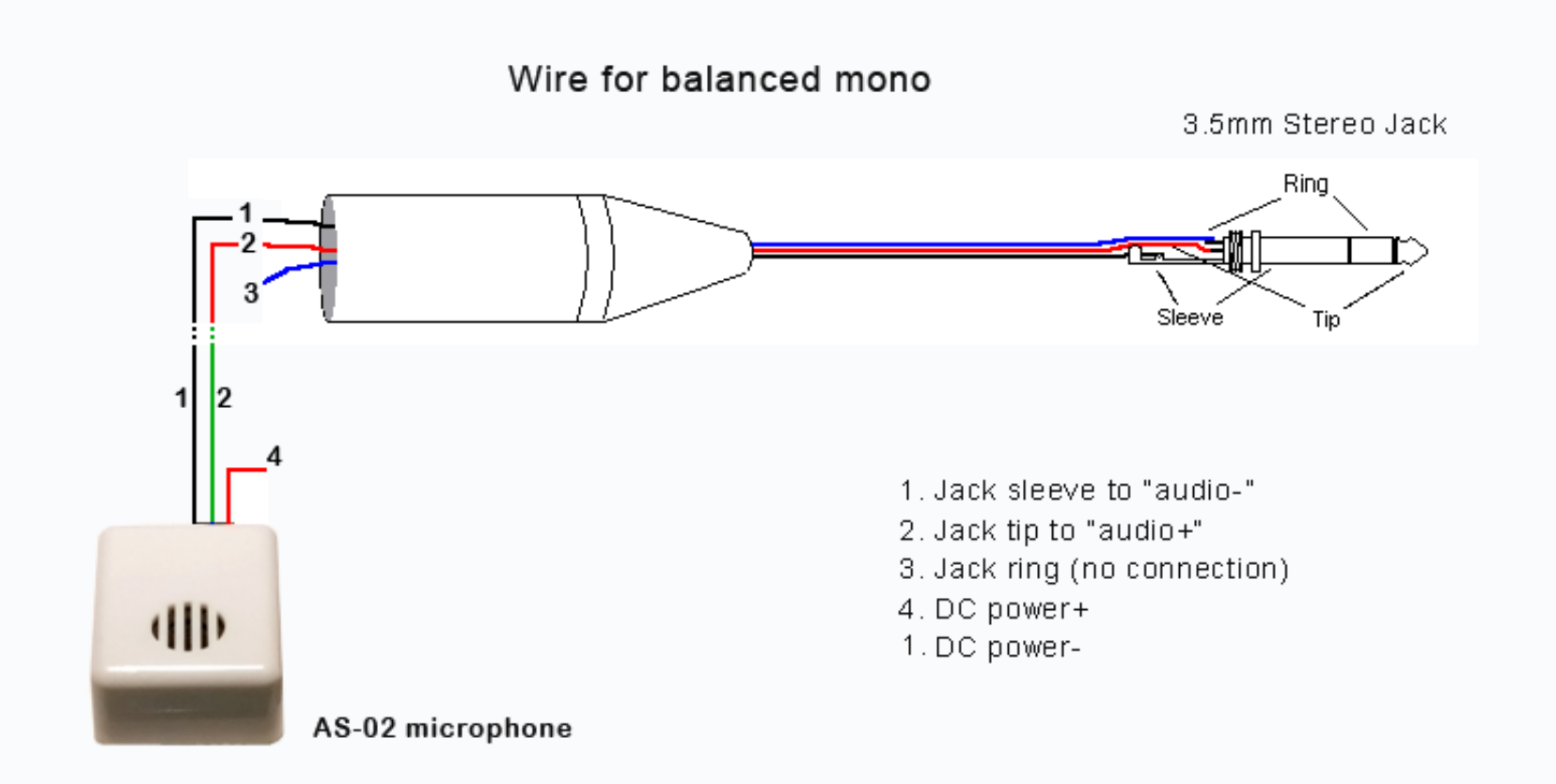


Figure 2.1.1

2.2 Box Camera Installation

Box camera can be fixed in both wall and ceiling, customers can choose different ways to install the camera according to their specific needs. The following section introduces the ceiling mounting, and the wall mounting follows the same way:

Step 1: Fix the mounting bracket to the ceiling.

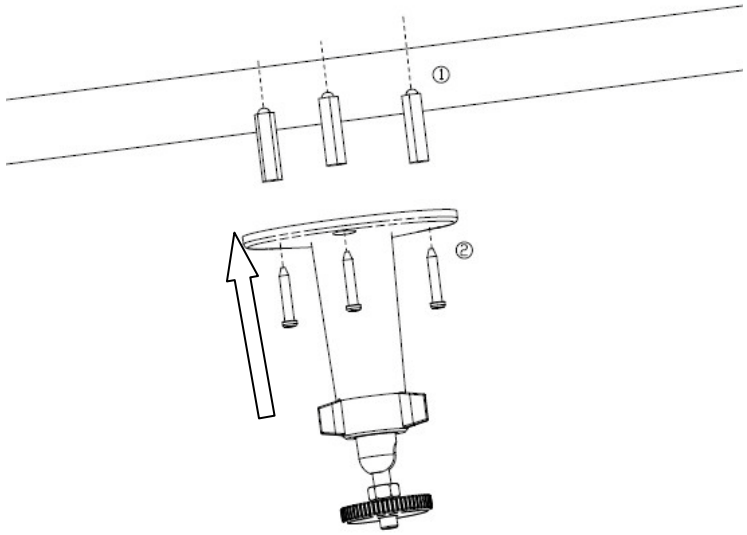


Figure 2.2.1 Fix camera mounting bracket

Note:

If it is wall, you need to fix the expand bolt (note: the mounting hole of the expand bolt should align with the bracket) before fixing the bracket, as step 1 in Figure 2.2.1. If the wall surface is wooden, the step 1 in Figure 2.2.1 can be ignored and you can use the self-tapping screw to fix the bracket directly. Please note that the wall on which the camera is fixed should be able to bear at least three times the weight of the bracket and the camera.

Step 2: Screw the camera's mounting holes to the mounting bracket, and then adjust the camera to the desired monitoring location and finally tighten the knob on bracket to secure the camera to the ceiling.

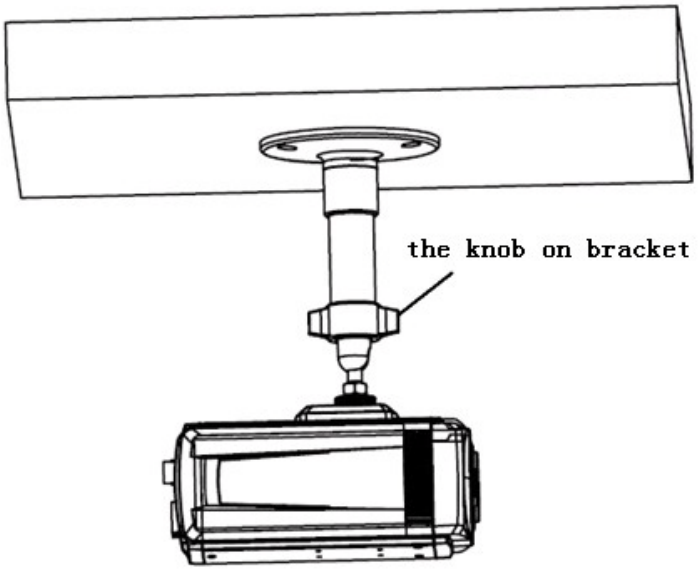


Figure 2.2.2 Fix the Camera

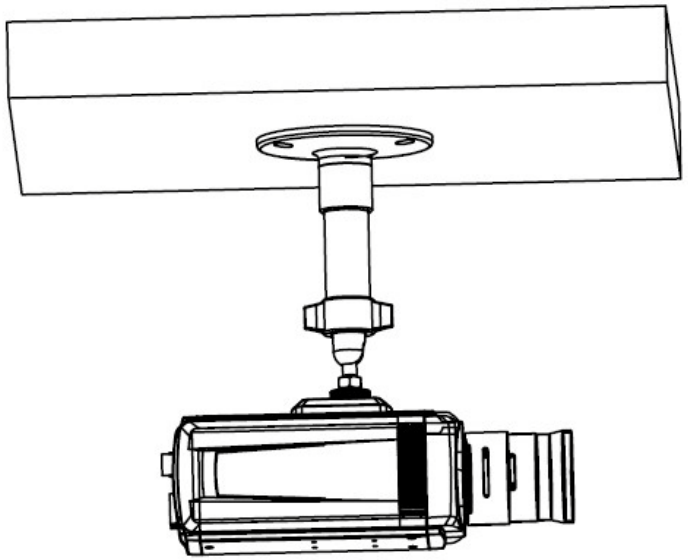


Figure 2.2.3 Mount and adjust Lens

Step 3: Mount the camera lens: connect the VIDEO OUT interface of the camera to the debugging monitor, and adjust lens focus until you have obtained the clearest video images on the monitor, and then lock the lens. If required, loosen the knob on the mounting bracket and adjust the camera lens to the desired monitoring scene, and finally tighten the knob on bracket.

2.3 Dome Camera Installation

The ceiling mounting is a suitable installation way for this camera. Please stick to the following steps:
Step 1: First, loosen the screw with a hexagonal screw driver (attached with the camera), and take down the transparent cover shown as figure 2.3.1
Step 2: Use the screws to fix the dome camera on the ceiling. Figure 2.3.2
Step 3: Adjust the camera's view angle while watching the video on the adjustment monitor. Loosen the fixed screws, and adjust the camera horizontally and vertically. Adjust the lens focus to get optimal video effect. Figure 2.3.3

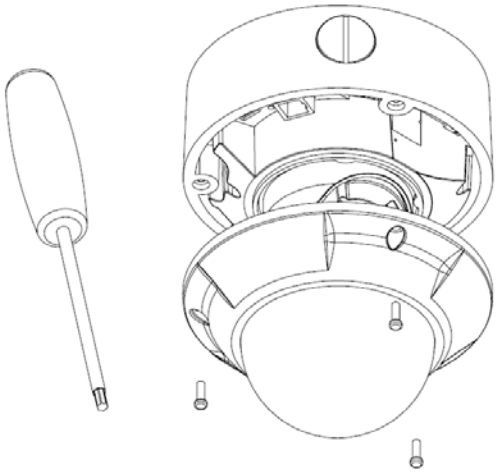


Figure 2.3.1 Unload the Cover

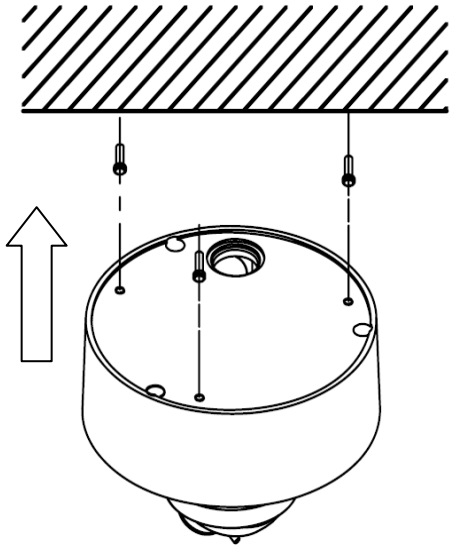


Figure 2.3.2 Install the Camera

Figure 2.3.3 Adjust the lens

Step 4: Tighten the screw after adjusting camera's view angle, and cover the transparent casing. Figure 2.3.4

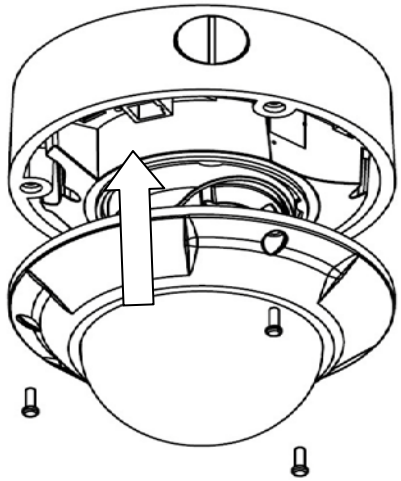


Figure 2.3.4 Install the Cover

2.4 Mini Dome Installation

The ceiling mount is a suitable installation method for this camera. Please stick to the following steps:

Note:

If required, user can apply the pliers to remove the clip (refer to the part marked in dotted line) on the side of the back box and then feed cables through the opening to secure on the ceiling.

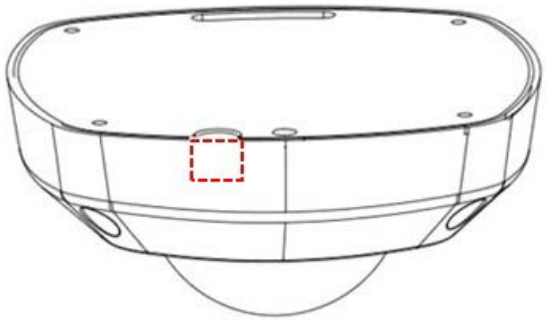


Figure 2.4.1

Step 1: Loosen the set screws with a hexagonal screw driver (attached with the camera), and take down the back box shown as below:

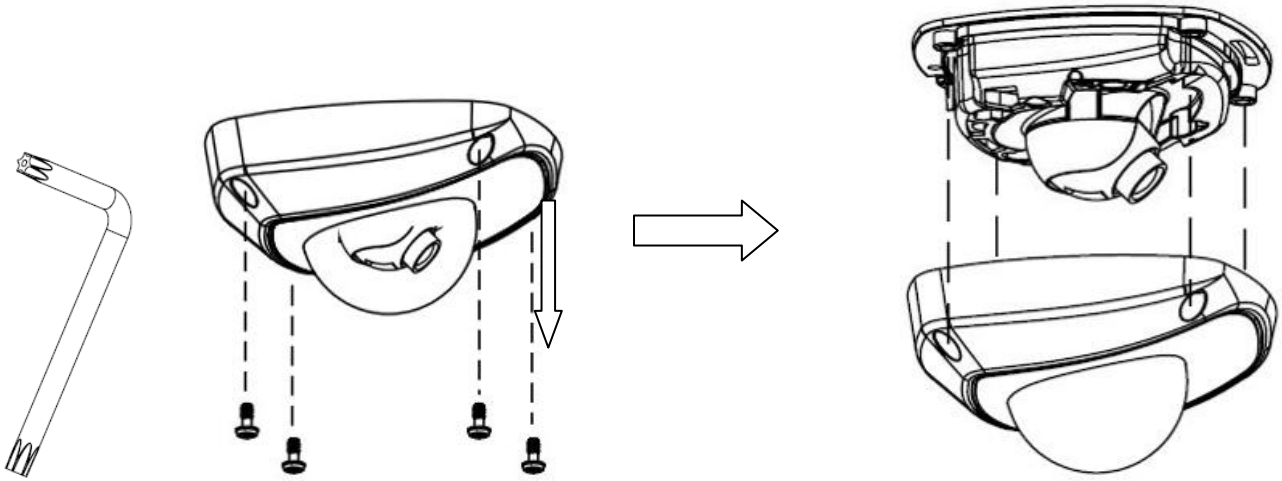


Figure 2.4.2 Remove the back box

Step 2: Use the screws to fix the bottom board on the ceiling.

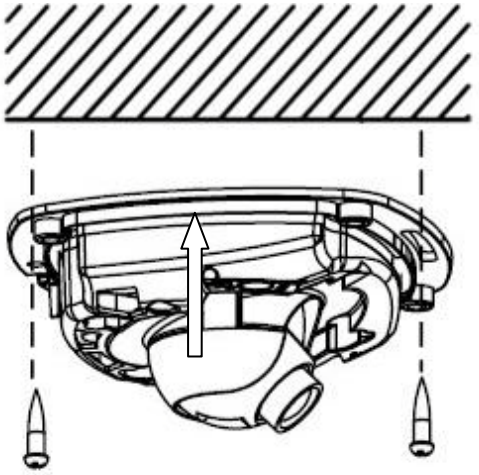


Figure 2.4.3 Fix the bottom board

Step 3: While viewing the video on the computer, adjust the camera’s view angle for your need.

Loosen the lens set screws.

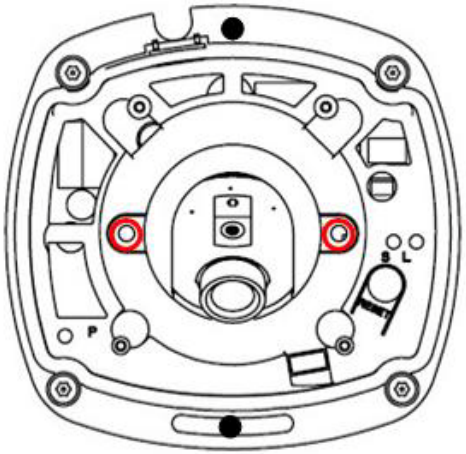
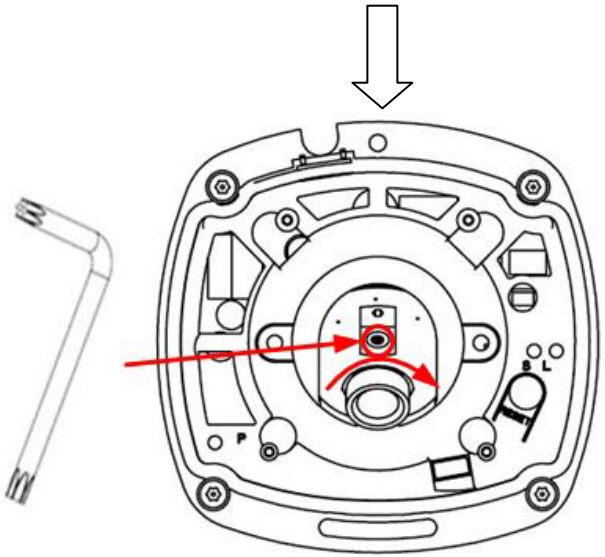


Figure 2.4.4



Insert the hexagonal screw driver into the hole marked in the picture , and then adjust horizontally and vertically the camera's pan and tilt by turning the hexagonal screw driver.

Figure 2.4.5

Tighten the lens set screws.

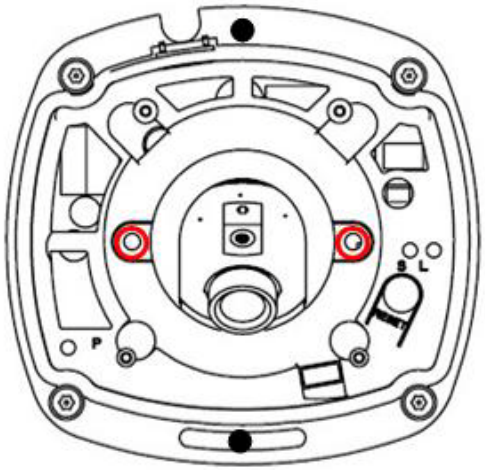


Figure 2.4.6

Note:

1. As the lens of camera has already been factory adjusted to the best imaging effect, thus it only needs to adjust the pan and tilt view angle.
2. If the image is not clear without the back box, please don't worry, the back box will affect the imaging effect, so when you test the imaging effect of lens, the back box must be installed to the camera

Step 4: Install the back box, and tighten the set screws.

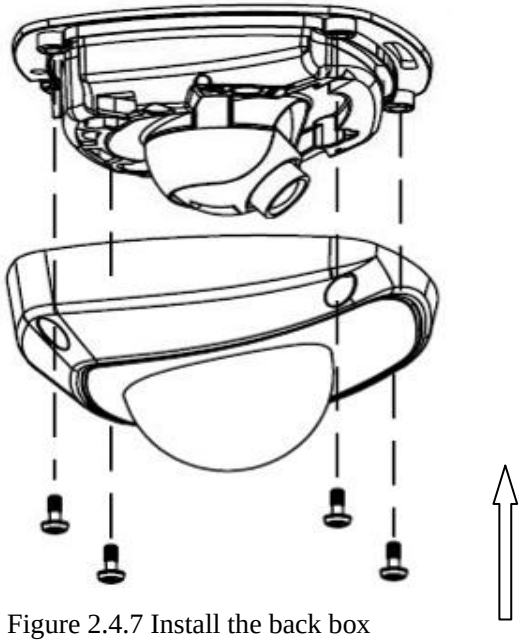


Figure 2.4.7 Install the back box

Figure 2.4.8 Done

2.5 IP Speed Dome Installation

2.5.1 General Steps

Step 1: Open the bubble and remove the expandable poly ethylene and protective sticker from the dome drive. Refer to Figure 1.4.1.

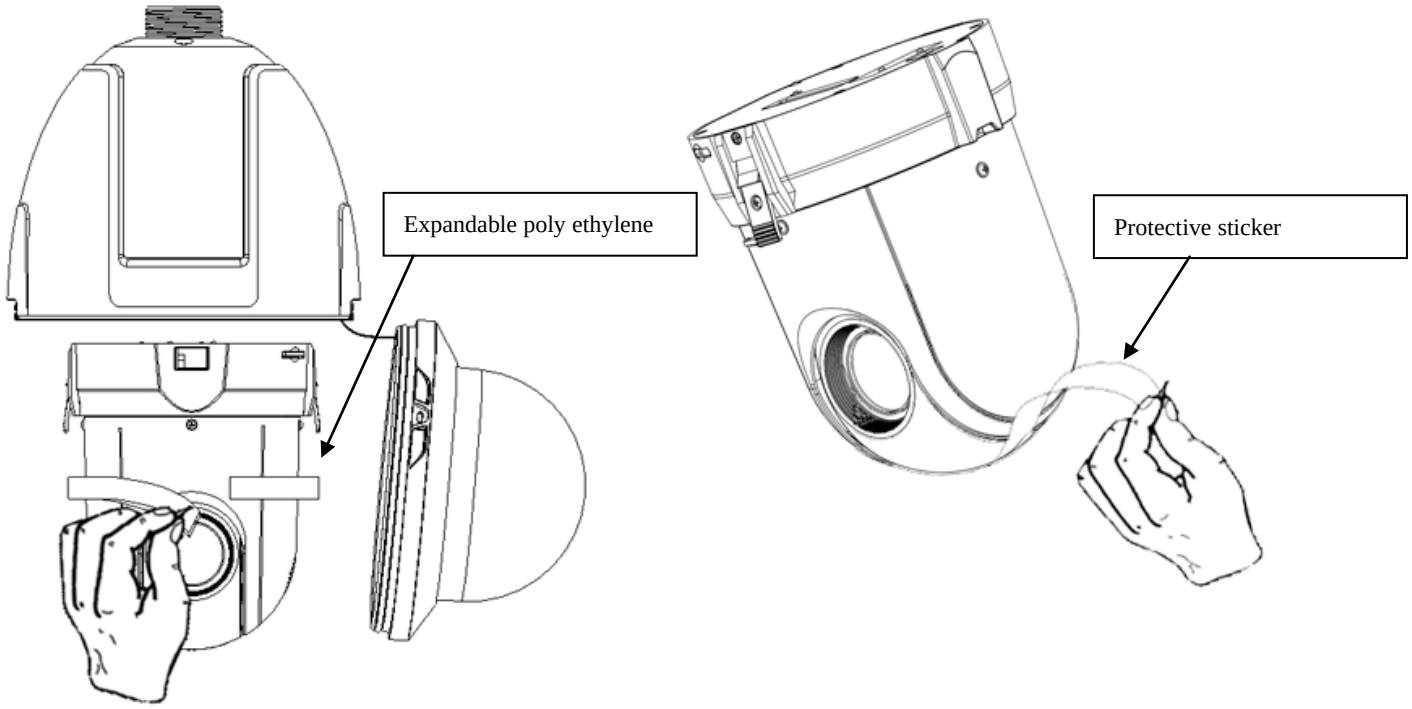


Figure 1.4.1 Open bubble and remove the expandable poly ethylene and protective sticker from dome drive

Step 2: Configure the dome address, baud rate and other settings through DIP switch SW1 and SW2 located on the bottom board of the dome, as shown in Figure 1.4.2. Usually you don't need do this step because the dome address, baud rate and other settings of INC-MP1300 can be configured through

software interface. It is self-adaptive design.

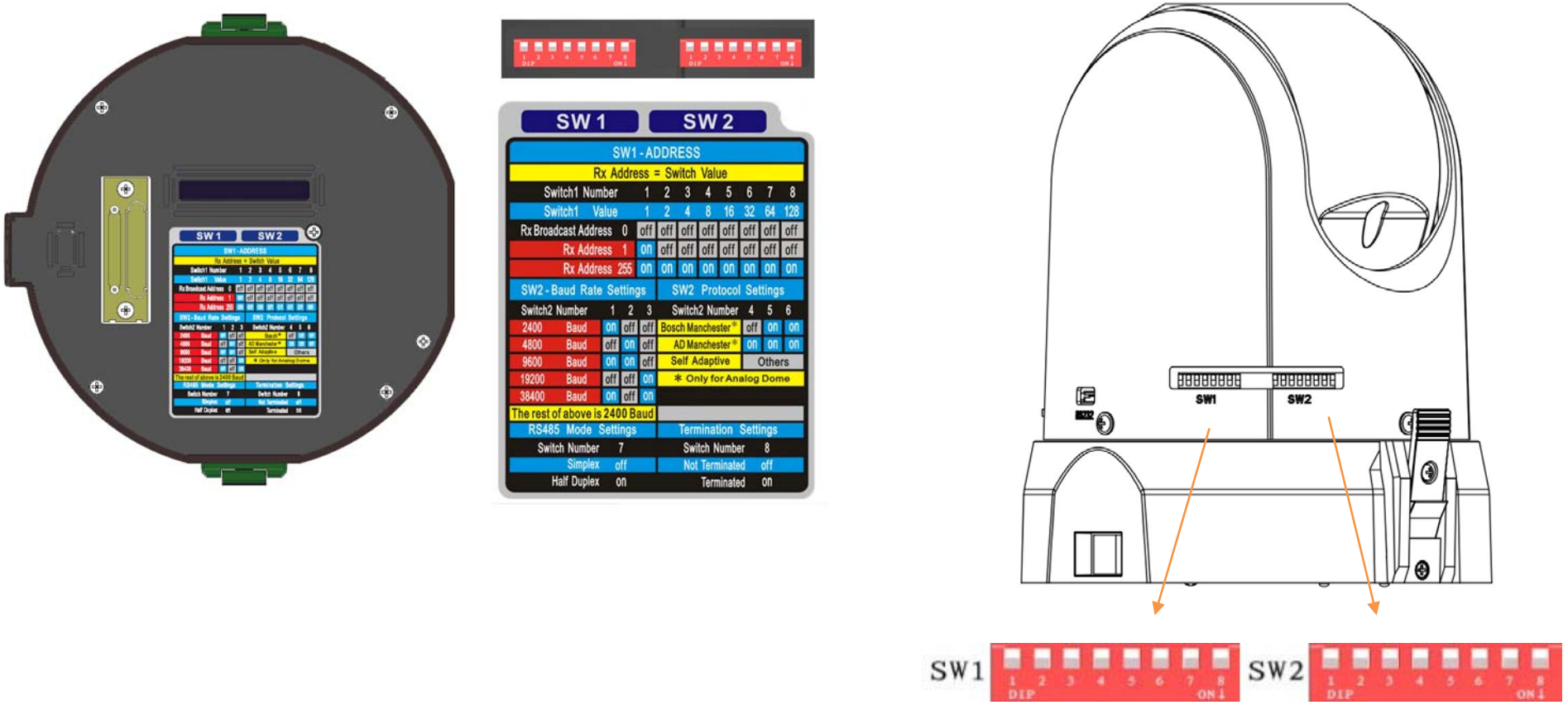
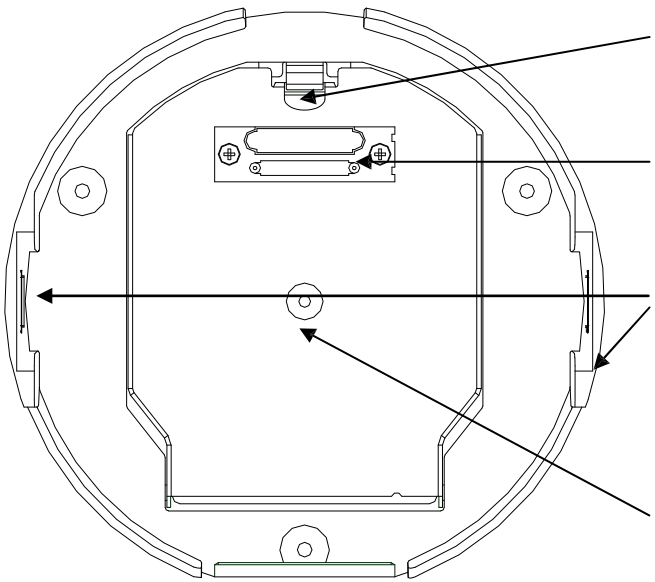


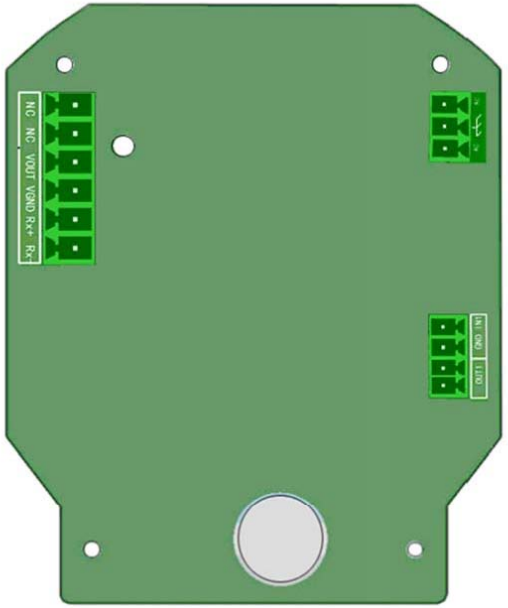
Figure 1.4.2 Medium Speed Dome DIP Switch

Step 3: Push the tab locks on the back box interconnect board and lift the hinged door to the circuit board, as shown in Figure 1.4.3. Unplug the video cable, power cord and other cable terminals to avoid cables twisting during the back box installation. Refer to Figure 1.4.4 for the wiring terminals.



1. Tab Lock
2. Wiring Connector
3. Lock Clips
4. Power LED Indicator

Figure 1.4.3 Back Box Interconnect Board



1.Alarm In/Out Terminals (1 inputs/1 outputs)

2. Audio In/Out, Video Out and RS-485 COM Terminals

3. 24VAC Voltage Input and GND

Figure 1.4.4 Back Box Circuit Board

Step 4: Attach the back box of dome to the mount.

For your attention: For outdoor installation, please apply the thread compound and the damp-proof stopper to threads of the back box and the mount. After having made connections of the power cord, video cable, RS-485 control line and alarm input/output lines (if required), close the hinged door and tighten the set screws, as shown in Figure 1.4.5.

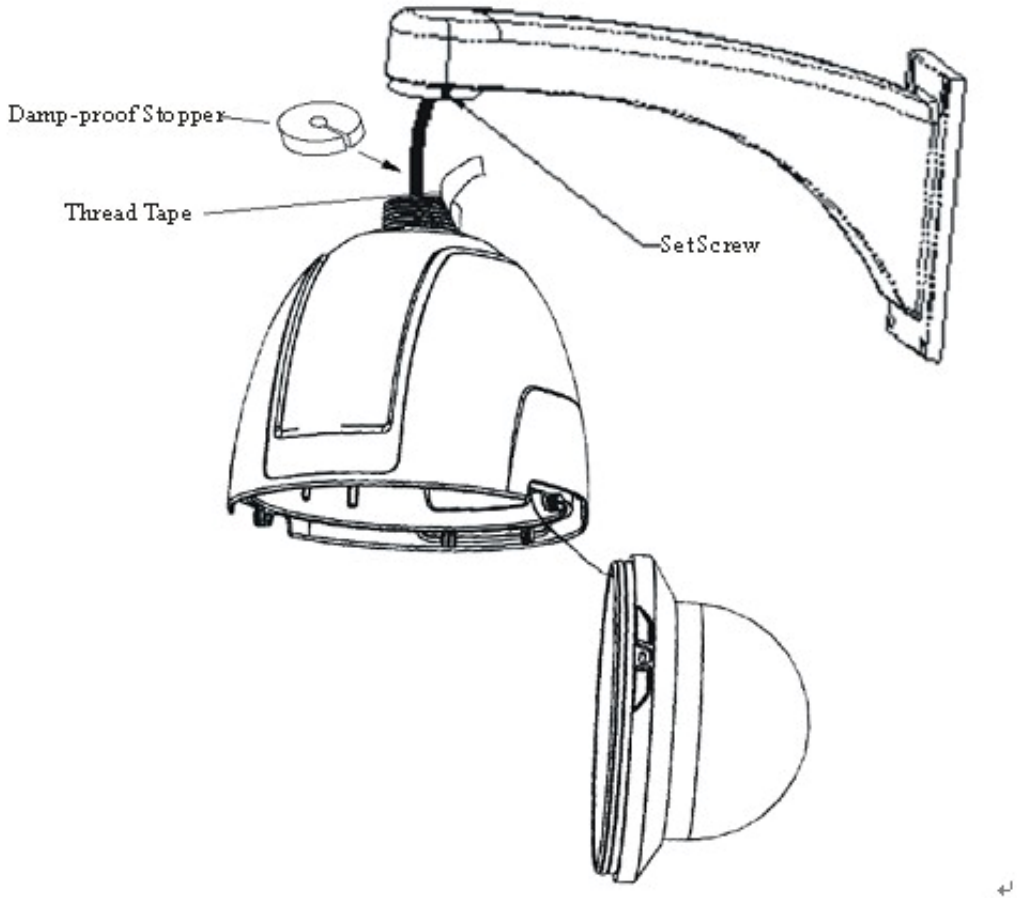


Figure 1.4.5 Attach Back Box to Mount

Step 5: Install the dome drive as shown in Figure 1.4.6, align the tabs on both sides of the dome drive with the corresponding arrow labels on the back box to snap the drive into the back box firmly.

Step 6: Install the bubble and fasten the two set screws on both sides, as shown in Figure 1.4.7

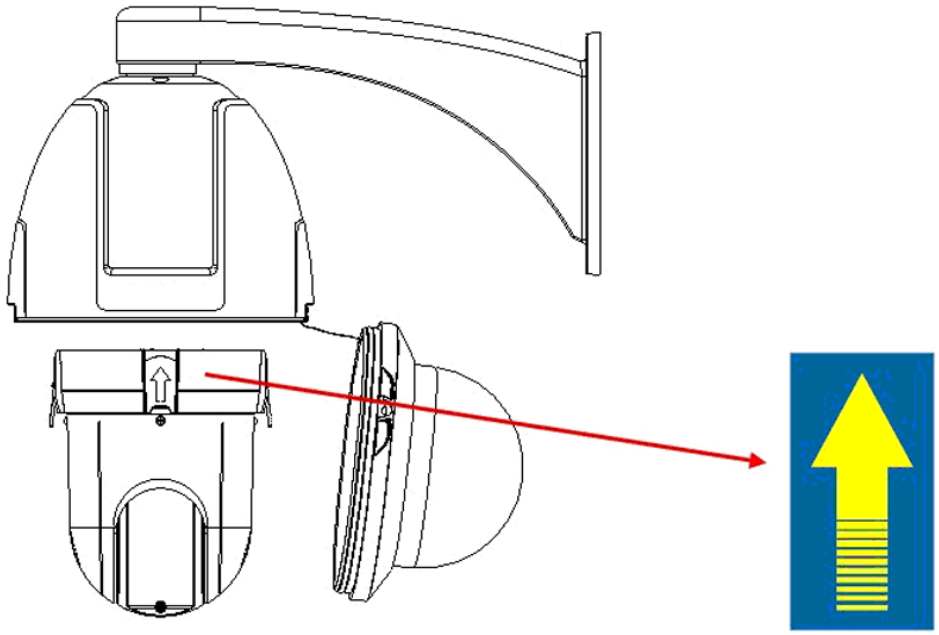


Figure 1.4.6 Install Dome Drive

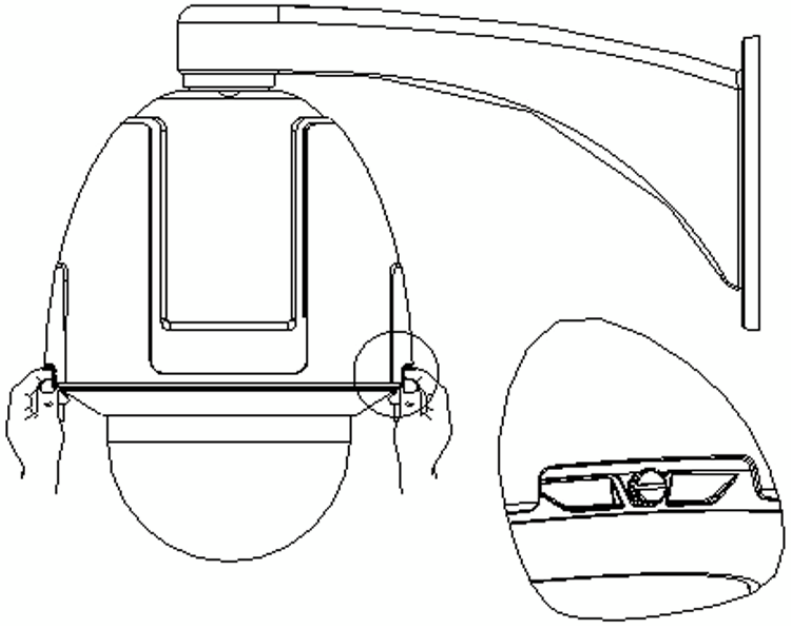
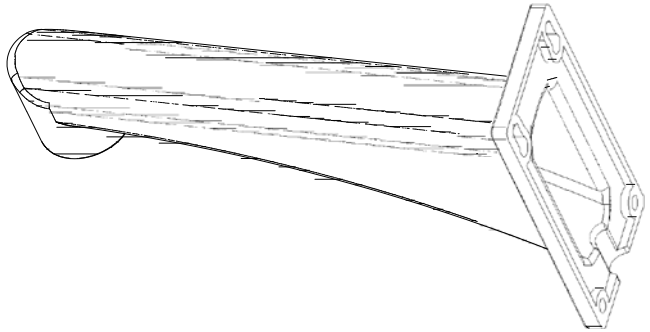
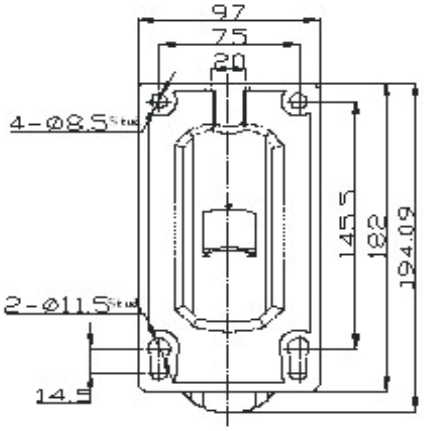
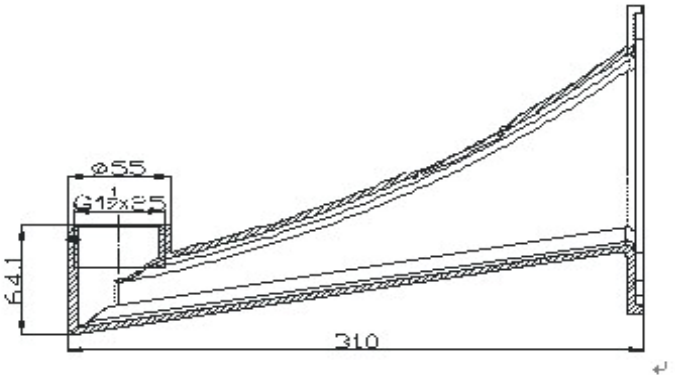


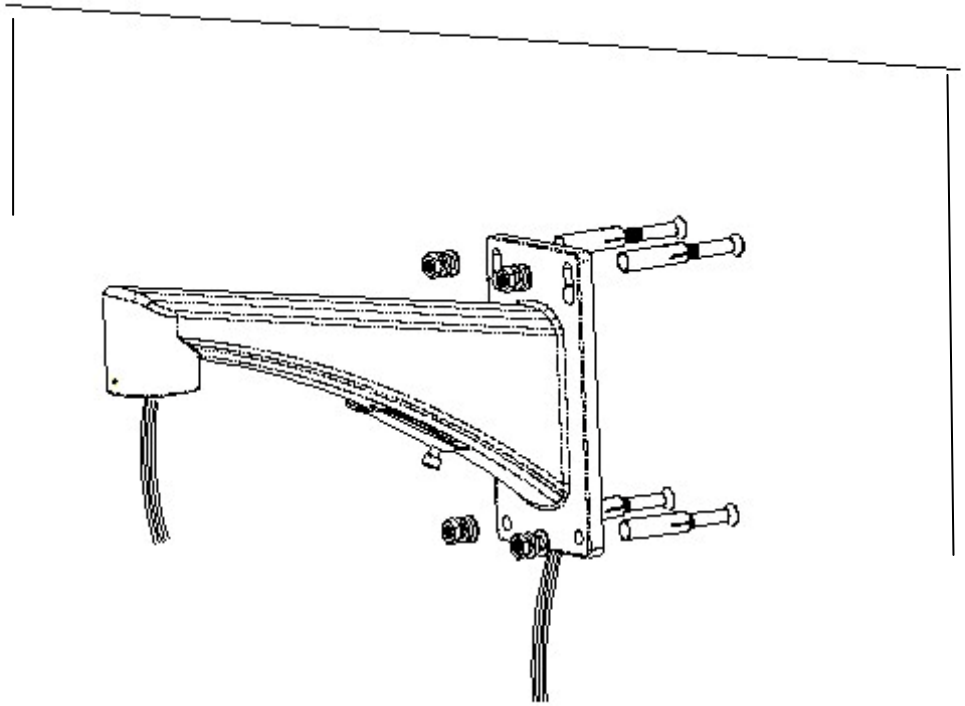
Figure 1.4.7 Install Bubble

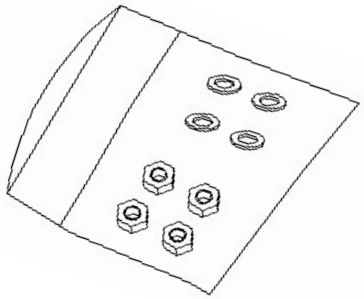
2.5.2 Wall Mount





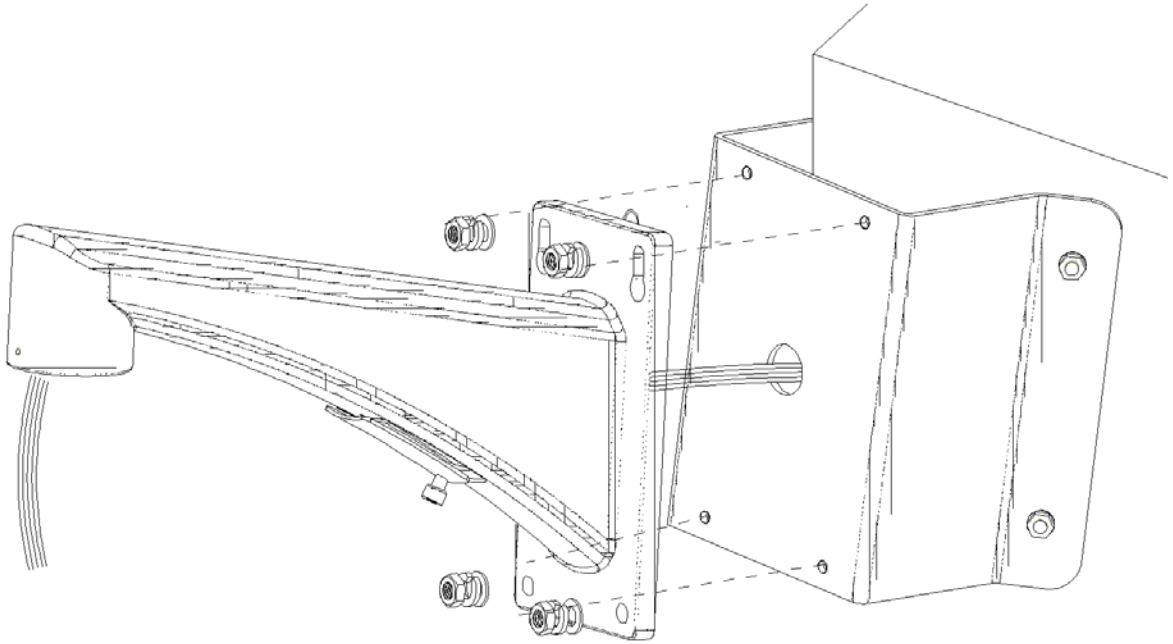




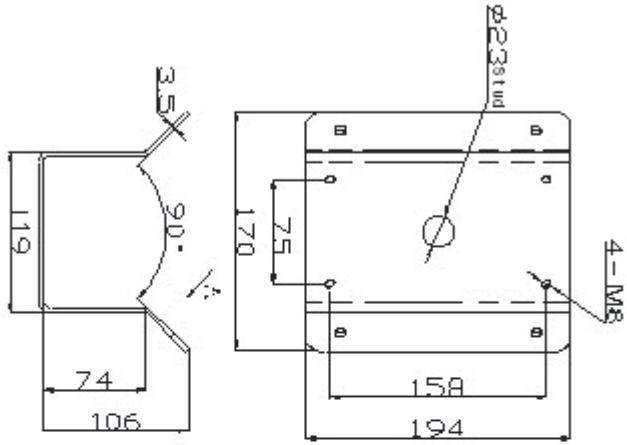


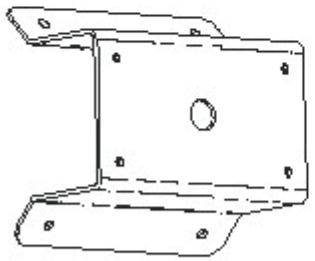
Nuts and Flat Washers

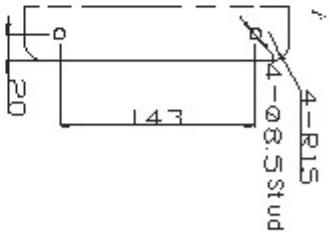
2.5.3 Corner Mount

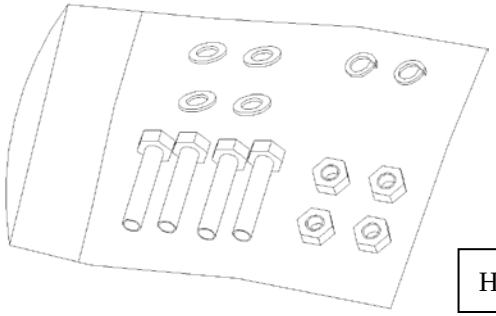


Corner Adapter



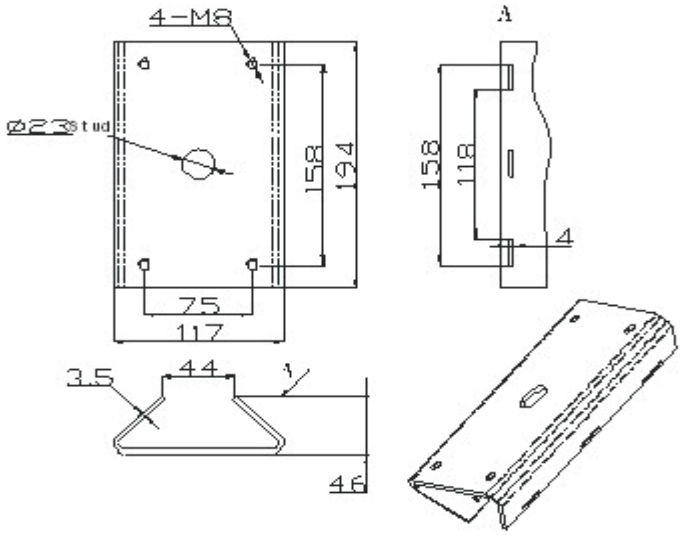


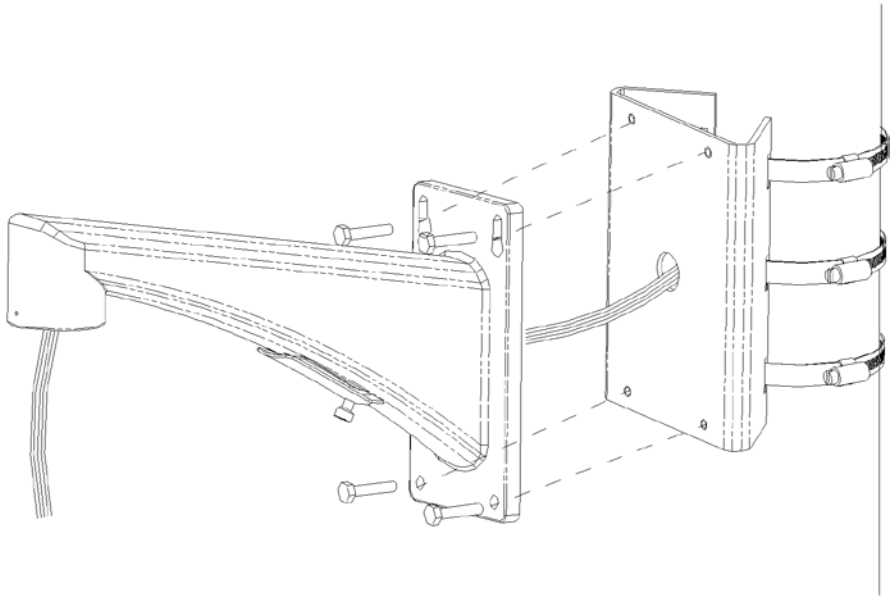


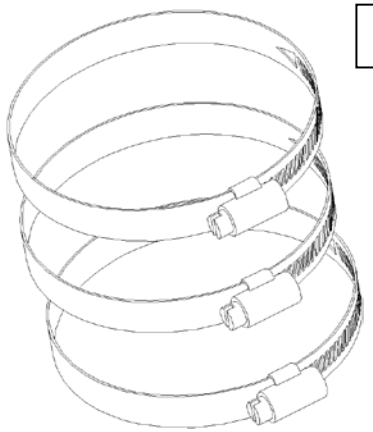


Hex Screws (M8×30), Nuts, Spring Washers and Flat Washers

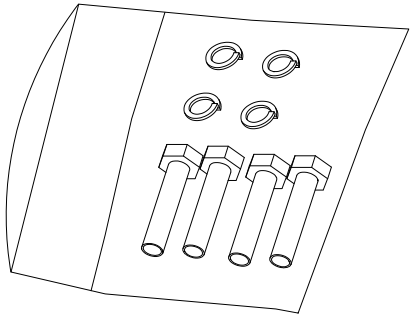
2.5.4 Pole Mount





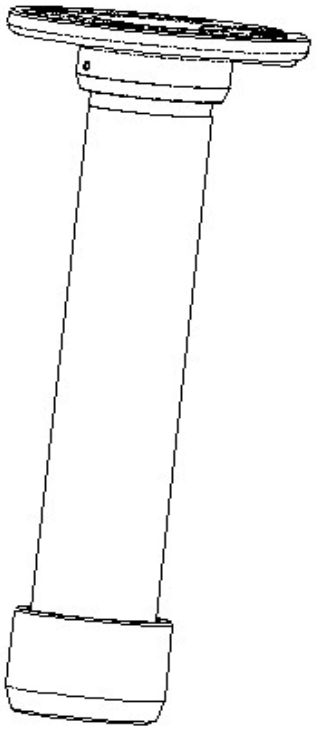


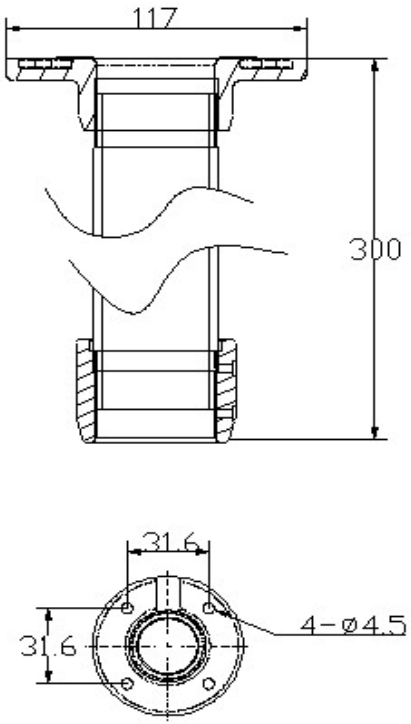
Pole Adapter

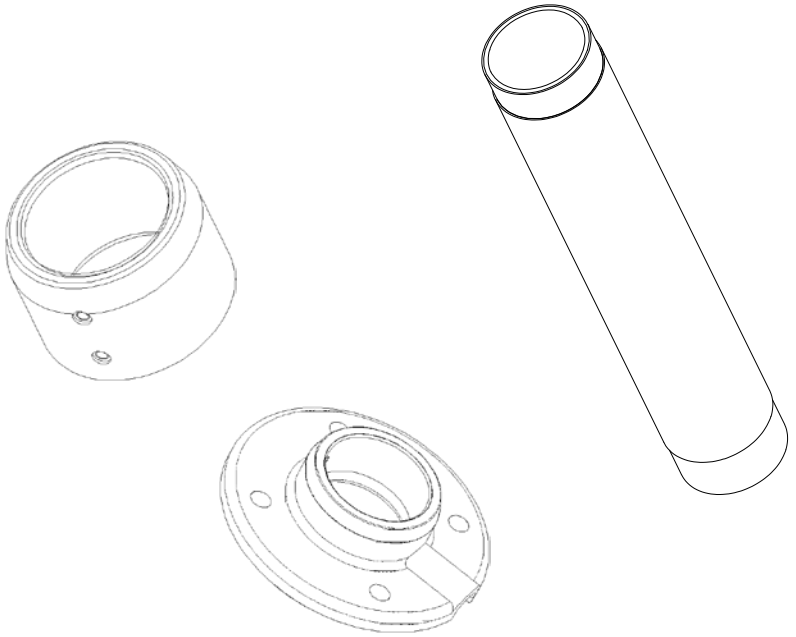


Hex Screws (M8×30) and Spring Washers

2.5.5 Pendant Mount

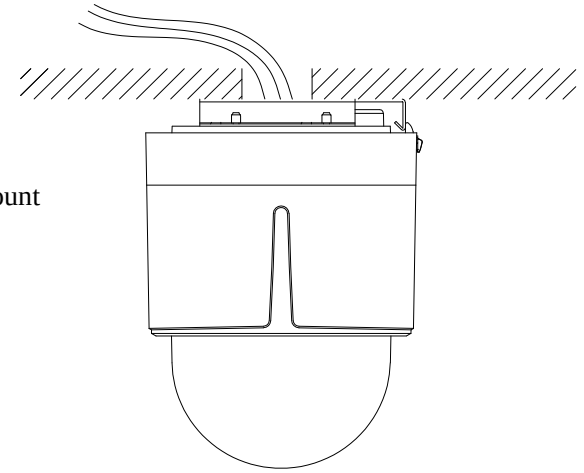


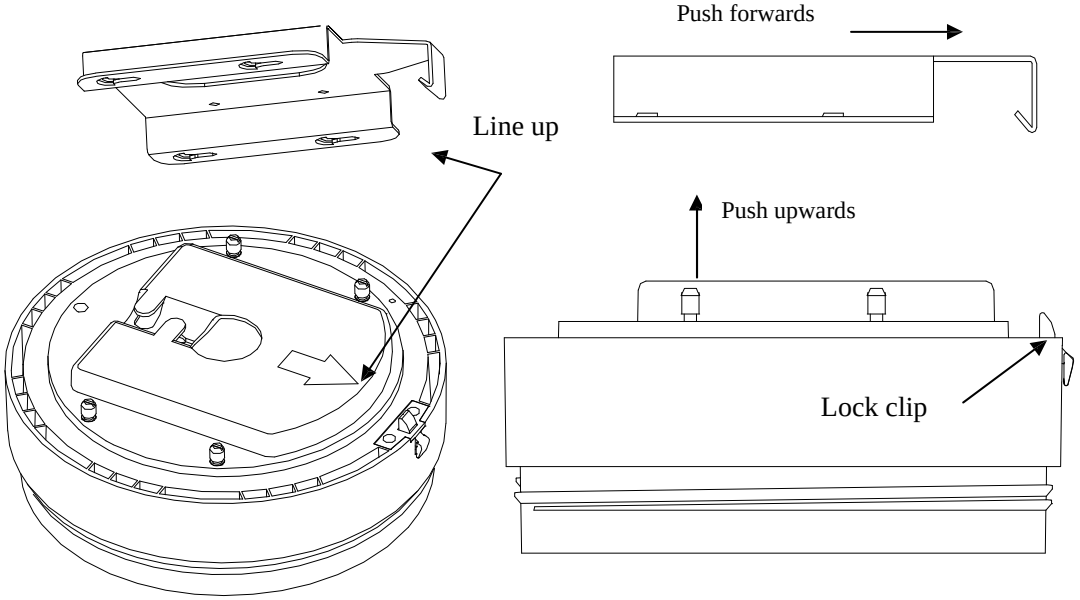


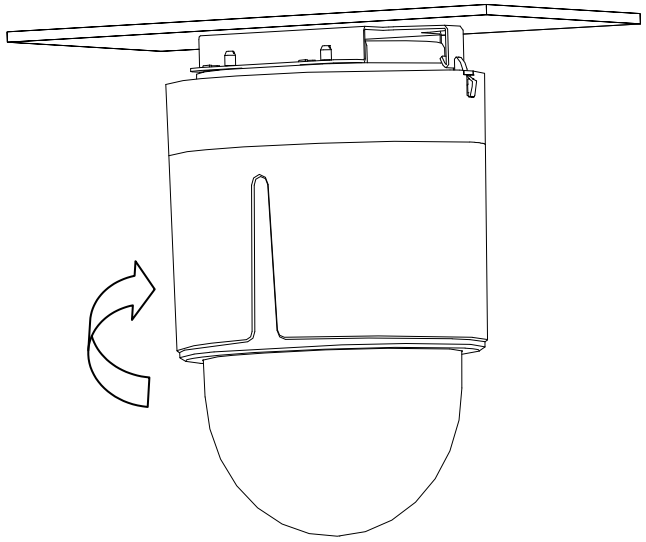


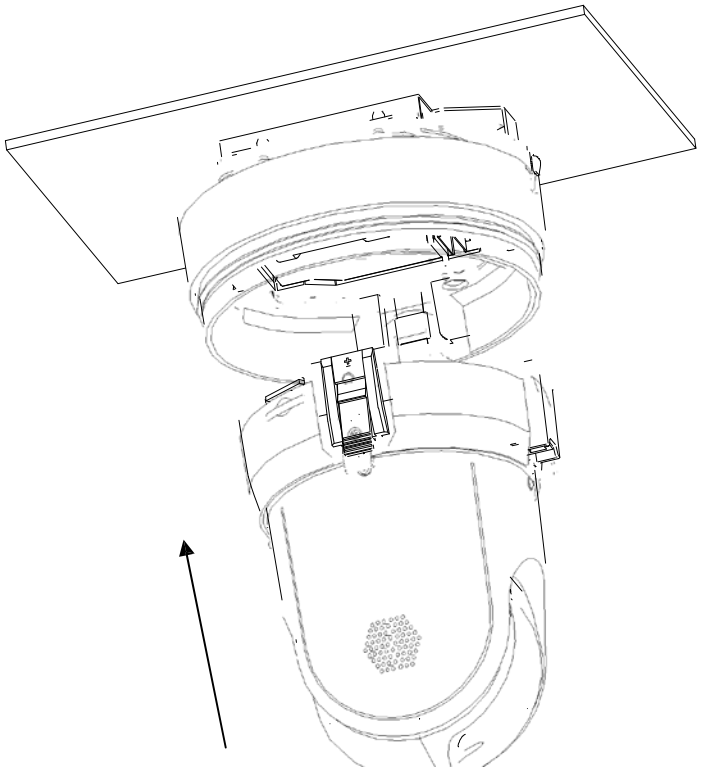
2.5.6 Surface ceiling mount

Surface mount



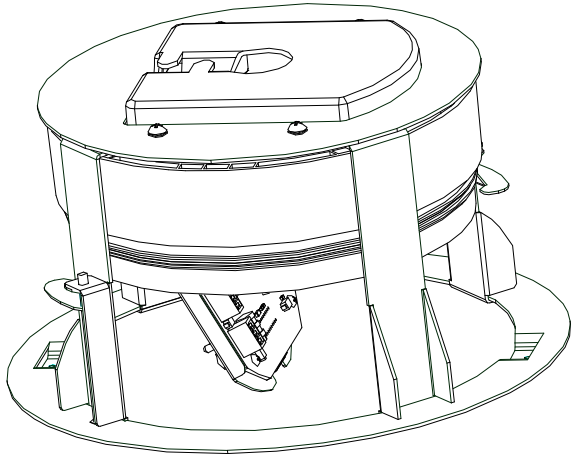

Push forwards
Line up
Push upwards
Lock clip

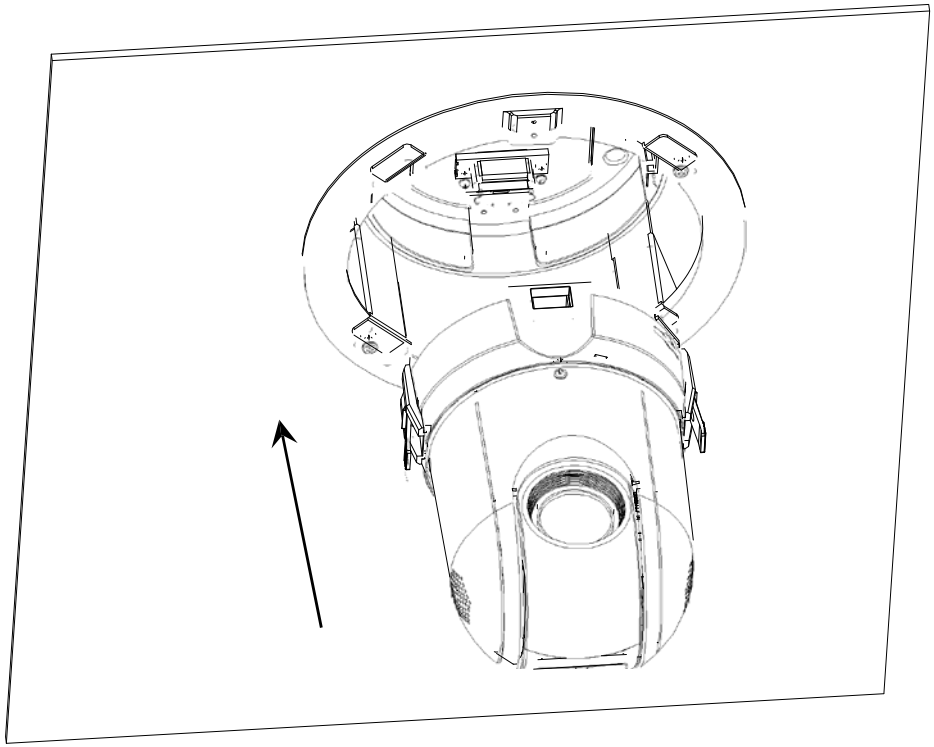


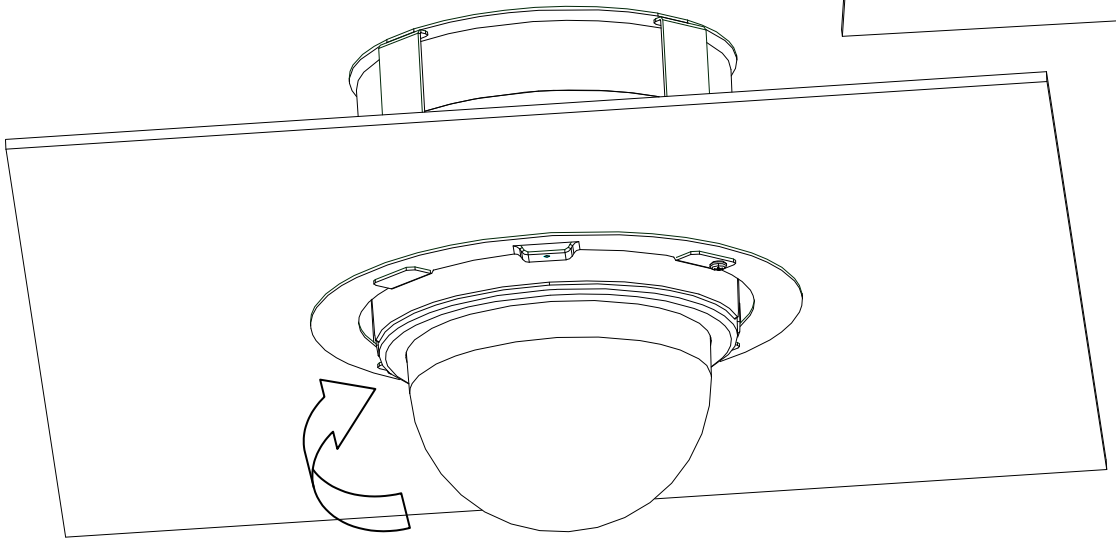


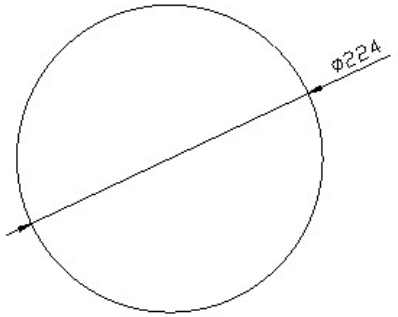
2.5.7 Recess ceiling mount

Bracket







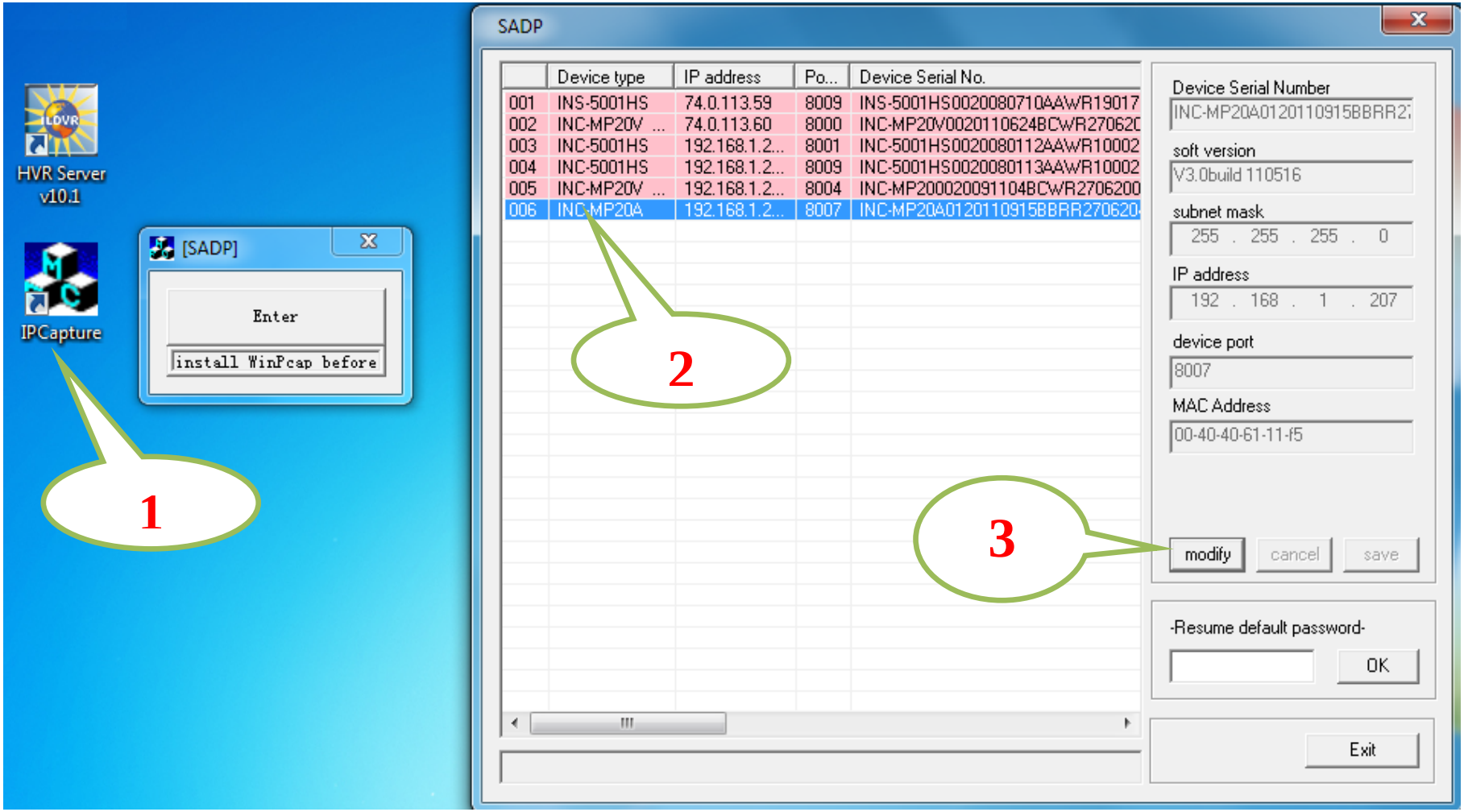


Drill Drawing

3. Software Installation

3.1 Search and Modify IP Address

Before using IP camera, please make sure whether the default IP address of the camera fit your local network environment. If not, please install IPCapture software to search and modify the IP address of INC-MP series Camera. IPCapture is an independent utility program. You can find it in the software CD or download it from ILDVR web site. Please connect the IP camera and the PC running IPCapture program in same network segment.

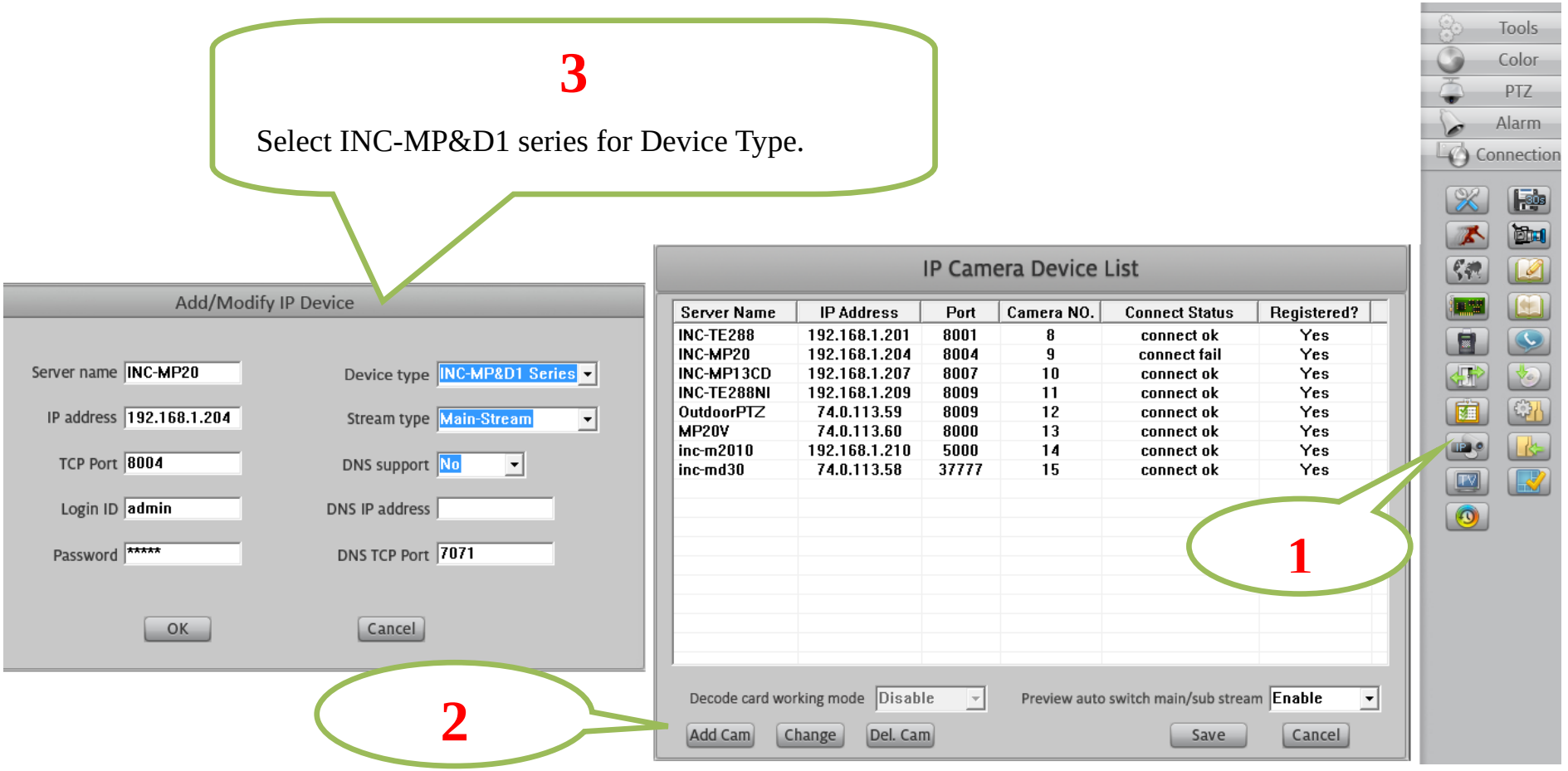


3.2 Connect to HVR Server and Live Center

In the main interface of HVR Server, click Tools icon to expand the Tool Panel, click Add/del IP camera button to bring up “IP Camera Device List” interface. In Live Center the operation is similar but the first step is to enter Local Setup interface.

For your attention:

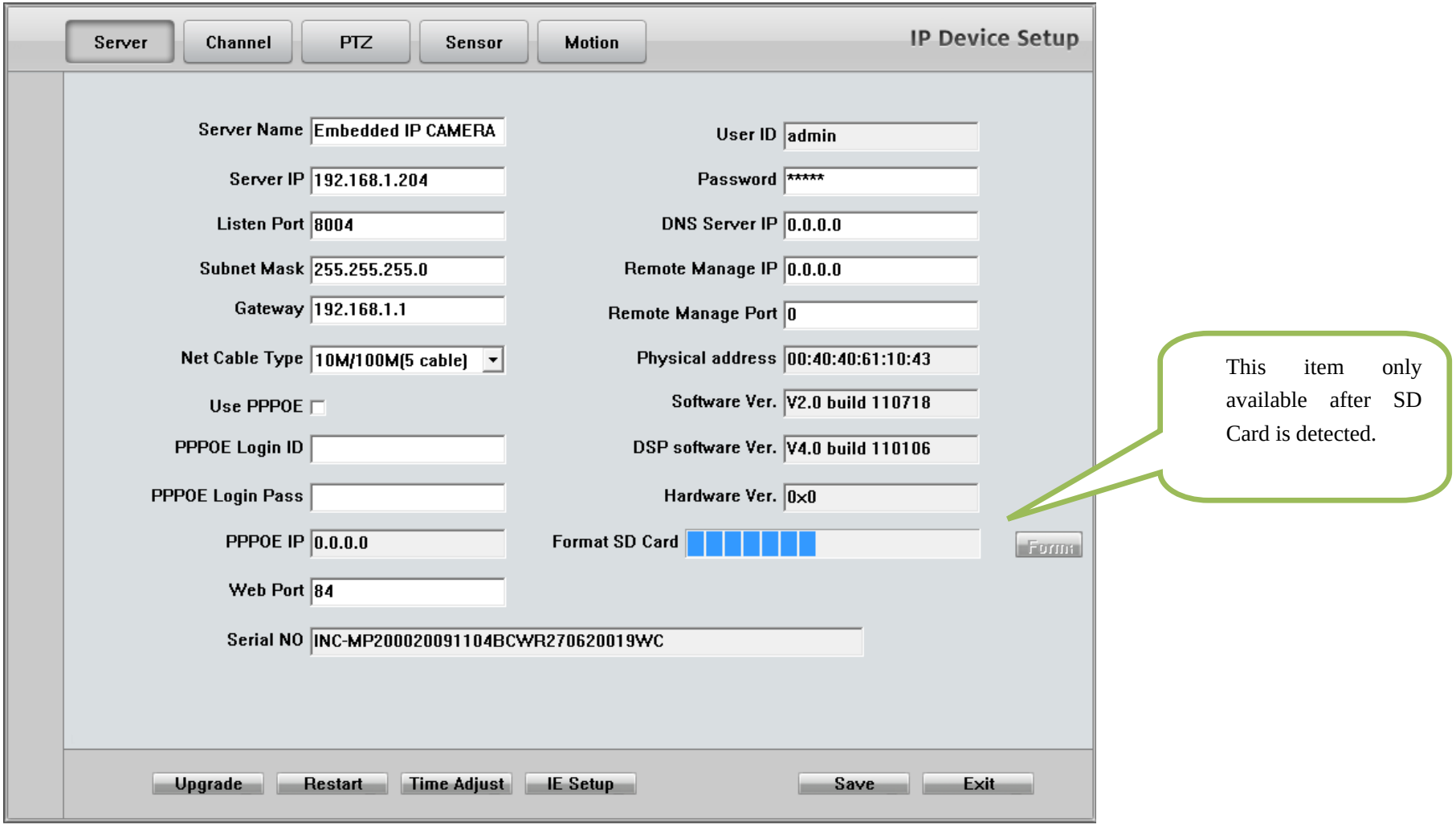
All IP cameras must be registered in the software then it could be recorded. If you couldn’t record video, please update the license file IPEncrypt.dat for HVR Server and Live Center software. You can find the update license file in software CD or download from ILDVR web site



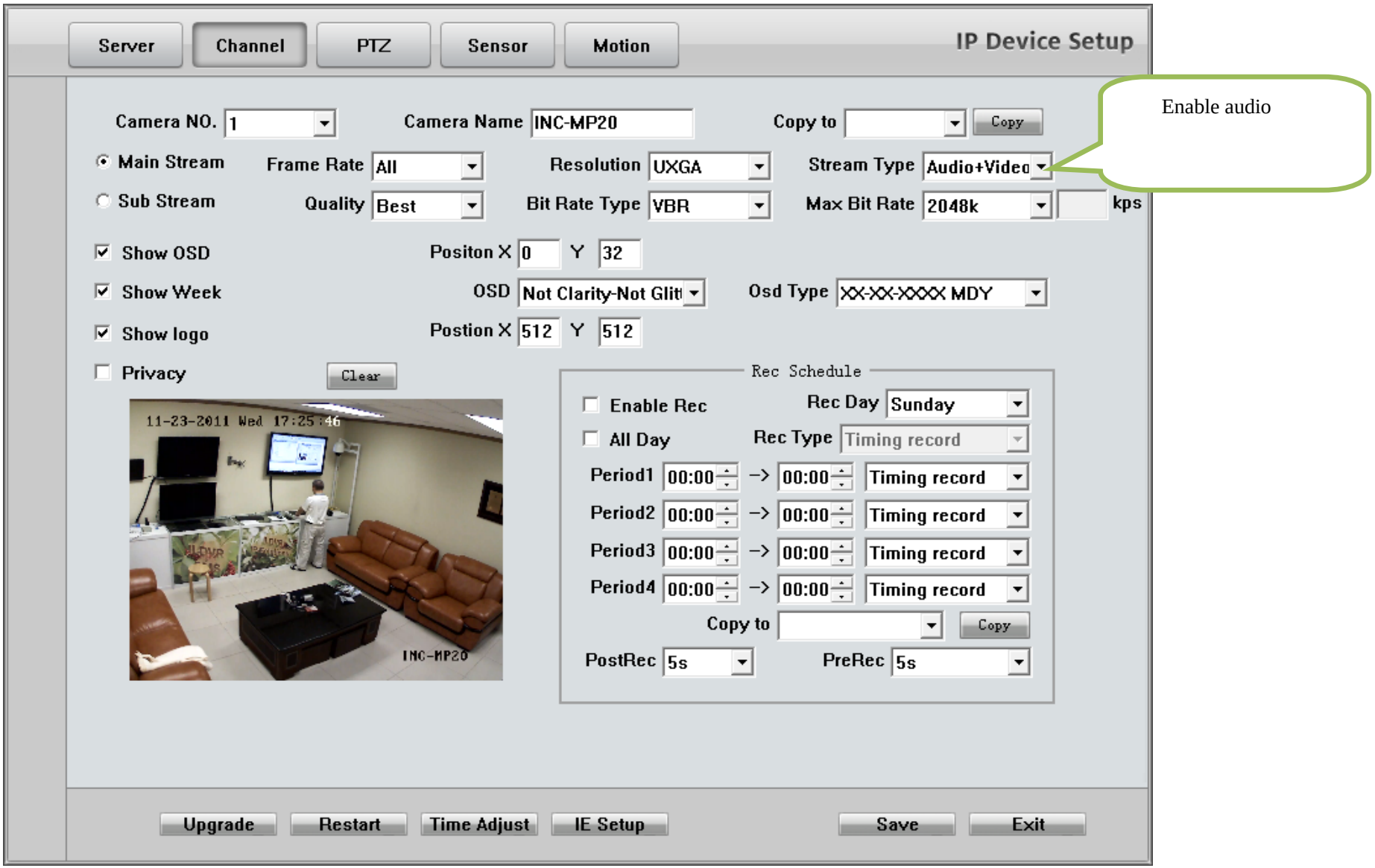
3.3 Camera System Configuration

The following operations need admin user rights to login IP camera. Please refer to above step. Right click IP Camera window to pop up right-click menu. Choose "IPcam_NetDVR_Setup" to bring up "IP Camera Setup" interface. In Live Center, entrance is "Remote Setup" then choose Server alias

In "Server" page, you change IP address, port number and reset the password of admin ID etc. If you install SD card in the camera, please format it in here or in IE web client page, otherwise it cannot be used. The device serial number is necessary for register license.

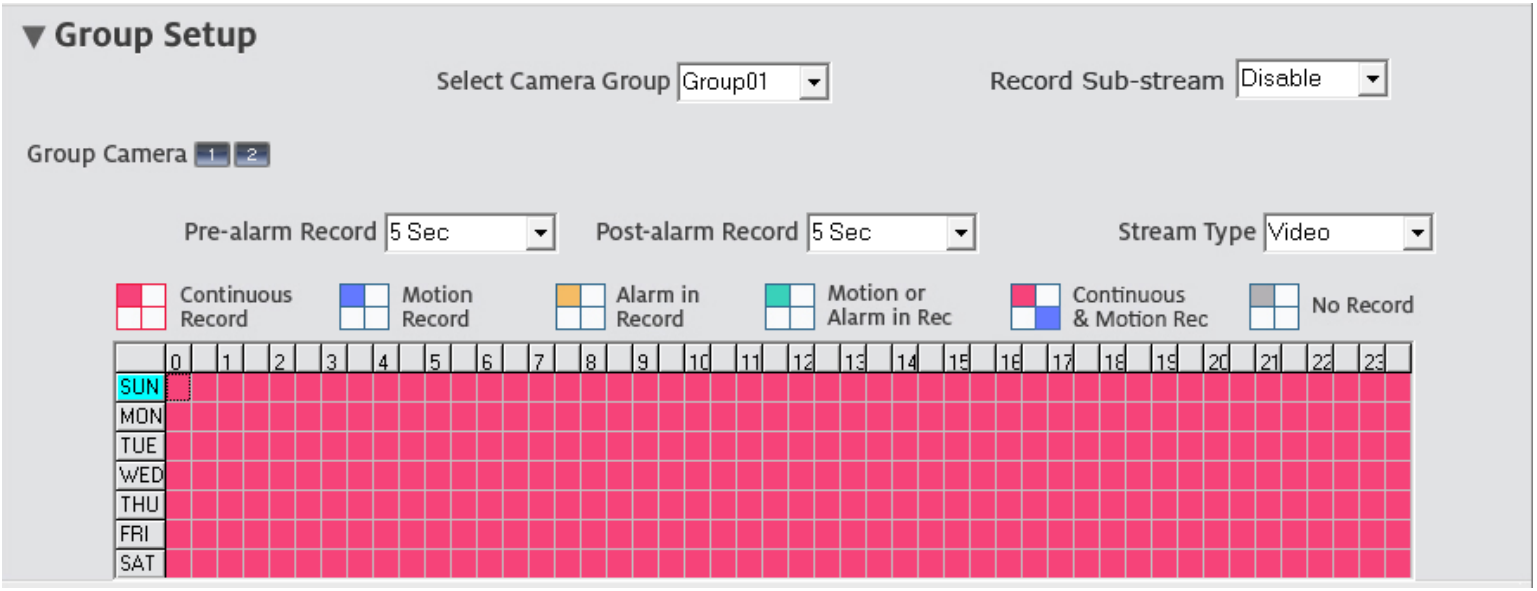


In “Channel” page you can modify video parameters and OSD information. If you need mask privacy area, please check-on the Privacy then draw a rectangle area on the image. That is the mask area. If you have SD card to record, please check-on “Enable Rec” then setup recording schedule.



3.4 Continuous Record Setup

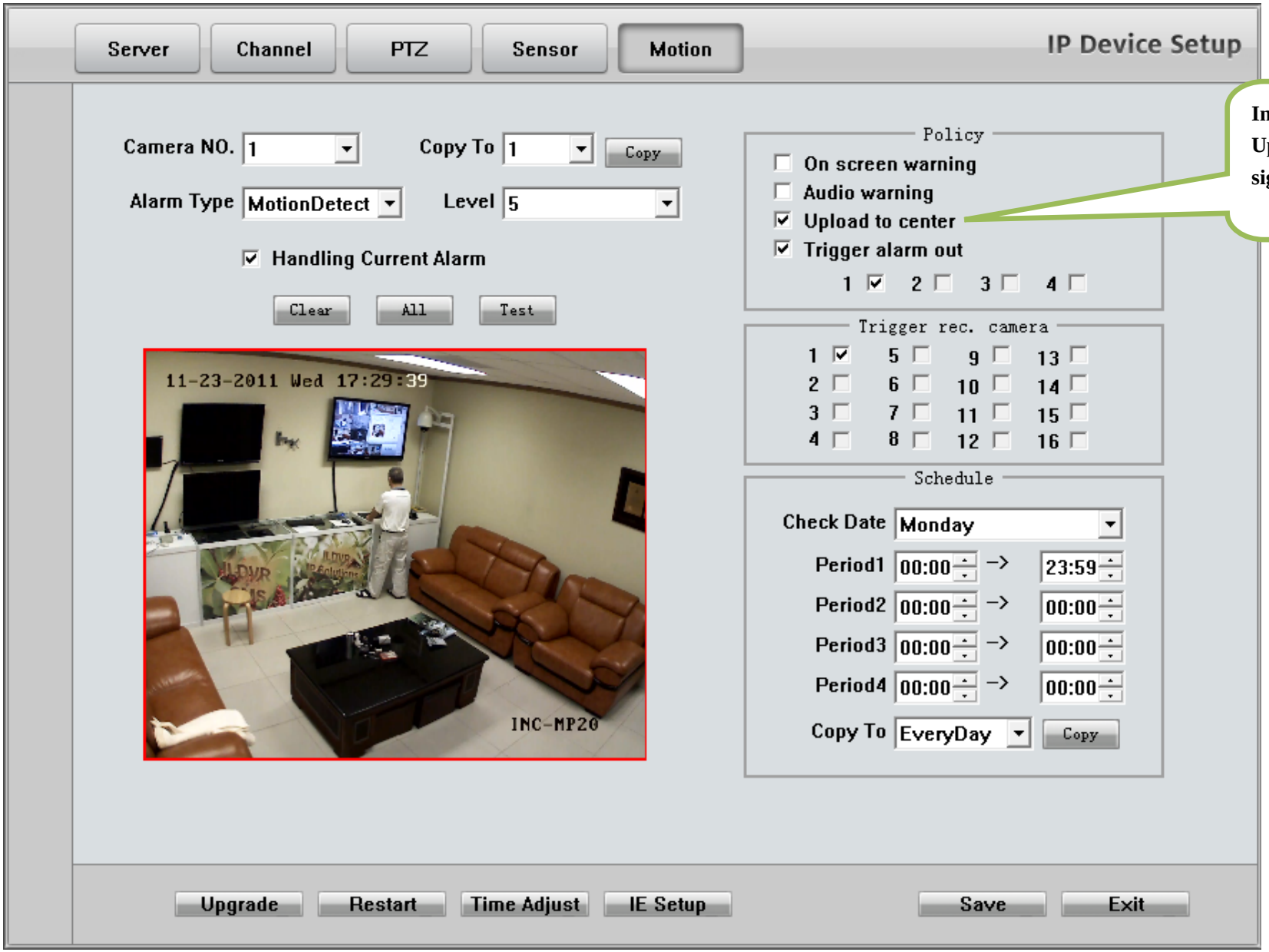
Continuous Record means always record the video, the operation is simple. You get video connection, get video record. You just enter Camera Setup page→ Group Setup, choose camera group and cameras, click the icon “Continuous Record” then slide the mouse to set time table. The operation in Live Center is similar.



3.5 Motion Detect Alarm Record Setup

Motion Detect Record is a little bit complicated than Continuous Record because HVR system need additional signal to analyze the video stream type. So you must configure 2 places. One place is Motion Record setup in HVR system “Camera Setup” page, similar to Continuous Record setup. Another place is Motion page as below,

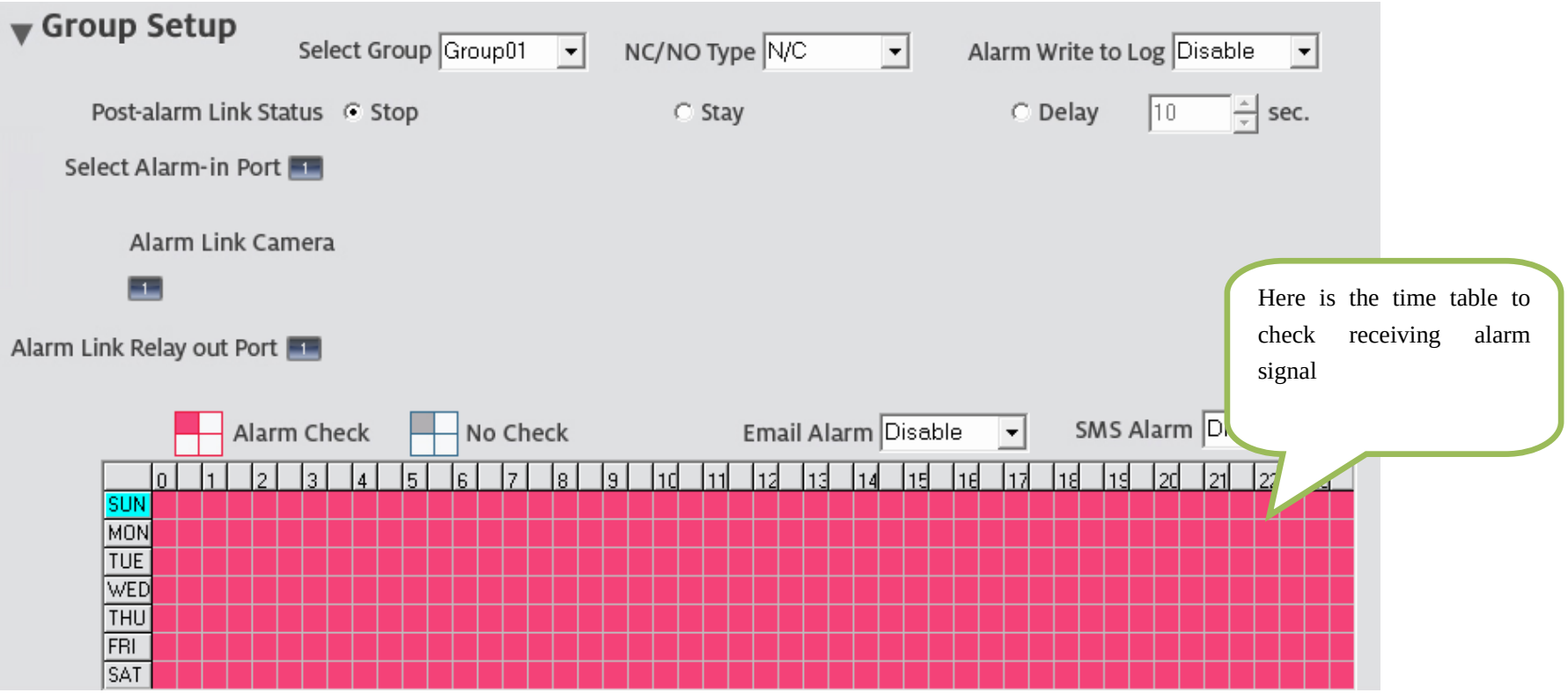
For your attention, the key item “Upload to center” must be checked on, otherwise your settings only apply to local SD card motion record.


Server
Channel
PTZ
Sensor
Motion
IP Device Setup
Camera NO. 1
Copy To 1
Copy
Alarm Type MotionDetect
Level 5
Handling Current Alarm
Clear
All
Test
11-23-2011 Wed 17:29:39
INC-MP20
Policy
On screen warning
Audio warning
Upload to center
Trigger alarm out
1 2 3 4
Trigger rec. camera
1 5 9 13
2 6 10 14
3 7 11 15
4 8 12 16
Schedule
Check Date Monday
Period1 00:00 -> 23:59
Period2 00:00 -> 00:00
Period3 00:00 -> 00:00
Period4 00:00 -> 00:00
Copy To EveryDay
Copy
Upgrade
Restart
Time Adjust
IE Setup
Save
Exit
Important:
Upload alarm
signal to network

3.6 Sensor Trigger Alarm Record Setup

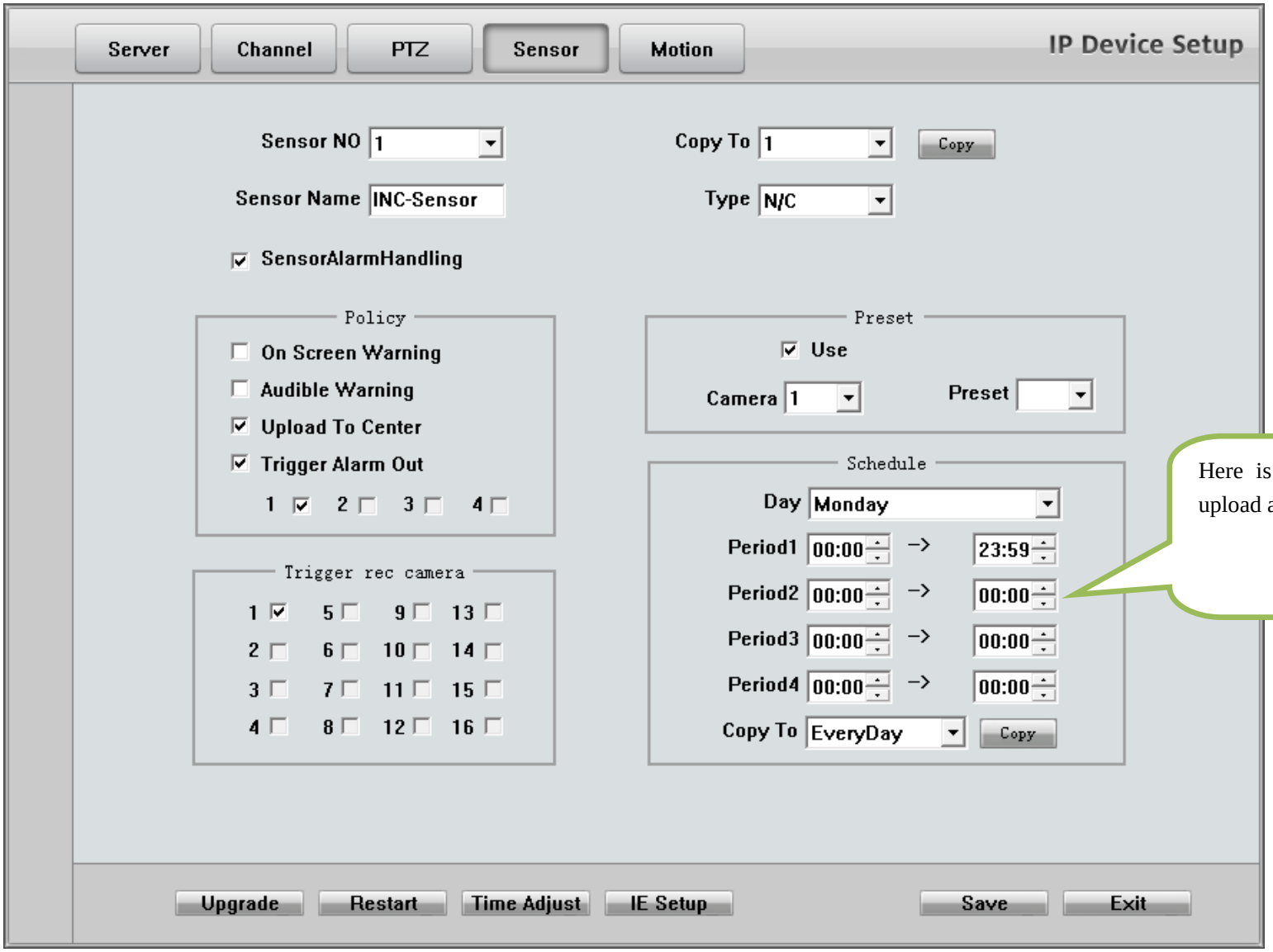
Sensor Record is a kind of external alarm-in trigger record. It is more complicated than Motion Record because motion detect signal is embedded in video stream, but sensor alarm signal is a kind of external signal. You must configure 3 places to execute Sensor Record. The first place is Alarm in Record setup in HVR system "Camera Setup" page, similar to Motion Record setup.

The second place is Alarm Check time table in HVR system "Alarm in & Relay out" page as below picture



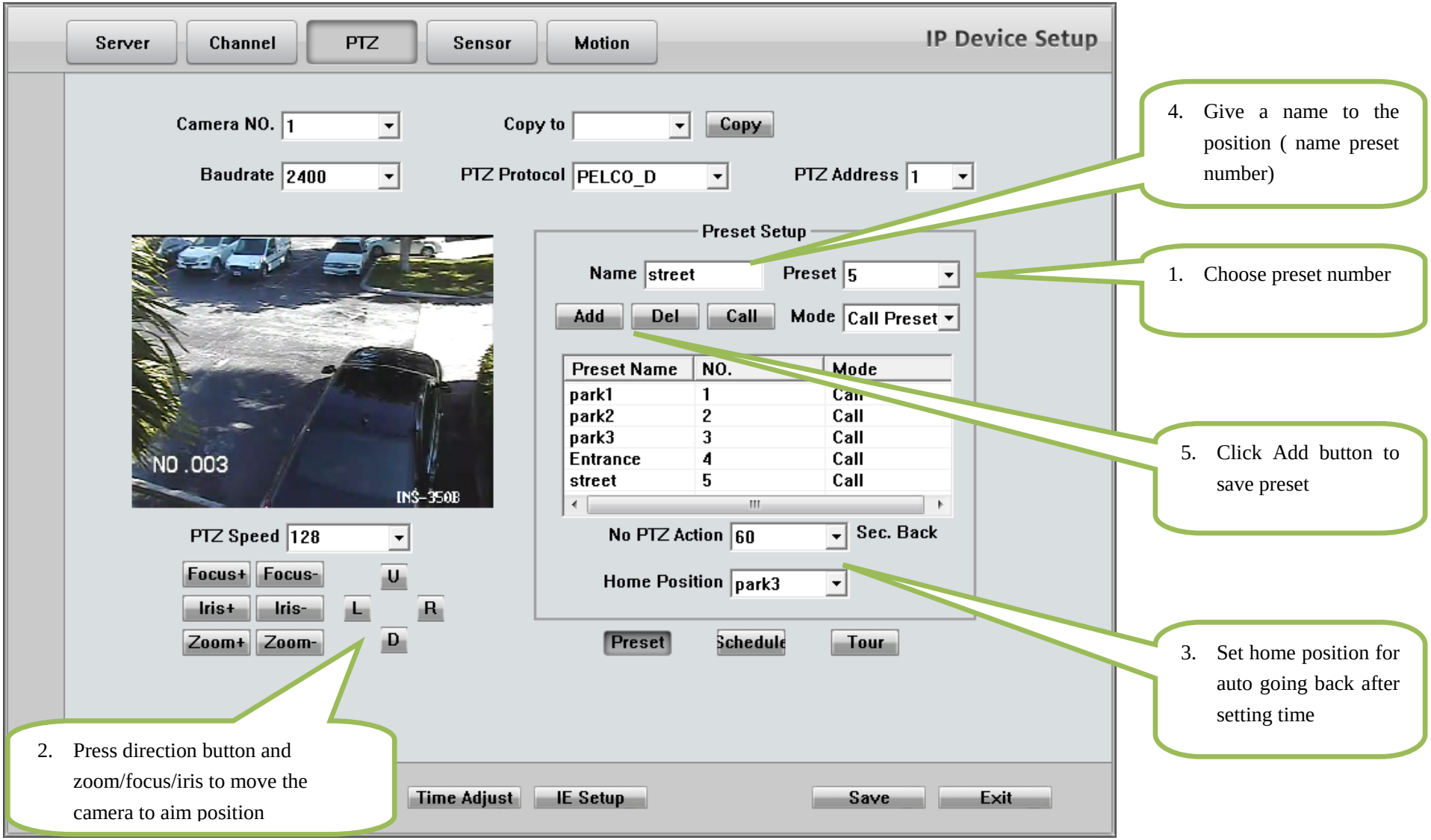
The third place is Sensor page as below.

For your attention, the key item "Upload to center" must be checked on, otherwise your settings only apply to local SD card sensor record.



3.7 PTZ Operation

If you have INS series IP Speed Dome or connect analog speed dome to IP Video Server, please setup preset position, auto-spot plan and preset tour in this page. No like analog PTZ which saves preset in camera system, the IP PTZ saves preset in local computer, so if you use another PC to control same IP PTZ, you should do same setting again in that PC. Comparing analog PTZ and IP PTZ, the setup procedure is very different, but the operations of call preset are exactly same.



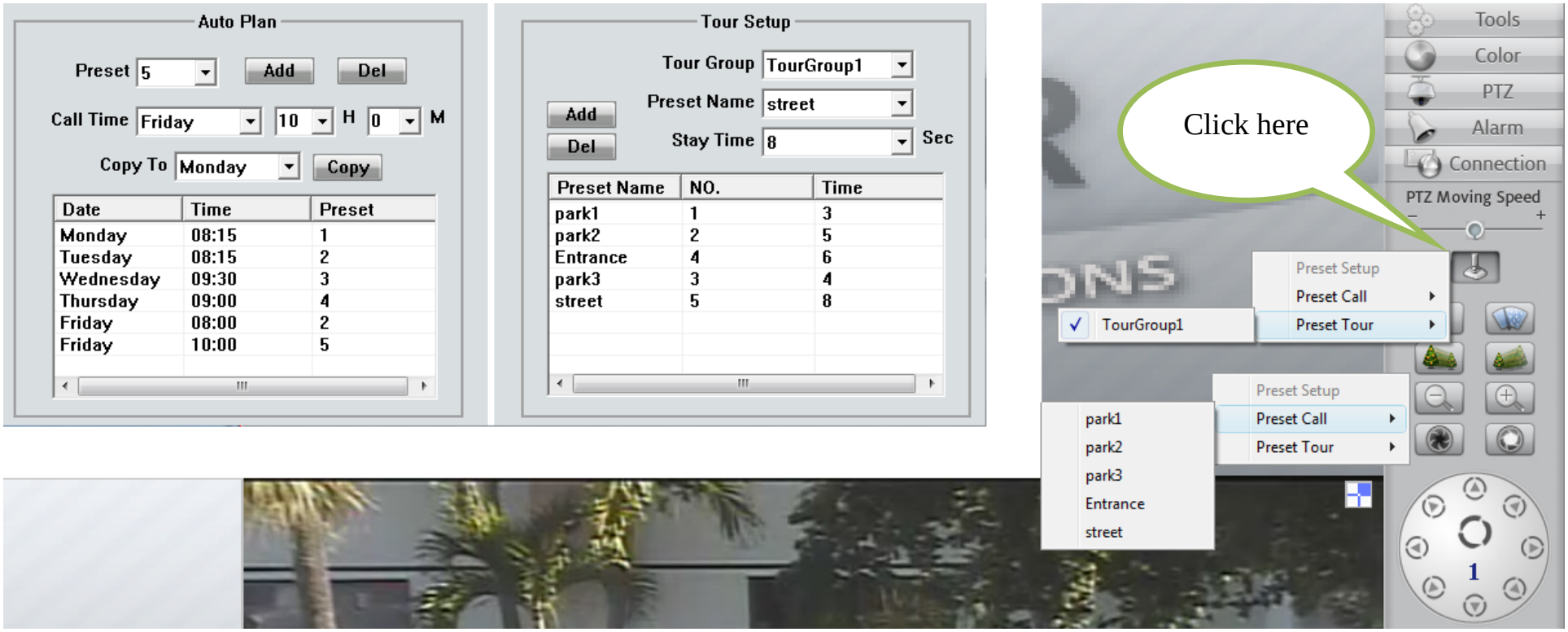
Auto Plan:

Auto Plan means HVR software automatically call the preset position by a scheduled time table. When the system time reach, the IP speed dome will auto move to preset position. You can save up to 64 moments and one preset could be used multiple times.

Tour Group:

Tour Group means you can put different preset position in a sequential group, each preset position could be defined a staying time (stay there without moving). When you execute a Tour, the IP camera will continuously move according to the sequence and time table saved in the group. You can save up to 8 groups.

In main interface of HVR Server or Live Center, click “Preset Operation” button to bring up preset menu then choose call preset or tour preset.



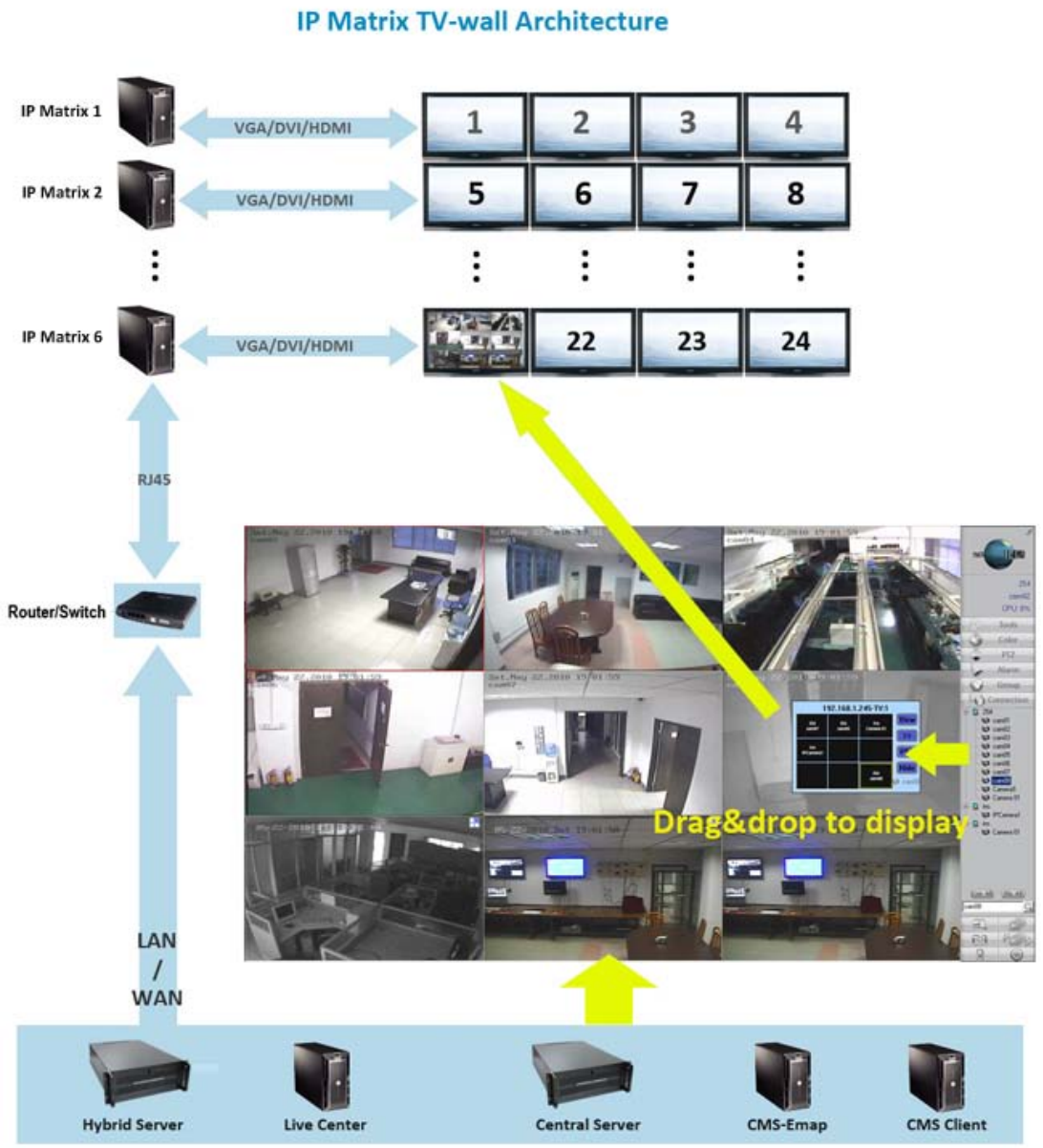
3.8 Display on TV-wall

For large surveillance system the TV-wall is important and necessary. IP camera cannot be integrated into traditional matrix system. ILDVR free software IP Matrix offers innovative TV-wall solution.

All ILDVR software support IP matrix operation, one computer running HVR Server / Live Center / CMS supports up to 6 IP Matrix TV-client.

One computer running IP Matrix software supports 4 monitor outputs, each monitor can display up to 16 windows (cameras). That means one IP Matrix can display max. 64 cameras simultaneously

In IP matrix, each video window can be put multiple cameras by switch viewing.



4. Advanced Operations

4.1 SD Card Local Record Setup

If you install SD card into IP camera to record video locally, please follow these operation steps

a. Format SD card in “Server” page. If there is no SD card, the Format button won’t be available. Refer to section 3.3

b. Set record schedule in “Channel” page.

c. If you want motion record, please go to “Motion” page to setup schedule

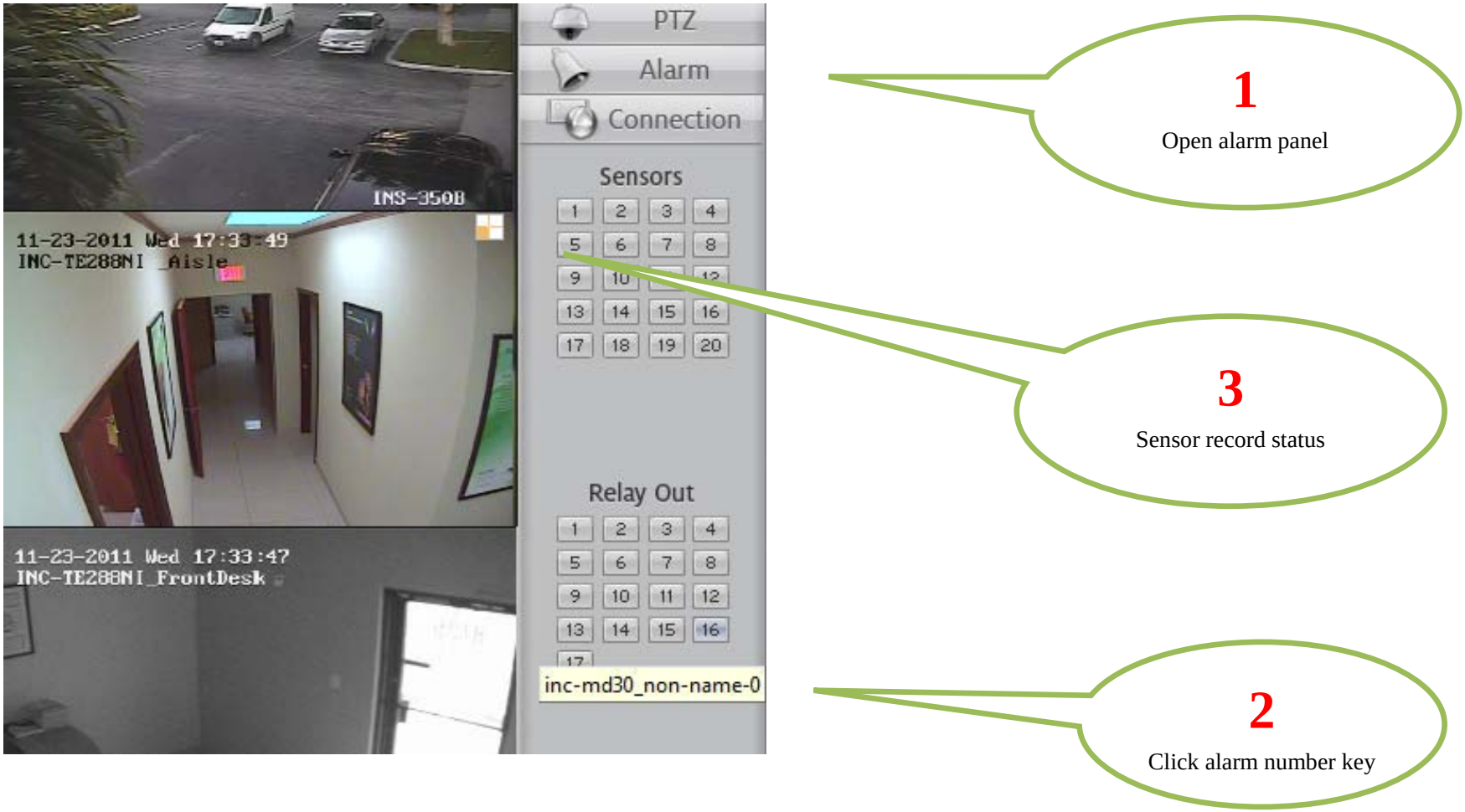
d. If you install external sensor, please go to “Sensor” page to setup schedule.

4.2 Audio Chat to IP Camera

From right-click menu choose “Audio Chat to IP Device” to initialize a remote talk between PC to IP camera. This feature needs microphone (audio pickup) and speaker (earphone) to support in both ends. If no audio device can be detected, the “End Talk” dialog will not pop up. That means system will ignore your request.

4.3 Manually Trigger Alarm-out

Manual trigger alarm out (relay out) can be widely used to integrate other electrical device such as open a door, turn of light, etc.

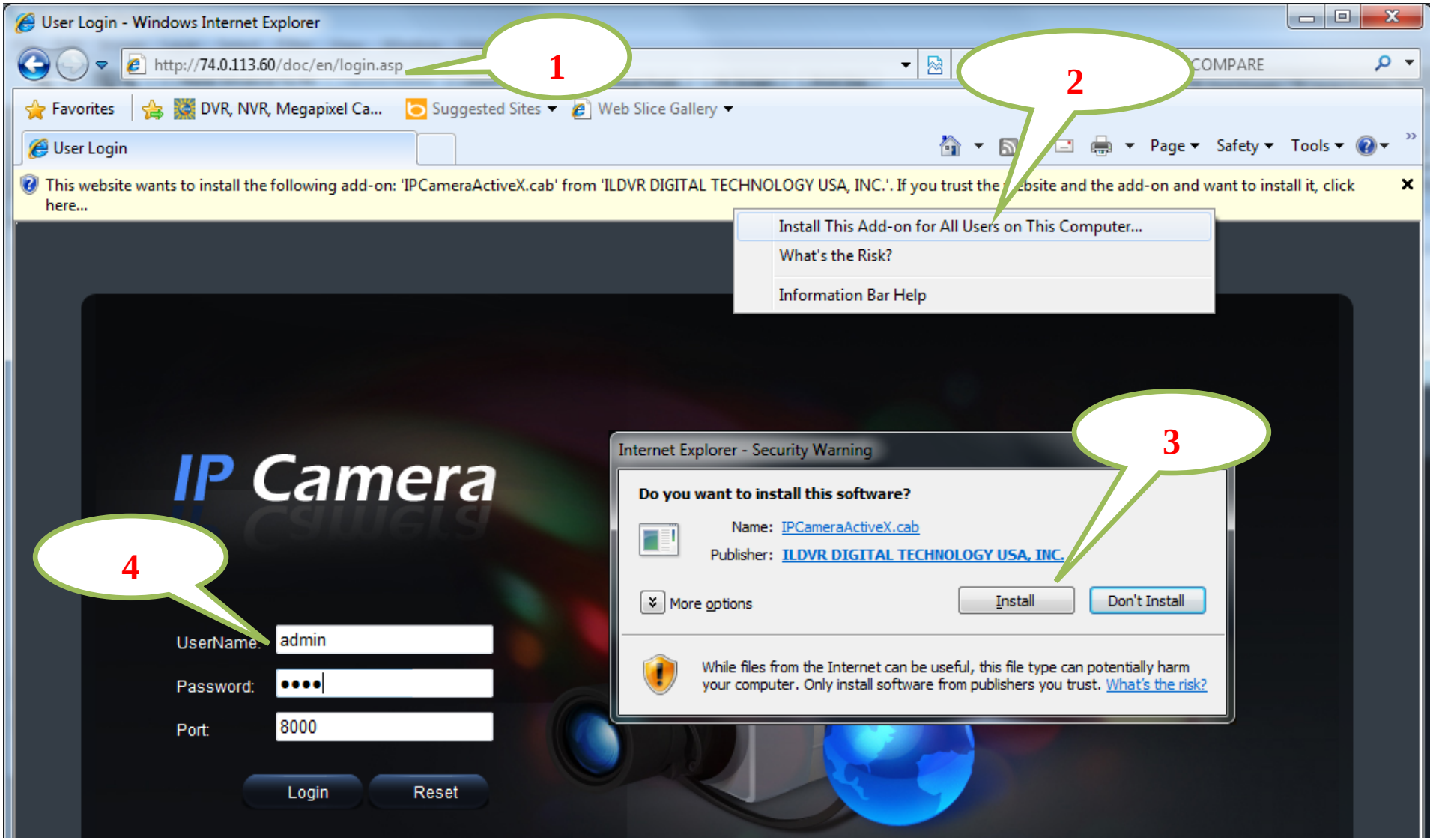


4.4 Mobile Phone Access Viewing

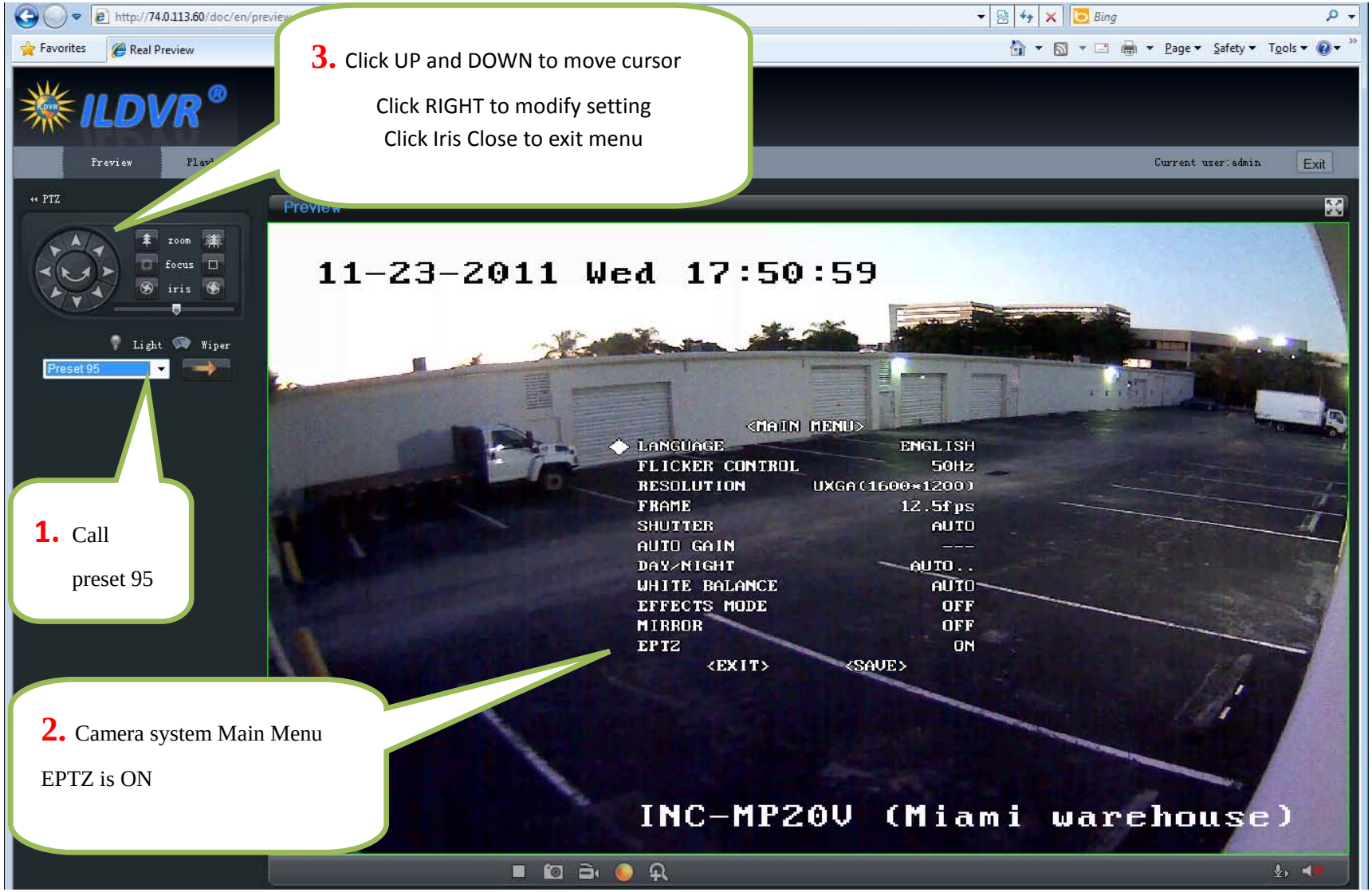
After you connect IP Camera to HVR Server, you can use your mobile phone to login HVR Server to view the real time image. HVR Server support most mainstream mobile phone in the market. The operation system includes iPhone, Android, Blackberry, Windows Mobile and Symbian. For Blackberry, Windows Mobile and Symbian mobile phone, user can directly login to HVR Server to download client software and install. For iPhone, Android mobile phone user should go to online app store to download client software. Please refer to HVR user manual for more details

4.5 IE Web Client Operation

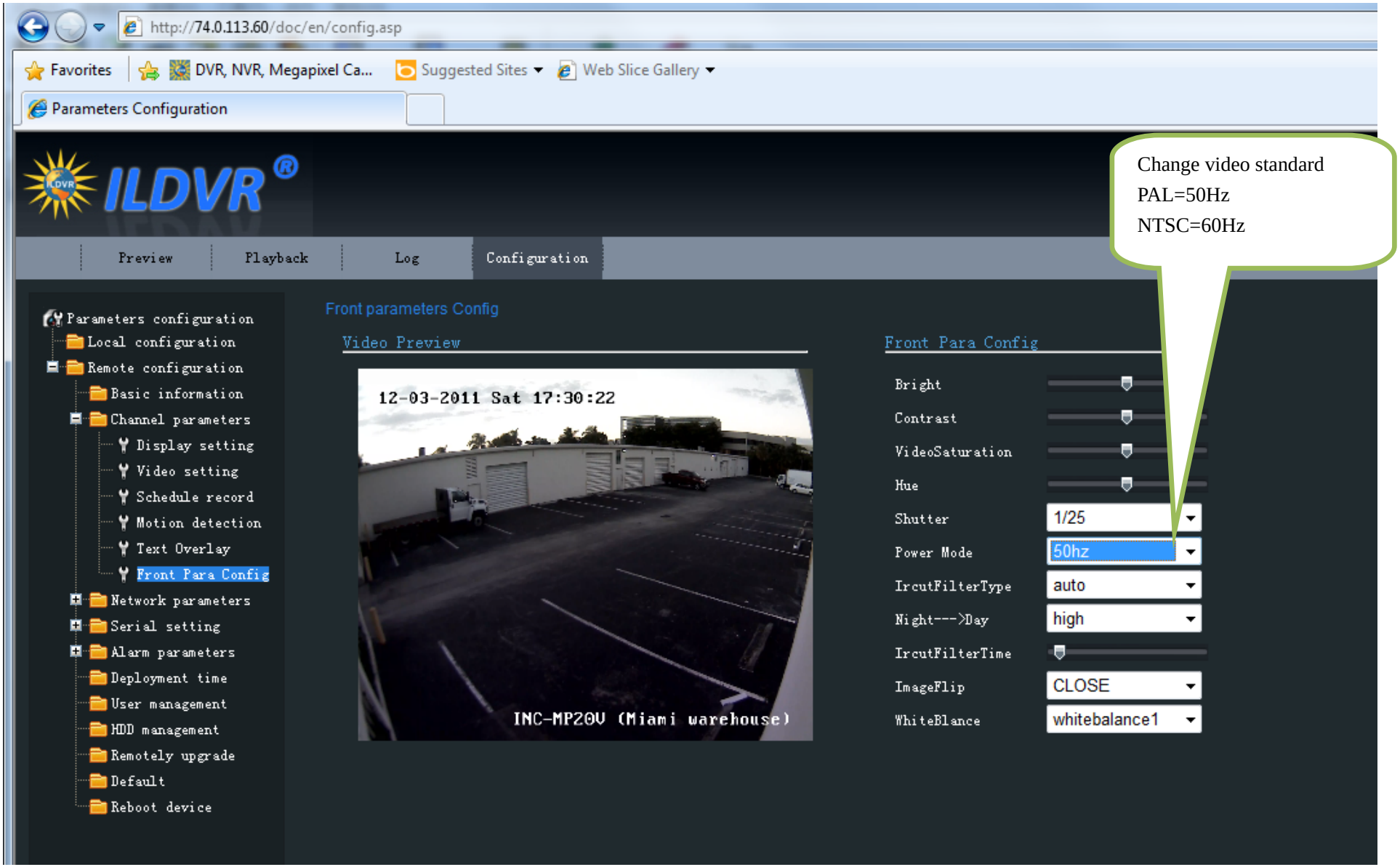
All IP cameras have built in web server. You can use Internet Explorer directly login to IP camera by input camera's IP address or domain name. At first time connecting to IP camera, you will be prompted to install ActiveX Control (Add-on). Refer to following illustration



Most of the configuration jobs could be done in ILDVR software interface, but some advanced operation must be finished through IE interface. Such as User Management and Restore system to factory default settings. The following illustration show you how to bring up camera advanced system menu to turn ON/OFF ePTZ function. If IE is limited in your network environment, you can do same job in ILDVR software by saving and calling preset 95.



For CMOS image sensor camera, please set the video standard in accordance with local city electrical power frequncy. You can also do it in the step of previous page, the item name is FLICKER CONTROL.



4.6 ePTZ Operation

ePTZ function is similar to physical PTZ operation but there is no physical PTZ installation. This innovative feature works perfectly with INC-MP13CD and INC-MP20CD, especially the Zoom in / Zoom out. The other models of INC-MP series with CMOS image sensor don't support zoom in / zoom out of ePTZ but support ePTZ pan/tilt after you setup the resolution less than maximum resolution.

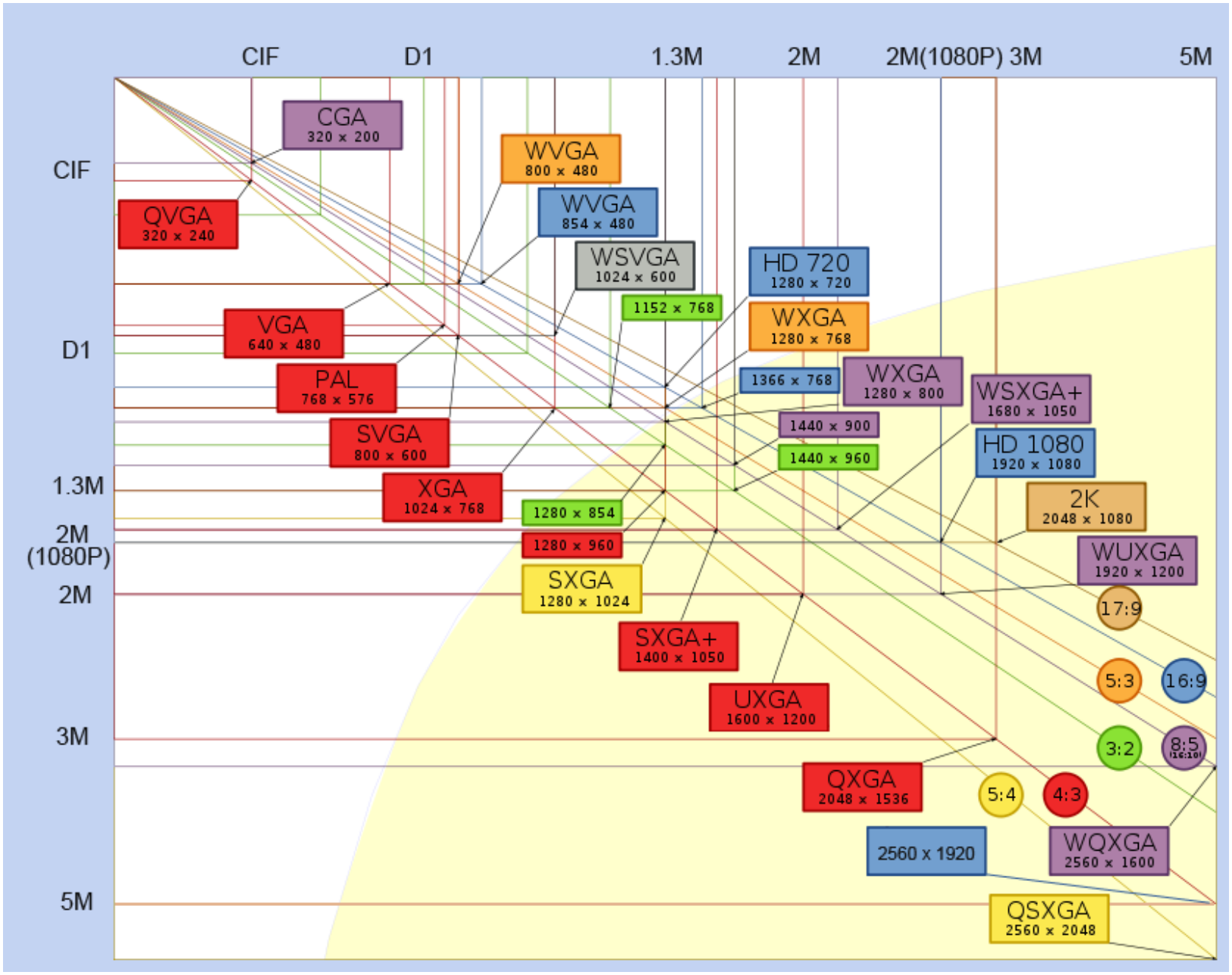
For your attention:

The ePTZ function is default to ON. If have set small resolution but can't operate ePTZ, please login by IE to check this function ON/OFF status, refer to above illustration.

Resolution list available in products and software

List resolution in Channel Page	List pixels in IE config	List resolution in Channel Page	List pixels in IE config
DCIF	528*384	UVGA	1600*1200
CIF	352*288	SVGA	800*600
QCIF	176*144	HD720P	1280*720
4CIF	740*576	XVGA	1024*768
2CIF	704*288	HD900P	1600*912
VGA	640*480	HD1080P	1920*1080
		QSXGA	2560*1920

The following illustration shows the terms of different image resolutions.


CIF
D1
1.3M
2M
2M(1080P)
3M
5M
CIF
D1
1.3M
2M (1080P)
2M
3M
5M
CGA 320 x 200
QVGA 320 x 240
VGA 640 x 480
PAL 768 x 576
SVGA 800 x 600
XGA 1024 x 768
WVGA 800 x 480
WVGA 854 x 480
WSVGA 1024 x 600
1152 x 768
1280 x 854
1280 x 960
SXGA 1280 x 1024
SXGA+ 1400 x 1050
UXGA 1600 x 1200
QXGA 2048 x 1536
2560 x 1920
QSXGA 2560 x 2048
HD 720 1280 x 720
WXGA 1280 x 768
1366 x 768
WXGA 1280 x 800
1440 x 900
1440 x 960
WSXGA+ 1680 x 1050
HD 1080 1920 x 1080
2K 2048 x 1080
WUXGA 1920 x 1200
WQXGA 2560 x 1600
17:9
5:3
16:9
3:2
8:5 (16:10)
5:4
4:3

Technical Support Information

Please fill in this form in order to get prompt technical service in case of emergency!

Item	Description
IP Device Model Name	
IP Device serial number	
Firmware Version	
Purchasing date	
Dealer’s Contact info	**Company name:** **Technical Engineer:** **Tel:** **Fax:** **Email:**